



VOLUME CONTROL DAMPER - 3VCD SERIES 3V-SHAPED STEEL BLADES

STANDARD CONSTRUCTION

Frame: 1.2mm thick galvanized steel sheet.

Blades: 3 V-shaped 1.2mm thick roll-formed galvanized steel.

Axles: 1/2" square galvanized steel rod.

Linkage: made of galvanized steel.
Concealed in frame.

Bushing: Self lubricating plastic nylon bushes.

Quadrant: Plated steel with wing nut to lock the blades position. Marked to show the position of the blades.

Fixing to duct: Flanged frame.

Single section minimum size:

100X100mm for Flanged/Box/Slip & clip types.

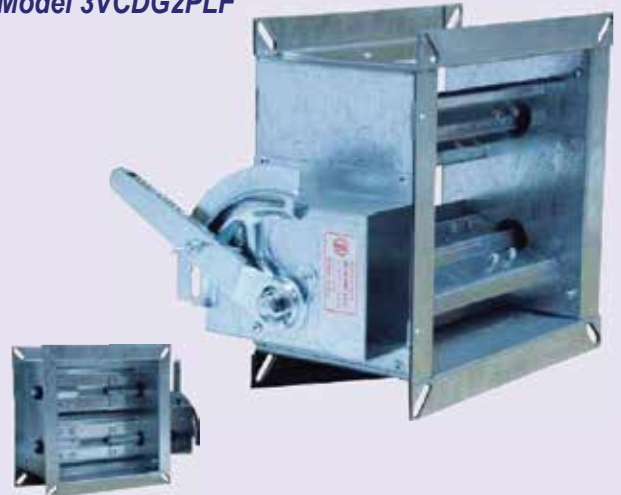
100X150mm for Hat-shaped type.

Single section maximum size:

1200X1200mm for Hat-shaped/Flanged types.

1000X1000mm for Slip & clip/Box types.

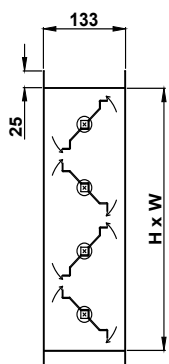
Model 3VCDG2PLF



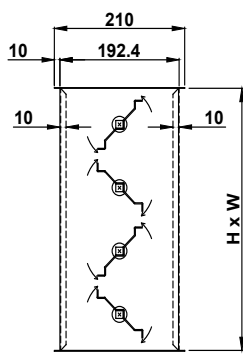
Model 3VCDG2PLH



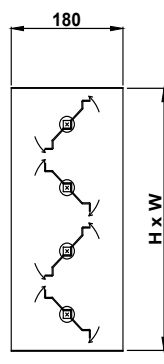
DIMENSIONS



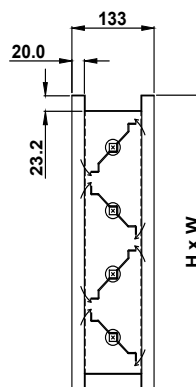
3VCD-Flange type



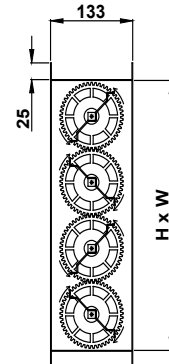
3VCD-Slip & Clip type



3VCD-Box type



3VCD-Hat type



3VCD with gear mechanism



Plastic Bushes

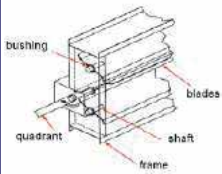




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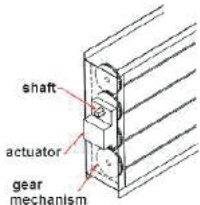
3V-SHAPED STEEL BLADES

OPTIONS



FEATURE	MODEL	MANUAL QUADRANT MODELS																			
		3VCDG2PLH	3VCDG2BLH	3VCDG2PLF	3VCDG2BLF	3VCDG2PLS	3VCDG2BLS	3VCDG2PLB	3VCDG2BLB	3VCDG2PGH	3VCDG2BGH	3VCDG2PGF	3VCDG2BGF	3VCDG2PGS	3VCDG2BGS	3VCDG2PGB	3VCDG2BGB	3VCDG2SLH	3VCDG2SLF	3VCDG2SLS	3VCDG2SLB
DRIVE	MANUAL QUADRANT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ELECTRIC ACTUATOR																				
BLADE TYPE	G.I. 3V-SHAPED	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ALUMINUM AEROFOIL																				
BLADE MOVEMENT	OPPOSED	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PARALLEL	ABOVE MODELS (EXCEPT THE ONES WITH GEAR MECHANISM) CAN BE WITH PARALLEL BLADES, PLS. WRITE "PARALLEL" ON YOUR ORDER																			
USE	CONTROL (AIR BALANCING)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	LOW LEAKAGE (AIR TIGHT SHUT OFF)																				
CONSTRUCTION	GALVANIZED STEEL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	STAINLESS STEEL 304																	✓	✓	✓	✓
BUSHING/ BEARING TYPE	PLASTIC NYLON BUSHES	✓		✓		✓		✓		✓		✓		✓		✓					
	BRASS BUSHES		✓		✓		✓		✓		✓		✓		✓		✓				
	S.S. BEARING																✓	✓	✓	✓	✓
MECHANISM	G.I. LINKAGE	✓	✓	✓	✓	✓	✓	✓	✓	✓								✓	✓	✓	✓
	PLASTIC GEARS										✓	✓	✓	✓	✓	✓	✓			✓	✓
FIXING TO DUCT	HAT-SHAPED	✓	✓							✓	✓							✓			✓
	FLANGE			✓	✓							✓	✓					✓			
	SLIP & CLIP					✓	✓							✓	✓					✓	
	BOX TYPE (INSERTED INSIDE DUCT)							✓	✓							✓	✓				✓

**Other options of S.S. bushes "X" and S.S. bearing "S" are shown at the ordering key.



FEATURE	MODEL	MOTORIZED MODELS																			
		M3VCDG2PLH	M3VCDG2BLH	M3VCDG2PLF	M3VCDG2BLF	M3VCDG2PLS	M3VCDG2BLS	M3VCDG2PLB	M3VCDG2BLB	M3VCDG2PGH	M3VCDG2BGH	M3VCDG2PGF	M3VCDG2BGF	M3VCDG2PGS	M3VCDG2BGS	M3VCDG2PGB	M3VCDG2BGB	M3VCDG2SLH	M3VCDG2SLF	M3VCDG2SLS	M3VCDG2SLB
DRIVE	MANUAL QUADRANT																				
	ELECTRIC ACTUATOR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BLADE TYPE	G.I. 3V-SHAPED	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ALUMINUM AEROFOIL																				
BLADE MOVEMENT	OPPOSED	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PARALLEL	ABOVE MODELS (EXCEPT THE ONES WITH GEAR MECHANISM) CAN BE WITH PARALLEL BLADES, PLS. WRITE "PARALLEL" ON YOUR ORDER																			
USE	CONTROL (AIR BALANCING)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	LOW LEAKAGE (AIR TIGHT SHUT OFF)																				
CONSTRUCTION	GALVANIZED STEEL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	STAINLESS STEEL 304																	✓	✓	✓	✓
BUSHING/ BEARING TYPE	PLASTIC NYLON BUSHES	✓		✓		✓		✓		✓		✓		✓		✓					
	BRASS BUSHES		✓		✓		✓		✓		✓		✓		✓		✓				
	S.S. BEARING																✓	✓	✓	✓	✓
MECHANISM	G.I. LINKAGE	✓	✓	✓	✓	✓	✓	✓	✓	✓								✓	✓	✓	✓
	PLASTIC GEARS										✓	✓	✓	✓	✓	✓	✓			✓	✓
FIXING TO DUCT	HAT-SHAPED	✓	✓							✓	✓							✓			✓
	FLANGE			✓	✓							✓	✓					✓			
	SLIP & CLIP					✓	✓							✓	✓					✓	
	BOX TYPE (INSERTED INSIDE DUCT)							✓	✓							✓	✓				✓

**Other options of S.S. bushes "X" and S.S. bearing "S" are shown at the ordering key.





VOLUME CONTROL DAMPER - 3VCD SERIES

3V-SHAPED STEEL BLADES

PERFORMANCE DATA

Beta Industrial LLC certifies that the 3VCD shown hereon 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 Leakage and Air Performance ratings only.

Test Information

- * 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
- * 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 21 in-lb/ft² applied to close and seat the damper during the test.



PRESSURE DROP DATA

Size 12" x 12"		Size 24" x 24"		Size 36" x 36"		Size 12" x 48"		Size 48" x 12"	
Air Velocity (fpm)	Pressure Drop (IWG)	Air Velocity (fpm)	Pressure Drop (IWG)	Air Velocity (fpm)	Pressure Drop (IWG)	Air Velocity (fpm)	Pressure Drop (IWG)	Air Velocity (fpm)	Pressure Drop (IWG)
297	0.002	347	0.003	318	0.002	346	0.003	346	0.003
730	0.009	749	0.01	747	0.009	756	0.01	754	0.01
976	0.02	999	0.02	995	0.015	1003	0.02	1001	0.02
1466	0.04	1514	0.05	1494	0.034	1520	0.04	1515	0.04
1958	0.08	2008	0.08	1991	0.061	2014	0.07	2007	0.08

AIR LEAKAGE DATA

Size 12" x 48"		Size 24" x 36"		Size 36" x 36"		Size 48" x 36"	
Leakage through face area cfm/ft ²	Pressure Drop (IWG)	Leakage through face area cfm/ft ²	Pressure Drop (IWG)	Leakage through face area cfm/ft ²	Pressure Drop (IWG)	Leakage through face area cfm/ft ²	Pressure Drop (IWG)
0.3	1.03	10.3	0.109	5.5	0.106	4.6	0.105
0.4	2.063	22.6	0.510	11.5	0.511	10.6	0.514
0.7	4.132	32.7	1.025	15.7	1.025	14.8	1.031
0.7	6.196	46.5	2.063	23.2	2.049	20.6	2.070
0.8	8.265	66.4	4.137	34.4	4.097	26.4	4.137

Maximum Allowable Leakage, cfm/ft²

Pressure Class	1.0" W.G	4" W.G	8" W.G
1A	3	N/A	N/A
1	4	8	11
2	10	20	28
3	40	80	112

	Width	Height
Minimum	4"	4" *
Maximum	48"	48"

* Minimum height for Hat-shaped type is 6"(150mm)

Bulletin No. 8, Oct 2024





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PERFORMANCE DATA

FLANGED TYPE



HAT-SHAPED TYPE



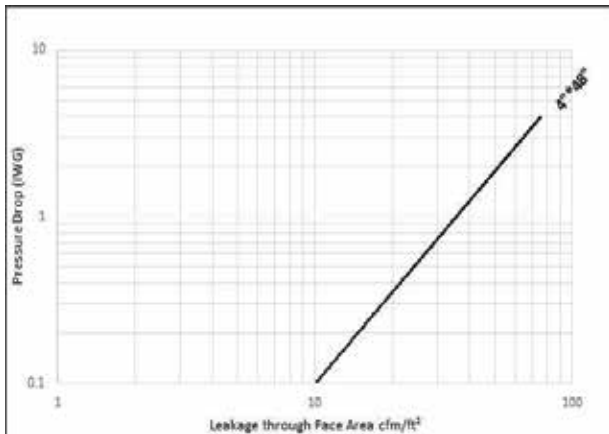
SLIP & CLIP TYPE



BOX TYPE



AIR LEAKAGE DATA



PRESSURE DROP DATA

Size 4" x 48"	
Air Velocity (fpm)	Pressure Drop (IWG)
516	0.034
992	0.130
1482	0.291
1985	0.524
2480	0.819

Tested at AMCA 500-D lab
Arlington Heights, USA



Ordering Key:

M	3	VCD	G2	P	L	F	SIZE
--- : QUADRANT DRIVEN M: MOTORIZED 3: 3V-SHAPED G.I. BLADES VCD: VOLUME CONTROL DAMPER G1: 0.9MM G.I.CONSTRUCTION G2: 1.2MM G.I.CONSTRUCTION G3: 1.5MM G.I.CONSTRUCTION G4: 1.7MM G.I.CONSTRUCTION S1: 1.0MM S.S. 304 CONSTRUCTION S2: 1.2MM S.S. 304 CONSTRUCTION S3: 1.5MM S.S. 304 CONSTRUCTION S4: 1.7MM S.S. 304 CONSTRUCTION P: PLASTIC NYLON BUSHES B: BRASS BUSHES X: S.S. BUSHES S: S.S. BEARINGS L: G.I. LINKAGE MECHANISM G: PLASTIC GEARS MECHANISM H: HAT-SHAPED FRAME F: FLANGED TO DUCT S: SLIP & CLIP WITH DUCT B: BOX TYPE (INSERTED INSIDE DUCT) SIZE: WIDTH X HEIGHT							

Single section minimum size:
100X100mm for Flanged/Box/Slip & clip types.
100X150mm for Hat-shaped types.

Single section maximum size:
1200X1200mm for Hat-shaped/Flanged types.
1000X1000mm for Slip & clip/Box types.

