

Model HEC

CONTINUOUS DUTY AUTOMATIC SELF-CLEANING
DUST COLLECTOR



MURPHY

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#1J/01/01

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Since 1943, N. R. Murphy Limited has been a recognized leader in the field of air pollution control. Our Model HEC, first introduced in the 1960's, has undergone numerous design changes and improvements over the years to keep pace with current regulations and technological advancements. The Model HEC is a continuous duty, automatic self cleaning dust collector which will operate continuously 24 hours a day, 7 days a week, making it ideal for manufacturing operations that run multiple shifts and seldom or never shut down. N. R. Murphy Limited has the capability to fully design and manufacture this product to meet the customer's exacting requirements and specifications, with minimal lead times. We offer rapid delivery on both our standard catalogued and custom designed models.

DUST COLLECTOR SELECTION:

N. R. Murphy Limited's dust collectors are designed and constructed to provide a lasting return for your investment and feature heavy gauge galvanized, all welded construction to meet a broad range of conditions, applications or unique locations. Stainless steel dust collectors are also available for applications involving food processing, pharmaceuticals or corrosive environments. N.R. Murphy engineers and/or technical representatives will work with you to ensure that your new dust collector will be designed to suit your intended and specific application. An endless variety of designs are available in both standard or custom models.

PRINCIPLE OF OPERATION:

Particulate laden gases enter the collector through the inlet and impact against a baffle which directs the heavier particulate down into the collector's hopper. The gas with the remaining particulate is directed toward the filter section where the gas passes through the filters and the fine particulate is collected on the outer surface of the filter bags. The clean air is then discharged through an outlet at the top of the collector.

To provide continuous service, the Model HEC dust collector features a pulse jet self cleaning system which uses compressed air at 80 to 100 psig to pulse off the accumulated dust, thus maintaining a constant pressure drop across the filters. This is accomplished by using a series of solenoid-controlled valves which are activated by a timer to release a jet of compressed air from the dust collector's manifold. The air travels under pressure through a piped system to a nozzle, directly over a venturi, and into the bag. The blast of compressed air intermittently stops the air flow through the filter, inflates the filter bag and breaks off the dust accumulation. Only a portion of the dust collector's filters are being cleaned at any time, thus allowing the majority of the filter bags to continue to do their job of filtering the dirty air. An efficient venturi design assures maximum cleaning efficiency with minimum consumption of compressed air.

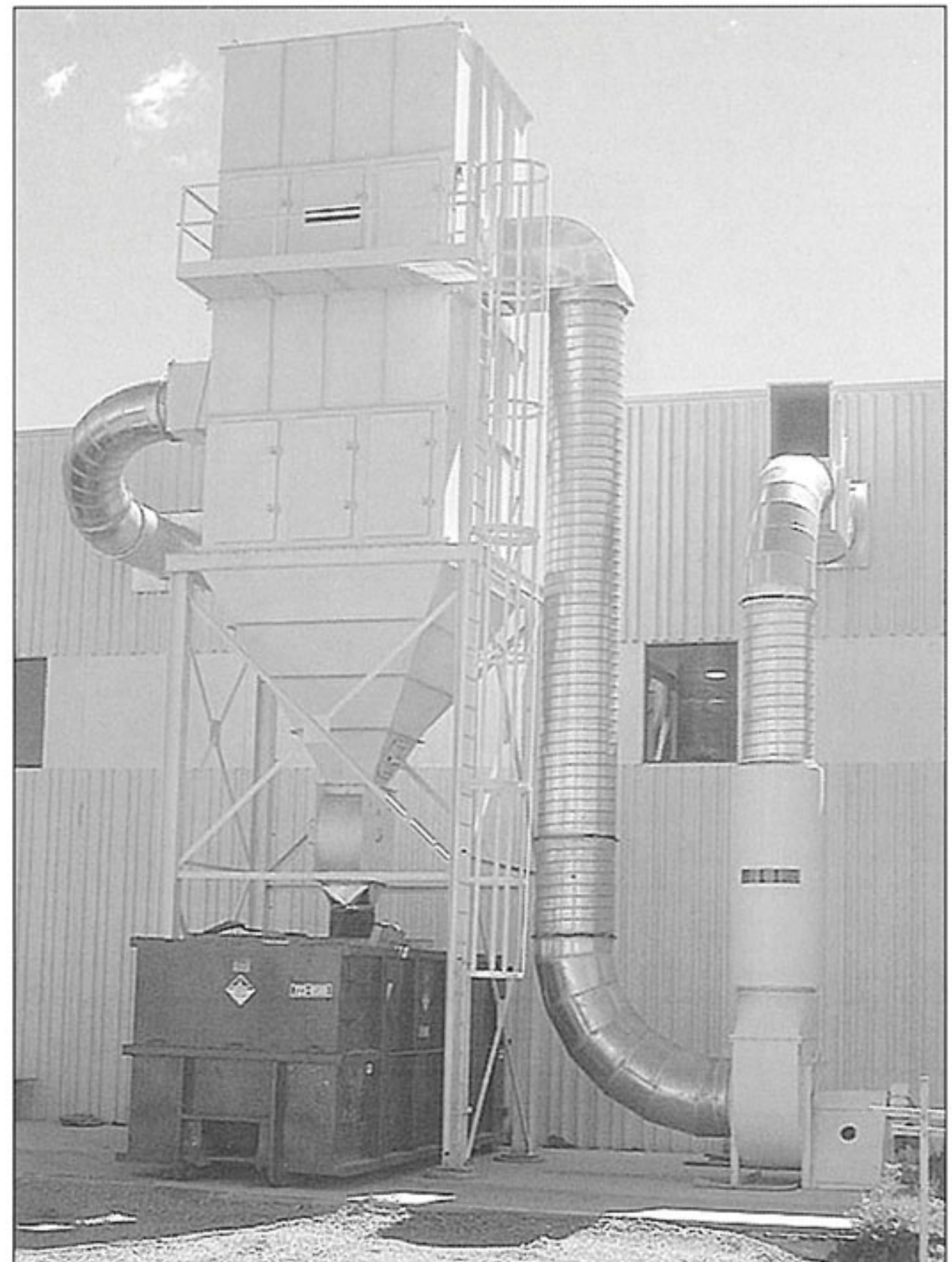
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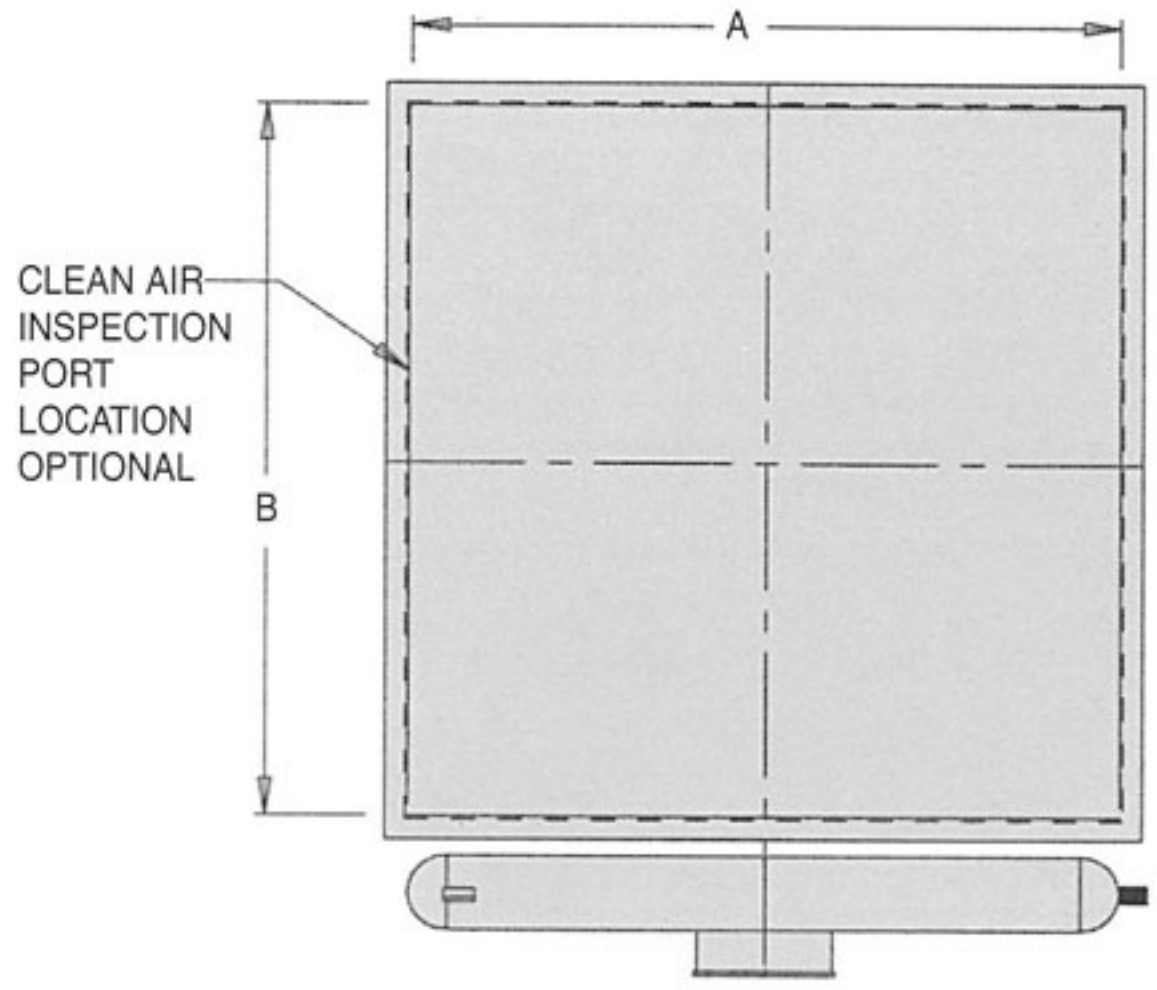
- ♦ The filter tube cleaning system requires 80 - 100 psig of clean, dry in-plant compressed air. Valves and control operate on 120 V-60 cycle power.
- ♦ The filter tubes and cages are pre-checked and shipped loose for on-site installation by user or installer.

IMPORTANT

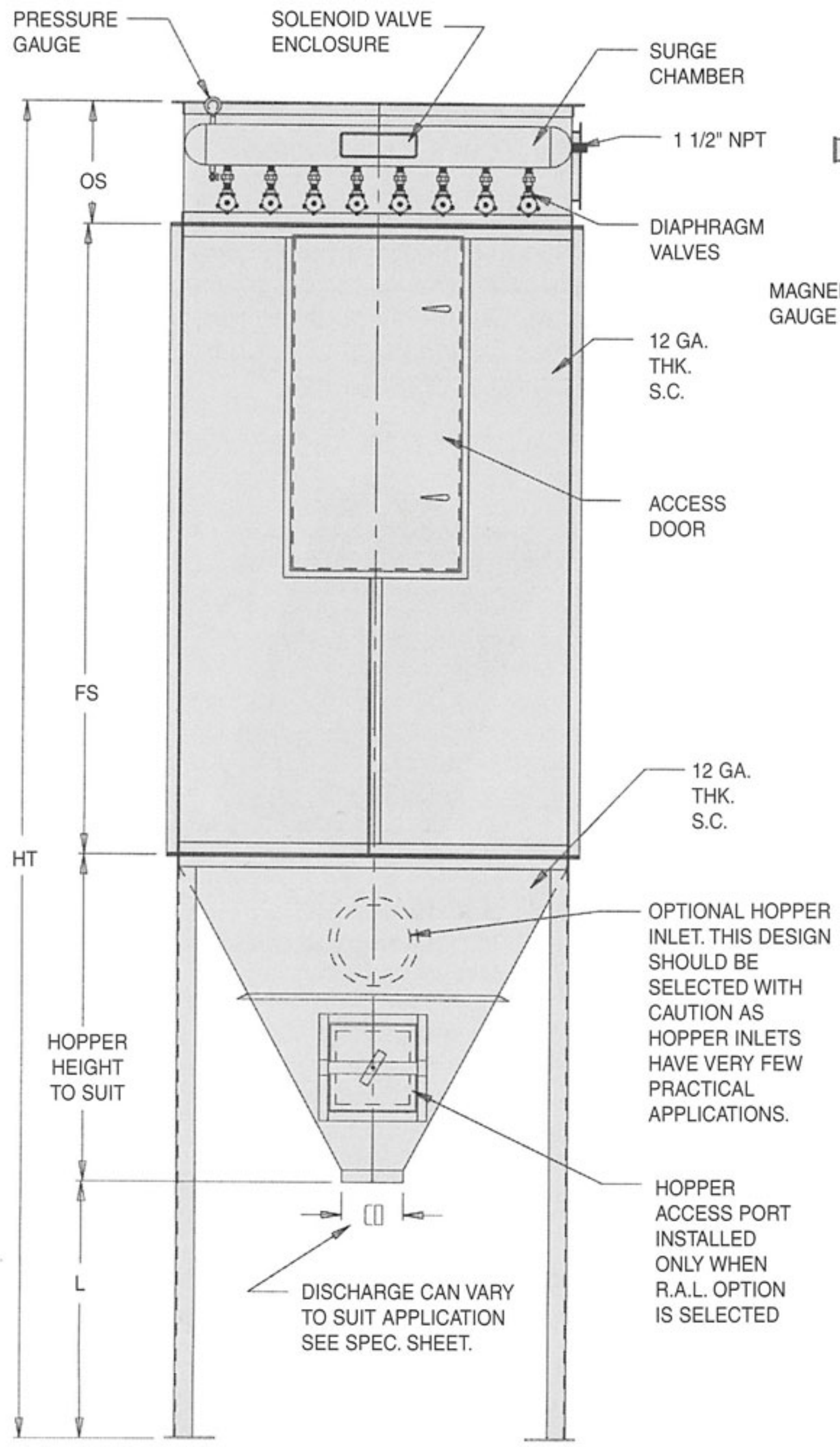
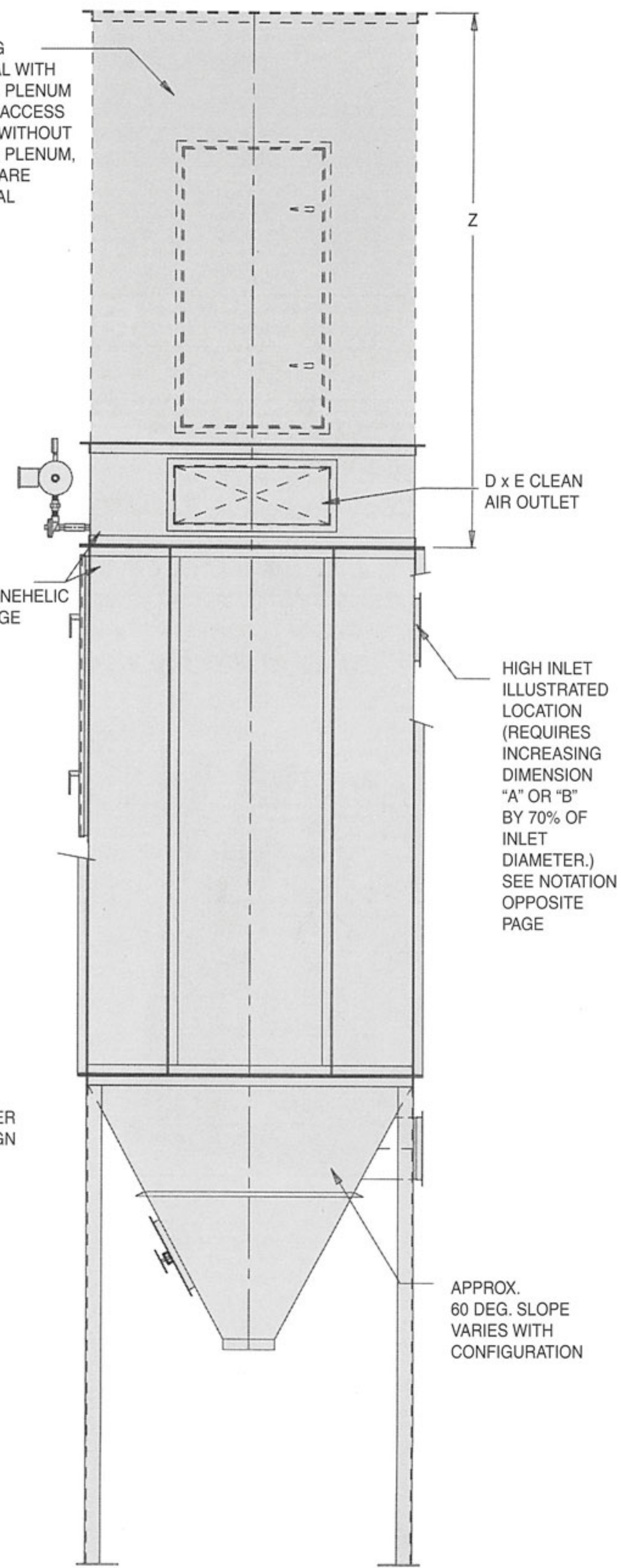
- ♦ **FOR THE MAJORITY OF APPLICATIONS, WE RECOMMEND UTILIZING OUR TOP AIR INLET, LOCATED HIGH IN THE FILTER SECTION, WHICH INCORPORATES OUR UNIQUE INTERNAL PRIMARY BAFFLING SYSTEM. USING THE LAWS OF GRAVITY TO OUR BEST ADVANTAGE, THIS OPTION PROVIDES A MORE UNIFORM DISTRIBUTION OF THE DUST LADEN AIR THROUGHOUT THE DUST COLLECTOR. THIS LESSENS THE DUST LOADING ON THE FILTER TUBES, THUS MAKING IT EASIER TO MAINTAIN CLEANER FILTERS AT ALL TIMES.**
- ♦ **HOPPER INLETS ARE AVAILABLE FOR APPLICATIONS WITH A LIGHT DUST LOADING OR PRODUCTS WITH A HIGHER MATERIAL DENSITY.**
- ♦ **CLEAN SIDE FILTER INSTALLATION AND REMOVAL USING OUR WALK IN STYLE PLENUM OR TOP ACCESS DOORS IS ALWAYS RECOMMENDED UNLESS THE LOCATION OF THE DUST COLLECTOR MAKES IT IMPRACTICAL. CONSULT WITH OUR TECHNICAL REPRESENTATIVES FOR YOUR PARTICULAR APPLICATION.**

MURPHY technical representatives are located throughout Canada and the United States. They are available to assist you in selecting the proper dust collector to solve your dust problem with no obligation.





TOP BAG REMOVAL WITH WALK IN PLENUM OR TOP ACCESS DOORS WITHOUT WALK IN PLENUM, EITHER ARE OPTIONAL



Model HEC Specifications & Dimensions S-Design

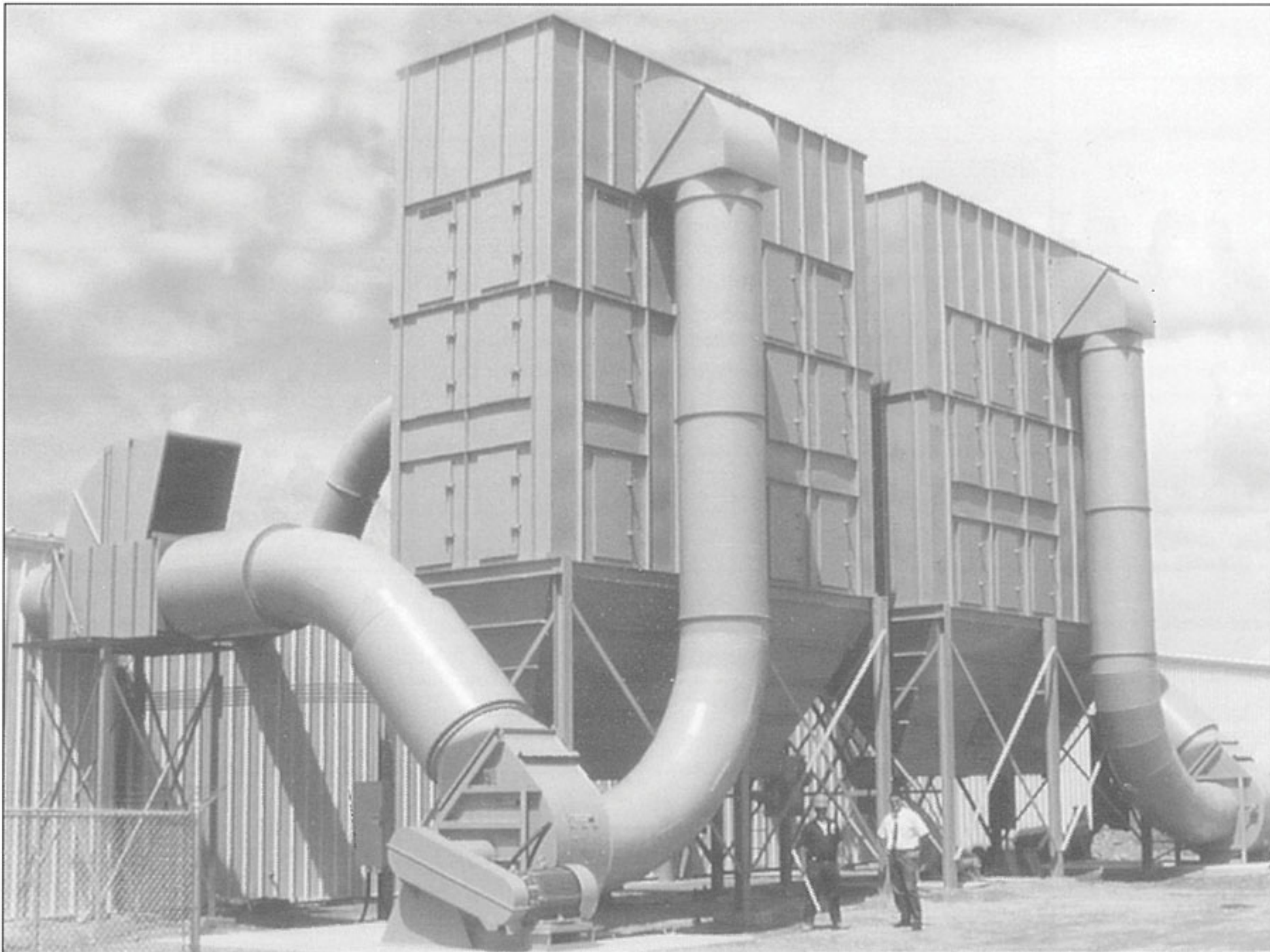
REF.	HEC-25-S	HEC-36-S	HEC-64-S	HEC-100-S	HEC-144-S	HEC-196-S	HEC-256-S
★ A.	42"	49"	63"	77"	91"	105"	119"
★ B.	42"	49"	63"	77"	91"	105"	119"
<p>★ Note: FOR TOP SIDE HIGH INLET IN FILTRATION SECTION (RECOMMENDED ON ALMOST ALL APPLICATIONS), ADD 70% OF INLET DIAMETER TO DIMENSION "A" or "B".</p>							
CO (STD) Material Discharge	8" x 8"	10" x 10"	10" x 10"	12" x 12"	12" x 12"	14" x 14"	16" x 16"
D & E Outlet	Size depends on model number and cfm requirements. Choice of locations - back side or either end. Roof also, when top access doors are not selected.						
FS	Filter tube length + ½" for both clean and dirty side filter removal.						
HT (STD)	= L + OS + HOPPER HEIGHT + FS, once bag length has been selected						
L (STD)	42"	42"	42"	42"	42"	42"	42"
OS (STD)	18"	18"	18"	24"	24"	24"	30"
Z (STD)	Dimension is same as bag length selected; same clearance is required on all top bag removal models. For shorter walk in plenums or less clearance requirements, split cages are available. Please check with factory on price & delivery.						
MAXIMUM cfm ▲ PER MODEL	2,800	5,000	9,000	15,000	21,000	29,000	38,000
	▲ CFM IS NOMINAL. TYPES OF DUST, DUST LOADING & AIR TO CLOTH RATIO MUST BE CONSIDERED. DO NOT EXCEED STATED CFM. CHECK WITH FACTORY.						
Approximate scfm required at 80 to 100 psig	2.5	3.6	6.4	10	14.4	19.6	25.6
	NOTE: Compressed air stated is an averaged requirement. Types of dust, dust loading and air to cloth ratios could affect certain applications. Please check with factory. Compressors and dryers should be sized for twice the charted air requirements.						
NOTE: Where (STD) standard is shown, adjustments can be made to stated dimensions to suit given applications without affecting deliveries or performance.							
Tube Length	Approx. unit weight in lbs. (no stand or options)						
8'	1,400	1,820	2,677	4,150	5,890	7,054	9,480
10'	1,540	1,976	2,877	4,410	6,150	7,420	10,200
12'	1,640	2,132	3,077	4,670	6,410	7,786	10,920
<i>Weights of all standard models with various tube lengths includes filters and cages.</i>							
Square Footage of Filter Media							
Arrangement (Tube Length)	5 rows x 5 tubes	6 rows x 6 tubes	8 rows x 8 tubes	10 rows x 10 tubes	12 rows x 12 tubes	14 rows x 14 tubes	16 rows x 16 tubes
8'	288	414	737	1,152	1,658	2,257	2,949
10'	360	518	921	1,440	2,073	2,822	3,686
12'	432	622	1,105	1,728	2,488	3,386	4,423

FEATURES:

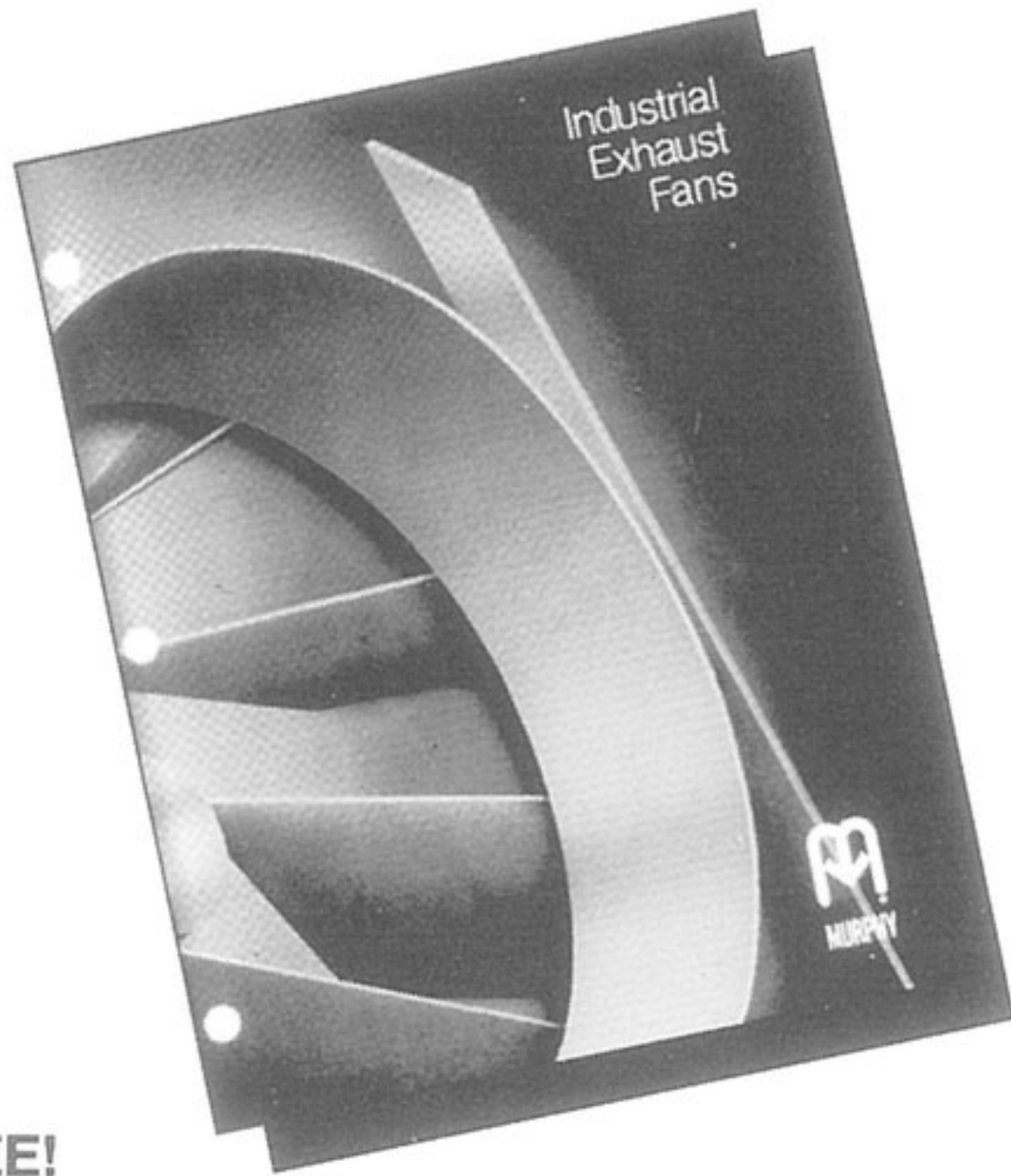
- ◆ Continuous duty automatic self cleaning
- ◆ Heavy gauge galvanized all welded construction painted a standard colour
- ◆ Standard or custom design
- ◆ 99.9% efficiency by weight as small as 1 micron
- ◆ All smaller models fully factory assembled with exception of filters and cages which must be installed on site by user or installer
- ◆ Rugged weatherproof construction
- ◆ High efficiency
- ◆ Flexible design
- ◆ Either, pull through or blow through design
- ◆ Minimum maintenance
- ◆ Low cost installation
- ◆ Standardized construction
- ◆ Many sizes and configurations available
- ◆ Good appearance
- ◆ Filtered air can be returned to plant (when allowable), thus considerable savings on conditioned plant air
- ◆ No tools required to install or remove filters and cages when clean side filter removal option purchased

OPTIONS:

- ◆ Top air inlet
- ◆ Clean side filter removal using full height walk-in plenum
- ◆ Clean side filter removal using reduced height walk-in plenum and split cages
- ◆ Clean side filter removal using top access doors
- ◆ Railing around top for top bag removal
- ◆ Support structure
- ◆ Safety ladder and railings
- ◆ Industrial exhaust fan
- ◆ Bin level indicator
- ◆ Additional access doors
- ◆ Fire damper
- ◆ Inline silencer
- ◆ Various types and finishes of filter media
- ◆ 45 gallon drums
- ◆ Explosion venting or hardware
- ◆ Inlet blowback prevention damper
- ◆ Magnetic starter
- ◆ Custom made electrical control panels
- ◆ Rotary air lock
- ◆ Screw conveyor
- ◆ Spark detection/Extinguishment systems
- ◆ Abort dampers

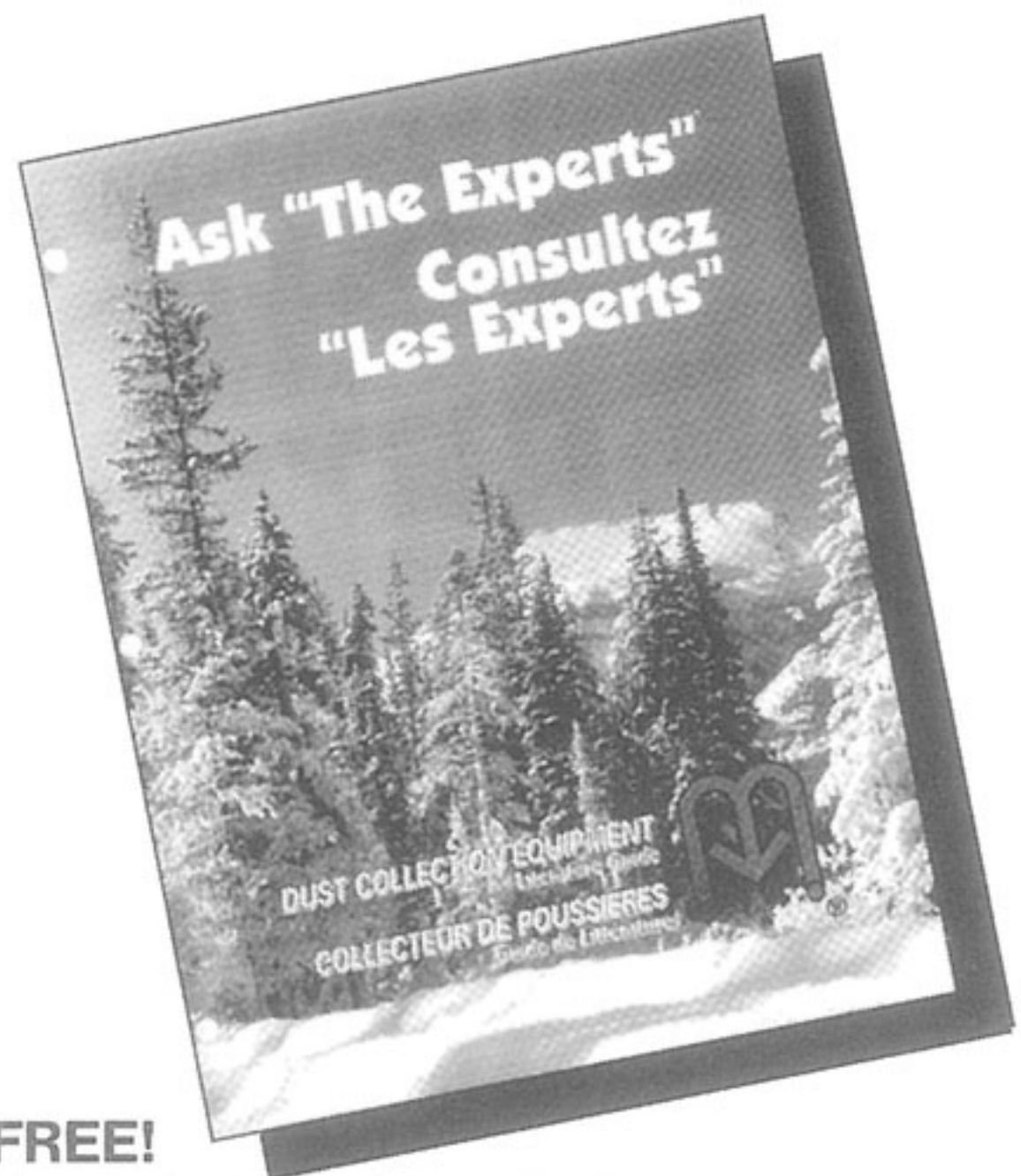


Dust Collection Equipment



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Fabric Dust Collectors

The most complete line of dust collectors available anywhere. We have collectors available for any application. Our highly qualified technical representatives across Canada and U.S.A. are ready to assist you in solving your problems.



Accessories
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Technical Handbook

An informative pocket-sized manual to assist with your technical calculations.



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