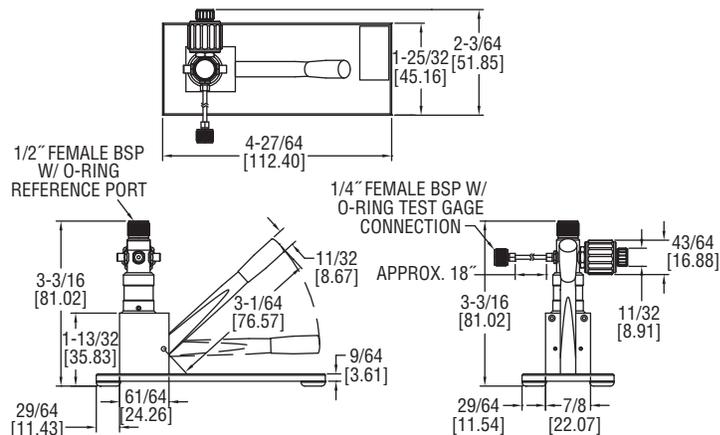




## Series BCHP Low Pressure Hand Pump

### Specifications - Installation and Operating Instructions



The Series BCHP Calibration Test Pump is able to generate pressure and vacuum for adjusting or calibrating pressure gauges, transmitters, or switches. The pump is hand operated and has a pneumatic pressure range of -28 in Hg to 870 psi (-0.95 bar to 60 bar). Dual pressure ports allow two instruments to be connected to the pump without additional fittings. The Series BCHP can be used in laboratories and production areas. The fine adjustment valve on this pump ensures precise measurements.

#### PRODUCT OVERVIEW

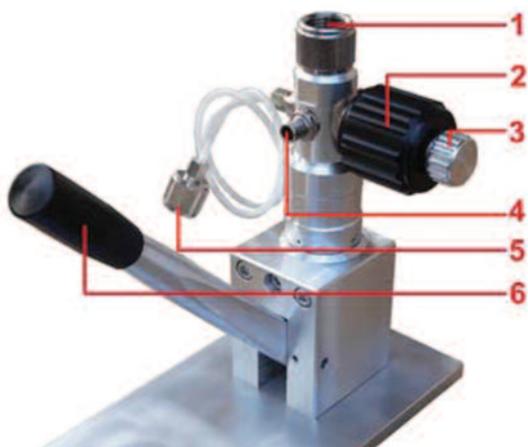


Figure 1

- |   |  |
|---|--|
| 1. Pressure connector for reference instrument 1/2" BSP female rotating | 4. Change-over switch for pressure/vacuum generation               |
| 2. Fine adjustment knob   | 5. Pressure connector for test instrument 1/4" BSP female rotating |
| 3. Pressure relief knob   | 6. Pump handle   |

#### SPECIFICATIONS:

**Media:** Air.

**Output Ranges:** -28 in Hg to 870 psi (-0.95 to 60 bar).

**Process Connections:** 1/4" female BSP

**Gauge Connection:** 1/2" female BSP.

**Materials:** Anodized aluminum, brass, and ABS.

**Weight:** 8.4 lb (3.8 kg).

#### MOUNTING INSTRUCTIONS

The reference instrument is to be mounted on the top connection of the pump. Fastening with the knurled nut by hand is sufficient. An integral O-ring seals the reference instrument pressure port without the use of teflon tape.

The test instrument is attached to the connection at the end of the hose. The optional NPT adapter set includes sealing gaskets and different adapters to best fit the instrument being tested. The tube can also be removed to attach the test instrument directly to the pump using the same adapter.

#### NOTICE

Do not use tape sealant to seal the ports, as it may damage the pump.

## PRESSURE OPERATION

**Step 1:** Check whether the change-over switch (4) has pressure selected. (See label on neck of the pump) If pressure is not selected, use a small tool to push the switch to the correct position.

**NOTICE** Do not move the change-over switch (4) when the test pump is under operation.

**Step 2:** Make sure the pressure relief knob (3) is not completely closed.

**Step 3:** Turn the fine adjustment knob (2) counter-clockwise until it stops. Then, turn the knob three turns clockwise to ensure the adjustment is adequate to increase or decrease the pressure.

**Step 4:** Turn the pressure relief valve (3) until it closes.

**Step 5:** Press down on the pump handle (6) until the approximate pressure level has been reached.

**NOTICE** Do not exceed a pressure of 650 psi (45 bar).

**Step 6:** Turn the fine adjustment valve (2) clockwise to increase the pressure or counter-clockwise to decrease the pressure. Do this until the required pressure level has been reached on the reference instrument.

**NOTICE** After increasing the pressure, the reading may slightly drop for about 30 seconds, due to thermodynamic effects, the tube connection, and the sealing gaskets. (If the pressure does not come to a standstill within that time, check the ports to be sure they are sealed tightly.)

**Step 7:** To reduce the pressure in the pump, turn the fine adjustment valve (2) counter-clockwise. If more pressure still needs to be decreased, carefully turn the pressure relief knob (3).

**NOTICE** Only remove the reference or test instrument when the relief valve (3) is open and no pressure is in the test pump.

## VACUUM OPERATION

**Step 1:** Check whether the change-over switch (4) has vacuum selected. (See label on the neck of the pump) If vacuum is not selected, use a small tool to push it to the correct position.

**NOTICE** Do not move the change-over switch (4) when the test pump is under operation.

**Step 2:** Make sure the pressure relief knob (3) is not completely closed.

**Step 3:** Turn the fine adjustment knob (2) clockwise until it stops. Rotate the knob counter clockwise three turns so that the vacuum pressure can be increased or decreased.

**Step 4:** Turn the pressure relief knob (3) until it closes.

**Step 5:** Press down on the pump handle (6) until the approximate vacuum level has been reached.

**NOTICE** Do not exceed a vacuum of -26.5 in Hg (-0.9 bar.)

**Step 6:** Turn the fine adjustment valve (2) clockwise to decrease the vacuum or counter-clockwise to increase the vacuum. Do this until the required pressure has been reached on the reference instrument.

**NOTICE** After increasing the vacuum, the reading may slightly increase for about 30 seconds, caused by thermodynamic effects, the tube connection, and the sealing gaskets. (If the vacuum does not come to a standstill within that time, check the ports to be sure they are sealed tightly.)

**Step 7:** To reduce the vacuum in the pump, turn the fine adjustment valve (2) counter-clockwise. If additional vacuum pressure needs to be relieved, carefully open the pressure relief valve (3).

**NOTICE** Only remove the reference or test instrument when the relief valve (3) is open and no vacuum is in the test pump.

## FAULT INVESTIGATION

1. If the pressure or vacuum cannot be generated correctly or if the set pressure and vacuum does not stay stable, it may be caused by incorrect positioning or sealing of the gaskets. Be sure any adapters on the test instrument have been sufficiently tightened.

2. Before assuming there is a leak in the pump, check if the pressure relief valve (3) is closed and if the change-over switch (4) is correctly positioned.

3. Do not apply any force to the operating elements of the calibration test pump and do not connect an external pressure supply to the pump.

## MAINTENANCE/REPAIR

Upon final installation of the Series BCHP, no routine maintenance is required. The Series BCHP is not field serviceable and should be returned if repair is needed. Field repair should not be attempted and may void warranty.

## WARRANTY/RETURN

Refer to "Terms and Conditions of Sales" in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.