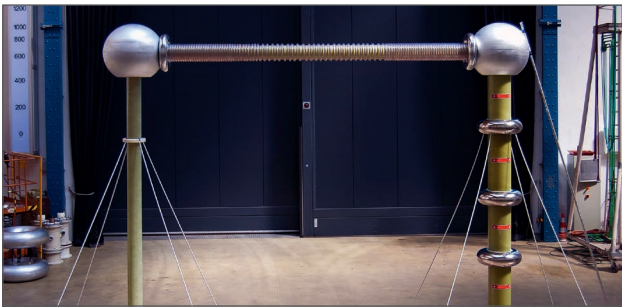


# HVDC test systems

## Conducting DC voltage tests on all electric power supply components



- **One-button-operation on 5.7" LCD-colour display**
- **Test voltages of up to 800 kVDC**
- **DC voltage ripple < 3%**
- **Automatic measuring range switchover**
- **Motorised discharge switch**
- **High voltage generation on both polarities optionally available**

### DESCRIPTION

Megger offers DC voltage test devices for a wide range of voltages and applications. The HVDC test set is a high-performance, portable testing system that can be used to evaluate all kind of high-voltage-direct-current components, in line with the applicable regulations regarding the generation of HVDC voltages of up to 800 kV.

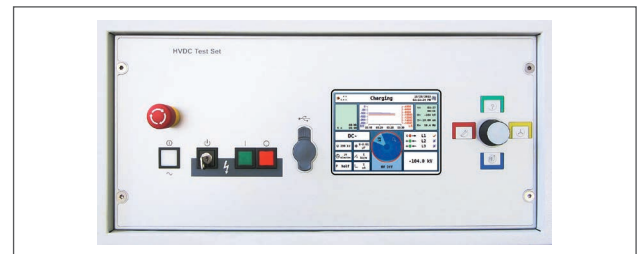
The set is predominantly used by power supply companies, service providers, cable installers and cable manufacturers to test DC voltage in high-voltage systems and cables. In addition, surge arresters, HVDC transformers or insulators can also be tested and leakage measurements conducted.

The system is suitable for on-site testing as a fixed-installation system, and as a measuring trailer for the purposes of transportation. The modular structure of the test system facilitates its set-up on site, and allows it to be adapted to the particular measuring tasks. The separation of the control unit and the high-voltage unit ensures that the system can be used at a safe distance. The high voltage system is water resistant and features an ammonium sulphate solution which protects the cascade from surges caused by breakdowns in the test object.

Alongside DC voltage testing, the short-circuit-proof output circuit and the system's high power enable the HVDC Systems use during fault location as a burner for modifying high-impedance and intermittent faults.

Each DC voltage test is automatically earthed by the motorised discharge system and thereby set to a safe operational state. This takes care of secure earthing as well as unearthing before the start of a new measurement. The modular cascade set for generating high DC voltage is optionally available with negative or positive polarity.

In the event of a power cut, the automatic discharge system remains in its current position and no automatic discharging occurs. In this case however, discharging may be manually initiated using a rip cord and the gas pressure spring triggered in the process.



*Control Unit with one-button-operation*

The device is controlled using standard SebaKMT one-button-operation with a quick selection menu similar to those of our other measurement systems (e.g. Variant, Centrix). Measurement data storage and the display of current/voltage-over-time occur automatically at a frequency of 4 Hz. This data is based on the EasyProt format and can be exported to a USB stick.

To ensure safe operation of the system during an ongoing DC voltage test or cascade burning, the system automatically shuts down in the event of an overcurrent (manually adjustable) or overvoltage. This avoids major damage to the test system and/ or test object in case of malfunctions or breakdowns.

## TECHNICAL DATA\*

	<b>HVDC 200</b>	<b>HVDC 400</b>	<b>HVDC 650</b>	<b>HVDC 800</b>
<b>DC output voltage (**)</b>	0 ... -200 kV	0 ... -400 kV	0 ... -650 kV	0 ... -800 kV
<b>Output current</b>	9 mA @ -190 kV	4 mA @ -350 kV	3,5 mA @ -600 kV	2 mA @ -800 kV
<b>Short circuit current <math>I_k</math></b>	300 mA $\pm$ 10 %	300 mA $\pm$ 10 %	290 mA $\pm$ 10 %	55 mA $\pm$ 10 %
<b>Residual ripple</b>			< 3 % (acc. IEC 60060-1)	
<b>Voltage range</b>			0 ... 800 kV, resolution 1 kV	
<b>Measuring range</b>			$\pm$ 3 %	
<b>Current range</b>		100 $\mu$ A... 300 mA (fully-automated range switchover)		
<b>Overcurrent switch off</b>		10 $\mu$ A ... 100 mA (adjustable)		
<b>Test duration</b>		1 Min ... 99 Tage (adjustable)		
<b>Max. discharge energy</b>	600 kJ @ 200 kV	600 kJ @ 400 kV	1.600 kJ @ 650 kV	2.000 kJ @ 800 kV
<b>Input voltage</b>		220 ... 250 V, 50 / 60 Hz		
<b>Power consumption <math>P_{max}</math></b>		4 kVA (16 A fused)		5.5 kVA (25 A fused)
<b>Operating temperature</b>			- 20 °C ... + 55 °C	
<b>Storage temperature</b>			- 20 °C ... + 70 °C	

## SPECIAL FEATURES

- Control via one-button-operation on 5.7" LCD colour display
- Modular cascading tower for test voltages of up to max. 800 kVDC (optionally for positive or negative high voltage)
- DC voltage ripple < 3% (acc. IEC 60060-1)
- Motor-driven discharge switch with manual closing function (emergency)
- Overtemperature protection for power electronics
- Automatic current measuring range switchover
- High voltage display with a resolution of 1 kV
- Logging in familiar EasyProt format using USB stick



*HVDC test set with positive polarity (200 kV<sub>DC</sub>)*



*HVDC testing system up to 400 kV<sub>DC</sub>*

## ORDERING INFORMATION

Product	Order no.
HVDC 200	899003476
HVDC 400	892502186
HVDC 650	892502216
HVDC 800	899003477

\* We reserve the right to make technical changes.

\*\* Positive polarity available on request.

### GERMANY

Megger GmbH  
Obere Zeil 2  
D-61440 Oberursel  
T +49 6171 92987 0  
F +49 6171 92987 19  
info@megger.de

Seba Dynatronic  
Mess- und Ortungstechnik GmbH  
Dr.-Herbert-lann-Str. 6  
96148 Baunach  
T +49 (0) 9544 680  
F +49 (0) 9544 2273  
team.dach@megger.de

Hagenuk KMT  
Kabelmesstechnik GmbH  
Röderaue 41  
01471 Radeburg  
T +49 (0) 35208 840  
F +49 (0) 35208 84249  
team.dach@megger.de

### CERTIFICATION ISO

Registered to ISO 9001 Cert. no. 000677 QM08

**HVDC\_DS\_EN\_V01**

**www.megger.de**

Megger is a registered trademark