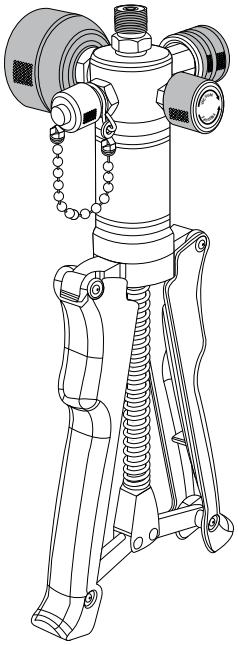
EN

Ralston

Ralston DCAP-PV Pressure/Vacuum **Test Pump** Operation Manual



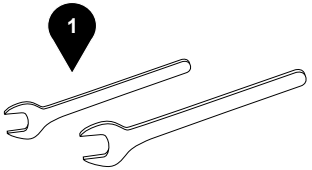
For all models of the Ralston DCAP-PV Pressure/Vacuum Test Pump

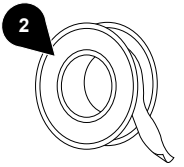
Table of Contents

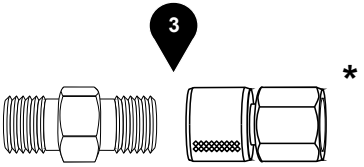
Specifications

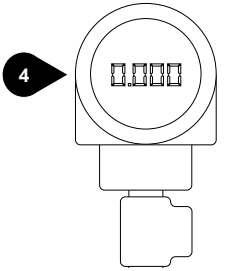
Pressure Range	0-650 psi (45 bar)
Vacuum Range	28.5 inHg / 760 mmHg
Media	Air
Pressure Reference Port	Male Ralston Quick-test™ outlet port, no check valve, stainless steel
Pressure Outlet Port	Male Ralston Quick-test™ outlet port with cap and chain, stainless steel
Temperature Range	0 to 130 °F (-18 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)

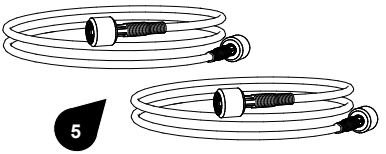
Requirements

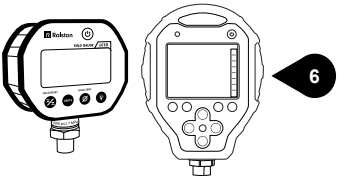












*** ralstoninst.com/adapters**

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

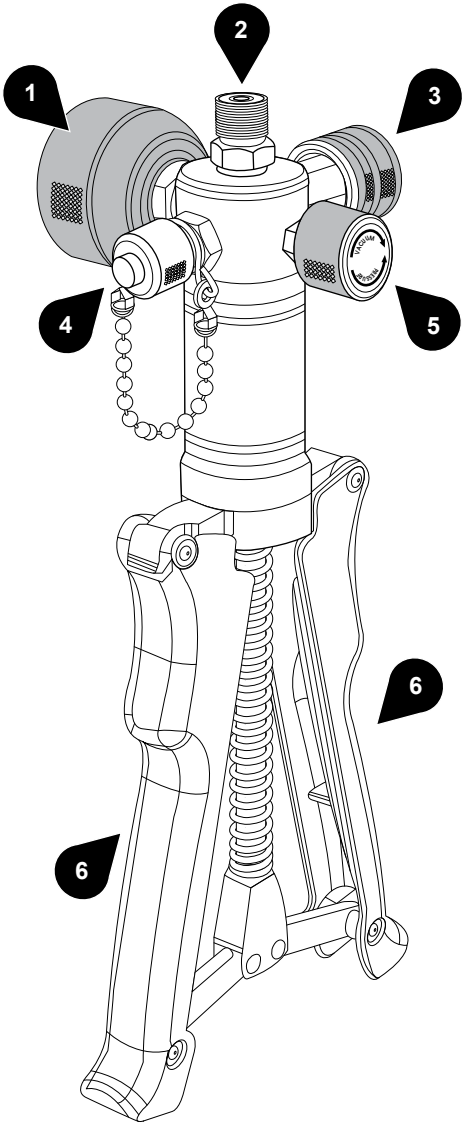
⚠ WARNING: Do not exceed Maximum Working Pressure for this product or damage may result.

⚠ 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.

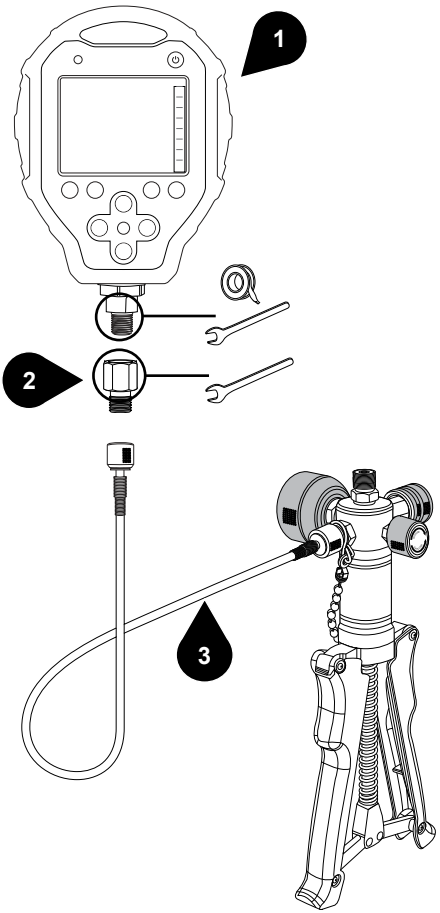
Pressure/Vacuum Test Pump Overview



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

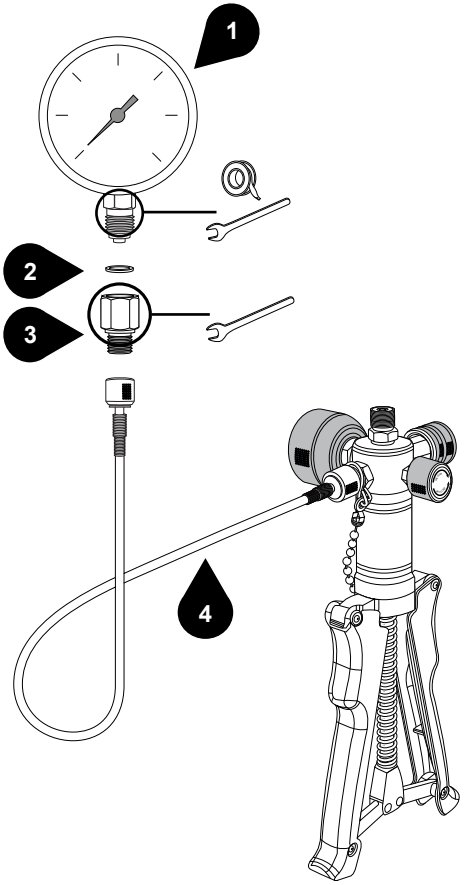
Connecting Reference Gauge

Male NPT Reference Gauge



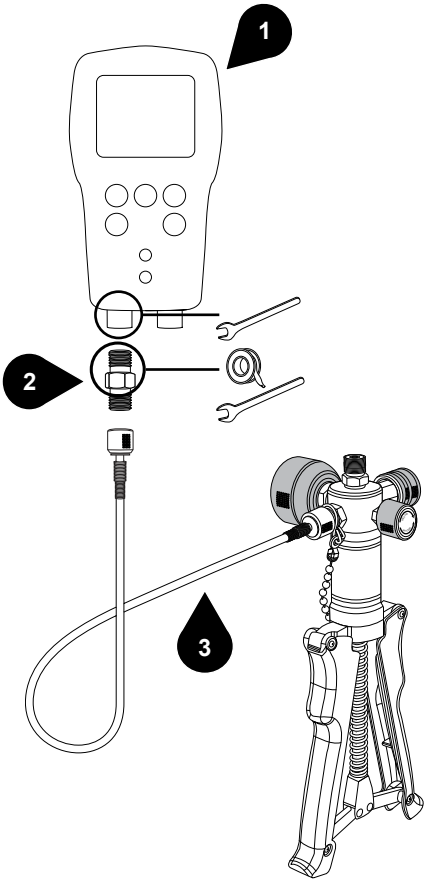
1. Reference Gauge with NPT male connection
2. NPT Female Ralston Quick-test™ Adapter
3. Ralston Quick-test™ Hose

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

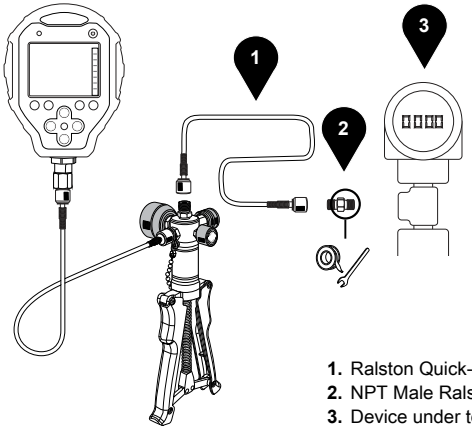


1. Reference Gauge with NPT female port
2. NPT Male Ralston Quick-test™ Adapter
3. Ralston Quick-test™ Hose

Connecting Device Under Test (DUT)

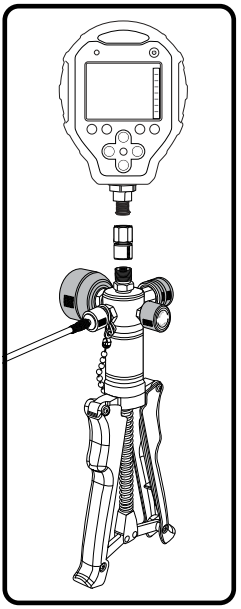
1 Isolate the Device Under Test (DUT) from the process and vent DUT prior to connecting to it.

2



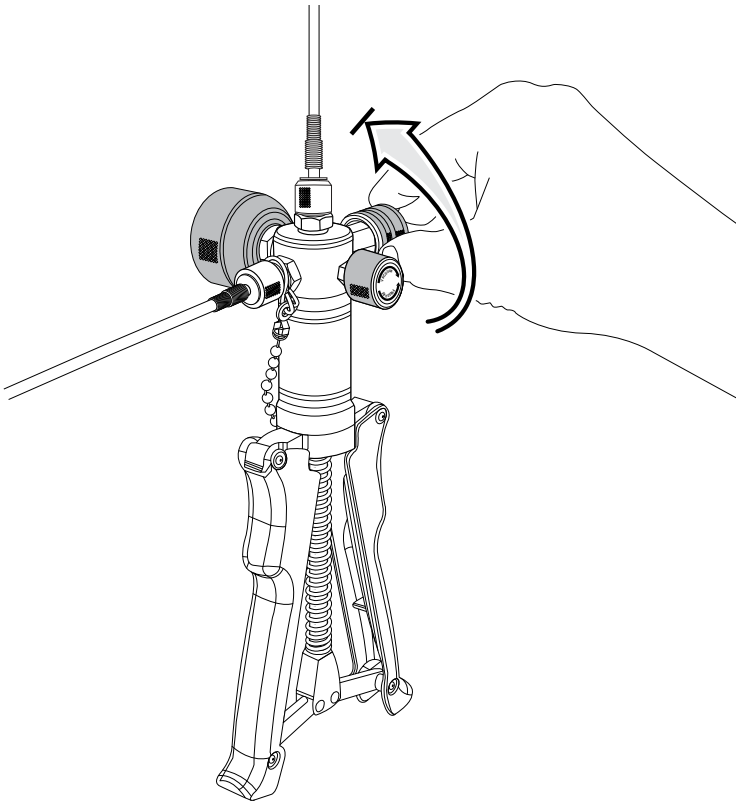
1. Ralston Quick-test™ Hose
2. NPT Male Ralston Quick-test™ Adapter
3. Device under test (DUT)

or

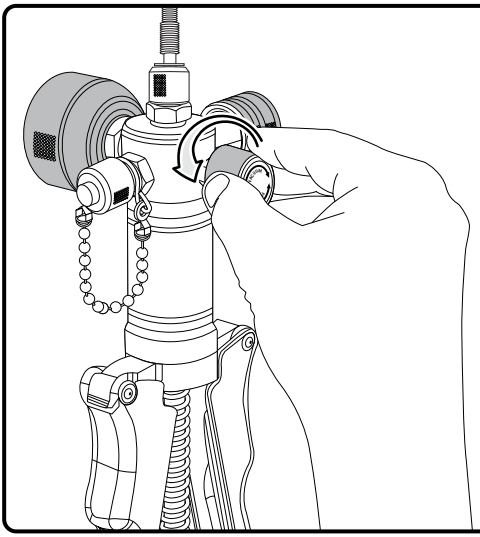


Prepare the Pump

Close Bleed Valve.

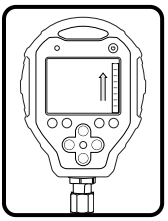


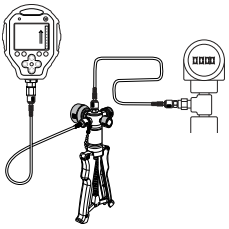
Calibrate with Pressure



Turn Pressure/Vacuum Knob counterclockwise for pressure.

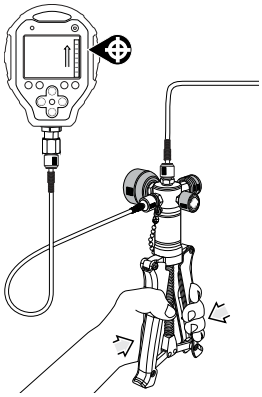
Increase Pressure





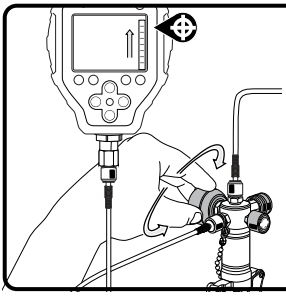
Test point

1



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

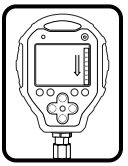
2



Fine-adjust to exact test point.

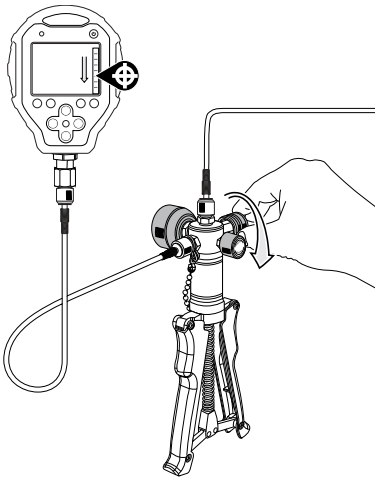
Repeat steps 1 through 2 for each test point up-scale.

Decrease Pressure



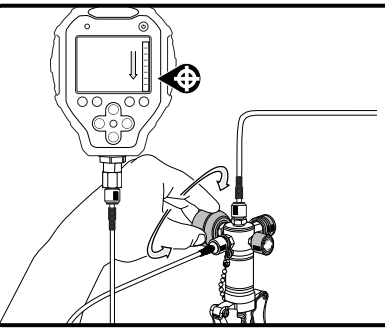
Test point

1



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

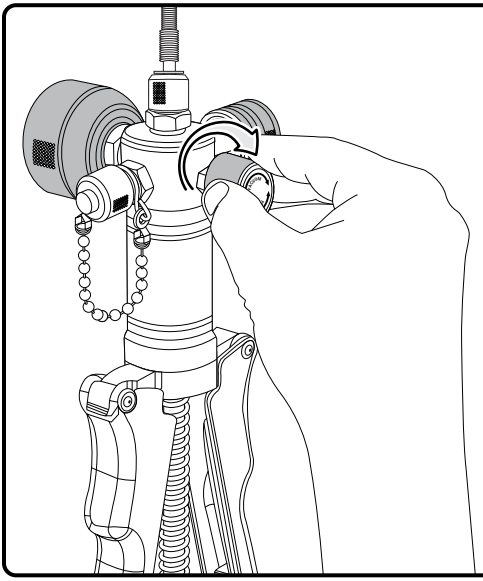
2



Fine-adjust to exact test point.

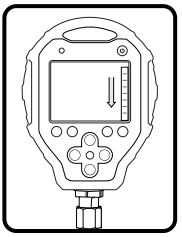
Repeat steps 1 and 2 for each test point down-scale.

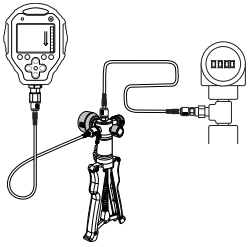
Calibrate with Vacuum



Turn Pressure/Vacuum Knob clockwise for vacuum.

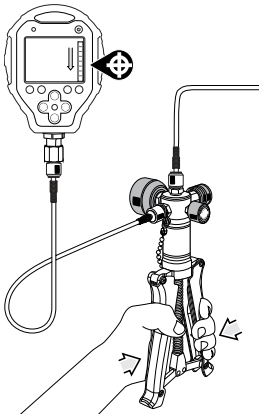
Increase Vacuum





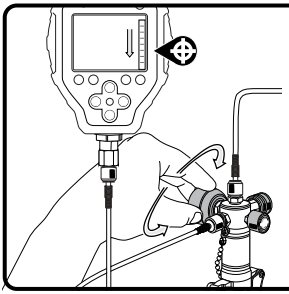
Test point

1



Pump to just above test point. Let vacuum reading stabilize. This may take several minutes.

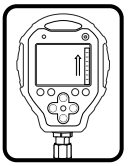
2



Fine-adjust to exact test point.

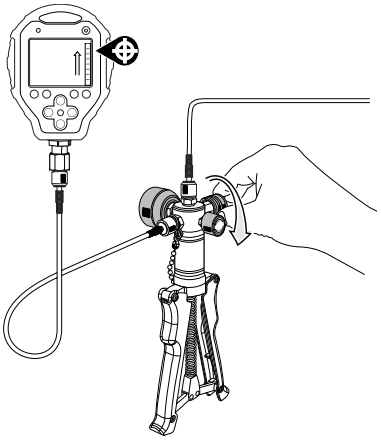
Repeat steps 1 and 2 for each test point down-scale.

Decrease Vacuum



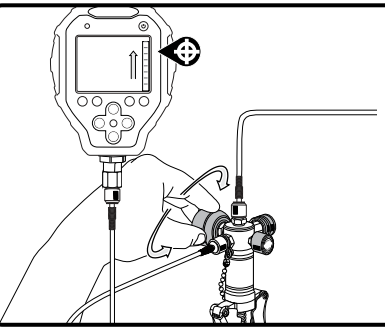
Test point

1



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

2

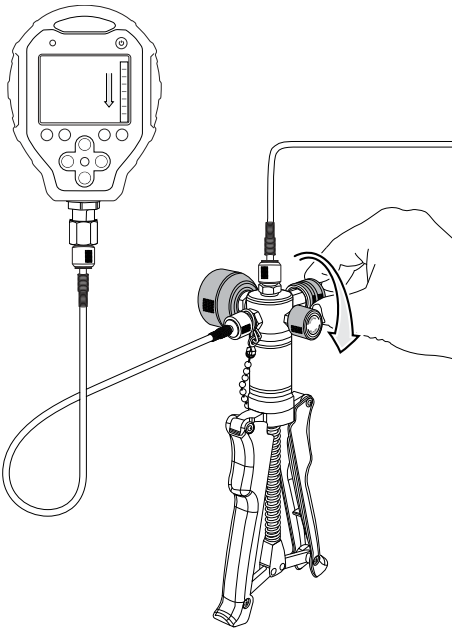


Fine-adjust to exact test point.

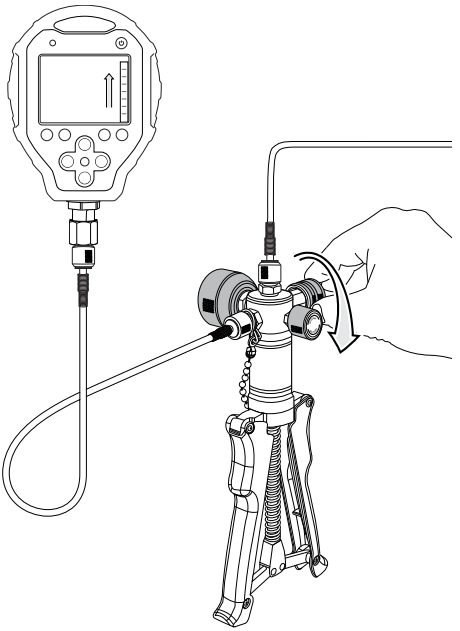
Repeat steps 1 through 2 for each test point up-scale.

Venting System

Release Pressure



Release Vacuum

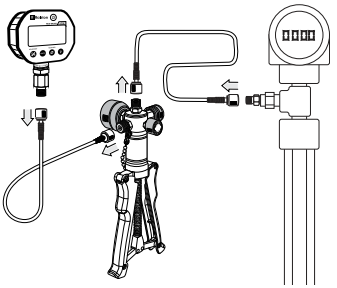


When finished testing, open the Bleed Valve and vent the system.

Storage and Transport

Vent system when calibration is completed. See page 17.

1



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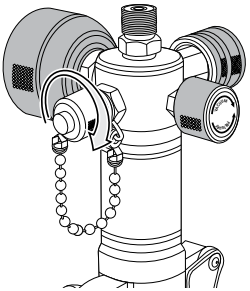

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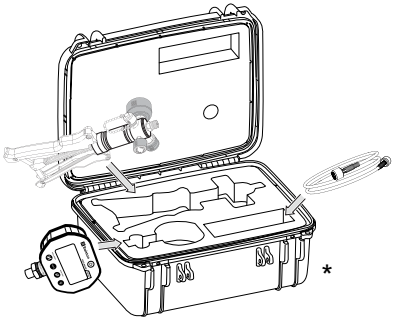

* Ralston DCAP & DCAP-PV Test Pump Carrying Case (DCAP-CASE). Sold separately.

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**

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