

DIVERSIFIED AIR SYSTEMS, INC.

**MAXCLONE™**

*Cyclone dust collectors*

- *Minimal field assembly*
  - *Minimal footprint*
  - *Spinning cyclonic effect on large particles*
  - *High efficiency*
- 
- *Can be connected to a dust collector*
  - *Ideal for wood, plastic or metal transforming industries*



*Superior technology generating substantial operating savings*

# MAXCLONE™

*High-Productivity Innovative Products*

## **MAXCLONE** *Cyclon dust collectors*

MAXCLONE cyclone dust collectors use centrifugal energy to separate large and medium size particles from the air. The spiraling effect brings those particles toward the bottom of the cyclone and into a dust storage system (drum/canister or other). Clean air is then drawn upward into the inner cylinder and discharged into the atmosphere or into an after filter system for additional filtration efficiency. Clean air can then be recycled back into the facility for maximum energy savings. The narrow footprint of the MAXCLONE allows interior or exterior installation without losing valuable floor space.

## *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



Please call 800-264-8958

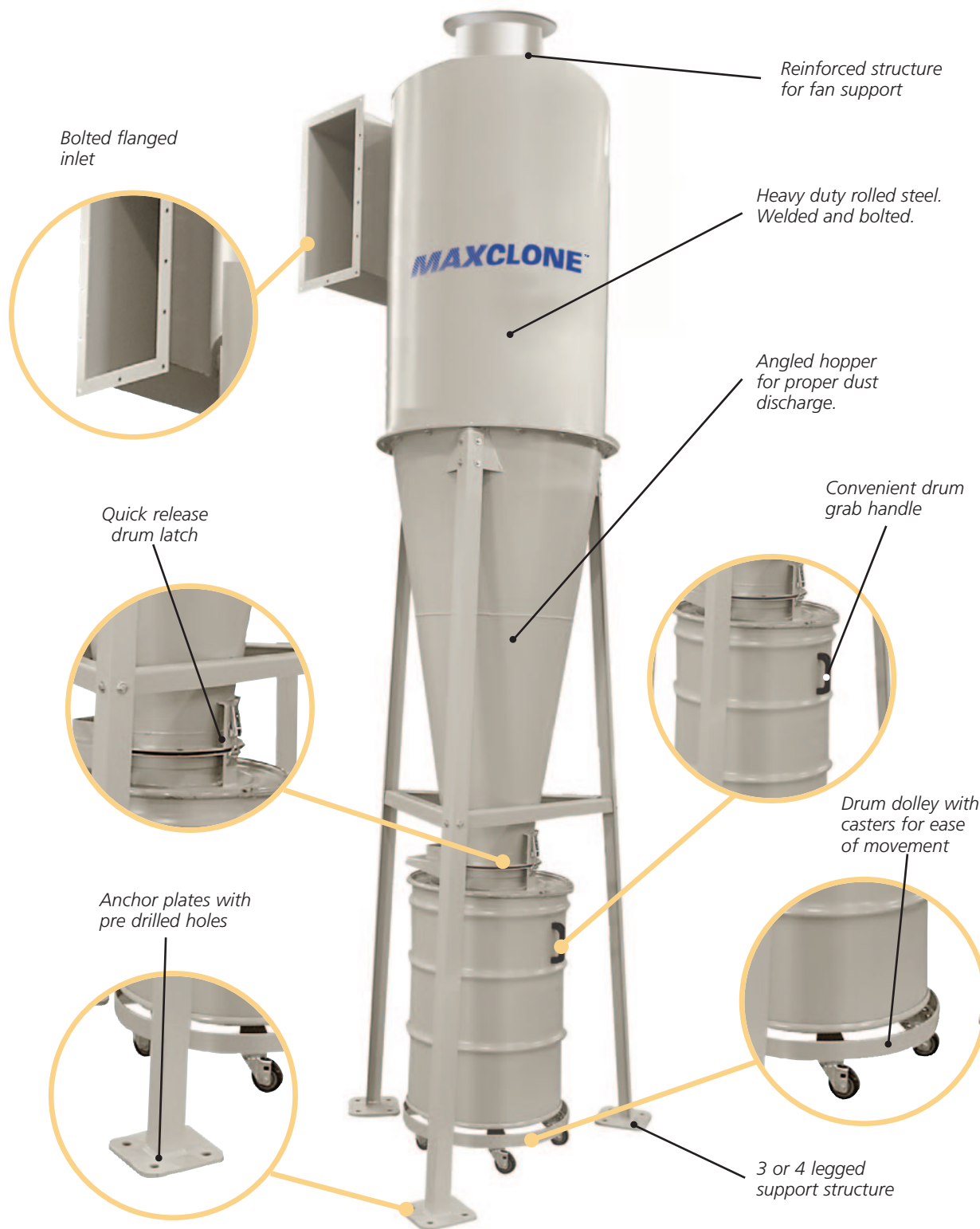
## MAXCLONE DUST COLLECTOR FOR LARGE AND MEDIUM SIZE PARTICLES

### TYPICAL APPLICATIONS FOR THE MAXCLONE

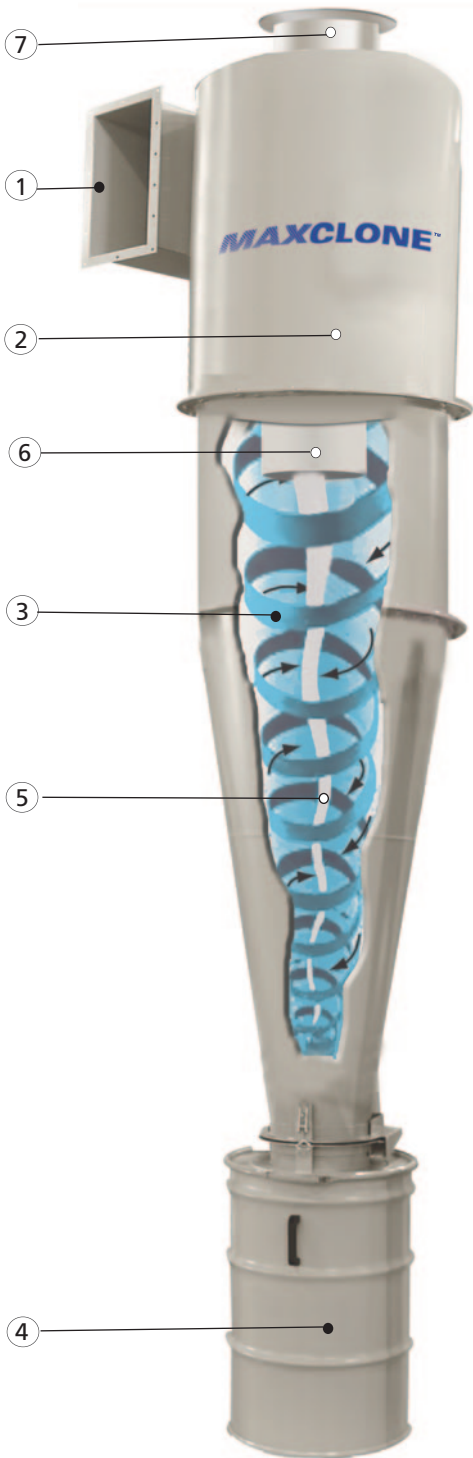
- Woodworking industries
- Machine shops
- Metal transforming shops
- Manufacturing plants
- Bulk and powder collection
- Food/pharmaceutical facilities



## OUTSTANDING MAXCLONE FEATURES



**PRINCIPLE OF OPERATION**



Particles enter the cyclone through the inlet (1) at high velocity. The internal baffle (2) located after the inlet diverts the particles downward in a helicoidal pattern. The centrifugal force (3) pushes the heavier particles toward the interior walls and continues the gravity effect toward the bottom of the cyclone.

The larger particles are collected in the dust storage system. (4) Clean air is then vacuumed upward (5) toward the inner cylinder (6). The top flange (7) is usually equipped with a blower directing cleaner air to a secondary optional after-filter for fine particles filtration or released into the atmosphere (refer to environmental requirements before selecting this system).

**SAFETY RULES AND REQUIREMENTS**

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

**RECOMMENDED DUCT VELOCITIES FOR PARTICLES**

CHART 1

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

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

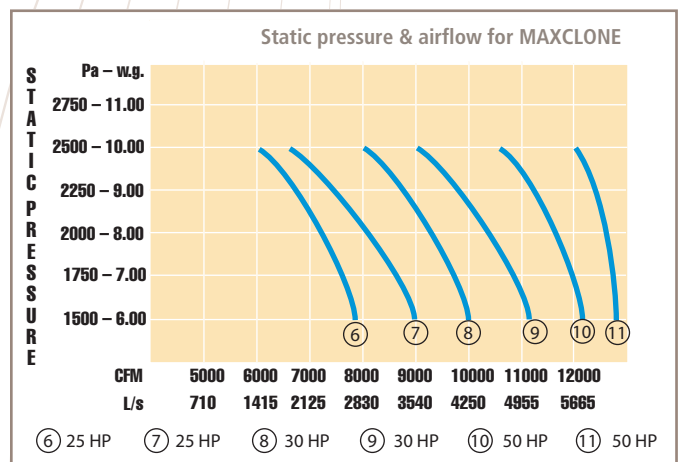
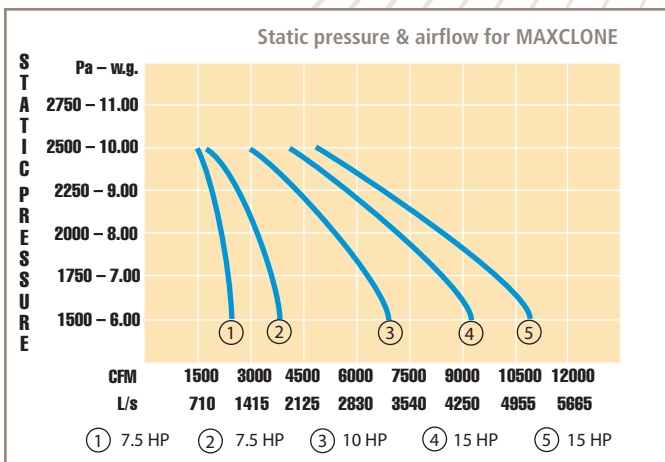
Note: installation must be made according to local building codes and regulations.

## MODEL NUMBERS

### General data

CHART 2

Model	DDMC-018	DDMC-021	DDMC-024	DDMC-027	DDMC-030	DDMC-033	DDMC-036	DDMC-039	DDMC-042	DDMC-045	DDMC-048	
<b>Capacity CFM/L/s</b>	1600/2700	2300/3900	3100/5300	4000/6800	4700/8000	6000/10200	6800/11500	8000/13600	9000/15300	10600/18000	12000/20400	
<b>Dimensions [inches] / [cm]</b>	<b>A</b>	18.00/45.72	21.00/53.34	24.00/60.96	27.00/68.58	30.00/76.20	33.00/83.82	36.00/91.44	39.00/99.06	42.00/106.68	45/114.43	48/121.92
	<b>B</b>	10.75/27.31	12.50/31.75	14.25/36.20	16.00/40.64	17.75/45.09	19.50/49.53	21.25/53.98	23.00/58.42	24.50/62.23	26/66.04	28/71.12
	<b>C</b>	6.75/17.15	8.00/20.32	9.00/22.86	10.25/26.04	11.50/29.21	12.50/31.75	13.75/34.93	14.75/37.47	16.00/40.64	17.00/43.18	18.25/46.34
	<b>D</b>	6.00/15.24	6.00/15.24	6.00/15.24	8.00/20.32	8.00/20.32	8.00/20.32	8.00/20.32	8.00/20.32	10.00/25.40	10.00/25.40	10.00/25.40
	<b>E</b>	2.25/5.72	2.50/6.35	3.00/7.62	3.50/8.89	3.75/9.53	4.00/10.16	4.50/11.43	5.00/12.70	5.25/13.34	5.50/13.97	6.00/15.24
	<b>F</b>	14.50/36.83	17.00/43.18	19.25/48.90	21.50/54.61	24.25/61.60	26.50/67.31	29.00/73.66	31.00/78.74	33.50/85.09	36.00/91.44	38.50/97.79
	<b>G</b>	5.50/13.97	6.50/16.51	7.25/18.42	8.13/20.6375	9.00/22.86	9.75/24.77	10.5/26.67	11.38/28.89	12.25/31.12	13.13/33.34	16.00/40.64
	<b>H</b>	105.0/266.7	52.50/133.35	60.00/152.4	67.50/171.45	75.00/190.5	82.50/209.55	90.00/228.60	97.50/247.65	105.00/266.70	112.50/285.75	120.00/304.80
	<b>I</b>	9.00/22.86	10.50/26.67	12.00/30.48	13.50/34.29	15.00/38.10	16.50/41.91	18.00/45.72	19.50/49.53	21.00/53.34	22.50/57.15	24.00/60.96
	<b>J</b>	27.5/69.85	32.75/83.19	38.75/98.43	43.00/109.22	48.00/121.92	53.00/134.62	58.00/147.32	63.00/160.02	68.50/173.99	73.50/186.69	77.50/196.85
	<b>K</b>	14.00/35.56	16.00/40.64	18.00/45.72	20.00/50.8	23.00/58.42	25.00/63.50	27.00/68.58	30.00/76.20	32.00/81.28	34.00/86.36	36.00/91.44
	<b>L</b>	9.00/22.86	10.50/26.67	12.00/30.48	13.50/34.29	15.00/38.10	16.50/41.91	18.00/45.72	19.50/49.53	21.00/53.34	22.50/57.15	24.00/60.96
	<b>M</b>	16.00/40.64	18.75/47.63	22.50/57.15	24.50/62.23	27.00/68.58	29.50/74.93	32.00/81.28	35.00/88.9	38.00/96.52	40.50/102.87	43.00/109.22
	<b>N</b>	22.00/55.88	25.00/63.50	28.00/71.12	31.00/78.74	34.00/86.36	37.00/93.98	40.00/101.60	43.00/109.22	58.00/147.32	49.00/124.46	52.00/132.08
	<b>O</b>	270	360	450	600	720	870	1020	1230	1380	1530	1800
	<b>P</b>	50	75	90	110	150	175	205	270	280	325	365
<b>Cyclone Weight [lbs] / [kg]</b>	270/ 122	360/ 163	450/ 204	600/ 272	720/ 326	870/ 393	1020/ 462	1230/ 558	1380/ 626	1530/ 693	1800/ 816	
<b>Hopper Weight [lbs] / [kg]</b>	50/ 22.7	75/ 34.0	90/ 40.8	110/ 49.9	150/ 68.0	175/ 79.4	205/ 92.5	270/ 122.5	280/ 127.0	325/ 147.0	365/ 166.0	

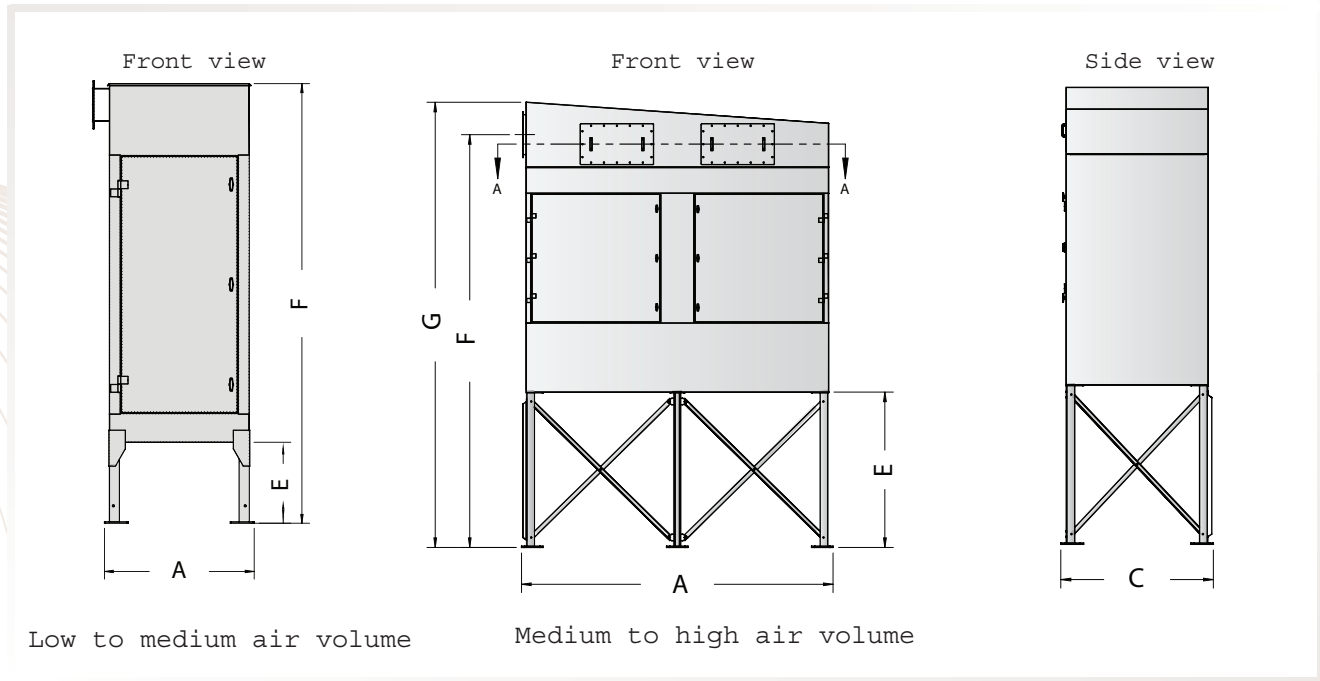


Fan drives: fan curves indicated above are direct drive type, 3500 RPM.

Fan notes: Fans suggested above as per MAXCLONE 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 MAXCLONE dust collectors when applications call for wood dusts or reactive alloys and metals.

## OPTIONAL AFTER-FILTER SYSTEM



## AFTER-FILTER SYSTEM APPLICATION

High efficiency cyclone dust collectors may still require enhanced filtration for small particles. After-filter systems could be required if the small particles coming out of the cyclone outlet are not allowed to be released into the atmosphere. Environmental, state or local regulations could apply.

After-filter systems dimensions will vary as per the amount of air volume required. Those systems do not have a cleaning operation and filter bags or envelopes need to be replaced occasionally. Filters are clamped to flanges on the tube sheet located at the top of the unit. Bottom of filters may include zippers to empty the contaminants into drums or dust bins. Quantity, diameters and lengths of filter bags vary as per the air volume required and available footprint and height.

The inlet is usually located at the top of the system by means of ductwork and fine particles travel into the plenum toward the opened section of the filter bags. Bottom of structure is opened to allow filtered air to be recycled into the premises or to be released into the atmosphere. Front access doors allow visual inspection of the filter bags and replacements.

## CONSTRUCTION

The filter cabinet and support structure made with degreased 11 to 14 gauge mild steel folded and/or welded sheet plates and channels. Protection of metal 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 polyester filter bags (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.

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

## SHIPPING

In order to facilitate shipping and protect the equipment, DAS usually ships MAXCLONE dust collectors without the fan installed on the cyclone. Optional equipment such as dampers, after-filter systems or silencers are shipped separate and require field assembly.

## CREATE YOUR MAXCLONE 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 rated seismic zone 4, cross braces on support structure with pre-drilled holes for floor anchoring, high efficiency cyclonic effect, direct drive TEFC motor with non-sparking impeller for wood dusts or reactive metals, top dirty air inlet, inner cylinder, clean air outlet on top of cyclone with flange for fan mounting, quick release drum latch, drum or bin for dust storage, drum dolly, angled hopper for proper dust discharge

**2. MODEL TO BE :**

DDMC-18  DDMC-21  DDMC-24   
 DDMC-27  DDMC-30   
 DDMC-33  DDMC-36   
 DDMC-39  DDMC-42   
 DDMC-45  DDMC-48

**3. FAN TO BE :**

7.5 H.P.  25 H.P.   
 10 H.P.  30 H.P.   
 15 H.P.  50H.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 :**

115/1 /60  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) opened bottom for straight discharge

**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) rotary airlock at bottom of hopper   
 G) slide/blast gates   
 H) fan outlet silencer   
 I) after-filter cabinet with polyester bag filters.   
 J) tamper proof cabinet access door

**8. UNIT DESIGNED FOR :**

A) interior installation   
 B) exterior installation

Note : specifications listed above may be modified to suit application. Contact D.A.S. or representative for information.

**Diversified Air Systems, Inc.**

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Continuous product improvement is a policy of D.A.S. Inc. Product features and specifications may be modified without prior notice.