

Bushings: Standards and Ratings

Current Ratings	Voltage Ratings							
	Polycast Standard Ratings	Transformer Bushings			Switchgear Bushings			
		Nom. Voltage Class kV	Low Freq. Dry kV	Impulse (BIL) kV Crest 1.2x5µs	Chopped Wave kV Crest (µs)	Nom. Voltage Class kV	Low Freq. Dry kV	Impulse (BIL) kV Crest 1.2x50µs
<p>Polycast type tests the bushings it supplies, and will assist its customers in determining optimum conductor sizes and arrangements for their applications. However, it is not practical to pre-determine the absolute maximum current ratings for every bushing and for every possible bushing variation, or every condition of use. Thus, we specify a conservative nominal current rating or, where experience allows a practical current range for each bushing, based upon:</p> <ol style="list-style-type: none"> Type tests Test data from equivalent units Industry standard <p>Note: Because the conditions of use of any bushing is beyond our control, it is always the responsibility of users to ensure that the current carrying capability of any bushing they use is not exceeded in their application.</p>	0.6	0.6	4	10				
	01	1.2 ^T	10	30	36 (1.0)			
	02	2	15	45	54 (1.5)			
	05	5.0 ^T	21	60	69 (1.5)	4.76	19	60
	08	8.7 ^T	30	75	88 (1.6)	8.25	26	75
	15	15.0 ^T	35	95	110 (1.8)	15.0	36	95
	18	15.0 ^P	50	110	126 (3.0)	15.5	50	110
	25	25.0	42	125	145 (2.25)	25.8	60	125
	28	25.0 ^P	60	150	175 (3.0)	38.0	80	150
	35	36 ^{IEC}	77	170	195 (3.0)			
	38	34.5 ^P	80	200	230 (3.0)	38.0	80	200
	46	46.0 ^P	105	250	290 (3.0)			
	^T ANSI / IEEE C57.12.00 = Distribution Transformers ^P ANSI / IEEE C57.19.01 = Outdoor Power Transformers ^{IEC} IEC 60137					ANSI / IEEE C37.20.3		

Conductor Material

Electrolytic copper is standard in all Polycast bushings. Cast copper, aluminum or forged aluminum is also available for some items.

Plating

For transformer bushings, tin plating is standard with silver plating as optional. For switchgear bushings, silver plating is standard, tin is optional.

Ambient Working Temperatures

Indoor Bushings:	Ambient -5°C to +55°C
Outdoor Bushings:	Ambient -50°C to +55°C
Transformer Bushings:	Oil Temperatures to 100°C

These ambient temperatures are considered safe for all bushing applications.

Please consult catalog pages for recommended maximum continuous operating temperatures or contact Polycast for any special requirements.

Technical Standards

Polycast has designed and manufactures a wide range of bushings for transformer, switchgear and other power applications to meet North American and International Standards. IEC 60137 is used as a technical guideline, but ANSI and CSA specifications for specific types of bushings are always considered.



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