

DIVERSIFIED AIR SYSTEMS, INC.

MAXVIBE™

*Shaker type dust collector
with envelope filter*

- *Efficiency of 99% @ 5-10 microns*
- *Modular for various air volume capacities*
- *Automatic cleaning shaker system*
- *Rugged painted steel cabinet and structure*



Superior technology generating substantial operating savings

MAXVIBE™

Multiple pocket type dust collector with shaker cleaning

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Designed for various air volume applications and solid particles filtration, the MAXVIBE dust collector is ideal for small to medium size shops and industries, training facilities or vocational schools. The narrow footprint of the MAXVIBE unit means that it may be installed inside or outside of the facility without losing valuable floor space. The 99% efficiency filter pocket envelope allows clean air to be recycled back into the premises for maximum energy savings. Usage may vary from wood transforming industries, ferrous or non-ferrous manufacturing shops, plastics and composites fabrication as well as pharmaceutical plants and food industries. The manual or motorized cleaning systems dislodge particles from the filter and are then stored in a variety of bins, drawers or drums. Safety features such as explosion relief vents, back draft dampers or spark detection and extinguishing systems are available.

Industrial Air Specialists

With our headquarters in Louisville, Kentucky, Diversified Air Systems, Inc. has been providing quality air solutions to industrial and commercial facilities since 1981. During our more than thirty years of operation, Diversified Air Systems, Inc. has established two important company traditions: offering state-of-the-art equipment at competitive prices and achieving long-term customer satisfaction.

The staff of Diversified Air Systems, Inc. includes five application engineers, with a combined experience of more than 75 years in the air filtration and HVAC industry. Whether your facility requires an air filtration system for dust, mist, or fumes, or an HVAC solution to meet ventilation needs, Diversified Air Systems, Inc. has the equipment and expertise to meet the need.

Services include air quality analysis, system design, equipment sales, turnkey installation, onsite servicing, and supply of replacement filters and accessories.

Other Filtration Systems available:

Air Cleaners

Containment Booths

Decontamination Booths

Downdraft Tables

Dust Collectors

Fans and Blowers

Gas & Odor Control

High Vacuum Systems

Mist Collectors

Paint Booths

Stainless Steel Collectors

Vehicle Exhaust Systems

Wet Dust Collectors



ENVELOPE FILTERS / SHAKER TYPE CLEANING

Most of our competitors do not include these standard features:

- Powerful 1 H.P. motor for shaker mechanism
- Low or high profile dust storage system
- Dust inlet with abrasion resistant feature
- Choice of interior or exterior installation
- Minimal field assembly required
- No extra cost for location selection of explosion relief vent

TYPICAL APPLICATIONS FOR THE MAXVIBE

- Wood shops, cabinetry making
- Training centers and vocational schools
- Grinding, sanding or buffing applications
- Plastic and composites shops
- Metal transforming facilities
- Food / pharmaceutical powders



DAMV-1800 with explosion vent, silencer and lockable access doors to (4) dust storage drums



DAMV-270 with low profile dust storage drawer and top sound enclosure

OUTSTANDING MAXVIBE FEATURES



GENERAL DESCRIPTION

Dust and particles are carried from source capture drops into the main duct connected to the MAXVIBE unit. Larger particles fall by gravity into the hopper toward the dust storage drum or canister. Finer particles are vacuumed upward into the high efficiency multi pocket filter envelope. The sound insulated fan mounted on top of the unit recycles clean air into the premises if desired or permitted. When the unit is shut down, the electronic control panel activates the cleaning cycle by shaking the filter envelope creating upper oscillation instead of usual bottom filter shaking which may result in lesser efficient cleaning. Filter inspection may be carried by simply opening the access door when unit is shut down.

Note:

DUST COLLECTOR INSTALLATION: To ensure proper installation, refer to local building laws and requirements. Support ground have to meet requirements for weight of dust collector and adjacent equipment.

MAXVIBE GENERAL DATA

CHART 1

Model	Filter surface Sq. ft/Sq. m	Number of filters	Number of pockets	Capacity C.F.M./ L/s
DAMV-170	170/15	1	8	675 to 1400/ 320 to 660
DAMV-270	274/25	1	12	850 to 2200/ 400 to 1040
DAMV-350	361/35	1	16	1125 to 2925/ 530 to 1380
DAMV-450	449/42	1	16	1400 to 3650/ 660 to 1720
DAMV-570	570/51	1	24	1700 to 4625/ 800 to 2180
DAMV-700	722/67	2	32	2175 to 5700/ 1025 to 2690
DAMV-900	898/83	2	32	2400 to 8000/ 1130 to 3140
DAMV-1140	1140/104.8	2	98	3600 to 9400/ 1700 to 4435
DAMV-1350	1347/125	3	48	3900 to 10800/ 1810 to 5100
DAMV-1800	1796/167	4	64	5200 to 14400/ 680 to 1890
DAMV-2280	2280/209	4	96	8320 to 18280 3925 to 8630

Note : air volume capacities indicated above per MAXVIBE selection is with a + or - 8 to 1 air to cloth ratio. The purpose of this ratio is to extend filter life and lower static pressure. D.A.S. may agree to a 10 to 1 air to cloth ratio in certain applications. Example: DAMV-700 can be used with a 7000 CFM fan for a 10 to 1 air to cloth ratio.

RECOMMENDED DUCT VELOCITIES FOR PARTICULATES

CHART 2

Type of dust	F.P.M. /meter per second
Metal dust	4200 / 21
Sawdust (dry)	3800 / 19
Cement dust	7000 / 35
Wood dust	4000 / 20

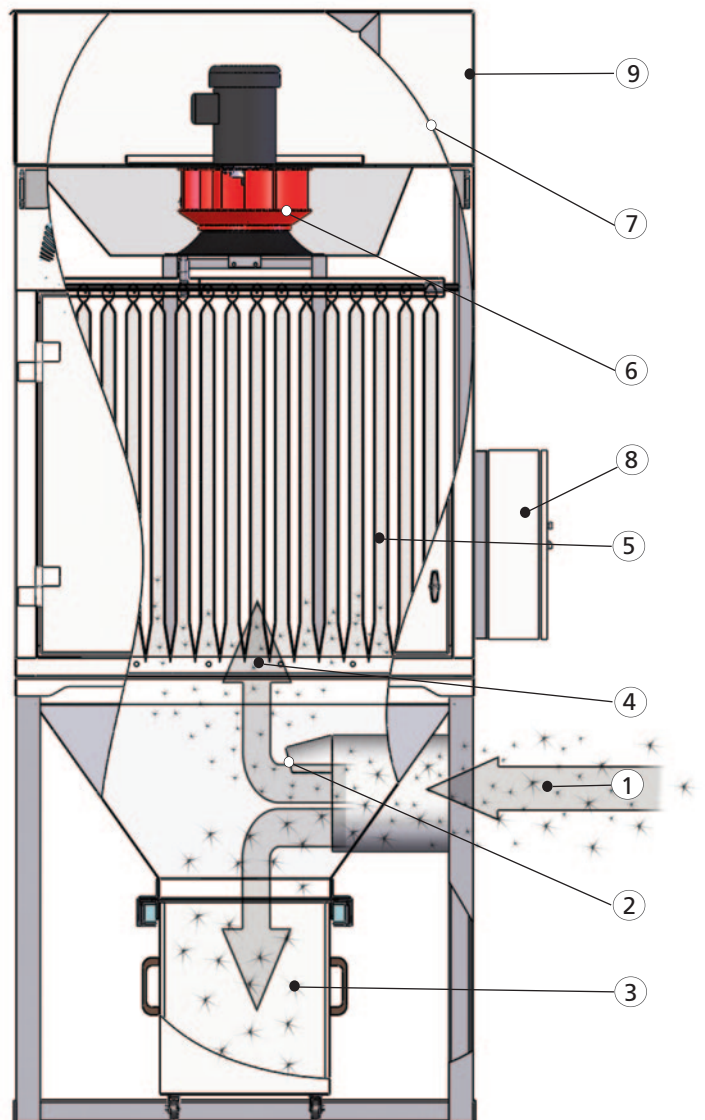
Note : other particle velocities may be required. Refer to Industrial Ventilation Handbook for more details or contact DAS.

Filtration note : Safety after-filter system can be specified in the unlikely event of main filter envelope failure. Contact DAS for information and details.

PRINCIPLE OF OPERATION

During operation, dust-laden air (1) enters the collector from the top of the hopper. The dusty air will first deflect off the baffle plate (2) forcing the larger particles down into the dust bin (3), the air velocity is also reduced in this section. The fine remaining dust is then carried upwards (4) into the envelope filter (5) and forced onto the filter fabric surface.

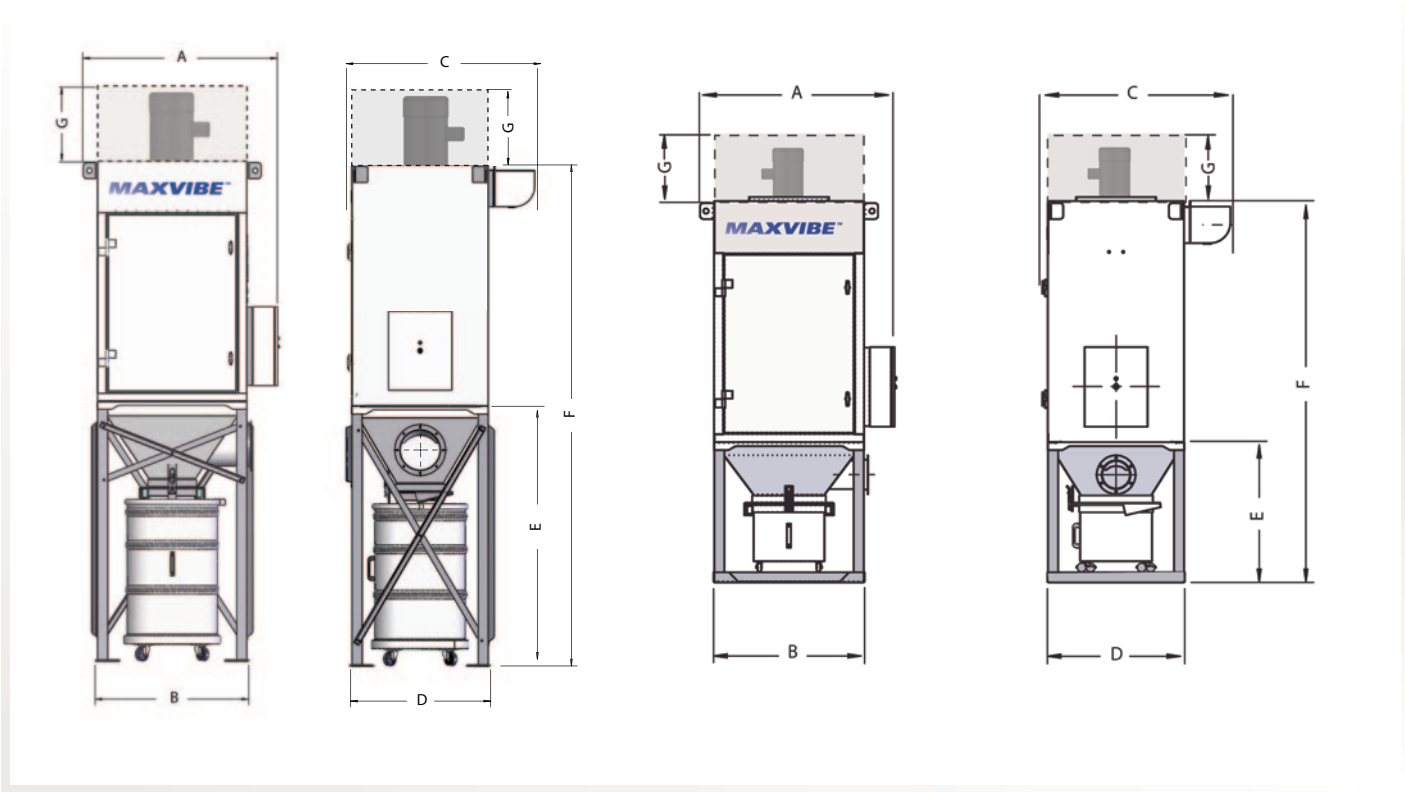
The now cleaned air is drawn into the backward inclined impeller (6) and is then exhausted outside (7) of the collector. The "dust cake" formed on the dirty side of the filter can be dislodged by the automatic filter shaking mechanism (8). The acoustical motor plenum ensures quiet operation (9). Optional fan outlet silencers are also available.



MAXVIBE MODEL NUMBERS AND DIMENSIONS

DAMV-170/270/350/450/570

DAMV-DB (DUST BIN)



SOUND LEVELS (dBA)

Model	170	270	350	450	570
With sound insulated fan plenum	86	86	88	90	93
Without sound insulated fan plenum	73	74	76	78	80

Note: because of different motor, sound enclosure and explosion relief vent configurations, dimensions may vary from those indicated below. Factory will supply submittals with proper selection.

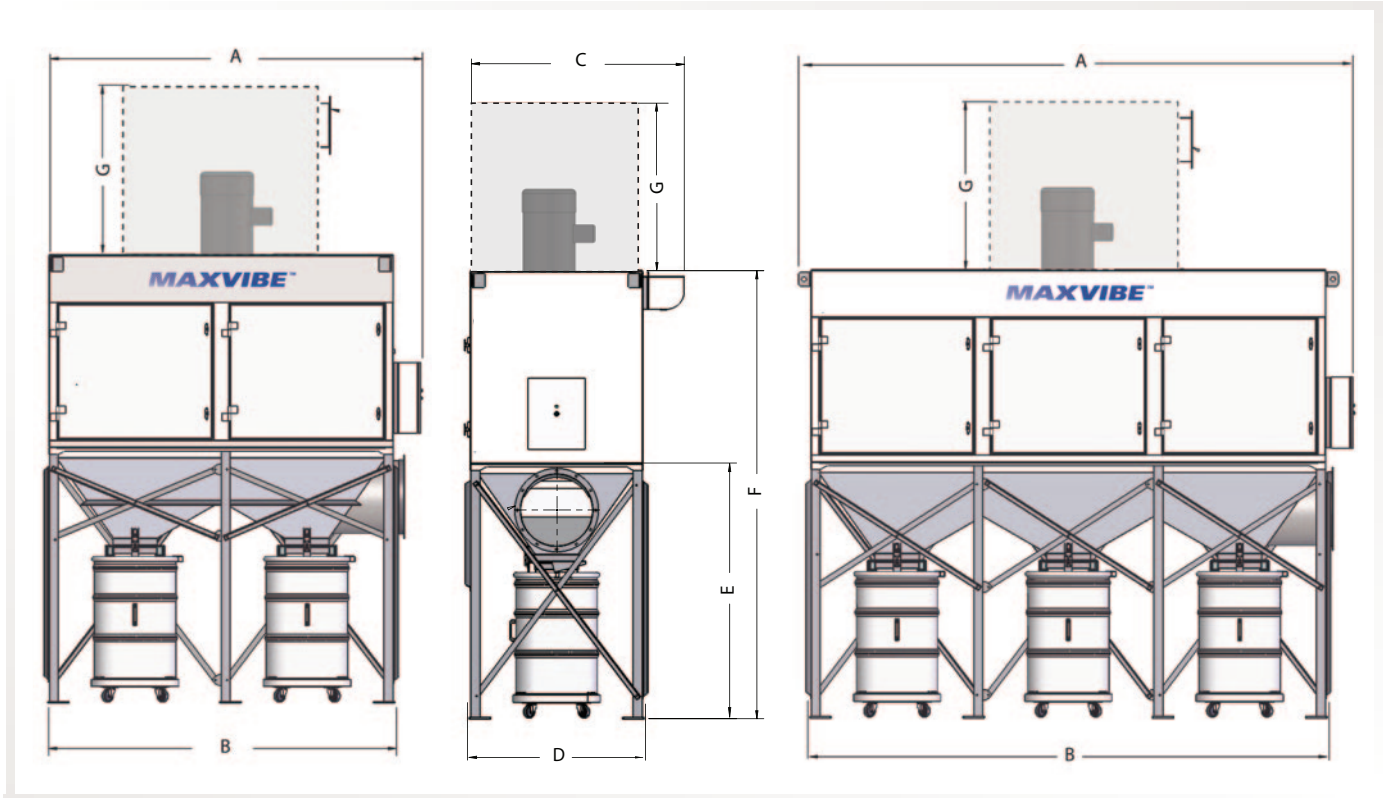
CHART 3

Model	Dimensions [inches] / [mm]							Weight (no motor, no enclosure, no relief vent)
	A	B	C	D	E	F	G	[lbs] / [kg]
170	48.50/1212	38.25/956	45.5/1137	35/875	64.5/1612	125.25/3131	16.12/403	1050/477
270/350	55.25/1381	48.5/1212	62.75/1568	48.5/1212	71/1775	124.5/3112	20/ 510	1250/568
450	55.25/1381	48.5/1212	62.75/1568	48.5/1212	71/1775	133.25/3331	24/ 610	1450/659
570	55.25/1381	48.5/1212	62.75/1568	48.5/1212	71/1775	145.25/3690	30/760	1700/775
170-DB	45.12/1128	38.62/965	45.62/1140	34.37/860	35/875	95/2375	16.12/403	925/420
270/350	55.25/1381	48.5/1212	62.75/1568	48.5/1212	49/1245	102.5/2590	20/ 510	1125/510
450-DB	55.25/1381	48.5/1212	62.75/1568	48.5/1212	49/1245	111.25/2825	24/ 610	1140/520

MAXVIBE MODEL NUMBERS AND DIMENSIONS

DAMV-700/900/1140

DAMV-1350



Note: because of different motor, sound enclosure and explosion relief vent configurations, dimensions may vary from those indicated below. Factory will supply submittals with proper selection.

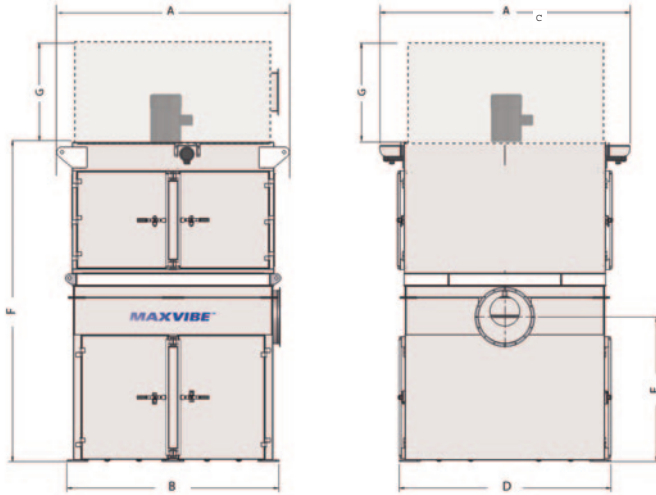
Note on sound levels: Because of different motor selection and sound fan plenum configurations, sound levels will be supplied with selection of collector and fan size.

CHART 4

Model	Dimensions [inches] / [mm]							Weight (no motor, no enclosure, no relief vent)
	A	B	C	D	E	F	G	[lbs] / [kg]
700	102.75/2568	96/2400	65.5/1637	48.5/1212	71/1775	124.5/3112	39/990	2000/909
900	102.75/2568	96/2400	65.5/1637	48.5/1212	71/1775	133/3325	43/1090	2100/953
1140	102.75/2568	96/2400	65.5/1637	48.5/1212	71/1775	145/3685	49/1245	2250/1020
1350	153.5/3837	143.75/3593	60.25/1506	48.5/1212	71/1775	133/3325	55/1395	2750/1250

MAXVIBE MODEL NUMBERS AND DIMENSIONS

DAMV-1800/2280



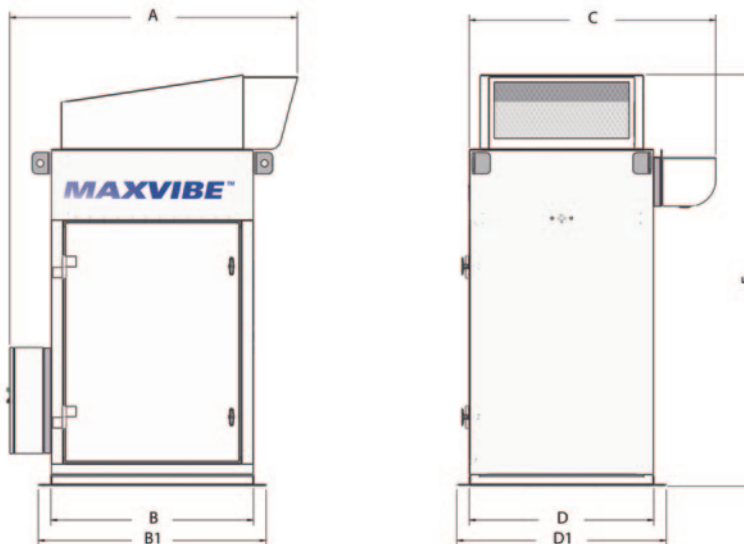
Note: because of different motor, sound enclosure and explosion relief vent configurations, dimensions of such are not indicated below. Factory will supply submittals with proper selection.

Note on sound levels: Because of different motor selection and sound fan plenum configurations, sound levels will be supplied with selection of collector and fan size.

CHART 5

Model	Dimensions [inches] / [mm]						Weight (no motor, no enclosure, no relief vent)
	A	B	C	D	E	F	[lbs] / [kg]
1800	110.75/2768	96/2400	119/2975	96/2400	89,5/2237	152/3800	5700/2590
2280	110.75	96	119	96	90	165	6100

DAMV-BV 170/270/350/450 (Bin vent configuration only)

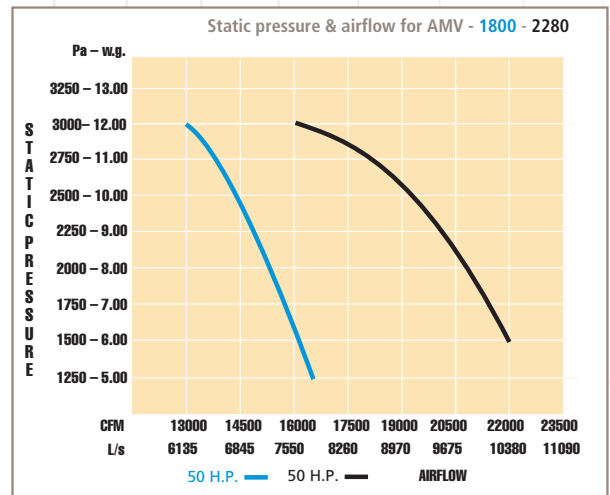
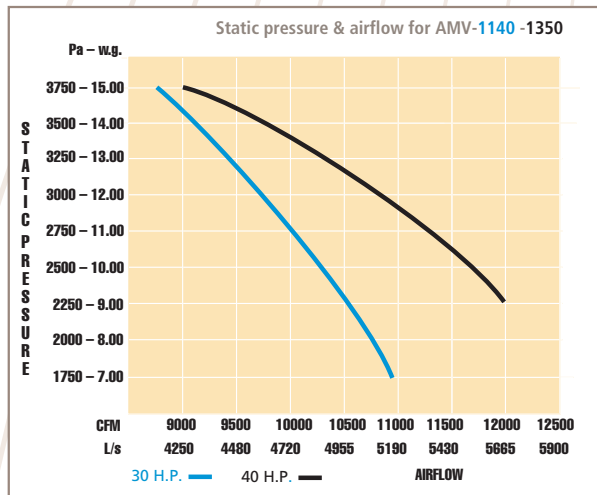
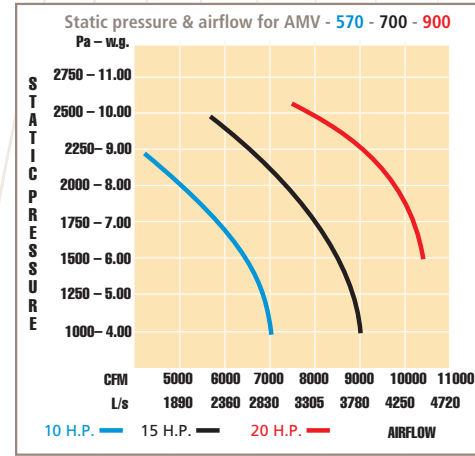
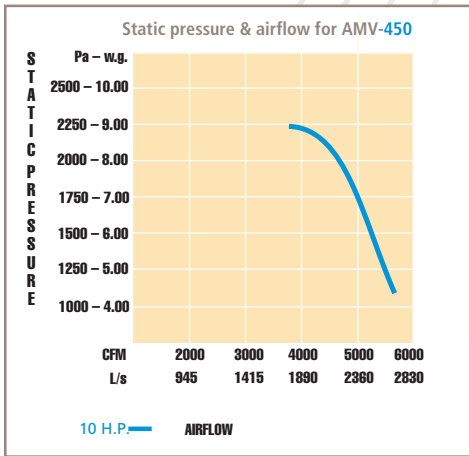
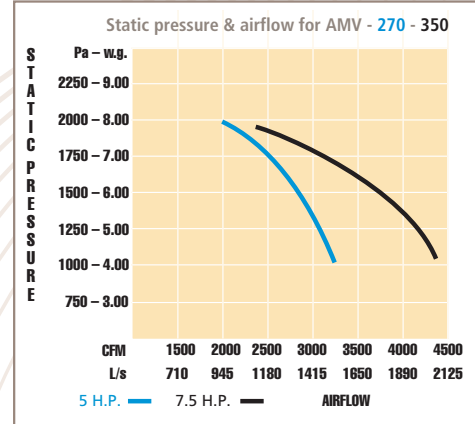
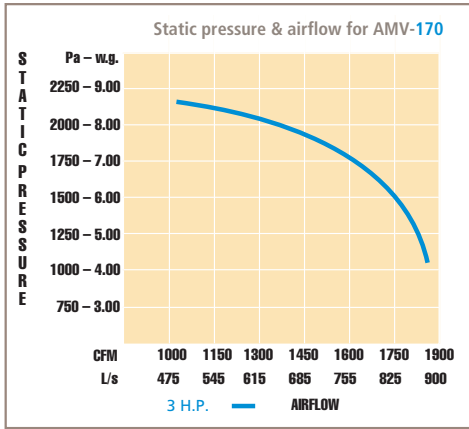


Note: because of different explosion relief vent configurations, dimensions of such are not indicated below. Factory will supply submittals with proper selection.

CHART 6

Model	Dimensions [inches] / [mm]							Weight (no relief vent)
	A	B	B1	C	D	D1	E	[lbs] / [kg]
170	53.25/1331	37.5/937	42/1050	45.8/1145	34/850	38.75/968	76.25/1906	575/261
270/350	63.25/1581	47.75/1193	52.5/1312	65.5/1637	47.75/1193	52.5/1312	69.75/1743	680/309
450							78/1950	725/329

MAXVIBE FANS PERFORMANCE



Fan drives: fan curves indicated above are direct drive type, 3500 RPM.

Fan notes: Fans suggested above as per MAXVIBE model selected are for references only. DAS can supply alternate fans for specific air volume or static pressure required. Impeller width will be as per fan selection.

DAS uses standard non-sparking impellers on MAXVIBE dust collectors when applications call for wood dusts or reactive alloys and metals.

CONSTRUCTION

The filter cabinet and hopper assembly are made with degreased 11 to 14 gauge mild steel folded and/or welded sheet plates and channels. Protection of surface is ensured by a epoxy primer coat with two (2) coats of air dried polyurethane final paint. Cross braces on the rugged support structure and filter cabinet are assembled to resist damages in seismic zone 4.

The highly efficient sateen filter envelope (99% @ 5-10 microns) prevents “dust caking” which would normally increase static pressure resulting in lower air volume through weeks and months of regular usage. The top mounted direct drive fan assembly usually consists of a non-sparking backward inclined impeller located on the clean side of the dust collector.

All access doors, joints and folds are sealed with gaskets to prevent air leakage.

SAFETY RULES AND REQUIREMENTS

The MAXVIBE is an enclosure type dust collector. MAXVIBE dust collectors can be used with different dusts such as wood, metal, composites, chemicals, agricultural or food grade.

Wood dust applications.

In wood dust applications and for air volumes of 1500 C.F.M and more, the collector must be specified in accordance with NFPA 664 standards and regulations. The MAXVIBE dust collector must not be used in mixed applications of wood dusts and non reactive metal grinding, sanding or buffing dusts. The MAXVIBE dust collector should not be connected to sanders or abrasive planers with mechanical material feeds unless it is equipped with a spark detection/extinguishing safety device.

Reactive metals application.

The National Fire Protection Agency (NFPA) standard 484 defines aluminum, magnesium, tantalum, titanium and zirconium as reactive metals so it is imperative that NFPA 484 standard be observed at all times and that the collector be installed outside of the facility or premises with all required safety devices. Grinding operations shall not be served by the same Maxivibe collector as buffing/polishing operations.

The MAXVIBE dust collector should include a sign indicating **CAUTION** when used with explosive dusts.

The MAXVIBE dust collector should include a sign indicating **WARNING** when used with aluminum dusts advising danger of mixing with other dusts.

SHIPPING

In order to facilitate shipping and installation, DAS usually ships DAMV dust collectors with the fan factory mounted on the cabinet. Hopper and support structure are shipped fully assembled ready for cabinet mount. Larger DAMV models may require more extensive field assembly.

Optional equipment such as dampers or silencers are shipped separate and require field assembly. Explosion venting doors are factory installed on the dust collector cabinet.

Shaker cleaning note:

MAXVIBE collector does not have capability of cleaning while in operation. Cleaning cycle is performed upon every unit shutdown. DAS or representative should be made aware of dust load and type of dust before selection.

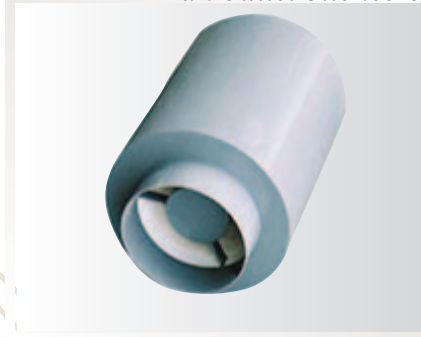
OPTIONAL ACCESSORIES AND DESCRIPTION

Explosion venting doors



Requirement by NFPA for reactive material collection and storage of particles such as wood, aluminum and/or magnesium dusts and chips.

Fan outlet silencers



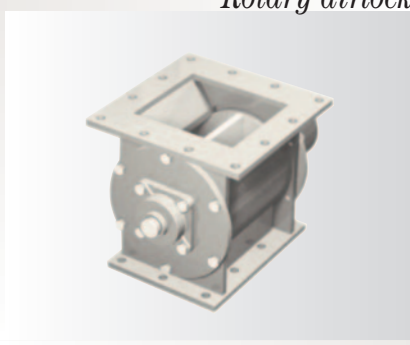
Sound attenuators for high velocity discharge at fan outlets.

Micro switches



Current sensors connected to shop equipment for automatic fan start/stop.

Rotary airlock



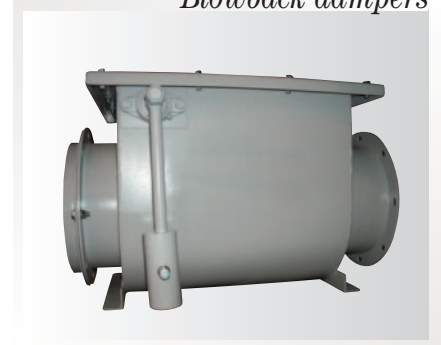
Rotary airlock for constant dust discharge.

Slide / blast gates



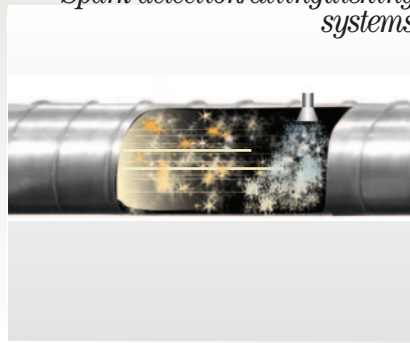
Used for shutting off air vacuum on specific shop equipment.

Blowback dampers



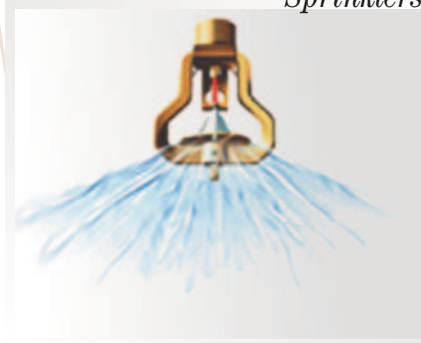
Safety device preventing flames or explosion in dust collector from coming back into the building.

Spark detection/extinguishing systems



Recommended safety device for highly abrasive metal or wood transforming applications

Sprinklers



Safety device used to extinguish possible fires in dust collectors.

Abort dampers



Safety device preventing a possible explosion in a dust collector from coming back into the building and exhausting pressure into the atmosphere.

Safety device and equipment notes: Design built and/or engineered dust collecting equipment may require different safety devices as described above. Refer to NFPA rules and regulations for appropriate devices. DAS or it's representative may also guide you in proper selection of equipment as per the application.

It is highly recommended to refer to local building laws and safety requirements prior to selecting or installing any type of dust collecting equipment.

Installation note: It is recommended to allow 36" (0.9 meter) work and access space around the collector for installation and possible maintenance.

CREATE YOUR MAXVIBE SPECIFICATION

1. DUST COLLECTOR SHOULD INCLUDE :

11 and 14 gauge mild steel epoxy primer coat (4000 hours salt spray test) with two (2) coats of air dried polyurethane final paint, cabinet and support structure with pre-drilled holes for floor anchoring, high efficiency (99% @ 5-10 microns) multi-pocket filter envelope, filter surface equivalent to model number, sealed frame access door to filter envelope, electronic control panel with timer for shaker cleaning in NEMA 4 enclosure, direct drive TEFC motor with non-sparking backward inclined impeller for wood dusts or reactive metals, sound insulated fan plenum, dirty air inlet with dust deflector in hopper section, clean air outlet on top of collector, lift lugs for filter cabinet positioning, 1 H.P. shaker motor with oscillating pattern for better cleaning efficiency, joints and folds sealed with gaskets to prevent air leakage.

2. MODEL TO BE:

- DAMV-170 DAMV-270 DAMV-350
 DAMV-450 DAMV-570
 DAMV-700 DAMV-900
 DAMV-1140 DAMV-1350
 DAMV-1800 DAMV-2280

3. FAN TO BE:

- 3 H.P. 20 H.P.
 5 H.P. 30 H.P.
 10 H.P. 40 H.P.
 15 H.P. 50 H.P.

4. FAN PERFORMANCE TO BE:

_____ CFM@ _____" S.P. (Ex: 5000 CFM@ 6"S.P.)
 _____ L/s@ _____pa S.P. (Ex: 2360 L/s @ 1500 pa S.P.)

5. VOLTAGE TO BE:

- 230/1/60 208/3/60
 460/3/60 575/3/60

6. DUST STORAGE CAPACITY SHOULD BE WITH :

- A) 20 gallon bin (25 gallon U.S.)
 B) 45 gallon drum (55 gallon U.S.)
 C) drum dolly with swivel casters
 D) no dust storage, bin vent configuration

7. UNIT TO BE EQUIPPED WITH :

- A) NFPA explosion relief vent
 B) sprinkler head
 C) abort damper
 D) blowback damper
 E) spark detection/extinguishing system
 F) micro switches for automatic fan operation
 G) rotary airlock
 H) slide/blast gates
 I) pressure differential indicator
 J) anti-static filter fabric
 K) fan outlet silencer in lieu of sound insulated plenum
 L) safety after-filter cabinet with primary 30% pleated filters and secondary 85% polyester bag filters.
 M) tamper proof cabinet access door
 N) support structure and hopper enclosure with access door

8. UNIT DESIGNED FOR :

- A) interior installation
 B) exterior installation

Diversified Air Systems, Inc.

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