



3160
Duct-Mount



3161
Quick 'N' Stall Duct-Mount



3165
Flanged-to-Duct



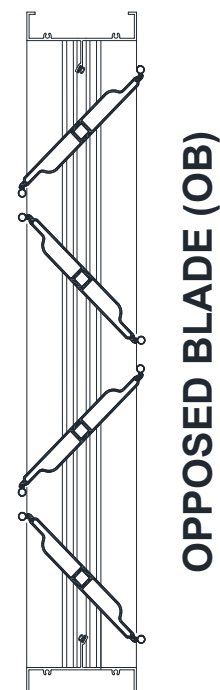
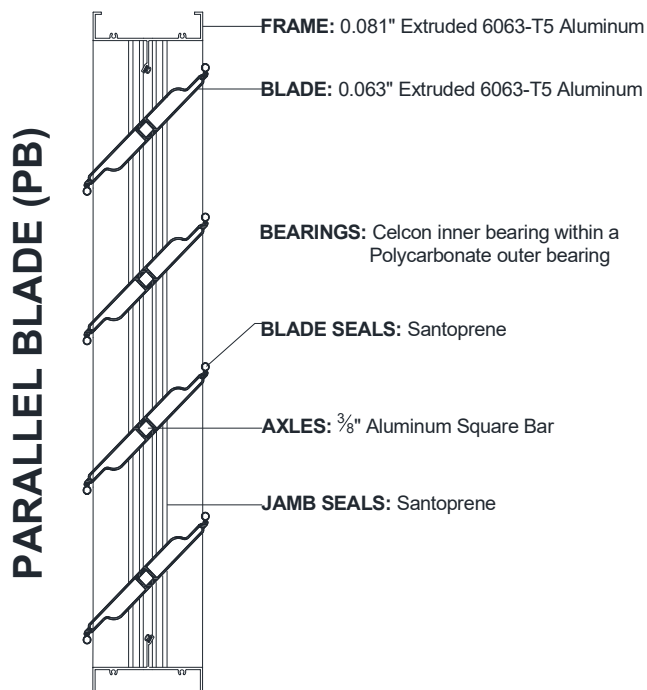
3167
Flange One side

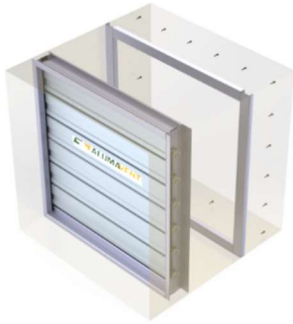
STANDARD CONSTRUCTION

Frame Depth: 4" (102 mm) – 3160/3165
5.25" (133 mm) – 3161
Overall Depth with Blades Open: 6.125" (156 mm)
Minimum Height: 8" (203 mm) - Single Blade
15" (381 mm) - Multiple Blade
Maximum Panel Width: 60" (1524 mm)
Maximum Panel Height: 60" (1524 mm)
Maximum Panel Size: 25 Sq.Ft.
Maximum System Pressure: See chart on page 4.
Standard Operation Torque: 8 in.-lbs./ft² (0.9 N•m/m²)
Operating Temperature Range: -40° to +212° F
Standard Finish: Mill extruded aluminum.
Standard Motor Installation: 6" Side Shaft Direct Drive
Linkage: Zinc Alloy 7 Crankarms with Polycarbonate bushings and Corrosion proof Zinc plated Steel clamped with cup-point trunnion screws
Concealed in Frame (3160/3161) **Outside of Frame (3165/3167)**

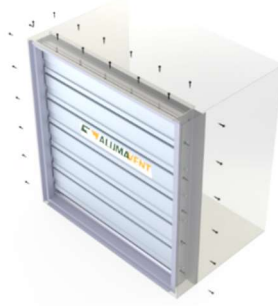
AVAILABLE ACCESSORIES

- Factory Supplied Actuators
- Actuators with end switches for signaling
- Jack Shaft
- Hand Quadrants
- Chain Operation for manual operation spring closed
- Silicone Blade and Jamb Seals – Specify 3100SI
- Saltwater Construction – Specify 3100SW
- Clear Anodized finish
- 4" Blade Construction

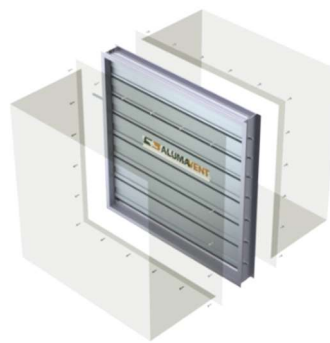




3160
Duct-Mount Requires
Mounting Angle
Inside duct



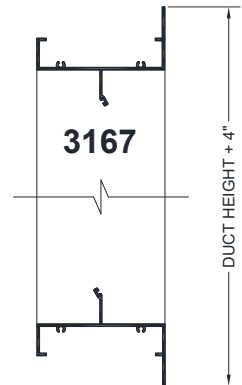
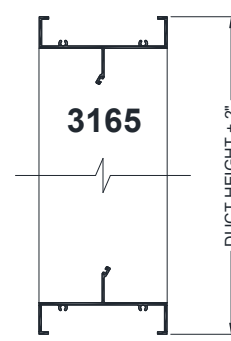
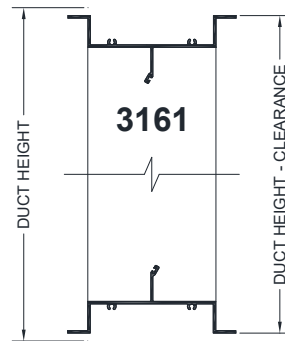
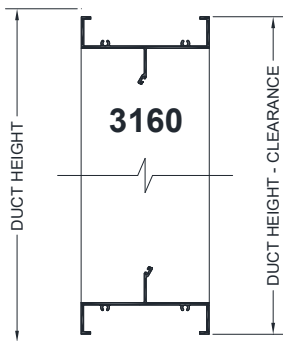
3161
Quick 'N' Stall
Duct-Mount



3165
Flanged-to-Duct



3167
Front Flange



***For Models 3160 and 3161:**
Clearance = 1/4" Overall for Single Panel Construction
Clearance = 1/2" Overall for Multiple Panel Construction

For Duct-Mount Frame specify: 3160 / 3161
For Flanged-to-Duct Frame specify: 3165
For Flanged-to-Wall specify: 3167

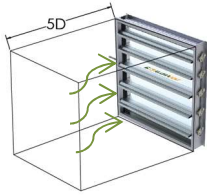
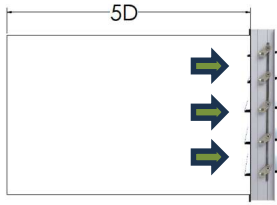
RECOMMENDED SPECIFICATION:

Furnish and install control damper model 3160 / 3161 / 3165 as manufactured by Alumavent Inc., Alliston Ontario. Blades shall be 0.063" (1.60 mm) thick extruded aluminum, hollow airfoil shape. Frames shall be 0.081" (2.06 mm) thick extruded aluminum. Axles shall be 0.375" (9.53 mm) aluminum square bar. Blade and Jamb seals shall be Santoprene (or optional Silicone). Linkage is concealed in frame for models 3160 / 3161 and outside of frame for model 3165 / 3167. Operating temperature range shall be -40° to +212°F. Leakage and pressure drop performance data submitted to be based on tests in accordance with AMCA Standard 500-D. Dampers must comply with the requirements of AMCA 511 Certified Ratings Program and be qualified to bear the AMCA Seal for Air Performance and Air Leakage. Damper widths from 12" (305 mm) to 60" (1524 mm) must meet leakage Class 1A criteria of maximum 3 cfm/ft² (15.2 L/s/m²) at 1" w.g. (.25 kPa).

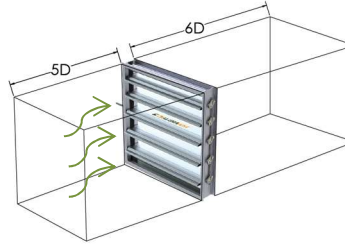
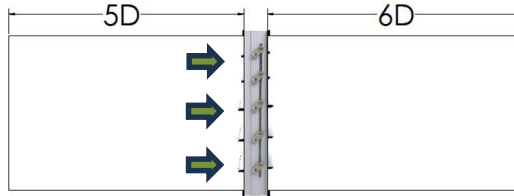
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PRESSURE DROP:

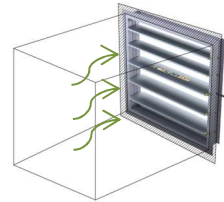
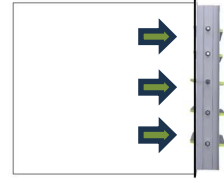
AMCA 5.2



AMCA 5.3



AMCA 5.5



3100 SERIES CONTROL DAMPER PRESSURE DROP	
Velocity [FPM]	Pressure Drop [in. w.g]
12x12 (inches)	
500	0.04
1000	0.14
2000	0.59
3000	1.34
4000	2.24
24x24 (inches)	
500	0.01
1000	0.07
2000	0.18
3000	0.40
4000	0.72
36x36 (inches)	
500	0.01
1000	0.04
2000	0.15
3000	0.35
4000	0.60
12x48 (inches)	
500	0.01
1000	0.04
2000	0.16
3000	0.36
4000	0.65
48x12 (inches)	
500	0.03
1000	0.10
2000	0.39
3000	0.88
4000	1.47

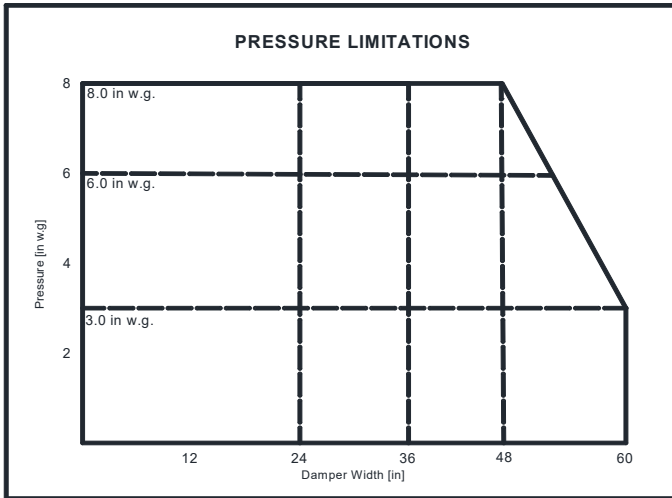
3100 SERIES CONTROL DAMPER PRESSURE DROP	
Velocity [FPM]	Pressure Drop [in. w.g]
12x12 (inches)	
500	0.01
1000	0.05
2000	0.21
3000	0.48
4000	0.81
24x24 (inches)	
500	0.00
1000	0.02
2000	0.04
3000	0.10
4000	0.18
36x36 (inches)	
500	0.00
1000	0.01
2000	0.06
3000	0.14
4000	0.24
12x48 (inches)	
500	0.01
1000	0.02
2000	0.07
3000	0.13
4000	0.24
48x12 (inches)	
500	0.01
1000	0.03
2000	0.12
3000	0.28
4000	0.48

3100 SERIES CONTROL DAMPER PRESSURE DROP	
Velocity [FPM]	Pressure Drop [in. w.g]
12x12 (inches)	
500	0.09
1000	0.27
2000	1.03
3000	2.28
4000	3.79
24x24 (inches)	
500	0.05
1000	0.18
2000	0.77
3000	1.75
4000	2.98
36x36 (inches)	
500	0.05
1000	0.18
2000	0.76
3000	1.72
4000	2.93
12x48 (inches)	
500	0.05
1000	0.18
2000	0.76
3000	1.70
4000	2.86
48x12 (inches)	
500	0.05
1000	0.19
2000	0.80
3000	1.88
4000	3.25

Pressure drop tested per AMCA 500-D per set-up figures as indicated above. Data corrected to standard air density of 0.075 lbs/ft³.

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PRESSURE LIMITATIONS:



Up to 8 in. wg (2 kPa) pressure differential.
For pressures greater than 8 in. wg, consult factory.

LEAKAGE DATA:

Leakage Class definitions:

The maximum permitted leakage for Class ratings is as follows:
Class 1A: 3 cfm/ft² @ 1" w.g. (Class 1A is only tested at 1" w.g. per AMCA).

MAXIMUM DAMPER WIDTH	LEAKAGE CLASS			
	@1" w.g. (0.25 kPa)	@3" w.g. (0.75 kPa)	@4" w.g. (1 kPa)	@8" w.g. (2 kPa)
60" (1524 mm)	1A	1	N/A	N/A
48" (1219 mm)	1A	1	1	1

Class 1: 4 cfm/ft² @ 1" w.g.

8 cfm/ft² @ 4" w.g.

11 cfm/ft² @ 8" w.g.

Air leakage is based on operations between 0°C-49°C (32°F-120°F).

Data corrected to standard air density of 0.075 lbs./ft³.

Leakage tested in accordance with AMCA Standard 500-D, Fig.5.4A.

Data are based on a torque of 8 in.-lbs./ft² (0.9 N•m/m²) to close and seat the damper during the test.



3100 Installation
Instructions



Jack Shaft Assembly
Instructions



Jumper Assembly
Instruction



Certification

CERTIFIED RATINGS

Alumavent Inc. certifies that the 3100 Series Non-Insulated Control Dampers shown here are 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 ratings and air leakage ratings.

