

## **Transmation**

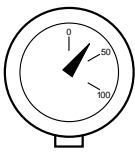
Generate pressure or vacuum where you need it with either Transmation's Model 6215P (Pressure) or Model 4238P (Vacuum) Pump.

The pumps are tube type, cylindrical shaped hand pumps with a "T" handle at the compressor end and a round knob at the volume adjust end. The overall length is between 11.5" (full extension) and 8.5" (fully collapsed). They incorporate a needle valve for venting and a volume adjust vernier for precision adjustment of pressure.

Pressure or vacuum connections are made through one 1/8" NPT internally threaded fitting. The pump is small in size, lightweight and ruggedly constructed to withstand typical field use.

Every technician can carry one in their toolbox and be ready to go.

## Operating instructions



### Producing pressure

- 1) Connect the pump's port 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).
- 2) Set the FINE ADJUST knob to the full counterclockwise position.
- 3) Turn the bleed valve knob fully counterclockwise to relieve all system pressure and zero any measuring devices.
- 4) Turn the bleed valve knob fully clockwise to close.
- 5) Repeatedly move the "T" handle in and out to generate the desired pressure.
- 6) Use the FINE ADJUST knob to bring up the pressure to the precise level.
- 7) Use the BLEED VALVE to lower the pressure from the pressure generated. Opening the BLEED VALVE 1/4 turn will lower the pressure very gradually. Opening it 1/2 turn will release the pressure faster and opening it 3/4 turn will quickly and safely release all the pressure in the system.

### Warning

It is imperative that all system pressure is relieved prior to making any connections or disconnections. Failure to relieve system pressure could result in serious personal injury or equipment damage. Even nominal pressure values can generate extreme force if fitting or tubing failure occurs due to improper installation or usage. Since the pump is capable of generating pressures exceeding 100 psig, it is important 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.

### Connections

To install a pressure fitting in the pump:

- 1) Turn the BLEED VALVE counterclockwise to bleed any pressure
- 2) Use a 5/8" open-end wrench on the input port to prevent it from rotating while tightening the supply fitting with a 5/8" open-end wrench.

### 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

## Precision Pressure and Vacuum Pumps

Model 6215P – Pressure Pump

Model 4238P – Vacuum Pump



- Portable pressure or vacuum source
- Generate up to 600 mm/23" Hg with vacuum pump
- Generate up to 145 psig/10 bar with pressure pump
- Coarse and fine adjustments  
Provide resolution to 0.001 psig

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.

### 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 pump 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, etc.) to minimize temperature variations that might induce errors. Air is compressed by the pump. 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.



# Product Specifications

Output range	Model 6215P - Pressure: 145 psig/10 bar Model 4238P - Vacuum: 600 mm/23" Hg
Pressure connections	Single 1/8" NPT female fitting
Size	Body diameter: 1.5"/3.8 cm Length: 8.5"/21.6 cm (collapsed) 11.5"/29.2 cm (extended)
Weight	.5 Lbs./0.68 kg
Construction materials	Body and piston: Acetal O-Rings: Buna N Other wetted parts: Brass or nickel plated brass

## 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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