

The HVT series of high voltage dividers provide a reliable and efficient solution for measuring DC voltages up to 450kV with high accuracy and minimal drift. These dividers precisely scale high voltages to measurable levels for instrumentation, testing, monitoring, and calibration. The scaled output is available via a BNC connector for convenient measurement.

Using precision-matched resistive elements and an optimized low-field-strength design, the HVT series delivers excellent linearity, long-term drift stability, and a low temperature coefficient for reliable, repeatable measurements.

In addition to the standard HVTS models, the HVT platform also supports OEM-specific⁽¹⁾ versions tailored to customer requirements. Available custom options include unique voltage ratings, resistance ratios, multiple measurement outputs, capacitive element for ripple measurement, connectors and encapsulated solutions.



Features

- ▶ Input voltages from 50kV to 450kV
- ▶ Measurement accuracy as high as $\leq 0.1\%$
- ▶ High stability of 0.2%
- ▶ Temperature coefficient 15ppm/°C
- ▶ Voltage coefficient of 0.12ppm/V
- ▶ Roller mounted design for easy positioning
- ▶ BNC connector

Applications



- ▶ High voltage test & measurement
- ▶ E-beam systems
- ▶ Ion implantation
- ▶ X-ray systems
- ▶ Research

Dimensions

Click the link to the dimensions table

→ [mechanical details](#)

Documentation

For further information click the link or scan the code

→ xppower.com



Models & ratings

Model	Input voltage	Input impedance	Divider ratio
HVTS50000	50kV	1G Ω	5000:1
HVTS100000	100kV	2G Ω	10000:1
HVTS150000	150kV	2G Ω	15000:1
HVTS200000	200kV	3G Ω	20000:1
HVTS250000	250kV	3G Ω	25000:1
HVTS300000	300kV	4G Ω	30000:1
HVTS350000	350kV	4G Ω	35000:1
HVTS400000	400kV	5G Ω	40000:1
HVTS450000	450kV	5G Ω	45000:1

Notes:

1. Custom configurations and application-specific modifications are available upon request. Contact [XP Power Sales](#) for details.

General

Characteristic	Notes & conditions
Input connector	M8 stud
Output connector	BNC

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Accuracy	<0.1		<0.5	%	≤0.1% for 50kV and 150kV models ≤0.5% for other models
Stability		0.2		%	
Temperature coefficient		15		ppm/°C	
Voltage coefficient		0.12		ppm/V	

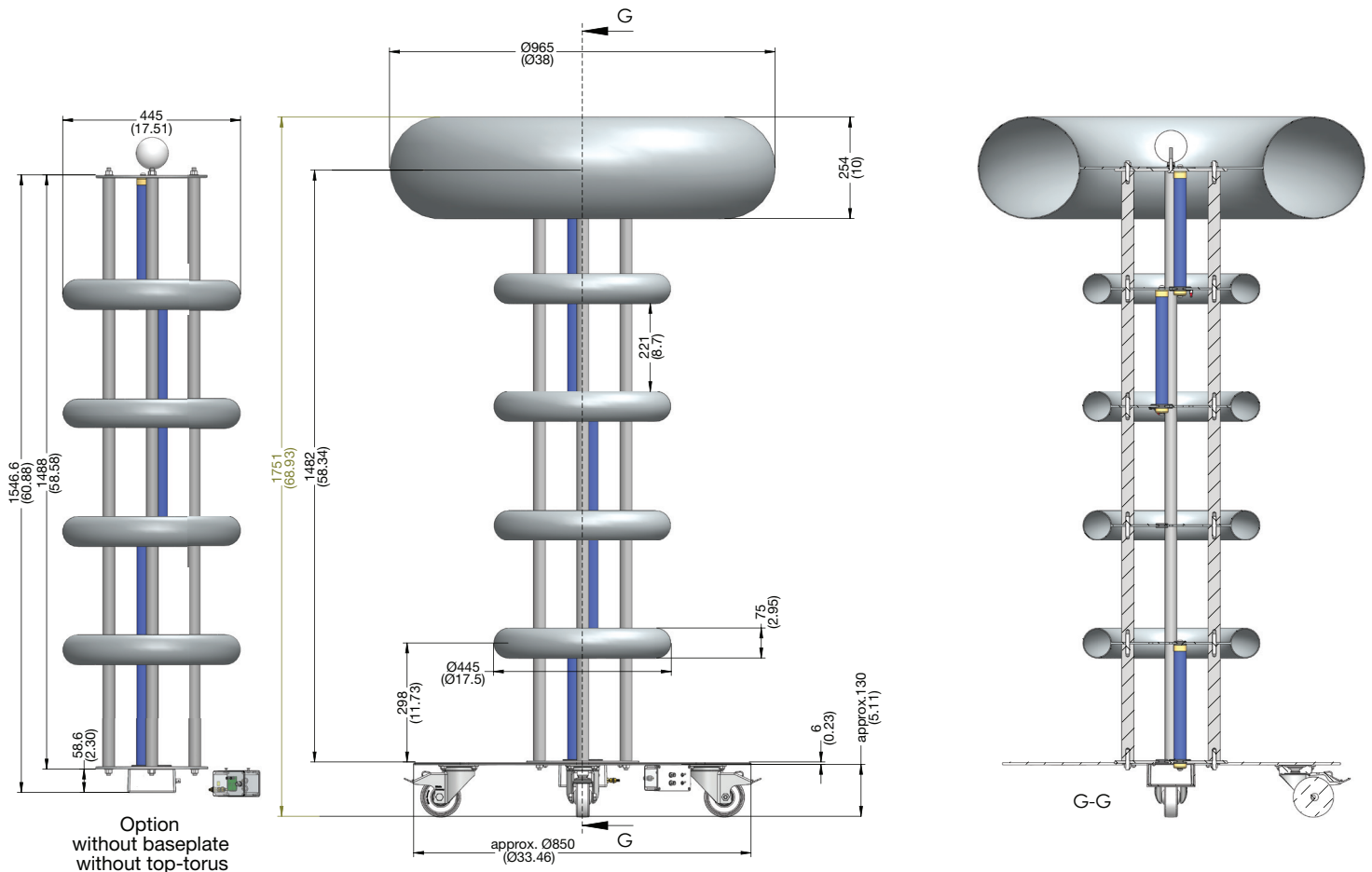
Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	0		+40	°C	
Storage temperature	0		+85	°C	
Cooling	Natural convection				
Humidity	Less than 60%				

Mechanical details

Model	Height	Weight	Max. diameter
HVTS50000	470 (18.50)	23 (50.70)	445 (17.5)
HVTS100000	768 (30.25)	27 (59.5)	445 (17.5)
HVTS150000	794 (31.25)	30 (66.13)	610 (24)
HVTS200000	1092 (43)	34 (75)	610 (24)
HVTS250000	1117 (43.97)	37 (81.57)	711 (28)
HVTS300000	1415 (55.7)	41 (90.4)	711 (28)
HVTS350000	1434 (56.45)	44 (97.00)	864 (34)
HVTS400000	1732 (68.2)	49 (108)	864 (34)
HVTS450000	1751 (68.93)	51 (112.43)	965 (38)

HVTS450000 (450kV model)



Notes:

1. All dimensions shown in mm (inches).
2. Weight measurements in kg (lbs)