

MONOXIVENT®

Source Capture Systems

Operation and Maintenance Manual

Portable HEPA System

Series - PHS



MONOXIVENT - SOURCE CAPTURE SYSTEMS

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PORTABLE HEPA SYSTEM

GENERAL INFORMATION

SAFETY PRECAUTIONS:

- Keep all paper work relating to the PHS.
- Do not use the unit to extract easily flammable or explosive gases.
- Do not mix ferrous and non-ferrous materials within the collector.
- Protect the electrical power cord from damage
- Make sure the collector stands firmly and wheels are locked.
- Use only high grade filter replacements.
- Do not operate without filter inserts
- Protect the collector from dampness
- Unplug the collector before opening any electrical panels

ASSEMBLY :

- Inspect all components for damage due to shipping.
- Portable cabinet ships completely assembly and ready for use
- Mount the arm to the top of the collector as shown in the arm instruction sheet supplied with the arm.
- After mounting arm and adjusting, the collector is ready for use
- Plug power cord into 120/1 outlet.

MAINTENANCE:

- Except for occasional adjustment of the arm joints, the collector operates maintenance free. Only the filter inserts need to be changed.

TECHNICAL DATA

MOTOR: 1 1/2 HP 1 PHASE TEFC MOTOR 3450 RPM
FAN: 780 CFM ACTUAL - BACKWARD INCLINE WHEEL
WEIGHT: CABINET, LESS ARM, IS 250 POUNDS
CABINET: 18 GAUGE STEEL WITH EPOXY POWDER COATING
WHEELS: (4) CASTERS 5" DIAMETER WITH LOCKING FEATURE
VOLTAGE: 115/120/1 PRE-WIRED POWER CORD
AMP DRAW: START UP REQUIRES 13 AMPS - MINIMUM 20 AMP SERVICE
FILTERS: STANDARD WITH : POLY PREFILTER & 99% HEPA CELL
(24X24X12)

OPTIONAL FILTERS: A. 24"X24"X9" HEPA
24"X24"X2" CARBON CELL

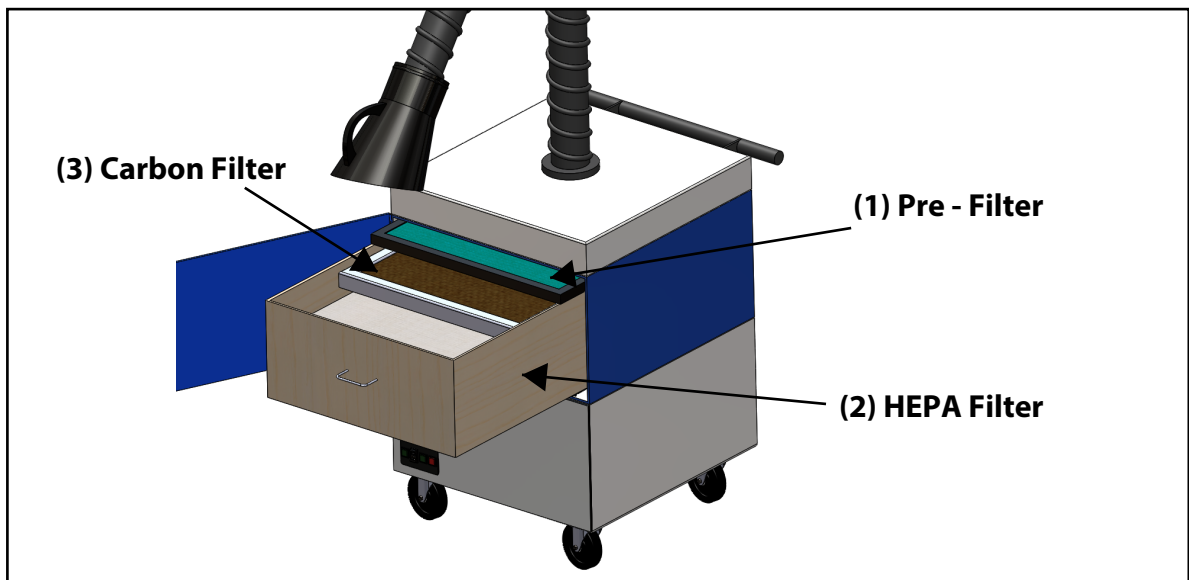
UNIT STANDARD WITH FILTER MONITOR LIGHT



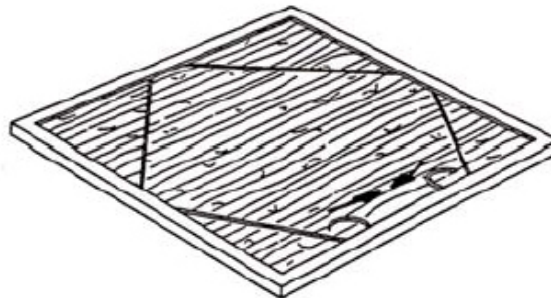
The Monoxivent portable filter unit is used mainly for source capture and extraction of welding smoke. Different filter combinations can make the PHS a versatile unit.

The contaminated air is drawn in at the top of the cabinet by an arm or central duct attached to the top.

The particulate passes through a first stage poly pre-filter. Large particles are trapped in the pre-filter (1). The standard main filter (99% HEPA) then captures and removes even the smallest smoke particles (2). If desired, a third stage filter cell can be supplied (3). This third stage is usually a carbon cell.



The poly pre-filter is supplied with a re-useable frame in which only the poly material is removed, thrown out and replaced.



PORTABLE HEPA SYSTEM SERIES PHS

The PHS unit is supplied with a poly pre-filter and a large HEPA main filter.

Filter life cannot be determined since it is unknown as to how many hours a day the unit is used and also the type of application the unit is being used under. A portable unit is normally used for light usage and for maintenance purposes. Portables are not normally used for production type welding stations unless the best answer is a portable unit. Filter replacement should be a considering factor if used under a production/high welding usage application.

The HEPA unit is supplied with a filter monitor light, which reads pressure difference between the clean side of the filter as to the dirty air entry side. The light can be sensitive to certain conditions so we suggest the following guideline for best results.

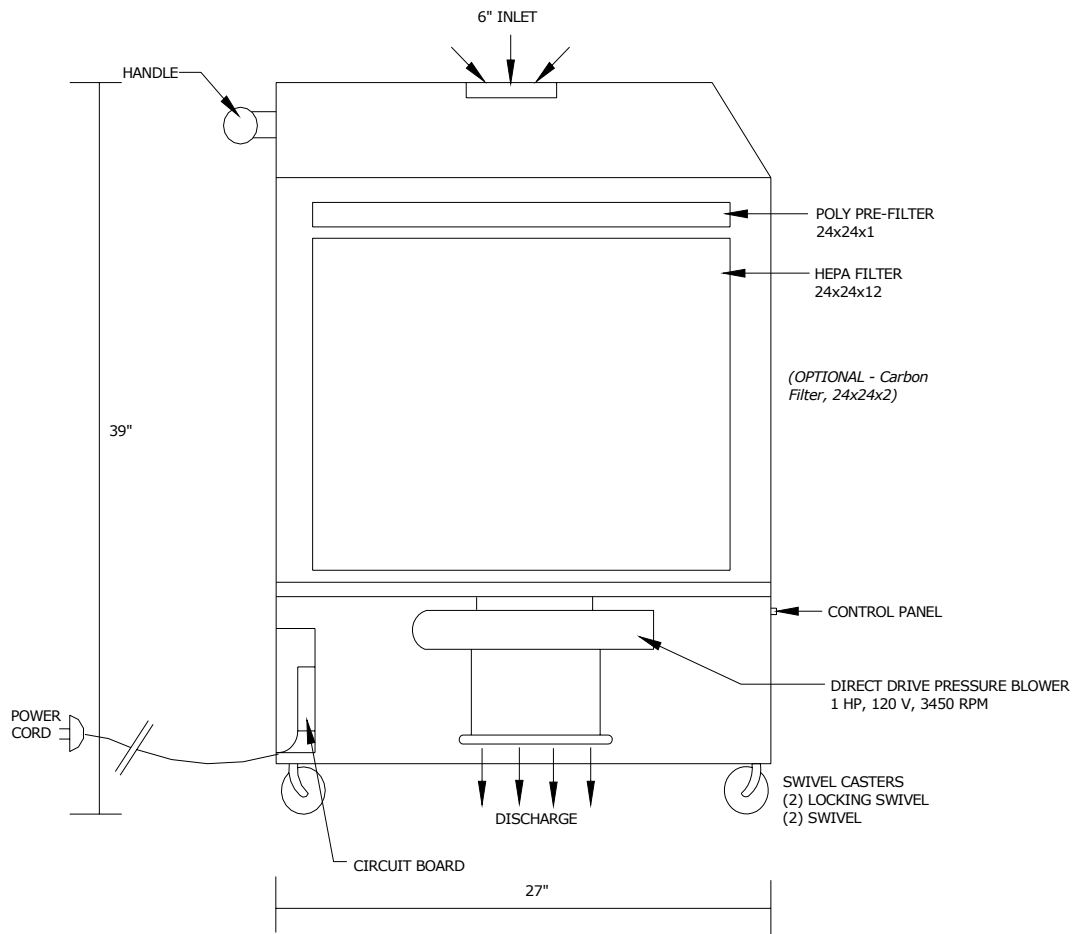
A. Change the poly pre-filter weekly or more often based upon usage. The filter is low cost. The poly pre-filter's function is to capture larger particles. A simple holding up of the filter to a light will give a good indication of filter blockage. A clogged pre-filter can activate the filter monitor light, which should be used for the main filter reading. The poly pre-filters are packaged and sold in lots of 10.

B. The HEPA main filter is a full 24"x24"x11 1/2". The HEPA filter change suggestion will be based on a couple of factors. The light is one factor but the true test of the HEPA filter is the suction of the fumes at the hood face. If the light comes on and the pre-filter is good, chances are the HEPA is getting loaded. The light is **not** a panic must change situation. It is an indicator of the filter getting full. Once the light has come on, the operator should now be aware of the suction at the hood face. When the hood can hardly pull any more smoke, then we have a full filter, which should then be changed.

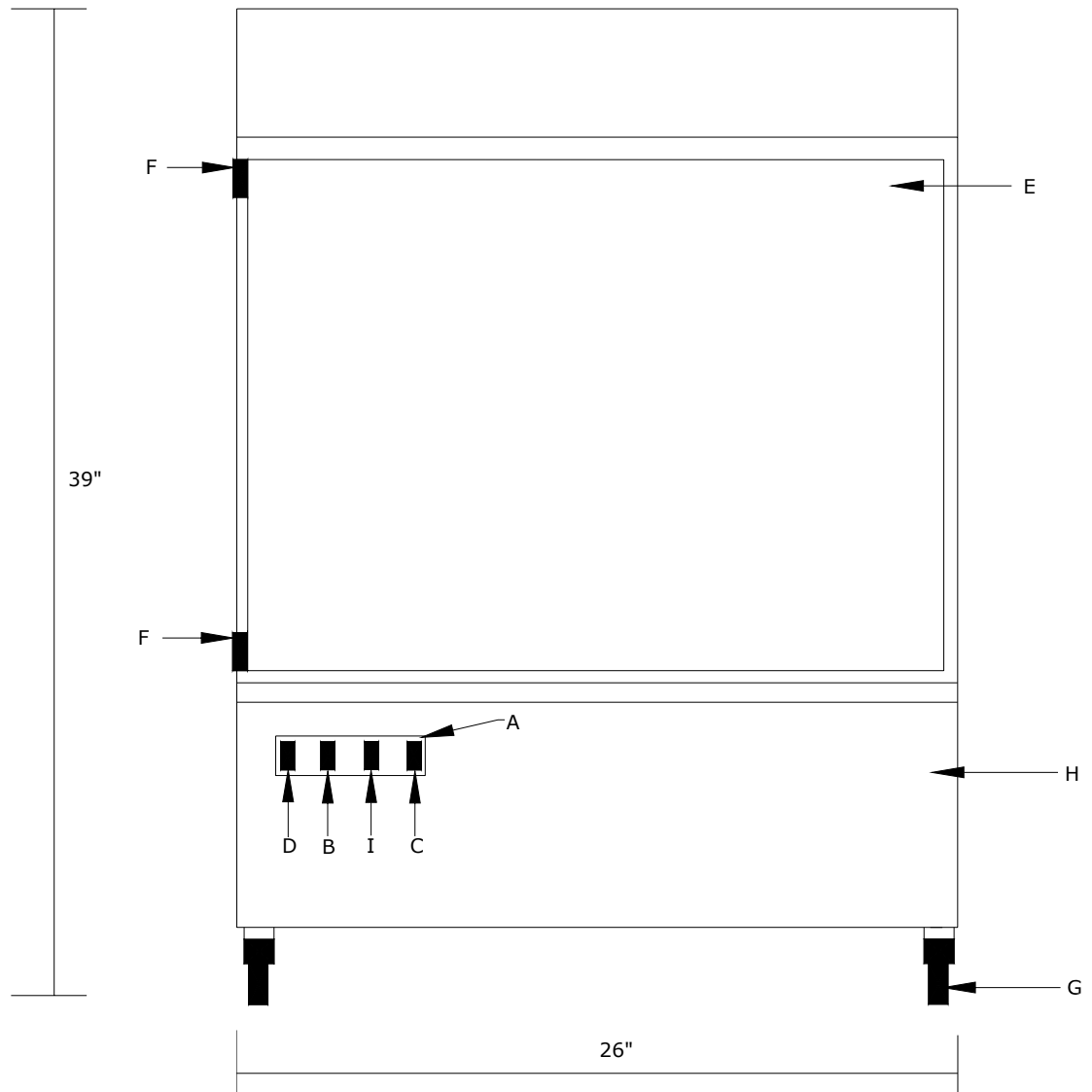
We suggest a simple and quick clean out of the machine upon each HEPA filter change. This is just good preventive maintenance.

Poly pre-filter part number - 2424PP Pack of 10
HEPA main filter number - 2412-99-P Pack of 1

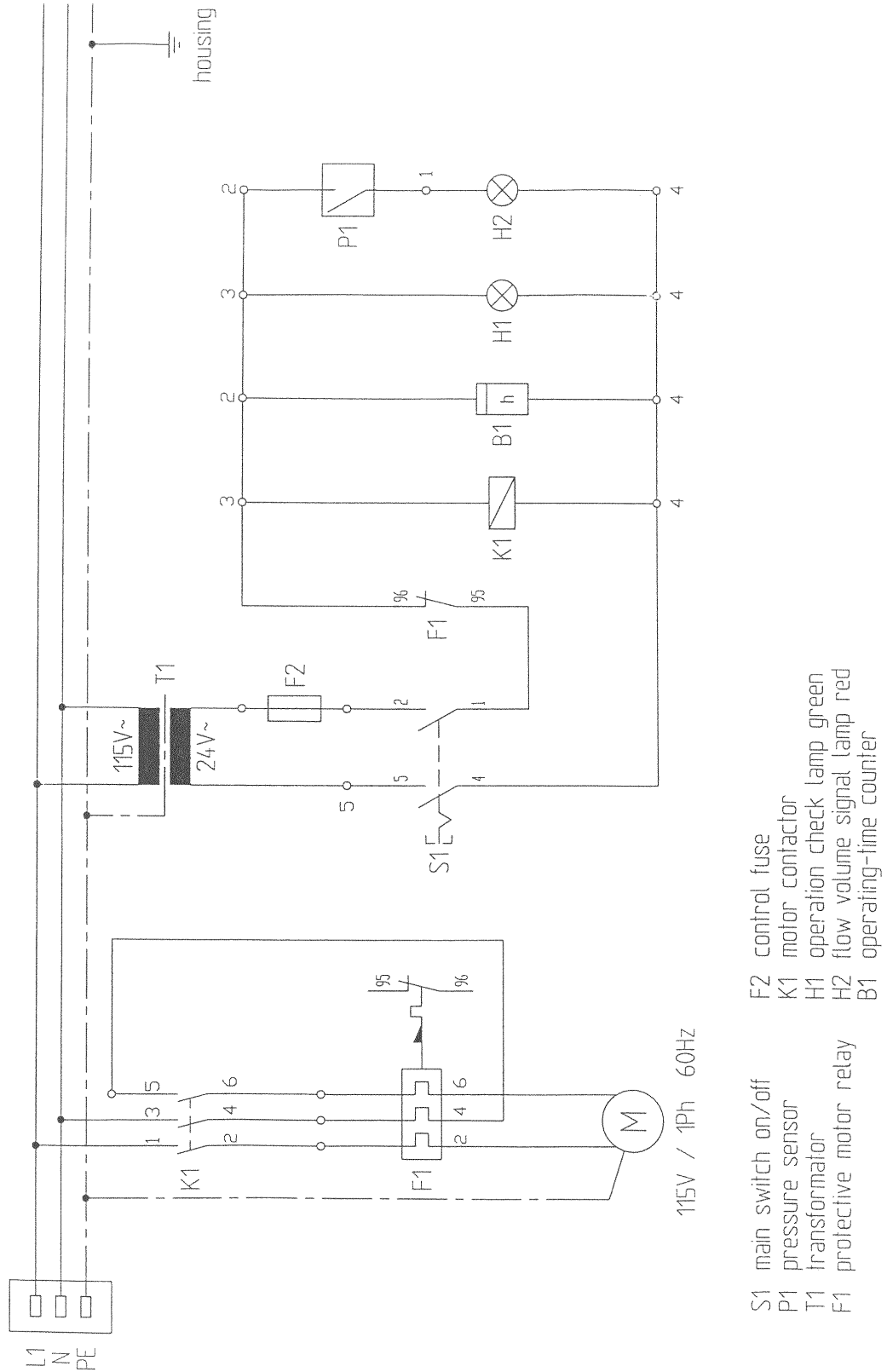
**PHS - HEPA SYSTEM
SIDE VIEW, EXPLODED**



PHS HEPA System Front View



- A. Control Panel
- B. Counter Run Time
- C. Filter Monitor Light
- D. Blower on/off Rocker Switch
- E. Filter Access Door
- F. Access Door Hinges
- G. Wheels (4)
- H. Blower and Electrical Controls Access Panel
- I. Power Indicator Light



- S1 main switch on/off
- P1 pressure sensor
- T1 transformer
- F1 protective motor relay
- F2 control fuse
- K1 motor contactor
- H1 operation check lamp green
- H2 flow volume signal lamp red
- B1 operating-time counter

Assembly Information

General Information for the Portable Fume Arm

There will be some assembly required for the arm. Please check for all components before starting.

1. Check components for duct mount arms.

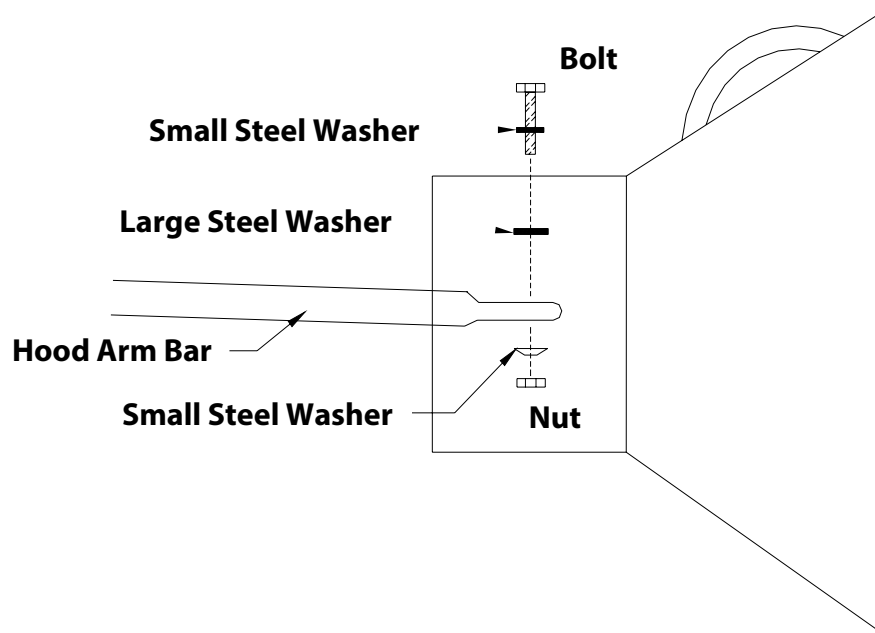
1. Arm with internal support structure
2. Base bracket mounted to arm
3. Hood mounted to arm
4. Hose Installed on arm
5. Black nylon swivel collar mounted on base

2. Slide hose back from base bracket. Be sure to see if red bolt is located in Hole 2. If red bolt is not in Hole 2 – then remove bolt and rotate the base bracket 90-degrees so hole in bracket will align with Hole 2. Install red head bolt and snug. Arm is normally shipped with red head bolt in Hole 2 (see following page).

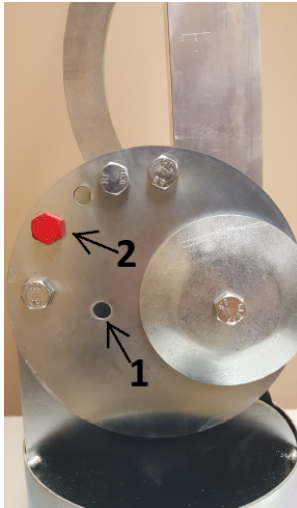
3. If mounting arm on Monoxivent portable unit – the 8 holes in the black nylon swivel will align with the 8 holes in the top of the portable unit. Using hardware supplied with the arm, bolt the arm to the top of the unit. Tighten bolts evenly and bring to snug. **Do not overtighten bolts.** Be sure arm swivels easily 360-degrees.

4. The arm will need final adjustment/tuning for easiest movement and to stay in place upon positioning. You will find friction pads and adjustment pivot joints in four (4) places. 1. Pivot point at the bracket. 2. Pivot point in the center of the arm. 3&4. Pivot point at the hood location. Only put enough tension on these pivot joints to hold the arm in any position it is placed. The arm final adjustment is key to the arm being user friendly. **Do not over tighten the pivot joint friction discs.** Depending on arm usage and movement, occasional adjustments may be required. Based upon the arm's application, cleaning of the internal support structure may require scheduling.

Assembly of Hood to Hood Arm Bar on Arm



The drawing shows how the base bracket should be positioned for the arm to mount on a portable or other top mount surface. The arm for portable/top mount should have been supplied as shown. If it is not, then remove the red bolt head bolt and rotate base bracket 90-degrees and line up Hole 2 with hole in bracket and replace the red bolt head and snug.



Red Bolt Head location for Portable/ Top Mount Arm, mount in hole 2, as shown

