



HVZI[®]

HIGH VOLTAGE, INC.
FIELD PORTABLE DC HIPOT TEST SETS
PTS SERIES PRODUCT CATALOG

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PORTABLE DC HIPOT TEST SETS FOR FIELD AND FACTORY USE

The PTS series of DC hipot test sets was designed to be the most functional and versatile portable hipots we could manufacture. The PTS series hipots are roughly the same size and weight or smaller than the competition but offer far more features and functionality. Our DC hipots up to 130 kV are rated for 10 mA units from 200 kVDC - 600 kVDC are rated for 5 mA. Hipots up to 75 kVDC contain a +/- 1% line voltage regulator built in to stabilize the incoming power source, resulting in more stable and accurate leakage current readings. All PTS units have a built in high voltage megohmmeter enabling the same instrument to be used for insulation resistance testing. Our meters use 100 uA meter movements, with digital meters as an available ordering option. The meters are also transit-protected, reducing the risk of breakage during transportation.

Applications

The PTS series are designed for field, shop or factory testing of shielded power cables, switchgear, wire harnesses, motors, generators, hotline tools/safety products, aerial lifts/bucket trucks and substation apparatus. The PTS series is ideal for any DC over voltage withstand test. The guard-ground circuit allows for precise leakage current measurement. The built in megohmmeter scale inverse to the current meter scale allows for accurate insulation resistance measurements able to be taken at any voltage.



Motors and Generators



Aerial Lifts & Bucket Trucks



Substation Apparatus



Hotline Tools

PTS Series Advantages

High Voltage, Inc. produces the top DC Hipots available. Our standard models range from 37.5 kVDC to 600 kVDC. The PTS series hipots are roughly the same size and weight or smaller than the competition but offer far more features and functionality. Our DC hipots, up to 130 kV, are rated for 10 mA, not 5 mA. Models up to 75 kVdc contain a +/- 1% line voltage regulator built in to stabilize the incoming power source, resulting in more stable and accurate leakage current readings. All PTS units have a built in high voltage megohmmeter enabling the same instrument to be used for insulation resistance testing. Our meters use 100 uA meter movements, rather than the 5 or 10 uA of others on the market. This makes our meters much more durable. We have transit-protected meters, reducing the breakage from rough handling during transit.

Standard features and benefits:

- Secondary Connected 2 Range Voltmeter
- 5 Range Current/Megohmmeter
- Megohm readings taken at any voltage
- 3.5 Digit Digital Meters Optional
- Factory Fixed Overcurrent Overload
- Guard/Ground Circuit for Accurate Current Measurement
- Anti-static Glass Faced Volt and Current Meters
- Transit Protected Volt and Current Meters
- Full-wave Bridge Rectifier
- External Safety Interlock Provisions
- Zero Start Safety Interlock
- Under Lid and/or HV Tank Mounted Storage for All Accessories

PTS-75 & PTS-80 Differences

The PTS-75 and the PTS-80 are very similar. The PTS-75 offers a 75kVdc output while the PTS-80 provides 80kVdc. All other specifications and features are the same except for one important difference. The PTS-75 contains a +/- 1% input voltage regulator circuit designed to stabilize the incoming voltage powering the instrument. This enables the user to make more precise and stable leakage current readings, as the output voltage and current, does not fluctuate as much as it would without this circuit. The PTS-80 does not have this circuit. The regulating circuit is a ferro-resonant transformer/capacitor circuit. It is sensitive to frequency fluctuations and the input waveform. It works extremely well when the hipot is powered from utility power or a “sine wave” output inverter. It may not work properly if powered from a poorly regulated output from a motor generator or an inverter with a “modified sine wave” output, which is really a chopped square wave. If you only have available an inverter that is not a “true sine wave” design, then buy the PTS-80.

PTS-75 - Utility, stable generator, or true sine wave inverter power source

PTS-80 - Any input power source, including “modified sine wave” inverter

High Voltage Section Configurations



Cable Output

Shielded output cable terminated with a red boot and alligator clip is standard on PTS-15, PTS-37.5, PTS-75, PTS-80, PTS-100, PTS-130, and PTS-200.



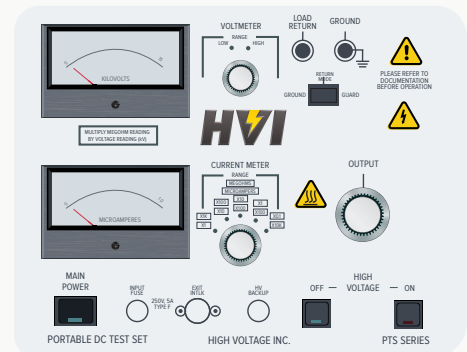
Toroidal Output

Aluminum Toroid is standard on the PTS-300 and PTS-600BT. External Current Limit Resistors are provided. No output cable provided.

Controls and Configuration

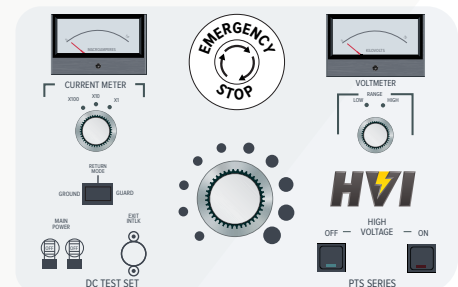
PTS-15, PTS-37.5, PTS-75, PTS-80, PTS-100, and PTS-130

- Continuously adjustable output voltage
- Secondary connected 2 range analog voltmeter
- 5 range analog current/megohmmeter
- Guard/ground circuit for accurate leakage current measurement
- Transit protected, glass faced meters to prevent damage
- Fixed overload set to 11mA current
- Zero start safety interlock
- External interlock provisions



PTS-200, PTS-300 and PTS-600BT

- Continuously adjustable output voltage
- Secondary connected 2 range analog voltmeter
- 5 range analog current/megohmmeter
- Guard/ground circuit for accurate leakage current measurement
- Transit protected, glass faced meters to prevent damage
- Fixed overload set to 6mA current
- Zero start safety interlock
- External interlock provisions



PTS Series Specifications



PTS-15



PTS-37.5

PTS-15

Input: 120Vac, 60Hz, 10A (PTS-15)
230Vac, 50Hz, 5A (PTS-15F5)
230Vac, 60Hz, 5A (PTS-15F6)
+/-1% input voltage regulator

Output: 0 – 15 kV DC @ 10 mA, negative polarity,
positive ground
Full Wave Bridge Rectification

Duty: Continuous, capacitive charging

Voltmeter: 3.5", scaled 0 – 7.5/15 kV DC, $\pm 2\%$ F.S.

Current Meter: 3.5", scaled 0 – 1.0 μ Adc, $\pm 2\%$ F.S. with
multipliers of x 1, x 10, x 100, x 1 k, x 10 k.
Guard/ground load return

Megohmmeter: Scaled 100 -1 M Ω $\pm 2\%$ F.S. with multipliers
of x 0.1, x 1, x 10, x 100, x 1 k

Size & Weight: 14 x 11 x 14 in., 55 lb.
356 x 279 x 356 mm, 25 kg

Output Termination: 20 ft. (6 m) shielded output cable with alligator clamp

Scope of Supply: 20ft red test lead, 20ft black test leads,
10in safety ground stick, external interlock plug,
operations manual, calibration certificate

PTS-37.5

120Vac, 60Hz, 10A (PTS-37.5)
230Vac, 50Hz, 5A (PTS-37.5F5)
230Vac, 60Hz, 5A (PTS-37.5F6)
+/-1% input voltage regulator

0 – 37.5 kV DC @ 10 mA, negative polarity,
positive ground
Full Wave Bridge Rectification

Continuous, capacitive charging

3.5", scaled 0 – 15/37.5 kV DC, $\pm 2\%$ F.S.

3.5", scaled 0 – 1.0 μ Adc, $\pm 2\%$ F.S. with
multipliers of x 1, x 10, x 100, x 1 k, x 10 k.
Guard/ground load return

Scaled 100 -1 M Ω $\pm 2\%$ F.S. with multipliers
of x 0.1, x 1, x 10, x 100, x 1 k

14 x 11 x 14 in., 61 lb.
356 x 279 x 356 mm, 28 kg

20 ft. (6 m) shielded output cable with alligator clamp

20ft red test lead, 20ft black test leads,
10in safety ground stick, external interlock plug,
operations manual, calibration certificate



PTS-75



PTS-80

PTS-75

Input: 120Vac, 60Hz, 10A (PTS-75)
 230Vac, 50Hz, 5A (PTS-75F5)
 230Vac, 60Hz, 5A (PTS-75F6)
 +/-1% input voltage regulator

Output: 0 – 75 kV DC @ 10 mA, negative polarity,
 positive ground
 Full Wave Bridge Rectification

Duty: Continuous, capacitive charging

Voltmeter: 3.5", scaled 0 – 37.5/75 kV DC, ±2% F.S.

Current Meter: 3.5", scaled 0 – 1.0 μ Adc, ±2% F.S. with
 multipliers of x 1, x 10, x 100, x 1 k, x 10 k.
 Guard/ground load return

Megohmmeter: Scaled 100 -1 M Ω ±2% F.S. with multipliers
 of x 0.1, x 1, x 10, x 100, x 1 k

Size & Weight: 14 x 11 x 18 in., 68 lb.
 356 x 279 x 457 mm, 31 kg

Output Termination: 20 ft. (6 m) shielded output cable with alligator clamp

Scope of Supply: 20ft red test lead, 20ft black test leads,
 10in safety ground stick, external interlock plug,
 operations manual, calibration certificate

PTS-80

120Vac, 60Hz, 10A (PTS-80)
 230Vac, 50/60Hz, 5A (PTS-80F)

0 – 80 kV DC @ 10 mA, negative polarity,
 positive ground
 Full Wave Bridge Rectification

Continuous, capacitive charging

3.5", scaled 0 – 40/80 kV DC, ±2% F.S.

3.5", scaled 0 – 1.0 μ Adc, ±2% F.S. with
 multipliers of x 1, x 10, x 100, x 1 k, x 10 k.
 Guard/ground load return

Scaled 100 -1 M Ω ±2% F.S. with multipliers
 of x 0.1, x 1, x 10, x 100, x 1 k

14 x 11 x 18 in., 65 lb.
 356 x 279 x 457 mm, 29 kg

20 ft. (6 m) shielded output cable with alligator clamp

20ft red test lead, 20ft black test leads,
 10in safety ground stick, external interlock plug,
 operations manual, calibration certificate

PTS Series Specifications



PTS-100



PTS-100U

PTS-100

Input: 120Vac, 50/60Hz, 15A (PTS-100)
230Vac, 50/60Hz, 8A (PTS-100F)

Output: 0 – 100 kV DC @ 10 mA, negative polarity,
positive ground
Full Wave Bridge Rectification

Duty: Continuous, capacitive charging

Voltmeter: 3.5", scaled 0 – 50/100 kV DC, $\pm 2\%$ F.S.

Current Meter: 3.5", scaled 0 – 1.0 μ A dc, $\pm 2\%$ F.S. with
multipliers of x 1, x 10, x 100, x 1 k, x 10 k.
Guard/ground load return

Megohmmeter: Scaled 100 -1 M Ω with multipliers
of x 0.1, x 1, x 10, x 100, x 1 k

Size & Weight: Case: 14 x 11 x 14 in., 30 lb.
356 x 279 x 356 mm, 14 kg
HV Tank: 9.5 x 11.75 x 14.5 in., 68lb.
241 x 298 x 368 mm, 31 kg

Output Termination: 20 ft. (6m) shielded EPR output cable with
alligator clamp EPR cable stays flexible in
cold weather

Scope of Supply: 20ft EPR shielded output cable, 20ft red
test lead, x2 20ft black test leads, 14in
safety ground stick, external interlock plug,
operations manual, calibration certificate

PTS-100U

120Vac, 50/60Hz, 15A (PTS-100U)
230Vac, 50/60Hz, 8A (PTS-100UF)

0 – 100 kV DC @ 10 mA, negative polarity,
positive ground
Full Wave Bridge Rectification

Continuous, capacitive charging

3.5", Scaled 0 - 50/100 kV DC, $\pm 2\%$ F.S.

3.5", scaled 0 – 1.0 μ A DC, $\pm 2\%$ F.S. with
multipliers of x 1, x 10, x 100, x 1 k, x 10k
Guard/ground load return

Scaled 100 -1 M Ω with multipliers
of x 0.1, x 1, x 10, x 100, x 1 k

Case: 14 x 11 x 14 in., 30 lb.
356 x 279 x 356 mm, 14 kg
HV Tank: 9.5 x 11.75 x 14.5 in., 68 lb.
241 x 298 x 368 mm, 31 kg

50ft. (15m) shielded EPR output cable with
alligator clamp EPR cable stays flexible in
cold weather

50ft EPR shielded output cable, 50ft red
test lead, x2 50ft black test leads, 14in
safety ground stick, external interlock plug,
operations manual, calibration certificate



PTS-130



PTS-200

PTS-130

Input: 120Vac, 50/60Hz, 15A (PTS-130)
230Vac, 50/60Hz, 8A (PTS-130F)

Output: 0 – 130 kV DC @ 10 mA, negative polarity,
positive ground
Full Wave Bridge Rectification

Duty: Continuous, capacitive charging

Voltmeter: 3.5", scaled 0 – 75/150 kV DC, ±2% F.S.

Current Meter: 3.5", scaled 0 – 1.0 μ Adc, ±2% F.S. with
multipliers of x 1, x 10, x 100, x 1 k, x 10 k.
Guard/ground load return

Megohmmeter: Scaled 100 -1 M Ω ±2% F.S. with multipliers
of x 0.1, x 1, x 10, x 100, x 1 k

Size & Weight: Case: 14 x 11 x 14 in., 34 lb.
356 x 279 x 356 mm, 15 kg
HV Tank: 12.25 x 12 x 18 in., 87lb.
311 x 305 x 457 mm, 39 kg

Output Termination: 20ft. (6m) shielded EPR output cable with
alligator clamp EPR cable stays flexible in
cold weather

Scope of Supply: 20ft EPR shielded output cable, 20ft red
test lead, x2 20ft black test leads, 14in
safety ground stick, external interlock plug,
operations manual, calibration certificate

PTS-200

120Vac, 50/60Hz, 15A (PTS-200)
230Vac, 50/60Hz, 8A (PTS-200F)

0 – 200 kV DC @ 5 mA, negative polarity,
positive ground
Full Wave Bridge Rectification

Continuous, capacitive charging

3.5", scaled 0 – 80/200 kV DC, ±2% F.S

3.5", scaled 0 – 1.0 μ Adc, ±2% F.S. with
multipliers of x 1, x 10, x 100, x 1 k, x 10 k.
Guard/ground load return

Scaled 100 -1 M Ω ±2% F.S. with multipliers
of x 0.1, x 1, x 10, x 100, x 1 k

Case: 14 x 11 x 14 in., 34 lb.
356 x 279 x 356 mm, 15 kg
HV Tank: 13 x 14 x 27.5 in., 150 lb.
330 x 356 x 699 mm, 68 kg

20 ft. (6m) shielded EPR output cable with
alligator clamp EPR cable stays flexible in
cold weather

20ft EPR shielded output cable, 20ft red
test lead, x2 20ft black test leads, 14in
safety ground stick, external interlock plug,
operations manual, calibration certificate

PTS Series Specifications



PTS-300



PTS-600BT

PTS-300

Input: 120Vac, 50/60Hz, 15A (PTS-300)
230Vac, 50/60Hz, 8A (PTS-300F)

Output: 0 – 300 kV DC @ 5 mA, negative polarity,
positive ground
Full Wave Bridge Rectification

Duty: Continuous, capacitive charging

Voltmeter: 3.5", scaled 0 – 120/300 kV DC, ±2% F.S.

Current Meter: 3.5", scaled 0 – 1.0 μ A dc, ±2% F.S. with
multipliers of x 1, x 10, x 100, x 1 k, x 10 k.
Guard/ground load return

Megohmmeter: Scaled 100 -1 M Ω ±2% F.S. with multipliers
of x 0.1, x 1, x 10, x 100, x 1 k

Size & Weight: Case: 14 x 11 x 14 in., 34 lb.
356 x 279 x 356 mm, 15 kg
HV Tank: 36 x 36 x 43.5 in., 380 lb.
915 x 915 x 1105 mm, 172 kg

Output Termination: Top toroid

Scope of Supply: 20ft red test lead, x2 20ft black test leads,
x2 20kohm external limit resistors, 14in
safety ground stick, external interlock plug,
operations manual, calibration certificate

PTS-600BT

120Vac, 50/60Hz, 30A (PTS-600)
230Vac, 50/60Hz, 15A (PTS-600F)

0 - 600kV DC @ 5 mA Bench top controller,
negative polarity, positive ground
Full Wave Bridge Rectification

Continuous, capacitive charging

3.5", scaled 0-300/600 kV DC ±2% F.S

3.5", scaled 0-1.0 μ A DC, ±2% F.S. with
multipliers of x 1, x 10, x 100, x 1 k, x 10 k
Guard/ground load return

100 – 1 M Ω w/x.1, x1, x10, x100, x1k ranges,
w/analog meters

Case: 21 x 15.5 x 15 in., 70 lb.
535 x 395 x 382 mm, 32 kg
HV Tank: 36 x 15 x 89 in., 580 lb.
914 x 381 x 1105 mm, 263 kg

Top toroid

20ft red test lead, x2 20ft black test leads,
x4 20kohm external limit resistors, 14in
safety ground stick, external interlock plug,
operations manual, calibration certificate

Optional Accessories



Hand and Foot Safety Interlock Switches

Dead man style safety switches that connect to the external interlock provisions on the front panel of the PTS DC Hipot test set. The switch must be depressed before “HV On” and remain depressed during the duration of the testing. Releasing the switch has the same effect as hitting “HV Off”, turning off the high voltage circuit. Supplied with 12 foot lead.

Grounding Sticks

Safely confirm the device under test has been discharge and is at ground potential before handling after testing.

Reusable Shipping Cases

Reusable hard shipping cases designed for safe transportation of your PTS Series DC Hipot.

Optional Upgrades



Digital Metering

Add 3.5-digit digital meters to models with analog meters as standard equipment. Deletes or modifies any volt or current meter range switches.



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© **COPYRIGHT 2024 - HIGH VOLTAGE, INC.** – Manufacturers of high voltage test equipment. Products include portable VLF AC .1Hz to .01Hz. Very Low Frequency, sinewave output hipots up to 200 kV; Tan delta and PD diagnostic measurement bridges for cable diagnostics, portable switchgear and bottle testers up to 100 kV AC ; Portable DC Hipots/Megohmmeters to 300 kV DC ; Oil Test sets at 60 kV or 100 kV; Aerial lift and bucket truck testers to 300 kV AC; High Power AC Dielectric test sets up to 300 kV AC @ 40 KVA; OHM Check concentric neutral tester; Controlled energy cable fault locators, Radar and Tracing devices; 150 kV and 300 kV HV voltage dividers.