WESTERN ENTERPRISES
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Manufacturer of innovative compressed gas
fittings, regulators & measurement tools.

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Hydro/Pneumatic Tester

Quick Start Guide

First things first

General purpose use only

⚠ DANGER **Hydro/Pneumatic Tester**

This device is not intended for hazardous locations.

Hydro/Pneumatic Tester is a diagnostic instrument for measuring temperature, pressure & number of pump strokes during pipeline testing. The Hydro/Pneumatic Tester does not assess successful completion of hydrostatic test.

The device is intended for moderate outdoor use and indoor (climate controlled) use and storage.

Receiving & Unpacking

Don't lose any components

- Take care not to lose any of the components
- Review the packing list to confirm that you received all components.

Operating temperatures

For accurate measurements, the ambient temperature must be within 14 °F to 104 °F (-10 °C to 40 °C)

Pressure sensor ranges

Minimum rated pressure: -14.5 psi gauge.
Maximum rated pressure: 3000 psi gauge.

Temperature sensor ranges

Functional range: -50 °C to 250 °C

Power requirement

- Input: 12 V dc to 24 V dc @ 3 A maximum with 4 Pin Mini Din port.

HPT Tester & accessories

Included Items

- The HPT100:
  - 10.2 in. Touch-Panel computer display
  - Three RTD temperature sensors
  - One compound isolated 3000 psi pressure sensor
  - One stroke counter sensor
- Wireless keyboard and mouse
- One soft-sided carrying bag
- Power cord/AC adapter
- Battery power cable
- Battery charger
- 12V, 18Ah Battery
- Four 150 ft. M12 M-F A-coded cables
- Three 10 ft. M12 M-F A-coded armored cables
- One 3.3 ft. M12 M-fly-wire A-coded cable
- Three Class A RTD with M12 A-coded probe connectors
- One 150 ft. 6900 psi rated quick test pressure hoses
- Two 1/8 in. MNPT-Quick Test pressure fittings
- Two 1/4 in. MNPT-Quick Test pressure fittings
- Stroke counter terminal kit

Test setup

1. Inspect the pressure hoses, temperature, stroke counter, and power cables, and probes.
2. Install RTD probes into the test locations. Connect the M12 cables between the RTD probes and the Hydro/Pneumatic Tester.
3. Connect the hose to the Hydro/Pneumatic Tester. An adapter fitting may be necessary. Use PFTE tape for NPT fittings.
4. Connect the power to the Hydro/Pneumatic Tester. Plug in the AC power adapter or use the battery power cable and battery with charger.
5. Turn on the device and wait for the **Setup** mode to appear.
6. Vent and zero the pressure sensor. Zeroing removes the change in atmospheric pressure.
7. Connect the other end of hose to the appropriate fittings installed into the pipe under test.
8. Set required measurement units and sensor names
9. Confirm the Hydro/Pneumatic Tester is reading proper process values.
10. Set the test parameters you require on the information and elevation pages.
11. Press **Record** button on the Hydrostatic Tester.
12. Begin pressurization of pipe under test.
13. When pressurization is complete press the stopwatch button to **begin** hydro/Pneumatic Test.

Note: The hydrostatic test automatically stops after the specified duration, but data will continue to be recorded until you tap Stop. Review mode appears after the test stops.

14. Press **Stop** button to end data collection and bring up Review mode.
15. Transfer data to the USB drive to analyze the data later.
16. Tap the **Return** button to return to Setup mode.

Perform these checks before using
Preventing injuries

1. Check the specified pressure and temperature connection types and rating ranges for accessories.
2. Only use accessories from other vendors if they match the connection types and ratings of the device sensors.
3. Examine the power cord and adapter to make certain they are not damaged.
4. Place the device on a flat, stable surface before connecting cables or hoses.
5. Check the pressure hose to make certain it is free from cracks, holes, defects, or unusual wear and tear.
6. Look for cracks, residue, or other damage around the sensor ports. If you see any, **don't use the device.** Contact the appropriate personnel.
7. Check all input, hose, and cable connections to make sure they are correctly and securely attached.
8. Check the computer screen to make sure it is not cracked or damaged.

Additional items to be aware of

1. Don't let sharp/hard objects touch the screen.
2. Refer to the user manual for use and safety precautions.

Repackaging the HP Tester

Shutting down properly

Don't unplug the power cord while the application is running

1. Tap **Power** off in the **Menu**.
2. After the computer turns off, unplug the power cord.
3. Store the Hydro/pneumatic Tester and small accessories in the soft case and place in the hard case.

Hardware

1. Unplug the power cord.
2. Disconnect the RTD & stroke counter cables from the sensor panel.
3. Remove RTD probes from installation.
4. Remove Stroke Counter Fly wire cable from pump.
5. Disconnect the pressure hoses from the sensor panel.
6. Drain & Dry the hoses.
7. Store the hose and cables on their reels.
8. Store the Hydro/Pneumatic Tester and all accessories in the hard case.

Cleaning

1. Turn off the device and unplug the power cord before cleaning.
2. Clean the device regularly using a damp, lint-free cloth and water or isopropyl alcohol.

Maintenance

▪ Factory calibration once a year.

Troubleshooting tips

Temperature measurement display??????

The RTDs are not properly connected.

1. Check the connections of the RTD cable on the panel and on the RTD.
2. If the connections are good, then swap the cable at the port.

    Did the "??????" follow the cable?
    Yes - *the port is ok.*
    No - *the port is the problem not the cable.*

    If **yes**, then swap the cable at the probe.

    Did the "??????" follow the cable?
    Yes - *the cable is the problem.*
    No - *the probe is the problem.*

No measurements in the graph

Pressure and temperature measurements don't appear in the graph.

1. The Visibility controls may be turned off. Tap them to see if they turn on.
2. The network sensors may have locked up.
    1. Turn the computer off.
    2. Wait 1 minute.
    3. Turn the computer on.

Troubleshooting tips

The time is not correct

1. The time stamp that appears in the graph and in the data table isn't correct.
2. Tap the Date and Time on the taskbar on the bottom of the screen.

The application didn't start automatically

1. Press and hold the power button to turn the device off.
2. Press the power button to run the device on.

How to contact us

Contact Sales

If you have any issues, questions, or suggestions, please contact Sales at Western Enterprises using on of the following methods.

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