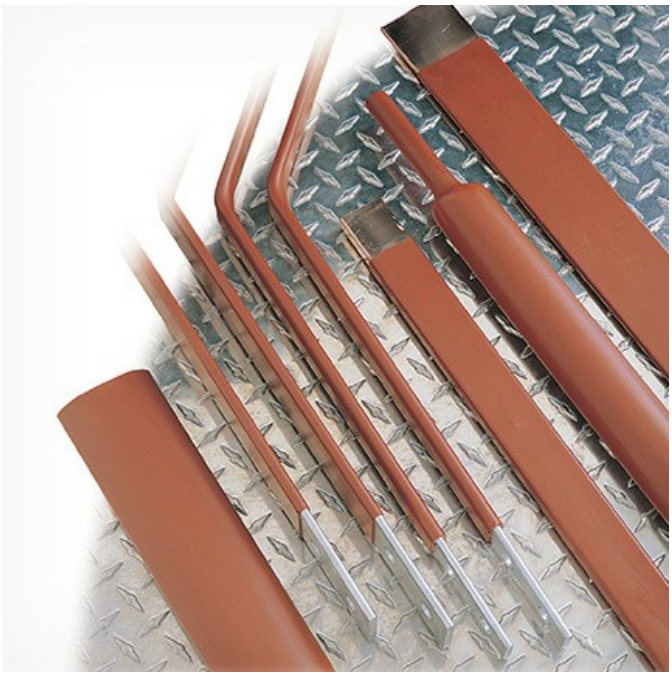
CBTM/CBTH

Medium voltage crosslinked polyolefin bus bar tubing

Medium and heavy wall anti-track heat shrink tubing specifically designed for insulating medium voltage bus bar.



Features And Benefits

- 3:1 shrink ratio
- Reduces bus bar clearance requirements
- Protects against accidental flashover
- Anti-track
- Halogen free
- CBTM medium wall tubing rated to 25 kV CBTH heavy wall tubing rated to 36 kV
- Continuous operating temperature: -40°C to 125°C
- Shrink temperature: 120°C

Standards

- Tested to ANSI C37.20.2 standards for medium voltage switchgear applications to 36 kV
- UL Recognized Component

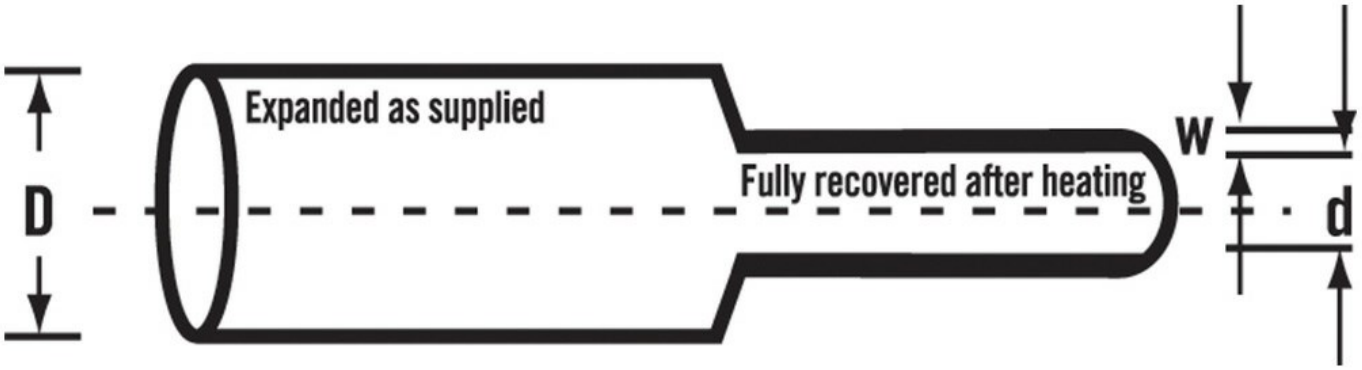
Typical Applications

- Insulation of medium voltage bus bars in switchgear equipment

Ordering

- Select a dimension which will shrink snugly over the component to be covered. If recovery is restricted the resultant wall thickness will be less than specified.
- Please specify the product name, order reference number
- Standard is red, printed, unlined, 50 ft lengths (maximum or 1 splice allowed with minimum length of 15 ft)
- Order Example: CBTM, 1300

Please contact your Customer Service Representative for information on custom colors, sizes, lengths and material data sheet.



CBTM Medium Wall Bus Tubing: For Services To 25 KV On Unbolted Bus Bar

ORDER NUMBER	EXPANDED				RECOVERED				APPLICATION RANGES							
	Internal Diameter (min) D		Wall Thickness (nom) w		Internal Diameter (max) d		Wall Thickness (nom) w		*Rectangular Bus Bar				Round Bus Bar			
	min		max		min		max		min		max		min		max	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
0750	19.0	0.75	1.14	0.045	5.5	0.22	2.70	0.109	6.4	1/4	6.4	1/4	6.8	0.27	15.2	0.60
1300	33.0	1.30	1.14	0.045	10.1	0.40	2.97	0.117	12.7	1/2	28.5	1 1/8	12.4	0.49	27.9	1.10
2050	52.0	2.05	1.14	0.045	19.0	0.75	2.79	0.110	31.5	1 1/4	50.8	2	22.3	0.88	43.1	1.70
2750	69.8	2.75	1.14	0.045	25.4	1.00	2.87	0.115	44.4	1 3/4	76.2	3	29.7	1.17	58.4	2.30
3500	88.9	3.50	1.14	0.045	29.9	1.18	3.09	0.122	57.1	2 1/4	101.6	4	35.8	1.41	73.6	2.90
4700	119.3	4.70	1.14	0.045	39.9	1.57	3.20	0.126	73.0	2 7/8	142.8	5 5/8	47.7	1.88	101.6	4.00
6700	170.1	6.70	1.14	0.045	58.4	2.30	3.17	0.125	114.3	4 1/2	203.2	8	69.5	2.74	144.7	5.70

CBTH Heavy Wall Bus Tubing: For Services To 36 KV On Unbolted Bus Bar

ORDER NUMBER	EXPANDED				RECOVERED				APPLICATION RANGES							
	Internal Diameter (min) D		Wall Thickness (nom) w		Internal Diameter (max) d		Wall Thickness (nom) w		Rectangular Bus Bar*				Round Bus Bar			
	min		max		min		max		min		max		min		max	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
1100	27.9	1.10	1.67	0.066	8.9	0.35	3.88	0.153	9.5	3/8	12.7	1/2	10.6	0.42	17.7	0.70
2000	50.8	2.00	1.57	0.062	16.0	0.63	4.08	0.161	22.2	7/8	34.9	1 3/8	19.3	0.76	33.0	1.30
2700	68.0	2.68	1.52	0.060	22.1	0.87	4.08	0.161	34.9	1 3/8	50.8	2	26.1	1.05	43.1	1.70
3500	89.9	3.54	1.52	0.060	29.9	1.18	4.08	0.161	50.8	2	76.2	3	35.8	1.41	58.4	2.30
4700	119.9	4.72	1.57	0.062	39.9	1.57	4.19	0.165	69.8	2 3/4	111.1	4 3/8	47.7	1.88	81.2	3.20
6600	167.6	6.60	1.67	0.066	65.0	2.56	4.19	0.165	114.3	4 1/2	177.8	6 1/2	69.5	2.74	124.4	4.90

*Assume rectangular bus bars have 1/4 in thickness on min application ranges and 5/8 in thickness on max application ranges. Application ranges noted above selected to obtain minimum insulation thickness required to meet ANSI C37.20.2 withstand requirements at bus bar spacing and operating voltages noted. These spacings were determined from a limited number of test configurations. Due to the wide variety of bus bar configurations, these spacings and recovered wall thicknesses should not be employed by the user without actual verification and testing for the intended application. Spacing based on insulation wall thickness per application range of above table.

Clearances With Insulation

SYSTEM VOLTAGE	BIL	CBTM MEDIUM WALL TUBING				CBTH HEAVY WALL TUBING			
		P to P		P to G		P to P		P to G	
	kV	mm	in	mm	in	mm	in	mm	in
15 kV	95	86.0	3.4	106.0	4.2	55.0	2.2	66.0	2.6

SYSTEM VOLTAGE	BIL	CBTM MEDIUM WALL TUBING				CBTH HEAVY WALL TUBING			
		P to P		P to G		P to P		P to G	
25 kV	125	114.0	4.5	152.0	6.0	71.0	2.8	101.0	4.0
36 kV	150	165.0	6.5	203.0	8.0	142.0	5.6	190.0	7.5
15 kV	95	86.0	3.4	106.0	4.2	55.0	2.2	66.0	2.6
25 kV	125	114.0	4.5	152.0	6.0	71.0	2.8	101.0	4.0
36 kV	150	165.0	6.5	203.0	8.0	142.0	5.6	190.0	7.5

P to P: Phase to Phase orientation
P to G: Phase to Ground orientation
Spacing based on metal to metal dimension prior to insulation
Spacing based on insulation wall thinkness per application range of above table

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