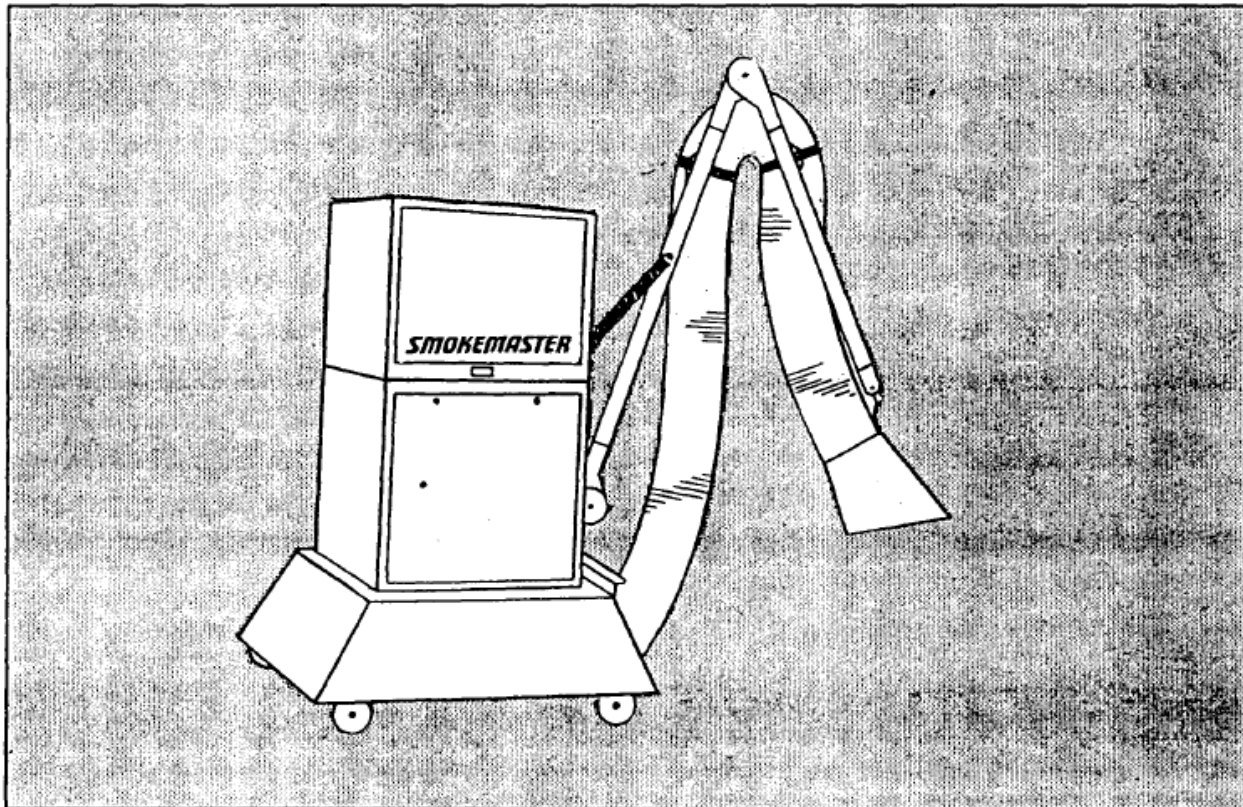


Further information:  
BERRIMAN ASSOCIATES - [www.berriman.com](http://www.berriman.com) - 1-800-480-3630

# **SMOKEMASTER®**

## **MODEL M68V**

### **INDUSTRIAL MECHANICAL AIR CLEANER**

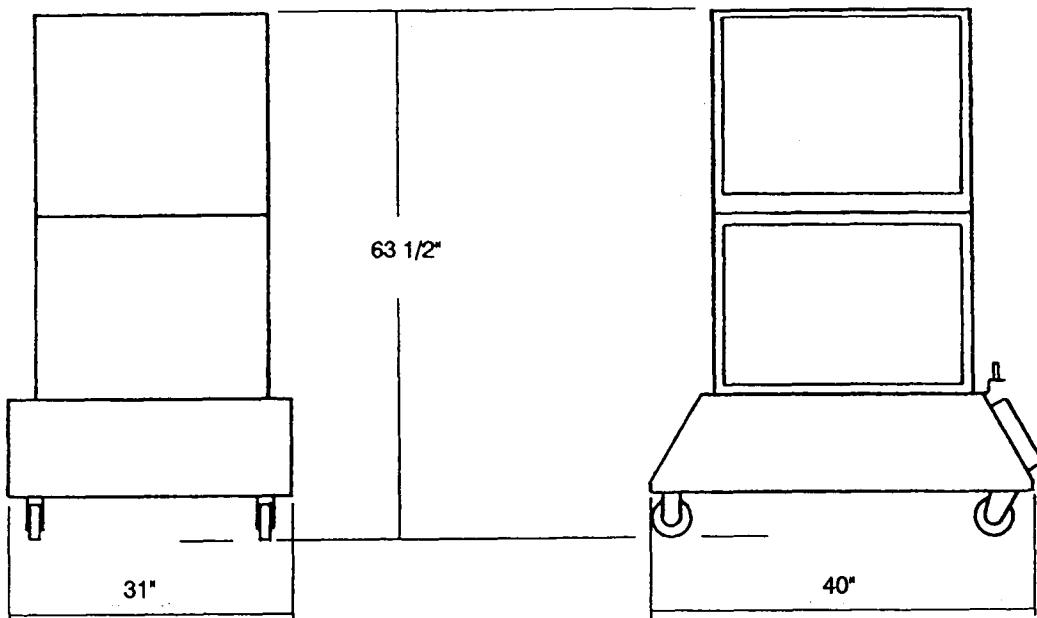
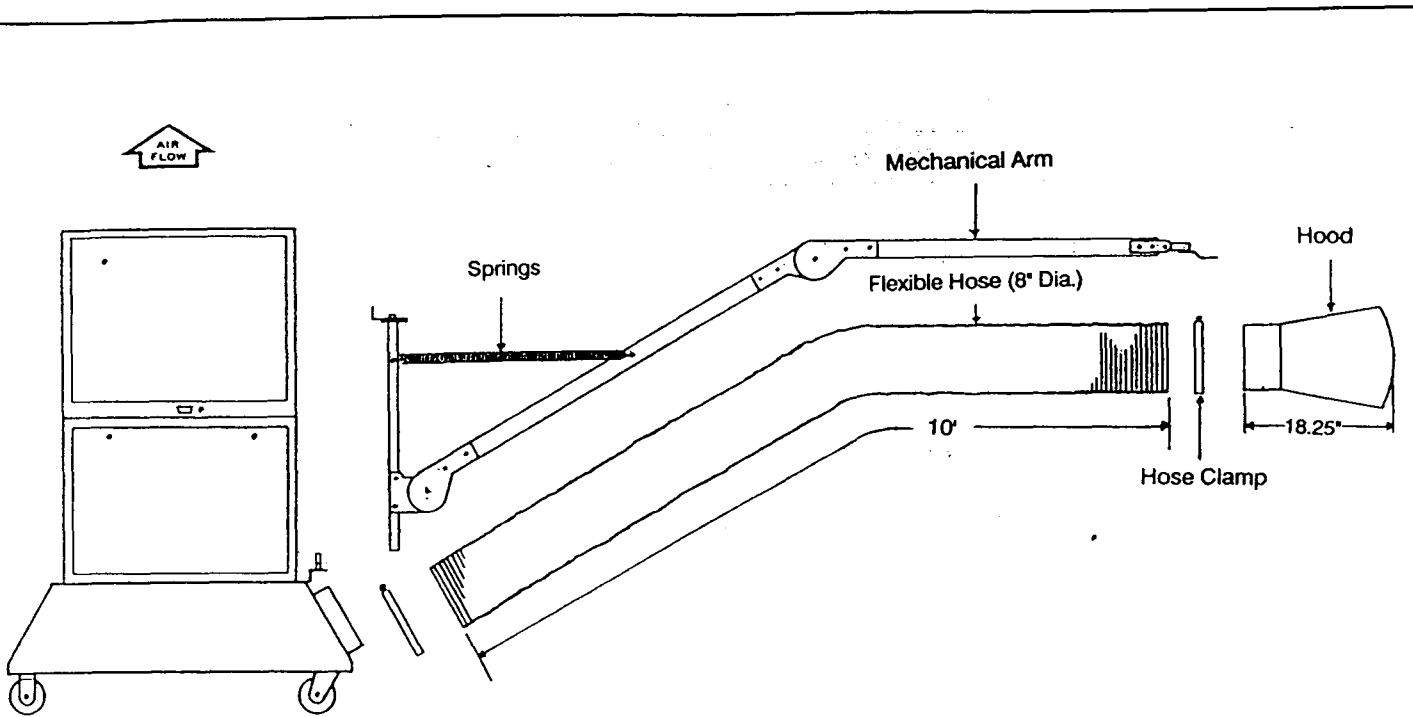


THE SMOKEMASTER M68V HEPA AIR CLEANER CAPTURES SMOKE, DUST, AND OTHER AIRBORNE POLLUTANTS IN THE WORKPLACE. THE M68V IS A COMPLETE SELF-CONTAINED AIR CLEANER WHICH CAN BE USED IN SOURCE CAPTURE APPLICATIONS AS WELL AS WITH BACKGROUND AIR CLEANING TO PROVIDE HEALTHIER WORKING CONDITIONS.

- Factory installed pressure gauge provides filter status at a glance.
- 1.5 HP, heavy duty, permanently lubricated, ball bearing motor requires no maintenance.
- High efficiency filter (HEPA) rate at 99.97 DOP at 3 micron particles.
- Powered from a standard grounded outlet. All models equipped with a 10-foot power cord.
- Specifically designed for source capture of contaminants.

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METRIC CONVERSION	FORMULA
Ins. to mm	Ins. x 25.4
Lbs. to kgs.	Lbs. x .455
Ins. w.g. to kPa	Ins. w.g. x .2488
CFM to m <sup>3</sup> /h	CFM x 1.6992
Ft <sup>2</sup> to m <sup>2</sup>	Ft <sup>2</sup> x .0929

FIGURE 1 - M68 DIMENSIONS

# SPECIFICATIONS

## IMPORTANT

THE SPECIFICATIONS GIVEN IN THIS PUBLICATION DO NOT INCLUDE NORMAL MANUFACTURING TOLERANCES. THEREFORE, THIS UNIT MAY NOT MATCH THE LISTED SPECIFICATIONS EXACTLY. ALSO, THIS PRODUCT IS TESTED AND CALIBRATED UNDER CLOSELY CONTROLLED CONDITIONS, AND SOME MINOR DIFFERENCES IN PERFORMANCE CAN BE EXPECTED IF THOSE CONDITIONS ARE CHANGED.

	M68V1003	M68V1011	M68V1080	M68V1081
<b>MODEL</b>	120 Vac	208-240 Vac	208-240 Vac	440-480 Vac
<b>VOLTAGE</b>	120 Vac 1 Phase 60 Hz	208-240 Vac 1 Phase 60 Hz	208-240 Vac 1 Phase 60 Hz	440-480 Vac 1 Phase 60 Hz
<b>CURRENT</b>	17.2 Amps	8.8 Amps	5.0 Amps	2.5 Amps
<b>POWER</b>	950 Watts	950 Watts	1100 Watts	1100 Watts

**EFFICIENCY:** 99.97 DOP (ASHRAE 52-76)

**CAPACITY:** Free air 3000 CFM. Factory set at 1100 CFM with 99.97 DOP HEPA filter.

**SHIPPING WEIGHT:** 345 Lbs.

**INSTALLATION WEIGHT:** 296 Lbs.

**DIMENSIONS:** 40" L x 63.5" H x 31" W; see Fig. 1, Pg. 3. **HEPA FILTER:** 23 3/8" x 23 3/8" x 11 1/2"

**AMBIENT TEMPERATURE RATING:** The operating temperature range is -40°F to 104°F.

**MOTOR:** 1.5 HP, TEFC, thermally protected with sealed ball bearings. Adjustable motor sheave allows for field airflow adjustments.

**FINISH:** Baked enamel, dark grey textured.

# PLANNING THE INSTALLATION

## WARNING

The M68 industrial roll-around electronic air cleaner is not explosion proof. It must not be located or used where there is any danger of gas, vapor, or dust explosion.

this goal is through the use of electronic air cleaners.

At no time should an electronic air cleaner be placed where there is a potential for explosion due to the presence of explosive dusts, gases, or vapors. Contact the nearest Smokemaster representative for assistance in determining the correct application of an electronic air cleaner.

## INTRODUCTION

Clean air is the subject of numerous laws and regulations. Typical requirements in the United States are those put out by the Occupational Safety and Health Administration (OSHA). Private groups, such as the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), have also published numerous recommendations.

Normally, clean air is defined in regulations and recommendations as air having a limited amount of contaminant in it, commonly expressed as parts per million, or milligrams per cubic meter. Approved counteractions are intended to lower or eliminate the amount of contaminants in the air. One of the more common methods of achieving

## SIZING

Sizing is the process of determining the amount of air cleaning necessary in any given application. Since the M68 is a source capture air cleaner, the sizing process is relatively simple—provide one source capture hood per contaminant source.

## LOCATION

For most efficient operation, the M68 source capture hood should be placed as close to the contaminant source as possible. The maximum distance between the contaminant producer and the source capture hood should not exceed 18 in. Therefore, in locating the M68, be sure that the mechanical arm is capable of extending the source capture hood to within 18 inches of the contaminant source.

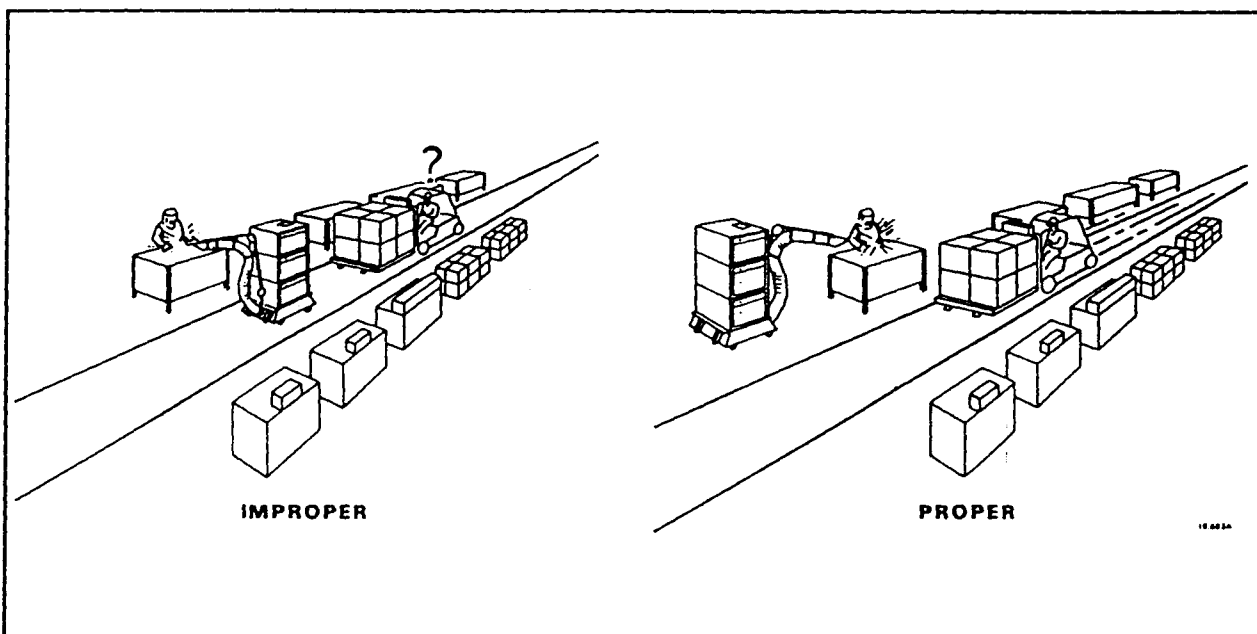


FIGURE 2 - EXAMPLES OF PROPER AND IMPROPER M68 LOCATION

# FILTER MAINTENANCE / REPLACEMENT

## CAUTION

Adjusting the variable sheave changes the load on the motor. Do not exceed the rated amperage for the motor.

## FILTER MAINTENANCE

Dirty air is drawn through the prefilter. Large particulate, such as lint, is removed by the prefilter. The remaining smaller particulate is then captured by the hepa filter.

As the contaminant load on the filters increases, the filters become more efficient in capturing the smaller particles. At the same time, however, the dirty filter allows less air to pass through - resulting in less particle collection and a decrease in the overall effectiveness of the air cleaner.

Below is a chart which indicates the C.F.M. vs. static pressure using the standard 99.97 dop hepa filter and the 35% prefilter in an ambient cleaning installation.

C.F.M. Capacities	Resistance Inches W.G.	
1100	1.4"	Both Filters Clean
870	1.5"	
470	1.6"	

Upon installation, note the initial pressure reading. Check the filter gauge daily and replace the prefilter when the pressure reading increases by .1" W.G. Note that a .1" increase represents about a 25% decrease in the rated air flow.

If replacing the prefilter does not lower the pressure reading by .1" W.G., the hepa filter is nearing the end of its life. If the reduced CFM is tolerable, the M68 can be operated beyond the 1.6" W.G.; however, air flow will be reduced further.

## WARNING

1. Do not place a ladder against the M68 when it is mounted in an overhead position. A lift platform should be used to gain access to the air cleaner for filter removal and servicing.
2. Disconnect power to the M68 before working on or near the air cleaner.

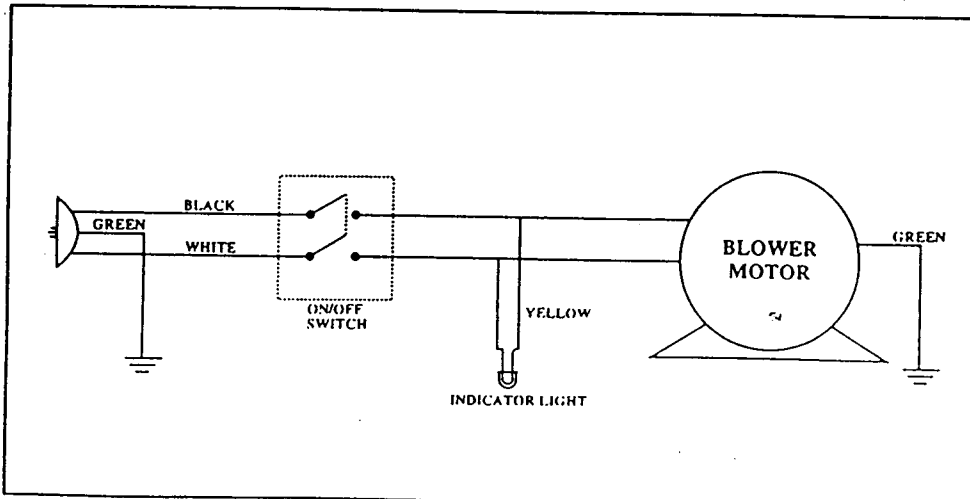
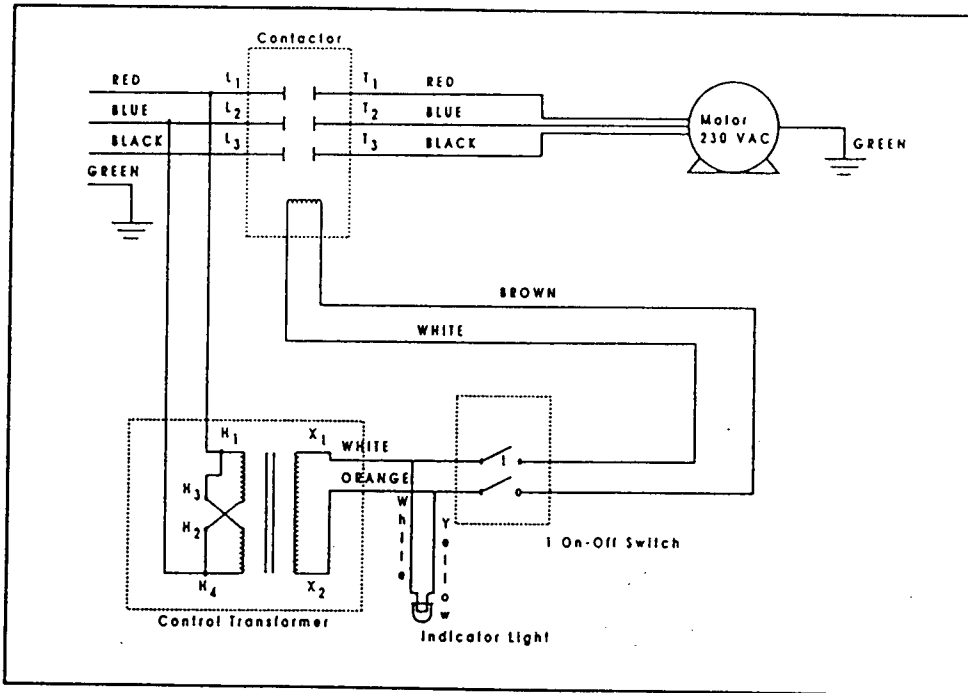
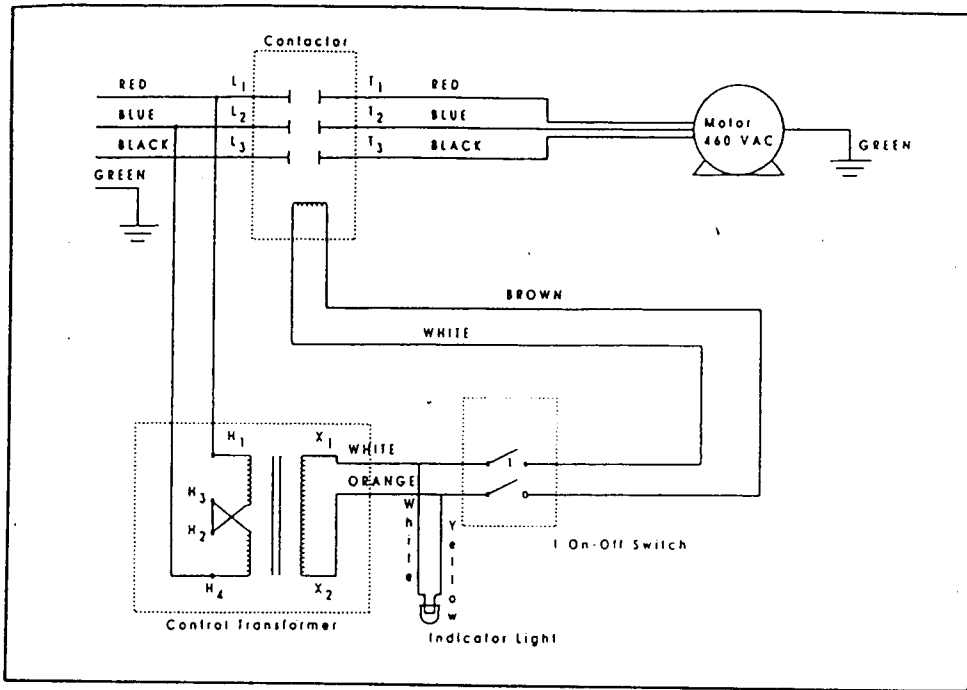
## FILTER REPLACEMENT

### Prefilter:

- Open the filter access door.
- Slide the 2" prefilter out of the track.
- Replace the prefilter. Be sure the air flow arrow on the prefilter points towards the blower.
- Close the filter access door.

### Hepa:

- Open the filter access door.
- Loosen the 2 filter retainer bolts. A 9/16" wrench will be necessary for this step. Remove the hepa filter. Caution should be used because the filter weighs 37 lbs. new.
- Slide the new hepa filter in place. Make sure the air flow arrow points towards the blower.
- Using the 9/16" wrench, tighten the filter retainer bolts to compress the filter gasket.
- Close the filter access door.



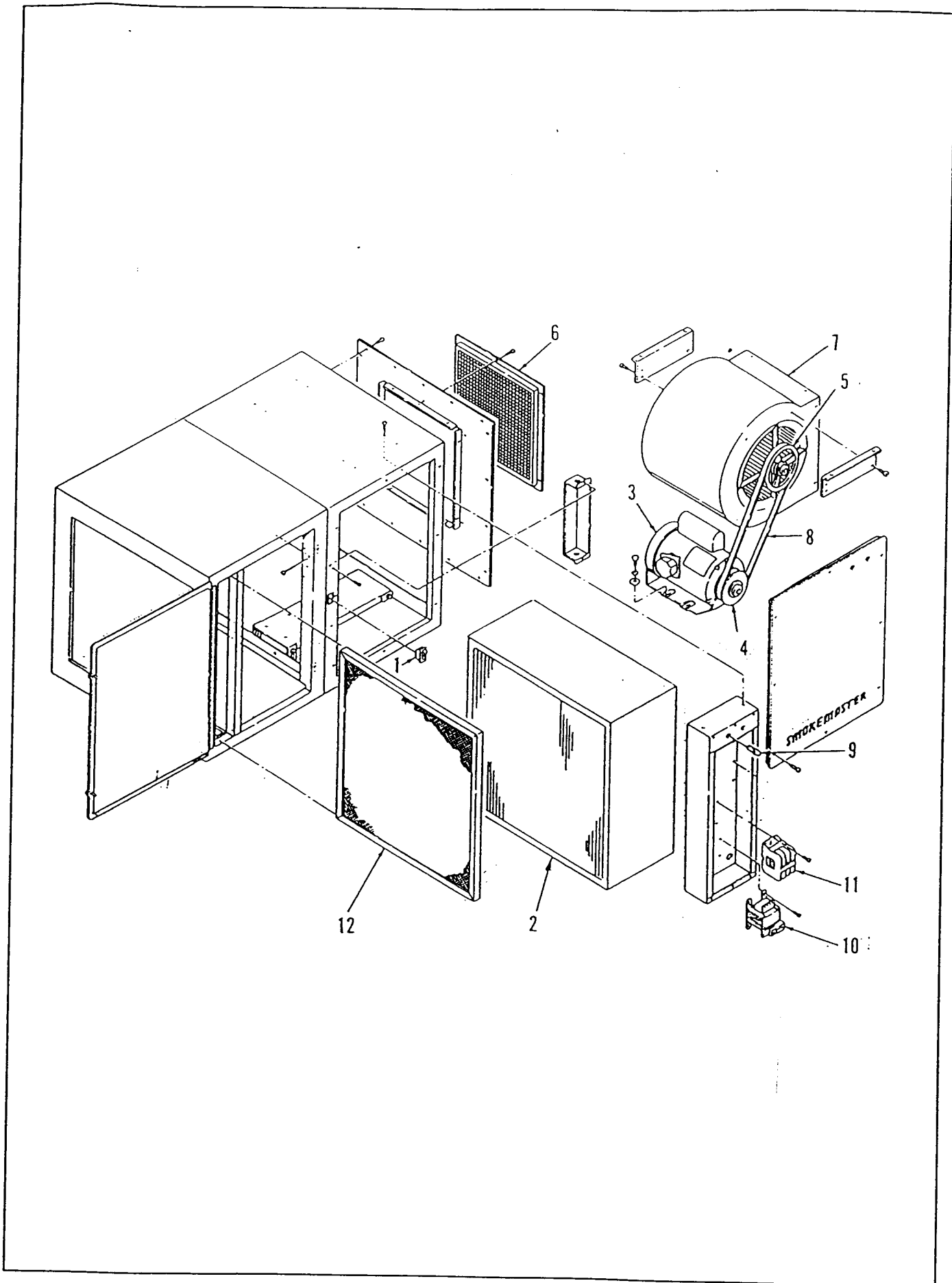


FIGURE 16 - EXPLODED VIEW OF M68 AIR CLEANER



# PARTS LIST

NO.	DESCRIPTION	PART NO.	
		1 PHASE	3 PHASE
1	On/Off Switch	10140	10140
2	HEPA Filter 99.97 DOP	41088	41088
3	Motor, 1.5 Horse Power	40037	40040
4	Motor Sheave, Variable	30362	30534
5	Blower Sheave	30167	30167
6	Exhaust Grille	21326	21326
7	Blower	37012	37012
8	Belt	30543	30543
9	Indicator Light	10097	10097
10	Step Dow Transformer	————	10075
11	Motor Contactor	————	10078
12	Filter Gauge	10205	10205
Not Shown	Prefilter, 2" Pleated	41053	41053
Not Shown	Hose Clamp, 8" Diameter	30035	30035
Not Shown	Impinger Assembly	07057	07057
Not Shown	2" Aluminum Washable Mesh Prefilter	41083	41083
Not Shown	Hose, 8" Diameter x 10'	30021	30021

**LIMITED THREE-YEAR WARRANTY**