



# MECP100

## Pneumatic Hand Pump

### Operating Instructions

The Martel MECP100 Hand Pump is designed to be a simple to use pressure and vacuum source for calibrating process control instrumentation. Combined with one of our pressure calibrators, the MECP100 makes a complete Pressure/Vacuum Calibration System.

#### **Operation**

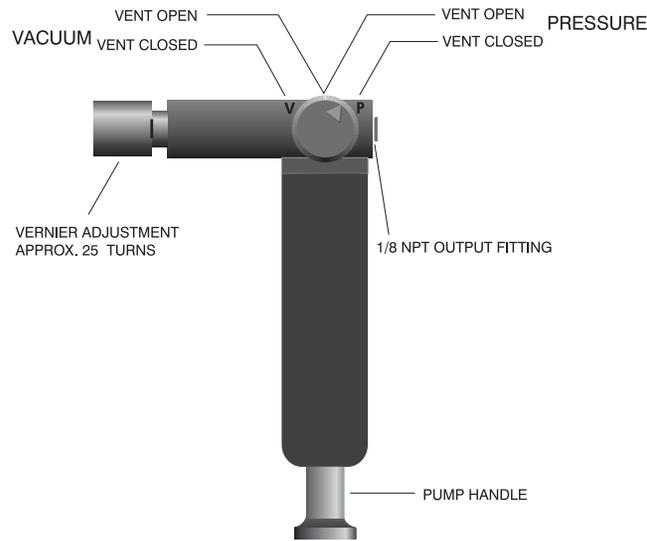
The drawing shows the operation of the controls on the MECP100. The pump is designed for use with ambient air only. If there is a possibility that contaminants may enter the pump the optional filter (Martel P/N 54-54067) should be installed at the output fitting.

**CAUTION: Do not connect the pump to a pressure source.**



www.martelcorp.com  
e-mail: sales@martelcorp.com  
Tel: (603) 434-1433 800-821-0023  
Fax: (603) 434-1653

**Martel Electronics**  
3 Corporate Park Drive  
Derry, NH 03038



## Pump Valve Assembly Cleaning Instructions

Occasionally, the MECP100 may not work properly due to dirt or other contamination of the internal valve assembly. Use the following procedure for cleaning the valve assembly. If this procedure does not fix the problem, a repair kit (part number 1010043) may be ordered.

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.

## WARRANTY

Martel Electronics Corporation warrants the MECP100 pneumatic 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.