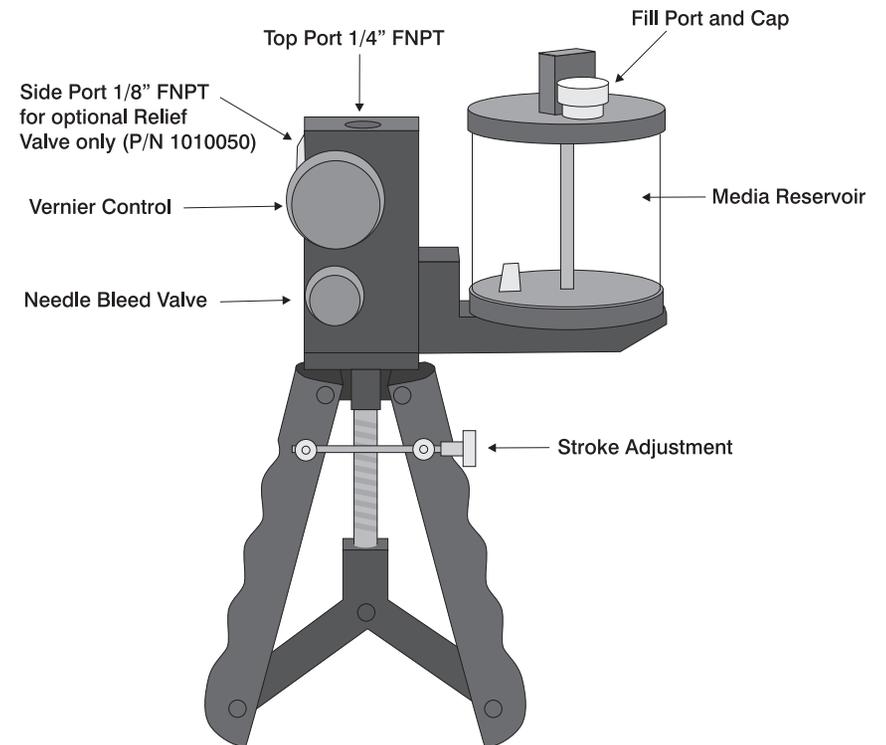


# MECP10K Hydraulic Hand Pump



The MECP10K Hydraulic Hand Pump provides a hydraulic pressure source up to 10,000 PSI. A wide variety of pressure media may be used but **distilled water** is the preferred fluid. The seals are Fluorocarbon and the only other non-metallic materials are plastic. Viscous oils 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. Remove the fill cap and fill the reservoir approximately  $\frac{1}{2}$  -  $\frac{2}{3}$  full. Select a fluid compatible with the system and the MECP10K. *Do not* allow the fluid level to drop below the reservoir. (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. **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.**
6. 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. As higher pressures are achieved, pumping force can be reduced by reducing the stroke length using the continuously variable stroke adjustment.

7. 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).
8. **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 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 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.

If any product is to be returned, a "Return Material Authorization" number may be obtained by calling our Customer Service Department toll free at 1-800-821-0023 in the US or Canada or +1-603-434-8179 outside the US. Access our RMA Form by using [www.martelcorp.com](http://www.martelcorp.com), under Customer Service.

# MECP10K Priming Procedure

*Martel Electronics Corp.*

P/N: **80337**

Products: **MECP10K Hand Pump**

**Released By:**

**ECO No:**

**Written By:** Mark Desmarais

**Approved By:** Tom Fatur

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## Section: 1

### Priming the MECP10K Hydraulic pump without fittings attached.

1. Before attaching any fittings or meters follow the procedure below for initial priming.
2. Hold the pump upright, and then remove the filler cap located on the top of the liquid reservoir.
3. Fill the reservoir up to the maximum line with clean distilled water, mineral oil or hydraulic oil 32 (10W), then re-install the filler cap finger tight.
4. Adjust the **Vernier Knob** to approximately the mid point of its range.
5. Open the **Bleed Knob** fully, by turning it counterclockwise until it stops.
6. Lay the pump over horizontally for approximately one minute or until the liquid appears at the top or side ports (this allows the liquid to fill the passages inside of the pump body easily) then stand the pump back up vertically, close the **Bleed Knob** (clockwise). Pump the handles a few times and the liquid should start to fill the ports.
7. Attach any instruments, hose connections or plugs to the ports and continue to compress the handles until pressure is created.  
Note: It may take several dozen compressions of the handles to create pressure depending on attachment volumes and length of hoses.
8. Open the **Bleed Knob** to release pressure and any trapped air back into the reservoir. Repeat this cycle two to three times as it may take several cycles on a new pump to remove trapped air from inside of the pump.
9. Once the air has been purged the pump can be stored primed and if necessary slightly pressurized to maintain a good prime. If distilled water is used it should be changed once a month or when the water becomes contaminated.

## Section: 2

### Priming The MECP10K Hydraulic Pump that has fittings attached.

1. Make sure that there is the proper amount of clean liquid in the liquid reserve.
2. Open the **Bleed Knob** fully, by turning it counterclockwise until it stops.
3. Lay the pump over horizontally for approximately one minute so that the liquid can fill the passages inside of the pump body, then stand the pump back up vertically, close the **Bleed Knob** (clockwise). Pump the handles several times until pressure is created.
4. Open the **Bleed Knob** to release pressure and any trapped air back into the reservoir. Repeat this cycle two to three times as it may take several cycles to remove trapped air from inside of the pump.
5. Once the air has been purged the pump can be stored primed and if necessary slightly pressurized to maintain a good prime. If distilled water is used it should be changed once a month or when the water becomes contaminated.