



AIR CONTROL DAMPER MODEL KVCD-3V12 or 22 FLANGED FRAME LEAKAGE RATED DAMPER

STANDARD CONSTRUCTION

FRAME:

18 Ga galvanized steel Flanged frame construction with 35mm flanges.

BLADES:

16 Ga galvanized steel 3V type blades

Parallel blades model KVCD-3V12

Opposed blades model KVCD-3V22

SEALS:

Stainless Steel Jamb Seal

Rubber Foam Blade Seal

BEARINGS:

Nylon bearings

AXLES:

0.47"(12mm) Square zinc plated steel stud

LINKAGE:

Concealed in frame 10Ga (3mm) zinc plated steel

MANUAL HAND-QUADRANT:

Galvanized steel die cast hand-quadrant plated for square or round shaft installed on an elevated bearing bracket

BRACKET:

1" (25mm) elevated hand bracket

FINISH:

Mill galvanized

OPTIONS:

1) FRAME CONSTRUCTION

- Aluminum or stainless steel frame construction.
- Frame thickness 1.5mm or 1mm (for 1mm thickness not available for Aluminum construction & for Galvanized & stainless steel construction Maximum size is 24"x24").

2) FLANGES:

Variable size of frame flanges sizes: 20, 25, 30 or 40mm.

3) BLADES CONSTRUCTION

Aluminum or stainless steel blades construction.

4) BEARINGS:

Bronze bearings (std for motorized dampers) or stainless steel bearings.

5) ACTUATORS:

- Electric (24,120 & 230V) or pneumatic.
- Spring return or non spring return.
- With or without auxiliary switch.

6) Blades indicator switch - BIS

7) EXTENDED SHAFT (without Hand Quadrant):

4.7" (120mm) extended shaft (round or square) beyond the air control frame.

8) 2" Elevated hand bracket.



APPLICATION

KVCD-3V12 or 22 is an Ultra low leakage damper designed to provide superior air control with high performance and heavy duty construction. Dampers are especially designed for manual & motorized balancing & shut off applications. They are suitable for use in the majority of commercial medium to high pressure and velocity HVAC systems. They comply to IECC (International Energy Conservation Code) with a leakage rating of 3cfm/ft² at 1"Wg pressure (55cmh/m² at 0.25Kpa) or less.

MINIMUM SIZES:

- SINGLE BLADE TYPE:
4"W(101mm) x 4"H(101mm).
- MULTI-BLADES :
4"W(101mm) x 10"H(254mm)

MAXIMUM SIZES:

- SINGLE BLADE TYPE:
48"W(1219mm) x 9"H(229mm)
- MULTI-BLADES SINGLE SECTION:
48"W(1219mm)x 48"H(1219mm)

MULTI-SECTIONS: UNLIMITED



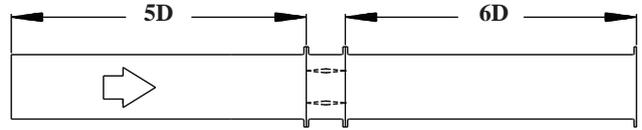
AIR CONTROL DAMPER

MODEL KVCD-3V12 & 22

PERFORMANCE DATA

AMCA Test Figures

Figure 5.3 Illustrates a fully ducted damper. This configuration has the lowest pressure drop of the test configurations because entrance and exit losses are minimized by straight duct runs upstream and downstream of the damper.



Damper in Fully open position

48"x12" (1219x305mm)

Velocity (Fpm)	Pressure Drop (In.Wg)
500	0.01
1000	0.04
1500	0.09
2000	0.16
3000	0.38

12"x48" (305x1219mm)

Velocity (Fpm)	Pressure Drop (In.Wg)
500	0.005
1000	0.02
1500	0.05
2000	0.08
3000	0.19

12"x12" (305x305mm)

Velocity (Fpm)	Pressure Drop (In.Wg)
1000	0.02
1500	0.04
2000	0.08
2500	0.15
3000	0.24

24"x24" (610x610mm)

Velocity (Fpm)	Pressure Drop (In.Wg)
800	0.01
1000	0.02
1500	0.05
2000	0.09
3000	0.19

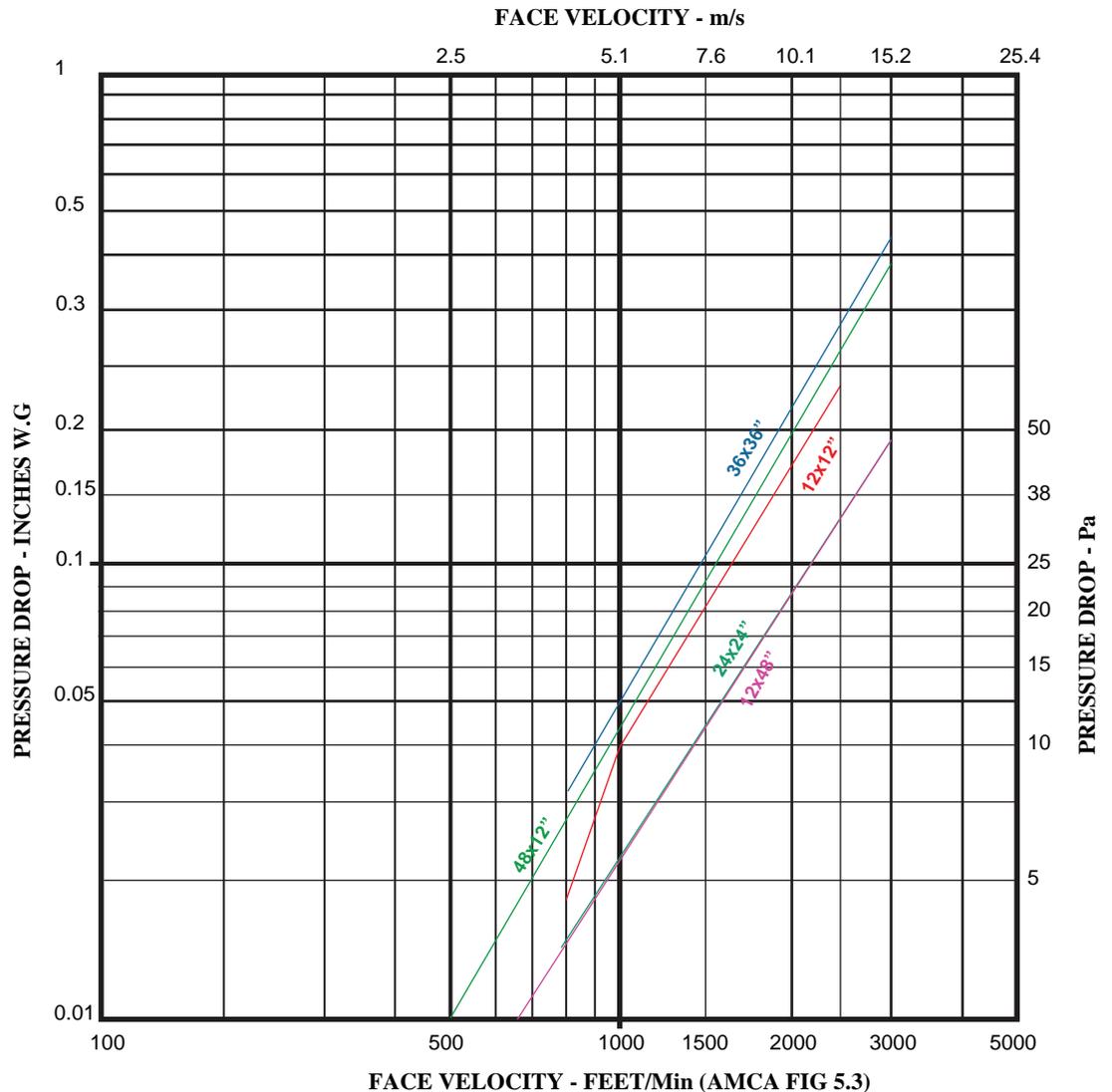
36"x36" (914x914mm)

Velocity (Fpm)	Pressure Drop (In.Wg)
800	0.03
1000	0.05
1500	0.11
2000	0.20
3000	0.46

Tested for Air Performance in accordance with ANSI/AMCA Standard 500-D, Figure 5.3. Air performance testing was conducted using opposed blade dampers; the same results can be applied to parallel blade dampers. All data has been corrected to represent standard air density .075 lb/ft



KBE International certifies that the model KVCD-3V12 & 22 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 Programs. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance ratings.





AIR CONTROL DAMPER

MODEL KVCD-3V12 or 22

LEAKAGE

AMCA Certified Leakage

Maximum Damper Width	Leakage Class at:	
	1 in.Wg (0.25Kpa)	4 in.Wg (1.0 Kpa)
48 in. (1219mm)	1	1

Leakage Class Definitions:

Leakage Class 1A - 3 cfm/ft² @ 1 in. wg (0.015 m³/s/ m² @ 0.25 kPa)

Leakage Class 1 - 4 cfm/ft² @ 1 in. wg (0.020 m³/s/ m² @ 0.25 kPa)

Leakage Class 1 - 8 cfm/ft² @ 4 in. wg (0.041 m³/s/ m² @ 1.0 kPa)

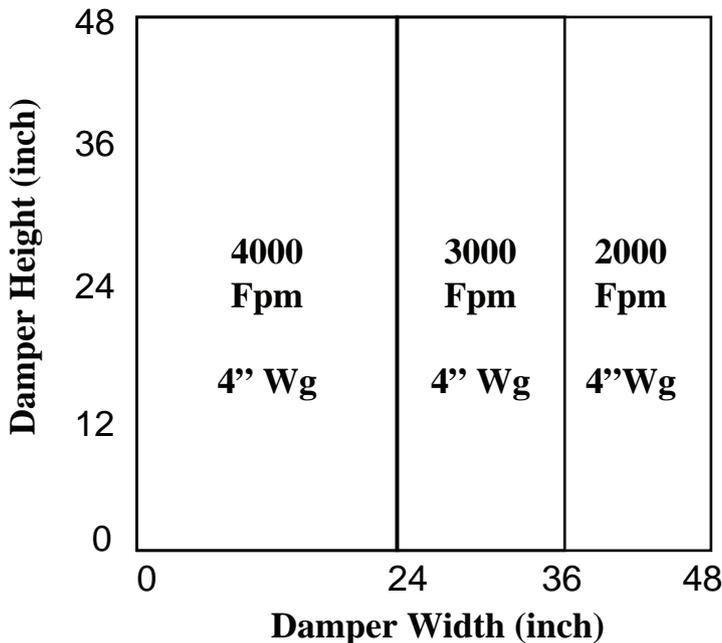


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Air leakage is based on operation between 32°F (0°C) and 120°F (49°C). Tested for leakage in accordance with ANSI/AMCA Standard 500-D, Figure 5.5.

Data Are based on a Torque of 19.5in.lb/ft² applied to close & seat the damper during the test for Width above 36inch & on a Torque of 13.3 in.lb/ft² applied to close & seat the damper during the test for Width 36inch and less

Velocity & Pressure Limitations

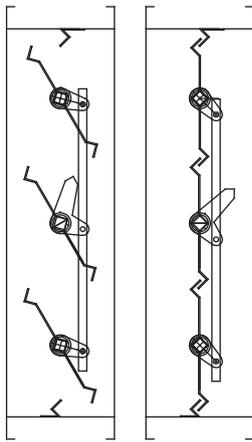
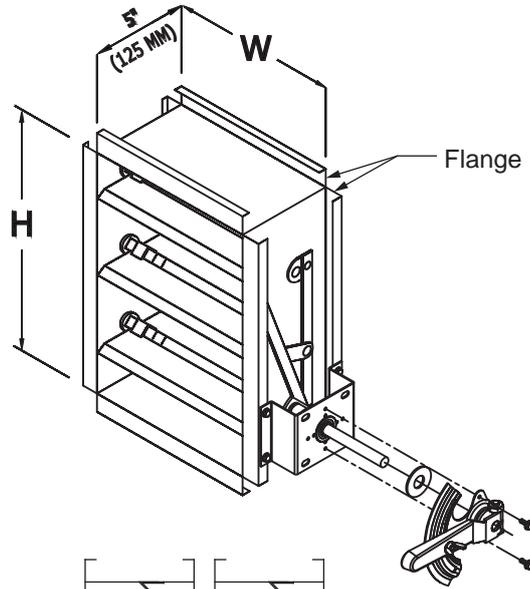




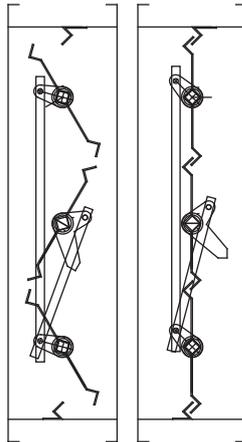
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DETAILS



Parallel Blades



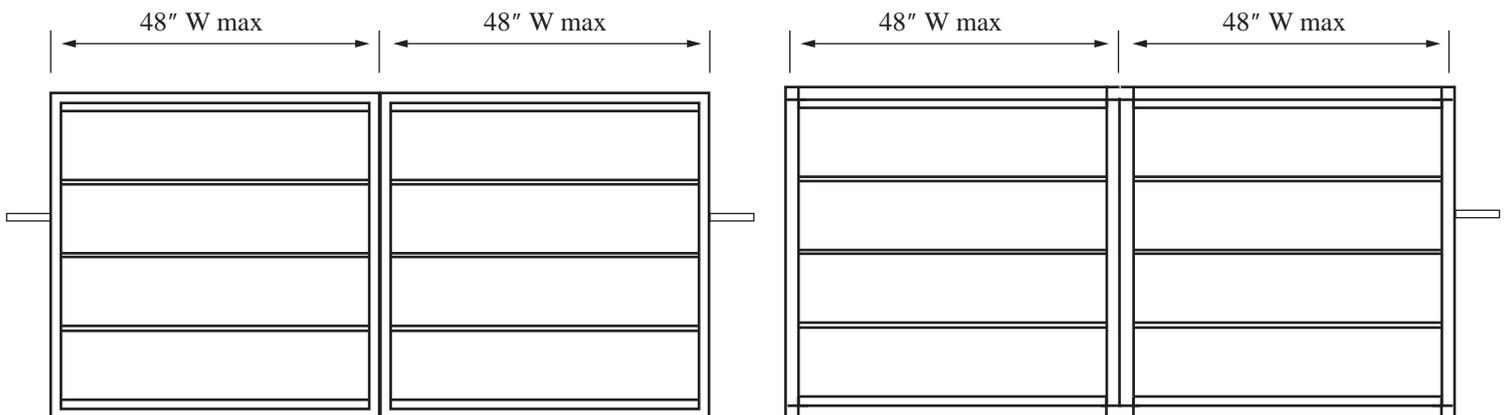
Opposed Blades



Motorized Damper

Multi-Section Assembly

Dampers larger than maximum single section size, will be made up of multiple equal sections. Sections to be assembled on site (as standard) by sheet metal screw or #10 bolts & nuts with hand-quadrant on each side of the damper. Damper can be factory assembled with single side hand-quadrant as optional with limited assembly of 2 sections --limitation is required to avoid damage during transportation.



Standard 2 sections assembly
with Hand-quadrant (or Motor) on each side

Optional 2 sections assembly
with Hand-quadrant (or Motor) on 1 side