PPP–3P
Precision Pressure Pump

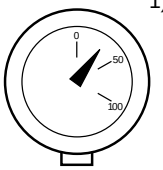
OMEGA®
An OMEGA Technologies Company

Operator´s Manual

OPERATING INSTRUCTIONS

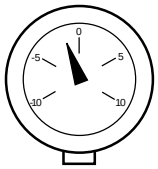
IMPORTANT: Read all operating instructions and general operating information *before* beginning any test procedures.

PRODUCING POSITIVE PRESSURE



1) Connect one of the Model PPP-3P's ports to the instrument to be calibrated or checked. Use small-diameter tubing as short in length as possible (this will maximize the pressure adjustment range). An auxiliary port is provided for simultaneous output to a second device, e.g., application of pressure to an instrument or system under test and to a pressure standard to measure the actual pressure output. If the auxiliary port is not used, it should be securely plugged.
2) Set the brass fine pressure adjustment knob on the top of the pump to the mid-travel position as indicated by the line cast into the pump body.
3) Turn the black discharge knob on the side of the pump fully clockwise. Do not overtighten.
4) Squeeze the actuating levers to generate pressure. At pressures above 150 psig the levers should be squeezed harder and more quickly at the end of the stroke. Additional force is required to open the discharge valve due to higher line pressure.
5) Use the discharge and fine pressure knobs to adjust pressure to the desired level.

PRODUCING NEGATIVE PRESSURE



1) Perform Step 1 as described above.
2) Turn the brass fine pressure adjustment fully clockwise until resistance is felt. Do not overtighten.
3) Turn the discharge knob fully clockwise. Do not overtighten.
4) Turn the fine pressure adjustment counterclockwise to generate the desired negative pressure (to -2 psig).

WARNING

Even nominal pressure values can generate extreme force if fitting or tubing failure occurs due to improper installation or usage. Since the Model PPP-3P is capable of generating pressures over 100 psig, it is imperative that all pressure connections and test procedures be done by qualified service personnel, according to standard engineering practices, to prevent possible personal injury or equipment damage.

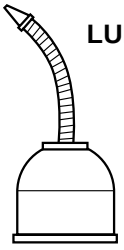
GENERAL OPERATING INSTRUCTIONS

TEMPERATURE CONSIDERATIONS

Since the pressure change of a contained volume of gas is directly proportional to absolute temperature, temperature control is critical when using the Model PPP-3P with any high-resolution measuring device. Tubing should be kept away from heat sources (i.e., lamps, operating electronic equipment, excessive hand contact, etc.) as well as from heat-dissipating structures (i.e., open windows, air conditioning vents, ventilation ducts, etc.) to minimize temperature variations that might induce measurement error.

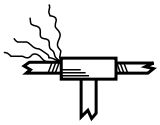
Air is compressed when the Model PPP-3P's actuating levers are squeezed. This compression causes some heating of the air as it is forced into the system. Consequently, a noticeable decrease in pressure—caused by the cooling of the newly compressed air—may occur immediately after cessation of pumping.

LUBRICATION



The Model PPP-3P is lubricated at the factory and under normal operating conditions should not require additional lubrication. If lubrication is required, invert the pump and apply two drops of a light-grade machine oil to the piston rod near the base of the pump body. Do not over-oil.

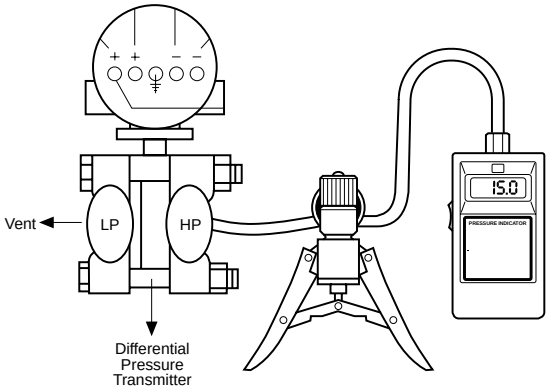
LEAK PREVENTION AND DETECTION



In order to obtain maximum pressure indication stability, leaks must be avoided. It is strongly recommended that either Teflon® tape or commercial pipe sealant be used at all tapered fittings and connections. If Teflon® tape is used, care must be taken that the proper amount is applied. Excessive tape may fray and cause plugging of relief valves, orifices, nozzles, etc. Overuse of pipe sealant may cause similar problems.

External equipment should also be checked carefully for leaks. Process connections, flange bolts, and vents must be tightly closed. Defective gaskets, leaking valves, and damaged diaphragms are all potential sources of leaks.

For detection of very small system leaks, the traditional soap bubble method may not be sufficient. Halogen leak detection devices may be required when using highly sensitive pressure calibration equipment.



SPECIFICATIONS

OUTPUT RANGE: -2 to 200 psig

RESOLUTION: 0.001 psig

PRESSURE CONNECTIONS

Primary Port:	1/8"-27 NPT
Auxiliary Port:	1/8"-27 NPT

WEIGHT: 0.87 kg (1.9 lb.)

MEDIA COMPATIBILITY: Non-conductive, non-corrosive, instrument-grade clean air or inert gas

CONSTRUCTION: Machined brass pump body, piston; stainless steel piston rod, handles

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The information contained in this document is believed to be correct but OMEGA ENGINEERING, Inc. accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARNING: These products are not designed for use in, and should not be used for, paitent connected applications

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to @OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight,insurence and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. P.O. number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. P.O. number to cover the cost of repair,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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