The PPA500 Pneumatic Hand Pump is a compact, lightweight, portable, hand-operated pressure and vacuum pump. When a digital calibrator is added the unit can be used to calibrate or check pressure measuring devices in the field. No external power or high pressure bottles are required. The PPA500 is completely assembled and ready to connect to the pressure device to be calibrated. Calibration is quick and simple since the pump is taken directly to the pressure device. This pneumatic pump provides a source of air pressure, 0-500 psig (600 psi max.), or vacuum, 0-28” Hg.

1. Isolate the device to be calibrated. CAUTION: Do not connect to high pressure sources. Safe operating procedures must be exercised to avoid personal injury and damage to the calibration system.

2. Connect the pump and calibrator to the pressure device to be calibrated. Make sure the connection is pressure tight and be certain to use Teflon tape to prevent leakage.

3. Turn the knurled knob on the needle valve clockwise to close. NOTE: Hand tighten only to prevent damage to the valve seat.

4. Using a small screwdriver, set the shuttle valve to “pressure or vacuum”. Note that “P” and “V” are stamped on the sides of the pump body.

5. Squeeze the handles until the desired or approximate pressure is obtained. Additional force is required as the pressure is increased.

6. The pressure can be decreased with the needle valve.

7. The pressure can be “fine tuned” with the vernier knob. To increase pressure, turn the vernier knob clockwise. Turning the vernier knob counterclockwise will decrease pressure. NOTE: The vacuum reading increases when the vernier knob is turned counterclockwise.

8. When the calibration procedure is completed, bleed the pressure before disconnecting the unit. CAUTION: To prevent personal injury, the pressure must be reduced to zero before disconnecting any element of the system.

9. Store the unit in a carrying case or other safe location.

Pump Valve Assembly Cleaning Instructions
Occasionally, the PPA500 may not work properly due to dirt or other contamination of the internal valve assembly. Use the following procedure for cleaning the valve assembly.

1. Using a small screwdriver, remove the 2 valve retention caps located on opposite sides of the pump below the pressure/vacuum switch.

2. After the caps have been removed, gently remove the spring and o-ring assembly.

3. Set aside the valve assemblies in a safe area and clean out the valve body using a cotton swab soaked in IPA (isopropyl alcohol).

4. Repeat the process several times using a new cotton swab each time until there is no remaining evidence of contamination or dirt.

5. Operate the pump handles several times and recheck for contamination.

6. Clean the o-ring assembly and the o-ring on the retention caps with IPA and inspect the o-rings closely for any damage or excessive wear. Replacements are included in the repair kit, if needed.

7. Inspect the springs for wear or loss of tension. They should be approximately 8.6 mm long in the relaxed state. If shorter, they may not provide sufficient sealing tension. Replace if needed.

8. Once all parts have been cleaned and inspected, reinstall the o-ring and spring assembly into the valve body.

9. Reinstall the retention caps and gently tighten each cap.

10. Seal the output port and operate the pump to at least 50% of capacity.

11. Release the pressure and repeat several times to ensure that the o-rings seat properly.
It is the policy of OMEGA to comply with all worldwide safety and EMC/EI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

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, human applications.

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of 13 months from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal one (1) year product warranty to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, EXCEPT THAT OFFTITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the 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.

PATENT NOTICE: U. S. Pat. No. 6,074,089; 5,465,838 / Canada 2,228,333; 2,116,055 / UK GB 2,321,712 / Holland 1008153 / Israel 123052 / France 2 762 908 / EPO 0614394. Other patents pending.

FOR WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:
1. Purchase Order 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. Purchase Order number to cover the COST of the repair, 2. Model and serial number of the 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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