

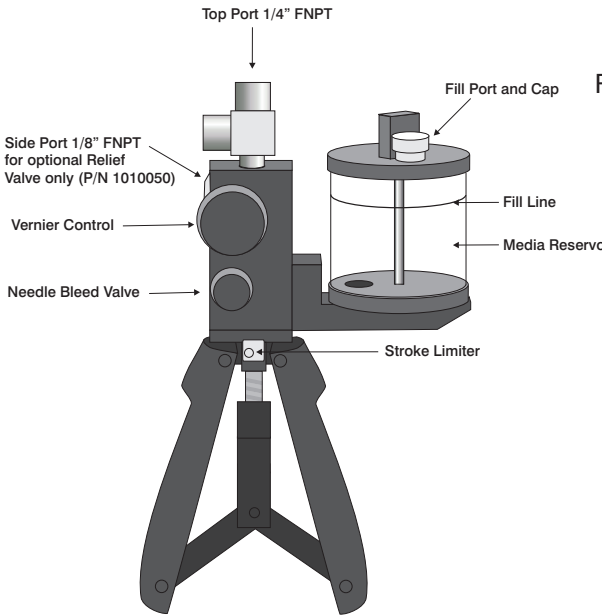
# + User's Guide



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## M-4370/1011 PPH10K



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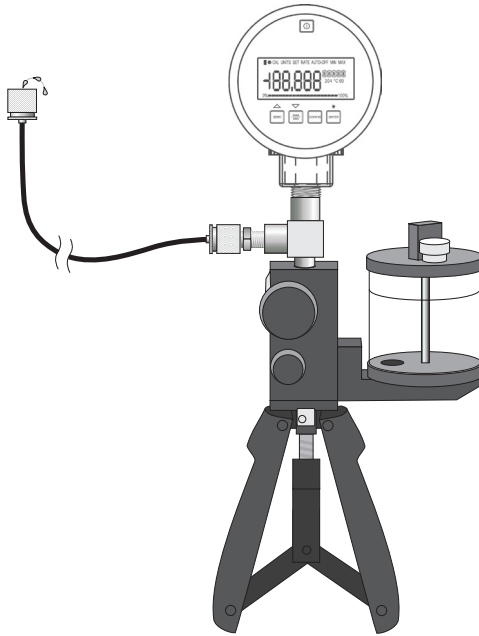
WARNING: These products are not designed for use in, and should not be used for, human applications.

The PPH10K Hydraulic Hand Pump provides a hydraulic pressure source up to 10,000 PSI. A wide variety of pressure media may be used; distilled water, mineral based hydraulic oil, or up to hydraulic oil 100 (30W). The seals are Fluorocarbon and the only other non-metallic materials are plastic. Viscous oils above 30W should not be used.

***CAUTION: Hydrocarbon fluids should never be used in oxygen service applications.***

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. Select a fluid compatible with the system and the PPH10K. Remove the fill cap and fill the reservoir to the fill line. During usage do not allow the fluid level to drop below 50% of the reservoir capacity. (Doing so will allow air to be introduced into the test system).
3. Care should be exercised to minimize the total test system volume. Connect the device(s) to be calibrated to the pump port(s) using fittings or braided hose with the appropriate pressure ratings.
4. Adjust the vernier control to the mid position and close the needle bleed valve.
5. Push the stroke limiter into the prime mode to allow the handles to have maximum travel. With the hose to the device under test open to air squeeze the handles to begin the priming process. (See figure 1). NOTE: This can take many strokes of the pump depending on the volume of the system and if the pump has not been used for a while. It is important to use the full stroke of the handles to make sure a full charge of hydraulic fluid is pulled from the reservoir with each stroke.
6. Once the fluid starts to exit the end of the hose connect the hose to the device to be calibrated and continue to squeeze the handles until the reference gauge starts to show a sharp rise in the pressure. At this point squeeze the handles and push the stroke limiter into the pump mode thereby limiting the stroke of handles. NOTE: failure to use the stroke limiter will greatly reduce the mechanical advantage the user has and will limit the maximum pressure that can be generated with reasonable handle pressure.
7. ***NOTE: Air in the system should be minimized because it can effect calibration and high pressure gases can be dangerous. It may be necessary to "prime" the test system to eliminate gases. Repeat until bubbles are not seen in the reservoir.***
8. Close the needle valve and squeeze the handles until the approximate desired pressure is reached. The vernier control can be used to "fine tune" the pressure. Systems with large volume may

require additional bleeding. Continue until all pressure points are calibrated.



**Figure 1.**

9. Manipulation of the needle valve, vernier control and the handles can produce any pressure desired within the PPH10K hand pump operating range (0 to 10,000 PSI).
10. **CAUTION: To prevent personnel injury, the pressure must be reduced to zero before disconnecting any element of the system.** When the calibration is completed, carefully open the needle valve to release the pressure. **NOTE: Opening the needle valve releases the pressure media into the reservoir. Do not allow the reservoir to overfill while venting.** Store the unit in a carrying case or another safe location. The PPH10K may be stored with the operating fluid in the reservoir. It is recommended that the fluid being utilized be identified so that another potential operator of the PPH10K will be advised.

**WARNING:**

- **Never use the PPH10K to generate pressure greater than 10,000 PSI/700 Bar**
- **Never connect the PPH10K to a pressure source**
- **The 1/8" FNPT Port should only be used with optional Relief Valve P/N 1010050**

## 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.

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## 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.

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.

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