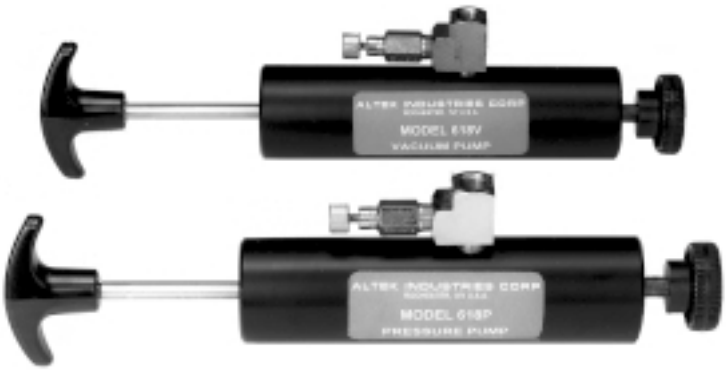
ALTEK

PRECISION PRESSURE PUMP - MODEL 618P
PRECISION VACUUM PUMP - MODEL 618V

DATA SHEET 618: See Data Sheets 628 for Low Pressure Pump & 638 for High-Pressure 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



GENERAL DESCRIPTION

Generate pressure or vacuum where you need it with either Altek's Model 618P (Pressure) or Model 618V (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. Model 618's simple design and quality construction ensure a long service life.

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

SPECIFICATIONS

OUTPUT RANGE:
Model 618P - Pressure: 145 PSIG/10 BAR
Model 618V - 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:
1.5 Lbs./0.68 kg

CONSTRUCTION MATERIALS:
Body and Piston: Acetal
O-Rings: Buna N
Other Wetted Parts: Brass or Nickel Plated Brass

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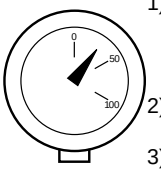
IMPORTANT: Read all operating instructions and general operating information *before* beginning any test procedures.

OPERARTING INSTRUCTIONS

PRODUCING PRESSURE



1) Connect Model 618'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 he pressure generated. Opening the BLEED VLAVE $^1/_4$ 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 Model 618 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.

GENERAL OPERATING INFORMATION

CONNECTIONS

To install a pressure fitting in the Model 618:
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 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 Model 618 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 Model 618. 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.

ONE YEAR WARRANTY

Our equipment is guaranteed against defective material and workmanship for a period of one year from date of shipment. Claims under guarantee can be made by returning the equipment prepaid to our factory. The equipment will be replaced, repaired or adjusted at our option. The liability of Altek is restricted to that given under our guarantee No responsibility is accepted for damage, loss or other expense incurred through sale or use of our equipment. Under no condition shall Altek be liable for any special, incidental or consequential damage.

No pump will be accepted for service unless all process materials have been completely removed from all components by the customer. Contaminated pumps will be returned to the customer for proper cleaning.

OTHER PRODUCTS

Altek designs and manufacturers fast, accurate instruments for measurement, generation and simulation of virtually every process control signal. Consult our factory directly or contact your local stocking representative to order precise, low cost Milliamp Calibrators, Voltage Sources, Direct Thermocouple Sources, RTD Simulators, Frequency Sources and Pressure Pumps & Indicators. Altek also produces calibrators for custom ranges and unique applications. Additional models and ranges are frequently added to the Altek instrument family to meet all of your critical calibration requirements. Altek products are made in the USA.

ORDERING INFORMATION

DESCRIPTION	MODEL No.
Model 618 Pressure Pump	618P
Model 618 Vacuum Pump	618V

AVAILABLE FROM:

100849-902 REV:A