

INTRODUCTION

Engineered for demanding environments, the DBM delivers powerful and efficient air distribution from a single point, making them ideal for large-scale facilities with high ceilings such as data centers, warehouses, athletic complexes, distribution hubs, and big box retail stores. These modules are specifically designed to manage high-volume airflow while maintaining precise directional control, ensuring optimal ventilation across expansive spaces.

Constructed from durable steel with internal reinforcement, each DBM plenum module supports airflow capacities ranging from 4,000 to 25,000 CFM, containing an interior baffle design for enhanced efficiency. Air is distributed through multiple drum louver or grille outlets, both of which offer flexible adjustment, vertically and horizontally, via individually adjustable blades, so as to allow for tailored air patterns to meet the unique needs of any facility layout.

MODEL

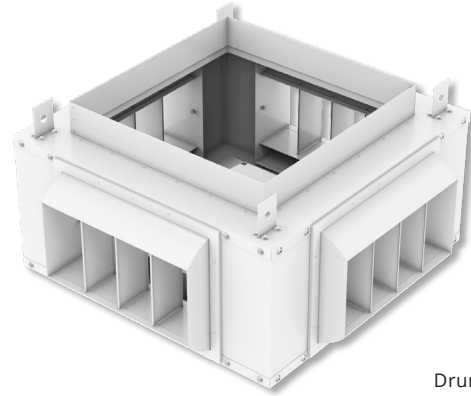
DBM - Drop Box Module

FEATURES

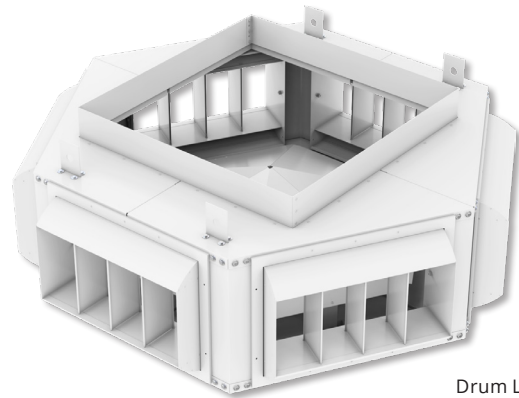
- Steel plenum construction
- Two Outlet Options: Drum Louver (extruded aluminum construction) or Industrial Grille (steel grille frame construction)
- Vertically and horizontally adjustable outlets
- Balanced output via internal deflector
- Integral hanger brackets
- Fiberglass or fiber-free insulation (optional)

FINISHES

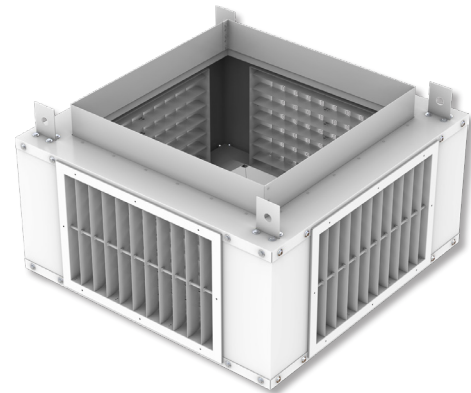
- Standard Finish is #44 British White
- Optional finishes available



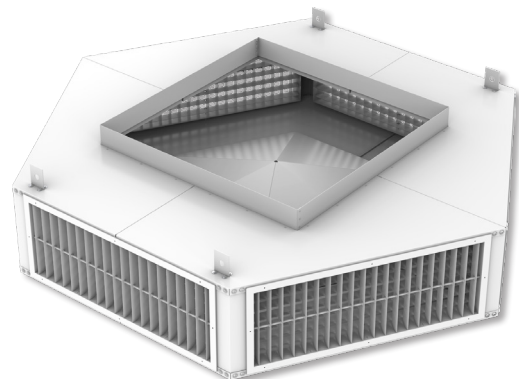
DBM
4-Sides
Drum Louvers



DBM
6-Sides
Drum Louvers

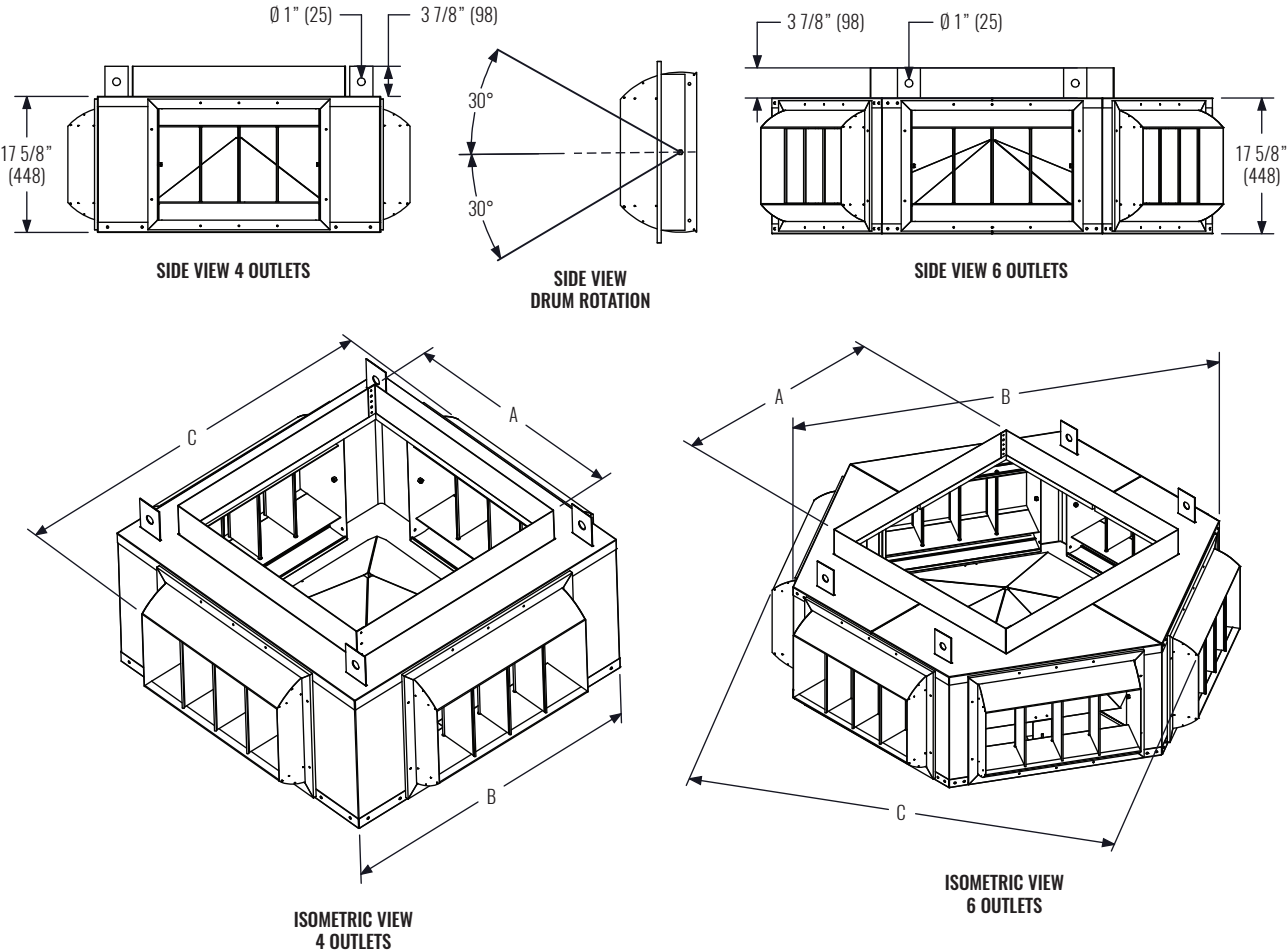


DBM
4-Sides
Grilles



DBM
6-Sides
Grilles

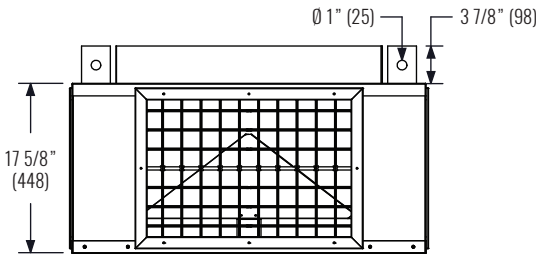
DIMENSIONAL DATA | DBM WITH DRUM LOUVERS



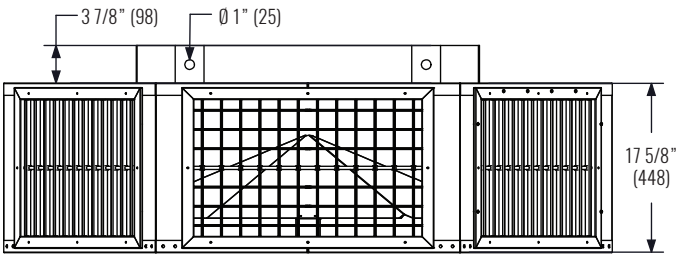
DIMENSIONAL REFERENCES						
OUTLET TYPE	CAPACITY (CFM)	OUTLET SIZE	A	B	C	WEIGHT (LBS)
4 WAY	4,000	21" x 15"	23 7/8" (606)	32 7/8" (835)	40 9/16" (1030)	75
	5,000	21" x 15"	23 7/8" (606)	32 7/8" (835)	40 9/16" (1030)	75
	7,500	21" x 15"	27 7/8" (708)	36 7/8" (937)	44 9/16" (1132)	80
6 WAY	10,000	21" x 15"	31 7/8" (810)	57 1/2" (1461)	58" (1473)	127
	12,500	24" x 15"	35 7/8" (911)	63 1/2" (1613)	63" (1600)	132
	15,000	30" x 15"	37 7/8" (962)	75 1/2" (1918)	74" (1880)	179
	17,500	30" x 15"	39 7/8" (1013)	75 1/2" (1918)	74" (1880)	179
	20,000	36" x 15"	39 7/8" (1013)	87 1/2" (2134)	84" (2134)	217
	22,500	40" x 15"	41 7/8" (1064)	95 1/4" (2419)	90" (2286)	263
	25,000	40" x 15"	43 7/8" (1114)	95 1/4" (2419)	90" (2286)	263

NOTES: Dimensions in parentheses are mm.

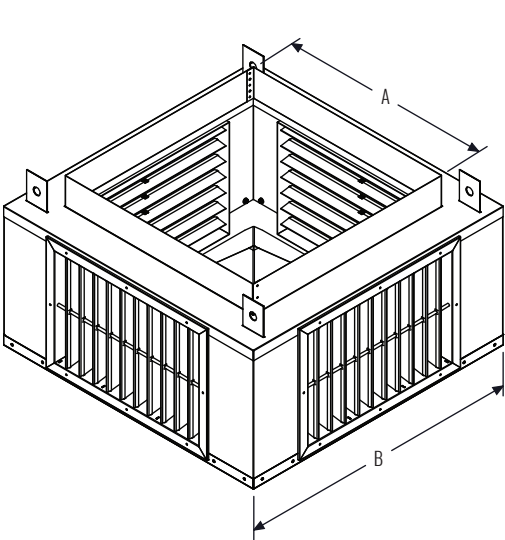
DIMENSIONAL DATA | DBM WITH GRILLES



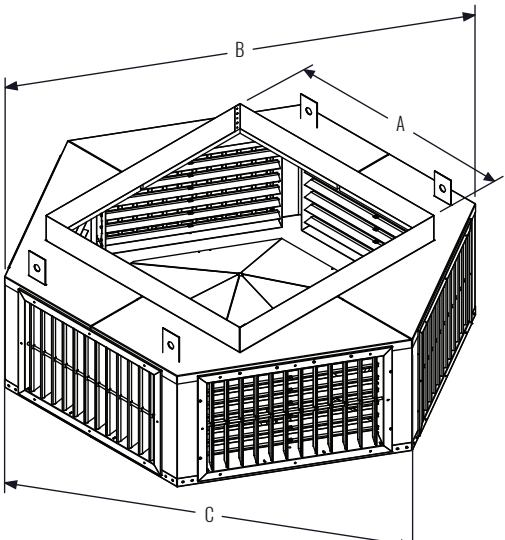
SIDE VIEW 4 OUTLETS



SIDE VIEW 6 OUTLETS



ISOMETRIC VIEW
4 OUTLETS



ISOMETRIC VIEW
6 OUTLETS

DIMENSIONAL REFERENCES						
OUTLET TYPE	CAPACITY (CFM)	OUTLET SIZE	A	B	C	WEIGHT (LBS)
4 WAY	4,000	22" x 15 1/4"	23 7/8" (606)	32 7/8" (835)	-	80
	5,000	22" x 15 1/4"	23 7/8" (606)	32 7/8" (835)	-	80
	7,500	22" x 15 1/4"	27 7/8" (708)	36 7/8" (937)	-	85
6 WAY	10,000	21 1/2" x 15 1/4"	31 7/8" (810)	57 1/2" (1461)	50" (1270)	134
	12,500	24 1/2" x 15 1/4"	35 7/8" (911)	63 1/2" (1613)	55" (1397)	136
	15,000	30 1/2" x 15 1/4"	37 7/8" (962)	75 1/2" (1918)	66" (1676)	188
	17,500	30 1/2" x 15 1/4"	39 7/8" (1013)	75 1/2" (1918)	66" (1676)	188
	20,000	36 1/2" x 15 1/4"	39 7/8" (1013)	87 1/2" (2134)	76" (1930)	226
	22,500	40 1/2" x 15 1/4"	41 7/8" (1064)	95 1/4" (2419)	83" (2108)	273
	25,000	40 1/2" x 15 1/4"	43 7/8" (1114)	95 1/4" (2419)	83" (2108)	273

NOTES: Dimensions in parentheses are mm.

PERFORMANCE DATA

DRUM LOUVER PERFORMANCE DATA						
MODEL	CAPACITY (CFM)	VELOCITY PRESSURE (IN.WC)	TOTAL PRESSURE (IN.WC)	THROW (FT)	NC	DRUM LOUVER SIZE
DBM-4	4,000	0.064	0.163	33-40-57	25	21" x 15"
	5,000	0.099	0.255	37-45-64	32	21" x 15"
	7,500	0.120	0.365	45-55-78	51	21" x 15"
DBM-6	10,000	0.125	0.406	42-52-74	45	21" x 15"
	12,500	0.122	0.425	47-58-82	50	24" x 15"
	15,000	0.141	0.456	52-64-90	49	30" x 15"
	17,500	0.157	0.550	56-69-97	56	30" x 15"
	20,000	0.205	0.777	60-74-104	55	36" x 15"
	22,500	0.213	0.845	64-78-110	54	42" x 15"
	25,000	0.218	0.831	67-82-116	59	42" x 15"

NOTES: All data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-2006. Throw is based on isothermal air, 150, 100 and 50 fpm terminal velocities. See the section, Engineering Guidelines, in this catalog for throw information. Each NC value represents the noise criterion that will not be exceeded by the sound pressure in any of the octave bands, 2nd through 7th. Each NC value is based on a room absorption of 10dB, re 10⁻¹² watts. Throw is based on a 15° upward deflection. For 0° upward deflection multiply throw values shown by 1.2. For 30° upward deflection multiply throw values shown by 0.8. Velocity pressure is based on plenum neck velocity. See Krueger's selection program for performance data not shown.

GRILLE PERFORMANCE DATA						
MODEL	CAPACITY (CFM)	VELOCITY PRESSURE (IN.WC)	TOTAL PRESSURE (IN.WC)	THROW (FT)	NC	DRUM LOUVER SIZE
DBM-4	4,000	0.064	0.138	27-40-58	27	21" x 15"
	5,000	0.099	0.216	33-46-65	34	21" x 15"
	7,500	0.120	0.276	46-56-80	46	21" x 15"
DBM-6	10,000	0.125	0.336	43-53-75	46	21" x 15"
	12,500	0.122	0.339	48-59-84	49	24" x 15"
	15,000	0.141	0.375	53-65-92	49	30" x 15"
	17,500	0.157	0.439	57-70-99	53	30" x 15"
	20,000	0.205	0.673	61-75-106	53	36" x 15"
	22,500	0.213	0.749	65-80-113	52	42" x 15"
	25,000	0.218	0.712	69-84-119	55	42" x 15"

NOTES: All data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-2006. Throw is based on isothermal air, 150, 100 and 50 fpm terminal velocities. See the section, Engineering Guidelines, in this catalog for throw information. Each NC value represents the noise criterion that will not be exceeded by the sound pressure in any of the octave bands, 2nd through 7th. Each NC value is based on a room absorption of 10dB, re 10⁻¹² watts. Throw is based on a 0° blade deflection. Velocity pressure is based on plenum neck velocity. See Krueger's selection program for performance data not shown.

ENGINEERING SPECIFICATION & CONFIGURATION

SECTION 1: GENERAL

1.01 - Section Covers

- A. Drop Box Diffusers

1.02 - Related Requirements

- A. Section Includes:
 - 1. High-Capacity Drop Box Module

1.03 - Submittals

- A. Product Data: For each type of product indicated, include the following:
 - 1. Data Sheet: Indicate materials of construction, finish and mounting details and performance data including throw, static pressure, sound ratings

SECTION 2: PRODUCTS

2.01 - Manufacturer

- A. Manufacturer: Krueger
 - 1. Drop Box Module with DPL Drum Louver Outlets
 - 2. Drop Box Module with 6880-20V Industrial Supply Grilles

2.02 - Drop Box Module with DPL Drum Louver Outlets

- A. Description:
 - 1. Furnish and install Krueger model DBM with drum louver outlets of various sizes indicated on the plans and air distribution schedule
- B. Construction:
 - 1. Dropbox will consist of 0.044" plain steel plenum and DPL outlets will be constructed of aluminum
 - 2. Dropbox diffusers shall consist of an interior baffle pyramid
 - 3. The rectangular inlets shall have a minimum of a 3.75" depth available for duct connection
 - 4. DPL diffusers can be adjusted 30° up and down from the central position and the blades can be individually adjusted for horizontal spread
 - 5. Dropbox shall have a nominal capacity of (select one):
 - a. 4,000 CFM capacity (4-way outlet)
 - b. 5,000 CFM capacity (4-way outlet)
 - c. 7,500 CFM capacity (4-way outlet)
 - d. 10,000 CFM capacity (6-way outlet)
 - e. 12,500 CFM capacity (6-way outlet)
 - f. 15,000 CFM capacity (6-way outlet)
 - g. 17,500 CFM capacity (6-way outlet)
 - h. 20,000 CFM capacity (6-way outlet)
 - i. 22,500 CFM capacity (6-way outlet)
 - j. 25,000 CFM capacity (6-way outlet)

- C. Finish: Standard Finish will be #44 white. Optional finishes shall be available
 - 1. The standard finish will be an electrophoretic enamel paint, baked at 310° F for 30 minutes
 - 2. The paint thickness shall be 1.0 – 1.2 mils
 - 3. The finish shall have a pencil hardness of HB-H per ASTM D3363-92A
 - 4. The paint shall meet the requirements of ASTM D2794-93, with a direct impact resistance greater than 100 inch-pounds and a reverse impact resistance greater than 80 inch-pounds
 - 5. The paint must pass a 100-hour ASTM B117 Corrosive Environments Salt Spray Test without creepage, blistering or deterioration of film

- D. Accessories:
 - 1. Internal 1" Black Fiberglass Insulation
 - 2. Internal 1" Black Fiber Free Insulation

2.03 - Drop Box Module with 6880-20V Industrial Supply Grilles

- A. Description:
 - 1. Furnish and install Krueger model DBM with industrial supply grilles of various sizes indicated on the plans and air distribution schedule
- B. Construction:
 - 1. Dropbox will consist of 0.044" plain steel plenum and 6880-20V industrial double deflection supply grilles will be constructed of steel
 - 2. Dropbox diffusers shall consist of an interior baffle pyramid
 - 3. The rectangular inlets shall have a minimum of a 3.75" depth available for duct connection
 - 4. Dropbox shall have a nominal capacity of (select one):
 - a. 4,000 CFM capacity (4-way outlet)
 - b. 5,000 CFM capacity (4-way outlet)
 - c. 7,500 CFM capacity (4-way outlet)
 - d. 10,000 CFM capacity (6-way outlet)
 - e. 12,500 CFM capacity (6-way outlet)
 - f. 15,000 CFM capacity (6-way outlet)
 - g. 17,500 CFM capacity (6-way outlet)
 - h. 20,000 CFM capacity (6-way outlet)
 - i. 22,500 CFM capacity (6-way outlet)
 - j. 25,000 CFM capacity (6-way outlet)
- C. Finish: Standard Finish will be #44 white. Optional finishes shall be available
 - 1. The standard finish will be an electrophoretic enamel paint, baked at 310° F for 30 minutes
 - 2. The paint thickness shall be 1.0 – 1.2 mils
 - 3. The finish shall have a pencil hardness of HB-H per ASTM D3363-92A

ENGINEERING SPECIFICATION & CONFIGURATION (CONTINUED)

- 4. The paint shall meet the requirements of ASTM D2794-93, with a direct impact resistance greater than 100 inch-pounds and a reverse impact resistance greater than 80 inch-pounds
 - 5. The paint must pass a 100-hour ASTM B117 Corrosive Environments Salt Spray Test without creepage, blistering or deterioration of film
- D. Accessories:
- 1. Internal 1" Black Fiberglass Insulation
 - 2. Internal 1" Black Fiber Free Insulation

SECTION 3: EXECUTION**3.01 - Examination**

- A. Ensure that all conditions are appropriate before beginning installation
- B. Ensure all field measurements align with the specifications depicted in the drawings
- C. Notify architect of any inadequate preparation if another installer is responsible for installation before proceeding

3.02 - Installation

- A. Install Diffusers level and plumb
- B. Verify diffuser air patterns are as indicated on drawings during installation
- C. Diffusers shall be installed with airtight connection to ducts to allow the service and maintenance of dampers

3.03 - Closeout Activities

- A. After installation, verify diffuser air patterns as directed before starting air balance

- 1. SERIES: (X)**
DBM - Drop Box Module
- 2. NUMBER OF OUTLETS: (X)**
4 - 4 Outlets
6 - 6 Outlets
- 3. CFM: (XXXXXX)**
4,000
5,000
7,500
10,000
12,500
15,000
17,500
20,000
22,500
25,000
- 4. INSULATION: (X)**
H - Fiberglass
Y - Fiber-free
- 5. OUTLET TYPE: (X)**
D - DPL Drum Louver
G - 6880-20V Grille
- 6. FINISH: (XX)**
01 - Mill
07 - Enamel Paint Match
35 - Black
44 - British White