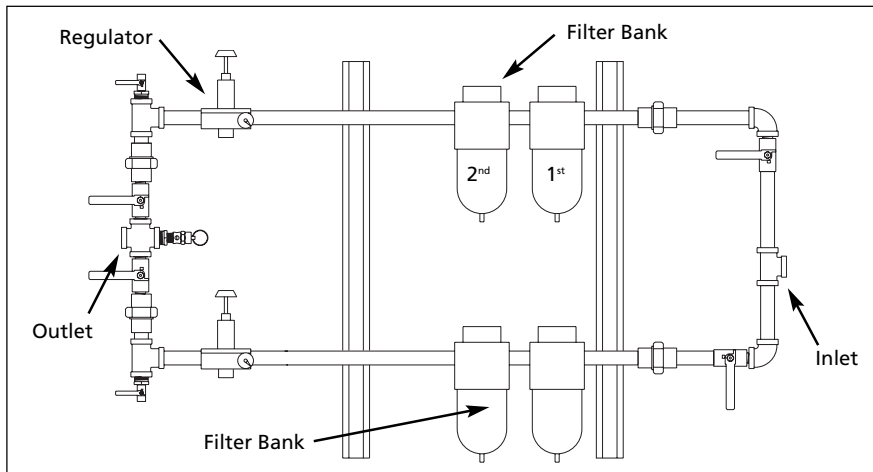


Medical Compressed Air Filter System

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Description

The Powerex compressed air filter system is especially designed for use in medical air applications. This filter system meets NFPA 99 requirements by having two stages of filtration to remove oil vapors and water aerosols, odors, and solid particles as small as .5 micron with 99.9998% efficiency. The filter system is completely duplexed to provide uninterrupted service and is sized to perform with 100% peak demand through either bank of filters. The filter elements are made with continuous visual monitors.



Safety Guidelines

This manual contains information that is very important to know and understand. This information is provided for SAFETY and to PREVENT EQUIPMENT PROBLEMS. To help recognize this information, observe the following symbols.

⚠ DANGER

Danger indicates

an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

Warning indicates

a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

⚠ CAUTION

Caution indicates

a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.

NOTICE

Notice indicates

important information, that if not followed, may cause damage to equipment.

General Information

The Powerex compressed air filter system has two series or "banks" of filters. The filters in both banks are the same. Entering air is controlled by quarter turn ball valves to direct the air into one bank of filters at a time.

The first .5 micron coalescing filter collects submicronic solid particles and remaining liquid aerosols. A manual drain is supplied for this filter element.

The second filter element contains an activated carbon cartridge for removing unpleasant odors in the air stream.

⚠ DANGER

Breathable Air Warning

This filter system is NOT equipped and should NOT be used "as is" to supply breathing quality air. For any application of air for human consumption, you must fit the filter system with suitable in-line safety and alarm equipment. This additional equipment is necessary to properly filter and purify the air to meet minimal specifications for Grade D breathing as described in Compressed Gas Association Commodity Specification G 7.1 - 1966, OSHA 29 CFR 1910. 134, and/or Canadian Standards Associations (CSA).

DISCLAIMER OF WARRANTIES

In the event the filter system is used for the purpose of breathing air application and proper in-line safety and alarm equipment is not simultaneously used, existing warranties are void, and Powerex disclaims any liability whatsoever for any loss, personal injury or damage.

The second bank containing identical filters is available for back-up operation during system maintenance. The filters contain visual monitors that change color from green to red as the filters collect particles.

A separate pressure regulator and gauge is supplied for each bank of filters to allow easy adjustment of air pressure to the desired distribution system and for random air samples.

The ASME code safety valve at the outlet of the filter system is set at 75 PSI and is non-adjustable.

Compressed Air Filter System

General Information (Continued)

⚠ WARNING

The compressed air filter system will not remove carbon monoxide or other toxic gases.

Installation

The frame work typically supplied with the filter system allows easy wall mounting. Fasteners capable of supporting the weight of the system must be used. Easy accessibility should be provided for performing routine maintenance. The filter system should be installed after an air line dryer, if used, and before any air line monitoring equipment.

After assembly, open all valves in the filter system except the system vents. Slowly pressurize and adjust regulator to desired pressure. Check for leaks with a soapy water solution. Release pressure slowly and remedy any leaks.

Operation

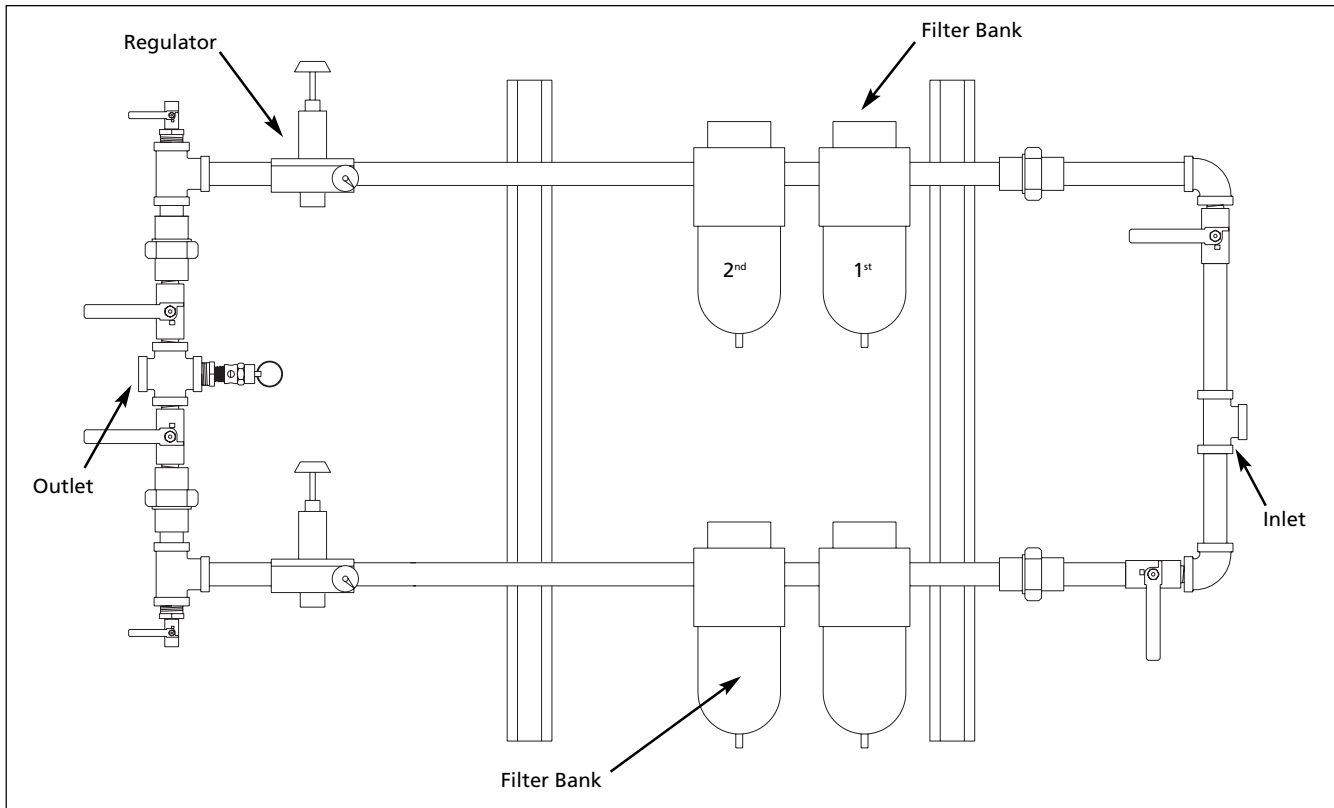
1. Ensure the system vents are closed and then slowly open the quarter turn valves for the upper filter bank in the order given below:
 - a. Inlet valve
 - b. Outlet valve
2. Close the valves for the lower filter bank in the order given below:
 - a. Inlet valve
 - b. Outlet valve

3. Slowly open the lower system vent to relieve any pressure. Then close the vent.

Max. Air Press.	Max. Air Temp.	Maximum Air Pressure After Regulators
150 PSIG	125°F	75 PSIG

4. Adjust the output air pressure with the regulator by turning the knob clockwise for increased pressure or counterclockwise for decreased pressure.

The outlet safety valve will vent to atmosphere if the pressure exceeds 75 PSI.



Replacement Parts

Part Description	MFP-040-342	MFP-050-342 MFP-060-362 MFP-070-382	MFP-110-382	MFP-220-3A2	Qty. Per Bank
.5 Micron filter element (1st)	ST178107AV	ST178121AV	ST178125AV	ST178131AV	1
Activated carbon element (2nd)	ST178111AV	ST178123AV	ST178129AV	ST178135AV	1
Auto drain valve	ST178103AV	ST178103AV	ST178103AV	ST178103AV	1

Maintenance



WARNING

Relieve all

pressure from the filter bank being serviced before performing any maintenance.

Alternate between filter banks at least annually to perform preventative maintenance.

Replace each filter element and the auto drain valve annually.

Replacement is necessary when the filter element indicator becomes red. Change the air flow to the opposite filter bank prior to maintenance.

Notes

Lined area for taking notes, consisting of multiple horizontal lines.

Compressed Air Filter System

Powerex Limited Warranty

Powerex 3 Year / 10,000 Hour Extended Parts Limited Warranty - Powerex warrants each Compressor Pump or Scroll Air-End against defects in material or workmanship from the date of purchase for a period of **Three years or 10,000 hours**, whichever may occur first. This warranty applies to the exchange of part(s) of the compressor pump or air-end found to be defective by an Authorized Powerex Service Center.

Powerex 1 Year / 5,000 Hour Inlet to Outlet Limited Warranty - Powerex warrants each Compressor Unit, System, Pump, or Air-End against defects in material or workmanship from the date of purchase for a period of **One Year or 5,000 Hours**, whichever may occur first. This warranty applies to the exchange of defective component part(s) and labor performed by an Authorized Powerex Service Center.

The above mentioned warranty applies to POWEREX manufactured units or systems only.

Items listed in the operator's manual under routine maintenance are not covered by this or any other warranty.

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM THE DATE OF PURCHASE: AND TO THE EXTENT PERMITTED BY LAW, ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. THIS IS THE EXCLUSIVE REMEDY AND LIABILITY FOR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES IS EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW.

All claims pertaining to the merchandise in this schedule, with the exception of warranty claims, must be filed with POWEREX within 6 months of the invoice date, or they will not be honored. Prices, discounts and terms are subject to change without notice or as stipulated in specific product quotations. All agreements are contingent upon strikes, accidents, or other causes beyond our control. All shipments are carefully inspected and counted before leaving the factory. Please inspect carefully any receipt of merchandise noting any discrepancy or damage on the carrier's freight bill at the time of delivery. Discrepancies or damage which obviously occurred in transit are the carrier's responsibility and related claims should be made promptly directly to the carrier. Returned merchandise will not be accepted without prior written authorization by POWEREX and deductions from invoices for shortage or damage claims will not be allowed. **UNLESS OTHERWISE AGREED TO IN WRITING, THESE TERMS AND CONDITIONS WILL CONTROL IN ANY TRANSACTION WITH POWEREX** any different or conflicting terms as may appear on any order form now or later submitted by the buyer. All orders are subject to acceptance by POWEREX.