BF840

Room Filtration Module

REFERENCE / USER MANUAL

Mopec®
Better By Design™

21750 Coolidge Highway • Oak Park, MI 48237 USA
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IMPORTANT INFORMATION

MODEL NO.:

SERIAL NO.:

DATE OF PURCHASE:

DATE OF INSTALLATION:

INSTALLATION NOTES:

SERVICE AND SUPPORT:

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INTRODUCTION

The BF840 Room Filter is a heavy duty auxiliary air filtration unit designed to neutralize residual formalin fumes in the busiest of laboratories.

At peak workloads, many large facilities find themselves exceeding OSHA recommended exposure rates for formalin and are forced to temporarily shut down or operate at limited capacity. Equipped with two replaceable 40 lb. (18 kg) potassium permanganate and carbon mixed filters, the BF840 has the horsepower to rein in formalin overexposure and maintain a safe laboratory environment.

The BF840 is constructed all of stainless steel and is equipped with a 9' line cord with hospital grade plug. Casters enable easy positioning of the BF840 through out any lab, allowing easy filtration of problem areas.

FEATURES

The BF840 Room Filtration Module

Dimensions: 301/2" Wide x 241/4" Deep x 231/4" Tall

Top: 18 Gauge, type 304 Stainless Steel with a # 4 Polished Finish

Door/Panels: 18 Gauge, type 304 Stainless Steel with a # 4 Polished Finish

Outer Case: 18 Gauge, Type 304 Stainless Steel with a # 4 Polished Finish

Electrical: 110v / 1ph / 60 Hz

Power: 9' Hospital Grade Line Cord

Filter Gauge: Pressure Differential

Filters: Pre-filter Material is Merv13 rated, and is 18" x 24" x 2"
Filter Media is Potassium Permanganate and charcoal Mix (50/50)

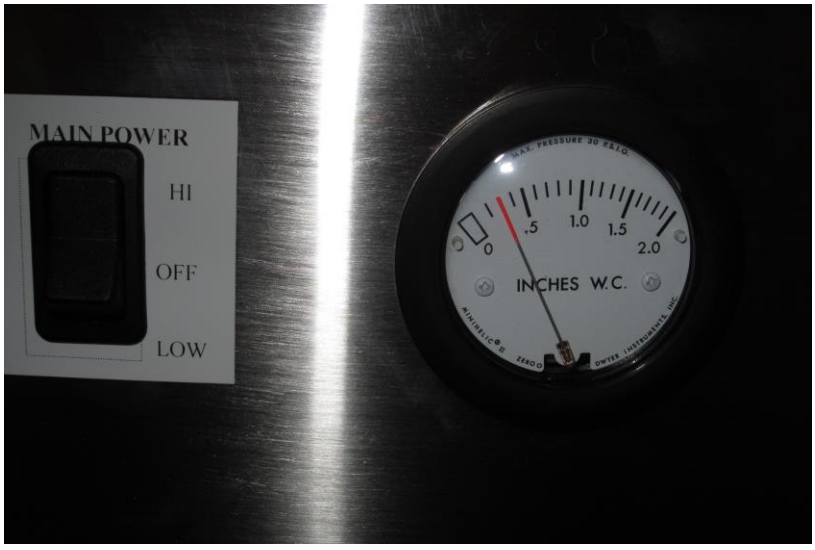
Casters: Four (4) 3" locking caster

Operation:

The unit has a three-way switch, Hi, Off and Low.

Upon turning the unit on, the pressure gauge will read 0 as depicted in the picture below.

Through use, a slow steady deflection to the right will occur; this indicates the pre-filter filter is working. As the gauge approaches 2.0 in of water column the pre-filter filter needs to be changed.



This is a differential pressure gauge. From this point of calibration, a 100% blockage of the filters will yield a reading of .5 in of W.C.

How to change filters:

BF023 Merv13 Pre-filter:

Open the cover by pulling upward on the handle. The Pre-filter can be lifted out of the holder and replaced by new media. The media should be firmly inserted into the holder frame so that it seats to the bottom of the frame. The arrow on the filter should point towards the inside of the module. See photo below

BF014 Combination Potassium and Charcoal Filter

With the cover, open simply pick up the black plastic filter casing and dispose of in accordance with your hospital guidelines. The new filter is placed in the unit with the opening of the filter towards the top of the unit as shown in the above photo. See Cleaning and maintenance section on how to check the filter for replacement.

GENERAL PRECAUTIONS

- ✓ Introduction of liquid into the unit will create a shock hazard for operators and personnel in the area. In addition will void any associated warranty of the motor and filter unit.
- ✓ Operation, use and maintenance of this unit not in accordance with this manual might damage unit for which Mopec will not be responsible.
- ✓ Replaceable filter elements, both Pre-filter BF023, BF021 Potassium Permanganate and BF014 Combination Media filter are to be replaced by the customer at their own cost.
- ✓ Unit should not be operated with panels removed or doors open.

CLEANING AND MAINTENANCE

EVALUATING FILTERS FOR REPLACEMENT

The filters in your BF840 unit contain activated charcoal and alumina pellets impregnated with potassium permanganate, $KMnO_4$, which is a fast oxidizer. Formaldehyde passing through the filter is converted to carbon dioxide and water.

The filter's life depends entirely on the amount of formaldehyde fumes passing through the filter.

The pellets are bright purple when new and become dark brown when spent. Once the inner part of the pellet is brown it is totally spent and must be replaced. This chemistry is very effective and essentially removes all formaldehyde if there is active $KMnO_4$ available. The efficiency drops off as the filter media approaches its maximum capacity. The last 15-20% capacity will exhibit some pass through of formaldehyde.

Health Hazard Data - Alumina Permanganate Filter Media

Effects of Exposure – The filter media is non-toxic upon oral, skin, and inhalation exposure and is non-irritant of the skin. Breathing of dust may cause sneezing. Skin may feel dry after contact. The filter media is an eye irritant.

Emergency Treatment – Flush eye with large quantities of water and seek medical attention.

PROCEDURE - EVALUATING FILTERS FOR REPLACEMENT

On one side of the filter there are four tabs which can be opened to allow pellets to be removed. (see photo)

Eye protection is recommended based on the above "Health Hazard Data".

The usefulness of the filter is approximately 80% diminished when the purple color first disappears from the core.

To determine when the $KMnO_4$ has been exhausted, remove a pellet and slice it in half. Place the sliced pellet(s) on a paper towel and add a few drops of water. The water running off the pellet(s) should be initially purple and then turn a deep iodine color. If no purple coloration is present, the $KMnO_4$ is totally spent. filter-evaluation

When the purple color first disappears from the core of the pellet as described above, the rate at which formaldehyde is removed from the air stream is slowed considerably.

(See Summary on Following Page)

CLEANING AND MAINTENANCE

PROCEDURE – SUMMARY OF EVALUATING FILTERS FOR REPLACEMENT

From a practical standpoint, it may be desirable to perform the tests on the preceding page more frequently during initial usage of the filters to determine when the purple first begins to disappear from the core of the sliced pellet. Based on these early observations, the user can establish a Replacement Testing Cycle with occasional re-checks for verification**.**

All stainless-steel surfaces can be cleaned with soap and water, which will remove debris.

The stainless-steel surfaces can be disinfected with a non-caustic disinfectant. We suggest using BE045 PathCloud or BE047 Bench Wipe for cleaning purposes.

We recommend you **NOT USE** a bleach solution to clean your unit. Bleach will eventually erode stainless steel if not thoroughly rinsed. The use of chlorine bleach will **VOID THE STAINLESS-STEEL WARRANTY**

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WARRANTY

MOPEC BF840 ROOM FILTRATION MODULE

LIMITED WARRANTY

Products manufactured by Mopec will be free from defects in material and workmanship and conform to Mopec's description or specifications. If a warranty claim is made within one (1) year from the earlier if the date of acceptance/first beneficial use, the defective or nonconforming Product or Part thereof will be repaired or (at Mopec's option) replaced free of charge, FCA Mopec's dock. All warranty claims must be in writing and received by Mopec within the warranty period. The warranty is not transferable (other than to customers of Mopec's authorized Distributors), and will not apply unless the Equipment has been properly installed, maintained and operated in accordance with all instructions; and does not apply to defects, nonconformities or other failure due to Equipment misuse, abuse, modifications, or other causes outside Mopec's control. If a warranty claim is made in writing within the warranty period, the defective or nonconforming Equipment (or Part thereof) will be repaired or (at Mopec's option) replaced free of charge, FCA Mopec's dock.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THE WARRANTY AS SET FORTH HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

To the extent that Mopec is acting as a supplier of Products manufactured by a third party, the Products will be warranted only to the extent that they are warranted by their manufacturers and Buyer (or its customer) agrees to look solely to the Product manufacturer for all warranty claims.

MOPEC, 21750 COOLIDGE HIGHWAY, OAK PARK, MI 48237

BEFORE SERVICING THE UNIT LOOK FOR AND HEED THE FOLLOWING LABEL

TROUBLE SHOOTING GUIDE

Problem	**Possible Solution**
My Unit does not turn on	Assure your facility circuit breaker has not been tripped. Assure unit is plugged in. Assure Switch is turned on
My unit does not remove odors	Assure your facility circuit breaker has not been tripped. Assure unit is plugged in. Check Gauge for level Assure Switch is turned on Assure Pre- filter is not blocked Assure Combination Media filter is not clogged
My unit will not roll	Assure foot brake is released on all the casters

CERTIFICATE OF REGISTRATION

This is to certify that

MP Acquisition, LLC DBA Mopec

21750 Coolidge Highway, Oak Park, Michigan 48237 USA

operates a

Quality Management System

which complies with the requirements of

ISO 9001:2008

for the following scope of registration

The registration covers the quality management system for the design, engineering, manufacturing and installation of equipment and distribution of supplies for morgue, pathology, histology and necropsy applications.

Certificate No.:	CERT-0078089	Original Certification Date:	April 9, 2008
File No.:	1068177	Current Certification Date:	April 7, 2014
Issue Date:	March 11, 2014	Certificate Expiry Date:	April 6, 2017

Chris Jouppi
President,
QMI-SAI Canada Limited

Samer Chaouk
Head of Policy, Risk and Certification

ISO 9001

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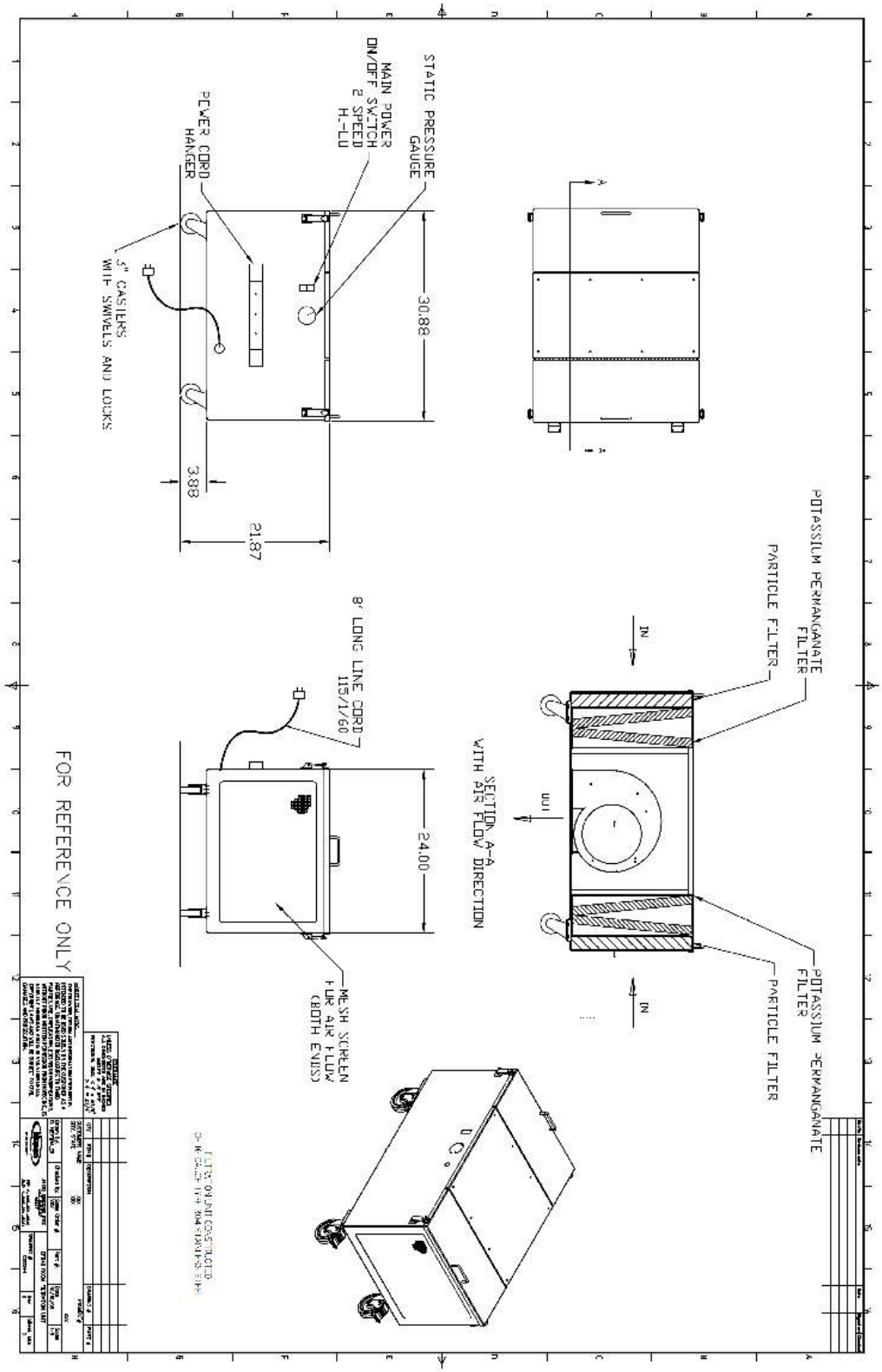
STATIC PRESSURE GAUGE
MAIN POWER ON/OFF SWITCH 2 SPEED H-LU
POWER CORD HANGER
3" CASTERS WITH SWIVELS AND LOCKS
30.88
3.88
21.87
8' LONG LINE CORD 115/1/60
24.00
MESH SCREEN FOR AIR FLOW (BOTH ENDS)
POTASSIUM PERMANGANATE FILTER
PARTICLE FILTER
IN
SECTION A-A WITH AIR FLOW DIRECTION
POTASSIUM PERMANGANATE FILTER
PARTICLE FILTER
FOR REFERENCE ONLY