



## ITEM # LAV-INLINEFILTER

Inline Air Filter with 24 square inches of filter media which remains strong up to 10 CFM air flow. Removes particles as small as 5 microns.



## ITEM # LAV-3WAYVALVE

Our Three-Way Brass Ball Valve with T-full port and 3ea. 3/8" Hosebarb connections will hold a vacuum in your system, isolate the vacuum pump to prevent oil backup, and release/bleed air back into your system all in one. An external vacuum gauge can be connected to the third valve to take a system vacuum reading isolated from the vacuum pump.



## ITEM # LAV-TANK

The TANK allows you to change your vacuum pump oil with ease! Simply open the cap on the side of The Tank, place our vacuum pump in the cradle and open the drain valve on the pump to drain. The TANK holds up to five oil changes.



## ITEM # GA-001

High Vacuum Pump Plate is made of cast iron and accommodates bell jars up to 9" diameter. Plate is 1/2" thick nickel plated for corrosion resistance. Hose barb is 3/8". Pump plate comes with attached vacuum release valve and rubber gasket for a tight seal. Replacement gaskets available, Item #GA-001RUBGAS.



## ITEM # AP-001

Acrylic Pump Plate accommodates bell jars up to 9" with a 3/8" intake port for vacuum tubing. The acrylic base has four suction cup stands and the plate is 10.75" diameter base x 1.5" high. Pump plate comes with an attached vacuum release valve and rubber gasket for a tight seal. Replacement gaskets available, Item #GA-001RUBGAS.

For your convenience, FISCHER TECHNICAL COMPANY stocks products from overseas manufacturers such as Safety Pipette Fillers and Safety Laboratory Mats. We also inventory High Vacuum Pumps, Vacuum Pump Oil and Gauges, Cast Iron and Plastic Vacuum Pump Plates.

Unit drained for shipment— do not operate without adding oil

## Operating Instructions

In order to make the best use of your investment, familiarize yourself with the new features and operating instructions before starting pump. With routine care, your high vacuum pump will give you years of reliable service by following proper maintenance guidelines.

**Important:** Use oil specifically refined for high vacuum pumps. For best results, use Fischer Technical Company High Vacuum Pump Oil:

Item #OIL-12, Case of 12 Quarts

**Use of oil not refined for high vacuum pumps and or operating the pumps with contaminated oil will void your warranty.**

Oil Capacity of LAV-3 High Vacuum Pump is 26.4 oz. (780cc)

- Remove brass oil fill plug on pump and insert spout into fill port.
- Slowly add oil until oil rises to top of OIL LEVEL line. Replace oil fill plug.
- Checking oil level. Start with vacuum pump intake (top of hosebarb) capped. After running, oil should be even with OIL LEVEL line.

## OPERATING YOUR HIGH VACUUM PUMP

It is important that solids and liquid contaminants are kept from entering your vacuum pump. Clearances within your pump are less than .001 inch and solids of any size could close block and jam your vacuum pump. Operate the pump on a clean system or provide an intake filter to prevent solids from entering.

Moisture and corrosive chemicals can also damage your vacuum pump. To prevent these from entering, frequently cold traps or molecular sieves are used. Most important however is to change the oil whenever your vacuum pump has been contaminated. Left sitting in the pump, contaminated oil will form sludge, rust, and erode the internal surfaces—shortening your pump's life.

Note: Your vacuum pump is designed to operate at high vacuum continuously. Operating the pump at or near atmospheric pressures for a prolonged period of time will result in excessive smoke to emanate from the pump exhaust (through the handle) and can cause overheating. Further, since these type of pumps are oil sealed, prolonged use and especially frequent cycling or operation at high pressures will cause oil to coalesce around the exhaust port. This is not a sign of a defective pump. There are exhaust smoke eliminators available which can eliminate this problem. Consult your dealer for Item #LAV-EF.

**Vacuum pump is not a check valve. Releasing the vacuum without first isolating the pump from your system can allow atmospheric air to leak through the pump into the system. This can also cause oil to backup into your system and create a big mess.** When releasing the vacuum in your system we recommend first isolating the vacuum pump intake with a shut-off valve and second "bleed" the system with a bleeder valve. Consult dealer for Item #LAV-3WAYVALVE if your system does not have a shut off valve or bleeder valve.

## GAS BALLAST VALVE

The gas ballast valve, located next to the intake fitting is designed to help purge moisture (water vapor) from the pump oil by permitting a controlled amount of atmospheric air to enter the exhaust stage of the pump. Whenever you evacuate a system containing moisture it is recommended to open the valve a 1/4 turn. When a vacuum of 1000 to 2000 microns has been reached, close the valve and continue to evacuate.

Note: One cannot attain the ultimate vacuum with the gas ballast valve open.

## PUMP MOTOR

Pump and oil must be above 30° F. Line voltage must be equal to motor nameplate +/-10%. Normal operating temperature is approximately 160° F, which is hot to the touch. Line voltage ambient condition and operating pressures will affect this somewhat. The motor has automatic resetting thermal overload protection. If the motor will not restart pump after shut off, it may have opened the thermal protection. Disconnect the pump from the system, wait about 15 minutes for the motor to cool and start it again.

## WARRANTY

These vacuum pumps are warranted to be free from defects in workmanship and materials for a period of one year. Our liability is limited to repair or replacement of these products if these products are found to be defective by us. In no case shall we allow charges for labor, expense, or consequential damage.

# PUMP ACCESSORIES



## HIGH VACUUM PUMP OIL

Quart bottles of high vacuum pump oil. Designed specifically for use with Fischer Technical Company High Vacuum Pumps. This non-detergent high vacuum pump oil is hydro-processed to attain its stable, viscous and refined properties. This process also results in a clear mineral oil that will alert of contamination sooner if the oil becomes milky or cloudy.

Item #OIL-PK Quart (qty 2)

Item #OIL-012 Quart (qty 12)



## ITEM # HVG-TUBING/SET

5' High Vacuum Pump 1/2" ID tubing with two Hose Clamps. Tubing is constructed of PVC with reinforcing webbing to prevent collapsing under vacuum.



## ITEM # LAV-GREASE

Translucent white grease is corrosion resistant and contains a silica thickener that won't react with rubber. Suitable for use on o-rings, gaskets, and seals in vacuum systems. 4oz



## ITEM # HVG-001

High Digital Vacuum Gauge with extended range MEMS sensor and vacuum reading range from 100,000 to 10 microns. Easy-to-read backlit display reads in seven International Units: Microns, PSIA, InHg, mBars, Pascals, Torr, mTorr. +32°F to +120°F Ambient Temperature, Retractable Hanging Hook, operates with three AA batteries.



## ITEM # LAV-EF

High Vacuum Pump Exhaust Filter designed to eliminate oil mist from the pump. A brass elbow connects directly to the exhaust handle.



## BELL JARS

Made of heavy molded glass to withstand high vacuum pressure. Comes with a knob top for easy handling. The flange has been ground down to provide an excellent seal. Three sizes available:

Item #BJAR-01 5 x 9"

Item #BJAR-02 6 x 11"

Item #BJAR-03 8-1/2 x 15"