



# ACTUATORS & DAMPERS

## RECTANGULAR DAMPERS

### VD-1300 SERIES



#### DESCRIPTION

The Johnson Controls VD-1300 Series parallel/opposed blade HVAC control dampers are custom made to size requirements. Damper frames are constructed of formed 13-gauge galvanized sheet metal mechanically joined with dual linkage concealed in the side channels to eliminate noise and friction. Compressible spring stainless steel side seals and acetal or bronze bearings are also available. Dampers are available in Class I, II, and III leakage performance grades.

#### FEATURES

- Three-day construction standard
- 24-hour fast track shipping available
- Tested to over 100,000 cycles
- Self-compensating, stainless steel side seals
- Blade rotation stops
- Square blade pins for non-slip pivoting



VD-1300



#### LEAKAGE RESISTANCE

Leakage Resistance	
VD-1310	17 cfm/sq ft maximum at 1 in. static pressure 45 cfm/sq ft maximum at 4 in. static pressure
VD-1320	3.4 cfm/sq ft maximum at 1 in. static pressure 6.0 cfm/sq ft maximum at 4 in. static pressure
VD-1330	2.2 cfm/sq ft maximum at 1 in. static pressure 3.7 cfm/sq ft maximum at 4 in. static pressure

TABLE 1. LEAKAGE RESISTANCE CLASSES<sup>1</sup>

Class	Static Pressure (inches water)			
	1	4	8	12
IA	3	--	--	--
I	4	8	11	14
II	10	20	28	35
III	40	80	112	140

1. Maximum allowable leakable in cfm/sq ft is m3/s x 196) for all sizes.

#### GENERAL SPECIFICATIONS

Type	Parallel or opposed blade	Side Seals	Self-adjusting stainless steel
Shaft	7"L x 0.5" Dia. (17.8 x 1.3 cm) with holding clip	Linkage	1/8" zinc-plated rolled steel
Bearings	Acetal (bronze optional)	Operating Temperature	-40° to 200°F (-40° to 93°C); high temperature option with bronze bearings, silicon seals up to 250°F (121°C)
Blade Design	Single 16-gauge galvanized steel (VD-1310); double 22-gauge galvanized (VD-1320); 1/16" extruded aluminum airfoil (VD-1330); blade pins 3/8" square zinc-plated steel; Santoprene blade seals (silicon optional for VD-1320)	Weight	7 lbs/sq. ft (shipping weight estimate)
		Approvals	
		Warranty	3 years

#### INDIVIDUAL SPECIFICATIONS

	VD-1310	VD-1320	VD-1330
Leakage (see Table 1 above)	Class III	Class I	Class IA
Blade construction	Single 16-gauge galvanized steel	Double 22-gauge galvanized steel	1/16" airfoil extruded aluminum
Operating torque @			
0.5" W.C. (100 fpm)	4.25 in-lb	4.5 in-lb	4.5 in-lb
1" W.C. (1000 fpm)	5.25 in-lb	5.5 in-lb	5.5 in-lb
Velocity/Pressure limits for specified performance			
Damper 24"W (60.96 cm)	4500 fpm @ 6" W.C.	6000 fpm @ 8" W.C.	8000 fpm @ 10" W.C.
Damper 48"W (121.9 cm)	1500 fpm @ 3" W.C.	2000 fpm @ 8" W.C.	4000 fpm @ 8" W.C.

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1

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## DIMENSIONS

### Dimensions notes

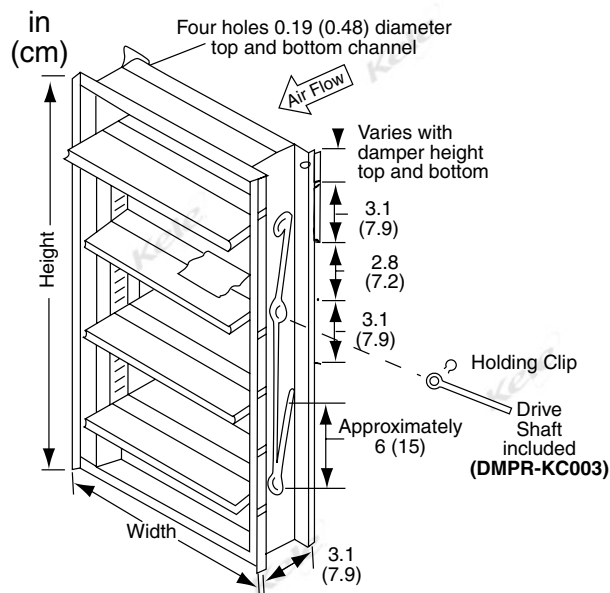
- 1) Unit furnished approximately 1/4" (0.6 cm) undercut for proper fit in duct. If no undercut wanted, order "E" Option code.
- 2) Dimensions shown are from the outside edges of the damper frame

**Table 2. Damper Section Sizes (1" increments)**

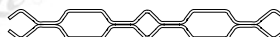
Single Section	Dimension
Width (VD-1310)	8" to 36" (20 to 91 cm)
Width (VD-1320, -1330)	8" to 48" (20 to 122 cm)
Height (VD-1310, -1320, -1330)	6" to 76" (15 to 193 cm)
Multi-section	Dimension
Width (VD-1310)	36" to 108" (91 to 274 cm)
Width (VD-1320, -1330)	48" to 192" (124 to 488 cm)
Height (VD-1310)	6" to 76" (15 to 193 cm)
Height (VD-1320, -1330)	6" to 228" (15 to 732 cm)

**Table 3. Option Codes**

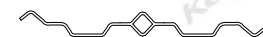
E	Exact, whole inch size, no undercut
F	1.5" flange on entering side
G	1.5" flange on leaving side
H	1.5" flange on both sides
J	Jackshaft, field-installed (must specify if needed, not automatically included with multi-section dampers)



**VD-1330 Class I Blade**



**VD-1320 Class II Blade**



**VD-1310 Class III Blade**

## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
V	Product family
	<b>BLADE OPERATION</b>
O	Opposed
P	Parallel
	<b>BLADE TYPE</b>
A	Class I VD-1330 airfoil design
P	Class II VD-1320 double piece design
V	Class III VD-1310 with seals single piece design (not recommended for outside air)
	<b>BEARING/SEAL TYPE</b>
E	Extended - bronze/santoprene
H	High - bronze/silicone
S	Standard - acetal/santoprene
	<b>ACTUATOR</b>
N	None (integral actuators available, special order, contact Kele)
	<b>WIDTH</b>
WWW	See Table 2 above for limitations (1" increments), use all 3 digits
	<b>HEIGHT</b>
HHH	See Table 2 above for limitations (1" increments), use all 3 digits
	<b>OPTIONS (LIMIT TWO)</b>
	See Table 3 above
V O V S N WWW HHH	Option Code Number

**Example:** VOVSN-024-025 Opposed blade Class III damper 24" x 25", with standard bearings/seal.

Note: The jackshaft components and dampers will be shipped as separate panels a maximum of 48"W and 76"H. The required jackshafts, coupling kits, and support bars must be field-assembled.