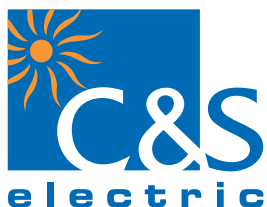


We touch your **electricity** everyday!

**GLOBAL SPECIALIST
FOR POWER BUSBARS**

Sandwich Busbar Trunking System



metabar

Manufacturing Facilities



Greater Noida - India



Haridwar - India



Boom-Belgium

C&S Electric Ltd. is one of the leading manufacturer of electrical equipment in India. It's wide range of electrical and electronic products find application in power generation, distribution, control, protection and final consumption.

C&S employs over 4000 people including 400 engineers, and has 17 state-of-the-art manufacturing plants. It has 23 sales/marketing offices across India and its products are exported to more than 85 countries.

The Power Busbar Division of C&S founded four decade ago and has been meeting the evolving needs of power generating stations, process and manufacturing industries, infrastructure establishments, technological centers and real estate developments with its complete and fully tested product line of Busduct, Bustrunking and associated equipment.

The Eta-com group was founded in 1979 and ever since markets a full range of cast resin insulated busway systems. The concept which was already in use in the sixties in industrial installations is now in the third generation form. Due to the typical characteristics, the system guarantees the integrity of many projects world-wide, providing safe and maintenance free electrical power supplies in both Low Voltage and Medium Voltage installations.

With the acquisition of Eta-com in December 2011, the co-operation between the two companies gives birth to a **Global Power Busbars Specialist**.



metabar range cover Sandwich Bustrunking, Air Insulated Bustrunking & Lighting Trunking.

Bustrunking has lower impedance in comparison to cable and conventional busducts for the same application. Lower impedance means less energy lost during distribution and this translates into cost savings and makes this as energy saver

Flexible Distribution because of Plug-in type arrangement at regular intervals or as per customer design provides efficient power distribution.

Bustrunking system requires less space for Installation in a building / industry as compared to conventional busduct and cable system, so optimum utilization of space.

Material and manpower used in busway is lower than cable & conventional busduct. It saves money on raw materials and creates less waste by buying pre-engineered lengths of busway.

Bustrunking system comes with provision of expansions, changes, replacement and reusing. Metabar Bustrunking can be supplied in following standard types:

SB - Sandwich Type

Up to 1000 V AC Three phase conductors and/or
50, 100% Protective internal & isolated earth
And 100 & 200% neutral

Al-conductors range up to 5000 A
Cu-conductors range up to 6600 A
DC application on request
Other frequencies on request



CB-Compact Air Insulated Type

Up to 1000 V AC
Three phase conductors and/or
50, 100% Protective internal & isolated Earth
And 100% Neutral

Al-conductors range up to 1250 A
Cu-conductors range up to 2000 A
DC application on request
Other frequencies on request



LB-Lighting Trunking

Up to 500 V AC
Three phase conductors
Cu-conductors range up to 40 A



betobar is the leading technology in the world for cast resin insulated busbars in low & medium voltage installations.

This concept is unique as it is based on the direct encapsulation of copper or aluminium conductors with an insulation compound, B.I.M. casting mix, consisting of epoxy-resin mixed under vacuum. This B.I.M. casting mix has excellent electrical characteristics and high mechanical withstand with specific physical properties. It is moisture-resistant, fire-resistant and self-extinguishing. A flexible fabrication method, universal moulds and an integrated process controlled mixing technique allow the production of an almost unlimited number of element forms for L.V. as for M.V. applications. The prefabricated elements are self-supporting and are interconnected electrically by joining the conductors with 2-sided compression contacts, ensuring an excess of contact surfaces and a maximum of adjustment. Junctions and element extremities are overcast with a B.I.M. casting mix resulting in a homogeneous insulation over the full length of the connection.

betobar busbars can be supplied in the following standard types:

For Low Voltage

- LA - series
- Up to 1000 V AC / 1500V DC
- Three phase conductors and/or
- Protective earth / 50,100,150% neutral
- Al-conductors range up to 5000 A
- Cu-conductors range up to 6300 A
- DC application on request
- Other frequencies on request



For Medium Voltage

Type	Current Rating	Voltage Rating
SH-Series	Al upto 1500A	3.6 KV to 7.2 KV
	Cu upto 1850A	



Type	Current Rating	Voltage Rating
PH-Series	Al upto 5000A	3.6 KV to 17.5 KV
	Cu upto 6100A	



Other current and voltage ratings on request.

IP68
degree of protection

IK10
mechanical resistance



isobar range covers Isolated Phase Busduct, Segregated Phase Busducts and Non-Segregated Phase Busducts.

C&S is a market leader in India and amongst the major global companies for design, manufacture, erection and commissioning of Isolated Phase Bus Ducts upto 1000MW power plants.

Today, we have an enviable track record of having associated with 4 Units of 800 MW, 43 Units of 660 MW, 33 Units of 500 MW, 60 Units of 250 MW, 50 Units of 150 MW Thermal Power Stations, Hydro Power Plants and Nuclear Power Plants, besides many Captive/Private Power Projects of capacity less than 100 MW. The largest proportion of 80,000 MW power generated in India flows through C&S isobar busducts.

isobar Busduct have been successfully type tested for highest peak current during short circuit test and also for temperature rise test at world famous laboratories like KEMA-Holland and EDF-France, CPRI-Bhopal & Bangalore and at IIT-Roorkee (For Seismic tests)

Isolated Phase Busduct

C&S offers a wide range of natural air cooled Isolated Phase busducts with voltage rating of 11kV to 38kV having current rating of 100A to 30,000A, with the short circuit current withstand capacity of 309 kA/sec & 845 kA peak. These busducts have applications in all generating stations from 50MW & above.



Segregated Phase Busducts

C&S offer a wide range of Segregated Phase Busducts for Medium Voltage applications from 3.3 kV to 33 kV upto 5000A with a maximum Short Circuit Current withstand capability of 50 kA rms for 3sec. and 128 kA peak. Segregated Phase Busducts find applications in Power Generating Stations and Industrial or Distribution Plants for lower capacity generator connections, inter-connections between switchgear and transformers.

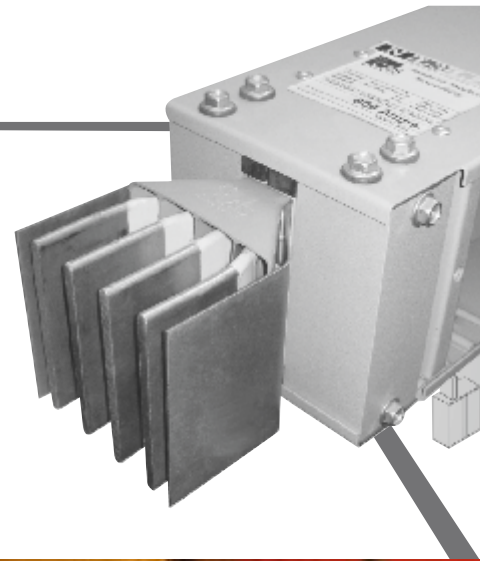


Non-Segregated Phase Busducts

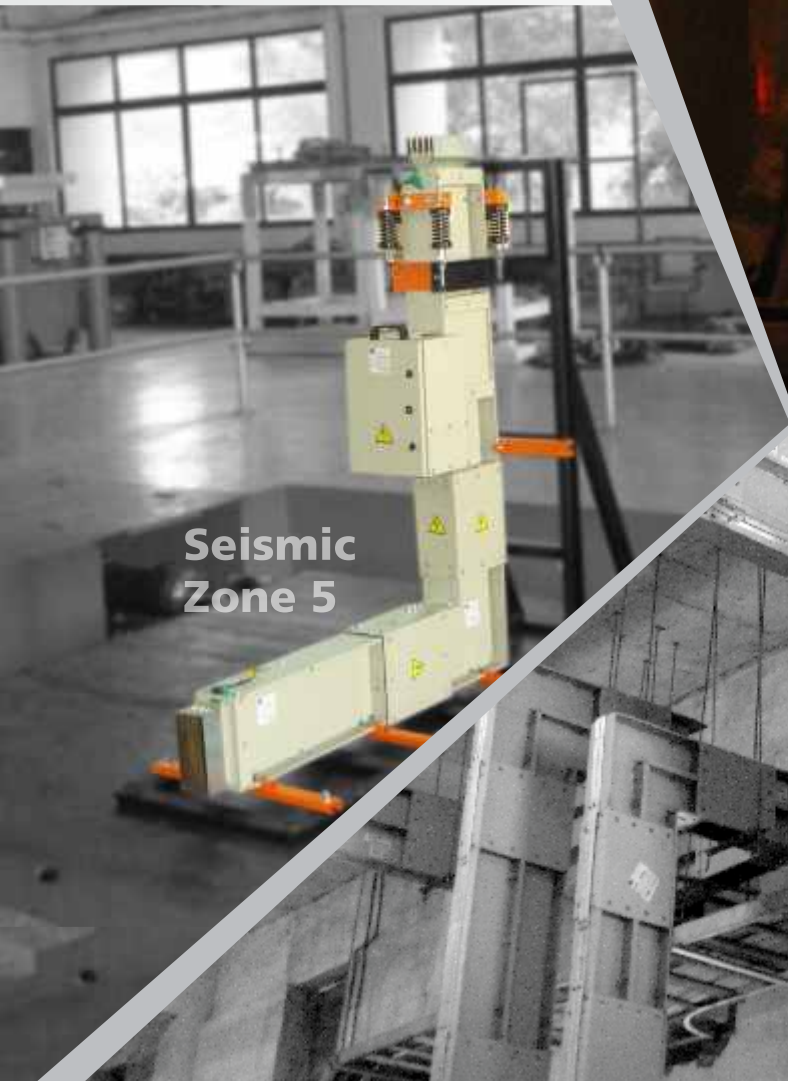
C&S offer a wide range of Non-Segregated Phase Bus ducts for Low Voltage applications from 415V to 1.1 kV upto 6500A with a maximum Short Circuit Current withstand capability of 80 kA rms for 1sec. and 180 kA peak. Non-Segregated Phase Bus Ducts are commonly used in industrial utilities, power plants for interconnection between switchgear and transformers and also for lower capacity of generator (viz DG sets)



Sandwich Insulated



**Resistance
to Flame
Propagation**



**Seismic
Zone 5**



Applications

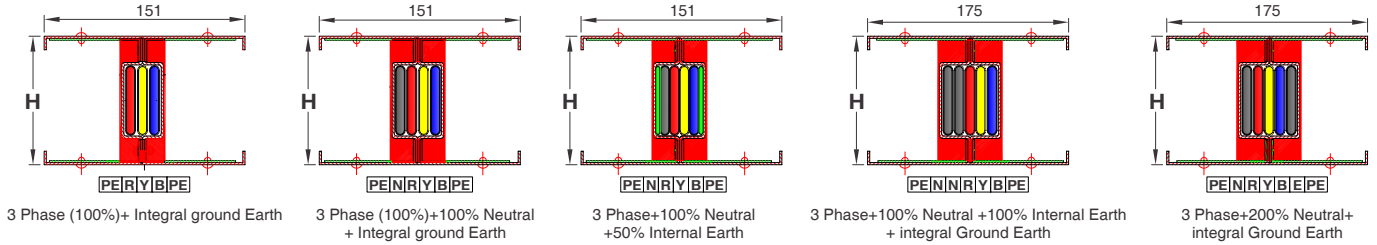


Technical Specifications

Sandwich Busway

Compliance of Standard	IEC 61439 (1&6) & IS 8623 (1&2)
Independent Certification Authority	CPRI, ASTA, UL
Busbar Arrangement	Sandwich Type
Busbar Ratings	Copper 630 ~ 6600A Aluminium 400 ~ 5000A
Busbar Configuration	3 Phase+50% Integral Ground Earth 3 Phase+100% Neutral+Integral Ground Earth 3 Phase+100% Neutral+50% Internal Earth 3 Phase+100% Neutral+100% Internal Earth+Integral Ground Earth 3 Phase+200%Neutral+Integral Ground Earth
Rated Operational Voltage (Ue)	1000 Volt, AC
Rated Insulation Voltage (Ui)	1000 Volt, AC
Rated Impulse Withstand Voltage (Uimp)	12 KV (1.2/50 μ s)
Rated Frequency	50 Hz / 60 Hz
Enclosure Material	1.6 mm G.I
Surface Coating on Enclosure	Powder coated (RAL-7032)
Busbar Material (Phase/Neutral)	Copper 99.9% pure ETP grade Aluminium 6101 with high conductivity & strength
Busbar Material - Internal Earth (Optional)	1.5 mm Copper
Busbar Material - External Earth (Optional)	Copper / Aluminium
Busbar Insulation	Polyester+Mica
Degree of Protection	IP54 for Plug in type, IP55 for feeder type (IP65 on request)
Fire Rating	240 Minutes (ISO 834)
Seismic Compliance	Zone-5
Joint	Uniblock Joint (tamper proof shear off nut)
Plug -in-Box	32~800 A

SBC (Copper Sandwich Insulated Bus Trunking)



Rated Current (In)	Amps	630	800	900	1000	1100
Product Code	---	SBC 040N1	SBC 050N1	SBC 060N1	SBC 070N1	SBC 080N1
Busbar size per phase (No. of busbars)	mm	6x40(1)	6x50(1)	6x60(1)	6x70(1)	6x80(1)
Overall Height (H)	mm	85	95	105	115	125
Rated Three Phase RMS Short Time Current for 1 Second (I _{scw})	kA	40	50	50	65	65
Rated Three phase Peak short time current (I _{pk})	kA	84	105	105	143	143
Rated Single Phase RMS Short Time Current for 1 Second (I _{scw})	kA	24	30	30	39	39
Rated Single phase Peak short time current (I _{pk})	kA	50.4	63	63	81.9	81.9
Approximate Weight of Bustrunking						
3 Phase+ 50% Integral Earth	kg/mtr.	20	22	24	27	29
3 Phase+100% Neutral+ 50% Integral Earth	kg/mtr.	22	25	28	31	34
3 Phase+100% Neutral+50% Internal Earth	kg/mtr.	23	26	30	33	36
3 Phase+200% Neutral+50% Integral Earth	kg/mtr.	25	29	32	36	40
3 Phase+100% Neutral+100% Isolated Earth+50% Integral Earth	kg/mtr.	25	29	32	36	40
Electrical Characteristics for 50 Hz						
AC Resistance at 20°C (R ₂₀)	miliohms /mtr.	0.0740	0.0592	0.0499	0.0427	0.0378
A.C. Resistance at thermal conditions (R _t)	miliohms /mtr.	0.0959	0.0767	0.0645	0.0553	0.0489
Reactance (X)	miliohms /mtr.	0.0417	0.0333	0.0278	0.0238	0.0208
Impedance at thermal conditions (Z)	miliohms /mtr.	0.1045	0.0836	0.0703	0.0602	0.0531
Composite Voltage drop at full Load concentrated at the end of bustrunking run (ΔV)	mV/mtr./A at 0.7 P.F.	0.1678	0.1342	0.1126	0.0965	0.0850
	mV/mtr./A at 0.8 P.F.	0.1761	0.1409	0.1183	0.1014	0.0894
	mV/mtr./A at 0.9 P.F.	0.1809	0.1447	0.1216	0.1042	0.0920
	mV/mtr./A at 1.0 P.F.	0.1660	0.1328	0.1118	0.0958	0.0847
Electrical Characteristics for 60 Hz						
AC Resistance at 20°C (R ₂₀)	miliohms /mtr.	0.0742	0.0594	0.0500	0.0429	0.0379
A.C. Resistance at thermal conditions (R _t)	miliohms /mtr.	0.0961	0.0769	0.0648	0.0556	0.0491
Reactance (X)	miliohms /mtr.	0.0500	0.0400	0.0333	0.0286	0.0250
Impedance at thermal conditions (Z)	miliohms /mtr.	0.1083	0.0867	0.0729	0.0625	0.0551
Composite Voltage drop at full Load concentrated at the end of bustrunking run (ΔV)	mV/mtr./A at 0.7 P.F.	0.1784	0.1427	0.1198	0.1027	0.0905
	mV/mtr./A at 0.8 P.F.	0.1851	0.1482	0.1244	0.1067	0.0941
	mV/mtr./A at 0.9 P.F.	0.1876	0.1501	0.1262	0.1082	0.0955
	mV/mtr./A at 1.0 P.F.	0.1664	0.1332	0.1122	0.0962	0.0851

Voltage Drop Calculation Formulae

$$\Delta V = k \times \sqrt{3} \times (R_l \cos \phi + X \sin \phi) \times I_B \times L$$

Where

ΔV is the composite voltage drop of the system (V);

R_l & X are the mean resistance and reactance value of the system (m Ω /mtr)

I_B is the actual load current of the circuit being considered (A);

L is the length of the system being considered (M);

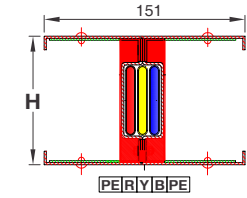
$\cos \phi$ is the load power factor being considered;

k is the load distribution factor:

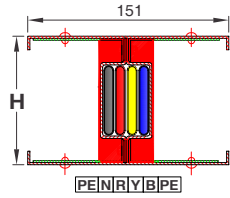
$k=1$, if full load is concentrated at the end of the busbar trunking run;
 $k=(n+1)/2n$, if the load is uniformly spread between n branches.

	1250	1600	1800	2000	2250	2500	3200	3600	4000	4500	5000	6000	6600
	SBC 100N1	SBC 125N1	SBC 150N1	SBC 175N1	SBC 200N1	SBC 230N1	SBC 125N2	SBC 150N2	SBC 175N2	SBC 200N2	SBC 230N2	SBC 175N3	SBC 200N3
	6x100(1)	6x125(1)	6x150(1)	6x175(1)	6x200(1)	6x230(1)	6x125(2)	6x150(2)	6x175(2)	6x200(2)	6x230(2)	6x175(3)	6x200(3)
	145	170	195	220	245	275	340	390	440	490	550	660	735
	80	100	100	100	100	100	120	120	120	120	120	120	120
	176	220	220	220	220	220	264	264	264	264	264	264	264
	48	60	60	60	60	60	72	72	72	72	72	72	72
	100.8	132	132	132	132	132	158.40	158.40	158.40	158.40	158.40	158.40	158.40
	34	40	46	52	58	65	75	87	100	112	127	145	164
	40	47	55	62	70	79	90	105	121	136	155	177	200
	43	51	59	67	75	85	97	113	130	147	167	191	216
	47	56	65	74	83	94	106	124	142	161	183	209	236
	47	56	65	74	83	94	106	124	142	161	183	209	236
	0.0311	0.0249	0.0207	0.0179	0.0157	0.0136	0.0124	0.0104	0.0090	0.0078	0.0068	0.0060	0.0052
	0.0403	0.0322	0.0268	0.0232	0.0203	0.0177	0.0161	0.0134	0.0116	0.0102	0.0088	0.0077	0.0068
	0.0170	0.0136	0.0127	0.0109	0.0095	0.0083	0.0070	0.0064	0.0055	0.0049	0.0042	0.0038	0.0033
	0.0437	0.0350	0.0297	0.0256	0.0224	0.0195	0.0176	0.0149	0.0128	0.0113	0.0098	0.0086	0.0076
	0.0698	0.0559	0.0482	0.0416	0.0364	0.0316	0.0282	0.0242	0.0209	0.0183	0.0160	0.0141	0.0123
	0.0735	0.0588	0.0504	0.0435	0.0380	0.0331	0.0296	0.0252	0.0218	0.0191	0.0166	0.0147	0.0129
	0.0756	0.0605	0.0514	0.0444	0.0389	0.0338	0.0304	0.0257	0.0222	0.0195	0.0170	0.0149	0.0131
	0.0697	0.0558	0.0465	0.0402	0.0352	0.0306	0.0279	0.0232	0.0201	0.0176	0.0153	0.0134	0.0117
	0.0313	0.0251	0.0209	0.0181	0.0159	0.0138	0.0126	0.0106	0.0092	0.0080	0.0070	0.0062	0.0054
	0.0405	0.0325	0.0271	0.0235	0.0206	0.0179	0.0163	0.0137	0.0119	0.0104	0.0091	0.0080	0.0070
	0.0204	0.0163	0.0152	0.0130	0.0114	0.0099	0.0084	0.0077	0.0066	0.0059	0.0051	0.0046	0.0040
	0.0454	0.0363	0.0311	0.0268	0.0235	0.0205	0.0184	0.0157	0.0136	0.0119	0.0104	0.0092	0.0081
	0.0743	0.0595	0.0516	0.0446	0.0390	0.0340	0.0302	0.0260	0.0225	0.0199	0.0173	0.0153	0.0135
	0.0773	0.0619	0.0533	0.0461	0.0403	0.0351	0.0314	0.0269	0.0233	0.0205	0.0179	0.0158	0.0139
	0.0785	0.0629	0.0537	0.0464	0.0407	0.0354	0.0318	0.0271	0.0234	0.0206	0.0180	0.0159	0.0140
	0.0702	0.0562	0.0469	0.0407	0.0356	0.0310	0.0283	0.0237	0.0205	0.0180	0.0157	0.0138	0.0122

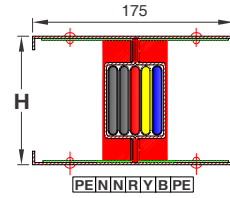
SBA (Aluminium Sandwich Insulated Bus Trunking)



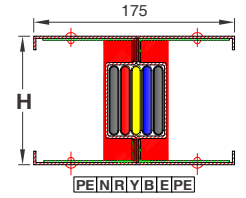
3 Phase (100%) + Integral ground Earth



3 Phase (100%) + 100% Neutral + Integral ground Earth



3 Phase + 100% Neutral + 100% Internal Earth + integral Ground Earth



3 Phase + 200% Neutral + integral Ground Earth

Rated Current (In)	Amps	400	500	630	700	800	1000
Product Code	---	SBA 040N1	SBA 050N1	SBA 060N1	SBA 070N1	SBA 080N1	SBA 100N1
Busbar size per phase (No. of busbars)	mm	6x40(1)	6x50(1)	6x60(1)	6x70(1)	6x80(1)	6x100(1)
Overall Height (H)	mm	85	95	105	115	125	145
Rated Three Phase RMS Short Time Current for 1 Second (I _{scw})	kA	25	30	40	40	50	50
Rated Three phase Peak short time current (I _{pk})	kA	52.5	63	84	84	105	105
Rated Single Phase RMS Short Time Current for 1 Second (I _{scw})	kA	15	18	24	24	30	30
Rated Single phase Peak short time current (I _{pk})	kA	30	36	50.4	50.4	63	63

Approximate Weight of Bustrunking

3 Phase + 50% Integral Earth	kg/mtr.	15	16	17	18	19	22
3 Phase + 100% Neutral + 50% Integral Earth	kg/mtr.	16	17	18	19	21	24
3 Phase + 200% Neutral + 50% Integral Earth	kg/mtr.	17	18	20	22	23	26
3 Phase + 100% Neutral + 100% Isolated Earth + 50% Integral Earth	kg/mtr.	17	18	20	22	23	26

Electrical Characteristics for 50 Hz

AC Resistance at 20°C (R ₂₀)	miliohms /mtr.	0.1198	0.0958	0.0806	0.0691	0.0611	0.0503
A.C. Resistance at thermal conditions (R _t)	miliohms /mtr.	0.1553	0.1243	0.1046	0.0896	0.0792	0.0652
Reactance (X)	miliohms /mtr.	0.0417	0.0333	0.0278	0.0238	0.0208	0.0170
Impedance at thermal conditions (Z)	miliohms /mtr.	0.1608	0.1286	0.1082	0.0927	0.0819	0.0674
Composite Voltage drop at full Load concentrated at the end of bustrunking run (ΔV)	mV/mtr./A at 0.7 P.F.	0.2398	0.1919	0.1612	0.1381	0.1218	0.1001
	mV/mtr./A at 0.8 P.F.	0.2585	0.2068	0.1738	0.1490	0.1314	0.1081
	mV/mtr./A at 0.9 P.F.	0.2736	0.2189	0.1840	0.1577	0.1392	0.1145
	mV/mtr./A at 1.0 P.F.	0.2690	0.2152	0.1811	0.1553	0.1372	0.1130

Electrical Characteristics for 60 Hz

AC Resistance at 20°C (R ₂₀)	miliohms /mtr.	0.1200	0.0961	0.0809	0.0694	0.0614	0.0506
A.C. Resistance at thermal conditions (R _t)	miliohms /mtr.	0.1557	0.1246	0.1050	0.0900	0.0796	0.0656
Reactance (X)	miliohms /mtr.	0.0500	0.0400	0.0333	0.0286	0.0250	0.0204
Impedance at thermal conditions (Z)	miliohms /mtr.	0.1635	0.1309	0.1101	0.0944	0.0834	0.0687
Composite Voltage drop at full Load concentrated at the end of bustrunking run (ΔV)	mV/mtr./A at 0.7 P.F.	0.2506	0.2006	0.1685	0.1445	0.1274	0.1048
	mV/mtr./A at 0.8 P.F.	0.2677	0.2143	0.1801	0.1544	0.1363	0.1121
	mV/mtr./A at 0.9 P.F.	0.2805	0.2245	0.1888	0.1619	0.1430	0.1177
	mV/mtr./A at 1.0 P.F.	0.2697	0.2159	0.1818	0.1559	0.1379	0.1137

Voltage Drop Calculation Formulae

$$\Delta V = k \times \sqrt{3} \times (R_l \cos \phi + X \sin \phi) \times I_B \times L$$

Where

ΔV is the composite voltage drop of the system (V);

R_l & X are the mean resistance and reactance value of the system (m Ω /mtr)

I_B is the actual load current of the circuit being considered (A);

L is the length of the system being considered (M);

$\cos \phi$ is the load power factor being considered;

k is the load distribution factor:

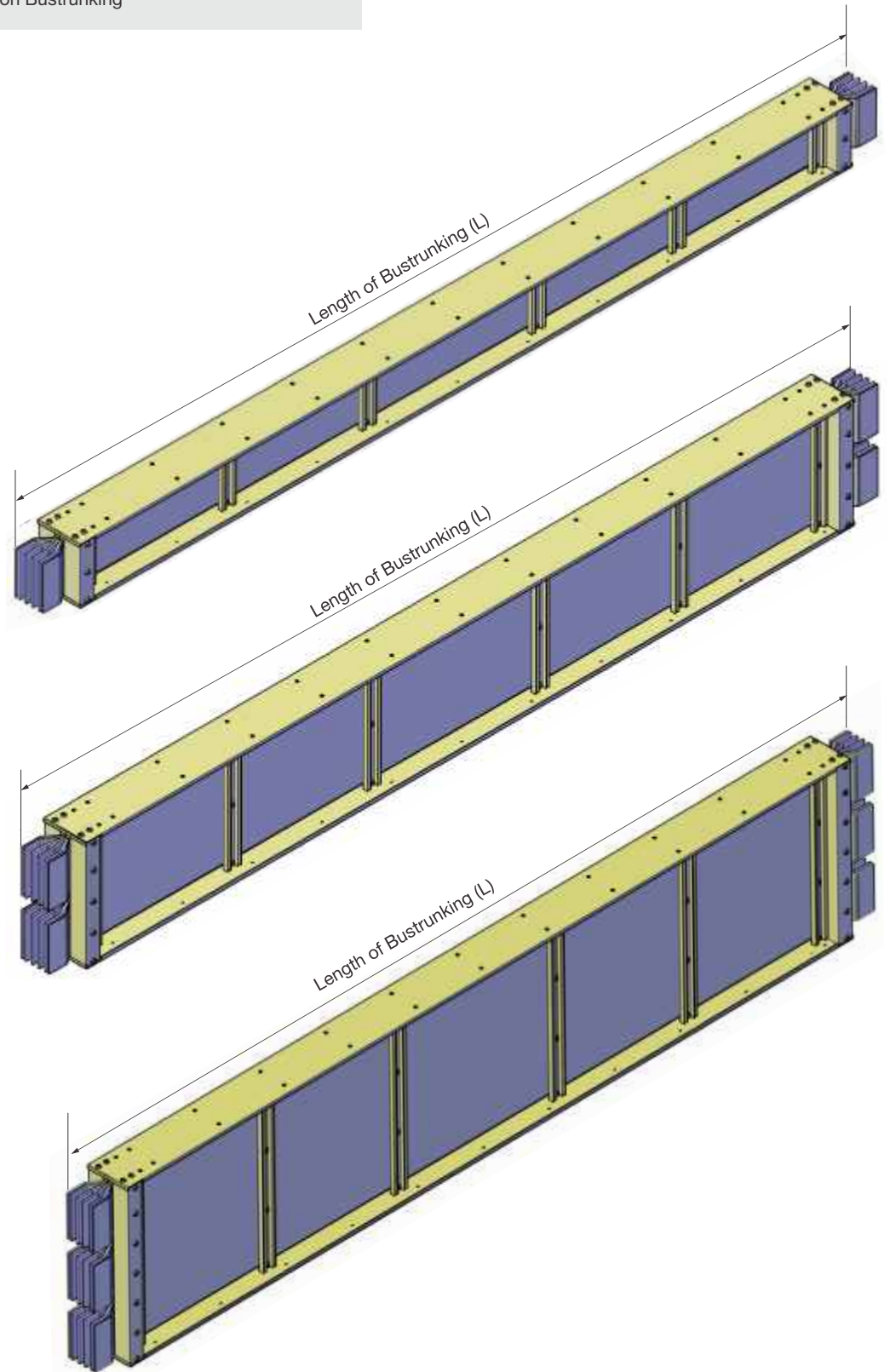
$k=1$, if full load is concentrated at the end of the busbar trunking run;
 $k=(n+1)/2n$, if the load is uniformly spread between n branches.

	1250	1350	1600	1800	2000	2250	2500	3200	3600	4000	4500	5000
	SBA 125N1	SBA 150N1	SBA 175N1	SBA 200N1	SBA 230N1	SBA 125N2	SBA 150N2	SBA 175N2	SBA 200N2	SBA 230N2	SBA 175N3	SBA 200N3
	6x125(1)	6x150(1)	6x175(1)	6x200(1)	6x230(1)	6x125(2)	6x150(2)	6x175(2)	6x200(2)	6x230(2)	6x175(3)	6x200(3)
	170	195	220	245	275	340	390	440	490	550	660	735
	65	65	80	80	80	120	120	120	120	120	120	120
	143	143	176	176	176	264	264	264	264	264	264	264
	39	39	48	48	48	72	72	72	72	72	72	72
	81.9	81.9	100.8	100.8	100.8	158.4	158.4	158.4	158.4	158.4	158.4	158.4
	25	28	30	33	38	44	50	57	63	71	81	90
	27	30	34	37	42	49	56	63	71	80	91	101
	30	34	38	42	46	55	63	71	79	89	101	114
	30	34	38	42	46	55	63	71	79	89	101	114
	0.0402	0.0335	0.0290	0.0254	0.0221	0.0201	0.0168	0.0145	0.0127	0.0111	0.0097	0.0085
	0.0522	0.0435	0.0376	0.0329	0.0314	0.0261	0.0217	0.0188	0.0165	0.0157	0.0125	0.0110
	0.0136	0.0127	0.0109	0.0095	0.0083	0.0070	0.0064	0.0055	0.0049	0.0042	0.0038	0.0033
	0.0539	0.0453	0.0392	0.0343	0.0325	0.0270	0.0227	0.0196	0.0172	0.0162	0.0131	0.0115
	0.0801	0.0684	0.0591	0.0517	0.0483	0.0403	0.0343	0.0296	0.0260	0.0242	0.0199	0.0174
	0.0864	0.0734	0.0634	0.0555	0.0521	0.0434	0.0368	0.0318	0.0279	0.0261	0.0213	0.0187
	0.0916	0.0774	0.0669	0.0585	0.0552	0.0460	0.0387	0.0335	0.0293	0.0277	0.0224	0.0196
	0.0904	0.0753	0.0652	0.0570	0.0544	0.0452	0.0377	0.0326	0.0285	0.0272	0.0217	0.0190
	0.0405	0.0338	0.0293	0.0257	0.0225	0.0204	0.0171	0.0148	0.0130	0.0112	0.0100	0.0088
	0.0526	0.0439	0.0380	0.0333	0.0286	0.0265	0.0221	0.0192	0.0169	0.0143	0.0129	0.0114
	0.0163	0.0152	0.0130	0.0114	0.0099	0.0084	0.0077	0.0066	0.0059	0.0051	0.0046	0.0040
	0.0551	0.0464	0.0402	0.0352	0.0288	0.0278	0.0234	0.0203	0.0178	0.0162	0.0137	0.0121
	0.0839	0.0720	0.0622	0.0545	0.0388	0.0425	0.0363	0.0314	0.0277	0.0242	0.0213	0.0187
	0.0898	0.0766	0.0662	0.0580	0.0431	0.0454	0.0386	0.0334	0.0294	0.0261	0.0227	0.0199
	0.0943	0.0799	0.0691	0.0606	0.0472	0.0476	0.0403	0.0349	0.0307	0.0277	0.0236	0.0207
	0.0911	0.0760	0.0659	0.0577	0.0496	0.0459	0.0383	0.0333	0.0292	0.0272	0.0224	0.0197

- Transformer to Panel
- Panel to Panel
- Generator to Panel
- Panel to Rising main
- Panel to Horizontal Distribution Bustrunking

Standard Length: 3000mm
Maximum Length: 3000mm
Minimum Length: 500mm

Straight Length (Feeder)

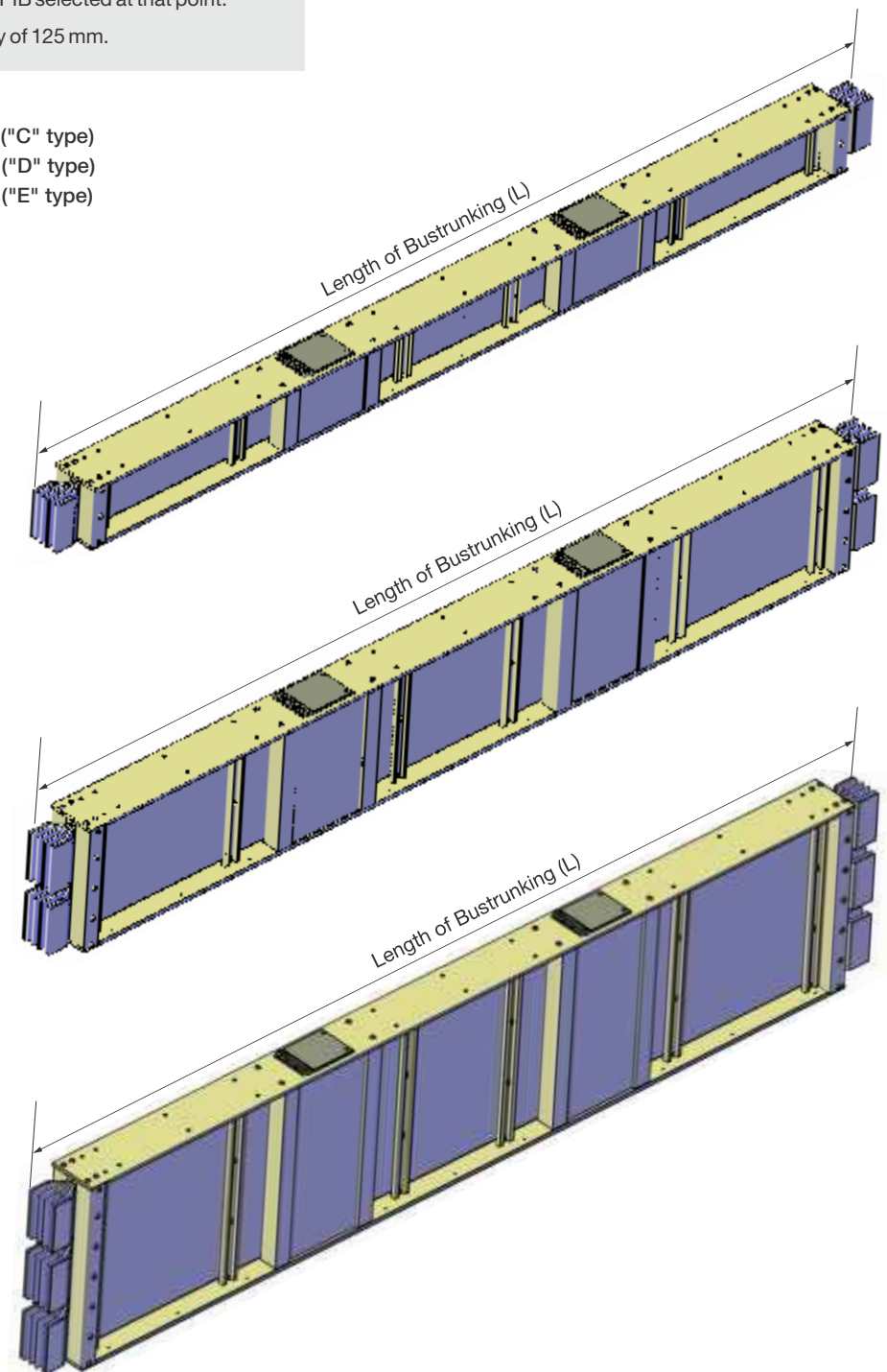


Straight Length with PIP

- For tapping Power from Main Line through Plug-in-Boxes.
- Plug-in Point shown are indicative only.
- Plug-in Point (PIP) shall be as per the site requirement (up to 4 Nos max on either side).
- Same plug in point (PIP) Can be used for all rating PIBs .
- PIP on both side at same position can be given in trunking with bus bar size 100 mm & above.
- PIP position to be fixed according to the PIB selected at that point.
- Distance between PIP should be multiply of 125 mm.

Standard & Max. Length: 2900mm

Mini. Length: 1250mm. upto 400A PIBs ("C" type)
 1500mm. upto 630A PIBs ("D" type)
 1750mm. upto 800A PIBs ("E" type)



Uniblock Joint

- Joint can be fitted / removed in installed condition without removal of section.
- Heavy duty disc spring used on both sides for uniform distribution of pressure.
- Joint can be tightened easily with help of spanner on nut side only. (spanner not required on bolt head side)
- Shear off nut ensures tightness of joint at desired torque and eliminates the need of torque wrench during installation.
- Tamper proof cap over shear off nut prevents opening of nut after achieving desired torque. Nut can only be opened after cap is broken.

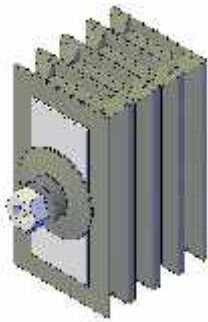
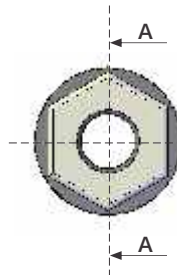
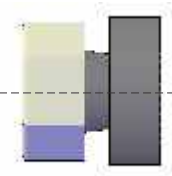


Figure - C



Shear off nut



Section A-A'

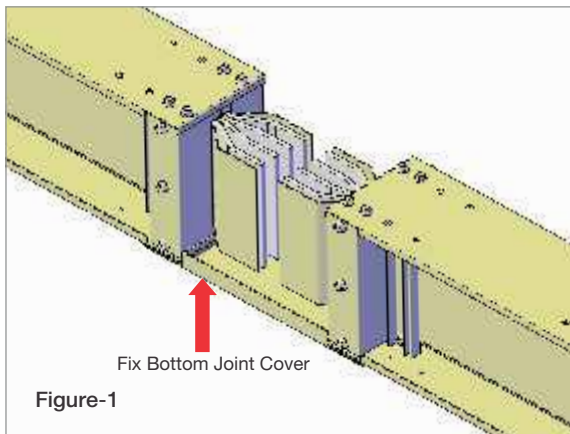


Figure-1

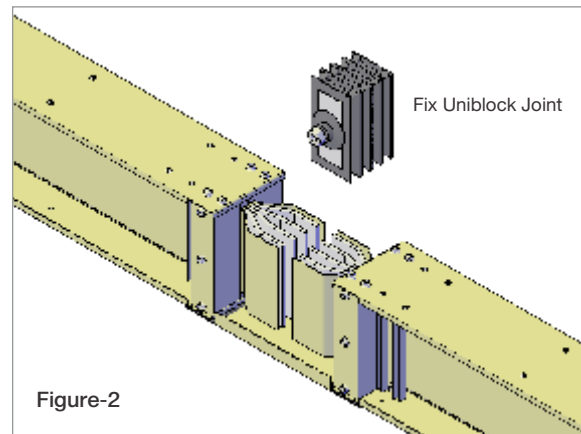


Figure-2

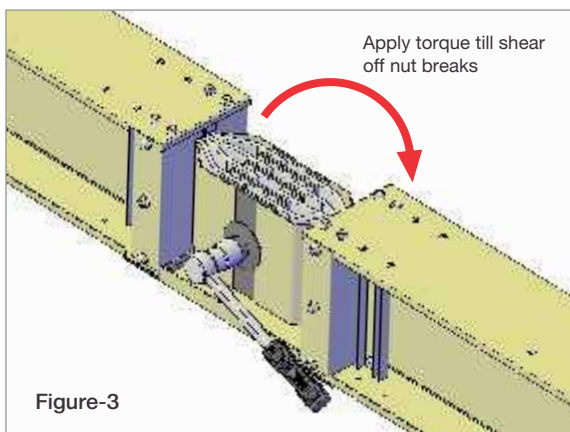
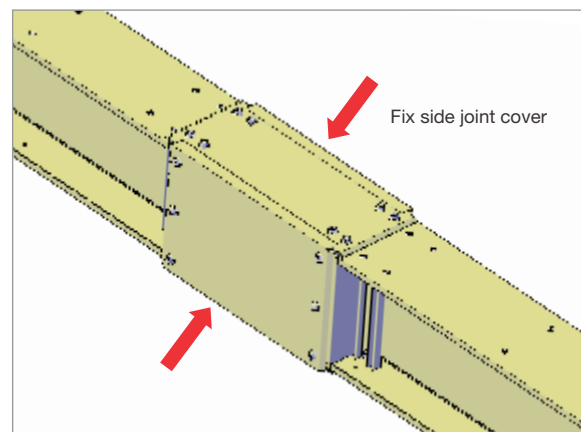
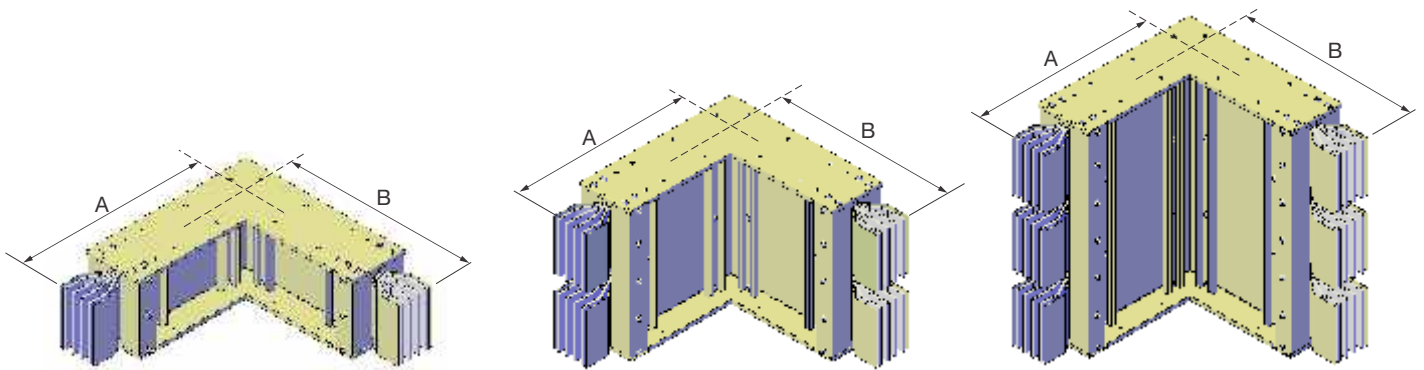


Figure-3



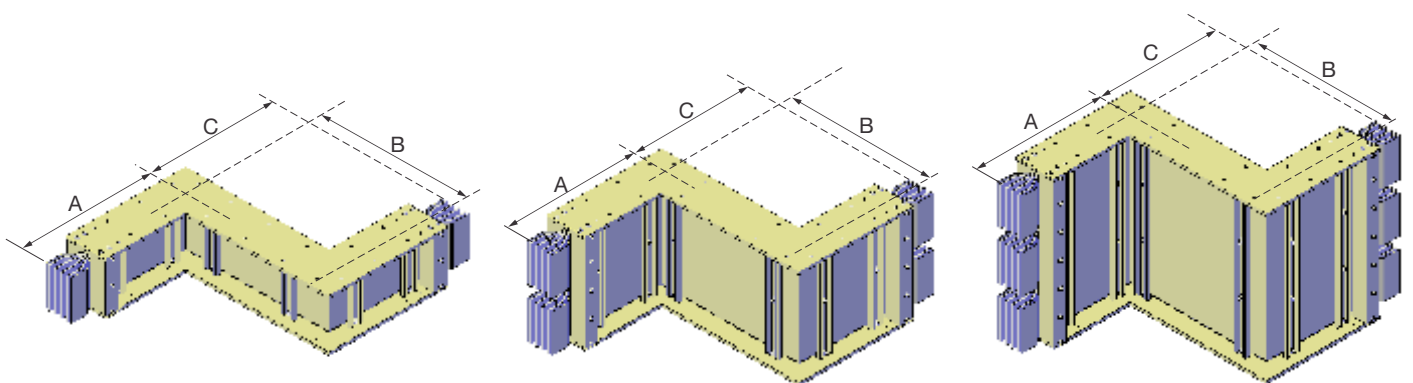
Edge Elbow

Current Rating	Standard Dimn. A x B (mm)
Copper - 630~6600A	500 x 500
Aluminium - 400~5000A	500 x 500



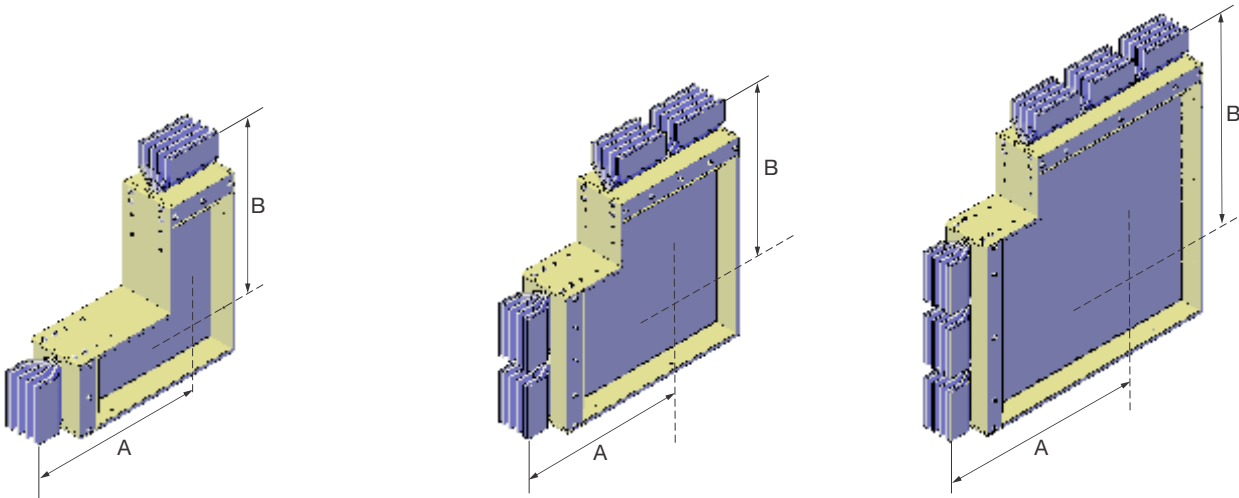
Offset Edge Elbow

Current Rating	Standard Dimn. A x B x C (mm)
Copper - 630~6600A	500 x 500 x 500
Aluminium - 400~5000A	500 x 500 x 500



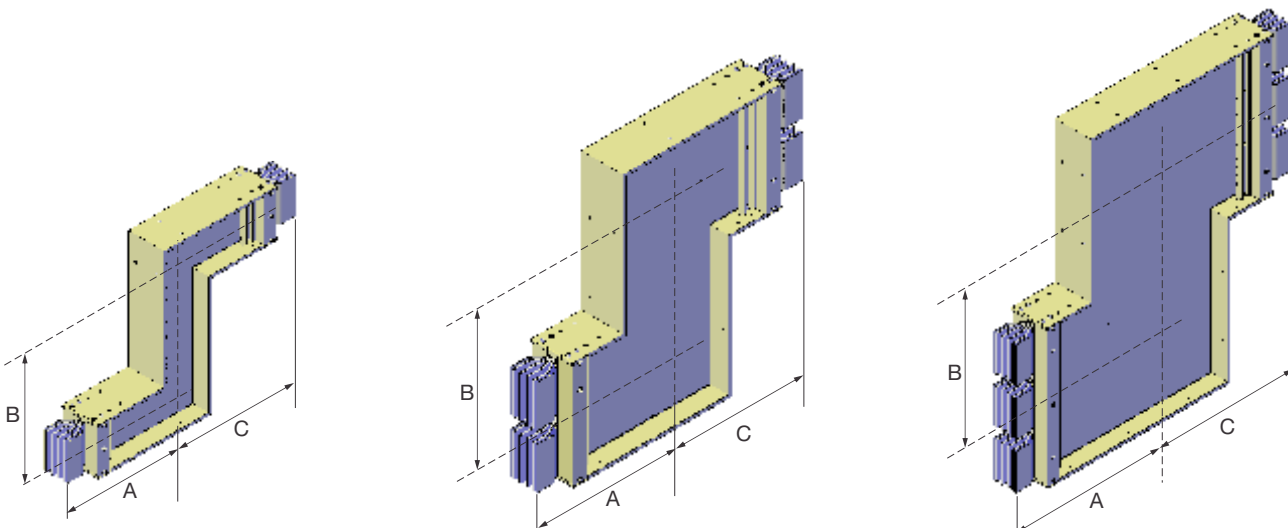
Flat Elbow

Current Rating	Standard Dimn. A x B (mm)	Minimum Dimn. A x B (mm)	Maximum Dimn. A x B (mm)
Copper - 630~2500A Aluminium - 400~2000A	500 x 500	500 x 500	750 x 750
Copper - 3200~5000A Aluminium - 2250~4000A	500 x 550	500 x 550	750 x 750
Copper - 6000~6600A Aluminium - 4500~5000A	600 x 600	600 x 600	750 x 750



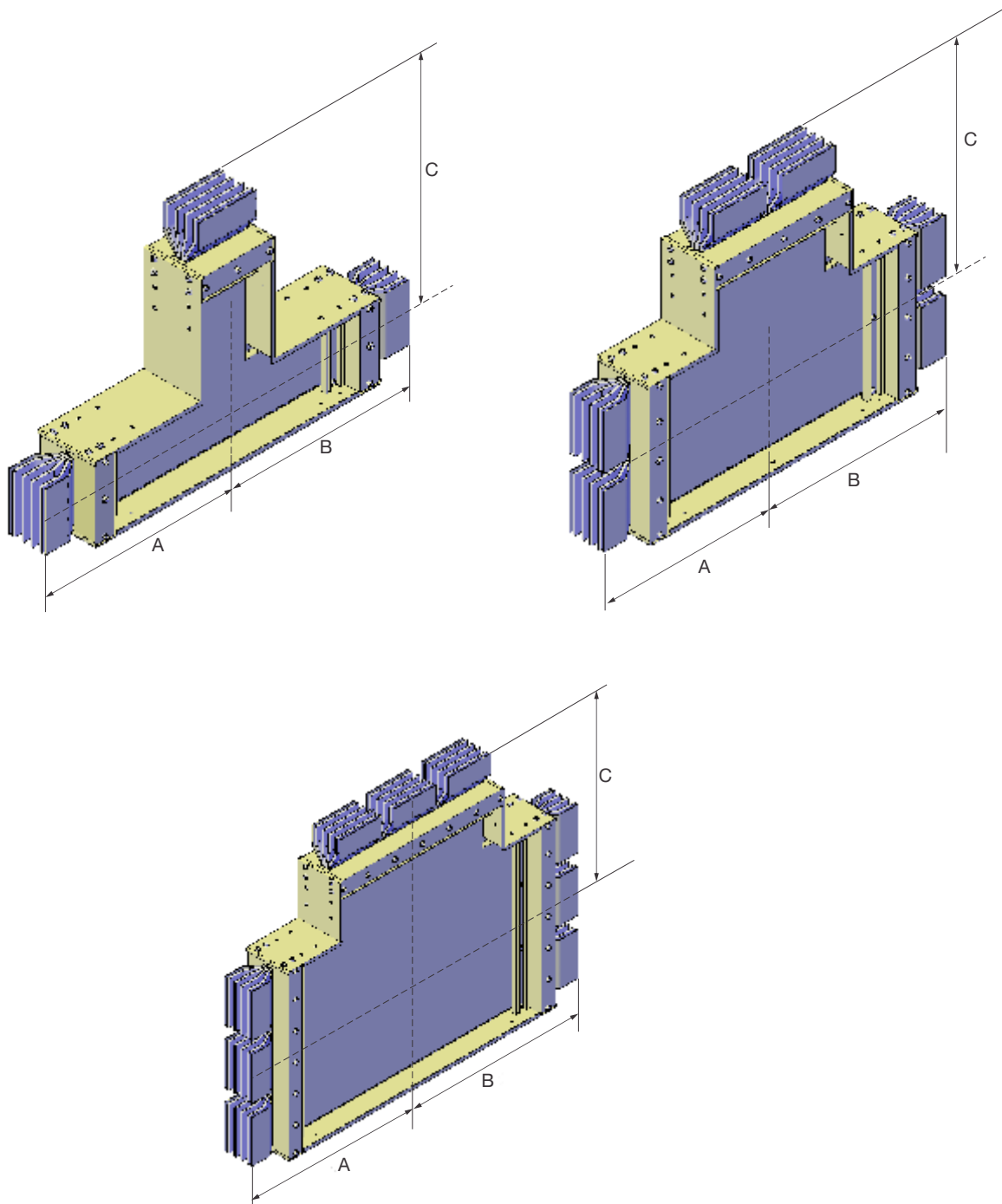
Offset Flat Elbow

Current Rating	Standard Dimn. A x B x C (mm)	Minimum Dimn. A x B x C (mm)	Maximum Dimn. A x B x C (mm)
Copper - 630~2500A Aluminium - 400~2000A	500 x 500 x 500	500 x 180 x 500	500 x 1000 x 500
Copper - 3200~5000A Aluminium - 2250~4000A	500 x 500 x 500	500 x 180 x 500	500 x 1000 x 500
Copper - 6000~6600A Aluminium - 4500~5000A	600 x 600 x 600	600 x 180 x 600	600 x 1000 x 600

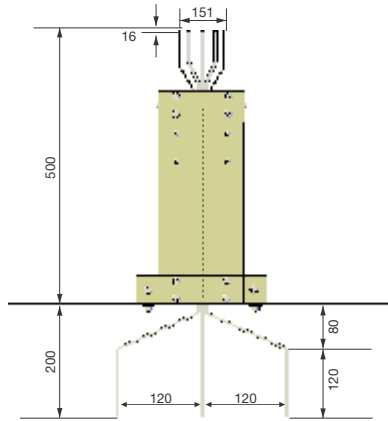
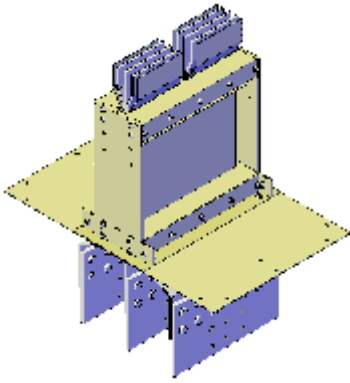


Flat Tee

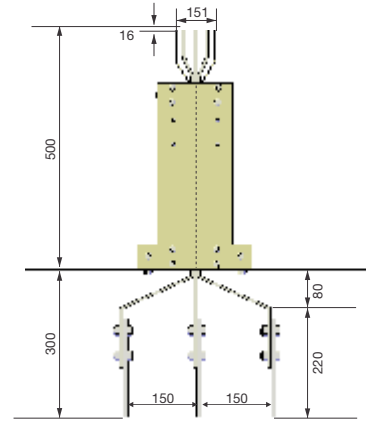
Current Rating	Standard Dimn. A x B x C (mm)
Copper - 630~2500A Aluminium - 400~2000A	500 x 500 x 500
Copper - 3200~5000A Aluminium - 2250~4000A	500 x 500 x 500
Copper - 6000~6600A Aluminium - 4500~5000A	600 x 600 x 600



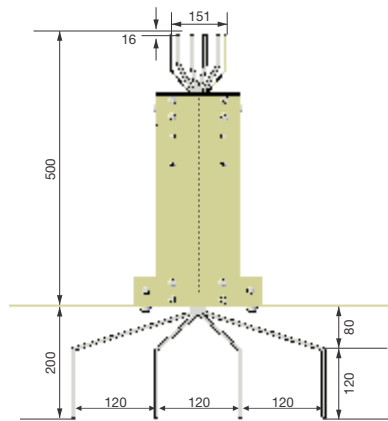
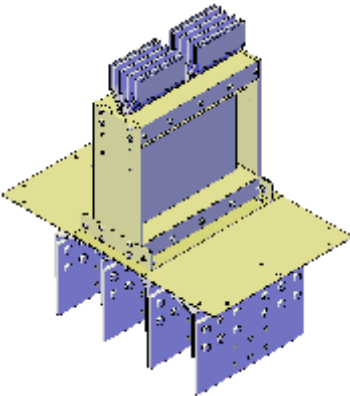
Flanged End



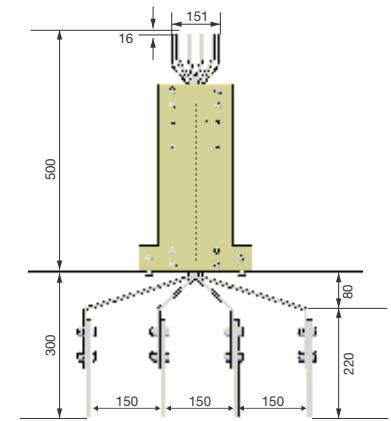
3 Busbar +50% Integral Earth



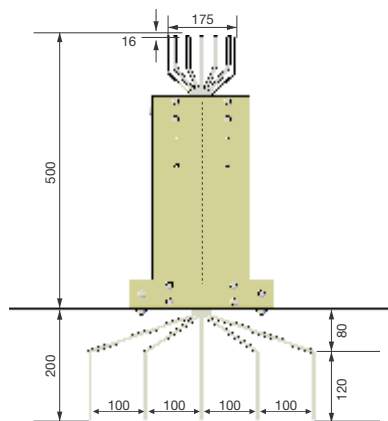
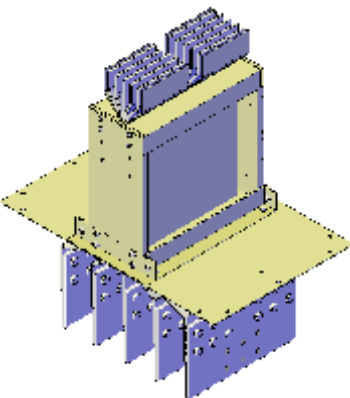
3 Busbar +50% Integral Earth



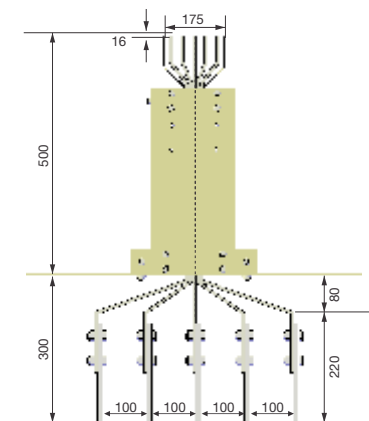
4 Busbar +50% Integral Earth
4 Busbar +Integral Ground Earth



4 Busbar +50% Integral Earth
4 Busbar +Integral Ground Earth



5 Busbar +50% Integral Earth



5 Busbar +50% Integral Earth

Copper 630~2500A
Aluminium 400~2000A

Copper 3200~6600A
Aluminium 2250~5000A

Flanged End

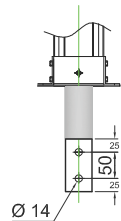
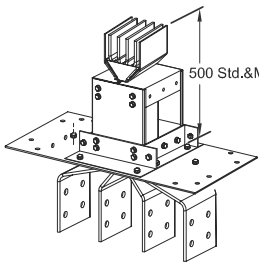


Figure 1
BUSBAR WIDTH
40 ~ 80mm

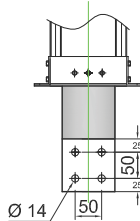


Figure 2
BUSBAR WIDTH
100 ~ 125mm

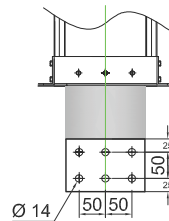


Figure 3
BUSBAR WIDTH
150 ~ 175mm

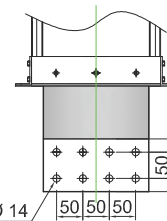


Figure 4
BUSBAR WIDTH
200 ~ 230mm

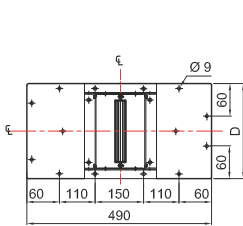


Figure 5

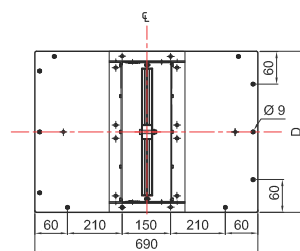


Figure 6

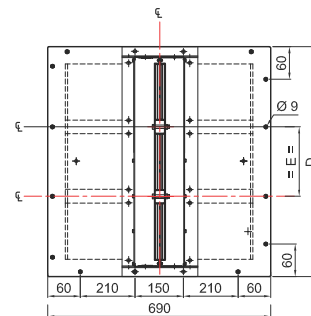
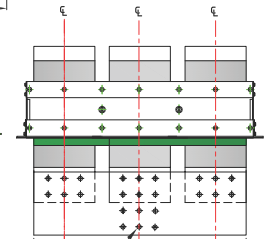
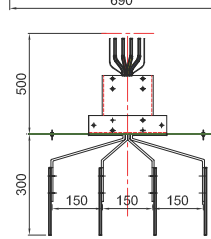
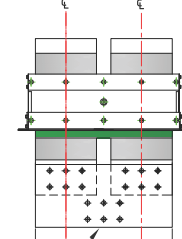
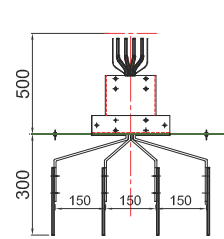
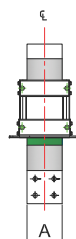
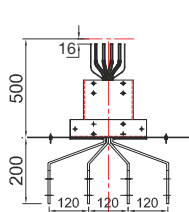


Figure 7



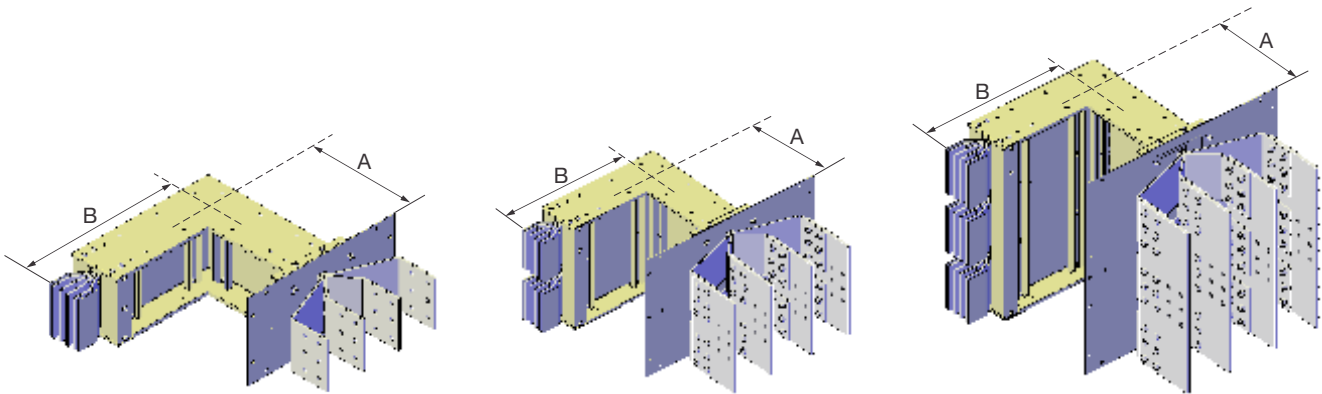
TERMINATION HOLES
(Ø14) AS PER REQUIREMENT

TERMINATION HOLES
(Ø14) AS PER REQUIREMENT

Busbar size (No. Of Busbar)	Copper		Aluminium		Dimensions			Busbar Hole Details	Terminal Details
	Rating	Code	Rating	Code	D	A	E		
40 x 6 (1)	630	SBC 40 N1	400	SBA 40 N1	146	40	-	Figure 1	Figure 5
50 x 6 (1)	800	SBC 50 N1	500	SBA 50 N1	156	50	-	Figure 1	
60 x 6 (1)	900	SBC 60 N1	630	SBA 60 N1	166	60	-	Figure 1	
70 x 6 (1)	1000	SBC 70 N1	700	SBA 70 N1	176	70	-	Figure 1	
80 x 6 (1)	1100	SBC 80 N1	800	SBA 80 N1	186	80	-	Figure 1	
100 x 6 (1)	1250	SBC 100 N1	1000	SBA 100 N1	206	100	-	Figure 2	
125 x 6 (1)	1600	SBC 125 N1	1250	SBA 125 N1	231	125	-	Figure 2	
150 x 6 (1)	1800	SBC 150 N1	1350	SBA 150 N1	256	150	-	Figure 3	
175 x 6 (1)	2000	SBC 175 N1	1600	SBA 175 N1	281	175	-	Figure 3	
200 x 6 (1)	2250	SBC 200 N1	1800	SBA 200 N1	306	200	-	Figure 4	
230 x 6 (1)	2500	SBC 230 N1	2000	SBA 230 N1	336	230	-	Figure 4	
125 x 6 (2)	3200	SBC 125 N2	2250	SBA 125 N2	402	296	-	Figure 2	Figure 6
150 x 6 (2)	3600	SBC 150 N2	2500	SBA 150 N2	452	346	-	Figure 3	
175 x 6 (2)	4000	SBC 175 N2	3200	SBA 175 N2	502	396	-	Figure 3	
200 x 6 (2)	4500	SBC 200 N2	3600	SBA 200 N2	552	446	-	Figure 4	
230 x 6 (2)	5000	SBC 230 N2	4000	SBA 230 N1	612	506	-	Figure 4	
175 x 6 (3)	6000	SBC 175 N3	4500	SBA 175 N3	723	617	221	Figure 3	Figure 7
200 x 6 (3)	6600	SBC 200 N3	5000	SBA 200 N3	798	692	246	Figure 4	

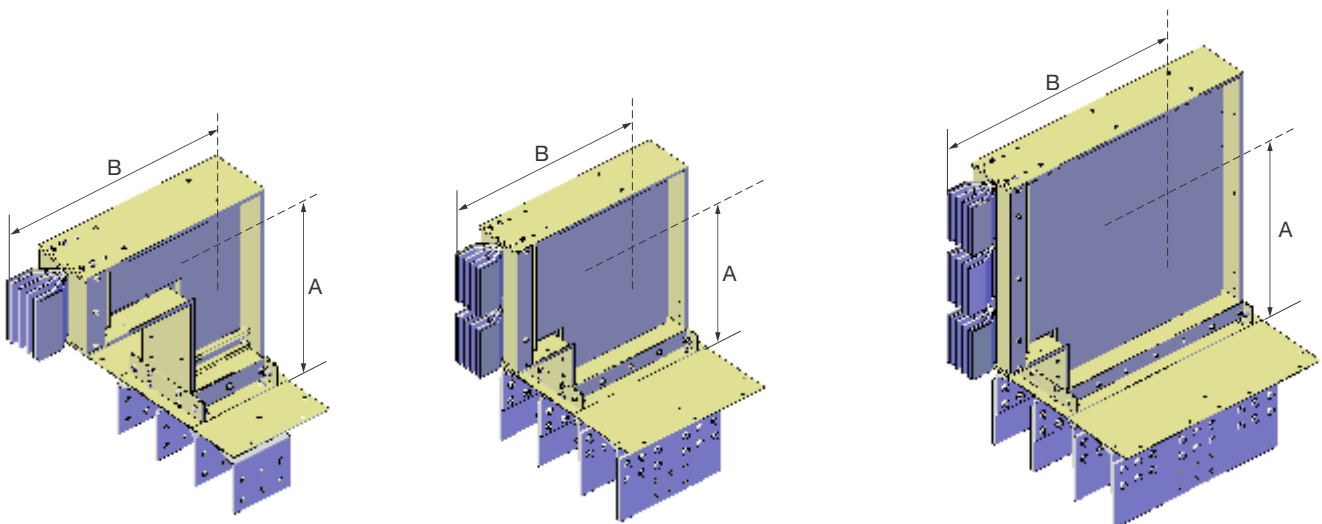
Flange End With Edge Elbow

Current Rating	Standard Dimn. A x B (mm)	Minimum Dimn. A x B (mm)	Maximum Dimn. A x B (mm)
Copper - 630~6600A Aluminium - 400~5000A	275 x 400	275 x 400	600 x 400



Flanged End with Flat Elbow

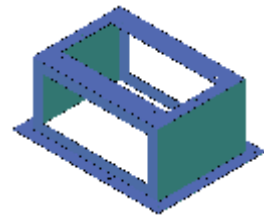
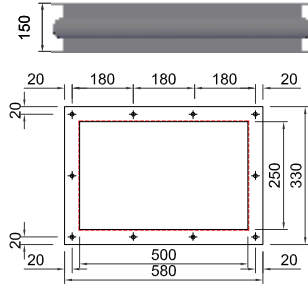
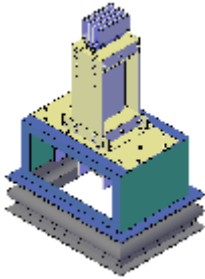
Current Rating	Standard Dimn. A x B (mm)	Minimum Dimn. A x B (mm)	Maximum Dimn. A x B (mm)
Copper - 630~2500A Aluminium - 400~2000A	275 x 400	275 x 400	1000 x 400
Copper - 3200~5000A Aluminium - 2250~4000A	425 x 550	425 x 550	1000 x 550
Copper - 6000~6600A Aluminium - 4500~5000A	575 x 600	575 x 600	900 x 600



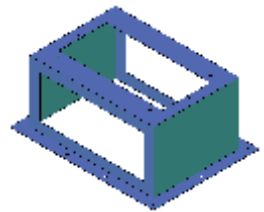
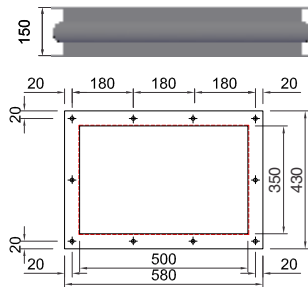
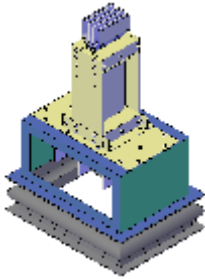
- Flange End Box are used for matching the standard Bustrunking flange assembly with the Panel/ DG/ Trf. flange.
- Flange Bellow need to be fixed between Flanged End Box and Genset termination box to avoid impact of vibrations of Genset being transferred to bustrunking.

Flanged End Box & Flange Bellow

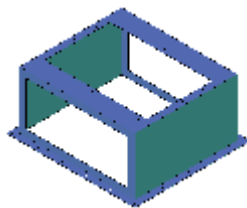
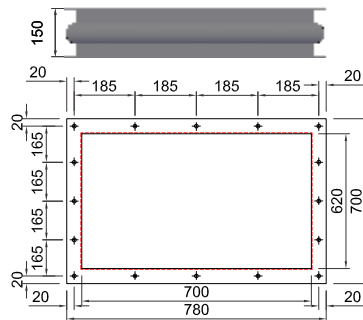
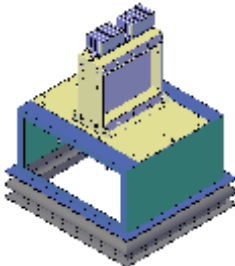
Copper 630-1600A
Aluminium 400-1250A



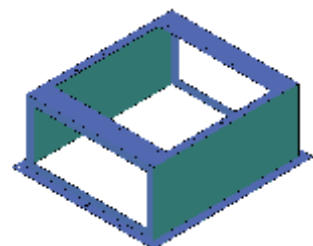
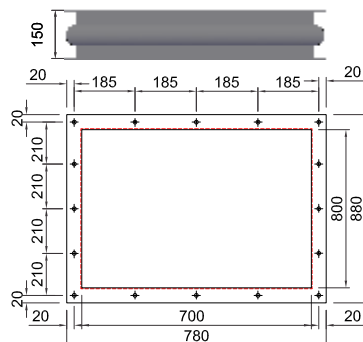
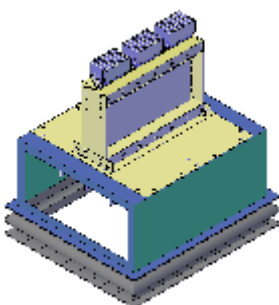
Copper 1800-2500A
Aluminium 1350-2000A



Copper 3200-5000A
Aluminium 2250-4000A



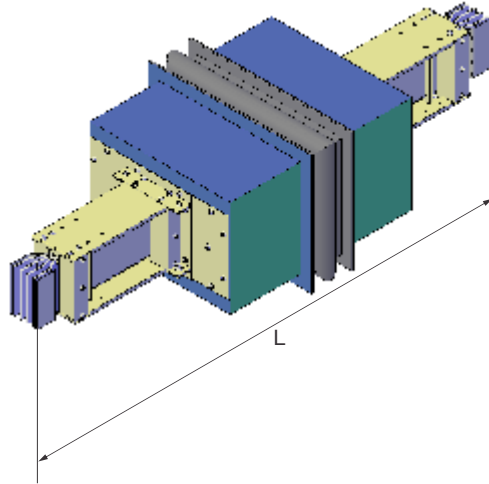
Copper 6000-6600A
Aluminium 4500-5000A



Flange Bellow

Flanged End Box

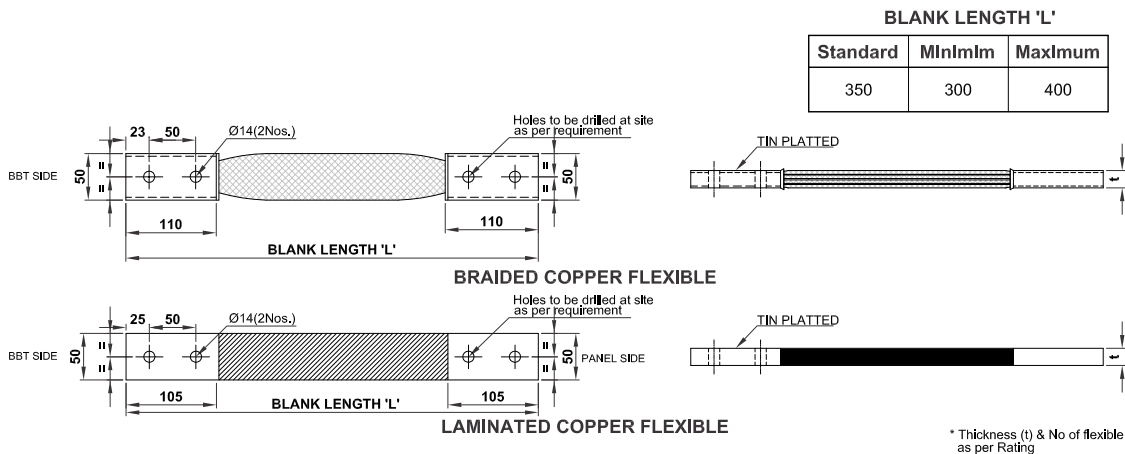
- It is required to permit certain movement in the axial direction of the bus trunking due to thermal expansion.
- It is recommended to use after every 50 mtr of straight run.
- To be used only in Indoor Application.
- Standard Dimension (L) :- 1500mm



Thermal Expansion unit

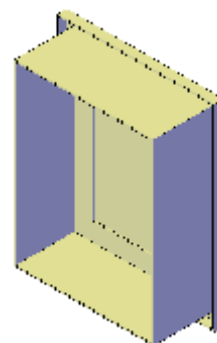
- Braided / Laminated Copper Flexible need to be used to connect flanged end busbar with busbars of Panel/ Transformer / Generators.

Copper Flexible



- It is used to terminate and to protect the end of plug-in bus trunking.
- It can be remove easily for extension of bus trunking .

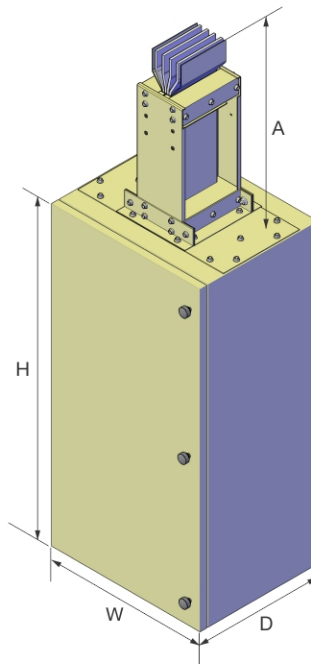
End Cover



End Feed Direct

- To charge bustrunking through cables from one end of bustrunking.
- End feed is available with sufficient space for direct connection through lugs and bolts.
- 300 mm length of bustrunking is integrally fitted (measured with bustrunking) along with End Feed as standard practice so that joint between End Feed and bustrunking is exactly same as joint of two normal bustrunking lengths.
- Undrilled cable gland plate is provided at bottom for multiple cable entry.

Standard Dimension (A) 300mm
 Minimum Dimension (A) 300mm
 Maximum Dimension (A) 750mm



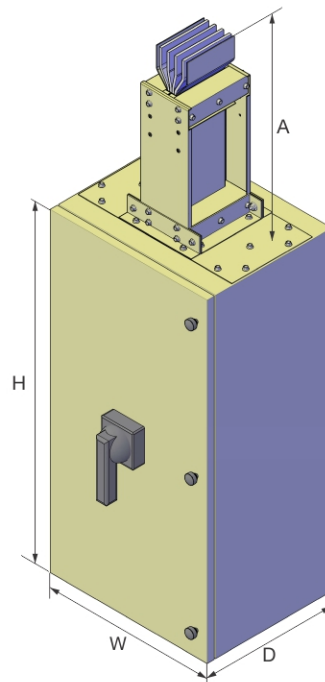
End Feed Direct

Copper		DIMENSIONS (mm)			Recommend Al. Cable Size 3.5 core sqmm (No.)	Aluminium		DIMENSIONS (mm)			Recommend Al. Cable Size 3.5 core sqmm (No.)
Rating	Code	Height(H)	Width(W)	Depth(D)		Rating	Code	Height(H)	Width(W)	Depth(D)	
630	SBC 40N1	600	500	370	300(2)	400	SBA 40N1	600	500	370	150(2)
800	SBC 50N1	600	500	370	400(2)	500	SBA 50N1	600	500	370	240(2)
900	SBC 60N1	600	500	370	400(2)	630	SBA 60N1	600	500	370	300(2)
1000	SBC 70N1	600	500	370	185(4)	700	SBA 70N1	600	500	370	300(2)
1100	SBC 80N1	600	500	370	240(4)	800	SBA 80N1	600	500	370	400(2)
1250	SBC 100N1	600	500	370	300(4)	1000	SBA 100N1	600	500	370	185(4)
1600	SBC 125N1	800	500	370	240(6)	1250	SBA 125N1	800	500	370	300(4)
1800	SBC 150N1	800	500	370	240(6)	1350	SBA 150N1	800	500	370	300(4)
2000	SBC 175N1	800	500	370	300(6)	1600	SBA 175N1	800	500	370	240(6)
2250	SBC 200N1	800	500	370	300(6)	1800	SBA 200N1	800	500	370	240(6)
2500	SBC 230N1	800	500	370	300(8)	2000	SBA 230N1	800	500	370	300(6)
3200	SBC 125N2	800	650	600	240(12)	2250	SBA 125N2	800	650	600	300(8)
3600	SBC 150N2	800	650	600	240(14)	2500	SBA 150N2	800	650	600	300(8)
4000	SBC 175N2	800	650	600	300(12)	3200	SBA 175N2	800	650	600	240(12)
4500	SBC 200N2	800	650	600	300(14)	3600	SBA 200N2	800	650	600	240(14)
5000	SBC 230N2	800	650	600	300(16)	4000	SBA 230N2	Data on request			
6000	SBC 175N3	Data on request				4500	SBA 175N3	Data on request			
6600	SBC 200N3	Data on request				5000	SBA 200N3	Data on request			

- To charge bustrunking through cables from one end of bustrunking.
- End feed is available with MCCB, SFU, Isolators, fuse holders etc. can be fitted in End Feed as per requirement.
- 300 mm length of bustrunking is integrally fitted (measured with bustrunking) along with End Feed as standard practice so that joint between End Feed and bustrunking is exactly same as joint of two normal bustrunking lengths.
- Undrilled cable gland plate is provided at bottom for multiple cable entry.

End Feed With Switchgear

Standard Dimension (A) 300mm
Minimum Dimension (A) 300mm
Maximum Dimension (A) 750mm



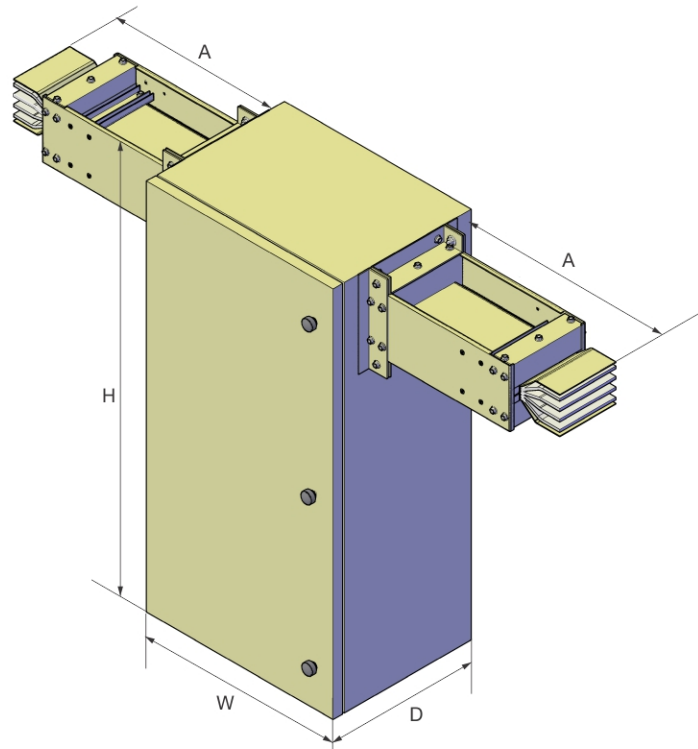
End Feed with Switchgear

Copper		DIMENSIONS (mm)			Recommend Al. Cable Size 3.5 core sqmm (No.)	Aluminium		DIMENSIONS (mm)			Recommend Al. Cable Size 3.5 core sqmm (No.)
Rating	Code	Height(H)	Width(W)	Depth(D)		Rating	Code	Height(H)	Width(W)	Depth(D)	
630	SBC 40N1	800	500	370	300(2)	400	SBA 40N1	800	500	370	150(2)
800	SBC 50N1	800	500	370	400(2)	500	SBA 50N1	800	500	370	240(2)
900	SBC 60N1	1000	500	370	400(2)	630	SBA 60N1	800	500	370	300(2)
1000	SBC 70N1	1000	500	370	185(4)	700	SBA 70N1	800	500	370	300(2)
1100	SBC 80N1	1000	500	370	240(4)	800	SBA 80N1	800	500	370	400(2)
1250	SBC 100N1	1000	500	370	300(4)	1000	SBA 100N1	1000	500	370	185(4)
1600	SBC 125N1	1000	500	370	240(6)	1250	SBA 125N1	1000	500	370	300(4)
1800	SBC 150N1	1000	500	370	240(6)	1350	SBA 150N1	1000	500	370	300(4)
2000	SBC 175N1	1000	500	370	300(6)	1600	SBA 175N1	1000	500	370	240(6)
2250	SBC 200N1	1000	500	370	300(6)	1800	SBA 200N1	1000	500	370	240(6)
2500	SBC 230N1	1000	500	370	300(8)	2000	SBA 230N1	1000	500	370	300(6)
3200	SBC 125N2	1000	650	600	240(12)	2250	SBA 125N2	1000	650	600	300(8)
3600	SBC 150N2	Data on request				2500	SBA 150N2	1000	650	600	300(8)
4000	SBC 175N2	Data on request				3200	SBA 175N2	1000	650	600	240(12)
4500	SBC 200N2	Data on request				3600	SBA 200N2	1000	650	600	240(14)
5000	SBC 230N2	Data on request				4000	SBA 230N2	Data on request			
6000	SBC 175N3	Data on request				4500	SBA 175N3	Data on request			
6600	SBC 200N3	Data on request				5000	SBA 200N3	Data on request			

- To charge bustrunking through cables from middle of bustrunking.
- Center feed Unit is available with sufficient space for direct connection through lugs and bolts.
- Undrilled cable gland plate is provided at bottom for multiple cable entry.

Center Feed Direct

Standard Dimension (A) 300mm
 Minimum Dimension (A) 300mm
 Maximum Dimension (A) 300mm



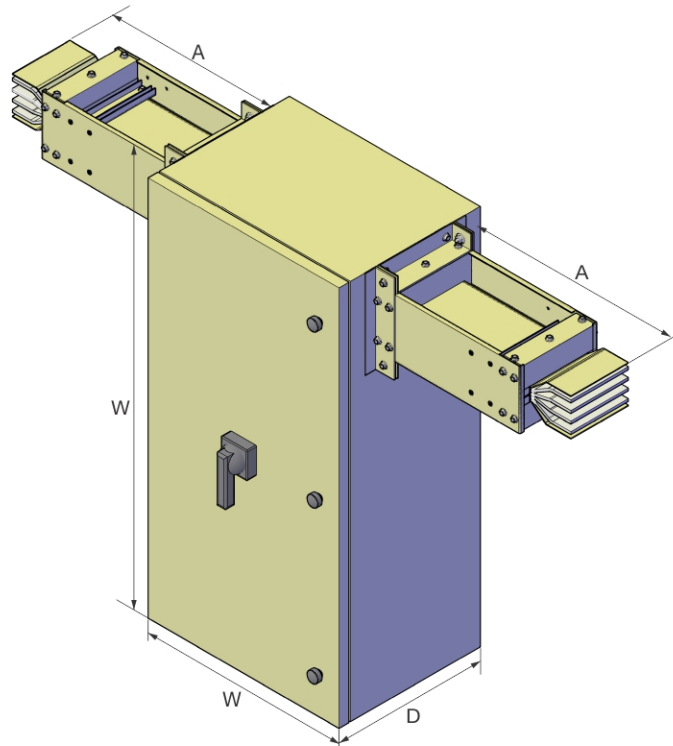
Center Feed Direct

Copper		DIMENSIONS (mm)			Recommend Al. Cable Size 3.5 core sqmm (No.)	Aluminium		DIMENSIONS (mm)			Recommend Al. Cable Size 3.5 core sqmm (No.)
Rating	Code	Height(H)	Width(W)	Depth(D)		Rating	Code	Height(H)	Width(W)	Depth(D)	
630	SBC 40N1	800	500	370	300(2)	400	SBA 40N1	800	500	370	150(2)
800	SBC 50N1	800	500	370	400(2)	500	SBA 50N1	800	500	370	240(2)
900	SBC 60N1	800	500	370	400(2)	630	SBA 60N1	800	500	370	300(2)
1000	SBC 70N1	800	500	370	185(4)	700	SBA 70N1	800	500	370	300(2)
1100	SBC 80N1	800	500	370	240(4)	800	SBA 80N1	800	500	370	400(2)
1250	SBC 100N1	800	500	370	300(4)	1000	SBA 100N1	800	500	370	185(4)
1600	SBC 125N1	1000	500	370	240(6)	1250	SBA 125N1	800	500	370	300(4)
1800	SBC 150N1	1000	500	370	240(6)	1350	SBA 150N1	1000	500	370	300(4)
2000	SBC 175N1	1000	500	370	300(6)	1600	SBA 175N1	1000	500	370	240(6)
2250	SBC 200N1	1000	500	370	300(6)	1800	SBA 200N1	1000	500	370	240(6)
2500	SBC 230N1	1000	500	370	300(8)	2000	SBA 230N1	1000	500	370	300(6)
3200	SBC 125N2	1000	650	600	240(12)	2250	SBA 125N2	1000	650	600	300(8)
3600	SBC 150N2	1000	650	600	240(14)	2500	SBA 150N2	1000	650	600	300(8)
4000	SBC 175N2	1000	650	600	300(12)	3200	SBA 175N2	1000	650	600	240(12)
4500	SBC 200N2	1000	650	600	300(14)	3600	SBA 200N2	1000	650	600	240(14)
5000	SBC 230N2	1000	650	600	300(16)	4000	SBA 230N2	Data on request			
6000	SBC 175N3	Data on request				4500	SBA 175N3	Data on request			
6600	SBC 200N3	Data on request				5000	SBA 200N3	Data on request			

- To charge bustrunking through cables from middle of bustrunking.
- Center feed Unit is available with MCCB, SFU, Isolators, fuse holders etc. can be fitted in Center Feed Unit as per requirement.
- Undrilled cable gland plate is provided at bottom for multiple cable entry.

Center Feed With Switchgear

Standard Dimension (A) 300mm
Minimum Dimension (A) 300mm
Maximum Dimension (A) 300mm



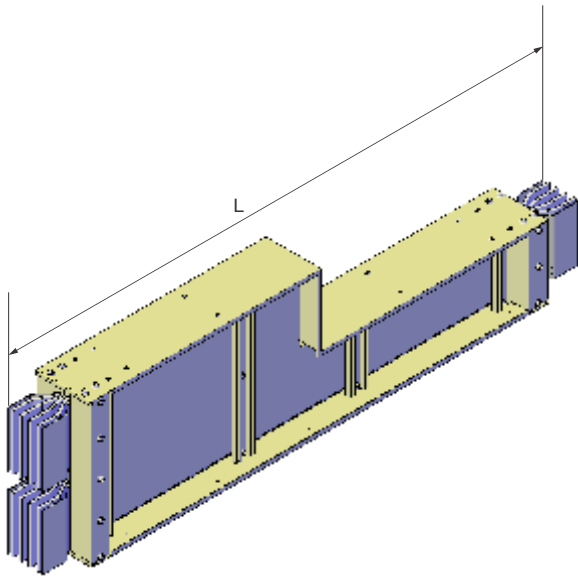
Center Feed with Switchgear

Copper		DIMENSIONS (mm)			Recommend Al. Cable Size 3.5 core sqmm (No.)	Aluminium		DIMENSIONS (mm)			Recommend Al. Cable Size 3.5 core sqmm (No.)
Rating	Code	Height(H)	Width(W)	Depth(D)		Rating	Code	Height(H)	Width(W)	Depth(D)	
630	SBC 40N1	1000	500	370	300(2)	400	SBA 40N1	1000	500	370	150(2)
800	SBC 50N1	1000	500	370	400(2)	500	SBA 50N1	1000	500	370	240(2)
900	SBC 60N1	1000	500	370	400(2)	630	SBA 60N1	1000	500	370	300(2)
1000	SBC 70N1	1000	500	370	185(4)	700	SBA 70N1	1000	500	370	300(2)
1100	SBC 80N1	1000	500	370	240(4)	800	SBA 80N1	1000	500	370	400(2)
1250	SBC 100N1	1000	500	370	300(4)	1000	SBA 100N1	1000	500	370	185(4)
1600	SBC 125N1	Data on request				1250	SBA 125N1	1000	500	370	300(4)
1800	SBC 150N1	Data on request				1350	SBA 150N1	Data on request			
2000	SBC 175N1	Data on request				1600	SBA 175N1	Data on request			
2250	SBC 200N1	Data on request				1800	SBA 200N1	Data on request			
2500	SBC 230N1	Data on request				2000	SBA 230N1	Data on request			
3200	SBC 125N2	Data on request				2250	SBA 125N2	Data on request			
3600	SBC 150N2	Data on request				2500	SBA 150N2	Data on request			
4000	SBC 175N2	Data on request				3200	SBA 175N2	Data on request			
4500	SBC 200N2	Data on request				3600	SBA 200N2	Data on request			
5000	SBC 230N2	Data on request				4000	SBA 230N2	Data on request			
6000	SBC 175N3	Data on request				4500	SBA 175N3	Data on request			
6600	SBC 200N3	Data on request				5000	SBA 200N3	Data on request			

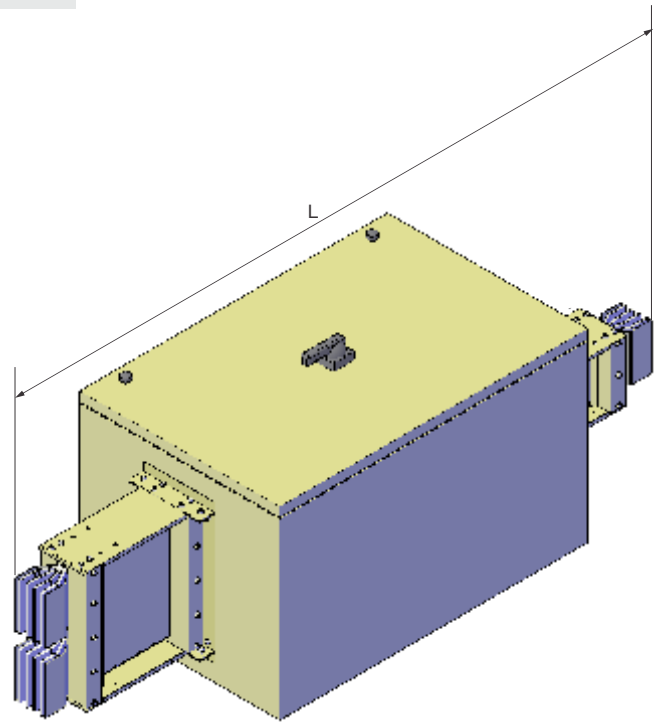
Reducer

- These are required to connect two dissimilar rating of busbar. Reducer may be designed with switching or isolating device

Standard Dimension (L)1500mm



Reducer (Direct)

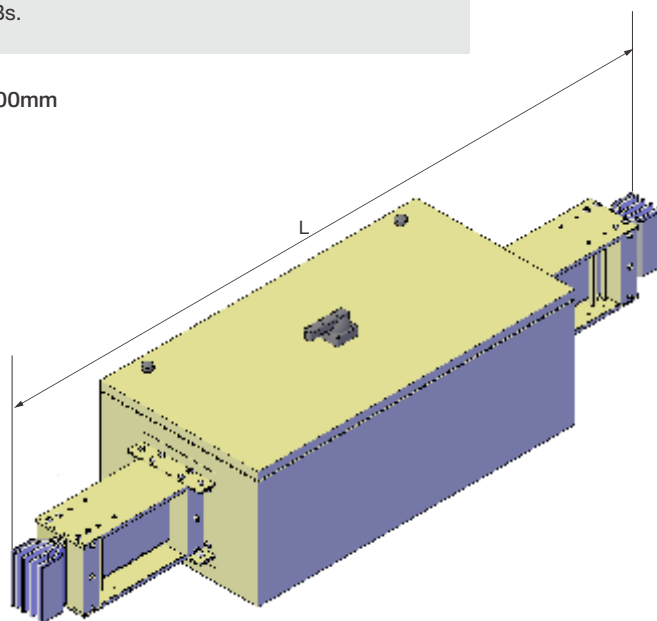


Reducer (with Switchgear)

- These are required to isolate the busbar run, in between, for various reasons. Section Isolator Unit can be fitted with Load Breaker Switches / SFUs / MCCBs.

Sectional Isolator

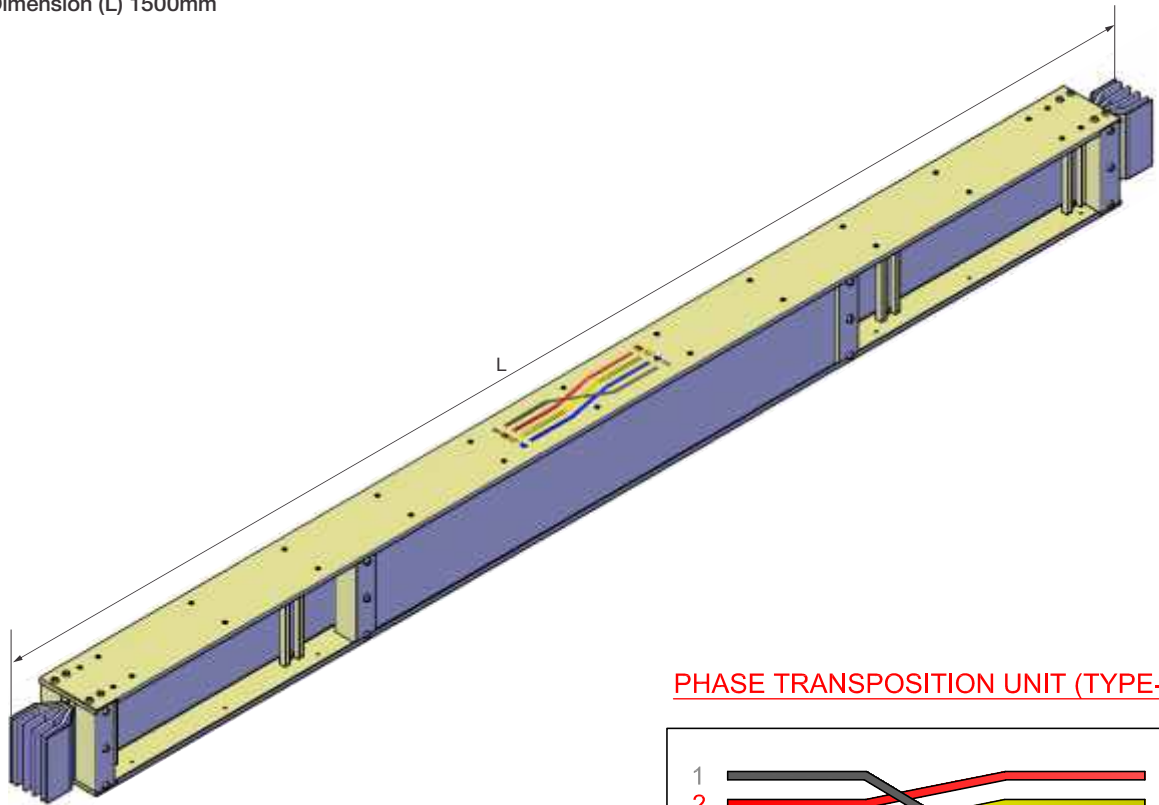
Standard Dimension (L)1500mm



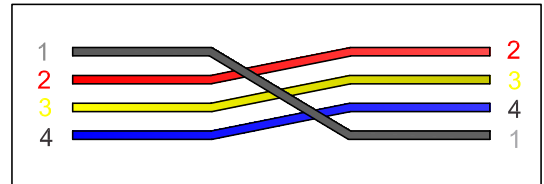
- Phase transposition unit are used to change the relative position of the phase conductors in order to balance the inductive reactances or to transpose the phases (such as NRYB to BYRN)
- To be used only in Indoor Application.

Standard Dimension (L) 1500mm

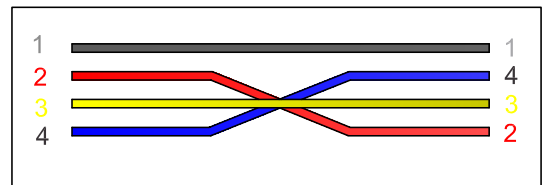
Phase Transposition Unit



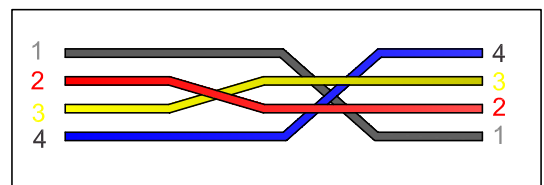
PHASE TRANSPOSITION UNIT (TYPE-1)



PHASE TRANSPOSITION UNIT (TYPE-2)

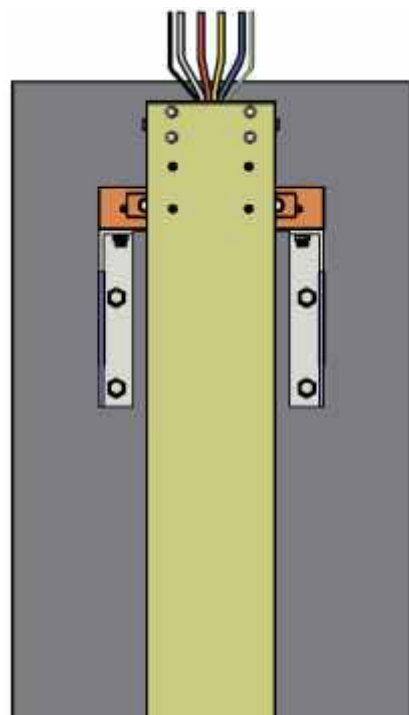
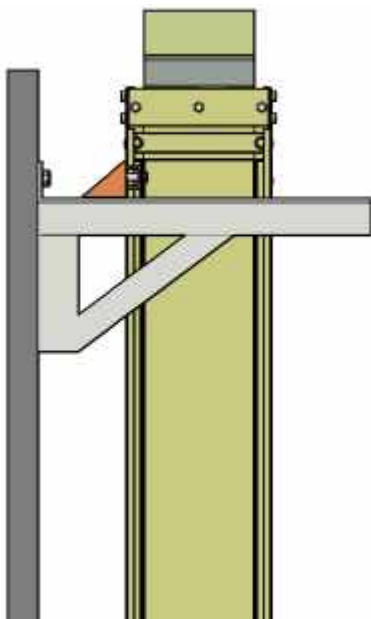
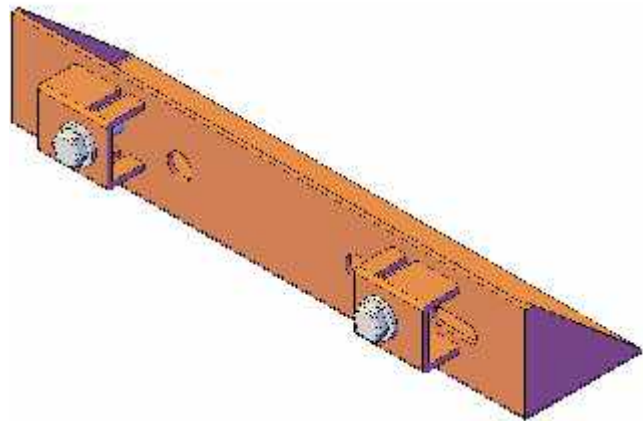
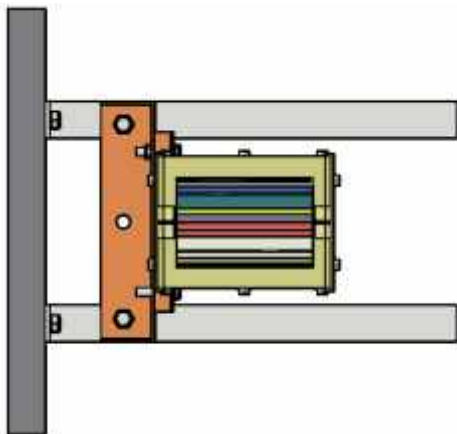


PHASE TRANSPOSITION UNIT (TYPE-3)



Vertical Support

- Vertical support is used to control Horizontal movement of sandwich rising main .
- Recommendation for using hangers per floor:-
 - Vertical Support is recommended per floor per rising main along with rigid or spring hanger when the floor height is between 3.5 to 4.5 Mtrs.
 - Vertical Support is common for all ratings of Sandwich Rising Mains.
 - Vertical Support is installed approximately at 2.0 Mtr. Height for floor level.

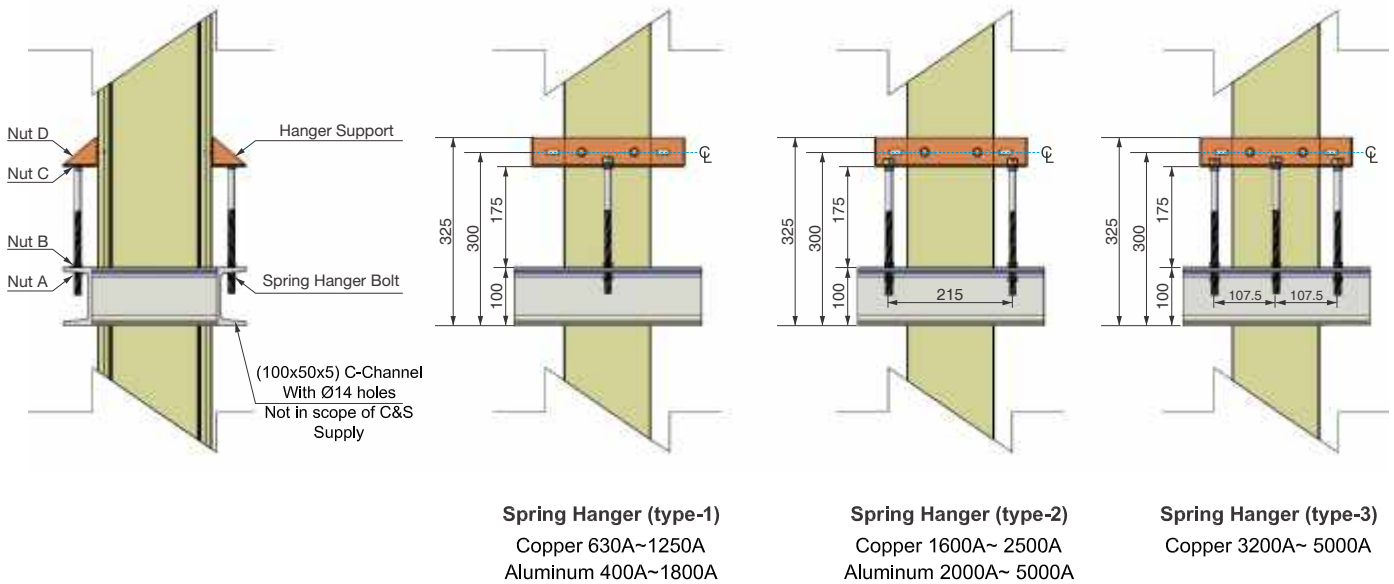


- One set of Rigid hanger per rising main must be installed at the start of the rising mains (i.e. At the lowest floor) to prevent expansion of bustrunking in downward direction. These can be fitted on 100x50X5 (or equivalent) channels mounted on floor / wall as shown below (not in scope of C&S supply)

Recommendation for using hangers per floor:-

- Up to 4.5 M: 01 rigid hanger+01 Vertical support. (for ensuring vertical alignment of rising Mains.)
- 4.5m>6.0 M : 01 rigid hanger+01 Vertical support+01 Spring Hanger.

Vertical Rigid Hanger



Installation Sequence

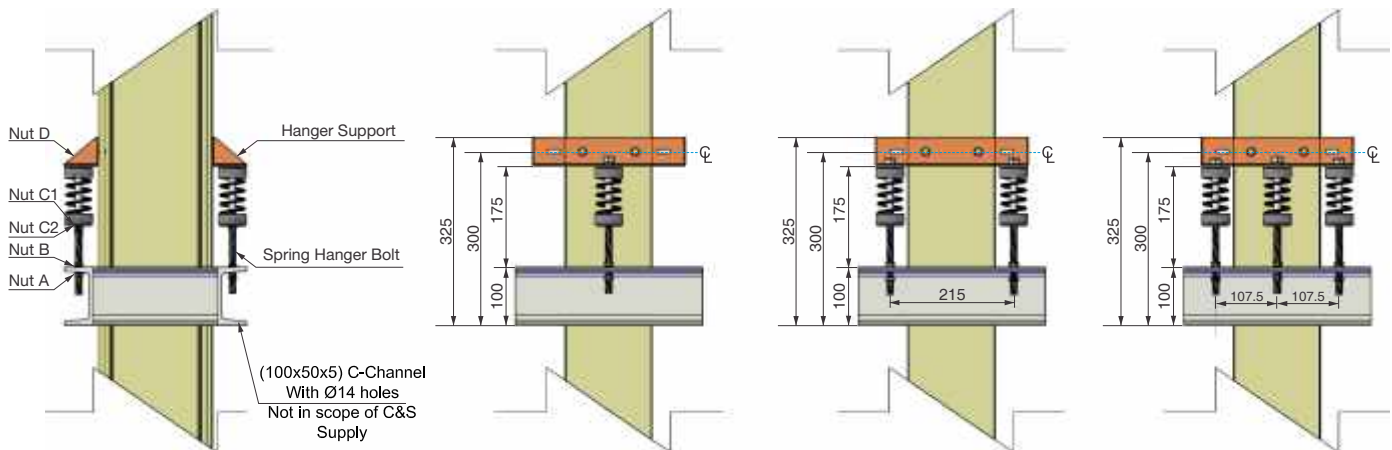
- Remove Nut A from Rigid Hanger on both sides.
- Mount "Hanger Support" through 2 Nos. Ø13 predrilled holes provided on desired rising main section.
- Insert "Rigid hanger bolts" into C-channel (already fixed at the floor level with desired holes)
- Adjust Nut 8 on to the C-channel (on both sides parallelly) ensuring center line (☉) of rigid hanger support positioned as 300 mm from floor level (or as indicated in drawing)
- Tighten & lock nut A.
- Ensure nut "C & D" remains fully tightened during entire process.

Vertical Spring Hanger

- One set of Spring hanger per rising main per floor (excluding lowest floor) need to be installed to sustain the bustrunking load and to allow vertical expansion of bustrunking in upward direction only. These can be fitted on 100x50X5 (or equivalent) channels mounted on floors I walls as shown below (not in scope of C&S supply)

Recommendation for using hangers per floor :

- Up to 4.5 M: 01 Vertical spring hanger+01 Vertical support. //(for ensuring vertical alignment of rising mains.)
- 4.5 M > 6.0 M: 02 Vertical spring hanger+01 Vertical support.



Spring Hanger (type-1)

Copper 630A~1250A
Aluminum 400A~1800A

Spring Hanger (type-2)

Copper 1600A~ 2500A
Aluminum 2000A~ 5000A

Spring Hanger (type-3)

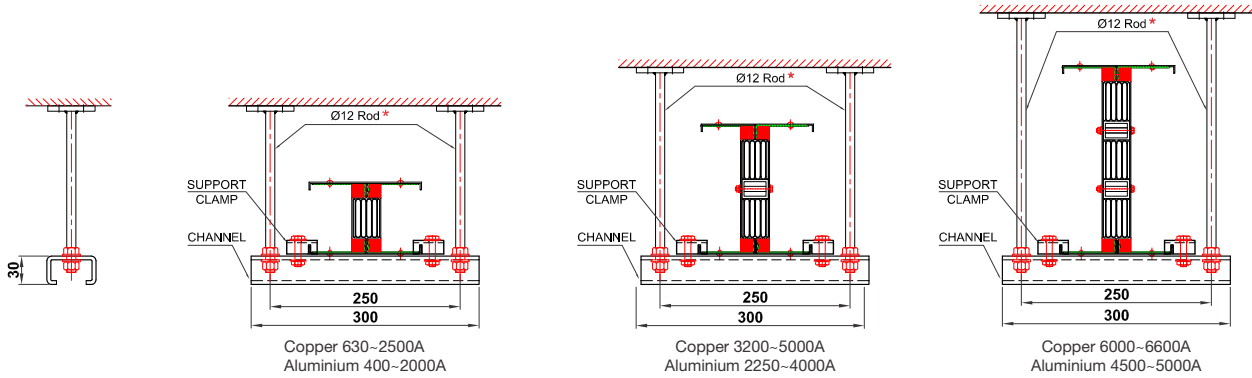
Copper 3200A~ 5000A

Installation Sequence

- Remove nut A from spring hanger on both sides.
- Mount " Hanger support" through 2 Nos. Ø13 predrilled holes provided on desired Rising main section
- Insert "Spring hanger bolts" into C-channel (already fixed at the floor level with desired holes)
- Adjust nut B on to the C-Channel ensuring center line (ϕ) of Hanger Support positioned at 300 mm from floor level (or as indicated in drawing)
- If two section are required at any floor, then Ujoin upper section with lower section (fitted with spring hanger) so that entire weight of rising main for that floor falls on spring hanger.
- Open & bring down nut C1 & C2 slowly (on both sides parallelly) until a gap of 1-2mm is created between nut D and spring hanger support
- Lock nut C1 & C2 at this position
- Loosen Nut D for allowing thermal expansion of rising main.

- These support need to be provided on horizontal feeder run at an interval of 1.5 Meter (or as per site requirement)

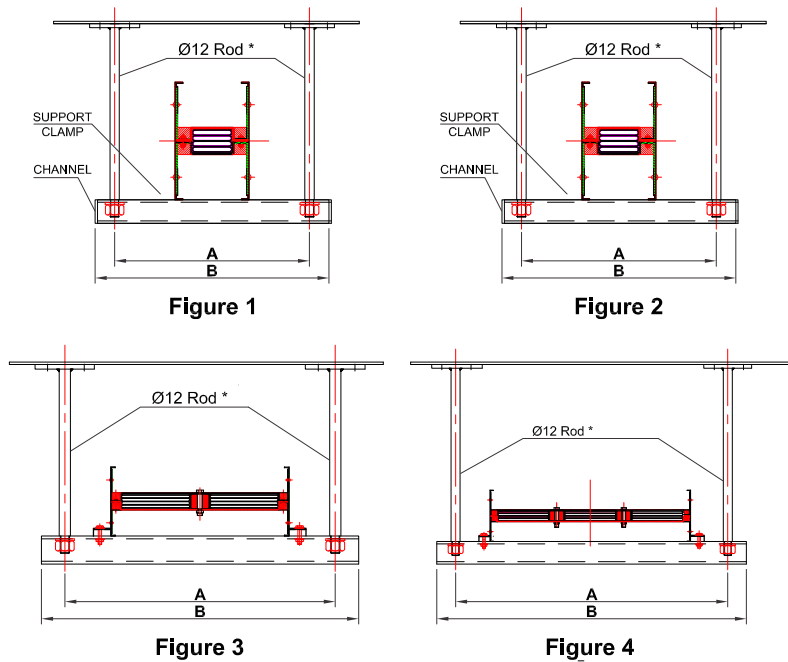
Edgewise Horizontal Support



* Not in scope of supply

- These support need to be provided on horizontal feeder run at an interval of 1.5 Meter (or as per site requirement)

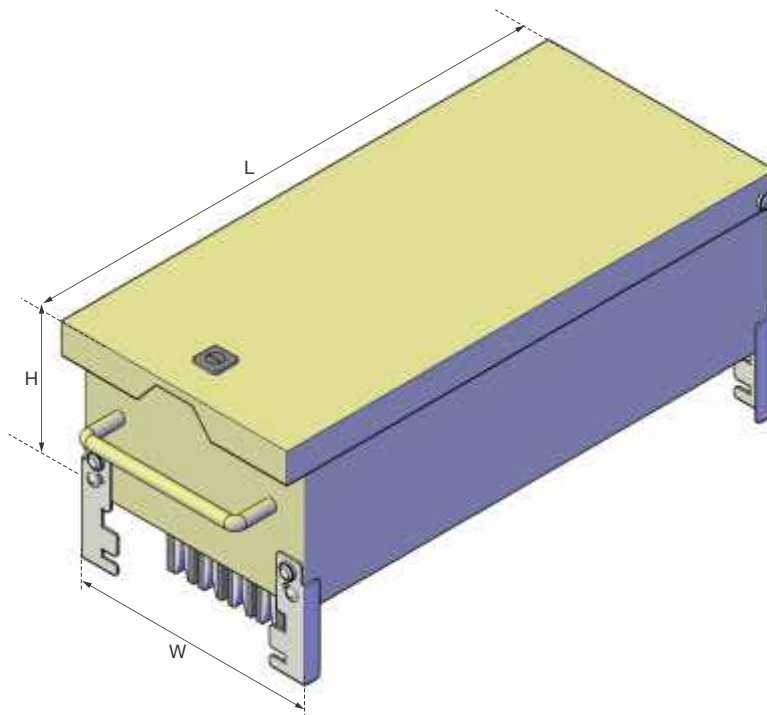
Flatwise Horizontal Support



Current Rating	Standard Dimensions		Code	Detail
	A	B		
Copper 630A-1250A	250	300	Type-A	Figure 1
Aluminium 400A-1000A				
Copper 1600A-2500A	400	450	Type-B	Figure 2
Aluminium 1250A-2000A				
Copper 3200A-5000A	650	700	Type-C	Figure 3
Aluminium 2250A-4000A				
Copper 6000A-6600A	850	900	Type-D	Figure 4
Aluminium 4500A-5000A				

Plug-in-Box

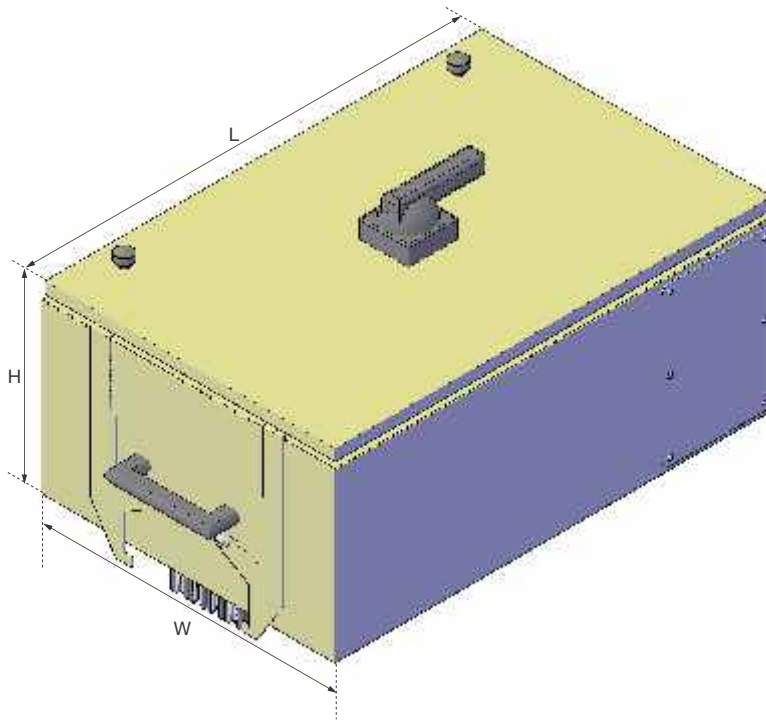
- Plug-in box enclosure is made from 1.6 mm G.I. with bottom hinged door.
- Plug-in contacts are made out of silver plated copper with spring steel backup pressure clips for ensuring uniform pressure and low contact resistance .
- For cables entry, provision of gland plates are provided on both sides and bottom of Plug-in Box.
- Earth contact of Plug-in boxes makes first & breaks last.
- Silver Plated contacts are properly shrouded / isolated.
- Plug-in boxes can only be fitted on to the Bustrunking with corrected polarity .
- Plug-in boxes can be used for MCB upto 63 Amps .
- Plug-in boxes can be used for Fuse holder (BS) upto 63 Amps.
- Recommended cable size is maximum 25sq. mm for Aluminium.



PIBX-S			
No. of Poles	H	W	L
3P/4P	100	180	280
5P	100	204	280

Plug-in-Box

- Plug-in box enclosure is made from 1.6 mm G.I. with side hinged door.
- Plug-in contacts are made out of silver plated copper with spring steel backup pressure clips for ensuring uniform pressure and low contact resistance .
- For cables entry, provision of gland plates are provided on both sides and bottom of Plug-in Box.
- Earth contact of Plug-in boxes makes first & breaks last.
- Plug-in box are suitable for MCCB/SFU's with rotary handle and door interlocking.
- Plug-in boxes are available with Interlocking with bustrunking to ensure “Plug-in” and “Plug-Out” possible only in “OFF” Condition.
- Silver Plated contacts are properly shrouded / isolated.
- Plug-in boxes can only be fitted on to the Bustrunking with corrected polarity.



Product Code	PIBX-N	PIBX-B	PIBX-C	PIBX-D	PIBX-E
	3B/4B/5B	3B/4B/5B	3B/4B/5B	3B/4B/5B	3B/4B/5B
With MCCB	32~125A*	160~250A	315~400A	500~630A	800A
With MCCB + Extended R/H	32~125A**	160~250A	315~400A	500~630A	800A
With MCCB + Direct R/H	32~125A	160~250A	315~400A	500~630A	800A
With SFU	32~125A	160~250A	315~400A	500~630A	800A
Final Box Size (L x W x H)	430x300x200	500x300x250	600x400x250	800x400x250	1000x400x250
Recommended Cable Size(Aluminium)	70 Sqmm	150 Sqmm	2 x 150 Sqmm	2 x 300 Sqmm	2 x 400 Sqmm

* For MCCB length upto 165mm use PIBX-N and MCCB above 165mm use PIBX-B

** For MCCB + R/H height upto 120mm use PIBX-N & above use PIBX-B

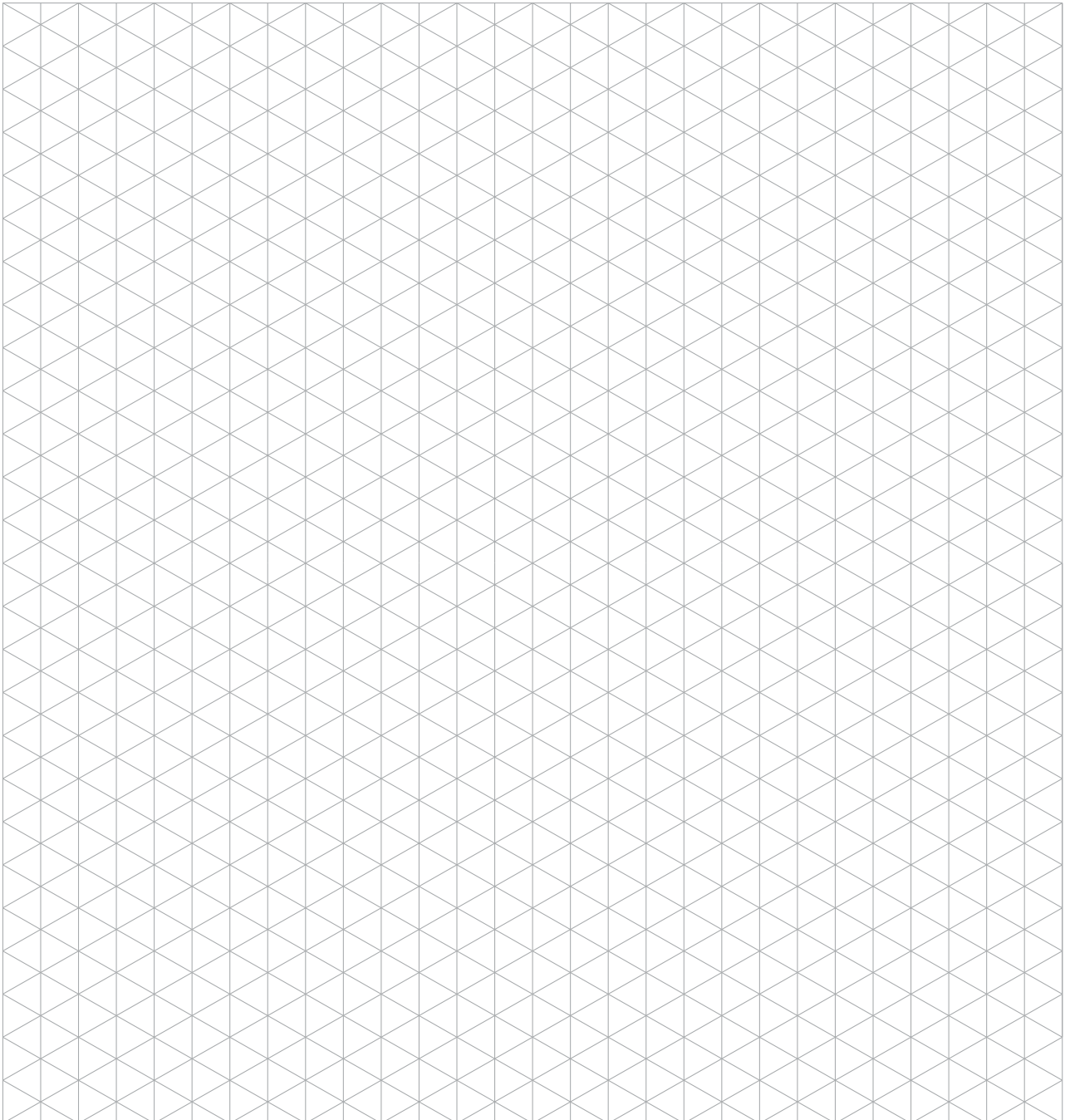
Busway Route Planner

Customer : _____

Date : _____

Information required for quotation. Please, photocopy this form and attach to your inquiry.

In	Un	Freq.		Temp.		Project :				
A	V	Hz	t ₀	t _{max}	Job no.:					
			°C	°C						
Conductors	3P	N	PE	+ -	Line	Length	Outdoor	Δ U	%	Tap off's
Cu <input type="checkbox"/> Al <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	no.	total	m	m		In
										no.



Type Test Certificates

CPR

Certificate No.2013/STN-17350
Laboratory Ref: CPR/STDS-Bhopal

TYPE TEST CERTIFICATE OF SHORT CIRCUIT PERFORMANCE

TEST OBJECT : 1000V, 200A, Sandwich Insulated Busbarling with Aluminium Enclosure;

DESIGNATION : 8BA 175 N1
Voltage: 1000V / Rated current: 200A / Rated frequency: 50/60Hz

MANUFACTURER : C & S Electric Ltd. (Bunkhaling Division)
Plot No. 1A, Sector-8C, Integrated Industrial Estate, IC, SIDCOL, Raipur, Handwar (Uttarakhand)

TESTED FOR : C & S Electric Ltd. (Bunkhaling Division)
Plot No. 1A, Sector-8C, Integrated Industrial Estate, IC, SIDCOL, Raipur, Handwar (Uttarakhand)

DATE OF TEST : 1st June, 2013

TESTED BY : Central Power Research Institute
Self-Reliant Testing & Development Section,
Sundernagar, Bhopal - 462 027

The test object, described in accordance with the description, drawings and prototype documented in this certificate has been subjected to the series of proving tests as accepted with:

IC: 81429-1, 2011, IEC 61439-4, 2012 (Annex 04, 19, 21)

The results are shown in the record of Proving Tests and the test reports attached hereto. The values obtained and the general performance are accepted to comply with the above Standards, and to verify the ratings assigned by the manufacturer as follows (page no. 1)

The certificate applies only to the test object. The responsibility for conformity of any equipment having the same configuration lies with the manufacturer.

This certificate comprises 14 sheets in total including first sheet

(Signature)
30/06/2013

S. BHATTACHARYA
JOINT DIRECTOR

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)

TEST REPORT

Test Report No. : 2013STL1183 **Dated** : 20 MAR 2013

Name and Address of the Customer : M/s C&S Electric Ltd. (Bunkhaling Division)
Plot No. 1A, Sector-8C, Integrated Industrial Estate, IC, SIDCOL, Raipur, Handwar (Uttarakhand)

Name and Address of the Manufacturer : M/s C&S Electric Ltd. (Bunkhaling Division)
Plot No. 1A, Sector-8C, Integrated Industrial Estate, IC, SIDCOL, Raipur, Handwar (Uttarakhand)

Particulars of Sample(s) Tested : 1000V, 200A, Sandwich Insulated Busbarling

Condition of Sample(s) on receipt : New

Type : Sandwich type

Designation : 8BA 175 N1

Serial Number(s) : Nil

Number of Sample(s) Tested : One

CPR sample code number(s) : STDSSTL120114

Sealing of the sample : Nil

Particulars of tests conducted : Life

Details of Tests : IEC - 61429-1, 2011 & IEC - 61439-4, 2012 and as per customer's requirement

Tests in accordance with Standard/specification : Nil

Sampling Plan : Nil

Customer's Requirement : Nil

Deviations, if any : Nil

Name of the witnessing persons : M. Sankar N. Gupta, Manager QM

Customer's Representative : Nil

Other than Customer's Representative : Nil

Test subcontracted with name and address of the laboratory : NONE

Documents constituting this report (in words) : Nil

No. of Sheets : FIVE

No. of Diagrams : Nil

No. of Graphs : Nil

No. of Photographs : Nil

No. of Test Circuit Diagrams : Nil

No. of Drawings : TWO

(Signature)
TEST ENGINEER

S. BHATTACHARYA
JOINT DIRECTOR

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)

TEST REPORT

Test Report No. : 2013STL1188 **Dated** : 20 MAR 2013

Name and Address of the Customer : M/s C&S Electric Ltd. (Bunkhaling Division)
Plot No. 1A, Sector-8C, Integrated Industrial Estate, IC, SIDCOL, Raipur, Handwar (Uttarakhand)

Name and Address of the Manufacturer : M/s C&S Electric Ltd. (Bunkhaling Division)
Plot No. 1A, Sector-8C, Integrated Industrial Estate, IC, SIDCOL, Raipur, Handwar (Uttarakhand)

Particulars of Sample(s) Tested : 1000V, 1600A, Sandwich Insulated Busbarling

Condition of sample(s) on receipt : New

Type : Sandwich type

Designation : 8BA 175 N1

Serial Number(s) : Nil

Number of Sample(s) Tested : One

CPR sample code number(s) : STDSSTL120114

Particulars of tests conducted : Mechanical Impact Test (IK 08)

Details of Tests : IS 202013

Tests in accordance with Standard/specification : Clause 10.2.5 of IEC - 61429-4, 2012

Sampling Plan : Nil

Customer's Requirement : Nil

Deviations, if any : Nil

Name of the witnessing persons : M. Sankar N. Gupta, Manager - Q.A.

Customer's Representative : Nil

Other than Customer's Representative : Nil

Test subcontracted with name and address of the laboratory : NONE

Documents constituting this report (in words) : Nil

No. of Sheets : FIVE

No. of Diagrams : Nil

No. of Graphs : Nil

No. of Photographs : Nil

No. of Test Circuit Diagrams : Nil

No. of Drawings : TWO

(Signature)
TEST ENGINEER

S. BHATTACHARYA
JOINT DIRECTOR

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)

TEST REPORT

Test Report No. : 2013STL1187 **Dated** : 8 FEB 2013

Name and Address of the Customer : M/s C&S Electric Limited,
Bunkhaling Division, Plot No. 1A, Sector-8C, Integrated Industrial Estate, IC, SIDCOL, Raipur, Handwar (Uttarakhand)

Name and Address of the Manufacturer : M/s C&S Electric Limited,
Bunkhaling Division, Plot No. 1A, Sector-8C, Integrated Industrial Estate, IC, SIDCOL, Raipur, Handwar (Uttarakhand)

Particulars of Sample(s) Tested : 1200V, 220Amp, Sandwich Insulated Busbarling (Aluminium)

Condition of sample(s) on receipt : New

Type : Sandwich type

Designation : 8BA 175 N2

Serial Number(s) : Nil

Number of Sample(s) Tested : One

CPR sample code number(s) : STDSSTL120107

Sealing of the sample : Nil

Particulars of tests conducted : Verification of Temperature Rise Limits

Details of Tests : Nil

Tests in accordance with Standard/specification : IEC - 61429-4, 2012 and as per customer's requirement

Sampling Plan : Nil

Customer's Requirement : Nil

Deviations, if any : Nil

Name of the witnessing persons : M. Sankar N. Gupta, Dy. Manager Q.A.

Customer's Representative : Nil

Other than Customer's Representative : Nil

Test subcontracted with name and address of the laboratory : NONE

Documents constituting this report (in words) : Nil

No. of Sheets : SEVEN

No. of Diagrams : Nil

No. of Graphs : Nil

No. of Photographs : Nil

No. of Test Circuit Diagrams : Nil

No. of Drawings : TWO

(Signature)
TEST ENGINEER

S. BHATTACHARYA
JOINT DIRECTOR

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)



TEST REPORT

Test Report No: **2013/STL/162** Dated: **20 MAR 2013**

Name and Address of the Customer: M/s. CAS Electric Ltd., (Buckingham Diversion)
Plot No. 1A, Sector-8C, Integrated Industrial Estate, EC,
SIDCUL, Ropar, Haryana (Jalgaon)

Name and Address of the Manufacturer: M/s. CAS Electric Ltd., (Buckingham Diversion)
Plot No. 1A, Sector-8C, Integrated Industrial Estate, EC,
SIDCUL, Ropar, Haryana (Jalgaon)

Particulars of Sample(s) Tested: 100VA, 1600A, Sandwich Insulated Busducting

Condition of sample(s) on receipt: New

Type: Sandwich type

Designation: DSA175N1

Serial Number(s): NIL

Number of Samples(s) Tested: One

CPRI sample code number(s): STD50711300119

Sealing of the sample: If any: NIL

Particulars of tests conducted: Degree of protection IP-00 (Category II)

Details of Tests: IS: 3026/1, IS: 3026/2

Tests in accordance with: IS: 1438-1, IS: 1 and IEC: 61439-4, 2012

Sampling Plan: NIL

Customer's Requirements: NIL

Observations, if any: NIL

Name of the witnessing persons:

Customer's Representative: Mr. Sarbajit K. Gupta, Manager - Q.A.

Other than Customer's Representative: NIL

Test subcontracted with name and address of the laboratory: NONE

Documents constituting this report (in words):

No. of Sheets: FIVE

No. of Descriptions: NIL

No. of Diagrams: NIL

No. of Photographs: NIL

No. of Test Circuit Diagrams: NIL

No. of Drawings: TWO

(Signature of Test Engineer)

(Signature of Joint Director)

(S. BHATTACHARYY)
JOINT DIRECTOR

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)



TEST REPORT

Test Report No: **2013/STL/159** Dated: **18 MAR 2013**

Name and Address of the Customer: M/s. CAS Electric Ltd., (Buckingham Diversion)
Plot No. 1A, Sector-8C, Integrated Industrial Estate,
EC, SIDCUL, Ropar, Haryana (Jalgaon)

Name and Address of the Manufacturer: M/s. CAS Electric Ltd., (Buckingham Diversion)
Plot No. 1A, Sector-8C, Integrated Industrial Estate,
EC, SIDCUL, Ropar, Haryana (Jalgaon)

Particulars of Sample(s) Tested: 100V, 1600A, Sandwich Insulated Busducting

Condition of sample(s) on receipt: New

Type: Sandwich type

Designation: DSA175N1

Serial Number(s): NIL

Number of Samples(s) Tested: One

CPRI sample code number(s): STD50711300119

Particulars of tests conducted: Verification of Resistance for common (Severity-A)

Details of Tests: IS: 3026/1, 2

Tests in accordance with: IS: 1438-1, IS: 1 and IEC: 61439-4, 2012

Sampling Plan: NIL

Customer's Requirements: NIL

Observations, if any: NIL

Name of the witnessing persons:

Customer's Representative: Mr. Sarbajit K. Gupta, Manager - Q.A.

Other than Customer's Representative: NIL

Test subcontracted with name and address of the laboratory: NONE

Documents constituting this report (in words):

No. of Sheets: FIVE

No. of Descriptions: NIL

No. of Diagrams: NIL

No. of Photographs: NIL

No. of Test Circuit Diagrams: NIL

No. of Drawings: TWO

(Signature of Test Engineer)

(Signature of Joint Director)

(S. BHATTACHARYY)
JOINT DIRECTOR

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)



TEST REPORT

Test Report No: **2013/STL/161** Dated: **19 APR 2013**

Name and Address of the Customer: M/s. CAS Electric Ltd., (Buckingham Diversion)
Plot No. 1A, Sector-8C, Integrated Industrial Estate,
EC, SIDCUL, Ropar, Haryana (Jalgaon)

Name and Address of the Manufacturer: M/s. CAS Electric Ltd., (Buckingham Diversion)
Plot No. 1A, Sector-8C, Integrated Industrial Estate,
EC, SIDCUL, Ropar, Haryana (Jalgaon)

Particulars of Sample(s) Tested: 100V, 1600A, Sandwich Insulated Busducting

Condition of sample(s) on receipt: New

Type: Sandwich type

Designation: DSA175N1

Serial Number(s): NIL

Number of Samples(s) Tested: One

CPRI sample code number(s): STD50711300119

Particulars of tests conducted: Verification of Resistance of insulating material to external field & No. up to material status effect of the following parts:
1) Joint insulator material polymer glass sheet material at 50°C
2) Fibre glass/Glass material polymer and vinyl at 50°C
3) End face cap material - polyethylene at 50°C

Details of Tests: IS: 3026/1, 2

Tests in accordance with: IS: 1438-1, IS: 1 and IEC: 61439-4, 2012

Sampling Plan: NIL

Customer's Requirements: NIL

Observations, if any: NIL

Name of the witnessing persons:

Customer's Representative: Mr. Sarbajit K. Gupta, Manager - Q.A.

Other than Customer's Representative: NIL

Test subcontracted with name and address of the laboratory: NONE

Documents constituting this report (in words):

No. of Sheets: FIVE

No. of Descriptions: NIL

No. of Diagrams: NIL

No. of Photographs: NIL

No. of Test Circuit Diagrams: NIL

No. of Drawings: TWO

(Signature of Test Engineer)

(Signature of Joint Director)

(S. BHATTACHARYY)
JOINT DIRECTOR

KEMA

Centre & Bangalore company Ltd. www.kema.co.uk
222, Choke Valley Rd, www.kema.com
113 32R, HAVER HALL, 518 2008
UK 518 2008

India: 2026/16, Durgam Cheruvu
44-4854, Hyderabad
Andhra Pradesh 500 016
Phone: +91 9 8858 5600 500 016
www.kema.com

Date: April 8, 2013

**Testing of Insulator Braking system types CBC1000, 518 2008
SBC1000H, SBC175N1, SBC175N2 and SBA175N1
from the manufacturer Controls & Switchgear Company Ltd.**

Dear Sir,

We confirm herewith that the Insulator Braking system, types CBC1000, SBC1000H, SBC175N1, SBC175N2 and SBA175N1, from the manufacturer Controls & Switchgear Company Ltd., have been tested according to IEC 60056-2 as in the clause mentioned on pages 2 and 3. The tests described in the report from Prof. & Dr. Sarbajit K. Gupta, dated March 15, 2013 were witnessed by KEMA.

We trust that we have informed you sufficiently. If not, please do not hesitate to contact us.

Yours faithfully,

KEMA Quality S.L.L.

(Signature of H.L. Scharf)

H.L. Scharf

KEMA Quality S.L.L.
Buckingham, 110 1011, CP Diversion
P.O. Box 1011, 518 011, Andhra Pradesh,
The Andhra Pradesh
Website: www.kema.com
www.kemaindia.com
Telephone: +91 98 858 5600
Mobile: +91 98 11 12 1115
E-mail: kema@kema.com
KEMA 518 2008, India, Centre Ltd.,
Registered Address: 00001611

Member of the IEC & Quality Network

Type Test Certificates

UL STATEMENT OF SELECTED VERIFICATION TEST

Certificate No. **UL TV 9815**
Page **11**
Date of Issue **2014-08-28**

Applicant: C&S Electric Limited, Plot No. 1A, Sector 8C, Integrated Industrial Estate, Rajapur, Hyderabad, Andhra Pradesh, India

Manufacturer: C&S Electric Limited, Plot No. 1A, Sector 8C, Integrated Industrial Estate, Rajapur, Hyderabad, Andhra Pradesh, India

Product Sample Description: 3000 Amp, 3 Phase, 100% Neutral + 80% Internal Earth, 1000 V, 1000 V (Um) (Ue) 3000 Hz, Copper Busbar Insulated Distribution System, with copper busbars, complying with light busbar length & size per IEC 60440, Plug in Bus Bar of 1250 (including)

Designation: 30C 1000A
Voltage: 11 KVing, 11 KV

Selected Verification Test in accordance with Standards: IEC 61439-1 (ed.2), IEC 61439-2 (ed.2)

Test Report No.: 478947201 (1) Issue July 2014 (08-28)

Additional information: Nil

Certificate Manager: Jeeendra Kishore

Issuing Body: UL International Service AG, Markingway 6A, 2798 Bellevue, Sherman, TX, 75154 9595 55, www.ul.com

Intertek ASTA
CERTIFICATE OF SELECTED TYPE TESTS

Laboratory Ref. No. **48427**
Certificate No. **12224**

AFFIRMATION: 400V, 3 Phase, 100% Neutral + 80% Internal Earth, 1000 V (Um), 1000 V (Ue) (3000 Hz) Insulated Distribution System comprising 3000 Amp, 1000 V (Um) (Ue) 3000 Hz, Copper Busbar Insulated Distribution System, with copper busbars, complying with light busbar length & size per IEC 60440, Plug in Bus Bar of 1250 (including)

DESIGNATION: 30C 1000A

MANUFACTURER: C&S Electric Limited (Exporting Division), Plot No. 1A, Sector 8C, Integrated Industrial Estate, Rajapur, Hyderabad-504012, India

TESTED BY: C&S Electric Limited (Exporting Division), Plot No. 1A, Sector 8C, Integrated Industrial Estate, Rajapur, Hyderabad-504012, India

DATES OF TESTS: 07th to 09th July 2014

The applicant, contractor or manufacturer with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with:

IEC 61439-1 (Ed.1.1) 2004-10 & IEC 61439-2 2006 incorporating Amendment 1, 2008, Clause 8.2.4

The results are shown in the record of Proving Tests and the photographs attached hereto. The values obtained and the general performance are considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated below.

Ratings Assigned by the Manufacturer and Proved by Test:

Thermal Cycling Test (Clause 8.2.1.8)

Rated current of copper busbar: 3000 A
Plug in Busbar length: 1250 mm
Temperature rise: 100°C

The scope of Proving Tests applies only to the apparatus depicted. The responsibility for conformity of any apparatus having the same characteristics and full label tests with the Manufacturer.

This Certificate is valid only in conjunction with the description, drawings and photographs incorporated in this certificate and the general performance are considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated below.

Only original representatives of the Certificate or representatives of the manufacturer or the applicant or their agent or other persons authorized to sign this certificate are permitted without previous permission from Intertek. Intertek Certification Ltd, Water House, Corporation Road, Rugby, CV21 3JH, England. www.intertek.com

U.K.A.S. 018

Ernie Davis
ASTA

EARTHQUAKE ENGINEERING LABORATORY
EARTHQUAKE ENGINEERING & VIBRATION RESEARCH CENTRE
CENTRAL POWER RESEARCH INSTITUTE
Prof. Dr. C.V. Raman Road, 7 B, Hebbal, BANGALORE - 560 080 (INDIA)
Tel: No. - 91-80-2301-4663

Sheet 1 of 15

TR No. EVMC2010/0101

Test Report Number: EVMC2010-0101 (Date): 17.06.2010

Name & Address of the Customer: M/s. C & S Electric Limited, Exporting Division, Plot No. 1A, Sector 8C, Integrated Industrial Estate, Rajapur, Hyderabad - 504012

Name & Address of the Manufacturer: M/s. C & S Electric Limited, Exporting Division, Plot No. 1A, Sector 8C, Integrated Industrial Estate, Rajapur, Hyderabad - 504012

Particulars of the Sample Tested:
Condition of Sample(s) Tested: New
Type: Busbar Insulated Type
Designation: 3000 Amp, 3 Phase, 100% Neutral + 80% Internal Earth, 1000 V, 1000 V (Um) (Ue) 3000 Hz, Copper Busbar Insulated Distribution System, with copper busbars, complying with light busbar length & size per IEC 60440, Plug in Bus Bar of 1250 (including)

Serialisation: Nil

Number of samples Tested: One

Date(s) of Test(s): 22-04-2010

CPRC Sample Code No.: EVMC2010/0101

Particulars of Tests Conducted: A) Resonance Search Test and B) Seismic Test

Test in accordance with Standard / Specification: IS 15654 (Part 1) - 2002, Zone V

Customer's Requirement: Nil

Customer's Inspection: Nil

Name of the Witnessing Personnel: M. Nandam Kishor and M. Sarath Chandra

Customer's Representation: Nil

Other Data: Customer's representation: Nil

Test conducted in accordance with address of the Secretary: Nil

Excursions constituting into Report:
Number of Excursions: Nil
Number of Overstays: Nil
Number of Faults: Nil
Number of Test Circuit Diagrams: Nil
Number of Drawings: Nil

TEST ENGINEER: P. Nandam Kishor

AUTHORISED SIGNATURES: P. Nandam Kishor, M. Sarath Chandra

ASTA
CERTIFICATE OF SELECTED TYPE TESTS

Laboratory Ref. No. **PLV.6186-0702**
Certificate No. **13122**

AFFIRMATION: 400V, 3 Phase + 100% Neutral + 80% Internal Earth, 1000 V (Um), 1000 V (Ue) (3000 Hz) Insulated Distribution System comprising 3000 Amp, 1000 V (Um) (Ue) 3000 Hz, Copper Busbar Insulated Distribution System, with copper busbars, complying with light busbar length & size per IEC 60440, Plug in Bus Bar of 1250 (including)

DESIGNATION: 30C 1000A

MANUFACTURER: C&S ELECTRIC LTD, Plot No. 1A, Sector 8C, Integrated Industrial Estate, Rajapur, Hyderabad-504012, India

TESTED BY: Electrical Research & Development Association (ERDA), New, Belvedere Industrial Estate, Victoria Road, Gurgaon, Haryana

DATES OF TESTS: 07th to 09th May 2010

The applicant, contractor or manufacturer with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with:

IEC 61439-1: Edition 1.0 2010-05

Verifications with reference to the tests listed in Annex D:

5. Protection against electric shock (IEC 61439-1) 10. Temperature rise tests
6. Short-circuit protection (IEC 61439-1) 11. Verification of short-circuit withstand strength

Refer to page 6 for ratings

The results are shown in the record of Proving Tests attached hereto. The values obtained and the general performance are considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated below.

The certificate applies only to the apparatus depicted. The responsibility for conformity of any apparatus having the same characteristics and full label tests with the Manufacturer.

This Certificate is valid only in conjunction with the description, drawings and photographs incorporated in this certificate and the general performance are considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated below.

Only original representatives of the Certificate or representatives of the manufacturer or the applicant or their agent or other persons authorized to sign this certificate are permitted without previous permission from Intertek. Intertek Certification Ltd, Water House, Corporation Road, Rugby, CV21 3JH, England. www.intertek.com Tel: 44 (0)1827 836000

U.K.A.S. 018

Ernie Davis
ASTA

ASTA CERTIFICATE OF SELECTED TYPE TESTS

Labortests Ref. No. 48817 **Certificate No.** 18091

APPROXIMATE: 1000A, 1000T/1000V (10/10), 50 Hz, Standard Industrial Insulating System with a 3-core and one, and one design system with the 0/1 and capacities of three phases, 1000V & 50Hz, internal earth metal, metal edge insulation (S.I.I) insulation.

DESCRIPTION: 00C0001

MANUFACTURER: Corbin & Sankhwar Co. Ltd., (Electrical Division), Plot No. 1A, Sector 8C, Integrated Industrial Estate, Ranipur, Haridwar (Uttarakhand), India.

TESTED BY: AA Testing Facility, Haridwar, INDIA, (M) 94111-10000, (F) 94111-10000, (E) 94111-10000

DATES OF TESTS: 17 and 18 March 2017



The approximate, overall relative accuracies with the description, drawings and photographs incorporated in this certificate has been indicated in the margin of printing level in accordance with:

IEC 61439-1:2005 and IEC 61439-2:2005 (as amended) 1:2005
 IEC 61439-1 (Ed. 1.1):2005-19 and IEC 61439-2:2005 (revising Amendment 1:2006, Clause 5.2.10, 5.2.12, 5.2.14 & 5.2.15)

The results are shown in the record of Primary Tests and the test reports attached hereto. The values obtained and the general performance are considered to comply with the above standards and to satisfy the design assigned by the manufacturer as stated below.

The results of Primary Tests apply only to the specimen tested. The responsibility for conformity of any separate parts, accessories and components with the technical data of the Manufacturer.

This certificate complies with the requirements of IEC 61439-1, IEC 61439-2, IEC 61439-3, IEC 61439-4, IEC 61439-5, IEC 61439-6, IEC 61439-7, IEC 61439-8, IEC 61439-9, IEC 61439-10, IEC 61439-11, IEC 61439-12, IEC 61439-13, IEC 61439-14, IEC 61439-15, IEC 61439-16, IEC 61439-17, IEC 61439-18, IEC 61439-19, IEC 61439-20, IEC 61439-21, IEC 61439-22, IEC 61439-23, IEC 61439-24, IEC 61439-25, IEC 61439-26, IEC 61439-27, IEC 61439-28, IEC 61439-29, IEC 61439-30, IEC 61439-31, IEC 61439-32, IEC 61439-33, IEC 61439-34, IEC 61439-35, IEC 61439-36, IEC 61439-37, IEC 61439-38, IEC 61439-39, IEC 61439-40, IEC 61439-41, IEC 61439-42, IEC 61439-43, IEC 61439-44, IEC 61439-45, IEC 61439-46, IEC 61439-47, IEC 61439-48, IEC 61439-49, IEC 61439-50, IEC 61439-51, IEC 61439-52, IEC 61439-53, IEC 61439-54, IEC 61439-55, IEC 61439-56, IEC 61439-57, IEC 61439-58, IEC 61439-59, IEC 61439-60, IEC 61439-61, IEC 61439-62, IEC 61439-63, IEC 61439-64, IEC 61439-65, IEC 61439-66, IEC 61439-67, IEC 61439-68, IEC 61439-69, IEC 61439-70, IEC 61439-71, IEC 61439-72, IEC 61439-73, IEC 61439-74, IEC 61439-75, IEC 61439-76, IEC 61439-77, IEC 61439-78, IEC 61439-79, IEC 61439-80, IEC 61439-81, IEC 61439-82, IEC 61439-83, IEC 61439-84, IEC 61439-85, IEC 61439-86, IEC 61439-87, IEC 61439-88, IEC 61439-89, IEC 61439-90, IEC 61439-91, IEC 61439-92, IEC 61439-93, IEC 61439-94, IEC 61439-95, IEC 61439-96, IEC 61439-97, IEC 61439-98, IEC 61439-99, IEC 61439-100.

UL STATEMENT OF SELECTED VERIFICATION TEST

Certificate No. 0174-0004
Page 01
Date of Issue 2014-08-28

Applicant: C&S Electric Limited
 Plot No. 1A, Sector 8C,
 Integrated Industrial Estate, Ranipur,
 Haridwar, Uttarakhand, India.

Manufacturer: C&S Electric Limited
 Plot No. 1A, Sector 8C,
 Integrated Industrial Estate, Ranipur,
 Haridwar, Uttarakhand, India.

Product Sample Description: 1000V and 1000V/1000V (10/10) Standard Industrial Insulating System with a 3-core and one, and one design system with the 0/1 and capacities of three phases, 1000V & 50Hz, internal earth metal, metal edge insulation (S.I.I) insulation.

Designation: 00C0001

Rating: Phase to phase 1000V

Related Verification Test(s) performed with (Reference): UL 1571 (Ed. 1), UL 1571 (Ed. 2), UL 1571 (Ed. 3), UL 1571 (Ed. 4), UL 1571 (Ed. 5), UL 1571 (Ed. 6), UL 1571 (Ed. 7), UL 1571 (Ed. 8), UL 1571 (Ed. 9), UL 1571 (Ed. 10), UL 1571 (Ed. 11), UL 1571 (Ed. 12), UL 1571 (Ed. 13), UL 1571 (Ed. 14), UL 1571 (Ed. 15), UL 1571 (Ed. 16), UL 1571 (Ed. 17), UL 1571 (Ed. 18), UL 1571 (Ed. 19), UL 1571 (Ed. 20), UL 1571 (Ed. 21), UL 1571 (Ed. 22), UL 1571 (Ed. 23), UL 1571 (Ed. 24), UL 1571 (Ed. 25), UL 1571 (Ed. 26), UL 1571 (Ed. 27), UL 1571 (Ed. 28), UL 1571 (Ed. 29), UL 1571 (Ed. 30), UL 1571 (Ed. 31), UL 1571 (Ed. 32), UL 1571 (Ed. 33), UL 1571 (Ed. 34), UL 1571 (Ed. 35), UL 1571 (Ed. 36), UL 1571 (Ed. 37), UL 1571 (Ed. 38), UL 1571 (Ed. 39), UL 1571 (Ed. 40), UL 1571 (Ed. 41), UL 1571 (Ed. 42), UL 1571 (Ed. 43), UL 1571 (Ed. 44), UL 1571 (Ed. 45), UL 1571 (Ed. 46), UL 1571 (Ed. 47), UL 1571 (Ed. 48), UL 1571 (Ed. 49), UL 1571 (Ed. 50), UL 1571 (Ed. 51), UL 1571 (Ed. 52), UL 1571 (Ed. 53), UL 1571 (Ed. 54), UL 1571 (Ed. 55), UL 1571 (Ed. 56), UL 1571 (Ed. 57), UL 1571 (Ed. 58), UL 1571 (Ed. 59), UL 1571 (Ed. 60), UL 1571 (Ed. 61), UL 1571 (Ed. 62), UL 1571 (Ed. 63), UL 1571 (Ed. 64), UL 1571 (Ed. 65), UL 1571 (Ed. 66), UL 1571 (Ed. 67), UL 1571 (Ed. 68), UL 1571 (Ed. 69), UL 1571 (Ed. 70), UL 1571 (Ed. 71), UL 1571 (Ed. 72), UL 1571 (Ed. 73), UL 1571 (Ed. 74), UL 1571 (Ed. 75), UL 1571 (Ed. 76), UL 1571 (Ed. 77), UL 1571 (Ed. 78), UL 1571 (Ed. 79), UL 1571 (Ed. 80), UL 1571 (Ed. 81), UL 1571 (Ed. 82), UL 1571 (Ed. 83), UL 1571 (Ed. 84), UL 1571 (Ed. 85), UL 1571 (Ed. 86), UL 1571 (Ed. 87), UL 1571 (Ed. 88), UL 1571 (Ed. 89), UL 1571 (Ed. 90), UL 1571 (Ed. 91), UL 1571 (Ed. 92), UL 1571 (Ed. 93), UL 1571 (Ed. 94), UL 1571 (Ed. 95), UL 1571 (Ed. 96), UL 1571 (Ed. 97), UL 1571 (Ed. 98), UL 1571 (Ed. 99), UL 1571 (Ed. 100).

Test Report No.: 01740004-01 (Issue Date: 2014-08-28)

Additional Information: The certificate is subject to surveillance with the following conditions:

1. The certificate is valid for the following products or services ranges:

DESIGN AND MANUFACTURE OF BUSTRUNKING & BUSDUCT SYSTEM

This certificate is valid for the following products or services ranges:

DESIGN AND MANUFACTURE OF BUSTRUNKING & BUSDUCT SYSTEM

Issuing Body: UL International Service AG, Haridwar, India
 1700 Bafra, Haridwar, India. Tel: +91 44 58 58 58
 info@ul.com, www.ul.com




ASTA CERTIFICATE OF SELECTED TYPE TESTS

Labortests Ref. No. 110120012754 **Certificate No.** 10131

APPROXIMATE: 1000V, 1 Phase + 100V Neutral + 50Hz Internal Earth, 1000V/100V (10/10), 50Hz, 3-core, 1000V & 50Hz, internal earth metal, metal edge insulation (S.I.I) insulation.

DESCRIPTION: 00C0001

MANUFACTURER: IAN ELECTRIC LTD, Plot No. 1A, Sector 8C, Integrated Industrial Estate, Ranipur, Haridwar, India.

TESTED BY: AA Testing Facility, Haridwar, INDIA, (M) 94111-10000, (F) 94111-10000, (E) 94111-10000

DATES OF TESTS: 17 and 18 March 2017

The approximate, overall relative accuracies with the description, drawings and photographs incorporated in this certificate has been indicated in the margin of printing level in accordance with:

IEC 61439-1:2005 and IEC 61439-2:2005 (as amended) 1:2005
 IEC 61439-1 (Ed. 1.1):2005-19 and IEC 61439-2:2005 (revising Amendment 1:2006, Clause 5.2.10, 5.2.12, 5.2.14 & 5.2.15)

The results are shown in the record of Primary Tests and the test reports attached hereto. The values obtained and the general performance are considered to comply with the above standards and to satisfy the design assigned by the manufacturer as stated below.

The results of Primary Tests apply only to the specimen tested. The responsibility for conformity of any separate parts, accessories and components with the technical data of the Manufacturer.

This certificate complies with the requirements of IEC 61439-1, IEC 61439-2, IEC 61439-3, IEC 61439-4, IEC 61439-5, IEC 61439-6, IEC 61439-7, IEC 61439-8, IEC 61439-9, IEC 61439-10, IEC 61439-11, IEC 61439-12, IEC 61439-13, IEC 61439-14, IEC 61439-15, IEC 61439-16, IEC 61439-17, IEC 61439-18, IEC 61439-19, IEC 61439-20, IEC 61439-21, IEC 61439-22, IEC 61439-23, IEC 61439-24, IEC 61439-25, IEC 61439-26, IEC 61439-27, IEC 61439-28, IEC 61439-29, IEC 61439-30, IEC 61439-31, IEC 61439-32, IEC 61439-33, IEC 61439-34, IEC 61439-35, IEC 61439-36, IEC 61439-37, IEC 61439-38, IEC 61439-39, IEC 61439-40, IEC 61439-41, IEC 61439-42, IEC 61439-43, IEC 61439-44, IEC 61439-45, IEC 61439-46, IEC 61439-47, IEC 61439-48, IEC 61439-49, IEC 61439-50, IEC 61439-51, IEC 61439-52, IEC 61439-53, IEC 61439-54, IEC 61439-55, IEC 61439-56, IEC 61439-57, IEC 61439-58, IEC 61439-59, IEC 61439-60, IEC 61439-61, IEC 61439-62, IEC 61439-63, IEC 61439-64, IEC 61439-65, IEC 61439-66, IEC 61439-67, IEC 61439-68, IEC 61439-69, IEC 61439-70, IEC 61439-71, IEC 61439-72, IEC 61439-73, IEC 61439-74, IEC 61439-75, IEC 61439-76, IEC 61439-77, IEC 61439-78, IEC 61439-79, IEC 61439-80, IEC 61439-81, IEC 61439-82, IEC 61439-83, IEC 61439-84, IEC 61439-85, IEC 61439-86, IEC 61439-87, IEC 61439-88, IEC 61439-89, IEC 61439-90, IEC 61439-91, IEC 61439-92, IEC 61439-93, IEC 61439-94, IEC 61439-95, IEC 61439-96, IEC 61439-97, IEC 61439-98, IEC 61439-99, IEC 61439-100.




Certificate of Registration

This is to certify that
 The Quality Management System
 of

C&S ELECTRIC LTD.

at

**PLOT 1A, SECTOR 8C, INTEGRATED INDUSTRIAL ESTATE,
 RANIPUR, HARIDWAR - 249 403 (UTTARAKHAND)
 (INDIA)**

has been found to conform to the Quality Management System Standard:



ISO 9001:2008

This certificate is valid for the following Products or Service ranges:

**DESIGN AND MANUFACTURE OF BUSTRUNKING
 & BUSDUCT SYSTEM**

CERTIFICATE NO: PCMS/QMS/1888/2018
ISSUED ON: 22/05/2018
VALIDITY DATE: 22/05/2020
1st SURVEILLANCE DATE: 22/01/2019
2nd SURVEILLANCE DATE: 22/01/2020
3rd SURVEILLANCE DATE: 22/01/2021
THE VALIDITY OF CERTIFICATE IS SUBJECT TO REGULAR SURVEILLANCE ALONG WITH THE ABOVE MENTIONED DATES AND IT'S ONLY VALID AFTER SUCCESSFUL SURVEILLANCE WITH CERTIFIED LETTER ISSUED BY PCMS.

Author: CHAIRMAN
P.C. MANAGEMENT
 124A, Block F,
 www.pcmsindia.com, New Delhi


Reference List - Domestic

CUSTOMER	PROJECT	PRODUCT	STATE/CITY
ETA Engineering Pvt Ltd.	Shapath V	SBA70N1,125N2	AHMEDABAD
Antelec Ltd	HCCB	SBC230N3, SBA150N3, SBA175N2	AHMEDABAD
Bhumi & Drishti Associates	Harsha Engineering Changodar	SBA60N1	AHMEDABAD
Sterling & Wilson Ltd	Ford Motors Ltd (Body Shop)	SBA175N2, 150N2, 100N2, 175N1, 125N1	AHMEDABAD
Amco Engineers	LG Hospital	SAB100N2, 60N1, 40N1	AHMEDABAD
Wooshin Systems Co. Ltd.	FORD, Sanand	SBA175N1, SBA100N2, SBA175N2	AHMEDABAD
HEC Infra Projects Pvt Ltd.	HEC Infra Projects Pvt Ltd.	SBA80N1, 60N1, 100N1, 100N2	AHMEDABAD
HEC Infra Projects Pvt Ltd.	ESIC Hospital & Medical Collage	SBA175N2, 150N2, 100N2, 175N1, 125N1, 80N1	AHMEDABAD
Amco Engineers Gujrat	LG Hospital Ahemdabad	SAB100N2, 60N1, 40N1	AHMEDABAD
Wooshin Systems Co. Ltd.	FORD, Sanand	SBA175N1, SBA100N2, SBA175N2	AHMEDABAD
Drishti Electricals	Harsha Engineering Ltd	SBA175N3, 60N1, LBC254BA5SP3	AHMEDABAD
Amco Engineers	Civil Hospital, Sola	SBA150N2, 60N1	AHMEDABAD
RN Electricals	Canpack india aurangabad	SBA200N3	AURNGABAD
Sterling & Wilson Ltd.	Perkins India Pvt. Limited	SBA200N3, 150N3, 175N2, 150N2, 80N1	AURANGABAD
Spark On Rivulet	Chalet Hotel-Banglore	SBA175N2, SBA200N3, SBA100N1	BANGALORE
Blue Star Limited	Nokia Siemens	SBA100N2	BANGALORE
Oracle	Ifflex Tech park	SBA175N1, SBA100N1, SBA150N3, SBA100N2, 4000A	BANGALORE
Micron Electricals	Market city	SBA150N3, SBA100N2, SBA175N1, SBA125N1, SBA100N1	BANGALORE
Krishn Electricals	A O Smith	SBC175N2,SBC125N2	BANGALORE
Micron Electricals	Cisco B11 & B12	SBA150N3, SBA150N2, SBA100N2	BANGALORE
Sterling and Wilson Ltd	TCS	SBC125N1, SBC40N1	BANGALORE
Sterling and wilson Ltd	Amitha Tech Park	SBA150N2, SBA175N1,SBA80N1	BANGALORE
Oracle	Ifflex Tech park	SBA175N1, SBA100N1	BANGALORE
ETA Engg. Pvt. Ltd.	Ritz Carlton	SBA100N1, SBA150N2	BANGALORE
Sterling and Wilson Ltd.	Amitha Tech Park	SBA150N2, SBA175N1,SBA80N1	BANGALORE
Sterling & Wilson	CISCO Banglore	SBA150N2, 100N2	BANGALORE
Shree Electricals	Tulip Data City	SBA150N3	BANGALORE
Sterling & Wilson Limited	The Capital	SBA200N3	BANGALORE
ETA Engineering Pvt Ltd	Asendas IT Park	SBA80N1,150N1,175N1,150N2,150N3	BANGALORE
Pravin Electricals Pvt Ltd	Capgemini IT Park	SBA80N1,100N1,100N2,150N2	BANGALORE
Micron Electricals	CISCO - B15	SBA100,150N2	BANGALORE
Bagmane Construction Pvt Ltd	Bagmane Toranto	SBA150N2,100N1,80N1	BANGALORE
Bagmane Construction Pvt Ltd	Bagmane WTC4	SBA175N2,150N2,125N1,100N1	BANGALORE
Bagmane Construction Pvt Ltd	Bagmane WTC5	SBA150N2,175N1,80N1	BANGALORE
Sterling & Wilson Pvt Ltd	UST Global Campus	SBA80N1, 60N1, 175N2	BANGALORE
Sterling & Wilson	Lulu Marriott courtyard	SBA175N2,150N2,125N1	BANGALORE
RGA Software System P Ltd	Pritek Park	SBA150N3,175N2,80N1,125N1,100N1	BANGALORE

Reference List - Domestic

CUSTOMER	PROJECT	PRODUCT	STATE/CITY
Micron Electricals	Marg Shopping mall	SBA175N2,150N2,100N2,175N1,125N1,100N1	BANGALORE
Micron Electricals	Prestige Shantiniketan	SBA175N1,100N2	BANGALORE
Sterling & Wilson Ltd	Nirlon Knowledge Park	SBA175N2	BANGALORE
Sterling & Wilson Powergen PLtd	Nirlon Knowledge Park	SBA150N3	BANGALORE
Micron Electricals	Continental Hospital	SBA150N2, 100N2	BANGALORE
Blue Star Ltd	Viceroy Hotel,	SBA175N2,SBA125N1	BANGALORE
Pravin Electricals Pvt. Limited	Hinduja Reality Ventures Ltd.,	SBA150N3	BANGALORE
Micron Electricals	CISCO Systems Indis Pvt Ltd,	SBA150N2	BANGALORE
Sterling & Wilson Ltd,	Hindustan Coca Cola Beverages Ltd	SBC230N2	BANGALORE
RMZ Ecoworld Infrastructure Pvt Ltd	RMZ Ecoworld Infrastructure Pvt Ltd	SBA175N2,125N1,80N1	BANGALORE
Krishn Electricals	Harvest Hotels & Serviced Apartments Pvt Ltd,	SBA175N2, SBA100N2, SBA175N1	BANGALORE
MildStone Buildcon Pvt Ltd	Construction of SEZ (Phase I)	SBA175N3, SBA175N2, SBA150N2	BANGALORE
Power Point Electrical Engineers	ManyataTech Park	SBA175N2,150N2,175N1,125N1	BANGALORE
Krishn Electricals	Kernlibers Spring & Hangers, Tumkur	SBA150N2,CBA1250,400,1000,800,	BANGALORE
Gopalan Enterprises India Pvt Ltd	Global Axis,	SB150N2,100N2	BANGALORE
Pragathi controls	Karle,	SBA175N2,175N1,100N2	BANGALORE
Sequent Electricals	Global Phase I,	SBA100N2	BANGALORE
Micron Electricals	Bosch Ltd, Bidadi	SBA100N2,175N1,150N2, CBA500	BANGALORE
RMZ Eco World Infrastruvture Pvt Ltd	RMZ Eco World Infrastruvture Pvt Ltd	SBA175N1,125N1	BANGALORE
Pravin Electricals Pvt. Limited	Hinduja Reality Ventures Ltd.,Banglore	SBA150N3	BANGALORE
Micron Electricals	CISCO Systems Indis Pvt Ltd,	SBA150N2	BANGALORE
RMZ Ecoworld Infrastructure Pvt Ltd	RMZ Ecoworld Infrastructure Pvt Ltd	SBA175N2,125N1,80N1	BANGALORE
Sterling & Wilson Ltd	Lotus Mall, Mangalore	SBA175N2,150N3,	BANGALORE
Krishn Electricals	Harvest Hotels & Serviced Apartments	SBA175N2, SBA100N2, SBA175N1	BANGALORE
MildStone Buildcon Pvt Ltd	Construction of SEZ (Phase I)	SBA175N3, SBA175N2, SBA150N2	BANGALORE
Power Point Electrical Engineers & Contractors	ManyataTech Park @ MFAR Green Heart	SBA175N2,150N2,175N1,125N1	BANGALORE
Krishn Electricals	Kernlibers Spring & Hangers, Tumkur	SBA150N2,CBA1250,400,1000,800,	BANGALORE
Gopalan Enterprises India Pvt Ltd	Global Axis	SB150N2,100N2	BANGALORE
Pragathi controls, Bangalore	Karle	SBA175N2,175N1,100N2	BANGALORE
Sequent Electricals	Global Phase I	SBA100N2	BANGALORE
Micron Electricals	Bosch Ltd, Bidadi	SBA100N2,175N1,150N2, CBA500	BANGALORE
RMZ Eco World Infrastruvture Pvt Ltd	RMZ Eco World Infrastruvture Pvt Ltd	SBA175N1,125N1	BANGALORE
Krishn Electricals	Kirloskar Toyota Textile Machinery Pvt Ltd	SBA150N3,SBA100N2	BANGALORE
RMZ Galleria India Pvt Ltd	RMZ Galleria - Mixed Use,	SBA100N2	BANGALORE
Micron Electricals	HP Campus DG upgradation works	SBA200N3	BANGALORE
Amber Electrotech Ltd.	AIIMS	SBA80N1,SBA100N1,SBA125N1,CBA400	BHOPAL
Power & Instrumentation	Indian Institute of Science Education and Research centre.	SBA150N3, SBA175N2, SBA175N1, SBA100N1	BHOPAL
Sterling & Wilson, Noida	ESIC Hospital, Patna	SBA125N1 & SBA150N2	BIHAR

Reference List - Domestic

CUSTOMER	PROJECT	PRODUCT	STATE/CITY
Jakson Engineers Limited	Pratibha Industries Ltd. Panta	SBA100N2, 125N1	BIHAR
Servotech Electricals Pvt Ltd	Hotel cum conversation centre	SBA150N1,150N2	CHANDIGARH
HEC Infra Projects Pvt Ltd.	Hyatt Project	SBA150N2, SBA125N1	CHANDIGARH
ETA Engineering Pvt. Ltd.	ETA Technopark	SBA150N3, SBA150N2, SBA100N2 & SBA125N1	CHENNAI
Sterling and wilson Pvt Ltd	MFAR Hotels Ltd,	SBA100N2	CHENNAI
ETA Enggineering Pvt Ltd,Chennai	Prestige Palladium,	SBA150N2,SBA80N1,SBA60N1	CHENNAI
Ethnic tobacco Co. Ltd, Guntur	Ethnic tobacco Co. Ltd, Guntur	SBC230N2,SBA100N2,SBA125N1	CHENNAI
Goms Electrical	Husky Injection Moulding ,	SBA150N2,SBA100N2,SBA125N1	CHENNAI
Sterling & Wilson Limited	Birla Surya Ltd	SBA80N1,150N1,175N2,150N2,100N2,175	CHENNAI
Sterling & Wilson	Sundram Clayton	SBA200N3, 150N3	CHENNAI
ETA Engg.Pvt Ltd	Nokia Ssiemens Network	SBC125N2,SBC40N1	CHENNAI
Epower Engineering	L&T Kobelco Machinery Pvt Ltd	SBA175N1,80N1,60N1	CHENNAI
E Power Engineering	Gold Hill	SBA17N1,100N2	CHENNAI
Epower Engg	HMI engineering	SBC125N2	CHENNAI
ETA Engg.Pvt Ltd	TKAP 210K(B159)	SBC125N2, 175N2	CHENNAI
Consolidated Construction	Emersion Ambernath	SBA175N2, 150N2,CBA200	CHENNAI
Micron Electricals	BMW-DH4- Expansion Project	SBA175N2,40N1, LBC25	CHENNAI
Consolidated tech.	IISER	SBA175N2,175N1,80N1	CHENNAI
Faery Estates Private Limited	SP Infocity, Block - B	SBA175N2,175N1,80N1	CHENNAI
ETA Engineering Pvt ltd, Chennai	ETA Techno Park - HCL,	SBA175N2,SBA175N2	CHENNAI
E Power Engineering	SRM Hospital	SBA100N2,SBA175N2, CBA630	CHENNAI
G V S Projects Pvt Ltd	Mahindra Satyam Tower-2	SBA175N3	CHENNAI
ETA ENGINEERING PVT LTD, Chennai	Anand Citi Centre Holdings Pvt Ltd,	SBA175N1,SBA125N1,	CHENNAI
E Power Engineering, Chennai	L&T Construction,	SBA175N2,SBA100N2,SBA150N2	CHENNAI
E Power Engineering, Chennai	Hyundai Wia,	SBA150N2, 150N3, 175N2	CHENNAI
L & T Construction Ltcd Chennai	ESIC Hospital Kollam	SBA60N1, 175N2, 125N1, 150N2	CHENNAI
L&T Construction Ltd, Chennai	Kundankulam Nuclear Power Plant Project	SBC100N1,40N1	CHENNAI
Tech Mech Engineers, Chennai	Tex Valley Erdode Mall,	SBA125N1,CBA400	CHENNAI
Faery Estates Pvt Ltd, Mumbai	SP Infocity,	SBA175N2,150N2,175N1,125N1,CBA250	CHENNAI
E Power Engineering - Chennai	HMI Eng,Shop # 3	SBC230N2	CHENNAI
E Power Engineering - Chennai	Mobis Audio & Air Bag System,	SBC125N2,SBC175N1	CHENNAI
Hitachi Automative Systems India Pvt Ltd, Chennai	Hitachi Automative Systems India Pvt Ltd,	SBA175N1,SBA150N3	CHENNAI
Cosmos Enterprises, Chennai	Tirumala Dairy Pvt Ltd,	SBA150N3,100N2	CHENNAI
Sterling & Wilson Ltd, Chennai	Estancia IT Park Pvt Ltd,	SBA150N3,175N2,150N2,100N2	CHENNAI
E Power Engineering, Chennai	Hyundai Wia,	SBA150N2, 150N3, 175N2	CHENNAI
Tech Mech Engineers, Chennai	Tex Valley Erdode Mall,	SBA125N1,CBA400	CHENNAI
E Power Engineering - Chennai	HMI Eng,Shop # 3	SBC230N2	CHENNAI
E Power Engineering - Chennai	Mobis Audio & Air Bag System,	SBC125N2,SBC175N1	CHENNAI

Reference List - Domestic

CUSTOMER	PROJECT	PRODUCT	STATE/CITY
Hitachi Automative Systems India Pvt Ltd, Chennai	Hitachi Automative Systems India Pvt Ltd,	SBA175N1,SBA150N3	CHENNAI
Cosmos Enterprises, Chennai	Tirumala Dairy Pvt Ltd,	SBA150N3,100N2	CHENNAI
Sterling & Wilson Ltd, Chennai	Estancia IT Park Pvt Ltd,	SBA150N3,175N2,150N2,100N2	CHENNAI
Sterling & Wilson Ltd, Chennai	BOSCH, Adugodu	SBA175N2,150N2,100N1,175N1	CHENNAI
Sterling & Wilson Ltd, Chennai	Cadbury India Ltd, Tada	SBA150N3,125N1,100N1,CBA400	CHENNAI
Sterling & Wilson Ltd, Chennai	Dailmer india Commercial Vehicles Pvt Ltd,	SBA150N2,175N1,60N1	CHENNAI
Sterling & Wilson Ltd, Chennai	RMZ Eco World, Plot 4A - 4B,	SBA100N2	CHENNAI
E Power Engineering, Chennai	ECHIER Motor Limited (Unit : Royal Enfield)	SBA175N1,40N1	CHENNAI
Pravin Electricals Pvt. Limited Mumbai	Perot Systems,Coimbatore	SBA150N2, 175N1, 100N1, 40N1, 50N1	COIMBATORE
E City Real Estate Mumbai	Fun Republic Coimbatore	SBA80N1, 100N1,175N1,150N2,150N3,175	COIMBATORE
E Power Engineering, Chennai	Texmo Industries, Coimbatore	SBA150N2, SBA200N1, SBA150N1	COIMBATORE
E Power Engineering, Chennai	Texmo Industries, Coimbatore	SBA150N2, SBA200N1, SBA150N1	COIMBATORE
GBJ Hotels Pvt Ltd, Coimbatore	GBJ Hotels, Coimbatore	SBA125N1,175N1	COIMBATORE
Ahluwalia Contracts (I) Ltd.,New Delhi	Raddison Hotel,Jaipur	SBA150N3,SBA100N2	DELHI
Bharat Hotel Ltd	The lalit Hotel,	SBA175N1	DELHI
MAC Associates,New Delhi	DMRC PH-2,New	SBC40N1	DELHI
MEC Electric Contracts P Ltd	JW Merriot DIAL at New	SBA175N1,SBA125N1,SBA150N2	DELHI
Sterling & Wilson Ltd, Sant nagar east of kailash	Central Square Plaza -6	SBA100N2,150N2,175N1	DELHI
Pooja Singla Builders & Engineers Pvt. Ltd.	COD Oval Cant.	SBA150N2,125N1	DELHI
Voltas Limited New delhi	RR Hospital (MES)	SBA100, 125N1,SBA150N, 175N2	DELHI
Voltas Limited New delhi	DMRC sushant loak GGN.	SBA100, 125N1,SBA150N, 175N2	DELHI
Pravin Electricals Pvt. Ltd., Mumbai	NICSI Data centre at	SBA150N3	DELHI
Maha laxmi,New Delhi	MES Ojhar		DELHI
S.L. Enterprises,New Delhi	Vaayu Bhawan,New	SBA125N1,SBA150N3	DELHI
Reliance Elektrik Works	Scoper complex, Lodhi Road, New	SBA100N2,SBA175N1,SBA100N1	DELHI
Reliance Electric Works	Rail Bhawan,New	SBC200N1	DELHI
Sterling & Wilson Ltd	Ashoka Leyland Ltd,Pantnagar	SBA150N3,SBA150N2,	DELHI
Sterling & Wilson Ltd	Century Textile	SBA100N1, 175N1, 175N2	DELHI
Rai Industrial Power Pvt Ltd	Leela Hotel,	SBA150N2	DELHI
Shivam Engineers	IVRCL,New	SBA125N1,SBA175N1,CBA400,CBA250	DELHI
SL Enterprises	NSIC Campus,New	SBA100N2,SBA175N1,SBA125N1	DELHI
Siemens Limited EIL	EIL New	SBA175N2	DELHI
Purearth Infrastructure Ltd	Pureearth self	SBA175N1, 100N2, 150N2	DELHI
MEC Electric Contracts Pvt. Ltd.	Hyatt Hotel , New	SBA200N3	DELHI
SL Enterprises	Rashtrapati Bhawan New	SBC230N1	DELHI
Reliance Elecktrik Works	A.E. (Electrical) CPWD, New	SBA150N3, SBA150N2	DELHI
ETA Engineering Pvt. Ltd.	DMRC Phase-III,	SBC230N2	DELHI
Ambience Towers Private Limited	Ambience Towers Private Limited,New	SBA150N2, 175N2, 100N2, 80N1	DELHI

Reference List - Domestic

CUSTOMER	PROJECT	PRODUCT	STATE/CITY
Ambience Towers Private Limited	Ambience Towers Private Limited,New	SBA150N2, SBA175N2, SBA175N1, SBA80N1	DELHI
S. L. Enterprises	MS Flats, BD Marg, New	SBC230N1, SBA40N1, SBA50N1	DELHI
Sudhir Power Projects Limited	The Pride Hotel, New	SBA150N2, SBA100N2	DELHI
Consortium of Sudhir Power Projects Ltd. & Sudhir Gensets Ltd.	DMRC CE-09 LOT 3 , New	SBC230N2, 125N2, 100N1	DELHI
Reliance Elecktrik Works,New Delhi	A.E. (Electrical) CPWD, New	SBA150N3, SBA150N2	DELHI
ETA Engineering Pvt. Ltd.New Delhi.	DMRC Phase-III,	SBC230N2	DELHI
Panun Entracon Pvt. Ltd.New Delhi	Rail Bhawan, New	SBC125N2	DELHI
Reliance Electric Works	Scope Minar ,New	SBA175N3	DELHI
Shivam Engineers,New Dehi	Winter Hills,New	SBA60N1, 40N1, 150N2	DELHI
HST Enterprises gautam nagar	AIIMS	SBA175N2	DELHI
Sudhir Power Projects Limited	American Embassy School, New	SBC230N1, 175N1	DELHI
Spire Techpark Private Limited	World Trade Center	SBA175N1, 125N1, 80N1	DELHI
Tractors India Pvt Ltd, New Delhi	Amazon, Bilaspur	SBA150N2,125N1	DELHI
EVIO Private Limited, , Mumbai	IIT	SBC 40N1	DELHI
Green Electricals	IVRC	SBA175N2, 100N2, 175N1, 125N1, 100N1	GUJARAT
L&T MHI Boilers P. Ltd Surat Gujrat	Hazira Manufacturing Facility	SBA100N1	GUJARAT
JOP Power,Goa	Goa Airport	SBA175N2,SBA150N2	GOA
Larsen & Toubro Ltd	EWAC-Ankaleshwar	SBA175N1,100N1,60N1,40N1	GUJARAT
Bhumi & Dristi Associates	Banas Dairy	SBC200N3	GUJARAT
TTK Presige Ltd.	Gujrat Unit 1 Project	SBA800A,CBA250A	GUJARAT
TTK Prestige Limited	Gujrat	SBA200N3	GUJARAT
Blue Tech Associates	Gujrat	SBC50N1, 70N1	GUJARAT
Sudhir Power Projects Limited	Colgate Palmolive (India) Ltd.	SBC230N2	GUJARAT
Hitachi Plant Technologies India Pvt.Ltd.	Toyo Ink India Pvt.Ltd.,Gujarat.	SBA150N3, 100N2	GUJARAT
Sudhir Power Projects Limited	Colgate Palmolive (India) Ltd.	SBC230N2	GUJARAT
NCC Limited	ESIC Hospital Project, Gulbarga	SBA60N1,80N1,125N1,175N1,100N2,175 N2,150N2	GULBARGA
JOP Power,Goa	Goa Airport	SBA175N2,SBA150N2	GOA
Munjaj Showa Ltd,Haridwar	Munjaj Showa Ltd	SBA150N2,SBA175N3	HARIDWAR
SRS Real Estate Ltd,Faridabad	SRS Residency,Faridabad	SBA40N1,SBA60N1,SBA80N1	HARYANA
Amtek Ring Gears Limited,Gurgaon	Amtek Ring Gears Limited	SBA175N3,SBA175N1	HARYANA
Sterling & Wilson Pvt Ltd,Noida	Dr. Fresh IT park,Gurgaon	SBA100N1,SBA150N2	HARYANA
Sterling & Wilson Pvt Ltd,Noida	Cyberwalk Manesar Gurgaon		HARYANA
Sterling & Wilson Pvt Ltd,Noida	A. buildwell Pvt Ltd,Gurgaon	SBA200N2,SBA200N1,SBA100N1	HARYANA
Cairns Energy India PTY Ltd,Gurgaon	Bhagyam Field Development Project	SBC150N1,SBC150N2	HARYANA
Cairns Energy India PTY Ltd,Gurgaon	Mangla Processing Terminal	SBC150N2	HARYANA
J.S Control & Automation	Prakash Industries limited	SBA175N2	HARYANA
Sudhir Power Projects Ltd	TDI Mall Kundli Sonipat	SBA150N2	HARYANA

Reference List - Domestic

CUSTOMER	PROJECT	PRODUCT	STATE/CITY
Sterling & Wilson Pvt Ltd,Noida	One Horizon Gurgaon	SBA150N3,SBA175N1	HARYANA
Nutech Contractor & Electrical Systems Pvt	Canary Residency,Gurgaon	SBA80N1	HARYANA
NKG Infrastructure Limited	Medical College and Hospital Faridabad	SBA175N2,SBA175N1	HARYANA
Sudhir Power Projects	Verandas, Gurgaon	SBA80N1,SBA175N1,SBA175N2	HARYANA
Sudhir Power Projects Limited,Gurgaon	Sky View Corporate park,Gurgaon	SBA175N1,SBA175N2	HARYANA
Reliance Elektric	HLL	SBA150N1, 200N1	HARYANA
Sudhir Power Projects Limited	MGF METROPOLIS MALL, GURGAON	SBA200N3	HARYANA
Suzuki Motor Cycle India Pvt. Limited	SUZUKI MOTOR CYCLE INDIA PVT. LIMITED, GURGAON,	SBA150N2,CBA400	HARYANA
Satkartar Electronics	IREQ PRIVATE LIMITED, GURGAON,	SBA100N1,SBA80N1,SBA60N1,SBA40N1	HARYANA
Milestones Engineering Pvt Ltd	Imperial Estate, Faridabad,	SBA175N1,SBA100N1,SBA60N1,	HARYANA
Jastech Systems Pvt. Ltd.Gurgaon,	SRS Royal Hills,	SBA40N1, 60N1, 80N1	HARYANA
United Engineers,Gurgaon	United Engineers,Gurgaon	SBA150N3, SBA175N2, SBA80N1	HARYANA
Bharat Electricals, Manesar, Gurgaon, Haryana	Bharat Electricals, Manesar, Gurgaon,	SBA150N2, 175N1, 100N1, 80N1	HARYANA
Triple A Engineering Pvt. Ltd. Gurgaon	Triple A Engineering Pvt. Ltd. Gurgaon	SBA150N2, 175N1, 80N1	HARYANA
Antelec Limited	Vatika Town Square Manesar	SBA150N3	HARYANA
Sudhir Power Projects Limited,Gurgaon,	The Villas, DLF, Phase-II, , Gurgaon,	SBA175N1	HARYANA
Brisk infrastructure & developers pvt. Ltd.	Lumbini Terrace Homes, sec-109	SBA125N1, 80N1, 50N1, 150N2, 175N1	HARYANA
Milestones Engineering Pvt Ltd .	Imperial Estate, Faridabad,	SBA175N1,SBA100N1,SBA60N1,	HARYANA
Jastech Systems Pvt. Ltd.Gurgaon,	SRS Royal Hills,	SBA40N1, 60N1, 80N1	HARYANA
United Engineers,Gurgaon	United Engineers,Gurgaon	SBA150N3, SBA175N2, SBA80N1	HARYANA
Bharat Electricals, Manesar, Gurgaon	Bharat Electricals, Manesar, Gurgaon,	SBA150N2, 175N1, 100N1, 80N1	HARYANA
Triple A Engineering Pvt. Ltd. Gurgaon	Triple A Engineering Pvt. Ltd. Gurgaon	SBA150N2, 175N1, 80N1	HARYANA
Antelec Limited,	Vatika Town Square Manesar	SBA150N3	HARYANA
Sudhir Power Projects Limited,Gurgaon,	The Villas, DLF, Phase-II, , Gurgaon,	SBA175N1	HARYANA
Brisk infrastructure & developers pvt. Ltd.	Lumbini terrace homes, sec-109,G urgaon	SBA125N1, 80N1, 50N1, 150N2, 175N1	HARYANA
Sudhir Power Projects Limited,Gurgaon	Tata Housing Deveopment Co. Ltd.	SBA175N2, 150N2, 100N2, 175N1	HARYANA
Jakson Limited,Faridabad	Amazon Warehouse Facility at Bilaspur,	SBA200N3, 150N3, 150N2, 100N2, 80N1	HARYANA
Timken Services (P) Ltd.Gurgaon, Haryana	Timken Services (P) Ltd.Gurgaon,	SBA150N2, SBA175N1	HARYANA
Blue Star Limited, Gurgaon	DMRC PHASE-3, LOT-4,	SBC230N2, 175N2, 230N1, 100N1	HARYANA
Triple A Engineering Pvt. Ltd.Gurgaon,	Michael Schumacher World Tower	SBA150N2, 100N2, 175N1, 125N1, 80N1	HARYANA
United Himalayan Industry	Enigma Housing Society, Gurgaon	SBA125N1, 100N1, 70N1, 50N1, 40N1	HARYANA
Genraal cable Energy P.LTD Baddi	Self	SBC 175N3, SBA150N3, 175N2	H. P.
BE Contracts P Ltd, Mandi	ESIC Hospital,Mandi	SBA125N1,SBA175N2,SBA100N2	H. P.
Jackson Limited	ESIC Mandi	SBA175N1, 100N2	H. P.
Tractor India Pvt Ltd	ONGC, Dehradun	SBC200N3	H. P.
Budhiraja Electricals	IIP Dehradun	SBA150N2, SBA200N1	H. P.
Tractor India Pvt Ltd	ONGC, Dehradun	SBC200N3	H. P.
CRSSG-NCC (JV) NBCC-ESIC Hospital	NBCC-ESIC Hospital,Mandi,	SBA125N1, 175N2, 100N2	H. P.

Reference List - Domestic

CUSTOMER	PROJECT	PRODUCT	STATE/CITY
AAPT India	WIPRO Hindupur		HINDUPUR
Bluestar Limited	Princeton towers,	SBA150N3,SBA150N2	HYDERABAD
Rohani Industrial Electricals Limited Mumbai	Tata Aerospace Hyderabad	SBA150N3, SBA60N1	HYDERABAD
Sterling & Wilson	Meenakshi Tech park	SBA175N3,N1 150N2, 125N1,100N1	HYDERABAD
Sequent Electricals	Vikas Telecom limited	SBA175N2	HYDERABAD
NMC Electricals	LEPL-II	SBA150N2,175N1,80N1	HYDERABAD
Blue Star Limited	Prestige Polygon	SBA100N1, 175N2	HYDERABAD
Sterling & Wilson	Raheja Building	SBA150N3,150N2	HYDERABAD
Amararaja	Corp office	SBA175N2,150N2,175N1,60N1	HYDERABAD
Bluestar Ltd.	CCHPL	SBA150N3, 100N2, CBA800, 400	HYDERABAD
Square A Enterprises	Mahaveer Infra	SBA125N1,80N1,40N1,150N2	HYDERABAD
Micron Electricals	Mahindra Satyam Tower-2	SBC50N1, SBA175N1	HYDERABAD
Micron Electricals	PBEL city-Ph-2	SBA175,80,60N1	HYDERABAD
Micron Electricals	TSI Business Park	SBA200N3,175N2,100N1,CBA400,200	HYDERABAD
Sterling & Wilson	Hindustan Coca Cola	SBC230N3,SBA175N2,150N3	HYDERABAD
Sterling Power Gen	Wipro Hydb.	SBA150N3	HYDERABAD
Micron Electricals	Manjushree technopark	SBA200N3, 175N2, 150N2	HYDERABAD
Pragathi Controls	Cyber City Hyderabad	SBA175N3, N2 & 200N1	HYDERABAD
L&T Limited	HP GR Tech Park	SBA175N3, N2 & 200N1	HYDERABAD
Sai Sudhir ifrastructure	INCOIS HYD	SBC150N2,SBC175N1	HYDERABAD
Micron Electricals, Hyderabad	TCS,	SBA100N2,SBC50N1	HYDERABAD
Sri Balaji Infra Iondia Pvt Ltd,Hyderabad	TIFR,	SBC175N2,125N1, CBA200	HYDERABAD
Sterlin & Wilson Powergen Pvt Ltd, Hyderabad	TSI Business Park,	SBA150N3, 175N2	HYDERABAD
NCC Limited	ESIC Hospital Project, Gulbarga	SBA60N1,80N1,125N1,175N1,100N2,175 N2,150N2	HYDERABAD
Trendset Builders Pvt Ltd, Hyderabad	Trendset Multiplex,	SBA150N2,SBA175N1,SBA60N1	HYDERABAD
Sterling & Wilson Ltd, Hyderabad	Metro Rail,	SBC70N1,40N1,125N2	HYDERABAD
Micron Electricals, Hyderabad	Tech Mahindra Technology Centre SEZ,	SBA175N2,SBA175N1,SBC50N1	HYDERABAD
All Tec Power Solutions, Secunderabad	Tech Park Shanta Sri Ram Constructions,	SBA150N3,150N2,100N2,175N1,125N1	HYDERABAD
Sri Balaji Infra Iondia Pvt Ltd,Hyderabad	TIFR,	SBC175N2,125N1, CBA200	HYDERABAD
Sterling & Wilson Ltd,	Hindustan Coca Cala Beverages Ltd	SBC230N2	HYDERABAD
Sterlin & Wilson Powergen Pvt Ltd, Hyderabad	TSI Business Park,	SBA150N3, 175N2	HYDERABAD
Trendset Builders Pvt Ltd, Hyderabad	Trendset Multiplex,	SBA150N2,SBA175N1,SBA60N1	HYDERABAD
Sterling & Wilson Ltd, Hyderabad	Metro Rail,	SBC70N1,40N1,125N2	HYDERABAD
Micron Electricals, Hyderabad	Tech Mahindra Technology Centre SEZ,	SBA175N2,SBA175N1,SBC50N1	HYDERABAD
All Tec Power Solutions, Secunderabad	Tech Park Shanta Sri Ram Constructions,	SBA150N3,150N2,100N2,175N1,125N1	HYDERABAD
Power & instrumentation (Gujrat) Ltd, Hydrabad..	AAI , Tirupati	SBA125N1, 100N2, 175N2	HYDERABAD
Manjeera Retail Holdings Pvt Ltd,	Manjeera Trinity Corporate	SNA100N2,175N1,150N2,150N3	HYDERABAD
Firepro Systems	Sahrudaya Health Care	SBA125N1,80N1,40N1	HYDERABAD

Reference List - Domestic

CUSTOMER	PROJECT	PRODUCT	STATE/CITY
Govt of india Department of Atomic Energy RR CAT	RRCAT indore	SBA175N2	INDORE
VE Commercial Vehicles	Eicher Project	SBA150N2,100N1	INDOR
Pravin Electricals Pvt Ltd	Hotel & Mall At Jamshedpur	SBC125N2	JAMSHEDPUR
Pace Electricals, Trissur, Kerala	Emerson Network (Airtel),Calicut, Kerala	SBA150N2	KERALA
L & T Construction Lted Chennai	ESIC Hospital Kollam	SBA60N1, 175N2, 125N1, 150N2	KERALA
Consolidated Technologies, Kochi	Trissur Sobha City Commercial, Kochi	SBA175N2,150N2,175N1	KERALA
TATA Consultancy	TCS Kochi	SBA125,100,60N1, SBC175,125,70,50N1	KOCHI
Martinet Engineers Pvt. Ltd, Kolkatta, West Bengal	Shrishti Hotel Pvt. Ltd. Kolkatta	SBA150N2, 125N1, 60N1, 80N1	KOLKATA
Sterling Electro Enterprises Pvt. Ltd.Bhandup	Hindustan Coca Cola Beverages Pvt. Ltd.	SBA100N2, 150N3	KOLKATA
Herald Corporation	Forum Rangoli Mall	SBA175N2,SBA100N2	KOLKATA
Blue star Limited,Kolkata	DCN Mall	SBA175N2,SBA175N1,SBA125N1	KOLKATA
Sterling & Wilson Ltd,Kolkatta	CIL, Rajarhat , Kolkatta	SBC230N1,SBC40N1	KOLKATA
ABB Limited	Kolkatta Airport		KOLKATA
Larsen & Toubro limited,Chennai	ESIC Joka campus,Kolkatta	SBA150N2,SBA100N2,SBA80N1	KOLKATA
Klystron Electronics P. ltd,Kolkatta	TCS Kolkatta	SBC70N1,SBC40N1	KOLKATA
Simplex Infrastructure Ltd, Kolkata	Durgapur Airport	SBA175N2,SBA150N2	KOLKATA
Mcchem Anlagen Energies & Infratech Pvt Ltd	ANKIT METALS,W.B	SBA150N3,SBA175N2	KOLKATA
Micron Electricals	TCS Ltd, Ecospace,	SBC70N1, SBC40N1	KOLKATA
Knight Deal Trade Pvt. Ltd.	Mani Casadona, Rajarhat	SBA175N2	KOLKATA
Simplex Infrastructure Ltd, Kolkata	RVNL, Dankuni	SBC230N2	KOLKATA
Simplex Infrastructure Ltd, Kolkata	DG MAP Sukna,	SBA40N1	KOLKATA
Kolkata Light House, Kolkata	RDH Building	SBC125N1,175N1	KOLKATA
Simplex Infrastructure Ltd, Kolkata	RVNL, Dankuni	SBC230N2	KOLKATA
Simplex Infrastructures Ltd, Kolkata	ASSAM Lagisislative Assambly-Dishpur	SBA175N2, 100N2, 125N1, SBA80N1	KOLKATA
Sterling & Wilson Ltd, Bangalore	Lotus Mall, Mangalore	SBA175N2,150N3,	MANGALORE
Micron Electricals, Kochi	TCS, Thiruvinthapuram	SBA100N2,SBA175N1	MANGALORE
ETA Engineering Pvt. Ltd.	Time Square,	SBA200N2	MUMBAI
Siemens Ltd., Navi Mumbai	Vedanta Hospital at	SBA200N2, SBA200N1, SBA80N1 & SBA40N1	MUMBAI
Blue Star India Ltd., Mumbai	Market City - Kurla	SBA175N1, SBA150N2 & SBA100N2	MUMBAI
Power solutions Mumbai	TCG House-BKC()	SBA200,150,125,100 N1	MUMBAI
Siemens Ltd., Navi Mumbai	BALCO- Korba (Bus duct Package)	SBA100,175N1 & SBA100,150,175N2,& SBA150N3	MUMBAI
Power solutions Mumbai	TCG House-BKC()	SBA150N2,125N1	MUMBAI
Listenlights Electrical Engineers & contractors	Kalpataru	SBC175N2, SBC70N1	MUMBAI
Blue Star India Ltd., Mumbai	CDKD Hospital	SBC125N1, 125N2, 70N1	MUMBAI
ETC Energy Therapy Co.Pvt. Ltd	Bombay Stock Exchange	SBA200N2, 80N1, 125N1, 175N1	MUMBAI
Antelec Limited, Mumbai	Tech Mahindra	SBA150N2 & SBC40N1	MUMBAI
Spark on Rivulet Pune	L&T Data Centre Powai	SBA40N1	MUMBAI
Bluestar India Limited Mumbai	CDKD Hospital	SBA150N3, 175N2, 100N2	MUMBAI

Reference List - Domestic

CUSTOMER	PROJECT	PRODUCT	STATE/CITY
Yogiraj Powertech	BARC-RLG substation	SBC125N2	MUMBAI
Supreme Infrastructure Limited	ESIC Hospital	SBA175N2,150N2,100N2,175N1,CBA800	MUMBAI
Sterling & Wilson Ltd.	Continental India Limited , Meerut	SBA175N2,SBA175N3	MEERUT
Ahluwalia Contracts India Ltd	Bank Of India	SBA150N2,SBC125N1,CBC400	MUMBAI
Antelec Ltd	Global software solution	SBA175N2,175N1,100N1	MUMBAI
ETA Engineering	ONGC Kurla Complex	SBA150N3,125N1,60N1,40N1	MUMBAI
ETA Engineering	GIFT City	SBA200N2,100N2,175N2	MUMBAI
Pravin Electricals Pvt. Limited	Lodha Primero Building	SBA175N2	MUMBAI
ABB Limited	Metro	SBA150N3,175N2,175N1	MUMBAI
Antelec Ltd Mumbai	Sify IT park	SBA175N2, 175N1, 100N1	MUMBAI
Pravin Electricals Pvt. Limited,Mumbai	Pravin Electricals Pvt. Limited,	SBA100N1,SBA125N1,SBA150N1	MUMBAI
Unity Infraprojects Limited, Mumbai	Cooper Hospital,	SBC125N2	MUMBAI
Antelec Limited, Mumbai	Sify IT Park at Navi	SBA175N2, 175N1, 100N1	MUMBAI
Sterling Electro Enterprises Pvt. Ltd	Carlesberg,	SBC 125N2	MUMBAI
Power & instrumentation(Gujrat) Ltd.	Zyodus Hospital	SBA60 N1, SBA80 N1, SBA100 N1, SBA175 N1	MUMBAI
Mumbai International Airport Pvt Ltd ,Mumbai	CSIA,	SBA175N1	MUMBAI
Reliance Industries Limited,Mumbai	TC-22,	SBA60N1, 80N1, 100N1, 125N1	MUMBAI
Pravin Electricals Pvt. Limited, , Mumbai	India Bulls sky 882	SBA17N1, 100N1, 50N1	MUMBAI
Reliance Industries Ltd,Nagpur	IDC Data centre -1 Nagpur	SBA150N2	NAGPUR
Thyssenkrupp Engine component I Pvt. Ltd,Nashik	Thyssenkrupp	SBA125N1, 100N2	NASHIK
Sterling & Wilson Ltd. Noida	Jaypee Greens (Sun Court)	SBA150N2,SBA125,80N1	NOIDA
Green Power International Pvt Ltd,Noida	Hero Honda Motors Ltd.,Dharuhera	SBA200N3	NOIDA
Jaypee sports Ltd,Noida	F-1 Race track,Greater Noida		NOIDA
Kaygee Engineers	Jaypee infratech Pavilion Courts,Noida	SBA80N1,SBA60N1,SBA40N1	NOIDA
MEC Electric Contracts P Ltd	Aakriti Hotels Pvt Ltd,Greater Noida	SBA175N2,SBA60N1,SBA100N1	GREATER NOIDA
Subros ltd	Subros ltd Noida	SBA175N1, CBA630, 400	NOIDA
Bhasin Infotech & Infrastructure Pvt. Ltd	Grand Venezia Mall , Graeter Noida	SBA150N3, 150N2, 175N1	GREATER NOIDA
NKG Infrastructure Ltd	ESIC Noida	SBA150N2, 175N1, 125N1	NOIDA
MEC Engineers	Aachvis IT Park,Noida	SBA100N2,SBA175N2,SBA175N1	NOIDA
Technical Assistance	Jaypee Moon Court,Greater Noida	SBA100N1,SBA60N1	GREATER NOIDA
Kataria Electricals	Jaiprakash Associate Limited,Noida	SBA60N1,SBA40N1	NOIDA
Trimoorti Electrical	JP Kosmos, Noida	SBA100N1, 80N1, 60N1, 40N1	NOIDA
Seighteen electricals	Klassic Towers, JP Greens	SBA80N1, 60N1, 40N1	NOIDA
Enkay Electricals Pvt. Ltd.	Noida Expressway	SBA175N1, CBA1000, CBA800, CBA500	NOIDA
Mahavira Electricals	Klassic Towers,NOIDA	SBA80N1, SBA60N1, SBA40N1	NOIDA
Srex Engineers Pvt. Ltd.Ballabgarh	JP Kosmos,NOIDA, UP	SBA125N1, SBA100N1, SBA80N1, SBA60N1, SBA40N1	NOIDA
Stellar Venturer (P) Ltd.	Stellar Business Park	SBA175N2, SBA150N2,	NOIDA
Mahavira Electricals	Klassic Towers,NOIDA	SBA80N1, SBA60N1, SBA40N1	NOIDA

Reference List - Domestic

CUSTOMER	PROJECT	PRODUCT	STATE/CITY
Stellar Venturer (P) Ltd.	Stellar Business Park	SBA175N2, SBA150N2,	NOIDA
Reliance Industries Ltd,Nagpur	IDC Data centre -1 Nagpur	SBA150N2	NAGPUR
Power & Instrumentation(Gj)	Biju Patnaik Airport	SBA100N2,125N1	ORISSA
UTKAL BUILDERS LTD	UTKAL SIGNATURE	SBA175N2,SBA150N2	ORISSA
TATA Consultancy	TCS Buvaneshwar	SBA40,60N1, SBC100, 40N1	ORISSA
ETA Engineering Pvt Ltd, Kolkata	NISER-Khurda	SBC40N1,SBC125N2,SBC175N1	ORISSA
Rohini Industrial Electricals Ltd	Ashok Leyland	SBA150N2, CBA630	PANTNAGR
Siemens Ltd.	Imsofer Chocklet- Baramati	SBA40N1, 60N1	PUNE
Spark On Rivulat	SHIMIZU CO. NIPRO INDIA	SBA175N2, 175N1, 100N2, 100N1, 60N1	PUNE
Santosh Electrical Co. Pvt Limited	Endurance Magneti Marelli Shcok	SBA175N3, 200N1, 150N1, 70N1, 60N1	PUNE
Spark On Rivulet	Kumar Pacific Mall	SBA200N3	PUNE
R.N.Industrial Electricals P Ltd	Varroc Engineering	SBA80N1,100N1,175N1,100N2	PUNE
Spark On Rivulet	Jabil Circuit	SBA175N2	PUNE
Rothe Erde India Pvt Ltd.	Wadivarhe Project	SBA80N1,SBA100N1,SBA125N1, SBA100N2,SBA175N1	PUNE
Reliance Industries Limited	R TG Complex	SBA80N1	PUNE
KFIL	Hospet project	SBA200N2	PUNE
Spark On Rivulet, PUNE	Avery Dennison A/c. Diplomat,	SBA175 N2, 100N2	PUNE
Servotech Electricals Pvt Ltd IT park Chandigarh	Hotel cum conversation centre	SBA150N1,150N2	PUNJAB
Sterling & Wilson Ltd, Punjab	The Trilium Mall	SBA175N2, 150N2, 125N1, 100N1, 80N1	PUNJAB
HEC Infra Projects Pvt Ltd.,Ahemdabad	Hyatt Project	SBA150N2, SBA125N1	PUNJAB
Grams Electrical Pvt. Ltd,Ludhiana	Emmar MGF The Views Mohali Hills, Mohali,	SBA125N1, 80N1, 60N1, 175N2, 125N2	PUNJAB
Zeniya Power Solutions	Hitech Gears Ltd,Bhiwadi	SBA200N3,SBA100N2,CBA500	RAJASTHAN
Hi-Tech Gears Ltd.	Hi-Tech Gears Ltd.	SBA150N3,SBA175N1,CBA500	RAJASTHAN
ETA Engineering Pprivate Limited	Jaipur Metro Supply	SBC230N2	RAJASTHAN
Siemens Limited	Hero Moto Corp.Neemrana	SBA150N3,SBA100N2	RAJASTHAN
Sudhir Power Projects Ltd	JCB Jaipur,	SBA60N1	RAJASTHAN
Nitin Spinners Ltd.Bhilwara	Nitin Spinners Ltd.Bhilwara,	SBA150N3, 175N2, 150N2, 100N1	RAJASTHAN
Siemens Limited	Hero Moto Corp.Neemrana	SBA150N3,SBA100N2	RAJASTHAN
"Sudhir Power Projects Limited,	JCB Jaipur,	SBA60N1	RAJASTHAN
Nitin Spinners Ltd.Bhilwara	Nitin Spinners Ltd.Bhilwara	SBA175N2, 150N2, 100N2, 100N1	RAJASTHAN
Andritz Hydro Pvt ltd	Teesta Urja	SBA150N1,100N2,200N2	SIKKIM
Haersions corporation	Heavy Vehicle Factory, Avadi	SBC50N1,SBC230N1	TAMILNADU
Micron Electricals	TCS, Thiruvinthapuram	SBA60N1, SBA100N1,SBC70N1,SBC40N1	TAMILNADU
Micron Electricals, Kochi	TCS, Thiruvinthapuram	SBA100N2,SBA175N1	TAMILNADU
Supernova Engineers Limited	BSNL Vellora	SBA175N1,	VELLORA
NMC Electricals,Secunderabad	LEPL,Vijaywada	SBA100N2	VIJAYWADA
Sterling & Wilson Ltd.	Hindustan coca Cola Beverages Pvt. Ltd.	SBC230N2,SBA175N2	VARANASI
NCC Limited	DGNP Vishakhapatnam	SBA40N1	VISHAKHA

Reference List - Overseas

CUSTOMER	PROJECT	PRODUCT	COUNTRY
Master power	Red Court Hotel.		BRAZIL
Mamico Tech Ltd.	Section Seven International Ltd	SBA175N1	BANGLADESH
PT Munhean Puma Perkasa	Clariant-Jakarta	SBA 230N2	INDONESIA
MunHean Singapore	Emporium Ball Room	SBA125N1	INDONESIA
PT MunHean Puma Perkasa	Asia Pacific	SBC125N2	INDONESIA
PT MunHean Puma Perkasa	Haris Hotel	SBA125N1, 50N1	INDONESIA
PT MunHean Puma Perkasa	Haris Hotel	SBA125N1	INDONESIA
PT MunHean Puma Perkasa	Imporium Ball Room	SBA150N1	INDONESIA
PT Munhean Puma Perkasa	One Casablanca	SBA230N2, 175N3	INDONESIA
Central Electricals	Fortis Tower	SBA40,60N1	KENYA
Central Electricals International Ltd.	Ushrika	SBA100N2,SBA125N1	KENYA
Central electrical	Ushrika	SBA100N2,125N1	KENYA
Power Megger Limited	Kenya	SBC400, SBC400	KENYA
Specialised Power systems Ltd.	Vijana Towers	SBC125N1	KENYA
Specialised Power systems Ltd.	Fidha Tower	SBC125N1	KENYA
Master power	Red Court Hotel.		KENYA
Central Electricals International Ltd	Two River Development	AI, SBA150N2	KENYA
Central Electricals International Ltd	UON Project	SBC40N1	KENYA
Power Megger Ltd	Mehrab Development Nairobi	SBC125N1	KENYA
Central Electricals International Ltd	UAP Jupa	SBC40N1,SBC50N1	KENYA
Mehta Electrical Limited	Britam Narobi	SBA500	KENYA
Gulf Engineering,Kuwait	Salmiya Hotel	SBC230N1,175N1,125N1	KUWAIT
Gulf Engineering Company KSCC	Kuwait	SBC175N1	KUWAIT
Quality Light & Heavy Equipment Co. Ltd.	Quality Lighthing	SBC175N1	KUWAIT
Gulf Technology	Gravity Tower	SBC 50N1	KUWAIT
Munhean Singapore PT	Malaysia	SBC50N1	MALAYSIA
MunHean Singapore Pte. Ltd.	Thanlynin Star City	SBA125N1	MYANMAR
MunHean Singapore Pte. Ltd.	The Residence @26	SBA60N1	MYANMAR
MunHean Singapore Pte. Ltd.	A3 Star City	SBA175N1	MYANMAR
Mun Hean Singapore Pte. Ltd.	Yankin Project	SBA 100N1	MYANMAR
Mun Hean Singapore Pte. Ltd.	Dagon Seikkan	SBA50N1, CBA200	MYANMAR
Green Power International Pvt. Ltd.	Lagos	SBC175N2, 175N1, 125N1	NIGERIA
Green Power International Pvt. Ltd	Nutty Fruity Lagos	SBC125N1	NIGERIA
Mun Hean Singapore Pte. Ltd.	Wabag dangote	SBC 175 N1, 175 N2	NIGERIA
MH Poly-electromechs. Inc	Unitop Puerto Princea Project	SBA100,175N1	PHILIPPINES
MH Poly-electromechs. Inc	Celadon Park San Lazaro	SBA125N2,200N1	PHILIPPINES
MH Poly- Electromechs,inc	Uptown-21	SBA100N1	PHILIPPINES
MH Poly- Electromechs,inc	E Block 2 (CEBU City)	SBA175N2,150N2,100N2	PHILIPPINES
MH Poly- Electromechs,inc	SM 2Ecom Interconnection	SBA150 N3	PHILIPPINES
MH Poly- Electromechs,inc	Alturas-Ubay	SBA175 N2	PHILIPPINES
MH Poly- Electromechs,inc	Clayx Project	SBA175,150,100 N2	PHILIPPINES
MH Poly- Electromechs,inc	SM Gensan	SBA175N2, 200N3	PHILIPPINES
MH Poly- Electromechs,inc	Eastwood Legrand	SBA150N3	PHILIPPINES
MH Poly- Electromechs,inc	Suntrust Aurora Project	SBA125N1	PHILIPPINES
MH Poly- Electromechs,inc	Little Baguio Terraces Project	SBA100N1,175N1,125N1	PHILIPPINES

Reference List - Overseas

CUSTOMER	PROJECT	PRODUCT	COUNTRY
Munhean Singapore	Resort World	SBC200N3	PHILIPPINES
Munhean Singapore	Makati Residences	SBA175N1	PHILIPPINES
Mun Hean Pte Ltd	CEBU SM CyberWest	SBA175N2, 150N3, 200N3	PHILIPPINES
MunHean Singapore PTE Ltd.	Marco Polo	SBA125N1	PHILIPPINES
MunHean Singapore PTE Ltd.	Calyx Residences Cebu	SBA175N1	PHILIPPINES
MunHean Singapore PTE Ltd.	Alturas Bohol	SBA125N1,SBA100N1	PHILIPPINES
MunHean Singapore PTE Ltd.	E- Block 3 - Manila	SBC175N2	PHILIPPINES
MunHean Singapore PTE Ltd.	Little Baguio Terraces -Manila	SBA125N1, SBA100N1	PHILIPPINES
MunHean Singapore PTE Ltd.	Suntrust Aurora-Manila	SBA125N1	PHILIPPINES
MunHean Singapore PTE Ltd.	Manhattan park view-Manila	SBA175N2, SBA150N3	PHILIPPINES
MunHean Singapore PTE Ltd.	Gaisano South -Cebu	SBC175N3	PHILIPPINES
MunHean Singapore PTE Ltd.	Glorietta 5 - Manila	SBC100N1	PHILIPPINES
MunHean Singapore PTE Ltd.	Mighty Tobacco Corp., Cebu	SBC50N1, SBC175N2	PHILIPPINES
MunHean Singapore PTE Ltd.	Rrliance IT Center	SBA125N1	PHILIPPINES
MunHean Singapore PTE Ltd.	11th Storey Res. Project	SBA125N1	PHILIPPINES
MunHean Singapore PTE Ltd.	Fort Victoria - Manila	SBA175N2, 150N2	PHILIPPINES
MunHean Singapore PTE Ltd.	Aeon Prime TGU Alabang - Cebu	SBA150N3	PHILIPPINES
MunHean Singapore PTE Ltd.	Marco Polo- 2, Cebu	SBA150N1	PHILIPPINES
MunHean Singapore PTE Ltd.	Abreeza Residences, Davao	SBA125N1	PHILIPPINES
MunHean Singapore PTE Ltd.	Azon Residences - Cebu	SBA175N2	PHILIPPINES
MunHean Singapore PTE Ltd.	Chioson - Cebu	SBA100N2	PHILIPPINES
MunHean Singapore PTE Ltd.	Alturas Mall Interconnections - Cebu	SBA175N2	PHILIPPINES
MunHean Singapore PTE Ltd.	FLB Project, Cebu	SBA150N2	PHILIPPINES
MunHean Singapore PTE Ltd.	ACC - Cebu	SBA100N2	PHILIPPINES
Mun Hean Singapore Pte. Ltd.	Amaia Skies STA Avenida	SBA100N1	PHILIPPINES
Mun Hean Singapore Pte. Ltd.	Aeon Prime & Azon	PIB	PHILIPPINES
Mun Hean Singapore Pte. Ltd.	Alon Projec	SBA 100N1	PHILIPPINES
Mun Hean Singapore Pte. Ltd.	Amaia Skies STA, MESA	SBA 100N1	PHILIPPINES
Mun Hean Singapore Pte. Ltd.	Solea Cordova - Cebu	SBA125N2	PHILIPPINES
Mun Hean Singapore Pte. Ltd.	Ilustrata Tower - Manila	SBA125N1	PHILIPPINES
Mun Hean Singapore Pte. Ltd.	Avida Vita - manila	SBA230N1 , 150N2 , 80N1	PHILIPPINES
Mun Hean Singapore Pte. Ltd.	Avida Intima - Manila	SBA125N1	PHILIPPINES
Gulf Swg	Mushreef Tower	SBC40N1	QATAR
Orient Star international	One Bedroom Flat Building	SBC70N1	QATAR
Gulf Swg.	2B+G+M+7	SBC40N1	QATAR
Gulf Swg.	B+G+M hotel	SBC40N1	QATAR
Dhafir Switchgear LLC	Salva resort hotel	SBC175N1,125,100,70N1	QATAR
Doha Technical Services	Building At Freej Abdul Aziz	SBC40N1	QATAR
Orientstar International	AL Kheesa Hyper Market	SBC200N1	QATAR
Orientstar International	AL Rabban Plastic Factory & Stock	EBC175N1, CBC315 & CBC 400	QATAR
SAT Engineering & Supplies LLC	Al Mansoura	SBC50N1	QATAR
SAT Engineering & Supplies LLC	Fereej Bin Mahmoud	SBC40N1	QATAR
ETA Doha	Jaidha Commercial development	SBC175N1	QATAR
Doha Technical services	AL Ghanin Appt.	SBC200N1, 175N1	QATAR
Doha Technical services	DTS B+G+9	SBC40N1	QATAR
Power Lux ME FZC	Commercial Building Hilal	SBC70,100,125,200N1	QATAR

Reference List - Overseas

CUSTOMER	PROJECT	PRODUCT	COUNTRY
Doha Technical Services	6Residential Building	SBC50N1	QATAR
Doha Technical Services	Munsherah Project	SBC40N1, 50N1	QATAR
Doha Technical Services	Al Munthasa office and flat	SBC40N1	QATAR
Doha Technical Services	DOHA MALL	SBC125N2,200N1 - 40N1,	QATAR
Doha Technical Services	AL Nour Residential Tower	SBC125N1	QATAR
Doha Technical Services	Residential Bldng at Al Saad	SBC40N1,CBC400	QATAR
DTS	Dafna tower Doha		QATAR
Doha Technical Services	Stock Order	SBC50N1,40N1,CBC400	QATAR
Orient Star Doha	stock+ 2b+G+M+6	SBC50N1, CBC630	QATAR
Doha Technical Services	Sinyar tower	SBC80, 50, 40	QATAR
Doha Technical Services	White Square Tower	SBC200N1	QATAR
Doha Technical Services	Police Tower	SBC70N1	QATAR
Doha Technical Services	Stock Order	SBC40N1	QATAR
Doha Technical Services	Doha Qatar	SBC40N1, 50N1	QATAR
Doha Technical Services	Doha Qatar switchgear	SBC40N1	QATAR
Doha Technical Services	Residential & Commercial	SBC100N1, 70N1	QATAR
Doha Technical Services	North gate mall	SBC40N1, 50N1, 80N1, 125N1, 200N1, 230N1	QATAR
Doha Technical Services	B + G + 7 Apartment	SBC50N1, 70N1	QATAR
Doha Technical Services	Stock Order 0020	SBC50N1	QATAR
Doha Technical Services	West Bay 44 Tower	SBC 230N1,125N1,50N1,40N1	QATAR
Doha Technical Services	SHK Falak Twin Tower	SBC 230N1,125N1,50N1,40N1	QATAR
Doha Technical Services	Mellineium Tower	SBC 40N1,50N1	QATAR
Volonter Russia	Self	SBA150N2	RUSSIA
Prom Elektro Avtomatika	Eltex Russia	SBA175N1	RUSSIA
PET Russia	Pet	SBC40N1	RUSSIA
Electroschitkomplekt Co. Ltd	ETM Russia	SBA150N3	RUSSIA
PET Russia	PET	SBA175N1	RUSSIA
PET Russia	Russia	SBA175N1, SBC40N1	RUSSIA
PET Russia	Russia	SBA175, 125, 100, 80, 50, 40N1, CBA250, 200	RUSSIA
Russia SVEL	Russia SVEL	SBA150N2,125N1,100N1,80N1	RUSSIA
LLC Trinidad Russia	ETM	SBA150N3	RUSSIA
PET Russia	N/A	SBC230N2	RUSSIA
PET Russia	N/A	SBA200N3, 175N2	RUSSIA
PET Russia	PET Russia	SBA175N1, 200N1	RUSSIA
Russia SVEL	Russia SVEL	SBA150N2,125N1,100N1,80N1	RUSSIA
Moselectro Joint-Stock Company	Mini Power Station-Moscow	SBA175N1	RUSSIA
PET LTD - Russia	PET- Russia	SBA100N2	RUSSIA
Moselectro Joint-Stock Company	Cherepovetsk GRES	SBC230N1	RUSSIA
Limited Liability Company	Russian Busbar centre	SBA125N2	RUSSIA
Mun Hean Singapore PTE Ltd.	PS Bank Centre Phase-2	SBC125N2,50N1	PHILIPPINES
Mun Hean Singapore PTE Ltd.	H.K.H Hotel	SBA125N2	PHILIPPINES
MH Poly-electromechs. Inc	Sky Rise Project	SBA150N2	PHILIPPINES
MunHean Singapore	Uptown-21	SBA100N1	PHILIPPINES
MunHean Singapore	COBALT HOTEL	SBA60N1	PHILIPPINES
MunHean Singapore	DCS Centrio	SBA150N3	PHILIPPINES
MunHean Singapore	1016 Residencies	SBA175N1	PHILIPPINES

Reference List - Overseas

CUSTOMER	PROJECT	PRODUCT	COUNTRY
MunHean Singapore	The Links	SBA100N2	PHILIPPINES
MunHean Singapore	81-Xavier	SBA175N1,125N2	PHILIPPINES
MunHean Singapore	Resort World	SBC200N3	PHILIPPINES
MunHean Singapore	Cebu Royal	SBA200N1	PHILIPPINES
MunHean Singapore	Istiglal Mosque	SBA100N2	INDONESIA
MunHean Singapore	11th story Building	SBA125N1	PHILIPPINES
MunHean Singapore	Koncord Kondo Project	SBA 100N2	PHILIPPINES
MunHean Singapore	Westlink 3 - Tuas	SBA125N1	SINGAPORE
MunHean Singapore	Index Project	SBA100N1 , 125N1 , 175N1 & LA 12EA	SINGAPORE
Busbar Installations (Pty) Ltd.	UJ University	SBA100N2,SBA175N1,SBA100N1	SOUTH AFRICA
Busbar Installations Pty. Ltd.	Windhoek Hospital	SBC50N1	SOUTH AFRICA
Busbar Installations Pty Ltd.	Exxaro Head Office Refurbishment	SBC100N1	SOUTH AFRICA
Busbar Installations (Pty) Ltd.	Extn of UJ University	SBA100N2	SOUTH AFRICA
Orange Electrical Ltd	Nuwaraeliya Hospital	SBA230N1	SRI LANKA
PT. MunHean Puma Perkasa	Mandiri Bank - Sumatra Island	SBA100N1, 150N1, 100N2, 150N2	SUMATRA
Enertec Contracting & Trading	Enertec Contracting & Trading	SBC 175N2	SYRIA
Digi Drives P. Ltd.	Eastern Construction	SBC125N1	TANZANIA
Digi Drives P. Ltd.	Kotodia tower		TANZANIA
Digi Drives P. Ltd.	Tanziana (NHC-II)	SBC100N1	TANZANIA
Digi Drives P. Ltd.	Sun Plaza	SBC60N1	TANZANIA
Digi Drives P. Ltd.	Wakulina	SBC100N1	TANZANIA
Central Electricals International Ltd	Muhimbili Orthopaedic Institute	SBC50N1, 40N1	TANZANIA
Central Electricals International Ltd	PPF Plaza Arusha	SBC50N1	TANZANIA
Digi Drive Pvt Ltd	Walulima	SBC70N1	TANZANIA
MEI Industrial Corporation	CCM	SBC50N1,CBC400	TANZANIA
Digi Drive Pvt Ltd Faridabad	HPPartt Tanzania	SBC70N1 1000A	TANZANIA
Power Lux ME FZC	Elemec Oman	SBC150N2	UAE
Power Lux ME FZC	ARJ Tower	SBC200N1,100,80N1	UAE
AL Zubair Est Trading	Newyork University	SBC60N1,80N1,100N1,150N1,175N1,230N1	UAE
AL Zubair Est Trading	Rosh Reyhaan Hotel	SBC230N1	UAE
Powerlux ME FZC	STORY TOWER -Sharjah	SBC100N1, 150N1, 175N1	UAE
AL Zubair Est Trading	Newyork University	SBC60N1,80N1,100N1,150N1,175N1,230N1	UAE
Powerlux ME FZC	5 Star Hotal - Dubai	SBC200N1, 175N1	UAE
Powerlux ME FZC	Al Khan - Sharjah	SBC230N1	UAE
Powerlux ME FZC	Villa- SHARJAH	SBC100N1, 230N1	UAE
Powerlux ME FZC	Jamal bin jawhar	SBC150N1, 100N1	UAE
AL Zubair Est Trading	Newyork University (NYU) - Add.	SBA100N1, 175N1, 60N1	UAE
Powerlux ME FZC	5 Star Hotel at Dubai	SBC175N1, SBC200N1	UAE
Powerlux ME FZC	AL Khan, Sharjah	SBC230N1	UAE
Powerlux ME FZC	AL Yousuf Twin Tower	SBC100N1	UAE
Powerlux ME FZC	ADCO/GASCO at Buhasa and Habshan	SBC230N1	UAE
Powerlux ME FZC	Jamal Bin Jawhar,AL Nahda,Sharjah	SBC150N1, SBC100N1,	UAE
Powerlux ME FZC	Sharjah for DIB	SBC150N1, SBC175N1, SBC100N1,	UAE
Powerlux ME FZC	Jamal Bin Jawher Block B1, Sharjah	SBC100N1, SBC150N1,	UAE
Powerlux ME FZC	Al Nahda, Dubai	SBC200N1	UAE
Powerlux ME FZC	Port Saeed, Dubai	SBC200N1, SBC125N1, SBC100N1	UAE

Reference List - Overseas

CUSTOMER	PROJECT	PRODUCT	COUNTRY
Powerlux ME FZC	Dubai Silicon Oasis, Dubai	SBC 200N1, SBC100N1	UAE
Powerlux ME FZC	Al Ghurair Factory, Abu Dhabi	SBC150N2, SBC175N2	UAE
Powerlux ME FZC	Resi Complex, AL Qusais Dubai	SBC200N1	UAE
Powerlux ME FZC	Comm /Residential Bldg., Dubai	SBC200N1	UAE
Powerlux ME FZC	Hotel Apartment	SBC125N1	UAE
Powerlux ME FZC	Al Nahda 2, Dubai	SBC200N1, SBC125N1	UAE
Powerlux ME FZC	Sobha Sapphire, Dubai	SBC200N1, SBC100N1	UAE
Powerlux ME FZC	Crwon Plaza Hotel, Dubai	SBC175N1, SBC100N1	UAE
Powerlux ME FZC	GHQ for Armed Forces, Al Ain	SBC230N1	UAE
Powerlux ME FZC	Storey Al Wazzan Tower, Dubai	SBC100N1	UAE
Powerlux ME FZC	Tower at Hilal City, Fujeirah	SBC125N2, SBC200N1, SBC100N1	UAE
Powerlux ME FZC	New York University	SBC125N1, SBC175N1	UAE
Powerlux ME FZC	Sadiyat Island	SBC230N1, SBC150N2, SBC175N1	UAE
Central Electrical International Ltd	Kawempe Hospital	SBC40N1	UGANDA
Central Electrical International Ltd	Mulago Hospital -Phase 2		UGANDA
Rove Group	Yemen	SBC175N2	YEMEN

Phoenix Hotel Tower



Landmark Plaza



Seibu Tower Project



PS Bank Project, Philippines



Some Installation References

Al Mazaya Tower, Kuwait



Residential Building At Al Qusaias, Dubai



Al Nazar Tower, Kuwait



Avenue 77, Moscow



isobar



Isolated Phase Busducts
(11~36kV up to 30000A)

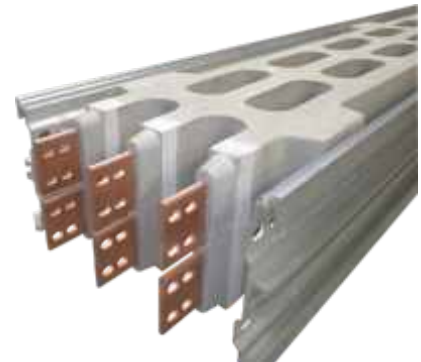


Segregated / Non-Segregated
Phase Busducts
(415~33kV up to 6500A)

betobar



Low Voltage



Medium Voltage

metabar



Sandwich Busbar Trunking System
(Low- Impedance)
(400~6600A)



Air Insulated
Busbar Trunking System
(125~2000A)



Lighting Trunking System
(25~63A)



● C&S + Etacom Installations

*This map is only for pictorial representation and to be scaled



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Kasna Road, Greater Noida,
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Plot No. 1C, Sector 8C,
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