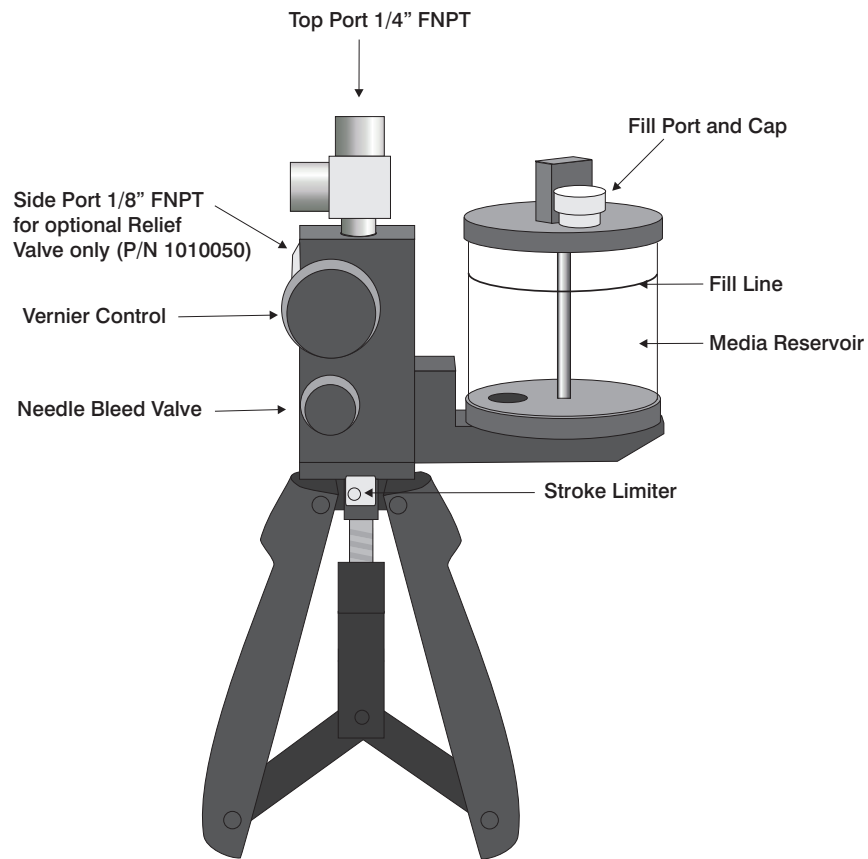


# MECP10K Hydraulic Hand Pump

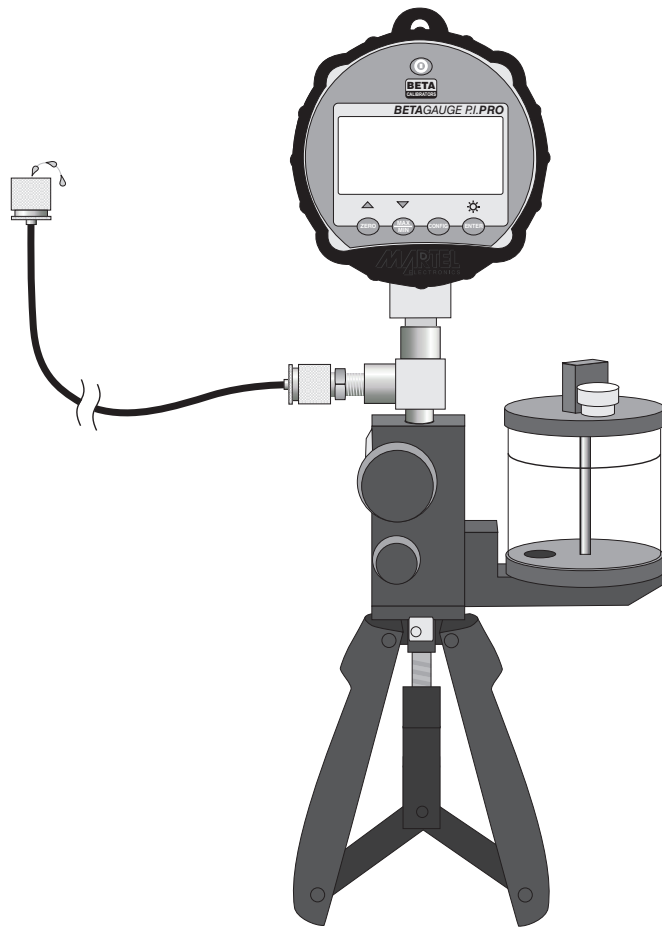


## Operating Instructions

The MECP10K 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 MECP10K. 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.**



**Figure 1.**

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.
9. Manipulation of the needle valve, vernier control and the handles can produce any pressure desired within the MECP10K 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 overflow while venting.** Store the unit in a carrying case or another safe location. The MECP10K 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 MECP10K will be advised.

**WARNING:**

- **Never use the MECP10K to generate pressure greater than 10,000 PSI/700 Bar**
- **Never connect the MECP10K to a pressure source**
- **The 1/8" FNPT Port should only be used with optional Relief Valve P/N 1010050**

**WARRANTY**

Martel Electronics Corporation warrants the MECP10K Hydraulic Hand Pump against defects in materials and workmanship for a period of twelve (12) months after date of sale. An invoice may be required as proof of purchase for warranty claims. Damage due to contamination or other misuse is not covered under this warranty.



0219406 Rev D 10/11