

Chapter:
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Wiring
(WG)

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Chapter:
1
WIRING
(WG)

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>
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1.1 Concealing of Conduits (WG-MA/CC)

m	1-1-1	Supplying & erecting rigid steel conduit 16 SWG 20 mm dia. with necessary accessories in wall/floor with chiselling appropriately as per specification No: WG-MA/CC.	165.90
m	1-1-2	Supplying & laying rigid steel conduit 16 SWG - 20 mm. dia. with necessary accessories in RCC work/false ceiling/false flooring as per specification No: WG-MA/CC.	152.25
m	1-1-3	Supplying & erecting rigid steel conduit 16 SWG 25 mm dia. with necessary accessories in wall/floor with chiselling appropriately as per specification No: WG-MA/CC.	200.55
m	1-1-4	Supplying & laying rigid steel conduit 16 SWG 25 mm. dia. with necessary accessories in RCC work/false ceiling/false flooring as per specification No: WG-MA/CC.	186.90
m	1-1-5	Supplying & erecting rigid steel conduit 16 SWG 32 mm dia. with necessary accessories in wall/floor with chiselling appropriately as per specification No: WG-MA/CC.	278.25
m	1-1-6	Supplying & laying rigid steel conduit 16 SWG 32 mm. dia. with necessary accessories in RCC work/false ceiling/false flooring as per specification No: WG-MA/CC.	261.45
m	1-1-7	Supplying & erecting H.M.S. P.V.C. conduit 20 mm. dia. with necessary accessories in wall/floor with chiselling appropriately as per specification No: WG-MA/CC.	99.75
m	1-1-8	Supplying & laying HMS PVC conduit 20 mm dia. with necessary accessories in RCC work/false ceiling/false flooring as per specification No. WG-MA/CC.	86.10
m	1-1-9	Supplying & erecting HMS P.V.C. conduit 25 mm. dia. with necessary accessories in wall/floor with chiselling appropriately as per specification No: WG-MA/CC.	110.25
m	1-1-10	Supplying & laying HMS PVC conduit 25 mm dia with necessary accessories in RCC work/false ceiling/false flooring as per specification No. WG-MA/CC.	100.80
m	1-1-11	Supplying & erecting HMS P.V.C. conduit 32 mm. dia. with necessary accessories in wall/floor with chiselling appropriately as per specification No: WG-MA/CC.	148.05
m	1-1-12	Supplying & laying HMS PVC conduit mm dia. with necessary accessories in RCC work/false ceiling/false flooring as per specification No. WG-MA/CC.	128.10
m	1-1-13	Concealing of provided G.I. pipe/H.G. screwed conduit/PVC pipe in wall/floor/false ceiling complete as per specification No: WG-PW/CW	61.95
	Note:-	Add Rs. 3/- per meter for erecting conduit on stone wall.	0.00
		<u>1.2 PVC Flexible/Rigid Conduits/Casing-n-Capping/ Under Floor Trunking/ Raceways and Box Trunking</u>	0.00
		(WG-MA/CON)	0.00
m	1-2-1	Supplying and erecting UPVC reinforced flexible conduit 20 mm in dia. conforming to I.S. with required number of couplings, PVC bushes, check nuts etc. complete.	78.75
m	1-2-2	Supplying and erecting UPVC reinforced flexible conduit 25 mm in dia. conforming to I.S. with required number of couplings, PVC bushes, check nuts etc. complete.	89.25
m	1-2-3	Supplying and erecting UPVC reinforced flexible conduit 31/32 mm in dia. conforming to I.S. with required number of couplings, PVC bushes, check nuts etc. complete.	113.40
m	1-2-4	Supplying and erecting UPVC reinforced flexible conduit 38/40 mm in dia. conforming to I.S. with required number of couplings, PVC bushes, check nuts etc. complete.	151.20
m	1-2-5	Supplying and erecting UPVC reinforced flexible conduit 50 mm in dia. conforming to I.S. with required number of couplings, PVC bushes, check nuts etc. complete.	193.20
m	1-2-6	Supplying and erecting HMS PVC conduit 20 mm dia. with PVC accessories on wall / ceiling as per specification No: WG-MA/CON.	71.40

m	1-2-7	Supplying and erecting HMS PVC conduit 25 mm dia. with PVC accessories on wall /ceiling as per specification No: WG-MA/CON.	80.85
m	1-2-8	Supplying and erecting HMS PVC conduit 32 mm dia. with PVC accessories on wall / ceiling as per specification No: WG-MA/CON.	123.90
m	1-2-9	Supplying and erecting PVC trunking (PVC casing-n-capping) of size 20 mm with accessories on wall/ceiling as per specification No: WG-MA/CON.	35.70
m	1-2-10	Supplying and erecting PVC trunking (PVC casing-n-capping) of size 25 mm with accessories on wall/ceiling as per specification No: WG-MA/CON.	37.80
m	1-2-11	Supplying and erecting PVC trunking (PVC casing-n-capping) of size 32 mm with accessories on wall/ceiling as per specification No: WG-MA/CON.	45.15
m	1-2-12	Supplying and erecting PVC trunking (PVC casing-n-capping) of size 40 mm with accessories on wall/ceiling as per specification No: WG-MA/CON.	67.20
m	1-2-13	Supplying and erecting PVC box trunking of size 50x16/20 mm. with accessories on wall/ceiling as per specification No: WG-MA/BOX.	85.05
m	1-2-14	Supplying and erecting PVC box trunking of size 50x50 mm. with accessories on wall/ceiling as per specification No: WG-MA/BOX.	140.70
m	1-2-15	Supplying and erecting PVC box trunking of size 75x50 mm. with accessories on wall/ceiling as per specification No: WG-MA/BOX.	301.35
m	1-2-16	Supplying and erecting PVC box trunking of size 75x75 mm. with accessories on wall/ceiling as per specification No: WG-MA/BOX.	389.55
m	1-2-17	Supplying and erecting PVC box trunking of size 100x50 mm. with accessories on wall/ceiling as per specification No: WG-MA/BOX .	462.00
m	1-2-18	Supplying and erecting PVC slotted box trunking of size 25x25 mm. with accessories on wall/ceiling as per specification No: WG-MA/SLBOX.	58.80
m	1-2-19	Supplying and erecting PVC slotted box trunking of size 45x30 mm. with accessories on wall/ceiling as per specification No: WG-MA/SLBOX.	100.80
m	1-2-20	Supplying and erecting PVC slotted box trunking of size 60x45 mm. with accessories on wall/ceiling as per specification No: WG-MA/SLBOX.	142.80
m	1-2-21	Supplying and erecting PVC slotted box trunking of size 75x75 mm. with accessories on wall/ceiling as per specification No: WG-MA/SLBOX.	206.85
m	1-2-22	Supplying and erecting PVC slotted box trunking of size 100x100 mm. with accessories on wall/ceiling as per specification No: WG-MA/SLBOX.	390.60
Each	1-2-23	Supplying & erecting UPVC gland/ adaptor suitable for 20 mm dia pvc pipe.	14.70
Each	1-2-24	Supplying & erecting UPVC gland/ adaptor suitable for 25 mm dia pvc pipe.	18.90
Each	1-2-25	Supplying & erecting UPVC gland/ adaptor suitable for 31/32 mm dia pvc pipe.	26.25
Each	1-2-26	Supplying & erecting UPVC gland/ adaptor suitable for 40/42 mm dia pvc pipe.	28.35
Each	1-2-27	Supplying & erecting UPVC gland/ adaptor suitable for 50 mm dia pvc pipe.	31.50
m	1-2-28	Supplying & erecting GI flexible Conduit 25 mm dia. conforming to I.S. with required number of couplings, bushes, check nuts etc. complete	43.05
m	1-2-29	Supplying & erecting GI flexible Conduit 40 mm dia. conforming to I.S. with required number of couplings, bushes, check nuts etc. complete	60.90
m	1-2-30	Supplying & erecting GI flexible Conduit 50 mm dia. conforming to I.S. with required number of couplings, bushes, check nuts etc. complete	70.35

	Note:-	1. Add Rs 3/- per meter for erecting conduit on stone wall.	0.00
		2. Item No. 1-2-6 to 1-2-8 may be used for erection/laying below false flooring/above false ceiling/behind wall panelling.	0.00
		<u>1.3 Bunch of Wires (WG-MA/BW)</u>	0.00
m	1-3-1	Supplying & erecting mains with 2x1.5 sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	37.80
m	1-3-2	Supplying & erecting mains with 2x1.5 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	39.90
m	1-3-3	Supplying & erecting mains with 2x2.5 sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places. as per specification No: WG-MA/BW	56.70
m	1-3-4	Supplying & erecting mains with 2x2.5 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places. as per specification No: WG-MA/BW	60.90
m	1-3-5	Supplying & erecting mains with 2x4 sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places. as per specification No: WG-MA/BW	77.70
m	1-3-6	Supplying & erecting mains with 2x4 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places. as per specification No: WG-MA/BW	82.95
m	1-3-7	Supplying & erecting mains with 2x6 sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	108.15
m	1-3-8	Supplying & erecting mains with 2x6 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places. as per specification No: WG-MA/BW	117.60
m	1-3-9	Supplying & erecting mains with 2x10 sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	179.55
m	1-3-10	Supplying & erecting mains with 2x10 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	202.65
m	1-3-11	Supplying & erecting mains with 3x2.5 Sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	78.75
m	1-3-12	Supplying & erecting mains with 3x2.5 sq.mm FRLHS copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	84.00
m	1-3-13	Supplying & erecting mains with 3x4 sq.mm FR copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	111.30
m	1-3-14	Supplying & erecting mains with 3x4 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	120.75
m	1-3-15	Supplying & erecting mains with 3x6 sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	158.55
m	1-3-16	Supplying & erecting mains with 3x6 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	171.15
m	1-3-17	Supplying & erecting mains with 3x10 sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	266.70
m	1-3-18	Supplying & erecting mains with 3x10 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	300.30

m	1-3-19	Supplying & erecting mains with 4x16 sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	541.80
m	1-3-20	Supplying & erecting mains with 4x16 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	592.20
m	1-3-21	Supplying & erecting mains with 4x25 sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	982.80
m	1-3-22	Supplying & erecting mains with 4x25 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	1041.60
m	1-3-23	Supplying & erecting mains with 4x35 sq.mm F.R copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	1346.10
m	1-3-24	Supplying & erecting mains with 4x35 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	1436.40
m	1-3-25	Supplying & erecting mains with 4x50 sq.mm FR copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	1915.20
m	1-3-26	Supplying and erecting PVC insulated PVC round sheathed 1 sq.mm (32 no. x 0.20mm dia.) 3 core flexible multi stranded copper Industrial cable for voltage grade up to 1.1 kV	42.00
m	1-3-27	Supplying and erecting PVC insulated PVC round sheathed 1.5 sq.mm (30 no. x 0.25 mm dia.) 3 core flexible multi stranded copper Industrial cable for voltage grade up to 1.1 kV	56.70
m	1-3-28	Supplying and erecting PVC insulated PVC round sheathed 2.5 sq.mm (50 no. x 0.25 mm dia.) 3 core flexible multi stranded copper Industrial cable for voltage grade up to 1.1 kV	85.05
m	1-3-29	Supplying and erecting PVC insulated PVC round sheathed 4 sq.mm (56 no. x 0.30 mm dia.) 3 core flexible multi stranded copper Industrial cable for voltage grade up to 1.1 kV	126.00
	Note:-	1) Double the rate of two wire bunch for calculating rate of four wire bunch up to 10 sq. mm	0.00
		2) Continuous running earth wire should be provided of min. 1.5 sq. mm. up to phase wire of 2.5 sq. mm. and further earth wire of half of the size of phase wire is to be used only for light & power load .	0.00
		3) Rates for the earth wire shall be calculated as one half rate of mains of bunch of two wire.	0.00
		Earth wire should be of green colour.	0.00
		4) For all types of wiring stranded copper wires shall be invariably used.	0.00
		5) For FRLS wire subtract 2% from total rate of FRLSH wire.	0.00
		<u>1.4 Mains on GI Bare Wire (WG-MA/GB)</u>	0.00
m	1-4-1	Supplying and erecting mains with ISI mark WP 2 x 2.5 sq. mm. 1100 V grade aluminium PVC insulated and PVC sheathed wires on G.I. bearer wire No. 8 SWG complete erected with required size of porcelain reel insulators and 16 SWG G.I. binding wire.	63.00
m	1-4-2	Supplying and erecting mains with ISI mark WP 2 x 4 sq. mm. 1100 V grade aluminium PVC insulated and PVC sheathed wires on G.I. bearer wire No. 8 SWG complete erected with required size of porcelain reel insulators and 16 SWG G.I. binding wire.	60.90
m	1-4-3	Supplying and erecting mains with ISI mark WP 2 x 6 sq. mm. 1100 V. grade aluminium PVC insulated and PVC sheathed wires on G.I. bearer wire No. 8 SWG complete erected with required size of porcelain reel insulators and 16 SWG G.I. binding wire.	74.55

m	1-4-4	Supplying and erecting mains with ISI mark WP 3 x 4 sq. mm. 1100 V. grade aluminium PVC insulated and PVC sheathed wires on G.I. bearer wire No. 8 SWG complete erected with required size of porcelain reel insulators and 16 SWG G.I. binding wire.	103.95
m	1-4-5	Supplying and erecting mains with ISI mark WP 3 x 6 sq. mm. 1100 V. grade aluminium PVC insulated and PVC sheathed wires on G.I. bearer wire No. 8 SWG complete erected with required size of porcelain reel insulators and 16 SWG G.I. binding wire.	124.95
m	1-4-6	Supplying and erecting mains with ISI mark WP 4 x 4 sq. mm. 1100 V. grade aluminium PVC insulated and PVC sheathed wires on G.I. bearer wire No. 8 SWG complete erected with required size of porcelain reel insulators and 16 SWG G.I. binding wire.	120.75
m	1-4-7	Supplying and erecting mains with ISI mark WP 4 x 6 sq. mm. 1100 V. grade aluminium PVC insulated and PVC sheathed wires on G.I. bearer wire No. 8 SWG complete erected with required size of porcelain reel insulators and 16 SWG G.I. binding wire.	148.05

1.5 Mains in Metal Conduit (WG-MA/MC)

			0.00
m	1-5-1	Supplying & erecting mains with 2x1.5 sq.mm. F.R. copper wire, in 16 gauge 20 mm dia. Rigid Steel conduit with continuous GI earth wire of 2.5 sq.mm. as per specification No: WG-MA/MC.	197.40
m	1-5-2	Supplying & erecting mains with 2x1.5 sq.mm. FRLSH copper wire, in 16gauge 20 mm dia. Rigid Steel conduit with continuous GI earth wire of 2.5 sq.mm. as per specification No: WG-MA/MC.	203.70
m	1-5-3	Supplying & erecting mains with 2x2.5 sq.mm. F.R. copper wire, in 16gauge 20 mm dia. rigid steel conduit, with continuous GI earth wire of 2.5sq.mm. as per specification No: WG-MA/MC.	220.50
m	1-5-4	Supplying & erecting mains with 2x2.5 sq.mm. FRLSH copper wire, in 16gauge 20 mm dia. rigid steel conduits, with continuous GI earth wire of 2.5sq.mm. as per specification No: WG-MA/MC.	223.65
m	1-5-5	Supplying & erecting mains with 2x4 sq. mm. F.R copper wire, in 16gauge 20 mm dia. Rigid Steel conduit, with continuous GI earth wire of 2.5sq.mm.as per specification No: WG-MA/MC.	249.90
m	1-5-6	Supplying & erecting mains with 2x4 sq.mm. FRLSH copper wire, in 16gauge 20 mm dia. Rigid Steel conduit, with continuous GI earth wire of 2.5 sq.mm. as per specification No: WG-MA/MC.	255.15
m	1-5-7	Supplying & erecting mains with 2x6 sq.mm. F.R. copper wire, in 16gauge 20 mm dia. rigid steel conduit, with continuous GI earth wire of 4 sq.mm. as per specification No: WG-MA/MC.	288.75
m	1-5-8	Supplying & erecting mains with 2x6 sq.mm. FRLSH copper wire, in 16gauge 20 mm dia. Rigid Steel conduit, with continuous GI earth wire of 4 sq.mm. as per specification No: WG-MA/MC.	292.95
m	1-5-9	Supplying & erecting mains with 2x10 sq.mm. F.R copper wire, in 16gauge 20 mm dia. rigid steel conduit, with continuous GI earth wire of 6 sq.mm. as per specification No: WG-MA/MC.	373.80
m	1-5-10	Supplying & erecting mains with 2x10 sq.mm. FRLSH copper wire, in 16gauge 20 mm dia. rigid steel conduit, with continuous GI earth wire of 6sq.mm. as per specification No: WG-MA/MC.	387.45
m	1-5-11	Supplying & erecting mains with 3x4 sq.mm. F.R. copper wire, in 16gauge 20 mm dia. rigid steel conduit, with continuous GI earth wire of 2.5sq.mm. as per specification No: WG-MA/MC.	287.70
m	1-5-12	Supplying & erecting mains with 3x4 sq.mm. FRLSH copper wire, in 16gauge 20 mm dia. rigid steel conduit, with continuous GI earth wire of 2.5sq.mm. as per specification No: WG-MA/MC.	298.20
m	1-5-13	Supplying & erecting mains with 3x6 sq.mm. F.R. copper wire, in 16gauge 20 mm dia. rigid steel conduit, with continuous GI earth wire of 4sq.mm. as per specification No: WG-MA/MC.	344.40
m	1-5-14	Supplying & erecting mains with 3x6 sq.mm. FRLSH copper wire, in 16gauge 20 mm dia. rigid steel conduit, with continuous GI earth wire of 4sq.mm. as per specification No: WG-MA/MC.	359.10

m	1-5-15	Supplying & erecting mains with 3x10 sq.mm. F.R copper wire, in 16gauge 25 mm dia. rigid steel conduit , with continuous GI earth wire of 6sq.mm. as per specification No: WG-MA/MC .	504.00
m	1-5-16	Supplying & erecting mains with 3x10 sq.mm. FRLSH copper wire, in 16gauge 25 mm dia. rigid steel conduit, with continuous GI earth wire of 6sq.mm. as per specification No: WG-MA/MC.	535.50
m	1-5-17	Supplying & erecting mains with 4x4 sq.mm. F.R copper wire, in 16gauge 25 mm dia. rigid steel conduit, with continuous GI earth wire of 2.5sq.mm. as per specification No: WG-MA/MC.	366.45
m	1-5-18	Supplying & erecting mains with 4x4 sq.mm. FRLSH copper wire, in 16gauge 25 mm dia. Rigid Steel conduit, with continuous GI earth wire of 2.5 sq.mm as per specification No: WG-MA/MC.	379.05
m	1-5-19	Supplying & erecting mains with 4x6 sq.mm. F.R copper wire, in 16gauge 25 mm dia. rigid steel conduit, with continuous GI earth wire of 4sq.mm. as per specification No: WG-MA/MC.	438.90
m	1-5-20	Supplying & erecting mains with 4x6 sq.mm. FRLSH copper wire, in 16gauge 25 mm dia. rigid steel conduit, with continuous GI earth wire of 4sq.mm. as per specification No: WG-MA/MC.	458.85
m	1-5-21	Supplying & erecting mains with 4x10 sq.mm. F.R copper wire, in 16gauge 32 mm dia. rigid steel conduit, with continuous GI earth wire of 6sq.mm. as per specification No: WG-MA/MC.	624.75
m	1-5-22	Supplying & erecting mains with 4x10 sq.mm. FRLSH copper wire, in 16gauge 32 mm dia. rigid steel conduit, with continuous GI earth wire of 6sq.mm. as per specification No: WG-MA/MC.	686.70
m	1-5-23	Supplying & erecting mains with 6x6 sq.mm. F.R copper wire, in 16gauge 32 mm dia. rigid steel conduit, with continuous GI earth wire of 4sq.mm. as per specification No: WG-MA/MC.	538.65
m	1-5-24	Supplying & erecting mains with 6x6 sq.mm. FRLSH copper wire, in 16gauge 32 mm dia. rigid steel conduit, with continuous GI earth wire of 4sq.mm. as per specification No: WG-MA/MC.	599.55
	Note:-	1) Add Rs 3/- per meter for erecting conduit on stone wall	0.00
		2) In case of G.I. Earth wire, appropriate guage, equivalent to the sq. mm. size shall be used.	0.00
		3) For FRLS wire subtract 2% from overall rate of FRLSH Wire.	0.00
		<u>1.6 Mains in PVC Conduit</u> (WG-MA/PC)	0.00
m	1-6-1	Supplying & erecting mains 2x1.5 sq.mm. and earth wire 1.5 sq.mm FR PVC copper wire, ISI mark HMS PVC conduit min. 20mm dia, as per specification No: WG-MA/PC.	115.50
m	1-6-2	Supplying & erecting mains with 2x1.5 sq.mm. and earth wire 1.5 sq.mm FRLSH PVC copper wire, in HMS PVC conduit min. 20mm dia as per specification No: WG-MA/PC.	117.60
m	1-6-3	Supplying & erecting mains with 2x2.5 sq.mm. and earth wire 1.5 sq.mm FR PVC copper wire, in HMS PVC conduit min. 20mm dia , as per specification No: WG-MA/PC .	130.20
m	1-6-4	Supplying & erecting mains with 2x2.5 sq.mm. and earth wire 1.5 sq.mm FRLSH PVC copper wire in HMS PVC conduit min. 20mm dia. as per specification No: WG-MA/PC.	136.50
m	1-6-5	Supplying & erecting mains with 2x4 sq.mm. and earth wire 2.5 sq.mm FR PVC copper wire in HMS PVC conduit min. 20mm dia, as per specification No: WG-MA/PC.	157.50
m	1-6-6	Supplying & erecting mains with 2x4 sq.mm. and earth wire 2.5 sq.mm FRLSH PVC copper wire in HMS PVC conduit min. 20mm dia , as per specification No: WG-MA/PC.	164.85
m	1-6-7	Supplying & erecting mains with 2x6 sq.mm. and earth wire 4 sq.mm FR PVC copper wire, in HMS PVC conduit min. 20mm dia, as per specification No: WG-MA/PC.	198.45
m	1-6-8	Supplying & erecting mains with 2x6 sq.mm. and earth wire 4 sq.mm FRLSH PVC copper wire, in HMS PVC conduit min.20mm dia, as per specification No: WG-MA/PC.	207.90

m	1-6-9	Supplying & erecting mains with 2x10 sq.mm. and earth wire 6 sqmm FR PVC copper wire, in HMS PVC conduit min. 25 mm dia, as per specification No: WG-MA/PC.	292.95
m	1-6-10	Supplying & erecting mains with 2x10 sq.mm. and earth wire 6 sq.mm FRLSH PVC copper wire, in HMS PVC conduit min. 25mm dia, as per specification No: WG-MA/PC.	325.50
m	1-6-11	Supplying & erecting mains with 3x4 sq.mm. and earth wire 2.5 sq.mm FR PVC copper wire in HMS PVC conduit min.20mm dia, as per specification No: WG-MA/PC.	199.50
m	1-6-12	Supplying & erecting mains with 3x4 sq.mm. and earth wire 2.5 sq.mm FRLSH PVC copper wire, in HMS PVC conduit min.20mm dia, as per specification No: WG-MA/PC.	208.95
m	1-6-13	Supplying & erecting mains with 3x6 sq.mm. and earth wire 4 sq.mm FR PVC copper wire, in HMS PVC conduit min. 25mm dia, as per specification No: WG-MA/PC.	256.20
m	1-6-14	Supplying & erecting mains with 3x6 sq.mm. and earth wire 4 sq.mm FRLSH PVC copper wire, in HMS PVC conduit min. 25 mm dia, as per specification No: WG-MA/PC.	270.90
m	1-6-15	Supplying & erecting mains with 3x10 sq.mm. and earth wire 6 sq.mm FR PVC copper wire, in HMS PVC conduit min. 25mm dia. as per specification No: WG-MA/PC.	373.80
m	1-6-16	Supplying & erecting mains with 3x10 sq.mm. and earth wire 6 sq.mm FRLSH PVC copper wire, in HMS PVC conduit min. 25mm dia , as per specification No: WG-MA/PC.	448.35
m	1-6-17	Supplying & erecting mains with 4x4 sq.mm and earth wire 2.5 sq.mm FR PVC copper wire, in HMS PVC conduit min. 25mm dia, as per specification No: WG-MA/PC.	235.20
m	1-6-18	Supplying & erecting mains with 4x4 sq.mm. and earth wire 2.5 sq.mm FRLSH PVC copper wire, in HMS PVC conduit min. 25mm dia, as per specification No: WG-MA/PC.	248.85
m	1-6-19	Supplying & erecting mains with 4x6 sq.mm. and earth wire 4 sq.mm FR PVC copper wire, in HMS PVC conduit min. 25mm dia , as per specification No: WG-MA/PC.	308.70
m	1-6-20	Supplying & erecting mains with 4x6 sq.mm. and earth wire 4 sq.mm FRLSH PVC copper wire, in HMS PVC conduit min. 25mm dia, as per specification No: WG-MA/PC.	330.75
m	1-6-21	Supplying & erecting mains with 4x10 sq.mm. and earth wire 6 sq.mm FR PVC copper wire, in HMS PVC conduit min. 32mm dia, as per specification No: WG-MA/PC.	487.20
m	1-6-22	Supplying & erecting mains with 4x10 sq.mm. and earth wire 6 sq.mm FRLSH PVC copper wire, in HMS PVC conduit min. 32mm dia, as per specification No: WG-MA/PC.	548.10
m	1-6-23	Supplying & erecting mains with 6x6 sq.mm. and earth wire 4 sq.mm FR PVC copper wire, in HMS PVC conduit min. 32mm dia , as per specification No: WG-MA/PC.	434.70
m	1-6-24	Supplying & erecting mains with 6x6 sq.mm. and earth wire 4 sq.mm FRLSH PVC copper wire, in HMS PVC conduit min. 32mm dia, as per specification No: WG-MA/PC.	462.00
	Note:-	1) Add Rs. 3/- per metre for erecting mains in PVC/HG conduit on stone wall.	0.00
		2) For FRLS wire subtract 2% from overall rate of FRLSH wire.	0.00
		<u>1.7 Wiring Accessories</u>	0.00
Each	1-7-1	Supplying and erecting shockproof 6A ISI mark porcelain base T.Switch / bell push erected on filled polypropylene board or polished double wooden block / 3 mm thick hylam sheet / 4mm thick plywood pasted with 1.5 mm thick laminate with S M screws and duly connected.	31.50

Each	1-7-2	Supplying and erecting One/Two way piano type switch 6A./bell push erected on filled polypropylene board or double polished wooden board/ folded or screwed board with top of either wooden/ 3 mm thick hylam sheet/ 4mm thick plywood pasted with 1.5 mm thick laminate with S M screws and duly connected.	35.70
Each	1-7-3	Supplying and erecting shockproof T. switch 16 A porcelain base surface mounting type / flush mounting type erected on filled polypropylene board or polished thick varnished double wooden block/folded or screwed board with top of either wooden/ 3 mm thick hylam sheet/ 4mm thick plywood pasted with 1.5 mm thick Laminate with S M screws and duly connected.	72.45
Each	1-7-4	Supplying and erecting shockproof piano type switch 250 V 16 A, erected on filled polypropylene board or polished double wooden/ folded or screwed board with top of either wooden/ 3 mm thick hylam sheet/ 4mm thick plywood pasted with 1.5 mm thick Laminate with S M screws and duly connected.	66.15
Each	1-7-5	Supplying and erecting shockproof 3 pin plug socket 6A with porcelain base / flush type erected on filled polypropylene board or polished thick varnished double wooden block / folded or screwed board with top of either wooden / 3 mm thick hylam sheet/ 4mm thick plywood pasted with 1.5 mm thick Laminate with S M screws and duly connected.	36.75
Each	1-7-6	Supplying and erecting shockproof 3 pin plug socket 16A with porcelain base/ flush type erected on filled polypropylene ISI marked (IS:14772-2000) board or polished thick varnished double wooden block / folded or screwed board with top of either wooden/3 mm thick hylam sheet/ 4mm thick plywood pasted with 1.5 mm thick Laminate with S M screws and duly connected.	48.30
Each	1-7-7	Supplying and erecting Ceiling rose / Batten holder / Slanting holder / hanging cord switch / hanging bell push / pendent holder bakelite base 6A. erected on filled polypropylene board or polished double wooden block/ PVC junction box.	34.65
	1-7-8	Reduce rate by Rs.7.5/-for erecting accessories on provided board / junction box.	0.00
Each	1-7-9	Supplying and erecting adaptor for lamp holder 230 V.A.C. supply.	32.55
Each	1-7-10	Supplying and erecting recess type, 3 pin plug socket 6A with piano switch 6A erected on M.S Box made of 16 SWG sheet duly painted and covered with bakelite hylam sheet of 3 mm thickness connected with earth terminals and leads duly concealed	78.75
Each	1-7-11	Supplying and erecting recess type, 3 pin plug socket 6A with piano switch 6 A combined unit erected on polished double wooden block/ folded or screwed board with top of either wooden or plywood pasted with sunmica and with connecting leads	82.95
Each	1-7-12	Supplying and erecting flush, shock proof plug socket 6 pin 6A and 16A with switch 16A combined unit erected in recess in 16 gauge M.S sheet box duly painted and connected with earth terminal and leads	105.00
Each	1-7-13	Supplying and erecting flush type, shockproof plug socket 6 pin 6A and 16A with switch 16A combined unit erected on filled polypropylene board or double wooden block / 3mm thick hylam sheet / 4mm thick plywood pasted with 1.5 mm thick sunmica with S M screws and duly connected.	135.45
Each	1-7-14	Supplying and erecting flush type shockproof plug socket 6A & 16A (6 pin) with 16A switch combined with indicator lamp and fuse with gang box on wooden board.	176.40
Each	1-7-15	Supplying and erecting shockproof bell push on filled polypropylene board or wooden block covered with sunmica with 2 core (TRS type) PVC insulated copper wire of size 0.5 sq mm 5 m length connected to the point.	37.80

Each	1-7-16	Supplying and erecting recess type 3 pin plug socket 6A with piano switch 6A combined unit erected on M.S box made up of 16 gauge sheet and covered with sunmica and with connecting leads	106.05
Each	1-7-17	Supplying 6 amp. 3 pin plug Top bakelite type of 230 V. A.C. supply.	34.65
Each	1-7-18	Supplying 16 amp. 3 pin plug Top bakelite type of 230 V. A.C. supply.	53.55
Note:-		1. If accessories erected on provided board Rs 8/- per accessories shall be deducted for board	0.00
		2. The above wiring accessories shall be conforming to IS:14772-2000.	0.00
		<u>1.8 Modular switches and Accessories</u>	0.00
Each	1-8-1	Supplying and erecting ISI mark modular type switch 6A / 10A duly erected on provided plate and box with wiring connections complete.	69.30
Each	1-8-2	Supplying and erecting ISI mark modular type switch 16A duly erected on provided plate and box with wiring connections complete.	93.45
Each	1-8-3	Supplying and erecting ISI mark modular type bell-push 6A / 10A duly erected on provided plate and box with wiring connections complete.	100.80
Each	1-8-4	Supplying and erecting ISI mark modular type bell-push with indicator 2 modules 6A / 10A , duly erected on provided plate and box with wiring connections complete.	122.85
Each	1-8-5	Supplying and erecting ISI mark modular type Two way switch 6A / 10A (2 Module) duly erected on provided plate and box with wiring connections complete.	101.85
Each	1-8-6	Supplying and erecting ISI mark modular type switch 16 / 20 A with indicator , duly erected on provided plate and box with wiring connections complete.	133.35
Each	1-8-7	Supplying and erecting ISI mark modular type switch one way 16 / 20 A , duly erected on provided plate and box with wiring connections complete with neon indicator .	101.85
Each	1-8-8	Supplying and erecting ISI mark modular type D.P. switch 32A with indicator , duly erected on provided plate and box with wiring connections complete.	182.70
Each	1-8-9	Supplying and erecting ISI mark modular type 32A, DP key tag switch with KEY TAG , duly erected on provided plate and box with wiring connections complete.	363.30
Each	1-8-10	Supplying and erecting ISI mark modular type 3 pin 6A multi sockets with safety shutter , duly erected on provided plate and box with wiring connections complete.	112.35
Each	1-8-11	Supplying and erecting ISI mark modular type 3 pin 6 / 16A multi socket with safety shutter , duly erected on provided plate and box with wiring connections complete.	165.90
Each	1-8-12	Supplying and erecting ISI mark modular type indicator lamp , duly erected on provided plate and box with wiring connections complete.	64.05
Each	1-8-13	Supplying and erecting ISI mark modular type 6 / 16A fuse unit , duly erected on provided plate and box with wiring connections complete.	94.50
Each	1-8-14	Supplying and erecting ISI mark modular type T.V. socket single outlet , duly erected on provided plate and box with wiring connections complete.	89.25
Each	1-8-15	Supplying and erecting ISI marked modular type telephone socket one gang with safety shutter , duly erected on provided plate and box with wiring connections complete.	89.25
Each	1-8-16	Supplying and erecting ISI mark modular type telephone socket two gang with safety shutter , duly erected on provided plate and box with wiring connections complete.	106.05

Each	1-8-17	Supplying and erecting ISI mark modular type computer jack RJ 45 with safety shutter, duly erected on provided plate and box with wiring connections complete.	109.20
Each	1-8-18	Supplying and erecting ISI mark modular type bell indicator , duly erected on provided plate and box with wiring connections complete.	152.25
Each	1-8-19	Supplying and erecting ISI mark modular type buzzer 220 / 250V , duly erected on provided plate and box with wiring connections complete.	103.95
Each	1-8-20	Supplying and erecting ISI mark modular type (one module) electronic dimmer 400 / 450W , duly erected on provided plate and box with wiring connections complete.	237.30
Each	1-8-21	Supplying and erecting ISI mark modular type (two modules) electronic dimmer 600/650W , duly erected on provided plate and box with wiring connections complete.	313.95
Each	1-8-22	Supplying and erecting ISI mark modular type (two modules) electronic dimmer 1000W , duly erected on provided plate and box with wiring connections complete.	401.10
Each	1-8-23	Supplying and erecting ISI mark modular type (two module) electronic step regulator for fan, duly erected on provided plate and box with wiring connections complete. Note: Add Rs 57/- for additional two module box with double mounting plate if required.	366.45
Each	1-8-24	Supplying and erecting ISI mark modular type blanking plate one module , duly erected on provided plate & box.	18.90
Each	1-8-25	Supplying and erecting ISI mark modular type blanking plate two module , duly erected on provided plate & box.	24.15
Each	1-8-26	Supplying and erecting PVC Surface modular switch box with double mounting plate for 1 module complete duly erected.	121.80
Each	1-8-27	Supplying and erecting PVC Surface modular switch box with double mounting plate for 2 modules duly erected.	127.05
Each	1-8-28	Supplying and erecting PVC Surface modular switch box with double mounting plate for 3 modules duly erected.	149.10
Each	1-8-29	Supplying and erecting PVC Surface modular switch box with double mounting plate for 4 modules duly erected.	166.95
Each	1-8-30	Supplying and erecting PVC Surface modular switch box with double mounting plate for 6 modules duly erected.	222.60
Each	1-8-31	Supplying and erecting PVC Surface modular switch box with double mounting & front plate for 8 modules complete duly connected.	254.10
Each	1-8-32	Supplying and erecting PVC Surface modular switch box with double mounting plate for 12 modules duly erected.	327.60
Each	1-8-33	Supplying and erecting PVC Surface modular switch box with double mounting plate for 16 / 18 module duly erected.	363.30
Each	1-8-34	Supplying and erecting unbreakable concealed type modular switch box with double mounting plate for 1 module duly erected flush to wall with required chiselling and finishing with cement mortar / POP as per required to match the background..	198.45
Each	1-8-35	Supplying and erecting unbreakable concealed type modular switch box with double mounting plate for 2 module duly erected flush to wall with required chiselling and finishing with cement mortar / POP as per required to match the background.	199.50
Each	1-8-36	Supplying and erecting unbreakable concealed type modular switch box with double mounting plate for 3 module duly erected flush to wall with required chiselling and finishing with cement mortar / POP as per required to match the background.	225.75
Each	1-8-37	Supplying and erecting unbreakable concealed type modular switch box with double mounting plate for 4 module duly erected flush to wall with required chiselling and finishing with cement mortar / POP as per required to match the background.	245.70

Each	1-8-38	Supplying and erecting unbreakable concealed type modular switch box with double mounting plate for 6 module duly erected flush to wall with required chiselling and finishing with cement mortar / POP as per required to match the background.	295.05
Each	1-8-39	Supplying and erecting unbreakable concealed type modular switch box with double mounting plate for 8 module duly erected flush to wall with required chiselling and finishing with cement mortar / POP as per required to match the background.	369.60
Each	1-8-40	Supplying and erecting unbreakable concealed type modular switch box with double mounting plate for 12 module duly erected flush to wall with required chiselling and finishing with cement mortar / POP as per required to match the background.	469.35
Each	1-8-41	Supplying and erecting unbreakable concealed type modular switch box with double mounting plate for 16 / 18 module duly erected flush to wall with required chiselling and finishing with cement mortar / POP as per required to match the background.	530.25
Each	1-8-42	Supplying and erecting White Footlight with 4 modules concealed modular box and LED lights with cover complete erected on wall /flush to wall with necessary chiselling in wall and finishing with cement and mortar / POP as per required and duly connected.	431.55
Each	1-8-43	Supplying and erecting 16 / 20 / 25 A starter (modular range) 2 module for AC unit on provided box complete & duly concealed with necessary material and connected.	366.45
Each	1-8-44	Supplying and erecting 6 to 32 A SPMCB suitable to fix in 1 module of modular switch in provided box complete & duly concealed with necessary material and connected.	179.55
Each	1-8-45	Supplying and erecting 16 to 32 A DPMCB suitable to fix in 2 module of modular switch in provided box complete & duly concealed with necessary material and connected.	195.30
Each	1-8-46	Supplying and erecting PVC Surface modular double mounting plate 1 module complete duly erected.	72.45
Each	1-8-47	Supplying and erecting PVC Surface modular double mounting plate 2 modules complete duly erected.	74.55
Each	1-8-48	Supplying and erecting PVC Surface modular double mounting plate 3 modules complete duly erected.	81.90
Each	1-8-49	Supplying and erecting PVC Surface modular double mounting plate 4 modules complete duly erected.	88.20
Each	1-8-50	Supplying and erecting PVC Surface modular double mounting plate 6 modules complete duly erected.	135.45
Each	1-8-51	Supplying and erecting PVC Surface modular double mounting plate 8 modules complete duly erected.	159.60
Each	1-8-52	Supplying and erecting PVC Surface modular double mounting plate 12 modules complete duly erected.	202.65
Each	1-8-53	Supplying and erecting PVC Surface modular double mounting plate 16/18 module complete duly erected.	228.90
Each	1-8-54	Supplying and erecting ISI mark modular type 5 pin socket with safety shutters 3 module socket 6A 240V AC supply, duly erected on provided plate and box with wiring connections complete duly erected.	130.20
Each	1-8-55	Supplying and erecting ISI mark modular safety power strip with one modular switch 16A and three sockets each 13A combination with overload and surge protection unit on double mounting plate, duly erected complete.	1206.45
Each	1-8-56	Supplying and erecting ISI mark modular switch with LED indicator available to connect in a switch board to glow LED when connected load is off, on provided double mounting plate complete duly erected.	124.95
Each	1-8-57	Supplying and erecting ISI mark modular type USB Charger socket of 1 Module with nominal output voltage of 5 VDC + 5/- 5% and nominal output current of 5 V - 750 mA , duly erected on provided plate and box with wiring connections complete.	542.85

Each	1-8-58	Supplying and erecting modular pop up Box 8 module erected with provided AV/HDMI , RJ 45,6 A electrical sockets and switch on provided table .	3929.10
Each	1-8-59	Supplying power strip with one switch 6A and 4 sockets each 6A, 230 V combination with surge and spike protection unit complete.	394.80
		<u>Point Wiring (PW)</u>	0.00
		<u>1.9 Point Wiring (WG-PW)</u>	0.00
Point	1-9-1	Point wiring for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FR grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	725.55
Point	1-9-2	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	729.75
Point	1-9-3	Point wiring for independent plug in 20 mm metal conduit with 1.5 sq.mm (2+1E) FR grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	798.00
Point	1-9-4	Point wiring for independent plug in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	804.30
Point	1-9-5	Point wiring for light/fan/bell in 20 mm ISI marked HMS PVC conduit with 1.5 sq. mm (2+1E) FR grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	418.95
Point	1-9-6	Point wiring for light/fan/bell in 20 mm ISI marked HMS PVC conduit with 1.5 sq. mm (2+1E) FRLSH grade copper wire with flush type switch and required accessories as per specification No: WG-PW/SW	427.35
Point	1-9-7	Point wiring for independent plug in 20 mm ISI marked HMS PVC conduit with 1.5 sq.mm (2+1E) FR grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	472.50
Point	1-9-8	Point wiring for independent plug in 20 mm ISI marked HMS PVC conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	484.05
Point	1-9-9	Point wiring for light/fan/bell concealed type in min 20 mm ISI marked HMS PVC conduit with 1.5 sq.mm. (2+1E) FR grade copper wires, modular type switch, earthing and required accessories as per specification No: WG-PW/CW	619.50
Point	1-9-10	Supplying and drawing of 2x1.5 sq.mm. FR grade copper wires with 1.5 sq.mm earth wire in provided concealed pipes for concealed type light/fan/bell point wiring and terminating on modular accessories in box for point wiring for light/fan/bell as per specification No: WG-PW/CW	384.30
Point	1-9-11	Point wiring for independent plug, concealed type in min 20 mm ISI marked HMS PVC conduit with 1.5 sq.mm (2+1E) FR grade copper wires, modular type switch and socket, earthing and required accessories as per specification No WG-PW/SW	672.00
Point	1-9-12	Supplying and drawing of 2x1.5 sq.mm. FR grade copper wires with 1.5 sq.mm earth wire in provided concealed pipes and terminating on modular accessories in box for point wiring for independent plug as per specification No WG-PW/SW	453.60
Point	1-9-13	Wiring for plug on board with Switch socket , copper wiring and earthing as per specification No: WG-PW/SW	100.80
Point	1-9-13	Wiring for plug on board with Modular Switch socket , copper wiring and earthing as per specification No: WG-PW/SW	0.00
Point	1-9-14	Wiring for plug on board with Switch socket concealed type , copper wiring and earthing and with modular accessories as per specification No: WG-PW/CW	471.45

Point	1-9-15	Point wiring for light/fan/bell hybrid type (Surface type under false ceiling and concealed type for drops & switch boards on walls) in min 20 mm PVC conduit / casing n capping with 1.5 sq.mm. (2+1E) FR grade copper wires, modular type switch, earthing and required accessories as per specification No: WG-PW/HW	476.70
Point	1-9-16	Point wiring in PVC trunking (casing-capping) with 1.5 sq.mm (2+1E) FR grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	302.40
Point	1-9-17	Point wiring in PVC trunking (casing-capping) with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	310.80
Point	1-9-18	Point wiring for independent plug in PVC trunking (casing-capping) with 1.5 sq. mm (2+1E) FR grade copper wire with flush type switch and required accessories as per specification No: WG-PW/SW	360.15
Point	1-9-19	Point wiring for independent plug in PVC trunking (casing-capping) with 1.5 sq. mm FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	370.65
Each	1-9-20	Concealing of provided M.S./ PVC switch box in wall with finishing as per specification No: WG-PW/CW	56.70
Point	1-9-21	Refilling the holes for dismantled point wiring with cement mortar & finishing.	31.50
Point	1-9-22	Secondary point wiring for additional light/ bell point, concealed type in min 20 mm PVC conduit with 1.5 sq.mm. (2+1E) FR/FRLSH grade copper wires with required accessories as per specification No: WG-PW/CW	173.25
Point	1-9-23	Secondary point wiring for additional light/ bell point in PVC trunking (casing-capping) with 1.5 sq.mm (2+1E) FR / FRLSH grade copper wire with required accessories as per specification No: WG-PW/SW	169.05
Point	1-9-24	Secondary point wiring for additional light/ bell point in min 20 mm metal conduit with 1.5 sq.mm (2+1E) FR/FRLSH grade copper wire with required accessories as per specification No: WG-PW/SW	295.05
Point	1-9-25	Point wiring in PVC trunking (casing-capping) with 1.5 sq.mm (2+1E) FR grade copper wire, modular type switch, earthing and required accessories as per specification No: WG-PW/SW	458.85
Point	1-9-25	C.F.Point wiring in PVC trunking (casing-capping) with 1.5 sq.mm (2+1E) FR grade copper wire, modular type switch, earthing and required accessories as per specification No: WG-PW/SW	0.00
Point	1-9-26	Point wiring in PVC trunking (casing-capping) with 1.5 sq.mm (2+1E) FRLSH grade copper wire, modular type switch, earthing and required accessories as per specification No: WG-PW/SW	463.05
Point	1-9-27	Point wiring for independent plug in PVC trunking (casing-capping) with 1.5 sq. mm (2+1E) FR grade copper wire, modular type switch, earthing and required accessories as per specification No: WG-PW/SW	620.55
Point	1-9-28	Point wiring for independent plug in PVC trunking (casing-capping) with 1.5 sq. mm (2+1E)FRLSH grade copper wire, modular type switch, earthing and required accessories as per specification No: WG-PW/SW	627.90
Point	1-9-29	Point wiring in ISI mark HMS PVC conduit with 1.5 sq.mm (2+1E) FR grade copper wire, modular type switch, earthing and required accessories as per specification No: WG-PW/SW	653.10
Point	1-9-30	Point wiring in ISI mark HMS PVC conduit with 1.5 sq.mm (2+1E) FR grade copper wire, modular type switch, earthing and required accessories as per specification No: WG-PW/SW	658.35
Point	1-9-31	Point wiring for independent plug in ISI mark HMS PVC conduit with 1.5 sq.mm (2+1E)FR grade copper wire, modular type switch, earthing and required accessories as per specification No: WG-PW/SW	832.65

Point	1-9-32	Point wiring for independent plug in ISI mark HMS PVC conduit with 1.5 sq.mm (2+1E)FR LSH grade copper wire, modular type switch, earthing and required accessories as per specification No: WG-PW/SW	845.25
	Note:-		
		1) For point wiring above 6 meters of length, add 10 % of overall rate of point wiring for every additional 1 meter length or part thereof.	0.00
		2)Point wiring starts from Main board/Intermediate switch board and suitable circuit mains are to be provided from D.B. to first board and between boards.	0.00
		3) For point wiring in stair case with 2 way control point increase overall rate by 50 % of point wiring.	0.00
		4) For wiring on stone wall add Rs 15.00 per point wiring.	0.00
		5) For covering at wall entries acrylic sheet of appropriate size shall be provided. (Refer Item No. 6-1-9)	0.00
		6) For concealed type wiring multistrand wires shall be used preferably.	0.00
		7) Earth Wire of minimum 1.5 sq mm Shall be terminated in each point	0.00
New		8) For point wiring in FRLS wire subtract 2% from overall rate of Point wiring with FRLSH Wire	0.00
		<u>1.10 Telephone, Audio and Video Wiring</u> (WG-TW/TW)	0.00
m	1-10-1	Supplying & erecting telephone copper cable 2 pair with 0.5 mm dia. laid in provided PVC casing capping/ conduit as per specification No. WG-TW	22.05
m	1-10-2	Supplying & erecting telephone copper cable 3 pair with 0.5 mm dia. laid in provided PVC casing capping / conduit as per specification No. WG-TW	27.30
m	1-10-3	Supplying & erecting telephone copper cable 4 pair with 0.5 mm dia. laid in provided PVC casing capping / conduit as per specification No. WG-TW	34.65
m	1-10-4	Supplying & erecting telephone copper cable 5 pair with 0.5 mm dia. laid in provided PVC casing capping / conduit as per specification No. WG-TW	44.10
m	1-10-5	Supplying & erecting telephone copper cable 10 pair with 0.5 mm dia. laid in provided PVC casing capping / conduit as per specification No. WG-TW	73.50
m	1-10-6	Supplying & erecting telephone copper cable 20 pair with 0.5 mm dia. laid in provided PVC casing capping / conduit as per specification No. WG-TW	130.20
m	1-10-7	Supplying & erecting telephone copper cable 50 pair with 0.5 mm dia. laid in provided PVC casing capping / conduit as per specification No. WG-TW	315.00
m	1-10-8	Supplying & erecting telephone copper cable 100 pair with 0.5 mm dia. laid in provided PVC casing capping / conduit as per specification No. WG-TW	599.55
m	1-10-9	Supplying & erecting jelly filled unarmoured telephone copper cable 10 pair with 0.5 mm dia. laid in provided PVC casing capping / conduit as per specification No. WG-TW	107.10
m	1-10-10	Supplying & erecting jelly filled unarmoured telephone copper cable 20 pair with 0.5 mm dia. laid in provided PVC casing capping / conduit as per specification No. WG-TW	169.05
m	1-10-11	Supplying & erecting jelly filled unarmoured telephone copper cable 50 pair with 0.5 mm dia. laid in provided PVC casing capping / conduit as per specification No. WG-TW	374.85
m	1-10-12	Supplying & erecting jelly filled unarmoured telephone cable 100 pair with 0.5 mm dia. laid in provided PVC casing capping/ conduit as per specification No. WG-TW	463.05

m	1-10-13	Supplying & erecting jelly filled armoured telephone copper cable 10 pair with 0.5 mm dia. laid in provided trench as per specification No. WG-TW	139.65
m	1-10-14	Supplying & erecting jelly filled armoured telephone copper cable 20 pair with 0.5 mm dia. laid in provided trench as per specification No. WG-TW	187.95
m	1-10-15	Supplying & erecting jelly filled armoured telephone copper cable 50 pair with 0.5 mm dia. laid in provided trench as per specification No. WG-TW	402.15
m	1-10-16	Supplying & erecting jelly filled armoured telephone copper cable 100 pair with 0.5 mm dia. laid in provided trench as per specification No. WG-TW	681.45
m	1-10-17	Supplying & erecting copper jumper wire with 0.5 mm dia as per specification No. WG-TW	19.95
m	1-10-18	Supplying & installing co-axial copper cable low voltage grade RG-11 as per specification No. WG-TW	67.20
m	1-10-19	Supplying & installing co-axial copper cable low voltage grade RG-6 as per specification No. WG-TW	60.90
Each	1-10-20	Supplying erecting VGA cable to be laid in Provided conduits and Terminating as per specifications having 15mtr cord length with male/female VGA connectors as per requirements complete.	2461.20
Each	1-10-21	Supplying & installing HDMI cable low voltage grade as per specification as per specifications having 3 mtr cord length with male/female 19pin HDMI connectors as per requirements complete.	1129.80
Each	1-10-22	Supplying & installing HDMI cable low voltage grade as per specification as per specifications having 5 mtr cord length with male/female 19pin HDMI connectors as per requirements complete.	2039.10
Each	1-10-23	Supplying & installing HDMI cable low voltage grade as per specification as per specifications having 10 mtr cord length with male/female 19pin HDMI connectors as per requirements complete.	4008.90
Each	1-10-24	Supplying & installing HDMI cable low voltage grade as per specification as per specifications having 15 mtr cord length with male/female 19pin HDMI connectors as per requirements complete.	4919.25
Each	1-10-25	Supplying & installing HDMI cable low voltage grade as per specification as per specifications having 20 mtr cord length with male/female 19pin HDMI connectors as per requirements complete.	6293.70
Each	1-10-26	Supplying & installing HDMI cable low voltage grade as per specification as per specifications having 25 mtr cord length with male/female 19pin HDMI connectors as per requirements complete.	9269.40
Each	1-10-27	Supplying & installing Audio Video cable low voltage grade as per specification having 15mtr cord length with required connectors 3RCA X 3RCA CABLE complete	3257.10
Each	1-10-28	Supplying & erecting HDMI extender over RJ45 Ethernet Cable Cat5e/6/7 60M 200ft complete.	5451.60
Each	1-10-29	Supply Installation Testing & commissioning of DVI to High-speed Category 2 HDMI Convertors Supporting Full HD 1080p, 2K, and 4K video up to 30 ft lengths, 3D having 24k gold-plated 19-pin Type A connectors with High-flex CL3-rated jacket. The Convertor should be RoHS compliant complete.	6906.90
Each	1-10-30	Supply, installation, testing and commissioning of DC 12V power supply.	1022.70

Each	1-10-31	Supply, installation, testing and commissioning of DC 24V power supply.	3927.00
		Notes:- RG stands for Radio Grade.	0.00
		VGA stands for Video Graphics Array.	0.00
		HDMI stands for High Definition Multimedia Interface.	0.00
		RJ stands for Registered jack.	0.00
		DVI stands for Digital Visual Interface.	0.00
		RoHS stands for Restriction of Hazardous Substances.	0.00
		<u>1.11 Telephone Accessories (WG-TW/TA)</u>	0.00
Each	1-11-1	Supplying, erecting & commissioning Main Distribution Frame (MDF) Box 50x50 pairs as per specification No. WG-TW	2033.85
Each	1-11-2	Supplying, erecting & commissioning MDF Box 60 x 60 pairs as per specification No. WG-TW	2186.10
Each	1-11-3	Supplying, erecting & commissioning MDF Box 100 x 100 pairs as per specification No. WG-TW	3323.25
Each	1-11-4	Supplying, erecting & commissioning MDF Box 150 x 150 pairs as per specification No. WG-TW	4671.45
Each	1-11-5	Supplying, erecting & commissioning MDF Box 200 x 200 pairs as per specification No. WG-TW	6814.50
Each	1-11-6	Supplying, erecting & commissioning MDF Box 250 x 250 pairs as per specification No. WG-TW	8628.90
Each	1-11-7	Supplying, erecting & commissioning MDF Box 300 x 300 pairs as per specification No. WG-TW	9847.95
Each	1-11-8	Supplying, erecting & commissioning MDF Box 400 x 400 pairs as per specification No. WG-TW	13425.30
Each	1-11-9	Supplying, erecting & commissioning MDF Box 500 x 500 pairs as per specification No. WG-TW	16164.75
Each	1-11-10	Supplying, erecting & commissioning MDF Box 600 x 600 pairs as per specification No. WG-TW	19306.35
Each	1-11-11	Supplying, erecting & commissioning MDF Box 800 x 800 pairs as per specification No. WG-TW	24831.45
Each	1-11-12	Supplying, erecting & commissioning junction box suitable for 10 pairs as per specification No. WG-TW	649.95
Each	1-11-13	Supplying, erecting & commissioning junction box suitable for 20 pairs as per specification No. WG-TW	779.10
Each	1-11-14	Supplying, erecting & commissioning junction box suitable for 30 pairs as per specification No. WG-TW	1036.35
Each	1-11-15	Supplying, erecting & commissioning junction box suitable for 40 pairs as per specification No. WG-TW	1128.75
Each	1-11-16	Supplying, erecting & commissioning junction box suitable for 50 pairs as per specification No. WG-TW	1405.95
Each	1-11-17	Supplying, erecting & commissioning junction box suitable for 60 pairs as per specification No. WG-TW	1488.90
Each	1-11-18	Supplying, erecting & commissioning junction box suitable for 100 pairs as per specification No. WG-TW	2145.15
Each	1-11-19	Supplying, erecting & commissioning junction box suitable for 150 pairs as per specification No. WG-TW	2672.25
Each	1-11-20	Supplying, erecting & commissioning 10 pair module for connection & disconnection of telephone cable as per specification No. WG-TW	346.50
Each	1-11-21	Supplying & erecting over voltage protection magazine suitable for 10 pair as per specification No. WG-TW	360.15

Each	1-11-22	Supplying & erecting rosette box RJ type Bakelite box on wall with LED indication duly connected as per specification No. WG-TW	103.95
Each	1-11-23	Supplying and erecting broadband splitter unit with 1 input & 2 output RJ 11 female connectors complete.	261.45
Job	1-11-24	Supplying, installing, testing & commissioning analogue type EPABX of 3 x 8 extensions complete.	14606.55
Job	1-11-25	Supplying, installing, testing & commissioning analogue type EPABX of 3 x 8 extensions complete with CLI and Voice DISA (Direct inward station access) as per specification No. WG-TW .	16020.90
Job	1-11-26	Supplying, installing, testing & commissioning digital (hybrid) type EPABX of 3 x 8 extensions complete.	21697.20
Job	1-11-27	Supplying, installing, testing & commissioning digital (hybrid) type EPABX of 6 x 16 extensions complete.	41441.40
Job	1-11-28	Supplying and installing, testing & commissioning of digital (hybrid) type EPABX of 6 x 24 extensions suitable upto 96 extensions complete.	56214.90
Job	1-11-29	Supplying, installing, testing & commissioning internet protocol digital type EPABX for 10 IP extensions complete.	27416.55
Each	1-11-30	Supplying, installing, testing & commissioning push button telephone instrument desk top/wall mount unit as per specification complete	750.75
Each	1-11-31	Supplying, installing, testing & commissioning push button telephone instrument desk top/wall mount with caller ID unit as per specification complete.	952.35
Each	1-11-32	Supplying, installing, testing & commissioning approved type Digital key telephone / IP telephone instrument as per specification complete.	6625.50
Each	1-11-33	Supplying, Installation, Testing & Commissioning analogue type basic plan 1+1 twin instrument telephone set without display complete.	3836.70
Each	1-11-34	Supplying, Installation, Testing & Commissioning plan analogue type plan 1+1 twin instrument telephone set with speaker phone and display complete.	5108.25
Job	1-11-35	Supplying & installing expansion cabinet for extension of digital hybrid EPABX to expand system by 32 ports with programming and configuration of extensions and direct lines with required accessories complete.	39708.90
	Note:-	1) Add Rs. 31576 /= for additional 16 extension card.	0.00
		2) Add Rs. 17089/= for additional 8 extension card.	0.00
		3) Add Rs. 18510/= for additional 8 trunks lines card.	0.00
		4) Minimum one digital key telephone instrument is essential for commissioning digital type EPABX	0.00
		5) EPABX stands for Electronic Private Automatic Branch Exchange.	0.00
		<u>1.12 Computer Cabling (WG-COC)</u>	0.00
m	1-12-1	Supplying & installing UTP networking cat-6 cable suitable for LAN / WAN Computer net-working as per specification No. WG-COC/NC	45.15
m	1-12-2	Supplying and fixing cat-6 LSZH cable suitable for LAN / WAN as per specification complete	53.55
m	1-12-3	Supplying & installing UTP networking cat-6+ cable suitable for LAN / WAN Computer net-working as per specification no. WG-COC/NC complete.	71.40
m	1-12-4	Supplying and fixing cat-6A LSZH cable suitable for LAN / WAN as per specification complete.	75.60
m	1-12-5	Supplying and fixing cat-6 STP cable suitable for LAN / WAN as per specification complete.	92.40

m	1-12-6	Supplying & installing UTP networking cat-6 cable with rodent proof jacket suitable for LAN / WAN Computer net-working as per specification No. WG-COC/NC	147.00
m	1-12-7	Supplying & installing UTP networking cat-6 armoured cable suitable for LAN / WAN Computer net-working as per specification No. WG-COC/NC	120.75
Each	1-12-8	Supplying and fixing 1 meter length, UTP patch cord of Cat 6 type in position as per specification No. WG-COC/PC	223.65
Each	1-12-9	Supplying and fixing 3 meter length, UTP patch cord of Cat 6 type in position as per specification No. WG-COC/PC	309.75
m	1-12-10	Supplying and erecting FR grade, pvc armoured multimode armoured multimode optical fibre cable with 6 fibres , with core dia 50/125 µm (OM3) suitable for 1 gbps ethernet distance at 850 nm of wavelength, on wall/ceiling or laid in provided pipe/trench as per specification No. WG-COC/OFC LSZH	201.60
m	1-12-11	Supplying and erecting LSZH armoured multimode optical fibre cable with 12 fibres with core dia 50/125 µm (OM3), suitable for 1 gbps ethernet distance at 850 nm of wavelength, on wall/ceiling or laid in provided pipe/trench as per specification No. WG-COC/OFC	295.05
m	1-12-12	Supplying and erecting LSZH armoured multimode optical fibre cable with 24 fibres with core dia 50/125 µm (OM3), suitable for 1 gbps ethernet distance at 850 nm of wavelength, on wall/ceiling or laid in provided pipe/trench as per specification No. WG-COC/OFC	434.70
m	1-12-13	Supplying and erecting LSZH armoured multimode optical fibre cable with 6 fibres , with core dia 50/125 µm (OM4) suitable for 1 gbps ethernet distance at 850 nm of wavelength, on wall/ceiling or laid in provided pipe/trench as per specification No. WG-COC/OFC	1111.95
m	1-12-14	Supplying and erecting LSZH armoured multimode optical fibre cable with 12 fibres , with core dia 50/125 µm (OM4) suitable for 1 gbps ethernet distance at 850 nm of wavelength, on wall/ceiling or laid in provided pipe/trench as per specification No. WG-COC/OFC	1844.85
m	1-12-15	Supplying and erecting LSZH armoured multimode Optical Fibre Cable with 24 fibres , with core dia 50/125 µm (OM4) suitable for 1 gbps ethernet distance at 850 nm of wavelength, on wall/ceiling or laid in provided pipe/trench as per specification No. WG-COC/OFC	3150.00
Each	1-12-16	Supplying and plugging FRLS duplex 3 meter length, Fibre Patch cord LC-SC MM (50) OM3 LSZH duplex complete as per specification No. WG-COC/FPC	2433.90
Each	1-12-17	Supplying and plugging FRLS duplex 3 meter length, Fibre Patch cord LC-SC MM (50) OM4 LSZH duplex complete as per specification No. WG-COC/FPC	2785.65
Each	1-12-18	Supplying and plugging FRLS duplex 3 meter length, fibre Patch cord LC-LC MM(50) OM3 LSZH duplex complete as per specification No. WG-COC/FPC	2933.70
Each	1-12-19	Supplying and plugging FRLS duplex 3 meter length, fibre patch cord LC-LC MM(50) OM4 LSZH duplex complete as per specification No. WG-COC/FPC	4319.70
Each	1-12-20	Supplying and fixing 2 meter length, UTP patch cord of cat 6 type in position as per specification No. WG-COC/PC	265.65
	Note:-	Cat-6 stands for Category-6 cable.	0.00
		LSZH stands for Low Smoke Zero Halogen.	0.00
		UTP stands for Unshielded twisted pair.	0.00
		FRLS stands for Flame Retardant Low Smoke.	0.00
		LAN stands for Local Area Network.	0.00
		WAN stands for Wide Area Network.	0.00
		<u>1.13 Networking Components (WG- NWC)</u>	0.00

Each	1-13-1	Supplying, fixing, and configuring web smart power over ethernet switch of 24 ports on provided rack or as directed as per specification No. WG-NWC/ENS	47967.15
Each	1-13-2	Supplying, fixing, and configuring Managed L2 Power over Ethernet Switch of 20 Ports + 4G Combo Port as per specification complete.	113633.10
Each	1-13-3	Supplying, fixing, and configuring 589Watt redundant power Supply system as per specification complete.	81411.75
Each	1-13-4	Supplying, fixing, and configuring ethernet managed ethernet switch of 24 ports with 2 SFP + 2 combo port and web view/CLI on provided rack or as directed as per specification no. WG-NWC/GBS	30287.25
Each	1-13-5	Supplying, fixing, and configuring GB managed ethernet layer 2 switch of 20 Ports + 4 SFP combo and web View/CLI as per specification complete.	56852.25
Each	1-13-6	Supplying, fixing, and configuring 10G base -SR SFP plus MM transceiver as per specification complete.	43613.85
Each	1-13-7	Supplying, fixing, and configuring layer 3/ 20 10/100/1000 base-T ports + 4 combo 10/100/1000Base-T/SFP ports + 4 10GE SFP+ ports - SI Image as per specification complete.	250999.35
Each	1-13-8	Supplying, fixing, and configuring 10G Base -SR SFP plus MM transceiver as per specification complete.	49681.80
Each	1-13-9	Supplying, fixing, and configuring 1-port mini-GBIC SX mutli-mode fibre transceiver (up to 550m, support 3.3V power) as per specification complete.	11246.55
Each	1-13-10	Supplying, fixing, and configuring broadband ADSL router with all accessories, on provided rack or as directed as per specification No. WG-NWC/ADSL	4397.40
Each	1-13-11	Supplying, fixing, and configuring modularised multi-service router as per specification complete.	158504.85
Each	1-13-12	Supplying, fixing, and configuring dual-path serial card as per specification complete.	36291.15
Each	1-13-13	Supplying, fixing, and configuring DB-60 (male) to 2 x DB-34 (male) for V.35 DTE as per specification complete.	3216.15
		Notes:- CLI stands for Command Language Interpreter.	0.00
		SFP stands for Small Form-factor Pluggable.	0.00
		GBIC stands for Gigabit Interface Converter.	0.00
		ADSL sands for Asymmetric digital subscriber line.	0.00
		<u>1.14 Networking Accessories (WG-NAS)</u>	0.00
Each	1-14-1	Supplying, installing & testing UTP connector (RJ-45) as per specification No. WG-NAS/UTPC.	88.20
Each	1-14-2	Supplying and fixing tool-less Information Outlet (Ethernet) flush/surface type in provided modular box as per specification no. WG-NAS/IO	444.15
Each	1-14-3	Supplying and fixing tool-less shutter keystone jack (RJ-45) in provided Patch Panel complete as per specification no. WG-NAS/KJ	101.85
Each	1-14-4	Supplying and fixing 24 port patch panel with tool-less keystone jacks in provided U Rack complete as per specification no. WG-NAS/PP	10517.85
Each	1-14-5	Supplying and fixing rack mounted type 12 Ports, light guide unloaded interconnect unit with adapter panel for termination of optical fibre cables on wall/ provided U rack complete as per specification no. WG-NAS/ LIU	4107.60
Each	1-14-6	Supplying and fixing wall mount 12 Ports, light guide unloaded interconnect unit with adapter panel as per specification complete.	4245.15
Each	1-14-7	Supplying and fixing 1 x 6 duplex adapter panel - SC as per specification complete.	290.85

Each	1-14-8	Supplying and fixing rack type 24 ports, light guide interconnect unit with adapter panel for termination of optical fibre cables on wall/ provided U rack complete as per specification no. WG-NAS/ LIU	4376.40
Each	1-14-9	Supplying and fixing wall mount 24 ports, light guide interconnect unit with adapter panel as per specification complete	4777.50
Each	1-14-10	Supplying and fixing 1 x 12 duplex adapter panel - SC as per specification complete	315.00
Each	1-14-11	Supplying and fixing SC/LC type multimode duplex adapter to couple two connectors between OFC & Fibre switch/Fibre module as per specification no. WG-NAS/MMA	521.85
Each	1-14-12	Supplying and fixing SC/LC type Multimode Duplex Adapter as per specification complete	529.20
Each	1-14-13	Supplying and fixing SC/LC type Multimode Pigtaills (OM3) for LIU to terminate OFC in LIU as per specification No. WG-NAS/LIU2	658.35
Each	1-14-14	Supplying and fixing SC/LC type multimode pigtaills (OM3) as per specification complete.	749.70
Each	1-14-15	Supplying and fixing SC/LC type multimode pigtaills (OM4) as per specification complete.	1179.15
Each	1-14-16	Supplying and fixing power over ethernet adaptor to provide DC supply to Ethernet devices as per specification No. WG-NAS/PEA	3962.70
Each	1-14-17	Supplying and fixing 36 U rack for networking with necessary arrangement for fixing required 16A/6A switches & plugs for LAN network as per specification No. WG-NAS/RAK	5614.35
Each	1-14-18	Supplying and fixing 6U wall mount rack (Dimension-DxWxH – 450x550x367 mm) as per specification No. WG-NAS/RAK	6618.15
Each	1-14-19	Supplying and fixing 9U wall mount rack (Dimension-DxWxH – 450x550x500 mm) as per specification No. WG-NAS/RAK	7947.45
Each	1-14-20	Supplying and fixing 12U wall mount rack (Dimension-DxWxH – 450x550x635 mm) as per specification No. WG-NAS/RAK	8836.80
Each	1-14-21	Supplying and fixing 15U wall mount rack (Dimension-DxWxH – 450x550x767 mm) as per specification No. WG-NAS/RAK	10069.50
Each	1-14-22	Supplying and fixing 17U floor mount rack (Dimension-DxWxH – 800x600x954mm) as per specification No. WG-NAS/RAK	33884.55
Each	1-14-23	Supplying and fixing 22 U floor mount rack (Dimension-DxW – 800x600x 1176mm) as per specification No. WG-NAS/RAK	37968.00
Each	1-14-24	Supplying and fixing 24 4 U floor mount rack (Dimension-DxW – 800x600x1265 mm) as per specification No. WG-NAS/RAK	44068.50
Each	1-14-25	Supplying and fixing 27 4 U floor mount rack (Dimension-DxW - 800X600x 1398mm) as per specification No. WG-NAS/RAK	48693.75
Each	1-14-26	Supplying and fixing 32 4U floor mount server Rack (Dimension-DxW - 800X1000 x1620mm) as per specification No. WG-NAS/RAK	61260.15
Each	1-14-27	Supplying and fixing 42 U floor mount server Rack (Dimension-DxW – 800x1000 x2070mm) as per specification No. WG-NAS/RAK	78768.90
Each	1-14-28	Supplying and fixing 6 U IP66 outdoor mount server rack with pole mount bracket (Dimension-DxW - 450X550 mm) as per specification No. WG-NAS/RAK	26935.65
Each	1-14-29	Supplying and fixing 9U IP66 outdoor mount server rack with pole mount bracket (Dimension- DxW - 450X550 mm) as per specification No. WG-NAS/RAK	32713.80
Each	1-14-30	Supplying and fixing 36U floor mount rack (Dimension-DxWxH – 800x600x1600 mm) as per specification No. WG-NAS/RAK	50385.30

Each	1-14-31	Supplying and fixing 42U floor mount rack (Dimension-DxWxH – 800x600x1866 mm) as per specification No. WG-NAS/RAK	65679.60
Each	1-14-32	Supplying and fixing wireless n 150 desktop adapter in provided computer as per specification No. WG-NAS/LANC2	1287.30
Each	1-14-33	Supplying and fixing manageable wireless dual-band 802.11 n/ac unified wireless access point in WLAN network as per specification no. WG-NAS/LAP1	21409.50
Each	1-14-34	Supplying and fixing 11n 2.4 GHz single band PoE Standalone/Software based access point as per specification complete.	24460.80
Each	1-14-35	Supplying and fixing high performance manageable wireless ac unified concurrent dual-band access point w PoE in WLAN network as per specification no. WG-NAS/LAP2	27433.35
Each	1-14-36	Supplying and fixing 11AC dual-band PoE standalone/software based access point as per specification complete.	32309.55
Each	1-14-37	Supplying and fixing 4x10/100/1000 mbps RJ-45 ports +4x100/1000 mbps SFP combo ports controller as per specification complete.	139044.15
Each	1-14-38	Supplying, installing and activating physical license pack software for supporting 32 additional APs on DWS-2000 complete.	33774.30
Each	1-14-39	Supplying, installing and activating physical license pack software for supporting 64 additional APs on DWS-2000 complete.	48890.10
Each	1-14-40	Supplying, fixing, and configuring 8-ports 10/100/1000Mbps unmanaged gigabit PoE Switch complete.	16332.75
Each	1-14-41	Supplying, fixing, and configuring 8-ports managed gigabit switches layer-2 , 10/100/1000 base-T PoE smart switch plus 2 SFP only complete.	23159.85
Each	1-14-42	Supplying, fixing, and configuring 20 SFP ports + 4 Combo SFP/10/100/1000Base-T complete.	191965.20
Each	1-14-43	Supplying, fixing, and configuring 48 ports managed gigabit switches layer-2 48 10/100/1000Base-T ports L2+ Management Switch with 4 10GE SFP+ ports complete.	180371.10
Each	1-14-44	Supplying, fixing, and configuring managed gigabit switches 48 Ports 10/100/1000Mbps + 4 SFP Ports complete.	61371.45
Each	1-14-45	Supplying, fixing, and configuring media convertor 1000Base-T to 1000 base-SX SC multi-mode media converter (550m) complete.	12791.10
m	1-14-46	Supplying & installing UTP networking cat 7 cable , 4 pair 23 AWG cat6A LSZH LAN cable , standards like ANSI/TIA 568 C.2, EN50173, IEC 11801 2nd ED, 600Mhz Speed frequency tested upto 700Mhz with third party certificate etc complete.	133.35
m	1-14-47	Supplying & installing single mode OS1/OS2 - armoured - 6 core OS1/OS2 armoured single mode optical fibre of size 50/125µm. 10/40 gbps speed in provided underground HDPE pipe complete.	96.60
m	1-14-48	Supplying & installing single mode OS1/OS2 - armoured - 12 core OS1/OS2 armoured single mode optical fibre of size 50/125µm. 10/40 gbps speed in provided underground HDPE pipe complete.	110.25
Each	1-14-49	Supplying & installing single mode fibre patch cord 3 m – duplex complete.	2215.50
Each	1-14-50	Supplying & installing single mode fibre adapter with plate - 6 port complete.	4021.50
Each	1-14-51	Supplying & installing single mode simplex pigtail complete.	665.70
Each	1-14-52	Supplying and fixing IP66 enclosure for fibre splicing as per specification complete	8116.50

	Note:- OM stands for Optical Mode.	0.00
	IP stands for Ingress Protection.	0.00
	PoE stands for Power over Ethernet.	0.00
	APs stands for Access Points.	0.00
	AWG stands for American Wire Gauge.	0.00
	OS stands for Optical Singlemode.	0.00
	<u>1.15 Dismantling (WG-DM)</u>	0.00
Point	1-15-1 Dismantling the existing light, fan, bell, clock, independent plug point, wiring including circuit mains of all types along with accessories etc. complete as per specification No: WG-DM/PW	7.35
m	1-15-2 Dismantling the existing Telephone / Lan / Wan / TV cables and wires of all sizes along with casing-capping / conduit complete as per specification No: WG-DM/PW	5.25
m	1-15-3 Dismantling the existing aluminium /copper mains, sub-mains wiring upto 10 sq mm. along with accessories etc complete as per specification No: WG-DM/PW	3.15
	Note:- Dismantled material of point wiring / circuit mains/ sub-mains / telephone / LAN / WAN / TV wires / cables shall be retained by contractor.	0.00
		0.00
	Above items are conforming to relevant IS as mentioned below	0.00
	IS 9537 (Part 1) :1980- Conduits for electrical installations-Part1 General requirements.	0.00
	IS 9537 (Part 2) :1981 - Specification for conduits for electrical Installation Part-II Rigid Steel Conduit.	0.00
	IS 9537 (Part-3) :1983- Specification for conduits for electrical installations Rigid plain conduit of insulating material	0.00
	IS 14927 :2001 -Cable Trunking and ducting systems for electrical installations	0.00
	IS 694 :2010 -PVC insulated cables for voltage upto including 1100 V	0.00
	IS 3854 :1997 - Switches for Domestic and similar purposes -specification.	0.00
	IS 1293 :2005 - Plug and socket outlets of rated voltage upto and including 250 volt and rated upto and including 16 Amperes- Specification.	0.00
	IS 371: 1999 - Ceiling Rose-Specification	0.00
	IS 11037 :1984 -Specification for electronic type Fan Regulator	0.00
	IS 14772 : 2000 - General requirements for enclosures for accessories for household and similar fixed electrical installations-Specification.	0.00
	IS 732 :1989 - Code of practice for electrical wiring installations	0.00
	IS 4648:1968 - Guide for electrical layout in residential building	0.00
	IS 2532 :1965 -Hard-drawn copper wire for telegraph and telephone purposes.	0.00
		0.00
		0.00
		0.00
	Chapter:	0
	2	0
	Fittings	0
	(FG)	0
		0
(FG-IDF/LED)	2.1 Indoor Fittings	0

Each	2-1-7	Supplying and erecting square shaped CRCA /die-cast aluminium powder coated housing LED panel light (slim edge-lit) suitable for 9 W - 12 W with provision for plane front frame with translucent cover fixed to the housing complete.	802.20
Each	2-1-8	Supplying and erecting square / round shaped CRCA /die-cast aluminium powder coated housing LED panel (slim edge-lit) light suitable for 13W to18W with provision for plane front frame with translucent cover fixed to the housing complete.	976.50
Each	2-1-9	Supplying and erecting CRCA /die-cast aluminium powder coated housing LED panel light (slim edge-lit) square / round shape suitable for 19 to 24 W with provision for plane front frame with translucent cover fixed to the housing complete.	1665.30
Each	2-1-10	Supplying and erecting square / rectangular shaped CRCA /die-cast aluminium powder coated housing LED panel (slim edge-lit) light suitable for 25 to 32W with provision for plane front frame with translucent cover fixed to the housing complete.	3141.60
Each	2-1-11	Supplying and erecting square shaped CRCA /die-cast aluminium powder coated housing LED panel light (slim edge-lit) 600x600mm suitable for 36 W-40W with provision for plane front frame with translucent cover fixed to the housing complete.	3734.85
Each	2-1-12	Supplying and erecting rectangular shaped CRCA /die-cast aluminium powder coated housing LED panel (slim edge-lit) 300x1200mm of suitable for 36 to 40 W with provision for plane front frame with translucent cover fixed to the housing complete.	3564.75
Each	2-1-13	Supplying and erecting LED flexible strip light 5m length upto 25W conforming IP 65 of any colour with driver complete.	2155.65
Each	2-1-14	Supplying and erecting LED flexible strip light 5m length upto 75W conforming IP 65 of any colour with driver complete.	4607.40
Each	2-1-15	Supplying LED concealed type foot / step light with PVC body for indoor application suitable for upto 5 W LED including driver and erecting by making necessary arrangement/recess in wall to make it flush with surface	542.85
Each	2-1-16	Supplying LED concealed type foot / step light with aluminium body for indoor/ outdoor application suitable for upto 4W-6W LED including driver and erecting by making necessary arrangement/recess in wall to make it flush with surface.	1939.35
Each	2-1-17	Making suitable size recess in any type of false ceiling for erection of flush type down lighter and finishing the background to match the original surface upto 20W	71.40
Each	2-1-18	Making suitable size of recess in any type of false ceiling for erection of flush type LED panel light 600mm x 600mm and finishing the background to match the original ceiling surface.	122.85
Each	2-1-19	Supplying and erecting corridor/passage light fitting (2 feet) including 9W LED lamp, comprises of extruded channel in plastic silver grey colour & with same plastic end cap on provided PVC block / wooden board.	517.65
Each	2-1-20	Supplying and erecting corridor/Passage light fitting (2 feet) including 18W LED lamp, comprises of extruded channel in plastic silver grey colour & with same plastic end cap on provided PVC block / wooden board.	726.60
Each	2-1-21	Supplying and erecting decorative oval bulk head edge-lit 10W LED luminaire comprising of high brightness LED Fitting on provided PVC block / wooden board.	1421.70
Each	2-1-22	Supplying & erecting LED 18W tube light fitting (4 feet) with polycarbonate housing , heat sink, integrated HF electronic driver complete.	600.60
Each	2-1-23	Supplying & erecting LED 20W tube light fitting (4 feet) with aluminium housing , heat sink, integrated HF electronic driver complete.	924.00

Each	2-1-24	Supplying and erecting LED Mirror Light with integrated driver including 7W to 9W lamp with polycarbonate housing and opal diffuser to be fixed above mirror or as required on clamps complete.	969.15
Each	2-1-25	Supplying and erecting LED Mirror Light with integrated driver including 14W to 18W lamp with polycarbonate housing and opal diffuser to be fixed above mirror or as required on clamps complete.	1283.10
	Note:-		
		1) System efficacy shall not be less than 90 lumens/watt,	0.00
		2) CRI shall be more than 80.	0.00
		3) Total harmonic distortion voltage and current shall be less than 10%	0.00
		4) Operating voltage range shall be in range of 160V to 270V	0.00
		5) Power Factor of Luminaire shall be more than 0.95	0.00
		6) Luminaire shall conform to respective IS.	0.00
		7) Luminaire shall withstand surge protection upto 2 kV	0.00
		8) Luminaire shall carry minimum three years warrantee.	0.00
		9) Correlated Colour Temperature (CCT) shall be required between 2700K-6500K.	0.00
			0.00
			0.00
			0.00
		<u>2.2 Decorative Indoor Fittings (FG-IDF)</u>	
Each	2-2-1	Supplying shock proof type Hand Lamp with lamp holder, guarded glass and 10 m of 3 core PVC flexible cord with hand shield type 3 pin 6 amp plug top.	163.80
Each	2-2-2	Supplying Integrated LED emergency type rechargeable table lamp of 4.5W with battery of 2000 mAh capacity with continues backup of 3hrs including with charging cord suitable for 230V AC power supply.	1314.60
Each	2-2-3	Supplying and erecting plain pendent type bakelite lamp holder complete erected at position with necessary length of twin flexible wire.(upto 1m)	38.85
Each	2-2-4	Supplying and erecting plain pendent type brass lamp holder complete erected at position with 20 cms glass opal shade with necessary length of twin twisted flexible wire 24 / 0.20 mm. (upto 1m)	97.65
Each	2-2-5	Supplying and erecting bulkhead fitting suitable for upto LED upto 12W fixed on wall. As per specification no. FG-IDF/BHF	233.10
Each	2-2-6	Supplying and erecting moon type decorative wall/ceiling mounted fixture including LED upto 12W circular/square type with opaque diffuser and electronic driver including bracket complete.	1735.65
Each	2-2-7	Supplying and erecting 1 light wall bracket Aluminium body & arm anodised / powder coated with decorative glass shade fixed on wall.	282.45
Each	2-2-8	Supplying and erecting 2 light wall bracket Aluminium body & arm anodised / powder coated complete with lamp holder and decorative glass shade suitably erected on polished wooden board / plywood pasted with laminate.	376.95
Each	2-2-9	Supplying and erecting 1 light fancy wall bracket with arm fabricated from brass duly lacquered with suitable holder and fancy glass shade duly wired erected on wall with suitable size of polished wooden / laminated board.	458.85
Each	2-2-10	Supplying and erecting 2 light fancy wall bracket with arm fabricated from brass duly lacquered with suitable holder and fancy glass shade duly wired erected on wall with suitable size of polished wooden / laminated board.	738.15
Each	2-2-11	Supplying & erecting suspension type decorative pendent fitting single light with anodized aluminium / powder coated MS rod up to 1 m length and canopy on top provided with decorative glass shed duly wired with two core flat wire suitable lamp holder complete.	414.75

Each	2-2-12	Supplying & erecting suspension type decorative fitting with rise /fall arrangement, 1 light inside semi-circular metallic reflector with counterweight with guide pulley / spring buffer with work shop type copper flexible wire complete with necessary hook, if required.	1424.85
Each	2-2-13	Erection of departmentally supplied fitting on PVC block connected with necessary leads for 4 ft. 40 Watts fitting or 2 ft. 20 W fitting.	57.75
Each	2-2-14	Erection of departmentally supplied surface/recess type decorative fitting with LED on PVC block connected with necessary leads.	56.70
	2-2-15	<u>2.3 General Indoor Fitting (FG-IDF)</u>	0.00
Each	2-2-16	Supplying and erecting 2 x 36 / 40W FTL corrosion proof capsule type in non-corrosive polycarbonate housing and prismatic polycarbonate cover with individual high power electronic ballast saving Power factor >0.9 and working voltage range of 170 - 270V AC, IP 65 protection suitable for cold storage areas to be fixed in false ceiling or at ceiling or on wall complete.	3500.70
		Note for 1) Reduce rate by Rs. 10/- if fitting is to be erected on existing boards/blocks.	0.00
		2.2 & 2.3	0.00
		2) In all fittings (excluding LED fittings) cost of lamps or tubes shall be added separately.	0.00
		<u>2.4 Accessories for Indoor Fittings (FG-AS)</u>	0.00
Each	2-4-1	Supplying and erecting low watt loss vacuum impregnated copper choke (VPIT) suitable for FTL upto 20 W as per specification No FG/AS1	239.40
Each	2-4-2	Supplying and erecting low watt loss vacuum impregnated copper choke (VPIT) suitable for FTL from 24 to 40 W as per specification No. FG/AS1	231.00
Each	2-4-3	Supplying and erecting electronic ballast , pf > 0.9 or transformer suitable for T5 lamp upto 28 W as per specification No. FG-FG/AS1	236.25
Each	2-4-4	Supplying and erecting electronic ballast , pf > 0.9 or transformer suitable for FTL upto 40 W as per specification No. FG-FG/AS1	267.75
Each	2-4-5	Supplying 18 / 20 /36 / 40 W tube starter 230 V as per specification No. FG-FG/AS11	13.65
m	2-4-6	Supplying and erecting double suspension heavy duty lacquered iron chain with hooks for erecting fluo. tube light fitting(for erecting various fixtures like FTL, LED, etc) with necessary shielded copper flexible wire three core of 1 sq mm for connecting leads. (for measurements half of the actual length used)	42.00
m	2-4-7	Supplying and erecting double suspension pipe rod of 16 gauge 20mm.dia H. G. conduit duly threaded and painted with two coats of enamel paint for erection of fluo. tube light fitting with necessary check nuts and shielded copper flexible wire three core of 1 sq mm for connecting leads (for measurements half of the actual length both pipes used)	193.20
Each	2-4-8	Supplying and erecting ball suspension plate cast aluminium erected with spring on wooden block in position.	35.70
Each	2-4-9	Providing and erecting clamps for box type / industrial type fittings with provided suspension down rod of 20 mm dia. H.G. conduit, the clamp shall be made of 25 x 3 (mm) MS flat with cutting, bending, drilling erected properly with necessary nut bolt as per direction.	80.85
Each	2-4-10	Supplying and fixing wiremesh (Jali) cover suitable for fitting / fan or for any purpose, complete with necessary materials. The jali cover shall be made from good quality G.I. wire mesh size 25 x 25 (mm) and made up of 14 SWG G.I. wire with side / supporting MS strips of suitable size.	439.95
Each	2-4-11	Supplying and erecting bakelite call bell with 6 cm / buzzer with double coil suitable for 230V complete erected on PVC block.	73.50

Each	2-4-12	Supplying and erecting gong with double coil suitable for 230V complete erected on polished wooden block.	109.20
Each	2-4-13	Supplying and erecting ding dong / electronic musical type call bell with heavy duty coil suitable to operate on 230V A.C. supply erected on polished double wooden block/sunmica block of suitable size	130.20
Each	2-4-14	Supplying and erecting luminous / modular type call bell indicator with plastic body , heavy duty coil and indicator lamp working on 230V A.C. supply with resetting arrangement complete erected on double wooden/ sunmica board	226.80
Each	2-4-15	Supplying and erecting Electronic Type cordless call bell erected on T.W. board having portable bell push working on 9V D.C. battery and (effective range upto 45 meter) bell on 250 V A.C. supply.	525.00
Each	2-4-16	Supplying and erecting condenser 4 microfarad for fluo. Fitting as per specification no FG-FG/AS7.	84.00
Each	2-4-17	Supplying and erecting electronic type 600 W dimmer complete erected on provided switch board.	159.60
Each	2-4-18	Supplying and erecting electronic type 300/450 W dimmer complete erected on provided switch board.	165.90
Each	2-4-19	Supplying and erecting electronic type driver for indoor LED upto 9W fixtures suitable to operate on 230V A.C. 50 Hz. Having pf>0.95 and THD<10%.	353.85
Each	2-4-20	Supplying and erecting electronic type driver for indoor LED upto 10W-18W fixtures suitable to operate on 230V A.C. 50 Hz. Having pf>0.95 and THD<10%.	451.50
Each	2-4-21	Supplying and erecting electronic type driver for indoor LED upto 19W-24W fixtures suitable to operate on 230V A.C. 50 Hz. Having pf>0.95 and THD<10%.	678.30
Each	2-4-22	Supplying and erecting electronic type driver for indoor LED upto 25W-40W fixtures suitable to operate on 230V A.C. 50 Hz. Having pf>0.95 and THD<10%.	693.00
		Note:- Use of electronic chokes, energy saving accessories shall be made preferably.	0.00
		<u>2.5 Outdoor Fittings (FG-ODF/LED)</u>	0.00
Each	2-5-1	Supplying and erecting LED street light fitting 12 to 18 W , with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete as per specification No FG-ODF/FLS-2 .	1703.10
Each	2-5-2	Supplying and erecting LED street light fitting suitable for 20 to 25W , with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete as per specification No FG-ODF/FLS-2 .	2000.25
Each	2-5-3	Supplying and erecting LED street light fitting suitable above 26W to 36W lamp, including lamp, with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete as per specification No FG-ODF/FLS2 .	2742.60
Each	2-5-4	Supplying and erecting LED Street light fitting suitable for above 40W to 48W lamp, including lamp, with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS2 .	3637.20
Each	2-5-5	Supplying and erecting LED street light fitting suitable for 60W lamp, including lamp , with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete as per specification No FG-ODF/FLS-2 .	5524.05

Each	2-5-6	Supplying and erecting LED street light fitting suitable for above 70W- 75 lamp, including lamp, with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS2	6120.45
Each	2-5-7	Supplying and erecting LED street light fitting suitable for above 75W - 90W lamp, including lamp, with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No. FG-ODF/FLS2.	7478.10
Each	2-5-8	Supplying and erecting LED street light fitting 100W , including lamp, with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2 .	8646.75
Each	2-5-9	Supplying and erecting LED street light fitting 120 W , including lamp, with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2 .	10542.00
Each	2-5-10	Supplying and erecting LED street light fitting 150 W , including lamp, with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2 .	16145.85
Each	2-5-11	Supplying and erecting LED street light fitting suitable for 160 -170 W , including lamp, with PF > 0.95 class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2	18517.80
Each	2-5-12	Supplying and erecting LED Flood light fitting of 30-40W, including lamp, with PF 0.95,class IP 65 and above class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2	2706.90
Each	2-5-13	Supplying and erecting LED Flood light fitting of 50W , including lamp, with PF > 0.95,class IP 65 and above class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2	4099.20
Each	2-5-14	Supplying and erecting LED Flood light fitting of 70- 80W , including lamp, with PF > 0.95,class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2	7401.45
Each	2-5-15	Supplying and erecting LED Flood light fitting of 90-100W , including lamp, with PF > 0.95, class IP 65 and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2	9989.70
Each	2-5-16	Supplying and erecting LED Flood light fitting of 120W , including lamp, with PF > 0.95,class IP 65 and above Housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2	12392.10
Each	2-5-17	Supplying and erecting LED Flood light fitting of 150W , including lamp, with PF > 0.95,class IP 65 and above Housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2	15262.80
Each	2-5-18	Supplying and erecting LED Flood light fitting of 200W , including lamp, with PF > 0.95,class IP 65 and above Housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete per specification No FG-ODF/FLS-2	22552.95
Each	2-5-19	Supplying and erecting Recess mounted 20W LED wall washers , tilted 70° outwards and swivels 360° to offer best illumination on the wall with any colour with driver complete. (Including Compatible Driver)	3733.80
Each	2-5-20	Supplying and erecting Recess mounted 30W LED wall washers , tilted 70° outwards and swivels 360° to offer best illumination on the wall with any colour with driver complete. (Including Compatible Driver)	5118.75

Each	2-5-21	Supplying & erecting 12W LED PAR (30 Lamp E-27 Base, SPOTO series) lights by making necessary arrangement/recess in wall to make it flush with surface.	1462.65
Each	2-5-22	Supplying & erecting 20W LED PAR (30 Lamp E-27 Base, SPOTO series) lights by making necessary arrangement/recess in wall to make it flush with surface.	2836.05
Each	2-5-23	Supplying & erecting 15W LED series PAR lights by making necessary arrangement/recess in wall to make it flush with surface.	5017.95
Each	2-5-24	Supplying and erecting cylindrical shaped integral decorative with high power 12W-16W LED bollard upto 1000mm with opal acrylic diffuser and IP65 protection on provided foundation complete.	3700.20
Each	2-5-25	Supplying and erecting mushroom shaped integral 12W-16W LED decorative bollard upto 680mm with IP65 protection on provided foundation complete.	6538.35
Each	2-5-26	Supplying and erecting 40W LED post top made in cast aluminium spigot housing with decorative clear opal acrylic diffuser and IP65 protection on provided pole/ bracket.	6507.90
Each	2-5-27	Erecting the departmentally supplied WP LED street light / flood light fitting upto 80W.	87.15
Each	2-5-28	Erecting departmentally supplied LED street light/ flood light Fitting upto 150W .	128.10
Each	2-5-29	Erecting departmentally supplied LED street light/ flood light Fitting upto 400W .	155.40
	Note:-	1) System efficacy shall not be less than 90 lumens/watt.	0.00
		2) CRI shall be more than 70.	0.00
		3) Total harmonic distortion voltage and current shall be less than 10%	0.00
		4) Operating voltage range shall be in range of 160V to 270V	0.00
		5) Power Factor of Luminaire shall be more than 0.95	0.00
		6) Luminaire shall conform to respective IS.	0.00
		7) Luminaire shall withstand surge protection upto 3 kV.	0.00
		8) Luminaire shall carry minimum three years warrantee.	0.00
		9) Correlated Color Temperature (CCT) shall be required between 2700K-6500K.	0.00
		10) There shall be provision for termination of earth connection.	0.00
		<u>2.6 Decorative Outdoor Fittings (FG-ODF)</u>	0.00
Each	2-6-1	Supplying and erecting Gate/garden light fitting with 200mm dia. glass bowl suitable for upto 12W LED lamp on provided pipe as per specification No. FG-ODF/ GLT	494.55
Each	2-6-2	Supplying and erecting Gate/garden light fitting with 300mm dia. glass bowl suitable for upto 12W LED lamp on provided pipe as per specification No. FG-ODF/ GLT	1071.00
Each	2-6-3	Supplying & erecting integral post top lantern fixtures (mushroom type) suitable for LED lamp upto 12 W consisting of clear acrylic top cover, cast aluminium pole cap complete with accessories on provided pole /bracket as per specification no. FG-ODF/PTL	2013.90
Each	2-6-4	Supplying & erecting integral post top lantern fixtures (globe type) suitable for LED lamp upto 12 W consisting of aesthetic round clear acrylic top cover, cast aluminium pole cap on provided pole /bracket as per specification no. FG-ODF/ PTL	1791.30
Each	2-6-5	Supplying & erecting integral post top lantern fixtures (light house type) suitable upto LED 18 W Lamp consisting of combination of spun aluminium canopy & clear acrylic top cover, cast aluminium pole cap on provided pole/ bracket as per specification no. FG-ODF/PTL (NEW)	1858.50
		<u>2.7 Highbay LED Fittings (FG-ODF/LED)</u>	0.00

Each	2-7-1	Supplying and erecting highbay LED fitting IP 65 with lamp 70W-80W , PF >0.95 duly connected complete with accessories as per specification no. FG-ODF/LED	10376.10
Each	2-7-2	Supplying and erecting highbay LED fitting IP 65 with lamp 110W-120W , PF >0.95 duly connected complete with accessories as per specification no. FG-ODF/LED	13041.00
Each	2-7-3	Supplying and erecting highbay LED fitting IP 65 with lamp 140W-150W , PF >0.95 duly connected complete with accessories as per specification no. FG-ODF/LED	16110.15
		<u>2.8 Street/Flood Light Fittings (FG-ODF)</u>	0.00
Each	2-8-1	Supplying and erecting street light fitting suitable for 70W H.P.S.V. lamp with accessories complete on provided bracket as per specification no. FG-ODF/GSL	2361.45
Each	2-8-2	Supplying and erecting street light fitting suitable for 150W H.P.S.V. lamp complete with accessories on provided bracket as per specification no. FG-ODF/GSL	2931.60
Each	2-8-3	Supplying and erecting street light fitting suitable for 250W H.P.S.V. lamp complete with accessories on provided bracket as per specification no. FG-ODF/GSL	3637.20
Each	2-8-4	Supplying and erecting street light fitting suitable for 400W H.P.S.V. lamp complete with accessories on provided bracket as per specification no. FG-ODF/GSL	4895.10
Each	2-8-5	Supplying and erecting street light fitting suitable for 70W metal halide lamp complete with accessories on provided bracket as per specification no. FG-ODF/GSL	2631.30
Each	2-8-6	Supplying and erecting street light fitting suitable for 150W metal halide lamp complete with accessories on provided bracket as per specification no. FG-ODF/GSL	3137.40
Each	2-8-7	Supplying and erecting street light fitting suitable for 250W metal halide lamp complete with accessories on provided bracket as per specification no. FG-ODF/GSL	3911.25
Each	2-8-8	Supplying and erecting street light fitting suitable for 400W metal halide lamp complete with accessories on provided bracket as per specification no. FG-ODF/GSL	4895.10
Each	2-8-9	Supplying and erecting flood light luminaries suitable for 70WH.P.S.V. lamp complete with accessories on provided bracket as per specification no. FG-ODF/GSL	3361.05
Each	2-8-10	Supplying and erecting flood light luminaries suitable for 150W H.P.S.V. lamp complete with accessories on provided bracket as per specification no. FG-ODF/GFL	5073.60
Each	2-8-11	Supplying and erecting flood light luminaries suitable for 250W H.P.S.V. lamp complete with accessories on provided bracket as per specification no. FG-ODF/GFL	5409.60
Each	2-8-12	Supplying and erecting flood light luminaries suitable for 400W H.P.S.V. lamp complete with accessories on provided bracket as per specification no. FG-ODF/GFL	6094.20
Each	2-8-13	Supplying and erecting asymmetrical beam integral flood light luminaries suitable for 70W metal halide lamp complete with accessories on provided bracket as per specification no. FG-ODF/GFL	3071.25
Each	2-8-14	Supplying and erecting asymmetrical beam integral flood light luminaries suitable for 150W metal halide lamp complete with accessories on provided bracket as per specification no. FG-ODF/GFL	3056.55
Each	2-8-15	Supplying and erecting asymmetrical beam integral flood light accessories luminaries suitable for 250W metal halide lamp complete with accessories on provided bracket as per specification no. FG-ODF/GFL	2744.70

Each	2-8-16	Supplying and erecting asymmetrical beam integral flood light luminaries suitable for 400W metal halide lamp complete with accessories on provided bracket as per specification no. FG-ODF/GFL	5014.80
Each	2-8-17	Supplying & erecting non integral symmetrical flood light with wide beam reflector luminaries suitable for 1x250W HPSV/MH lamp on provided bracket as per specification no. FG-ODF/HML	2505.30
Each	2-8-18	Supplying & erecting non integral symmetrical flood light with wide beam reflector luminaries suitable for 1x400W HPSV/MH lamp on provided bracket as per specification no. FG-ODF/HML	2505.30
Each	2-8-19	Supplying & erecting non integral heavy duty flood light with symmetric circular narrow beam reflector luminaries suitable for 1x250W HPSV/MH lamp on provided bracket as per specification no. FG-ODF/HML	4025.70
Each	2-8-20	Supplying & erecting non integral heavy duty flood light with symmetric circular narrow beam reflector luminaries suitable for 1x400W HPSV/MH lamp on provided bracket as per specification no. FG-ODF/HML	4309.20
Each	2-8-21	Supplying & erecting non integral symmetric wide beam flood light luminaries suitable for 2x250W HPSV/MH lamp on provided brackets per specification no. FG-ODF/HML	4898.25
Each	2-8-22	Supplying & erecting non integral symmetric wide beam flood light luminaries suitable for 2x400W HPSV/MH lamp on provided brackets per specification no. FG-ODF/HML	3658.20
	Note:-	Item No. 2-8-1 to 2-8-22 should be used only for replacement/maintenance purpose.	0.00
		<u>2.9 Accessories for Outdoor Fittings (FG-AS)</u>	0.00
Each	2-9-1	Supplying and erecting Street light bracket made from 25 mm. dia 'B' class G.I. Pipe, 0.6 m in length along with pole cap of 300 mm length and 80 mm dia duly welded with provided leads as per specification no. FG-BKT/BPC	559.65
Each	2-9-2	Supplying and erecting Street light bracket made from 40 mm. dia 'B' class G.I. Pipe, 0.6m. in length along with pole cap of 300 mm length and 80 mm dia duly welded with provided leads as per specification no. FG-BKT/BPC	626.85
Each	2-9-3	Supplying and erecting street light Wall bracket made from 25 mm. dia 'B' class G.I. pipe 1.2 m in total length complete as per specification no. FG-BKT/WB	569.10
Each	2-9-4	Supplying and erecting street light Wall bracket made from 40 mm. dia 'B' class G.I. pipe 1.2 m in total length complete as per specification no. FG-BKT/WB	705.60
Each	2-9-5	Supplying and erecting Street light bracket for erection of Single fitting made from 40 mm. dia 'B' class G.I. pipe 1.0 m in length along with pole cap of 300 mm length 100 mm dia duly welded as per specification no. FG-BKT/BPC	884.10
Each	2-9-6	Supplying and erecting Street light bracket for erection of Double fitting made from 40 mm. dia 'B' class G.I. pipe 1.0 m in length along with pole cap of 300 mm length 100 mm dia duly welded as per specification no. FG-BKT/BPC	1225.35
Each	2-9-7	Supplying and erecting Street light bracket for erection of Single fitting on tubular welded pole with 40 mm. dia 1.0 m long "B" grade G.I. pipe along with pole cap of 125mm dia 600 mm long duly welded as per specification no. FG-BKT/BPC	1417.50
Each	2-9-8	Supplying and erecting Street light bracket for erection of Double fitting on tubular welded pole with 40 mm. dia 1.0 m long "B" grade G.I. pipe along with pole cap of 125mm dia 600 mm long duly welded as per specification no. FG-BKT/BPC	1812.30
m	2-9-9	Supplying and erecting Street light bracket for erection of side entry fitting on pole with 40 mm. dia. 'B' grade G.I. pipe of required length complete as per specification no. FG-BKT/SLB	477.75

m	2-9-10	Supplying and erecting Street light bracket for erection of side entry fitting on pole with 25 mm. dia. 'B' grade G.I. pipe of required length complete as per specification no. FG-BKT/SLB	384.30
Each	2-9-11	Supplying and erecting Control gear 1x250W for HPSV/MH lamp with all accessories for NON Integral Flood light fittings suitable for complete	3649.80
Each	2-9-12	Supplying and erecting Control gear for NON Integral Flood light fittings suitable for 1x400W HPSV/MH lamp with all accessories complete.	4406.85
Each	2-9-13	Supplying and erecting Control gear for NON Integral Flood light fittings suitable for 2x250W HPSV/MH lamp with all accessories complete.	7752.15
Each	2-9-14	Supplying and erecting Control gear for NON Integral Flood light fittings suitable for 2x400W HPSV/MH lamp with all accessories complete.	9952.95
Each	2-9-15	Supplying and erecting condenser for MV/SV/MH lamp 150W,230V as per specification no. FG-FG/AS7	201.60
Each	2-9-16	Supplying and erecting condenser for MV/SV/MH lamp 250W,230V as per specification no. FG-FG/AS7	220.50
Each	2-9-17	Supplying and erecting condenser for MV/SV/MH lamp 400W,230V as per specification no. FG-FG/AS7	308.70
Each	2-9-18	Supplying and erecting ignitor suitable for 230V HPSV lamp 70/150/250/400W as per specification no. FG-FG/AS6	202.65
Each	2-9-19	Supplying and erecting electronic ignitor suitable for 230V metal halide lamp 70/150/250/400W (integral or non-integral type luminaries as per specification no. FG-FG/AS6	265.65
Each	2-9-20	Supplying and erecting VPIT heavy duty copper wound ballast 230V for 80-150W HPSV/MV/MH as per specification no. FG-FG/AS5.	1190.70
Each	2-9-21	Supplying and erecting VPIT compound heavy duty copper wound ballast for 230V for 250W HPSV/MV/MH as per specification no. FG-FG/AS5.	2060.10
Each	2-9-22	Supplying and erecting VPIT heavy duty copper wound ballast for 230V for 400W HPSV/MV/MH as per specification no. FG-FG/AS4.	2968.35
Each	2-9-23	Supplying and erecting electronic type Driver for Outdoor LED fittings upto 25W suitable to operate on 230V A.C. 50 Hz. Having pf>0.95 and THD<10%.	525.00
Each	2-9-24	Supplying and erecting electronic type Driver for Outdoor LED fittings upto 26W-45W suitable to operate on 230V A.C. 50 Hz. having pf>0.95 and THD<10%.	854.70
Each	2-9-25	Supplying and erecting electronic type Driver for Outdoor LED fittings upto 46W-75W suitable to operate on 230V A.C. 50 Hz. having pf>0.95 and THD<10%.	1203.30
Each	2-9-26	Supplying and erecting electronic type Driver for Outdoor LED fittings upto 76W-100W suitable to operate on 230V A.C. 50 Hz. having pf>0.95 and THD<10%.	1885.80
Each	2-9-27	Supplying and erecting electronic type Driver for Outdoor LED fittings upto 101W-150W suitable to operate on 230V A.C. 50 Hz. having pf>0.95 and THD<10%.	2294.25
Each	2-9-28	Supplying and erecting electronic type Driver for Outdoor LED fittings upto 151W-200W suitable to operate on 230V A.C. 50 Hz. having pf>0.95 and THD<10%.	3368.40
		<u>2.10 Lamps and Tubes for Indoor & Outdoor (FG-LP)</u>	0.00
Each	2-10-1	Supplying and erecting T8 Fluorescent tube day light 600mm 18 W	38.85
Each	2-10-2	Supplying and erecting T8 Fluorescent tube day light 1200mm 36 W	44.10
Each	2-10-3	Supplying and erecting T8 Fluorescent tube tri phosphor/Turband phosphor 36 W.	96.60
Each	2-10-4	Supplying and erecting T5 14 W energy efficient fluorescent tube.	96.60
Each	2-10-5	Supplying and erecting T5 24 W Energy Efficient fluorescent tube.	119.70

Each	2-10-6	Supplying and erecting T5 28 W energy efficient fluorescent tube.	100.80
Each	2-10-7	Supplying & erecting 0.5W, 230V integral type LED Lamp suitable for B-22/E-27 base.	63.00
Each	2-10-8	Supplying and erecting Pigmy /candle lamp miniature type coloured/ white.	27.30
Each	2-10-9	Supplying & erecting 3W, 230V integral type LED Lamp suitable for B-22/E-27 base.	124.95
Each	2-10-10	Supplying & erecting 5W-7W, 230V integral type LED Lamp suitable for B-22/E-27 base.	140.70
Each	2-10-11	Supplying & erecting 10-12W, 230V integral type LED Lamp suitable for B-22/E-27 base.	229.95
Each	2-10-12	Supplying & erecting 14W, 230V integral type LED Lamp suitable for B-22/E-27 base.	308.70
Each	2-10-13	Supplying & erecting 18W, 230V integral type LED Lamp suitable for B-22/E-27 base.	388.50
Each	2-10-14	Supplying & erecting ready to use Retrofit T8 LED 18 / 20 tube light with polycarbonate body, heat sink, integrated HF electronic driver complete & compatible to T8 / T12 LED luminaire by disconnecting starter & ballast if necessary.	624.75
		Note:- 1)System efficacy shall not be less than 90 lumens/watt	0.00
		2) LED Lamp /tube shall carry minimum two year warrantee.	0.00
Each	2-10-15	Supplying and erecting HPSV lamp 3 pin BC/Screwed cap head / pin type 230V,70 W SON type.	184.80
Each	2-10-16	Supplying and erecting HPSV lamp 3 pin BC/Screwed cap head /pin type 230V,150 W SON type.	386.40
Each	2-10-17	Supplying and erecting HPSV lamp 3 pin BC/Screwed cap head /pin type 230V,250 W SON type.	433.65
Each	2-10-18	Supplying and erecting HPSV lamp 3 pin BC/Screwed cap head /pin type 230V,400 W SON type.	505.05
Each	2-10-19	Supplying and erecting HPSV lamp 3 pin BC/Screwed cap head /pin type 230V,70 W SON-T-type.	211.05
Each	2-10-20	Supplying and erecting HPSV lamp 3 pin BC/Screwed cap head /pin type 230V, 150 W SON-T-type.	494.55
Each	2-10-21	Supplying and erecting HPSV lamp 3 pin BC/Screwed cap head /pin type 230V, 250 W SON-T-type.	552.30
Each	2-10-22	Supplying and erecting HPSV lamp 3 pin BC/Screwed cap head /pin type 230V, 400 W SON-T-type.	624.75
Each	2-10-23	Supplying and erecting Metal Halide lamp double ended 230V, 70 W .	512.40
Each	2-10-24	Supplying and erecting Metal Halide lamp double ended 230V, 150 W .	506.10
Each	2-10-25	Supplying and erecting Metal Halide lamp double ended 230V, 250 W.	680.40
Each	2-10-26	Supplying and erecting Metal Halide lamp double ended 230V, 400 W.	754.95
		Note:- For Use of Single ended MH Lamps increase Material rates by 40% of the rate of double ended lamps	0.00
		<u>2.11 Aviation Light Fitting</u>	0.00
Each	2-11-1	Supplying & erecting aviation obstruction light consisting of yellow painted die-cast aluminium alloy housing with integral LED aviation light comprising of aluminium housing with polycarbonate enclosure complete.	4767.00
		<u>2.12 Fans (FG-FN)</u>	0.00
Each	2-12-1	Supplying and erecting regular/ standard model ceiling fan of 600mm. sweep complete erected in position as per specification no. FG-FN/CF	1754.55
Each	2-12-2	Supplying and erecting regular/ standard model ceiling fan of 900 /1050 mm. sweep complete erected in position as per specification no. FG-FN/CF	1890.00

Each	2-12-3	Supplying and erecting regular/ standard model ceiling fan of 1400mm. sweep complete erected in position as per specification no. FG-FN/CF	1993.95
Each	2-12-4	Providing and erecting bracket fan 400 mm. sweep A. C. 230 volts 50 cycles 1350 R.P.M. Oscillating type, plastic or metal blades chrome plated guard with regulator and moisture proof treatment to winding and with 'E' class insulation.	2040.15
Each	2-12-5	Providing and erecting air circulator 450 mm. sweep oscillating type, wall mounting 1440 RPM without speed regulator, overheat protection unit, totally enclosed, flame proof motor suitable for 230/250 Volts single phase, 50 cycles A.C. supply, with one metre of 3 core lead wire and with moisture proof treatment to winding and with 'E' class insulation.	4953.90
Each	2-12-6	Providing and erecting air circulator 600 mm. sweep oscillating type, wall mounting 1440 RPM without speed regulator, overheat protection unit, totally enclosed, flame proof motor suitable for 230/250 volts single phase, 50 cycles A.C. supply, core lead wire and with moisture proof treatment to winding and with 'E' class insulation.	5780.25
Each	2-12-7	Supplying Pedestal fan 400 mm. 230 Volts 50 cycles oscillating type complete with guard and regulator 3 mtrs. of flexible wire and hand shield type 3 pin plug top.	2071.65
Each	2-12-8	Supplying pedestal type air circulator 450 mm. sweep oscillating type suitable to work on 230 Volts 50 cycles 1440 RPM with speed regulator, overhead protection unit, totally enclosed, flame proof motor with additional 3 core wire, 5 metre length and hand shield type 3 pin 5A. plug top complete with moisture proof treatment and 'E' class insulation.	4734.45
Each	2-12-9	Supplying pedestal type air circulator 600 mm. sweep oscillating type suitable to work on 230 Volts 50 cycles 1440 RPM with speed regulator, overhead protection unit, totally enclosed, flame proof motor with additional 3 core wire, 5 metre length and hand shield type 3 pin 6A. plug top complete with moisture proof treatment and 'E' class insulation.	7357.35
Each	2-12-10	Supplying Table fan of A.C. 230 V. 50 cycles 400 mm. oscillating type complete with 2 mtrs. of 3 core flexible wire and Hand shield type 3 pin plug top.	1686.30
Each	2-12-11	Supplying and erecting cabin fan of A.C. 230 V. 50 cycles 250 mm. /300 mm. sweep complete with necessary brackets for fixing cabin fans, wire etc.	1737.75
Each	2-12-12	Supplying and erecting cabin fan of A.C. 230 V. 50 cycles 400 mm. sweep complete with necessary brackets for fixing cabin fans, wire etc.	1795.50
Each	2-12-13	Supplying and erecting fresh air cum exhaust fan of light duty 250 V A.C. 50 cycles 300mm. 1400 RPM rust proof body & blades, wire mesh, duly erected in an approved manner.	1337.70
Each	2-12-14	Supplying and erecting fresh air cum exhaust fan of light duty 250 V A.C. 50 cycles 225mm. 1400 RPM rust proof body & blades, wire mesh, duly erected in an approved manner.	1232.70
Each	2-12-15	Supplying and erecting exhaust fan medium duty 230 V A.C. 50 cycles 225 mm. 1400 RPM with condenser complete erected in position with necessary materials. Fan motor with moisture proof treatment and 'E' class insulation.	1710.45
Each	2-12-16	Supplying and erecting exhaust fan heavy duty 230 V, A.C. 50 cycles 375/380 mm. 900 RPM complete erected in position as per specification no. FG-FN/EXF	3285.45
Each	2-12-17	Supplying and erecting exhaust fan heavy duty 230 V A.C. 50 cycles 375/380 mm. 1400 RPM complete erected in position as per specification no. FG-FN/EXF	3327.45

Each	2-12-18	Supplying and erecting exhaust fan heavy duty 230 V A.C. 50 cycles 450 mm. 1400 RPM complete erected in position as per specification no. FG-FN/EXF	4533.90
Each	2-12-19	Supplying and erecting exhaust fan heavy duty 230 V A.C. 50 cycles 450 mm. 900 RPM complete erected in position as per specification no. FG-FN/EXF	4192.65
Each	2-12-20	Supplying and erecting exhaust fan heavy duty 440 V A.C. 50 cycles 900 RPM 375/380 mm complete erected in position as per specification no. FG-FN/EXF	3493.35
Each	2-12-21	Supplying and erecting five star rated energy saving Ceiling fan 230 V A.C. 50 cycles 1200 mm complete erected in position as per specification no. FG-FN/CF	2038.05
<u>2.13 Accessories for Fans (FG-FN)</u>			0.00
Each	2-13-1	Supplying and erecting condenser 2.5 micro farad for ceiling fan	63.00
Each	2-13-2	Supplying & fixing anchor type fastener fan hook , with 2 nos. of 10 mm dia x 75 mm long with necessary materials for ceiling fan.	97.65
Each	2-13-3	Supplying and erecting fan clamp of 30 x 5 mm. M.S. flat of required length and 10 mm. M.S. bolt and nuts erected with necessary hook of 10 mm. M.S. round bar and painted.	189.00
Each	2-13-4	Supplying and erecting fan hook of 10 mm. M.S. round bar grouted in RCC slab with making the site as original.	108.15
Each	2-13-5	Supplying and erecting fan hook box of 10 mm M.S. round bar bounded to the R.C. C. bars upto 50 mm length each side and pierced through a 16 S.W.G. thick aluminium/M.S. Bowl 100 mm dia.or equivalent square size and having depth upto 75 mm complete erected with duly painted by one coat of red oxide paint and two coats of paint erected in position and without any leakage of slurry of cement concrete on either side of the box and positioned to the bottom level of the slab.	165.90
m	2-13-6	Supplying and erecting ' B ' grade G.I. pipe / M.S. pipe down rod duly painted for fan complete erected with PVC three core flexible cable 1 sq. mm copper PVC wire.	216.30
Each	2-13-7	Erection of departmentally supplied ceiling fan with necessary materials complete.	98.70
Each	2-13-8	Erection of departmentally supplied exhaust fan with necessary materials complete.	174.30
Each	2-13-9	Supplying and erecting electronic type step regulator for ceiling fan 600/ 900/ 1200/ 1400 mm. sweep, complete erected on provided switch board.	214.20
Each	2-13-10	Providing recess in brick wall suitable for erection of exhaust fan up to 450 mm sweep complete with grouting of nut, bolts, plaster in hand colour washing to match the colour of the wall for the wall thickness of 150 mm.	305.55
Each	2-13-11	Providing recess in brick wall suitable for erection of exhaust fan up to 450mm. sweep complete with grouting of nut, bolts, plastering and colour washing to match the colour of the wall for the wall thickness of 225 mm.	355.95
Each	2-13-12	Providing recess in brick wall suitable for erection of exhaust fan up to 450mm. sweep complete with grouting of nut, bolts, plastering and colour washing to match the colour of the wall for the wall thickness of 375 mm.	436.80
Each	2-13-13	Providing recess in stone wall suitable for erection of exhaust fan up to 450mm sweep complete with grouting of nut, bolts, plastering and colour washing to match the colour of the wall.	664.65
Each	2-13-14	Supplying & erecting 22 SWG G.I sheet metal cawl sector shaped with 25 x 25 x 3 (mm) angle iron frame, metal mesh to avoid birds entry with necessary material, suitable for exhaust fan of 300 mm as per specification no FG-FAS/MSC	1008.00

Each	2-13-15	Supplying & erecting 22 SWG G.I sheet metal cawl sector shaped with 25 x 25 x 3 (mm) angle iron frame, metal mesh to avoid birds entry with necessary material, suitable for exhaust fan of 400 mm as per specification no FG-FAS/MSC	1136.10
Each	2-13-16	Supplying & erecting 22 SWG G.I sheet metal cawl sector shaped with 25 x 25 x 3 (mm) angle iron frame, metal mesh to avoid birds entry with necessary material, suitable for exhaust fan of 450 mm as per specification no FG-FAS/MSC	1076.25
Each	2-13-17	Supplying & erecting 20 SWG G.I sheet metal cawl rectangular / round shaped with 25 x 25x 3 (mm) angle iron frame, metal mesh to avoid birds entry with necessary material, suitable for exhaust fan of 300 mm as per specification no FG-FAS/MSC	981.75
Each	2-13-18	Supplying & erecting 20 SWG G.I sheet metal cawl rectangular /round shaped with 25 x 25x 3 (mm) angle iron frame, metal mesh to avoid birds entry with necessary material, suitable for exhaust fan of 400 mm as per specification no FG-FAS/MSC	1269.45
Each	2-13-19	Supplying & erecting 20 SWG G.I sheet metal cawl rectangular /round shaped with 25 x 25x 3 (mm) angle iron frame, metal mesh to avoid birds entry with necessary material, suitable for exhaust fan of 450 mm as per specification no FG-FAS/MSC	1330.35

2.14 Dismantling

			0.00
Each	2-14-1	Dismantling of existing fluorescent fittings of any type & size.	14.70
Each	2-14-2	Dismantling the existing W.T. fluorescent fitting / S.V./ M.V. / M.H. lamp /LED fitting from wall with brackets and making the site as original complete.	43.05
Each	2-14-3	Dismantling the existing W.T. fluorescent fitting/ S.V./ M.V. / M.H. lamp /LED fitting from pole with brackets complete.	101.85
Each	2-14-4	Dismantling the existing ceiling fan /exhaust fan / cabin fan / bracket fan complete with accessories, G.I. down rod, frame etc. and making the site clear.	34.65

Note:- 1) Above rates are inclusive of transportation to the sub-divisional store or as directed by sectional officer. 0.00

2) All fans & fittings shall be marked with sr. no. & date of erection. 0.00

Above items are conforming to relevant IS as mentioned below

	0.00
IS 16101 : 2012 - General Lighting - LEDs and LED modules – Terms and Definitions.	0.00
IS 16102(Part 1) : 2012- Self- Ballasted LED Lamps for General Lighting Services, Part 1 Safety Requirements.	0.00
IS 16102(Part 2) : 2012 - Self-Ballasted LED Lamps for General Lighting Services, Part 2 Performance Requirements.	0.00
IS 16103(Part 1) : 2012 - Led Modules for General Lighting, Part 1 Safety Requirements.	0.00
IS 16103(Part 2) : 2012 - Led Modules for General Lighting, Part 2 Performance Requirements.	0.00
IS 15885(Part2/Sec13): 2012 - Safety of Lamp Control Gear	0.00
Part 2 Particular Requirements Section 13 d.c. or a.c.; Supplied Electronic Control gear for Led Modules.	0.00
IS 16104 : 2012 - d.c. or a.c. Supplied Electronic Control Gear for LED Modules - Performance Requirements.	0
IS 16105 : 2012 - Method of Measurement of Lumen Maintenance of Solid State Light (LED) Sources.	0
IS 16106 : 2012 - Method of Electrical and Photometric, Measurements of Solid-State Lighting (LED) Products.	0
IS 16107 (Part 1):2012 - Luminaires Performance, Part 1 General Requirements.	0
IS 16107-1:2012 - Luminaires Performance Part 2 Particular Requirements Section 1 LED Luminaire.	0

IS 16108 : 2012 - Photobiological Safety of Lamps and Lamp Systems. 0

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Chapter: 3 0

Appliances (AP) 0

(AP-WH) 3.1 Water-heaters 0

(AP-AC) 3.2 Air-conditioners 0

(AP-WC) 3.3 Water-coolers, Refrigerators 0

(ACR) 3.4 Air coolers 0

(WPF) 3.5 Water purifiers 0

(AP-INV) 3.6 Inverters 0

(AP-UPS) 3.7 On line UPS 0

3.8 Batteries for inverters, UPS 0

3.9 Voltage Stabilizers 0

3.1 Accessories for AC & Water cooler 0

3.11 HVAC system 0

3.12 Dismantling 0

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Chapter 3: APPLIANCES (AP)

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Unit	Item No	Short Description	
-3	-1	-2	-9.45
3.1 Water Heaters (AP-WH)			0
Each	3-1-1	Supplying and erecting storage type horizontal / vertical water heater 15 litres capacity with BEE 5 star rating high impact resistance engineering plastic body on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH	8040.90
Each	3-1-2	Supplying and erecting storage / pressure type horizontal / vertical water heater 25 litres with BEE 5 star rating of mild steel body , on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH	7258.65
Each	3-1-3	Supplying and erecting storage type horizontal / vertical water heater 25 litres capacity with BEE 5 star rating high impact resistance engineering plastic body on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH	9866.85
Each	3-1-4	Supplying and erecting storage/ pressure type vertical / horizontal water heater 35 litres capacity with BEE 4 star rating of mild steel body on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH	10645.95
Each	3-1-5	Supplying and erecting storage type horizontal / vertical water heater 35 litres capacity with BEE 5 star rating high impact resistance engineering plastic body on wall /loft duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH	11894.40

-3

-1

-2

-9.45

3.1 Water Heaters (AP-WH)

0

Each 3-1-1 Supplying and erecting storage type horizontal / vertical water heater 15 litres capacity with BEE 5 star rating high impact resistance engineering plastic body on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH 8040.90

Each 3-1-2 Supplying and erecting **storage / pressure type horizontal / vertical water heater 25 litres with BEE 5 star rating of mild steel body**, on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH 7258.65

Each 3-1-3 Supplying and erecting storage type horizontal / vertical water heater 25 litres capacity with BEE 5 star rating high impact resistance engineering plastic body on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH 9866.85

Each 3-1-4 Supplying and erecting **storage/ pressure type vertical / horizontal water heater 35 litres capacity with BEE 4 star rating of mild steel body** on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH 10645.95

Each 3-1-5 Supplying and erecting storage type horizontal / vertical water heater 35 litres capacity with BEE 5 star rating high impact resistance engineering plastic body on wall /loft duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH 11894.40

Each	3-1-6	Supplying and erecting storage/ pressure type vertical / horizontal water heater 50 litres capacity of mild steel body on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. APWH/ STWH	12173.70
Each	3-1-7	Supplying and erecting storage type horizontal / vertical water heater 50 litres capacity with BEE 5 star rating high impact resistance engineering plastic body on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH	13357.05
Each	3-1-8	Supplying and erecting ISI mark midget type 3.0 Ltr instant type water heater of ABS plastic body 3 kW, heating element 230/250 Volts 50 cycle AC supply with inlet and outlet, thermostatic control and thermal cutoff with 3 core PVC flexible wire leads complete duly tested and marking sr. no. and date of erection.	3801.00
Each	3-1-9	Supplying and erecting chromium plated heavy duty brass stop cock for inlet pipe of water heater (15 mm. dia).	213.15
Each	3-1-10	Supplying & erecting 15 mm brass non return valve for inlet pipe of storage water heater.	229.95
Each	3-1-11	Supplying & erecting dead weight pressure releasing valve for storage water heater with necessary materials complete.	387.45
Each	3-1-12	Supplying & erecting vacuum relief valve for storage water heater with necessary materials complete.	201.60
Each	3-1-13	Providing fibre reinforced pvc flexible pipe upto 1m length with brass locking nuts and washers and clips at both ends suitable for hot water and cold water both (1set of 2 nos) complete.	166.95
Each	3-1-14	Erecting departmentally supplied water heater of 15 / 25 ltr capacity with wall fasteners, inlet & outlet pipes, NRV, etc. and marking sr no. and date of erection.	457.80
Each	3-1-15	Erecting departmentally supplied water heater of 35/ 50 / 100 ltr capacity with wall fasteners, inlet & outlet pipes, NRV, etc. and marking sr. no. and date of erection.	539.70
Each	3-1-16	Supplying and erecting ISI mark heating element 2 / 3 kW suitable for water heater/ midget of any make any capacity.	936.60
Each	3-1-17	Supplying and erecting ISI mark thermostat suitable for water heater / midget of any make, any capacity.	348.60
Each	3-1-18	Dismantling unserviceable storage type water heater from site to workshop and back after duly repaired and re-erecting the repaired storage water heater in position with necessary material complete with To & Fro transportation.	379.05
Each	3-1-19	Supplying and erecting storage type horizontal / vertical water heater 100 litres capacity with BEE 5 star rating high impact resistance engineering plastic body on wall / loft complete duly tested and marking sr. no. and date of erection. specification no. AP-WH/STWH	21815.85

**3.2 Air
Conditioning
Units (AP-
AC)**

0.00

Each	3-2-1	Supplying, installing, testing and commissioning window model type room Air-conditioner having ISEER minimum 3.1 to maximum 3.29 suitable to operate on 230/250V, 50 cycles single phase A.C. supply 1 TR capacity with refrigerant R410A/R32 and copper condensor at position in provided recess with wooden frame complete. specification no. AP-AC/WAC	26626.95
Each	3-2-2	Supplying, installing, testing and commissioning window model mounted type room Air - conditioner having ISEER minimum 3.1 to maximum 3.29 suitable to operate on 230/250 V 50 cycles single phase A.C. supply 1.5 TR capacity with refrigerant R410A/R32 and copper condensor at position in provided recess with wooden frame complete. specification No. AP-AC/WAC	27921.60

Each	3-2-3	Supplying, installing, testing and commissioning window model type room Air - conditioner having ISEER minimum 3.30 suitable to operate on 230/250 V 50 cycles single phase A.C. supply 1.5 TR capacity with refrigerant R410A/R32 and copper condenser at position in provided recess with wooden frame complete. specification No. AP-AC/WAC	35981.40
Each	3-2-4	Supplying, installing, testing and commissioning window model type room Air-conditioner having ISEER minimum 3.1 to maximum 3.29 suitable to operate on 230/250 V 50 cycles single phase A.C. supply 2 TR capacity complete with refrigerant R410A/R32 and copper condenser at position in provided recess with wooden frame complete. specification No.AP-AC/WAC	36305.85
Each	3-2-5	Providing modifications to the existing window for erection of window room air conditioner in position with required teak wood/aluminium channel with filling the gaps to maintain air tightness complete.	1424.85
Each	3-2-6	Supplying, installing, testing and commissioning split type variable speed Inverter technology room Air conditioning unit 2 TR capacity having ISEER minimum 3.50 to maximum 3.99 suitable to operate on 250V, 50 cycles, A.C. supply having 1 no. of air handling unit hi-wall/ floor mounting type complete with Refrigerants R410 A/R32 and copper condenser at position. specification no. AP-AC/SAC	61218.15
Each	3-2-7	Supplying, installing, testing and commissioning split type variable speed inverter technology room Air conditioning unit 2 TR capacity having ISEER minimum 4.50 suitable to operate on 250V, 50 cycles, A.C. supply having 1 no. of air handling unit hi-wall/ floor mounting type complete with Refrigerants R410 A /R32 and copper condenser at position. specification no. APAC/ SAC	66198.30
Each	3-2-8	Supplying, installing, testing and commissioning split type variable speed Inverter technology room Air conditioning unit 1.5 TR Capacity having ISEER minimum 3.50 to maximum 3.99 suitable to operate on 250V, 50 cycles, A.C. supply having 1 no. of air handling unit hiwall / floor mounting type complete with refrigerant R410 A/R32 and copper condenser at position. specification no. APAC/ SAC	49569.45
Each	3-2-9	Supplying, installing, testing and commissioning split type variable speed Inverter technology room Air conditioning unit 1.5 TR capacity having ISEER minimum 4.50 suitable to operate on 250V, 50 cycles, A.C. supply having 1 no of air handling unit hiwall / floor mounting type complete with refrigerant R410 A/R32 and copper condensor at position. specification no.APAC/ SAC	54366.90
Each	3-2-10	Supplying, installing, testing and commissioning split type variable speed inverter technology room Airconditioning unit 1 TR capacity having ISEER minimum 3.50 to maximum 3.99 suitable to operate on 250V, 50 cycles, A.C. supply having 1 no. of air handling unit hi-wall mounting type complete with refrigerant R410A/R32 and copper condensor at position. specification no.APAC/ SAC	40852.35
Each	3-2-11	Supplying, installing, testing and commissioning split type variable speed inverter technology room Airconditioning unit 1 TR having ISEER minimum 4.50 suitable to operate on capacity 250V, 50 cycles, A.C. supply having 1 no. of air handling unit hi-wall / floor mounting type complete with refrigerant R410A/R32 and copper condenser at position. specification no. APAC/ SAC	44339.40
Sq.mm	3-2-12	Providing and pasting superior quality Sun control film on glass to achieve better cooling effect having 1.5 / 2 mm thickness, ultra violet transmittance less than 2% and solar heat rejection 78% in approved manner.	1223.25

Each	3-2-13	Supplying, installing, testing and commissioning split type room Air conditioning unit with variable speed Inverter technology 2.5 TR capacity with R410A/R32 refrigerant & copper condenser suitable to operate on 230/415V, 50cycles, A.C. supply having 1 no. of air handling unit (Mega spilt) Hi-wall mounting type complete at position. specification no. AP-AC/SAC	68355.00
Each	3-2-14	Supplying, installing, testing and commissioning split type room Air conditioning unit 3TR capacity with R410A/R32 refrigerant, 415 V, 50 cycles, A.C. supply having 1 no. of air handling unit (Mega spilt) mounting type complete at position. Specification no. AP-AC/SAC	70461.30
m	3-2-15	Supplying & erecting soft drawn copper pipe suitable for refrigeration system having 22 SWG thickness and inner dia / size 12 mm complete.	286.65
m	3-2-16	Supplying & erecting soft drawn copper pipe suitable for refrigeration system having 22 SWG thickness and inner dia / size 16 mm complete.	393.75
m	3-2-17	Supplying & erecting soft drawn copper pipe suitable for refrigeration system having 22 SWG thickness and inner dia / size 22 mm complete.	705.60
m	3-2-18	Supplying & erecting soft drawn copper pipe suitable for refrigeration system having 22 SWG thickness and inner dia / size 32 mm complete.	998.55
m	3-2-19	Supplying & erecting soft drawn copper pipe suitable for refrigeration system having 22 SWG thickness and inner dia / size 35 mm complete.	1142.40
m	3-2-20	Supplying & erecting soft drawn copper pipe suitable for refrigeration system having 22 SWG thickness and inner dia / size 42 mm Complete.	1387.05
Each	3-2-21	Supplying, installing, testing and commissioning cassette type split room air conditioning unit 1.5 TR having ISEER minimum 4.50 suitable for capacity 230/250 V, 50 cycles, AC supply having 1 no. air handling unit false ceiling mounting type complete with refrigerant R32/R410A and copper condenser coil at position with provided copper piping and drainage pipe.	81316.20
Each	3-2-22	Supplying, installing, testing and commissioning cassette type variable speed inverter technology split room airconditioning unit 2 TR capacity having ISEER minimum 3.50 to maximum 3.99 suitable to operate on 230/250 V, 50 cycles, AC supply having 1 no. air handling unit false ceiling mounting type complete with refrigerant R32/R410A and copper condenser coil at position as per specification with provided copper piping and drainage pipe.	98130.90
Each	3-2-23	Supplying, installing, testing and commissioning cassette type variable speed inverter technology split room air conditioning unit 3 TR capacity having ISEER maximum 4.50, suitable to operate on 230V /415 V, 50 cycles, AC supply having 1 no. air handling unit false ceiling mounting type complete with refrigerant R32/ R410A & copper condenser coil at position with provided copper piping and drainage pipe.	145511.10
Each	3-2-24	Supplying, installing, testing & commissioning cassette type split type variable speed inverter technology room airconditioning unit 3.5 TR capacity 230/250 V, 50 cycles, AC supply having 1 no. air handling unit false ceiling mounting type complete with refrigerant R32/R410A & copper condenser coil at position with provided copper piping and drainage pipe.	146922.30
Each	3-2-25	Supplying, installing, testing & commissioning cassette type variable speed inverter technology split room airconditioning unit 4 TR capacity 230V /415 V, 50 cycles, AC supply having 1 no. air handling unit false ceiling mounting type complete with refrigerant R32/R410A & copper condenser coil at position as with provided copper piping and drainage pipe.	160813.80

Each	3-2-26	Supplying, installing, testing and commissioning tower type room air conditioning unit of 2.5 TR capacity suitable to operate on 230/415V, 50 cycles ac supply having 1 no AHU and 1 no cabinet type floor mounting condensing unit with refrigerant R32/R410A & copper condenser coil with anti-corrosive fins, dust filters hydrophilic evaporator fins, powder coated outer body , with scroll /rotary compressor connected with provided refrigerant pipes, electric cables and drain pipe.	80501.40
Each	3-2-27	Supplying, installing, testing and commissioning tower type room air conditioning unit of 3.5TR capacity suitable to operate on 415 V, 50 cycles ac supply having 1 no. AHU and 1 no cabinet type floor mounting type condensing unit with refrigerant R32/R410A & copper condensor coil complete with anticorrosive fins, dust filters hydrophilic evaporator fins, powder coated outer body, with scroll / rotary compressor connected with provided refrigerant pipes, electric cables and drain pipe.	90052.20
Each	3-2-28	Supplying, installing, testing and commissioning tower type room air conditioning unit of 4.5 TR capacity suitable to operate on 415 V, 50 cycles ac supply having 1 no. air handling unit and 1 no. cabinet type floor mounting condensing unit with refrigerant R32/R410A & copper condenser coil with anti-corrosive fins, dust filters hydrophilic evaporator fins, powder coated outer body, with scroll / rotary compressor connected with provided refrigerant pipes, electric cables and drain pipe.	117327.00
Each	3-2-29	Supplying floor mounted de-humidifier of ABS engineering plastic body 320 W to 360 watt, 220-240V, 50 Hz of 16 to 22 litre/day (300C-80%-90%RH) capacity having rotary compressor consisting with R410A/R134A refrigerant, running temperature capacity 50C-350C, tank capacity 3 - 4.5 ltr, noise level below 40 db with digital display, programmable timer, humidity display, humidity setting arrangement, air flow 150 to 200 cu.mtr/hr and suitable for cover 70-100 cu. mtr area.	30836.40
Each	3-2-30	Supplying floor mounted de-humidifier of ABS engineering plastic body 470 W to 530 watt, 220-240V, 50 Hz of 30 to 35 litre/day (300C-80%-90%RH) capacity having rotary compressor consisting with R410A/R134A refrigerant, running temperature capacity 50C-350C, tank capacity 3.7 - 6.5 ltr, noise level 45-49 db with digital display, programmable timer, humidity display, humidity setting arrangement, air flow 190 to 220 cu. mtr/hr and suitable for cover 101-115 cu.mtr area.	49135.80
Each	3-2-31	Supplying floor mounted de-humidifier of ABS engineering plastic body 740 watt, 220-240V, 50 Hz of 50 litre/day (300C-80%RH) capacity having rotary compressor consisting with R410A/R134A refrigerant, running temperature capacity 50C-350C tank capacity 8 ltr, noise level 47db with digital display, programmable timer, humidity display, humidity setting arrangement, air flow 310 cu.mtr/hr and suitable for cover 150 cu.mtr area.	78660.75
Notes:- 1) For copper pipe nitrile rubber insulation refer to chapter 4.2.			0.00
2) For drain piping refer rates of PVC pipes from chapter no. 1.			0.00
3) If cost of any appliances for repair more than 50% then those shall be proposed for replacement.			0.00
			0.00

**3.3 Water
Coolers &
Refrigerators (AP-
WC)**

0.00

Each	3-3-1	Supplying single door refrigerator domestic type of approved make 165 to 205 litres storage capacity, 5 star suitable for operation on 230/250 V, 50 cycles complete with automatic temperature control, with one year guarantee shall be marked on unit for sealed unit in refrigeration system and marking sr. no. and date of erection.	11128.95
Each	3-3-2	Supplying doble door refrigerator domestic type of approved make 284 to 310 litres storage capacity, 5 star suitable for operation on 230/250 V, 50 cycles complete with automatic temperature control with one year guarantee for sealed unit and 10 years warranty for compressor in refrigeration system and marking sr. no. and date of erection.	25508.70
Each	3-3-3	Supplying, erecting, testing and commissioning self-contained water cooler 230/250V 50 cycles nominal cooling capacity of 40 litres/hr and storage capacity 80 litres with partially stainless steel body complete. specification no. APWCR/ WC	33743.85
Each	3-3-4	Supplying, erecting, testing and commissioning self-contained water cooler 230/250 V 50 cycles nominal cooling capacity of 80 litres/hr and storage capacity 120 litres with partially stainless steel body complete. specification no. AP-WCR/ WC	45346.35
Each	3-3-5	Supplying, erecting, testing and commissioning self contained water cooler 230/250 Volts 50 cycles nominal cooling capacity of 150 liters/hr and storage capacity 150 liters with partially stainless steel body complete. specification no. AP-WCR/WC	50060.85
Each	3-3-6	Supplying and erecting, testing and commissioning solar cum natural water cooler suitable for hot and dry weather nominal cooling capacity of 20 litres along with solar panel, fan for cooling, copper storage tank and copper coils with water spraying arrangement complete. Specification no. APWCR/SOLAR WC	69528.90
Each	3-3-7	Supplying and erecting, testing and commissioning solar cum natural water cooler suitable for hot and dry weather nominal cooling capacity of 50 litres along with solar panel, fan for cooling, copper storage tank and copper coils with water spraying arrangement complete. specification no. APWCR/SOLAR WC	84094.50
Each	3-3-8	Supplying double door refrigerator domestic type of approved make 292 to 415 litres storage capacity, minimum 4 star suitable for operation on 230/250 V 50 cycles complete with inverter technology compressor automatic temperature control and one year guarantee for sealed unit, 10 years warranty for compressor and marking sr. no. and date of erection.	36946.35
Job	3-3-9	Providing fully comprehensive annual maintenance service for 80/120/150 ltr. water cooler unit complete as per terms and conditions. Job includes 1) quarterly servicing 2) on call repair 3) replacement of all spares including minor electrical parts within 48 hours. 4) refrigerant charging if required. 5) if failed to rectify the fault within 48 hrs penalty shall be charged Rs.50/- per day.The job exclude sheet metal work and plastic material.	5033.70

Note:- Note : 1) If cost of any appliances for repair more than 50% then shall be proposed for replacement. 0.00

0.00

**3.4 Air
Coolers
(ACR)**

0.00

Each	3-4-1	Supplying evaporative air cooler (desert cooler) with galvanised steel body 230/250 Volts, 50 cycles, normal cooling capacity of 50 cu.m per minute , with 12" exhaust, minimum 40 to 55 litre water capacity tank complete. specification no. AP-WCR/DAC	9415.35
Each	3-4-2	Supplying evaporative air cooler (desert cooler) with galvanised steel body 230/250 Volts, 50 cycles, normal cooling capacity of 60 to 70 cu.m per minute with 15" exhaust fan, minimum 68 litre water capacity tank complete. specification no. AP-WCR/DAC	8362.20
Each	3-4-3	Supplying evaporative air cooler (desert cooler) with galvanised steel body 230/250 Volts, 50 cycles, normal cooling capacity of 80 cu.m per minute with 18" exhaust fan, minimum 75 to 80 litre water capacity tank complete. specification no APWCR/ DAC	11391.45

3.5 Water Purifiers (WPF)

0.00

Each	3-5-1	Supplying and erecting ultra violet storage type water purifier (RO+UV+UF) with softener for safe drinking water consisting of UV germicidal tube of 8W capacity choke made of copper wire and two indicator lamps with output of purified water 7 to 8 litre/min with activated carbon filter and softener operating on 230 V single phase A.C. supply.	19412.40
Each	3-5-2	Supplying and erecting ultra violet water purifier with softener for safe drinking water consisting of UV germicidal tube of 8W capacity, choke made of copper wire, two indicator lamps, dual function cartridge with output of purified water 2 litre/ min. with activated carbon filter and softener operating on 230 V single phase AC supply.	8733.90

0.00

0.00

**3.6
Inverter
(AP-INV)**

Each	3-6-1	Supplying, installing, testing and commissioning of 700 VA digital pure sine wave inverter based on Insulated Gate Bipolar Transistor (IGBT) technology single phase 230V,50 Hz complete as per specification no. AP-INV (Without batteries)	6943.65
Each	3-6-2	Supplying, installing, testing and commissioning of 800 VA to 900 VA Digital pure sine wave inverter based on Insulated Gate Bipolar Transistor (IGBT) technology single phase 230V,50 Hz complete as per specification no. AP-INV (Without batteries)	8271.90
Each	3-6-3	Supplying, installing, testing and commissioning of 1400 VA to 1600 VA Digital pure sine wave inverter based on Insulated Gate Bipolar Transistor (IGBT) technology single phase 230V,50 Hz complete as per specification no. AP-INV (Without batteries)	12079.20
Each	3-6-4	Supplying, installing, testing and commissioning of 2500 VA Digital pure sine wave inverter based on Insulated Gate Bipolar Transistor (IGBT) technology single phase 230V,50 Hz complete as per specification no. AP-INV (Without batteries)	20334.30

3.7 Online Uninterruptible Power Supply (UPS) (AP-UPS)

0.00

Each	3-7-1	Supplying & erecting on line UPS pure sine wave of 1 kVA capacity complete with standard features, along with necessary SMF batteries for 30 mins. battery backup as per specification no. AP-UPS	37633.05
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Each	3-7-2	Supplying & erecting on line UPS pure sine wave of 2 kVA capacity complete with standard features, along with necessary SMF batteries for 30 mins battery backup, as per specification no. AP-UPS	53636.10
Each	3-7-3	Supplying & erecting on line UPS pure sine wave of 3 kVA capacity complete with standard features, along with necessary SMF batteries for 30 mins battery backup, as per specification no. AP-UPS	69339.90
Each	3-7-4	Supplying & erecting on line UPS pure sine wave of 5 kVA capacity complete with standard features, along with necessary SMF batteries for 30 mins battery backup, as per specification no. AP-UPS	77758.80
Each	3-7-5	Supplying & erecting on line UPS pure sine wave of 6 kVA capacity complete with standard features, along with necessary SMF batteries for 30 mins battery backup as per specification no. AP-UPS	133445.55
Each	3-7-6	Supplying & erecting on line UPS pure sine wave of 8 kVA capacity complete with standard features, along with necessary SMF batteries for 30 mins battery backup, as per specification no. AP-UPS	175012.95
Each	3-7-7	Supplying & erecting on line UPS pure sine wave of 10 kVA capacity complete with standard features, along with necessary SMF batteries for 30 mins battery backup, as per specification no. AP-UPS	210424.20
Note:-		<u>For additional battery backup:- For the item no. 3.7.1 to 3.7.7, additional iron work of Rs.833/- shall be added for each additional battery backup . (The required capacity of batteries shall be added separately from item no.3.8.7 to 3.8.12 as per table 3.7/1 of specification book shall be referred for the same.)</u>	0.00
		<u>3.8 Batteries for Inverter & UPS</u>	0.00
Each	3-8-1	Supplying and erecting 12 V/80Ah to 88 Ah tubular battery with battery terminal wire, duly charged complete with 36 months warranty complete	9427.95
Each	3-8-2	Supplying and erecting 12 V/100Ah tubular battery with battery terminal wire, duly charged complete with 36 months warranty complete	11364.15
Each	3-8-3	Supplying and erecting 12 V/130Ah to 135Ah tubular battery with battery terminal wire, duly charged complete with 36 months warranty complete	14522.55
Each	3-8-4	Supplying and erecting 12 V/150Ah tubular battery with battery terminal wire, duly charged complete with 36 months warranty complete	17168.55
Each	3-8-5	Supplying and erecting 12 V/180Ah tubular battery with battery terminal wire, duly charged complete with 36 months warranty complete	18062.10
Each	3-8-6	Supplying and erecting 12 V/200Ah tubular battery with battery terminal wire, duly charged complete with 36 months warranty complete	21415.80
Each	3-8-7	Supplying and erecting 12 V/7Ah 7.5Ah SMF battery with battery terminal wire, duly charged complete with 24 months warranty complete	889.35
Each	3-8-8	Supplying and erecting 12 V/17Ah -18Ah SMF battery with battery terminal wire, duly charged complete with 24 months warranty complete	2452.80
Each	3-8-9	Supplying and erecting 12 V/26Ah SMF battery with battery terminal wire, duly charged complete with 24 months warranty complete	3031.35
Each	3-8-10	Supplying and erecting 12 V/42Ah SMF battery with battery terminal wire, duly charged complete with 24 months warranty complete	4629.45
Each	3-8-11	Supplying and erecting 12 V/65Ah SMF battery with battery terminal wire, duly charged complete with 24 months warranty complete	6472.20

Each	3-8-12	Supplying and erecting 12 V/100Ah SMF battery with battery terminal wire, duly charged complete with 24 months warranty complete.	9593.85
	Note :	Item No.3.8.7 to 3.8.12 use for UPS and Lift ARD (Auto Rescue Device) system.	0.00
		SMF stands for Sealed Maintenance Free.	0.00
		<u>3.9 Voltage Stabilizers</u>	0.00
Each	3-9-1	Supplying and erecting fully automatic line voltage stabilizer buck and boost type for operation on input voltage 160 to 270 V and output voltage 200 to 250 V rated for 0.5 kVA maximum load and with voltmeter, selector switch, 6A/16A flush type 3 pin socket for output and with 3 core flexible cord and 3 pin 6/16 A plug top suitable for refrigerator for continuous operation.	2392.95
Each	3-9-2	Supplying and erecting fully automatic line voltage stabilizer , buck and boost type for operation on input voltage 160 to 270V and output voltage 200 to 250V rated for, 1 kVA maximum load and with voltmeter, selector switch, 6A/16A flush type 3 pin socket for output and with 3 core flexible cord and 3 pin 6/16A plug top suitable for Water Cooler below 120 litre cooling capacity.	2658.60
Each	3-9-3	Supplying and erecting fully automatic line voltage stabilizer , buck and boost type for operation on input voltage 160 to 270 V and output voltage 200 to 250 V rated for, 3 kVA maximum load and with voltmeter, selector switch, 6A/16A flush type 3 pin socket for output and with 3 core flexible cord and 3 pin 6/16 A plug top suitable for Air Conditioner of 1 TR / Water Cooler of 120 liter cooling capacity and above.	3168.90
Each	3-9-4	Supplying and erecting fully automatic line voltage stabilizer , buck and boost type for operation on input voltage 160 to 270 V and output voltage 200 to 250 V rated for, 4 kVA maximum load and with voltmeter, selector switch, 6A/16A flush type 3 pin socket for output and with 3 core flexible cord and 3 pin 6/16 A plug top suitable for Air Conditioner of 1.5 TR.	5391.75
Each	3-9-5	Supplying and erecting fully automatic line voltage stabilizer , buck and boost type for operation on input voltage 160 to 270 V and output voltage 200 to 250 V rated for, 5 kVA maximum load and with voltmeter, selector switch, 6A/16A flush type 3 pin socket for output and with 3 core flexible cord and 3 pin 6/16 A plug top suitable for Air Conditioner of 2.0 TR.	9037.35
	Note:-	All the appliances shall be marked sr no and date of erection with enamel paint/ permanent marker after Installation.	0.00
		<u>3.10</u>	0.00
		<u>Accessories for AC</u>	
		<u>Water cooler</u>	
Job	3-10-1	Providing servicing of 1/1.5/2/3 TR capacity split/window air conditioning unit complete with all necessary material. Job includes checking of performance of unit, cleaning of filters of indoor unit, cleaning of outdoor unit with blower, checking of electrical connection of indoor as well as outdoor unit and submitting report to Engineer incharge.	502.95
Year	3-10-2	Providing annual comprehensive maintenance contract for 1 TR split/window air conditioning unit complete as per terms and conditions. Job includes 1) quarterly servicing 2) on call repair 3) replacement of all spares within 24 hours 4) sending standby manpower for VIP movement. The job excludes sheet metal work and pastic material.	6655.95

Year	3-10-3	Providing annual comprehensive maintenance contract for 1.5 TR split/window air conditioning unit complete as per terms and conditions. Job includes 1) quarterly servicing 2) on call repair 3) replacement of all spares within 24 hours 4) sending standby manpower for VIP movement. The job exclude sheet metal work and plastic material.	7400.40
Year	3-10-4	Providing annual comprehensive maintenance contract for 2 TR split/window air conditioning unit complete as per terms and conditions. Job includes 1) quarterly servicing 2) on call repair 3) replacement of all spares within 24 hours 4) sending standby manpower for VIP movement. The job exclude sheet metal work and plastic material.	8809.50
Year	3-10-5	Providing annual comprehensive maintenance contract for 3TR to 4.5 TR split/tower/window air conditioning unit complete as per terms and conditions. Job includes 1) quarterly servicing 2) on call repair 3) replacement of all spares within 24 hours 4) sending standby manpower for VIP movement. The job exclude sheet metal work and pastic material	9671.55
Each	3-10-6	Providing replacement of existing unservicable rotary/scroll compressor of air conditioner 1 TR by new one of same capacity with guarantee for one year with provided refrigerant complete.	9576.00
Each	3-10-7	Providing replacement of existing unservicable rotary/scroll compressor of air conditioner 1.5 TR by new one of same capacity with guarantee for one year with provided refrigerant complete.	10439.10
Each	3-10-8	Providing replacement of existing unservicable rotary/scroll compressor of air conditioner 2 TR by new one of same capacity with guarantee for one year with provided refrigerant complete.	11158.35
Each	3-10-9	Providing replacement of existing unservicable rotary/scroll compressor of air conditioner 2.5 TR to 4.5 TR by new one of same capacity with guarantee for one year with provided refrigerant complete.	18152.40
Job	3-10-10	Providing flushing out cooling coil and condensor coil of airconditioner unit refrigerant pipes internally with dry Nitrogen pressure in an approved manner.	745.50
Job	3-10-11	Providing brazing pipes and checking leakages in the split/ window unit duly with dry nitrogen pressure in an approved manner.	745.50
Each	3-10-12	Providing replacement of unserviceable starting relay for AC unit.	325.50
Each	3-10-13	Providing replacement of unserviceable starting capacitor for A/C unit.	679.35
Each	3-10-14	Providing replacement of unserviceable running capacitor for A/C unit.	679.35
Each	3-10-15	Providing replacement of unserviceable fan motor capacitor for A/C unit.	221.55
Each	3-10-16	Providing replacement of unserviceable PCB for A/C unit upto 3 TR capacity.	5437.95
Each	3-10-17	Providing repair of of faulty PCB for air conditioning unit upto 3 TR capacity.	1042.65
Each	3-10-18	Supplying and installing of new fan motor for condenser for air conditioning unit	5264.70
Each	3-10-19	Supplying and installing of new fan motor for indoor unit of air conditioner up to 3 TR suitable to operate on 230V to 250V AC or 280V to 340V DC supply having 4 to 8 poles as per requirement.	2940.00
Each	3-10-20	Supplying and installing new fan blade outdoor unit for air conditioning unit.	1791.30

Each	3-10-21	Providing replacement of blower of indoor unit for air conditioning unit.	1632.75
Each	3-10-22	Providing replacement of remote of indoor unit for air conditioning unit.	3315.90
KG	3-10-23	Providing vaccumising the airconditioner system and charging with R-22 refrigerant for air conditioning unit.	810.60
KG	3-10-24	Providing vaccumising the airconditioner system to 200 micron and charging with R-410A/R32 refrigerant for air conditioning unit.	1113.00
Job	3-10-25	Providing vaccumising the airconditioner system to 200 micron and charging with R-22 refrigerant for 1TR window/split air conditioning unit.	1310.40
Job	3-10-26	Providing vaccumising the airconditioner system to 200 micron and charging with R-22 refrigerant for 1.5TR window/split air conditioning unit.	1660.05
Job	3-10-27	Providing vaccumising the airconditioner system to 200 micron and charging with R-22 refrigerant for 2TR window/split air conditioning unit.	2172.45
Job	3-10-28	Providing vaccumising the airconditioner system to 200 micron and charging with R-22 refrigerant for 3TR window/split air conditioning unit.	3371.55
Job	3-10-29	Providing replacement of existing unserviceable compressor of 40 litre cooling capacity water cooler by new one of same capacity alongwith suitable refrigerent with guarantee for one year.	8041.95
Job	3-10-30	Providing replacement of existing unserviceable compressor of 60 litre cooling capacity water cooler by new one of same capacity alongwith suitable refrigerent with guarantee for one year.	8936.55
Job	3-10-31	Providing replacement of existing unserviceable compressor of 150 litre cooling capacity water cooler by new one of same capacity alongwith suitable refrigerent with guarantee for one year.	10220.70
Job	3-10-32	Providing replacement of existing unserviceable condensor coil of 40/80/150 litre cooling capacity water cooler by new one of same capacity , testing to the satisfaction of site engineer for cooling and along with guarantee for one year with suitable refrigerant.	6693.75
Job	3-10-33	Providing replacement of existing unserviceable SS water tap of 40/80/150 litre cooling capacity water cooler by new one of same capacity , testing to the satisfaction of site engineer for cooling and along with guarantee for one year with suitable refrigerant.	774.90
Job	3-10-34	Providing replacement of existing unserviceable relay 40/80/150 litre cooling capacity water cooler by new one of same capacity , testing to the satisfaction of site engineer for cooling and alongwith guarantee for one year with suitable refrigerant.	201.60
Job	3-10-35	Providing replacement of existing unserviceable thermostat of 40/80/150 litre cooling capacity water cooler by new one of same capacity , testing to the satisfaction of site engineer for cooling and alongwith guarantee for one year with suitable refrigerant.	560.70
Job	3-10-36	Supplying and erecting candle filter with filter pot for water cooler.	1292.55
Job	3-10-37	Supplying and erecting connector Pipe for candle filter of water cooler.	668.85
Job	3-10-38	Providing replacement of base tray of water cooler of any capacity.	2532.60
		Note:-1) If cost of repairs of any appliances is more than 50% of the cost of new unit, replacement of same shall be proposed.	0.00
		2) dismantled material to be retained by contractor.	0.00

3.11 VRV/VRF Air conditioning (New)

			0.00
Each	3-11-1	Supplying, erecting, testing and commissioning of 6 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.	134307.60
Each	3-11-2	Supplying, erecting, testing and commissioning 7 HP to 8 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.	302501.85
Each	3-11-3	Supplying, erecting, testing and commissioning 10 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.	321772.50

Each	3-11-4	<p>Supplying, erecting, testing and commissioning 12 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.</p>	340072.95
Each	3-11-5	<p>Supplying, erecting, testing and commissioning 14 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.</p>	434327.25
Each	3-11-6	<p>Supplying, erecting, testing and commissioning 16 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.</p>	471707.25

Each	3-11-7	<p>Supplying, erecting, testing and commissioning 18 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.</p>	494341.05
Each	3-11-8	<p>Supplying, erecting, testing and commissioning 20 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.</p>	524912.85
Each	3-11-9	<p>Supplying, erecting, testing and commissioning 22 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.</p>	542610.60

Each	3-11-10	<p>Supplying, erecting, testing and commissioning 24 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.</p>	565791.45
Each	3-11-11	<p>Supplying, erecting, testing and commissioning 26 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.</p>	603880.20
Each	3-11-12	<p>Supplying, erecting, testing and commissioning 28 HP, VRF / VRV air conditioning system, out door unit (ODU) complying type-IV OEM standards working on HFC free refrigerant R410A or other required/suitable green equivalent refrigerant, for cooling capacity delivering 100% at 47 deg. celcius and non stop cooling even at 56 deg. celsius and coefficient of performance (COP) 3.00 to 4.00, modular type horizontal/vertical hot air discharge suitable for total piping length upto 1000 metre operation in cooling mode with inverter based VRF/VRV technology microprocessor based control compressor starter/control panel complete with scroll compressor, air cooled anti corrosive copper condenser coil of suitable shape for increasing maximum heat transfer area, built in oil separator, accumulator and oil receiver, copper tube aluminium fin air cooled condenser, condenser fan with motor suitable for 415V \pm 10%, 50 Hz, 3 phase power supply, internal copper refrigerant piping, internal wiring and first charge of refrigerant, etc. all housed in powder coated weather proof cabinet on provided angle iron frame or suitable foundation connected to the system in approved manner complete.</p>	654360.00

Each	3-11-13	Supply, installation, testing and commissioning of VRF/VRV based Hi-wall type indoor unit (IDU) of nominal cooling capacity 0.6TR - 0.8TR (229 to 358 cfm) having EER as per BEE standards and specifications with multiple speed evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls, with 3-core copper flexible cord of required length and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area. Unit shall be suitable for indoor wall mounting, having an electronic control console, provided with suitable mounting brackets with any additional refrigerant and oil charge as per the requirement during installation, connected to the system complete.	19909.05
Each	3-11-14	Supply, installation, testing and commissioning of VRF/VRV based Hi-wall type indoor unit (IDU) of nominal cooling capacity 1.0TR (358 cfm) to 1.25TR (417 cfm) having EER as per BEE standards and specifications with multiple speed evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls, with 3-core copper flexible cord of required length and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area. Unit shall be suitable for indoor wall mounting, having an electronic control console, provided with suitable mounting brackets with any additional refrigerant and oil charge as per the requirement during installation, connected to the system complete.	21237.30
Each	3-11-15	Supply, installation, testing and commissioning of VRF/VRV based Hi-wall type indoor unit (IDU) of nominal cooling capacity 1.3TR (421 cfm) to 1.7TR (586 cfm) having EER as per BEE standards and specifications with multiple speed evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls, with 3-core copper flexible cord of required length and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area. Unit shall be suitable for indoor wall mounting, having an electronic control console, provided with suitable mounting brackets with any additional refrigerant and oil charge as per the requirement during installation, connected to the system complete.	23048.55
Each	3-11-16	Supply, installation, testing and commissioning of VRF/VRV based Hi-wall type indoor unit (IDU) of nominal cooling capacity 1.8TR (594 cfm) to 2.2TR (655 cfm) having EER as per BEE standards and specifications with multiple speed evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls, with 3-core copper flexible cord of required length and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area. Unit shall be suitable for indoor wall mounting, having an electronic control console, provided with suitable mounting brackets with any additional refrigerant and oil charge as per the requirement during installation, connected to the system complete.	31018.05

Each	3-11-17	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 4 Way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 0.6TR (420 cfm) / 0.8TR (441 cfm) having EER as per BEE standards and specifications, suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase, 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	30198.00
Each	3-11-18	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 4 Way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 1.0TR (441 cfm) / 1.3TR (512 cfm) having EER as per BEE standards and specifications, suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase, 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	34908.30
Each	3-11-19	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 4 Way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 1.5TR (512 cfm) / 1.8TR (618 cfm) having EER as per BEE standards and specifications, suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase, 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	37323.30
Each	3-11-20	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 4 Way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 2.0TR (618 cfm) / 2.3TR (671 cfm) having EER as per BEE standards and specifications, suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase, 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	37685.55

Each	3-11-21	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 4 Way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 2.6TR (918 cfm) to 2.8TR (1100 cfm) having EER as per BEE standards and specifications, suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase, 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	38530.80
Each	3-11-22	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 4 Way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 3.0TR (1100 cfm) to 3.2TR (1165 cfm) having EER as per BEE standards and specifications, suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase, 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	39134.55
Each	3-11-23	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 4 Way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 3.3TR (1165 cfm) to 4.0TR (1218 cfm) having EER as per BEE standards and specifications, suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase, 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	39738.30
Each	3-11-24	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 4 Way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 4.1TR (1218 cfm) to 5.0TR (1624 cfm) having EER as per BEE standards and specifications, suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase, 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	57814.05

Each	3-11-25	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 2 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 0.6TR (420 cfm) to 0.8TR (441 cfm) having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	50847.30
Each	3-11-26	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 2 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 1.0TR (441 cfm) to 1.3TR (512 cfm) having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	61714.80
Each	3-11-27	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 2 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 1.4TR (512 cfm) to 1.7TR (618 cfm) having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	63163.80
Each	3-11-28	Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 2 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 1.8TR (565 cfm) to 2.0TR (618 cfm) having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.	64371.30

Each	3-11-29	<p>Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 2 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 2.1TR (671 cfm) to 2.7TR (918 cfm) having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.</p>	72081.45
Each	3-11-30	<p>Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 2 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 2.8TR (1130 cfm) to 3.7TR (1377 cfm) having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.</p>	83692.35
Each	3-11-31	<p>Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 2 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 3.8TR (1377 cfm) to 4.7TR (1624 cfm) having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.</p>	97907.25
Each	3-11-32	<p>Supply, installation, testing and commissioning of VRF/VRV based ceiling suspended 1 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 0.6TR (420 cfm) to 0.8TR (441 cfm) having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete.</p>	67964.40

- Each 3-11-33 Supply, installation, testing and commissioning of VRF/VRV based **ceiling suspended 1 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 1.0TR (441 cfm) to 1.3TR (512 cfm)** having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete. 50726.55
- Each 3-11-34 Supply, installation, testing and commissioning of VRF/VRV based **ceiling suspended 1 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 1.4TR (512 cfm) to 2.0TR (618 cfm)** having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete. 73669.05
- Each 3-11-35 Supply, installation, testing and commissioning of VRF/VRV based **ceiling suspended 1 way cassette indoor unit (IDU) compact / standard size of nominal cooling capacity 1.8TR (575 cfm) to 2.7TR (953 cfm)** having EER as per BEE standards and specifications suitable as per site requirement with swing louvers and adjustable blades from sides. Indoor Units complete with in-built drainage arrangements, fan, refrigerant liquid and refrigerant piping, cordless remote control and fresh air port etc. IDU shall have anticorrosive coating suitable for coastal area complete in all respects, to operate on 1-phase 230V, 50Hz, AC input supply, consisting with any additional refrigerant and oil charge as per requirement during installation and connected to the system complete. 80872.05
- Each 3-11-36 Supply, installation, testing and commissioning of VRF/VRV based **concealed split ductable type, high static indoor unit (IDU) having nominal cooling capacity of 0.8TR (280 cfm) to 1.1TR (400 cfm)** having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, condensate pump, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area, with necessary ceiling suspension arrangement having an electronic control console with providing any additional refrigerant and oil charge as per requirement during installation connected with the system complete. 30692.55

Each	3-11-37	Supply, installation, testing and commissioning of VRF/VRF based concealed split ductable type, high static indoor unit (IDU) having nominal cooling capacity of 1.2TR (400 cfm) to 1.7TR (600 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, condensate pump, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area, with necessary ceiling suspension arrangement having an electronic control console with providing any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	31296.30
Each	3-11-38	Supply, installation, testing and commissioning of VRF/VRF based concealed split ductable type, high static indoor unit (IDU) having nominal cooling capacity of 1.8TR (600 cfm) to 2.0TR (800 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, condensate pump, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area, with necessary ceiling suspension arrangement having an electronic control console with providing any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	24224.55
Each	3-11-39	Supply, installation, testing and commissioning of VRF/VRF based floor mounting / ceiling suspended dual mount type, indoor unit (IDU) having nominal cooling capacity of 0.8TR (280 cfm) to 1.1TR (400 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU should have anti-corrosive coating suitable for coastal area, with necessary floor mounting or ceiling suspension arrangement having an electronic control console with providing any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	41549.55
Each	3-11-40	Supply, installation, testing and commissioning of VRF/VRF based floor mounting / ceiling suspended dual mount type, indoor unit (IDU) having nominal cooling capacity of 1.2TR (400 cfm) to 1.5TR (600 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU should have anti-corrosive coating suitable for coastal area, with necessary floor mounting or ceiling suspension arrangement having an electronic control console with providing any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	42179.55

Each	3-11-41	Supply, installation, testing and commissioning of VRF/VRF based floor mounting / ceiling suspended dual mount type, indoor unit (IDU) having nominal cooling capacity of 1.2TR (600 cfm) to 1.5TR (800 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU should have anti-corrosive coating suitable for coastal area, with necessary floor mounting or ceiling suspension arrangement having an electronic control console with providing any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	42636.30
Each	3-11-42	Supply, installation, testing and commissioning of VRF/VRF based floor mounting / ceiling suspended dual mount type, indoor unit (IDU) having nominal cooling capacity of 2.1TR (800 cfm) to 2.6TR (1000 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU should have anti-corrosive coating suitable for coastal area, with necessary floor mounting or ceiling suspension arrangement having an electronic control console with providing any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	47104.05
Each	3-11-43	Supply, installation, testing and commissioning of VRF/VRF based floor mounting / ceiling suspended dual mount type, indoor unit (IDU) having nominal cooling capacity of 3.2TR (1200 cfm) to 3.6TR (1400 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU should have anti-corrosive coating suitable for coastal area, with necessary floor mounting or ceiling suspension arrangement having an electronic control console with providing any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	49881.30
Each	3-11-44	Supply, installation, testing and commissioning of VRV/VRF based floor mount type vertical, indoor unit (IDU) having nominal cooling capacity of 2.2TR (420 cfm) to 2.3TR (560 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, in built drain pump, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area , an electronic control console, with suitable floor mounting arrangement, additional refrigerant and oil charge as per requirement during installation connected with the system complete.	39685.80

Each	3-11-45	Supply, installation, testing and commissioning of VRV/VRF based floor mount type vertical, indoor unit (IDU) having nominal cooling capacity of 2.8TR (1000 cfm) to 3.2TR (1200 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, in built drain pump, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area , an electronic control console, with suitable floor mounting arrangement, additional refrigerant and oil charge as per requirement during installation connected with the system complete.	44557.80
Each	3-11-46	Supply, installation, testing and commissioning of VRV/VRF based floor mount type vertical, indoor unit (IDU) having nominal cooling capacity of 4.0TR (1400 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, in built drain pump, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area , an electronic control console with suitable floor mounting arrangement, additional refrigerant and oil charge as per requirement during installation connected with the system complete.	51088.80
Each	3-11-47	Supply, installation, testing and commissioning of VRV/VRF based floor mount type vertical, indoor unit (IDU) having nominal cooling capacity of 5.0TR (1624 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, in built drain pump, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. IDU shall have anti-corrosive coating suitable for coastal area , an electronic control console with suitable floor mounting arrangement, additional refrigerant and oil charge as per requirement during installation connected with the system complete.	77218.05
Each	3-11-48	Supply, installation, testing and commissioning of VRV / VRF based floor mount type package, room/indoor unit (IDU) having nominal cooling capacity of 8.0TR (3200 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, in built drain pump, expansion device, cordless / corded remote control with necessary controls and electrical terminal to receive power supply, etc having anti-corrosive coating suitable for coastal area, with suitable floor mounting arrangement, an electronic control console and any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	96180.00
Each	3-11-49	Supply, installation, testing and commissioning of VRV / VRF based floor mount type package, room/indoor unit (IDU) having nominal cooling capacity of 10TR (4000 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, in built drain pump, expansion device, cordless / corded remote control with necessary controls and electrical terminal to receive power supply, etc having anti-corrosive coating suitable for coastal area, with suitable floor mounting arrangement, an electronic control console and any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	106139.25

Each	3-11-50	Supply, installation, testing and commissioning of VRV / VRF based ductable type, high static indoor unit (IDU) having nominal cooling capacity of 0.8TR (280 cfm) to 1.5TR (600 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area, with suitable ceiling suspension arrangement, with an electronic control console and any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	30816.45
Each	3-11-51	Supply, installation, testing and commissioning of VRV / VRF based ductable type, high static indoor unit (IDU) having nominal cooling capacity of 2.1TR (800 cfm) to 2.4TR (960 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area, with suitable ceiling suspension arrangement, with an electronic control console and any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	31420.20
Each	3-11-52	Supply, installation, testing and commissioning of VRV / VRF based ductable type, high static indoor unit (IDU) having nominal cooling capacity of 2.5TR (980 cfm) to 3.0TR (1200 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area, with suitable ceiling suspension arrangement, with an electronic control console and any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	37277.10
Each	3-11-53	Supply, installation, testing and commissioning of VRV / VRF based ductable type, high static indoor unit (IDU) having nominal cooling capacity of 3.1TR (1240 cfm) to 4.0TR (1600 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area, with suitable ceiling suspension arrangement, with an electronic control console and any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	45957.45
Each	3-11-54	Supply, installation, testing and commissioning of VRV / VRF based ductable type, high static indoor unit (IDU) having nominal cooling capacity of 4.1TR (1640 cfm) to 5.0TR (2000 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area, with suitable ceiling suspension arrangement, with an electronic control console and any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	52055.85

Each	3-11-55	Supply, installation, testing and commissioning of VRV / VRF based ductable type, high static indoor unit (IDU) having nominal cooling capacity of 5.1TR (2040 cfm) to 6.0TR (2400 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area, with suitable ceiling suspension arrangement, with an electronic control console and any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	58398.90
Each	3-11-56	Supply, installation, testing and commissioning of VRV / VRF based ductable type, high static indoor unit (IDU) having nominal cooling capacity of 8.0TR (3200 cfm) having EER as per BEE standards and specifications with evaporator fan with motor, copper tube aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area, with suitable ceiling suspension arrangement, with an electronic control console and any additional refrigerant and oil charge as per requirement during installation connected with the system complete.	64096.20
Each	3-11-57	Supply, installation, testing and commissioning of VRV / VRF based ceiling suspended 4.0TR Treated Fresh Air (TFA) (3310 cfm) indoor unit with evaporator fan with motor, copper tube, aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, corded / cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area with suitable ceiling suspension arrangement and an electronic control console with an additional refrigerant and oil charge as per requirement during installation connected with the system complete.	53721.15
Each	3-11-58	Supply, installation, testing and commissioning of VRV / VRF based ceiling suspended 6.5TR Treated Fresh Air (TFA) (5380 cfm) indoor unit with evaporator fan with motor, copper tube, aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, corded / cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area with suitable ceiling suspension arrangement and an electronic control console with an additional refrigerant and oil charge as per requirement during installation connected with the system complete.	73886.40
Each	3-11-59	Supply, installation, testing and commissioning of VRV / VRF based ceiling suspended 8.0TR (6600 cfm) to 10TR (8200 cfm) Treated Fresh Air (TFA) indoor unit with evaporator fan with motor, copper tube, aluminium fin evaporator coil, washable air filter, insulated drain tray, expansion device, corded / cordless remote control with necessary controls and electrical terminal to receive power supply, etc. having anti-corrosive coating suitable for coastal area with suitable ceiling suspension arrangement and an electronic control console with an additional refrigerant and oil charge as per requirement during installation connected with the system complete.	93122.40
Each	3-11-60	Supplying, erecting, testing & commissioning fresh air intake system, ductable circular inline fresh air fan inlet unit having 300 cfm capacity with maintaining the static pressure minimum 20 mm of Hg complete suitable to operate on 1ph, 230 V 50Hz, A.C. supply.	5037.90

Each	3-11-61	Supplying, erecting, testing & commissioning fresh air intake system, ductable circular inline fresh air fan inlet unit having 1000 cfm capacity with maintaining the static pressure minimum 20 mm of Hg complete suitable to operate on 1ph, 230 V 50Hz, A.C. supply.	15064.35
m	3-11-62	Supplying and erecting circular flexible / rigid PVC pipe duct of size 40 mm dia , 4 mm thickness with required couplers, reducers, T-joints, Y-joints, elbows and necessary supports etc with sealing complete with provided control/ air flow regulating valves / dampers, filters at position.	2223.90
m	3-11-63	Supplying and erecting circular flexible / rigid PVC pipe duct of size 50 mm dia , 4 mm thickness with required couplers, reducers, T-joints, Y-joints elbows and necessary supports etc with sealing complete with provided control/ air flow regulating valves / dampers, filters at position.	2406.60
m	3-11-64	Supplying and erecting circular flexible / rigid PVC pipe duct of size 80 mm dia , 4 mm thickness with required couplers, reducers, T-joints, Y-joints elbows and necessary supports etc with sealing complete with provided control/ air flow regulating valves / dampers, filters at position.	2590.35
m	3-11-65	Supplying and erecting circular flexible / rigid PVC pipe duct of size 100 mm dia , 4 mm thickness with required couplers, reducers, T-joints, Y-joints elbows and necessary supports etc with sealing complete with provided control/ air flow regulating valves / dampers, filters at position.	2958.90
m	3-11-66	Supplying and erecting circular flexible / rigid PVC pipe duct of size 150 mm dia , 4 mm thickness with required couplers, reducers, T-joints, Y-joints elbows and necessary supports etc with sealing complete with provided control/ air flow regulating valves / dampers, filters at position.	3325.35
m	3-11-67	Supplying and erecting circular flexible / rigid PVC pipe duct of size 200 mm dia , 4 mm thickness with required couplers, reducers, T-joints, Y-joints elbows and necessary supports etc with sealing complete with provided control/ air flow regulating valves / dampers, filters at position.	3693.90
Each	3-11-68	Supplying and erecting an air flow regulating valves / dampers in provided flexible or rigid duct / pipe of 40 mm size with an alteration for existing flexible pvc pipe duct and necessary joints, sealing, couplings complete at position.	5271.00
Each	3-11-69	Supplying and erecting an air flow regulating valves / dampers in provided flexible or rigid duct / pipe of 50 mm size with an alteration for existing flexible pvc pipe duct and necessary joints, sealing, couplings complete at position.	5744.55
Each	3-11-70	Supplying and erecting an air flow regulating valves / dampers in provided flexible or rigid duct / pipe of 80 mm size with an alteration for existing flexible pvc pipe duct and necessary joints, sealing, couplings complete at position.	6216.00
Each	3-11-71	Supplying and erecting an air flow regulating valves / dampers in provided flexible or rigid duct / pipe of 100 mm size with an alteration for existing flexible pvc pipe duct and necessary joints, sealing, couplings complete at position.	6689.55
Each	3-11-72	Supplying and erecting an air flow regulating valves / dampers in provided flexible or rigid duct / pipe of 150 mm size with an alteration for existing flexible pvc pipe duct and necessary joints, sealing, couplings complete at position.	7162.05
Each	3-11-73	Supplying and erecting an air flow regulating valves / dampers in provided flexible or rigid duct / pipe of 200 mm size with an alteration for existing flexible pvc pipe duct and necessary joints, sealing, couplings complete at position.	8579.55

Each	3-11-74	Supply, installation, testing and commissioning air curtain of 3 feet width having air throw velocity of 12 to 14 m/sec , low noise level up to 38 to 46 dB suitable for door height upto 9 feet, working on 1ph, 230 V, 50Hz, A.C. supply.	17804.85
Each	3-11-75	Supply, installation, testing and commissioning air curtain of 4 feet width having air throw velocity of 21 m/sec , low noise level up to 38 to 46 dB suitable for door height upto 9 feet, working on 1ph, 230 V, 50Hz, A.C. supply.	18577.65
Each	3-11-76	Supply, installation, testing and commissioning air curtain of 6 feet width having air throw velocity of 21 m/sec , low noise level up to 38 to 46 dB suitable for door height upto 9 feet, working on 1ph, 230 V, 50Hz, A.C. supply.	21594.30
Job	3-11-77	Carrying out core cutting of size 3" to 5" dia x 15" length in the C.C./rock/stone wall with the help of specialized core cutting machine in proper manner and finishing the site as original.	8222.55
Each	3-11-78	Supply, installation, testing and commissioning cordless remote control having colour LCD panel, real time clock, temperature limitation (16 to 30 degree Cent.), functions like filter clean reminder timer suitable to communicate with wired controller complete.	1786.05
Each	3-11-79	Supplying, erecting, testing and commissioning centralised programmable remote control panel (HMI) touch manager controls minimum 16 system of minimum 64 ODU's can be controlled and up to 992 IDU's can be individually mounted and controlled indoor units having minimum 200 mm size colour LCD touch panel, yearly schedule, power proportional distribution function, temperature limitation, history function complete erected on wall with an arrangement to integrate with provided fire alarm system.	45472.35
Sq.m	3-11-80	Supply, installation, testing and commissioning of manually operated, opposed blade, duct mounted, flanged volume control dampers of required sizes in GI construction complete with operating mechanism, mounting arrangement, rubber refrigerant kits etc. complete.	6258.00
Each	3-11-81	Supply, installation, testing and commissioning of volume control box with collar for control damper of required sizes in GI construction complete with operating mechanism, mounting arrangement, rubber refrigerant kits etc. complete.	5946.15
Each	3-11-82	Supply, fabrication, installation an testing of flexible canvass connections constructed between ductable unit / dampers / ducting of required size with fire resist flexible double canvas sleeve complete.	2785.65
Sq.m	3-11-83	Providing adhesive thermal insulation for supply / return air duct with 19 mm nitrile rubber insulation having R-value as per the prevailing provisions in ECBC-2007.	989.10
Sq.m	3-11-84	Providing and applying of accoustic insulation for air ducts with 25 mm thick, 48kg/cu.m fiber glass faced with RP tissue and covered with 26 SWG perforated aluminium sheets complete.	1126.65
Each	3-11-85	Supplying & erecting tile type modular diffuser made from aluminium sheet complete with powder coated matching to the ceiling shade for provided suuply and return air.	12122.25
Each	3-11-86	Supplying and installation of high pressure grade required size copper connection Y or T- Joints / refnet for liquid and suction line complete erected on wall/ceiling with supports/raceways, Nitrile rubber insulation, painting etc. with brazing and testing for leakages confirming the normal operation of the VRV / VRF air conditioning system.	5779.20
Sq.m	3-11-87	Supplying and installing of coller damper of galvanised iron material of upto 120 microns for anti corrosive resistance for supply air grill of required size	6625.50

Sq.m	3-11-88	Supplying and erecting aluminium powder coated linear grill of suitable size for width length without collar dampers having matching colour with the existing false ceiling and suitable for deflection of 15/30/45 degree.	1295.70
m	3-11-89	Supplying, laying / fixing, testing and commissioning of appropriate nominal refrigerant copper pipe of 41.3 mm dia (OD) for liquid line / suction line supply and return piping of suitable gauge (hard drawn copper pipe for liquid main line and for refrigerant) along with necessary supports, hangers, clamps, vibration isolators and fittings such as bends, tees, valves, gauges, strainers with insulation of 19 mm thick elastomeric nitrile rubber along with application of multicoating suitable for use with VRV / VRF piping for protection against mechanical damages fungal growth, flame spread, water permeance and ultra violet radiations complete with OEM standards of VRV / VRF air conditioning system.	2522.10
m	3-11-90	Supplying, laying / fixing, testing and commissioning of appropriate nominal refrigerant copper pipe of 34.9 mm dia (OD) for liquid line / suction line supply and return piping of suitable gauge (hard drawn copper pipe for liquid main line and for refrigerant) along with necessary supports, hangers, clamps, vibration isolators and fittings such as bends, tees, valves, gauges, strainers with insulation of 19 mm thick elastomeric nitrile rubber along with application of multicoating suitable for use with VRV / VRF piping for protection against mechanical damages fungal growth, flame spread, water permeance and ultra violet radiations complete with OEM standards of VRV / VRF air conditioning system.	2360.40
m	3-11-91	Supplying, laying / fixing, testing and commissioning of appropriate nominal refrigerant copper pipe of 28.6 mm dia (OD) for liquid line / suction line supply and return piping of suitable gauge (hard drawn copper pipe for liquid main line and for refrigerant) along with necessary supports, hangers, clamps, vibration isolators and fittings such as bends, tees, valves, gauges, strainers with insulation of 19 mm thick elastomeric nitrile rubber along with application of multicoating suitable for use with VRV / VRF piping for protection against mechanical damages fungal growth, flame spread, water permeance and ultra violet radiations complete with OEM standards of VRV / VRF air conditioning system.	2296.35
m	3-11-92	Supplying, laying / fixing, testing and commissioning of appropriate nominal refrigerant copper pipe of 22.2 mm dia (OD) for liquid line / suction line supply and return piping of suitable gauge (hard drawn copper pipe for liquid main line and for refrigerant) along with necessary supports, hangers, clamps, vibration isolators and fittings such as bends, tees, valves, gauges, strainers with insulation of 19 mm thick elastomeric nitrile rubber along with application of multicoating suitable for use with VRV / VRF piping for protection against mechanical damages fungal growth, flame spread, water permeance and ultra violet radiations complete with OEM standards of VRV / VRF air conditioning system.	1545.60
m	3-11-93	Supplying, laying / fixing, testing and commissioning of appropriate nominal refrigerant copper pipe of 19.1 mm dia (OD) for liquid line / suction line supply and return piping of suitable gauge (hard drawn copper pipe for liquid main line and for refrigerant) along with necessary supports, hangers, clamps, vibration isolators and fittings such as bends, tees, valves, gauges, strainers with insulation of 19 mm thick elastomeric nitrile rubber along with application of multicoating suitable for use with VRV / VRF piping for protection against mechanical damages fungal growth, flame spread, water permeance and ultra violet radiations complete with OEM standards of VRV / VRF air conditioning system.	1199.10

m	3-11-94	Supplying, laying / fixing, testing and commissioning of appropriate nominal refrigerant copper pipe of 15.9 mm dia (OD) for liquid line / suction line supply and return piping of suitable gauge (hard drawn copper pipe for liquid main line and for refrigerant) along with necessary supports, hangers, clamps, vibration isolators and fittings such as bends, tees, valves, gauges, strainers with insulation of 19 mm thick elastomeric nitrile rubber along with application of multicoating suitable for use with VRV / VRF piping for protection against mechanical damages fungal growth, flame spread, water permeance and ultra violet radiations complete with OEM standards of VRV / VRF air conditioning system.	1050.00
m	3-11-95	Supplying, laying / fixing, testing and commissioning of appropriate nominal refrigerant copper pipe of 12.7 mm dia (OD) for liquid line / suction line supply and return piping of suitable gauge (hard drawn copper pipe for liquid main line and for refrigerant) along with necessary supports, hangers, clamps, vibration isolators and fittings such as bends, tees, valves, gauges, strainers with insulation of 19 mm thick elastomeric nitrile rubber along with application of multicoating suitable for use with VRV / VRF piping for protection against mechanical damages fungal growth, flame spread, water permeance and ultra violet radiations complete with OEM standards of VRV / VRF air conditioning system.	778.05
m	3-11-96	Supplying, laying / fixing, testing and commissioning of appropriate nominal refrigerant copper pipe of 9.5 mm dia (OD) for liquid line / suction line supply and return piping of suitable gauge (hard drawn copper pipe for liquid main line and for refrigerant) along with necessary supports, hangers, clamps, vibration isolators and fittings such as bends, tees, valves, gauges, strainers with insulation of 19 mm thick elastomeric nitrile rubber along with application of multicoating suitable for use with VRV / VRF piping for protection against mechanical damages fungal growth, flame spread, water permeance and ultra violet radiations complete with OEM standards of VRV / VRF air conditioning system.	653.10
m	3-11-97	Supplying, laying / fixing, testing and commissioning of appropriate nominal refrigerant copper pipe of 6.4 mm dia (OD) for liquid line / suction line supply and return piping of suitable gauge (hard drawn copper pipe for liquid main line and for refrigerant) along with necessary supports, hangers, clamps, vibration isolators and fittings such as bends, tees, valves, gauges, strainers with insulation of 19 mm thick elastomeric nitrile rubber along with application of multicoating suitable for use with VRV / VRF piping for protection against mechanical damages fungal growth, flame spread, water permeance and ultra violet radiations complete with OEM standards of VRV / VRF air conditioning system.	504.00
	Note:-		
		1).The rates of ODU's having COP ranging from 4.00 to 4.80, the material rate of item nos. 3-1-1 to 3-1-12 shall be increased by 25%.	0.00
		2).Pipe insulation of heating system and cooling systems shall be as per the table 5.6 and 5.7 of Energy Conservation Building Code (ECBC)-2007 user guide.	0.00
		3).Duct work insulation R value in m2 - K/W shall be as per table 5.8 of Energy Conservation Building Code (ECBC)-2007 user guide. Sample R values for duct insulation materials shall be referred from table 5.9.	0.00
		<u>3.12 Dismantling</u>	0.00
Each	3-12-1	Dismantling the existing electric geyser or storage type water heater of any size along with plumbing connections and making the site clear.	173.25
Each	3-12-2	Dismantling the existing window type air conditioner of any type and capacity safely without any damages and making the site clear.	433.65

Each	3-12-3	Dismantling the existing split type air conditioner of any type and capacity safely without any damages and making the site clear.	819.00
	Note:-	The rates for item no 3.10.1 to 3.10.3 are inclusive of dismantling and handing over to section office inclusive of transportation upto 25 km between site and section office.	0
			0
		IS Standards for Energy saving devices	0
		IS 3412 (1994) Electric water boilers	0
		IS 1476-1 (2000) Performance of Household Refrigerating Appliance - Refrigerators with or Without Low Temperature Compartment, Part 1: Energy Consumption and Performance	0
		IS 15750 (2006) Household frost-free refrigerating appliances - Refrigerators cooled by internal forced air circulation - Characteristics and test methods	0
		IS 11338 (1985) Thermostats for Use in Refrigerators, Air Conditioners, Water Coolers and Beverage Coolers	0
		IS 1391-1 (1992) Thermostats for Use in Refrigerators, Air Conditioners, Water Coolers and Beverage Coolers	0
		IS 1391-2 (1992) Room air conditioners, Part 2: Split air conditioners	0
		IS 1475-1(2001) Self-Contained Drinking Water Coolers, Part 1: Energy Consumption and Performance	0
		IS 10500 (1991) Drinking water	0
		IS 10555 (2002) Exfoliated Vermiculite (Thermal Insulation)	0
		IS 10556 (1983) Code of Practice for Storage and Handling of Thermal Insulation Materials(Thermal Insulation)	0
		IS 4578 (1997) Lubricating oils for refrigeration machinery	0
		IS 4831 (1968) Recommendation on units and symbols for refrigeration	0
		(Refrigeration and air conditioning)	0
		IS 5111 (1993) Testing of refrigerant compressors	0
		IS 7613 (1975) Method of testing panel type air filters for air conditioning and ventilation purposes	0
		Specifications of Inverter (As per MNRE Specifications)	0
		IS 1651 - 1991 - Stationary cells and batteries, lead-acid type (Tubular)	0
		IS 13369: Stationary lead acid batteries (with tubular positive plates) in monoblock containers	0
		IS 16242 (Part 1) : 2014 PART 1 GENERAL AND SAFETY REQUIREMENTS FOR UPS	0
		Doc: ET 31(6128) Part 3 Method of Specifying the Performance and Test Requirements	0
			0
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			0
			0
			0
	Chapter:		0
	4		0
	Energy saving Devices (ESD)		0
			0
(ESD-SHWS)	4.1	Solar Hot water system	0

(ESD-HWP)	4.2 Pipes for Solar Hot Water System	0
(ESD-SOL)	4.3 Solar Lighting	0
	4.4 Miscellaneous	0
(ESD-RT-OFG)	4.5 Rooftop OFF grid solar systems	0
(ESD-RT-ONG)	4.6 Rooftop ON grid Solar systems	0
(ESD-SWPS)	4.7 Solar water pump systems	0
	4.8 Dismantling	0
		0
		0
		0
		0
4 : ENERGY SAVING DEVICES (ESD)		0
		0

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0</i>
-3	-1	-2	-9.45
		<u>4.1 Solar hot water system (ESD-SHWS)</u>	0
Each	4-1-1	Supplying, installing, testing and commissioning of FPC solar water heating system without heat exchanger type of 100 LPD capacity complete. Specification no. ESD-SHWS-FPC	23773.05
Each	4-1-2	Supplying, installing, testing and commissioning of FPC solar water heating system without heat exchanger type of 200 LPD capacity complete. Specification no. ESD-SHWS-FPC	40498.50
Each	4-1-3	Supplying, installing, testing and commissioning of FPC solar water heating system without heat exchanger type of 300 LPD capacity complete. Specification no. ESD-SHWS-FPC	55414.80
Each	4-1-4	Supplying, installing, testing and commissioning of FPC solar water heating system without heat exchanger type of 500 LPD capacity a complete. Specification no. ESD-SHWS-FPC	79054.50
Each	4-1-5	Supplying, installing, testing and commissioning of ETC solar water heating system without heat exchanger type of 100 LPD capacity complete. Specification no. ESD-SHWS-ETC	21299.25
Each	4-1-6	Supplying, installing, testing and commissioning of ETC solar water heating system without heat exchanger type of 200 LPD capacity complete. Specification no. ESD-SHWS-ETC	32917.50
Each	4-1-7	Supplying, installing, testing and commissioning of ETC solar water heating system without heat exchanger type of 250 LPD capacity complete. Specification no. ESD-SHWS-ETC	38186.40
Each	4-1-8	Supplying, installing, testing and commissioning of ETC solar water heating system without heat exchanger type of 300 LPD capacity complete. Specification no. ESD-SHWS-ETC	40654.95
Each	4-1-9	Supplying, installing, testing and commissioning of ETC solar water heating system without heat exchanger type of 500 LPD capacity complete. Specification no. ESD-SHWS-ETC	62848.80
Note		1. If the solar water heating system is to be provided with heat exchanger, increase overall rates by 15 %.	0.00
		2. For all hostel buildings, rest houses, circuit houses, dormitories and residential quarters, solar water heating system shall be proposed for new installation and for replacement / renovation instead of electrical water heater.	0.00
		<u>4.2 Pipes for solar hot water system (ESD-HWP)</u>	0.00

m	4-2-1	Supplying and erecting GI pipe 15 mm dia B class with resin bonded flap rock wool/glass wool insulation , with necessary material complete. Specification no. (ESD-HWP/TGP)	312.90
m	4-2-2	Supplying and erecting GI pipe 20 mm dia B class with resin bonded flap rock wool/glass wool insulation , with necessary material as per specification no. (ESD-HWP/TGP)	361.20
m	4-2-3	Supplying and erecting GI pipe 25 mm dia B class with resin bonded flap rock wool/glass wool insulation , with necessary material complete. Specification no. (ESD-HWP/TGP)	533.40
m	4-2-4	Supplying and erecting GI pipe 32 mm dia B class with resin bonded flap rock wool/glass wool insulation , with necessary material complete. Specification no. (ESD-HWP/TGP)	614.25
m	4-2-5	Supplying and erecting GI pipe 40 mm dia B class with resin bonded flap rock wool/glass wool insulation , with necessary material complete. Specification no. (ESD-HWP/TGP)	691.95
m	4-2-6	Supplying and erecting GI pipe 50 mm dia B class with resin bonded flap rock wool/glass wool insulation , with necessary material complete. Specification no. (ESD-HWP/TGP)	809.55
m	4-2-7	Supplying and erecting 12/16 mm (ID/OD) polyethylene composite pipe duly joined by compression/crimp fitted accessories, with internal as well as external end sealing arrangement for solar water heater system complete. Specification no. (ESD-HWP/PCP)	180.60
m	4-2-8	Supplying and erecting 16/20 mm (ID/OD) polyethylene composite pipe duly joined by compression/crimp fitted accessories, with internal as well as external end sealing arrangement for solar water heater system complete. Specification no. (ESD-HWP/PCP)	206.85
m	4-2-9	Supplying and erecting 20/25 mm (ID/OD) polyethylene composite pipe duly joined by compression/crimp fitted accessories, with internal as well as external end sealing arrangement for solar water heater system complete. Specification no. (ESD-HWP/PCP)	260.40
m	4-2-10	Supplying and erecting 25/32 mm (ID/OD) polyethylene composite pipe duly joined by compression/crimp fitted accessories, with internal as well as external end sealing arrangement for solar water heater system complete. Specification no. (ESD-HWP/PCP)	359.10
m	4-2-11	Supplying and erecting 32/40 mm (ID/OD) polyethylene composite pipe duly joined by compression/crimp fitted accessories, with internal as well as external end sealing arrangement for solar water heater system complete. Specification no. (ESD-HWP/PCP)	469.35
m	4-2-12	Supplying and erecting 40/50 mm (ID/OD) polyethylene composite pipe duly joined by compression/crimp fitted accessories, with internal as well as external end sealing arrangement for solar water heater system complete. Specification no. (ESD-HWP/PCP)	662.55
m	4-2-13	Supplying and erecting elastomeric nitrile rubber / foam tube type sleeves for over coating and insulating on provided PC / copper pipes having 9 mm thickness and inner diameter / sizes 6 mm for solar water heater system.	53.55
m	4-2-14	Supplying and erecting elastomeric nitrile rubber / foam tube type sleeves for over coating and insulating on provided PC / copper pipes having 9 mm thickness and inner diameter / sizes 9 mm for solar water heater system.	60.90
m	4-2-15	Supplying and erecting elastomeric nitrile rubber / foam tube type sleeves for over coating and insulating on provided PC / copper pipes having 9 mm thickness and inner diameter / sizes 12 mm for solar water heater system.	66.15
m	4-2-16	Supplying and erecting elastomeric nitrile rubber / foam tube type sleeves for over coating and insulating on provided PC / copper pipes having 9 mm thickness and inner diameter / sizes 16 mm for solar water heater system.	75.60

m	4-2-17	Supplying and erecting elastomeric nitrile rubber / foam tube type sleeves for over coating and insulating on provided PC / copper pipes having 9 mm thickness and inner diameter / sizes 19 mm for solar water heater system.	87.15
m	4-2-18	Supplying and erecting elastomeric nitrile rubber / foam tube type sleeves for over coating and insulating on provided PC / copper pipes having 9 mm thickness and inner diameter / sizes 22 mm for solar water heater system.	95.55
m	4-2-19	Supplying and erecting elastomeric nitrile rubber / foam tube type sleeves for over coating and insulating on provided PC / copper pipes having 9 mm thickness and inner diameter / sizes 28 mm for solar water heater system.	108.15
m	4-2-20	Supplying and erecting elastomeric nitrile rubber / foam tube type sleeves for over coating and insulating on provided PC / copper pipes having 9 mm thickness and inner diameter / sizes 32 mm for solar water heater system.	118.65
m	4-2-21	Supplying and erecting elastomeric nitrile rubber / foam tube type sleeves for over coating and insulating on provided PC / copper pipes having 9 mm thickness and inner diameter / sizes 42 mm for solar water heater system.	129.15
	Note:	1) For polyethylene composite pipe additional insulation of maximum 6 mm thickness may be proposed where there is drastic fall in temperature due to atmospheric condition.	0.00
		2) ID/OD stands for inner diameter / outer diameter.	0.00
		<u>4.3 Solar lighting (ESD-SOL)</u>	0.00
Each	4-3-1	Supplying, installing, testing and commissioning of solar home light system with 2 white LED luminaires , 2.5 W (max.) each, 12V, 12 AH C-20 lead acid battery / valve regulated lead acid battery, 12 Wp SPV Module with module mounting hardware, electronic control, connecting wires, switches, battery box and all accessories complete. Specification no. ESD-SOL/SHL	#VALUE!
Each	4-3-2	Supplying, installing, testing and commissioning of solar home light system with 2 white LED luminaires 2.5W (max.) each and 1 DC fan upto 10W, 12V-20 AH C-20 lead acid battery/ valve regulated lead acid battery, 24 Wp SPV Module with module mounting hardware, electronic control, connecting wires, switches, battery box and all accessories complete. Specification no. ESD-SOL/SHL	#VALUE!
Each	4-3-3	Supplying, installing, testing and commissioning of solar home light system with 4 white LED luminaires , 2.5W (max.) each, 12V, 20 AH C-20 lead acid battery / valve regulated lead acid battery , 24Wp SPV Module with module mounting hardware, electronic control, connecting wires, switches, battery box and all accessories complete. Specification no. ESD-SOL/SHL	#VALUE!
Each	4-3-4	Supplying, installing, testing and commissioning of solar home light system with 2 white LED luminaires 2.5W (max.) Each and 1 DC fan upto 20 W, 12V- 40AH C-20 lead acid battery/valve regulated lead acid battery, 40 Wp SPV module with module mounting hardware, electronic control, connecting wires, switches, battery box and all accessories complete. Specification no. ESD-SOL/SHL	#VALUE!
Each	4-3-5	Supplying, installing, testing and commissioning of solar panel comprising high efficiency poly-crystalline / multi crystalline photovoltaic cell 100Wp, 12V with necessary clamps and module frame on existing structure complete. Specification no. ESD-SOL/CELL	5072.55
Each	4-3-6	Supplying, installing, testing and commissioning of solar panel comprising high efficiency poly-crystalline / multi crystalline photovoltaic cell 250Wp, 24V with necessary clamps and module frame on existing structure complete. Specification no. ESD-SOL/CELL	10092.60

Each	4-3-7	Supplying, installing, testing and commissioning of solar panel comprising high efficiency poly-crystalline / multi crystalline photovoltaic cell 300Wp, 24V with necessary clamps and module frame on existing structure complete. Specification no. ESD-SOL/CELL	11330.55
Each	4-3-8	Supplying, installing, testing and commissioning of battery with capacity of 12 V- 40 Ah with duty cycle 10-12 hrs suitable to charge on PV cell with necessary wiring connections erected in powder coated protection box with stand and nut bolts complete. Specification no. ESD-SOL/BAT	6625.50
Each	4-3-9	Supplying, installing, testing and commissioning battery with capacity of 12 V- 75 Ah with duty cycle 10-12 hrs suitable to charge on PV cell with necessary wiring connections erected in powder coated protection box with stand and nut bolts complete. Specification no. ESD-SOL/BAT	8338.05
Each	4-3-10	Supplying, installing, testing and commissioning battery with capacity of 12 V- 150 Ah with duty cycle 10-12 hrs suitable to charge on PV cell with necessary wiring connections erected in powder coated protection box with stand and nut bolts complete. Specification no. ESD-SOL/BAT	14723.10
Each	4-3-11	Supplying, installing, testing and commissioning solar street light pole comprising of 9 W LED fitting, 12V 18Ah maintenance free lithium battery , min. 40 Wp SPV module, MS powder coated battery box weather proof, mounted on 75/80 mm dia. B-Grade GI pole of 6 m. height along with brackets, foundation, earthing and necessary accessories complete. Specification no. ESD-SOL-STL (with 5 years warrantee)	#VALUE!
Each	4-3-12	Supplying, installing, testing and commissioning solar street light pole comprising of 14W LED fitting, 12V 36Ah maintenance free lithium battery , min. 75Wp SPV module, MS powder coated battery box weather proof, mounted on 75/80 mm dia. B-Grade GI pole of 6 m. height along with brackets, foundation, earthing and necessary accessories complete. Specification no. ESD-SOL-STL (with 5 years warrantee)	#VALUE!
Each	4-3-13	Supplying, installing, testing and commissioning solar street light pole comprising of 12W x 2 nos. LED fittings, 12V min. 100Ah maintenance free lithium battery, min 120Wp SPV module , MS powder coated battery box weather proof, mounted on 75/80 mm dia. B-Grade GI pole of 6 m. height along with brackets, foundation, earthing and necessary accessories complete. Specification no. ESD-SOL-STL	#VALUE!
Each	4-3-14	Supplying, installing, testing and commissioning solar LED mini Hi – Mast 20 W x 5 nos. LED luminaries, 2 nos. x 150 AH 12 V lithium battery, min. 400 Wp SPV modules , mounted on GI octagonal pole with bottom of 130 mm A/F, top 70 mm A/F 6 mtr height along with brackets, foundation, earthing and necessary accessories, waterproof battery box, suitable solar inverter, timer setting arrangement, GI / powder coated module structure, with first 6 hr. full intensity light output and following 6 hr. with half intensity light output along with solar and local electrical power supply charging facility complete. (with 5 years warrantee)	#VALUE!
Each	4-3-15	Supplying, installing, testing and commissioning solar street light pole comprising of 7W x 2 nos. LED fittings, 12V 36 Ah maintenance free lithium battery, min. 100 Wp SPV module , MS powder coated weather proof and anti-theft battery box. pole height 5 m. 16 Lux at 4 m. complete. Specification no. ESD-SOL-STL (with 5 years warrantee)	#VALUE!
Note:-		1. For item no 4-3-5 to 4-3-7 for solar panel comprising of mono crystalline photovoltaic cell of the same capacity, increase overall rate by 10 % .	0.00

		2. For items 4-3-1 to 4-3-13 are considered with warrantee of 5 years.	0.00
		3. For item no. 4-3-1 to 4-3-4 and 4-3-13 to 4-3-15 rates are as per benchmark cost of Ministry of New and Renewable Energy (MNRE) which are inclusive of total system cost, it's installation, commissioning, transportation, insurance with 5 years AMC/CMC .	0.00
		4. Warrantee of the battery for item no. 4-3-1 to 4-3-4 should be for a period of 5 years and warrantee for PV modules will be for a minimum period of 25 years from the date of supply.	0.00
		<u>4.4 Miscellaneous</u>	0.00
Each	4-4-1	Supplying and erecting quartz electronic time switch having 24 hour dial to work on 250 V 50 cycle AC having built in rechargeable nickel cadmium batteries to run the time switch on failure of supply having switch contact rating upto 16A to use independently or in conjunction with contactor.	2487.45
Each	4-4-2	Supplying and erecting two pole power contactor 230 V, 12 A for time switch complete erected on provided wooden block/ box, with necessary materials.	1012.20
Each	4-4-3	Supplying and erecting two pole power contactor 230 V, 32 A for time switch complete erected on provided wooden block/ box, with necessary materials.	2470.65
Each	4-4-4	Supplying and erecting four pole power contactor 430 V, 16 A for time switch complete erected on provided wooden block/ box, with necessary materials.	1357.65
Each	4-4-5	Supplying and erecting four pole power contactor 430 V, 40 A for time switch complete erected on provided wooden block/ box, with necessary materials.	2721.60
Each	4-4-6	Supplying and erecting programmable digital almanac timer microcontroller based with real time clock to operate on derived switching "ON" & switching "OFF" street light as per daily sunset and sunrise respectively automatically having 4 digit LED continuous time display, relay output 230 V / 10A with 10 hrs battery backup and manual over drive facility capable to drive different capacity contactors timer erected in provided M.S. box in an approved manner.	6309.45
per litre	4-4-7	Providing and fixing high-density polyethylene (HDPE) container one piece moulded water tank made out of high density polyethylene and built corrugated inclusive of delivery up to destination hoisting and fixing of accessories such as inlet, outlet overflow pipe inclusive of all tanks capacity up to 20000 litres .	9.45
		<u>4.5 Rooftop OFF grid solar systems (ESD-RT-OFG)</u>	0.00
Each	4-5-1	Supplying, installing, testing and commissioning of 1 kWp off grid solar power pack with GI mounting structure and interconnecting wires / cables along with 24V/12V pure sine wave solar power inverter (THD<5%), 24V/12V charge controller and 24V/12V C-10 rated lead acid battery bank of required capacity and required SPV modules for battery backup of 3 hrs complete , with 5 years on site performance warrantee. Specification no. ESD-RT-OFG	#VALUE!
Each	4-5-2	Supplying, installing, testing and commissioning of 1 kWp off grid solar power pack with GI mounting structure and interconnecting wires / cables along with 24V/12V pure sine wave solar power inverter (THD<5%), 24V/12V charge controller and 24V/12V C-10 rated lead acid battery bank of required capacity and required SPV modules for battery backup of 6 hrs complete , with 5 years on site performance warrantee. Specification no. ESD-RT-OFG	#VALUE!

Each	4-5-3	Supplying, installing, testing and commissioning of 11 kWp off grid solar power pack with GI mounting structure and interconnecting wires / cables along with 24V/12V pure sine wave solar power inverter (THD<5%), 24V/12V charge controller and 24V/12V C-10 rated lead acid battery bank of required capacity and required SPV modules for battery backup of 3 hrs complete, with 5 years on site performance warrantee as per Specification no. ESD-RT-OFG	#VALUE!
Each	4-5-4	Supplying, installing, testing and commissioning of 11 kWp off grid solar power pack with GI mounting structure and interconnecting wires / cables along with 24V/12V pure sine wave solar power inverter (THD<5%), 24V/12V charge controller and 24V/12V C-10 rated lead acid battery bank of required capacity and required SPV modules for battery backup of 6 hrs complete, with 5 years on site performance warrantee as per Specification no. ESD-RT-OFG	#VALUE!
Note:-	1. For item no. 4-5-1 add Rs. 76190/- per kWp for off grid solar power pack upto 10 kWp		0.00
	2. For item no. 4-5-2 add Rs. 95240/- per kWp for off grid solar power pack upto 10 kWp		0.00
	3. For item no. 4-5-3 add Rs. 68571/- per kWp for off grid solar power pack above 11 kWp upto 25 kWp		0.00
	4. For item no. 4-5-4 add Rs. 85714/- per kWp for off grid solar power pack above 11 kWp upto 25 kWp		0.00
	5. For item no. 4-5-1 to 4-5-4, rates are as per benchmark cost of Ministry of New and Renewable Energy (MNRE), inclusive of total system cost, it's installation, commissioning, transportation, insurance with 5 years AMC/CMC .		0.00
		<u>4.6 Rooftop ON grid solar systems (ESD-RT-ONG)</u>	0.00
Each	4-6-1	Supplying, installing, testing and commissioning of 1 kWp capacity on grid solar power pack with GI mounting structure and inter connecting wires / cables without battery bank SPV modules and solar power conditioning unit of required capacity complete, with 5 years on site performance warrantee. Specification no. ESD-RT-ONG	#VALUE!
Each	4-6-2	Supplying, installing, testing and commissioning of 11 kWp capacity on grid solar power pack with GI mounting structure and inter connecting wires / cables without battery bank SPV modules and solar power conditioning unit of required capacity complete, with 5 years on site performance warrantee. Specification no. ESD-RT-ONG	#VALUE!
Each	4-6-3	Supplying, installing, testing and commissioning of 101 kWp capacity on grid solar power pack with GI mounting structure and inter connecting wires / cables without battery bank SPV modules and solar power conditioning unit of required capacity complete, with 5 years on site performance warrantee. Specification no. ESD-RT-ONG	#VALUE!
Note:-	1. For item no.4-6-1 add Rs. 57145/- per kWp for ON grid solar power pack upto 10 kWp .		0.00
	2. For item no.4-6-2 add Rs. 52380/- per kWp for ON grid solar power pack above 11 kWp upto 100 kWp.		0.00
	3. For item no.4-6-3 add Rs. 50480/- per kWp for ON grid solar power pack above 101 kWp upto 500 kWp.		0.00
	4. For item no. 4-6-1 to 4-6-3, rates are as per benchmark cost of Ministry of New and Renewable Energy (MNRE), inclusive of total system cost, it's installation, commissioning, transportation, insurance with 5 years AMC/CMC.		0.00
			0.00
			0.00
			0.00
		<u>4.7 Solar water pump systems (ESD-SWPS)</u>	0.00

Each	4-7-1	Supplying, installing, testing and commissioning of solar water pump of 1 HP capacity, DC surface type, 90000 LPD, total head 10m, comprising of 900 Wp PV array / submersible type (with controller) 42000 LPD, total head of 30m, comprising of 1200 Wp PV array mounted on GI structure with necessary hardware complete with 5 years on site performance warrantee. Specification no. ESD-SWPS	#VALUE!
Each	4-7-2	Supplying, installing, testing and commissioning of solar water pump of 2 HP capacity, DC surface type, 180000 LPD total head 10m, comprising of 1800 Wp PV array / submersible type (with controller) 63000 LPD, total head of 30m, comprising of 1800 Wp PV array respectively mounted on GI structure with necessary hardware with 5 years on site performance warrantee. Specification no. ESD-SWPS	#VALUE!
Each	4-7-3	Supplying, installing, testing and commissioning of solar water pump of 3 HP capacity, DC surface type, 135000 LPD, total head of 20m, comprising of 2700 Wp PV array / submersible type (with controller) 105000LPD/63000LPD/ 42000LPD total head of 30m/50m/70m, comprising of 3000Wp/ 3000Wp/3000Wp PV array respectively mounted on GI structure with necessary hardware with 5 years on site performance warrantee. Specification no. ESD-SWPS	#VALUE!
Each	4-7-4	Supplying, installing, testing and commissioning of solar water pump of 5 HP capacity, DC submersible type (with controller) 100800 LPD/ 67200LPD/ 45600LPD, total head of 50m/70m/ 100m, comprising of 4800Wp/ 4800Wp/ 4800Wp/ PV array respectively mounted on GI structure with necessary hardware with 5 years on site performance warrantee. Specification no. ESD-SWPS	#VALUE!
Each	4-7-5	Supplying, installing, testing and commissioning of solar water pump of 1 HP capacity, AC surface type, 81000 LPD total head of 10m, comprising of 900 Wp PV array / submersible type (with controller) 38400 LPD, total head of 45m, comprising of 1200Wp PV array respectively mounted on GI structure with necessary hardware and suitable inverter with 5 years on site performance warrantee. Specification no. ESD-SWPS	#VALUE!
Each	4-7-6	Supplying, installing, testing and commissioning of solar water pump of 2 HP capacity, AC surface type, 162000 LPD, total head of 10m, comprising of 1800 Wp PV array / submersible type (with controller) 57600 LPD, head of 30m, comprising of 1800Wp PV array respectively mounted on GI structure with necessary hardware and suitable inverter with 5 years on site performance warrantee. Specification no. ESD-SWPS	#VALUE!
Each	4-7-7	Supplying, installing, testing and commissioning of solar water pump of 3 HP capacity, AC surface type, 243000 LPD, total head of 10m, comprising of 2700Wp PV array / submersible type (with controller) 121500LPD/96000LPD/ 57000LPD/ 39000LPD, total head of 20m/30m/ 50m/70m, comprising of 2700Wp/3000Wp/ 3000Wp/ 3000Wp PV array respectively mounted on GI structure with necessary hardware and suitable inverter with 5 years on site performance warrantee. Specification no. ESD-SWPS	#VALUE!
Each	4-7-8	Supplying, installing, testing and commissioning of solar water pump of 5 HP capacity, AC surface type, 432000 LPD/ 2160000 LPD, total head of 10m/20m, comprising of 4800Wp/ 4800Wp PV array respectively / submersible type (with controller) of 91200LPD/ 62400LPD/ 40800LPD total head of 50m/70m/100m, comprising of 4800Wp/ 4800Wp/ 4800Wp PV array respectively mounted on GI structure with necessary hardware and suitable inverter with 5 years on site performance warrantee. Specification no. ESD-SWPS	#VALUE!

Each	4-7-9	Supplying, installing, testing and commissioning of 7.5 HP capacity AC/DC solar water pump (SPV pump), comprising of min. 7.5 KWp capacity multi crystalline SPV modules mounted on GI Structure with necessary hardware with controller, suitable size HDPE delivery water pipe line up to 60 mtr length inside or above water tank/borewell with necessary control valves and necessary power supply cable of appropriate size complete with 5 years on site performance warrantee. Specification no. ESD-SWPS	639445.80
Each	4-7-10	Supplying, installing, testing and commissioning of 10 HP capacity AC/DC Solar water pump (SPV pump), comprising of min. 10 KWp capacity multi crystalline SPV modules mounted on GI Structure with necessary hardware with controller, suitable size HDPE delivery water pipe line up to 60 mtr length inside or above water tank/ borewell with necessary control valves and necessary power supply cable of appropriate size complete with 5 years on site performance warrantee. Specification no. ESD-SWPS	820512.00
	Note:-	For item no. 4-7-1 to 4-7-8, rates are as per benchmark cost of Ministry of New and Renewable Energy (MNRE), inclusive of total system cost, it's installation, commissioning, transportation, insurance with 5 years AMC/CMC .	0.00
		<u>4.8 Dismantling</u>	0.00
Each	4-8-1	Dismantling the existing solar water heating system upto 500 LPD capacity along with piping etc. from roof top and bringing down to ground.	1985.55
		Above items are conforming to relevant IS as mentioned below	0.00
		IS 12933-1 (2003): Solar flat plate collector, Part 1: requirements	0.00
		IS 12933-2 (2003): Solar flat plate collector, Part 2: components	0.00
		IS 12933-5 (2003): Solar flat plate collector, Part 5: Methods	0.00
		IS 12976 (1990): Solar water heating systems - code of practice	0.00
		IS 15450 (2004): Polyethylene/ aluminium / polyethylene composite pressure pipes for hot and cold water supplies	0.00
		IS 2062 (1992): Mounting structure steel	0
		IS 4759: Galvanization of mounting structure	0
		IEC 61215: PV modules certificate	0
		IEC 61730: Safety qualification testing for PV modules	0
		IEC 61701: Salt mist corrosion testing for PV modules	0
		MNRE Guidelines / Standards	0
		MNRE STD 03: 2013: MNRE Standard : All glass (glass in glass) evacuated tubes solar water heating system	0
		MNRE STD 01: 2013:MNRE Standard : All glass (glass in glass) evacuated solar collector tubes	0
		MNRE guidelines to domestic users of solar water heaters on cost, selection and availability of systems (2012)	0
		MNRE guidelines for installation of solar water heating systems in high rise buildings and multi-storeyed flats.	0
		MNRE Technical specifications for solar photovoltaic lighting system & power packs (off-grid solar application scheme 2016-17)	0
		MNRE JNNSM Solar photovoltaic water pumping systems	0
		MNRE stands for Ministry of New and Renewable Energy	0
		JNNSM stands for Jawaharlal Nehru National Solar Mission	0
			0
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			0
			0
			0
			0
			0

Switchgear (SW) 0

(SW-SWR)	5.1 LT - IC/ MC switchgears, ATS	0
(SW-DB)	5.2 I/C, M/C distribution boards/mini feeder pillar/street light control panel	0
(SW-MCB)	5.3 LT - MCB's/MCB change over switch	0
(SW-MCBDB)	5.4 LT – MCBDB's	0
(SW-MCCB)	5.5 LT – MCCB's	0
(SW-RCCB)	5.6 RCCB / RCBO	0
(SW-SWR-MCCBPB)	5.7 MCCB panel boards and accessories	0
(SW-ACB)	5.8 LT – Air circuit breakers	0
(SW-HTS)	5.9 HT-SF6 Load Break Switch /VCB/RMU	0
(SW-AS)	5.1 Accessories	0
	5.11 Accessories for MCCB's	0
	5.12 Dismantling	0

Chapter 5 SWITCHGEARS (SW)

Unit	Item No	Short Description	0
-3	-1	-2	-9.45
		<u>5.1 LT - IC/MC Switchgears, ATS (SW-SWR)</u>	0
Each	5-1-1	Supplying and erecting double pole switch surface type/ flush type 240V, 32A with indicator lamp & fuse as per specification no. SW-SWR/BDP .	173.25
Each	5-1-2	Supplying and erecting double pole metal clad switch with fuse and neutral link 240V, 16A on iron / GI frame as per specification no. SW-SWR/MDP .	464.10
Each	5-1-3	Supplying and erecting double pole metal clad switch with HC type fuse and neutral link 240V, 32A on iron / GI frame as per specification no. SW-SWR/MDP .	779.10
Each	5-1-4	Supplying and erecting double pole metal clad switch with HC type fuse 240V,63A on iron / GI frame as per specification no. SW-SWR/MDP .	1824.90
Each	5-1-5	Supplying and erecting triple pole metal clad switch and HC type fuse 415V, 16A on iron / GI frame / board as per specification no. SW-SWR/MTP .	1031.10
Each	5-1-6	Supplying and erecting triple pole metal clad switch and fuse 415V, 32A on iron / GI frame as per specification no. SW-SWR/MTP .	1278.90

Each	5-1-7	Supplying and erecting triple pole metal clad switch and fuse 415V, 63A on angle iron / GI frame as per specification no. SW-SWR/MTP.	2691.15
Each	5-1-8	Supplying and erecting triple pole metal clad switch and fuse 415V, 100A on angle iron / GI frame as per specification no. SW-SWR/MTP.	5624.85
Each	5-1-9	Supplying and erecting triple pole metal clad rewirable fuse switch 415V, 200A on angle iron /GI frame as per specification no. SW-SWR / MTP.	6460.65
Each	5-1-10	Supplying and erecting triple pole metal clad HC type rewirable fuse and switch 415V, 16A with neutral link on angle iron / GI frame as per specification no. SW-SWR/MTP.	1021.65
Each	5-1-11	Supplying and erecting triple pole metal clad HC type rewirable fuse and switch 415, V 32A with neutral link on angle iron / GI frame as per specification no. SW-SWR/MTP.	1319.85
Each	5-1-12	Supplying and erecting triple pole metal clad HC type rewirable fuse and switch 415V, 63A with neutral link on angle iron /GI frame as per specification no. SW-SWR/MTP.	2683.80
Each	5-1-13	Supplying and erecting triple pole metal clad switch and fuse 415V, 100A with neutral link on angle iron / GI frame as per specification no. SW-SWR/MTP .	5058.90
Each	5-1-14	Supplying and erecting triple pole metal clad switch rewirable fuse 415V, 200A with neutral link on angle iron / GI frame as per specification no. SW-SWR/MTP.	8217.30
Each	5-1-15	Supplying and erecting triple pole metal clad HRC fuse switch 415V, 63A with neutral link with HRC fuses on angle iron /GI frame as per specification no. SW-SWR/TPHRC.	3977.40
Each	5-1-16	Supplying and erecting triple pole metal clad HRC fuse switch 415V, 100 A. with neutral link with HRC fuses on angle iron /GI frame as per specification no. SW-SWR/TPHRC.	5660.55
Each	5-1-17	Supplying and erecting triple pole metal clad HRC fuse switch 415V, 200A with neutral link with HRC fuses on angle iron /GI frame as per specification no. SW-SWR/TPHRC.	7752.15
Each	5-1-18	Supplying and erecting triple pole metal clad HRC fuse switch 415V, 300-320 A with neutral link with HRC fuses, on angle iron / GI frame as per specification no. SW-SWR/TPHRC.	9819.60
Each	5-1-19	Supplying and erecting triple pole metal clad HRC fuse switch 415V, 400A with neutral link with HRC fuses, on angle iron / GI frame as per specification no. SW-SWR/TPHRC.	14556.15
Each	5-1-20	Supplying and erecting triple pole metal clad HRC fuse switch 415V, 500A with neutral link with HRC fuses, on angle iron / GI frame as per specification no. SW-SWR/TPHRC.	19784.10
Each	5-1-21	Supplying and erecting triple pole metal clad HRC fuse switch 415V, 630A with neutral link with HRC fuses, on angle iron / GI frame. As per specification no. SW-SWR/TPHRC.	20461.35
Each	5-1-22	Supplying and erecting triple pole metal clad HRC fuse switch 415V, 800A with neutral link with HRC fuses, on angle iron / GI frame as per specification no. SW-SWR/TPHRC.	29495.55
Each	5-1-23	Supplying and erecting four pole metal clad ON LOAD change over switch 415V , 16A erected on angle iron / GI frame complete.	2062.20
Each	5-1-24	Supplying and erecting four pole metal clad ON LOAD change over switch 415V, 40A erected on angle iron / GI frame complete.	2748.90
Each	5-1-25	Supplying and erecting four pole metal clad ON LOAD change over switch 415V, 63A erected on angle iron / GI frame complete.	4104.45
Each	5-1-26	Supplying and erecting four pole metal clad ON LOAD change over switch 415V, 100A erected on angle iron /GI frame complete.	7374.15
Each	5-1-27	Supplying and erecting four pole metal clad ON LOAD change over switch 415V, 200A erected on angle iron /GI frame approved make complete.	8557.50
Each	5-1-28	Supplying and erecting four pole metal clad ON LOAD change over switch 415V, 320A erected on angle iron /GI frame complete.	12877.20

Each	5-1-29	Supplying and erecting four pole metal clad ON LOAD change over switch 415 V, 400A erected on angle iron / GI frame complete.	18360.30
Each	5-1-30	Supplying and erecting two pole metal clad change over switch 240V, 16A erected on angle iron / GI frame approved make and duly connected with suitable wire leads complete.	989.10
Each	5-1-31	Supplying and erecting two pole metal clad change over switch 240V, 32A erected on angle iron / GI frame approved make and duly connected with suitable wire leads complete.	1368.15
Each	5-1-32	Supplying and erecting ON LOAD four pole automatic transfer switch suitable for 415V, 100A, 50 Hz , capacity with enclosure, automatic/manual inbuilt time delay, high transfer speed, excellent breaking capacity, superior making capacity, compact & light weight, erected on provided angle iron / GI frame and connected with provided leads complete.	33210.45
Each	5-1-33	Supplying and erecting ON LOAD four pole automatic transfer switch suitable for 415V, 160A, 50 Hz capacity with enclosure, automatic/manual inbuilt time delay, high transfer speed, excellent breaking capacity, superior making capacity, compact & light weight, erected on provided angle iron / GI frame and connected with provided leads complete.	43263.15
Each	5-1-34	Supplying and erecting ON LOAD four pole automatic transfer switch suitable for 415V, 200A, 50 Hz capacity with enclosure, automatic/manual inbuilt time delay, high transfer speed, excellent breaking capacity, superior making capacity, compact & light weight, erected on provided angle iron / GI frame and connected with provided leads complete.	54605.25
Each	5-1-35	Supplying and erecting -ON LOAD four pole automatic transfer switch suitable for 415V, 315/320A, 50 Hz capacity -with enclosure, automatic/manual inbuilt time delay, high transfer speed, excellent breaking capacity, superior making capacity, compact & light weight, erected on provided angle iron / GI frame and connected with provided leads complete.	63950.25
Each	5-1-36	Supplying and erecting ON LOAD four pole automatic transfer switch suitable for 415V, 400A, 50 Hz capacity with enclosure, automatic/manual inbuilt time delay, high transfer speed, excellent breaking capacity, superior making capacity, compact & light weight, erected on provided angle iron / GI frame and connected with provided leads complete.	75061.35
New		Add 20% overall rate for the use of iron clad switchgears in place of sheet metal.	0.00
		<u>5.2 IC / MC Distribution Boards/ Mini Feeder Pillar/ Street Light Control Panel(SW-DB)</u>	0.00
Each	5-2-1	Supplying and erecting metal clad distribution board 240V, 2 way, 16A per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	555.45
Each	5-2-2	Supplying and erecting metal clad distribution board 240V, 3 way, 16A per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	591.15
Each	5-2-3	Supplying and erecting metal clad distribution board 240V, 4 way, 16A per way & neutral bar connector complete erected on iron / GI frame as per specification No. SW-SWR/MDB	743.40
Each	5-2-4	Supplying and erecting metal clad distribution board 240V, 6 way, 16A per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	886.20
Each	5-2-5	Supplying and erecting metal clad distribution board 240V, 8 way, 16A per way & neutral bar connector complete erected on iron / GI frame as per specification no SW-SWR/MDB	1065.75
Each	5-2-6	Supplying and erecting metal clad distribution board 415V, 3way, 16A per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	2424.45

Each	5-2-7	Supplying and erecting metal clad distribution board 415V, 4 way, 16A per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	2658.60
Each	5-2-8	Supplying and erecting metal clad distribution board 415V, 6 way, 16A per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	3085.95
Each	5-2-9	Supplying and erecting metal clad distribution board 415 V, , 8 way, 16 A per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	4095.00
Each	5-2-10	Supplying and erecting metal clad distribution board 415V, 3 ways, 32A. per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	3041.85
Each	5-2-11	Supplying and erecting metal clad distribution board 415V, 4 way, 32A. per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	3222.45
Each	5-2-12	Supplying and erecting metal clad distribution board 415V, 6 way, 32A. per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	4251.45
Each	5-2-13	Supplying and erecting metal clad distribution board 415 V, 8 way, 32A. per way & neutral bar connector complete erected on iron / GI frame as per specification no. SW-SWR/MDB	5346.60
Each	5-2-14	Supplying and erecting mini feeder pillar triple pole with 200A FPMCCB as incomer and 2 outgoing circuits with HRC fuse base and cartridge of 100A consists of aluminium bus bar 500 V 200 A complete erected in 14 gauge CRCA sheet box with supporting angles, self-locks, gasket and slanting top to be erected on provided foundation as per specification no. SW-SWR/MFP	35627.55
Each	5-2-15	Supplying and erecting mini feeder pillar triple pole with 300A FPMCCB as incomer and 3 outgoing circuits with HRC fuse base and cartridge of 100A consists of aluminium bus bar 500V 300A complete erected in 14 gauge CRCA sheet box with supporting angles, self-locks, gasket and slanting top to be erected on provided foundation as per specification no. SW-SWR/MFP	51489.90
Each	5-2-16	Supplying & erecting street light control panel in powder coated CRCA 14/16 SWG sheet, outdoor type, single phase, 240 V consisted of suitable rating contactor, 24 hrs digital / astronomical time switch with minimum 5 years battery backup, SPN MCB 40 A , auto/manual selector switch, ON/OFF push buttons, indicator lamps, control wiring, metering device, etc for automatic operation & overcurrent, short circuit, earth fault protection of street lights upto the maximum load of 6 kW on provided iron frame/ CC foundation complete.	17290.35
Each	5-2-17	Supplying & erecting street light control panel in powder coated CRCA 14/16 SWG sheet, outdoor type, single phase, 240 V consisted of suitable rating contactor, 24 hrs digital / astronomical time switch with minimum 5 years battery backup, SPN MCB 63 A auto/manual selector switch, ON/OFF push buttons, indicator lamps, control wiring, metering device, etc for automatic operation & overcurrent, short circuit, earth fault protection of street lights upto the max load of 12 Kw on provided iron frame / CC foundation complete.	21795.90
Each	5-2-18	Supplying & erecting street light control panel in powder coated CRCA 14/16 SWG sheet, outdoor type, three phase, 415 V consisted of suitable rating contactor, 24 hrs digital / astronomical time switch with minimum 5 years battery backup, TPN MCB 40 A auto/manual selector switch, ON/OFF push buttons, indicator lamps, control wiring, metering device, etc for automatic operation & overcurrent, short circuit, earth fault protection of street lights upto the max load of 6 kW on provided iron frame / CC foundation complete.	21532.35

Each	5-2-19	Supplying & erecting street light control panel in powder coated CRCA 14/16 SWG sheet, outdoor type, three phase, 415V consisted of suitable rating contactor, 24 hrs digital/ astronomical time switch with minimum 5 years battery backup, TPN MCB 63 A auto/manual selector switch, ON/OFF push buttons, indicator lamps, control wiring, metering device, etc for automatic operation & overcurrent, short circuit, earth fault protection of street lights upto the max load of 12 kW on provided iron frame / CC foundation complete.	28101.15
Each	5-2-20	Supplying & erecting street light control panel in powder coated CRCA 14/16 SWG sheet, outdoor type, three phase, 415 V consisted of suitable rating contactor, 24 hrs digital/ astronomical time switch with minimum 5 years battery backup, TPN MCB 110 A auto/manual selector switch, ON/OFF push buttons, indicator lamps, control wiring, metering device, etc for automatic operation & overcurrent, short circuit, earth fault protection of street lights upto the max load of 12 kW on provided iron frame / CC foundation complete.	47198.55
Each	5-2-21	Supplying & erecting street light control panel outdoor type, for single phase 2 wire system having in built astronomical adjustable programmable timer with minimum 5 years battery backup , 2 pole contactor upto 60 A, with maintenance mode to switch ON street lights during time of repairs with energy consumption data recording for analysis and LCD display for energy monitoring with numeric key pad in provided box complete.	18692.10
Each	5-2-22	Supplying & erecting street light control panel outdoor type, for three phase 4 wire system having in built astronomical adjustable programmable timer with minimum 5 years battery backup , 4 pole contactor upto 60 A, with maintenance mode to switch ON street lights during time of repairs with energy consumption data recording for analysis and LCD display for energy monitoring with numeric key pad in provided box complete.	33094.95
Note:-	1) For erection of switchgear on existing/provided GI /angle iron frame reduce the overall rate by 5%.		0.00
	2) In coastal area preference to iron clad switchgear shall be given.		0.00
	3) For switchgear without enclosure for cubical panels the rates shall be decreased by 25 % of item no 5-1-16 to 5-1-23 proposed upto 5-1-28		0.00
New	4) Item no 5-2-21, 5-2-22 shall be installed in existing panel with appropriate capacity protecting switchgears.		0
			0
			0
	<u>5.3 LT - MCBs/ MCB Change Over Switch (SW-MCB)</u>		
Each	5-3-1	Supplying, erecting & marking SPMCB 0.5A to 5A in provided distribution board as per specification no. SW-SWR/MCB	231.00
Each	5-3-2	Supplying, erecting & marking SPMCB 6A to 32A, C-series (for motor/power) in provided distribution board as per specification no. SW-SWR/MCB	162.75
Each	5-3-3	Supplying, erecting & marking SPMCB 6A to 32A, B- series (for lighting) in provided distribution board as per specification no. SW-SWR/MCB	174.30
Each	5-3-4	Supplying, erecting & marking SPMCB 40A to 63A C- series (for motor/power) in provided distribution board as per specification no. SW-SWR/MCB	321.30
Each	5-3-5	Supplying, erecting & marking SPMCB 40A to 63A, B- series (for lighting) in provided distribution board as per specification no. SW-SWR/MCB	321.30
Each	5-3-6	Supplying, erecting & marking DPMCB 6A to 32A, C- series (for motor/power) in provided distribution board as per specification no. SW-SWR/MCB	486.15

Each	5-3-7	Supplying, erecting & marking DPMCB 6 A to 32 A B- series (for lighting) in provided distribution board as per specification no. SW-SWR/MCB	457.80
Each	5-3-8	Supplying, erecting & marking DPMCB 40A to 63A, C- series (for motor/power) in provided distribution board as per specification no. SW-SWR/MCB	661.50
Each	5-3-9	Supplying, erecting & marking DPMCB 40A to 63A, B- series (for lighting) in provided distribution board as per specification no. SW-SWR/MCB	619.50
Each	5-3-10	Supplying, erecting & marking SPN MCB 6A to 32A, C- series (for motor/power) in provided distribution board as per specification no. SW-SWR/MCB	448.35
Each	5-3-11	Supplying, erecting & marking SPN MCB 6A to 32A, B- series (for lighting) in provided distribution board as per specification no. SW-SWR/MCB	403.20
Each	5-3-12	Supplying, erecting & marking SPN MCB 40A, C-series (for motor/power) in provided distribution board as per specification no. SW-SWR/MCB	617.40
Each	5-3-13	Supplying, erecting & marking SPN MCB 40A, B-series (for lighting) in provided distribution board as per specification no. SW-SWR/MCB	559.65
Each	5-3-14	Supplying, erecting & marking TPMCB 6 A to 32A in provided distribution board as per specification no. SW-SWR/MCB	687.75
Each	5-3-15	Supplying, erecting & marking TPMCB 40A to 63A in provided distribution board as per specification no. SW-SWR/MCB	974.40
Each	5-3-16	Supplying, erecting & marking FPMCB 6A to 32A in provided distribution board as per specification no. SW-SWR/MCB	952.35
Each	5-3-17	Supplying, erecting & marking FPMCB 40A to 63A in provided distribution board as per specification no. SW-SWR/MCB	1295.70
Each	5-3-18	Supplying, erecting & marking TPN MCB 6A to 32A, C- series in provided distribution board as per specification no. SW-SWR/MCB	936.60
Each	5-3-19	Supplying, erecting & marking TPN MCB 40A to 63A, C- series in provided distribution board as per specification no. SW-SWR/MCB	1199.10
Each	5-3-20	Supplying erecting and marking double pole isolator only switch version of miniature circuit breaker of 40A with required wiring connections and lugs etc. in provided distribution board complete.	290.85
Each	5-3-21	Supplying erecting and marking triple pole isolators only switch version of miniature circuit breaker of 40A with required wiring connections and lugs etc. in provided distribution board complete.	546.00
Each	5-3-22	Supplying erecting and marking triple pole isolators only switch version of miniature circuit breaker of 63A with required wiring connections and lugs etc. in provided distribution board complete.	613.20
Each	5-3-23	Supplying erecting and marking triple pole isolators only switch version of miniature circuit breaker of 100A with required wiring connections and lugs etc. in provided distribution board complete.	696.15
Each	5-3-24	Supplying erecting and marking four pole isolators only switch version of miniature circuit breakers of 40A in provided distribution board complete.	622.65
Each	5-3-25	Supplying erecting and marking four pole isolators only switch version of miniature circuit breakers of 63A in provided distribution board complete.	654.15
Each	5-3-26	Supplying erecting and marking four pole isolators only switch version of miniature circuit breakers of 80/100A in provided distribution board complete.	816.90
Each	5-3-27	Supplying, fixing and commissioning MCB type change over switch 2 pole, 25 A with 3 positions (I-O-II) with centre off position as per specification no. SW-SWR/MCBCOS	991.20
Each	5-3-28	Supplying, fixing and commissioning MCB type change over switch 2 pole, 40 A with 3 positions (I-O-II) with centre off position as per specification no. SW-SWR/MCBCOS	1474.20

Each	5-3-29	Supplying, fixing and commissioning MCB type change over switch 2 pole, 63 A with 3 positions (I-O-II) with centre off position as per specification no. SW-SWR/MCBCOS	1704.15
Each	5-3-30	Supplying, fixing and commissioning MCB type change over switch 4 pole, 25A with 3 positions (I-O-II) with centre off position as per specification no. SW-SWR/MCBCOS	1708.35
Each	5-3-31	Supplying, fixing and commissioning MCB type change over switch 4 pole, 40A with 3 positions (I-O-II) with centre off position as per specification no. SW-SWR/MCBCOS	2625.00
Each	5-3-32	Supplying, fixing and commissioning MCB type change over switch 4 pole, 63A with 3 positions (I-O-II) with centre off position as per specification no. SW-SWR/MCBCOS	2894.85
	Note:-	1) For lighting load 'B' series MCBs are to be provided and for motive/inductive power load 'C' series MCBs are to be provided	0.00
		2) For heavy duty motors, welding transformers and machines having heavy surge current MCB of 'D' type series should be provided for which rates are to be taken by increasing 10% on the material cost of rates of 'C' series	0.00
	New	3) ROHS compliant MCB's, MCCB's, RCCB's, RCBO's and distribution boards shall be preferred.	0.00
	New	4) For use of MCB's with inbuilt short circuit indication on each pole add 10% in the cost of material component.	0.00
		<u>5.4 LT - MCBDBs (SW-MCBDB)</u>	0.00
Each	5-4-1	Supplying and erecting triple pole and neutral distribution board (TPNDB) surface/ flush mounted suitable for SPMCB of 12 ways on iron / GI frame (horizontal busbar type) as per specification no. SW-SWR/MCBDB	1759.80
Each	5-4-2	Supplying and erecting triple pole and neutral distribution board (TPNDB) surface/ flush mounted suitable for SPMCB of 24 ways on iron / GI frame (horizontal busbar type) as per specification no. SW-SWR/MCBDB	2504.25
Each	5-4-3	Supplying and erecting triple pole and neutral distribution board (TPNDB) surface/ flush mounted suitable for SPMCB of 36 ways on iron /GI frame (horizontal busbar type) as per specification no. SW-SWR/MCBDB	3036.60
Each	5-4-4	Supplying and erecting triple pole and neutral distribution board (TPNDB) surface/ flush mounted SP /TP MCBs of 12 ways on iron / GI frame (vertical busbar type) as per specification no. SW-SWR/MCBDB	4041.45
Each	5-4-5	Supplying and erecting triple pole and neutral distribution board (TPNDB) surface/ flush mounted SP / TP of 24 ways on iron / GI frame (vertical busbar type) as per specification no. SW-SWR/MCBDB	5222.70
Each	5-4-6	Supplying & erecting triple pole and neutral distribution board (TPNDB) surface/ flush mounted SP / TP MCB of 36 ways on iron / GI frame (vertical busbar type) as per specification no. SW-SWR/MCBDB	6555.15
Each	5-4-7	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted SPMCB of 12 ways , on iron /GI frame (horizontal busbar type) as per specification no. SW-SWR/MCBDB	2147.25
Each	5-4-8	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted SPMCB of 24 ways , on iron/ GI frame/wooden board. (horizontal busbar type) as per specification no. SW-SWR/MCBDB	3078.60
Each	5-4-9	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted SPMCB of 12 ways/phase (36 poles) on iron/ GI frame (horizontal busbar type) as per specification no. SW-SWR/MCBDB	4195.80

Each	5-4-10	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted SP / TP MCBs of 12 ways , on iron/ GI frame (vertical busbar type) as per specification no. SW-SWR/MCBDB	4520.25
Each	5-4-11	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted SP / TP MCBs of 24 ways on iron/ GI frame (vertical busbar type) as per specification no. SW-SWR/MCBDB	5979.75
Each	5-4-12	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted SP / TP MCBs of 36 ways on iron/ GI frame (vertical busbar type) as per specification no. SW-SWR/MCBDB	7694.40
Each	5-4-13	Supplying, erecting and marking enclosure single pole and neutral distribution board (SPNDB) one way for SPMCB 1 no on iron/ GI frame as per specification no. SW-SWR/MCBDB	258.30
Each	5-4-14	Supplying and erecting single pole and neutral distribution board (SPNDB) surface/ flush mounted with 2 ways for incoming and 2 ways for outgoing SPMCBs on iron/ GI frame as per specification no. SW-SWR/MCBDB	763.35
Each	5-4-15	Supplying and erecting single pole and neutral distribution board (SPNDB) surface/flush mounted with 2 ways for incoming and 6 ways for outgoing SP MCB's on iron/ GI frame as per specification no. SW-SWR/MCBDB	786.45
Each	5-4-16	Supplying and erecting single pole and neutral distribution board (SPNDB) surface/flush mounted with 2 ways for incoming and 10 ways for outgoing SP MCB's on iron/ GI frame as per specification no. SW-SWR/MCBDB	1003.80
Each	5-4-17	Supplying and erecting single pole and neutral distribution board (SPNDB) with door surface/flush mounted with 2 ways for incoming and 2 ways for outgoing SP MCB's on iron/ GI frame as per specification no. SW-SWR/MCBDB	946.05
Each	5-4-18	Supplying and erecting single pole and neutral distribution board (SPNDB) with door surface/flush mounted with 2 ways for incoming and 6 ways for outgoing SP MCB's on iron/ GI frame as per specification no. SW-SWR/MCBDB	1115.10
Each	5-4-19	Supplying and erecting single pole and neutral distribution board (SPNDB) with door surface/flush mounted with 2 ways for incoming and 10 ways for outgoing SP MCB's on iron/ GI frame as per specification no. SW-SWR/MCBDB	1339.80
Each	5-4-20	Supplying & erecting original 1.25 mm CRCA sheet metal enclosures with 20A. 2 pin plug & earth socket and 20A. 3 pin plug top with 20A/30A single pole MCB complete erected on angle iron/ GI frame.	741.30
Each	5-4-21	Supplying & erecting original 1.25 mm CRCA sheet metal enclosures with 30A, 3 pin plug & earth socket and 30 A 3 pin plug top with 30A triple pole MCB complete erected on angle iron/ GI frame.	1626.45
Each	5-4-22	Supplying & erecting original 1.25 mm CRCA sheet metal enclosures with 10A. 2 pin plug and earth socket and 10A, 3 pin plug top with 10A single pole miniature circuit breakers erected on angle iron/ GI frame complete.	759.15
Each	5-4-23	Supplying & erecting CRCA sheet metal one way enclosures suitable for DP MCB / TP MCB /FP MCB erected on angle iron/GI frame complete.	358.05
Each	5-4-24	Supplying and erecting blanking plate of suitable size on MCB DB complete.	12.60
Each	5-4-25	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted suitable for 3 pole MCCB as incomer & outgoing SP MCB (12 poles) or TP MCB of 4 ways (12 poles) on iron/ GI frame. (vertical busbar type) as per specification no. SW-SWR/MCBDB1	5867.40

Each	5-4-26	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted suitable for 3 pole MCCB as incomer & outgoing SP MCB (24 poles) or TP MCB of 8 ways (24 poles) , on iron/ GI frame. (vertical busbar type) as per specification no. SW-SWR/MCBDB1	6959.40
Each	5-4-27	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted suitable for 3 pole MCCB as incomer & outgoing SP MCB (36 poles) or TP MCB of 12 ways (36 poles) on iron/ GI frame. (vertical busbar type) as per specification no. SW-SWR/MCBDB1	9145.50
Note:-	1)	All MCB's shall have breaking capacity not less than 10 kA.	0.00
	2)	Above rates are applicable only to factory made enclosures.	0.00
	3)	Reduce overall rates by 5% if angle iron frame is not required.	0.00
	4)	MCB's (double pole, four pole or triple pole & neutral) & isolators for single phase circuits shall not be incorporated for outgoing circuits of three phase distribution board.	0.00
	5)	For more than 2 kW load RCCB shall invariably be provided & erected preferably on the same distribution board. (RCCB+MCB) or (RCCB+MCCB etc.) separate box for RCCB/ELCB is not permissible.	0.00
	6)	Above rates are for branded DB's with provision of same brand interior switchgears	0.00
	7)	The MCBDB is exclusive of incoming MCB/MCCB and outgoing SP/TP MCB's and the same should be preferably of the same make	0.00
New	8)	ROHS compliant MCB's, MCCB's, RCCB's, RCBO's and Distribution Boards shall be preferred.	0.00
New	9)	DB,s with IEC 61439 part 1 &3 and minimum IK 08 shall be preferred.	0.00
		<u>5.5 LT - MCCBs (SW-MCCB)</u>	0.00
Each	5-5-1	Providing & erecting 3 Pole MCCB upto 100A , 415V, with short circuit rating 25 kA (Ics=100% of Icu) , adjustable thermal (overload) setting and fixed magnetic setting with provided leads, provision for installation of shunt/ UV/ trip alarm contact and MCCB should have phase barriers both sides, in provided enclosure on iron /GI frame as per specification no. SW-SWR/MCCB	4750.20
Each	5-5-2	Providing & erecting 3 Pole MCCB of 200A ,415V capacity with short circuit rating 25 kA (Ics=100% of Icu) adjustable thermal (overload) setting and fixed magnetic setting with provided leads, provision for installation of shunt/ UV/ trip alarm contact and MCCB should have phase barriers both sides, in provided enclosure on iron /GI frame as per specification no. SW-SWR/MCCB	9477.30
Each	5-5-3	Providing & erecting 3 Pole MCCB of 250A ,415V capacity with short circuit rating 36 kA (Ics=100% of Icu) adjustable thermal (overload) setting and fixed magnetic setting with provided leads, provision for installation of shunt/ UV/ trip alarm contact and MCCB should have phase barriers both sides, in provided enclosure on iron /GI frame as per specification no. SW-SWR/MCCB	12903.45
Each	5-5-4	Providing & erecting 3 Pole MCCB of 315/400A , 415V capacity with short circuit rating 36 kA (Ics=100% of Icu) , adjustable thermal (overload) setting and fixed magnetic setting with provided leads, provision for installation of shunt/ UV/ trip alarm contact and MCCB should have phase barriers both sides, in provided enclosure on iron /GI frame as per specification no. SW-SWR/MCCB	17098.20
Each	5-5-5	Providing & erecting 3 Pole MCCB of 600/630 A , 415V capacity with short circuit rating 36 kA (Ics=100% of Icu) , adjustable thermal (overload) setting and fixed magnetic setting with provided leads, provision for installation of shunt/ UV/ trip alarm contact and MCCB should have phase barriers both sides, in provided enclosure on iron /GI frame as per specification no. SW-SWR/MCCB	22956.15

Each	5-5-6	Providing & erecting 3 Pole MCCB of 800A , 415V capacity with short circuit rating 50 kA ,(lcs=100% of Icu) , adjustable thermal (overload) setting and fixed magnetic setting with provided leads, provision for installation of shunt/ UV/ trip alarm contact and MCCB should have phase barriers both sides, in provided enclosure on iron /GI frame as per specification no. SW-SWR/MCCB	33239.85
	Note:-	1) For use of 4pole MCCB in place of 3pole MCCB add 20% in overall rate of 3 pole MCCB .	0.00
	New	2) ROHS compliant MCB's, MCCB's, RCCB's, RCBO's and Distribution Boards shall be preferred.	0.00
		<u>5.6 RCCB / RCBO (SW-RCCB)</u>	0.00
Each	5-6-1	Providing, erecting and commissioning 2 pole RCCB only of electromagnetic type with 30/100/300 mA sensitivity and having capacity of 16/ 25A complete as per specification no. SW-RCCB/RCCB	1866.90
Each	5-6-2	Providing, erecting and commissioning 2 pole RCCB only of electromagnetic type with 30/100/300 mA sensitivity and having capacity of 40A complete as per specification no. SW-RCCB/RCCB	1972.95
Each	5-6-3	Providing, erecting and commissioning 2 pole RCCB only of electromagnetic type with 30/100/300 mA sensitivity and having capacity of 63A complete as per specification no. SW-RCCB/RCCB	2572.50
Each	5-6-4	Providing, erecting and commissioning 4 pole RCCB only of electromagnetic type with 30/100/300 mA sensitivity and having capacity of 16/25A complete as per specification no. SW-RCCB/RCCB	2461.20
Each	5-6-5	Providing, erecting and commissioning 4 pole RCCB only of electromagnetic type with 30/100/300 mA sensitivity and having capacity of 40A complete as per specification no. SW-RCCB/RCCB	2493.75
Each	5-6-6	Providing, erecting and commissioning 4 pole RCCB of electromagnetic type with 30/100/300 mA sensitivity and having capacity of 63A complete as per specification no. SW-RCCB/RCCB	2788.80
Each	5-6-7	Providing, erecting and commissioning 4 pole RCCB of electromagnetic type with 30/100/300 mA sensitivity and having capacity of 80A . complete as per specification no. SW-RCCB/RCCB	4458.30
Each	5-6-8	Providing, erecting & commissioning 4 pole RCCB of electromagnetic type with 30/100/300 mA sensitivity and having capacity of 100A , complete as per specification no. SW-RCCB/RCCB	4857.30
Each	5-6-9	Supplying & fixing CRCA sheet Box with earthing terminals for housing 2 Pole RCCB on iron frame/laminated board complete.	195.30
Each	5-6-10	Supplying & fixing CRCA sheet Box with earthing terminals for housing 4 Pole RCCB on iron frame/laminated board complete.	267.75
Each	5-6-11	Supplying, fixing and commissioning 2 pole,RCBO (residual current breaker with overcurrent short circuit 10 kA and earth leakage protection) , with 30/100/300 mA sensitivity and having capacity of 6/10/16/20/25A , as per specification no SW-RCCB/RCBO	2942.10
Each	5-6-12	Supplying, fixing and commissioning 2 pole RCBO (residual current breaker with overcurrent short circuit 10 kA and earth leakage protection) , with 30/100/300 mA sensitivity and having capacity of 32A/40A as per specification no SW-RCCB/RCBO	3112.20
Each	5-6-13	Supplying, fixing and commissioning 2 pole RCBO (residual current breaker with overcurrent short circuit 10 kA and earth leakage protection) , with 30/100/300 mA sensitivity and having capacity of 63A , as per specification no SW-RCCB/RCBO	4062.45

Each	5-6-14	Supplying, fixing and commissioning 4 pole RCBO ((residual current breaker with overcurrent short circuit 10 kA and earth leakage protection) , with 30/100/300 mA sensitivity and having capacity of 6A/10A/16A/20A/25/A as per specification no SW-RCCB/RCBO	3672.90
Each	5-6-15	Supplying, fixing and commissioning 4 pole RCBO ((residual current breaker with overcurrent short circuit 10 kA and earth leakage protection) , with 30/100/300 mA sensitivity and having capacity of 32A/40A as per specification no SW-RCCB/RCBO	4039.35
Each	5-6-16	Supplying, fixing and commissioning 4 pole RCBO ((residual current breaker with overcurrent short circuit 10 kA and earth leakage protection) , with 30/100/300 mA sensitivity and having capacity of 63A as per specification no SW-RCCB/RCBO	4473.00
Each	5-6-17	Providing, erecting & commissioning 4 pole, 40A RCCB with added immunity which can avoid nuisance DC pulse tripping with 30/100/300 mA sensitivity complete as per specification no. SW-RCCB/RCCB	5264.70
Each	5-6-18	Providing, erecting & commissioning 4 pole, 63A RCCB with added immunity which can avoid nuisance DC pulse tripping with 30/100/300 mA sensitivity complete as per specification no. SW-RCCB/RCCB	5414.85
Each	5-6-19	Providing, erecting & commissioning 4 pole,100A RCCB with added immunity which can avoid nuisance DC pulse tripping with 30/100/300 mA sensitivity complete as per specification no. SW-RCCB/RCCB	7146.30
	Note:-	1) For human safety RCCB with 30mA sensitivity shall be selected.	0.00
	New	2) ROHS compliant MCB's,MCCB's, RCCB's, RCBO's and Distribution Boards shall be preferred.	0.00
	New	3) Item no 5-6-23 to 5-6-25 shall be preferably used for lift applications to avoid nuisance tripping.	0.00
	New	4) For use of RCBO's with inbuilt short circuit indication on each pole and separate earth leakage tripping indication shall be preferably used.	0.00
		<u>5.7 MCCB Panel Boards and Accessories (SW-SWR-MCCBPB)</u>	0.00
Each	5-7-1	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for four pole incoming 250A, 2 ways four pole outgoing upto 100 A MCCB's on iron frame, as per specification no SW-SWR/MCCBPB .(Excluding MCCB'S)	31067.40
Each	5-7-2	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for four pole incoming 250A, 4 ways four pole outgoing upto 100 A MCCB's on iron frame, as per specification no SW-SWR/MCCBPB . (Excluding MCCB'S)	37198.35
Each	5-7-3	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for four pole incoming 250A, 6 ways four pole outgoing upto 100 A MCCB's on iron frame, as per specification no SW-SWR/MCCBPB . (Excluding MCCB'S)	43296.75
Each	5-7-4	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for four pole incoming 250A, 8 ways Four pole outgoing upto 100 A MCCB's on iron frame, as per specification no SW-SWR/MCCBPB . (Excluding MCCB'S)	47338.20
Each	5-7-5	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for four pole incoming 250A, 12 ways four pole outgoing upto 100 A MCCB's erected on -iron frame, as per specification no SW-SWR/MCCBPB . (Excluding MCCB'S)	62403.60
Each	5-7-6	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for four pole incoming 400A, 2 ways four pole outgoing upto 100 A MCCB's on iron frame, as per specification no SW-SWR/MCCBPB . (Excluding MCCB'S)	37605.75

Each	5-7-7	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for four pole incoming 400A, 4 ways four pole outgoing upto 100 A MCCB's on provided iron frame, as per specification no SW-SWR/MCCBPB . (Excluding MCCB'S)	42205.80
Each	5-7-8	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for four pole incoming 400 A, 6 ways four pole outgoing upto 100 A MCCB's on iron frame, as per specification no SW-SWR/MCCBPB . (Excluding MCCB'S)	48459.60
Each	5-7-9	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for four pole incoming 400A, 8 ways four pole outgoing upto 100 A MCCB's on iron frame, as per specification no SW-SWR/MCCBPB . (Excluding MCCB'S)	51711.45
Each	5-7-10	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for four pole incoming 400A, 12 ways four pole outgoing upto 100 A MCCB's on iron frame, as per specification no SW-SWR/MCCBPB . (Excluding MCCB'S)	72921.45
Set	5-7-11	Providing & erecting incoming and outgoing cable alleys suitable for MCCB panel board with door of 250A incoming and 2 way outgoing made from CRCA sheet 1.6 mm thick duly powder coated and having vertical insulated partition for shielding between the shared face of cable way and DB complete.	14732.55
Set	5-7-12	Providing & erecting incoming and outgoing cable alleys suitable for MCCB panel board with door of 250A incoming and 4 way outgoing or 400A incoming and 2 way outgoing made from CRCA sheet 1.6 mm thick duly powder coated and having vertical insulated partition for shielding between the shared face of cableway and DB complete.	14080.50
Set	5-7-13	Providing & erecting incoming and outgoing cable alleys suitable for MCCB panel board with door of 250A incoming and 6 way outgoing or 400A incoming and 4 way outgoing made from CRCA sheet 1.6 mm thick duly powder coated and having vertical insulated partition for shielding between the shared face of cableway and DB complete.	14872.20
Set	5-7-14	Providing & erecting incoming and outgoing cable alleys suitable for MCCB panel board with door of 250A incoming and 8 way outgoing or 400A incoming and 6 way outgoing made from CRCA sheet 1.6 mm thick duly powder coated and having vertical insulated partition for shielding between the shared face of cableway and DB complete.	16690.80
Set	5-7-15	Providing & erecting incoming and outgoing cable alleys suitable for MCCB panel board with door of 250A incoming and 12 way outgoing or 400A incoming and 6/8 way outgoing made from CRCA sheet 1.6 mm thick duly powder coated and having vertical insulated partition for shielding between the shared face of cableway and DB complete.	19683.30
Set	5-7-16	Providing & erecting incoming and outgoing cable alleys suitable for MCCB panel board with door of 400A incoming and 12 way outgoing made from CRCA sheet 1.6 mm thick duly powder coated and having vertical insulated partition for shielding between the shared face of cableway and DB complete.	22270.50
Set	5-7-17	Providing & erecting prewired meter module suitable for MCCB panel board with CT's and emf's VIF meter complete.	11519.55
Each	5-7-18	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for three pole incoming 250A, 4 ways three pole outgoing up to 100A MCCB on iron frame in compliance of IEC 61439, as per specification no SW-SWR/MCCBPB (Excluding MCCB'S)	35541.45

Each	5-7-19	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for three pole incoming 250A, 8 ways three pole outgoing up to 100A MCCB on iron frame in compliance of IEC 61439, as per specification no SW-SWR/MCCBPB (Excluding MCCB'S)	43778.70
Each	5-7-20	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for three pole incoming 250A, 12 ways three pole outgoing up to 100A MCCB on iron frame in compliance of IEC 61439, as per specification no SW-SWR/MCCBPB (Excluding MCCB'S)	51273.60
Each	5-7-21	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for three pole incoming 400A, 4 ways three pole outgoing up to 100A MCCB on iron frame in compliance of IEC 61439, as per specification no SW-SWR/MCCBPB (Excluding MCCB'S)	41569.50
Each	5-7-22	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for three pole incoming 400A, 8 ways three pole outgoing up to 100A MCCB on iron frame in compliance of IEC 61439, as per specification no SW-SWR/MCCBPB (Excluding MCCB'S)	47084.10
Each	5-7-23	Providing & erecting floor / wall mounting, MCCB panel board with door suitable for three pole incoming 400A, 12 ways three pole outgoing up to 100A MCCB on iron frame in compliance of IEC 61439, as per specification no SW-SWR/MCCBPB (Excluding MCCB'S)	60027.45
	Note:-	1) The MCCB panel board and cable alleys from above items are interconnected and should be of same make only and factory made only	0.00
		2) The MCCB panel board is exclusive of incoming and outgoing MCCB's and the same should be preferably of the same make	0.00
	New	3) ROHS compliant MCB's, MCCB's, RCCB's, RCBO's and distribution boards shall be preferred.	0.00
		<u>5.8 LT - Air Circuit Breakers (SW-ACB)</u>	0.00
Each	5-8-1	Supplying and erecting air circuit breaker manually operated non-drawout type of 630A rated at 50° C without deration , 500V, 3 pole having short circuit rating 50 kA (Ics=Icu=Icw for 1s), with standard accessories and thermal magnetic release on provided iron frame as per specification no. SW-SWR/ACB	60906.30
Each	5-8-2	Supplying and erecting air circuit breaker manually operated non-drawout type of 800A rated at 50° C without deration , 500V, 3 pole with having short circuit rating 50 kA (Ics=Icu=Icw for 1s), standard accessories and thermal magnetic release on provided iron frame as per specification no. SW-SWR/ACB	63275.10
Each	5-8-3	Supplying and erecting air circuit breaker manually operated non-drawout type of 1000A rated at 50° C without deration , 500V, 3 pole having short circuit rating 50 kA (Ics=Icu=Icw for 1s), with standard accessories and thermal magnetic release on provided iron frame as per specification no. SW-SWR/ACB	67046.70
Each	5-8-4	Supplying and erecting air circuit breaker manually operated non-drawout type of 1600A rated at 50° C without deration , 500V, 3 pole having short circuit rating 50 kA (Ics=Icu=Icw for 1s), with standard accessories and thermal magnetic release on provided iron frame as per specification no. SW-SWR/ACB	94906.35
Each	5-8-5	Supplying and erecting air circuit breaker manually operated drawout type of 800A rated at 50° C without deration , 500V, 3 pole having short circuit rating 50 kA (Ics=Icu=Icw for 1s), with standard accessories and thermal magnetic release on provided iron frame as per specification no. SW-SWR/ACB	104892.90

Each	5-8-6	Supplying and erecting air circuit breaker manually operated drawout type of 1000A rated at 50° C without deration , 500V, 3 pole having short circuit rating 50 kA (Ics=Icu=Icw for 1s), with standard accessories and thermal magnetic release on provided iron frame as per specification no. SW-SWR/ACB	110948.25
Each	5-8-7	Supplying and erecting air circuit breaker manually operated drawout type of 1600A rated at 50° C without deration , 500V, 3 pole having short circuit rating 50 kA (Ics=Icu=Icw for 1s),with standard accessories and thermal magnetic release on provided iron frame as per specification no. SW-SWR/ACB	147151.20
Each	5-8-8	Supplying and erecting air circuit breaker manually operated drawout type of 1250A rated at 50° C without deration , 500V, 3 pole having short circuit rating 50 kA (Ics=Icu=Icw for 1s), with standard accessories and thermal magnetic release on provided iron frame as per specification no.. SW-SWR/ACB	124852.35
Each	5-8-9	Supplying and erecting air circuit breaker manually operated Non drawout type of 1250A rated at 50° C without deration , 500V, 3 pole having short circuit rating 50 kA (Ics=Icu=Icw for 1s), with standard accessories and thermal magnetic release on provided iron frame as per specification no. SW-SWR/ACB	99624.00
Job	5-8-10	Providing maintenance of ACB of all range with ACB maintenance kit by ACB manufacturer consisting of all the essential consumables like greases, cleaning spray, dusters, scrubbers and hardware required and carrying out necessary corrective maintenance of ACB complete. (excluding required spare prices)	4223.10
	Note:-	1) For electrical drawout type ACB for item no from 5-8-6 to 5-8-9 increase overall rates by 20%.	0.00
	New	2) Rated capacity of ACB is observed at 50°C without derating.	0.00
		<u>5.9 HT SF6 Load Break Switch /VCB/RMU (SW-HTS)</u>	0.00
Each	5-9-1	Supplying and erecting extendable / non-extendable indoor type 11 kV, 630A, load break switch with fuses of required rating on provided MS channels / trench / foundations per specification no SW-HTS / LBS	124096.35
Each	5-9-2	Supplying and erecting extendable / non-extendable indoor type 22 kV, 630A, load break switch with fuses of required rating on provided MS channels / trench / foundation as per specification no SW-HTS / LBS	233904.30
Each	5-9-3	Supplying and erecting extendable / non-extendable outdoor type 11 kV 630A, load break isolator switch on provided MS channels / trench / foundation as per specification no SW-HTS / LBS	142288.65
Each	5-9-4	Supplying and erecting extendable / non-extendable outdoor type 22 kV 630A, load break isolator switch on provided MS channels / trench / foundation as per specification no SW-HTS / LBS	250330.50
Each	5-9-5	Supplying and erecting 11 kV 400A, oil switch-fuse unit extendable/non-extendable on provided MS channels / trench / foundation as per specification no SW-HTS / LBS	153734.70
Each	5-9-6	Supplying & erecting 11 kV 630A, indoor type ring main unit with 1 or 2 incoming & 2 or 1 outgoing with HRC fuses complete erected on provided cc foundation/MS channels/trench, etc, as per specification no SW-HTS / RMU	307496.70
Each	5-9-7	Supplying & erecting 22 kV 630A, indoor type ring main unit with 1 or 2 incoming & 2 or 1 outgoing with HRC fuses complete erected on provided c c foundation/MS channels/trench, etc as per specification no SW-HTS / RMU	526405.95
Each	5-9-8	Supplying and erecting 11kV, 630A, vacuum circuit breaker of required rating, on provided MS channels / trench / foundation as per specification no SW-HTS / VCB	535645.95
Each	5-9-9	Supplying and erecting 22 kV, 630 A, vacuum circuit breaker of required rating on provided MS channels / trench / foundation as per specification no SW-HTS / VCB	1069108.95

Each	5-9-10	Supplying and erecting 11kV HRC fuse 10A to 40 A for load break switch to be fitted with necessary nut bolts and commissioning complete.	4335.45
Each	5-9-11	Supplying and erecting 11 kV HRC fuse 63A for load break switch to be fitted with necessary nut bolts and commissioning complete.	4978.05
Each	5-9-12	Supplying and erecting 22 kV HRC fuse 10A to 40A for load break switch to be fitted with necessary nut bolts and commissioning complete.	7693.35
Each	5-9-13	Supplying and erecting 22 kV HRC fuse 63A for load break switch to be fitted with necessary nut bolts and commissioning complete.	9700.95
Each	5-9-14	Supplying , erecting, testing & commissioning 11kV, 630A, 21 kA / 3sec, 1 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 1 no. feeder with 1VCB as per specification no. SW-HTS / RMU SCADA	299862.15
Each	5-9-15	Supplying, erecting, testing & commissioning 11kV, 630A, 21 kA / 3sec, 1 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 1 no. feeder with 1LBS as per specification no. SW-HTS / RMU SCADA	189497.70
Each	5-9-16	Supplying , erecting, testing & commissioning 11kV, 630A, 21 kA / 3sec, 2 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 1 no. feeder with load break switch and 1 no. feeder with VCB as per specification no. SW-HTS / RMU SCADA (1LBS +1VCB)	382294.50
Each	5-9-17	Supplying , erecting, testing & commissioning 11kV, 630A, 21 kA / 3sec, 3 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 2 nos. feeder with load break switch and 1 no. feeder with VCB as per specification no. SW-HTS / RMU SCADA (2LBS +1VCB)	461980.05
Each	5-9-18	Supplying , erecting, testing & commissioning 11kV, 630A, 21kA/3sec, 4 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 2 nos. feeder with load break switch and 2 nos. feeder with VCB as per specification no. SW-HTS / RMU SCADA (2LBS +2VCB)	686786.10
Each	5-9-19	Supplying , erecting, testing & commissioning 11kV, 630A, 21kA/3sec, 5 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 2 nos. feeder with load break switch and 3 nos. feeder with VCB as per specification no. SW-HTS / RMU SCADA (2LBS +3VCB)	798489.30
Each	5-9-20	Supplying , erecting, testing & commissioning 11kV, 630A, 21kA/3sec, 6 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 2 nos. feeder with load break switch and 4 nos. feeder with VCB as per specification no. SW-HTS / RMU SCADA (2LBS +4VCB)	1073296.35
Each	5-9-21	Supplying , erecting, testing & commissioning 11kV, 630A, 21kA/3sec, 3 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 1 no. feeder with load break switch and 2 nos. feeder with VCB as per specification no. SW-HTS / RMU SCADA (1LBS +2VCB)	540349.95
Each	5-9-22	Supplying , erecting, testing & commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 1 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 1 no. feeder with VCB as per specification no. SW-HTS / RMU SCADA (1VCB)	342838.65

Each	5-9-23	Supplying , erecting, testing & commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 1 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 1no. feeder with 1LBS as per specification no. SW-HTS / RMU SCADA	241140.90
Each	5-9-24	Supplying , erecting, testing & commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 2 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 1 no. feeder with load break switch and 1 no. feeder with VCB as per specification no. SW-HTS / RMU SCADA (1LBS +1VCB)	555865.80
Each	5-9-25	Supplying , erecting, testing & commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 3 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 2 nos. feeder with load break switch and 1 no. feeder with VCB as per specification no. SW-HTS / RMU SCADA (2LBS +1VCB)	684978.00
Each	5-9-26	Supplying , erecting, testing & commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 4 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 2 nos. feeder with load break switch and 2 nos. feeder with VCB as per specification no. SW-HTS / RMU SCADA (2LBS +2VCB)	942809.70
Each	5-9-27	Supplying , erecting, testing & commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 5 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 2 nos. feeder with load break switch and 3 nos. feeder with VCB . as per specification no. SW-HTS / RMU SCADA (2LBS +3VCB+M)	1220177.70
Each	5-9-28	Supplying , erecting, testing & commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 6 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 2 nos. feeder with load break switch and 4 nos. feeder with VCB as per specification no. SW-HTS / RMU SCADA (2LBS +4VCB)	1572784.50
Each	5-9-29	Supplying , erecting, testing & commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 3 way outdoor, extensible motorised SCADA compatible RMU as per electric supply company specification consisting of 1no. feeder with load break switch and 2 nos. feeder with VCB as per specification no. SW-HTS / RMU SCADA (1LBS +2VCB)	809861.85
	Note:-	1) The above items are for Indoor installation with IP 55 protection class.	0.00
		2) For outdoor installations IP 65 protection class is to be proposed by increasing overall rates by 10%.	0.00
	New	3) Internal arc tested RMU (min equivalent to short circuit capacity) shall be preferred.	0.00
	New	4) LBS /RMU shall be IEC 62271 -100,200 and 102, compliance.	0.00
		<u>5.10 Accessories (SW-AS)</u>	0.00
Each	5-10-1	Supplying and erecting porcelain base iron clad cut out of HC type 415V 16A erected on polished wooden block complete.	131.25
Each	5-10-2	Supplying and erecting iron clad cut out HC type 415V 32A erected on polished wooden block complete.	205.80
Each	5-10-3	Supplying and erecting iron clad cut out HC type 415V 63A erected on polished wooden block complete.	354.90
Each	5-10-4	Supplying and erecting iron clad cut out HC type 415V 100A erected on polished wooden block complete.	661.50
Each	5-10-5	Supplying and erecting iron clad cut out HC type 415V 200A erected on polished wooden block complete.	1125.60

Each	5-10-6	Supplying and erecting HC pattern porcelain fuse bridges with base & HC type fuse links 240V 16A erected on polished wooden block complete.	78.75
Each	5-10-7	Supplying and erecting HC pattern porcelain fuse bridges with base & HC type fuse links 240V 32A erected on polished wooden block complete.	150.15
Each	5-10-8	Supplying & erecting fuse bridge with base 16A erected on provided switch board in approved manner complete.	91.35
Each	5-10-9	Supplying & erecting fuse bridges with base HC type fuse links 240V 63A erected on polished wooden block complete.	152.25
Each	5-10-10	Supplying & erecting fuse bridges with base HC type fuse links 415V 100A erected on polished wooden block complete.	596.40
Each	5-10-11	Supplying & erecting fuse bridges with base HC type fuse links 415V 200A erected on polished wooden block complete.	846.30
Each	5-10-12	Supplying & erecting fuse bridges with base HC type fuse links 415V 300A erected on polished wooden block complete.	1060.50
Each	5-10-13	Supplying and erecting Bakelite fuse fitting suitable for HRC bolted type fuse up to 32A without fuse complete.	85.05
Each	5-10-14	Supplying and erecting Bakelite fuse fitting suitable for HRC bolted type fuse up to 63A without fuse complete.	129.15
Each	5-10-15	Supplying and erecting Bakelite fuse fitting suitable for HRC bolted type fuse up to 100A without fuse complete.	263.55
Each	5-10-16	Supplying & erecting HRC fuse cartridge 415V 32A complete.	99.75
Each	5-10-17	Supplying & erecting HRC fuse cartridge 415V 63A complete.	116.55
Each	5-10-18	Supplying & erecting HRC fuse cartridge 415V 100A complete.	217.35
Each	5-10-19	Supplying & erecting HRC fuse cartridge 415V 200A complete.	286.65
Each	5-10-20	Supplying & erecting HRC fuse cartridge 415V 300A complete.	416.85
Each	5-10-21	Supplying & erecting HRC fuse cartridge 415V 400A complete.	678.30
Each	5-10-22	Supplying & erecting 415V 16A porcelain base neutral link complete erected in provided MS box complete.	71.40
Each	5-10-23	Supplying & erecting 415V 32A porcelain base neutral link complete erected in provided MS box complete.	76.65
Each	5-10-24	Supplying & erecting 415V 63A porcelain base neutral link complete erected in provided MS box complete.	116.55
Each	5-10-25	Supplying & erecting 415V 100A porcelain base neutral link complete erected in provided MS box complete.	203.70
Each	5-10-26	Supplying & erecting porcelain/epoxy bus bar support complete erected in provided MS box for 100A complete.	61.95
Each	5-10-27	Supplying & erecting porcelain/epoxy bus bar support complete erected in provided MS box for 200/300A complete.	87.15
Each	5-10-28	Supplying & erecting porcelain/epoxy bus bar support complete erected in provided MS box for 400A complete.	108.15
Each	5-10-29	Supplying & erecting 415V 200A porcelain base neutral link complete erected in provided MS box complete.	369.60

		<u>5.11 Accessories for MCCB's</u>	0.00
Set	5-11-1	Supplying and erecting terminal spreaders for use on MCCB incoming and outgoing terminals for 3 pole upto 100A MCCB complete. (set of 6).	178.50
Set	5-11-2	Supplying and erecting terminal spreaders for use on MCCB incoming and outgoing terminals for 3 pole upto 250A MCCB complete. (set of 6)	840.00
Set	5-11-3	Supplying and erecting terminal spreaders for use on MCCB incoming and outgoing terminals for 3 pole 300A- 400A MCCB complete. (set of 6)	1481.55
Set	5-11-4	Supplying and erecting terminal spreaders for use on MCCB incoming and outgoing terminals for 3 pole 630A MCCB complete. (set of 6)	1666.35
Set	5-11-5	Supplying and erecting terminal spreaders for use on MCCB incoming and outgoing terminals for 3 pole upto 800A MCCB complete. (set of 6)	3446.10
Set	5-11-6	Supplying and erecting terminal spreaders for use on MCCB incoming and outgoing terminals for 4 pole upto 100A MCCB complete. (Set of 8)	287.70
Set	5-11-7	Supplying and erecting terminal spreaders for use on MCCB incoming and outgoing terminals for 4 pole above 100A upto 250A MCCB complete. (Set of 8)	1089.90
Set	5-11-8	Supplying and erecting terminal spreaders for use on MCCB incoming and outgoing terminals for 4 pole above 250A upto 400A MCCB complete. (Set of 8)	2123.10
Set	5-11-9	Supplying and erecting terminal spreaders for use on MCCB incoming and outgoing terminals for 4 pole above 400A upto 630A MCCB complete. (Set of 8)	2484.30
Set	5-11-10	Supplying and erecting terminal spreaders for use on MCCB incoming and outgoing terminals for 4 pole above 630A upto 800A MCCB complete. (Set of 8)	4349.10
Each	5-11-11	Supplying and erecting earth fault module for MCCB with adjustable earth fault sensitivity selection 10% to 50% of nominal current (In) and adjustable time delay 100/200 millisecond suitable for upto 200A MCCB with inbuilt CT's complete.	4931.85
Each	5-11-12	Supplying and erecting earth fault module for MCCB with adjustable earth fault sensitivity selection 10% to 50% of nominal current (In) and adjustable time delay 100/200 millisecond suitable for above 200A upto 400A MCCB with inbuilt CT's complete.	6648.60
Each	5-11-13	Supplying and erecting earth fault module for MCCB with adjustable earth fault sensitivity selection 10% to 50% of nominal current (In) and adjustable time delay 100/200 millisecond suitable for above 400A upto 800A MCCB excluding CT's complete.	4946.55
Each	5-11-14	Supplying and erecting extended rotary handle for MCCB with adjustable telescopic rod suitable for upto 250A MCCB complete.	1169.70
Each	5-11-15	Supplying and erecting extended rotary handle for MCCB with adjustable telescopic rod suitable for above 250A upto 630A MCCB complete.	1666.35
Each	5-11-16	Supplying and erecting extended rotary handle for MCCB with adjustable telescopic rod suitable above 630A upto 800A MCCB complete.	2505.30
Each	5-11-17	Supplying and erecting SS enclosure for MCCB suitable for upto 100A MCCB complete.	878.85
Each	5-11-18	Supplying and erecting SS enclosure for MCCB suitable for 125A to 200A MCCB complete.	1452.15
		<u>5.12 Dismantling</u>	0.00
Each	5-12-1	Dismantling the existing switchgears, DB, and bus bar of any size complete with/ without board or angle iron frame complete.	87.15

Each	5-12-2	Making the site clear of dismantled DB and switch gears by refilling the holes with cement mortar & finishing in an approved manner complete.	65.10
Each	5-12-3	Dismantling existing OCB, ACB, LBS, VCB complete from existing panel board in an approved manner complete.	1177.05
		Note:- The rates for item no 5.12.1 to 5.12.3 are for dismantling and handing over to section office inclusive of transportation upto 25 km, between site and section office.	0.00
Each	5-12-4	Dismantling any type of unserviceable feeder pillar, switch gear panel, capacitor panel, metering panel, bus-bar panel, electronic equipment panel, etc. and remaking the site good as original complete. (approx. size (upto 150 cm x 70 cm x 45 cm) - small cupboard)	1177.05
Each	5-12-5	Dismantling any type of unserviceable feeder pillar, switch gear panel, capacitor panel, metering panel, bus-bar panel, electronic equipment panel, etc. and remaking the site good as original complete. (approx. size (upto 200cm. x 90 cm x 45 cm and above) - big cupboard)	1766.10
	Note:-	If item no.5-12-4 & 5-12-5 are to be used then items 5-12-1 to 5-12-3 of dismantling switchgears shall not be used.	0.00
		Above items are confirming to relevant IS as mentioned below	0.00
		IS/IEC .60947.1.2007: Low-voltage switchgear and control gear, Part 1: General rules	0.00
		IS/IEC:60947.2.2003: Low-Voltage Switchgear and Control gear, Part 2: Circuit Breakers	0.00
		IS/IEC:60947.3.1999: Low voltage switchgear and control gear, Part 3: Switches, disconnectors, switch-disconnectors and fuse combination units	0.00
		IS/IEC:60947.4.1.2000: Low-Voltage Switchgear and Control gear, Part 4: Contractors and Motor-Starters, Section 1: Electromechanical Contactors and Motors-Starters	0
		IS/IEC:60947.4.2.1999: Low-Voltage Switchgear and Control gear : Part 4 - Contractors and Motor-Starters, Section 2: ac Semiconductor Motor Controllers and Starters	0
		IS/IEC:60947.4.3.1999: Low voltage switchgear and control gear, Part 4: AC semiconductor controllers and contactors for non-motor loads	0
		IS/IEC:60947.5.1.2003: Low-Voltage Switchgear and Control gear, Part 5: Control Circuit Devices and Switching Elements, Section 1: Electromechanical Control Circuit Devices	0
		IS/IEC:60947.5.2.2007 : Low-Voltage Switchgear and Control Gear, Part 5: Control Circuit Devices and Switching Elements, Section 2: Proximity Switches	0
		IS:12640:1.2008: Residual Current Operated Circuit - Breakers for Household and Similar Uses, Part 1: Circuit-Breakers Without Integral Overcurrent Protection (RCCBs)	0
		IS:12640.2.2008, IEC 61009-1: Residual Current Operated Circuit - Breaking for Household and Similar Uses, Part 2: Circuit - Breakers with Integral Overcurrent Protection (RCVOs)	0
		IS:13703.1.1993: LV Fuses for voltages not exceeding 1000 V ac or 1500 V dc, Part 1: General requirements	0
		IS:13703.2.1.1993: Low-voltage fuses for voltages not exceeding 1 000 V AC or 1 500 V DC, Part 2: Fuses for use by authorized persons, Section 1: Supplementary requirements	0
		IS:13703.2.2.1993: Low-voltage fuses for voltages not exceeding 1 000 V AC or 1 500 V DC, Part 2: Fuses for use by authorized persons, Section 2: Examples of standardized fuses	0

IS:13703.4.1993: Low-Voltage Fuses for Voltages not Exceeding 1000 V AC or 1500 V DC, Part 4: Supplementary Requirements for Fuse Links for the Protection of Semiconductor Devices	0
IS:8623.1.1993: Low-Voltage Switchgear and Control gear Assemblies, Part 1: Requirements for Type-Tested and Partially Type-Tested Assemblies	0
IS:8623.2.1993: Low-voltage Switchgear and Control gear Assemblies, Part 2: Particular Requirements for Busbar Trunking Systems (Busway)	0
IS:8623.3.1993: Low-Voltage Switchgear and Control gear Assemblies, Part 3: Particular Requirements for Equipment Where Unskilled Persons have Access for Their Use	0
IEC 61439-1: General requirements.	0
IEC 61439-2: Power switchgear and control gear assemblies.	0
IEC 61439-3: Distribution boards.	0
IEC 61439-4: Assemblies for construction sites.	0
IEC 61439-5: Assemblies for power distribution.	0
IEC 61439-6: Busbar trunking systems.	0
IEC 62271-1: High Voltage Switchgear and Control gear common specifications	0

Chapter:6	0
Control Panel (CP)	0
(CP-BB) 6.1 Sheets	0
6.2 Busbars	0
6.3 Measuring Instruments	0
6.4 H.T. Metering	0
6.5 Accessories	0
(CP-SPD) 6.6 Surge Protective Devices	0
(CP-ED) 6.7 Energy Devices (Harmonic Filter, APFC Panel)	0
	0
	0
	0
oter : 6 CONTROL PANEL (CP)	0

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0</i>
-3	-1	-2	-9.45
		6.1 Sheets	0
kg	6-1-1	Supplying and erecting metal work in CRCA sheet with fabrication of boxes, panel boards, etc. including cutting, bending, drilling, welding, riveting, treated with anti-rust treatment and duly powder coated or painted with one coat of red lead paint and 2 coats of enamel paint complete.	239.40
	Note:-	Above rates are inclusive of angle iron work.	0.00
m ²	6-1-2	Supplying and erecting GI sheet 1.6 mm (16 SWG) to be used for fabrication of boxes panel boards etc. including cutting, bending, drilling, welding, riveting etc. and painting with one coat of red lead paint and 2 coats of enamel paint.	2242.80
m ²	6-1-3	Supplying and erecting GI sheet 1.25 mm (18 SWG) to be used for fabrication of boxes panel boards etc. including cutting, bending, drilling, welding, riveting etc. and painting with one coat of red lead paint and 2 coats of enamel paint.	1908.90

m ²	6-1-4	Supplying and erecting GI sheet 1 mm (20 SWG) to be used for fabrication of boxes panel boards etc. including cutting, bending, drilling, welding, riveting etc. and painting with one coat of red lead paint and 2 coats of enamel paint.	1744.05
m ²	6-1-5	Supplying and erecting GI sheet 0.8 mm (22 SWG) to be used for fabrication of boxes panel boards etc. including cutting, bending, drilling, welding, riveting etc. and painting with one coat of red lead paint and 2 coats of enamel paint.	1268.40
m ²	6-1-6	Supplying and erecting GI sheet 0.6 mm (24 SWG) to be used for fabrication of boxes panel boards etc. including cutting, bending, drilling, welding, riveting etc. and painting with one coat of red lead paint and 2 coats of enamel paint.	1220.10
m ²	6-1-7	Supplying and erecting acrylic sheet 3 mm thick to be used for covering the CRCA sheet boxes etc. including cutting, drilling, and pasting or fixing with nut bolts/ screws etc. complete.	1187.55
m ²	6-1-8	Supplying and erecting acrylic sheet 2 mm thick for covering wall entries including cutting, drilling and fixing with nut bolts / screws etc. complete.	1035.30
m ²	6-1-9	Supplying and erecting hylam sheet/ ebonite sheet 3 mm thick for covering wall entries including cutting, drilling and fixing with nut bolts / screws etc. complete.	916.65
m ²	6-1-10	Supplying and erecting hylam sheet/ ebonite 6 mm thick for covering wall entries including cutting, drilling and fixing with nut bolts / screws etc. complete.	1567.65
m ²	6-1-11	Supplying and erecting plywood 6 mm thick fixed to wall or on provided panel board with necessary materials such as screws, wall fasteners supports, nuts bolts etc. complete.	422.10
m ²	6-1-12	Supplying and erecting plywood 12 mm thick fixed to wall or on provided panel board with necessary materials such as screws, wall fasteners supports, nuts bolts etc. complete.	700.35
m ²	6-1-13	Supplying and pasting sunmica / formica sheet 1 mm thick on provided plywood of required shade.	800.10
m ²	6-1-14	Supplying and erecting marine plywood 18/19 mm thick fixed to wall or on provided panel board with necessary materials such as screws, wall fasteners, supports, nut bolts etc. complete.	1333.50
Each	6-1-15	Supplying and erecting GI sheet 1.6 mm (16 SWG) caution board of size 200 x 150 mm duly painted with red oxide and enamel paint in Marathi and Hindi erected at position for medium voltage installation.	103.95
Each	6-1-16	Supplying and erecting GI sheet 1.6mm (16 SWG) caution board of size 250 x 200 mm duly painted with red oxide and enamel paint in Marathi and Hindi erected at position for HV/EHV installation.	143.85
Each	6-1-17	Supplying and erecting GI sheet of 1.25mm (18 SWG) size 200 x 150 mm duly painted with red oxide & enamel paint for displaying the department, date of erection of the electrical installation with approved shade complete.	82.95
m ²	6-1-18	Supplying and erecting cupboard for enclosing switchgears or for any other purpose made from selected marine plywood planks 19 mm thick duly varnished/ painted from inside and from outside with brass hinges and locking arrangement with suitable lock with keys in duplicate. Cupboard shall be duly grouted with suitable size of iron work in wall at the bottom. (Size of cupboard shall be specified in the estimate)	2229.15
kg	6-1-19	Supplying and erecting iron, sheet metal work consisting of CRCA sheets, various sections of iron, plates, chequered plates, rods, bars, MS pipes, etc. for panel board or any other purpose with bending, cutting, drilling and welding complete erected at the position with necessary materials duly painted with one coat of red oxide and two coats of enamel paint to match the switchgears or as per directions by the authority.	138.60

	Note:-	Quantity of iron/sheet metal work shall be considered and worked out as per steel data table.	0.00
Each	6-1-20	Supplying and erecting self-locking arrangement with keys in duplicate, made of brass duly erected, flush with surface of panel / cupboard.	254.10
m ²	6-1-21	Supplying and erecting expanded metal jali enclosure made from GI square mesh 15 SWG having 20/25 mm squares, properly fixed/welded and duly painted with one coat of red oxide and two coats of silver/enamel paint complete. (size of jali or enclosure to be specified in the estimate.)	181.65
kg	6-1-22	Supplying and erecting slotted angles, frames etc. for panel board or any other purposes complete with bending, cutting, drilling and welding complete erected at the position with necessary materials duly painted with one coat of red oxide and two coats of enamel paint to match the switchgears or as per directions by the authority	123.90
<u>6.2 Bus bars (CP-BB)</u>			0.00
m	6-2-1	Supplying and erecting bus bar chamber triple pole with neutral with four aluminium bars, 500V, 100A complete as per specification no. CP-BB	5410.65
m	6-2-2	Supplying and erecting bus bar chamber triple pole with neutral with four aluminium bars, 500V 200A complete as per specification no. CP-BB	5693.10
m	6-2-3	Supplying and erecting bus bar chamber triple pole with neutral with four aluminium bars, 500V 300A complete as per specification no. CP-BB	6053.25
m	6-2-4	Supplying and erecting bus bar chamber triple pole with neutral with four aluminium bars, 500V 400A complete as per specification no. CP-BB	8665.65
m	6-2-5	Supplying and erecting bus bar chamber triple pole with neutral with four aluminium bars, 500V 630A complete as per specification no. CP-BB	9877.35
m	6-2-6	Supplying and erecting bus bar chamber triple pole with neutral with four aluminium bars, 500V 800A complete as per specification no. CP-BB	10722.60
m	6-2-7	Supplying and erecting bus bar chamber triple pole with neutral with four copper bars, 500V, 100A complete as per specification no. CP-BB	7728.00
m	6-2-8	Supplying and erecting bus bar chamber triple pole with neutral with four copper bars, 500V 200A complete as per specification no. CP-BB	9089.85
kg	6-2-9	Supplying & erecting of required size electrolyte copper flexible braided bus patti or bar in bus bar chamber/in panel or any other purpose, suitable for 500 volt with require capacity with 99.9% copper purity with fixing arrangement (like lug or bottle type lug) to both the end with high grade polyolefin insulation sleeve complete as per specification no. BCP-BB	1243.20
	6-2-10	1) The cross sectional area of copper flexible braided bus or bar shall be designed or considered with 30% more or existing cross sectional area of copper bus patti	0.00
	6-2-11	2) Measurement shall be done on actual weight basis after fabrication but before erection.	0.00
kg	6-2-12	Supplying and erecting of any size electrolyte copper patti or bar in bus bar chamber / in panel or any other purpose, 500 V with require capacity with 99.9% copper purity with fixing arrangement (like lug or bottle type lug) to both the end with high grade polyolefin insulation sleeve complete as per specification no. BCP-BB	1080.45

kg	6-2-13	Supplying and erecting of any size electrolyte aluminium patti or bar in bus bar chamber / in panel or any other purpose, 500 V with require capacity with 99.9% aluminium purity with fixing arrangement (like lug or bottle type lug) to both the end with high grade polyolefin insulation sleeve complete as per specification no. BCP-BB	605.85
	Note:-	Nut, bolts holding the lugs to bus bar shall be of bimetallic/ brass/ cadmium plated steel.	0.00
		<u>6.3 Measuring Instruments</u>	0.00
Each	6-3-1	Supplying and erecting static energy meter with 240V 50 Hz. AC supply 5 to 30 A , ISI mark, accuracy class 1.0 with backlit LCD display, (measuring and display kWh V, I, kW six month history of energy and MD in kVA) with transparent hinge type box complete erected on polished teak wood board duly wired with required size of weather proof PVC wires duly tested by electric supply company.	2338.85
Each	6-3-2	Supplying and erecting static energy meter with 240V 50 Hz. AC supply 10 to 60 A , ISI mark, accuracy class 1.0 with backlit LCD display, (measuring and display kWh, V, I, kW, six month history of energy and MD in kVA) with transparent hinge type box complete erected on polished teak wood board duly wired with required size of weather proof PVC wires duly tested by electric supply company.	2491.65
Each	6-3-3	Supplying and erecting static energy meter with 3 X 240V 50 Hz. AC supply 10 to 60 A , ISI mark, accuracy class 1.0 with backlit LCD display, (measuring and display kWh only) with transparent hinge type box complete erected on polished teak wood board duly wired with required size of weather proof PVC wires duly tested by electric supply company.	4162.20
Each	6-3-4	Supplying and erecting static energy meter 440 V 50 Hz. 100A ISI mark meter AC 3 phase 4 wires LCD/LED display complete erected on polished teak wood board duly wired with required size of weather proof PVC wires duly tested for class II accuracy by electric supply company.	5932.50
Each	6-3-5	Supplying and erecting LT CT multifunction DLMS compliance energy meter of accuracy of class 0.5 , 3x240V,50 Hz with optical & RS 232 port, backlit LCD, measures & displays trivector energy, load survey, TOD, tamper detection & logging, power ON /OFF events, instantaneous parameters of rating 1/5 A with display in absence of power complete with zero adjustment & test certificate from manufacturer erected on provided M.S. box and connected to CTs.	8143.80
Each	6-3-6	Supplying and erecting HT CT multifunction DLMS compliance of accuracy of class 0.5 , 3x63.5V,50 Hz with optical & RS 232 port, backlit LCD, measures kWh, kVAh, V, I, kW , 6 months history of energy , load survey, & displays trivector energy, load survey, TOD, tamper detection & logging, power ON /OFF events, instantaneous parameters of rating 1/5 A with display in absence of power complete with zero adjustment & test certificate from manufacturer erected on provided M.S. box.	10942.05
Each	6-3-7	Supplying and erecting panel mounting type digital ammeter having three and half digit LED display , external CT operated, calibrated for suitable to operate on 500V, 0 to 1000A AC supply with necessary PVC wire leads and lugs and mounting hardware on provided panel complete with calibration certificate from manufacturer.	1352.40

Each	6-3-8	Supplying and erecting panel mounting type digital voltmeter having three and half digit LED display , calibrated for 0 to 750V AC suitable to operate on 500V AC supply with necessary PVC wire leads and lugs and mounting hardware on provided panel complete with calibration certificate from manufacturer.	1296.75
Each	6-3-9	Supplying and erecting Intelligent flush mounted panel meter three phase four wire (IPM) input voltage measurement range 50-550 V AC (P-P) 415V, aux. supply 90-300 V AC/DC, flush mounting 96 x 96 mm, flush mounted (96 x 96 mm) meter constant Wh viewing in LCD multifunction meters in auto scroll mode with voltage, current, frequency, power factor kW, kVA, kVAR, kWh, kVAh, kVARh, phase angle, interrupts, THD, complete with RS 485 communication protocol, class 1 accuracy and wiring connections and mounting hardware on provided panels complete with calibration certificate from manufacturer.	6949.95
Each	6-3-10	Supplying and erecting dual source intelligent flush mounted panel meter three phase four wire (IPM) 415V CT/ PT site programmable class I flush mounted (96 x 96 mm) meter with voltage, current, frequency, power factor, ON hrs, kWh, EB and DG set metering with LED display (excluding CT'S) complete with RS 485 communication protocol, class I accuracy and wiring connections and mounting hardware on provided panels complete with calibration certificate from manufacturer.	3721.20
Each	6-3-11	Supplying and erecting intelligent flush mounted maximum demand controller panel meter three phase four wire 50-550 V Phase to phase aux supply 90-300V AC/DC CT secondary site selectable 1A/5A, class I flush mounted 96 x 96 mm meter, data log 8 MB, 4 real output time of day (TOD) 6 slots available, block / sliding window site selectable with V, A, F, kW, kVA, kVAh, kWh, kVAh, kVAh, PF, run hr, ON hrs, Intr, phase angle, THD, events, neutral current, max demand (with RTC) viewing in LCD multi-function meter with LCD display complete class-I accuracy with RS 485 communication protocol with wiring connections and mounting hardware on provided panels complete with calibration certificate from manufacturer.	20808.90
Each	6-3-12	Supplying and erecting single phase 10 to 60 A net meter of accuracy class 1.0, 240V, 50 Hz, with backlit LCD display, optical port (measures import kWh, export kWh, net kWh, V, I, kW, 12 months history of energy) with wiring connections and mounting hardware on provided panels complete with calibration certificate from manufacturer.	5670.00
Each	6-3-13	Supplying and erecting three phase 10 to 60 A net meter DLMS compliance of accuracy class 1.0, 3 x 240V, 50 Hz, with backlit LCD display, optical port and RJ 232 port (measures import kWh, kVAh, export kWh, kVAh, Net kWh, kVAh, V, I, kW, 6 months history of energy) with wiring connections and mounting hardware on provided panels complete with calibration certificate from manufacturer.	10260.60
Each	6-3-14	Supplying and erecting AC three phase LT CT multifunction net meter DLMS compliance of accuracy class 0.5, 3 x 240V, 50Hz, with backlit LCD display, optical port & RS 232 port (measures import kWh, kVAh, export kWh, kVAh, Net kWh, kVAh, V, I, kW, 6 months history of energy, load survey, TOD, tamper detection & logging, power ON/OFF events, instantaneous parameters of rating 1/5A with display in absence of power) with wiring connections and mounting hardware on provided panels complete with calibration certificate from manufacturer.	13694.10

Each	6-3-15	Supplying and erecting AC three phase HT CT multifunction net meter DLMS compliance of accuracy class 0.5, 3x 63.5V, 50Hz, with backlit LCD display, optical port & RS 232 port(measures import kWh, kVAh, export kWh, kVAh, net kWh, kVAh, V, I, kW, 6 months history of energy, load survey, TOD, tamper detection & logging, power ON/OFF events, instantaneous parameters of rating 1/5A with display in absence of power) with wiring connections and mounting hardware on provided panels complete with calibration certificate from manufacturer.	18702.60
Each	6-3-16	Supplying and erecting single phase smart energy meter DLMS compliance with 240V 50 cycles AC supply 5-30 A , ISI mark, accuracy class 1.0 with backlit LCD display, measuring & display kWh, V, I, kW, day, week, month & with communication module configurable for GSM/Wi-Fi, IrDA/Bluetooth, complete provided panel with calibration certificate from manufacturer & duly wired with required size of PVC wires.	10291.05
Each	6-3-17	Supplying and erecting Three phase smart energy meter DLMS compliance with 3x240V 50 cycles AC supply 10-60 A , ISI mark, accuracy class 1.0 with backlit LCD display, measuring & display V, I, kW, kWh, PF, kVA, kVAh, MD, day, week, month & with communication module configurable for GSM/Wi-Fi, IrDA/Bluetooth, complete provided panel with calibration certificate from manufacturer & duly wired with required size of PVC wires.	17621.10
	Note:-	1. Provision of CT's shall be made for meters for respective meters. All meters shall be with manufacturer's calibration certificate.	0.00
		2. Provision of smart energy meters i.e. item no. 6.3.16 and 6.3.17 shall be done according to provisions as per Energy Conservation Building Code (ECBC) : 2007.	0.00
		3. DLMS stands for Device Language Message Specification.	0.00
		6.4 H. T. Metering	0.00
Each	6-4-1	Supplying, erecting, testing and commissioning 11 KV HT metering cubical (compact type) approved by MSEDCL/licensee fabricated with 2 mm (14 SWG) M.S. sheets with supporting angle and channel, painted with powder coating / epoxy paint of required shade copper bus bar size 25 x 6 mm electronic security lock and heavy duty mechanical lock, with counter meter for measuring no of times the opening of doors, top side cover (CT, PT cover) interlock with meter doors, epoxy coated 3 nos CT having required ratio between 5/5A to 50/5A , VA10, Class0.5S, 11000/V3/110/V3 VA 50, class 0.5 epoxy terminal block suitable for provided trivector meter, and provision for incoming and outgoing cables etc. complete duly tested by licensee with necessary test certificates and erected on provided plinth/ cc foundation	139417.95
Each	6-4-2	Supplying, erecting, testing, commissioning 11 KV HT metering cubical (compact type) approved by MSEDCL/licensee fabricated with 2 mm (14 SWG) M.S. sheets with supporting angle and channel, painted with powder coating / epoxy paint of required shade copper bus bar size 25x6 mm electronic security lock and heavy duty mechanical lock, with counter meter for measuring no of times the opening of doors, top side cover (CT,PT cover) interlock with meter doors epoxy coated 3 nos CT having required ratio between 75/5 A to 100/5 A , VA10, class0.2S, 11000/V3/110/V3 VA 50, class 0.2 epoxy terminal block suitable for provided trivector meter, and provision for incoming and outgoing cables etc. complete duly tested by licensee with necessary test certificates and erected on provided plinth/ cc foundation	145573.05

Each	6-4-3	Supplying, erecting, testing, commissioning 22 KV HT metering cubical (compact type) approved by MSEDCL/licensee fabricated with 2 mm (14 SWG MS sheets with supporting angle and channel, painted with powder coating / epoxy paint of required shade copper bus bar size 25x6 mm electronic security lock and heavy duty mechanical lock, with counter meter for measuring no of times the opening of doors, top side cover (CT,PT cover) interlock with meter doors epoxy coated 3 nos CT having required ratio between 5/5 A to 25/5 A , VA10, class 0.5S, 22000/V3/110/V3 VA 50, class 0.5 epoxy terminal block suitable for provided trivector meter, and provision for incoming and outgoing cables etc. complete duly tested by licensee with necessary test certificates and erected on provided plinth/ cc foundation	173886.30
Each	6-4-4	Supplying, erecting, testing, commissioning 22 KV HT metering cubical (compact type) approved by MSEDCL/licensee fabricated with 2mm.(14 SWG) M.S. sheets with supporting angle and channel, painted with powder coating / epoxy paint of required shade copper bus bar size 25x6 mm electronic security lock and heavy duty mechanical lock, with counter meter for measuring no of times the opening of doors, top side cover (CT,PT cover) interlock with meter doors, epoxy coated 3 nos CT having required ratio between 50/5 A to 100/5 A , VA10, class 0.2S, 22000/V3/110/V3 VA 50, class 0.2 epoxy terminal block suitable for provided trivector meter, and provision for incoming and outgoing cables etc. complete duly tested by licensee with necessary test certificates and erected on provided plinth/ cc foundation	180656.70
<u>6.5 Accessories</u>			
Each	6-5-1	Supplying and erecting selector switch suitable for voltmeter/ammeter for 3 phase AC supply 500V, 50Hz, on provided box / panel and duly connecting with necessary PVC wire leads and lugs.	0.00 319.20
Each	6-5-2	Supplying and erecting LT current transformer with bar primary 50/5 to 1000/5 ratio with 15 VA burden erected in provided CRCA box duly secured with insulating materials connected to the meter with test certificates.	877.80
kVAr	6-5-3	Supplying and erecting 525 V 3 phase, 50 Hz., MPP type capacitor having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours kVAr bank of metalised polypropylene condensers (MPP) with the standard capacities of 2, 3, 5, 7, 10, 12.5 and 15 kVAr units of P.F. correction for operation on 3 phase 50 Hz. with externally discharging resistances, earthing terminals and built on angle iron or channel iron frame work and provided with terminal cover box complete erected on provided iron bracket or on floor duly tested by licensee.	414.75
kVAr	6-5-4	Supplying and erecting 525 V 3 phase, 50 Hz., MPP type capacitor having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours kVAr bank of all polypropylene condensers (APP) with the standard capacities of 2, 3, 5, 7, 10, 12.5 and 15 kVAr units of P.F. correction for operation on 3 phase 50 Hz. with externally discharging resistances, earthing terminals and built on angle iron or channel iron frame work and provided with terminal cover box complete erected on provided iron bracket or on floor duly tested by licensee.	453.60
Each	6-5-5	Supplying and erecting set of 3 pilot lamps all bakelite with colour glasses with miniature lamps 230 V/250V erected on provided CRCA box with panel type fuses and connected with PVC wires.	594.30

Each	6-5-6	Supplying & erecting LED type indicating pilot lamp with LED colours red / yellow / green, 230 / 250V on provided box / panel with necessary material, wiring & connections etc.	182.70
Each	6-5-7	Supplying & erecting LED type indicating pilot lamp with LED colour blue, 230 / 250 V on provided box / panel with necessary material, wiring & connections etc.	242.55
		<u>6.6 Surge Protective Devices (CP-SPD)</u>	0.00
Each	6-6-1	Supplying, installation & marking of surge arrestor / surge protection device at the main distribution board after the incoming breaker of type 1+2 tested for Imax 100 kA for single phase and neutral as per specification no. CP-SPD	9572.85
Each	6-6-2	Supplying, installation & marking of surge arrestor / surge protection device at the main distribution board after the incoming breaker of type 1+2 tested for Imax 100 kA for three phase and neutral as per specification no. CP-SPD	17507.70
Each	6-6-3	Supplying, installation & marking of surge arrestor / surge protection device at the main distribution board after the incoming breaker of type 1+2 tested for Imax 50 kA for single phase and neutral as per specification no. CP-SPD	6666.45
Each	6-6-4	Supplying, installation & marking of surge arrestor/ surge protection device at the main distribution board after the incoming breaker of type 1+2 tested for Imax 50 kA for three phase and neutral as per specification no. CP-SPD	12984.30
Each	6-6-5	Supplying, installation & marking of surge arrestor/ surge protection device at the sub main distribution board after the incoming breaker of type 2 tested for Imax 40 kA for single phase and neutral as per specification no. CP-SPD	3953.25
Each	6-6-6	Supplying, installation & marking of surge arrestor/ surge protection device at the sub main distribution board after the incoming breaker of type 2 tested for Imax 40 kA for three phase and neutral as per specification no. CP-SPD	7198.80
Each	6-6-7	Supplying, installation & marking of surge arrestor/ surge protection device at the sub main distribution board after the incoming breaker of type 2 tested for Imax 15 kA for single phase and neutral as per specification no. CP-SPD	4813.20
Each	6-6-8	Supplying, installation & marking of surge arrestor/ surge protection device at the sub main distribution board after the incoming breaker of type 2 tested for Imax 15 kA for three phase and neutral as per specification no. CP-SPD	9415.35
	Note:-	The above items shall be used only in installation where delicate/ sensitive instruments are used or for installations that are prone to surges.	0.00
		<u>6.7 Energy Devices (Harmonic Filter, APFC Panel) (CP-ED)</u>	0.00
per day	6-7-1	Carrying out power quality analysis of the existing load at per point of supply / or as directed, with use of necessary day equipments and recording voltage, current, frequency, kW, kVA, kVA _r , PF, THD _v , THD _i , load imbalance, preparation and submission of detailed analysis report with remedial measures, as per specification no CP-ED/PQA	23998.80
	Note:-	1) Above job is to be carried out irrespective of measurements carried out at various electrical panels/load centers.	0.00
		2) For estimating, one day shall be considered of number of hours of one normal working day and it shall be actual time required for taking measurements on site.	0.00
		3)After carrying out detailed power quality analysis of existing load and on the basis of analysis active harmonic filter is to be provided, in addition to necessary capacitors / APFC with capacitors.	0.00

Each	6-7-2	Supplying, erecting, testing, and commissioning of digital active 30 A harmonic filter cum power conditioner , with digital closed loop active filter with source current sensing, 32 bit digital signal processing with less than 1 milli second response time, high speed IGBTs in power circuit with necessary CTs to be mounted on existing cable/bus and shunted to supply along with digital display showing voltage, current, frequency, kW, kVA, kVAR, PF, VTHD, ITHD and waveform with alarm for 3 phase 4 wire system as per specification No. CP-ED/DAHF	338040.15
Each	6-7-3	Supplying, erecting, testing, and commissioning of digital active 60 A harmonic filter cum power conditioner , with digital closed loop active filter with source current sensing, 32 bit digital signal processing with less than 1 millisecond response time, high speed IGBTs in power circuit with necessary CTs to be mounted on existing cable/bus and shunted to supply along with digital display showing voltage, current, frequency, kW, kVA, kVAR, PF, VTHD, ITHD and waveform with alarm for 3 phase 4 wire system as per specification No. CP-ED/DAHF	397261.20
Each	6-7-4	Supplying, erecting, testing, and commissioning of digital active 100 A harmonic filter cum power conditioner , with digital closed loop active filter with source current sensing, 32 bit digital signal processing with less than 1 milli second response time, high speed IGBTs in power circuit with necessary CTs to be mounted on existing cable/bus and shunted to supply along with digital display showing voltage, current, frequency, kW, kVA, kVAR, PF, VTHD, ITHD and waveform with alarm for 3 phase 4 wire system as per specification No. CP-ED/DAHF	563672.55
Each	6-7-5	Supplying, erecting, testing, and commissioning of digital active 150 A harmonic filter cum power conditioner , with digital closed loop active filter with source current sensing, 32 bit digital signal processing with less than 1 millisecond response time, high speed IGBTs in power circuit with necessary CTs to be mounted on existing cable/bus and shunted to supply along with digital display showing voltage, current, frequency, kW, kVA, kVAR, PF, VTHD, ITHD and waveform with alarm for 3 phase 4 wire system as per specification No. CP-ED/DAHF	741350.40
Each	6-7-6	Supplying and erecting 30 kVAR, 440 V 3 phase, 50 Hz., thyristor switched micro APFC passive filter panel , consisting of suitable steps of APP type capacitor units with harmonic filter reactors, as per specification no CP-ED/APFC	121082.85
Each	6-7-7	Supplying and erecting 40 kVAR, 440 V 3 phase, 50 Hz., thyristor switched micro APFC passive filter panel , consisting of suitable steps of APP type capacitor units with harmonic filter reactors, as per specification no CP-ED/APFC	145703.25
Each	6-7-8	Supplying and erecting 50 kVAR, 440 V 3 phase, 50 Hz., thyristor switched micro APFC passive filter panel , consisting of suitable steps of APP type capacitor units with harmonic filter reactors, as per specification no CP-ED/APFC	155551.20
Each	6-7-9	Supplying and erecting 75 kVAR, 440 V 3 phase, 50 Hz., thyristor switched micro APFC passive filter panel , consisting of suitable steps of APP type capacitor units with harmonic filter reactors, as per specification no CP-ED/APFC	190019.55
Each	6-7-10	Supplying and erecting 100 kVAR, 440 V 3 phase, 50 Hz., thyristor switched micro APFC passive filter panel , consisting of suitable steps of APP type capacitor units with harmonic filter reactors, as per specification no CP-ED/APFC	237146.70
Each	6-7-11	Supplying and erecting 125 kVAR, 440 V three phase, 50 Hz., thyristor switched micro APFC passive filter panel , consisting of suitable steps of APP type capacitor units with harmonic filter reactors, as per specification no CP-ED/APFC	287706.30

Each	6-7-12	Supplying and erecting 150 kVAr, 440 V 3 phase, 50 Hz., thyristor switched micro APFC passive filter panel , consisting of suitable steps of APP type capacitor units with harmonic filter reactors, as per specification no CP-ED/APFC	355438.65
Each	6-7-13	Supplying and erecting 175 kVAr, 440 V 3 phase, 50 Hz., thyristor switched micro APFC passive filter panel , consisting of suitable steps of APP type capacitor units with harmonic filter reactors, as per specification no CP-ED/APFC	412903.05
Each	6-7-14	Supplying and erecting 200 kVAr, 440 V 3 phase, 50 Hz., thyristor switched micro APFC passive filter panel , consisting of suitable steps of APP type capacitor units with harmonic filter reactors, as per specification no CP-ED/APFC	464093.70
Each	6-7-15	Supplying and erecting 250 kVAr, 440 V three phase, 50 Hz., thyristor switched micro APFC passive filter panel , consisting of suitable steps of APP type capacitor units with harmonic filter reactors, as per specification no CP-ED/APFC	577740.45
Each	6-7-16	Supplying and erecting 35 kVAr, 3 phase, 50 Hz., capacitor duty contactor with de-latching mechanism microprocessor APFC controller with MPP / APP type capacitor with 525 V and having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours with , consisting of suitable steps of MPP / APP type capacitor units with detuned aluminium filter 7% reactors with circuit breaker as main incomer and MCCB for each branch protection as per specification no CP-ED/APFC	175115.85
Each	6-7-17	Supplying and erecting 50 kVAr, 3 phase, 50 Hz., capacitor duty contactor with de-latching mechanism microprocessor APFC controller with MPP / APP type capacitor with 525 V and having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours with , consisting of suitable steps of MPP / APP type capacitor units with detuned aluminium filter 7% reactors with circuit breaker as main incomer and MCCB for each branch protection, as per specification no CP-ED/APFC	245054.25
Each	6-7-18	Supplying and erecting 100 kVAr, 3 phase, 50 Hz., capacitor duty contactor with de-latching mechanism microprocessor APFC controller with MPP / APP type capacitor with 525 V and having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours with , consisting of suitable steps of MPP / APP type capacitor units with detuned aluminium filter 7% reactors with circuit breaker as main incomer and MCCB for each branch protection, as per specification no CP-ED/APFC	346582.95
Each	6-7-19	Supplying and erecting 125 kVAr, 3 phase, 50 Hz., capacitor duty contactor with de-latching mechanism microprocessor APFC controller with MPP / APP type capacitor with 525 V and having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours with , consisting of suitable steps of MPP / APP type capacitor units with detuned aluminium filter 7% reactors with circuit breaker as main incomer and MCCB for each branch protection, as per specification no CP-ED/APFC	452771.55
Each	6-7-20	Supplying and erecting 150 kVAr, 3 phase, 50 Hz., capacitor duty contactor with de-latching mechanism microprocessor APFC controller with MPP / APP type capacitor with 525 V and having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours with , consisting of suitable steps of MPP/APP type capacitor units with detuned aluminium filter 7% reactors with circuit breaker as main incomer and MCCB for each branch protection, as per specification no CP-ED/APFC	490145.25

Each	6-7-21	Supplying and erecting 200 kVAr, 3 phase, 50 Hz., capacitor duty contactor with de-latching mechanism microprocessor APFC controller with MPP / APP type capacitor with 525 V and having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours with , consisting of suitable steps of MPP /APP type capacitor units with detuned aluminium filter 7% reactors with circuit breaker as main in-comer and MCCB for each branch protection, as per specification no CP-ED/APFC	548043.30
Each	6-7-22	Supplying and erecting 250 kVAr, 3 phase, 50 Hz., capacitor duty contactor with de-latching mechanism microprocessor APFC controller with MPP / APP type capacitor with 525 V and having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours with , consisting of suitable steps of MPP / APP type capacitor units with detuned aluminium filter 7% reactors with circuit breaker as main in-comer and MCCB for each branch protection, as per specification no CP-ED/APFC	628580.40
	Note:-	1. After doing quality analysis, if it is observed that filters are required to compensate only reactive power and not harmonics then the above items shall be used with proper designing.	0.00
		2. After verification of nature of load, depending upon load survey and requirements of reactors and requirements capacitor duty contactor switching panels shall be used.	0
		3. While selecting the capacitor rated voltage, inrush current capacity, overcurrent capacity and life shall be checked from manufacturer as per specifications mentioned.	0
	(New)	4. Refer chapter no. 5 for dismantling items.	0
		5. IGBT stands for Insulated Gate Bipolar Transistor.	0
		Above items are conforming to relevant IS as mentioned below	0
		IS : 2551 :1982 - Danger notice plates.	0
		IS : 13585 (Part – I) :1994 - Shunt power capacitors of the non-self-healing type for ac systems having a rated voltage up to and including 1000V.	0
		IEC 61643- II - Low voltage surge protective devices part 32	0
			0
			0
			0
	Chapter :		0
	7		0
	Cables		0
	(CB)		0
(CB-LT/AL)	7.1	LT Cables (Aluminium)	0
(CB-LT/CL)	7.2	LT Cables (Copper)	0
(CB-HT)	7.3	HT Cables	0
(CB-JT/LT)	7.4	Cable Joints & End Termination Kits (LT Cables)	0
(CB-JT/H)	7.5	Cable Joints & End Termination Kits (HT Cables)	0
(CB-CE)	7.6	Cable Enclosures	0
(CB-GL)	7.7	Cable Glands	0
(CB-SB/CI)	7.8	Street Light Boxes & Cable Indicators	0
(CB-CL/CI)	7.9	Cable Lugs (Copper)	0
(CB-CL/AL)	7.1	Cable Lugs (Aluminium)	0
(CB-CT)	7.11	Cable Tray	0
	7.12	Dismantling	0
			0

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Chapter : 7 **CABLES (CB)**

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0</i>
-3	-1	-2	-9.45
<u>7.1 LT Cables (Aluminum) (CB-LT/AL)</u>			0
m	7-1-1	Supplying, erecting & terminating XLPE armoured cable 1 core 70 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	202.65
m	7-1-2	Supplying, erecting & terminating XLPE armoured cable 1 core 95 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	222.60
m	7-1-3	Supplying, erecting & terminating XLPE armoured cable 1 core 120 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	260.40
m	7-1-4	Supplying, erecting & terminating XLPE armoured cable 2 core 4 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	100.80
m	7-1-5	Supplying, erecting & terminating XLPE armoured cable 2 core 6 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	113.40
m	7-1-6	Supplying, erecting & terminating XLPE armoured cable 2 core 10 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	128.10
m	7-1-7	Supplying, erecting & terminating XLPE armoured cable 3 core 2.5 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	103.95
m	7-1-8	Supplying, erecting & terminating XLPE armoured cable 3 core 4 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	109.20
m	7-1-9	Supplying, erecting & terminating XLPE armoured cable 3 core 6 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	122.85
m	7-1-10	Supplying, erecting & terminating XLPE armoured cable 3 core 10 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	144.90

m	7-1-11	Supplying, erecting & terminating XLPE armoured cable 3 core 16 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	163.80
m	7-1-12	Supplying, erecting & terminating XLPE armoured cable 3 core 25 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	192.15
m	7-1-13	Supplying, erecting & terminating XLPE armoured cable 3 core 35 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	239.40
m	7-1-14	Supplying, erecting & terminating XLPE armoured cable 3 core 50 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	290.85
m	7-1-15	Supplying, erecting & terminating XLPE armoured cable 3½ core 25 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	217.35
m	7-1-16	Supplying, erecting & terminating XLPE armoured cable 3½ core 35 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	262.50
m	7-1-17	Supplying, erecting & terminating XLPE armoured cable 3½ core 50 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	341.25
m	7-1-18	Supplying, erecting & terminating XLPE armoured cable 3½ core 70 sq. mm. aluminium conductor with continuous 8.35 sq. mm. (10 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	443.10
m	7-1-19	Supplying, erecting & terminating XLPE armoured cable 3½ core 95 sq. mm. aluminium conductor with continuous 8.35 sq. mm. (10 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	541.80
m	7-1-20	Supplying, erecting & terminating XLPE armoured cable 3½ core 120 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	674.10
m	7-1-21	Supplying, erecting & terminating XLPE armoured cable 3½ core 150 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	801.15
m	7-1-22	Supplying, erecting & terminating XLPE armoured cable 1100 V. 3½ core 185 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	979.65

m	7-1-23	Supplying, erecting & terminating XLPE armoured cable 3½core 240 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	1226.40
m	7-1-24	Supplying, erecting & terminating XLPE armoured cable 3½ core 300 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	1464.75
m	7-1-25	Supplying, erecting & terminating XLPE armoured cable 3½core 400 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	1827.00
m	7-1-26	Supplying, erecting & terminating XLPE armoured cable 4 core 4 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	120.75
m	7-1-27	Supplying, erecting & terminating XLPE armoured cable 4 core 6 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	135.45
m	7-1-28	Supplying, erecting & terminating XLPE armoured cable 4 core 10 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	161.70
m	7-1-29	Supplying, erecting & terminating XPLE armoured cable 4 core 16 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	189.00
m	7-1-30	Supplying, erecting & terminating XLPE armoured cable 4 core 25 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	234.15
m	7-1-31	Supplying, erecting & terminating XLPE armoured cable 4 core 35 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	290.85
m	7-1-32	Supplying, erecting & terminating XLPE armoured cable 4 core 50 sq. mm. aluminium conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	366.45
m	7-1-33	Supplying, erecting & terminating XLPE armoured cable 4 core 70 sq. mm. aluminium conductor with continuous 8.35 sq. mm. (10 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	481.95
m	7-1-34	Supplying, erecting & terminating XLPE armoured cable 4 core 95 sq. mm. aluminium conductor with continuous 8.35 sq. mm. (10 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	594.30

m	7-1-35	Supplying, erecting & terminating XLPE armoured cable 4 core 120 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	726.60
m	7-1-36	Supplying, erecting & terminating XLPE armoured cable 4 core 150 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	891.45
m	7-1-37	Supplying, erecting & terminating XLPE armoured cable 1100 V. 4 core 185 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	1085.70
m	7-1-38	Supplying, erecting & terminating XLPE armoured cable 4 core 240 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	1376.55
m	7-1-39	Supplying, erecting & terminating XLPE armoured cable 4 core 300 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	1629.60
m	7-1-40	Supplying, erecting & terminating XLPE armoured cable 4 core 400 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	2035.95
m	7-1-41	Re-erecting PVC / XLPE armoured cable 2 to 4 Core up to 50 sq. mm. on wall with necessary material & G.I. earth wire in an approved manner.	46.20
per job	7-1-42	11kv/22kv/33kv Cable fault detection for HT power underground cable from 35 sq. mm. to 400 sq. mm. by acoustic method by using surge wave tester & surge wave receiver (Duo phone) up to 250 meter length cable with recording results & submission of test reports.	7588.35
per job	7-1-43	11kv/22kv/33kv Cable fault detection for HT power underground cable from 35 sq. mm. to 400 sq. mm. by acoustic method by using surge wave tester & surge wave receiver (Duo phone) 251 meter to 500 meter length cable with recording results & submission of test reports.	7277.55
per job	7-1-44	Cable fault detection for all types of LT underground cable from 16sq. mm. to 400 sq. mm. by acoustic method by using surge wave tester & surge wave receiver (Duo phone) up to 250 meter length cable with recording results & submission of test reports.	7164.15
per job	7-1-45	Cable fault detection for all types of LT underground cable from 16 sq. mm. to 400 sq. mm. by acoustic method by using surge wave tester & surge wave receiver (Duo phone) 251 meter to 500 meter length cable with recording results & submission of test reports.	6854.40
	Note:-	1) Add Rs. 5/- per meter for erection of cables on stone wall.	0.00
		2) Rate of all cables includes cost of lugs, glands, etc. required for erection and connection of cable.	0.00
		3) In case of next fault for same cable add Rs 4000 per fault for fault detection.	0.00
		4)Add Rs 5000/- for high pressure testing charges of H.T. cable.	0.00
		5)Transportation charges of fault finding machine above 20 km Rs 12/- per km.	0.00
		6) For round wire armouring increase material rates by 25%.	0.00

		<u>7.2 LT Cables (Copper) (CB-LT/CU)</u>	0.00
m	7-2-1	Supplying, erecting & terminating XLPE unarmoured cable 1 core 25 sq. mm. copper conductor complete erected with provided lugs, laid in provided control panel /distribution boards / pipe as per specification no. CB-LT/CU	313.95
m	7-2-2	Supplying, erecting & terminating XLPE unarmoured cable 1 core 35 sq. mm. copper conductor complete erected with provided lugs, laid in provided control panel /distribution boards / pipe as per specification no. CB-LT/CU	428.40
m	7-2-3	Supplying, erecting & terminating XLPE unarmoured cable 1 core 50 sq. mm. copper conductor complete erected with provided lugs, laid in provided control panel /distribution boards / pipe as per specification no. CB-LT/CU	575.40
m	7-2-4	Supplying, erecting & terminating XLPE unarmoured cable 1 core 70 sq. mm. copper conductor complete erected with provided lugs, laid in provided control panel/distribution boards / pipe as per specification no. CB-LT/CU	805.35
m	7-2-5	Supplying, erecting & terminating XLPE unarmoured cable 1 core 95 sq. mm. copper conductor complete erected with provided lugs, laid in provided control panel /distribution boards / pipe as per specification no. CB-LT/CU	1071.00
m	7-2-6	Supplying, erecting & terminating XLPE unarmoured cable 1 core 120 sq. mm. copper conductor complete erected with provided lugs, laid in provided control panel /distribution boards / pipe as per specification no. CB-LT/CU	1344.00
m	7-2-7	Supplying, erecting & terminating XLPE unarmoured cable 1 core 150 sq. mm. copper conductor complete erected with provided lugs, laid in provided control panel /distribution boards / pipe as per specification no. CB-LT/CU	1671.60
m	7-2-8	Supplying, erecting & terminating XLPE armoured cable 2 core 2.5 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	141.75
m	7-2-9	Supplying, erecting & terminating XLPE armoured cable 2 core 4 sq mm copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	174.30
m	7-2-10	Supplying, erecting & terminating XLPE armoured cable 2 core 6 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	219.45
m	7-2-11	Supplying, erecting & terminating XLPE armoured cable 2 core 10 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	325.50
m	7-2-12	Supplying, erecting & terminating XLPE armoured cable 2 core 16 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	449.40
m	7-2-13	Supplying, erecting & terminating XLPE armoured cable 2 core 25 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	669.90

m	7-2-14	Supplying, erecting & terminating XLPE armoured cable 3 core 2.5 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	171.15
m	7-2-15	Supplying, erecting & terminating XLPE armoured cable 3 core 4 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	216.30
m	7-2-16	Supplying, erecting & terminating XLPE armoured cable 3 core 6 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	281.40
m	7-2-17	Supplying, erecting & terminating XLPE armoured cable 3 core 10 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	425.25
m	7-2-18	Supplying, erecting & terminating XLPE armoured cable 3 core 16 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	594.30
m	7-2-19	Supplying, erecting & terminating XLPE armoured cable 3 core 25 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	952.35
m	7-2-20	Supplying, erecting & terminating XLPE armoured cable 3½ core 25 sq. mm. copper conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	1143.45
m	7-2-21	Supplying, erecting & terminating XLPE armoured cable 3½ core 35 sq. mm. copper conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	1486.80
m	7-2-22	Supplying, erecting & terminating XLPE armoured cable 3½ core 50 sq. mm. copper conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	2052.75
m	7-2-23	Supplying, erecting & terminating XLPE armoured cable 3½ core 70 sq. mm. copper conductor with continuous 8.35 sq. mm. (10 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	2892.75
m	7-2-24	Supplying, erecting & terminating XLPE armoured cable 3½ core 95 sq. mm. copper conductor with continuous 8.35 sq. mm. (10 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	4152.75
m	7-2-25	Supplying, erecting & terminating XLPE armoured cable 3½ core 120 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	5318.25

m	7-2-26	Supplying, erecting & terminating XLPE armoured cable 3½ core 150 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	6432.30
m	7-2-27	Supplying, erecting & terminating XLPE armoured cable 1100 V. 3½ core 185 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	8018.85
m	7-2-28	Supplying, erecting & terminating XLPE armoured cable 3½core 240 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	10284.75
m	7-2-29	Supplying, erecting & terminating XLPE armoured cable 3½ core 300 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	12785.85
m	7-2-30	Supplying, erecting & terminating XLPE armoured cable 3½core 400 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	16623.60
m	7-2-31	Supplying, erecting & terminating XLPE armoured cable 4 core 4 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	264.60
m	7-2-32	Supplying, erecting & terminating XLPE armoured cable 4 core 6 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	353.85
m	7-2-33	Supplying, erecting & terminating XLPE armoured cable 4 core 10 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	538.65
m	7-2-34	Supplying, erecting & terminating XLPE armoured cable 4 core 16 sq. mm. copper conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	771.75
m	7-2-35	Supplying, erecting & terminating XLPE armoured cable 4 core 25 sq. mm. copper conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	1234.80
m	7-2-36	Supplying, erecting & terminating XLPE armoured cable 4 core 35 sq. mm. copper conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	1684.20
m	7-2-37	Supplying, erecting & terminating XLPE armoured cable 4 core 50 sq. mm. copper conductor with continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	2303.70

m	7-2-38	Supplying, erecting & terminating XLPE armoured cable 4 core 70 sq. mm. copper conductor with continuous 8.35 sq. mm. (10 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	3304.35
m	7-2-39	Supplying, erecting & terminating XLPE armoured cable 4 core 95 sq. mm. copper conductor with continuous 8.35 sq. mm. (10 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	4741.80
m	7-2-40	Supplying, erecting & terminating XLPE armoured cable 4 core 120 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	5967.15
m	7-2-41	Supplying, erecting & terminating XLPE armoured cable 4 core 150 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	7447.65
m	7-2-42	Supplying, erecting & terminating XLPE armoured cable 1100 V. 4 core 185 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	9157.05
m	7-2-43	Supplying, erecting & terminating XLPE armoured cable 4 core 240 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	11787.30
m	7-2-44	Supplying, erecting & terminating XLPE armoured cable 4 core 300 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	14661.15
m	7-2-45	Supplying, erecting & terminating XLPE armoured cable 4 core 400 sq. mm. copper conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	19221.30
	Note:-		
		1) Add Rs. 5/- per meter for erection of cables on stone wall.	0.00
		2) Rate of all cables includes cost of lugs, glands, etc. required for erection and connection of cable.	0.00
		3) For cable fault detection rates refer sub chapter 7.1 and notes below.	0.00
		4) For round wire armouring increase material rates by 15%.	0.00
		<u>7.3 HT Cables (CB-HT)</u>	0.00
m	7-3-1	Supplying , erecting & terminating 3 x 70 sq. mm. aluminium 11 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1026.90
m	7-3-2	Supplying , erecting & terminating 3 x 95 sq. mm. aluminium 11 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1204.35
m	7-3-3	Supplying , erecting & terminating 3 x 120 sq. mm. aluminium 11 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1374.45
m	7-3-4	Supplying , erecting & terminating 3 x 150 sq. mm. aluminium 11 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1544.55

m	7-3-5	Supplying , erecting & terminating 3 x 185 sq. mm. aluminium 11 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1789.20
m	7-3-6	Supplying , erecting & terminating 3 x 240 sq. mm. aluminium 11 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2127.30
m	7-3-7	Supplying , erecting & terminating 3 x 300 sq. mm. aluminium 11 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2462.25
m	7-3-8	Supplying , erecting & terminating 3 x 400 sq. mm. aluminium 11 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	3052.35
m	7-3-9	Supplying , erecting & terminating 3 x 95 sq. mm. aluminium 11 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1523.55
m	7-3-10	Supplying , erecting & terminating 3 x 120 sq. mm. aluminium 11 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1741.95
m	7-3-11	Supplying , erecting & terminating 3 x 150 sq. mm. aluminium 11 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1940.40
m	7-3-12	Supplying , erecting & terminating 3 x 185 sq. mm. aluminium 11 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2170.35
m	7-3-13	Supplying , erecting & terminating 3 x 240 sq. mm. aluminium 11 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2531.55
m	7-3-14	Supplying , erecting & terminating 3 x 300 sq. mm. aluminium 11 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2906.40
m	7-3-15	Supplying , erecting & terminating 3 x 400 sq. mm. aluminium 11 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	3413.55
m	7-3-16	Supplying , erecting & terminating 3 x 70 sq. mm. aluminium 22 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1299.90
m	7-3-17	Supplying , erecting & terminating 3 x 95 sq. mm. aluminium 22 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1583.40
m	7-3-18	Supplying , erecting & terminating 3 x 120 sq. mm. aluminium 22 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1791.30
m	7-3-19	Supplying , erecting & terminating 3 x 150 sq. mm. aluminium 22 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1988.70
m	7-3-20	Supplying , erecting & terminating 3 x 185 sq. mm. aluminium 22 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2219.70
m	7-3-21	Supplying , erecting & terminating 3 x 240 sq. mm. aluminium 22 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2586.15
m	7-3-22	Supplying , erecting & terminating 3 x 300 sq. mm. aluminium 22 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2964.15
m	7-3-23	Supplying , erecting & terminating 3 x 70 sq. mm. aluminium 33 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	1528.80
m	7-3-24	Supplying , erecting & terminating 3 x 95 sq. mm. aluminium 33 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2091.60

m	7-3-25	Supplying , erecting & terminating 3 x 120 sq. mm. aluminium 33 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2344.65
m	7-3-26	Supplying , erecting & terminating 3 x 150 sq. mm. aluminium 33 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2527.35
m	7-3-27	Supplying , erecting & terminating 3 x 185 sq. mm. aluminium 33 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2784.60
m	7-3-28	Supplying , erecting & terminating 3 x 240 sq. mm. aluminium 33 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	3167.85
m	7-3-29	Supplying , erecting & terminating 3 x 300 sq. mm. aluminium 33 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	3557.40
m	7-3-30	Supplying , erecting & terminating 3 x 150 sq. mm. aluminium 33 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2526.30
m	7-3-31	Supplying , erecting & terminating 3 x 185 sq. mm. aluminium 33 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	2782.50
m	7-3-32	Supplying , erecting & terminating 3 x 240 sq. mm. aluminium 33 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	3158.40
m	7-3-33	Supplying , erecting & terminating 3 x 300 sq. mm. aluminium 33 kV(UE), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT	3554.25
	Note:-	1) For cable fault detection rates refer sub chapter 7.1 and notes below.	0.00
		2) For round wire armouring increase material rates For 11 kV (E) by 25%	0.00
		For 11 kV(UE), 22 kV, 33kV (E)/(UE) by 27.5%	0.00
		<u>7.4 Cable Joints & End Termination Kits (LT Cables) (CB-JT/LT)</u>	0.00
Each	7-4-1	Providing & erecting epoxy straight through joint outdoor/indoor for LT XLPE armoured cable 2.5 to 16 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	2021.25
Each	7-4-2	Providing & erecting epoxy straight through joint outdoor/indoor for LT XLPE armoured cable 25 to 50 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	2384.55
Each	7-4-3	Providing & erecting epoxy straight through joint outdoor/indoor for LT XLPE armoured cable 70 to 95 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	3139.50
Each	7-4-4	Providing & erecting epoxy straight through joint outdoor/indoor for LT XLPE armoured cable 120 to 185 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	3264.45
Each	7-4-5	Providing & erecting epoxy straight through joint outdoor/indoor for LT XLPE armoured cable 240 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	5058.90
Each	7-4-6	Providing & erecting epoxy straight through joint outdoor/indoor for LT XLPE armoured cable 300 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	6239.10
Each	7-4-7	Providing & erecting epoxy straight through joint outdoor/indoor for LT XLPE armoured cable 400 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	6296.85
Each	7-4-8	Providing & erecting epoxy outdoor / indoor end termination kit for LT XLPE armoured cable 2.5 to 16 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	1947.75
Each	7-4-9	Providing & erecting epoxy outdoor / indoor end termination kit for LT XLPE armoured cable 25 to 50 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	2089.50

Each	7-4-10	Providing & erecting epoxy outdoor / indoor end termination kit for LT XLPE armoured cable 70 to 120 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	2289.00
Each	7-4-11	Providing & erecting epoxy outdoor / indoor end termination kit for LT XLPE armoured cable 150 to 185 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	2545.20
Each	7-4-12	Providing & erecting epoxy outdoor / indoor end termination kit for LT XLPE armoured cable 240 to 300 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	3202.50
Each	7-4-13	Providing & erecting epoxy outdoor / indoor end termination kit for LT XLPE armoured cable 400 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	3892.35
	Note	1) Above rates are for Aluminium lugs & ferrules. For Copper lugs & ferrules increase material rates by 15 %	0.00
		<u>7.5 Cable Joints & End Termination Kits (HT Cables) (CB-JT/HT)</u>	0.00
Each	7-5-1	Providing and erecting Heat shrinkable indoor termination kit for 11 kV (E) XLPE HT cable 3x up to 95 sq. mm. with necessary material as per specification no. CB-JT/HT	7765.80
Each	7-5-2	Providing and erecting Heat shrinkable indoor termination kit for 11 kV (E) XLPE HT cable 3x120 to 185 sq. mm. with necessary material as per specification no. CB-JT/HT	9400.65
Each	7-5-3	Providing and erecting Heat shrinkable indoor termination kit for 11 kV (E) XLPE HT cable 3x240 to 300 sq. mm. with necessary material as per specification no. CB-JT/HT	10118.85
Each	7-5-4	Providing and erecting Heat shrinkable indoor termination kit for 11 kV (E) XLPE HT cable 3x400 sq. mm. with necessary material as per specification no. CB-JT/HT	10517.85
Each	7-5-5	Providing and erecting Heat shrinkable out door termination kit for 11 kV (E) XLPE HT cable 3 x up to 95 sq. mm. with necessary material as per specification No. CB-JT/HT	13512.45
Each	7-5-6	Providing and erecting Heat shrinkable outdoor termination kit for 11 kV (E) XLPE HT cable 3x120 to 185 sq. mm. with necessary material as per specification no. CB-JT/HT	11770.50
Each	7-5-7	Providing and erecting Heat shrinkable out door termination kit for 11 kV (E) XLPE HT cable 3x240 to 300 sq. mm. with necessary material as per specification no. CB-JT/HT	13093.50
Each	7-5-8	Providing and erecting Heat shrinkable outdoor termination kit for 11 kV (E) XLPE HT cable 3x400 sq. mm. with necessary material as per specification no. CB-JT/HT	13511.40
Each	7-5-9	Providing and erecting Heat shrinkable straight through joint kit for 11 kV (E) XLPE HT cable 3x up to 95 sq. mm. with necessary material as per specification no. CB-JT/HT	20101.20
Each	7-5-10	Providing and erecting Heat shrinkable straight through joint kit for 11 kV (E) XLPE HT cable 3x120 to 185 sq. mm. with necessary material as per specification no. CBJT/HT	23828.70
Each	7-5-11	Providing and erecting Heat shrinkable straight through joint kit for 11 kV (E) XLPE HT cable 3x240 to 400 sq. mm. with necessary material as per specification no. CBJT/HT	28684.95
Each	7-5-12	Providing and erecting Heat shrinkable indoor termination kit for 11 kV (UE)/22 kV (E) XLPE HT cable 3x up to 95 sq. mm. with necessary material as per specification no. CB-JT/HT	9530.85
Each	7-5-13	Providing and erecting Heat shrinkable indoor termination kit for 11 kV (UE)/ 22 kV (E) XLPE HT cable 3x120 to 185 sq. mm. with necessary material as per specification no. CB-JT/HT	12025.65
Each	7-5-14	Providing and erecting Heat shrinkable indoor termination kit for 11 kV (UE)/ 22 kV (E) XLPE HT cable 3x240 to 400 sq. mm. with necessary material as per specification no. CB-JT/HT	14379.75
Each	7-5-15	Providing and erecting Heat shrinkable out door termination kit for 11 kV (UE)/ 22 kV (E) XLPE HT cable 3x up to 95 sq. mm. cable with necessary material as per specification no. CB-JT/HT	14325.15

Each	7-5-16	Providing and erecting Heat shrinkable outdoor termination kit for 11 kV (UE)/ 22 kV (E) XLPE HT cable 3x120 to 185 sq. mm. with necessary material as per specification no. CB-JT/HT	16630.95
Each	7-5-17	Providing and erecting Heat shrinkable outdoor termination kit for 11 kV (UE)/ 22 kV (E) XLPE HT cable 3x240 to 400 sq. mm. with necessary material as per specification no. CB-JT/HT	21786.45
Each	7-5-18	Providing and erecting Heat shrinkable straight through joint kit for 11 kV (UE)/22 kV (E) XLPE HT cable 3x up to 95 sq. mm. with necessary material as per specification no. CBJT/HT	34493.55
Each	7-5-19	Providing and erecting Heat shrinkable straight through joint kit for 11 kV (UE)/22 kV (E) XLPE HT cable 3x120 to 185 sq. mm. with necessary material as per specification no. CBJT/HT	37561.65
Each	7-5-20	Providing and erecting Heat shrinkable straight through joint kit for 11 kV (UE)/22 kV (E) XLPE HT cable 3x240 to 300 sq. mm. with necessary material as per specification no. CBJT/HT	46195.80
Each	7-5-21	Providing and erecting Heat shrinkable straight through joint kit for 11 kV (UE)/ 22 kV (E) XLPE HT cable 3x 400 sq. mm. with necessary material as per specification no. CBJT/HT	52841.25
Each	7-5-22	Providing and erecting Heat shrinkable indoor termination kit for 33 kV (E)/33 kV (UE) XLPE HT cable 3x up to 70 sq. mm. with necessary material as per specification no. CB-JT/HT	13703.55
Each	7-5-23	Providing and erecting Heat shrinkable indoor termination kit for 33 kV (E)/33 kV (UE) XLPE HT cable 3x95 to 150 sq. mm. with necessary material as per specification no. CB-JT/HT	14374.50
Each	7-5-24	Providing and erecting Heat shrinkable indoor termination kit for 33 kV (E)/33 kV (UE) XLPE HT cable 3x185 to 240 sq. mm. with necessary material as per specification no. CB-JT/HT	18922.05
Each	7-5-25	Providing and erecting Heat shrinkable indoor termination kit for 33 kV (E)/33 kV (UE) XLPE HT cable 3x300 sqmm to 400 sq. mm. with necessary material as per specification no. CB-JT/HT	22605.45
Each	7-5-26	Providing and erecting Heat shrinkable out door termination kit for 33 kV (E) /33 kV (UE)XLPE HT cable 3x up to 70 sq. mm. with necessary material as per specification no. CB-JT/HT	17758.65
Each	7-5-27	Providing and erecting Heat shrinkable outdoor termination kit for 33 kV (E) /33 kV (UE)XLPE HT cable 3x 95 to 150 sq. mm. with necessary material as per specification no. CB-JT/HT	20353.20
Each	7-5-28	Providing and erecting Heat shrinkable outdoor termination kit for 33 kV (E)/33 kV (UE) XLPE HT cable 3x185 to 240 sq. mm. with necessary material as per specification no. CB-JT/HT	26164.95
Each	7-5-29	Providing and erecting Heat shrinkable outdoor termination kit for 33 kV (E)/33 kV (UE) XLPE HT cable 3x300 sq. mm. to 400 sq. mm. with necessary material as per specification no. CB-JT/HT	31522.05
Each	7-5-30	Providing and erecting Heat shrinkable straight through joint kit for 33 kV (E)/33 kV (UE) XLPE HT cable 3x up to 70 sq. mm. with necessary material as per specification no. CBJT/HT	44633.40
Each	7-5-31	Providing and erecting Heat shrinkable straight through joint kit for 33 kV (E)/33 kV (UE) XLPE HT cable 3x95 to 150 sq. mm. with necessary material as per specification no. CBJT/HT	53411.40
Each	7-5-32	Providing and erecting Heat shrinkable straight through joint kit for 33 kV (E)/33 kV (UE) XLPE HT cable 3x185 to 240 sq. mm. with necessary material as per specification no. CBJT/HT	70011.90
Each	7-5-33	Providing and erecting Heat shrinkable straight through joint kit for 33 kV (E)/33 kV (UE) XLPE HT cable 3x300 to 400 sq. mm. with necessary material as per specification no. CBJT/HT	78542.10
	Note	1) Above rates are for Aluminium Lugs & Ferrules for Copper Lugs & Ferrules increase material rates by 15 %	0.00
		<u>7.6 Cable Enclosures (CB-CE)</u>	0.00
m	7-6-1	Supplying & erecting G.I. pipe 'A' class 25 mm dia. erected for enclosing XLPE armoured cable on wall/pole as per specification no. CB-CE	194.25

m	7-6-2	Supplying & erecting G.I. pipe 'A' class 40 mm dia. erected for enclosing XLPE armoured cable on wall/pole as per specification no. CB-CE	302.40
m	7-6-3	Supplying & erecting G.I. pipe 'A' class 50 mm dia. erected for enclosing XLPE armoured cable on wall/pole as per specification no. CB-CE	399.00
m	7-6-4	Supplying & erecting G.I. pipe 'A' class 75 mm dia. erected for enclosing XLPE armoured cable on wall/pole as per specification no. CB-CE	602.70
m	7-6-5	Supplying & laying (including excavation) 15 cm dia RCC Hume pipe with coupling collar of standard thickness at required depth up to 90 cm below road / ground surface, for enclosing provided cable & necessary back filling with light ramming to make the road/ground surface as it was (Except bitumen carpet).	624.75
m	7-6-6	Supplying & laying (including excavation) 15 cm dia half round RCC Hume pipe of standard thickness at required depth up to 90 cms. below road / ground surface, for enclosing provided cable & necessary back filling with light ramming to make the road/ground surface as it was (Except bitumen carpet).	483.00
m	7-6-7	Supplying & laying (including excavation) 25 cm dia RCC Hume pipe of standard thickness at required depth up to 90 cms. below road / ground surface, for covering provided cable & necessary back filling with light ramming to make the road/ground surface as it was (Except bitumen carpet).	664.65
m	7-6-8	Supplying & laying (including excavation) 25 cm Dia half round RCC Hume pipe of standard thickness at required depth up to 90 cms. below road / ground surface, for enclosing provided cable & necessary back filling with light ramming to make the road/ground surface as it was (Except bitumen carpet).	519.75
m	7-6-9	Supplying and laying (including excavation of suitable width & depth up to 90 cm) 50 mm outside dia. double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.	193.20
m	7-6-10	Supplying and laying (including excavation of suitable width & depth up to 90 cm) 75 mm outside dia. double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.	220.50
m	7-6-11	Supplying and laying (including excavation of suitable width & depth up to 90 cm) 90 mm outside dia. double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.	323.40
m	7-6-12	Supplying and laying (including excavation of suitable width & depth up to 90 cm) 120 mm outside dia. double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.	381.15
m	7-6-13	Supplying and laying (including excavation of suitable width & depth up to 90 cm) 146 mm outside dia. double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.	454.65
m	7-6-14	Supplying and laying (including excavation of suitable width & depth up to 90 cm) 160 mm outside dia, double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.	481.95
m	7-6-15	Supplying and laying (including excavation of suitable width & depth up to 90 cm) 175 mm outside dia, double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.	615.30
m	7-6-16	Supplying and laying (including excavation of suitable width & depth up to 90 cm) 200 mm outside dia, double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.	712.95

	Note:-	1)For erection of G I pipe on stone wall add Rs.5/- per meter to the overall rate.	0.00
		2)All the GI pipes and DWC pipes shall be ISI marked.	0.00
		3) For running the cable across the field / along the road , it should be covered by half round Hume pipe only.	0.00
		<u>7.7 Cable Glands (CB-GL)</u>	0.00
Each	7-7-1	Supplying & erecting Siemens type brass cable glands for 2 to 4 core 2.5 sq. mm. /2 to 4 core 4 sq. mm. /2 core 6 sq. mm. for XLPE armoured cable as per specification no. CB-GL	54.60
Each	7-7-2	Supplying & erecting Siemens type brass cable glands for 3 to 4 core 6 sq. mm. /2 to 4 core 10 sq. mm. for XLPE armoured cable as per specification No. CB-GL	55.65
Each	7-7-3	Supplying & erecting Siemens type brass cable glands for 3 to 4 core 16 sq. mm. /3 to 4 core 25 sq. mm. /3 core 35 sq. mm. for XLPE armoured cable as per specification no. CB-GL	64.05
Each	7-7-4	Supplying & erecting Siemens type brass cable glands for 4 core 35 sq. mm./3 core 50 sq. mm. for XLPE armoured cable as per specification no. CB-GL	84.00
Each	7-7-5	Supplying & erecting Siemens type brass cable glands for 4 core 50 sq. mm. for XLPE armoured cable as per specification no. CB-GL	108.15
Each	7-7-6	Supplying & erecting Siemens type brass cable glands for 3½ core 70 sq. mm. for XLPE armoured cable as per specification no. CB-GL	108.15
Each	7-7-7	Supplying & erecting Siemens type brass cable glands for 3½ core 95 sq. mm. for XLPE armoured cable as per specification no. CB-GL	144.90
Each	7-7-8	Supplying & erecting Siemens type brass cable glands for 3½ core 120 sq. mm. for XLPE armoured cable as per specification no. CB-GL	162.75
Each	7-7-9	Supplying & erecting Siemens type brass cable glands for 3½ core 150 sq. mm. for XLPE armoured cable as per specification no. CB-GL	163.80
Each	7-7-10	Supplying & erecting Siemens type brass cable glands for 3½ core 185 sq. mm. for XLPE armoured cable as per specification no. CB-GL	183.75
Each	7-7-11	Supplying & erecting Siemens type brass cable glands for 3½ core 240 sq. mm. for XLPE armoured cable as per specification no. CB-GL	221.55
Each	7-7-12	Supplying & erecting Siemens type brass cable glands for 3½ core 300 sq. mm. for XLPE armoured cable as per specification no. CB-GL	240.45
Each	7-7-13	Supplying & erecting Siemens type brass cable glands for 3½ core 400 sq. mm. for XLPE armoured cable as per specification no. CB-GL	297.15
	Note:-	1) For use of Flange type glands increase overall rate by 50%.	0.00
		2) Glands are to be provided at time of joints/repairs.	0.00
		<u>7.8 Street Light Boxes & Cable Indicators (CB-SB/CB-CIP)</u>	0.00
Each	7-8-1	Supplying & erecting cast iron cable indicator plate buried along with route of cable for PVC / XLPE armoured cable as per specification no. CB-CIP	171.15
Each	7-8-2	Supplying & erecting water tight terminal box of 1.6 mm (16 gauge) CRCA sheet of size 200 x 150 x 150 mm. complete on pole as per specification no. CB-SB	478.80
Each	7-8-3	Supplying & erecting water tight terminal box of 1.6 mm (16 gauge) CRCA sheet of size 300 x 200 x 150 mm complete on pole as per specification no. CB-SB	676.20

Each	7-8-4	Supplying & erecting water tight terminal box of 1.6 mm (16 gauge) CRCA sheet of size 150 x 100 x 100 mm complete on pole as per specification no. CB-SB	321.30
Each	7-8-5	Supplying & erecting water tight terminal box of cast iron of size 200 x 150 x 150 mm complete on pole as per specification no. CB-SB	597.45
Each	7-8-6	Supplying & erecting water tight terminal box of cast iron of size 300 x 200 x 150 mm complete on pole as per specification no. CB-SB	705.60
Each	7-8-7	Supplying & erecting water tight terminal box of cast iron of size 150 x 100 x 100 mm complete on pole as per specification no. CB-SB	508.20
Each	7-8-8	Supplying & erecting FRP box of size 300 x 200 x 125 mm, 2.7 mm thick complete on pole/wall as per specification no. CB-SB	602.70
Each	7-8-9	Supplying & erecting FRP box of size 250 x 200 x 100 mm, 2.7 mm thick complete on pole/wall as per specification no. CB-SB	539.70
Each	7-8-10	Supplying & erecting FRP box of size 150 x 125 x 100 mm, 2.7 mm thick complete on pole/wall as per specification no. CB-SB	469.35
		<u>7.9 Cable Lugs (Copper) (CB-CL/CU)</u>	0.00
Each	7-9-1	Supplying & erecting crimping type copper lugs for cable up to 16 sq. mm. complete as per specification no. CB-CL/CU	16.80
Each	7-9-2	Supplying & erecting crimping type copper lugs for cable 25 sq. mm. complete as per specification no. CB-CL/CU	24.15
Each	7-9-3	Supplying & erecting crimping type copper lugs for cable 35 sq. mm. complete as per specification no. CB-CL/CU	29.40
Each	7-9-4	Supplying & erecting crimping type copper lugs for cable 50 sq. mm. complete as per specification no. CB-CL/CU	39.90
Each	7-9-5	Supplying & erecting crimping type copper lugs for cable 70 sq. mm. complete as per specification no. CB-CL/CU	59.85
Each	7-9-6	Supplying & erecting crimping type copper lugs for cable 95 sq. mm. complete as per specification no. CB-CL/CU	79.80
Each	7-9-7	Supplying & erecting crimping type copper lugs for cable 120 sq. mm. complete as per specification no. CB-CL/CU	109.20
Each	7-9-8	Supplying & erecting crimping type copper lugs for cable 150 sq. mm. complete as per specification no. CB-CL/CU	155.40
Each	7-9-9	Supplying & erecting crimping type copper lugs for cable 185 sq. mm. complete as per specification no. CB-CL/CU	198.45
Each	7-9-10	Supplying & erecting crimping type copper lugs for cable 240 sq. mm. complete as per specification no. CB-CL/CU	270.90
Each	7-9-11	Supplying & erecting crimping type copper lugs for cable 300 sq. mm. complete as per specification no. CB-CL/CU	368.55
Each	7-9-12	Supplying & erecting crimping type copper lugs for cable 400 sq. mm. complete as per specification no. CB-CL/CU	531.30
		<u>7.10 Cable Lugs (Aluminium) (CB-CL/AL)</u>	0.00
Each	7-10-1	Supplying & erecting crimping type aluminium lugs for cable up to 16 sq. mm. complete as per specification no. CB-CL/AL	7.35
Each	7-10-2	Supplying & erecting crimping type aluminium lugs for cable 25 sq. mm. complete as per specification no. CB-CL/AL	8.40
Each	7-10-3	Supplying & erecting crimping type aluminium lugs for cable 35 sq. mm. complete as per specification no. CB-CL/AL	14.70
Each	7-10-4	Supplying & erecting crimping type aluminium lugs for cable 50 sq. mm. complete as per specification no. CB-CL/AL	17.85
Each	7-10-5	Supplying & erecting crimping type aluminium lugs for cable 70 sq. mm. complete as per specification no. CB-CL/AL	22.05
Each	7-10-6	Supplying & erecting crimping type aluminium lugs for cable 95 sq. mm. complete as per specification no. CB-CL/AL	23.10
Each	7-10-7	Supplying & erecting crimping type aluminium lugs for cable 120 sq. mm. complete as per specification no. CB-CL/AL	34.65
Each	7-10-8	Supplying & erecting crimping type aluminium lugs for cable 150 sq. mm. complete as per specification no. CB-CL/AL	43.05

Each	7-10-9	Supplying & erecting crimping type aluminium lugs for cable 185 sq. mm. complete as per specification no. CB-CL/AL	56.70
Each	7-10-10	Supplying & erecting crimping type aluminium lugs for cable 240 sq. mm. complete as per specification no. CB-CL/AL	79.80
Each	7-10-11	Supplying & erecting crimping type aluminium lugs for cable 300 sq. mm. complete as per specification no. CB-CL/AL	120.75
Each	7-10-12	Supplying & erecting crimping type aluminium lugs for cable 400 sq. mm. complete as per specification no. CB-CL/AL	157.50
<u>7.11 Cable Tray (CB-CT)</u>			0.00
m	7-11-1	Providing & erecting Hot dipped galvanized ladder type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 150 mm width & 100 mm height comprising all required standard accessories.	669.90
m	7-11-2	Providing & erecting Hot dipped galvanized ladder type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 200 mm width & 100 mm height comprising all required standard accessories.	715.05
m	7-11-3	Providing & erecting Hot dipped galvanized ladder type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 300 mm width & 100 mm height comprising all required standard accessories.	798.00
m	7-11-4	Providing & erecting Hot dipped galvanized ladder type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 400 mm width & 100 mm height comprising all required standard accessories.	879.90
m	7-11-5	Providing & erecting Hot dipped galvanized ladder type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 500 mm width & 100 mm height comprising all required standard accessories.	963.90
m	7-11-6	Providing & erecting Hot dipped galvanized perforated type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 150 mm width & 75 mm height complete with necessary coupler plates & hardware in approved manner.	511.35
m	7-11-7	Providing & erecting Hot dipped galvanized perforated type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 200 mm width & 75 mm height complete with necessary coupler plates & hardware in approved manner.	592.20
m	7-11-8	Providing & erecting Hot dipped galvanized perforated type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 300 mm width & 75 mm height complete with necessary coupler plates & hardware in approved manner.	753.90
m	7-11-9	Providing & erecting Hot dipped galvanized perforated type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 400 mm width & 75 mm height complete with necessary coupler plates & hardware in approved manner.	913.50
m	7-11-10	Providing & erecting Hot dipped galvanized perforated type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 500 mm width & 75 mm height complete with necessary coupler plates & hardware in approved manner.	1075.20
m	7-11-11	Providing & erecting Hot dipped galvanized cover suitable for perforated type cable tray manufactured from 18 swg (1.2 mm thick) GI sheet of 150 mm width & 20 mm height complete with necessary hardware in approved manner.	266.70
m	7-11-12	Providing & erecting Hot dipped galvanized cover suitable for perforated type cable tray manufactured from 18 swg (1.2 mm thick) GI sheet of 200 mm width & 20 mm height complete with necessary hardware in approved manner.	353.85

m	7-11-13	Providing & erecting Hot dipped galvanized cover suitable for perforated type cable tray manufactured from 18 swg (1.2 mm thick) GI sheet of 300 mm width & 20 mm height complete with necessary hardware in approved manner.	453.60
m	7-11-14	Providing & erecting Hot dipped galvanized cover suitable for perforated type cable tray manufactured from 18 swg (1.2 mm thick) GI sheet of 400 mm width & 20 mm height complete with necessary hardware in approved manner.	578.55
m	7-11-15	Providing & erecting Hot dipped galvanized cover suitable for perforated type cable tray manufactured from 18 swg (1.2 mm thick) GI sheet of 500 mm width & 20 mm height complete with necessary hardware in approved manner.	672.00

	Note:-	1) Standard accessories shall typically include :	0.00
		a) 'Z' section support -30 x 35 mm in size - 312 mm in length - 6 nos. support for one piece ladder of 2.5 m in length each.	0.00
		b) Anchor fastener & nut bolts of adequate size - 16 nos. (2 nos. per support)	0.00
		c) Coupler plates with hardware - 70 x 200 x 3 mm thick - 2 nos. for each piece of 2.5 m ladder complete with necessary accessories such as reducer, horizontal elbow & tee, up & down vertical elbow & bend, cross piece complete erected in approved manner.	0.00
		2) Provision for resting arrangement or support for perforated type cable tray shall be made separately as per iron work item.	0.00
		3) Provision of cover for perforated type cable tray shall be made only where it is absolutely necessary and make sure for locking arrangement.	0.00
		4) Both type of cable trays shall be earthed properly.	0.00

7.12 Dismantling 0.00

m	7-12-1	Dismantling the existing cables of all types & size up to 10 sq. mm.	14.70
m	7-12-2	Dismantling the existing cables of all types & size above 10 sq mm up to 50 sq. mm.	21.00
m	7-12-3	Dismantling the existing cables of all types & size above 50 sq. mm.	27.30
m	7-12-4	Refilling the holes for dismantled cables with cement mortar & finishing in an approved manner etc. complete.	53.55
m	7-12-5	Dismantling the existing underground cable without damaging it with glands, cable end box including refilling the trench up to ground level and making coils complete.	88.20

	Note:-	1) The rates for item no 7.12.1 to 7.12.5 are for dismantling and handing over to section office inclusive of transportation up to 25 km, between site and section office.	0.00
		2) Item No 7.12.5 shall be used only when the cost of dismantled cable is more than the cost of excavation.	0.00

Above items are conforming to relevant IS as mentioned below 0.00

IS - 7098 - 1 :1988 : Cross-linked polyethylene insulated PVC sheathed cables, Part 1: For working voltage upto and including 1100 V. 0.00

IS - 7093 :1973 : Straight through joint boxes and lead sleeves for paper insulated lead sheathed cables up to and including 11 kV. 0.00

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Chapter: 8 0

Over Head Systems (OH) 0

(OH-PL) 8.1 Steel Poles 0

(OH-PSC)	8.2 PSC Poles	0
(OH-HM)	8.3 Hot Dipped Galvanized Poles & High Mast	0
(OH-BKT)	8.4 Brackets	0
(OH-CON)	8.5 Conductors	0
(OH-INS)	8.6 Insulators	0
	8.7 Accessories	0
	8.8 Dismantling	0
		0
		0
		0
		0

er: 8 OVER HEAD SYSTEMS (OH)

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0</i>
-3	-1	-2	-9.45
		<u>8.1 Steel Poles (OH-PL)</u>	0
Each	8-1-1	Supplying and erecting steel tubular swaged pole 139.7 x 114.3 x 88.9 mm. dia with 4.5x3.65x3.25 mm thickness (4.5 + 1.75 + 1.75 m) length respectively and total 8 m long with pole cap, base plate in provided foundation.(weight 101 kg.) as per specification no. OH-PL/STP	8510.25
Each	8-1-2	Supplying and erecting steel tubular swaged pole 139.7 x 114.3 x 88.9 mm. dia with 4.5x3.65x3.25 mm thickness (5 + 1.75 + 1.75 m) length respectively and total 8.5 m long with pole cap, base plate in provided foundation.(weight 109 kg.) as per specification no. OH-PL/STP	9187.50
Each	8-1-3	Supplying and erecting steel tubular swaged pole 165.1 x 139.7 x 114.3 mm. dia with 4.5 x 4.5 x 3.65 mm thickness (5 + 2 + 2 m) length respectively and total 9 m long with pole cap, base plate in provided foundation (weight 147 kg) as per specification no. OH-PL/STP	11228.70
Each	8-1-4	Supplying and erecting steel tubular swaged pole 165.1 x 139.7 x 114.3 mm dia with 4.5 x 4.5 x 3.65 mm. thickness (5 + 2.5 + 2.5 m) length respectively and total 10 m long with pole cap, base plate in provided foundation (weight 160 kg) as per specification no. OH-PL/STP	12498.15
Each	8-1-5	Supplying and erecting steel tubular swaged pole 165.1 x 139.7 x 114.3 mm dia with 4.5 x 4.5 x 3.65 mm thickness (5.60 + 2.7 + 2.7 m) length total 11 m long with pole cap, base plate in provided foundation (weight 175 kg.) as per specification no. OH-PL/STP	13803.30
Each	8-1-6	Supplying and erecting steel tubular swaged pole 165.1 x 139.7 x 114.3 mm dia. with 5.4 x 4.5 x 3.65 mm. thickness (5.8 + 3.1 + 3.1 mtr) length total 12 m long with pole cap, base plate in provided foundation (weight 208 kg.) as per specification no. OH-PL/STP	16486.05
Each	8-1-7	Supplying and erecting steel tubular swan neck swaged type welded pole with upper portion hydraulically bent, 165.1 x 139.7 x 114.3 mm dia with 4.5 x 4.50 x 3.65 mm thickness (5 + 2 + 3 m) respectively (net vertical height 9 m.) total length 10 m long with base plate in provided foundation.(weight 156.75 kg) as per specification no. OH-PL/STP	14045.85
Each	8-1-8	Supplying and erecting steel tubular swan neck swaged type welded pole with upper portion hydraulically bent, 165.1 x 139.7 x 114.3 mm dia. with 4.5 x 4.5 x 3.65 mm thickness (5.6 + 2.7 + 2.7 m) respectively total 11 m long with base plate in provided foundation.(weight 175 kg) as per specification no. OH-PL/STP	15614.55

m	8-1-9	Supplying and erecting rolled steel joist (girder) pole 150 x 80 mm/150 x75 mm (14.9 kg /m) with provided base plate in provided foundation as per specification no. OH-PL/RSJ	996.45
m	8-1-10	Supplying and erecting rolled steel joist (girder) pole 200 x 100 mm. (25.9 kg/ m) with provided base plate in provided foundation as per specification no. OH-PL/RSJ	1593.90
m	8-1-11	Supplying and erecting rolled steel joist (girder) pole 175 x 85 mm (19.6 kg/m) with provided base plate in provided foundation as per specification no. OH-PL/RSJ	1245.30
m	8-1-12	Supplying and erecting rolled steel joist (girder) pole 100 x 116 mm (23 kg/m) with provided base plate in provided foundation as per specification no. OH-PL/RSJ	1437.45
m	8-1-13	Supplying and erecting rolled steel joist (girder) pole 125 x 70 mm (13.3 kg/m) with provided base plate in provided foundation as per specification no. OH-PL/RSJ	910.35
m	8-1-14	Supplying and erecting rolled steel joist (girder) pole 152 x 152 mm (37.1 kg/m) with provided base plate in provided foundation as per specification no. OH-PL/RSJ	2196.60
m	8-1-15	Supplying and erecting rail pole (29.76 kg/m) with provided base plate in provided foundation as per specification no. OH-PL/RLP	1773.45
Each	8-1-16	Supplying and erecting ISI mark G.I. pipe pole 'B' grade 80 mm dia 6 m long with pole cap, base plate in provided foundation as per specification no. OH-PL/GIP	4811.10
Each	8-1-17	Supplying and erecting M.S. pipe pole 'B' grade 80 mm dia 6 m long with pole cap base plate in provided foundation as per specification no. OH-PL/GIP	3970.05

Note:- As per contour of the site and position of different obstacles / layout the length of RSJ pole to be considered for each pole, also selection of size of pole shall be made on the basis of strength of pole which will decide its utility as normal, intermediate, cut point etc. The measurement sheet should be attached in estimate/bill. Necessary arrangement for earthing shall be provided, also the base plate should be taken separately for item no 8.1.9 to 8.1.15 for each pole. 0.00

8.2 PSC Poles (OH-PSC)

		0.00	
Each	8-2-1	Supplying and erecting pre-stressed cement concrete (PSC) rectangular pole of top 90 x 102 / 105 mm & bottom of 90 x 275 mm 8 m long (140 kg) complete erected in provided C. C. foundation & muffing (square / round) as per specification no. OH-PL/PSC	2978.85
Each	8-2-2	Supplying and erecting pre-stressed cement concrete (PSC) rectangular pole of top 105 x 115 mm & bottom of 105 x 315 mm 9 m long (200 kg) complete erected in provided C. C. foundation & muffing (square/round) as per specification no. OH-PL/PSC	3625.65

8.3 Hot Dipped Galvanized Poles & High Mast (OH-HM)

		0.00	
Set	8-3-1	Supplying and erecting 12.5 m (clear height) High Mast (Top-150mm, Bottom-360mm) with lowering and raising motorized unit, lantern carriage assembly suitable for max. 6 nos. luminaries and its control gear box, lightning finial arrangement for fixing aviation light and foundation bolts on provided foundation as per specification no. OH-PL/HM (excluding luminaries).	198518.25
Set	8-3-2	Supplying and erecting 16 m (clear height) High Mast (Top-150mm, Bottom-360mm) with lowering and raising motorized unit, lantern carriage assembly suitable for max. 8 nos. luminaries and its control gear box, lightning finial arrangement for fixing aviation light and foundation bolts on provided foundation as per specification no. OH-PL/HM (excluding luminaries).	233545.20

Set	8-3-3	Supplying and erecting 16 m (clear height) High Mast (Top-150 mm, Bottom-410mm) with lowering and raising motorized unit, lantern carriage assembly suitable for max. 12 nos. luminaries and its control gear box, lightning finial arrangement for fixing aviation light and foundation bolts on provided foundation as per specification no. OH-PL/HM (excluding luminaries).	257624.85
Set	8-3-4	Supplying and erecting 20 m (clear height) High Mast (Top- 150mm, Bottom-410mm) with lowering and raising motorized unit, lantern carriage assembly suitable for max. 8 nos. luminaries and its control gear box, lightning finial arrangement for fixing aviation light and foundation bolts on provided foundation as per specification no. OH-PL/HM (excluding luminaries).	300015.45
Set	8-3-5	Supplying and erecting 20 m (clear height) High Mast (Top-150mm, Bottom-460mm) with lowering and raising motorized unit, lantern carriage assembly suitable for max. 12 nos. luminaries and its control gear box, lightning finial arrangement for fixing aviation light and foundation bolts on provided foundation as per specification no. OH-PL/HM (excluding luminaries)	341544.00
Set	8-3-6	Supplying and erecting 25 m (clear height) High Mast (Top-150mm, Bottom-540mm) with lowering and raising motorized unit, lantern carriage assembly suitable for max. 12 nos. luminaries and its control gear box, lightning finial arrangement for fixing aviation light and foundation bolts on provided foundation as per specification No. OH-PL/HM (excluding luminaries).	381615.15
Set	8-3-7	Supplying and erecting 25 m (clear height) High Mast (Top-200mm, Bottom- 560 mm) with lowering and raising motorized unit, lantern carriage assembly suitable for max. 16 nos. luminaries and its control gear box, lightning finial arrangement for fixing aviation light and foundation bolts on provided foundation as per specification no. OH-PL/HM (excluding luminaries).	440549.55
Set	8-3-8	Supplying and erecting 9m (clear height) fixed type High Mast (Top-100mm, Bottom- 200mm) with hexagonal/round bracket and foundation bolts suitable for max. 4 nos floodlight fixtures on provided foundation as per specification no. OH-PL/OPL (excluding luminaries).	30972.90
Set	8-3-9	Supplying and erecting 12.5m (clear height) Fixed type High Mast (Top-110mm, Bottom- 242 mm) with hexagonal/round bracket and foundation bolts suitable for max. 6 nos floodlight fixtures on provided foundation as per specification no. OH-PL/OPL (excluding luminaries).	54272.40
	8-3-10	<i>Hot Dipped Galvanized Octagonal Poles</i>	0.00
Each	8-3-11	Providing & erecting 3 m high (clear height) galvanised octagonal pole with foundation bolts having bottom of 130 mm A/F, top 70 mm A/F on provided foundation as per specification no. OH-PL/OPL	10118.85
Each	8-3-12	Providing & erecting 4 m high (clear height) galvanised octagonal pole with foundation bolts having bottom of 130 mm A/F, top 70 mm A/F on provided foundation as per specification no. OH-PL/OPL	11199.30
Each	8-3-13	Providing & erecting 5 m high (clear height) galvanised octagonal pole with foundation bolts having bottom of 130 mm A/F, top 70 mm A/F on provided foundation as per specification no. OH-PL/OPL .	12212.55
Each	8-3-14	Providing & erecting 6 m high (clear height) galvanised octagonal pole with foundation bolts having bottom of 130 mm A/F, top 70 mm A/F on provided foundation as per specification no. OH-PL/OPL	13596.45
Each	8-3-15	Providing & erecting 7 m high (clear height) galvanised octagonal pole with foundation bolts having bottom of 130 mm A/F, top 70 mm A/F on provided foundation as per specification no. OH-PL/OPL .	15678.60
Each	8-3-16	Providing & erecting 8 m high (clear height) galvanised octagonal pole with foundation bolts having bottom of 135 mm A/F, top 70 mm A/F on provided foundation as per specification no. OH-PL/OPL	17850.00

Each	8-3-17	Providing & erecting 9 m high (clear height) galvanised octagonal pole with foundation bolts having bottom of 155 mm A/F, top 70 mm A/F on provided foundation as per specification no. OH-PL/OPL	20087.55
Each	8-3-18	Providing & erecting 10 m high (clear height) galvanised octagonal pole with foundation bolts having bottom of 175 mm A/F, top 70 mm A/F on provided foundation as per specification no. OH-PL/OPL	22714.65
Each	8-3-19	Providing & erecting 11 m high (clear height) galvanised octagonal pole with foundation bolts having bottom of 210 mm A/F, top 90 mm A/F on provided foundation as per specification no. OH-PL/OPL	27775.65
Each	8-3-20	Providing & erecting 12 m high (clear height) galvanised octagonal pole with foundation bolts having bottom of 240 mm A/F, top 90 mm A/F on provided foundation as per specification no. OH-PL/OPL	31873.80
	8-3-21	<u>Hot Dipped Galvanized Conical Poles</u>	0.00
Each	8-3-22	Providing & erecting 3 m high galvanised conical pole with foundation bolts having bottom dia. from 105 to 115 mm, top dia. from 65 to 75 mm on provided foundation as per specification no. OH-PL/CPL	11202.45
Each	8-3-23	Providing & erecting 4 m high galvanised conical pole with foundation bolts having bottom dia. from 115 to 130 mm, top dia. from 65 to 75 mm on provided foundation as per specification no. OH-PL/CPL	13441.05
Each	8-3-24	Providing & erecting 5 m high galvanised conical pole with foundation bolts having bottom dia. from 125 to 145 mm, top dia. from 65 to 75 mm on provided foundation as per specification no. OH-PL/CPL	14611.80
Each	8-3-25	Providing & erecting 6 m high galvanised conical pole with foundation bolts having bottom dia. from 135 to 160 mm, top dia. from 65 to 75 mm on provided foundation as per specification no. OH-PL/CPL .	16364.25
Each	8-3-26	Providing & erecting 7 m high galvanised conical pole with foundation bolts having bottom dia. 145 to 175 mm, top dia. 65 to 75 mm on provided foundation as per specification no. OH-PL/CPL	18621.75
Each	8-3-27	Providing & erecting 8 m high galvanised conical pole with foundation bolts having bottom dia. from 155 to 190 mm, top dia. from 65 to 75 mm on provided foundation as per specification no. OH-PL/CPL .	20746.95
Each	8-3-28	Providing & erecting 9 m high galvanised conical pole with foundation bolts having bottom dia. from 165 to 200 mm, top dia. from 65 to 75 mm on provided foundation as per specification no. OH-PL/CPL	24120.60
Each	8-3-29	Providing & erecting 10 m high galvanised conical pole with foundation bolts having bottom dia. from 175 to 200 mm, top dia. from 65 to 75 mm on provided foundation as per specification no. OH-PL/CPL	27325.20
Each	8-3-30	Providing & erecting 11 m high galvanised conical pole with foundation bolts having bottom dia. from 195 to 245 mm, top dia. from 70 to 85 mm on provided foundation as per specification no. OH-PL/CPL	32748.45
Each	8-3-31	Providing & erecting 12 m high galvanised conical pole with foundation bolts having bottom dia. from 216 to 260 mm, top dia. from 80 to 96 mm on provided foundation as per specification no. OH-PL/CPL	38386.95
Each	8-3-32	Providing and erecting galvanised 1000mm single arm sword type bracket with FRP dome and ball as per specification no. OH-PL/PBKT	2382.45
Each	8-3-33	Providing and erecting galvanised 1000mm double arm sword type bracket with FRP dome and ball as per specification no. OH-PL/PBKT	3904.95
	Note:-	1) For bracket length of 1500 mm (Single/ double arm) increase overall rates by 20%	0.00

		2) Above brackets are suitable for octagonal /conical poles from 3m to 12m length.	0.00
		<u>Highmast Control Panels</u>	0.00
Job	8-3-32	Supplying and erecting outdoor stand mounted feeder pillar for highmast of the same manufacturer with 32A TPN MCB incomer , single dial timer switch, 25A TP contactor for automatic switching of luminaries, 2 nos 9A contactors and raise/lower push button, and provision for termination of adequate size of incoming and outgoing cables erected in min. 14 SWG CRCA sheet box with supporting angles, self-lock, gasket and slanting top erected with CC foundation complete.	26591.25
Job	8-3-33	Supplying and erecting Outdoor Stand Mounted Feeder Pillar for highmast of the same manufacturer with 63A TPN MCB incomer , single dial timer switch, 45A TP contactor for automatic switching of luminaries, 2 nos 9A contactors and raise/lower push button, and provision for termination of adequate size of incoming and outgoing cables erected in min. 14 SWG CRCA sheet box powder coated with supporting angles, self-lock, gasket and slanting top erected with CC foundation complete .	29499.75
		Note:- For item no. 8-3-32 & 8-3-33 rates are inclusive of foundation.	0.00
		<u>8.4 Brackets (OH-BKT)</u>	0.00
Each	8-4-1	Supplying & erecting MS pole bracket for guarding/LT OH Line , fabricated from angle iron 50x50x6 mm and 550 mm long for necessary nos. of provided insulators and erecting on pole with 50x6mm clamp complete as per specification no. OH - PL/BKT	382.20
Each	8-4-2	Supplying & erecting MS pole bracket for guarding/LT OH Line , fabricated from angle iron 50x50x6 mm and 1100mm long for necessary nos. of provided insulators and erecting on pole with 50x6mm clamp complete as per specification no. OH -PL/BKT	509.25
Each	8-4-3	Supplying & erecting MS pole bracket for guarding/LT OH Line fabricated from ISM channel 75x40x6mm and 550 mm long for necessary nos. of provided insulators and erecting on pole with 50x6mm clamp complete as per specification no. OH-PL/BKT	423.15
Each	8-4-4	Supplying & erecting MS pole bracket for guarding/LT OH Line fabricated from ISM channel 75x40x6mm and 1100 mm long for necessary nos. of provided insulators and erecting on pole with 50x6mm clamp as per approved method of construction and complete as per specification no. OH-PL/BKT	721.35
Each	8-4-5	Supplying & erecting MS pole bracket for LT OH conductor fabricated from 65x65x6 mm section, 550 mm long for necessary nos. of provided insulators and erecting on pole with 50x6 mm clamp as per approved method of construction and complete as per specification no. OH-PL/BKT	427.35
Each	8-4-6	Supplying & erecting MS pole bracket for LT OH conductor fabricated from 65x65x6 mm section, 1100 mm long for necessary nos. of provided insulators and erecting on pole with 50x6 mm clamp as per approved method of construction and complete as per specification no. OH-PL/BKT	728.70
Each	8-4-7	Supplying & erecting MS pole bracket, for OH conductor fabricated from ISM channel, 75x40x6mm 550mm long for 2 insulators and erecting on pole with 50x6 mm clamp as per approved method of construction and complete as per specification no. OH-PL/BKT	389.55
Each	8-4-8	Supplying & erecting MS pole bracket, for OH conductor fabricated from ISM channel, 75x40x6mm 1100mm long for 4 insulators and erecting on pole with 50x6 mm clamp as per approved method of construction and complete as per specification no. OH-PL/BKT	721.35

Each	8-4-9	Supplying & erecting MS pole bracket,for OH conductor fabricated from ISM channel, 75x40x6mm, 550 mm long for two insulators and welded with extension channel pieces of same size 300 mm in length and erecting on pole with 50x6 mm clamp as per approved method of construction and complete as per specification no. OH-PL/BKT	530.25
Each	8-4-10	Supplying & erecting MS pole bracket , fabricated from ISM channel, 75x40x6mm, 1100 mm long for 4 insulators and welded with extension channel pieces of same size 300 mm. in length and erecting on pole with 50x6 mm clamp as per approved method of construction and complete as per specification no. OH-PL/BKT	737.10
Each	8-4-11	Supplying & erecting 100 x 50x6 mm with 4.7 mm thick web and 7.5 mm thick flange channel iron cross arm of suitable length for 2.4m wide DP structure and erecting on DP with 50x6 mm clamp as per approved method of construction and complete as per specification no. OH-PL/BKT.	1893.15
		Note:- For distance exceeding 2.4 m between two pole structure add Rs. 500/- per meter for extra channel length.	0.00
Each	8-4-12	Supplying and erecting vee cross arm with ISM channel of 75x40x6mm , for 11kV HTOH line with arrangement to fix insulator at 45mm from the end & horizontal distance between insulators 1220 mm bent at angle of 60 degree keeping base 305 mm and the total vertical height of V cross arm as 460mm, and fixed on pole with MS clamp of 80x10 mm, nut bolts,washers complete as per specification no. OH-PL/VCA	1180.20
Each	8-4-13	Supplying and erecting vee cross arm with ISM channel of 100 x 50 x 6mm or 22/33kV HTOH line with arrangement to fix insulator at 45mm from the end & horizontal distance between insulators 1530 mm bent at angle of 60 degree keeping base 310 mm and the total vertical height of V cross arm as 460mm, and fixed on pole with MS clamp of 80x10 mm, nut bolts, washers complete as per specification no. OH-PL/VCA	1624.35
Each	8-4-14	Supplying and erecting 75x40x6 mm with 4.4 mm thick web and 7.3 mm thick flange channel (top pin) with clamp of suitable length so as to maintain vertical clearance of 1065 mm for 11 kV,1320 mm for 22 kV between insulators for erection of top pin insulators complete as per specification no. OH-PL/VCA	500.85
Each	8-4-15	Supplying and erecting bracket for guarding of HT OH Line , made from channel iron 1600 mm in length and 75x40x6 mm. erected on pole complete as per specification no. OH-PL/VCA	984.90
Each	8-4-16	Supplying and erecting bracket for guarding of HT OH Line , made from channel iron 1600 mm in length and 65 x 65 x 6mm thick erected on pole as per specification no. OH-PL/VCA	892.50
		<u>D. P. Structure</u>	0.00
Each	8-4-17	Supplying & erecting single pole cut point channel set of for 11 kV HT OH line, two channel of size 100 x 50 x 6 mm 1.6 m long having stud angle of size 50 x 50 x 6 mm 1.5 m long long with necessary clamps, nut bolts etc. complete.	4194.75

Each	8-4-18	Supplying & erecting inline D. P. structure for 11/0.415 kV, 63 kVA transformer with R.S.J. Pole 2 Nos. of size 100 x 116 mm x 11 m long with suitable distribution box of C.R.C.A. Sheet 16 SWG with 4 pole MCCB 100 amps as incomer & 6 nos. 63 amps kitkat/MCCB for outgoing circuits. Transformer D.P. Structure includes the A. B. Switch 200 amps, D.O. fuse set & L.A. set, 2 nos. of top channel of size 100 mm x 50 mm for erection of A.B. switch & 2 nos. base channel of size 100 mm x 50 mm for erecting transformer. channel of size 75 x 40 mm for erecting D.O. fuse set, L.A., A.B. switch handle etc. angle of size 50 x 50 x6 mm for erecting distribution box, transformer belt etc.as per drawing (min. 124 Kg. iron work) with necessary clamps, nut-bolts, vee cross arm, top clip, insulators etc. complete with caution board & barbed wire. D.P. structure shall be erected in c.c. foundation complete.	111220.20
Each	8-4-19	Supplying & erecting inline D. P. structure for 11/0.415 kV, 100 kVA transformer with R.S.J. pole 2 nos. of size 100 x 116 mm x 11 Mtr. long with suitable distribution box of C.R.C.A. sheet 16 SWG with 4 pole MCCB 200 amps as incomer & 6 nos. 100 amps kitkat/MCCB for outgoing circuits. Transformer D.P. structure includes the A. B. switch 200 amps, D.O. fuse set & L.A. set, 2 Nos. of top channel of size 100 mm x 50 mm for erection of A.B. switch & 2 nos. base channel of size 100 mm x 50 mm for erecting transformer channel of size 75 x 40 mm for erecting D.O. fuse set, L.A., A.B. switch handle etc. Angle of size 50 x 50 x6 mm for erecting distribution box, transformer belt etc.as per drawing (min. 124 Kg. iron work) with necessary clamps, nut-bolts, vee cross arm, top clip, insulators etc. complete with caution board & barbed wire. D.P. structure shall be erected in c.c. foundation complete.	123727.80
Each	8-4-20	Supplying & erecting inline D. P. structure for 11/0.415 kV, 200 kVA transformer with R.S.J. pole 2 nos. of size 100 x 116 mm x 11 Mtr. long with suitable distribution box of C.R.C.A. sheet 16 SWG with 4 pole MCCB 300 amps as incomer & 6 nos. 100 amps kitkat/MCCB for outgoing circuits. Transformer D.P. structure includes the A. B. switch 200 amps, D.O. fuse set & L.A. set, 2 nos. of top channel of size 100 mm x 50 mm for erection of A.B. switch & 2 nos. base channel of size 100 mm x 50 mm for erecting Transformer. channel of size 75 x 40 mm for erecting D.O. fuse set, L.A., A.B. switch handle etc. Angle of size 50 x 50 x6 mm for erecting distribution box, transformer belt etc.as per drawing (min. 124 Kg. iron work) with necessary clamps, nut-bolts, vee cross arm, top clip, insulators etc. complete with caution board & barbed wire. D.P. structure shall be erected in c.c. foundation complete.	135826.95
Each	8-4-21	Supplying & erecting inline cut point end pole D. P. Structure for 11/0.415 kV, 63 kVA Transformer with R.S.J. Pole 2 Nos. of size 100 x 116 mm x 11 Mtr. Long with suitable Distribution Box of C.R.C.A. Sheet 16 SWG with 4 Pole MCCB 100 Amps as incomer & 6 Nos. 63 Amps kitkat /MCCB for outgoing circuits. Transformer D.P. Structure includes the A. B. Switch 200 Amps, D.O. fuse Set & L.A. Set. 2 Nos. Top channel of size 100 mm x 50 mm for erection of A.B. Switch & 2 Nos. Base channel of size 100 mm x 50 x mm for erecting Transformer. Channel of size 75 x40 mm for erecting D.O. Fuse Set, L.A., A.B. Switch handle etc. Angle of size 50 x 50 x6 mm for erecting Distribution Box, Transformer Belt etc.as per drawing (min. 176 Kg. iron work) with necessary clamps, Nut-bolts. vee cross arm, top clip, insulators etc. complete with caution board & barbed wire. D.P. Structure shall be erected in c.c. foundation complete.	117004.65

Each	8-4-22	Supplying & erecting inline cut point end pole D. P. Structure for 11/0.415 kV, 100 kVA Transformer with R.S.J. Pole 2 Nos. of size 100 x 116 mm x 11 Mtr. Long with suitable Distribution Box of C.R.C.A. Sheet 16 SWG with 4 Pole MCCB 200 Amps as incomer & 6 Nos.100 Amps kitkat /MCCB for outgoing circuits. Transformer D.P. Structure includes the A. B. Switch 200 Amps, D.O. fuse Set & L.A. Set. 2 Nos. Top channel of size 100 mm x 50 mm for erection of A.B. Switch & 2 Nos. Base channel of size 100 mm x 50 x mm for erecting Transformer. Channel of size 75 x40 mm for erecting D.O. Fuse Set, L.A., A.B. Switch handle etc. Angle of size 50 x 50 x6 mm for erecting Distribution Box, Transformer Belt etc.as per drawing(min. 176 Kg. iron work) with necessary clamps, Nut-bolts. Vee cross arm, top clip, insulators etc. complete with caution board & barbed wire. D.P. Structure shall be erected in c.c. foundation complete.	128980.95
Each	8-4-23	Supplying & erecting inline cut point end pole D. P. structure for 11/0.415 kV, 200 KVA transformer with R.S.J. pole 2 nos. of size 100 x 116 mm x 11 Mtr. long with suitable distribution box of C.R.C.A. sheet 16 SWG with 4 pole MCCB 300 amps as incomer & 6 nos. 63 amps kitkat /MCCB for outgoing circuits. Transformer D.P. structure includes the A. B. switch 200 Amps, D.O. fuse set & L.A. set. 2 nos. Top channel of size 100 mmx 50 mm for erection of A.B. switch & 2 nos. base channel of size 100 mm x 50 x mm for erecting transformer. Channel of size 75 x40 mm for erecting D.O. fuse set, L.A., A.B. switch handle etc. Angle of size 50 x 50 x6 mm for erecting distribution box, transformer belt etc.as per drawing (min.176 Kg. iron work) with necessary clamps, nut-bolts, vee cross arm, top clip, insulators etc. complete with caution board & barbed wire. D.P. Structure shall be erected in c. c. foundation complete.	145969.95
Each	8-4-24	Supplying & erecting end pole D. P. Structure for 11/0.415 kV, 63 kVA Transformer with R.S.J. pole 2 nos. of size 100 x 116 mm x 11 Mtr. long with suitable distribution box of C.R.C.A. sheet 16 SWG with 4 pole MCCB 100 amps as incomer & 6 nos. 63 amps Kitkat /MCCB for outgoing circuits. Transformer D.P. structure includes the A. B. switch 200 amps, D.O. fuse set & L.A. set. 2 nos. Top channel of size 100 mm x 50 mm for erection of A.B. switch & 2 nos. Base channel of size 100 mm x 50 x mm for erecting transformer. Channel of size 75 x40 mm for erecting D.O. fuse set, L.A., A.B. switch handle etc. Angle of size 50 x 50 x6 mm for erecting distribution box, transformer belt etc. as per drawing (min. 124 Kg. iron work) with necessary clamps, nut-bolts, vee cross arm, top clip, insulators etc. complete with caution board & barbed wire. D.P. structure shall be erected in c.c. foundation complete.	113671.95
Each	8-4-25	Supplying & erecting end pole D. P. Structure for 11/0.415 kV, 100 kVA Transformer with R.S.J. Pole 2 Nos. of size 100 x 116 mm x 11 Mtr. Long with suitable Distribution Box of C.R.C.A. Sheet 16 SWG with 4 Pole MCCB 200 Amps as incomer & 6 Nos.100 Amps Kitkat/MCCB for outgoing circuits. Transformer D.P. Structure includes the A. B. Switch 200 Amps, D.O. fuse Set & L.A. Set. 2 Nos. Top channel of size 100 mm x 50 mm for erection of A.B. Switch & 2 Nos. Base channel of size 100 mm x 50 x mm for erecting Transformer. Channel of size 75 x40 mm for erecting D.O. Fuse Set, L.A., A.B. Switch handle etc. Angle of size 50 x 50 x6 mm for erecting Distribution Box , Transformer Belt etc.as per drawing (min. 124 Kg. iron work) with necessary clamps, Nut-bolts. vee cross arm, top clip, insulators etc. complete with caution board & barbed wire. D.P. Structure shall be erected in c.c. foundation complete.	124131.00

Each	8-4-26	Supplying & erecting end pole D. P. Structure for 11/0.415 kV, 200 kVA Transformer with R.S.J. pole 2 nos. of size 100mm x 116 mm x 11 m long with suitable distribution box of C.R.C.A. sheet 16 SWG with 4 pole MCCB 300 Amps as incomer & 6 nos.100 amps kitkat/MCCB for outgoing circuits. Transformer D.P. structure includes the A. B. switch 200 Amps, D.O. fuse set & L.A. set. 2 nos. Top channel of size 100 mmx 50 mm for erection of A.B. switch & 2 nos. base channel of size 100 mm x 50 x mm for erecting transformer. Channel of size 75 x40 mm for erecting D.O. fuse set, L.A., A.B. switch handle etc. Angle of size 50 x 50 x6 mm for erecting distribution box, transformer belt etc. as per drawing (min. 124 Kg. iron work) with necessary clamps, nut-bolts, vee cross arm, top clip, insulators etc. complete with caution board & barbed wire. D.P. Structure shall be erected in c. c. foundation complete.	141318.45
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8.5 Conductors (OH-CON)

			0.00
km	8-5-1	Supplying and erecting all aluminium stranded conductors 7/1.96 mm complete (Rose) (58 kg/km) as per specification no. OH-CON/AAC	14176.05
km	8-5-2	Supplying and erecting all aluminium stranded conductors 7/2.21 mm complete (Gnat) (73.77kg/km) as per specification no. OH-CON/AAC	20259.75
km	8-5-3	Supplying and erecting all aluminium stranded conductors 7/2.48 mm complete (Iris) (91.8 kg/km) as per specification no. OH-CON/AAC	21885.15
km	8-5-4	Supplying and erecting all aluminium stranded conductors 7/2.78 mm. complete (Pansy) (115.8 kg/km) as per specification no. OH-CON/AAC	27846.00
km	8-5-5	Supplying and erecting all aluminium stranded conductors 7/3.10 mm. complete. (Ant.) (145.0 kg/km) as per specification No. OH-CON/AAC	33918.15
km	8-5-6	Supplying and erecting ACSR conductor of size 6/1-2.11 mm complete. (squirrel) (85kg/km) as per specification no. OH-CON/ACSR	17800.65
km	8-5-7	Supplying and erecting ACSR conductor of size 6/1-2.59 mm complete. (Weasel) (127.7 kg/km) as per specification no. OH-CON/ACSR	22807.05
km	8-5-8	Supplying and erecting ACSR conductor of size 6/1-3.60 mm complete. (Ferret) (171.3 kg/km) as per specification no. OH-CON/ACSR	35583.45
km	8-5-9	Supplying and erecting ACSR conductor of size 6/1-3.66 mm complete.(Mink) (255 kg/km) as per specification no. OH-CON/ACSR	54972.75
km	8-5-10	Supplying and erecting ACSR conductor of size - 6/1-4.09 mm (Raccon) complete. (318 kg/km) as per specification no. OH-CON/ACSR	68414.85
km	8-5-11	Supplying and erecting ACSR conductor of size - 6/1-4.72 mm (Dog) complete. (394 kg/km) as per specification no. OH-CON/ACSR	84256.20

8.6 Insulators (OH-INS)

			0.00
Each	8-6-1	Supplying and erecting pin type LT medium insulator 100 mm x 62 mm dia. with suitable G.I. spindle, nut, bolts complete erected.	69.30
Each	8-6-2	Supplying and erecting porcelain shackle type LT medium insulator 75x115 mm dia. with G.I. (Shackle) strips , nuts and bolts, complete.	55.65
Each	8-6-3	Supplying and erecting porcelain shackle type LT medium insulator 50 x 89 mm dia. with G.I. (Shackle) strips, nuts and bolts, complete.	52.50
Each	8-6-4	Supplying and erecting aluminium bobbin with G.I. (shackle) strip, nuts complete.	86.10
Each	8-6-5	Providing and fixing G.I. earthing stud with necessary materials.	52.50

Each	8-6-6	Supplying and erecting porcelain disc type insulator with necessary hardware suitable for 11kV line, complete as per specification no. OH-INS/DI	1110.90
Each	8-6-7	Supplying and erecting porcelain disc type insulator with necessary hardware suitable for 22kV line, complete as per specification no. OH-INS/DI	1417.50
Each	8-6-8	Supplying and erecting porcelain disc type insulator with necessary hardware suitable for 33 kV line complete as per specification no. OH-INS/DI	1808.10
Each	8-6-9	Supplying and erecting porcelain pin type insulator with G.I. pin suitable for 11kV line, complete as per specification no. OH-INS/PN	266.70
Each	8-6-10	Supplying and erecting porcelain pin type insulator suitable for 22kV line with G.I. pin complete as per specification no. OH-INS/PN	333.90
Each	8-6-11	Supplying and erecting porcelain pin type insulator with G.I. pin suitable for 33kV line, complete as per specification no. OH-INS/PN	682.50
Each	8-6-12	Supplying and erecting porcelain post type insulator with nut bolts suitable for 11kV line , complete as per specification no. OH-INS/PST	511.35
Each	8-6-13	Supplying and erecting porcelain post type insulator with nut bolts suitable for 22kV line , complete as per specification no. OH-INS/PST	609.00
Each	8-6-14	Supplying and erecting porcelain post type insulator with nut bolts suitable for 33kV line complete as per specification no. OH-INS/PST	819.00
Each	8-6-15	Supplying and erecting distribution class, 11 kV thyrite type lightning arrester with nut bolts, on provided MS channel as per specification no. OH-INS/LA	1041.60
Each	8-6-16	Supplying and erecting distribution class, 22 kV thyrite type lightning arresters with nut bolts, on provided MS channel as per specification no. OH-INS/LA	1158.15
			0.00
			0.00
			0.00
			0.00
		<u>8.7 Accessories</u>	
Each	8-7-1	Supplying and erecting G.I. stay set for poles, including loop insulators at inaccessible height complete with anchor plate 300 x 300 x 6 mm., straining screws, G.I. stay wire 7/10 SWG, G.I. stay rod 20 mm x 1.8 m length and pole clamps duly erected in provided cement concrete foundation.	1363.95
Each	8-7-2	Supplying and erecting G.I. stay set for poles, including loop insulators at inaccessible height complete with anchor plate 300 x 300 x 6 mm., straining screws, G.I. stay wire 7/8 SWG, G.I. stay rod 20 mm x 1.8 m length and pole clamps duly erected in provided cement concrete foundation.	1598.10
Each	8-7-3	Supplying and erecting G.I. fly stay set for pole including straining screw, G.I. stay wire, 7/10 SWG (for to 15mtr. long) with pole clamp, made of 50 x 6 mm MS flat, complete erected on provided RSJ pole. (Add. Rs. 25/- per m for extra length beyond 15 m)	1945.65
Each	8-7-4	Supplying and erecting G.I. self stay set for pole, including anchor plate 300x 300 x 6 mm. straining screw, loop-insulator, G.I. stay wire 7/10 SWG, G.I. stay rod 20 mm x 1.8 m long, erected with pole clamps along with angle iron bracket of 50 x 50 x 6 mm and one meter long fixed to pole at suitable height with suitable MS clamps duly erected in provided C.C. foundations.	1598.10
Each	8-7-5	Supplying and erecting G.I. wall hook, 10 to 15 mm dia and overall length 250 mm including grouting, cement plastering etc. complete.	52.50

Each	8-7-6	Supplying and erecting pipe post made from ISI mark G.I. pipe 40 mm dia 3 m overall length, with two bends, fixed to pipe at the top & bottom, round bended, complete erected with MS flat welded MS bolts 15 cm long duly grouted in wall with necessary clamps, nuts and bolts etc. duly painted with two coats of aluminium paint complete.	1178.10
Each	8-7-7	Supplying and erecting pipe post made from ISI mark G.I. pipe 25 mm dia 3 m overall length, with two bends, fixed to pipe at the top & bottom, round bended, complete erected with MS flat welded MS bolts 15 cm long duly grouted in wall with necessary clamps, nuts and bolts etc. duly painted with two coats of aluminium paint complete.	1063.65
Each	8-7-8	Supplying and erecting guarding loop using G.I. wire no.8 SWG for L.T. overhead line of horizontal formation complete erected with 20 SWG GI wire as binding wire and 50 mm. section on each side, complete.	48.30
Each	8-7-9	Supplying and erecting fibre/ PVC spacers for LT overhead line 3 to 5 conductors complete erected.	113.40
Each	8-7-10	Supplying and erecting pole clamp made from 50 x 6 mm MS flat for pole or pipe, post complete erected with 15 mm bolts and nuts, complete duly painted with one coat of red oxide and two coats of aluminium paint.	233.10
Each	8-7-11	Supplying and erecting pole clamp made from 50 x 10 mm MS flat for pole or pipe, post complete erected with 15 mm bolts and nuts, complete duly painted with one coat of red oxide and two coats of aluminium paint.	259.35
Each	8-7-12	Supplying and erecting 'D' type pole clamps, fabricated from 50 x 6 mm MS flat with 15 mm dia. bolts and nut fixed to steel tubular pole duly painted with one coat of red oxide and two coats of aluminium paint.	132.30
Each	8-7-13	Supplying and erecting 'C' type (half) clamps for pole made from 50 x 6 mm flat for fixing cross arms by means of 15 mm dia. bolts and nuts painted with one coat of red oxide and two coats of aluminium paint.	132.30
Each	8-7-14	Supplying and erecting 'C' type (half) clamps for pole made from 50 x 10 mm flat for fixing cross arms by means of 15 mm dia. bolts and nuts painted with one coat of red oxide and two coats of aluminium paint.	164.85
Each	8-7-15	Supplying and fixing MS base plate 30x30x0.6 cm size fixed to the pole base either by welding or by set screws 12 mm. dia fixed at position.	413.70
Each	8-7-16	Supplying and fixing MS round base plate 25 cm dia meter and 10mm. thick fixed to pole by set screws or welded and fixed at position.	415.80
Each	8-7-17	Supplying and fixing MS pole cap fabricated from MS pipe or cast iron fixed to pole by means of set screws and 75 mm deep.	109.20
Each	8-7-18	Supplying and erecting guarding lace for H.T.O.H. line with 8 SWG G.I. wire to protect the H.T. overhead line with binding wire of 20 SWG G.I. wire for 75 mm section on either side.	46.20
		<u>8.8 Dismantling</u>	0.00
Each	8-8-1	Dismantling the existing pole up to 6 m height with brackets, clamps, insulators, stay from the cement concrete foundation and making the site clear by refilling the pits with excavated materials and bringing it to the ground level.	478.80
Each	8-8-2	Dismantling the existing pole above 6 m height with brackets, clamps, insulators, stay from the cement concrete foundation and making the site clear by refilling the pits with excavated materials and bringing it to the ground level.	777.00
km	8-8-3	Dismantling the existing overhead line including G.I. wires of all sizes without damaging & making the coils in suitable sizes.	1069.95

job	8-8-4	Dismantling existing lightning arrestor set , insulator complete from DP structure in an approved manner.	89.25
			0
		Above items are conforming to relevant IS as mentioned below	0
		IS 2713-1 to 3 : 1980 -Tubular Steel Poles for Overhead Power Lines.	0
		IS 2062 : 2011 - Hot Rolled Medium and High Tensile Structural Steel.	0
		IS 2062 :2011 - Hot Rolled Medium and High Tensile Structural Steel.	0
		IS 2633 :1986 - Methods for testing uniformity of coating of zinc coated articles.	0
		IS 875-3 : 1987 - Code of Practice for Design Loads (Other than Earthquake) for Buildings and Structures, Part 3: Wind Loads.	0
		IS 4759 : 1996 - Hot-dip zinc coatings on structural steel and other allied products.	0
		IS 808 : 1989 - Dimensions for Hot Rolled Steel Beam, Column, Channel and Angle Sections.	0
		IS 1445 : 1977 - Porcelain insulators for overhead power lines with a nominal voltage up to and including 1000 V.	0
		IS 2486-1 : 1993 - Metal fittings of insulators for overhead power lines with nominal voltage greater than 1000 V, Part 1: General requirements and tests.	0
		IS 2486-2 : 1989 - Insulator fittings for overhead power lines with nominal voltage greater than 1 000 V, Part 2: Dimensional requirements.	0
		IS 2486-3 : 1974 - Insulator Fittings for Overhead Power Lines with a Nominal Voltage Greater than 1000 Volts, Part III: Locking Devices.	0
		IS 2486-4 : 1981 -Insulator Fittings for Overhead Power Lines with a Nominal Voltage Greater than 1 000 V, Part IV: Tests for Locking Devices.	0
		IS 785 : 1998 - Reinforced Concrete Poles for Overhead Power and Telecommunication Lines.	0
		IS 2713-1 to 3 : 1980 - Tubular Steel Poles for Overhead Power Lines.	0
		IS 7321 : 1974 - Code of practice for selection, handling and erection of concrete poles for overhead power and telecommunication lines.	0
		IS 398-1 : 1996 - Aluminium conductors for overhead transmission purposes, Part 1: Aluminium stranded conductors.	0
		IS 398-1 (B) : 1996 - Aluminium Conductors for Overhead Transmission Purposes "B" Specification, Part 1: Aluminium Stranded Conductors.	0
		IS 398-2 : 1996 - Aluminium conductors for overhead transmission purposes, Part 2: Aluminium conductors, galvanized steel reinforced.	0
		IS 13158 : 1991 - Prestressed concrete circular spun poles for overhead power, traction and telecommunication lines.	0
			0
			0
			0
			0
		Chapter: 9	0
		Earthing (EA)	0
(EA-EP)		9.1 Plate, Pipe type Earthing	0
(EA-EP)		9.2 Accessories	0
		9.3 Lightning Conductor and Accessories	0
			0

Chapter : 9 Earthing (EA)

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<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0</i>
<i>-3</i>	<i>-1</i>	<i>-2</i>	<i>0</i>
<u>9.1 Plate, Pipe type Earthing (EA-EP)</u>			0
Each	9-1-1	Providing earthing with galvanized iron earth plate size 60 x 60 x 0.6 cm complete with all materials, testing & recording the results as per specification no. EA-EP	4179.00
Each	9-1-2	Providing earthing with copper earth plate size 30 x 30 x 0.315 cm complete with all materials, testing & recording the results as per specification no. EA-EP	5812.80
Each	9-1-3	Providing earthing with galvanized iron earth plate size 60 x 60 x 0.6 cm with funnel with a wire mesh for watering and brick masonry block C.I. cover complete with all materials, testing & recording the results as per specification no. EA-EP	5416.95
Each	9-1-4	Providing pipe type earthing with 40mm. dia. G.I. pipe or 20 mm dia. G.I. Rod complete with all materials as per specification no. EA-EP	1331.40
Each	9-1-5	Supply, Installation, Testing and commissioning of maintenance free earthing comprising of Electrode of 17.2 mm diameter Low Carbon Steel with 250 micron molecular copper bonded earthing rod of Length 3m along with 25 kg Carbon based environment friendly back fill ground enhancing compound required to fill up the excavated earth with required quantity complete. Specification no. EA-MOBI	12837.30
Each	9-1-6	Providing earthing with copper earth plate size 60 x 60 x 0.315 cm with funnel with a wire mesh for watering and brick masonry block C.I. cover with minimum 25 kg Carbon based environment friendly back fill Ground Enhancing compound complete with all materials, testing & recording the results as per specification no ESE -LA	14673.75
	Note:-	1) Resistivity of the soil shall be checked and no of back filling ground enhancing compound bags shall be used as per guidelines elaborated in specification.	0.00
		2) Additional G.I. pipe required from earth pit & GI/Copper wire / strip more than 8 m in length from earth pit to installation to be provided separately.	0.00
		3) Record entries for earthing work shall be maintained.	0.00
		4) Requirement of no of bags shall be decided with respect to soil resistivity.	0.00
<u>9.2 Accessories</u>			0.00
Kg.	9-2-1	Supplying and erecting aluminium strip of required sizes used for earthing on wall and/or any other purpose with necessary aluminium clamps fixed on wall painted with bituminous paint in an approved manner with joints required. As per specification no EA-EP .	358.05
Kg.	9-2-2	Supplying and erecting copper strip of required size used for earthing on wall and/or any other purpose with necessary copper clamps fixed on wall painted with bituminous paint in an approved manner with joints required. As per specification no. EA-EP .	772.80
Kg.	9-2-3	Supplying and erecting GI strip of required size used for earthing on wall and/or any other purpose with necessary GI clamps fixed on wall painted with bituminous paint in an approved manner with joints required. As per specification no EA-EP .	203.70

-3	-1	-2	0
<u>10.1 Transformers</u>			0
Each	10-1-1	Supplying, installing, testing & commissioning 3 phase, 11/0.433 kV, 50 Hz., 25 kVA oil immersed and naturally cooled outdoor type, aluminium wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with standard accessories complete with test certificate with losses below 190 Watts at 50% load, 635 Watts at 100% load as per IS:1180 - 2014, energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	114363.90
Each	10-1-2	Supplying, installing, testing & commissioning of 3 phase, 11/0.433 kV, 50 Hz., 63 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 340 Watts at 50% load, 1140 Watts at 100% load as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	259587.30
Each	10-1-3	Supplying, installing, testing & commissioning of 3 phase, 11/0.433 kV, 50 Hz., 100 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 475 Watts at 50% load, 1650 Watts at 100% load as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	335450.85
Each	10-1-4	Supplying, installing, testing & commissioning 3 phase, 11/0.433 kV, 50 Hz., 160 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 670 Watts at 50% load, 1950 Watts at 100% load as per IS:1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	442937.25
Each	10-1-5	Supplying, installing, testing & commissioning 3 phase, 11/0.433 kV, 50 Hz., 200 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 780 Watts at 50% load, 2300 Watts at 100% load as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	543502.05

Each	10-1-6	Supplying, installing, testing & commissioning 3 phase, 11/0.433 kV, 50 Hz., 250 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40°C by thermometer in oil and 45°C by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 980 Watts at 50% load, 2930 Watts at 100% load as per IS: 1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	700751.10
Each	10-1-7	Supplying, installing, testing & commissioning 3 phase, 11/0.433 kV, 50 Hz., 315 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40°C by thermometer in oil and 45°C by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 1025 Watts at 50% load, 3100 Watts at 100% load as per IS: 1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	751154.25
Each	10-1-8	Supplying, installing, testing & commissioning 3 phase, 11/0.433 kV, 50 Hz., 500 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40°C by thermometer in oil and 45°C by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 1510 Watts at 50% load, 4300 Watts at 100% load as per IS: 1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	989220.75
Each	10-1-9	Supplying, installing, testing & commissioning 3 phase, 11/0.433 kV, 50 Hz., 630 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected additional neutral brought out on load side, temperature rise should not exceed 40°C by thermometer in oil and 45°C by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 1860 Watts at 50% load, 5300 Watts at 100% load as per IS: 1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1231122.90
Each	10-1-10	Supplying, installing, testing & commissioning 3 phase, 22/0.433 kV, 50 Hz., 63 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40°C by thermometer in oil and 45°C by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 357 Watts at 50% load, 1197 Watts at 100% load as per IS: 1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	301747.95

Each	10-1-11	Supplying, installing, testing & commissioning 3 phase, 22/0.433 kV, 50 Hz., 100 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 499 Watts at 50% load, 1733 Watts at 100% load as per IS:1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	375339.30
Each	10-1-12	Supplying, installing, testing & commissioning 3 phase, 22/0.433 kV, 50 Hz., 160 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 704 Watts at 50% load, 2048 Watts at 100% load as per IS:1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	475242.60
Each	10-1-13	Supplying, installing, testing & commissioning 3 phase, 22/0.433 kV, 50 Hz., 200 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 819 Watts at 50% load, 2415 Watts at 100% load as per IS:1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	615301.05
Each	10-1-14	Supplying, installing, testing & commissioning 3 phase, 22/0.433 kV, 50 Hz., 250 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 1029 Watts at 50% load, 3077 Watts at 100% load as per IS: 1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, ras per specification no SS- TR.	717801.00
Each	10-1-15	Supplying, installing, testing & commissioning 3 phase, 22/0.433 kV, 50 Hz., 315 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off Load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 1077 Watts at 50% load, 3255 Watts at 100% load as per IS: 1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	842712.15

Each	10-1-16	Supplying, installing, testing & commissioning Watts 3 phase, 22/0.433 kV, 50 Hz., 500 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 1586 Watts at 50% load, 4515 Watts at 100% load as per IS:1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1066551.15
Each	10-1-17	Supplying, installing, testing & commissioning 3 phase, 22/0.433 kV, 50 Hz., 630 kVA, oil immersed and naturally cooled outdoor type, copper wound transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with HV tapping (with off load tap changer) off load +5 to -10 in steps of 2.5%, with standard accessories complete with test certificate with losses below 1953 Watts at 50% load, 5565 Watts at 100% load as per IS: 1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1437404.85
		Note :- 1) For indoor type transformer add Rs. 15000/- in overall rate of transformer.	0.00
		2) For use of transformer with aluminium winding for 63/100/200 kVA capacity. (To be used only for Licensee Job), rates shall be reduced by 35 % from the material rates for Transformer with copper winding.)	0.00
		3) For item No. 10-1-1 & 10-1-2 reduce the material rate by 5% for transformer without off Load Tap Changer.	0.00
Job	10-1-18	Inspection of faulty distribution transformer 11kV / 22kV on HV side, 415 V on LV side upto 500 kVA capacity in workshop in presence of authority by opening top cover, disconnecting HV & LV studs, tap changer connections; taking out core along with winding for inspection and carrying out necessary tests on HV, LV side, oil, tap-changer etc. checking breather, body condition etc. and submitting inspection report, test reports (oil, insulation, resistance, ratio,etc.) and quotation for repairs complete.	3916.50
		Note :- When a transformer is required in lieu of faulty transformer, refer chapter no. 14 (14-Temporary Illumination). Transportation, erection, testing etc are to be considered separately.	0.00
Each	10-1-19	Supplying, installing, testing & commissioning single phase, 11 kV/ V3/ 250V, 15 kVA, oil cooled with CSP features outdoor type, aluminium wound transformer, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating,with 5 % continuously rated for full load with standard accessories complete with test certificate with losses should be below 82 Watts at 50% load & 224 Watts at 100 % load & first filling of oil having vector group- DYN-11 & first filling of silica gel, as per IS:1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	96596.85
Each	10-1-20	Supplying, installing, testing & commissioning single phase, 11 kV/ V3/ 250V, 25 kVA, oil cooled with CSP Features outdoor type, aluminium wound transformer, temperature rise should not exceed 40oC by thermometer in oil and 45oC by the resistance in winding at full load rating, with 5 % continuously rated for full load with standard accessories complete with test certificate with losses should be below 110 Watts at 50% load & 300 Watts at 100 % load & first filling of oil having vector group- DYN-11 & first filling of silica gel, as per IS:1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	117082.35

Each	10-1-21	Supplying, installing, testing & commissioning compact substation with 3 phase, 11/ 0.433 kV, 50 Hz., 63 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate, losses below 340 Watts at 50% load, 1140 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II with necessary permissions of Electrical Inspector, as per specification no SS- TR.	793095.45
Each	10-1-22	Supplying, installing, testing & commissioning compact substation with 3 phase, 11/ 0.433 kV, 50 Hz., 100 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 475 Watts at 50% load, 1650 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector as per specification no SS- TR	884201.85
Each	10-1-23	Supplying, installing, testing & commissioning compact substation with 3 phase, 11/0.433 kV, 50 Hz., 160 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 670 Watts at 50% load, 1950 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1059401.70
Each	10-1-24	Supplying, installing, testing & commissioning compact substation with 3 phase, 11/0.433 kV, 50 Hz., 200 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 780 Watts at 50% load, 2300 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1221207.75
Each	10-1-25	Supplying, installing, testing & commissioning compact substation with 3 phase, 11/0.433 kV, 50 Hz., 250 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 980 Watts at 50% load, 2930 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1289676.15
Each	10-1-26	Supplying, installing, testing & commissioning compact substation with 3 phase, 11/0.433 kV, 50 Hz., 315 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (Incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 1025 Watts at 50% load, 3100 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1506732.15

Each	10-1-27	Supplying, installing, testing & commissioning compact substation with 3 phase, 11/0.433 kV, 50 Hz., 500 kVA, Oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 1510 Watts at 50% load, 4300 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspectors per specification no SS- TR.	1992730.95
Each	10-1-28	Supplying, installing, testing & commissioning compact substation with 3 phase, 11/0.433, 50 Hz., 630 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 1860 Watts at 50% load, 5300 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspectors per specification no SS- TR.	2247238.35
Each	10-1-29	Supplying, installing, testing & commissioning compact substation with 3 phase, 22/0.433 kV, 50 Hz., 63 kVA, Oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 357 Watts at 50% load, 1197 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	892585.05
Each	10-1-30	Supplying, installing, testing & commissioning compact substation with 3 phase, 22/0.433 kV, 50 Hz., 100 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 499 Watts at 50% load, 1733 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1012830.00
Each	10-1-31	Supplying, installing, testing & commissioning compact substation with 3 phase, 22/0.433 kV, 50 Hz., 160 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 704 Watts at 50% load, 2048 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1179974.25
Each	10-1-32	Supplying, installing, testing & commissioning compact substation with ,3 phase, 22/0.433 kV, 50 Hz., 200 kVA oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity , with inbuilt metering cubical, standard accessories complete with test certificate with losses below 819 Watts at 50% load, 2415 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1331499.75

Each	10-1-33	Supplying, installing, testing & commissioning compact substation with 3 phase, 22/0.433 kV, 50 Hz., 250 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity, with inbuilt metering cubical, standard accessories complete with test certificate with losses below 1029 Watts at 50% load, 3077 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1445724.00
Each	10-1-34	Supplying, installing, testing & commissioning compact substation with 3 phase, 22/0.433 kV, 50 Hz., 315 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity, with inbuilt metering cubical, standard accessories complete with test certificate with losses below 1077 Watts at 50% load, 3255 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	1658625.15
Each	10-1-35	Supplying, installing, testing & commissioning compact substation with 3 phase, 22/0.433 kV, 50 Hz., 500 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity, with inbuilt metering cubical, standard accessories complete with test certificate with losses below 1586 Watts at 50% load, 4515 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	2218853.70
Each	10-1-36	Supplying, installing, testing & commissioning compact substation with 3 phase, 22/0.433 kV, 50 Hz., 630 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switch of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity, with inbuilt metering cubical, standard accessories complete with test certificate with losses below 1953 Watts at 50% load, 5565 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR.	2501369.85
		Note :- For compact substation without metering cubicle deduct Rs. 30000/- from material cost.	0.00
Each	10-1-37	Supplying, installation, testing and commissioning 3 phase, 11/0.433 kV, 50 Hz., 315 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin transformer, copper wound, Dyn11 vector group, delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temperature rise of winding (at principal tap) 115oC at ambient temp max 50oC and min -50oC at full load rating, with tapping (off circuit tap links type tap changer), for off load +5 to - 5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage and frequency (+15% IS tol) 1 kW, full load loss at rated current 3.15 kW, with 98.70% efficiency at full load & 98.88 % at 1/2 full load, with 75 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 21 degree of protection, cable box arrangement at HV side and busduct at LV side, with rating and diagram plate, base channel, earthing terminals and WTI scanner with 3 PT-100 sensors, etc, standard accessories complete with test certificates (as per IS:11171 & IS 2026) with necessary permissions of Electrical Inspector as per specification no SS- TR.	732420.15

Each	10-1-38	<p>Supplying, installation, testing and commissioning 3 phase, 11/0.433 kV, 50 Hz., 400 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin transformer, copper wound, Dyn11 vector group, delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at principal tap) 115°C at ambient temp max 50°C & min -5°C at full load rating, with tapping (with off circuit tap links type tap changer) for off load +5 to -5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 1.15 kW, full load loss at rated current 3.60 kW, with 98.83% efficiency at full load & 98.99% at 1/2 full load, with 75 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 21 degree of protection, cable box arrangement at HV side & bus duct at LV side, with rating & diagram plate, base channel, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with test certificate (as per IS:11171 & IS 2026) with necessary permissions of Electrical Inspector, as per specification no SS- TR.</p>	816252.15
Each	10-1-39	<p>Supplying, installation, testing and commissioning 3 phase, 11/0.433 kV, 50 Hz., 400 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin transformer, copper wound, Dyn11 vector group, delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at principal tap) 115°C at ambient temp max 50°C & min -5°C at full load rating, with tapping (with off circuit tap links type tap changer) for off load +5 to -5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 1.15 kW, full load loss at rated current 3.60 kW, with 98.83% efficiency at full load & 98.99% at 1/2 full load, with 75 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 21 degree of protection, cable box arrangement at HV side & bus duct at LV side, with rating & diagram plate, base channel, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with test certificate (as per IS:11171 & IS 2026) with necessary permissions of Electrical Inspector, as per specification no SS- TR.</p>	894912.90
Each	10-1-40	<p>Supplying, installation, testing and commissioning 3 phase, 11/0.433 kV, 50 Hz., 630 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin transformer, copper wound, Dyn11 vector group, delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at principal tap) 115°C at ambient temp max 50°C & min -5°C at full load rating, with Tapping (with off circuit tap links type tap changer) for off load +5 to -5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 1.60 kW, full load loss at rated current 5.00 kW, with 98.96% efficiency at full load & 99.10% at 1/2 full load, with 75 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 21 degree of protection, cable box arrangement at HV side & busduct at LV side, with rating & diagram plate, base channel, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with test certificate (as per IS:11171 & IS 2026) with necessary permissions of Electrical Inspector, as per specification no. SS- TR.</p>	1040048.10

Each	10-1-41	<p>Supplying, installation, testing and commissioning 3 phase, 11/0.433 kV, 50 Hz., 750 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin transformer, copper wound, Dyn11 vector group, with delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at principal tap) 115°C at ambient temp max 50°C & Min -5°C at full load rating, with Tapping (with off circuit tap links type tap changer) for off load +5 to - 5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 1.90 kW, full load loss at rated current 6.75 kW, with 98.86 % efficiency at full load & 99.05 % at 1/2 full load, with 75 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 21 degree of protection, cable box arrangement at HV side & bus duct at LV side, with rating & diagram plate, base channel, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with necessary permissions of Electrical Inspector test certificate (as per IS:11171 & IS 2026) with necessary permissions of Electrical Inspectors per specification no. SS- TR.</p>	1096549.65
Each	10-1-42	<p>Supplying, installation, testing and commissioning 3 phase, 11/0.433 kV, 50 Hz., 1000 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin transformer, copper wound, Dyn11 vector group, delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at Principal Tap) 115°C at ambient temp max 50°C & min -5°C at full load rating, with tapping (with off circuit tap links type tap changer) for off load +5 to - 5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 2.20 KW, full load loss at rated current 9.25 kW, with 98.87 % efficiency at full load & 99.11 % at 1/2 full load, with 75 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 21 Degree of protection, cable box arrangement at HV side & bus duct at LV side, with rating & diagram plate, base channel, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with test certificate (as per IS:11171 & IS 2026) with necessary permissions of Electrical Inspector as per specification no. SS- TR.</p>	1319977.05
Each	10-1-43	<p>Supplying, installation, testing and commissioning 3 phase, 22/0.433 kV, 50 Hz., 315 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin Transformer, copper wound, Dyn11 vector group, delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at Principal Tap) 115°C at ambient temp max 50°C & Min -5°C at full load rating, with Tapping (with off circuit bolted links type tap changer) for off load +5 to - 5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 1.80 kW, full load loss at rated current 3.00 kW, with 98.50 % efficiency at full load & 98.41 % at 1/2 full load, with 125 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 23 degree of protection, cable box arrangement at HV side & busduct at LV side, with rating & diagram plate, base channel, lifting lugs, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with test certificate (as per IS:11171 & IEC 60076-11) with necessary permissions of Electrical Inspector, as per specification no. SS- TR.</p>	1375371.90

- Each 10-1-44 Supplying, installation, testing and commissioning 3 phase, 22/0.433 kV, 50 Hz., 400 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin Transformer, copper wound, Dyn11 vector group, delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at principal tap) 115°C at ambient temp max 50°C & min -5°C at full load rating, with Tapping (with off circuit bolted links type tap changer) for off load +5 to -5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 2.00 kW, full load loss at rated current 3.60 kW, with 98.62 % efficiency at full load & 98.57 % at 1/2 full load, with 125 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 23 Degree of protection, cable box arrangement at HV side & bus duct at LV side, with rating & diagram plate, base channel, lifting lugs, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with test certificate (as per IS:11171 & IEC 60076-11) with necessary permissions of Electrical Inspector, as per specification no. SS- TR. 1403439.45
- Each 10-1-45 Supplying, installation, testing and commissioning 3 phase, 22/0.433 kV, 50 Hz., 500 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin Transformer, copper wound, Dyn11 vector group, with delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at Principal Tap) 115°C at ambient temp max 50°C & min -5°C at full load rating, with tapping (with off circuit bolted links type tap changer) for off load +5 to -5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 2.20 kW, Full load loss at rated current 4.50 kW, with 98.68 % efficiency at full load & 98.69 % at 1/2 full load, with 125 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 23 degree of protection, cable box arrangement at HV side & bus duct at LV side, with rating & diagram plate, base channel, lifting lugs, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with test certificate (as per IS:11171 & IEC 60076-11) with necessary permissions of Electrical Inspector, as per specification no. SS- TR. 1442585.55
- Each 10-1-46 Supplying, installation, testing and commissioning 3 phase, 22/0.433 kV, 50 Hz., 630 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin Transformer, copper wound, Dyn11 vector group, delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at Principal Tap) 115°C at ambient temp max 50°C & Min -5°C at full load rating, with tapping (with off circuit bolted links type tap changer) for off load +5 to -5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 2.50 kW, full load loss at rated current 5.50 kW, with 98.75 % efficiency at full load & 98.78 % at 1/2 full load, with 125 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 23 Degree of protection, cable box arrangement at HV side & busduct at LV side, with rating & diagram plate, base channel, lifting lugs, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with test certificate (as per IS:11171 & IEC 60076-11) with necessary permissions of Electrical Inspector, as per specification no. SS- TR. 1487638.95

Each	10-1-47	<p>Supplying, installation, testing and commissioning 3 phase, 22/0.433 kV, 50 Hz., 750 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin Transformer, copper wound, Dyn11 vector group, delta/star connection with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at principal tap) 115°C at ambient temp max 50°C & min -5°C at full load rating, with tapping (with off circuit bolted links type tap changer) for off load +5 to -5% @ 2.5% in +2/-2 steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 2.60 kW, full load loss at rated current 7.00 kW, with 98.74 % efficiency at full load & 98.85 % at 1/2 full load, with 125 kV peak full wave lightning impulse withstand voltage with complete enclosure having IP 23 degree of protection, cable box arrangement at HV side & bus duct at LV side, with rating & diagram plate, base channel, lifting lugs, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with test certificate (as per IS:11171 & IEC 60076-11) with necessary permissions of Electrical Inspector, as per specification no. SS- TR.</p>	1537679.85
Each	10-1-48	<p>Supplying, installation, testing and commissioning 3 phase, 22/0.433 kV, 50 Hz., 1000 kVA, indoor type, vacuum cast coil (VCC) dry type cast resin transformer, copper wound, Dyn11 vector group, with delta connection on HV side & star connection on LV side with additional neutral brought out on load side, for indoor use continuous duty, average temp rise of winding (at principal tap) 115°C at ambient temp max 50°C & Min -5°C at full load rating, with tapping (with off circuit bolted links type tap changer) for off load +5 to -5% @ 2.5% in +2/-2 Steps, HV variation, class of insulation H/H, method of cooling AN, no load loss at rated voltage & frequency (+15% IS Tol) 3.20 kW, full load loss at rated current 9.30 kW, with 98.77 % efficiency at full load & 98.91 % at 1/2 full load, with 125 KV peak full wave lightning impulse withstand voltage with complete enclosure having IP 23 degree of protection, cable box arrangement at HV side & bus duct at LV side, with rating & diagram plate, base channel, lifting lugs, earthing terminals & WTI scanner with 3 PT-100 sensors, etc. standard accessories complete with test certificate (as per IS:11171 & IEC 60076-11) with necessary permissions of Electrical Inspector, as per specification no. SS- TR.</p>	1672473.60
Each	10-1-49	<p>Supplying and erecting compact substation with 100 kVA, 3 phase, 50 Hz. ONAN type thermal class K10, 21kA for 3 Sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no direct cable module and one no. fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. interconnection between HT switchgear and transformer shall be using 1Cx3x95 sq.mm aluminium unarmoured XLPE cable. copper wound transformer 100 kVA 11 kV/ 433V Dyn11 oil filled, indoor type transformer bushings, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with Off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-200 amps aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoing 200 A 433V 4P 50Hz 35kA ICOG fixed manual type moulded case circuit breaker (MCCB) with microprocessor based release for overload, short circuit & earth fault protection., multifunctional meter with class 1.0 accuracy with RS 485 port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer</p>	1583473.50

Each	10-1-50	Supplying and Erecting approved make compact substation with 200 kVA, 3 phase, 50 Hz. ONAN type thermal class K10, 21kA for 3 Sec. SF6 insulated non-extensible compact switchgear (Type DV-NE) consisting of one no direct cable module and one no fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + inst.) protection. interconnection between HT switchgear and transformer shall be using 1Cx3x120 sq.mm aluminium unarmorured XLPE cable. copper wound transformer 200 kVA 11 kV/ 433V Dyn11 oil filled, indoor type transformer bushings, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2 - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-315 amps aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoings 315 A 433V 4P 50Hz 35 kA ICOG fixed manual type moulded case circuit breaker (MCCB) with microprocessor based release for overload , short circuit & earth fault protection., multifunctional meter with class 1.0 accuracy with RS 485 Port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer compartment powder /colour coated enclosure with interconnection between HT	1757043.75
Each	10-1-51	Supplying and Erecting approved make compact substation with 315 kVA, 3 phase, 50 Hz., ONAN type, thermal class K10, 21kA for 3 Sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no direct cable module and one no fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. interconnection between HT switchgear and transformer shall be using 1Cx3x150 sq.mm aluminium unarmorured XLPE cable. copper wound transformer 315 kVA 11 kV/433V Dyn11 oil filled, indoor type transformer bushings, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%.temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2 - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-500 amps aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoings 500 A 433V 4P 50Hz 35 kA ICOG fixed manual type moulded case circuit breaker (MCCB) with microprocessor based release for overload , short circuit & earth fault protection., multifunctional meter with class 1.0 accuracy with RS 485 port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer compartment powder /colour coated enclosure with interconnection between HT	1860448.80
Each	10-1-52	Supplying and Erecting approved make compact substation with 400 kVA, 3 phase, 50 Hz., ONAN type thermal class K10, 21kA for 3 sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no direct cable module and one no fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. interconnection between HT switchgear and transformer shall be using 1Cx3x150 sq.mm aluminium unarmorured XLPE cable. copper wound transformer 400 kVA 11 kV/433V DYn11 oil filled, indoor type transformer bushings, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-630 amps aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoings 630 A 433V 4P 50Hz 35kA ICOG, fixed manual type air circuit breaker (ACB) with microprocessor based release for overload , short circuit & earth fault protection., multifunctional meter with class 1.0 accuracy with RS 485 Port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer compartment powder /colour coated enclosure with interconnection between HT	1984164.00

Each	10-1-53	Supplying and Erecting approved make compact substation with 500 kVA, 3 phase, 50 Hz. ONAN type thermal class K10, 21 kA for 3 sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no direct cable module and one no fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. interconnection between HT switchgear and transformer shall be using 1Cx3x150 sq.mm aluminium XLPE cable. Copper wound transformer 500 kVA 11 kV/ 433V DYn11 oil filled, indoor type transformer bushings, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-800 amps aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoing 800 A 433V 4P 50Hz 35 kA ICOG, fixed manual type air circuit breaker (ACB) with microprocessor based release for overload , short circuit & earth fault protection., multifunctional meter with class 1.0Accuracy with RS 485 Port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer compartment, powder /colour coated enclosure with interconnection between HT switchgear & transformer using	2099570.55
Each	10-1-54	Supplying and Erecting approved make Compact Substation with 630 kVA, 3 phase, 50 Hz., ONAN type thermal class 10, 21kA for 3 Sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no direct cable module and one no fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. Interconnection between HT switchgear and transformer shall be using 1Cx3x185 sq.mm aluminium unarmorured XLPE cable. copper wound transformer 630kVA 11kV/ 433V DYn11 oil filled, indoor type transformer bushings, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp Rise - oil/winding 40/45°C losses (subject to IS 1180 Energy Efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-1000 amps aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoing 1000 A 433V 4P 50Hz 50 kA ICOG fixed manual type air circuit breaker (ACB) with microprocessor based release for overload , short circuit & earth fault protection, multifunctional meter with class 1.0 accuracy with RS 485 port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer compartment powder /colour coated enclosure with interconnection between HT	2264832.15
Each	10-1-55	Supplying and Erecting approved make compact substation with 1000 kVA, 3 phase, 50 Hz., ONAN type thermal class K10, 21kA for 3 Sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no direct cable module and cne no fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. Interconnection between HT switchgear and transformer shall be using 1Cx3x200 sq.mm aluminium unarmorured XLPE cable. copper wound transformer 1000 kVA 11 kV/ 433V Dyn11 oil filled, indoor type transformer bushings, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-1600 amps aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sq.mm.) with outgoing 1600 A 433V 4P 50Hz 50kA ICOG fixed manual type air circuit breaker (ACB) with microprocessor based release for overload , short circuit & earth Fault protection, multifunctional meter with class 1.0 accuracy with RS 485 port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer compartment powder /colour coated enclosure with interconnection between HT	2506723.80

Each	10-1-56	Supplying and Erecting approved make compact substation with 200 kVA, 3 phase, 50 Hz., ONAN type thermal class K10, 21 kA for 3 Sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no. direct cable module and one no. fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. Interconnection between HT switchgear and transformer shall be using 1Cx3x120 sq.mm aluminium unarmoured XLPE cable. copper wound transformer 200KVA 22 KV/433V Dyn11 oil filled, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-315 A aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoing 315 A 433V 4P 50 Hz 35 kA ICOG fixed manual type moulded case circuit breaker (MCCB) with microprocessor based release for overload , short circuit & earth Fault protection., multifunctional meter with class 1.0 accuracy with RS 485 port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer compartment, powder /colour coated enclosure with interconnection between HT switchgear & transformer using	1817978.40
Each	10-1-57	Supplying and Erecting approved make compact substation with 315 kVA, 3 phase, 50 Hz., ONAN type thermal class K10, 21 kA for 3 Sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no. direct cable module and one no. fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. Interconnection between HT switchgear and transformer shall be using 1Cx3x150 sq.mm aluminium unarmoured XLPE Cable. copper wound transformer 315 KVA 22 KV/433V Dyn11 oil filled, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-500 amps aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoing 500 A 433V 4P 50 Hz 35 kA ICOG fixed manual type moulded case circuit breaker (MCCB) with microprocessor based release for overload , short circuit & earth Fault protection, multifunctional meter with class 1.0 accuracy with RS 485 port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer compartment, powder / colour coated enclosure with interconnection between HT switchgear &	2007246.15
Each	10-1-58	Supplying and Erecting approved make compact substation with 400 kVA, 3 phase, 50 Hz., ONAN type thermal class K10, 21kA for 3 Sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no. direct cable module and one no. fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. Interconnection between HT switchgear and transformer shall be using 1Cx3x150 sq.mm aluminium unarmoured XLPE cable. Copper wound transformer 400 kVA 22 kV/433V Dyn11 oil filled, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel;-630 A aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoing 630 A 433V 4P 50 Hz 35kA ICOG, fixed manual Type air circuit breaker (ACB) with microprocessor based release for overload , short circuit & earth fault protection., multifunctional meter with class 1.0 accuracy with RS 485 port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer compartment, powder /colour coated enclosure with interconnection between HT switchgear & transformer using	2150349.60

Each	10-1-59	Supplying and Erecting compact substation with 500 kVA, 3 phase, 50 Hz., ONAN type thermal class K10, 21kA for 3 Sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no. direct cable module and one no. fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. Interconnection between HT switchgear and transformer shall be using 1Cx3x150 sq.mm aluminium unarmorured XLPE cable. Copper wound transformer 500 kVA 22 kV/433V Dyn11 oil filled, indoor type transformer bushings, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel;-800 A aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with Outgoings 800 A 433V 4P 50 Hz 35 kA ICOG, fixed manual type air circuit breaker (ACB) with microprocessor based release for overload , short circuit & earth fault protection., multifunctional meter with class 1.0 accuracy with RS 485 port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for Transformer compartment powder /colour coated enclosure with interconnection between HT	2265756.15
Each	10-1-60	Supplying and Erecting approved make compact substation with 630 kVA, 3 phase, 50 Hz., ONAN type thermal class K10, 21 kA for 3 Sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no. direct cable module and one no. fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. Interconnection between HT switchgear and transformer shall be using 1Cx3x185 sq.mm aluminium unarmorured XLPE cable. Copper wound transformer 630kVA 22 kV/433V Dyn11 oil filled, indoor type transformer bushings, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/winding 40/45°C losses (subject to IS 1180 energy efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-1000 amps aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoing 1000 A 433V 4P 50 Hz 50 kA, ICOG, fixed manual type air circuit breaker (ACB) with microprocessor based release for overload , short circuit & earth fault protection., multifunctional meter with class 1.0 accuracy with RS 485 port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for Transformer compartment powder /colour coated enclosure with interconnection between HT	2480872.80
Each	10-1-61	Supplying and Erecting approved make compact substation with 1000 kVA, 3 phase, 50 Hz. ONAN type thermal class K10, 21kA for 3 Sec. SF6 insulated non-extensible compact switchgear (type DV-NE/ RT2-NE) consisting of one no direct cable module and one no fixed manual vacuum circuit breaker in SF6 insulated stainless steel enclosure, with series trip, self powered microprocessor based numerical over current relay (IDMTL + Inst.) protection. Interconnection between HT switchgear and transformer shall be using 1Cx3x200 sq.mm aluminium unarmorured XLPE cable. copper wound transformer 1000KVA 22KV/433V Dyn11 oil filled, indoor type transformer bushings, hermetically sealed transformer with corrugated wall, without conservator type of design & top normal porcelain bushings for HT & LT with off load tap switch of rating +5% to -10% @2.5%. temp rise - oil/Winding 40/45°C losses (subject to IS 1180 energy efficiency level 2) - max @ 50% loading : as per IS 1180 and max @ 100% loading : as per IS 1180 and impedance as per IS 1180 with LV panel-1600amps aluminium busbar (100% for phase and 50% for neutral, current density - 1 amp/sqmm) with outgoing 1600 A 433V 4P 50 Hz 50 kA ICOG fixed manual type air circuit breaker (ACB) with microprocessor based release for overload , short circuit & earth Fault protection, multifunctional meter with class 1.0 accuracy with RS 485 port, RYB, ON/OFF trip indications, outdoor enclosure having IP54 IP54 degree of protection for HT & LT switchgear compartment & IP23 degree of protection for transformer compartment powder /colour coated enclosure with interconnection between HT	2750462.40
		<u>10.2 Accessories</u>	0.00

Set	10-2-1	Supplying and erecting approved make 11 kV outdoor type gang operated air break, triple pole switch 200 A capacity with 3 post pin type insulator per phase, mounted in horizontal or vertical position with necessary channels on provided cross arm with adequate length of "C" class G.I. pipe for operating handle erected on extended square shaft. The operating handle provided with lock and key at suitable height from ground level with necessary clamp.	9042.60
Set	10-2-2	Supplying and erecting approved make 11 kV outdoor type gang operated air break, triple pole switch 400 A capacity with 3 post pin type insulator per phase, mounted in horizontal or vertical position with necessary channels on provided cross arm with adequate length of "C" class G.I. pipe for operating handle erected on extended square shaft. The operating handle provided with lock and key at suitable height from ground level with necessary clamp.	13958.70
Set	10-2-3	Supplying and erecting approved make 22 kV outdoor type gang operated air break, triple pole switch 200 A capacity with 3 post pin type insulator per phase, mounted in horizontal or vertical position with necessary channels on provided cross arm with adequate length of "C" class G.I. pipe for operating handle erected on extended square shaft. The operating handle provided with lock and key at suitable height from ground level with necessary clamp.	16380.00
Set	10-2-4	Supplying and erecting approved make 33 kV outdoor type gang operated air break, triple pole switch 200 A capacity with 3 post pin type insulator double stack per phase, mounted in horizontal position with necessary channels on provided cross arm with adequate length of "C" class G.I. pipe for operating handle erected on extended square shaft. The operating handle provided with lock and key at suitable height from ground level with necessary clamp.	34247.85
Set	10-2-5	Supplying and erecting approved make, 11 kV outdoor type drop out fuse with insulator complete with fuse holders, fuse barrel with metal fitting, fuse element mounted on M.S. channel with working current of 15A capacity complete erected on provided cross arm.	5594.40
Set	10-2-6	Supplying and erecting approved make, 22 kV outdoor type drop out fuse with insulator complete with fuse holders, fuse barrel with metal fitting, fuse element mounted on M.S. channel with working current of 15A capacity complete erected on provided cross arm.	9178.05
Set	10-2-7	Supplying and erecting approved make, 33 kV outdoor type drop out fuse with insulator complete with fuse holders, fuse barrel with metal fitting, fuse element mounted on M.S. channel with working current of 15A capacity complete erected on provided cross arm.	15764.70
Each	10-2-8	Supplying and erecting 11 kV fuse barrel with metal fittings complete.	384.30
Each	10-2-9	Supplying and erecting 22 kV fuse barrel with metal fittings complete.	609.00
kg	10-2-10	Supplying and erecting hard drawn copper solid wire no. 0 to 6 SWG complete erected for connections on H.T. sides.	951.30
m	10-2-11	Supplying and erecting extra thick alkathene pipe 10 mm dia. erected to enclose bare conductor wires complete.. (use shall be restricted to H.T.)	48.30

Each	10-2-12	Supplying operating rod, suitable for 11/22 kV supply with clamps for removing drop out fuses at 6 meters length, 4 pieces each with rain shade with hand grip including earthing chain 1.5 m complete.(Light duty)	3710.70
Each	10-2-13	Supplying heavy duty operating rod, outer dia 25 mm & inner dia 20 mm suitable for 11 kV with brass couplings etc for removing drop out fuses at 6 meters length, 4 pieces each with rain shade with hand grip including earthing chain 1.5 m complete.	4099.20
Each	10-2-14	Supplying heavy duty operating rod, outer dia 25 mm & inner dia 20 mm suitable for 22/33 kV with brass couplings etc for removing drop out fuses at 6 m length, 4 pieces each with rain shade with hand grip including earthing chain 1.5 m complete.	4834.20
m	10-2-15	Supplying and erecting copper tubular bus 20 mm dia 1.6 mm (16 SWG) thick for the use of high tension over head bus and erected on provided HT insulators with clamps, nuts and bolts complete. (weight per meter of bus is about 1.7 kg.	1643.25
Each	10-2-16	Supplying and erecting clamps, made out of 25x3 mm, copper strips to be fixed to tubular bus for connecting the bare copper wire to other equipment, with brass nuts bolts of suitable dia complete.	215.25
Each	10-2-17	Supplying and erecting ant climbing devices, fabricated from pole clamps of MS flat 40x5 mm, with drooping spikes 15 cm. in length, welded to it and erected on pole complete.	168.00
Each	10-2-18	Supplying and erecting fencing of section having size 2450 mm in height from ground level and 1200 mm width with angle iron frame work erected in CC foundation and painted complete as per specification no SS-AS/FSG	5639.55
		Note:- For section less than 1200 mm width, reduce rate by Rs 200/- per 100 mm or part thereof for reduction in width of 1200 mm.	0.00
Each	10-2-19	Supplying and erecting 50 x 50 x 6 mm angle iron as corner support 2m long fixed at the middle of the fencing frame and the other side inclined at 30 degree angle, in cement concrete foundation of 15 x 15 x 40 cm complete duly painted with one coat of red oxide and two coats aluminum paint complete.	1127.70
Each	10-2-20	Supplying and erecting double leaf hinged door each 1500 mm in width x 1850 mm in height using B class, GI pipe with angle iron supports, chain link wire mesh (jali) complete supported on channel iron, erected in foundation, and painted complete as per specification no SS-AS/DLD	16155.30
kg	10-2-21	Supplying & erecting barbed wire two ply with 12 SWG ply and 12 SWG barb with a gap between two bars of 75 mm. firmly fixed on provided angle supports with necessary materials complete. (6.044 meters/kg.).	111.30
Each	10-2-22	Providing printed instruction chart for treating persons suffering from electric shock, printed in English & Marathi and duly laminated complete.	121.80
Each	10-2-23	Providing pair of duly tested rubber hand gloves as per IS :47705 suitable for working upto 22 kV supply complete.	588.00
Each	10-2-24	Providing Round bottom fire bucket of 9 Litres capacity as per IS : 2546 made out of 24 gauge G.I. sheet with extra handle at bottom duly painted white inside and red outside with FIRE Mark, on provided stand/ wall hook complete.	454.65
Each	10-2-25	Providing Floor mounting stand for keeping 4 Nos. of FIRE buckets 1500mm in length, 900mm in height frame made out of 30x30x4 mm angle iron with cross supports for legs, welded with 4 hooks and duly painted with one coat of red lead and two coats of silver paint complete.	3516.45
Each	10-2-26	Supplying and erecting wall hook 225mm projection for keeping fire buckets made out of 15 mm dia. M.S. Rod grouted in wall to a depth of minimum 15cms complete.	82.95

Each	10-2-27	Supplying standard first aid box with necessary antiseptic cream, medicine for use on wounds due burn, crepe bandage, gauge bandage, medicated ready to use bandage (Band-Aid) adhesive tape for medicinal use, scissors, anti-septic solution, etc. (All above contents shall be of standard makes)	730.80
m ²	10-2-28	Supplying and fixing PVC synthetic elastomer electrically insulating mat with class A insulation conforming to IS: 15652 – 2006 & CPRI tested having 2 mm thickness upto 3.3 kV	4517.10
m ²	10-2-29	Supplying and fixing PVC synthetic elastomer electrically insulating mat with class B insulation conforming to IS: 15652 – 2006 & CPRI tested having 2.5 mm thickness upto 11 kV	4880.40
m ²	10-2-30	Supplying and fixing PVC synthetic elastomer electrically insulating mat with class C insulation conforming to IS: 15652 – 2006 & CPRI tested having 3mm thickness upto 33 kV	6569.85
Per pair	10-2-31	Supplying shock proof leather safety shoes of electrical grade of standard size as IS :11226, 14544 duly tested, with necessary test certificate from manufacturer.	1722.00
Each	10-2-32	Supplying and erecting D.C.P. type fire extinguisher 6 kg capacity cartridge type with gun metal cap 150 gram CO2 gas cartridge, powder and brackets conforming to IS 2171-1985/ IS 15683 and complete erected with necessary clamps made from 50x6 mm M.S. flat with nuts & bolts grouted in wall complete.	3363.15
Each	10-2-33	Supplying and erecting D.C.P. type fire extinguisher 9 kg capacity cartridge type with Gun Metal cap 150 gram CO2 gas cartridge, powder and brackets conforming to IS 2171-1985 and complete erected with necessary clamps made from 50x6 mm M.S. flat with nuts & bolts grouted in wall complete.	3823.05
Each	10-2-34	Supplying & erecting Carbon Dioxide (CO₂) fire extinguisher of 4.5 kg. capacity cartridge type conform to IS 2878 /15683 complete erected with necessary clamp made from 50 x 6 mm. M. S. flat with nut & bolts grouted in wall complete.	8986.95
Each	10-2-35	Supplying and erecting ABC powder type fire extinguisher as per IS : 13849/15683 of 1 kg capacity with necessary clamp for erection on wall.	2215.50
Each	10-2-36	Supplying and erecting ABC powder type fire extinguisher as per IS : 13849 /15683 of 6 kg capacity with necessary clamp for erection on wall.	3530.10
Each	10-2-37	Supplying SMC chequered plates, hot press moulded from advanced composites of plastics namely sheet moulding compound of thickness 2.5 mm with insulation level upto 22 kV and fixing it to substation floor with SR-998 adhesive along with 5 mm thick E.P. foam complete.	4635.75
Each	10-2-38	Supplying SMC chequered plates, hot press moulded from advanced composites of plastics namely sheet moulding compound of thickness 5 mm with insulation level suitable for 33 kV and fixing it to substation floor with SR-998 adhesive along with 5 mm thick E.P. foam complete.	9085.65
Kg	10-2-39	Refilling of fire extinguisher of DCP type by dismantling from site to workshop for refilling which includes removing of existing powder and cleaning the cylinder, delivery pipe, nozzle internally and refilling new powder complete with reinstalling properly at site with necessary certificate.	224.70
Kg	10-2-40	Refilling of fire extinguisher of ABC type by dismantling from site to workshop for refilling which includes removing of existing powder and cleaning the cylinder, delivery pipe, nozzle internally and refilling new powder complete with reinstalling properly at site with necessary certificate.	257.25

Kg	10-2-41	Refilling of fire extinguisher of CO2 type by dismantling from site to workshop for refilling which includes removing of existing powder and cleaning the cylinder, delivery pipe , nozzle internally and refilling new powder complete with reinstalling properly at site with necessary certificate.	185.85
Per km	10-2-42	Transportation of 11/22 kV transformer upto 315 kVA without loading & unloading (for handing over to section store/ repair works only)	24.15
Per km	10-2-43	Transportation of 11/22 kV transformer above 315 kVA to 1000 kVA without loading & unloading (for handing over to section store/ repair works only)	33.60
<u>10.3 Dismantling</u>			0.00
kVA	10-3-1	Dismantling the existing distribution transformer of any capacity from the plinth / foundation safely without any damages.	29.40
kVA	10-3-2	Dismantling existing pole mounted distribution transformer safely without any damages.	42.00
set	10-3-3	Dismantling existing DO / AB switch set complete from D.P. structure in an approved manner.	347.55
	Note:-	The rate for item no 10.3.3 are for dismantling and handing over to section office inclusive of transportation upto 25 km, between site and section office.	0.00
			0.00
Above items are conforming to relevant IS as mentioned below			0.00
IS 1180 (Part 2): 2016 :-Outdoor type three-phase distribution transformers up to and including 100 kVA 11 kV, Part 2: Sealed type			0.00
IS 2026 (Part 1): 2011 :-Power transformers, Part 1: General			0.00
IS 2026 (Part 2): 2010 :- Power transformers, Part 2: Temperature-rise			0.00
IS 2026 (Part 3): 2009 :- Power Transformers Part - 3 Insulation Levels, Dielectric Tests and External Clearances in Air			0.00
IS 2026 (Part 4): 1977 :- Power transformers, Part 4: Terminal marking, tappings and connections			0.00
IS 2026 (Part 5): 2011 :- Power Transformers, Part 5: Ability to Withstand Short Circuit			0.00
IS 2026 (Part 7): 2009 :- Power Transformers, Part 7: Loading Guide for Oil-Immersed Power Transformers			0.00
IS 2026 (Part 8): 2009 :- Power Transformers, Part 8: Applications guide			0.00
			0.00
			0.00
			0
			0
Chapter :			0
11			0
<u>Generators (GEN)</u>			<u>0</u>
(GEN-GEN)	11.1	Generators	0
(GEN-AMF)	11.2	Auto Mains Failure Panels (AMF Panels)	0
	11.3	Servicing of DG Set	0
	11.4	Dismantling	0
			0
			0
			0
Chapter 11 : Generators (GEN)			0
			0

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0</i>
-3	-1	-2	0
<u>11.1 Generators (GEN-GEN)</u>			0
Each	11-1-1	Supplying, erecting and commissioning of diesel generating set with standard control Panel with alternator of 5 kVA output continuous rating, single phase, 230V 50c/s 0.8 p. f. A.C a totally enclosed air / liquid cooled multi cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 % .Both the engine and alternator direct coupled on a common fabricated steel base plate with anti-vibrating pad with control panel comprising of standard meters, switchgears, indicators connected with suitable wires/cables. The complete set enclosed in acoustic enclosure made of 18 SWG CRCA Sheet, sound absorbing material, Rockwool covered from inside with ¾ mm holes perforated sheet to restrict sound level upto 75 dB at 1.0 m. The engine with first filling of oil, diesel etc. as per specification no. GEN-DG	154749.00
Each	11-1-2	Supplying, erecting and commissioning of diesel generating set with standard control Panel with alternator of 10 kVA output continuous rating, single phase, 230V , 50c/s 0.8 p. f. A.C a totally enclosed air / liquid cooled multi cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5% .Both the engine and alternator direct coupled on a common fabricated steel base plate with anti-vibrating pad with control panel comprising of standard meters, switchgears, indicators connected with suitable wires/cables. The complete set enclosed in Acoustic enclosure made of 18 SWG CRCA Sheet, sound absorbing material, Rockwool covered from inside with ¾ mm holes perforated sheet to restrict sound level upto 75 dB at 1.0 m. The engine with first filling of oil, diesel etc.as per specification no. GEN-DG	303736.65
Each	11-1-3	Supplying, erecting and commissioning of diesel generating set with alternator of 10 kVA output continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 % . Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising of meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc. as per specification No. GEN-DG	286079.85

Each	11-1-4	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 15 kVA output continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	318054.45
Each	11-1-5	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 20 kVA output continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	362641.65
Each	11-1-6	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 25 kVA output continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	380989.35

Each	11-1-7	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 30 kVA output continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	399731.85
Each	11-1-8	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 40 kVA output continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite. Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	507875.55
Each	11-1-9	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 50 kVA output continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	551884.20

Each	11-1-10	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 62.5 kVA output continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	572656.35
Each	11-1-11	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 82.5 kVA output continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	682609.20
Each	11-1-12	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 100 kVA output continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	806786.40

Each	11-1-13	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 125 kVA output continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	851256.00
Each	11-1-14	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 140 kVA output continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	1076007.45
Each	11-1-15	<p>Supplying, erecting and commissioning of diesel generating set with alternator of 160 kVA output continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. GEN-DG</p>	1082285.40

- Each 11-1-16 Supplying, erecting and commissioning of **diesel generating set with alternator of 180 kVA output** continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. **GEN-DG** 1240992.90
- Each 11-1-17 Supplying, erecting and commissioning of **diesel generating set with alternator of 200 kVA output** continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc as per specification no. **GEN-DG** 1374217.95
- Each 11-1-18 Supplying, erecting and commissioning of **diesel generating set with alternator of 250 kVA output** continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel, etc **and obtaining necessary approval from Electrical Inspector** as per specification no. **GEN-DG** 1715215.95

- Each 11-1-19 Supplying, erecting and commissioning of **diesel generating set with alternator of 320 kVA output** continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, alongwith standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc and **obtaining necessary approval from Electrical Inspector** as per specification no. **GEN-DG** 2231129.25
- Each 11-1-20 Supplying, erecting and commissioning of **diesel generating set with alternator of 380/400 kVA output** continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising of meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc. and **obtaining necessary approval from Electrical Inspector** as per specification no. **GEN-DG** 2562391.65
- Each 11-1-21 Supplying, erecting and commissioning of **diesel generating set with alternator of 500 kVA output** continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising of meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite Acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc. and **obtaining necessary approval from Electrical Inspector** as per specification no. **GEN-DG** 3051501.60

Each	11-1-22	Supplying, erecting and commissioning of diesel generating set with alternator of 750 kVA output continuous rating, 3 phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722-2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising of meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc. and obtaining necessary approval from Electrical Inspector as per specification no. GEN-DG	5727803.55
	Note:-		
		1) DG Set rating for altitudes more than 150 m above mean sea level shall be de-rated at 3.5 % for every 300 m above 150 m mean sea level.	0.00
		2) In case of new DG set, if AMF/SYNC panel is to be used in lieu of standard panel reduce rate by 10% of the cost of material of new AMF panel/SYNC panel.	0.00
		3) For all the Engines, the emission standards/norms shall meet applicable pollution control board norms as amended by Government.	0.00
		<u>11.2 Auto Mains Failure Panels (AMF Panels) (GEN-AMF)</u>	0.00
Each	11-2-1	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of upto 10 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF .	45390.45
Each	11-2-2	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 10 kVA upto 15 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF .	47237.40
Each	11-2-3	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 15 kVA upto 20 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF .	49730.10
Each	11-2-4	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 20 kVA upto 25 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF .	54254.55
Each	11-2-5	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 25 kVA upto 35 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF .	65400.30
Each	11-2-6	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 35 kVA upto 40 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF .	74560.50
Each	11-2-7	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 40 kVA upto 50 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF .	79458.75

Each	11-2-8	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 50 kVA upto 62.5 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	83766.90
Each	11-2-9	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 62.5 kVA upto 82.5 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	101616.90
Each	11-2-10	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 82.5 kVA upto 100 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	108862.95
Each	11-2-11	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 100 kVA upto 125 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	114710.40
Each	11-2-12	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 125 kVA upto 140 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	136559.85
Each	11-2-13	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 140 kVA upto 180 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	161071.05
Each	11-2-14	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 180 kVA upto 200 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	175459.20
Each	11-2-15	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 200 kVA upto 250 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	200062.80
Each	11-2-16	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 250 kVA upto 320 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	288096.90
Each	11-2-17	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 320 kVA upto 400 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	309885.45
Each	11-2-18	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 400 kVA upto 500 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	383782.35
Each	11-2-19	Supplying, erecting, testing and commissioning of Microprocessor based AMF panel suitable for diesel generating set of above 500 kVA upto 750 kVA capacity Single/Three phase, 230/415 Volts, 50Hz A.C. with all standard features, safeties etc as per specification no. GEN-AMF.	545683.95

Each	11-2-20	Supplying, erecting, testing and commissioning of Microprocessor based generator control unit (synchronization panel) panel suitable for diesel generating set of 320 kVA capacity Three phase, 415 Volts, 50Hz A.C. with all standard features and safeties etc as per specification no. GEN-SYNC .	596463.00
Each	11-2-21	Supplying, erecting, testing and commissioning of Microprocessor based generator control unit (synchronization panel) panel suitable for diesel generating set of above 320 kVA upto 380/400 kVA capacity Three phase, 415 Volts, 50Hz A.C. with all standard features and safeties etc as per specification no. GEN-SYNC .	670323.15
Each	11-2-22	Supplying, erecting, testing and commissioning of Microprocessor based generator control unit (synchronization panel) panel suitable for diesel generating set of above 400 kVA upto 500 kVA capacity Three phase, 415 Volts, 50Hz A.C. with all standard features and safeties etc as per specification no. GEN-SYNC .	694942.50
Each	11-2-23	Supplying, erecting, testing and commissioning of Microprocessor based generator control unit (synchronization panel) panel suitable for diesel generating set of above 500 kVA upto 750 kVA capacity Three phase, 415 Volts, 50Hz A.C. with all standard features and safeties etc as per specification no. GEN-SYNC .	990383.10

11.3 Servicing of DG Set

			0.00
Job	11-3-1	Carrying out servicing of DG set upto 50 kVA with/without AMF panel of any make to ensure smooth running of DG set for 30 mins on load. Checking for abnormal sound and leakages, carry out visual inspection of all moving parts, oil levels, oil filters, fuel filters, air filters and clean them properly, rectify the minor leakages if any. Inspect alternator, stator and rotor for normal speed & proper frequency, examine battery charging with monitoring system and recording voltages, checking battery cells gravity and topping up with distilled water, checking V belts with necessary adjustment, checking and retightening of nut bolts including coupling bolts of engine and alternator, checking & cleaning of radiator and leakage testing checking of radiator & fuel supply hose pipes, checking of AVR, excitation diodes, its connections confirming proper output voltage. checking & resetting of valve tappets, Cleaning of DG set internally using blower, cleaning radiator and Submit the servicing report to engineer in charge. (Non Comprehensive) as per specification no. GEN-SER-AMC	2229.15
Job	11-3-2	Carrying out servicing of DG set from 62.5 kVA to 200 kVA with/without AMF panel of any make to ensure smooth running of DG set for 30 mins on load. Checking for abnormal sound and leakages, carry out visual inspection of all moving parts, oil levels, oil filters, fuel filters, air filters and clean them properly, rectify the minor leakages if any. Inspect alternator, stator and rotor for normal speed & proper frequency, examine battery charging with monitoring system and recording voltages, checking battery cells gravity and topping up with distilled water, checking V belts with necessary adjustment, checking and retightening of nut bolts including coupling bolts of engine and alternator, checking & cleaning of radiator and leakage testing checking of radiator & fuel supply hose pipes, checking of AVR, excitation diodes, its connections confirming proper output voltage. checking & resetting of valve tappets, Cleaning of DG set internally using blower, cleaning radiator and Submit the servicing report to engineer in charge. (Non Comprehensive) as per specification no. GEN-SER-AMC	2844.45

Job	11-3-3	Carrying out servicing of DG set from 250 kVA to 500 kVA with/without AMF panel of any make to ensure smooth running of DG set for 30 mins on load. Checking for abnormal sound and leakages, carry out visual inspection of all moving parts, oil levels, oil filters, fuel filters, air filters and clean them properly, rectify the minor leakages if any. Inspect alternator, stator and rotor for normal speed & proper frequency, examine battery charging with monitoring system and recording voltages, checking battery cells gravity and topping up with distilled water, checking V belts with necessary adjustment, checking and retightening of nut bolts including coupling bolts of engine and alternator, checking & cleaning of radiator and leakage testing checking of radiator & fuel supply hose pipes, checking of AVR, excitation diodes, its connections confirming proper output voltage. checking & resetting of valve tappets, Cleaning of DG set internally using blower, cleaning radiator and Submit the servicing report to engineer in charge. (Non Comprehensive) as per specification no. GEN-SER-AMC	4075.05
Job	11-3-4	Carrying out servicing of DG set from 500 kVA to 750 kVA with/without AMF panel of any make to ensure smooth running of DG set for 30 mins on load. Checking for abnormal sound and leakages, carry out visual inspection of all moving parts, oil levels, oil filters, fuel filters, air filters and clean them properly, rectify the minor leakages if any. Inspect alternator, stator and rotor for normal speed & proper frequency, examine battery charging with monitoring system and recording voltages, checking battery cells gravity and topping up with distilled water, checking V belts with necessary adjustment, checking and retightening of nut bolts including coupling bolts of engine and alternator, checking & cleaning of radiator and leakage testing checking of radiator & fuel supply hose pipes, checking of AVR, excitation diodes, its connections confirming proper output voltage. checking & resetting of valve tappets, Cleaning of DG set internally using blower, cleaning radiator and Submit the servicing report to engineer in charge. (Non Comprehensive) as per specification no. GEN-SER-AMC	4691.40
litre	11-3-5	Topping up new lubricating oil 15W/40 grade of approved make as per IS 13656 : 2014	430.50
litre	11-3-6	Topping up new glycol based coolant 50/50 with operating range from 118°C to -37°C of approved make	332.85
Each	11-3-7	Supplying and erecting V-Belt of all types and lengths, adjust tension as per requirements from generator manufacturer suitable for DG set upto 100kVA	2780.40
Each	11-3-8	Supplying and erecting V-Belt of all types and lengths, adjust tension as per requirements from generator manufacturer suitable for DG set from 125 kVA to 250 kVA	5464.20
Each	11-3-9	Supplying and erecting V-Belt of all types and lengths, adjust tension as per requirements from generator manufacturer suitable for DG set from 320 kVA to 500 kVA	14557.20
Each	11-3-10	Supplying and erecting lub oil filter element along with sealing rings, gasket etc complete suitable for DG Set upto 62.5 kVA.	1303.05
Each	11-3-11	Supplying and erecting lub oil filter element along with sealing rings, gasket etc complete suitable for DG Set from 82.5 kVA to 250 kVA.	3419.85
Each	11-3-12	Supplying and erecting lub oil filter element along with sealing rings, gasket etc complete suitable for DG Set from 320 kVA to 500 kVA.	6312.60
Each	11-3-13	Supplying and erecting fuel filter along with sealing rings, gasket, primary filter and water separator etc complete suitable for DG Set upto 50 kVA.	1160.25

Each	11-3-14	Supplying and erecting fuel filter along with sealing rings, gasket, primary filter and water separator etc complete suitable for DG Set from 62.5 kVA to 125 kVA .	1631.70
Each	11-3-15	Supplying and erecting fuel filter along with sealing rings, gasket, primary filter and water separator etc complete suitable for DG Set from 140 kVA to 200 kVA .	4746.00
Each	11-3-16	Supplying and erecting fuel filter along with sealing rings, gasket, primary filter and water separator etc complete suitable for DG Set from 250 kVA to 500 kVA .	8717.10
Each	11-3-17	Supplying and erecting stop solenoid assembly 12V/24V single coil energized to run with or without primary etc complete suitable for DG set upto 125 kVA .	5841.15
Each	11-3-18	Supplying and erecting stop solenoid assembly 12V/24V single coil energized to run with or without primary etc complete suitable for DG set from 140 kVA to 200 kVA .	13842.15
Each	11-3-19	Supplying and erecting stop solenoid assembly 12V/24V single coil energized to run with or without primary etc complete suitable for DG set from 250 kVA to 500 kVA .	26904.15
Each	11-3-20	Supplying and erecting Air cleaner/Air filter element suitable for DG set upto 40 kVA	3077.55
Each	11-3-21	Supplying and erecting Air cleaner/Air filter element suitable for DG set from 50 kVA to 125 kVA	4937.10
Each	11-3-22	Supplying and erecting Air cleaner/Air filter element suitable for DG set from 140 kVA to 200 kVA	8545.95
Each	11-3-23	Supplying and erecting Air cleaner/Air filter element suitable for DG set from 250 kVA to 500 kVA	20785.80
Each	11-3-24	Supplying, erecting and testing permanent magnet generator (PMG) excited Automatic Voltage Regulator (AVR) with sensing input voltage range: 190 V AC - 264 V AC 2/3 Phase, frequency range 50-60 Hz and output voltage max 120 V DC continuous current 3.7 A, transient current 6 A for 10 second with minimum resistance of 15 ohm, AVR response time of 10 ms etc. complete suitable for DG set as per Specification GEN-SER-AVR	63504.00
Each	11-3-25	Supplying, erecting and testing permanent magnet generator (PMG) excited Automatic Voltage Regulator (AVR) with sensing input voltage range: 190 V AC - 264 V AC 1 Phase 2 wire, frequency range 50-60 Hz and output voltage max 120 V DC continuous current 2.7 A, transient current 6 A for 10 second with minimum resistance of 15 ohm, AVR response time of 10 ms etc. complete suitable for DG set as per Specification GEN-SER-AVR	57410.85
Each	11-3-26	Supplying, erecting and testing main stator powered excited Automatic Voltage Regulator (AVR) with sensing input voltage range: 95 V - 132 V /190 V AC - 264 V AC 1 Phase 2 wire, frequency range 50-60 Hz and output voltage max 90 V DC continuous current 4 A, transient current 6 A for 10 second with minimum resistance of 15 ohm, AVR response time of 20 ms etc. complete suitable for DG set as per Specification GEN-SER-AVR	21404.25
Each	11-3-27	Supplying, erecting and testing main stator powered excited Automatic Voltage Regulator (AVR) with sensing input voltage range: 190 V AC - 264 V AC, frequency range 50-60 Hz and output voltage max 90 V DC continuous current 10 A, transient current 16 A for 10 second with minimum resistance of 10 ohm, AVR response time of 20 ms etc. complete suitable for DG set as per Specification GEN-SER-AVR	29159.55

Each	11-3-28	Supplying, erecting and testing main stator powered excited Automatic Voltage Regulator (AVR) with sensing input voltage range: 170 V AC - 280 V AC 1 phase/ 270 V - 520 V AC 3 phase, frequency range 50-60 Hz and output voltage max 63 V DC continuous current 6 A, transient current 7 A for 10 second with minimum resistance of 10 ohm, AVR response time of 20 ms etc. complete suitable for DG set as per Specification no GEN-SER-AVR	26389.65
Each	11-3-29	Supplying and erecting set of engine safety unit suitable for DG set upto 125 kVA as per specification no	17526.60
Each	11-3-30	Supplying and erecting set of engine safety unit suitable for DG set from 140 kVA to 250 kVA	20480.25
Each	11-3-31	Supplying and erecting set of engine safety unit suitable for DG set from 320 kVA to 500 kVA	23681.70
Each	11-3-32	Supplying and erecting SMPS based Battery Charger input voltage 230 V A.C. & output voltage 24 V DC, charging current 10A suitable to charge DG set Battery	9601.20
Each	11-3-33	Supplying and erecting SMPS based Battery Charger input voltage 230 V A.C. & output voltage 24 V DC, charging current 20A suitable to charge DG set Battery	17527.65
Each	11-3-34	Supplying and erecting SMPS Battery Charger input voltage 230 V A.C. & output voltage 12 V DC, charging current 10A suitable to charge DG set Battery	2866.50
Each	11-3-35	Supplying, erecting, testing and commissioning 4 pole power contactor 32A with coil voltage of 220/240 V suitable to operate on AV voltage for DG set.	2102.10
Each	11-3-36	Supplying, erecting, testing and commissioning 4 pole power contactor 63 A with coil voltage of 220/240 V suitable to operate on AV voltage for DG set.	4767.00
Each	11-3-37	Supplying, erecting, testing and commissioning 4 pole power contactor 80-130A with coil voltage of 220/240 V suitable to operate on AV voltage for DG set.	8458.80
Each	11-3-38	Supplying, erecting, testing and commissioning 4 pole power contactor 200A with coil voltage of 220/240 V suitable to operate on AV voltage for DG set.	19807.20
Each	11-3-39	Supplying, erecting, testing and commissioning 4 pole power contactor 325A with coil voltage of 220/240 V suitable to operate on AV voltage for DG set.	39987.15
Each	11-3-40	Supplying, erecting, testing and commissioning 4 pole power contactor 400A with coil voltage of 220/240 V suitable to operate on AV voltage for DG set.	51204.30
Each	11-3-41	Supplying, erecting, testing and commissioning 4 pole power contactor 600A with coil voltage of 220/240 V suitable to operate on AV voltage for DG set.	77196.00
Each	11-3-42	Supplying, erecting, testing and commissioning 4 pole power contactor 800A with coil voltage of 220/240 V suitable to operate on AV voltage for DG set.	116698.05
Each	11-3-43	Supplying, erecting, testing and commissioning microcontroller based digital line voltage monitor 3 phase 4 wire 2 CO output relay suitable to operate on AC voltage for DG set.	2336.25
Each	11-3-44	Supplying & erecting 12 V 80 Ah heavy duty plate type Battery with terminal wire duly charged complete suitable for DG set with warrantee for 3 years	8087.10
Each	11-3-45	Supplying & erecting 12 V 88 Ah heavy duty plate type Battery with terminal wire duly charged complete suitable for DG set with warrantee for 3 years	8541.75
Each	11-3-46	Supplying & erecting 12 V 100 Ah heavy duty plate type Battery with terminal wire duly charged complete suitable for DG set with warrantee for 3 years	10212.30

Each	12-1-2	Supplying and erecting Centrifugal water pump (Monoblock), 230V, Single phase 50 cycles A.C. supply of 0.75 KW/1 HP with discharge 1.6/2.9 Litres per second (LPS) for head of 9/22 m & 40 mm suction/ 40 mm delivery pipe on provided C.C. foundation as per specification no. WP-CGP	8323.35
Each	12-1-3	Supplying and erecting Centrifugal water pump (Monoblock), 230V, Single phase 50 cycles A.C. supply of 1.125 KW/1.5HP with discharge 4.45/2.26 Litres per second (LPS) for head of 6/27 m & 40 mm suction/ 32 mm delivery pipe on provided C.C. foundation as per specification no. WP-CGP	10026.45
Each	12-1-4	Supplying and erecting Centrifugal water pump (Monoblock), 230V, Single phase 50 cycles A.C. supply of 1.5 KW/2 HP with discharge 7.16/4.16 Litres per second (LPS) for head of 12/21 m & 50 mm suction/ 50 mm delivery pipe on provided C.C. foundation as per specification no. WP-CGP	12205.20
Each	12-1-5	Supplying and erecting Centrifugal water pump (Monoblock), 415V, three phase 50 cycles A.C. supply of 1.5 KW/2 HP with discharge 2.2/4.1 Litres per second (LPS) for head of 8/26 m and 50 mm suction/ 40 mm delivery pipe on provided C.C. foundation as per specification no. WP-CGP	13774.95
Each	12-1-6	Supplying and erecting Centrifugal water pump (Monoblock), 415V, three phase 50 cycles A.C. supply of 2.25 KW/ 3 HP with discharge 2/4.9 Litres per second (LPS) for head of 14/36 m and 50 mm suction/ 40 mm delivery pipe on provided C.C. foundation as per specification no. WP-CGP	17739.75
Each	12-1-7	Supplying and erecting Centrifugal water pump (Monoblock), 415V, three phase 50 cycles A.C. supply of 2.25KW/ 3 HP with discharge 4.9/9.2 Litres per second (LPS) for head of 10/26 m and 65 mm suction/ 50 mm delivery pipe on provided C.C. foundation as per specification no. WP-CGP	17212.65
Each	12-1-8	Supplying and erecting Centrifugal water pump (Monoblock), 415V, three phase 50 cycles A.C. supply of 2.25 KW/3 HP with discharge 1.83/4.16 Litres per second (LPS) for head of 24/36 m and 50 mm suction/ 40 mm delivery pipe on provided C.C. foundation as per specification No. WP-CGP	17982.30
Each	12-1-9	Supplying and erecting Centrifugal water pump (Monoblock), 415 V, three phase 50 cycles A.C. supply of 3.75 KW/5 HP with discharge 2/4.1 Litres per second (LPS) for head of 36/52 m and 50 mm suction/ 40 mm delivery pipe on provided C.C. foundation as per specification no. WP-CGP	22232.70
Each	12-1-10	Supplying and erecting Centrifugal water pump (Monoblock), 415 V, three phase 50 cycles A.C. supply of 3.75 KW/5 HP with discharge 5.8/8.5 Litres per second (LPS) for head of 20/36 m and 65 mm suction/ 50 mm delivery pipe on provided C.C. foundation as per specification no. WP-CGP	22164.45
Each	12-1-11	Supplying and erecting Centrifugal water pump (Monoblock), 415 V, three phase 50 cycles A.C. supply of 5.625 KW/7.5 HP with discharge 4.5/8.6 Litres per second (LPS) for head of 32/52 m and 65 mm suction/ 50 mm delivery pipe of size or with discharge of 11.1/19.9 Litres per second (LPS) for head of 16/30 m and 80mm suction/ 65mm delivery pipe of size, on provided C.C. foundation as per specification no. WP-CGP	29806.35
Each	12-1-12	Supplying and erecting Centrifugal water pump (Monoblock), 415 V, three phase 50 cycles A.C. supply of 7.5 KW/10 HP with discharge 9.6/21.6 Litres per second (LPS) for head of 18/40 m and 80 mm suction/ 65 mm delivery pipe of size or with discharge of 4.3/7.8 Litres per second (LPS) for head of 40/64 m and 65mm suction/ 50mm delivery pipe of size, on provided C.C. foundation as per specification no. WP-CGP	36618.75

Each	12-1-13	Supplying and erecting Centrifugal water pump (Monoblock), 415 V, three phase 50 cycles A.C. supply of 9.375 KW/ 12.5 HP with discharge 7/19.6 Litres per second (LPS) for head of 20/48 m and 80 mm suction/ 65 mm delivery pipe of size or with discharge of 20/33.5 Litres per second (LPS) for head of 18/30 m and 100mm suction/ 100mm delivery pipe of size, on provided C.C. foundation as per specification no. WP-CGP	43257.90
Each	12-1-14	Supplying and erecting Centrifugal water pump (Monoblock), 415 V, three phase 50 cycles A.C. supply of 11.25 KW/ 15 HP with discharge 10.5/19.4 Litres per second (LPS) for head of 30/54 m and 80 mm suction/ 65 mm delivery pipe of size or with discharge of 17.5/36.8 Litres per second (LPS) for head of 18/36 m and 100mm suction/ 100mm delivery pipe of size, on provided C.C. foundation as per specification no. WP-CGP	47461.05
Each	12-1-15	Supplying and erecting Centrifugal water pump (Monoblock), 415 V, three phase 50 cycles A.C. supply of 15 KW/20 HP with discharge 14/33.8 Litres per second (LPS) for head of 18/52 m and 100mm suction/ 80mm delivery pipe of size, on provided C.C. foundation as per specification no. WP-CGP	63862.05
Each	12-1-16	Supplying and erecting Centrifugal water pump (Monoblock), 415 V, three phase 50 cycles A.C. supply of 18.75 KW/25 HP with discharge 13.3/258 Litres per second (LPS) for head of 48/60 m and 100mm suction/ 80mm delivery pipe of size, on provided C.C. foundation as per specification no. WP-CGP	77549.85
Each	12-1-17	Supplying and erecting Centrifugal water pump (Monoblock), 415 V, three phase 50 cycles A.C. supply of 22.5 KW/30 HP with discharge 6.66/28.33 Litres per second (LPS) for head of 48/69 m and 100mm suction/ 80mm delivery pipe of size, on provided C.C. foundation as per specification no. WP-CGP	89653.20
Note		Energy Efficient water pumps should be used invariably.	0.00
		<u>12.2 Submersible pumps for Borewells (Wp-SMP)</u>	0.00
Each	12-2-1	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 20 to 80 LPM discharge at 55 to 25 m head and (max. efficiency at 41 m head & 50 lpm) discharge & delivery Pipe of Size-50mm dia. with a necessary H type clamps as per specification no. WP-SMP	28562.10
Each	12-2-2	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 70 to 250 LPM discharge at 44 to 24 m head & (max. efficiency at 38 m head & 160 lpm) discharge & delivery Pipe of Size-50mm diameter with a necessary H type clamps as per specification no. WP-SMP	29685.60
Each	12-2-3	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell 3HP (2 stage) suitable for 200 to 500 LPM discharge at 21 to 11 m head & (max. efficiency at 19 m head & 300 lpm) discharge & delivery Pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	30906.75
Each	12-2-4	Supplying and erecting submersible pumpset of 3.75 KW/5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 20 to 80 LPM discharge at 91 to 42 m head & (max. efficiency at 68 m head & 50 lpm) discharge & delivery Pipe of Size-50mm diameter with a necessary H type clamps as per specification no. WP-SMP	33850.95

Each	12-2-5	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 100 to 250 LPM discharge at 45 to 24 m head & (max. efficiency at 38 m head & 250 lpm) discharge & delivery Pipe Size-50mm diameter with a necessary H type clamps as per specification no. WP-SMP	30355.50
Each	12-2-6	Supplying and erecting submersible pumpset of 3 KW/4 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 70 to 250 LPM discharge at 65 to 36 m head & (max. efficiency at 57 m head & 160 lpm) discharge & delivery Pipe of Size-50mm diameter with a necessary H type clamps as per specification no. WP-SMP	31418.10
Each	12-2-7	Supplying and erecting submersible pumpset of 3.75 KW/5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 250 to 700 LPM discharge at 33 to 15 m head & (max. efficiency at 24 m head & 500 lpm) discharge & delivery Pipe of Size-65mm diameter with a necessary H type clamps as per specification no. WP-SMP	32424.00
Each	12-2-8	Supplying and erecting submersible pumpset of 3 KW/4 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 400 to 900 LPM discharge at 20 to 12 m head & (max. efficiency at 16 m head & 700 lpm) discharge & delivery Pipe of Size-75 mm diameter with a necessary H type clamps as per specification no. WP-SMP	32685.45
Each	12-2-9	Supplying and erecting submersible pumpset of 5.625 KW/7.5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 20 to 80 LPM discharge at 129 to 59 m head & (max. efficiency at 95 m head & 50 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	39041.10
Each	12-2-10	Supplying and erecting submersible pumpset of 3.75KW/5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 70 to 250 LPM discharge at 87 to 48 m head & (max. efficiency at 76 m head & 160 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	35297.85
Each	12-2-11	Supplying and erecting submersible pumpset of 5.625 KW/7.5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 60 to 175 LPM discharge at 97 to 56 m head & (max. efficiency at 79 m head & 125 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	36645.00
Each	12-2-12	Supplying and erecting submersible pumpset of 3 KW/4 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 100 to 350 LPM discharge at 56 to 30 m head & (max. efficiency at 47 m head & 250 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	32566.80
Each	12-2-13	Supplying and erecting submersible pumpset of 4.5 KW/6 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 200 to 500 LPM discharge at 42 to 22 m head & (max. efficiency at 34 m head & 350 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	33324.90
Each	12-2-14	Supplying and erecting submersible pumpset of 3 KW/4 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 300 to 850 LPM discharge at 33 to 10 m head & (max. efficiency at 24 m head & 600 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	29755.95

Each	12-2-15	Supplying and erecting submersible pumpset of 3.75 KW/5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 300 to 850 LPM discharge at 33 to 10 m head & (max. efficiency at 33 m head & 600 lpm) discharge & delivery pipe of Size-75 mm diameter with a necessary H type clamps as per specification no. WP-SMP	36806.70
Each	12-2-16	Supplying and erecting submersible pumpset of 3.75 KW/5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 100 to 350 LPM discharge at 67 to 36 m head & (max. efficiency at 57 m head & 250 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	34204.80
Each	12-2-17	Supplying and erecting submersible pumpset of 4.5 KW/6 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 60 to 175 LPM discharge at 113 to 66 m head & (max. efficiency at 92 m head & 125 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	39138.75
Each	12-2-18	Supplying and erecting submersible pumpset of 3.75 KW/5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 200 to 500 LPM discharge at 52 to 28 m head & (max. efficiency at 42 m head & 350 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	37080.75
Each	12-2-19	Supplying and erecting submersible pumpset of 5.625 KW/7.5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 250 to 700 LPM discharge at 44 to 20 m head & (max. efficiency at 32 m head & 500 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	36094.80
Each	12-2-20	Supplying and erecting submersible pumpset of 4.5 KW/6 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 20 to 80 LPM discharge at 184 to 84 m head & (max. efficiency at 136 m head & 50 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	44680.65
Each	12-2-21	Supplying and erecting submersible pumpset of 5.625 KW/7.5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 300 to 850 LPM discharge at 44 to 14 m head & (max. efficiency at 32 m head & 600 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	38907.75
Each	12-2-22	Supplying and erecting submersible pumpset of 5.625 KW/7.5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 250 to 700 LPM discharge at 55 to 25 m head & (max. efficiency at 40 m head & 500 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	42382.20
Each	12-2-23	Supplying and erecting submersible pumpset of 3.75 KW/5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 60 to 175 LPM discharge at 130 to 75 m head & (max. efficiency at 106 m head & 125 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	42838.95
Each	12-2-24	Supplying and erecting submersible pumpset of 3.75 KW/5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 20 to 80 LPM discharge at 221 to 101 m head & (max. efficiency at 163 m head & 50 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	48012.30

Each	12-2-25	Supplying and erecting submersible pumpset of 3.75 KW/5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 20 to 80 LPM discharge at 258 to 118 m head & (max. efficiency at 190 m head & 50 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	53894.40
Each	12-2-26	Supplying and erecting submersible pumpset of 5.625 KW/7.5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 60 to 175 LPM discharge at 146 to 85 m head & (max. efficiency at 119 m head & 25 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	44512.65
Each	12-2-27	Supplying and erecting submersible pumpset of 9.375 KW/12.5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 300 to 850 LPM discharge at 55 to 17 m head & (max. efficiency at 40 m head & 600 lpm) discharge & delivery pipe of Size-75 mm diameter with a necessary H type clamps as per specification no. WP-SMP	44247.00
Each	12-2-28	Supplying and erecting submersible pumpset of 7.5 KW/10 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 400 to 900 LPM discharge at 41 to 25 m head & (max. efficiency at 32 m head & 700 lpm) discharge & delivery pipe of Size-80 mm diameter with a necessary H type clamps as per specification no. WP-SMP	40489.05
Each	12-2-29	Supplying and erecting submersible pumpset of 7.5 KW/10 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 70 to 250 LPM discharge at 153 to 84 m head & (max. efficiency at 133 m head & 160 lpm) discharge & delivery pipe of Size-80 mm diameter with a necessary H type clamps as per specification no. WP-SMP	48780.90
Each	12-2-30	Supplying and erecting submersible pumpset of 4.5 KW/6 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 60 to 175 LPM discharge at 162 to 94 m head & (max. efficiency at 132 m head & 125 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	48808.20
Each	12-2-31	Supplying and erecting submersible pumpset of 5.625 KW/7.5 HP with 415 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 20 to 80 LPM discharge at 294 to 134 m head & (max. efficiency at 218 m head & 50 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	59630.55
Each	12-2-32	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 230 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 72 to 20 LPM discharge at 10 to 50 m head & (max. efficiency at 52 m head & 30 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	31109.40
Each	12-2-33	Supplying and erecting submersible pumpset of 1.125 KW/1.5 HP with 230 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 84 to 40 LPM discharge at 30 to 90 m head & (max. efficiency at 69 m head & 60 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	29085.00
Each	12-2-34	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 230 V, 50 c/s AC supply suitable for 150 mm dia. borewell suitable for 42 to 20 m head at 30 to 90LPM discharge & (max. efficiency at 34 m head & 60 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	24016.65

Each	12-2-35	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 45 to 13 m head & (max. efficiency at 33 m head & 30 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	19273.80
Each	12-2-36	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 54 to 15 m head & (max. efficiency at 39 m head & 30 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	19955.25
Each	12-2-37	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 72 to 20 m head & (max. efficiency at 33 m head & 30 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	20191.50
Each	12-2-38	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 85 to 170 LPM discharge at 32 to 12 m head & (max. efficiency at 24 m head & 130 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	19430.25
Each	12-2-39	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 42 to 20 m head & (max. efficiency at 34 m head & 60 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	20457.15
Each	12-2-40	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 51 to 25 m head & (max. efficiency at 42 m head & 60 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	19897.50
Each	12-2-41	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 32 to 12 m head & (max. efficiency at 26 m head & 30 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	19040.70
Each	12-2-42	Supplying and erecting submersible pumpset of 1.125 KW/1.5 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 109 to 30 m head & (max. efficiency at 78 m head & 30 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	22420.65
Each	12-2-43	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 127 to 35 m head & (max. efficiency at 91 m head & 30 lpm) discharge & delivery pipe of Size-32 mm diameter with a necessary H type clamps as per specification no. WP-SMP	25802.70
Each	12-2-44	Supplying and erecting submersible pumpset of 1.125 KW/1.5 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 84 to 40 m head & (max. efficiency at 69 m head & 60 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	25081.35

Each	12-2-45	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 127 to 35 m head & (max. efficiency at 91 m head & 30 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	25548.60
Each	12-2-46	Supplying and erecting submersible pumpset of 1.5 kw/2 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 144 to 40 m head & (max. efficiency at 104 m head & 30 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	28384.65
Each	12-2-47	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 85 to 170 LPM discharge at 43 to 18 m head & (max. efficiency at 33 m head & 130 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification No. WP-SMP	24813.60
Each	12-2-48	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 230 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 160 to 45 m head & (max. efficiency at 116 m head & 30 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	27123.60
Each	12-2-49	Supplying and erecting submersible pumpset of 0.75 KW/1 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 45 to 13 m head & (max. efficiency at 33 m head & 30 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	19643.40
Each	12-2-50	Supplying and erecting submersible pumpset of 0.75 KW/1 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 54 to 15 m head & (max. efficiency at 39 m head & 30 lpm) discharge & delivery pipe of Size-32 mm diameter with a necessary H type clamps as per specification no. WP-SMP	20545.35
Each	12-2-51	Supplying and erecting submersible pumpset of 0.75 KW/1 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 72 to 20 m head & (max. efficiency at 52 m head & 30 lpm) discharge & delivery Pipe of Size-32 mm diameter with a necessary H type clamps as per specification no. WP-SMP	20731.20
Each	12-2-52	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 85 to 170 LPM discharge at 32 to 12 m head & (max. efficiency at 24 m head & 130 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	24514.35
Each	12-2-53	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 42 to 20 m head & (max. efficiency at 34 m head & 60 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	19135.20
Each	12-2-54	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 51 to 25 m head & (max. efficiency at 42 m head & 60 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	21174.30

Each	12-2-55	Supplying and erecting submersible pumpset of 0.75 KW/1 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 90 to 25 m head & (max. efficiency at 66 m head & 30 lpm) discharge & delivery pipe of Size-32 mm diameter with a necessary H type clamps as per specification no. WP-SMP	21732.90
Each	12-2-56	Supplying and erecting submersible pumpset of 1.125 KW/1.5 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 109 to 30 m head & (max. efficiency at 78 m head & 30 lpm) discharge & delivery pipe of Size-32 mm diameter with a necessary H type clamps as per specification No. WP-SMP	25078.20
Each	12-2-57	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 63 to 30 m head & (max. efficiency at 51 m head & 60 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	24497.55
Each	12-2-58	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 84 to 40 m head & (max. efficiency at 69 m head & 60 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification No. WP-SMP	24701.25
Each	12-2-59	Supplying and erecting submersible pumpset of 1.125 KW/1.5 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 127 to 35 m head & (max. efficiency at 91 m head & 30 lpm) discharge & delivery pipe of Size-32 mm diameter with a necessary H type clamps as per specification no. WP-SMP	26166.00
Each	12-2-60	Supplying and erecting submersible pumpset of 1.125 KW/1.5 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 144 to 40 m head & (max. efficiency at 104 m head & 30 lpm) discharge & delivery pipe of Size-32 mm diameter with a necessary H type clamps as per specification no. WP-SMP	26792.85
Each	12-2-61	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 85 to 170 LPM discharge at 43 to 18 m head & (max. efficiency at 91 m head & 130 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	21684.60
Each	12-2-62	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 10 to 50 LPM discharge at 160 to 45 m head & (max. efficiency at 116 m head & 30 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	27130.95
Each	12-2-63	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 85 to 170 LPM discharge at 54 to 21 m head & (max. efficiency at 11 m head & 130 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	24646.65
Each	12-2-64	Supplying and erecting submersible pumpset of 1.5 KW/2 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 105 to 50 m head & (max. efficiency at 85 m head & 60 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	23917.95

Each	12-2-65	Supplying and erecting submersible pumpset of 2.25 KW/3 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 126 to 60 m head & (max. efficiency at 102 m head & 60 lpm) discharge & delivery pipe of Size-32 mm diameter with a necessary H type clamps as per specification No. WP-SM	32964.75
Each	12-2-66	Supplying and erecting submersible pumpset of 2.25 KW/3HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 85 to 170 LPM discharge at 67 to 27 m head & (max. efficiency at 49 m head & 130 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification No. WP-SMP	28271.25
Each	12-2-67	Supplying and erecting submersible pumpset of 3.75 KW/5 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 147 to 70 m head & (max. efficiency at 119 m head & 60 lpm) discharge & delivery pipe of Size-40 mm diameter with a necessary H type clamps as per specification no. WP-SMP	30502.50
Each	12-2-68	Supplying and erecting submersible pumpset of 3 KW/4 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 30 to 90 LPM discharge at 168 to 80 m head & (max. efficiency at 136 m head & 60 lpm) discharge & delivery pipe of Size-32 mm diameter with a necessary H type clamps as per specification no. WP-SMP	34751.85
Each	12-2-69	Supplying and erecting submersible pumpset of 3 KW/4 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 85 to 170 LPM discharge at 88 to 36 m head & (max. efficiency at 68 m head & 130 lpm) discharge & delivery pipe of Size-50 mm diameter with a necessary H type clamps as per specification no. WP-SMP	30738.75
Each	12-2-70	Supplying and erecting submersible pumpset of 3.75 KW/5 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 85 to 170 LPM discharge at 110 to 46 m head & (max. efficiency at 83 m head & 130 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	34252.05
Each	12-2-71	Supplying and erecting submersible pumpset of 4.5 KW/6 HP with 415 V, 50 c/s AC supply suitable for 100 mm dia. borewell suitable for 85 to 170 LPM discharge at 133 to 55 m head & (max. efficiency at 100 m head & 130 lpm) discharge & delivery pipe of Size-65 mm diameter with a necessary H type clamps as per specification no. WP-SMP	37930.20
	Note	Energy Efficient water pumps should be used invariably.	0
		<u>12.3 Submersible pumps for Openwell</u>	0
Each	12-3-1	Supplying and erecting submersible pump set suitable for erection on open well of 2.25 KW/3 HP with 415 V 50 c/s.A.C. supply, having delivery head from 21 to 7 m and discharge from 200 to 800 ltrs. per minute (Max efficiency at 16 m head & 500 ltr discharge) & pipe of Suction 50mm /Delivery 50 mm diameter erected with necessary H type clamps as per specification no. WP-OSP	20629.35
Each	12-3-2	Supplying and erecting submersible pump set suitable for erection on open well of 3.75 KW/5 HP with 415 V 50 c/s.A.C. supply, having delivery head from 24 to 13m. and discharge from 400 to 1000 ltrs. per minute (Max efficiency at 21m head & 680 ltr discharge) & pipe of Suction 50mm / Delivery 50 mm diameter erected with necessary H type clamps as per specification no. WP-OSP	22619.10

Each	12-3-3	Supplying and erecting submersible pump set suitable for erection on open well of 5.625 KW/7.5 HP with 415 V 50 c/s.A.C. supply, having delivery head from 20 to 10m and discharge from 450 to 1600 ltrs. per minute (Max efficiency at 17 m head & 1250 ltr discharge) & pipe of Suction 65 mm/Delivery 50 mm diameter erected with necessary H type clamps as per specification no. WP-OSP	29179.50
Each	12-3-4	Supplying and erecting submersible pump set suitable for erection on open well of 5.625 KW/7.5 HP with 415 V 50 c/s.A.C. supply, having delivery head from 36 to 18 m and discharge from 400 to 1000 ltrs. per minute (Max efficiency at 29 m head & 680 ltr discharge) & pipe of Suction 75 mm/Delivery 65 mmdiameter erected with necessary H type clamps as per specification no. WP-OSP	31246.95
Each	12-3-5	Supplying and erecting 1 phase, 230 V, 50 Hz, submersible pump set of 0.75 KW/1HP for erection on open well, pump having discharge 35 / 270L.P.M., head 30 / 15 m & pipe of Suction 32 mm/Delivery 25 mm diameter erected with with necessary H type clamps as per specification no. WP-OSP	15890.70
Each	12-3-6	Supplying and erecting 1 phase, 230 V, 50 Hz, submersible pump set of 1.5 KW/2HP suitable for erection on open well, pump having discharge 130 / 475 L.P. M., head 21 / 9 m & pipe of Suction 50 mm/Delivery 50 mm diameter erected with necessary H type clamps as per specification no. WP-OSP	16122.75
	12-3-7	Energy Efficient water pumps should be used	0
		<u>12.4 Accessories</u>	0
Each	12-4-1	Supplying and erecting D. O. L. Starter suitable for 250V. single phase , 50 cycles with overload element with necessary materials and connected to supply upto 3 H. P.	1014.30
Each	12-4-2	Supplying and erecting D.O.L. Starter 400V. 3 phase, 50 cycles with no volt coil and overload element with necessary materials and connected to supply upto 7.5 H.P.	1890.00
Each	12-4-3	Supplying and erecting D.O.L. Starter 400V. 3 phase, 50 cycles with no volt coil and overload element with necessary materials and connected to supply for 10 H.P.	2549.40
Each	12-4-4	Supplying and erecting fully Automatic star/delta starter suitable for 12.5 H.P. to 15 H.P. for 3 phase squirrel cage motor totally enclosed with overload and no volt relay complete erected on provided angle iron frame.	6693.75
Each	12-4-5	Supplying and erecting fully Automatic star/delta starter suitable for above 15 H.P. upto 25 H.P. squirrel cage motor totally enclosed with overload and no volt relay complete erected on provided angle iron frame.	13089.30
Each	12-4-6	Supplying and erecting fully Automatic star / delta starter suitable for above 25 H. P to 35 H. P. squirrel cage motor totally enclosed with overload and no volt relay complete erected on provided angle iron frame.	20646.15
Each	12-4-7	Supplying and erecting pump protection relay comprising current sensing phase failure and UV+OV relay with dry run and overload protection suitable for 3 phase pumps.	2734.20
m	12-4-8	Supplying and erecting flat flexible 3 core 2.5 sq mm PVC sheathed submersible type copper cable suitably clamped at fixed intervals with column pipe assembly complete.	126.00
m	12-4-9	Supplying and erecting flat flexible 3 core 4 sq mm PVC sheathed submersible type copper cable suitably clamped at fixed intervals with column pipe assembly complete.	173.25
m	12-4-10	Supplying and erecting flat flexible 3 core 6 sq mm PVC sheathed submersible type copper cable suitably clamped at fixed intervals with column pipe assembly complete.	240.45

m	12-4-11	Supplying and erecting flat flexible 3 core 1.5 sq mm PVC sheathed submersible type copper cable suitably clamped at fixed intervals with column pipe assembly complete.	90.30
m	12-4-12	Supplying & erecting flat flexible 3 core 10 sq.mm PVC sheathed submersible type copper cable suitably clamped at fixed intervals with coloum pipe assembly complete.	385.35
m	12-4-13	Supplying & erecting flat flexible 3 core 16 sq.mm PVC sheathed submersible type copper cable suitably clamped at fixed intervals with coloum pipe assembly complete.	583.80
Each	12-4-14	Supplying & erecting Water level controller 230/415 V AC., Two way for under ground tank operation only.	1332.45
Each	12-4-15	Supplying & erecting Water level controller 230/ 415V AC., Four way for under ground & Over head tank operation.	1383.90
Each	12-4-16	Supplying & erecting PVC coated 5 mm dia Brass Sensor/ electrode duly wired with nut & bolts complete	263.55
Each	12-4-17	Supplying & erecting automatic control panel for 3 Ph, 415 volt, A.c. Submersible/ centrifugal pump set upto 7.5 HP consisting of DOL starter having relay range 9-14 AMPS.P.P., Combined ammeter/voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc	5205.90
Each	12-4-18	Supplying & erecting automatic control panel for 3 Ph, 415 volt, a.c. Submersible/ centrifugal pump set for 7.5 to 10 HP consisting of DOL starter having relay range 13-21 AMPS.P.P., Combined ammeter/voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc	5918.85
Each	12-4-19	Supplying & erecting automatic control panel for 3 Ph, 415 volt, a.c. Submersible/ centrifugal pump set for 7.5 to 10 HP consisting of DOL starter having relay range 28-42 AMPS.P.P., Combined ammeter/voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc.	6400.80
Each	12-4-20	Supplying & erecting automatic control panel for 1 Ph, 230 volt, a.c.. Submersible/ centrifugal pump set upto 2 HP consisting of DOL starter Of suitable relay range S. P.P., Combined ammeter/ voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc .	5074.65
Each	12-4-21	Supplying & erecting automatic control panel for 3 Ph, 415 volt, a.c. Submersible/ centrifugal pump set upto 20 HP consisting of Star Delta starter having relay range 13-21Amp,S.P.P., Combined ammeter/ voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc .	12983.25
Each	12-4-22	Supplying & erecting automatic control panel for 3 Ph, 415 volt, a.c. Submersible/ centrifugal pump set upto 20 HP consisting of Star Delta starter having relay range 28-42 Amp, S.P.P., Combined ammeter/ voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc	15744.75

Each	12-4-23	Supplying & erecting automatic control panel for 3 Ph, 415 volt, a.c. Submersible/centrifugal pump set upto 30 HP consisting of Star Delta starter having relay range 30-50 Amp, S.P.P., Combined ammeter/ voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc.	24649.80
Each	12-4-24	Supplying & erecting Soft Starters for 3 phase 415 volt, A.C. water pump upto 15 H.P. consisting of RS-485 Communication port, Compact size & range, internal by-pass contactor, 400% max. allowed overload of nominal current, with Compatibility with teleservice software "Remote Drive" on internet, having protection for motor overload, phase sequence, excess start time, phase loss, power circuit fault, supply frequency, communication failure etc. complete.	36355.20
Each	12-4-25	Supplying & erecting Soft Starters for 3 phase 415 volt, A.C. water pump 15 -30 H.F consisting of RS-485 Communication port, Compact size & range, internal by-pass contactor, 400% max. allowed overload of nominal current, with Compatibility with teleservice software "Remote Drive" on internet, having protection for motor overload, phase sequence, excess start time, phase loss, power circuit fault, supply frequency, communication failure etc. complete.	42570.15
Each	12-4-26	Supplying & erecting automatic control panel for 3 Ph, 415 volt, A.c.Submersible/centrifugal pump set upto 10 HP consisting of Star Delta starter having relay range 6-10 Amp, S.P.P., Combined ammeter/ voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc.	10591.35
Each	12-4-27	Supplying & erecting automatic control panel for 3 Ph, 415 volt, A.C. Submersible/centrifugal pump set upto 10 - 15 HP consisting of Star Delta starter having relay range 13-22 Amp, S.P.P., Combined ammeter/ voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc .	10610.25
Each	12-4-28	Supplying & erecting Float sensor switch for water level controller working on 250V & rated current 8A, with 2 mtr. wire & High quality of wire & plastic body.	452.55
Each	12-4-29	Supplying & erecting directly operated Single phasing preventor complete erected and connected to supply to operate in case of single phasing with guarantee for minimum one year.	856.80
		<u>12.5 Dewatering Pump</u>	0.00
Each	12-5-1	Supplying & erecting Dewatering Submersible pump set 415V, 3 phase, 50C/s, A.C. supply of 1.5 KW/ 2 H.P. , of 2 to 17 m head with 600 to 100 LPM discharge, non-clogging minimised abrasive wear, large impeler clearance & maintenance free pump set with water proof cable duly sealed with epoxy material built in protection to prevent the motor from burn out due to abnormal operation. specially designed high efficiency motor with F class insulation & the pump mechanically sealed in the oil chamber,. etc. complete as per specification no. DWP- SMP	39694.20

Each	12-5-2	Supplying & erecting Dewatering Submersible pump set 415V, 3 phase, 50C/s, A.C. supply of 3.73KW/ 5 H.P. of 16 to 22 m head with 625 to 260 LPM discharge, non-clogging minimised abrasive wear, large impeller clearance & maintenance free pump set with water proof cable duly sealed with epoxy material built in protection to prevent the motor from burn out due to abnormal operation. specially designed high efficiency motor with F class insulation & the pump mechanically sealed in the oil chamber, etc. complete as per specification no. DWP- SMP	55762.35
Each	12-5-3	Supplying & erecting Dewatering Submersible pump set 415V, 3 phase, 50C/s, A.C. supply of 5.5KW/ 7.5 H.P. , of 6 to 22 m head with 1560 to 360 LPM discharge, non-clogging minimised abrasive wear, large impeller clearance & maintenance free pump set with water proof cable duly sealed with epoxy material built in protection to prevent the motor from burn out due to abnormal operation. specially designed high efficiency motor with F class insulation & the pump mechanically sealed in the oil chamber, etc. complete as per specification no. DWP- SMP	76588.05
<u>12.6 Pressure Pump</u>			0.00
Each	12-6-1	Supplying & erecting Pressure Booster Pump, single phase, 50C/s, A.C. supply of 0.375 KW/ 0.5 H.P. , for Domestic Pressure boosting applications in bungalows, apartments, hotels etc for constant pressure for Bathrooms.	19324.20
Each	12-6-2	Supplying & erecting Pressure Booster Pump, single phase, 50C/s, A.C. supply of 0.75 KW/ 1 H.P. , for Domestic Pressure boosting applications in bungalows, apartments, hotels etc for constant pressure for Bathrooms.	21173.25
Each	12-6-3	Supplying & erecting Pressure Booster Pump, single phase, 50C/s, A.C. supply of 1.125 KW/1.5 H.P. , for Domestic Pressure boosting applications in bungalows, apartments, hotels etc for constant pressure for Bathrooms..	24607.80
<u>12.7 Dismantling Material</u>			0.00
HP	12-7-1	Dismantling the existing monoblock / open well submersible water pump set centrifugal type without pipeline complete and making the site clear.	87.15
HP	12-7-2	Dismantling the existing ejecto type water pump set without pipeline complete and making the site clear.	87.15
Each	12-7-3	Dismantling the existing ejecto pump with PVC pipeline.	954.45
Each	12-7-4	Dismantling the existing ejecto pump with GI pipeline upto 10 m depth.	2460.15
Each	12-7-5	Dismantling the existing Submersible pump with PVC pipeline	925.05
Each	12-7-6	Dismantling the existing submersible pump with GI pipeline upto 10m depth. (For additional depth of each 3 m or part thereof add Rs.50/- per 3 m, in the rates)	2460.15
Each	12-7-7	Attending breakdown of water pump and associated accessories for fault finding including minor repairs & put in working condition & submit the report of inspection to the engineer in-charge.	925.05
			0.00
Above items are conforming to relevant IS as mentioned below			0.00
IS 9079 : 2002 - Electric Monoset Pumps for Clear, Cold Water for Agricultural and Water Supply Purposes			0
IS 8034 : 2002 - Submersible Pumpsets - Specification			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Chapter: 13			0

Fighting & Fire Alarm System (FF)	0
(FF-MFP/ 13.1 Main Fire Pumps (Single Stage Centrifugal)	0
(FF-MFP/ 13.2 Main Fire Pumps (Multi Stage Centrifugal)	0
(FF-MFP/ 13.3 Jockey Pumps (Centrifugal)	0
(FF-MFP/ 13.4 Booster Pump	0
(FF-PP) 13.5 Pipes	0
(FF-FV) 13.6 Valves	0
(FF-FFA) 13.7 Fire Fighting Accessories	0
(FF-FAS) 13.8 Conventional Fire Alarm System	0
(FF-PAS) 13.9 P A System	0
(FF-SPR) 13.1 Sprinklers	0
(FF-FRM) 13.11 Fire Sealant System	0
13.12 Fire Safety Audit	0
	0
	0
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	0
<u>Chapter</u>	<u>0</u>
<u>13 : FIRE</u>	
<u>IGHTIN</u>	
<u>& FIRE</u>	
<u>ARM</u>	
<u>STEM</u>	
<u>F) ___</u>	

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	
			0
<i>-3</i>	<i>-1</i>	<i>-2</i>	<i>0</i>
		<u>13.1 Main Fire Pumps (Single Stage Centrifugal) (FF-MFP/SSC)</u>	0
Each	13-1-1	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of fire service main single stage pump, of 1400 LPM at 56 m head centrifugal type, 30 HP (22 kW), 3 phase, 415 volt, 50Hz or of suitable HP complete, as per specification no. FF-MFP/SSC	127818.60
Each	13-1-2	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of fire service main single stage pump, of 1800 LPM at 76 m head centrifugal type, 50 HP (37 kW), 3 phase, 415 volt, 50Hz or of suitable HP complete as per specification no. FF-MFP/SSC	194027.40
Each	13-1-3	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of fire service main single stage pump, of 2400 LPM at 76 m head centrifugal type, 75 HP (55 kW) 3 phase, 415 volt, 50Hz or of suitable HP complete as per specification no. FF-MFP/SSC	301771.05
		<u>13.2 Main Fire Pumps (Multi Stage Centrifugal) (FF-MFP/MSC)</u>	0.00
Each	13-2-1	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of fire service main multi stage pump, of 2400 LPM at 88 m head centrifugal type, 75 HP (55 kW), 3 phase, 415 volt, 50Hz or of suitable HP with suitable stages as per specification no. FF-MFP/MSC	253325.10

Each	13-2-2	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of fire service main multi stage pump, of 2800 LPM at 76 m head centrifugal type, 75 HP (55 kW), 3 phase, 415 volt, 50Hz or of suitable HP with suitable stages as per specification no. FF-MFP/MS	348050.85
Each	13-2-3	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of fire service main multi stage pump, of 2800 LPM at 105 m Head centrifugal type, 120 HP, (90 kW), 3 phase, 415 volt, 50Hz or of suitable HP with suitable stages as per specification no. FF-MFP/MS	500609.55
<u>13.3 Jockey Pumps (Centrifugal) (FF-MFP/JP)</u>			0.00
Each	13-3-1	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of jockey pump of 240 LPM at 56 m head, 15 HP (11 kW), 3 phase, 415 volt, 50Hz or of suitable HP with suitable stages as per specification no. FF-MFP/JP	67154.85
Each	13-3-2	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of jockey pump of 240 LPM at 105 m head 20 HP (15 kW), 3 phase, 415 volt, 50Hz or of suitable HP with suitable stages as per specification no. FF-MFP/JP	122068.80
<u>13.4 Booster Pump (FF-MFP/BP)</u>			0.00
Each	13-4-1	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of booster pump of 180 LPM at 40 m Head, 5 HP (3.75 KW), 3 phase, 415 volt, 50Hz or of suitable HP with suitable stages as per specification no. FF-MFP/BP	29952.30
Each	13-4-2	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of booster pump of 450 LPM at 35 m head 7.5 HP (5.5 KW), 3 phase, 415 volt, 50Hz or of suitable HP with suitable stages as per specification no. FF-MFP/BP	36628.20
Each	13-4-3	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of booster pump of 460 LPM at 40m head 10 HP (7.5 KW), 3 phase, 415 volt, 50Hz or of suitable HP with suitable stages as per specification no. FF-MFP/BP	43983.45
Each	13-4-4	Supplying, installing, testing and commissioning with perfect aligning, proper levelling of booster pump of 900 LPM at 40 m Head, 12.5 HP (10 KW), 3 phase, 415 volt, 50Hz or of suitable HP with suitable stages as per specification no. FF-MFP/BP	56726.25
Note:- LPM stands for Litres Per Minutes.			0.00
<u>13.5 Pipes (FF-PP)</u>			0.00
m	13-5-1	Supplying and erecting G.I. pipe above ground of 'C' class ERW of size 20 mm dia with necessary fittings complete as per specification no. FF-PP	303.45
m	13-5-2	Supplying and erecting G.I. pipe above ground of 'C' class ERW of size 25 mm dia with necessary fittings complete as per specification no. FF-PP	396.90
m	13-5-3	Supplying and erecting G.I. pipe above ground of 'C' class ERW of size 50 mm dia with necessary fittings complete as per specification no. FF-PP	715.05
m	13-5-4	Supplying and erecting G.I. pipe above ground of 'C' class ERW of size 65 mm dia with necessary fittings complete as per specification no. FF-PP	940.80
m	13-5-5	Supplying and erecting G.I. pipe above ground of 'C' class ERW of size 75/80 mm dia with necessary fittings complete as per specification no. FF-PP	1136.10
m	13-5-6	Supplying and erecting G.I. pipe above ground of 'C' class ERW of size 100 mm dia with necessary fittings complete as per specification no. FF-PP	1554.00
m	13-5-7	Supplying and erecting G.I. pipe above ground of 'C' class ERW of size 150 mm dia with necessary fittings complete as per specification no. FF-PP	2280.60

m	13-5-8	Supplying and erecting G.I. pipe above ground of 'C' class ERW of size 200 mm dia with necessary fittings complete as per specification no. FF-PP	3568.95
m	13-5-9	Providing coating of bitumen paint & 4mm thick wrapping for underground 100 mm ring main of fire fighting system.	362.25
m	13-5-10	Providing coating of bitumen paint & 4mm thick wrapping for underground 150 mm ring main of fire fighting system.	480.90
m	13-5-11	Providing coating of bitumen paint & 4mm thick wrapping for underground 200 mm ring main of fire fighting system.	646.80
		Note:- Refer chapter no. 16 (Civil Works) for excavation charges for laying underground pipes.	0.00
		ERW stands for Electrical Resistance Welded.	0.00
		<u>13.6 Valves (FF-FV)</u>	0.00
Each	13-6-1	Supplying and erecting cast iron foot valve ball type/flap type of size 80 mm dia with strainer for negative suction complete as per specification no. FF-VL/FV	4720.80
Each	13-6-2	Supplying and erecting cast iron foot valve ball type/flap type of size 100 mm dia with strainer for negative suction complete as per specification no. FF-VL/FV	6794.55
Each	13-6-3	Supplying and erecting cast iron foot valve ball type/flap type of size 150 mm dia with strainer for negative suction complete as per specification no. FF-VL/FV	16952.25
Each	13-6-4	Supplying and erecting cast iron foot valve ball type/flap type of size 200 mm dia with strainer for negative suction complete as per specification no. FF-VL/FV	29232.00
	13-6-5	<u>End Line Strainer (positive suction) (ELS)</u>	0.00
Each	13-6-6	Supplying and erecting 75/80 mm dia end line strainer for positive suction complete as per specification no. FF-VL/ELS	4215.75
Each	13-6-7	Supplying and erecting 100 mm dia end line strainer for positive suction complete as per specification no. FF-VL/ELS	5980.80
Each	13-6-8	Supplying and erecting 150 mm dia end line strainer for positive suction complete as per specification no. FF-VL/ELS	9529.80
Each	13-6-9	Supplying and erecting 200 mm dia end line strainer for positive suction complete as per specification no. FF-VL/ELS	12988.50
		<u>Sluice Valve</u>	0.00
Each	13-6-9	Supplying and erecting cast iron double flange sluice valve 75/80 mm dia. complete as per specification no. FF-VL/SV	5411.70
Each	13-6-10	Supplying and erecting cast iron double flange sluice valve 100 mm dia. complete as per specification no. FF-VL/SV	7965.30
Each	13-6-11	Supplying and erecting cast iron double flange sluice valve 160 mm dia. complete as per specification no. FF-VL/SV	12391.05
Each	13-6-12	Supplying and erecting cast iron double flange sluice valve 200 mm dia. complete as per specification no. FF-VL/SV	21135.45
		<u>Butterfly Valves (BFV)</u>	0.00
Each	13-6-13	Supplying & erecting cast iron double flange butterfly valve of size 50 mm dia. complete as per specification no. FF-VL/BFV	2268.00
Each	13-6-14	Supplying & erecting cast iron double flange butterfly valve of size 65 mm dia. complete as per specification no. FF-VL/BFV	2442.30
Each	13-6-15	Supplying & erecting cast iron double flange butterfly valve of size 75/80 mm dia. complete as per specification no. FF-VL/BFV	2901.15
Each	13-6-16	Supplying & erecting cast iron double flange butterfly valve of size 100 mm dia. complete as per specification no. FF-VL/BFV	3754.80
Each	13-6-17	Supplying & erecting cast iron double flange butterfly valve of size 150 mm dia. complete as per specification no. FF-VL/BFV	5968.20
Each	13-6-18	Supplying & erecting cast iron double flange butterfly valve of size 200 mm dia. complete as per specification no. FF-VL/BFV	8905.05

		<u>Non Return Valves (NRV)</u>	0.00
Each	13-6-19	Supplying and erecting cast iron double flange NRV of size 75/80 mm dia complete as per specification no. FF-VL/NRV	5591.25
Each	13-6-20	Supplying and erecting cast iron double flange NRV of size 100 mm dia complete as per specification no. FF-VL/NRV	7763.70
Each	13-6-21	Supplying and erecting cast iron double flange NRV of size 150 mm dia complete as per specification no. FF-VL/NRV	12250.35
Each	13-6-22	Supplying and erecting cast iron double flange NRV of size 200 mm dia complete as per specification no. FF-VL/NRV	19346.25
Each	13-6-23	Supplying and erecting cast iron double flange ball type NRV of size 75/80 mm dia complete as per specification no. FF-VL/NRV	8130.15
Each	13-6-24	Supplying and erecting cast iron double flange ball type NRV of size 100 mm dia complete as per specification no. FF-VL/NRV	10897.95
Each	13-6-25	Supplying and erecting cast iron double flange ball type NRV of size 150 mm dia complete as per specification no. FF-VL/NRV	25653.60
Each	13-6-26	Supplying and erecting cast iron double flange ball type NRV of size 200 mm dia complete as per specification no. FF-VL/NRV	42270.90
		<u>Gate / Wheel Valves (GV)</u>	0.00
Each	13-6-27	Supplying & erecting gun metal gate valve of size 20 mm dia complete as per specification no. FF-VL/GV	916.65
Each	13-6-28	Supplying & erecting gun metal gate valve of size 25 mm dia complete as per specification no. FF-VL/GV	1180.20
Each	13-6-29	Supplying & erecting gun metal gate valve of size 50 mm dia complete as per specification no. FF-VL/GV	1198.05
		<u>Hydrant Valves (HV)</u>	0.00
Each	13-6-30	Supplying and erecting gun metal single outlet hydrant valve fitted with necessary accessories complete as per specification no. FF-VL/HV	8274.00
Each	13-6-31	Supplying and erecting stainless steel single outlet hydrant valve fitted with necessary accessories complete as per specification no. FF-VL/HV	5278.35
Each	13-6-32	Supplying and erecting gun metal double outlet hydrant valve fitted with necessary accessories complete as per specification no. FF-VL/HV	16035.60
Each	13-6-33	Supplying and erecting stainless steel double outlet hydrant valve fitted with necessary accessories complete as per specification no. FF-VL/HV	11416.65
		<u>13.7 Fire Fighting Accessories (FF-FFA)</u>	0.00
		<u>Priming Tank</u>	0.00
Each	13-7-1	Supplying & installing one piece moulded HDPE / fibre water tank for negative suction only, having capacity 1000 litres fitted with necessary accessories complete as per specification no. FF-FFA/PT	10385.55
		<u>Hose Reel with Drum (HR)</u>	0.00
Each	13-7-2	Supplying and installing wall mounting swinging Hose reel drum fitted with 19 mm dia. 30m long high pressure polypropylene (Polyhose) fitted with necessary accessories complete as per specification no. FF-FFA/HV	6563.55
		<u>Hose Pipes</u>	0.00
Each	13-7-3	Supplying fire fighting controlled percolation (C.P.) Hose pipe, 63mm dia, 15m in length , fitted with necessary accessories complete as per specification no. FF-FFA/CPH	3917.55
Each	13-7-4	Supplying fire fighting reinforced rubber lined (R.R.L.) hose pipe, 63mm dia, 15m in length , fitted with necessary accessories complete as per specification no. FF-FFA/RRL	4853.10
m	13-7-5	Supplying & erecting high pressure poly propylene hose pipe 19 mm dia complete as per specification no. FF-FFA/HOP	178.50
m	13-7-6	Supplying & erecting high pressure rubber hose pipe 19 mm dia complete as per specification no. FF-FFA/RHP	124.95

		<u>Nozzles (NZ)</u>	0.00
Each	13-7-7	Supplying & erecting gun metal branch pipe of 63 mm dia fitted with 20 mm dia detachable hexagonal nozzle complete as per specification no. FF-FFA/NZ	1782.90
Each	13-7-8	Supplying & erecting stainless steel branch pipe 63 mm dia fitted with 20 mm dia detachable hexagonal nozzle complete as per specifications no. FF-FFA/NZ	1816.50
Each	13-7-9	Supplying & erecting gun metal chrome plated nozzle, 19 mm dia complete as per specification no. FF-FFA/NZ	903.00
		<u>Fire Brigade Connection (FBC)</u>	0.00
Each	13-7-10	Supplying and erecting fire brigade header of 150 mm dia , for supplying water in fire tank complete as per specification no. FF-FA/FBC	8559.60
		<u>Siamese Connection (SMC)</u>	0.00
Each	13-7-11	Supplying and erecting fire brigade header (Siamese connection) of 150 mm dia for supplying water to wet riser system complete as per specification no. FF-FFA/SMC	10539.90
		<u>Air Cushion Tank (Air Vessel) (ACT)</u>	0.00
Each	13-7-12	Supplying and installing air vessel of 300 mm dia 1.5m in height M.S. tank installed inside pump house / on terrace complete as per specification no. FF-FFA/ACT	11332.65
		<u>Air Release Valve (ARV)</u>	0.00
Each	13-7-13	Supplying and erecting 20/25mm dia gun metal air release cock , with necessary G.I. coupling to be fitted on top of air vessel or on wet riser complete as per specification no. FF-FFA/ARV	756.00
		<u>Pressure Gauge (PG)</u>	0.00
Each	13-7-14	Supplying and installing pressure gauge of 100 mm dia. , 0-300 PSI or 0-14 kg per cm square fitted with 12/15 mm dia. pad cock valve, and G.I. pipe, elbow etc. complete as per specification no. FF-FFA/PG	694.05
		<u>Pressure Switch(PS)</u>	0.00
Each	13-7-15	Supplying and installing pressure switch with 12/15 mm dia isolation valve , G.I. nipple, elbow, etc complete as per specification no. FF-FFA/PS	1594.95
		<u>Orifice Plate(OP)</u>	0.00
Each	13-7-16	Supplying and erecting one no. brass orifice plate having 6 mm. thickness, 140 mm outer dia and required/proper diameter of inner hole at every single outlet hydrant valve as per specification no. FF-FFA/OP	914.55
Each	13-7-17	Supplying and erecting one no. brass orifice plate having 6 mm. thickness, 160 mm outer dia and required/proper diameter of inner hole at every double outlet hydrant valve as per specification no. FF-FFA/OP	926.10
		<u>MS / CRCA Boxes (BOX)</u>	0.00
Each	13-7-18	Supplying and erecting M.S./CRCA cabinet for housing single hydrant valve (size 400 x 400 x 400mm.) made from 16 SWG sheet and angle iron 25 mm. x 25 mm. x 4 mm. having front doors with viewing glass (8"x6") and locking arrangement with necessary fixing material such as rubber bidding etc. duly painted in post box red colour.	4867.80
Each	13-7-19	Supplying and erecting M.S./CRCA cabinet for housing Fire Brigade / SIEMESE connections (size 1250 x 400 x 300 mm.) made from 16 SWG sheet and angle iron 25 mm. x 25 mm. x 4 mm. having front doors with viewing glass (8" x 6") and locking arrangement with necessary fixing material such as rubber bidding etc. duly painted in post box red colour.	7514.85

Each	13-7-20	Supplying and erecting M.S./CRCA cabinet for housing Floor Hydrant valve, hose pipe, hose reel and branch pipe (size 1000 x 736 x 736 mm.) made from 16 SWG sheet and angle iron 25 x 25 x 4 mm. having front doors with viewing glass (8"x6") and locking arrangement with necessary fixing material such as rubber bidding etc. duly painted in post box red colour.	14467.95
	Note:-	Specifications of the above items shall conform to respective Indian standards.	0.00
		MS stands for Mild Steel.	0.00
		CRCA stands for Cold Rolled Close Annealed.	0.00
		<u>13.8 Conventional Fire Alarm System (FF-FAS)</u>	0.00
Each	13-8-1	Supplying, installing, testing and commissioning heat detector complete on box as per specification no. FF-FAS/HD	1605.45
Each	13-8-2	Supplying, installing, testing and commissioning optical type smoke detector complete on box as per specification no. FF-FAS/SD	1722.00
Each	13-8-3	Supplying, installing, testing and commissioning four wire conventionally single ended reflected type beam smoke detector with 8 " receiver . The range of smoke detector is max 164 feet .	32713.80
Each	13-8-4	Supplying, installing, testing and commissioning four wire conventionally single ended reflected type beam smoke detector with 8" receiver . The range of smoke detector is max 325 feet .	53266.50
	Note:-	For large areas and passages beam detectors should be preferably used (Item no. 13-8-3 & 13-8-4)	0.00
Each	13-8-5	Supplying, installing, testing and commissioning manual call point (Pill box) with break glass push button in metal enclosure complete as per specification no. FF-FAAS/MCP	539.70
Each	13-8-6	Supplying, installing, testing and commissioning hooters with CRCA enclosure complete as per specification no. FF-FAAS/HTR	632.10
Each	13-8-7	Supplying, installing, testing and commissioning remote response indicators complete as per specification no. FF-FAAS/RI	204.75
m	13-8-8	Supplying, installing, testing and commissioning FR, XLPE armoured cable 2 core 1.5 sq.mm. copper conductor complete erected on wall/ ceiling complete as per specification no. CB-LT/CU	96.60
m	13-8-9	Supplying, installing, testing and commissioning FR, XLPE armoured cable 4 core 1.5 sq.mm. copper conductor complete erected on wall/ ceiling complete as per specification no. CB-LT/CU	118.65
m	13-8-10	Supplying, installing, testing and commissioning FR, XLPE armoured cable 8 core 1.5 sq.mm. copper conductor complete erected on wall/ ceiling complete as per specification no. CB-LT/CU	231.00
m	13-8-11	Supplying, installing, testing and commissioning FR, XLPE armoured cable 12 core 1.5 sq.mm. copper conductor complete erected on wall/ ceiling complete as per specification no. CB-LT/CU	322.35
Each	13-8-12	Supplying, installing, testing and commissioning of 2 Zones Microprocessor based conventional fire alarm control panel (FACP) with standard accessories complete as per specification no. FF-FAAS/FACP	17521.35
	Note:-	1. Increase overall rate by 25 % for additional zone as per requirement.	0.00
		2. For item no 13-8-8 to 13-8-11 increase overall rate by 7.5% for FRLS.	0.00
		3. Above rates are for Non-Addressable type.	0.00
Each	13-8-13	Supplying, installing, testing and commissioning 2 Zone, local signal control panel (LCP) with standard accessories complete as per specification no. FF-FAAS/LCP	5302.50
	Note:-	1. Increase overall rate by 10 % for additional zone as per requirement.	0.00
		2. Above items are for Non-Addressable type.	0.00
		<u>13.9 P A System (FF-PAS)</u>	0.00

Each	13-9-1	Supplying, erecting, testing and commissioning amplifier 120 W for public address system suitable to operate on 230 Volts A.C. / 12 Volts D.C. supply complete as per specification no. FF-PA/AFR	17126.55
Each	13-9-2	Supplying, erecting, testing and commissioning sound column 15 Watts complete as per specification no. FF-PA/SOC	2601.90
Each	13-9-3	Supplying, erecting, testing and commissioning microphone complete as per specification no. FF-PA/MIC	4965.45
Each	13-9-4	Supplying, erecting, testing and commissioning stand for microphone complete.	1760.85
Each	13-9-5	Supplying, erecting, testing and commissioning table stand for microphone complete.	1103.55
m	13-9-6	Supplying, erecting, testing and commissioning of 2 core shielded microphone cable complete as per specification no. FF-PA/MCC	135.45
m	13-9-7	Supplying, erecting, testing and commissioning of 0.5 sq mm speaker wire complete.	34.65
m	13-9-8	Supplying, erecting, testing and commissioning of 0.75 sq mm speaker wire complete.	43.05
m	13-9-9	Supplying, erecting, testing and commissioning of 1 sq mm speaker wire complete.	49.35
m	13-9-10	Supplying, erecting, testing and commissioning of 1.5 sq mm speaker wire complete.	65.10
<u>13.10 Sprinklers (FF-SPR)</u>			0.00
Each	13-10-1	Supplying, erecting, testing and commissioning of 15 mm (½") dia. NBCM Body chrome finished quartzoid bulb sprinkler having 68° C fixed temperature rating with deflector disc of conventional construction complete as per specification no. FF-SPR	424.20
Each	13-10-2	Supplying, erecting, testing and commissioning vane type water flow detector suitable for detecting flow of water in wet sprinkler pipe of main line or branch lines of 75/80 mm dia having following features 1) Visual switch activation 2) Rugged switch assembly 3) Heavy duty aluminium pipe saddles 4) Durable metal enclosure 5) Steel U bolts for secure mounting 6) Two SPDT (Single pole double track) synchronised switches 7) serviceable without draining pipes	6686.40
Each	13-10-3	Supplying, erecting, testing and commissioning vane type water flow detector suitable for detecting flow of water in wet sprinkler pipe of main line or branch lines of 100 mm dia having following features 1) Visual switch activation 2) Rugged switch assembly 3) Heavy duty aluminium pipe saddles 4) Durable metal enclosure 5) Steel U bolts for secure mounting 6) Two SPDT (Single pole double track) synchronised switches 7) serviceable without draining pipes	7637.70
<u>13.11 FIRE SEALANT SYSTEM (FF-FRM)</u>			0.00
Job	13-11-1	Supplying and erecting fire resistant mortar (20 kg) with fire resistance class S90 as per National Electrical Code (NEC) SP30-2011 suitable to seal the openings with all kinds of cables, pipes and cable support system in steel and aluminium and plastic profiles (Except hollow core conductors). The residual openings shall be closed with filler, as per specification no. FF-FRM	8629.95
	Note:-	For estimating purpose consider one bag of 20kg to cover 300mm x 400mm area 150mm thick or 0.018 m3	0.00
<u>13.12 FIRE SAFETY AUDIT</u>			0.00
Sq mtr	13-12-1	Providing/conducting complete fire audit including submission of fire audit report for the whole premises.	6.30
	Note:-	Specification of the above all items conform to respective Indian Standards.	0.00
			0.00
		Above items are conforming to relevant IS as mentioned below:-	0.00
		IS 1520:1980 Horizontal Centrifugal Pumps For Clear, Cold, Fresh Water	0.00

IS 1239 :2004 Pipes	0.00
IS 10221:2008 Coating and wrapping of Underground pipes	0.00
IS 4038 : 1986 Foot valve for water work purpose	0.00
IS 907 : 1984 End line strainer	0.00
IS 909: 1992 Specification for Underground Fire Hydrant, Sluice Valve Type	0.00
IS 13095 : 1981 Butterfly valve for general purposes	0.00
IS 5312-I : 2004 Non return valve for water work purpose	0.00
IS 778 :1984 Gate valve for water work purpose	0.00
IS 5290: 1993 Landing valve	0.00
IS 884 :1985 First aid hose reel for fire fighting system	0.00
IS 446 :1987 Rubber hose pipe	0.00
IS 8423, IS 903 :1994 CP hose for fire fighting	0
IS 636 : 1988 RRL hose for fire fighting	0
IS 4927 :1992 Canvas hose pipe for fire fighting	0
IS 903: 1993 Fire hose coupling, branch pipe, Nozzles and nozzle spanner	0
IS 3589:2001 Air cushion tank	0
BS 5839 part I, EN54 - 12 : 2002 Optical beam detector	0
IS 14851:2000 Maintenance of fire hose	0
IS 15105:2002 Design and installation of fixed automatic sprinkler fire extinguishing system	0
IS 15301:2003 Installation & maintenance of fire fighting pumps	0
IS 15908 : 2011 Selection, installation and maintenance of control and indicating equipment's for fire detection and alarm system	0

Chapter: 14	0
Temporary Illumination (TE- IL)	0
(TE-IL) 14.1 Temporary Illumination	0
(TE-DG) 14.2 Hiring of Generators	0

TEMPORARY ILLUMINATION (TE- IL) 0

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0</i>
-3	-1	-2	0
14.1 Temporary Illumination			0
Each	14-1-1	Providing temporary illumination consisting of tube light day light and colour 4' X 36/40 watts complete erected with tubes, mains and required switchgears with continuous earth wire erected and dismantled without using scaffolding upto three days.	42.00
Each	14-1-2	Providing temporary illumination consisting of tube light day light and colour 4' X 36/40 watts complete erected with tubes, mains and required switchgears with continuous earth wire erected and dismantled with using scaffolding upto three days.	56.70

Each	14-1-3	Providing temporary illumination consisting of flood light fitting 1000/500W complete halogen fitting with lamp, holders, mains and required switchgears with continuous earth wire erected and dismantled without using scaffolding upto three days.	211.05
Each	14-1-4	Providing temporary illumination consisting of flood light 1000/500W complete halogen fitting with lamp, holders, mains and required switchgears with continuous earth wire erected and dismantled with scaffolding upto three days.	223.65
Each	14-1-5	Providing temporary illumination consisting of metal halide flood light fitting 250 W complete with lamp, holders, mains and required switchgears with continuous earth wire erected and dismantled without using scaffolding upto three days.	279.30
Each	14-1-6	Providing temporary illumination consisting of metal halide flood light fitting 250 W complete with lamp, holders, mains and required switchgears with continuous earth wire erected and dismantled with using scaffolding upto three days.	291.90
Each	14-1-7	Providing temporary illumination consisting of metal halide flood light fitting 400 W complete with lamp, holders, mains and required switchgears with continuous earth wire erected and dismantled without using scaffolding upto three days.	297.15
Each	14-1-8	Providing temporary illumination consisting of metal halide flood light fitting 400 W complete with lamp, holders, mains and required switchgears with continuous earth wire erected and dismantled, with using scaffolding upto three days.	309.75
Per Thousand	14-1-9	Providing temporary illumination consisting of white/colour series lights 50 nos. with miniature lamps of 6.2 to 16V with required switchgears erected and dismantled with rotor effect as approved without scaffolding upto three days.	995.40
Per Thousand	14-1-10	Providing temporary illumination consisting of white/colour series lights 50 nos. with miniature lamps of 6.2 to 16V with required switchgears erected and dismantled with rotor effect as approved with scaffolding upto three days	1144.50
Each	14-1-11	Providing temporary illumination consisting of 2000W sungun or colour tran light fitting complete with stand cutter and strainer along with mains, required switchgears with continuous earth wire erected and dismantled without scaffolding upto three days.	458.85
Each	14-1-12	Providing and fixing temporary electronic rotating machine to give running effect to strips lights and miniature lights upto a load of 5000 W either mechanical cum electrical or electronics complete with mains and required switchgears with continuous earth wire and dismantling upto three days.	425.25
Each	14-1-13	Providing temporary illumination wrapping of coloured gelatin paper to 36/40 W, fluorescent tube light/500 W flood light fitting complete with rubber boards and dismantling upto three days.	7.35
Each	14-1-14	Providing temporary oscillating type pedestal air circulators 600/900 mm or air cooler connected with necessary mains, required switchgears with continuous earthing maintaining the same during the function and including dismantling upto three days.	338.10
Each	14-1-15	Providing temporary oscillating type pedestal fan 16" (400 mm) or ceiling fan connected with necessary mains, required switchgears with continuous earthing maintaining the same during the function and including dismantling upto three days.	161.70
Each	14-1-16	Providing temporary evaporator air cooler connected with necessary mains, required switchgears with continuous earthing maintaining the same during the function and including dismantling upto three days.	400.05
Each	14-1-17	Providing temporary heavy duty exhaust fan 18" or 24" connected with necessary mains, required switchgears with continuous earthing maintaining the same during the function and including dismantling for three days.	363.30

Each	14-1-18	Providing temporary plug point with 3 pin 6A/16A with necessary mains, required switchgears and continuous earth connection upto three days.	32.55
Each	14-1-19	Providing temporary 1.5 Ton capacity window air conditioning unit complete with temporary frame and fabrication work and required material to achieve cooling temperature connected along with necessary mains, required switchgears and continuous earthing maintaining the same during the function and including dismantling for three days.	3471.30
Each	14-1-20	Providing temporary 280 litres capacity refrigerator complete with M.S. stand if necessary connected with mains, switchgear and continuous earthing maintaining the same during the function and including dismantling for three days.	732.90
Each	14-1-21	Providing temporary 120/150 liter capacity water cooler with water filter (candle type or UV tube) with M.S. stand complete with minor plumbing work if necessary connected with mains, required switchgears and continuous earthing maintaining the same during the function and including dismantling for three days.	1533.00
Each	14-1-22	Providing temporary 20"/24" colour television with multi channel tuner, connected with necessary mains, required switchgears with continuous earthing maintaining the same during the function and including dismantling for three days.	383.25
Each	14-1-23	Providing temporary 6V/10V with 20/40 Watt fluorescent emergency lamp connected with necessary mains, required switchgears and continuous earthing maintaining the same during the function and including dismantling for three days.	156.45
Each	14-1-24	Providing temporary digital projector with spring loaded white screen connected with necessary mains, required switchgears and maintaining the same during the function including dismantling.	5366.55
m	14-1-25	Providing temporary illumination consisting of round LED/ neon flex LED/ flexible strip LED having 2 to 5 W capacity per meter and consisting suitable power adaptor with mains, required switchgears erected and dismantled without using scaffolding and maintaining the same upto 3 days	13.65
m	14-1-26	Providing temporary illumination consisting of round LED/ neon flex LED/ flexible strip LED having 2 to 5 W capacity per meter and consisting suitable power adaptor with mains, required switchgears erected and dismantled with using scaffolding and maintaining the same upto 3 days	15.75
Each	14-1-27	Providing and maintaining temporary 2 Ton capacity split type air conditioning unit complete with temporary stand and fabrication work and required material to achieve cooling temperature connected along with necessary mains, required switchgears and continuous earthing maintaining the same during the function and including dismantling for three days.	5945.10
Each	14-1-28	Providing and maintaining temporary 2 Ton capacity window type air conditioning unit complete with temporary stand and fabrication work and required material to achieve cooling temperature connected along with necessary mains, switchgear and continuous earthing maintaining the same during the function and including dismantling for three days.	4280.85
Each	14-1-29	Providing and maintaining temporary 1.5 Ton capacity split type air conditioning unit complete with temporary stand and fabrication work and required material to achieve cooling temperature connected along with necessary mains, required switchgears and continuous earthing maintaining the same during the function and including dismantling for three day.	5116.65

Each	14-1-30	Providing and maintaining temporary 3.5 Ton capacity tower type air conditioning unit complete with temporary stand and fabrication work and required material to achieve cooling temperature connected along with necessary mains, required switchgears and continuous earthing maintaining the same during the function and including dismantling for three days.	14775.60
Each	14-1-31	Providing and maintaining temporary 4.5 Ton capacity tower type air conditioning unit complete with temporary stand and fabrication work and required material to achieve cooling temperature connected along with necessary mains, required switchgears and continuous earthing, maintaining the same during the function and including dismantling for three days.	16592.10
Each	14-1-32	Providing and maintaining temporary LCD/LED colour T.V. (32" to 42" size) and positioning at site with required cabling as per direction of authority, duly connecting and testing for three days.	1042.65
Job	14-1-33	Providing, maintaining and operating temporary public address system on hire consisting 02 Nos. solid state heavy wattage amplifier 250 watts (one for working and another for stand by emergency) working on AC / generator and 24 volt car battery supply, 06 Nos. of matching of 100 volt line (200 watts) box type speakers/ sound column, 02 Nos super sensitive microphone with suitable size of microphone holding stand. The system shall be in a fully automatic change over operation in case of failure of supply for one day.	7801.50
Each	14-1-34	Providing and maintaining temporary additional box type speaker of 100 Volt line (100 watts) for one day.	334.95
Each	14-1-35	Providing and maintaining temporary cordless (Hand type or lape type) super sensitive HUF microphone (1 no stand by) for one day.	2552.55
Each	14-1-36	Providing, maintaining and operating temporary fingertip switcher of 8 ways to operate the public address system between dias and participants in the hall with necessary cabling, wiring etc for one day.	2049.60
Each	14-1-37	Providing and maintaining temporary all in one desktop PC with following configuration Intel TM second generation core i3 G630, 2GB DDR3 RAM, 1TB HARD DISK, DVDR W optical drive 20" LED screen, web camera, wifi, bluetooth, keyboard and mouse, media card reader etc for three days.	1166.55
Each	14-1-38	Providing and maintaining temporary Laser Printer , resolution (in dpi) mono 600, paper size A4, print speed in PPM (A4 size) 25, Port : 1 USB, memory (in MB): NA network card 10/100:YES, Duplexing: YES etc on hire basis for three days.	333.90
Each	14-1-39	Providing and maintaining temporary 1 KVA on line UPS pure sine wave suitable for 30 minutes battery backup to provided computer with necessary interconnecting cabling, wiring etc for three days.	2345.70
Each	14-1-40	Providing and maintaining temporary 700 VA digital pure sine wave Invertor based on IGBT technology suitable for 120 minutes battery backup to electrical installation with necessary interconnecting cabling, wiring etc for one day.	502.95
Each	14-1-41	Providing and maintaining temporary 1400 VA to 1600 VA digital pure sine wave Invertor based on IGBT technology suitable for 120 minutes battery backup to electrical installation with necessary interconnecting cabling, wiring etc for one day.	884.10
Each	14-1-42	Providing and maintaining temporary 2500 VA digital pure sine wave Invertor based on IGBT technology on hire basis suitable for 120 minutes battery backup to electrical installation with necessary interconnecting cabling, wiring etc for one day.	1774.50

Each	14-1-43	Providing temporary illumination Consisting of LED flood light fitting 100w to 115w Metal Halide Flood light fitting 250watt complete erected with lamp, holders, mains, switchgears with continuous earth wire erected and dismantled without using scaffolding upto three days	966.00
Each	14-1-44	Providing temporary illumination Consisting of LED flood light fitting 100w to 115w Metal Halide flood light fitting 250watt complete erected with lamp, holders, mains, switchgears with continuous earth wire erected and dismantled with using scaffolding upto three days	978.60
Each	14-1-45	Providing temporary plug point with 3 phase industrial socket having CRCA sheet metal enclosure with 30A, 3 pin plug and earth socket and 30A, 3 pin, plug top with 30A, triple pole MCB, mains, switchgears with continuous earth wire upto three days	116.55
m	14-1-46	Providing temporary PVC armoured cable 4 core 50 sq mm Aluminium conductor with continuous 12 SWG G.I. Earth wire complete erected with gland and lugs and switchgears upto three days	21.00
m	14-1-47	Providing temporary PVC armoured cable 4 core 95 sq mm Aluminium conductor with continuous 10 SWG G.I. Earth wire complete erected with gland and lugs and switchgears upto three days	27.30
m	14-1-48	Providing temporary PVC armoured cable 3.5 core 150 sq mm aluminium conductor with continuous 8 SWG G.I. earth wire complete erected with gland and lugs and switchgears upto three days	43.05
m	14-1-49	Providing temporary PVC armoured cable 3.5 core 240 sq mm aluminium conductor with continuous 8 SWG G.I. Earth wire complete erected with gland and lugs and switchgears upto three days	58.80
m	14-1-50	Providing temporary PVC armoured cable 3.5 core 300 sq mm aluminium conductor with continuous 8 SWG G.I. Earth wire complete erected with gland and lugs and switchgears upto three days	68.25
m	14-1-51	Providing temporary PVC armoured cable 3.5 core 400 sq mm aluminium conductor with continuous 8 SWG G.I. Earth wire complete erected with gland and lugs and switchgears upto three days	74.55
Each	14-1-52	Providing temporary illumination consisting of water proof LED Par Light, 54 pieces with RGBW controller complete erected with mains, switchgears with continuous earth wire erected and dismantled without using scaffolding upto three days	1228.50
Each	14-1-53	Providing temporary illumination consisting of water proof LED Par Light, 54 pieces with RGBW controller complete erected with mains, switchgears with continuous earth wire erected and dismantled with using scaffolding upto three days	2473.80
Each	14-1-54	Providing temporary illumination consisting of water proof HMI Par Light, 4000 watts complete erected with mains, switchgears with continuous earth wire erected and dismantled without using scaffolding upto three days	4580.10
Each	14-1-55	Providing temporary illumination consisting of water proof HMI Par Light, 4000 watts complete erected with mains, switchgears with continuous earth wire erected and dismantled with using scaffolding upto three days	4832.10
Job	14-1-56	Providing, commissioning and maintaining temporary CCTV system with 8 channel NVR , IP video/audio input - 1 no, IP based 2.0 MP, Full HD, IR IP dome camera - 2 nos, IP based 2.0 MP, Full HD, IR IP PTZ camera - 2 nos, 2TB Hard Disk - 2 no, 32" Full H D professional Display - 1 no, 8 port PoE Switch - 1 no, Power supply unit to camera - 1 no, On Line UPS UPS - 1 no with necessary mains, switchgears on hire basis for one day	11366.25

Each	14-1-57	Providing, commissioning and maintaining additional IP based 2.0 MP, full HD, IR IP dome camera in existing CCTV system with necessary mains, switchgears on hire basis for one day.	946.05
Each	14-1-58	Providing, commissioning and maintaining additional IP based 2.0 MP, Full HD, IR IP PTZ camera in existing CCTV system with necessary mains, switchgears on hire basis for one day.	2600.85
m	14-1-59	Providing temporary illumination consisting of LED rope Light having 2 to 5 W capacity per meter and consisting suitable power adaptor with mains, switchgears erected and dismantled without using scaffolding and maintaining the same upto 3 days	16.80
m	14-1-60	Providing temporary illumination consisting of LED rope light having 2 to 5 W capacity per meter and consisting suitable power adaptor with mains, switchgears erected and dismantled with using scaffolding and maintaining the same upto 3 days	24.15
Each	14-1-61	Providing temporary line matching transformer (40-XT) for speakers having distance more than 60 Mtrs from Amplifiers and maintaining the same upto 1 day	201.60
Each	14-1-62	Providing temporary illumination consisting of flood light fitting 200 W complete LED fitting with lamp , complete required switchgear erected and dismantled without using scaffolding upto three days.	1231.65
Each	14-1-63	Providing temporary illumination consisting of flood light fitting 200 W complete LED fitting with lamp , complete required switchgear erected and dismantled with using scaffolding upto three days.	1946.70
Each	14-1-64	Providing temporary illumination consisting of flood light fitting 300 W complete LED fitting with lamp , complete required switchgear erected and dismantled without using scaffolding upto three days.	2427.60
Each	14-1-65	Providing temporary illumination consisting of flood light fitting 300 W complete LED fitting with lamp , complete required switchgear erected and dismantled with using scaffolding upto three days.	2440.20
Each	14-1-66	Providing and maintaining distribution transformer 11kV / 22 kV on HV side 415 V on LV side up to 63 to 200 kVA Capacity for ten days on hired basis.	18961.95
Each	14-1-67	Providing and maintaining distribution transformer 11kV / 22 kV on HV side 415 V on LV side up to 250 to 500 kVA Capacity for ten days on hired basis.	27902.70
Each	14-1-68	Providing and maintaining distribution transformer 11/ 22 kV on HV side 415 V on LV side upto 500 kVA capacity on hired basis subsequent to first ten days after commissioning.	144.90
Each	14-1-69	Erecting 11kV / 22 kV on HV side 415 V on LV side up to 500 kVA capacity hired/ provided transformer on existing plinth / DP structure, making connections on HV & LV side in approved manner, carrying out necessary tests before and after charging upto full load to satisfaction.	8392.65
	Note:-	1) For item no.14.1.1 to 14.1.23 and 14.1.25 to 14.1.26 and 14-1-62 to 14-65 the rates are for the period of 3 days function which includes preparatory period with testing and connecting, commissioning and maintaining in healthy condition with transportation.	0.00
		2) For each additional day after 3 days but not exceeding 15 days, add 25% per day.	0.00
		3) For additional (ie after for 3+15) days, add 5% per day but total rental charges shall be limited to 80% of full rate of completed item.	0.00
		4) For item no. 14.1.24 the rates of projector for 1 function or for max. period of 1 day whichever is more, including transportation, connections with projector, operator till completion of function.	0.00
		5) Cartridge refilling is not added in the cost of Item no.14-1-38. Rs300/- shall be added for each cartridge refilling.	0.00

6) Rate for Item no 14-1-32 to 14-1-36, 14-1-40 to 14-1-42, 14-1-56 to 14-1-58, 14-1-61(new) is for one day only . For next five days the rate shall be reduced by 10% of the first day . From 7th to 15th Days rate shall be reduced by 50% of first day From 16th to 30th day rates shall be reduced by 75 % of first day 0.00

14.2 Hiring of Generators (TE-DG)

			0.00
Per Day	14-2-1	Hiring charges for supplying and maintaining 230V, 50 cycles AC generating set 1 to 2 kVA capacity with necessary fuel, mains, switchgears and accessories complete with continuous running on load/no load as per requirements complete with self certification.	2671.20
Per Day	14-2-2	Hiring charges for supplying and maintaining 230/415 V, 50 cycles AC generating set 3 to 10 kVA capacity with necessary fuel, mains, switchgears and accessories complete with continuous running on load/no load as per requirements complete with self certification.	5198.55
Per Day	14-2-3	Hiring charges for supplying and maintaining temporary 415V, 50 cycles AC generating set 11 to 25 kVA (excluding 25 kVA) capacity with necessary fuel, mains, switchgears and accessories complete with continuous running on load/no load as per requirements complete with self certification.	8031.45
Per Day	14-2-4	Hiring charges for supplying and maintaining temporary 415V, 50 cycles AC generating set 25 to 40 kVA capacity with necessary fuel, mains, switchgears and accessories complete with continuous running on load/no load as per requirements complete with self certification.	8892.45
Per Day	14-2-5	Hiring charges for supplying and maintaining temporary 415V, 50 cycles AC generating set 50/62.5 kVA capacity with necessary fuel, mains, switchgears and accessories complete with continuous running on load/no load as per requirements complete with self certification.	11646.60
Per Day	14-2-6	Hiring charges for supplying and maintaining temporary 415V, 50 cycles AC generating set 75 to 100 kVA capacity with necessary fuel, mains, switchgears and accessories complete with continuous running on load/no load as per requirements complete with self certification.	14427.00
Per Day	14-2-7	Hiring charges for supplying and maintaining temporary 415V, 50 cycles AC generating set 125 kVA capacity with necessary fuel, mains, switchgears and accessories complete with continuous running on load/no load as per requirements complete with self certification.	20124.30
Per Day	14-2-8	Hiring charges for supplying and maintaining temporary 415V, 50 cycles AC generating set 250 kVA capacity with necessary fuel, mains, switchgears and accessories complete with continuous running on load/no load as per requirements complete with self certification.	36813.00
Per Day	14-2-9	Hiring charges for supplying and maintaining temporary 415V, 50 cycles AC generating set 320 kVA capacity with necessary fuel, mains, switchgears and accessories complete with continuous running on load/no load as per requirements with necessary certificate from Electrical Inspector.	46823.70
Per Day	14-2-10	Hiring charges for supplying and maintaining temporary 415V, 50 cycles AC generating set 500 kVA capacity with necessary fuel, mains, switchgears and accessories complete with continuous running on load/no load as per requirements with necessary certificate from Electrical Inspector.	64057.35
Note:-		1) Above rates are applicable for first day. For subsequent five days, the above rate shall be reduced by 10%	0.00
		2) The above rates are inclusive of transportation.	0

- 3) The above note does not include preparatory and testing period, and no additional amount shall be paid for that. 0
- 4) The above rates are with on load working of DG set upto 5 hours per day. For additional working hours exceeding average 5 hours per day cost of diesel shall be considered as per actual. 0
- 5) Lumpsum provision for the additional fuel (if DG set is to be used for more than five hours) shall be made as a separate item in the estimate of temporary D G Set. (Fuel payment shall be made on the basis of actual consumption and invoice produced by Contractor. 0

0

0

Chapter:
15

0

Siren
(SRN)

0

SRN-SRN 15.1 Siren

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15.2 Accessories for Siren

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15.3 Dismantling

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0

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0

Chapter 15: SIREN (SRN)

0

0

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0</i>
<i>-3</i>	<i>-1</i>	<i>-2</i>	<i>0</i>
		<u>15.1 Siren</u>	0
Each	15-1-1	SITC of 220/250 Volts, single phase, 50 Hz Siren of 3.25 km range , Horizontal double mounting type of 1/2 HP 6000 RPM on C. C. foundation complete as per specification no. SRN-AS/SM	12573.75
Each	15-1-2	SITC of 415 Volts, 3 phase, 50 Hz Siren of 8 km range , horizontal double mounting type of 5 H.P. 2800 RPM on C.C. foundation complete as per specification no. SRN-AS/SM	65819.25
Each	15-1-3	Re-erecting the siren motor duly lifting at site and connected with assembly of existing siren by proper alignment, testing and giving test trial as per the required standard.	615.30
		Note :- Functional requirements for electric motor sirens (second revision)	0.00
		<u>15.2 Accessories for Siren</u>	0.00
Each	15-2-1	Scrapping the existing paint of outer surface of weather shade for siren, cleaning the surface and applying two coats of anticorrosive epoxy air dry paint of approved colour mixed in special type thinner complete as per specification no. SRN-AS/PTG	1124.55
Each	15-2-2	Scrapping existing paint of Siren motor, blower and iron foundation completely and painting the same by one coat of red oxide and two coats epoxy paint of superior quality of required colour.	751.80
Each	15-2-3	Providing C.C. foundation (1:2:4) with plastering of size 60 x 60 x 20 cm for Siren motor with nut bolts of required size with 1.2 cm thick hard rubber sheet packing provided in between the foundation and motor base to minimise the jerks and vibration to the slab complete.	1409.10
Each	15-2-4	Supplying and fixing superior quality metal elastic anti vibration rubber mounting pad to siren.	677.25
Each	15-2-5	Replacing the existing unserviceable worn-out bearing for heavy duty siren moto	823.20
		<u>15.3 Dismantling</u>	0.00

Per Km	15-3-1	Transportation of siren motor from site to workshop and back to the site. (For Municipal Corporation Area Only)	52.50
Each	15-3-2	Dismantling the existing Siren motor from the existing location, lowering from terrace to ground, loading and unloading.	639.45
		Above items are conforming to relevant IS as mentioned below:-	0
		IS 1941 (Part I) : 1976 - Functional requirements for electric motor sirens, Part 1: ac 3 phase 50 hz, 415 volts type	0

		Chapter: 16	0
		Civil Work (CW)	0
(CW-EXN)	16.1	Excavation	0
	16.2	Masonry Work	0
	16.3	CC Foundation	0
(CW-PTG)	16.4	Painting	0
(CW-PLB)	16.5	Plumbing	0
	16.6	Plumbing Accessories	0
			0
			0
			0
			0
		Chapter 16 : CIVIL WORKS	0

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	
-3	-1	-2	0
		<u>16.1 Excavation (CW-EXN)</u>	0
m	16-1-1	Making trench of suitable width and depth in soft soil for laying provided LT cable up to and including 16 sq.mm complete as per specification no. CW-EXN-CTR	150.15
m	16-1-2	Making trench of suitable width and depth in hard murum / tar road for laying provided LT cable up to and including 16 sq. mm complete as per specification no. CW-EXN-CTR	184.80
m	16-1-3	Making trench of suitable width and depth in hard murum / tar road for laying provided LT cable of 16 sq. mm & above and covered with half round hume pipe complete as per specification no. CW-EXN-CTR	268.80
m	16-1-4	Making trench of suitable width and depth in soft soil for laying provided LT cable of 16 sq. mm & above and covered with half round hume pipe complete as per specification no. CW-EXNCTR	234.15
m ³	16-1-5	Excavating hard Rock or bituminous road by chiselling for preparing pit for pole / stay/earth plate / for laying cable/ pipe & clearing the site by removing debris & making the site as required complete.	995.40
m ³	16-1-6	Excavating hard murum / metal road by chiselling for preparing pit for poles stay or earth plates or for laying cables, pipes & clearing the site by removing debris & making the site as required complete.	248.85
m ³	16-1-7	Excavating soft murum / soft soil road by chiselling for preparing pit for poles stay or earth plates or for laying cables, pipes & clearing the site by removing debris & making the site good complete.	213.15
	Note:-	1) For laying additional cable in same trench add Rs. 45/- per meter for additional bricks between and above the extra cable.	0.00

2) For laying additional cable in same trench above 25 sq.mm, bricks shall be laid width wise above the cable. Total rate shall be increased by Rs. 48/- per meter. 0.00

16.2 Masonry Work

			0.00
m ³	16-2-1	Making burnt brick masonry with 1:6 ratio cement concrete duly plastered including watering, streaking joint on exposed faces, rocking at joint on exposed faces and watering complete.	5017.95
Job	16-2-2	Supplying & arranging burnt cured bricks properly for various purposes (size 9" x4.25"x3") at work for 100 bricks complete.	605.85
m ²	16-2-3	Supplying and spreading stone metal 25 mm size for 100 mm depth above the ground level complete.	96.60
Each	16-2-4	Supplying and erecting RCC chamber cover with frame 60cmx 45cm medium duty 100kg with lifting arrangement including laying of angle iron frame of angle size as 50 x 50 x6 mm to be fixed / embedded on top of chamber complete.	2626.05

16.3 C.C. Foundation

			0.00
Each	16-3-1	Making transformer plinth (1.5 x 1.5 x 1.5) m in size with necessary excavation in ground with 150 mm. thick M- 10 PCC at the bottom and top and 250 mm. thick, burnt brick wall constructed at periphery and remaining hollow portion shall be filled with 40mm hard broken aggregate. External surface duly plastered by 12 mm thick including watering etc complete.	13893.60

Note:- The above rates are for 1.2 meter height plinth above ground level. If excess height is required to maintain ground clearance as per Central Electricity Authority (Measures Relating to Safety and Electric Supply) regulations, 2010 regulations, add Rs. 820/- for every 100 mm. 0.00

Each	16-3-2	Making cement concrete foundation including excavation (45 x 45 x 120) cm deep in 1:3:6 cement concrete, 20 to 25 mm stone metal, (45 x 45 x 45) cm / 45 cm dia. x 45 cm height plinth duly plastered, with necessary curing and finishing complete. (for 6 m pole)	1231.65
Each	16-3-3	Making cement concrete foundation including excavation (60 x 60 x 150) cm deep in 1:3:6 cement concrete 20 x 25 mm stone metal, (45 x 45 x 45) cm /45 cm dia. x 45 cm height plinth duly plastered, with necessary curing and finishing complete. (above 6 m to 9 m poles)	1927.80
Each	16-3-4	Making cement concrete foundation including excavation (60 x 60) cm x deep 1/6 of pole length in 1:3:6 cement concrete 20 x 25 mm stone metal, 45 cm x 45 cm x 45 cm /45 cm dia. x 45 cm. height plinth duly plastered, with necessary curing and finishing complete. (for above 9 m poles)	2066.40
m ³	16-3-5	Making cement concrete foundation in 1:2:4 cement concrete with foundation bolts and nuts complete. (cost of wooden box is included) (for pumps) .	4750.20
Each	16-3-6	Making cement concrete foundation including excavation (60 x 60 x 150) cm deep in 1:3:6 cement concrete, (20 to 25) mm stone metal with necessary curing and finishing complete. (for stay) .	1607.55
m ³	16-3-7	Making cement concrete foundation in 1:3:6 cement concrete, (20 to 25) mm. stone metal duly plastered with necessary curing for complete. (pole muffing or any other purpose) .	3249.75
Each	16-3-8	Making M- 20 grade reinforced cement concrete foundation by considering the safe soil bearing capacity as 10 T/sq.m at 1.5 m depth including supply of steel, concrete, excavation, fixing provided nut bolts with the help of template, duly plastered as per design complete (for 3 to 5m octagonal / conical GI pole) .	2893.80
Each	16-3-9	Making M- 20 grade reinforced cement concrete foundation by considering the safe soil bearing capacity at site as 10 T/sq.m at 1.5 m depth including supply of steel, concrete, excavation and fixing provided nut bolts with the help of template, duly plastered as per design complete (for 6m to 8m high octagonal /conical GI pole) .	3478.65

Each	16-3-10	Making M- 20 grade reinforced cement concrete foundation by considering the safe soil bearing capacity at site as 10 T/sq.m at 1.5 m depth including supply of steel, concrete, excavation and fixing provided nut bolts with the help of template, duly plastered as per design complete (for 9m & 10m high octagonal /conical GI pole).	4631.55
Each	16-3-11	Making M- 20 grade reinforced cement concrete foundation by considering the safe soil bearing capacity at site as 10 T/sq. m at 1.5 m depth including supply of steel, concrete, excavation and fixing provided nut bolts with the help of template, duly plastered as per design complete (for 11m & 12.5m high octagonal /conical GI pole).	6475.35
Each	16-3-12	Making M- 20 cement concrete foundation by considering the safe soil bearing capacity at site as 10 T/sq. m at 2 m depth including excavation and fixing provided nut bolts with the help of template, duly plastered as per design complete (for 12.5 m raising lowering high mast).	23795.10
Each	16-3-13	Making M- 20 cement concrete foundation by considering the safe soil bearing capacity at site as 10 T/sq. m at 2 m depth including excavation and fixing provided nut bolts with the help of template, duly plastered as per design complete (for 16 m raising lowering high mast).	28713.30
Each	16-3-14	Making M- 20 cement concrete foundation by considering the safe soil bearing capacity at site as 10 T/sq. m at 2 m depth including excavation and fixing provided nut bolts with the help of template, duly plastered as per design complete (for 20 m raising lowering high mast) .	35147.70
Each	16-3-15	Making M- 20 cement concrete foundation suitable by considering the safe soil bearing capacity at site as 10 T/sq. m at 2 m depth including excavation and fixing provided nut bolts with the help of template, duly plastered as per design complete (for 25 m high mast).	40852.35
<u>16.4 Painting (CW-PTG)</u>			0.00
Each	16-4-1	Spray painting the table fan / pedestal fan / cabin fan / ceiling fan / exhaust fan including guards etc by scrapping the existing paint complete. Specification no. CW-PTG/PTF.	130.20
m	16-4-2	Painting of pipe pole upto 6 m length along with street light / pole brackets / clamps etc by scrapping the existing paint complete. Specification no CW -PTG/PTP.	57.75
m	16-4-3	Painting of steel tubular / rail / RSJ pole above 6.0 m length along with street light pole brackets, clamps etc by scrapping the existing paint complete. Specification no CW -PTG/PTP.	77.70
Each	16-4-4	Spray painting of fluorescent fitting with flat reflector for 1x4' FTL by scrapping existing paint complete. Specification no. CWPTG/ PFT.	78.75
Each	16-4-5	Spray painting of fluorescent fitting with flat reflector for 2x4' FTL by scrapping existing paint complete. Specification no. CWPTG/ PFT.	87.15
Each	16-4-6	Spray painting of panel type lift doors of MS complete. Specification no. CW-PTG/PLD1.	863.10
Each	16-4-7	Painting lift door of collapsible type complete. Specification no. CW-PTG/PLD2.	699.30
Job	16-4-8	Spray painting of distribution transformer upto 200 kVA capacity complete. Specification no. CW-PTG/PDT.	2370.90
Job	16-4-9	Spray painting of distribution transformer above 200 kVA capacity complete. Specification no. CW-PTG/PDT.	3277.05
m ²	16-4-10	Painting fencing of transformer substation including all supports, iron work and doors from both sides by scrapping existing paint, with one coat of red oxide & two coats of aluminium paint complete.	107.10

m ²	16-4-11	Painting of feeder pillar / switchgears and frame of panel board with single coat of red oxide & two coats of approved quality enamel paint by scrapping existing paint painting the same complete. (while calculating square meter area, area of angle iron frame on which the switchgears are erected shall be considered if required)	239.40
m ²	16-4-12	Powder coating of approved colour shade on both sides of provided iron work / MS / CRCA sheet steel work complete including anti-rust treatment in an approved manner.	366.45
m ²	16-4-13	Epoxy painting on both side of approved colour shade of provided iron work / MS / CRCA sheet steel work complete along with anti-rust treatment in an approved manner.	509.25
Each	16-4-14	Painting identification number by indelible ink marker / enamel paint on fittings / equipment with the help of ladders if necessary by dismantling and refitting the enclosures, tubes etc if required the same and refitting complete.	7.35
Each	16-4-15	Scrapping existing paint & spray painting of industrial type fluorescent fitting with flat reflector for 2x4' FTL completely as per specification no. CW-PTG/PFT.	99.75
	Note:-	For item no. 16-4-10, 16-4-11 if painting is to be done from both sides, double the rate per sq.m for both sides of painting.	0.00
		<u>16.5 Plumbing (CW-PLB)</u>	0.00
m	16-5-1	Supplying and erecting ISI mark GI pipe 15 mm dia. 'B' class at position with accessories complete. Specification no. CW-PLB/GP.	207.90
m	16-5-2	Supplying and erecting ISI mark GI pipe 20 mm dia.'B' class at position with accessories complete. Specification no. CW-PLB/GP.	248.85
m	16-5-3	Supplying and erecting ISI mark GI pipe 25 mm. dia. 'B' class at position with accessories complete. Specification no. CW-PLB/GP.	355.95
m	16-5-4	Supplying and erecting ISI mark GI pipe 32 mm dia.'B' class at position with accessories complete. Specification no. CW-PLB/GP.	425.25
m	16-5-5	Supplying and erecting ISI mark GI pipe 40 mm. dia. 'B' class at position with accessories complete. Specification no. CW-PLB/GP.	502.95
m	16-5-6	Supplying and erecting ISI mark GI pipe 50 mm dia.'B' class at position with accessories complete. Specification no. CW-PLB/GP.	668.85
m	16-5-7	Supplying and erecting ISI mark GI pipe 65 mm. dia. 'B' class at position with accessories complete. Specification no. CW-PLB/GP.	849.45
m	16-5-8	Supplying and erecting ISI mark GI pipe 75/80 mm dia. 'B' class at position with accessories complete. Specification no. CW-PLB/GP.	1087.80
m	16-5-9	Supplying and erecting ISI mark GI pipe 100 mm dia. 'B' class at position with accessories complete. Specification no. CW-PLB/GP.	1518.30
m	16-5-10	Supplying and erecting ISI mark GI pipe 32 mm. dia 'C' class at position with accessories complete. Specification no. CW-PLB/GP.	505.05
m	16-5-11	Supplying and erecting ISI mark GI pipe 40 mm. dia 'C' class at position with accessories complete. Specification no. CW-PLB/GP.	586.95
m	16-5-12	Supplying and erecting ISI mark GI pipe 50 mm. dia 'C' class position with accessories complete. Specification no. CW-PLB/GP.	787.50
m	16-5-13	Supplying and erecting ISI mark GI pipe 65 mm. dia 'C' class position with accessories complete. Specification no. CW-PLB/GP.	994.35
m	16-5-14	Supplying and erecting ISI mark GI pipe 75/80 mm dia 'C' class position with accessories complete. Specification no. CW-PLB/GP.	1242.15
m	16-5-15	Supplying and erecting ISI mark GI pipe 100 mm dia 'C' class position with accessories complete. Specification no. CW-PLB/GP.	1748.25
m	16-5-16	Supplying and erecting high density polythene pipe ISI mark 32 mm dia. suitable for pressure of 6 kg/cm ² connected to jet/submersible pump with required material complete.	71.40
m	16-5-17	Supplying and erecting high density polythene pipe ISI mark 40 mm dia. suitable for pressure of 6 kg/cm ² connected to jet/submersible pump with required material complete.	107.10
m	16-5-18	Supplying and erecting high density polythene pipe ISI mark 50 mm. dia. suitable for pressure of 6 kg. / cm ² connected to jet/submersible pump with required material complete.	133.35

16.6 Plumbing Accessories

			0.00
Each	16-6-1	Supplying and erecting 25 mm dia. gun metal foot valve position with necessary materials complete.	415.80
Each	16-6-2	Supplying and erecting 40 mm dia. gun metal foot valve at position with necessary materials complete.	796.95
Each	16-6-3	Supplying and erecting 50 mm dia. gun metal foot valve at position with necessary materials complete.	1040.55
Each	16-6-4	Supplying and erecting 65 mm dia. gun metal foot valve at position with necessary materials complete.	1907.85
Each	16-6-5	Supplying and erecting 75/80 mm dia. gun metal foot valve at position with necessary materials complete.	2507.40
Each	16-6-6	Supplying and erecting 100 mm dia. gun metal foot valve at position with necessary materials complete.	3846.15
Each	16-6-7	Supplying and erecting 25 mm dia. cast iron foot valve at position with necessary materials complete.	296.10
Each	16-6-8	Supplying and erecting 40 mm dia. cast iron foot valve at position with necessary materials complete.	483.00
Each	16-6-9	Supplying and erecting 50 mm dia. cast iron foot valve at position with necessary materials complete.	603.75
Each	16-6-10	Supplying and erecting 65 mm dia. cast iron foot valve at position with necessary materials complete.	970.20
Each	16-6-11	Supplying and erecting 75/80 mm dia. cast iron foot valve at position with necessary materials complete.	1419.60
Each	16-6-12	Supplying and erecting 100 mm dia. cast iron foot valve at position with necessary materials complete.	2938.95
Each	16-6-13	Supplying and erecting 25 mm dia. gun metal sluice valve at position with necessary materials complete.	829.50
Each	16-6-14	Supplying and erecting 40 mm. dia. gun metal sluice valve at position with necessary materials complete.	1590.75
Each	16-6-15	Supplying and erecting 50 mm dia. gun metal sluice valve at position with necessary materials complete.	2279.55
Each	16-6-16	Supplying and erecting 65 mm dia. gun metal sluice valve at position with necessary materials complete.	4239.90
Each	16-6-17	Supplying and erecting 75/80 mm dia. gun metal sluice valve at position with necessary materials complete.	5974.50
Each	16-6-18	Supplying and erecting 100 mm dia. gun metal sluice valve at position with necessary materials complete.	11593.05
Each	16-6-19	Supplying and erecting non return valve 25 mm dia in position made of gun metal complete.	528.15
Each	16-6-20	Supplying and erecting non return valve 40 mm dia in position made of gun metal complete.	997.50
Each	16-6-21	Supplying and erecting non return valve 50 mm dia in position made of gun metal complete.	1456.35
Each	16-6-22	Supplying and erecting non return valve 65 mm dia in position made of gun metal complete.	3279.15
Each	16-6-23	Supplying and erecting non return valve 75/80 mm dia in position made of gun metal complete.	4258.80
Each	16-6-24	Supplying and erecting non return valve 100 mm dia in position made of gun metal complete.	8002.05
Each	16-6-25	Supplying and erecting CI flange 25 mm dia with necessary nuts bolts and washers with rubber seal in position complete.	150.15
Each	16-6-26	Supplying and erecting CI flange 40 mm dia with necessary nuts bolts and washers with rubber seal in position complete.	159.60
Each	16-6-27	Supplying and erecting CI flange 50 mm. dia with necessary nuts bolts and washers with rubber seal in position complete.	191.10
Each	16-6-28	Supplying and erecting CI flange 65 mm. dia with necessary nuts bolts and washers with rubber seal in position complete.	240.45
Each	16-6-29	Supplying and erecting CI flange 75/80 mm. dia with necessary nuts bolts and washers with rubber seal in position complete.	406.35

Each	16-6-30	Supplying and erecting CI flange 100 mm. dia with necessary nuts bolts and washers with rubber seal in position complete.	426.30
Each	16-6-31	Supplying and erecting 0-100 lb/sq. inch pressure gauge having 4" dia complete with socket for 1/2" GI pipe complete.	704.55
Each	16-6-32	Supplying and erecting 40 mm dia. ball type foot valve having CI body lined with FRP from inside and synthetic rubber coated reinforced, nitrile rubber ball, leaded fin bronze, FRP sheet, carbon steel fasteners, CI./MS strainer complete.	1167.60
Each	16-6-33	Supplying and erecting 50 mm dia. ball type foot valve having CI body lined with FRP from inside and synthetic rubber coated reinforced, nitrile rubber ball, leaded fin bronze, FRP sheet, carbon steel fasteners, CI./MS strainer complete.	1651.65
Each	16-6-34	Supplying and erecting 65 mm dia. ball type foot valve having CI body lined with FRP from inside and synthetic rubber coated reinforced, nitrile rubber ball, leaded fin bronze, FRP sheet, carbon steel fasteners, CI./MS strainer complete.	2384.55

Note:- For ball type foot valve above 65 mm refer chapter 13-7 0

Above items are conforming to relevant IS as mentioned below:- 0

IS 1255 : 1984 Code of practice for installation and maintenance of power cables up to and including 33 kV rating. 0

IS:1200.19 : 1981 Method of Measurement of Building and Civil Engineering Works Part XIX: Water Supply, Plumbing and Drains. 0

IS 10028 : 2016 Code of practice for selection, installation and maintenance of transformers: Part 2 Installation. 0

IS 1332 : 1986 - Precast reinforced concrete street lighting poles. 0

National Electric Code (NEC) 0

Chapter: 0
17 0

Lift 0

17.1 New Installation 0

17.2 Lift Repair/Modernization 0

17.3 Dismantling 0

Chapter 0

No : 17

LIFTS

(LFT)

0

0

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0</i>
-3	-1	-2	0
		<u>17-1 New Installation</u>	0
Job	17-1-1	SITC of Electric Traction Passenger Lift with	1189734.00
		· Rated capacity :- 4 Passenger/272Kg	0.00
		· Floors :- G+1 floor (2Stops/2 Landings)	0.00
		· Travel :- 3 to 4.2 mtrs	0.00
		· Location of Lift Machine:- MR/MRL	0.00
		· Rated speed :- 1.0mps VS	0.00
		· Doors type :- COPO/TOPO Doors with frame having clear opening of 700/800 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
		· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
		· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with / without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
		· Clear Car size ofmm wide xmm deep xmm high	0.00
		· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
		· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength, copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
		· ARD complete with necessary SMF VRLA batteries	0.00
		· Fireman controller having fireman switch at fire Landing.	0.00
		· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
		· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
		· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job	17-1-2 SITC of Electric Traction Passenger Lift with	1219266.30
	· Rated capacity :- 6 Passenger/408Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR/MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 800 mm wide x 2000mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor / control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm overhead.	0.00
Job	17-1-3 SITC of Electric Traction Passenger Lift with	1318008.30
	· Rated capacity :- 8 Passenger/544Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR/MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 800 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep.mm Pit depth,mm Overhead.	0.00
Job 17-1-4	SITC of Electric Traction Passenger Lift with	1576990.80
	· Rated capacity :- 10 Passenger/680Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR/MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 800 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/ control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep ,mm Pit depth, ,mm Overhead.	0.00
Job 17-1-5	SITC of Electric Traction Passenger Lift with	1683336.90
	· Rated capacity :- 13 Passenger/884Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs.	0.00
	· Location of Lift Machine:- MR/MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 900/1000 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/ frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor /control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-6	SITC of Electric Traction Passenger Lift with	1858537.80
	· Rated capacity :- 14 Passenger/952Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 900 mm wide x 2000mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/ control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-7	SITC of Electric Traction Passenger cum Stretcher/Hospital Lift with	1973384.70
	· Rated capacity :- 15 Passenger/1020Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR/MRL [applicable for Passenger Lift with MRL only & Stretcher/Hospital Lift with MR & MRL]	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COP/TOPO Doors with frame having clear opening of 800/900/1000 mm wide x 2000mm high made from SS 304 grade sheet of 1.5mm thick in hairline finish for car and all landing doors with SS door architraves / frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/ control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work.	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-8	SITC of Electric Traction Passenger Lift with	2022361.95
	· Rated capacity :- 16 Passenger/1088Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR/MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 1000mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT..	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job	#REF! SITC of Electric Traction Passenger Lift with	2136552.60
	· Rated capacity :- 18 Passenger/1224Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR	0.00
	· Speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 1100 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep, mm Pit depth,mm Overhead.	0.00
Job 17-1-10	SITC of Electric Traction Passenger cum Stretcher/Hospital Lift with	2351338.50
	· Rated capacity :- 20 Passenger/1360Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR/MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 1100/1200 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/ frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/ without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-11	SITC of Electric Traction Passenger Lift with	2411931.90
	· Rated capacity :- 22 Passenger/1496Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR/MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 1100 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-12	SITC of Electric Traction Stretcher/Hospital Lift with	2475429.60
	· Rated capacity :- 23 Passenger/1564Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 1300 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00

	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
		0.00
Job 17-1-13	SITC of Electric Traction Passenger cum Stretcher/Hospital Lift with	2572725.75
	· Rated capacity :- 26 Passenger/1768Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR/MRL [applicable for Passenger Lift with MR & MRL & Stretcher/Hospital Lift with MR only]	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 1100/1200 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/ frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/ without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00

	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00
	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-14	SITC of Electric Traction Passenger cum Stretcher/Hospital Lift with	2725398.90
	· Rated capacity :- 29 Passenger/1972Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR/MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 1200/1300/1400 mm wide x 2000mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00

	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00
	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-15	SITC of Electric Traction Stretcher/Hospital Lift with	3053316.00
	· Rated capacity :- 36 Passenger/2448Kg	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 1400mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00

	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00
	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-16	SITC of Electric Traction Goods Lift with	3121176.45
	· Rated capacity :- 3000Kg Goods/44 Passengers	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR	0.00
	· Rated speed :- 0.6 to 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 1700 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00

	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00
	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-17	SITC of Electric Traction Goods Lift with	3455082.75
	· Rated capacity :- 4000Kg Goods /59 Passengers	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR	0.00
	· Rated speed :- 0.6 to 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 2100 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00

	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00
	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-18	SITC of Electric Traction Goods Lift with	3678263.40
	· Rated capacity :- 5000Kg Goods/73 Passengers.	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MR	0.00
	· Rated speed :- 0.6 to 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 2100 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00
	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00

	Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00
	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
		0.00
Job 17-1-19	SITC of Electric Traction Goods Lift with	3194571.45
	· Rated capacity :- 3000Kg Goods/44 Passengers	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPPO/TOPO Doors with frame having clear opening of 1800mm wide x 2000mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00

	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00
	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-20	SITC of Electric Traction Goods Lift with	3506577.90
	· Rated capacity :- 4000Kg Goods/59 Passengers.	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of .1800mm wide x 2000mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	· CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00

	· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
	· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00
	· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
	· Lift shaft available having clear size ofmm wide xmm deep,mm Pit depth,mm Overhead.	0.00
Job 17-1-21	SITC of Electric Traction Goods Lift with	3760235.85
	· Rated capacity :- 5000Kg Goods/73 Passengers.	0.00
	· Floors :- G+1 floor (2Stops/2 Landings)	0.00
	· Travel :- 3 to 4.2 mtrs	0.00
	· Location of Lift Machine:- MRL	0.00
	· Rated speed :- 1.0mps VS	0.00
	· Doors type :- COPO/TOPO Doors with frame having clear opening of 2200 mm wide x 2000 mm high made from SS 304 grade sheet of 1.5mm, thick in hairline finish for car and all landing doors with SS door architraves/frames	0.00
	· Lift car enclosure made from SS 304 grade sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc.	0.00
	· COP with SS face plate having metallic push buttons with Braille Code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with/without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ ground floor	0.00
	· Clear Car size ofmm wide xmm deep xmm high	0.00
	· LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille Code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings	0.00
	· Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port, control panel duly wired with proper size & strength copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class	0.00
	· ARD complete with necessary SMF VRLA batteries	0.00
	· Fireman controller having fireman switch at fire Landing,	0.00
	CCTV surveillance system comprises of 2nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for 60 days with 18" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge.	0.00

		· Lift Machine of Gearless PMSM of suitable kW with Traction pulley, OSG, electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves, suspension wire ropes/belts of adequate size & strength	0.00
		· Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work	0.00
		· Minor civil work for alteration if any and erection of door frames and accessories, erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails fixing of girders for mounting lift machine etc. complete as per specification no. LFT.	0.00
		· Lift shaft available having clear size ofmm wide xmm deep, mm Pit depth,mm Overhead.	0.00
		Add On	0.00
	A	For Lift travelling up to six floors at a speed of 1.0 mps, add as below,	0.00
Floor	1	For Lift having 700mm wide x 2000mm high clear entrance in 1.5mm thick SS 304	162151.50
Floor	2	For Lift having 800mm wide x 2000mm high clear entrance in 1.5mm thick SS 304	167013.00
Floor	3	For Lift having 900mm wide x 2000mm high clear entrance in 1.5mm thick SS 304	172863.60
Floor	4	For Lift having 1000mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	178056.90
Floor	5	For Lift having 1100mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	183447.60

Floor	6	For Lift having 1200mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	189888.30
Floor	7	For Lift having 1300mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	195766.20
Floor	8	For Lift having 1400mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	201749.10
Floor	9	For Lift having 1500mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	211836.45
Floor	10	For Lift having 1700mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	222296.55
Floor	11	For Lift having 1800mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	233551.50
Floor	12	For Lift having 2100mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	254556.75
Floor	13	For Lift having 2200mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	263448.15
	A1	For Lift travelling above six floors & up to fifteen floors at a speed of 1.5 mps, add as below,	0
			0

Floor	1	For Lift having 700mm wide x 2000mm high clear entrance in 1.5mm thick SS 304	169433.25
Floor	2	For Lift having 800mm wide x 2000mm high clear entrance in 1.5mm thick SS 304	174536.25
Floor	3	For Lift having 900mm wide x 2000mm high clear entrance in 1.5mm thick SS 304	180647.25
Floor	4	For Lift having 1000mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	186054.75
Floor	5	For Lift having 1100mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	191672.25
Floor	6	For Lift having 1200mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	198425.85
Floor	7	For Lift having 1300mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	204408.75
Floor	8	For Lift having 1400mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	210612.15

Floor	9	For Lift having 1500mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	221121.60
Floor	10	For Lift having 1700mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	232234.80
Floor	11	For Lift having 1800mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	243881.40
Floor	12	For Lift having 2100mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	265815.90
Floor	13	For Lift having 2200mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	275243.85
			0.00
	A2	For Lift travelling above fifteen floors & up to twenty floors at a speed of 1.75 mps, add as below,	0.00
Floor	1	For Lift having 800mm wide x 2000mm high clear entrance in 1.5mm thick SS 304	179703.30
Floor	2	For Lift having 900mm wide x 2000mm high clear entrance in 1.5mm thick SS 304	186011.70
Floor	3	For Lift having 1000mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	191522.10

Floor	4	For Lift having 1100mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	197323.35
Floor	5	For Lift having 1200mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	204207.15
Floor	6	For Lift having 1300mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	210437.85
Floor	7	For Lift having 1400mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	216865.95
Floor	8	For Lift having 1500mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	227663.10
Floor	9	For Lift having 1700mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	239155.35
Floor	10	For Lift having 1800mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	251155.80
Floor	11	For Lift having 2100mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	273810.60

Floor	12	For Lift having 2200mm wide x 2000mm high clear entrance in 1.5mm thick SS 30	283091.55
			0.00
	B	If there is additional automatic car door, add as below.	0.00
			0.00
Set	1	For Lift car having 700mm wide x 2000mm high clear entrance having 1.5mm thick	134036.70
Set	2	For Lift car having 800mm wide x 2000mm high clear entrance having 1.5mm thick	138177.90
Set	3	For Lift car having 900mm wide x 2000mm high clear entrance having 1.5mm thick	143075.10
Set	4	For Lift car having 1000mm wide x 2000mm high clear entrance having 1.5mm thick	147737.10
Set	5	For Lift car having 1100mm wide x 2000mm high clear entrance having 1.5mm thick	152246.85
Set	6	For Lift car having 1200mm wide x 2000mm high clear entrance having 1.5mm thick	157718.40
Set	7	For Lift car having 1300mm wide x 2000mm high clear entrance having 1.5mm thick	162700.65
Set	8	For Lift car having 1400mm wide x 2000mm high clear entrance having 1.5mm thick	167612.55
Set	9	For Lift car having 1500mm wide x 2000mm high clear entrance having 1.5mm thick	175893.90
Set	10	For Lift car having 1700mm wide x 2000mm high clear entrance having 1.5mm thick	185761.80

Set	11	For Lift car having 1800mm wide x 2000mm high clear entrance having 1.5mm th	194970.30
Set	12	For Lift car having 2100mm wide x 2000mm high clear entrance having 1.5mm th	213102.75
Set	13	For Lift car having 2200mm wide x 2000mm high clear entrance having 1.5mm th	221271.75
			0.00
			0.00
	C	For Full Collective control system, add as below.	0.00
Each	1	For Lift travelling above First floor & up to Sixth floor	33378.45
Each	2	For Lift travelling above Sixth floor & up to Fifteenth floor	76259.40
Each	3	For Lift travelling above Fifteenth floor & up to Twentieth floor	100079.70
			0.00
			0.00
Each	D	For additional 2MP Camera along with necessary accessories at Home Landing, add as given.	16443.00
			0.00
			0.00
	E	For Group control system of number of lifts, add as below.	0.00
Job	1	For Duplex Lift control system	42326.55
Job	2	For Triplex Lift control system	63264.60
Job	3	For Quadruplex Lift control system	85313.55
			0.00
			0.00
Each	F	For vision panel having Size 100mm wide x 200mm high covered with fire rated laminated glass, having punched Jali as a part of the door panel SS sheet itself.	3370.50
			0.00
	G	The above rates are for landing & car door height of 2000mm and Lift car ceiling height of 2250mm .	0.00
		If the requirements for landing & car doors height above 2000mm & Lift car height above 2250mm, add overall Rs. per 100mm rise per Lift per landing.	0.00
	a	For Lift car enclosure & car door per 100mm Step rise	0.00
per landing	1	for Lift car door, having clear entrance of 700/800/900mm wide	55058.85
per landing	2	for Lift car door, having clear entrance 1000/1100/1200/1300mm wide	75386.85
per landing	3	for Lift car door, having clear entrance 1400/1500/1700mm wide	131952.45

per landing	4	for Lift car door, having clear entrance 1800/2100/2200mm wide	223963.95
	b	For Lift Landings per 100mm Step rise	0.00
per landing	1	for Lift Landing door having clear entrance of 700/800/900mm wide	13836.90
per landing	2	for Lift Landing door, having clear entrance of 1000/1100/1200/1300mm wide	18831.75
per landing	3	for Lift Landing door, having clear entrance of 1400/1500/1700mm wide	29715.00
per landing	4	for Lift Landing door, having clear entrance of 1800/2100/2200mm wide	44568.30
			0.00
Notes			0.00
	1)	General: - Job includes entire procedure of obtaining all necessary erection permissions & "License to Work the Lift" from Electrical Inspector(Lifts) with submission to the Engineer In Charge.	0.00
	2)	Warrantee: - Job covers three years onsite warrantee for all the Lift parts with FCAMC as per the maintenance schedule.	0.00
		Note 1 and 2 above shall be included in item description.	0.00
	3)	If the lift shaft is greater than the required size of the lift as mentioned in relevant Indian Standard [with Amendments up to date], the provision of extra steel required for erecting supports of guide rails shall be made by the department as a separate item.	0.00
	4)	The Electric power supply of 415 volts, 3 phase 4 wire,50Hz shall be made available up to Lift controller, and as per the provisions laid down in relevant The Electricity Safety Regulations 2010[with Amendments up to date], Indian Standard The Maharashtra Lift, escalators & moving walkway Act 2017 & relevant Rules, the separate cables for lighting and power & shall be erected through lift shaft only with 2nos distinct earth connections from lift machine & controller	0.00
	5)	The technical specification of Lift duty motor, control panel, brakes, guide rails, and guide shoes, lift car frame, car, counter weight and suspension, lift safety gear and governor, buffer, lift doors, locking device and contacts, lift wire rope of lifts shall be as per actual requirement of the job.	0.00
	6)	For nonstandard lift shafts the Lift capacity shall be selected so that all the safety clearances to be maintained as per the provisions laid down in relevant Indian Standard, The Maharashtra Lift, escalators & moving walkway Act 2017 & relevant Rules and work shall be carried out accordingly	0.00
	7)	For building having height of 15 mtr or more, lift shall meet the requirement of fireman lift as per the statutory requirements laid in relevant Indian Standard	0.00
	8)	While framing estimates of lifts for handicapped persons/ Hospital/Goods Lifts, the relevant Indian standard shall be referred for dimensions.	0.00

	9) The sizes in mm for Lift car, entrance, available lift Shaft etc. with travel shall be mentioned in the Detailed Estimate	0.00
	10) The above rates are for mostly installed Electric Traction Lifts, for Lift requirements with different purposes/ specifications, the items should be got approved from the competent authority	0.00
	11) The Traffic Analysis [TA] shall be done as per the provisions laid down in relevant Indian standards for finalizing the capacity and number of Lifts in different types of buildings.	0.00
		0.00
	<u>17.2: Lift Repair/Modernization</u>	0.00
	<i>LIFT Machine</i>	0.00
Job	17-2-1 Overhauling of Gearbox by opening the gear box, cleaning the oil path with oil adjusting the Thrust bearing, & bush with packings etc. and refilling with the fresh oil of requisite viscosity and sufficient quantity, complete with re-erection as original with necessary alignment & testing.	6426.00
Job	17-2-2 Providing dismantling the existing worn-out/damaged Thrust bearing & bush with allied accessories complete supplying & installing new Thrust bearing & Bush with allied accessories like packings etc. and refilling with the fresh gear oil of requisite viscosity and sufficient quantity, complete suitable up to 10 passenger lift car with re-erection as original with necessary alignment & testing	11364.15
Job	17-2-3 Providing dismantling the existing lift duty electric motor from lift gearbox coupling to carryout necessary repairs and re-erection the same as original with necessary alignment & testing complete after repairing	3264.45
Job	17-2-4 Providing rewinding of the electromagnetic type brake coil suitable to operate on 110V DC supply by superior quality enamelled copper wire of require size complete with testing	4655.70
Job	17-2-5 Providing and fixing new set brake liner of good quality complete with alignment & testing with removal of old worn-out brake liners	2641.80
Job	17-2-6 Providing dismantling the existing main driving sheave complete by hanging the lift car and providing and fixing a new main driving sheave made from superior quality cast iron completely finished having diameter up to 600mm suitable up to 4nos rope grooves the size for the same will be specified in the estimate	13925.10
Job	17-2-7 Providing dismantling the existing main driving sheave complete by hanging the lift car and providing and fixing a new main driving sheave made from superior quality cast iron completely finished having diameter 601 to 800mm suitable up to 4nos rope grooves .	19564.65
Job	17-2-8 Providing dismantling the existing diverter sheave complete by hanging the lift car and providing and fixing a new diverter sheave made from superior quality cast iron completely finished having diameter up to 250mm suitable up to 4nos rope grooves.	11031.30
Job	17-2-9 Providing dismantling the existing diverter sheave complete by hanging the lift car and providing and fixing a new diverter sheave made from superior quality cast iron completely finished having diameter 251 to 500mm suitable up to 4nos rope grooves.	12465.60
Job	17-2-10 Providing dismantling the existing OSG pulley set (top & bottom) complete and providing and fixing overspeed governor pulley set (top & bottom) made from superior quality cast iron completely finished suitable for Lift car rated speed.	10740.45
Job	17-2-11 Providing dismantling the existing OSG rubber roller complete, providing and fixing new nylon roller of superior quality.	407.40
	<i>Lift CAR</i>	0.00
Job	17-2-12 Providing dismantling the existing lift car/counter weight guide shoe liner and providing and fixing new superior quality non-metallic car/counter weight guide shoe Liner complete with re-erection, alignment & adjustment complete with lubrication	3081.75

Job	17-2-13	Providing dismantling the existing unserviceable retiring cam (Door) by supplying & erecting new one of superior quality with necessary spare complete with re-erection and testing etc. with copper wound magnetic coil of 110V DC supply.	4857.30
Kg	17-2-14	Providing dismantling the existing deteriorated lift car flooring/floor tiles by supplying & erecting SS chequered plate of required thickness and of superior quality with necessary material	495.60
Job	17-2-15	Providing dismantling the existing deteriorated lift car enclosure by supplying & erecting new enclosure made from 1.5mm thick stainless steel sheet SS304 grade of superior quality with necessary material complete with handrail, mirror, required thickness stainless steel chequered plate flooring and min. 2.5mm thick GI sheet car top & stainless steel 304grade 1.2mm thick false ceiling & required LED light fitting & cabin fan/blower, emergency light with necessary grill along with required accessories suitable for 4 to 8 passenger lift car	160869.45
Job	17-2-16	Providing dismantling the existing deteriorated lift car enclosure by supplying & erecting new enclosure made from 1.5mm thick stainless steel sheet SS304 grade of superior quality with necessary material complete with handrail, mirror, required thickness stainless steel chequered plate flooring and min. 2.5mm thick GI sheet car top & stainless steel 304grade 1.2mm thick false ceiling & required LED light fitting & cabin fan/blower, emergency light with necessary grill along with required accessories suitable for 10 to 13 passenger lift car	193942.35
Job	17-2-17	Providing dismantling the existing deteriorated lift car enclosure by supplying & erecting new enclosure made from 1.5mm thick stainless steel sheet SS304 grade of superior quality with necessary material complete with handrail, mirror, required thickness stainless steel chequered plate flooring and min. 2.5mm thick GI sheet car top & stainless steel 304grade 1.2mm thick false ceiling & required LED light fitting & cabin fan/blower, emergency light with necessary grill along with required accessories suitable for 14 to 16 passenger lift car	226013.55
Job	17-2-18	Providing dismantling the existing deteriorated lift car enclosure by supplying & erecting new enclosure made from 1.5mm thick stainless steel sheet SS304 grade of superior quality with necessary material complete with handrail, mirror, required thickness stainless steel chequered plate flooring and min. 2.5mm thick GI sheet car top & stainless steel 304grade 1.2mm thick false ceiling & required LED light fitting & cabin fan/blower, emergency light with necessary grill along with required accessories suitable for 18 to 23 Passenger Lift Car	262199.70
Job	17-2-19	Providing dismantling the existing deteriorated Lift car enclosure by supplying & erecting new enclosure made from 1.5mm thick stainless steel sheet SS304 grade of superior quality with necessary material complete with handrail, mirror, required thickness stainless steel chequered plate flooring and min. 2.5mm thick GI sheet car top & stainless steel 304grade 1.2mm thick false ceiling & required LED light fitting & cabin fan/blower, emergency light with necessary grill along with required accessories suitable for 26 to 36 Passenger Lift Car	334323.15
Each	17-2-20	Supplying erecting & testing & commissioning minimum 2000mm high Infra-Red/IR curtain with minimum 80beams, suitable to attach automatic Lift car door complete with electronic driver suitable to work on 230V AC supply with required wiring & accessories complete connected to the lift controller safety circuit. including dismantling of existing accessories as applicable	52249.05

Sq ft	17-2-21	Supplying & erecting laminated type with minimum 6mm thick mirror confirming to relevant standard in the lift car complete pasting with necessary adhesives if required and fixing with SS frame & accessories complete, this job includes dismantling of existing accessories as applicable	443.10
Lift Shaft			0.00
Each	17-2-22	Providing Emergency Stop Switch as per IS [push to stop & pull/rotate clockwise to open] erected on GI box in pit/LMR /car top for maintenance work complete with necessary wires	714.00
Each	17-2-23	Supplying & erecting over travel final/Terminal limit switch complete with nylon roller for up & down direction along with cams etc as required.	2074.80
Each	17-2-24	Providing and fixing new magnetic reed switch with M.S. Flag for levelling the lift. Providing and fixing necessary magnet for the floor position indicator, providing and fixing electronics card with digital indicator, complete with re-erection including dismantling of existing accessories as applicable	1035.30
Each	17-2-25	Supplying & erecting lift car door lock with electrical contact [spring loaded NO/NC of 5A/250V rating] complete unit with Bakelite roller attached to bracket on car top with M.S. "T" bracket attached to car gate complete with Testing including dismantling of existing accessories as applicable	1035.30
m	17-2-26	Supplying & erecting main suspension wire rope of 13mm dia. having 8/19 construction as per IS complete with termination in provided eye bolts including dismantling of existing accessories as applicable	217.35
m	17-2-27	Supplying & erecting main suspension wire rope of 10mm dia. having 8/19 construction as per IS complete with termination in provided eye bolts including dismantling of existing accessories as applicable	191.10
m	17-2-28	Supplying & erecting main suspension wire rope of 8mm dia. having 8/19 construction as per IS complete with termination in provided eye bolts including dismantling of existing accessories as applicable	159.60
m	17-2-29	Supplying & erecting wire rope of 3/4/6mm dia. having 6/19 construction as per IS complete with termination in provided eye bolts including dismantling of existing accessories as applicable	106.05
Each	17-2-30	Supplying & erecting GI eye bolt suitable for tie up of min. 13mm dia. lift wire ropes with 4nos bull dog clips 8/19 construction as per IS Complete with termination in provided eye bolts including dismantling of existing accessories as applicable	1521.45
Each	17-2-31	Supplying & erecting GI eye bolt suitable for tie up of 8/10mm dia. lift wire ropes with 4nos bull dog clips 8/19 construction as per IS Complete with termination in provided eye bolts including dismantling of existing accessories as applicable.	1251.60
Car & Landing Doors			0.00
Job	17-2-32	Repairing of M.S. collapsible landing/lift car door for broken rivets, pickets gibes, roller bearings complete with oiling etc. complete with re-erection, and alignment for smooth operation	926.10
Job	17-2-33	Supplying & erecting MS collapsible type perforate Car/Landing door with 50mm high 8mm thick MS pata at top with roller bearings & nylon gibes complete having adequate strength as per requirements with necessary alignment complete with having clear opening of 700/800mm in width and clear height not less than 2000mm including dismantling of existing door as applicable	9548.70

Job	17-2-34	Supplying & erecting MS collapsible type perforate Car/Landing door with 50mm high 8mm thick MS pata at top with roller bearings & nylon gibes complete having adequate strength as per requirements with necessary alignment complete with having clear opening of 1000/1200mm in width and clear height not less than 2000mm including dismantling of existing door as applicable	11300.10
Job	17-2-35	Supplying & erecting MS Collapsible type imperforate Car/ Landing door with 50mm high 8mm thick MS pata at top with roller bearings & Nylon gibes complete having adequate strength as per requirements with necessary alignment complete with grassing Note for Imperforate door the thickness of CRCA sheet not less than 1.1mm having clear opening of 700/800mm in width and clear height not less than 2000mm, including dismantling of existing door as applicable	12390.00
Job	17-2-36	Supplying & erecting COPO/TOPO car/landing door panels with frame made from 1.5mm thick SS 304grade sheet complete with necessary coupler arrangements, nylon bearings at hanger with header assembly with all required accessories with electromechanical lock & nylon coated guide shoes complete having adequate strength as per requirements with necessary alignment complete with greasing having clear opening of 700mm in width and clear height not less than 2000mm, including dismantling of existing door as applicable.	66077.55
job	17-2-37	Supplying & erecting COPO/TOPO car/landing door panels with frame made from 1.5mm thick SS 304grade sheet complete with necessary coupler arrangements, nylon bearings at hanger with header assembly with all required accessories with electromechanical lock & nylon coated guide shoes complete having adequate strength as per requirements with necessary alignment complete with greasing having clear opening of 800mm in width and clear height not less than 2000mm, including dismantling of existing door as applicable	70817.25
job	17-2-38	Supplying & erecting COPO/TOPO car/landing door panels with frame made from 1.5mm thick SS 304grade sheet complete with necessary coupler arrangements, nylon bearings at hanger with header assembly with all required accessories with electromechanical lock& nylon coated guide shoes complete having adequate strength as per requirements with necessary alignment complete with greasing having clear opening of 900mm in width and clear height not less than 2000mm, including dismantling of existing door as applicable	80258.85
job	17-2-39	Supplying & erecting COPO/TOPO car/landing door panels with frame made from 1.5mm thick SS 304grade sheet complete with necessary coupler arrangements, nylon bearings at hanger with header assembly with all required accessories with electromechanical lock & nylon coated guide shoes complete having adequate strength as per requirements with necessary alignment complete with greasing having clear opening of 1000mm in width and clear height not less than 2000mm, including dismantling of existing door as applicable	91405.65
job	17-2-40	Supplying & erecting COPO/TOPO car/landing door panels with frame made from 1.5mm thick SS 304grade sheet complete with necessary coupler arrangements, nylon bearings at hanger with header assembly with all required accessories with electromechanical lock & nylon coated guide shoes complete having adequate strength as per requirements with necessary alignment complete with greasing having clear opening of 1200mm in width and clear height not less than 2000mm, including dismantling of existing door as applicable	104244.00

m	17-2-41	Providing & fixing aluminium sill with 1 track suitable for fixing of car/ landing door with necessary material like MS brackets, fasteners complete with alignment, including dismantling of existing door as applicable	1118.25
m	17-2-42	Providing & fixing aluminium Sill with 2 track suitable for fixing of car/ landing door with necessary material like MS brackets, fasteners complete with alignment, including dismantling of existing door as applicable	1424.85
Each	17-2-43	Providing & fixing landing door gate lock of superior quality with necessary adjustable operating lever complies with the relevant IS suitable for swing or collapsible type landing doors	4172.70
Each	17-2-44	Providing & fixing landing/Car gate movable contact electrical switch of superior quality complies with the relevant IS suitable for all type of landing/car doors	161.70
Each	17-2-45	Providing & fixing LOP with single push button with metallic top & Braille Coded suitable for UP/DN having luminous glow indicator around button with MS box & 3mm thick SS face plate with screws with UP & DN button & digital CPI (suitable for 1digits) complete with necessary connections, including dismantling of existing door as applicable	4667.25
Each	17-2-46	Providing & fixing LOP with two push button with metallic top & Braille coded suitable for UP/DN having luminous glow indicator around button with MS box & 3mm thick SS face plate with screws with UP & DN button & digital CPI (suitable for 2digits) complete with necessary connections, including dismantling of existing door as applicable	5609.10
Each	17-2-47	Providing & fixing COP with push buttons having luminous glow indicator around button suitable for G+7 floors with push buttons with metallic top & Braille coded suitable for door close, door open, alarm bell, stop, light, fan, intercom etc, FPI, with MS box & 3mm thick SS face Plate with UP & DN arrows & digital FPI (suitable for 2digits) complete with necessary connections, including dismantling of existing COP as applicable	17202.15
Each	17-2-48	Providing & fixing push button suitable with micro switch with push button on existing COP/LOP with necessary connections and testing complete including dismantling of existing button accessories as applicable	998.55
Each	17-2-49	Providing & fixing 40mm high fixing digital indicator module of gives indication of required shade with connections and testing complete including dismantling of existing accessories as applicable	1215.90
Each	17-2-50	Providing & fixing car door operator motor with assembly of suitable capacity & speed with necessary pulleys & required accessories complete including dismantling of existing accessories as applicable	25281.90
Each	17-2-51	Providing & fixing hydraulic type landing door closer suitable for swing door with necessary material complete, including dismantling of existing accessories as applicable	1315.65
door	17-2-52	Providing & fixing car/landing door guide shoe liner/gibes complete with necessary material like nylon coating complete including dismantling of existing accessories as applicable	604.80
		CONTROLLER	0.00
Job	17-2-53	Supplying erecting, testing & commissioning of electronic microprocessor/ PLC based collective-selective lift controller with closed loop logic suitable up to 5.5kW capacity lift duty motor without VVVF Drive and lift car travelling Gr+7 floors having manual operated doors complete erected on wall or floor made from 1.5mm thick CRCA sheet with powder coated enclosure having IP54 protection grade, including dismantling of existing accessories as applicable.	110263.65

Job	17-2-54	Supplying erecting, testing & commissioning of electronic microprocessor/PLC based collective-selective lift controller with closed loop logic suitable up to 5.5kW capacity lift duty motor without VVVF Drive & lift car travelling Gr+7 floors having power operated doors complete erected on wall or floor made from 1.5mm thick CRCA sheet with powder coated enclosure having IP54 protection grade. including dismantling of existing accessories as applicable	131206.95
Job	17-2-55	Supplying erecting, testing & commissioning of VVVF drive having provision for closed loop logic with necessary card, suitable to drive lift duty electric motor up to 5.5kW capacity to be erected in position with necessary wiring in existing control panel including dismantling of existing accessories as applicable	63961.80
Job	17-2-56	Supplying erecting, testing & commissioning of VVVF drive having provision for closed loop logic with necessary card, suitable to drive lift duty electric motor up to 7.5kW capacity to be erected in position with necessary wiring in existing control panel including dismantling of existing accessories as applicable	74960.55
Job	17-2-57	Supplying erecting, testing & commissioning of VVVF drive having provision for closed loop logic with necessary card, suitable to drive lift duty electric motor up to 10/11kW capacity to be erected in position with necessary wiring in existing control panel including dismantling of existing accessories as applicable	95816.70
Job	17-2-58	Supplying erecting, testing & commissioning of VVVF drive having provision for closed loop logic with necessary card, suitable to drive lift duty electric motor up to 15kW capacity to be erected in position with necessary wiring in existing control panel including dismantling of existing accessories as applicable	121065.00
Job	17-2-59	Supplying erecting, testing & commissioning of VVVF drive having provision for closed loop logic suitable to drive lift door operator motor up to 0.5/0.75kW capacity to be erected in position with necessary wiring in existing control panel including dismantling of existing accessories as applicable	25135.95
Job	17-2-60	Supplying erecting, testing & commissioning of rotary encoder mounted on the lift motor shaft for correct & control the positioning & direction of the lift car & providing closed loop feedback to the lift controller complete with necessary shielded data cable up to controller with necessary connectors, this job includes dismantling of existing encoder if any.	23326.80
Job	17-2-61	Providing & fixing inspection/maintenance box with cover of suitable size with UP/DN push buttons (with mechanical protection), stop button as per IS, mechanically protected, toggle switch for normal/inspection/maintenance mode, 6A/250V 3Pin socket & 6A piano type switch protected cover with bulb & switch having IP54 grade protection class, this job includes dismantling of existing inspection/maintenance box if any.	1619.10
Job	17-2-62	Providing & fixing junction box having size of 300x300mm & height of 80mm complete with Bakelite terminal strip of 16A/500V rating with cover having IP54 grade protection class includes dismantling of existing Junction box if any. This job includes dismantling of existing inspection/maintenance box if any.	1138.20
Job	17-2-63	Supplying erecting, testing & commissioning of ARD panel having audio-visual indication in lift car complete with necessary SMF VRLA batteries suitable for up to 8 passenger capacity lift car including dismantling of existing accessories as applicable	82639.20
Job	17-2-64	Supplying erecting, testing & commissioning of ARD panel having audio-visual indication in lift car complete with necessary SMF VRLA batteries suitable for 9 to 12 passenger capacity lift car. including dismantling of existing accessories as applicable	93662.10

Job	17-2-65	Supplying erecting, testing & commissioning of ARD panel having audio-visual indication in lift car complete with necessary SMF VRLA batteries suitable for 13 to 16 passenger capacity lift car. including dismantling of existing accessories as applicable	106959.30
Job	17-2-66	Supplying erecting, testing & commissioning of ARD panel having audio-visual indication in lift car complete with necessary SMF VRLA batteries suitable for 17 to 22 passenger capacity lift car. including dismantling of existing accessories as applicable	121947.00
Job	17-2-67	Supplying erecting, testing & commissioning of ARD panel having audio-visual indication in lift car complete with necessary SMF VRLA batteries suitable for 23 to 29 passenger capacity lift car. including dismantling of existing accessories as applicable	140007.00
Job	17-2-68	Providing complete lift shaft wiring in copper wire/cable from main controller to car top with COP & to all landing push button panel to all landing gate locks to all floor levelling switch to main motor to brake unit & final limit switch indicator system using ISI mark single pvc insulated flexible copper wire having minimum 1.0 sq. mm size from controller to safety devices & 0.75 Sqmm size for indication system complete in PVC/GI trunking with cover for lift with manually/power operated doors travelling up to G+1 floors / 2 stops & 2 landings for floor height up to 4.2mtrs including dismantling of existing accessories as applicable	21168.00
m	17-2-69	Supplying, erecting & terminating flat flexible PVC insulated cable 4core 1.0 sq. mm copper conductor used for railing cables complete erected with PVC/ wooden fastening arrangement & lugs, on wall / trunking as per specification including dismantling of existing accessories as applicable	161.70
m	17-2-70	Supplying, erecting & terminating flat flexible PVC insulated cable 12core 1.0 sq. mm copper conductor used for trailing cables complete erected with pvc/ wooden fastening arrangement & lugs, on wall/ trunking as per specification including dismantling of existing accessories as applicable	382.20
Job	17-2-71	Supplying, erecting, testing & commissioning programmable rope mounted Overload Warning Device (OWD) within built digital indicator complete with required wiring & accessories with audio visual indication in lift car including dismantling of existing accessories as applicable.	67032.00
			0.00
Note:	1.	For item no 17-2-2.... for 11 to 20 passenger capacity lift , add 15% to the basic cost	0.00
	2.	For item no 17-2-2.... for 21 to 29 passenger capacity lift , add 25% to the basic cost	0.00
	3.	For item nos. 17-2-6 to 17-2-9 main/diverter sheave for additional groove exceeding 4nos , add 10% in the basic cost per additional groove	0.00
	4.	For item no's 17-2-33 to 17-2-35 for Stainless Steel Collapsible doors, basic cost of MS collapsible shall be doubled,	0.00
		Note:- This item shall be operated with prior permission in writing from the concern Superintending Engineer (Electrical).	0.00
	5.	For item no's 17-2-33 to 17-2-35, If the requirements for landing/car doors clear height above 2000mm , for Manual operated MS door panels add Rs.1,000/- per 100mm rise per landing.	0.00
	6.	For item nos. 17-2-36 to 17-2-40 the rates are for automatic landing/car door with clear height of 2000mm	0.00
		If the Requirements for landing/car doors clear height above 2000mm, refer add on item no. 17-1/G (b)	0.00
			0.00
	7.	For item no 17-2-47- Providing & fixing additional Floor button with allied hardware components on COP, add Rs. 2526/- per additional button.	0.00

	8.	For item no 17-2-53 & 17-2-54... Lift Controller for Lift car travelling 9 stops to 15 stops, add Rs. 27325/-.	0.00
	9.	For item no 17-2-53 & 17-2-54... Lift Controller for Lift car travelling 16 stops to 21 stops, Rs. 45988/-.	0.00
	10.	For item no 17-2-53 & 17-2-54.... Lift Controller for Power Circuit suitable for above 5.5kW & up to 10kW motor, add Rs. 7440/-.	0.00
	11.	For item no 17-2-53 & 17-2-54... Lift Controller for Power Circuit suitable for above 10kW & up to 15kW motor, add Rs. 10837/-	0.00
	12.	For item no 17-2-68 ... For Lift Shaft Wiring in copper wire/cable , above 1 st floor for lifts with manually/power operated doors, add Rs. 2506/- per floor.	0.00
	13.	The cost of dismantled material of lift parts, shall be calculated on the rate analysis based on weight density calculations of actual dismantled material e.g. mild steel/MS/GI/SS sheets, motors, copper wire, wooden parts etc.	0.00
	14.	This job includes transportation of the dismantled material up to division/section store.	0.00
	15.	The Lift dismantled material will be the property of the department.	0.00
			0.00
		<u>17.3: Dismantling</u>	0.00
Job	17-3-1	Dismantling the existing 4 to 7 Passenger lift of all types travelling G+1 floors (2 Landings/2Stops) having with auto/manual operated doors for lift car & all landings with door frames, guide rails, controller, wiring buffers, Lift Machine, ropes complete with all allied accessories of Lift and making the site clear in all respect complete with refilling the holes with cement mortar & making the site as original this job includes transportation of the dismantled material up to division/section store and handing over to the section engineer/store keeper in charge complete.	28808.85
Job	17-3-2	Dismantling the existing 8 to 12 Passenger lift of all types travelling G+1 floors (2 Landings/2Stops) having with auto/manual operated doors for lift car & all landings with door frames, guide rails, controller, wiring buffers, Lift Machine, ropes complete with all allied accessories of Lift and making the site clear in all respect complete with refilling the holes with cement mortar & making the site as original this job includes transportation of the dismantled material up to division/section store and handing over to the section engineer/store keeper in charge complete.	31151.40
Job	17-3-3	Dismantling the existing 13 to 17 Passenger/Stretcher/Goods lift of all types travelling G+1 floors (2 Landings/2Stops) having with auto/manual operated doors for lift car & all landings with door frames, guide rails, controller, wiring buffers, Lift Machine, ropes complete with all allied accessories of Lift and making the site clear in all respect complete with refilling the holes with cement mortar & making the site as original this job includes transportation of the dismantled material up to division/section store and handing over to the section engineer/store keeper in charge complete	33461.40
Job	17-3-4	Dismantling the existing 18 to 22 Passenger/Stretcher/Goods lift of all types travelling G+1 floors (2 Landings/2Stops) having with auto/manual operated doors for lift car & all landings with door frames, guide rails, controller, wiring buffers, Lift Machine, ropes complete with all allied accessories of Lift and making the site clear in all respect complete with refilling the holes with cement mortar & making the site as original this job includes transportation of the dismantled material up to division/section store and handing over to the section engineer/store keeper in charge complete	36090.60

Job	17-3-5	Dismantling the existing 23 to 26 Passenger/Stretcher/Goods lift of all types travelling G+1 floors (2 Landings/2Stops) having with auto/manual operated doors for lift car & all landings with door frames, guide rails, controller, wiring buffers, Lift Machine, ropes complete with all allied accessories of Lift and making the site clear in all respect complete with refilling the holes with cement mortar & making the site as original this job includes transportation of the dismantled material up to division/section store and handing over to the section engineer/store keeper in charge complete	38482.50
Job	17-3-6	Dismantling the existing 27 to 36 Passenger/Stretcher/Goods lift of all types travelling G+1 floors (2 Landings/2Stops) having with auto/manual operated doors for lift car & all landings with door frames, guide rails, controller, wiring buffers, Lift Machine, ropes complete with all allied accessories of Lift and making the site clear in all respect complete with refilling the holes with cement mortar & making the site as original this job includes transportation of the dismantled material up to division/section store and handing over to the section engineer/store keeper in charge complete	41084.40
Job	17-3-7	Dismantling the existing 3000-5000Kg Goods lift of all types travelling G+1 Upper Floors (2 Landings/2Stops) having with auto/manual operated doors for lift car & all landings with door frames, guide rails, controller, wiring buffers, Lift Machine, ropes complete with all allied accessories of Lift and making the site clear in all respect complete with refilling the holes with cement mortar & making the site as original this job includes transportation of the dismantled material up to division/section store and handing over to the section engineer/store keeper in charge complete	43632.75
			0.00
		Add On	0.00
	A	If there are addition of floors for lift travelling up to six floors, add as given below	0.00
Floor	1	For 4 to 7 passenger lift of all types	1799.70
Floor	2	For 8 to 12 passenger lift of all types	1967.70
Floor	3	For 13 to 17 passenger/stretcher/goods lift of all types	2083.20
Floor	4	For 18 to 23 passenger/stretcher/goods lift of all types	2371.95
Floor	5	For 23 to 26 passenger/stretcher/goods lift of all types	2484.30
Floor	6	For 27 to 36 passenger/stretcher/goods lift of all types	2635.50
Floor	7	For 3000 to 5000Kg goods lift of all types	2812.95
			0.00
			0.00
	A1	If there are additional floors for Lift travelling above Six floors and up to Fifteen floors Add as given below	0.00
Floor	1	For 4 to 7 passenger lift of all types	1967.70
Floor	2	For 8 to 12 passenger lift of all types	2083.20
Floor	3	For 13 to 17 passenger/stretcher/goods lift of all types	2371.95
Floor	4	For 18 to 23 passenger/stretcher/goods lift of all types	2484.30
Floor	5	For 23 to 26 passenger/stretcher/goods lift of all types	2635.50
Floor	6	For 27 to 36 passenger/stretcher/goods lift of all types	2812.95
Floor	7	For 3000 to 5000Kg goods lift of all types	2962.05
			0.00
			0.00
	A2	If there are additional floors for Lift travelling above fifteen floors and up to Twenty floors, add as given below	0.00
Floor	1	For 4 to 7 passenger lift of all types	2083.20
Floor	2	For 8 to 12 passenger lift of all types	2371.95

Floor	3	For 13 to 17 passenger/stretchers/goods lift of all types	2484.30
Floor	4	For 18 to 23 passenger/stretchers/goods lift of all types	2635.50
Floor	5	For 23 to 26 passenger/stretchers/goods lift of all types	2812.95
Floor	6	For 27 to 36 passenger/stretchers/goods lift of all types	2962.05
Floor	7	For 3000 to 5000Kg goods lift of all types	3225.60
			0.00
			0.00
	B	If there are additional set of lift car door and landing door, add as given below	0.00
Set	1	For 4 to 7 passenger lift of all types	1310.40
Set	2	For 8 to 12 passenger lift of all types	1420.65
Set	3	For 13 to 17 passenger/stretchers/goods lift of all types	1518.30
Set	4	For 18 to 23 passenger/stretchers/goods lift of all types	1766.10
Set	5	For 23 to 26 passenger/stretchers/goods lift of all types	1554.00
Set	6	For 27 to 36 passenger/stretchers/goods lift of all types	1773.45
Set	7	For 3000 to 5000Kg goods lift of all types	2142.00
Notes	1)	The lift dismantled material cost shall be calculated on the rate analysis base	0

2) The lift dismantled material will be the property of the department 0

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References

The applicable Indian Standards for Lifts are as follows 0

· National Building Code 2016 - Part 8 Building Services Section 5 & 5A Installation of Lifts, 0

· IS 8216:1976 Guide for Inspection of Wire Ropes 0

· IS 14665 (Part 1) :2000 -Electric Traction Lifts Part 1 Guidelines For Outline Dimensions of Passenger, Goods, Service and Hospital Lifts 0

· IS 14665 (Part 2/Sec 1 & 2) : 2000 - Electric Traction Lifts Part 2 Code of Practice For Installation, Operation and Maintenance Section 1 Passenger and Goods Lifts Section 2 Service Lifts 0

· IS 14665 (Part 3/Sec 1 & 2) : 2000- Electric Traction Part 3 Safety Rules Lifts Section 1 Passenger and Goods Lifts, Section 2 Service Lifts 0

· IS 14665 (Part 4/Sec 1 to 9) : 2001 -Electric Traction Lifts Part 4 Components Section 1 Lift Buffers, Section 2 Lift Guide Rails and Guide Shoes, Section 3 Lift Car frame, Car, Counterweight and Suspension, Section 4 Lift Safety Gears and Governors, Section 5 Lift Retiring Cam, Section 6 Lift Doors and Locking Devices and Contacts, Section 7 Lift Machines and Brakes, Section 8 Lift Wire Ropes, Section 9 Controller and Operating Devices for Lifts 0

· IS 14665 (Part 5) :1999 -Electric Traction Lifts – Specification Part 5 Inspection Manual 0

· IS 15785 : 2007 Installation and Maintenance of Lift without conventional Machine Rooms Code of Practice 0

· IS 15330: 2003 Code of Practice for Installation and Maintenance of Lifts for differently abled Persons 0

· Lift ACT & Rules -The Maharashtra Lift, Escalators & Moving Walkway Act-201 0

Local Authority Rules : The Development Control Regulations of The local Autl 0

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Abbreviations

0

Symbol	Meaning	0
ARD	Automatic Rescue Device	0
CCTV	Closed Circuit Television	0
COP	Car Operating Panel	0
COPO	Centre Opening Power Operated	0
CPI	Car Position Indicator	0
CRCA	Cold Rolled Close Annealed	0
FCAMC	Fully Comprehensive Annual Maintenance Contract	0
FCC	Fire Command Centre	0
FHD	Full High Definition	0
FPI	Floor Position Indicator	0
GI	Galvanised Iron	0
HDR	High Definition Recording	0
IBMS	Intelligent Building Management System	0
IP	Internet Protocol	0
IP54	Ingress Protection i. e Protection from limited dust ingress & Protection from water spray from any direction	0
IS	Indian Standards	0
ISI	Indian Standards Institute,	0
Kg	Kilograms	0
kW	Kilowatt rating	0
LED	Light Emitting Diode	0
LFT	Lift Installation	0
LMR	Lift Machine Room	0
LOP	Landing Operating Panel	0
MP	Mega Pixel	0
mps	meters per second	0
MR	Machine Room	0
MRL	Machine Room Less	0
MS	Mild Steel	0
mtrs	meters	0
NBC	National Building Code	0
NVR	Network Video Recorder	0
OSG	Over speed Safety Governor	0
OWD	Overload Warning Device	0
PLC	Programmable Logic Control	0
PMSM	Permanent Magnet Synchronous AC Machine	0
PVC	Polyvinyl Chloride	0
SITC	Supplying, Installing, Testing and Commissioning	0
SMF	Sealed Maintenance Free	0
SS	Stainless Steel	0
TOPO	Telescopic Opening Power Operated	0
UP/DN	Up/Down	0
VAS	Voice Annunciation System	0

VRLA	Valve-Regulated Lead-Acid	0
VS	Variable Speed	0
VVVF	Variable Voltage Variable Frequency	0

Chapter: 18		0
Miscellaneous (MSC)		0

18.1 Rewinding		0
18.2 Replacement		0
18.3 Accessories		0

Chapter 18 : MISCELLANEOUS (MSC)

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0</i>
<i>-3</i>	<i>-1</i>	<i>-2</i>	<i>0</i>
		<u>18.1 Rewinding</u>	0
Job	18-1-1	Rewinding motor of table / pedestal / wall bracket / cabin fans including minor repairs lubricating of ball bearings & bush bearing, and replacing condenser, screws etc. Testing of fan for original speed and consumption with guarantee for 1 year including transportation from site to workshop and back.	478.80
Each	18-1-2	Rewinding motor of the 900 mm ceiling fan and over hauling including minor repairs lubricating of ball bearings & bush bearing, and replacing condenser, screws etc. Testing of fan for original speed and consumption with guarantee for one year.	507.15
Each	18-1-3	Rewinding motor of the 1200/1400 mm ceiling fan and over hauling including minor repairs lubricating of ball bearings & bush bearing, and replacing condenser, screws etc. Testing of fan for original speed and consumption with guarantee for one year.	521.85
Each	18-1-4	Rewinding motor of the 900/1400 rpm 300 mm Exhaust fan and over hauling including minor repairs, lubricating of ball bearings & bush bearing, and replacing condenser, screws etc. & testing for original speed and consumption with guarantee for one year	521.85
Each	18-1-5	Rewinding motor of the 900/1400 RPM 375 mm Exhaust fan and over hauling including minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. Testing the motor for original speed and consumption with guarantee for one year	616.35
Each	18-1-6	Rewinding motor of the 900/1400 RPM 450 mm Exhaust fan and over hauling including minor repairs, lubricating of ball bearings & bush bearing, and replacing condenser, screws etc. Testing for original speed and consumption with guarantee for one year	890.40
Each	18-1-7	Rewinding of electric motor upto 1 H.P. single phase upto 1400 RPM with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing condenser, screws etc. Testing the motor for original speed and no load consumption with guarantee for one year.	1118.25
Note:-	1) Item No. 18-1-7 is for rewinding of motors other than table / pedestal / cabin / wall mounting / ceiling / Exhaust fan.		0.00

		2) All above rewinding items are excluding of bearing replacement.	0.00
		3) The electric motor of the same fan shall not be rewound for more than 2 no of times.	0.00
Each	18-1-8	Rewinding of electric motor upto and including 1 HP, three phase upto 1400 RPM of all types and makes with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. Testing the motor for the original speed and no load consumption with guarantee for one year	1433.25
Each	18-1-9	Rewinding of electric motor above 1 HP and upto 2 HP, three phase upto 1400 RPM with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed and no load consumption with guarantee for one year	1666.35
Each	18-1-10	Rewinding of electric motor above 2 HP and upto 3 HP, three phase upto 1400 RPM with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed and no load consumption with guarantee for one year	1944.60
Each	18-1-11	Rewinding of electric motor above 3 HP and upto 5 HP, three phase upto 1400 RPM with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed and no load consumption with guarantee for one year	3154.20
Each	18-1-12	Rewinding of electric motor above 5 HP and upto 7.5 HP, three phase upto 1400 RPM with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed and no load consumption with guarantee for one year	3780.00
Each	18-1-13	Rewinding of electric motor above 7.5HP and upto 10 HP, three phase upto 1400 RPM with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed and no load consumption with guarantee for one year	4480.35
Each	18-1-14	Rewinding of electric motor above 10 HP and upto 12.5 HP, three phase upto 1400 RPM with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed and no load consumption with guarantee for one year	4573.80
Each	18-1-15	Rewinding of electric motor above 12.5 HP and upto 15 HP, three phase upto 1400 RPM with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed and no load consumption with guarantee for one year	5350.80
Each	18-1-16	Rewinding of electric motor above 15 HP and upto 20 HP, three phase upto 1400 RPM with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed and no load consumption with guarantee for one year	7071.75
Each	18-1-17	Rewinding of electric motor upto 25 HP, three phase upto 1400 RPM of all types and makes with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed and no load consumption with guarantee for one year	9296.70
Each	18-1-18	Rewinding of electric motor upto 30 H.P. three phase upto 1400 RPM of all types and makes with copper wire, overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed and no load consumption with guarantee for one year	11148.90

HP	18-1-19	Rewinding of submersible pump motor in borewell of all types and makes upto and including 5 HP with coated copper wires & overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed, H.P. and no load consumption & guarantee for one year.	1577.10
HP	18-1-20	Rewinding of submersible pump motor in borewell of all types and makes above 5 H.P. upto 25 HP with coated copper wires & overhauling with minor repairs, lubricating of ball bearings & bush bearing, and replacing screws etc. testing for the original speed, H.P. and no load consumption & guarantee for one year.	1765.05
	Note:-	1) Electric motors of burnt ceiling fans older than 10 yrs shall not be rewound.	0.00
		2) Rates for rewinding of 2 pole motors shall be decreased by 5%.	0.00
		3) The dismantled material shall be retained by the contractor.	0.00
		4) Rates of Item No. 18-1-19 & 18-1-20 for rewinding of submersible pump in open well and water tank shall be decreased by 40%.	0.00
		<u>18.2 Replacement</u>	0.00
Each	18-2-1	Replacing the existing bearing of approved make for electric motor A.C single phase / 3 phase upto 1 HP of all types with due alignment of the shaft and tested.	266.70
Each	18-2-2	Replacing the existing bearing of approved make for A.C electric motor 3 phase 2 H.P. to 3 HP of all types with due alignment of the shaft and tested.	333.90
Each	18-2-3	Replacing the existing bearing of approved make for electric motor 5 HP & 7.5 HP of all types with due alignment of the shaft and tested.	502.95
Each	18-2-4	Replacing the existing bearing of approved make for electric motor 10 HP & 12.5 HP of all types with due alignment of the shaft and tested.	783.30
Each	18-2-5	Replacing the existing bearing of approved make for electric motor 15H.P.to 20 H.P. of all types with due alignment of the shaft and tested.	1271.55
Each	18-2-6	Replacing the existing ball bearing of table/ cabin/ pedestal/ ceiling/ exhaust fan complete with alignment of shaft & tested.	169.05
Each	18-2-7	Replacing the existing Bush/ rubber, ring, washers of table/ cabin/ pedestal/ ceiling/ exhaust fan complete with alignment of shaft & tested.	91.35
Each	18-2-8	Replacing the existing bearing of approved make for electric motor of 25 H.P. of all types with due alignment of the shaft and tested.	2160.90
Each	18-2-9	Replacing the existing bearing of approved make for electric motor of 30 H.P. of all types with due alignment of the shaft and tested.	2332.05
	Note:-	Above rates are applicable for replacement of bearing only.	0.00
		<u>18.3 Accessories</u>	0.00
Litre	18-3-1	Filtration of Transformer oil on site till satisfactory test results.	25.20
Litre	18-3-2	Supplying and topping up filtered transformer oil of approved make with test certificate.	134.40
Each	18-3-3	Supplying and erecting No-Volt-Coil for motor having DOL starters upto 7.5 H.P.	253.05
Each	18-3-4	Supplying and erecting No-Volt-Coil for motor having DOL starters from 7.5 H.P. to 10 H.P.	504.00
Each	18-3-5	Supplying and erecting No-Volt-Coil for motor having Star-Delta Starter from 12.5 H.P. to 15 H.P. motor.	485.10
Each	18-3-6	Supplying and erecting No-Volt-Coil for motor having ML1.5 type Star-Delta Starter from 15 H.P. to 25 H.P. motor.	626.85
Each	18-3-7	Supplying and erecting No-Volt-Coil for motor having Star-Delta Starter from 20 H.P. to 30 H.P. motor.	504.00

Each	18-3-8	Supplying and erecting No-Volt-Coil for motor having ML2 type Star-Delta Starter from 25 H.P. to 35 H.P. motor.	995.40
Each	18-3-9	Supplying and erecting No-Volt-Coil from 30 H.P. to 90 H.P. MU motor starter.	1342.95
Each	18-3-10	Supplying and erecting No-Volt-Coil from 90 H.P. to 125 H.P. motor starter.	2260.65
Each	18-3-11	Supplying and erecting thermal Overload Relay for motor starter suitable for up to 12.5 HP.	1098.30
Each	18-3-12	Supplying and erecting thermal Overload Relay for motor starter suitable for up to 15 HP.	779.10
Each	18-3-13	Supplying and erecting thermal over load relay for motor starter 10 H.P. to 17.5 H.F	1100.40
Each	18-3-14	Supplying and erecting thermal over load relay for motor starter 20 H.P. to 25 H.P.	1269.45
Each	18-3-15	Supplying and erecting thermal over load relay for motor starter 30 H.P to 35 H.P.	1782.90
Each	18-3-16	Supplying and erecting thermal over load relay for motor starter 40 H.P. to 50 H.P.	2311.05
Each	18-3-17	Supplying and erecting thermal over load relay for motor starter 60 H.P. to 90 H.P.	3012.45
Each	18-3-18	Supplying and erecting thermal over load relay for motor starter from 100 H.P. to 125 H.P.	3448.20
Each	18-3-19	Supplying & erecting timer for STAR/DELTA motor starter upto 12.5 H.P.	580.65
Each	18-3-20	Supplying & erecting Timer with Combination Coil for motor starter suitable from 15 H.P to 30 H.P.	1883.70
Each	18-3-21	Supplying & erecting Electronic timer above 30 H.P motor starter.	1253.70
Each	18-3-22	Supplying & erecting contactor for DOL motor starter from 7.5 H.P. to 10 H.P.	1004.85
Each	18-3-23	Supplying & erecting contactor MU-1 for DOL motor starter from 7.5 H.P. to 10 H.P.	1546.65
Each	18-3-24	Supplying & erecting contactor MU-1H for DOL motor starter from 7.5 H.P. to 10 H.P.	1675.80
Each	18-3-25	Supplying & erecting contactor for MK-2 Star Delta motor starter from 12.5 H.P. to 15 H.P.	1025.85
Each	18-3-26	Supplying & erecting contactor MU-2 Type for motor starter suitable from 12.5 H.P to 20 H.P.	2055.90
Each	18-3-27	Supplying & erecting contactor for Star Delta motor starter from 15 H.P. to 25 H.P.	2337.30
Each	18-3-28	Supplying & erecting contactor for Star Delta motor starter from 25 H.P. to 30 H.P.	4236.75
Each	18-3-29	Supplying and erecting contactor for motor starter suitable from 25 H.P. to 30 H.P.	2457.00
Each	18-3-30	Supplying and erecting contactor for motor starter suitable for above 30 H.P. to 40 H.P.	5903.10
Each	18-3-31	Supplying and erecting contactor for motor starter suitable for above 45 H.P. to 50 H.P.	7768.95
Each	18-3-32	Supplying and erecting contactor for motor starter suitable from 55 HP to 60 HP.	9763.95
Each	18-3-33	Supplying and erecting contactor for motor starter suitable for 75 H.P. to 90 H.P.	15492.75
Each	18-3-34	Supplying and erecting contactor for motor starter suitable for 100 H.P. to 125 H.P.	20502.30
Each	18-3-35	Dismantling the existing ceiling fan of various sizes and replacing the bolt and nuts at reel insulator and at bottom of the down rod with half threaded bolt of 3/8' dia 2-1/2" to 3-1/2" long and 5/16" dia 1-3/4" to 2-1/4" long respectively required sizes with 2 plate washers with oiling, greasing and painting the date of repair and re-erecting at position.	132.30

Each	18-3-36	Replacing suitable capacity motor of water pump of air cooler of any capacity and type in lieu of old one.	506.10
Each	18-3-37	Checking the existing Indoor faulty fitting, finding the fault , repairing by provided necessary material, if any, and putting into beneficial use with necessary Tools & Tackles.	44.10
Each	18-3-38	Checking the existing outdoor faulty fitting, finding the fault , repairing by provided necessary material, if any, and putting into beneficial use with necessary Tools & Tackles.	88.20
	Note :-	Follow type II Co-ordination of respective manufacturer for starter/spares solution.	0.00
			0.00
			0.00
			0.00
	Chapter:		0.00
	19		
	Credit for dismantled items		0.00

19.1 Credit for dismantled items

0.00
0.00
0.00
0.00
0.00

19: Credit for dismantled materials

0.00
0.00

<i>Unit</i>	<i>Item No</i>	<i>Short Description</i>	<i>0.00</i>
<i>-3</i>	<i>-1</i>	<i>-2</i>	<i>0.00</i>
		<u>19.1 Credit for dismantled materials</u>	0.00
Kg	19-1-1	PVC armoured/unarmoured cables and wires (Aluminium)	-15.75
Kg	19-1-2	PVC armoured/unarmoured cables and wires (Copper)	-66.15
Kg	19-1-3	Aluminium materials	-74.55
Kg	19-1-4	HG / M.S / G.I. Materials / Poles etc.	-18.90
Kg	19-1-5	Copper / Brass materials	-234.15
Kg	19-1-6	Wooden materials	-4.20
Kg	19-1-7	PVC pipes/materials	-8.40
Kg	19-1-8	Paper cartoons/boxes.	-6.30
Kg	19-1-9	I.C. / M.C. switches / D.P. / D.B./ T.P. / feeder pillar etc.	-18.90
Kg	19-1-10	Meters (Ammeter / Voltmeter/Energy meter, etc..)	-24.15
Each	19-1-11	O.C.B./ A.C.B / V.C.B	-1522.50
Each	19-1-12	Ceiling/cabin/bracket/pedestal/table fan.	-169.05
Kg	19-1-13	Paper cartoons/boxes.	-116.55
Kg	19-1-14	I.C. / M.C. switches / D.P. / D.B./ T.P. / feeder pillar etc.	-162.75
Kg	19-1-15	Meters (Ammeter / Voltmeter/Energy meter, etc..)	-239.40
Each	19-1-16	O.C.B./ A.C.B / V.C.B	-373.80
Each	19-1-17	Ceiling/cabin/bracket/pedestal/table fan.	-412.65
Each	19-1-18	Air circulators	-643.65
Each	19-1-19	Fluorescent/LED tube light fittings	-14.70
Each	19-1-20	Street/flood light fittings.	-58.80
Each	19-1-21	Geysers	-107.10
Kg	19-1-22	Accessories such as tube starter / bell / holder/ ceiling rose / MCB etc.	-16.80

Kg	19-1-23	Chokes / condenser / small coils / motor starter etc.	-37.80
Kg	19-1-24	Lift ropes / belts	-23.10
Each	19-1-25	Hot water boilers	-318.15
HP	19-1-26	Electric motors	-443.10
HP	19-1-27	Water pump sets.	-456.75
TR	19-1-28	A.C compressors	-542.85
TR	19-1-29	Window air conditioning unit.	-1814.40
TR	19-1-30	Outdoor unit of split air conditioner.	-1874.25
Each	19-1-31	Indoor unit of split air conditioner.	-677.25
Kg	19-1-32	Copper piping of air conditioning system.	-291.90
Each	19-1-33	Instant type water cooler	-632.10
Litre	19-1-34	Storage type Water cooler	-35.70
Each	19-1-35	Refrigerator up to 165 ltr.	-689.85
Each	19-1-36	Refrigerator above 165 ltr.	-1178.10
Each	19-1-37	Air coolers without fan.	-498.75
Each	19-1-38	Air coolers with fan.	-756.00
Litre	19-1-39	Transformer oil	-11.55
KVA	19-1-40	Diesel Generating set	-675.15
KVA	19-1-41	Transformer	-76.65
Each	19-1-42	Telephone exchange (EPABX)	-861.00
Each	19-1-43	Telephone instrument	-35.70
Each	19-1-44	Water Purifier	-67.20
KVA	19-1-45	Inverter / UPS	-65.10
KVA	19-1-46	Voltage Stabilizer	-77.70
Each	19-1-47	Amplifier	-343.35
Each	19-1-48	Mikes	-42.00
Each	19-1-49	Storage type water purifier	-88.20
Kg	19-1-50	Tubular/SMF Battery	-56.70
Kg	19-1-51	All types of SS material	-39.90

Note : 1) Rates for items which are not covered in above list shall be calculated on the basis of type of material / equipment considering it's site condition and prevailing market rates and approval shall be taken from concerned Superintending Engineer (Electrical).

2) The cost of dismantled material as per above mentioned rates shall be deducted from the estimate to the limit of **Rs. 5,000/- (Rs. Five Thousand only)**. If the cost of dismantled material in the estimate exceeds **Rs. 5,000/- (Rs. Five Thousand only)** such material shall be retained and taken in the Dismantled Material Register.

3) As per Ministry of Environment And Forests, New Delhi Notification on Dated 16th May 2001, and all updated notifications regarding disposal of material in non-hazardous / non-polluting manner shall be followed. Declaration from the contractor for the same shall be taken while calling for tenders.

(WG-MA/
CC)

(WG-MA/
CON)

(WG-MA/
BW)

(WG-MA/
GB)

(WG-MA/
MC)

(WG-MA/
PC)

(WG-PW)

(WG-TW/
TW)

(WG-TW/
TA)

(WG-COC)

(WG-
NWC)

(WG-NAS)

(WG-DM)

<i>Unit</i>	<i>Material</i>	<i>Labour</i>	<i>Total</i>
-3	-4	-5	-6

m	117	40.95	158
m	112	32.55	145
m	150	40.95	191
m	145	32.55	178
m	210	54.6	265
m	208	40.95	249
m	54	40.95	95
m	49	32.55	82
m	64	40.95	105
m	63	32.55	96
m	92	49.35	141
m	86	35.7	122
m	18	40.95	59
m	63	11.55	75
m	73	11.55	85
m	96	11.55	108
m	120	24.15	144
m	160	24.15	184
m	54	13.65	68

m	63	13.65	77
m	96	22.05	118
m	23	10.5	34
m	25	10.5	36
m	29	13.65	43
m	50	13.65	64
m	59	22.05	81
m	107	27.3	134
m	260	27.3	287
m	344	27.3	371
m	413	27.3	440
m	42	13.65	56
m	74	22.05	96
m	114	22.05	136
m	170	27.3	197
m	345	27.3	372
Each	8	6.3	14
Each	12	6.3	18
Each	19	6.3	25
Each	21	6.3	27
Each	24	6.3	30
m	27	13.65	41
m	44	13.65	58
m	53	13.65	67

m	25	10.5	36
m	27	10.5	38
m	40	13.65	54
m	44	13.65	58
m	60	13.65	74
m	65	13.65	79
m	89	13.65	103
m	98	13.65	112
m	154	16.8	171
m	176	16.8	193
m	61	13.65	75
m	66	13.65	80
m	89	16.8	106
m	98	16.8	115
m	134	16.8	151
m	146	16.8	163
m	232	22.05	254
m	264	22.05	286

m	483	32.55	516
m	531	32.55	564
m	895	40.95	936
m	951	40.95	992
m	1235	47.25	1282
m	1321	47.25	1368
m	1769	54.6	1824
m	29	10.5	40
m	43	10.5	54
m	70	10.5	81
m	109	10.5	120

m	33	27.3	60
m	31	27.3	58
m	44	27.3	71

m	58	40.95	99
m	78	40.95	119
m	74	40.95	115
m	100	40.95	141
m	147	40.95	188
m	153	40.95	194
m	169	40.95	210
m	172	40.95	213
m	189	49.35	238
m	194	49.35	243
m	226	49.35	275
m	230	49.35	279
m	301	54.6	356
m	314	54.6	369
m	219	54.6	274
m	229	54.6	284
m	273	54.6	328
m	287	54.6	342

m	425	54.6	480
m	455	54.6	510
m	288	60.9	349
m	300	60.9	361
m	357	60.9	418
m	376	60.9	437
m	534	60.9	595
m	593	60.9	654
m	447	66.15	513
m	505	66.15	571
m	77	32.55	110
m	79	32.55	112
m	91	32.55	124
m	97	32.55	130
m	111	38.85	150
m	118	38.85	157
m	150	38.85	189
m	159	38.85	198

m	235	44.1	279
m	266	44.1	310
m	146	44.1	190
m	155	44.1	199
m	200	44.1	244
m	214	44.1	258
m	312	44.1	356
m	383	44.1	427
m	175	49.35	224
m	188	49.35	237
m	245	49.35	294
m	266	49.35	315
m	415	49.35	464
m	473	49.35	522
m	359	54.6	414
m	385	54.6	440
Each	15	14.7	30

Each	19	14.7	34
Each	54	14.7	69
Each	48	14.7	63
Each	26	9.45	35
Each	37	9.45	46
Each	18	14.7	33
		0	0
Each	16	14.7	31
Each	62	12.6	75
Each	66	12.6	79
Each	85	14.7	100
Each	113	15.75	129
Each	138	30.45	168
Each	21	14.7	36

Each	71	30.45	101
Each	33	0	33
Each	51	0	51
Each	50	15.75	66
Each	73	15.75	89
Each	80	15.75	96
Each	101	15.75	117
Each	81	15.75	97
Each	111	15.75	127
Each	81	15.75	97
Each	158	15.75	174
Each	330	15.75	346
Each	91	15.75	107
Each	142	15.75	158
Each	45	15.75	61
Each	74	15.75	90
Each	69	15.75	85
Each	69	15.75	85
Each	85	15.75	101

Each	88	15.75	104
Each	129	15.75	145
Each	83	15.75	99
Each	207	18.9	226
Each	280	18.9	299
Each	363	18.9	382
Each	330	18.9	349
Each	15	3.15	18
Each	20	3.15	23
Each	93	23.1	116
Each	98	23.1	121
Each	119	23.1	142
Each	136	23.1	159
Each	189	23.1	212
Each	219	23.1	242
Each	278	33.6	312
Each	312	33.6	346
Each	99	90.3	189
Each	100	90.3	190
Each	125	90.3	215
Each	144	90.3	234

Each	176	105	281
Each	247	105	352
Each	326	120.75	447
Each	384	120.75	505
Each	321	90.3	411
Each	333	15.75	349
Each	155	15.75	171
Each	170	15.75	186
Each	54	14.7	69
Each	56	14.7	71
Each	63	14.7	78
Each	69	14.7	84
Each	114	14.7	129
Each	137	14.7	152
Each	177	15.75	193
Each	202	15.75	218
Each	94	30.45	124
Each	1113	35.7	1149
Each	103	15.75	119
Each	494	23.1	517

Each	3697	45.15	3742
Each	376	0	376
Point	454	237.3	691
Point	458	237.3	695
Point	494	265.65	760
Point	500	265.65	766
Point	216	182.7	399
Point	224	182.7	407
Point	240	210	450
Point	251	210	461
Point	335	255.15	590
Point	207	158.55	366
Point	385	255.15	640
Point	273	158.55	432
Point	69	27.3	96
Point		0	0
Point	284	164.85	449

Point	244	210	454
Point	197	91.35	288
Point	205	91.35	296
Point	224	118.65	343
Point	234	118.65	353
Each	18	35.7	54
Point	18	11.55	30
Point	110	54.6	165
Point	106	54.6	161
Point	226	54.6	281
Point	346	91.35	437
Point		0	0
Point	350	91.35	441
Point	472	118.65	591
Point	479	118.65	598
Point	439	182.7	622
Point	444	182.7	627
Point	583	210	793

Point	595	210	805
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m	12	9.45	21
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m	17	9.45	26
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m	22	10.5	33
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m	28	13.65	42
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m	56	13.65	70
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m	110	13.65	124
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m	273	27.3	300
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m	530	40.95	571
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m	75	27.3	102
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m	134	27.3	161
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m	316	40.95	357
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m	400	40.95	441
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m	106	27.3	133
m	152	27.3	179
m	342	40.95	383
m	608	40.95	649
m	14	5.25	19
m	50	13.65	64
m	44	13.65	58
Each	2226	117.6	2344
Each	1036	39.9	1076
Each	1719	222.6	1942
Each	3595	222.6	3818
Each	4240	445.2	4685
Each	5549	445.2	5994
Each	8383	445.2	8828
Each	2991	111.3	3102
Each	4688	504	5192
Each	5908	669.9	6578
Each	934	39.9	974

Each	3517	222.6	3740
Each	1896	40.95	1937
Each	2041	40.95	2082
Each	3124	40.95	3165
Each	4366	82.95	4449
Each	6407	82.95	6490
Each	8135	82.95	8218
Each	9241	137.55	9379
Each	12593	193.2	12786
Each	15147	247.8	15395
Each	18029	358.05	18387
Each	23153	495.6	23649
Each	572	47.25	619
Each	695	47.25	742
Each	940	47.25	987
Each	1028	47.25	1075
Each	1215	123.9	1339
Each	1294	123.9	1418
Each	1919	123.9	2043
Each	2421	123.9	2545
Each	275	54.6	330
Each	302	40.95	343

Each	80	18.9	99
Each	202	47.25	249
Job	11432	2479.05	13911
Job	12779	2479.05	15258
Job	18185	2479.05	20664
Job	36989	2479.05	39468
Job	51059	2479.05	53538
Job	23081	3030.3	26111
Each	627	88.2	715
Each	819	88.2	907
Each	5763	547.05	6310
Each	3131	522.9	3654
Each	4342	522.9	4865
Job	37150	667.8	37818

m	30	12.6	43
m	38	12.6	51
m	55	12.6	68
m	59	12.6	72
m	75	12.6	88

m	113	27.3	140
m	90	25.2	115
Each	193	19.95	213
Each	275	19.95	295
m	127	65.1	192
m	216	65.1	281
m	349	65.1	414
m	994	65.1	1059
m	1692	65.1	1757
m	2922	77.7	3000
Each	2233	85.05	2318
Each	2568	85.05	2653
Each	2709	85.05	2794
Each	4029	85.05	4114
Each	233	19.95	253

Each	43708	1975.05	45683
Each	103632	4589.55	108222
Each	74991	2544.15	77535
Each	26301	2544.15	28845
Each	51601	2544.15	54145
Each	38993	2544.15	41537
Each	227581	11466	239047
Each	42265	5050.5	47316
Each	10555	156.45	10711
Each	3558	630	4188
Each	143677	7279.65	150957
Each	31812	2751	34563
Each	3000	63	3063
Each	34	50.4	84
Each	360	63	423
Each	47	50.4	97
Each	9168	849.45	10017
Each	3092	820.05	3912
Each	3128	914.55	4043
Each	138	138.6	277

Each	3207	960.75	4168
Each	3715	834.75	4550
Each	213	87.15	300
Each	410	87.15	497
Each	417	87.15	504
Each	363	263.55	627
Each	436	278.25	714
Each	761	362.25	1123
Each	3623	151.2	3774
Each	4227	1120.35	5347
Each	5183	1120.35	6303
Each	6449	1120.35	7569
Each	7296	1120.35	8416
Each	8470	1120.35	9590
Each	31151	1120.35	32271
Each	35040	1120.35	36160
Each	40850	1120.35	41970
Each	45255	1120.35	46375
Each	57223	1120.35	58343
Each	73898	1120.35	75018
Each	24586	1066.8	25653
Each	30036	1120.35	31156
Each	46866	1120.35	47986

Each	61432	1120.35	62552
Each	1139	87.15	1226
Each	18999	1391.25	20390
Each	21905	1391.25	23296
Each	24736	1391.25	26127
Each	29380	1391.25	30771
Each	121702	10720.5	132423
Each	32166	0	32166
Each	46562	0	46562
Each	15359	196.35	15555
Each	21861	196.35	22057
Each	178667	4156.95	182824
Each	171192	590.1	171782
Each	57855	594.3	58449
Each	11588	594.3	12182
m	114	12.6	127
m	65	27.3	92
m	78	27.3	105
Each	2083	27.3	2110
Each	3803	27.3	3830
Each	607	27.3	634
Each	7094	636.3	7730

Point	-2	9.45	7
m	-1	6.3	5
m	-2	5.25	3

(FG-IDF)

(FG-IDF)

(FG-AS)

(FG-ODF/
LED)

(FG-ODF)

(FG-ODF/
LED)

(FG-ODF)

(FG-AS)

(FG-LP)

(FG-FN)

(FG-FN)

<u>Unit</u>	<u>Material</u>		
<u>-3</u>	<u>-4</u>	-5.25	-9
		0	0
Each	223	40.95	264
Each	576	82.95	659
Each	660	82.95	743
Each	1106	82.95	1189
Each	1133	82.95	1216
Each	457	69.3	526

Each	695	69.3	764
Each	861	69.3	930
Each	1476	110.25	1586
Each	2882	110.25	2992
Each	3447	110.25	3557
Each	3285	110.25	3395
Each	1915	137.55	2053
Each	4250	137.55	4388
Each	379	137.55	517
Each	1709	137.55	1847
Each	13	54.6	68
Each	20	96.6	117
Each	438	54.6	493
Each	637	54.6	692
Each	1299	54.6	1354
Each	531	40.95	572
Each	839	40.95	880

Each	868	54.6	923
Each	1153	69.3	1222
Each	156	0	156
Each	1252	0	1252
Each	23	13.65	37
Each	79	13.65	93
Each	195	27.3	222
Each	1612	40.95	1653
Each	236	32.55	269
Each	326	32.55	359
Each	404	32.55	437
Each	670	32.55	703
Each	351	44.1	395

Each	1296	60.9	1357
Each	14	40.95	55
Each	13	40.95	54
		0	0
Each	3293	40.95	3334

Each	201	27.3	228
Each	193	27.3	220
Each	198	27.3	225
Each	228	27.3	255
Each	10	3.15	13
m	32	8.4	40
m	165	18.9	184

Each	26	8.4	34
Each	63	13.65	77

Each	378	40.95	419
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Each	51	18.9	70
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Each	85	18.9	104
Each	105	18.9	124
Each	197	18.9	216
Each	486	13.65	500
Each	53	27.3	80
Each	138	13.65	152
Each	144	13.65	158
Each	310	27.3	337
Each	403	27.3	430
Each	619	27.3	646
Each	633	27.3	660
Each	1472	150.15	1622
Each	1755	150.15	1905
Each	2462	150.15	2612
Each	3314	150.15	3464
Each	5111	150.15	5261

Each	5679	150.15	5829
Each	6972	150.15	7122
Each	8060	175.35	8235
Each	9865	175.35	10040
Each	15202	175.35	15377
Each	17461	175.35	17636
Each	2361	217.35	2578
Each	3687	217.35	3904
Each	6832	217.35	7049
Each	9297	217.35	9514
Each	11585	217.35	11802
Each	14319	217.35	14536
Each	21262	217.35	21479
Each	3424	132.3	3556
Each	4743	132.3	4875

Each	1343	50.4	1393
Each	2651	50.4	2701
Each	4729	50.4	4779
Each	3424	99.75	3524
Each	6127	99.75	6227
Each	6098	99.75	6198
Each	14	69.3	83
Each	14	108.15	122
Each	14	134.4	148

Each	382	89.25	471
Each	931	89.25	1020
Each	1829	89.25	1918
Each	1617	89.25	1706
Each	1681	89.25	1770

	0	0	
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Each	9708	174.3	9882
Each	12246	174.3	12420
Each	15169	174.3	15343
Each	2141	108.15	2249
Each	2684	108.15	2792
Each	3330	134.4	3464
Each	4528	134.4	4662
Each	2398	108.15	2506
Each	2880	108.15	2988
Each	3591	134.4	3725
Each	4528	134.4	4662
Each	3093	108.15	3201
Each	4724	108.15	4832
Each	5018	134.4	5152
Each	5670	134.4	5804
Each	2817	108.15	2925
Each	2803	108.15	2911
Each	2506	108.15	2614

Each	4642	134.4	4776
Each	2278	108.15	2386
Each	2278	108.15	2386
Each	3726	108.15	3834
Each	3996	108.15	4104
Each	4531	134.4	4665
Each	3350	134.4	3484
Each	409	123.9	533
Each	473	123.9	597
Each	445	96.6	542
Each	575	96.6	672
Each	704	137.55	842
Each	1029	137.55	1167
Each	1185	164.85	1350
Each	1561	164.85	1726
m	372	82.95	455

m	283	82.95	366
Each	3368	108.15	3476
Each	4089	108.15	4197
Each	7275	108.15	7383
Each	9371	108.15	9479
Each	159	32.55	192
Each	177	32.55	210
Each	261	32.55	294
Each	160	32.55	193
Each	220	32.55	253
Each	1093	40.95	1134
Each	1915	47.25	1962
Each	2780	47.25	2827
Each	453	47.25	500
Each	767	47.25	814
Each	1099	47.25	1146
Each	1749	47.25	1796
Each	2138	47.25	2185
Each	3161	47.25	3208
Each	32	5.25	37
Each	37	5.25	42
Each	87	5.25	92
Each	87	5.25	92
Each	109	5.25	114

Each	91	5.25	96
Each	55	5.25	60
Each	21	5.25	26
Each	114	5.25	119
Each	129	5.25	134
Each	208	10.5	219
Each	283	10.5	294
Each	359	10.5	370
Each	568	27.3	595

Each	154	22.05	176
Each	346	22.05	368
Each	391	22.05	413
Each	459	22.05	481
Each	179	22.05	201
Each	449	22.05	471
Each	504	22.05	526
Each	573	22.05	595
Each	466	22.05	488
Each	460	22.05	482
Each	626	22.05	648
Each	697	22.05	719

Each 4451 89.25 4540

Each 1588 82.95 1671

Each 1717 82.95 1800

Each	1816	82.95	1899
Each	1888	54.6	1943
Each	4594	123.9	4718
Each	5340	164.85	5505
Each	1973	0	1973
Each	4509	0	4509
Each	7007	0	7007
Each	1606	0	1606
Each	1614	40.95	1655
Each	1669	40.95	1710
Each	1150	123.9	1274
Each	1050	123.9	1174
Each	1505	123.9	1629
Each	3005	123.9	3129
Each	3045	123.9	3169

Each	4194	123.9	4318
Each	3869	123.9	3993
Each	3203	123.9	3327
Each	1858	82.95	1941
Each	27	32.55	60
Each	66	27.3	93
Each	153	27.3	180
Each	62	40.95	103
Each	131	27.3	158
m	165	40.95	206
Each	11	82.95	94
Each	42	123.9	166
Each	190	13.65	204
Each	84	206.85	291
Each	91	247.8	339
Each	127	288.75	416
Each	137	495.6	633
Each	877	82.95	960

Each	999	82.95	1082
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Each	942	82.95	1025
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Each	852	82.95	935
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Each	1148	60.9	1209
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Each	1206	60.9	1267
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Each	0	13.65	14
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Each	0	40.95	41
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Each	0	96.6	97
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Each	0	32.55	33
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(AP-WH)

(AP-AC)

(AP-WC)

(ACR)

(WPF)

(AP-INV)

(AP-UPS)

<u>-3</u>	<u>-4</u>	-5.25	-9
Each	7327	330.75	7658
Each	6582	330.75	6913
Each	9066	330.75	9397
Each	9765	373.8	10139
Each	10954	373.8	11328

Each	11220	373.8	11594
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Each	12347	373.8	12721
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Each	3549	71.4	3620
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Each	167	35.7	203
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Each	183	35.7	219
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Each	298	71.4	369
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Each	121	71.4	192
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Each	123	35.7	159
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Each	105	330.75	436
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Each	140	373.8	514
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Each	727	164.85	892
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Each	285	47.25	332
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Each	0	361.2	361
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Each	20403	373.8	20777
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3.2 Air
Condition
ers (AP-
AC)

Each	24037	1321.95	25359
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Each	25270	1321.95	26592
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Each	32946	1321.95	34268
Each	33255	1321.95	34577
Each	604	752.85	1357
Each	56153	2150.4	58303
Each	60896	2150.4	63046
Each	45059	2150.4	47209
Each	49628	2150.4	51778
Each	37170	1736.7	38907
Each	40491	1736.7	42228
Sq.mm	1083	81.9	1165

Each	62721	2379.3	65100
Each	64232	2873.85	67106
m	246	27.3	273
m	348	27.3	375
m	645	27.3	672
m	924	27.3	951
m	1061	27.3	1088
m	1294	27.3	1321
Each	73980	3463.95	77444
Each	89994	3463.95	93458
Each	135118	3463.95	138582
Each	136462	3463.95	139926
Each	149692	3463.95	153156

Each	73204	3463.95	76668
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Each	82300	3463.95	85764
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Each	108276	3463.95	111740
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Each	29368	0	29368
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Each	46796	0	46796
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Each	74915	0	74915
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**3.3 Water
Coolers &
Refrigerat
ors (AP-
WC)**

Each	10599	0	10599
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Each	24294	0	24294
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Each	31737	400.05	32137
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Each	42774	412.65	43187
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Each	47243	433.65	47677
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Each	64700	1518.3	66218
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Each	78572	1518.3	80090
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Each	35187	0	35187
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Job	2811	1983.45	4794
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**3.4 Air
Coolers
(ACR)**

Each 8967 0 8967

Each 7964 0 7964

Each 10849 0 10849

Each 18323 164.85 18488

Each 8153 164.85 8318

**3.6
Inverter
AP-INV)**

Each 5957 656.25 6613

Each 7222 656.25 7878

Each 10848 656.25 11504

Each 18710 656.25 19366

Each 35758 82.95 35841

Each	50999	82.95	51082
Each	65955	82.95	66038
Each	73973	82.95	74056
Each	127008	82.95	127091
Each	166596	82.95	166679
Each	200321	82.95	200404

Each	8896	82.95	8979
Each	10740	82.95	10823
Each	13748	82.95	13831
Each	16268	82.95	16351
Each	17119	82.95	17202
Each	20313	82.95	20396
Each	764	82.95	847
Each	2253	82.95	2336
Each	2804	82.95	2887
Each	4326	82.95	4409
Each	6081	82.95	6164

Each	9054	82.95	9137
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Each	2279	0	2279
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Each	2532	0	2532
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Each	3018	0	3018
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Each	5135	0	5135
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Each	8607	0	8607
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3.10
Accessori
s for AC
Water
cooler

Job	123	355.95	479
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Year	4045	2294.25	6339
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Year	4754	2294.25	7048
Year	6096	2294.25	8390
Year	6917	2294.25	9211
Each	7591	1528.8	9120
Each	8413	1528.8	9942
Each	9098	1528.8	10627
Each	15759	1528.8	17288
Job	545	164.85	710
Job	545	164.85	710
Each	269	40.95	310
Each	606	40.95	647
Each	606	40.95	647
Each	170	40.95	211
Each	5096	82.95	5179
Each	910	82.95	993
Each	4849	164.85	5014
Each	2717	82.95	2800
Each	1665	40.95	1706

Each	1390	164.85	1555
Each	3135	23.1	3158
KG	689	82.95	772
KG	977	82.95	1060
Job	917	330.75	1248
Job	1250	330.75	1581
Job	1738	330.75	2069
Job	2798	412.65	3211
Job	6450	1208.55	7659
Job	7302	1208.55	8511
Job	8525	1208.55	9734
Job	5828	547.05	6375
Job	697	40.95	738
Job	151	40.95	192
Job	493	40.95	534
Job	900	330.75	1231
Job	554	82.95	637
Job	1916	495.6	2412

Each 103930 23982 127912

Each 264115 23982 288097

Each 277566 28884.5 306450

Each 294995 28884.5 323879

Each 384761 28884.5 413645

Each 420361 28884.5 449245

Each 437396 33404.7 470801

Each 465023 34893.6 499917

Each 481878 34893.6 516772

Each 500543 38306.1 538849

Each 532298 42826.3 575124

Each 580374 42826.3 623200

Each 17990 971.25 18961

Each 19255 971.25 20226

Each 20980 971.25 21951

Each 28570 971.25 29541

Each 27268 1492.05 28760

Each 31754 1492.05 33246

Each 34054 1492.05 35546

Each 34399 1492.05 35891

Each 35204 1492.05 36696

Each 35779 1492.05 37271

Each 36354 1492.05 37846

Each 53569 1492.05 55061

Each 46934 1492.05 48426

Each 57284 1492.05 58776

Each 58664 1492.05 60156

Each 59814 1492.05 61306

Each 67157 1492.05 68649

Each 78215 1492.05 79707

Each 91753 1492.05 93245

Each 63236 1492.05 64728

Each 46819 1492.05 48311

Each 68669 1492.05 70161

Each 75529 1492.05 77021

Each 27739 1492.05 29231

Each 28314 1492.05 29806

Each 21579 1492.05 23071

Each 38079 1492.05 39571

Each 38679 1492.05 40171

Each 39114 1492.05 40606

Each 43369 1492.05 44861

Each 46014 1492.05 47506

Each 36522 1273.65 37796

Each 41162 1273.65 42436

Each 47382 1273.65 48656

Each 72267 1273.65 73541

Each 90232 1368.15 91600

Each 99717 1368.15 101085

Each	27795	1554	29349
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Each	28370	1554	29924
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Each	33948	1554	35502
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Each	42215	1554	43769
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Each	48023	1554	49577
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Each	53988	1629.6	55618
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Each	58965	2079	61044
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Each	48898	2264.85	51163
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Each	68103	2264.85	70368
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Each	85712	2975.7	88688
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Each	4419	379.05	4798
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Each	13968	379.05	14347
m	1882	236.25	2118
m	2056	236.25	2292
m	2231	236.25	2467
m	2582	236.25	2818
m	2931	236.25	3167
m	3282	236.25	3518
Each	4547	472.5	5020
Each	4998	472.5	5471
Each	5447	472.5	5920
Each	5898	472.5	6371
Each	6348	472.5	6821
Each	7698	472.5	8171

Each	16342	615.3	16957
Each	17078	615.3	17693
Each	19951	615.3	20566
Job	879	6952.05	7831
Each	1678	23.1	1701
Each	41064	2242.8	43307
Sq.m	5795	164.85	5960
Each	5498	164.85	5663
Each	2488	164.85	2653
Sq.m	859	82.95	942
Sq.m	990	82.95	1073
Each	10600	945	11545
Each	5093	410.55	5504
Sq.m	6276	33.6	6310

Sq.m	1211	23.1	1234
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m	2319	82.95	2402
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m	2165	82.95	2248
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m	2104	82.95	2187
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m	1389	82.95	1472
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m	1059	82.95	1142
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m	917	82.95	1000
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m	658	82.95	741
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m	539	82.95	622
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m	397	82.95	480
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Each	0	164.85	165
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Each	0	412.65	413
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Each	0 780.15	780
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(ESD-
SHWS)

(ESD-
HWP)
(ESD-SOL

(ESD-RT-
OFG)

(ESD-RT-
ONG)

(ESD-
SWPS)

<u>Unit</u>	<u>Material</u>		
<u>-3</u>	<u>-4</u>	-5.25	-9
Each	20808	1833.3	22641
Each	36206	2363.55	38570
Each	49940	2836.05	52776
Each	70748	4542.3	75290
Each	18394	1891.05	20285
Each	28986	2363.55	31350
Each	34004	2363.55	36368
Each	35883	2836.05	38719
Each	55314	4542.3	59856

m	232	66.15	298
m	278	66.15	344
m	376	132.3	508
m	453	132.3	585
m	527	132.3	659
m	639	132.3	771
m	123	49.35	172
m	148	49.35	197
m	193	54.6	248
m	287	54.6	342
m	392	54.6	447
m	576	54.6	631
m	45	6.3	51
m	52	6.3	58
m	57	6.3	63
m	66	6.3	72

m	77	6.3	83
m	85	6.3	91
m	97	6.3	103
m	107	6.3	113
m	117	6.3	123

Each	- #VALUE!	#VALUE!
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Each	- #VALUE!	#VALUE!
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Each	- #VALUE!	#VALUE!
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Each	- #VALUE!	#VALUE!
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Each	4532	299.25	4831
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Each	9271	341.25	9612
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Each	10383	408.45	10791
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Each	6145	164.85	6310
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Each	7734	206.85	7941
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Each	13774	247.8	14022
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Each	18547	#VALUE!	#VALUE!
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Each	38249	#VALUE!	#VALUE!
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Each	54810	#VALUE!	#VALUE!
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Each	203995	#VALUE!	#VALUE!
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Each	50999	#VALUE!	#VALUE!
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Each	2303	66.15	2369
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Each	884	79.8	964
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Each	2273	79.8	2353
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Each	1213	79.8	1293
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Each	2512	79.8	2592
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Each	5929	79.8	6009
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per litre	8	1.05	9
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Each	- #VALUE!	#VALUE!	
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Each	- #VALUE!	#VALUE!	
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Each - #VALUE! #VALUE!

Each - #VALUE! #VALUE!

0 0
0 0
0 0
0 0
0 0

Each 0 0
 - #VALUE! #VALUE!

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Each 595106 13890.5 608996

Each 763478 17962.4 781440

Each 0 1891.05 1891

(SW-SWR

(SW-DB)

(SW-MCB

(SW-
MCBDB)

(SW-
MCCB)

(SW-
RCCB)

(SW-
SWR-
MCCBPB)

(SW-ACB)

(SW-HTS)

(SW-AS)

<u>Unit</u>	<u>Material</u>		
<u>-3</u>	<u>-4</u>	-5.25	-9
Each	102	63	165
Each	378	64.05	442
Each	678	64.05	742
Each	1674	64.05	1738
Each	918	64.05	982
Each	1154	64.05	1218

Each	2464	98.7	2563
Each	5183	174.3	5357
Each	5979	174.3	6153
Each	882	91.35	973
Each	1166	91.35	1257
Each	2437	118.65	2556
Each	4644	174.3	4818
Each	7652	174.3	7826
Each	3669	118.65	3788
Each	5217	174.3	5391
Each	7209	174.3	7383
Each	9086	265.65	9352
Each	13473	389.55	13863
Each	18452	389.55	18842
Each	19039	448.35	19487
Each	27584	507.15	28091
Each	1813	151.2	1964
Each	2467	151.2	2618
Each	3758	151.2	3909
Each	6812	211.05	7023
Each	7893	257.25	8150
Each	11968	296.1	12264

Each	17091	394.8	17486
Each	808	134.4	942
Each	1169	134.4	1303
Each	31242	387.45	31629
Each	40816	387.45	41203
Each	51577	428.4	52005
Each	60404	500.85	60905
Each	70986	500.85	71487
Each	465	64.05	529
Each	472	91.35	563
Each	617	91.35	708
Each	753	91.35	844
Each	924	91.35	1015
Each	2190	118.65	2309

Each	2413	118.65	2532
Each	2820	118.65	2939
Each	3781	118.65	3900
Each	2765	132.3	2897
Each	2937	132.3	3069
Each	3917	132.3	4049
Each	4960	132.3	5092
Each	29671	4259.85	33931
Each	44210	4827.9	49038
Each	15606	861	16467
Each	19897	861	20758
Each	19646	861	20507

Each	25902	861	26763
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Each	44090	861	44951
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Each	16941	861	17802
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Each	30658	861	31519
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Each	183	36.75	220
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Each	118	36.75	155
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Each	129	36.75	166
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Each	269	36.75	306
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Each	269	36.75	306
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Each	426	36.75	463
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Each	399	36.75	436
Each	593	36.75	630
Each	553	36.75	590
Each	390	36.75	427
Each	347	36.75	384
Each	551	36.75	588
Each	496	36.75	533
Each	605	50.4	655
Each	878	50.4	928
Each	857	50.4	907
Each	1184	50.4	1234
Each	842	50.4	892
Each	1092	50.4	1142
Each	240	36.75	277
Each	470	50.4	520
Each	534	50.4	584
Each	613	50.4	663
Each	543	50.4	593
Each	573	50.4	623
Each	728	50.4	778
Each	907	36.75	944
Each	1367	36.75	1404

Each	1586	36.75	1623
Each	1577	50.4	1627
Each	2450	50.4	2500
Each	2707	50.4	2757

Each	1402	274.05	1676
Each	2111	274.05	2385
Each	2618	274.05	2892
Each	3575	274.05	3849
Each	4700	274.05	4974
Each	5969	274.05	6243
Each	1771	274.05	2045
Each	2658	274.05	2932
Each	3722	274.05	3996

Each	4031	274.05	4305
Each	5421	274.05	5695
Each	7054	274.05	7328
Each	196	50.4	246
Each	595	132.3	727
Each	617	132.3	749
Each	824	132.3	956
Each	769	132.3	901
Each	930	132.3	1062
Each	1144	132.3	1276
Each	587	118.65	706
Each	1430	118.65	1549
Each	604	118.65	723
Each	291	50.4	341
Each	11	1.05	12
Each	5185	403.2	5588

Each	6225	403.2	6628
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Each	8307	403.2	8710
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Each	4161	363.3	4524
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Each	8663	363.3	9026
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Each	11761	528.15	12289
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Each	15690	594.3	16284
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Each	21113	749.7	21863
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Each	30907	749.7	31657
Each	1741	36.75	1778
Each	1842	36.75	1879
Each	2413	36.75	2450
Each	2294	50.4	2344
Each	2325	50.4	2375
Each	2606	50.4	2656
Each	4196	50.4	4246
Each	4576	50.4	4626
Each	159	27.3	186
Each	228	27.3	255
Each	2765	36.75	2802
Each	2927	36.75	2964
Each	3832	36.75	3869

Each	3448	50.4	3498
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Each	3797	50.4	3847
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Each	4210	50.4	4260
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Each	4964	50.4	5014
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Each	5107	50.4	5157
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Each	6756	50.4	6806
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Each	28900	687.75	29588
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Each	34739	687.75	35427
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Each	40356	878.85	41235
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Each	44205	878.85	45084
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Each	58436	996.45	59432
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Each	35127	687.75	35815
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Each	39508	687.75	40196
Each	45108	1043.7	46152
Each	48370	878.85	49249
Each	68453	996.45	69449
Set	13777	254.1	14031
Set	13156	254.1	13410
Set	13910	254.1	14164
Set	15642	254.1	15896
Set	18492	254.1	18746
Set	20956	254.1	21210
Set	10707	263.55	10971
Each	33161	687.75	33849

Each	40815	878.85	41694
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Each	47836	996.45	48832
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Each	38902	687.75	39590
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Each	43963	878.85	44842
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Each	56173	996.45	57169
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Each	56346	1660.05	58006
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Each	58602	1660.05	60262
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Each	62035	1818.6	63854
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Each	87591	2796.15	90387
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Each	98342	1556.1	99898
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Each	102606	3058.65	105665
Each	137424	2719.5	140144
Each	116187	2719.5	118907
Each	92160	2719.5	94880
Job	997	3025.05	4022
Each	106700	11487	118187
Each	211279	11487	222766
Each	124026	11487	135513
Each	226923	11487	238410
Each	134927	11487	146414
Each	281367	11487	292854
Each	489852	11487	501339
Each	498652	11487	510139
Each	1006712	11487	1018199

Each	4054	74.55	4129
Each	4666	74.55	4741
Each	7252	74.55	7327
Each	9164	74.55	9239
Each	274096	11487	285583
Each	168987	11487	180474
Each	352603	11487	364090
Each	428494	11487	439981
Each	642595	11487	654082
Each	748979	11487	760466
Each	1010700	11487	1022187
Each	503132	11487	514619
Each	315026	11487	326513

Each	218171	11487	229658
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Each	517909	11487	529396
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Each	640873	11487	652360
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Each	886427	11487	897914
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Each	1150587	11487	1162074
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Each	1486403	11487	1497890
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Each	759810	11487	771297
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Each	102	23.1	125
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Each	173	23.1	196
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Each	315	23.1	338
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Each	607	23.1	630
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Each	1049	23.1	1072
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Each	52	23.1	75
Each	120	23.1	143
Each	64	23.1	87
Each	122	23.1	145
Each	545	23.1	568
Each	783	23.1	806
Each	987	23.1	1010
Each	58	23.1	81
Each	100	23.1	123
Each	228	23.1	251
Each	72	23.1	95
Each	88	23.1	111
Each	184	23.1	207
Each	250	23.1	273
Each	374	23.1	397
Each	623	23.1	646
Each	45	23.1	68
Each	50	23.1	73
Each	88	23.1	111
Each	171	23.1	194
Each	36	23.1	59
Each	60	23.1	83
Each	80	23.1	103
Each	305	47.25	352

Set	143	27.3	170
Set	773	27.3	800
Set	1384	27.3	1411
Set	1560	27.3	1587
Set	3255	27.3	3282
Set	241	32.55	274
Set	1005	32.55	1038
Set	1989	32.55	2022
Set	2333	32.55	2366
Set	4109	32.55	4142
Each	4670	27.3	4697
Each	6305	27.3	6332
Each	4684	27.3	4711
Each	1087	27.3	1114
Each	1560	27.3	1587
Each	2359	27.3	2386
Each	810	27.3	837
Each	1356	27.3	1383
Each	0	0	0
Each	0	82.95	83

Each	8	53.55	62
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Each	0	1121.4	1121
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Each	0	1121.4	1121
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Each	0	1682.1	1682
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(CP-BB)

(CP-SPD)
(CP-ED)

<i>Unit</i>	<i>Material</i>		
<i>-3</i>	<i>-4</i>		
kg	178	50.4	228
m ²	1746	389.55	2136
m ²	1428	389.55	1818

m ²	1271	389.55	1661
m ²	818	389.55	1208
m ²	772	389.55	1162
m ²	929	201.6	1131
m ²	784	201.6	986
m ²	671	201.6	873
m ²	1291	201.6	1493
m ²	262	139.65	402
m ²	527	139.65	667
m ²	622	139.65	762
m ²	1130	139.65	1270
Each	63	35.7	99
Each	101	35.7	137
Each	43	35.7	79
m ²	1279	844.2	2123
kg	105	27.3	132

		0	0
Each	202	39.9	242
m ²	97	75.6	173
kg	98	19.95	118
m	4579	574.35	5153
m	4848	574.35	5422
m	5068	697.2	5765
m	7556	697.2	8253
m	8710	697.2	9407
m	9515	697.2	10212
m	6786	574.35	7360
m	8083	574.35	8657
kg	1114	70.35	1184
kg	959	70.35	1029

kg	507	70.35	577
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Each	2044	182.7	2227
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Each	2190	182.7	2373
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Each	3718	245.7	3964
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Each	5401	248.85	5650
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Each	7265	491.4	7756
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Each	9930	491.4	10421
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Each	1042	245.7	1288
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Each	989	245.7	1235
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Each	6128	491.4	6619
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Each	3053	491.4	3544
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Each	19327	491.4	19818
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Each	3678	1722	5400
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Each	8050	1722	9772
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Each	10088	2953.65	13042
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Each 12397 5414.85 17812

Each 9555 245.7 9801

Each 16413 368.55 16782

Each 100825 31953.6 132779

Each 106687 31953.6 138641

Each	133652	31953.6	165606
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Each	140100	31953.6	172054
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Each	259	0 45.15	0 304
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Each	791	45.15	836
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kVAr	350	45.15	395
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kVAr	387	45.15	432
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Each	521	45.15	566
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Each	129	45.15	174
Each	186	45.15	231
Each	9067	50.4	9117
Each	16624	50.4	16674
Each	6299	50.4	6349
Each	12316	50.4	12366
Each	3715	50.4	3765
Each	6806	50.4	6856
Each	4534	50.4	4584
Each	8917	50.4	8967
per day	19216	3640.35	22856

Each 317092 4851 321943

Each 373493 4851 378344

Each 529373 7458.15 536831

Each 698590 7458.15 706048

Each 107859 7458.15 115317

Each 131307 7458.15 138765

Each 140686 7458.15 148144

Each 173513 7458.15 180971

Each 218396 7458.15 225854

Each 266548 7458.15 274006

Each	331055	7458.15	338513
Each	385783	7458.15	393241
Each	434536	7458.15	441994
Each	542771	7458.15	550229
Each	160072	6705.3	166777
Each	226680	6705.3	233385
Each	322621	7458.15	330079
Each	423753	7458.15	431211
Each	459347	7458.15	466805

Each 514488 7458.15 521946

Each 591190 7458.15 598648

- (CB-LT/AL)
- (CB-LT/CU)
- (CB-HT)
- (CB-JT/LT)
- (CB-JT/HT)
- (CB-CE)
- (CB-GL)
- (CB-SB/CB-CIP)
- (CB-CL/CU)
- (CB-CL/AL)
- (CB-CT)

<u>Unit</u>	<u>Material</u>		
<u>-3</u>	<u>-4</u>		
m	158	34.65	193
m	177	34.65	212
m	205	43.05	248
m	78	17.85	96
m	90	17.85	108
m	104	17.85	122
m	81	17.85	99
m	86	17.85	104
m	99	17.85	117
m	120	17.85	138

m	132	24.15	156
m	159	24.15	183
m	199	29.4	228
m	248	29.4	277
m	178	29.4	207
m	221	29.4	250
m	290	34.65	325
m	387	34.65	422
m	473	43.05	516
m	591	51.45	642
m	689	73.5	763
m	859	73.5	933

m	1080	88.2	1168
m	1293	101.85	1395
m	1638	101.85	1740
m	97	17.85	115
m	111	17.85	129
m	136	17.85	154
m	151	29.4	180
m	194	29.4	223
m	248	29.4	277
m	314	34.65	349
m	424	34.65	459
m	523	43.05	566

m	641	51.45	692
m	775	73.5	849
m	960	73.5	1034
m	1223	88.2	1311
m	1450	101.85	1552
m	1837	101.85	1939
m	26	17.85	44
per job	0	7227.15	7227
per job	0	6931.05	6931
per job	0	6822.9	6823
per job	0	6527.85	6528

m	275	24.15	299
m	379	29.4	408
m	519	29.4	548
m	738	29.4	767
m	991	29.4	1020
m	1251	29.4	1280
m	1563	29.4	1592
m	117	17.85	135
m	148	17.85	166
m	191	17.85	209
m	292	17.85	310
m	410	17.85	428
m	620	17.85	638

m	145	17.85	163
m	188	17.85	206
m	250	17.85	268
m	387	17.85	405
m	542	24.15	566
m	883	24.15	907
m	1060	29.4	1089
m	1387	29.4	1416
m	1920	34.65	1955
m	2720	34.65	2755
m	3912	43.05	3955
m	5014	51.45	5065

m	6052	73.5	6126
m	7563	73.5	7637
m	9707	88.2	9795
m	12075	101.85	12177
m	15730	101.85	15832
m	234	17.85	252
m	319	17.85	337
m	495	17.85	513
m	706	29.4	735
m	1147	29.4	1176
m	1575	29.4	1604
m	2159	34.65	2194

m	3112	34.65	3147
m	4473	43.05	4516
m	5632	51.45	5683
m	7019	73.5	7093
m	8647	73.5	8721
m	11138	88.2	11226
m	13861	101.85	13963
m	18204	101.85	18306
m	918	59.85	978
m	1087	59.85	1147
m	1249	59.85	1309
m	1396	74.55	1471

m	1629	74.55	1704
m	1951	74.55	2026
m	2257	88.2	2345
m	2819	88.2	2907
m	1391	59.85	1451
m	1599	59.85	1659
m	1773	74.55	1848
m	1992	74.55	2067
m	2336	74.55	2411
m	2680	88.2	2768
m	3163	88.2	3251
m	1178	59.85	1238
m	1448	59.85	1508
m	1646	59.85	1706
m	1819	74.55	1894
m	2039	74.55	2114
m	2388	74.55	2463
m	2735	88.2	2823
m	1396	59.85	1456
m	1932	59.85	1992

m	2173	59.85	2233
m	2332	74.55	2407
m	2577	74.55	2652
m	2942	74.55	3017
m	3300	88.2	3388
m	2331	74.55	2406
m	2575	74.55	2650
m	2933	74.55	3008
m	3297	88.2	3385

Each	1686	239.4	1925
Each	2032	239.4	2271
Each	2634	355.95	2990
Each	2614	494.55	3109
Each	4323	494.55	4818
Each	5332	610.05	5942
Each	5314	682.5	5997
Each	1616	239.4	1855
Each	1751	239.4	1990

Each	1824	355.95	2180
Each	1929	494.55	2424
Each	2555	494.55	3050
Each	3024	682.5	3707
Each	6469	927.15	7396
Each	7712	1241.1	8953
Each	8396	1241.1	9637
Each	8776	1241.1	10017
Each	11517	1352.4	12869
Each	9858	1352.4	11210
Each	11118	1352.4	12470
Each	11516	1352.4	12868
Each	17593	1550.85	19144
Each	21143	1550.85	22694
Each	25768	1550.85	27319
Each	8150	927.15	9077
Each	10212	1241.1	11453
Each	12454	1241.1	13695
Each	12291	1352.4	13643

Each	14487	1352.4	15839
Each	19397	1352.4	20749
Each	31300	1550.85	32851
Each	34222	1550.85	35773
Each	42445	1550.85	43996
Each	48774	1550.85	50325
Each	11810	1241.1	13051
Each	12449	1241.1	13690
Each	16780	1241.1	18021
Each	19978	1550.85	21529
Each	15561	1352.4	16913
Each	18032	1352.4	19384
Each	23567	1352.4	24919
Each	28470	1550.85	30021
Each	40957	1550.85	42508
Each	49317	1550.85	50868
Each	65127	1550.85	66678
Each	73251	1550.85	74802
m	158	27.3	185

m	247	40.95	288
m	325	54.6	380
m	505	69.3	574
m	300	295.05	595
m	165	295.05	460
m	338	295.05	633
m	200	295.05	495
m	71	113.4	184
m	97	113.4	210
m	157	151.2	308
m	212	151.2	363
m	282	151.2	433
m	308	151.2	459
m	363	222.6	586
m	456	222.6	679

Each	31	21	52
Each	32	21	53
Each	32	29.4	61
Each	51	29.4	80
Each	61	42	103
Each	61	42	103
Each	96	42	138
Each	113	42	155
Each	114	42	156
Each	128	47.25	175
Each	164	47.25	211
Each	175	53.55	229
Each	217	66.15	283
Each	145	17.85	163
Each	422	33.6	456
Each	610	33.6	644

Each	272	33.6	306
Each	535	33.6	569
Each	638	33.6	672
Each	450	33.6	484
Each	540	33.6	574
Each	480	33.6	514
Each	413	33.6	447
Each	9	7.35	16
Each	16	7.35	23
Each	20	8.4	28
Each	30	8.4	38
Each	49	8.4	57
Each	67	9.45	76
Each	90	13.65	104
Each	126	22.05	148
Each	167	22.05	189
Each	236	22.05	258
Each	319	31.5	351
Each	473	32.55	506
Each	3	4.2	7
Each	4	4.2	8
Each	6	8.4	14
Each	9	8.4	17
Each	13	8.4	21
Each	14	8.4	22
Each	20	12.6	33
Each	26	14.7	41

Each	34	19.95	54
Each	56	19.95	76
Each	79	35.7	115
Each	114	35.7	150
m	463	175.35	638
m	498	182.7	681
m	569	191.1	760
m	640	198.45	838
m	711	206.85	918
m	399	88.2	487
m	476	88.2	564
m	630	88.2	718
m	782	88.2	870
m	936	88.2	1024
m	216	37.8	254
m	299	37.8	337

m	394	37.8	432
m	513	37.8	551
m	602	37.8	640

m	0	13.65	14
m	0	19.95	20
m	0	26.25	26
m	13	37.8	51
m	0	84	84

(OH-PL)

(OH-PSC)
(OH-HM)
(OH-BKT)
(OH-CON)
(OH-INS)

<u>Unit</u>	<u>Material</u>		
<u>-3</u>	<u>-4</u>		
Each	7542	562.8	8105
Each	8187	562.8	8750
Each	9942	751.8	10694
Each	11151	751.8	11903
Each	12298	848.4	13146
Each	14467	1233.75	15701
Each	12593	784.35	13377
Each	13995	875.7	14871

m	790	158.55	949
m	1359	158.55	1518
m	1027	158.55	1186
m	1210	158.55	1369
m	708	158.55	867
m	1933	158.55	2092
m	1530	158.55	1689
Each	4291	290.85	4582
Each	3490	290.85	3781

Each 1723 1114.05 2837

Each 2339 1114.05 3453

Set 170647 18418 189065

Set 197861 24562.7 222424

Set	220794	24562.7	245357
Set	257692	28037.1	285729
Set	297243	28037.1	325280
Set	330659	32784.2	363443
Set	386787	32784.2	419571
Set	24619	4879.35	29498
Set	40316	11371.5	51688
Each	8677	959.7	9637
Each	9706	959.7	10666
Each	10671	959.7	11631
Each	11989	959.7	12949
Each	13733	1199.1	14932
Each	15560	1439.55	17000

Each	17452	1678.95	19131
Each	19954	1678.95	21633
Each	24534	1919.4	26453
Each	28197	2158.8	30356
Each	9709	959.7	10669
Each	11841	959.7	12801
Each	12956	959.7	13916
Each	14625	959.7	15585
Each	16536	1199.1	17735
Each	18319	1439.55	19759
Each	21293	1678.95	22972
Each	24345	1678.95	26024
Each	29270	1919.4	31189
Each	34400	2158.8	36559
Each	2021	247.8	2269
Each	3471	247.8	3719

Job	23358	1966.65	25325
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Job	26128	1966.65	28095
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Each	269	94.5	364
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Each	390	94.5	485
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Each	308	94.5	403
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Each	592	94.5	687
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Each	312	94.5	407
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Each	599	94.5	694
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Each	276	94.5	371
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Each	592	94.5	687
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Each	410	94.5	505
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Each	607	94.5	702
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Each	1615	187.95	1803
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Each	936	187.95	1124
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Each	1359	187.95	1547
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Each	382	94.5	477
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Each	843	94.5	938
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Each	755	94.5	850
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Each	3231	764.4	3995
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Each 84859 21065.1 105924

Each 96771 21065.1 117836

Each 108294 21065.1 129359

Each 90368 21065.1 111433

Each 101774 21065.1 122839

Each 117954 21065.1 139019

Each 87194 21065.1 108259

Each 97155 21065.1 118220

Each	113524	21065.1	134589
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km	12138	1362.9	13501
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km	17932	1362.9	19295
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km	19480	1362.9	20843
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km	24561	1959.3	26520
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km	30344	1959.3	32303
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km	15590	1362.9	16953
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km	19762	1959.3	21721
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km	31759	2130.45	33889
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km	50225	2130.45	52355
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km	63027	2130.45	65157
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km	77602	2641.8	80244
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Each	49	16.8	66
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Each	36	16.8	53
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Each	33	16.8	50
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Each	65	16.8	82
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Each	43	7.35	50
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Each	728	329.7	1058
Each	1020	329.7	1350
Each	1392	329.7	1722
Each	84	170.1	254
Each	148	170.1	318
Each	419	231	650
Each	317	170.1	487
Each	410	170.1	580
Each	504	276.15	780
Each	662	329.7	992
Each	773	329.7	1103
Each	1066	233.1	1299
Each	1289	233.1	1522
Each	1502	350.7	1853
Each	1289	233.1	1522
Each	33	16.8	50

Each	1005	116.55	1122
Each	896	116.55	1013
Each	26	19.95	46
Each	88	19.95	108
Each	194	28.35	222
Each	219	28.35	247
Each	98	28.35	126
Each	98	28.35	126
Each	129	28.35	157
Each	366	28.35	394
Each	368	28.35	396
Each	76	28.35	104
Each	24	19.95	44
Each	6	450.45	456
Each	6	733.95	740
km	0	1018.5	1019

job	0	85.05	85
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(EA-EP)
(EA-EP)

<i>Unit</i>	<i>Material</i>		
<i>-3</i>	<i>-4</i>		
Each	2957	1022.7	3980
Each	4513	1022.7	5536
Each	4136	1022.7	5159
Each	860	408.45	1268
Each	11109	1117.2	12226
Each	12952	1022.7	13975
Kg.	271	70.35	341
Kg.	666	70.35	736
Kg.	124	70.35	194

Kg.	633	70.35	703
Kg.	69	70.35	139
Kg.	465	82.95	548
Kg.	887	82.95	970
Kg.	323	82.95	406
Each	4260	0 403.2	0 4663
Each	985	164.85	1150

SS-TR

Unit Material

-3

-4

Each 103610 5307.75 108918

Each 241004 6222.3 247226

Each 312710 6767.25 319477

Each 414286 7558.95 421845

Each 508480 9141.3 517621

Each 657496 9885.75 667382

Each 703652 11732.7 715385

Each 927794 14321 942115

Each 1157924 14574 1172498

Each 281122 6256.95 287379

Each 350604 6861.75 357466

Each 445053 7558.95 452612

Each 576537 9463.65 586001

Each 673734 9885.75 683620

Each 790850 11732.7 802583

Each 1001442 14321 1015763

Each 1353739 15217.7 1368957

Job 0 3729.6 3730

Each 89297 2699.55 91997

Each 108705 2802.45 111507

Each 749469 5860.05 755329

Each 835885 6211.8 842097

Each 1002039 6915.3 1008954

Each 1155436 7618.8 1163055

Each 1219589 8674.05 1228263

Each 1424551 10431.8 1434983

Each 1886704 11135.3 1897839

Each 2128036 12190.5 2140227

Each 844221 5860.05 850081

Each 958388 6211.8 964600

Each 1116870 6915.3 1123785

Each 1260476 7618.8 1268095

Each 1368206 8674.05 1376880

Each 1569211 10431.8 1579643

Each 2102059 11135.3 2113194

Each 2370066 12190.5 2382257

Each 685844 11699.1 697543

Each 764980 12402.6 777383

Each 838840 13457.9 852298

Each 976009 14513.1 990522

Each 1028766 15567.3 1044333

Each 1239795 17326 1257121

Each 1292552 17326 1309878

Each 1318931 17677.8 1336609

Each 1355861 18029.5 1373891

Each 1398066 18733 1416799

Each 1445548 18909.5 1464457

Each 1572165 20667.2 1592832

Each 1487754 20316.5 1508070

Each 1651301 22074.2 1673375

Each 1746264 25591.7 1771856

Each 1862330 27350.4 1889680

Each 1970482 29109.2 1999591

Each 2126116 30866.9 2156983

Each 2352972 34384.3 2387356

Each 1709334 22074.2 1731408

Each 1886071 25591.7 1911663

Each 2020602 27350.4 2047952

Each 2128754 29109.2 2157863

Each 2331869 30866.9 2362736

Each 2585104 34384.3 2619488

0 0

Set	7667	945	8612
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Set	12349	945	13294
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Set	14655	945	15600
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Set	31257	1359.75	32617
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Set	4383	945	5328
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Set	7796	945	8741
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Set	14069	945	15014
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Each	330	35.7	366
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Each	544	35.7	580
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kg	764	141.75	906
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m	34	11.55	46
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Each	3534	0	3534
Each	3904	0	3904
Each	4604	0	4604
m	1529	35.7	1565
Each	169	35.7	205
Each	124	35.7	160
Each	5086	284.55	5371
Each	932	141.75	1074
Each	14842	543.9	15386
kg	94	11.55	106
Each	104	11.55	116
Each	560	0	560
Each	362	71.4	433
Each	3242	107.1	3349
Each	67	11.55	79

Each	696	0	696
m ²	3876	426.3	4302
m ²	4222	426.3	4648
m ²	5831	426.3	6257
Per pair	1640	0	1640
Each	3132	71.4	3203
Each	3570	71.4	3641
Each	8488	71.4	8559
Each	2039	71.4	2110
Each	3291	71.4	3362
Each	4273	141.75	4415
Each	8511	141.75	8653
Kg	122	92.4	214
Kg	153	92.4	245

Kg	85	92.4	177
Per km	23	0	23
Per km	32	0	32
		0	0
kVA	0	28.35	28
kVA	0	39.9	40
set	0	330.75	331

(GEN-GEN)

(GEN-AMF)

<i>Unit</i>	<i>Material</i>
<i>-3</i>	<i>-4</i>

Each 139631 7749 147380

Each 281524 7749 289273

Each 261764 10693.2 272457

Each 292216 10693.2 302909

Each 334680 10693.2 345373

Each 352154 10693.2 362847

Each 370004 10693.2 380697

Each 472998 10693.2 483691

Each 514911 10693.2 525604

Each 534694 10693.2 545387

Each 638978 11125.8 650104

Each 757242 11125.8 768368

Each 799594 11125.8 810720

Each 1011884 12884.6 1024769

Each 1017863 12884.6 1030748

Each 1169013 12884.6 1181898

Each 1295894 12884.6 1308779

Each 1618943 14596.1 1633539

Each 2110289 14596.1 2124885

Each 2425777 14596.1 2440373

Each 2891289 14902.7 2906192

Each 5438977 16074.5 5455051

Each 41414 1815.45 43229

Each 43173 1815.45 44988

Each 45547 1815.45 47362

Each 49856 1815.45 51671

Each 60471 1815.45 62286

Each 69195 1815.45 71010

Each 73860 1815.45 75675

Each	77963	1815.45	79778
Each	94963	1815.45	96778
Each	100239	3439.8	103679
Each	105808	3439.8	109248
Each	126617	3439.8	130057
Each	149067	4334.4	153401
Each	162770	4334.4	167104
Each	186202	4334.4	190536
Each	269062	5316.15	274378
Each	289813	5316.15	295129
Each	360191	5316.15	365507
Each	514383	5316.15	519699

Each	562744	5316.15	568060
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Each	633087	5316.15	638403
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Each	656534	5316.15	661850
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Each	937906	5316.15	943222
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Job	0	2123.1	2123
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Job	0	2709	2709
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Job	0	3880.8	3881
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Job	0	4467.75	4468
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litre	363	47.25	410
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litre	270	47.25	317
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Each	1956	691.95	2648
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Each	4512	691.95	5204
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Each	12879	984.9	13864
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Each	549	691.95	1241
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Each	2565	691.95	3257
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Each	5027	984.9	6012
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Each	413	691.95	1105
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Each	862	691.95	1554
Each	3535	984.9	4520
Each	7023	1278.9	8302
Each	4162	1400.7	5563
Each	11782	1400.7	13183
Each	23635	1987.65	25623
Each	2116	814.8	2931
Each	3594	1107.75	4702
Each	6738	1400.7	8139
Each	17808	1987.65	19796
Each	56450	4029.9	60480
Each	50647	4029.9	54677
Each	16355	4029.9	20385
Each	23741	4029.9	27771

Each	21103	4029.9	25133
Each	12662	4029.9	16692
Each	15475	4029.9	19505
Each	17351	5202.75	22554
Each	8806	338.1	9144
Each	16355	338.1	16693
Each	2392	338.1	2730
Each	1825	177.45	2002
Each	4363	177.45	4540
Each	7879	177.45	8056
Each	18687	177.45	18864
Each	37906	177.45	38083
Each	48589	177.45	48766
Each	73343	177.45	73520
Each	110964	177.45	111141
Each	2048	177.45	2225
Each	7619	82.95	7702
Each	8052	82.95	8135
Each	9643	82.95	9726

Each	15215	82.95	15298
Each	18642	82.95	18725
Each	21244	82.95	21327
litre	18	6.3	24
Job	0	1445.85	1446
per kVA	0	29.4	29

(WP-CGP)
(WP-SMP)
(WP-OSP)

(WP-DWP-SMP)
(WP-PP)

<u>Unit</u>	<u>Material</u>
<u>-3</u>	<u>-4</u>

Each	4748	547.05	5295
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Each	7380	547.05	7927
Each	9002	547.05	9549
Each	11077	547.05	11624
Each	12572	547.05	13119
Each	15965	930.3	16895
Each	15463	930.3	16393
Each	15841	1285.2	17126
Each	19889	1285.2	21174
Each	19824	1285.2	21109
Each	26961	1425.9	28387
Each	32777	2097.9	34875

Each	39100	2097.9	41198
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Each	42534	2667	45201
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Each	58154	2667	60821
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Each	70983	2873.85	73857
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Each	82510	2873.85	85384
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Each	23361	3840.9	27202
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Each	24431	3840.9	28272
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Each	25594	3840.9	29435
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Each	28398	3840.9	32239
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Each	25069	3840.9	28910
Each	26081	3840.9	29922
Each	27039	3840.9	30880
Each	27288	3840.9	31129
Each	32772	4410	37182
Each	29207	4410	33617
Each	30490	4410	34900
Each	26606	4410	31016
Each	27328	4410	31738
Each	23929	4410	28339

Each	30644	4410	35054
Each	28166	4410	32576
Each	32865	4410	37275
Each	30905	4410	35315
Each	29966	4410	34376
Each	38143	4410	42553
Each	32645	4410	37055
Each	35954	4410	40364
Each	36389	4410	40799
Each	41316	4410	45726

Each	46918	4410	51328
Each	37983	4410	42393
Each	37730	4410	42140
Each	34151	4410	38561
Each	42048	4410	46458
Each	42074	4410	46484
Each	52381	4410	56791
Each	25787	3840.9	29628
Each	23859	3840.9	27700
Each	19032	3840.9	22873

Each	14515	3840.9	18356
Each	15164	3840.9	19005
Each	15389	3840.9	19230
Each	14664	3840.9	18505
Each	15642	3840.9	19483
Each	15109	3840.9	18950
Each	14293	3840.9	18134
Each	17512	3840.9	21353
Each	20733	3840.9	24574
Each	20046	3840.9	23887

Each	20491	3840.9	24332
Each	23192	3840.9	27033
Each	19791	3840.9	23632
Each	21991	3840.9	25832
Each	14867	3840.9	18708
Each	15726	3840.9	19567
Each	15903	3840.9	19744
Each	19506	3840.9	23347
Each	14383	3840.9	18224
Each	16325	3840.9	20166

Each	16857	3840.9	20698
Each	20043	3840.9	23884
Each	19490	3840.9	23331
Each	19684	3840.9	23525
Each	21079	3840.9	24920
Each	21676	3840.9	25517
Each	16811	3840.9	20652
Each	21998	3840.9	25839
Each	19632	3840.9	23473
Each	18938	3840.9	22779

Each	27554	3840.9	31395
Each	23084	3840.9	26925
Each	25209	3840.9	29050
Each	29256	3840.9	33097
Each	25434	3840.9	29275
Each	28780	3840.9	32621
Each	32283	3840.9	36124
Each	17084	2563.05	19647
Each	18979	2563.05	21542

Each	25227	2563.05	27790
Each	27196	2563.05	29759
Each	12571	2563.05	15134
Each	12792	2563.05	15355
Each	749	217.35	966
Each	1583	217.35	1800
Each	2211	217.35	2428
Each	6076	299.25	6375
Each	12167	299.25	12466
Each	19281	382.2	19663
Each	2222	382.2	2604
m	93	27.3	120
m	138	27.3	165
m	202	27.3	229

m	59	27.3	86
m	340	27.3	367
m	529	27.3	556
Each	970	299.25	1269
Each	1019	299.25	1318
Each	110	140.7	251
Each	4659	299.25	4958
Each	5338	299.25	5637
Each	5797	299.25	6096
Each	4534	299.25	4833
Each	11879	486.15	12365
Each	14509	486.15	14995

Each	22990	486.15	23476
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Each	33756	868.35	34624
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Each	39675	868.35	40543
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Each	9601	486.15	10087
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Each	9619	486.15	10105
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Each	331	99.75	431
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Each	689	127.05	816
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Each	35241	2563.05	37804
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Each	50544	2563.05	53107
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Each	70378	2563.05	72941
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Each	17355	1048.95	18404
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Each	19116	1048.95	20165
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Each	22387	1048.95	23436
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HP	0	82.95	83
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HP	0	82.95	83
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Each	0	909.3	909
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Each	0	2342.55	2343
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Each	0	880.95	881
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Each	0	2342.55	2343
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Each	0	880.95	881
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(FF-MFP/SSC)
 (FF-MFP/MSC)
 (FF-MFP/JP)
 (FF-MFP/BP)
 (FF-PP)
 (FF-FV)
 (FF-FFA)
 (FF-FAS)
 (FF-PAS)
 (FF-SPR)
 (FF-FRM)

<i>Unit</i>	<i>Material</i>		
<i>-3</i>	<i>-4</i>		
Each	114501	7231.35	121732
Each	176385	8403.15	184788
Each	277532	9868.95	287401
Each	231393	9868.95	241262

Each	321608	9868.95	331477
Each	464264	12506.6	476771
Each	60038	3918.6	63957
Each	111423	4833.15	116256
Each	25851	2675.4	28526
Each	30599	4285.05	34884
Each	37458	4431	41889
Each	49486	4539.15	54025
m	204	85.05	289
m	293	85.05	378
m	596	85.05	681
m	759	136.5	896
m	945	136.5	1082
m	1343	136.5	1480
m	2035	136.5	2172

m	3235	163.8	3399
m	128	217.35	345
m	189	268.8	458
m	234	382.2	616
Each	4148	347.55	4496
Each	6123	347.55	6471
Each	15499	645.75	16145
Each	27194	645.75	27840
Each	3667	347.55	4015
Each	5348	347.55	5696
Each	8430	645.75	9076
Each	11724	645.75	12370
Each	4806	347.55	5154
Each	7238	347.55	7586
Each	11155	645.75	11801
Each	19483	645.75	20129
Each	1812	347.55	2160
Each	1978	347.55	2326
Each	2415	347.55	2763
Each	3228	347.55	3576
Each	5038	645.75	5684
Each	7835	645.75	8481

Each	4977	347.55	5325
Each	6794	599.55	7394
Each	11021	645.75	11667
Each	17779	645.75	18425
Each	7143	599.55	7743
Each	9733	645.75	10379
Each	23703	728.7	24432
Each	39493	765.45	40258
Each	677	196.35	873
Each	928	196.35	1124
Each	945	196.35	1141
Each	7532	347.55	7880
Each	4679	347.55	5027
Each	14924	347.55	15272
Each	10525	347.55	10873
Each	9668	222.6	9891
Each	5903	347.55	6251
Each	3731	0	3731
Each	4622	0	4622
m	134	35.7	170
m	83	35.7	119

Each	1662	35.7	1698
Each	1694	35.7	1730
Each	824	35.7	860
Each	7796	355.95	8152
Each	9690	347.55	10038
Each	10370	423.15	10793
Each	627	93.45	720
Each	568	93.45	661
Each	1426	93.45	1519
Each	802	69.3	871
Each	813	69.3	882
Each	3974	661.5	4636
Each	6495	661.5	7157

Each	12796	982.8	13779
Each	1364	164.85	1529
Each	1475	164.85	1640
Each	27566	3589.95	31156
Each	48425	2304.75	50730
Each	431	82.95	514
Each	478	123.9	602
Each	112	82.95	195
m	78	13.65	92
m	99	13.65	113
m	193	27.3	220
m	280	27.3	307
Each	15524	1163.4	16687
Each	4468	581.7	5050

Each	16048	262.5	16311
Each	2419	58.8	2478
Each	4646	82.95	4729
Each	1618	58.8	1677
Each	992	58.8	1051
m	114	14.7	129
m	18	14.7	33
m	26	14.7	41
m	32	14.7	47
m	47	14.7	62
Each	239	164.85	404
Each	6203	164.85	6368
Each	7109	164.85	7274
Job	8026	193.2	8219
Sq mtr	0	6.3	6

(TE-IL)
(TE-DG)

<u>Unit</u>	<u>Material</u>		
<u>-3</u>	<u>-4</u>		
Each	13	27.3	40
Each	13	40.95	54

Each	145	55.65	201
Each	145	68.25	213
Each	210	55.65	266
Each	210	68.25	278
Each	227	55.65	283
Each	227	68.25	295
Per Thousan d	617	330.75	948
Per Thousan d	617	472.5	1090
Each	318	118.65	437
Each	286	118.65	405
Each	6	1.05	7
Each	310	11.55	322
Each	142	11.55	154
Each	345	35.7	381
Each	287	58.8	346

Each	17	13.65	31
Each	2673	633.15	3306
Each	579	118.65	698
Each	987	472.5	1460
Each	288	76.65	365
Each	144	5.25	149
Each	5005	106.05	5111
m	7	6.3	13
m	7	8.4	15
Each	4855	807.45	5662
Each	3444	633.15	4077
Each	4066	807.45	4873

Each	13089	982.8	14072
Each	14819	982.8	15802
Each	916	76.65	993
Job	5634	1795.5	7430
Each	260	58.8	319
Each	2406	25.2	2431
Each	433	1519.35	1952
Each	919	192.15	1111
Each	257	60.9	318
Each	2169	65.1	2234
Each	396	82.95	479
Each	741	100.8	842
Each	1571	118.65	1690

Each	864	55.65	920
Each	864	68.25	932
Each	97	13.65	111
m	3	16.8	20
m	7	18.9	26
m	9	31.5	41
m	18	37.8	56
m	21	44.1	65
m	27	44.1	71
Each	1114	55.65	1170
Each	2288	68.25	2356
Each	4243	118.65	4362
Each	4412	190.05	4602
Job	8461	2363.55	10825

Each	711	190.05	901
Each	2098	379.05	2477
m	10	6.3	16
m	10	12.6	23
Each	179	12.6	192
Each	1117	55.65	1173
Each	1786	68.25	1854
Each	2256	55.65	2312
Each	2256	68.25	2324
Each	18059	0	18059
Each	26574	0	26574
Each	138	0	138
Each	0	7992.6	7993

Per Day 1627 916.65 2544

Per Day 3872 1079.4 4951

Per Day 6406 1243.2 7649

Per Day 7063 1405.95 8469

Per Day 9686 1405.95 11092

Per Day 12334 1405.95 13740

Per Day 17760 1405.95 19166

Per Day 33551 1508.85 35060

Per Day 43085 1508.85 44594

Per Day 59498 1508.85 61007

SRN-SRN

<u>Unit</u>	<u>Material</u>		
<u>-3</u>	<u>-4</u>		
Each	11074	900.9	11975
Each	61514	1170.75	62685
Each	0	585.9	586
Each	802	268.8	1071
Each	401	315	716
Each	1027	315	1342
Each	606	38.85	645
Each	626	157.5	784

Per Km	0	50.4	50
Each	0	609	609

(CW-EXN)

(CW-PTG)
(CW-PLB)

<i>Unit</i>	<i>Material</i>		
<i>-3</i>	<i>-4</i>		
m	41	101.85	143
m	41	135.45	176
m	121	135.45	256
m	121	101.85	223
m ³	0	948.15	948
m ³	0	237.3	237
m ³	0	202.65	203

m ³	3630	1148.7	4779
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Job	510	67.2	577
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m ²	75	16.8	92
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Each	2345	156.45	2501
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Each	7996	5236.35	13232
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Each	947	225.75	1173
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Each	1610	225.75	1836
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Each	1742	225.75	1968
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m ³	3698	826.35	4524
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Each	1193	338.1	1531
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m ³	2309	786.45	3095
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Each	2144	612.15	2756
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Each	2384	929.25	3313
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Each	3180	1230.6	4411
Each	4308	1858.5	6167
Each	11118	11543.7	22662
Each	14596	12750.1	27346
Each	18729	14745.2	33474
Each	21354	17552.9	38907
Each	57	67.2	124
m	21	33.6	55
m	24	50.4	74
Each	25	50.4	75
Each	33	50.4	83
Each	389	432.6	822
Each	306	360.15	666
Job	1249	1009.05	2258
Job	1967	1153.95	3121
m ²	68	33.6	102

m²	156	72.45	228
m²	205	143.85	349
m²	388	96.6	485
Each	1	6.3	7
Each	50	45.15	95
m	159	38.85	198
m	198	38.85	237
m	286	52.5	339
m	352	52.5	405
m	414	65.1	479
m	572	65.1	637
m	725	84	809
m	931	105	1036
m	1328	117.6	1446
m	428	52.5	481
m	494	65.1	559
m	685	65.1	750
m	863	84	947
m	1078	105	1183
m	1547	117.6	1665
m	42	26.25	68
m	76	26.25	102
m	101	26.25	127

Each	317	78.75	396
Each	680	78.75	759
Each	886	105	991
Each	1712	105	1817
Each	2257	131.25	2388
Each	3532	131.25	3663
Each	203	78.75	282
Each	381	78.75	460
Each	470	105	575
Each	819	105	924
Each	1221	131.25	1352
Each	2668	131.25	2799
Each	711	78.75	790
Each	1436	78.75	1515
Each	2066	105	2171
Each	3933	105	4038
Each	5559	131.25	5690
Each	10910	131.25	11041
Each	424	78.75	503
Each	859	91.35	950
Each	1282	105	1387
Each	3018	105	3123
Each	3925	131.25	4056
Each	7490	131.25	7621
Each	117	26.25	143
Each	126	26.25	152
Each	143	38.85	182
Each	190	38.85	229
Each	343	44.1	387

Each	362	44.1	406
Each	607	64.05	671
Each	1007	105	1112
Each	1468	105	1573
Each	2166	105	2271

<u>Unit</u>	<u>Material</u>
<u>-3</u>	<u>-4</u>

Job	955497	177583	1133080
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Job 979384 181822 1161206

Job 1068647 186599 1255246

Job 1271313 230583 1501896

Job 1363343 239835 1603178

Job 1496614 273422 1770036

Job 1595934 283480 1879414

Job 1639938 286121 1926059

Job 1744291 290521 2034812

Job 1939163 300207 2239370

Job 1992974 304104 2297078

Job 2052317 305235 2357552

Job 2131522 318693 2450215

Job 2269820 325798 2595618

Job 2570928 336992 2907920

Job 2624614 347935 2972549

Job 2931740 358815 3290555

Job 3138573 364535 3503108

Job 2654791 387658 3042449

Job 2944207 395391 3339598

Job 3176294 404883 3581177

Floor 139292 15137.9 154430

Floor 143547 15512.7 159060

Floor 148496 16136.4 164632

Floor 152817 16761.2 169578

Floor 156702 18009.6 174712

Floor 161588 19258 180846

Floor 165937 20506.5 186444

Floor 170387 21755 192142

Floor 178747 23002.4 201749

Floor 186212 25499.3 211711

Floor 195681 26748.8 222430

Floor 211942 30493.1 242435

Floor 217912 32991 250903

0

0

Floor 145771 15593.6 161365

Floor 150245 15980 166225

Floor 155429 16616.3 172045

Floor 159916 17278.8 177195

Floor 163991 18553.5 182545

Floor 169138 19838.7 188977

Floor 173550 21125 194675

Floor 178173 22410.2 200583

Floor	186896	23696.4	210592
Floor	194908	26267.9	221176
Floor	204715	27553.1	232268
Floor	221785	31373	253158
Floor	228141	33995.8	262137
Floor	154679	16467.2	171146
Floor	160037	17117.1	177154
Floor	164649	17753.4	182402

Floor 168825 19101.6 187927

Floor 174058 20424.6 194483

Floor 178668 21748.7 200417

Floor 183467 23071.7 206539

Floor 192439 24383.1 216822

Floor 200725 27041.7 227767

Floor 210819 28377.3 239196

Floor 228449 32323.2 260772

Floor 234605 35006 269611

Set 118916 8738.1 127654

Set 122483 9115.05 131598

Set 126769 9493.05 136262

Set 130573 10129.4 140702

Set 134490 10507.4 144997

Set 139197 11011.4 150208

Set 143373 11580.5 154953

Set 147674 11957.4 159631

Set 155058 12460.4 167518

Set 162811 14104.7 176916

Set	170952	14733.6	185686
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Set	186337	16618.4	202955
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Set	192859	17876.3	210735
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Each	29419	2369.85	31789
Each	68834	3793.65	72628
Each	89515	5799.15	95314

Each	14620	1039.5	15660
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Job	38346	1964.55	40311
Job	57305	2947.35	60252
Job	77320	3931.2	81251

Each	2554	656.25	3210
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per landing	44758	7678.65	52437
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per landing	63489	8307.6	71797
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per landing	116105	9564.45	125669
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per landing	201849	11450.3	213299
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per landing	9806	3371.55	13178
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per landing	13955	3979.5	17935
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per landing	23762	4538.1	28300
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per landing	36334	6112.05	42446
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Job	2669	3451.35	6120
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Job	6751	4071.9	10823
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Job	0	3109.05	3109
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Job	3551	883.05	4434
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Job	1924	592.2	2516
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Job	9915	3347.4	13262
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Job	15106	3526.95	18633
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Job	8083	2423.4	10506
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Job	9449	2423.4	11872
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Job	8994	1234.8	10229
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Job	287	100.8	388
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Job	1954	980.7	2935
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Job	4001	624.75	4626
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Kg	408	64.05	472
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Job	129302	23907.5	153209
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Job	153274	31432.8	184707
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Job	177302	37949.1	215251
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Job	202906	46808	249714
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Job	265079	53324.3	318403
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Each	47860	1900.5	49761
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Sq ft	315	107.1	422
		0	0
Each	601	78.75	680
Each	1748	227.85	1976
Each	758	227.85	986
Each	945	40.95	986
m	160	47.25	207
m	135	47.25	182
m	105	47.25	152
m	73	28.35	101
Each	1284	164.85	1449
Each	1027	164.85	1192
Job	280	601.65	882
Job	7990	1103.55	9094

Job	9658	1103.55	10762
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Job	10696	1103.55	11800
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Job	57717	5214.3	62931
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job	62231	5214.3	67445
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job	70863	5574.45	76437
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job	81361	5692.05	87053
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job	93026	6253.8	99280
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m	758	306.6	1065
m	1050	306.6	1357
Each	3616	358.05	3974
Each	116	37.8	154
Each	3593	851.55	4445
Each	4490	851.55	5342
Each	15047	1335.6	16383
Each	904	47.25	951
Each	1102	55.65	1158
Each	22921	1157.1	24078
Each	1107	145.95	1253
door	119	456.75	576
Job	99558	5454.75	105013

Job	119504	5454.75	124959
Job	59723	1192.8	60916
Job	70198	1192.8	71391
Job	90050	1204.35	91254
Job	114080	1220.1	115300
Job	22746	1192.8	23939
Job	20996	1220.1	22216
Job	991	551.25	1542
Job	875	208.95	1084
Job	76870	1834.35	78704
Job	87368	1834.35	89202

Job	99978	1887.9	101866
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Job	114197	1942.5	116140
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Job	131344	1996.05	133340
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Job	17124	3035.55	20160
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m	128	26.25	154
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m	280	84	364
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Job	63164	676.2	63840
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Job	2835 24601.5	27437
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Job	2892 26776.1	29668
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Job	2963 28905.5	31868
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Job	3091 31280.6	34372
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Job	3220 33429.9	36650
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Job	3477 35650.7	39128
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Job	3732 37823.1	41555
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Floor	350 1363.95	1714
Floor	391 1482.6	1874
Floor	408 1576.05	1984
Floor	420 1838.55	2259
Floor	432 1934.1	2366
Floor	443 2067.45	2510
Floor	467 2212.35	2679

Floor	391 1482.6	1874
Floor	408 1576.05	1984
Floor	420 1838.55	2259
Floor	432 1934.1	2366
Floor	443 2067.45	2510
Floor	467 2212.35	2679
Floor	490 2331	2821

Floor	408 1576.05	1984
Floor	420 1838.55	2259

Floor	432	1934.1	2366
Floor	443	2067.45	2510
Floor	467	2212.35	2679
Floor	490	2331	2821
Floor	513	2558.85	3072

Set	116	1131.9	1248
Set	128	1225.35	1353
Set	140	1306.2	1446
Set	151	1530.9	1682
Set	175	1305.15	1480
Set	233	1456.35	1689
Set	292	1748.25	2040

<i>Unit</i>	<i>Material</i>
<i>-3</i>	<i>-4</i>

Job 284 172.2 456

Each 311 172.2 483

Each 325 172.2 497

Each 325 172.2 497

Each 415 172.2 587

Each 616 232.05 848

Each 684 381.15 1065

Each	984	381.15	1365
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Each	1206	381.15	1587
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Each	1426	426.3	1852
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Each	2219	785.4	3004
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Each	2815	785.4	3600
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Each	3448	819	4267
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Each	3368	988.05	4356
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Each	4108	988.05	5096
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Each	5567	1167.6	6735
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Each	7114	1739.85	8854
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Each	8504	2113.65	10618
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HP	872	630	1502
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HP	1051	630	1681
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Each	175	78.75	254
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Each	200	117.6	318
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Each	353	126	479
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Each	607	138.6	746
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Each	896	315	1211
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Each	98	63	161
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Each	42	45.15	87
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Each	1664	393.75	2058
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Each	1827	393.75	2221
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Litre	13	10.5	24
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Litre	113	14.7	128
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Each	123	117.6	241
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Each	362	117.6	480
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Each	362	99.75	462
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Each	497	99.75	597
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Each	362	117.6	480
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Each	830	117.6	948
Each	1174	105	1279
Each	1995	157.5	2153
Each	946	99.75	1046
Each	624	117.6	742
Each	930	117.6	1048
Each	1091	117.6	1209
Each	1580	117.6	1698
Each	2070	131.25	2201
Each	2738	131.25	2869
Each	3153	131.25	3284
Each	453	99.75	553
Each	1694	99.75	1794
Each	1094	99.75	1194
Each	839	117.6	957
Each	1355	117.6	1473
Each	1478	117.6	1596
Each	906	71.4	977
Each	1840	117.6	1958
Each	2108	117.6	2226
Each	3917	117.6	4035
Each	2222	117.6	2340
Each	5547	74.55	5622
Each	7324	74.55	7399
Each	9210	89.25	9299
Each	14643	112.35	14755
Each	19392	134.4	19526
Each	47	78.75	126

Each	403	78.75	482
Each	0	42	42
Each	0	84	84

<i>Unit</i>	<i>Material</i>
<i>-3</i>	<i>-4</i>

Kg	-15
Kg	-63
Kg	-71
Kg	-18
Kg	-223
Kg	-4
Kg	-8
Kg	-6
Kg	-18
Kg	-23
Each	-1450
Each	-161
Kg	-111
Kg	-155
Kg	-228
Each	-356
Each	-393
Each	-613
Each	-14
Each	-56
Each	-102
Kg	-16

Kg	-36
Kg	-22
Each	-303
HP	-422
HP	-435
TR	-517
TR	-1728
TR	-1785
Each	-645
Kg	-278
Each	-602
Litre	-34
Each	-657
Each	-1122
Each	-475
Each	-720
Litre	-11
KVA	-643
KVA	-73
Each	-820
Each	-34
Each	-64
KVA	-62
KVA	-74
Each	-327
Each	-40
Each	-84
Kg	-54
Kg	-38