

SMOKEMASTER MODELS M72A & M72B INDUSTRIAL AIR CLEANER

THE M72 INDUSTRIAL AIR CLEANER INCLUDES COMPONENTS REQUIRED TO REMOVE AIRBORNE PARTICLES SUCH AS DUST, POLLEN, BACTERIA, TOBACCO, AND COOKING SMOKE FROM THE CIRCULATING AIR IN LARGE RESIDENTIAL OR LIGHT COMMERCIAL BUILDINGS. THE AIR CLEANER IS MOUNTED IN THE RETURN AIR DUCT OF A FORCED AIR SYSTEM WHERE AMBIENT TEMPERATURE DOES NOT EXCEED 175° F.

- Cleans the air at a rate of 1,000 to 6,000 cfm in forced air systems.
- Rated up to 95 percent efficient according to the National Bureau of Standards DOP test.
- Strong, galvanized steel cabinet can be installed vertically or horizontally.
- Hinged door allows easy access to filters.

For further information:

**BERRIMAN ASSOCIATES
1-800-480-3630
www.berriman.com**

SPECIFICATIONS

DIMENSIONS:	M72B - 21"L x 49.5"W x 32.25"H M72A - 21"L x 25.5"W x 32.25"H
WEIGHT:	M72B - Installed: 137 lbs. M72B - Shipping: 162 lbs. M72A - Installed: 71 lbs. M72A - Shipping: 86 lbs.
CABINET:	16 gauge galvanized steel.
PRIMARY FILTER:	Rigid V-bank, mini-pleated microglass fiber construction. M72B contains two 23 ³ / ₈ " x 23 ³ / ₈ " x 11 ¹ / ₂ " filters. M72 contains one. Filters weigh 13.25 lbs. each with a collection area of 200 sq. ft. per filter.
TEMPERATURE:	175° F maximum.
MOUNTING:	Standing or hanging cabinet with horizontal or vertical airflow. Ceiling mount brackets are standard.
PREFILTER:	Two 30-35% efficiency pleated prefilters, 24" x 24" x 4" per M72B. Filter media is a cotton and synthetic blend. Total prefilter media area is 29.5 sq. ft. each.
INSTRUMENTATION:	Dirty Filter Gauge designed to determine filter replacement cycle.
FILTER ACCESS:	Side load track system with hinged access door.

PLANNING THE INSTALLATION

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.

POSITION

The M72 can be mounted in a vertical or horizontal duct. If the air cleaner is to be mounted in a vertical duct, position the M72 so that the hinged access door opens down.

TRANSITIONS

When adapting the duct to fit the air cleaner, use gradual transitions in duct size to prevent turbulence and to increase efficiency.

Duct transitions should not exceed 20 degrees (about 4 in. per lineal foot [101.6 mm per lineal 302.8 M]) on each side of a fitting.

OUTDOOR AIR

When outdoor air is added to the return air duct, sufficient heat must be added to maintain a uniform air temperature between 32° F and 175° F. Two methods are recommended.

1. **Baffles.** Mixing baffles should be used to mix the outdoor air and the return air before it enters the air cleaner.

2. **Preheat Coil.** If a large amount of outdoor air is used, it must be heated. An appropriate control system should be used to control the heating element (electric strip heater, steam coil, etc.)

Outdoor air intakes should be protected to prevent the introduction of unnecessary contaminants. Depending on the installation, it may be necessary to incorporate some or all of the precautions mentioned below.

1. Air intakes should be hooded or louvered to provide adequate protection from rain and snow. The type of hood used will depend upon the installation and the expected weather conditions.

2. Air intakes should always be equipped with a "bird screen."

3. At times it may be desirable to install a prefilter ahead of the unit. This is done to remove contaminants that could be harmful to the air cleaner or might cause excessively fast dirt buildup.

HUMIDIFIERS

Location of the system humidifier is important to the operation of the air cleaner.

An evaporative-type humidifier may be installed between the furnace warm air duct and the return air duct without affecting the unit.

An atomizing-type humidifier should be installed downstream from the air cleaner. If the atomizing-type humidifier is installed upstream, mist, salts and minerals may decrease the efficiency of the electronic cell and create a need for equipment service.

When the atomizing-type unit *must* be used upstream from the M72, the following precautions should be taken:

1. It must be installed as far from the air cleaner as possible.

2. A standard, disposable-type furnace filter should be installed between the humidifier and the air cleaner to trap water droplets and mineral salts.

INSTALLING THE AIR CLEANER

Mount the M72 Air Cleaner as follows:

1. Fabricate and install the necessary vanes and transitions.
2. Set the cabinet in position. If hanging brackets are used, make certain the brackets are strong enough to hold the cabinet and the cabinet is attached firmly to the brackets.

NOTE: Place a spirit level on top of the cabinet to make sure it is level.

- 3a. Drill holes for sheetmetal screws into the cabinet face and also the duct.
 - b. Fasten the duct to the inside of the cabinet - flange opening with sheetmetal screws.
 - c. Seal all joints in the return air system to prevent dust from entering the clean airstream
4. Slide the prefilter(s) and primary filter(s) into place.