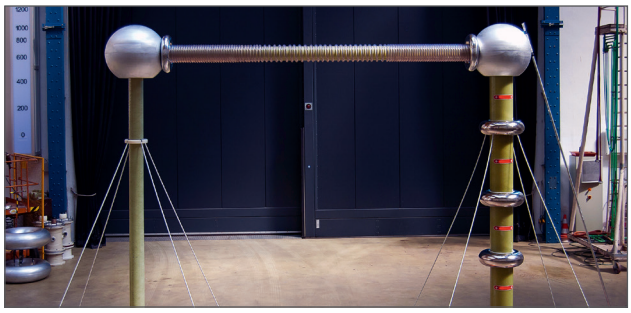
HVDC test systems

Conducting DC voltage tests on all electric power supply components



- **Test voltages of up to 800 kVDC**
- **DC voltage ripple < 3%**
- **Automatic measuring range switchover**
- **Motorised discharge switch**
- **One-button-operation on 5.7" LCD-colour display**
- **Optionally available in positive polarity**

DESCRIPTION

Megger offers DC 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 for DC testing on 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 laboratory testing as a permanently installed installation system, and as a for mobile on-site applications being stored in a trailer. 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 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.

Apart from DC 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 positive polarity.

In the event of a power outage 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 the standard Megger one-button-operation with a quick selection menu as known from other measurement systems. The display of the progression over time of current and voltage and the storage of measurement data takes place on an automated basis at a frequency of 4 Hz. Reports can be generated via the Easyprot reporting software and storage of the datasets on 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.

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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 polarity)
- 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
- Reporting via familiar EasyProt format using USB stick

TECHNICAL DATA*

General:

Residual ripple	< 3 % (acc. IEC 60060-1)
Voltage range	0 ... 800 kV, resolution 1 kV
Measuring range	± 3 %
Current range	100 µA… 300 mA (fully-automated range switchover)
Overcurrent switch off	10 µA ... 100 mA (adjustable)
Test duration	1 Min ... 99 days (adjustable)
Input voltage	220 … 250 V, 50 / 60 Hz
Operating temperature	- 20 °C … + 55 °C
Storage temperature	- 20 °C … + 70 °C

HVDC 200:

DC output voltage (**)	0 ... -200 kV
Output current	9 mA @ - 190 kV
Short circuit current I_K	50 mA ± 10 %
Max. discharge energy	600 kJ @ 200 kV
Power consumption P_{max}	4 kVA (16 A fused)

HVDC 400:

DC output voltage (**)	0 ... -400 kV
Output current	4 mA @ - 350 kV
Short circuit current I_K	45 mA ± 10 %
Max. discharge energy	600 kJ @ 400 kV
Power consumption P_{max}	4 kVA (16 A fused)

HVDC 650:

DC output voltage (**)	0 ... -650 kV
Output current	3,5 mA @ - 600 kV
Short circuit current I_K	40 mA ± 10 %
Max. discharge energy	1 600 kJ @ 650 kV
Power consumption P_{max}	5.5 kVA (25 A fused)

HVDC 800:

DC output voltage (**)	0 ... -800 kV
Output current	2 mA @ - 800 kV
Short circuit current I_K	35 mA ± 10 %
Max. discharge energy	2 000 kJ @ 800 kV
Power consumption P_{max}	5.5 kVA (25 A fused)

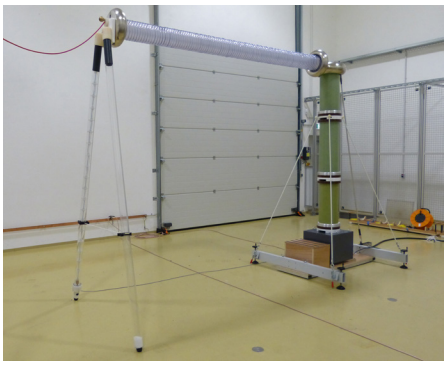
SCOPE OF DELIVERY

- HVDC test sytem consisting of basic platform, cascades, water resistor and bi-pod
- Control unit
- Set of cables (control-, mains- and earth-leads)
- Discharge rod
- External safety system
- Manual and reporting software on USB stick

ORDERING INFORMATION

Product	Order nr.
HVDC 200; Test system 200 kVDC	**899003476**
HVDC 400; Test system 400 kVDC	**1015432**
Mandatory selection HVDC 400	
Transport cases; incl. brackets and installation	90042775
Trailer; incl. brackets and installation	90042812
HVDC 650	**892502216**
Mandatory selection HVDC 650	
Transport cases; incl. brackets and installation	xxx
HVDC 800	**899003477**
Mandatory selection HVDC 800	
Transport cases; incl. brackets and installation	xxx
Options	
Additional electrolyte H 915 for water resistor	892492725
DakkS certified calibration	90035448

HVDC 400 integrated in trailer



HVDC 650

HVDC 800

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