

Data Sheet 1.71/5

## Gas-Insulated Test Transformer, Type PEG

### Application

Gas-insulated test transformers, type PEG, are used in metal-clad, gas-insulated HVAC test systems, type WPG...G (see Product Brochure 1.70). These WPG...G systems are used for factory testing of GIS and their metal-clad components, especially instrument transformers. WPG...G systems can be used for on-site testing as well. Test transformers, type PEG, are related to test object capacitances in the order of up to 2.9 nF and short-time tests.

### Design

Test transformers, type PEG, are characterized by a SF<sub>6</sub>-impregnated foil insulation well proven for gas-insulated voltage transformers. The active part is built into a steel tank filled with SF<sub>6</sub> (4.5 bar absolute) and closed by a GIS spacer on the flange of the tank. This forms the connection to the other components of the metal-clad HVAC test system or to the test object itself. A built-in measuring capacitor with SF<sub>6</sub>-insulation is used as the HV arm of a capacitive divider for HVAC measurement. The electrical design considers the hard stress in case of SF<sub>6</sub> breakdown of the test object, but the application of a protection impedance (Data Sheet 1.74) is recommended. The robust mechanical design, especially the steel tank with eyes for lifting hooks, considers the frequent transportation of on-site test equipment.

The primary winding is divided into two equal parts for series and parallel connection, which enables fine tuning at low voltages. An on-line monitoring of the winding temperatures allows more tests per day and an optimum utilization of the test field.



Figure 1: Test transformer, type PEG 500/750

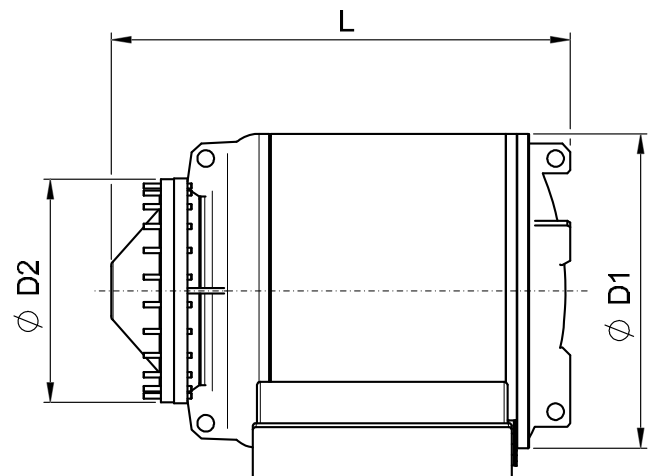


Figure 2: General dimensions

Table 1: Main parameters (The main parameters are related to power frequency 50 or 60 Hz, if not otherwise marked.)

Type	Input voltage	Output voltage	Duty cycle <sup>1)</sup>	Output current	Power	Max. load <sup>2)</sup>	Impedance voltage <sup>2)</sup>
	V	kV		A	kVA	nF	%
PEG 250/510	400	510	15 min ON - 60 min OFF, 3 cycles per day	0.49	250	2.9	15
PEG 500/750	1000	750	15 min ON - 60 min OFF, 3 cycles per day	0.67	500	2.6	15
PEG 800/1050	1000	1050	15 min ON - 60 min OFF, 3 cycles per day	0.76	800	2.0	17

<sup>1)</sup> at rated power, 40°C/104°F ambient and 25°C/77°F daily mean temperature. On-line monitoring of winding temperatures allows longer duty cycles.

<sup>2)</sup> related to 50 Hz

Table 2: Dimensions and weight

Type	Dimensions (approx.)			Weight (approx.)
	Diameter (D1)	Diameter (D2)	Length (L)	
	mm	mm	mm	kg
PEG 250/510	1200	770	1850	2000
PEG 500/750	1600	850	2160	3800
PEG 800/1050	2000	850	3100	8200

### Type designation

PEG a/b

a = rated power

b= rated output voltage