



MAC FILTER

INSTALLATION & OPERATION MANUAL



INTRODUCTION

The Multi Application Collector (MAC) was developed by ibis International to give a reliable, but economical solution to your application requiring both dust/fiber collection and air filtration. The Ibis MAC is a passive type manual filter with no moving parts or power requirements.

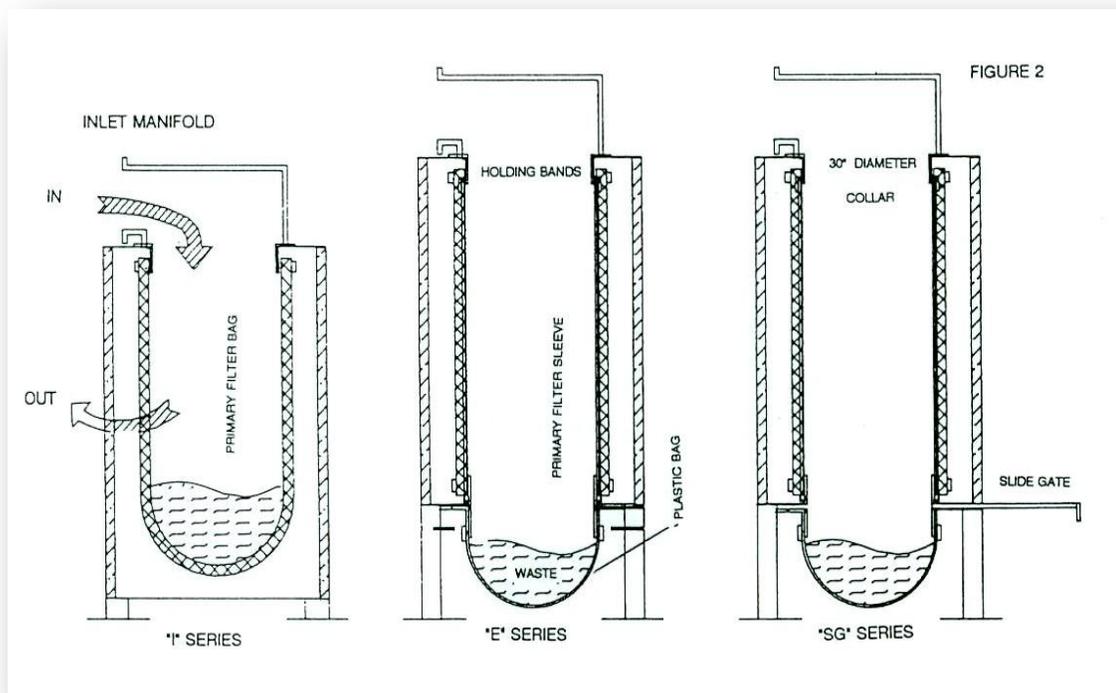
The MAC filter is shipped mostly assembled for easy shipping and field installation. Completion of assembly requires attaching the top inlet, legs (if applicable) and ductwork from the dust source.

THEORY OF OPERATION

The MAC design allows for two-stage filtration of particulate carried by an air stream (see Fig. 2) (The air and particulate are conveyed to the MAC by a fan). A primary filter sleeve provides the first stage of filtration and/or collection of particulate. The primary filter is normally a woven or knitted filter fabric. The type fabric will vary to suit the application.

The captured particulate will be stored in the sleeve itself, in a plastic bag below, or transported to a central vacuum system - depending on the model type or configuration. The conveying air passes through this primary bag/sleeve then flows through the secondary sidewall filter panels.

Removal of the collected particulate and service of the side wall secondary filters will detail in the following sections.



OPERATION/MAINTENANCE

“I” SERIES

The “I” Series has an internal primary filter bag that is the first filter stage and the particulate collector. To remove accumulated waste/particulate, stop the fan(s), release the holding band at the bag collar (top), remove the bag and empty the material. The empty bag is replaced on the collar and the holding band is secured. A spare or extra set of bags will allow a short “downtime” and a quick change. The bag material will vary to suit the application.

“E” SERIES

The “E” series has an External collection bag and a primary filter sleeve rather than the bag found in the “I” Series. The sleeve is held in place with holding bands and secured to the top and bottom collar(s). To remove the waste/particulate, stop the fan(s), release the holding band(s) on the external collection bag. Plastic bags are normally used for easy disposal. Option cloth bags are available for special applications. Install a clean bag and restart fan(s).

“SG” SERIES

The “SG” Series is the same as the “E” Series except for a full cut-off Slide Gate located at the bottom. The use of the slide gate will isolate the external collection bag allowing replacement without stopping the process fan(s). After replacing the plastic bag, open the slide gate and continue with normal operation.

“CVS” SERIES

The “CVS” series is different from all of the above, regarding one aspect: There is a bottom hole without an exterior collar. This series has a collection hopper with a bottom pneumatic slide gate. This hopper is meant to be connected to a Central Vacuum System (Ibis CVS). Once the pneumatic slide gate opens, the material is purged from the MAC hopper. This system negates the need for changing bags or sleeves and provides minimal down-time and is essentially maintenance-free. The pneumatic cylinder has a solenoid that must be connected to the customer’s controls. This valve opens per the customer’s requirements. This is totally dependent on the material being filtered and the amount of material entering the MAC filter. Opening the hopper valve long enough to empty the bottom hopper is the goal.

"FBC" SERIES

The "FBC" series has an External collection bag and a primary filter sleeve rather than the bag found in the "I" Series. It also has an secondary external sleeve that extends the collection bag to ground level when the unit is placed on a mezzanine or platform. The sleeves are held in place with holding bands and secured to the top and bottom collar(s). To remove the waste/particulate, stop the fan(s), release the holding band(s) on the external collection bag. Plastic bags are normally used for easy disposal. Option cloth bags are available for special applications. Install a clean bag and restart fan(s).

PRIMARY FILTER BAG/SLEEVE CHANGE

All MAC Series filters have a bag or sleeve held in place by a steel holding band. Simply release and put on a new bag or sleeve. You will want to keep a spare bag/sleeve in stock. Ibis offers various types of fabrics, sleeve hoops, special collars, bands etc. for different applications.



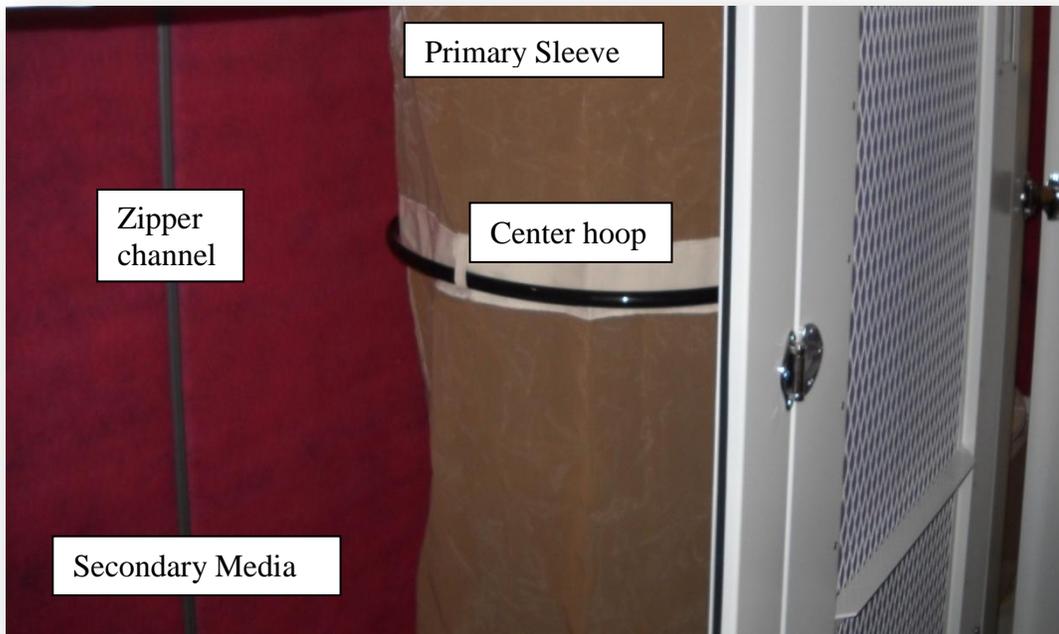
SECONDARY (SIDEWALL) FILTER SERVICE

The side wall and/or door are fitted with filter media. The life of this filter media can often be extended by periodic cleaning of the media while in place. To accomplish this, use compressed air to "back blow" the media from the outside of the MAC.

The media is normally a lofty, nonwoven polyester material held in the frame by a plastic zipper channel or extrusion. Cut the media from a roll allowing an extra 50 mm. in each dimension. Lay the media square on top of the zipper channel and push media into the plastic holding groove using a “media installation tool” or “zip tool” (see figure 3).

Once positioned, roll the tool for fully securing media. Be sure to trim any excess media and tuck and/or roll edges completely in the holding channel.

TIP: Use old media pieces as pattern (template) for cutting new media.



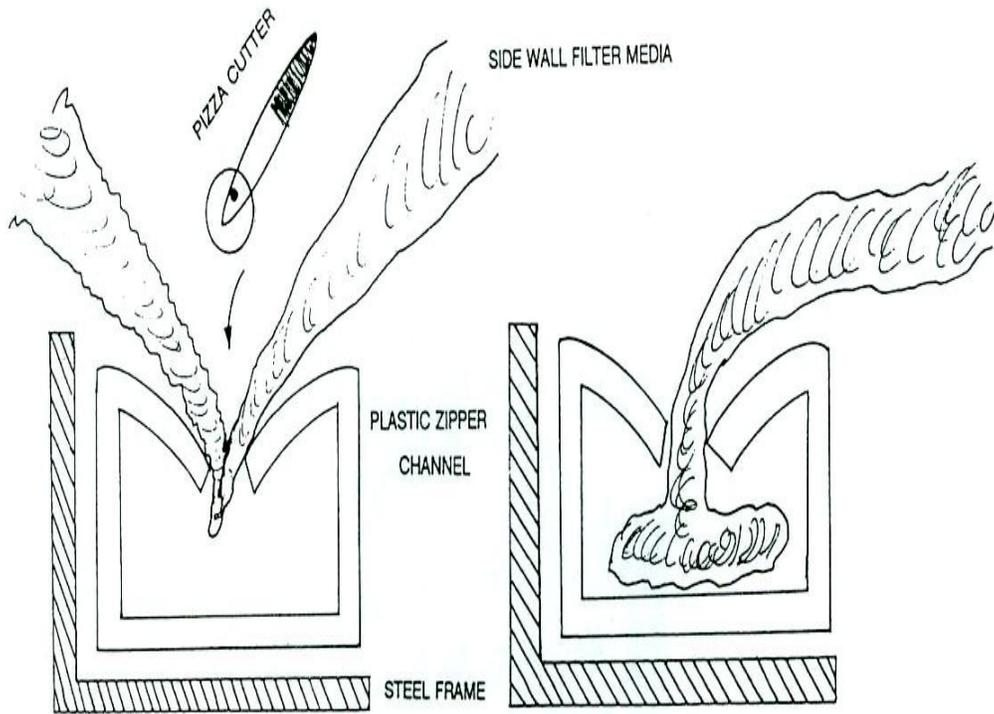


FIGURE 3

INSTALLATION/ASSEMBLY

1. Read instructions completely then check your shipment for missing or damaged parts.
2. Move equipment to the installation area prior to assembly. Do not tighten bolts until assembly is complete.
3. If your MAC does not have the sidewall media installed, now is the time to do that. See instructions on Page 4 under "Secondary Filter Service".
4. Take the MAC components and place on floor. Secure the legs to the bottom of the MAC. Standard legs on the "I" Series are 100 mm. long and legs on the "E" and "SG" Series are 1000 mm. long. Actual leg length may vary with the application.
5. Install the inlet manifold(s), if supplied. (Turbo or plenum style)
6. Install the primary filter bag(s) or sleeve(s).
7. The main system fan may now be positioned and duct connected from the process. In some cases, a fan support stand (FSS) will be included to facilitate ducting.
8. If a static pressure kit was provided, install as illustrated in figure 4.
9. Electrical controls (option) for the fan motor should now be installed and wired. Prior to actually operating the MAC and fan with your production process, check fan rotation and measure the actual amperes used by the motor.
10. Sealer/caulking is supplied and should be used as required to provide maximum protection from dust leakage.

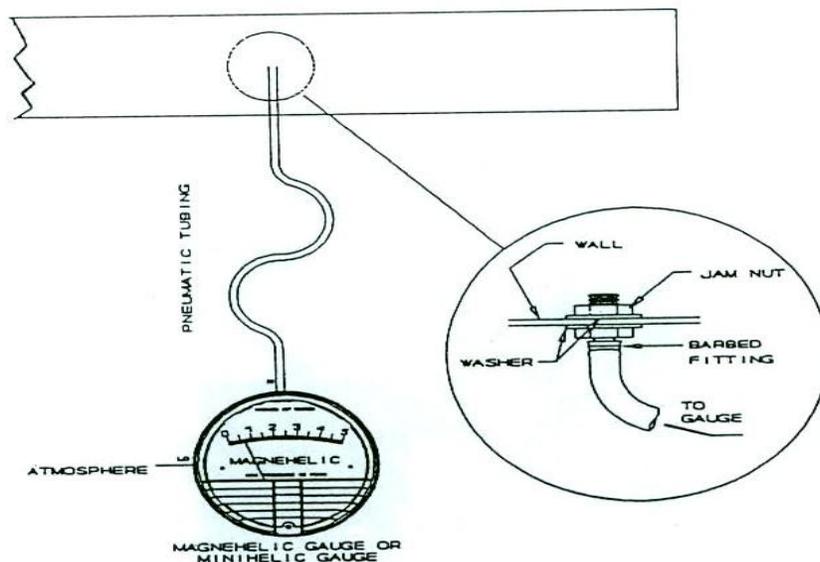


Figure 4

NOTE: BE SURE TO "ZERO" GAUGE
GAUGE WILL READ PRESSURE DROP ACROSS ENTIRE FILTER
INSTALL BARBED FITTING INTO SIDE OR TOP OF DUCT

SPARE PARTS

When ordering spare parts give complete information to include:

1. Serial Plate Number on machine.
2. Description of part including size.
3. Quantity.
4. Address and method of shipment.
5. Purchase Order number.

Typical Fabric Properties
F9515

Construction	52 x 52 EPI/PPI
Weave	2/1 Twill
Yarn Size - ASTM D-1907	Warp 8 mil Monofil PP
Yarn Size - ASTM D-1907	Fill 8 mil Monofil PP
Weight ASTM D-3776	3.5 oz/sqyd
Tensile - ASTM D-5034	Warp 165 lbs
Tensile - ASTM D-5034	Fill 165 lbs
Burst ASTM D-3786	PSI
Air Permeability ASTM D-737	34% Open Area CFM
Other	Opening Size (Calc) 285 microns

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Any recommendations made by Seller concerning uses or applications of said product are believed reliable and Seller make no warranty of results to be obtained. This data sheet supercedes all previous data sheets for this style and is subject to change without notice.

Tuesday, September 01, 2009

Typical Fabric Properties

AFTRK-100

Test Sample: 20" x 20"

Thickness: 1/2" +/- 1/8"

Color: Red & Purple

Static Pressure: 0.14" W.G. at 300FPM

Arrestance: 88% at 300 FPM

Efficiency: 80% on 10 microns s

HAVE A PROBLEM? NEED PARTS OR SERVICE?

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