



# Transmation

Generate pressure where you need it with Transmation's Model 5837P Precision Pressure Pump. Generate values from -2 to 100 psig, with a fine adjustment vernier providing output resolution to 0.001 psig. Use it independently or in conjunction with a Transmation pressure calibrator, forming a convenient source/indicator in the 100 psig range.

## Two ports

Dual output ports allow simultaneous pressure application to two devices. For example, connect one port to a calibrator – providing digital verification of the generated pressure – and the second port to the device being checked or calibrated.

## Standard fittings

Pressure connections are made through two 1/8" NPT internally threaded fittings. Compatible media are any non-conductive, non-corrosive, instrument-grade clean air or inert gas.

## Easy to use

The pump's small size and squeeze-action mechanism permit easy, one-handed operation at any angle. Although the unit is lightweight (less than two pounds), it is ruggedly constructed to withstand typical field use. The pump body and piston are machined brass, and the valve stem, piston rod, and handles are stainless steel. The simple design and quality construction ensure a long service life with virtually no maintenance.

## Product Specifications

<b>Output range</b>	-2 to 100 psi
<b>Resolution</b>	0.001 psig
<b>Pressure connections</b>	Primary and auxillary ports: 1/8-27 NPT
<b>Weight</b>	1.9 lbs (0.87 kg)
<b>Media</b>	Nonconductive, noncorrosive, instrument-grade clean air or inert gas
<b>Construction</b>	Machined brass pump body and piston, stainless stell piston rod, handles and valve stem

### Transmation

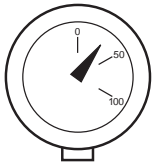
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## Precision Pressure Pump Model 5837P



- **Portable pressure source**  
Generates from -2 to 100 psig
- **Coarse and fine adjustments**  
Provide resolution to 0.001 psig
- **Dual output ports**  
Simultaneous connection to two devices
- **Convenient one handed operation**  
Functions at any angle



### Producing pressure

- 1) Connect one of the Model 5837Ps ports to the instrument to be calibrated or checked. Use small-diameter tubing as short in length as possible (this will maximize the pressure adjustment range). An auxiliary port is provided for simultaneous output to a second device, e.g., application of pressure to an instrument or system under test and to a Transmation calibrator to measure the actual pressure output. If the auxiliary port is not used, it should be securely plugged.
- 2) Set the brass fine pressure adjustment knob to the mid-travel position as indicated by the line cast into the pump body.
- 3) Turn the discharge knob fully clockwise. Do not overtighten.
- 4) Squeeze the actuating levers to generate pressure. At pressures above 150 psig the levers should be squeezed harder and more quickly at the end of the stroke. Additional force is required to open the discharge valve due to higher line pressure.
- 5) Use the discharge and fine pressure knobs to adjust pressure to the desired level.



### Temperature considerations

Since the pressure change of a contained volume of gas is directly proportional to absolute temperature, temperature control is critical when using the Model 5837P with any high-resolution measuring device. Tubing should be kept away from heat sources (i.e., lamps, operating electronic equipment, excessive hand contact, etc.) as well as from heat-dissipating structures (i.e., open windows, air conditioning vents, ventilation ducts, etc.) to minimize temperature variations that might induce measurement error.

Air is compressed when the Model 5837Ps actuating levers are squeezed. This compression causes some heating of the air as it is forced into the system. Consequently, a noticeable decrease in pressure—caused by the cooling of the newly compressed air—may occur immediately after cessation of pumping.

### Lubrication

The Model 5837P is lubricated at the factory and under normal operating conditions should not require additional lubrication. If lubrication is required, invert the pump and apply two drops of a light-grade machine oil to the piston rod near the base of the pump body. Do not over-oil.

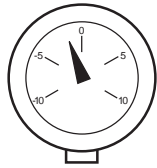


### Leak prevention and detection

In order to obtain maximum pressure indication stability, leaks must be avoided. It is strongly recommended that either Teflon® tape or commercial pipe sealant be used at all tapered fittings and connections. If Teflon® tape is used, care must be taken that the proper amount is applied. Excessive tape may fray and cause plugging of relief valves, orifices, nozzles, etc. Overuse of pipe sealant may cause similar problems.

External equipment should also be checked carefully for leaks. Process connections, flange bolts, and vents must be tightly closed. Defective gaskets, leaking valves, and damaged diaphragms are all potential sources of leaks.

For detection of very small system leaks, the traditional soap bubble method may not be sufficient. Halogen leak detection devices may be required when using highly sensitive pressure calibration equipment.



### Producing negative pressure

- 1) Perform Step 1 as described above.
- 2) Turn the brass fine pressure adjustment fully clockwise until resistance is felt. Do not overtighten.
- 3) Turn the discharge knob fully clockwise. Do not overtighten.
- 4) Turn the fine pressure adjustment counter-clockwise to generate the desired negative pressure (to -2 psig).

### Warning

Even nominal pressure values can generate extreme force if fitting or tubing failure occurs due to improper installation or usage. Since the Model 5837P is capable of generating pressures over 100 psig, it is imperative that all pressure connections and test procedures be done by qualified service personnel, according to standard engineering practices, to prevent possible personal injury or equipment damage.



### Warranty

Transmation products are warranted to be free from defects in material and workmanship (excluding fuses, batteries and leads) for a period of one year from the date of shipment. Warranty repairs can be obtained by returning the equipment prepaid to our factory. Products will be replaced, repaired, or adjusted at our option. *Transmation gives no other warranties, including any implied warranty of fitness for a particular purpose.* Also, Transmation shall not be liable for any special, indirect, incidental or consequential damages or losses arising from the sale or use of its products.

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