Volume Control Damper - VCD; Heavy Duty Application B- 40 Series

Type: Square and Rectangular
Model: VCD - GB-42A
Blade Type Aerofoil; Galvanized Construction
Blade Operation : A-Parallel, B-Opposed

BETEC CAD B-40 Series Volume control dampers are square and rectangular type with both parallel blade operation and opposed blade operation, double skin blade design. These heavy duty dampers are used under high pressure and velocity conditions to achieve efficient and rattle free operation.

The square and rectangular type **VCD**'s are designed for handling maximum air capacities at minimum pressure drop.


VCD-SB-42B

Damper Performance Ratings

Operating Pressure - 6" wg (1500 Pa.) Max.
Leakage - Class - II (Refer to AMCA 500 D)
Velocity - 3000 fpm (15 m/s).

Standard Construction

Frame
6" x 1.18" x 16 gauge (150 x 30 x 1.5 mm) thick rollformed galvanized steel 'C' channel.
Blades
6" (150 mm) wide, 0.9 mm (20 gauge) thick galvanized steel Aerofoil type rollformed.
Bushes
Bronze.
Mechanical Linkage
Galvanized steel linkages concealed in the frame.
Axles
12 mm square galvanized steel.
Quadrant
Heavy gauge galvanized steel with position indications **Shut**, 1/4 , 1/2, 3/4, **Open**.
Gasket
Neoprene / foam gasket.
Jamb Seal
0.3 mm thick Stainless spring steel.

Optional Fittings

Bushes
Brass/ Stainless Steel.
Flange Holes
Available customers request, please specify.
Transitions
Neck adaptor for round duct connections.

B- 40 Series Aerofoil Blade Model Details					
Material Construction					
Model	Frame		Blade		Quadrant
	Material	Thick	Material	Thick	Material
VCD-GB-42A/B	GI	1.5 mm	GI	0.9 mm	GI
VCD-GSB-42A/B	GI	1.5 mm	SS	0.9 mm	GI
VCD-SB-42A/B	SS	1.5 mm	SS	0.9 mm	SS

Alphabet indicates the type of blade operation
A - Parallel Blade.
B - Opposed Blade.

Optional Construction

Frame : Thickness up to 3 mm
Frame Depth : Up to 200 mm
Blade : Thickness up to 2 mm
Blade Width : Up to 150 mm
Frame and Blade Material : Stainless Steel (304/316L)

Any Combination of W x H											
VCD-GB-42A/B											
W- Inch	6"	8"	12"	16"	18"	20"	24"	28"	32"	36"	48"
H - Inch	6"	8"	12"	16"	18"	20"	24"	28"	32"	36"	48"

Note:
Increments of 2" (50 mm) possible with combination of 4"& 6" blade width.

Maximum single module size is 48"x48" (1200x1200 mm).

Damper, width W > 48" (1200 mm) or H > 48" (1200 mm), is provided with a center mullion partition.

Note :
Please contact ***BETEC CAD***. for customized design & additional information.
Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.

Engineering And Performance Data - VCD
B - 10/20/30/40 Series

Pressure drop for Volume Control Dampers

Single Skin Blade : VCD B 11/21/31/41
Aerofoil Blade : VCD B 12/22/32/42

AIR PERFORMANCE

•Tested for air performance at standard air density in accordance with ANSI/AMCA 500-D,Figure 5.3

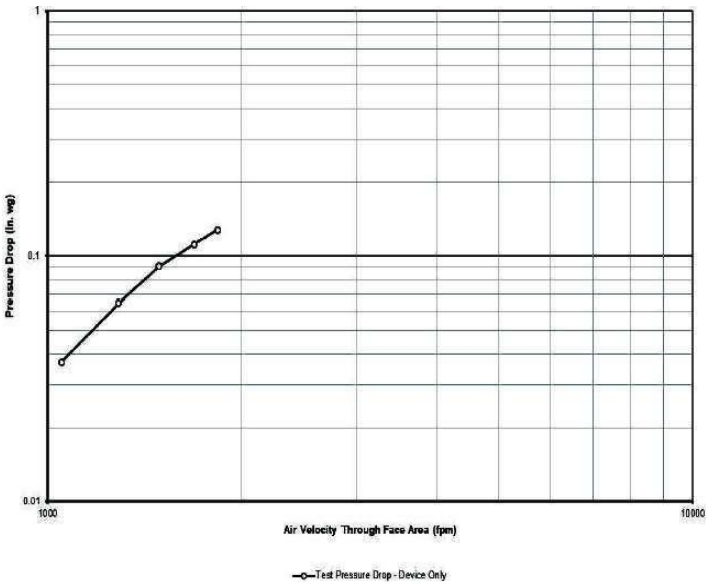
•Data are based on a torque of 24 in-lb/ft2 applied to close and seat the damper during the test.

Volume Control Damper

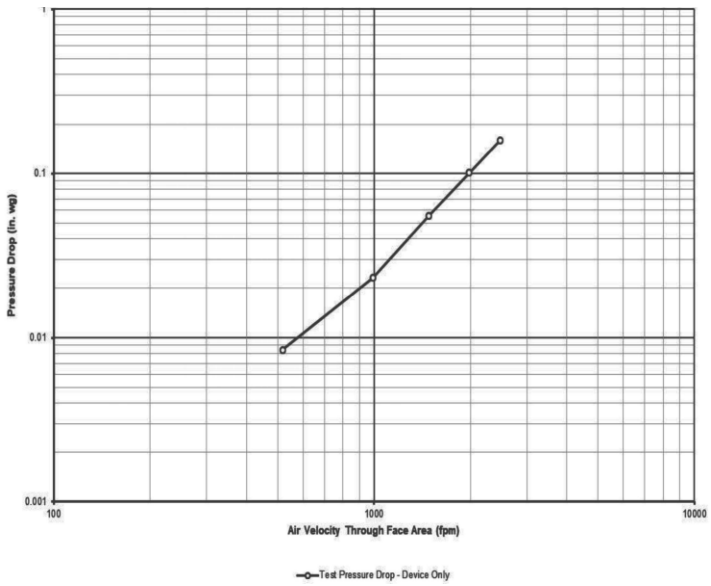
Betec Cad certifies that the Models VCD-GAB-22B/ VCD-GB-22B/VCD-GB-21B shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance and air leakage.

Pressure Loss Vs Face Velocity
Pressure Drop For Models VCD - B10/20/30/40 Series.

SIZE 12" X12"		SIZE 24" X 24"		SIZE 12" X 48"		SIZE 48" X 12"	
Air Velocity (fpm)	Pressure Drop (in. wg)	Air Velocity (fpm)	Pressure Drop (in. wg)	Air Velocity (fpm)	Pressure Drop (in. wg)	Air Velocity (fpm)	Pressure Drop (in. wg)
1100	0.04	520	0.008	520	0.01	520	0.007
1400	0.07	1000	0.02	1000	0.04	1000	0.02
1600	0.09	1600	0.06	1500	0.08	1600	0.05
1800	0.12	2000	0.1	2000	0.14	2000	0.09
1900	0.14	2600	0.18	2600	0.22	2600	0.14



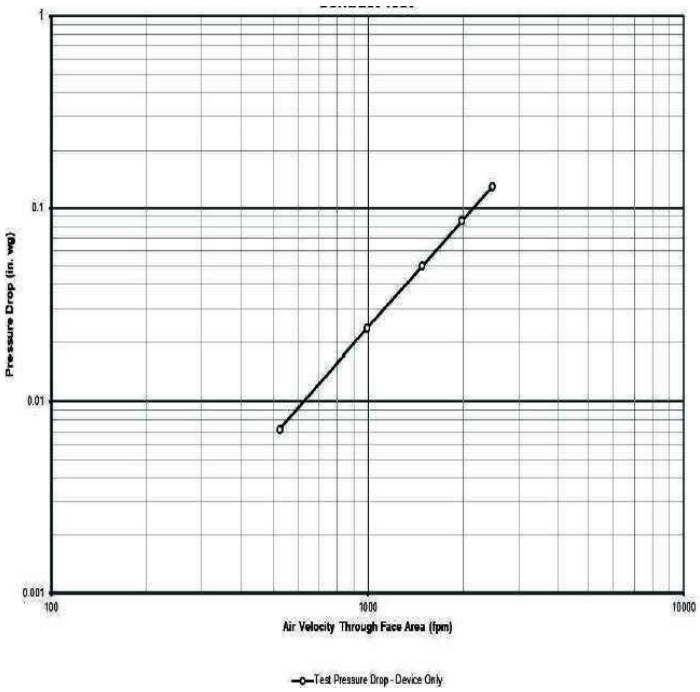
SIZE 12" X12"



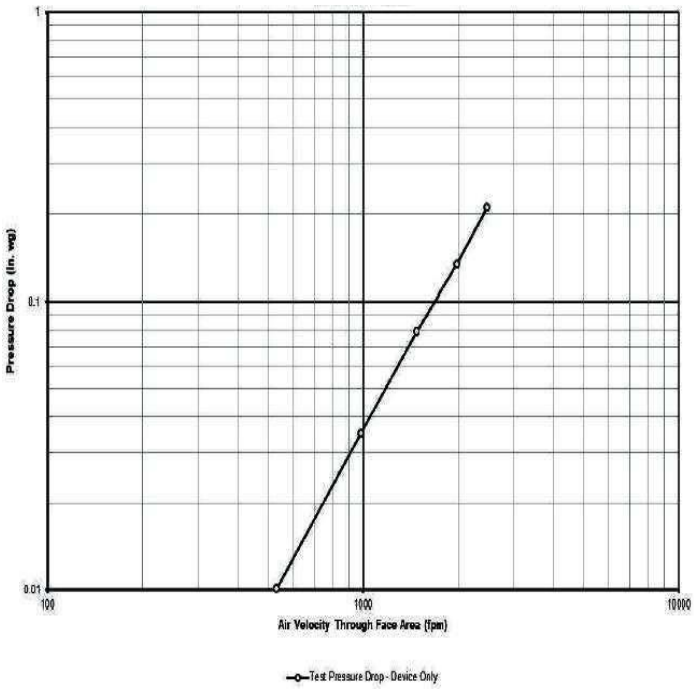
SIZE 24" X24"

Engineering And Performance Data - VCD

B 10/20/30/40 Series

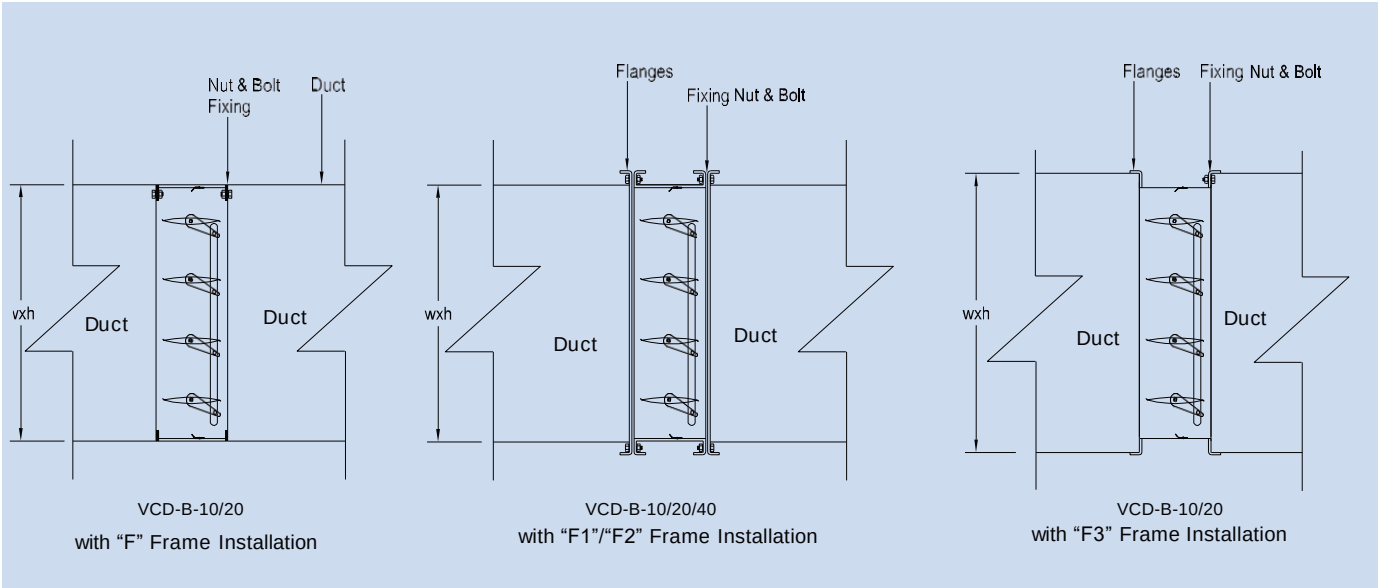


SIZE 48" X 12"



SIZE 12" X 48"

Installation Details



VCD-B-10/20
with "F" Frame Installation

VCD-B-10/20/40
with "F1"/"F2" Frame Installation

VCD-B-10/20
with "F3" Frame Installation

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Engineering And Performance Data - VCD

B 10/20/30/40 Series

Leakage Characteristics for Volume Control Dampers

Models VCD - B 10/20/30/40 - Leakage Curve (Blades 100% Closed Position)

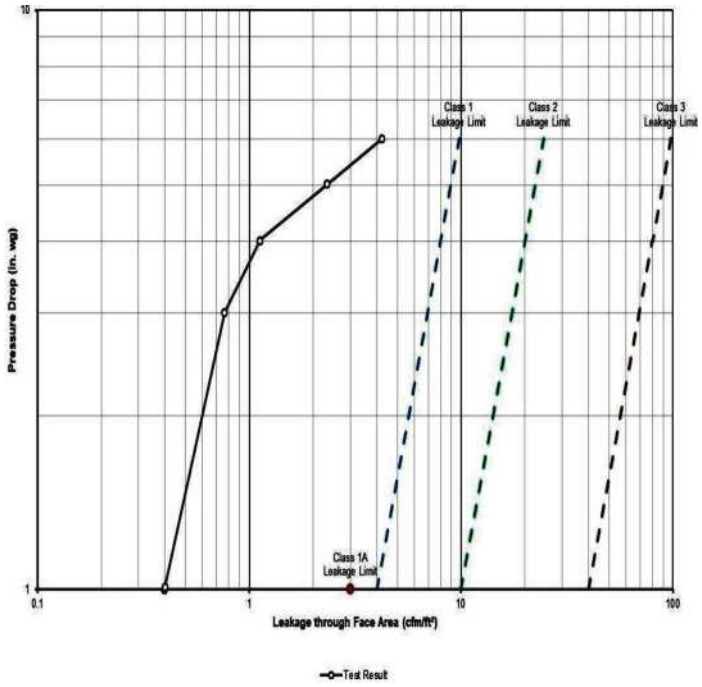
AIR LEAKAGE

•Air leakage is based on operation between 32 °F and 120 °F

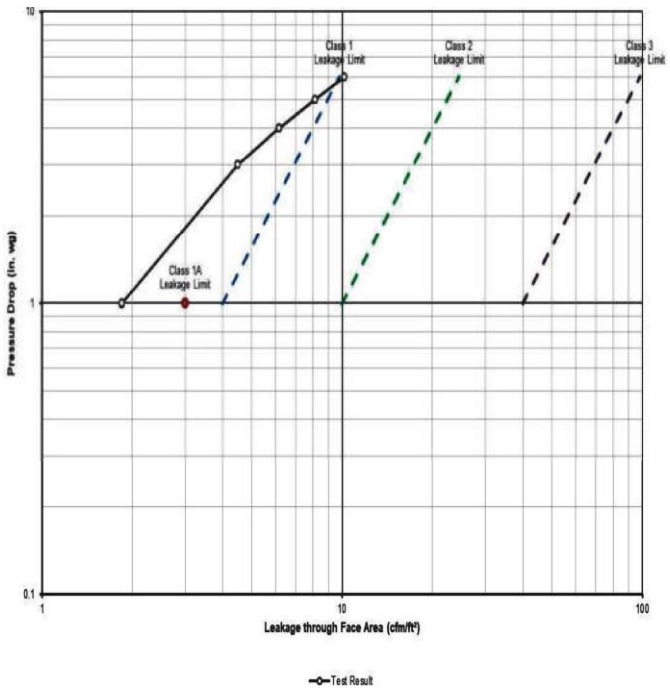
•Tested for air leakage at standard air density in accordance with ANSI/AMCA Standard 500-D,Figure 5.4

•Data are based on a torque of 24 in-lb/ft2 applied to close and seat the damper during the test.

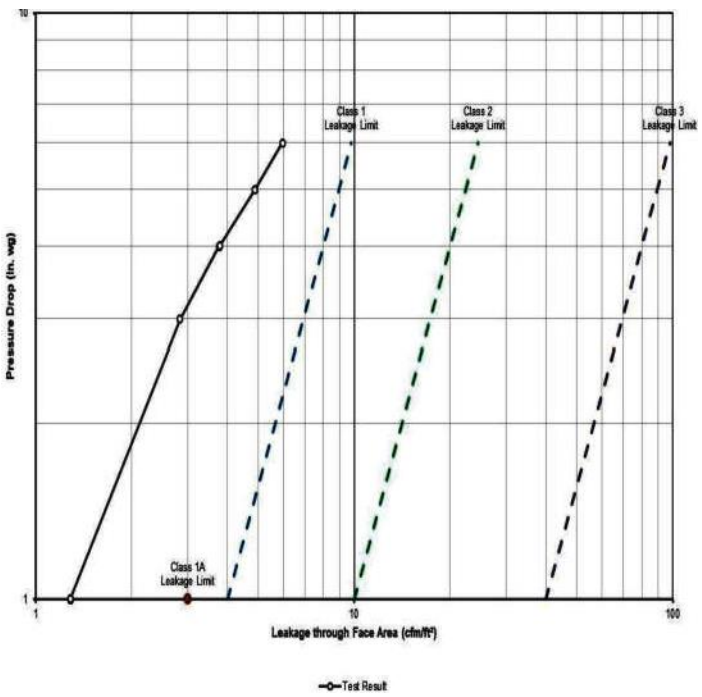
Maximum Allowable Leakge, cfm/ft²				
Class	at 1 in.wg	at 4 in.wg	at 6 in.wg	at 8 in.wg
1A	3	N/A	N/A	N/A
1	4	8	10	11
2	10	20	24	28
3	40	80	98	112



VCD-GAB-22-B- 36 "X 40"



VCD-GB-21-B- 36 "X 40"



VCD-GB-22-B- 36 "X 40"

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