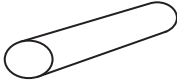

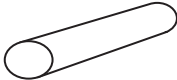
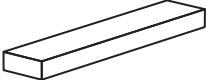




Typical Clearances of Busbars with BMT and BTT

The following table indicates possible clearance reductions as a result of using BMT or BTT to insulate busbars compared with un-insulated bars in air.

Rated Voltage (kV)	BMT Medium Wall Busbar Tube		BMT Medium Wall Busbar Tube		Un-Insulated Busbars
	Ph-E (mm)	Ph-Ph (mm)	Ph-E (mm)	Ph-Ph (mm)	IEC 71-2 Ph-E In Air (mm)
	Round Profile 		Rectangular Profile 		Un-Insulated Busbars
12	60	50	70	60	120
17.5	80	65	100	80	160
24	120	90	145	110	220
36	200	145	280	190	320

Rated Voltage (kV)	BTT Thick Wall Busbar Tube		BTT Thick Wall Busbar Tube		Un-Insulated Busbars
	Ph-E (mm)	Ph-Ph (mm)	Ph-E (mm)	Ph-Ph (mm)	IEC 71-2 Ph-E In Air (mm)
	Round Profile 		Rectangular Profile 		Un-Insulated Busbars
12	40	30	45	35	120
17.5	60	45	65	55	160
24	90	60	100	70	220
36	160	100	190	140	320

BMT and BTT Technical Data	Performance	Test Method
Continuous Operating Temperature	-40 to +125°C	IEC 216
Shrink Temperature	110°C	IEC 216
Cold Bend -40°C for 4hrs	No Damage	ASTM D2671
Flammability (Oxygen Index)	>25	ASTM 4589
Tensile Strength	>11.8 Mpa	ASTM D638
Tensile Strength After Aging 120°C 168hrs	>10MPa	ASTM D2671
Elongation at Break	> 700%	ASTM D638
Elongation at Break After Aging 120°C 168hrs	> 500%	ASTM D2671
Water Absorption 23°C 14 days	< 0.5%	ISO 32
Copper Corrosion 120°C 168hrs	No Corrosion	ASTM D2671
Dielectric Strength	> 20kV/m m	IEC 243
Dielectric Constant	max 3.0	IEC 250
Volume Resistivity	1x10 ¹³ Ohms /cm	IEC 93
Mould Resistance	No Growth	ASTM G21-D638
Heat Dissipation	Current Rating Not Effected by Tubing	

Criteria Influencing Electrical Performance

1. Insulation wall thickness
2. Available Ph-Ph and Ph-Earth clearance
3. Busbar chamber geometric configuration
4. Busbar profile