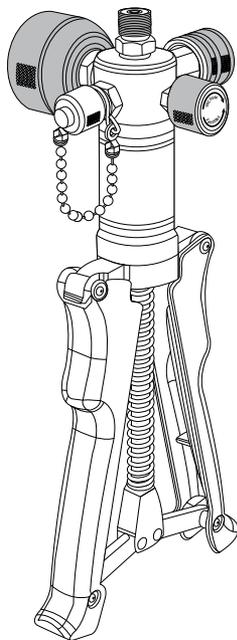


Ralston DCAP-PV Pressure/Vacuum Test Pump Operation Manual



For all models of the Ralston DCAP-PV Pressure/Vacuum Test Pump

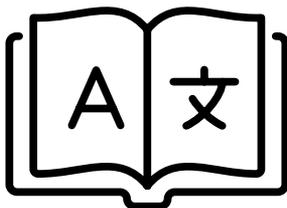


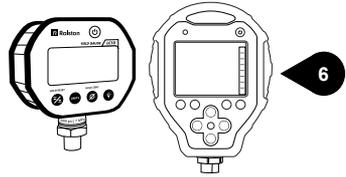
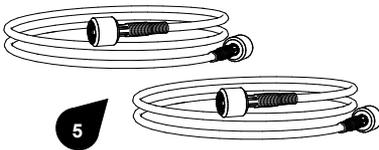
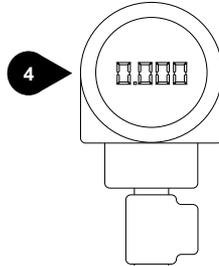
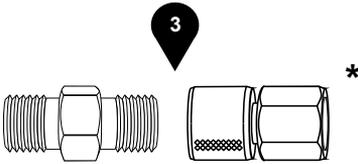
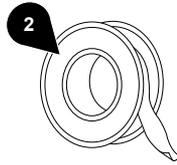
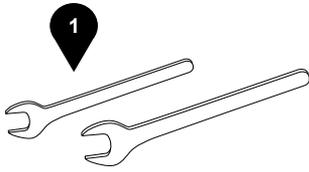
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Specifications

Pressure Range	0-650 psi (45 bar)
Vacuum Range	28.5 inHg / 760 mmHg
Media	Air
Pressure Reference Port	Male Ralston Quick-test™ outlet port, no check valve, stainless steel
Pressure Outlet Port	Male Ralston Quick-test™ outlet port with cap and chain, stainless steel
Temperature Range	0 to 130 °F (-18 to 54 °C)
Seal Materials	Buna-N, Teflon, Viton (base gasket), Delrin (bleed valve)
Construction	Aluminum, Brass, Stainless Steel
Fine Adjust Resolution	+/- 0.001 psi (+/- 0.03 mbar)
Weight	1.75 lb / 0.8 kg
Dimensions	H: 10.5 in (26.67 cm) W: 5 in (12.7 cm) D: 3 in (7.62 cm)

Requirements



* ralstoninst.com/adapters

What you need to use your Pressure/Vacuum Test Pump:

1. Wrenches
2. Thread Tape
3. Ralston Quick-test™ Adapters
4. Device Under Test
5. Ralston Quick-test™ Hoses
6. Pressure Reference

Important Safety Notices

⚠ WARNING: Do not exceed Maximum Working Pressure for this product or damage may result.

⚠ WARNING: Device under test should be isolated from the process, vented and vent valve closed prior to use.

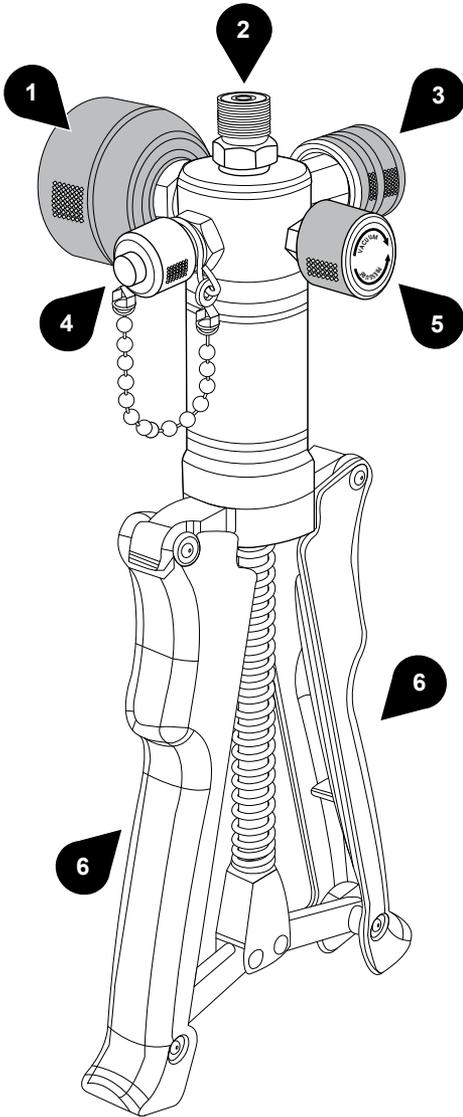
⚠ WARNING: Do not attempt to operate this pump until you have read and fully understand the instructions and hazards of the product.

- Any modifications to this product with custom parts can result in hazardous operation of the hand pump.
- Use eye protection while using this product. Leaking gas, parts or hoses can be ejected at high speed and may cause injury.

California Proposition 65 Warning

⚠ WARNING: Products containing Brass can expose you to chemicals, including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, visit www.P65Warnings.ca.gov.

Pressure/Vacuum Test Pump Overview

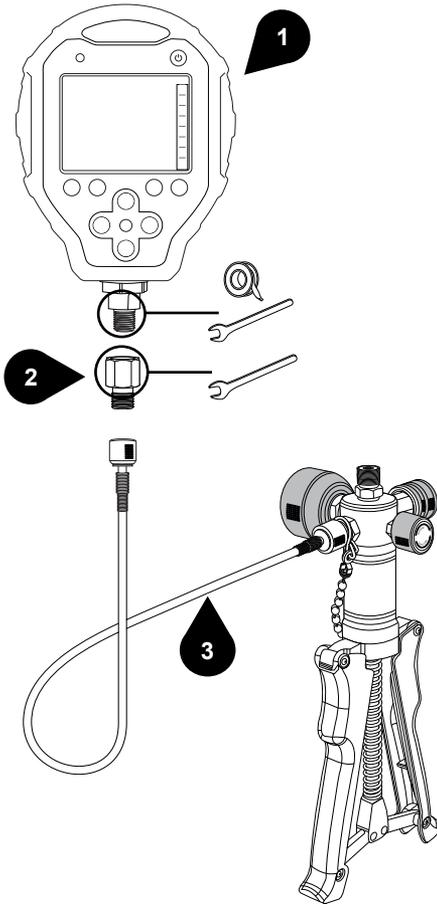


1. Fine Adjust Valve
2. Outlet Port
3. Bleed Valve
4. Outlet Port with Cap & Chain
5. Pressure/Vacuum Knob
6. Pump Handles

Setting Up

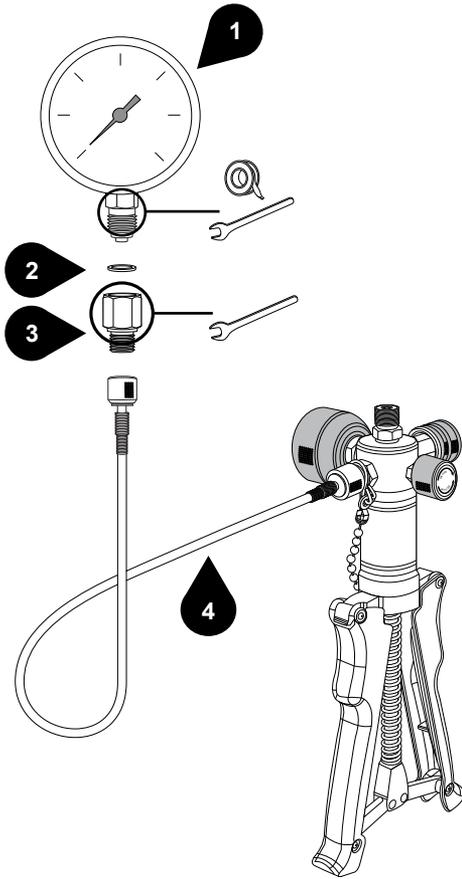
Connecting Reference Gauge

Male NPT Reference Gauge



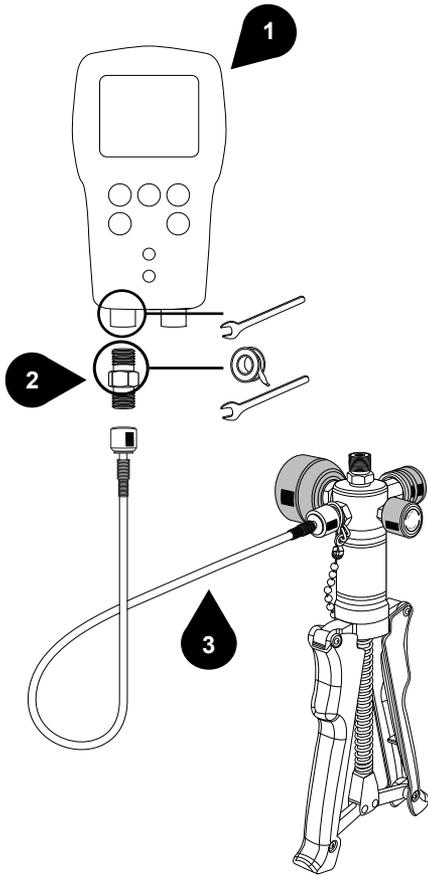
1. Reference Gauge with NPT male connection
2. NPT Female Ralston Quick-test™ Adapter
3. Ralston Quick-test™ Hose

Male BSPP Reference Gauge



1. Reference Gauge with BSPP male connection
2. BSPP Washer
3. BSPP Female (RG) Ralston Quick-test™ Adapter
4. Ralston Quick-test™ Hose

Female NPT Pressure Reference Gauge

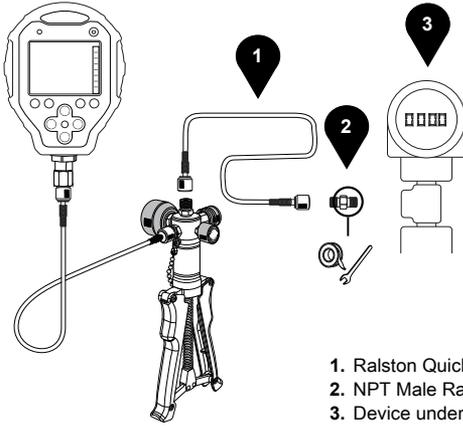


1. Reference Gauge with NPT female port
2. NPT Male Ralston Quick-test™ Adapter
3. Ralston Quick-test™ Hose

Connecting Device Under Test (DUT)

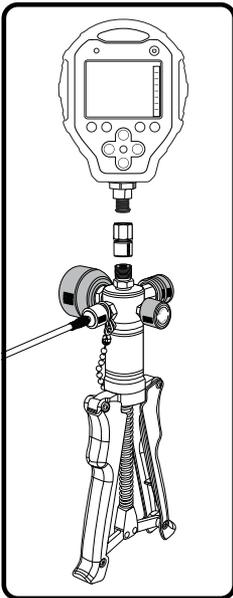
1 Isolate the Device Under Test (DUT) from the process and vent DUT prior to connecting to it.

2



1. Ralston Quick-test™ Hose
2. NPT Male Ralston Quick-test™ Adapter
3. Device under test (DUT)

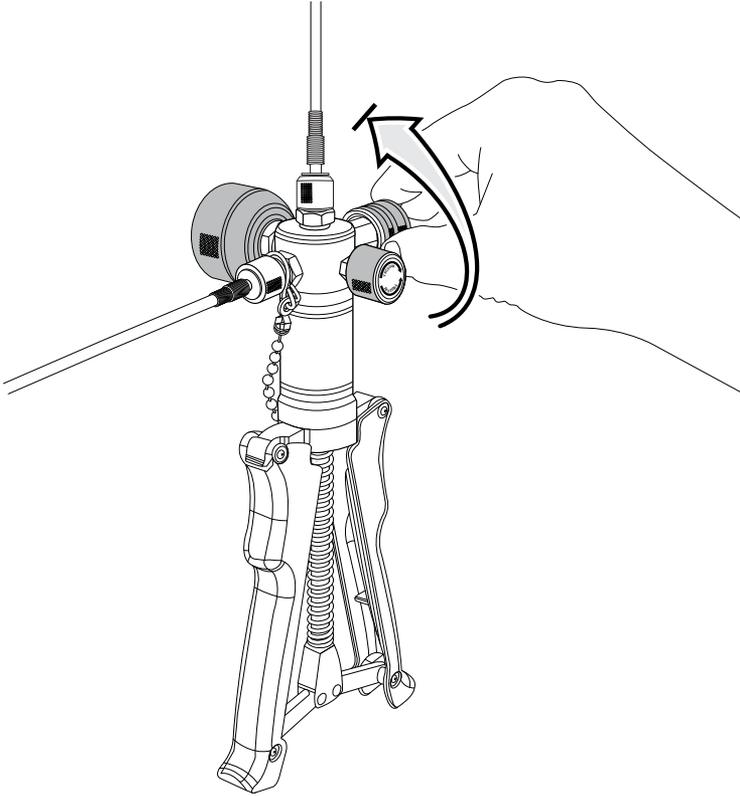
or



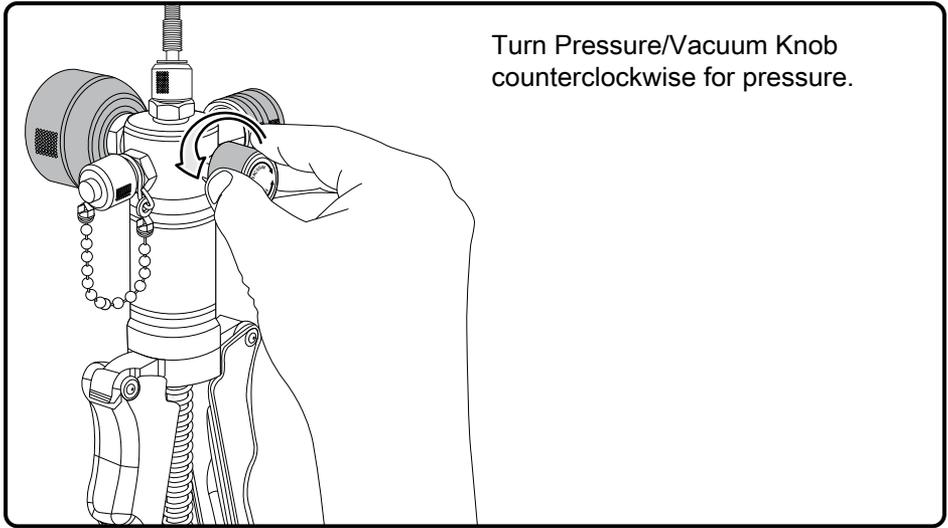
Calibration

Prepare the Pump

Close Bleed Valve.

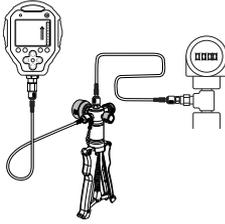
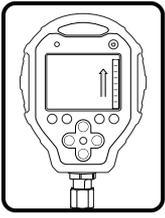


Calibrate with Pressure



Turn Pressure/Vacuum Knob
counterclockwise for pressure.

Increase Pressure



1

A line drawing showing a hand operating the pump handle of the device. A callout arrow points to the test point icon on the device's display.

Pump to just below test point. Let pressure reading stabilize. This may take several minutes.

2

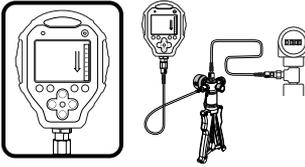
A line drawing showing a hand adjusting a knob on the device. A callout arrow points to the test point icon on the device's display.

Fine-adjust to exact test point.

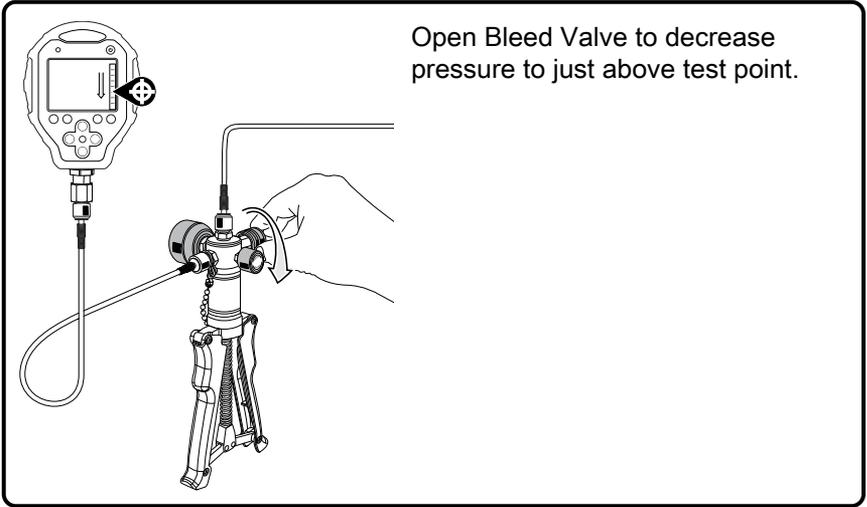


Repeat steps 1 through 2 for each test point up-scale.

Decrease Pressure

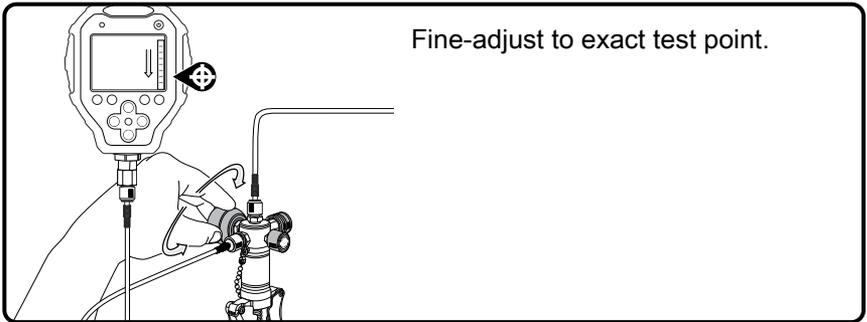


1



Open Bleed Valve to decrease pressure to just above test point.

2

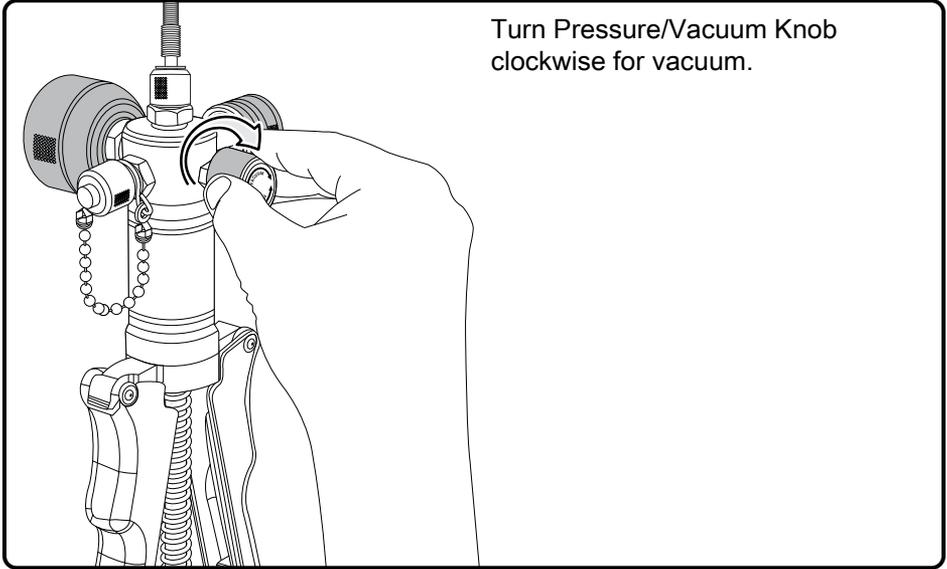


Fine-adjust to exact test point.



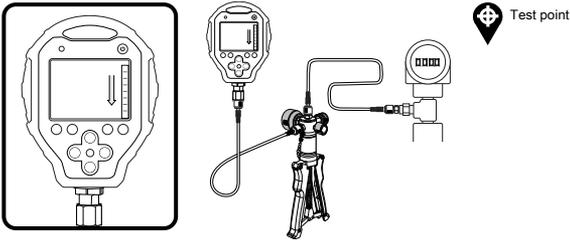
Repeat steps 1 and 2 for each test point down-scale.

Calibrate with Vacuum

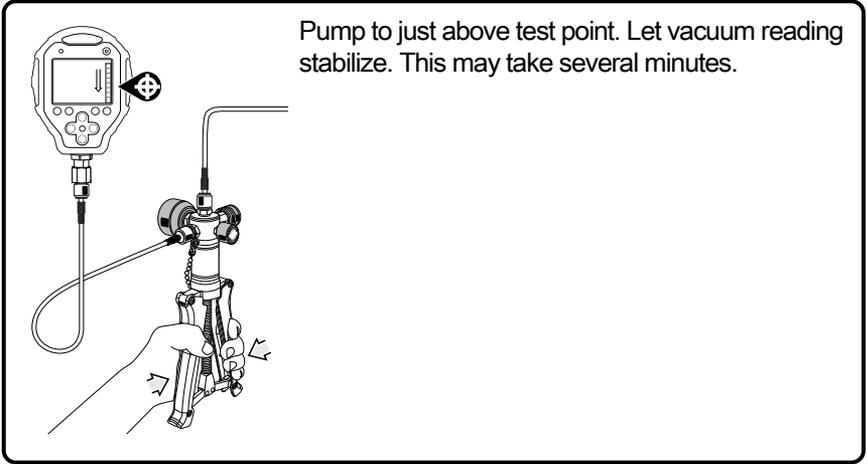


Turn Pressure/Vacuum Knob clockwise for vacuum.

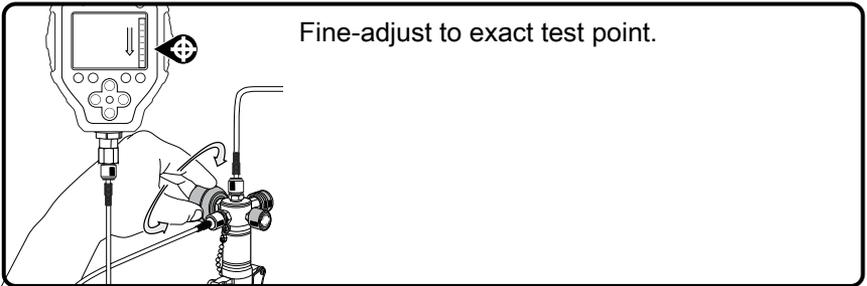
Increase Vacuum



1

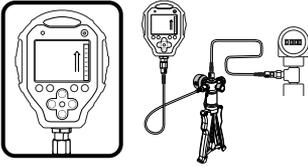


2



 Repeat steps 1 and 2 for each test point down-scale.

Decrease Vacuum



1

A detailed diagram of the handheld gauge. A hand is shown turning the bleed valve clockwise. A callout icon with a crosshair points to the bleed valve. The gauge's display shows a vacuum reading.

Open Bleed Valve to decrease vacuum to just below test point.

2

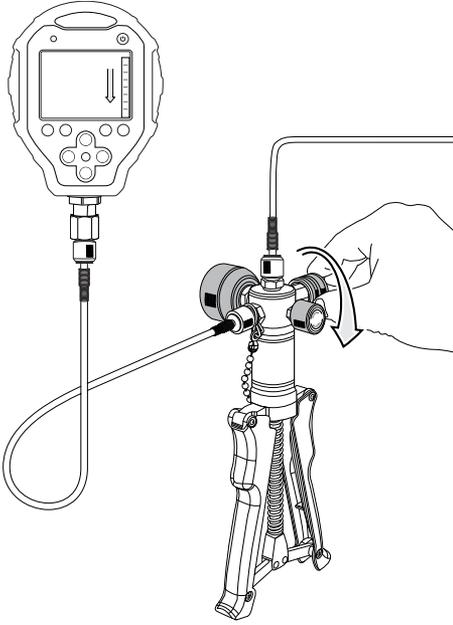
A detailed diagram of the handheld gauge. A hand is shown turning the bleed valve counter-clockwise. A callout icon with a crosshair points to the bleed valve. The gauge's display shows a vacuum reading.

Fine-adjust to exact test point.

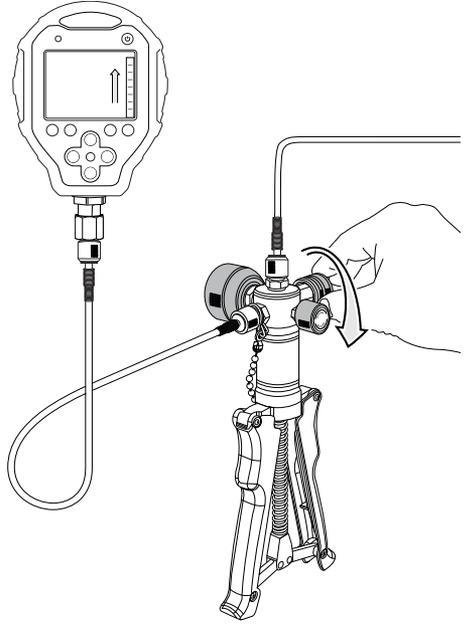
 Repeat steps 1 through 2 for each test point up-scale.

Venting System

Release Pressure



Release Vacuum

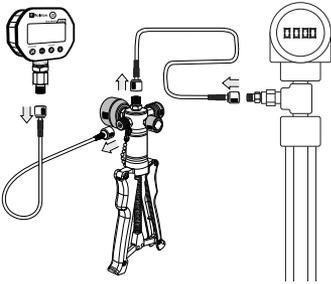


When finished testing, open the Bleed Valve and vent the system.

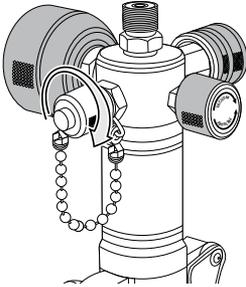
Storage and Transport

Vent system when calibration is completed. See page 17.

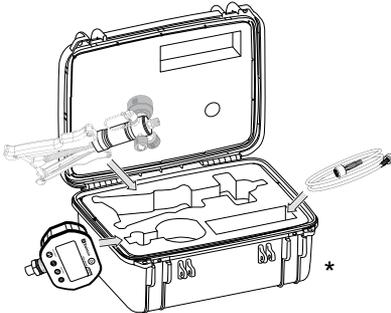
1



2



3



* Ralston DCAP or DCAP-PV Test Pump Carrying Case (DCAP-CASE). Sold separately.

Maintenance

Maintenance Interval

Every 300 uses or 3 months

Maintenance Procedure

- Lubricate the Ralston Quick-test™ fittings by squirting 2 ml of oil inside the connection.
- Lubricate the Fine Adjust Piston O-rings with silicone-based lubricant.
- Lubricate the threads on the Fine Adjust Piston with a graphite-based grease, such as Dow Corning® Moly-kote G-n Metal Assembly Paste (or equivalent).

Troubleshooting

The Pumping Piston is difficult to pump

If the Pumping Piston is difficult to pump over years of service, then apply a thin coat of graphite grease such as Dow Corning® Moly-kote G-n Metal Assembly Paste (or equivalent).

If the issue was not resolved by these troubleshooting instructions, then please contact support listed on page 21.

Support

Hours: **8:30 am – 5:00 pm EST**

Phone: **1 440-564-1430 • Toll Free: 1 800-347-6575 (US and Canada)**

Web: **ralstoninst.com/support**

Email: **support@ralstoninst.com**

Parts and Service: **ralstoninst.com/dcappv**

Ralston DCAP-PV Pressure/Vacuum Test Pump Operation Manual

For all models of the Ralston DCAP-PV Pressure/Vacuum Test Pump



ralstoninst.com

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