

Graphite Electrodes (COVA)

Typical characteristics

	Unit	Graphite Electrodes	Graphite Niples
Bulk density DIN 51 918	[g/cm ³]	1,66 - 1,75	1,75 - 1,86
Electrical resistivity* DIN 51 911	[Ω·μm]	4,6 - 5,8	3,0 - 4,5
Porosity DIN 51 918	[%]	14 - 22	8 - 15
Thermal conductivity according to DIN 51 908 (20°C)	[W/°K·m]	160 - 230	220 - 300
Flexural strength* DIN 51 902	[MN/m ²]	9 - 14	20 - 30
Young's Modulus* DIN 51 934/51 915	[GN/m ²]	9 - 15	19 - 28
CTE* (20 - 120° C) DIN 51 909	[10 ⁻⁶ /K]	0,4 - 1,0	0,2 - 0,9
* Measured values of anisotropic properties in longitudinal direction.	Diameter, length and tolerances according to IEC 60239/DIN 60239 or NEMA CGI - 2001 in special cases JIS R 7201 to 2001		

Normalized Dimensions and Average Weights

Φ Nominal	Dimensions			Nominal Length	Electrode Weight	Niple Weight	
	Φ Typical	Tolerances				Normal kg	Long kg
mm	mm	Max. mm	Min. mm	mm	kg		
400	408	409	403	1800	390	16	18
				2100	465		
				2400	531		
450	459	460	154	1800	500	19	22
				2100	580		
				2400	663		
500	510	511	505	2100	615	28	34
				2400	707		
				2700	815		
550	560	562	556	2100	850	35	42
				2400	965		
				2700	1086		
600	612	613	607	2100	1000	40	50
				2400	2400		
				2700	2700		

Weights shown are averages and vary depending on the tolerances of the diameter and length.

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