

Heavy Wall Busbar Insulating Tubes



RIBT-T

The REPL RIBT Heat Shrinkable Bus-Bar Insulation Tubing is used to insulate copper and aluminium bus-bars, preventing flashovers and accidentally induced discharge. It can be used in confined spaces to reduce the clearance necessary between bus-bar phases.

The tubes are made from thermally stabilized, cross linked, weather resistant polymeric material with a nominal shrink ratio of 3:1 and an unlimited shelf life when stored at normal warehouse temperatures.

It is available in two grades of wall thickness and can be used on all bus-bar systems, as long as minimum clearances are maintained as shown in the accompanying tables.

- Unlimited shelf life
- Halogen free
- UV & weather resistant
- Shrink ratio: 3:1
- Continuous operating temperature: 50°C to 125°C
- Conforms to specifications: **IEC 60684-3 / ENATS 09-13, RoHS 2011/65/EU & 2015/863/EU Compliant**
- Colour: Flame red (RAL 3000)



Product Types:

- **RIBT** - Medium Wall thickness, Shrink Ratio of 3:1
- **RIBT-T** - Heavy Wall thickness, Shrink Ratio of 3:1

MATERIAL SPECIFICATIONS		
CHARACTERISTIC	VALUE	TEST METHOD
Physical Properties		
Specific Gravity	1.19 ± 0.2	ASTMD - 1505
Water Absorption	1% (max)	ASTM D – 570/ISO 62
Tensile Strength	≥ 14 MPa	ASTM D – 2671
Ultimate Elongation	≥ 300% (min)	ASTM D – 2671
Hardness	45 ± 3 Shore D	ASTM D - 2240
Longitudinal Change	± 10 %	ESI 09 - 13
Shrink Temperature	120°C (min)	IEC - 216
Thermal Ageing Tests (120°C ± 3°C for 168 hours)		
Ultimate Elongation	≥ 200% (min)	ASTM D – 2671
Tensile Strength	≥ 10 MPa	ASTM D – 2671
Thermal Tests		
Heat Shock (30min, 200°C)	No Cracking / No Flow	ESI 09-13
Low Temp. Flexibility (-40%)	No Cracking	ASTM D - 2671
Flammability	Self-Extinguishing	ASTM D – 2671 - B
Electrical Properties		
Dielectric Strength	≥ 19 kV/mm (min)	ASTM D – 149 /IEC 243
Dielectric Constant	≤ 3.5	ASTM D – 150 / IEC 250
Volume Resistivity	1x10 ¹⁴ Ohm-cm (min)	ASTM D – 257 / IEC 93
Resistant to Tracking & Erosion	No Tracking, erosion or flame failure up to 3.25kV for 20 mins	ASTM D - 2303
Chemical Properties		
Fungus Resistance	1 (max)	ASTM G - 21
Chemical resistance immersion in following liquids NaOH (40%), H ₂ SO ₄ (3%), Toluene acetone for 24 hrs at room temperature	Good (no visual defects)	ISO 175

PRODUCT DIMENSIONS – RIBT-T Series			
CODE	D (mm)		T (mm)
	E	S	S
RIBT-T 15/6 *	15	6	± 0.2
RIBT-T 20/8 *	20	8	± 0.2
RIBT-T 25/10 *	25	10	± 0.2
RIBT-T 30/12 *	30	12	± 0.2
RIBT-T 40/16 *	40	16	± 0.2
RIBT-T 50/20 +	50	20	± 0.2
RIBT-T 60/24 +	60	24	± 0.2
RIBT-T 70/28 +	70	28	± 0.2
RIBT-T 80/32 +	80	32	± 0.2
RIBT-T 100/40 +	100	40	± 0.2
RIBT-T 120/48 +	120	48	± 0.2

E – As Supplied | S – After Free Recovery

* Available in 30 meter spools

+ Available in 15 meter spools

- Custom sizes are available on request with minimum volume requirements

See overleaf for recommendations on application range and clearance reduction ...

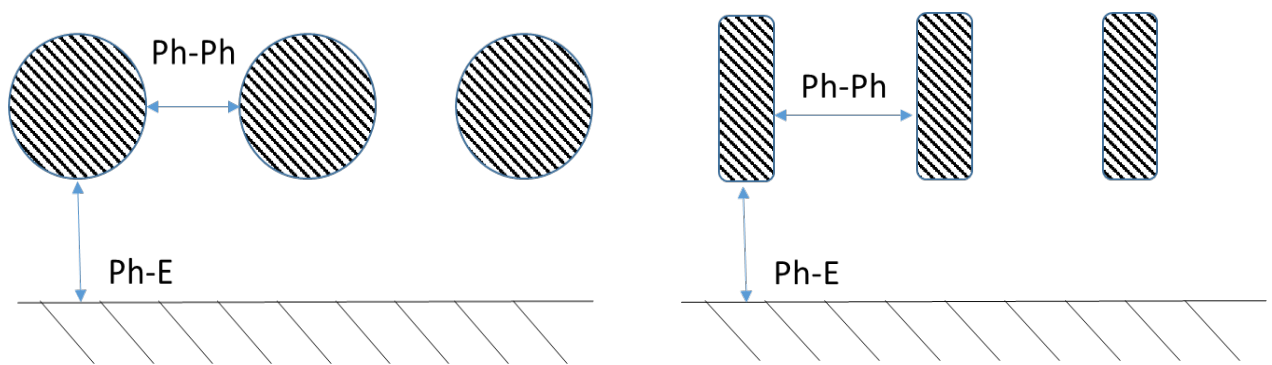
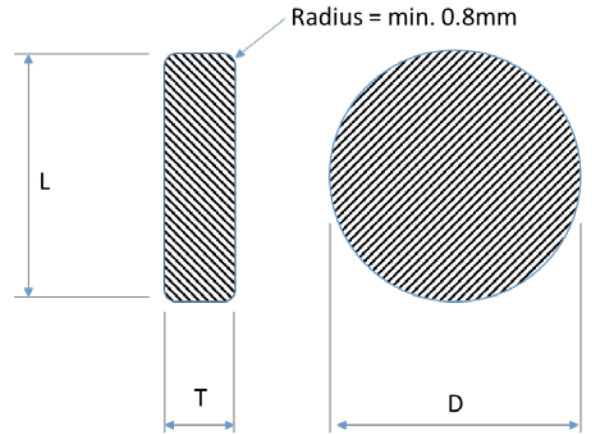


DATA SHEET

RIBT-T 23V1

RIBT-T

APPLICATION RANGE				
CODE	Rectangular Busbar Section L + T		Round Busbar Section d = Diameter	
	Min	Max	Min	Max
RIBT-T 15/6	12	18	6.5	12
RIBT-T 20/8	15	24	9	16
RIBT-T 25/10	19	31	11	20
RIBT-T 30/12	22	38	13.5	25
RIBT-T 40/16	29	50	18	34
RIBT-T 50/20	36	63	22	42
RIBT-T 60/24	43	76	26	51
RIBT-T 70/28	50	89	31	60
RIBT-T 80/32	57	102	35	69
RIBT-T 100/40	70	130	44	86
RIBT-T 120/48	70	156	44	100



CLEARANCE REDUCTION GUIDANCE						
Voltage Level (kV)	Round Busbars			Rectangular Busbars		
	With RIBT-T		Without	With RIBT-T		Without
	Phase-Phase	Phase-Earth	IEC 71-2 Air Clearance	Phase-Phase	Phase-Earth	IEC 71-2 Air Clearance
	mm	mm	mm	mm	mm	mm
12kV	30	40	120	35	45	120
17.5kV	45	60	160	55	65	160
24kV	60	90	220	70	100	220
36kV	100	160	320	140	190	320

The table above is for guidance only on the potential clearances when using RIBT-T busbar tubing based on typical applications. Any unusual geometries will affect dimensions possible.

The user should test on actual applications to ensure adequate performance level

REPL reserve the right to update the information contained in this document at any time without notice. It is the users responsibility to ensure it is suitable for the intended application. Any implied warranty relating to fitness for a particular purpose are explicitly excluded unless agreed in writing by REPL.
©REPL 2023