

## Dalamatic® Dust Collectors



# Dalamatic®

## Proven Performance, Compact Design

The versatile Donaldson® Torit® Dalamatic series of dust collectors deliver a powerful solution for nearly any dust filtration application. These collectors come in two models: the Dalamatic Cased (DLMC) is a stand alone collector that can be ducted to many different applications; the Dalamatic Insertable (DLMV) is a versatile collector that can be inserted into various applications, such as bins, silos, bunkers, storage vessels or transfer points. Both models are continuous-duty dust collectors designed to handle the most difficult product recovery applications.

### Dalamatics Offer:

- **Continuous collection** Provides continuous filtration of high dust concentrations at high filtration velocities and constant levels of resistance in almost any industry and application.
- **Compact design** Unique modular design allows for installation in the most space restricted areas. Envelope-shaped bags maximize the amount of media in a given space and allow for increased space between bags, minimizing the chances of bridging.
- **Dura-Life™ Filter Bags** provide better surface loading and better pulse cleaning reducing maintenance and operating costs.
- **Versatility** A full range of sizes and types of bags are available for a wide variety of dust collection applications.
- **10-year warranty**

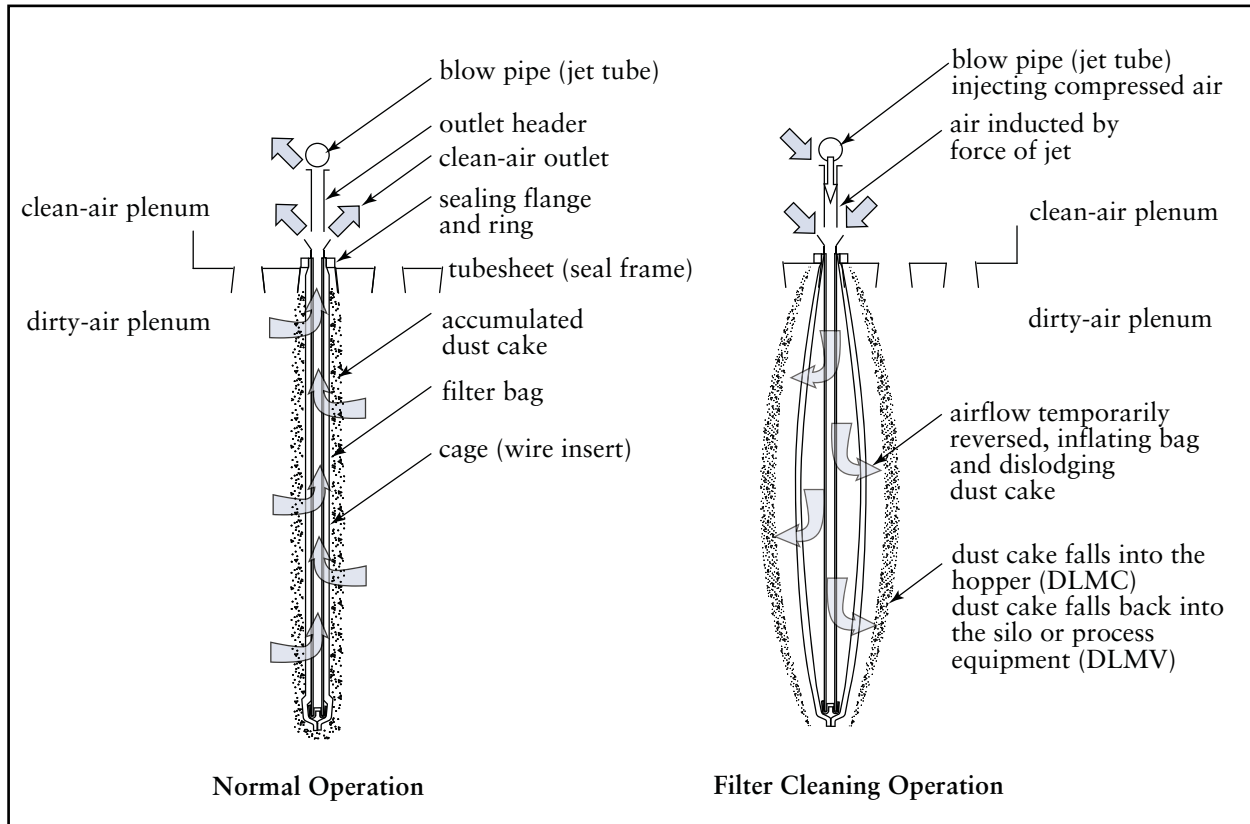
*Simply  
the Best  
Dust Collectors Available  
with Dura-Life™ Twice the Life Filter Bags*



DLMC 3/7/15

## Flexible, Effective Filter Media

### Principles of Filtration



**Efficient Media Design** The Dalamatic advantage is found in the breakthrough technology of Dura-Life filter bags. Dura-Life bags offer longer bag life and reduced emissions. This unique operation of the filter bag helps achieve high filtration efficiencies.

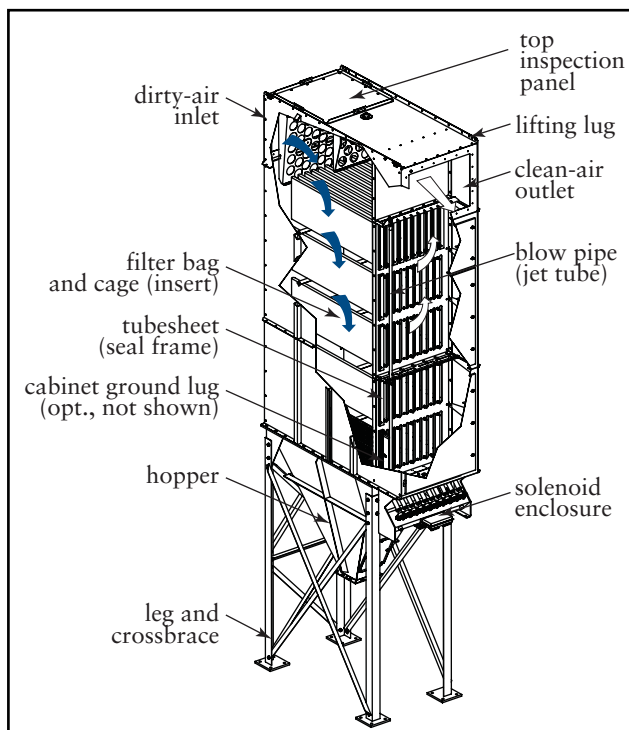
- Dust accumulates on the outer surface of the filter bag as air penetrates the media.
- The blowpipe (jet tube) injects a burst of compressed air into the filter bag.
- Airflow is then briefly reversed, inflating the filter bag and dislodging dust.
- The dislodged dust cake falls into the collection hopper for final removal or directly back in the the process. The envelope-shaped filter bag, which is mounted on a unique wire frame, ensures optimum airflow and thorough cleaning.



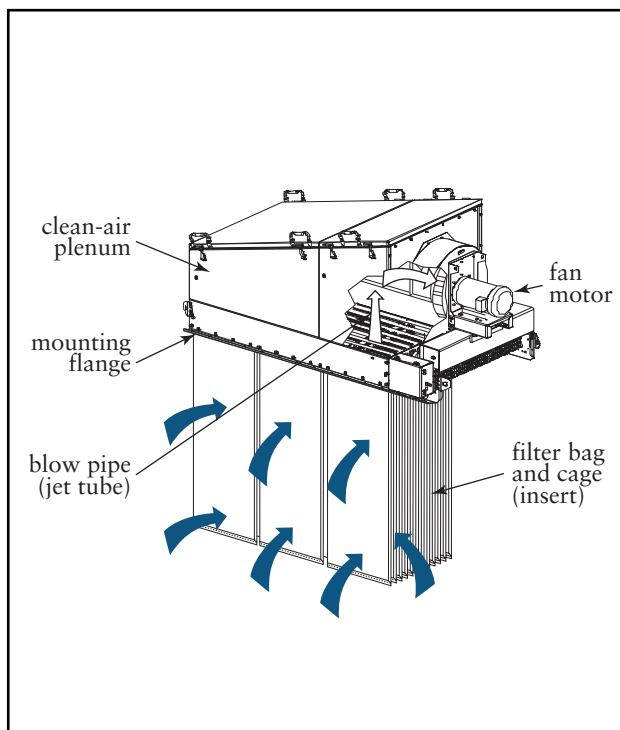
DLMV 45/15

## Sizes & Operations

### Normal Operation for Models DLMC



### Normal Operation for Models DLMV



### Dalmatic Cased (DLMC)

- Envelope-shaped bags provide maximum filter area per given space and ensure efficient cleaning
- Air volumes range from 1500 to 100,000 cfm
- Modular design gives dimensional and capacity flexibility
- Downward airflow pattern minimizes dust re-entrainment
- Installed face to face (double-banked) reduces required platforms and ductwork for easy access and maintenance
- Standard leg pack meets IBC 2003 requirements

### Dalmatic Insertable (DLMV)

- Five configurations to suit most process applications
- Uses positive pressure of the conveying air or can be fan powered for pneumatic conveying applications
- Bags can be installed hanging vertically, horizontally or any angle in between
- Can be inserted into hood enclosures at belt transfer points, bucket elevator casings, ribbon blenders and receiving hoppers for clamshell unloaders
- Insertable approach reduces or eliminates ducting costs; minimized ducting can also result in reduced energy costs



## Dura-Life™ Filter Bag Technology

*Standard in All Donaldson Torit  
Dalamatic Baghouse Collectors*

### **Dura-Life — A technology breakthrough for bag users.**

Polyester bags are produced with a needling process that creates larger pores where dust can embed into the fabric, inhibiting cleaning and reducing bag life. Dura-Life\* bags are engineered with a unique hydroentanglement process that uses water to blend the fibers. This process provides a more uniform material with smaller pores, better surface loading, and better cleaning. These advantages provide twice the operating life before bags need to be replaced due to high pressure drop. Longer life from Dura-Life bags lowers maintenance and operating costs and raises baghouse dust collection to a whole new level.



*These photos were taken with a scanning electron microscope of bag media used in a collector that was filtering fly ash. The bags were removed after 2,700 hours of use. Air-to-media ratio was 4.5 to 1. Pressure drop was 6 in. on polyester bags and 2 in. on Dura-Life.*

### **Dura-Life bags provide big benefits!**

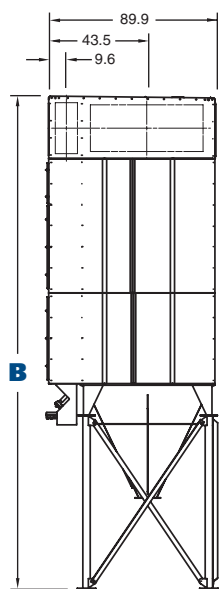
Dura-Life technology provides better surface loading and better pulse cleaning, resulting in:

- **Two to three times longer bag life**
- **Energy savings due to lower pressure drop**
- **Reduced replacement bag costs due to fewer bag changeouts**
- **Reduced maintenance and operating costs due to fewer bag changeouts**
- **30% fewer emissions based on EPA tests**



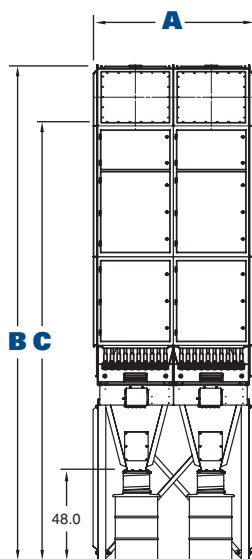
\* Dura-Life bags are made with Durapex® filter media manufactured by Polymer Group, Inc.

## Cased Dimensions & Specifications



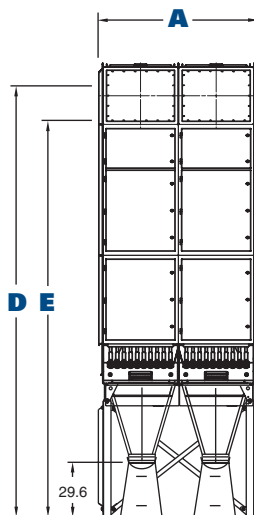
**Side View  
Pyramid Hopper**

(2/5/15 Model)



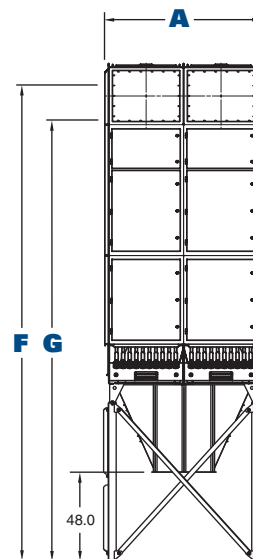
**Pyramid  
Hopper\***

(2/5/15 Model)



**UMA  
Hopper**

(2/5/15 Model with 4 cu. ft. Bins)



**Trough  
Hopper**

(2/5/15 Model)

DLMC Model	Nominal Airflow Range (cfm)**	Cloth Area (ft²)	No. of Banks	No. of Tiers	No. of Bags	No. of Valves	Shipping Weight (lbs)		
							With Pyramid Hopper	With Hopper for UMA 4 cu. ft. Bin	With Trough Hopper
1/2/15	1,290 - 3,550	323	1	2	20	10	2243	2270	N/A
1/3/15	1,940 - 5,335	485	1	3	30	10	2743	2770	N/A
1/4/15	2,580 - 7,095	645	1	4	40	10	3384	3396	N/A
2/2/15	2,580 - 7,095	645	2	2	40	20	3886	3907	3967
1/5/15	3,240 - 8,910	810	1	5	50	10	3884	3894	N/A
2/3/15	3,880 - 10,670	970	2	3	60	20	4686	4543	4707
1/7/15	4,520 - 12,430	1130	1	7	70	10	5145	4895	N/A
2/4/15	5,160 - 14,190	1290	2	4	80	20	5889	5593	5757
3/3/15	5,815 - 15,990	1454	3	3	90	30	6877	6518	6473
2/5/15	6,480 - 17,820	1620	2	5	100	20	6814	6518	6682
2/6/15	7,750 - 21,315	1938	2	6	120	20	7764	7468	7632
3/5/15	9,690 - 26,650	2423	3	5	150	30	9677	9318	9273
2/8/15	10,335 - 28,420	2584	2	8	160	20	9289	8993	9157
3/6/15	11,625 - 31,975	2907	3	6	180	30	11,077	10,718	10,673
4/5/15	12,920 - 35,530	3230	4	5	200	40	12,670	12,185	11,862
3/7/15	13,565 - 37,310	3392	3	7	210	30	12,177	11,818	11,773
3/8/15	15,500 - 42,635	3876	3	8	240	30	13,302	12,943	12,898
4/8/15	20,670 - 56,845	5168	4	8	320	40	17,445	16,960	16,637

\* With optional 55-gallon drum adapter (drum not included).

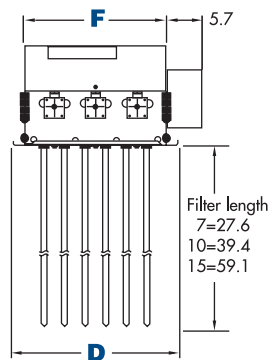
\*\* Based on clean filters.

## Cased Dimensions & Specifications

DLMC Model	Dimensions (inches)						
	A	B	Pyramid C	D	UMA E	F	Trough G
1/2/15	43.5	171.7	162.7	147.9	138.9	N/A	N/A
1/3/15	43.5	185.5	194.5	170.7	161.7	N/A	N/A
1/4/15	43.5	216.8	234.2	240.8	193.0	N/A	N/A
1/5/15	43.5	241.6	259.0	235.2	217.8	N/A	N/A
1/7/15	43.5	287.3	304.7	280.9	263.5	N/A	N/A
2/2/15	83.0	171.7	162.7	147.9	138.9	165.7	156.7
2/3/15	83.0	194.5	185.5	170.4	161.7	188.5	179.5
2/4/15	83.0	234.2	216.8	210.4	193.0	228.2	210.7
2/5/15	83.0	259.0	241.6	235.2	217.8	253.0	235.6
2/6/15	83.0	281.9	264.4	258.1	240.7	275.8	258.4
2/8/15	83.0	327.5	310.1	303.7	286.3	321.5	304.1
3/3/15	122.4	194.5	185.5	147.9	138.9	165.7	156.7
3/5/15	122.4	259.0	241.6	235.2	217.8	253.0	235.6
3/6/15	122.4	281.9	264.4	258.0	240.7	275.8	258.4
3/7/15	122.4	304.7	287.3	280.9	263.5	298.7	281.2
3/8/15	122.4	327.5	310.1	303.7	286.3	321.5	304.1
4/5/15	161.9	259.0	241.6	235.2	217.8	253.0	235.6
4/8/15	161.9	327.5	310.1	303.7	286.3	321.5	304.1

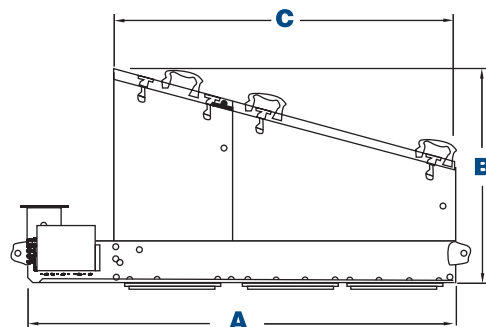
DLMC Operating Conditions	Standard	Optional
Seismic Spectral Acceleration	$S_S = 1.5$ & $S_1 = 0.6$	—
Wind Load Rating (mph)	90	—
Housing Rating ("wg)	0-20	21-45
Compressed Air Required (psig)	55-90	—
Temperature Range	15°F to 140°F	140°F to 400°F

## Insertable Dimensions & Specifications



### DLMV Type B

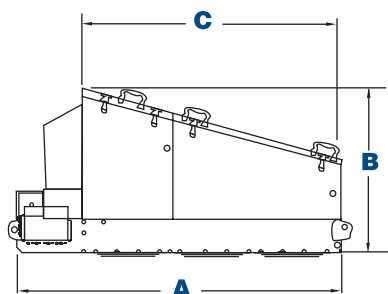
Basic filter for pressure systems located indoors.



### DLMV Type H

(Type B plus exit header)

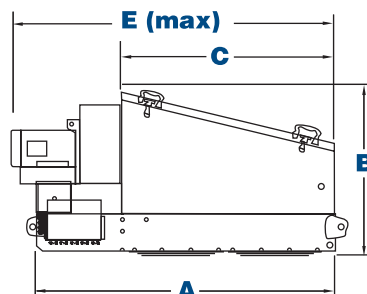
Filter with exit header for connection to a fan or discharge ducting. The filter is weatherproof and suitable for indoor and outdoor application.



### DLMV Type W

(Type H plus weather cowl)

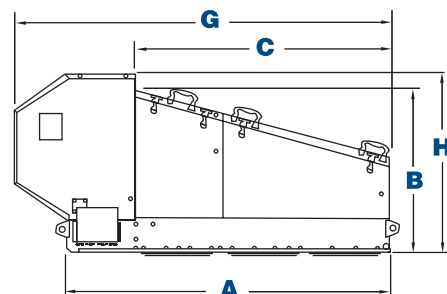
Filter with a weather cowl for pressure systems where the filter is located outdoors or exposed to adverse conditions.



### DLMV Type F

(Type H plus integral fan)

Weatherproof filter fitted with an integral fan for negative pressure applications.



### DLMV Type FAD

(Type F plus acoustic diffuser)

Weatherproof filter fitted with an integral fan and acoustic diffuser for quiet operation.

DLMV Model	No. of Bags	Dimensions (inches)								
		A	B	C	D	E	F	G	H	J
4/7, 6/10, 9/15	6	38.3	36.8	33.8	27.5	43.1	29.1	57.4	43.3	14.7
7/7, 10/10, 15/15	10	38.3	36.8	33.8	43.3	43.1	39.8	57.4	43.3	14.7
8/7, 12/10, 18/15	12	62.2	36.8	44.5	27.6	64.0	29.1	71.6	43.3	15.7
14/7, 20/10	20	62.3	36.8	44.5	43.3	67.0	39.8	71.7	43.3	15.8
30/15	20	62.3	37.6	44.5	43.3	68.4	39.8	71.7	43.3	15.8
21/7, 30/10, 45/15	30	85.9	42.9	68.1	43.3	93.1	39.8	100.0	46.8	15.8
60/15	40	112.2	42.9	88.8	43.3	113.3	39.8	120.7	46.8	15.8



## Insertable Dimensions & Specifications

DLMV Model	Nominal Airflow Range (cfm)*		Cloth Area (ft²)	4:1 cfm	6:1 cfm	8:1 cfm	No. of Valves	Fan	Motor (hp)	Type B	Shipping Weight (lbs)			
											Type H	Type W	Type F	Type FAD
4/7	215-	555	43	172	258	344	3	F1	1	231	320	331	430	523
6/10	320-	830	64	256	384	512	3	F1	1	251	340	351	450	543
7/7	375-	975	75	300	450	600	5	F1	1	353	474	485	584	688
								K3	2				595	699
8/7	430-	1,115	86	344	516	688	6	F1	1	375	518	529	628	727
								K3	2				640	739
9/15	485-	1,260	97	388	582	776	3	F1	1	273	362	373	472	565
								K3	2				483	576
10/10	540-	1,400	108	432	648	864	5	F1	1	386	507	519	617	721
								K3	2				628	732
12/10	645-	1,675	129	516	774	1032	6	K3	2	414	558	569	679	778
								K5	3				712	811
14/7	750-	1,950	150	600	900	1200	5	K3	2	606	794	805	915	1025
								K5	3				948	1058
15/15	805-	2,090	161	644	966	1288	5	K3	2	423	545	556	666	770
								K5	3				699	803
18/15	970-	2,520	194	776	1164	1552	6	K3	2	459	602	613	723	822
								K5	3				756	855
								K7	5				833	932
20/10	1,075-	2,795	215	860	1290	1720	5	K3	2	672	860	871	981	1091
								K5	3				1014	1124
								K7	5				1091	1201
21/7	1,130-	2,935	226	904	1356	1808	15	K3	2	794	1058	1080	1179	1307
								K5	3				1213	1341
								K7	5				1290	1418
30/10	1,615-	4,195	323	1292	1938	2584	15	K5	3	893	1157	1179	1312	1440
								K7	5				1389	1517
								K10	7.5				1561	1689
30/15	1,615-	4,195	323	1292	1938	2584	10	K5	3	750	935	946	1089	1199
								K7	5				1168	1278
								K10	7.5				1321	1431
45/15	2,420-	6,290	484	1936	2904	3872	15	K7	5	1003	1268	1290	1499	1627
								K10	7.5				1671	1799
								K11	10				1758	1886
60/15	3,230-	8,395	646	2584	3876	5168	20	K11	10	1323	1878	1900	2374	2506

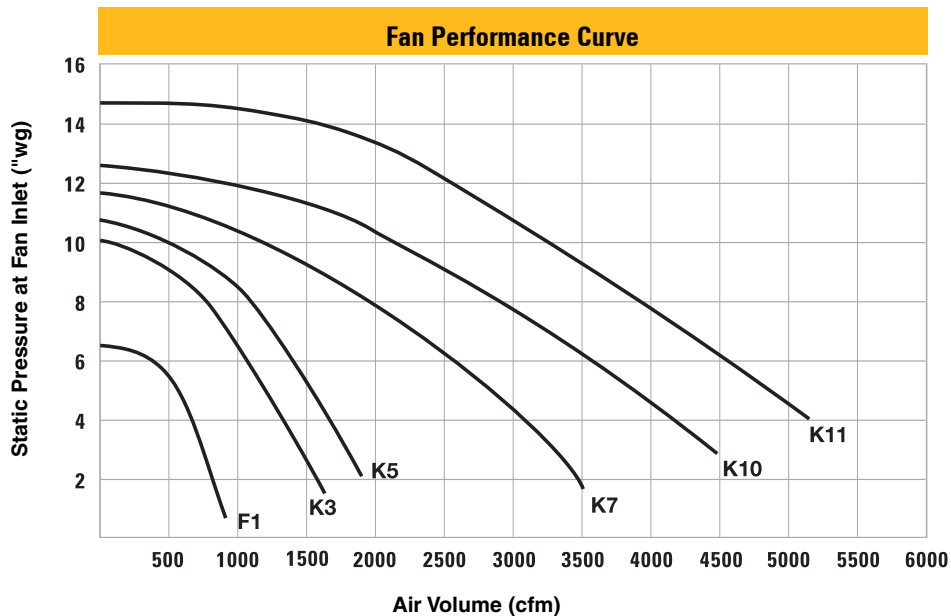
DLMV Operating Conditions	Standard	Optional
Pressure Limits	Type B, W and H: -16"wg Type F: As fan performance curves from shut-off to ambient pressure	
Compressed Air Required (psig)	65-90	
Temperature Range	14°F to 140°F	140°F to 250°F (not Type F)

\* Based on clean filters.

**Insertable Performance Selections**

*To select the most suitable fan for your applications*

- 1) Determine the air volume flow (cfm) needed to give effective venting and dust control
- 2) Estimate pressure or suction ("wg) in the housing in which the dust filter is inserted
- 3) Assess the operational pressure drop ("wg) across the clean side and dirty side of the filtering element – usually between 2 to 4 "wg
- 4) The sum of 2 and 3 gives the pressure ("wg) required for fan selection purposes
- 5) Consult graph for fan performance available

**Insertable Weighted Sound Pressure Levels**

All readings were taken in semi-reverberant surroundings 3'3" radius from the equipment housing and 5'3" above base level, using a precision sound level meter and octave filter.

	F1 (1 hp)	K3 (2 hp)	K5 (3 hp)	K7 (5 hp)	K10 (7.5 hp)	K11 (10 hp)
With acoustic diffuser*	76 dB(A)	73 dB(A)	74 dB(A)	76 dB(A)	79 dB(A)**	84 dB(A)
Without acoustic diffuser	91 dB(A)	89 dB(A)	92 dB(A)	93 dB(A)	94 dB(A)	97 dB(A)

Noise measurements of installed equipment may vary due to site conditions.

\* These measurements refer to standard outlet position.

\*\* Estimated data.

## Standard Features & Equipment Options

### Dalamatic Cased (DLMC)

	Standard	Optional
<b>Collector Design</b>		
Mild Steel Construction	X	
Horizontal Clean-Side Bag Removal	X	
Rear Dirty-Air Plenum Access Door		X
High Temperature Construction		X
Stainless Steel Construction		X
Mountable Fan		X
Ladders, Cages, & Platform Assemblies (OSHA compliant)		X
<b>Bags &amp; Cages</b>		
Dura-Life Twice the Life Polyester Felt Bags	X	
Quick-Release Filter Clamps		X
Variety of Bag Media Options		X
Anti-Static Filter Bags		X
<b>Paint System</b>		
Powder-Coated Polyester Textured Finish	X	
Blue Exterior Finish Coating Meets 250-Hour Salt Spray Corrosion Protection Test	X	
Hostile Environment Paint		X
Custom Colors		X
<b>Hopper Design</b>		
Pyramid Hoppers	X	
Trough Hoppers	X	
2 and 3 Bank Single-Outlet Hopper	X	
UMA Hopper		X
<b>Support Structure</b>		
Standard Leg Pack	X	
Leg Extensions		X
<b>Electrical Controls, Gauges and Enclosures</b>		
Solid-State Control Panels and Valves in NEMA 4 Encl.	X	
Solid-State Control Panels and Valves in NEMA 9 Encl.		X
Control Panels and Valves with Heater in NEMA 9 Encl.		X
Magnehelic® Gauge		X
Solenoid Enclosure NEMA 9		X
Photohelic® Gauge		X
Delta P Control, Delta P Plus Control		X
Compressed Air Filter and Regulator		X
<b>Safety Features</b>		
Sprinkler Pack		X
Explosion Vents		X
<b>Warranty</b>		
10-Year Warranty	X	

### Dalamatic Insertable (DLMV)

	Standard	Optional
<b>Collector Design</b>		
Mild Steel Construction	X	
Horizontal or Vertical Bag Removal	X	
High Temperature Construction		X
Stainless Steel Construction		X
Acoustic Diffuser Silencers		X
<b>Bags &amp; Cages</b>		
Dura-Life Twice the Life Polyester Felt Bags	X	
Clean-Side Bag Removal	X	
Quick-Release Filter Clamps		X
Variety of Bag Media Options		X
Anti-Static Filter Bags		X
<b>Paint System</b>		
Powder-Coated Polyester Texture	X	
Blue Exterior Finish Coating Meets 250-Hour Salt Spray Corrosion Protection Test	X	
Hostile Environment Paint		X
Custom Colors		X
<b>Support Structure</b>		
Vertical or Horizontal Upstands		X
<b>Electrical Controls, Gauges and Enclosures</b>		
Solid-State Control Panels and Valves in NEMA 4 Encl.	X	
Solid-State Control Panels and Valves in NEMA 9 Encl.		X
Control Panels and Valves with Heater in NEMA 9 Encl.		X
Magnehelic® Gauge		X
Solenoid Enclosure NEMA 9		X
Photohelic® Gauge		X
Delta P Control, Delta P Plus Control		X
Compressed Air Filter and Regulator		X
<b>Safety Features</b>		
Explosion Proof Motors		X
<b>Warranty</b>		
10-Year Warranty	X	

\* Magnehelic and Photohelic are registered trademarks of Dwyer Instruments, Inc.

U.S. Patent 7,015,158

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