



1. The exact positioning of the equipment should be considered according to the mechanical drawings
2. The technical information of the equipment should be considered according to the mechanical drawing
3. The size of the cables should be done based on the single line diagram of the main and sub panels
4. earth jump (1x10 mm² NYA) should be seen between the parts of the cable tray
5. The distance between cable tray supports should be 2 meters, the size and location of the supports should be specified by the manufacturer and contractor with the approval of the supervisor
6. the coordination of cable trays and busbar with mechanical equipment and cables should be done on site by the supervisor
7. The interference of all mechanical, electrical equipments on the site should be resolved by the supervisor
8. **blowers** mechanical information is not specified, it is considered based on the blower power available on the site. If the mechanical and process information changes, this map will be revised
9. The technical information of the equipment should be considered according to the mechanical drawing
10. the contractor and busbar manufacturer's must comply with all the standards and the executive shop and the thermal stresses and short circuit and the allowed distances for installation according to the standards and conditions of the workshop with the coordination of the supervisor.
11. all metal equipment should be connected to the earth system
12. The busbar and cable tray supports should not be less than 100 millimeters
13. All the parts of the cable tray should be hot galvanized with a cover door and with a thickness of 5mm and 100microns

Standard:
General Technical Specification and Execution Procedures for Electrical Installation of Buildings (r1-110-2 iron standard)
General Technical Specification and Execution Procedures for
Electrical Installation of Buildings Low and Medium Voltage Electrical Installations (r2-110-1 iron standard)
Technical Details for Electrical Installations NO. 393 iron standard
IEC 60439, VDE, NFPA, ISIRI
CONSTRUCTION INDUSTRY LAW AND LEGISLATION IRAN BUILDING ELECTRIC EQUIPMENT DESIGN AND
CONSTRUCTION STANDARD (MABHAS 13, 2016 IRAN STANDARD)
60439-6-LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES PART 6: BUSBAR TRUNKING
SYSTEMS (BUSWAYS)
60439-2-LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES PART 2: PARTICULAR
REQUIREMENTS FOR BUSBAR TRUNKING SYSTEMS (BUSWAYS)

TRB, TR1, TR2,TR3,TR4,TR5	TRANSFORMER BOOSTING 1600KVA
IB, I1, I2,TR3,I4,I5	INCOMING CELL
CBB, CB1, CB2,CB3,CB4,CB5	CAPACITOR BANK KVA
LB, L1, L2,L3,L4,L5	LOAD DISTRIBUTION CELL
CB, C1, C2,C3,C4,C5	COUPLE CELL
DB, D1, D2,D3,D4,D5	DISEL CELL CELL

[illegible]

FUTURE PIPE COVER LINE CONTROL CABINETS - STACKING AND PACKING MACHINE - HEIN PREPARATION																
AST-P-0.1	PIERCING MACHINE	1.0-ft.	400 V 3-Ø	53	62	-	42	DOUBLE	3	-	62	-	No	Yes	53	+450
AST-P-0.2	RESINING AND CURE CUP	1.0-ft.	400 V 3-Ø	18	73	-	32	DOUBLE	1	3	73	-	No	Yes	18	+450
AST-P-0.3	FORAM	1.0-ft.	400 V 3-Ø	50	256	-	72	SINGLE	-	-	1.0-ft.	-	No	No	-	+450
AST-P-0.4	PACKER	1.0-ft.	400 V 3-Ø	263	320	-	210	SINGLE	-	-	1.0-ft.	-	No	No	-	+1,000
AST-P-0.5	RAIDER - DASH	1.0-ft.	400 V 3-Ø	15	18	-	34	SINGLE	-	-	1.0-ft.	-	No	No	-	+450
AST-P-0.6	BEST CONTROL	1.0-ft.	400 V 3-Ø	20	34	-	40	SINGLE	-	-	1.0-ft.	-	No	No	-	+1,000
AST-P-0.7	WRAPPING, MARKING AND BELTS	1.0-ft.	400 V 3-Ø	250	259	-	178	SINGLE	-	-	1.0-ft.	-	No	No	-	+1,000
AST-P-0.8	NACRO WAVE CURING OVEN	1.0-ft.	400 V 3-Ø	500	586	-	460	SINGLE	-	-	1.0-ft.	-	No	No	-	+1,000
AST-P-0.9	CONVACTING	1.0-ft.	400 V 3-Ø	40	59	-	40	SINGLE	-	-	1.0-ft.	-	No	No	-	+1,000
AST-P-0.9	FASCH	1.0-ft.	400 V 3-Ø	50	59	-	40	SINGLE	-	-	1.0-ft.	-	No	No	-	+1,000
AST-HS	HEIN PREPARATION	1.0-ft.	400 V 3-Ø	18	62	-	42	DOUBLE	1	18	62	-	No	Yes	18	+450
TOTAL INSTALLED POWER FUTURE PIPE COVER LINE				5,360	6,447	-	5,383		3	118	85	-	No	Yes	100	+175

14	15	REFERENCE DOCUMENTS					
DOCUMENT NO.			TITLE				
V40110-060-REVL- OGT DOC			ELECTRICAL LAYOUT				
NOTES/LEGEND:							
AREA NAME LIST							
No.	DESCRIPTION						
1	Production Hall – Furnace Section						
2	Production Hall – Cold Line Section						
3	General Services Building No.2						
4	General Services Building No.1						
5	Resin Building						
6	Workshop No.1						
7	Laboratory and Workshop No.2						
8	Management Building						
9	Offices Building – Production Staffs						
10	Production Hall – Cold Line Control Room						
11	General Services No.2 Control Room						
12	Batching Plant Storage						
13	Glass Storage						
14	Binder Preparation Building						
15	Production Warehouse Preliminary						
16	Raw Material and Spare Parts Warehouse						
17	Locker Room and Showers						
18	Hot Water Boiler Room						
19	Guard Building No.1						
20	Guard Building No.2						
21	Pump Station No.1						
22	Cold Line Electrical Room						
23	Electrical Substation						
24	Water Recycling System						
25	Transformer Building						
26	Gas Oil Pump Shelter						
27	Truck Loading Shelter						
28	Weighing Bridge						
29	Evaporation Pond						
30	Fire Water Tank						
31	Hot Oil Building						
32	Resin Making and Tanks Area						
33	Bag Filter						
34	Office Building						
35	Restaurant Building						
36	Prayer Room						
37	VIP						
38	VIP for Drivers						
39	Emergency and Clinic Building						
40	Gas Oil Unit						
41	Production Hall – Furnace Control Room						
42	General Services No.1 – Control Room						
43	Binder Preparation Control Room						
44	Pump Station No.2						
45	Natural Gas Station						
46	Passage ELEC Substation						
47	Batching Plant						
48	Lime Storage						
49	Production Hall – Furnace Workshop & Leisure room						
51	Parking						
52	Main Storage						
53	Cooling Water						
54	Warehouse of Capsule Building						
55	Circulating Water Tank						
56	Elevated Water Tank						
57	Production Hall–Furnace Electrical Room						
58	Cooling Water Pond						
59	Tap Water						
60	Production Hall – Cold Line Control Room No.02						
61	Water treatment area						
62	Water pre–treatment Building						
63	General Services No.1 – Electrical Room						
5	17/03/2026	ISSUED FOR CONSTRUCTION	N.K	R.SH	M.R.S.	M.H.	M.H.
4	29/12/2025	ISSUED FOR CONSTRUCTION	N.K	R.SH	M.R.S.	M.H.	M.H.
3	3/4/2025	ISSUED FOR APPROVAL	G.M	R.SH	M.R.S.	M.E.	M.H.
2	5/3/2025	ISSUED FOR APPROVAL	G.M	R.SH	M.R.S.	M.E.	M.H.
1	18/2/2025	ISSUED FOR APPROVAL	G.M	R.SH	M.R.S.	M.E.	M.H.
0	12/1/2025	ISSUED FOR TENDER	G.M	R.SH	M.R.S.	M.E.	M.H.
REV	DATE	DESCRIPTION	DRAW. BY	DESC. BY	CHKD. Pro.Eng.Mgr	APPR. Eng.Mgr	AUTH. BY
Client:			 Iran Glass Wool Co.				
Consultant:			 Vista Faraz Rayvarz Project Management and Engineering Co.				
Project Title:							
Iran Glass Wool Complex							
Drawing Title:							
GENERAL Busduct system layout							
Scale	Drawing No.					Sheet	Rev.
1/1000	P0206–000000–VER–DRW–ED–021					1 of 2	A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	BUSDUCT For transformer load 1						BUSDUCT For transformer load 5						KEY PLAN		
	busbar name	load name	KVA	TOTAL KVA	A	C.B SIZE A	busbar name	load name	KVA	TOTAL KVA	A	C.B SIZE A			
	BUS BAR-1 -1600 A	LOAD 1-ASY-19-ST ACKING MACHINE-(Kva)	88	785.92	128	MCCB-250 WITH SET	BUS BAR-1 -3200 A	LOAD 1-ASY-05-FAN1-SUCTION FAN 1-(Kva)	533	1871.18	771	MCCB-1000 WITH SET			
		LOAD 2-ASY-20-PACKING MACHINE(Kva)	71		102	MCCB-250 WITH SET		963	MCCB-1250 WITH SET						
		LOAD 3-ASY-21-ROLL-UP, SHRINKING AND DE-DUSTING(Kva)	335		485	MCCB-800-SET		782	MCCB-1000-SET						
		LOAD 4-60-LP01 Production Hall - Cold Line Control Room No.02(Kva)	15		22	MCCB-100-SET 50		145	MCCB-250-SET						
		LOAD 5-SPARE (KVA)	138		250	MCCB-250 - WITH SET		43	MCCB-100 - WITH SET						
LOAD 6-SPARE (KVA)	138	250	MCCB-250 -												
BUSDUCT For transformer load 2						BUSDUCT For transformer load 4						REFERENCE DOCUMENTS			
busbar name	load name	KVA	TOTAL KVA	A	C.B SIZE A	busbar name	load name	KVA	TOTAL KVA	A	C.B SIZE A				
BUS BAR-1 -3200 A	LOAD 1-ASY-08-CRIMPING-(Kva)	94	1866.08	136	MCCB-250 WITH SET	BUS BAR-1 -3200 A	LOAD 1-CC-07-AIR COMPRESSOR 1-(Kva)	371	2041.18	536	MCCB-630 WITH SET				
	LOAD 2-ASY-09-CURING OVEN(Kva)	635		918	MCCB-1000 WITH SET		536	MCCB-630 WITH SET							
	LOAD 3-ASY-10-POST COMBUSTOR(Kva)	118		170	MCCB-250-SET		536	MCCB-630 WITH SET							
	LOAD 4-ASY-13-COOLING AND CUTTING(Kva)	212		306	MCCB-400-SET		850	MCCB-1000-SET							
	LOAD 5-ASY-14-FOIL FACING (Kva)	424		612	MCCB-800-SET		250	MCCB-400 - WITH SET							
	LOAD 6-ASY-17-CHOPPER BLADE (Kva)	218		315	MCCB-400-SET		250	MCCB-250 - WITH SET							
	LOAD 7-02-LP01 02-Production Hall - Cold Line Section-LIGHTING PANEL(Kva)	111		200	MCCB-250-SET		250	MCCB-250 - WITH SET							
	LOAD 8-SPARE (KVA)	55		100	MCCB-100-SET 50										
BUSDUCT For transformer load 3						BUSDUCT For transformer load B						NOTES/LEGEND:			
busbar name	load name	KVA	TOTAL KVA	A	C.B SIZE A	busbar name	load name	KVA	TOTAL KVA	A	C.B SIZE A				
BUS BAR-1 -2500 A- Panel-41DP1	LOAD 1-QFCC - FURNACE + WE COOLING AND COMBUSTION-(Kva)	420	1050.40	607	MCCB-1000 WITH SET	BUS BAR-1 -2000 A	LOAD 1-QTHY-FURNACE - BOOSTING SYSTEM POWER	1200	1200.00	1734	ACB-2000 WITH SET				
	LOAD 2-ASY-03-FIBERIZING, BUSHING, CUTES AND DAILY BINDER(Kva)	341		493	MCCB-800 WITH SET	BUSDUCT For Emergency load									
	LOAD 3-ASY-P01.1-FIBERIZING MACHINE(Kva)-FUTURE PIPE COVER LINE	62		90	MCCB-100-SET 100	busbar name	load name	KVA	TOTAL KVA	A	C.B SIZE A				
	LOAD 4-ASY-P01.2-BUSHING AND CULLET CHUTE(Kva)-FUTURE PIPE COVER LINE	22		32	MCCB-50	BUS BAR-1 -3200 A	LOAD 1-TR-1	1993	11521.80	3200	ACB WITH SET				
	LOAD 5-QDCS-FURNACE/WORKING END - CONTROL CABINET(Kva)	30		43	MCCB-100-SET 50		LOAD 2-TR-2	1993		3200	ACB WITH SET				
	LOAD 6-QPLC- FURNACE - BOOSTING SYSTEM PLC CABINET (Kva)	10		14	MCCB-50-SET 50		LOAD 3-TR-3	1993		3200	ACB WITH SET				
	LOAD 7-QBCH 1- FURNACE - CHARGER 1(Kva)	10		14	MCCB-50-SET 50		LOAD 4-TR-4	1993		3200	ACB WITH SET				
	LOAD 8-57-LP01 Furnace Electrical Room-LIGHTING PANEL(Kva)	11		16	MCCB-50-SET 50		LOAD 5-TR-5	1993		3200	ACB WITH SET				
	LOAD 9-ASY-SUP(Kva)	6		9	MCCB-50-SET 50		LOAD 5-TR-B	1557		2500	ACB WITH SET				
	LOAD 10-SPARE (A)	138.4		250	MCCB-250 - WITH SET										
BUS BAR-2-2500 A Panel-41DP2	LOAD 1-QFCC -FURNACE + WE COOLING AND COMBUSTION(Kva)	420	1179.40	607	MCCB-1000 WITH SET	<div>TRB, TR1, TR2,TR3,TR4,TR5</div> <div>IB, I1, I2,TR3,I4,I5</div> <div>CBB, CB1, CB2,CB3,CB4,CB5</div> <div>LB, L1, L2,L3,L4,L5</div> <div>CB, C1, C2,C3,C4,C5</div> <div>DB, D1, D2,D3,D4,D5</div> <div>TRANSFORMER BOOSTING 1600KVA</div> <div>INCOMING CELL</div> <div>CAPACITOR BANK KVA</div> <div>LOAD DISTRIBUTION CELL</div> <div>COUPLE CELL</div> <div>DISEL CELL CELL</div> <div><div><div></div></div>TAP OFF</div> <div><div></div></div> BUSDUCT <div><div></div></div> CABLE <div><div></div></div> DISTRIBUTION PANEL									
	LOAD 2-ASY-03-FIBERIZING, BUSHING, CUTES AND DAILY BINDER (Kva)	341		493	MCCB-800 WITH SET										
	LOAD 3-ASY-04-FORMING (Kva)	135		195	MCCB-250 - WITH SET										
	LOAD 4-ASY-P01.1-FIBERIZING MACHINE(Kva)-FUTURE PIPE COVER LINE	62		90	MCCB-100-SET 100										
	LOAD 5-QDCS-FURNACE/WORKING END - CONTROL CABINET(Kva)	30		43	MCCB-100-SET 50										
	LOAD 6-ASY-P01.2-BUSHING AND CULLET CHUTE(Kva)-FUTURE PIPE COVER LINE	22		32	MCCB-50										
	LOAD 7-QPLC- FURNACE - BOOSTING SYSTEM PLC CABINET (Kva)	10		14	MCCB-50-SET 50										
	LOAD 8-QBCH2-FURNACE - CHARGER 2 (Kva)	10		14	MCCB-50-SET 50										
	LOAD 9-ASY-SUP(Kva)	11		16	MCCB-50-SET 50										
	LOAD 10-SPARE (A)	138.4		250	MCCB-250 - WITH SET										
BUS BAR-1 -630 A	LOAD 1-CC4.1-GLASS WOOL LINE COOLING WATER 1 (Kva)	159	455.40	230	MCCB-400 - WITH SET										
	LOAD 2-CC13-FIRE FIGHTING SYSTEM (Kva)	120		173	MCCB-250 - WITH SET										
	LOAD 3-04-LP01-GENERAL SERVICE BUILDING NO.1. lighting panel (Kva)	19		27	MCCB-100 - WITH SET 50										
	LOAD 4-CC6.1-SCRAPER COOLING WATER 1 (Kva)	19		27	MCCB-400 - WITH SET										
	LOAD 5-SPARE (A)	138.4		250	MCCB-250 - WITH SET										
BUS BAR-2 -630 A	LOAD 1-CC4.2-GLASS WOOL LINE COOLING WATER 2 (Kva)	159	316.40	230	MCCB-400 - WITH SET										
	LOAD 2-CC6.1-SCRAPER COOLING WATER 2 (Kva)	19		27	MCCB-400 - WITH SET										
	LOAD 3-SPARE (A)	138.4		250	MCCB-250 - WITH SET										
BUS BAR-1 -2500 A	LOAD 1-QTHB-FURNACE - THROATH BOOSTING(Kva)	50		72	MCCB-100-SET 100										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	