PPP-2P
Precision Pressure Pump

PPP-2V
Precision Vacuum Pump

Omega
An OMEGA Technologies Company

Operator's Manual
IMPORTANT: Read all operating instructions and general operating information before beginning any test procedures.

OPERATING INSTRUCTIONS

PRODUCING PRESSURE

1) Connect Model PPP-2's port 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).

2) Set the FINE ADJUST knob (the large black knob on the end of the pump) to the full counterclockwise position.

3) Turn the BLEED VALVE knob (the small metal knob attached to the port) fully counterclockwise to relieve all system pressure and zero any measuring devices.

4) Turn the BLEED VALVE knob fully clockwise to close.

5) Repeatly move the "T" handle in and out to generate the desired pressure.

6) Use the FINE ADJUST knob to bring the pressure to the precise level.

7) Use the BLEED VALVE to lower the pressure from the pressure generated. Opening the BLEED VALVE 1/4 turn will lower the pressure very gradually. Opening it 1/2 turn will release the pressure faster and opening it 2/3 turn will quickly and safely release all the pressure in the system.

WARNING

It is imperative that all system pressure is relieved prior to making any connections or disconnections. Failure to relieve system pressure could result in serious personal injury or equipment damage. Even nominal pressure values can generate extreme force if fitting or tubing failure occurs due to improper installation or usage. Since the Model PPP-2 is capable of generating pressures exceeding 100 psig, it is important 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 INFORMATION

CONNECTIONS

To install a pressure fitting in the Model PPP-2:

1) Turn the BLEED VALVE counterclockwise to bleed any pressure

2) Use a 5/8" open-end wrench on the input port to prevent it from rotating while tightening the supply fitting with a 5/8" open-end wrench.

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.

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-2 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, etc.) to minimize temperature variations that might induce errors.

Air is compressed by the Model PPP-2. 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.

SPECIFICATIONS

OUTPUT RANGE:

Model PPP-2P - Pressure: 145 PSIG/10 BAR
Model PPP-2V - Vacuum: 600 mm/23" Hg

PRESSURE CONNECTIONS:

Single 1/8" NPT Female Fitting

SIZE:

Body Diameter: 1.5"/3.8 cm
Length: 8.5"/21.6 cm (collapsed)
11.5"/29.2 cm (extended)

WEIGHT:

1.5 Lbs./0.68 kg

CONSTRUCTION MATERIALS:

Body and Piston: Acetal
O-Rings: Buna N
Other Wetted Parts: Brass or Nickel Plated Brass
OMEGAnet℠ On-Line Service
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Servicing North America:
USA: One Omega Drive, Box 4097
    Stamford, CT 06907-0047
    Tel: (203) 359-1660  FAX: (203) 359-7700
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For immediate technical or application assistance:
USA and Canada: Sales Service: 1-800-826-6342 / 1-800-TC-OMEGA℠
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Servicing Europe:
Benelux: Postbus 8034, 1180 LA Amstelveen, The Netherlands
    Tel: (31) 20 6418405  FAX: 42 (69) 631114
    e-mail: nl@omega.com
Czech Republic: Ostravská 767, 733 01 Karvíná
    Tel: 42 (69) 6311899  FAX: 42 (69) 631114
    e-mail: czech@omega.com
France: 9 Rue Denis Papin, 78190 Trappes
    Tel: 33 (1) 30.62.14.00  FAX: 33 (1) 30.69.91.20
    Toll Free in France: 05-4-OMEGA
    e-mail: france@omega.com
Germany/Austria: Daimlerstrasse 26, D-75392 Deckenpronn, Germany
    Tel: 49 (07056) 3017  FAX: 49 (07056) 8540
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United Kingdom: 25 Swannington Road, Broughton Astley, Leicestershire,
    LE9 6TU, England
    Tel: 44 (1455) 285520  FAX: 44 (1455) 283912
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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, patient connected applications.

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, insurance 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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