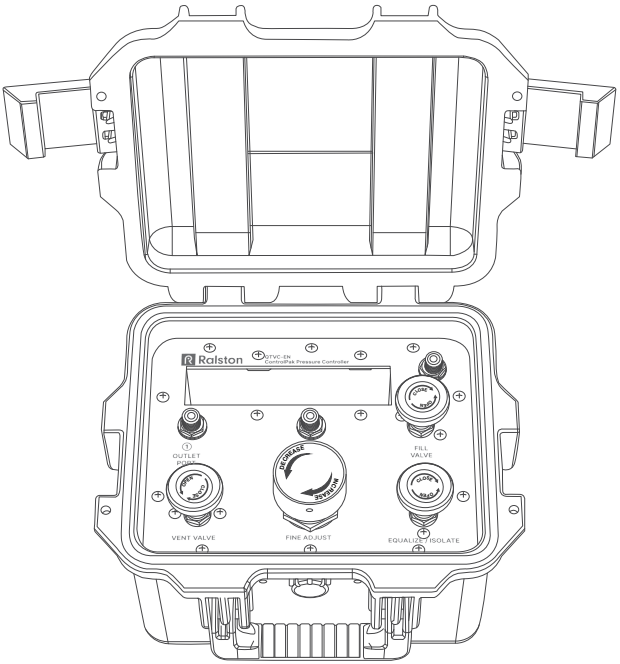
EN

Ralston QTVC-EN ControlPak Pressure Controller Operation Manual



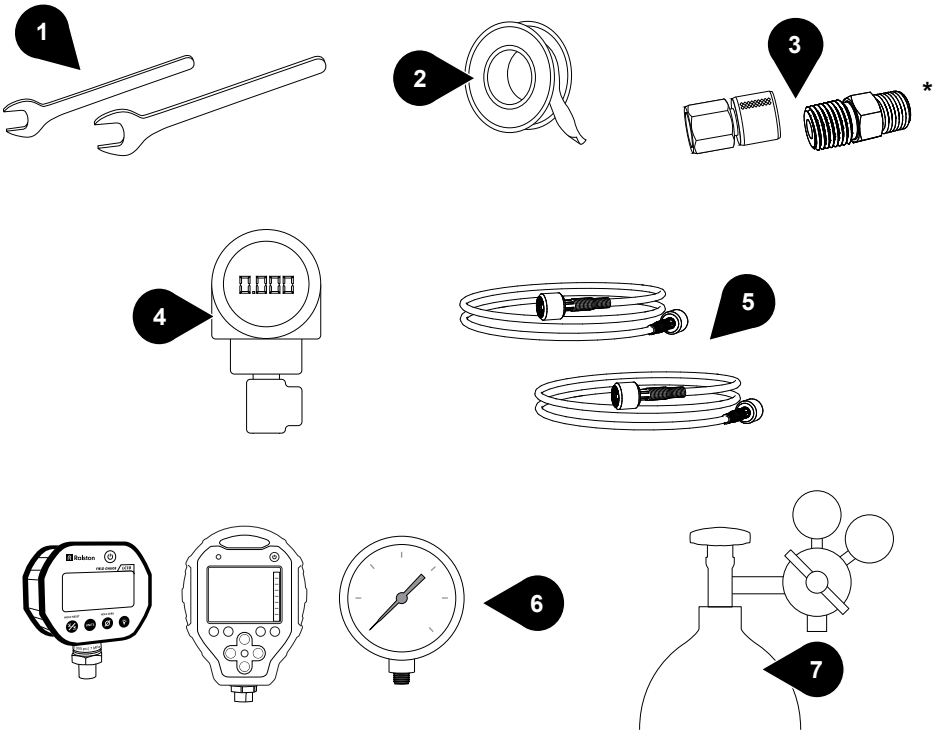
For all models of the Ralston QTVC-EN ControlPak Pressure Controller

Table of Contents

Specifications

Pressure Range	0 to 3,000 psi (0 to 210 bar)
Vacuum Range	0 to 10 inHg (0 to 260 mmHg)
Temperature Range	0 to 130 °F (-18 to 54 °C)
Construction	Anodized Aluminum, Brass, Plated Steel, Stainless Steel
Seal Materials	Buna-N, PEEK®, Teflon®
Pressure Media	Nitrogen, inert gas
Fine Adjust Resolution	±0.0005 PSI (0.03 mbar)
Inlet Port	Male Ralston Quick-test™, brass
Outlet Port A	Male Ralston Quick-test™ with cap and chain, brass
Outlet Port B	Male Ralston Quick-test™, brass
Weight	8.9 lb (4 kg)
Dimensions	L: 11.8 in (30cm) W: 9.8 in (24.9cm) H: 7.7 in (19.6cm)
Fill and Vent Valves	Soft seated construction
Mechanical Rotation	42 turns (pressure balanced)

Requirements



*** ralstoninst.com/adapters**

What you need to use your ControlPak Pressure Controller:

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

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.

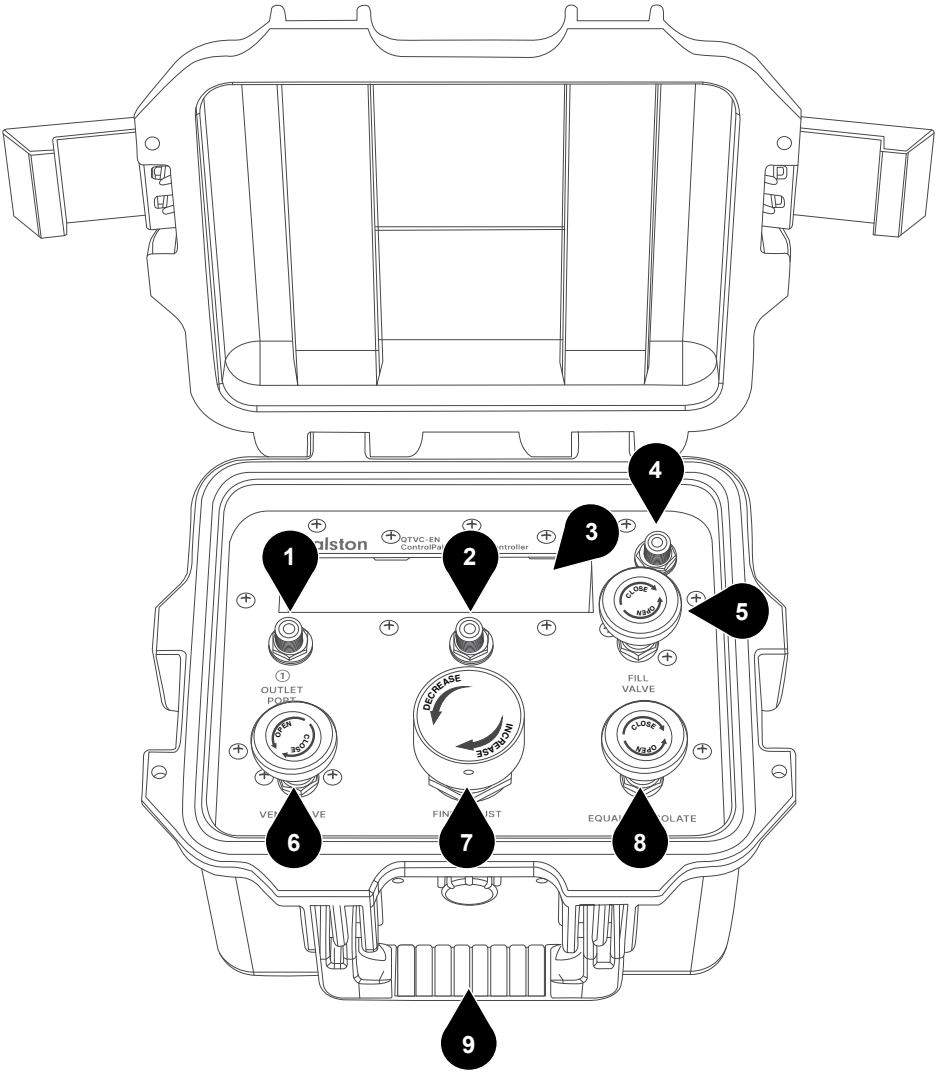
⚠ WARNING: Do not attempt to operate this product until you have read and fully understand the instructions and hazards of the product.

- Any modifications to this product with custom parts can result in hazardous operation of the product.
- 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.

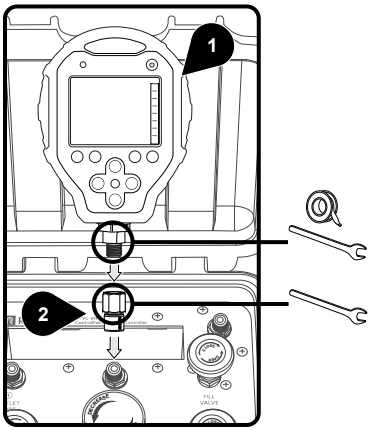
ControlPak Pressure Controller Overview



1. Outlet Port 1
2. Outlet Port 2
3. Storage Space
4. Fill Port
5. Fill Valve
6. Vent Valve
7. Fine Adjust Valve
8. Equalize/Isolate Valve
9. Carry Handle

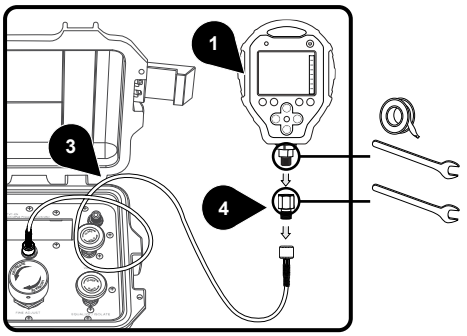
Connecting Reference Gauge

Male NPT Reference Gauge

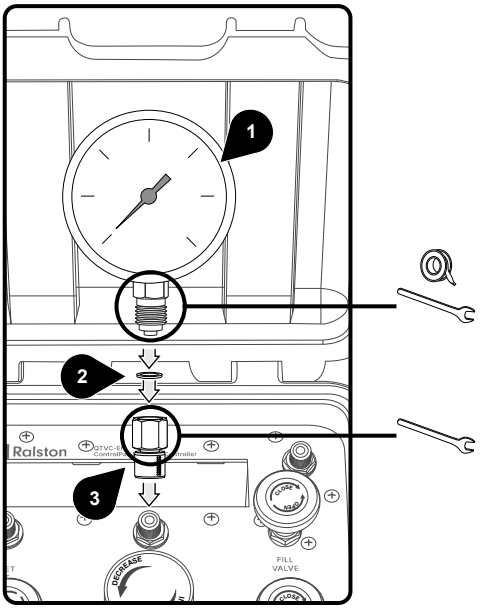


1. Reference Gauge with NPT male connection
2. NPT Female Ralston Quick-test™ Gauge Adapter
3. Ralston Quick-test™ Hose
4. NPT Female Ralston Quick-test™ Adapter

or

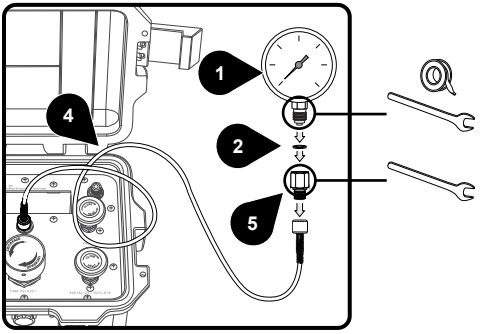


Male BSPP Reference Gauge

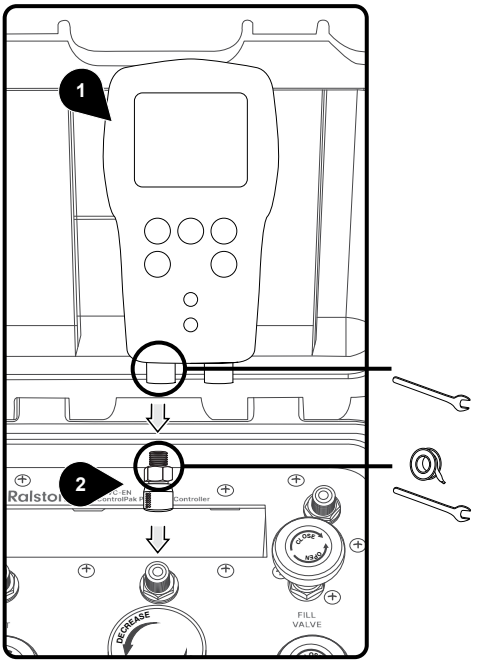


1. Reference Gauge with BSPP male connection
2. BSPP Washer
3. BSPP Female Ralston Quick-test™ Adapter
4. Ralston Quick-test™ Hose
5. BSPP Female (RG) Ralston Quick-test™ Adapter

or

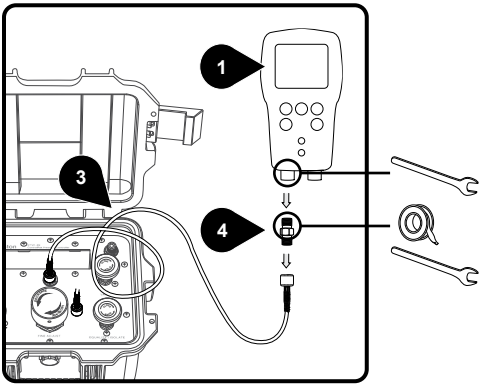


Female NPT Pressure Reference Gauge



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

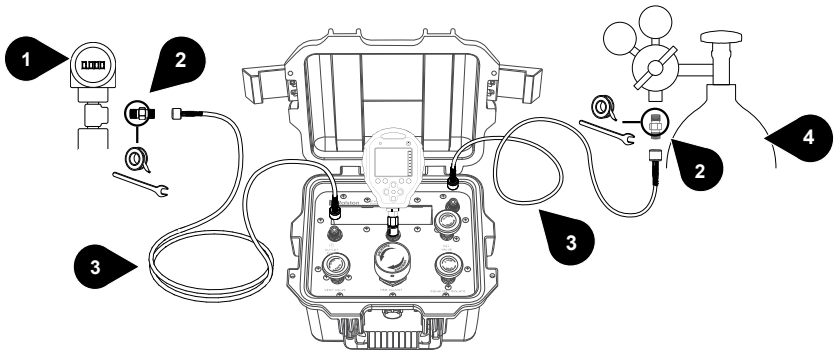
or



Connecting Device Under Test (DUT) and Pressure Source

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

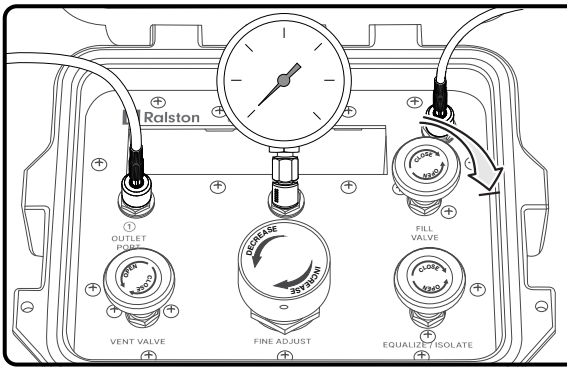
2



1. Device under test (DUT)
2. Ralston Quick-test™ Adapters
3. Ralston Quick-test™ Hoses
4. Pressure source

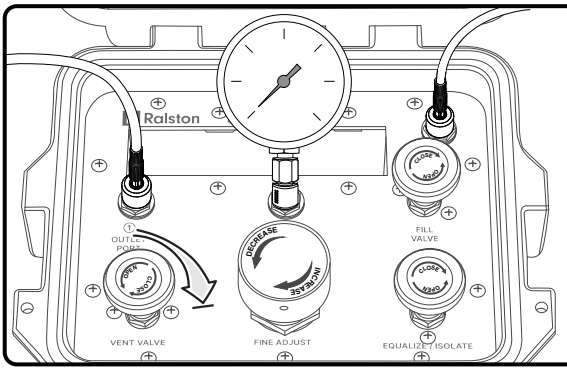
Prepare the ControlPak Pressure Controller

1



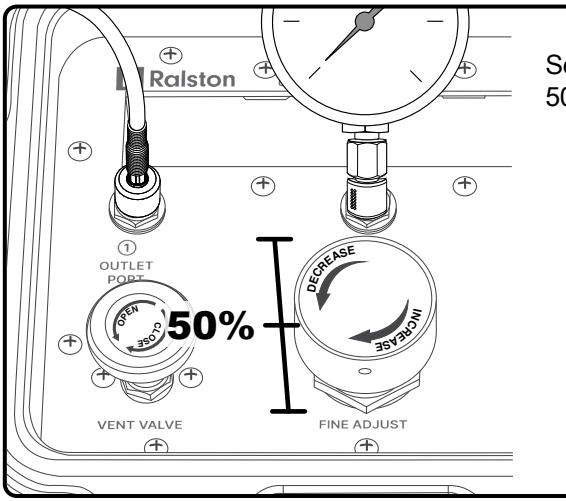
Close Fill Valve.

2



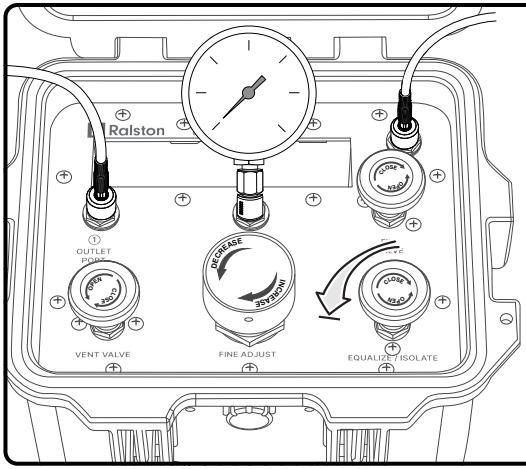
Close Vent Valve.

3



Set Fine Adjust Valve to 50% of travel.

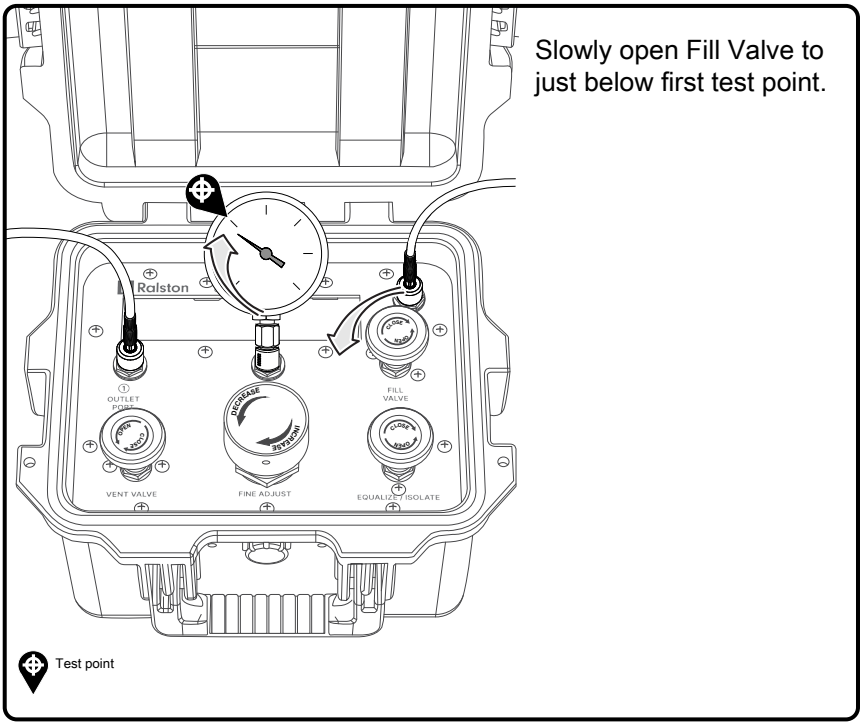
4



Open Equalize/Isolate Valve.

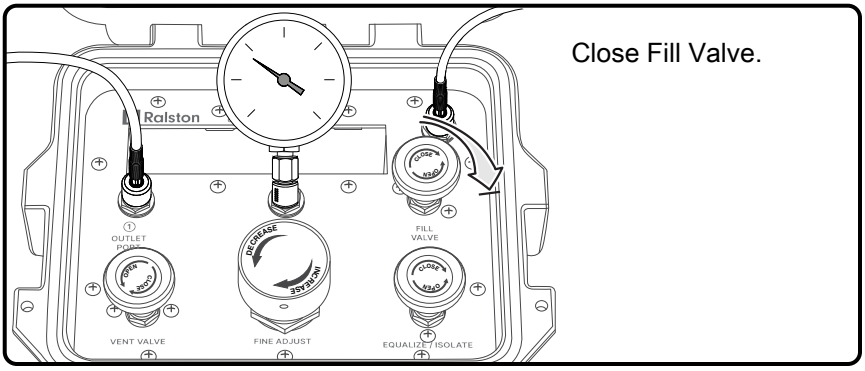
Increase Pressure

1



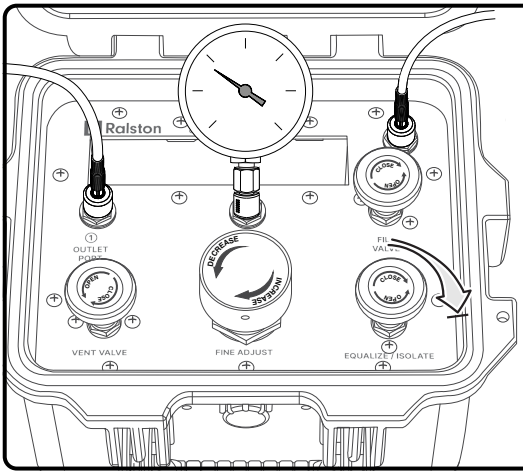
Slowly open Fill Valve to just below first test point.

2



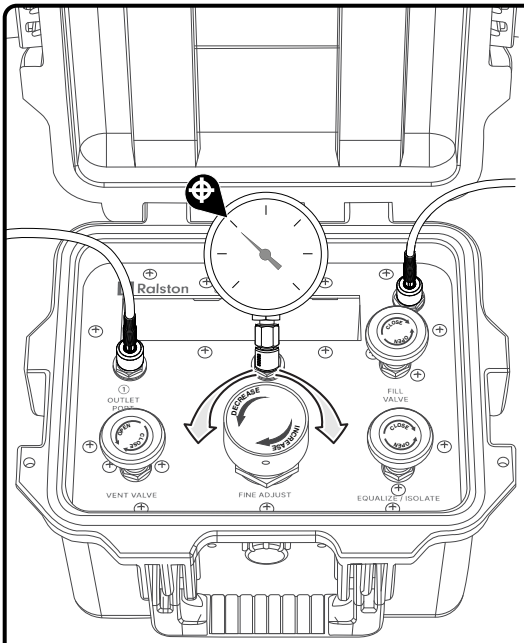
Close Fill Valve.

3



Close Equalize/Isolate Valve.

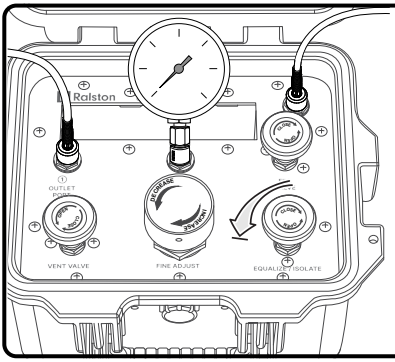
4



Use Fine Adjust Valve to put reference gauge on exact test point.

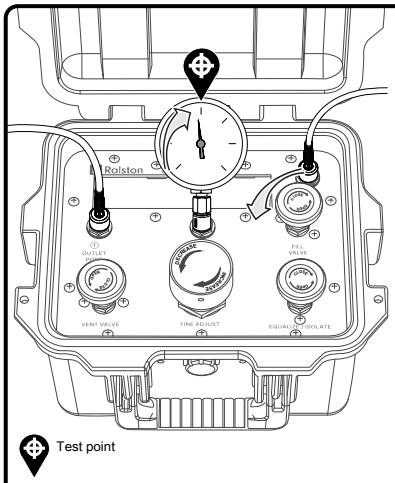
To Continue Moving Up-scale in Pressure

1



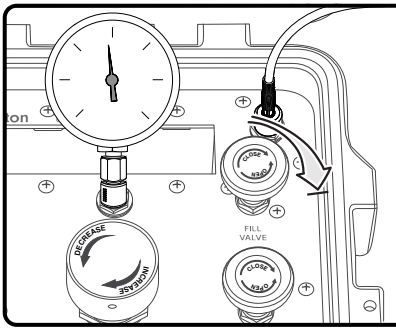
Open Equalize/Isolate Valve.

2



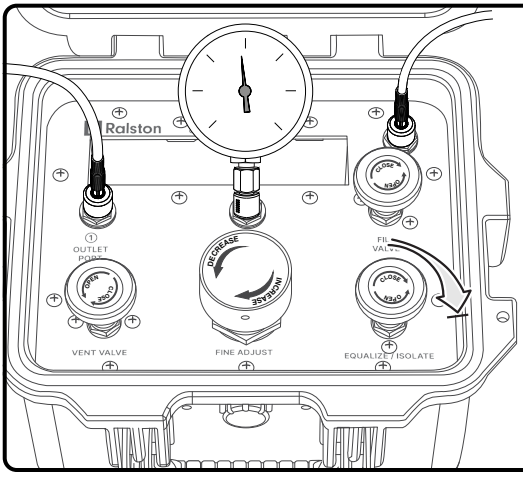
Slowly open Fill Valve to just below next test point.

3



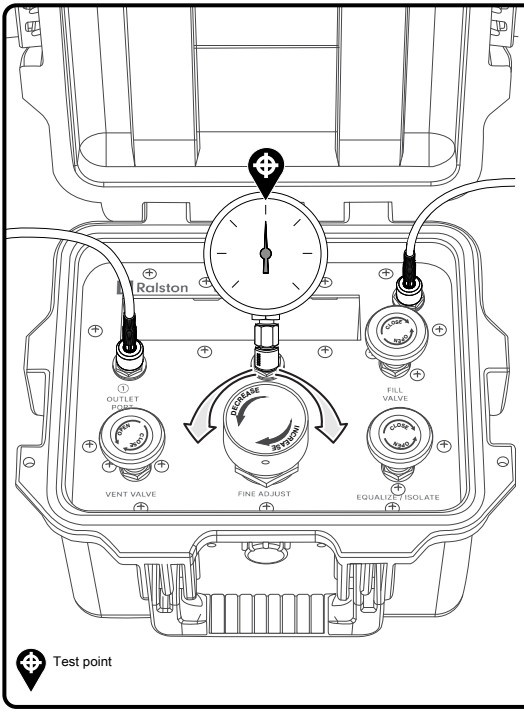
Close Fill Valve.

4



Close Equalize/Isolate Valve.

5

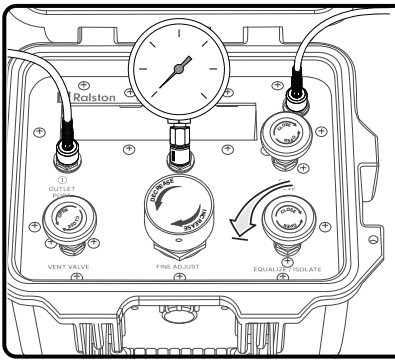


Use Fine Adjust Valve to put reference gauge on exact test point.

Repeat for each test point up-scale until range is complete.

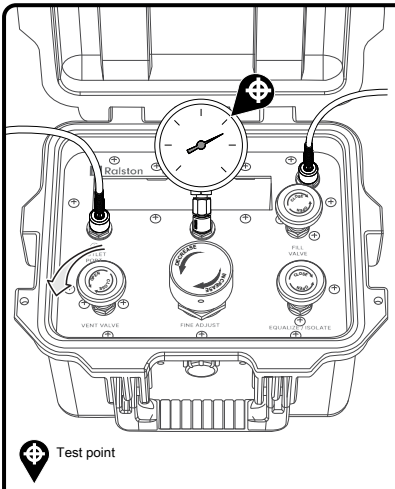
To Move Down-scale in Pressure

1



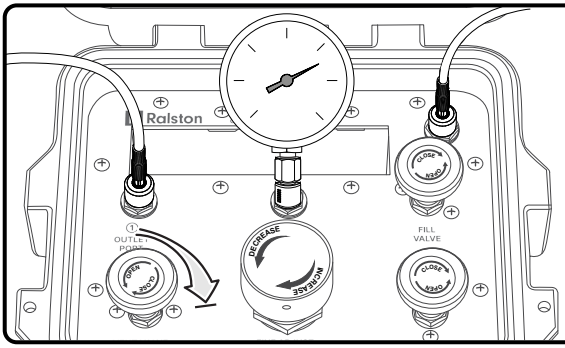
Open Equalize/Isolate Valve.

2



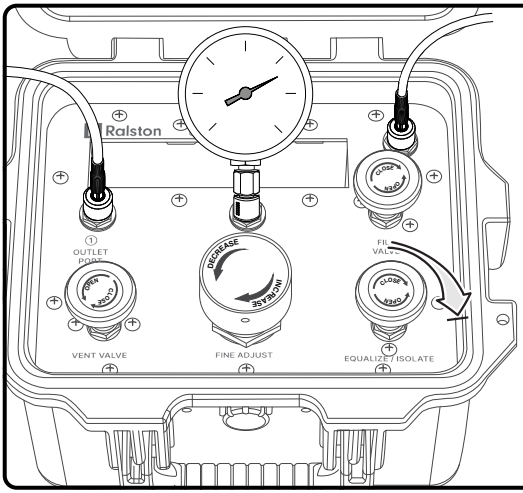
Slowly open Vent Valve to just above next test point.

3



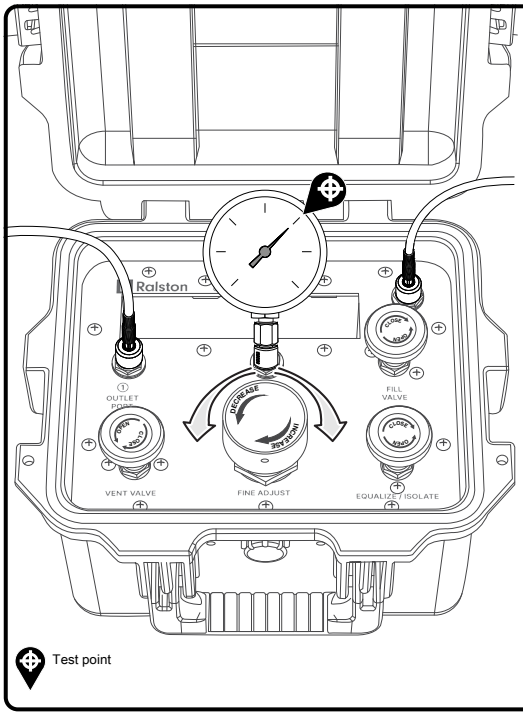
Close Vent Valve.

4



Close Equalize/Isolate Valve.

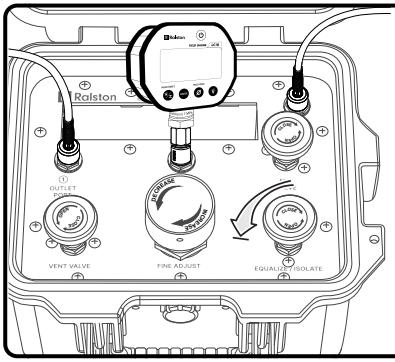
5



Fine-adjust to exact test point.

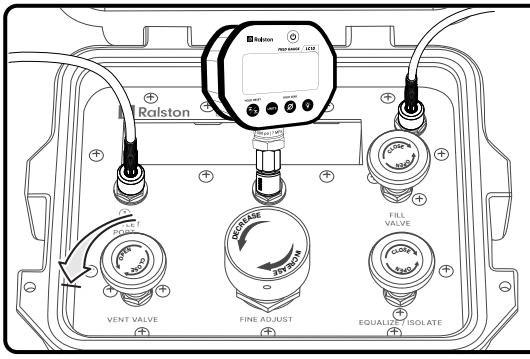
Venting System

1



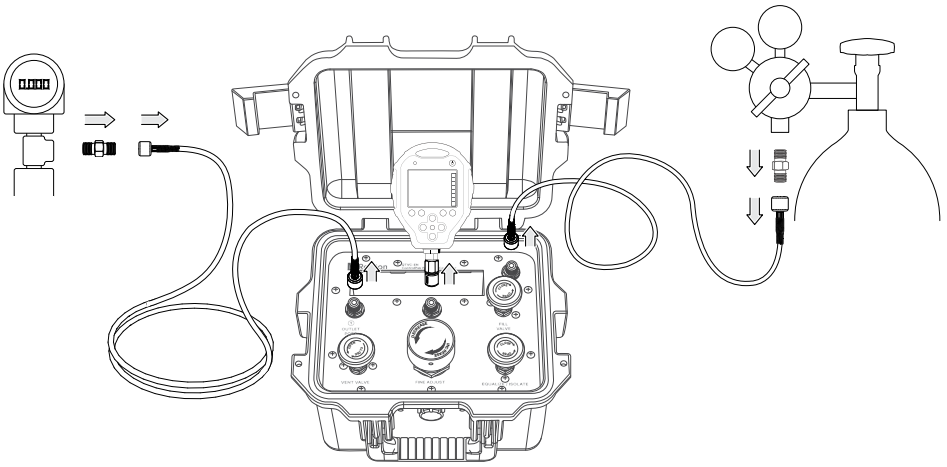
Open Equalize/Isolate Valve.

2



Open the Vent Valve.

Storage and Transport



Disconnect hoses and pressure reference, and store everything.

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 balance valve O-rings with silicone lubricant.

Troubleshooting

There is a drop in system pressure when the Pressure Controller has been pressurized and the Fill Valve is closed

If there is a drop in system pressure when the Pressure Controller has been pressurized and the Fill Valve is closed, then there is a leak. Follow these instructions to locate and repair the leak:

1. Connect the Pressure Controller to a Device Under Test (DUT) and connect a Ralston Quick-test™ hose to the Inlet Port.
2. Make sure the process connections are assembled wrench-tight.
3. Close Vent Valve.
4. Open Balance and Fill Valves.
5. Apply pressure to unit.
6. Close Fill Valve.
7. Spray soapy water or leak detection fluid where leaks are suspected or immerse the Pressure Controller in water. Be careful not to immerse the pressure gauge or calibrator.
8. Observe where the bubbles are coming from to determine where there is a leak.
9. Remove the leaking part and remove the O-ring.
10. Clean and lubricate the O-ring, and backup ring if applicable.
11. Replace the O-ring, and backup ring if applicable.
12. Reassemble.

Fine Adjust Valve is difficult to operate

If the Fine Adjust Valve is difficult to operate over years of service, then the inside walls of the piston need grease.

1. Remove the Fine Adjust Valve.
2. Apply a thin coat of graphite grease, such as Dow Corning® Moly-kote G-n Metal Assembly Paste (or equivalent) to the inside walls of the piston.
3. Reassemble.

The Pressure Controller does not adjust pressure

If the Pressure Controller does not adjust pressure, check the Equalize / Isolate valve seat for damage or debris.

1. Remove the Equalize / Isolate valve from the front of the panel.
2. Clean and inspect the valve stem tip.
3. Clean and inspect the valve seat.
4. Replace the valve if damaged.
5. Reassemble.
6. If the Pressure Controller still does not adjust pressure, then remove the Fine Adjust piston.
7. Clean and lubricate the O-ring and back up rings.
8. Replace the O-rings if damaged.
9. Reassemble.

If the issue was not resolved by these troubleshooting instructions, then please contact support listed on page 22.

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/qtvc-en**

Notes

Notes

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