

AHZAQ

10 kVA / 100 kV, 8-position test bath



Withstand testing of dielectric gloves, boots, blankets, rods and voltage detectors
up to class 4

AHZAQ

Dielectric PPE insulation test system

amperis

www.amperis.com

 C/ María Barbeito, 14
27003, Lugo, Spain

 Contact

T [+34] 982 20 99 20
info@amperis.com | www.amperis.com

A 10 kVA / 100 kV system that withstand-tests every class of dielectric PPE and insulated tooling in one bath.

System overview and tested items



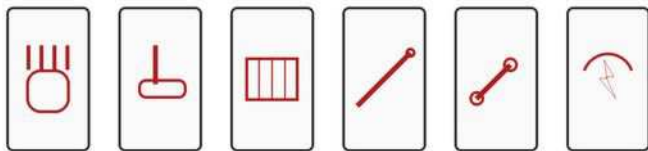
Control unit with printer, display and output and measurement terminals

A complete insulation test system

The system withstand-tests dielectric rubber goods and insulated tooling up to class 4. The test bath holds eight pairs of boots or gloves at once and reads the leakage current of every position separately, while an infrared link keeps the control console fully isolated from the high-voltage side. The whole set can be trailer-mounted for on-site work at remote locations.

Items tested, by class

- Dielectric gloves: classes 00 to 4.
- Dielectric boots: classes 0 to 4.
- Dielectric sleeves: classes 0 to 4.
- Blankets, mats and covers: classes 0 to 4.
- Insulated tools and other electrical equipment.
- Hot sticks (insulating rods) up to 4 m, tested at 100 kV every 300 mm.
- Capacitive voltage detectors of 35 kV and below.



Item families covered: gloves, boots, blankets/mats, rods, insulated tools and voltage detectors

The withstand test runs unattended, with an independent HV disconnect per channel and on-site report printing.

Control, automation and reports

Fully automatic withstand test

- Ramp-up, hold, ramp-down and power-off run unattended once the test is started.
- Independent high-voltage disconnect per channel, so a single fault does not stop the other seven tests.
- Over-voltage and over-current protection, with a high-voltage hazard warning light.
- A patented infrared link keeps the operating console fully isolated from the high-voltage circuit.

Console and display

A large LCD on the control console shows the eight leakage currents together with the test voltage, the test current and the timer, all at the same time, so the operator follows every position of the bath during the test without switching screens.

Records and reports

The system stores 60 test records and prints on-site reports on the built-in high-speed printer, so acceptance and periodic tests can be documented immediately after the withstand test finishes.

Safety

The test bath and its accessories carry a dedicated grounding container and the interlocks and disconnects described above; the equipment is designed for use by trained personnel following the applicable electrical-safety procedures.



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Test voltage and power ratings

Rated capacity	10 kVA
Rated output voltage	Up to 100 kV, according to the test transformer fitted (50 kV or 100 kV version)
Output voltage range	Up to 50.0 kV (50 kV transformer)
Voltage measurement error	< 1% of U + 0.5% of full scale
Input current range	Up to 50.0 A
Current measurement error	< 0.5% of I + 0.5% of full scale

Two interchangeable test transformers are available: a 50 kV / 200 mA version and a 100 kV / 100 mA version, both rated 10 kVA at 220 V input.

8-position test bath

Test positions	8, tested and read out simultaneously and independently
Leakage-current range	Up to 25.0 mA
Leakage-current error	< 1% ± 1 digit
Leakage-current resolution	0.1 mA
Max. working voltage	50 kV (class 4 test)
Steel test ball weight (Ø 4 mm)	20 kg



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System components: control and HV generation

Control desk	Houses the display, the test controls and the infrared link that isolates it from the high-voltage side
Voltage-raising transformer (50 kV version)	10 kVA, 50 kV rated output, 200 mA rated current, 220 V input
Voltage-raising transformer (100 kV version)	10 kVA, 100 kV rated output, 100 mA rated current, 220 V input
High-voltage divider	100 kV rated voltage, 1.5% accuracy
Protection resistor	5 k Ω , 100 mA maximum current, 100 kV maximum voltage



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Optional test accessories

Insulating-rod test bracket	100 kV rated test voltage; whole-length test for 35 kV rods and segment testing for rods up to 110 kV; 8 test stations with a universal adjustment range
Insulating-pad test bench	For insulating clothing, blankets and pads; 100 kV rated, 1800 × 1000 mm working area; embedded central grounding electrode and stainless-steel test electrodes; casters for easy movement
Insulating-clothing electrode sets	Sleeve electrodes (one per size), chest electrode (one set), trouser electrodes (one per size) and insulating-blanket electrodes in matching sizes
Voltage-detector test stand	35 kV rated, for capacitive voltage detectors of 35 kV and below; fixed ground electrode and motorised HV electrode with left/right travel, push-button and wireless remote control, and a graduated distance scale

These accessories are optional and are added to the base control desk / test bath / transformer set described on the previous page.



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Standards and scope of supply

Standards	ASTM D120, ASTM F496, IEC 60903
Base set	Control desk, test bath (8 positions), voltage-raising transformer, high-voltage divider and protection resistor
Optional accessories	Insulating-rod test bracket, insulating-pad test bench, insulating-clothing electrode sets and voltage-detector test stand

Insulated tools and other electrical equipment are tested with the base set; no additional accessory is required for them.



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