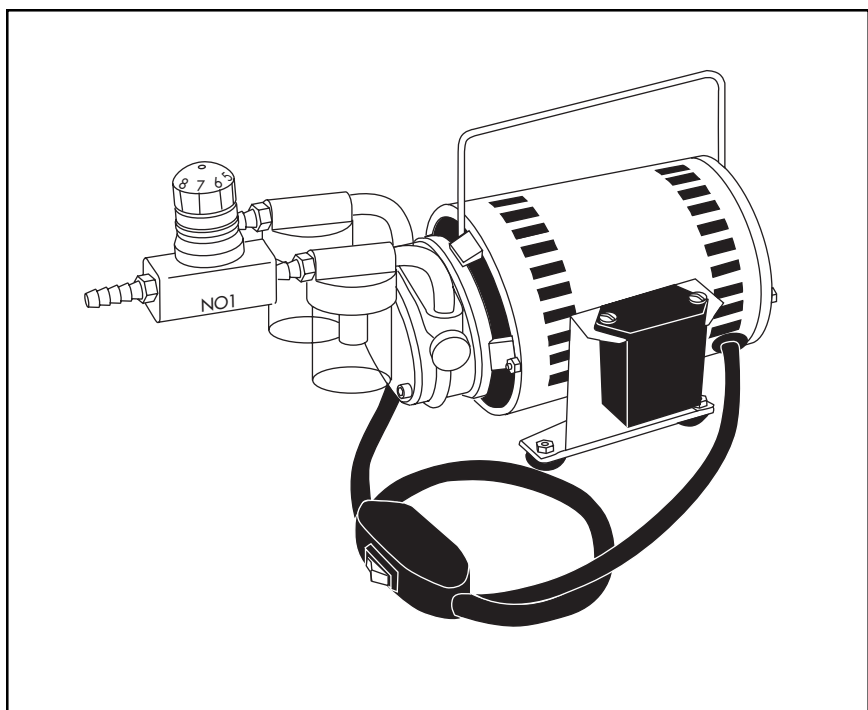


High-Volume Vacuum/Pressure Pump

Catalogue Numbers:

XX56 000 01 (115V/60 Hz)

XX56 000 02 (220V/50 Hz)



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Introduction

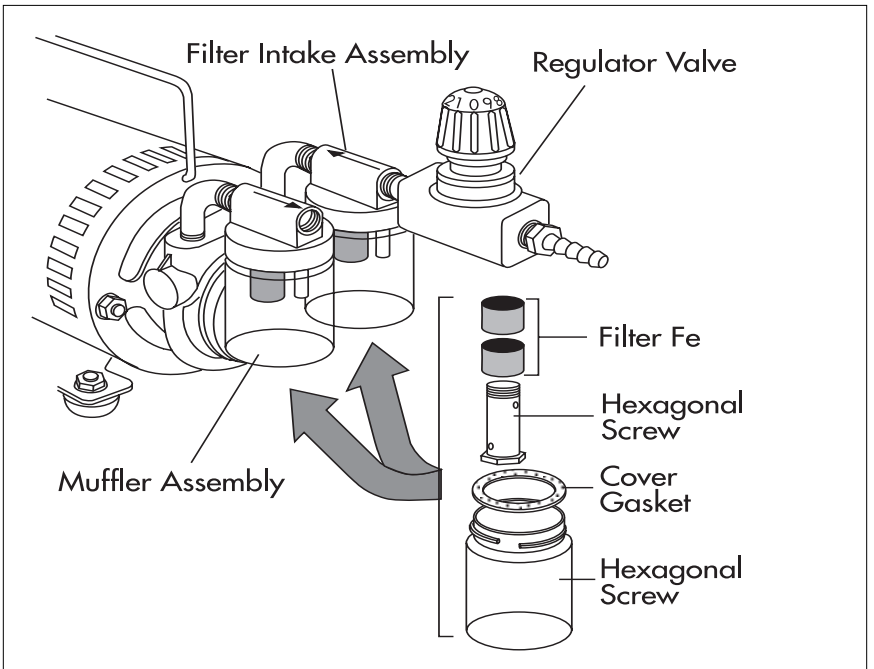
The Millipore High-Volume Vacuum/Pressure Pump is oil-less, portable, and has a rotary-vane (carbon-type). This pump is designed to sample up to 16 liters per minute. It also produces a vacuum up to 20 mercury (Hg), or a maximum pressure of 10 pounds per square inch gage (psig). You can use it as a vacuum or pressure source for filtration of liquids or gases, among other applications.

The pump is available with a 115 (volts) V/60 hertz (Hz) or 220 V/50 Hz motor. Use an appropriate AC power source designed for a three-pronged plug for the 115 V/60 Hz model. Or, use a source designed for a two pronged plug for the 220 V/50 Hz model. The pump meets the United States Environmental Protection Agency-Asbestos Hazard Emergency Response Act (U.S. EPA-AHERA) and United States Occupational Safety and Health Administration (U.S. OSHA) standards.

This document defines the parts and functions of the pump. It also describes how to use and maintain it.

▲ WARNING: Do not use the pump near combustible or liquid vapors since the vacuum/pressure pump is not explosion proof. Follow the instructions listed in this document to ensure proper use.

Diagram of the Pump



Using the Vacuum/Pressure Pump

1. Prepare any necessary equipment for your application or filter holder.
2. Select the appropriate tubing for your application. For a vacuum application, use tubing with a 3/16-inch internal diameter (I.D.) and a wall thickness that can withstand up to 20 psig. For a pressure application, use tubing with a 3/16-inch I.D. and a wall thickness that can withstand pressure in excess of 10 psig. Then locate paper towels, alcohol, and a compressed air source. Do not connect the tubing to the pump.
3. Remove the pump from the packing case and place it in a well-ventilated area or fume hood.

CAUTION: Operate the pump at room temperature since it cannot operate at temperatures below 4.4°C (40°F).

4. Plug the power cord into a grounded, electrical outlet to turn on the 220 V/50 Hz pump. For the 115 V/60 Hz pump, flip the power switch to the “on” position; the switch is located on the power cord.

CAUTION: Do not place the pump under a load when it is turned on, or it may not function.

5. Adjust the regulator valve to the required vacuum (or pressure level) for your application. Then connect the tubing from the filter holder (or other equipment) to the valve on the pump.

CAUTION: If the pump stops running after you connect the tubing, unplug (or turn off) the pump and remove the tubing. Then plug in (or turn on) the pump again and reconnect the tubing.

6. Begin your application. The thermal overload switch automatically shuts off the motor if the pump overheats. The pump will restart after 10 minutes.
7. Unplug (or turn off) the pump, after you finish your application.
8. Disconnect the tubing from the pump to the filter holder (or other equipment). Then continue to the next section for maintenance instructions.

Maintaining the Pump

This section describes how to clean the pump filters and flush the pump. Flush the pump after each use to remove dirt, moisture, or oil vapors that enter the pump chambers. These substances can cause the vanes to stick in a rotor slot, resulting in a noisy, inefficient pump.

CAUTION: Do not lubricate any of the parts with oil, grease, or petroleum products, or clean the pump with acids, caustics, or chlorinated solvents. If you do, you could damage the pump.

Cleaning the Filter Felts in the Pump

1. Remove the felts from the filter intake assembly. Set the felts aside.
2. Wash the filter felts with a paper towel or rag soaked in alcohol, or other suitable solvent.

CAUTION: Do not flush the pump with kerosene, gasoline, or other petroleum distillates since it damages the pump.

3. Dry the filter felts with clean, compressed air.

NOTE: Replace the felts with new ones, if necessary. See the “Technical Assistance” section to call the office in your country to order them.

4. Put the felts back onto the filter intake assembly. See the next section to flush the pump.

Flushing the Pump

1. Unscrew the filter intake assembly and the muffler assembly to remove them.
2. Place the pump in a well-ventilated area or under a fume hood.
3. Plug in (or turn on) the pump.

CAUTION: Operate the pump at room temperature; it cannot operate at temperatures below 4.4°C (40°F).

4. Hold a paper towel or rag over the outlet of the pump and add several teaspoons of alcohol or other suitable solvent into the intake valve. The pump starts flushing the liquid through the pump. Repeat this step to rinse the pump clean.

CAUTION: Do not flush the pump with kerosene, gasoline, or other petroleum distillates since it damages the pump.

5. Unplug (or turn off) the pump after you finish flushing it. Then screw the filter intake assembly and muffler assembly back onto the pump.

Specifications

Pump	Rotary, oil-less, carbon vane; includes in-line filters and muffler, feet, handle, and power cord with switch
Regulator	1/18" needle valve with lock-in flow feature; sampling range (3 liters per minute [LPM]–20 LPM)
Power	115 V/60 Hz; 220 V/50 Hz
Power output	0.1 Horsepower (0.075 kw)
Connections	115 V/60 Hz: three-conductor, 115 V power cord, including power switch, with three-prong plug (inlet/outlet connectors to 3/8" hose) 220 V/50 Hz: three-conductor, 220 V cord with two-prong plug (inlet/outlet connectors to 1/8" hose)
Vacuum	Up to 20 Hg (660 mm)
Pressure	Up to 10 psig (1.05 kg/cm ²)
Maximum flow rate	14 LPM with 25 mm cassette, 20 LPM with 37 mm cassette
Weight	3.18 kg (7 lb)
Humidity	8% to 100% noncondensing
Sound level	less than 70 dba
Operating temperature	1°C to 40°C
Safety compliance	115 V CSA approved 220 V CE compliant - 89/356/EEC 89/392/EEC 91/368/EEC

Ordering Information

Description	Catalogue Number
Vacuum/pressure pump, high volume, 115 V/60 Hz	XX56 000 01
Vacuum/pressure pump, high volume, 220 V/50 Hz	XX56 000 02

Technical Assistance

For further assistance, call 1-800-MILLIPORE (1-800-645-5476). Or, refer to *Millipore Direct* (laboratory products catalogue) for the phone number of the Millipore office nearest you. To access the Millipore laboratory catalogue on the Internet, access the URL menu and type: <http://www.millipore.com>

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