ALUMAVENT
CONTROL DAMPERS & FIRE DAMPERS

3900 SERIES
INSULATED CONTROL DAMPERS
3960 | 3961 | 3965| 3967

The Alumavent 3900 series thermally broken insulated blade aluminum control damper offers greater thermal efficiency than other control dampers. It features AMCA certified performance for Air Leakage, Air Performance and Thermal Efficiency.

3960
Duct-Mount

3961 Quick 'N' Stall
Duct-Mount

3965
Flanged-to-Duct

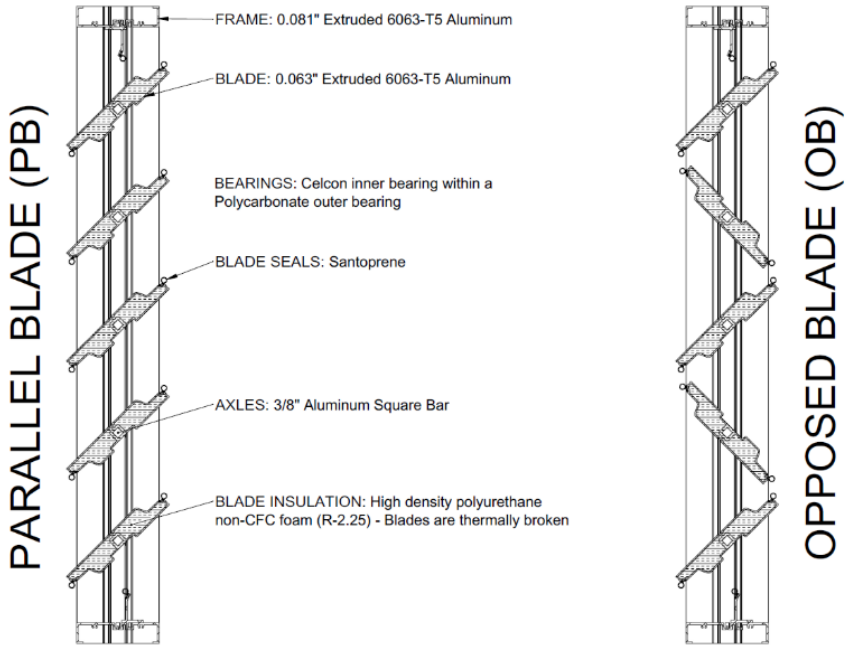
3967
Front Flanged

STANDARD CONSTRUCTION

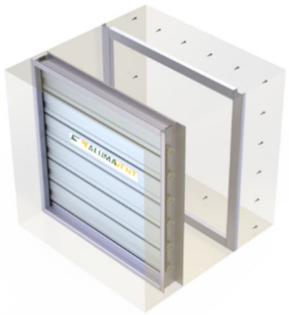
Depth: 4" *(102 mm)* – 3960/3965/3967
5.25" *(133 mm)* – 3961
Depth with Blades Open: 6.125" *(156 mm)*
Minimum Height: 6" *(152 mm)* - Single Blade
15" *(381 mm)* - Multiple Blade
Maximum Panel Width: 48" *(1219 mm)*
Maximum Panel Height: 60" *(1524 mm)*
Maximum Panel Size: 20 Sq.Ft.
Maximum System Pressure: Up to 8 in.wg. (1.99 kpa) see chart
Maximum Velocity: Up to 4000 fpm (20 m/s)
Operating Temperature Range: -40° to +180° F
Thermal Efficiency: 378%
Standard Finish: Mill
Standard Motor Installation: 6" Side Shaft Direct Drive
Linkage: Concealed in Frame (3960/3961)
Outside of Frame (3965/3967)

OPTIONS / ACCESSORIES

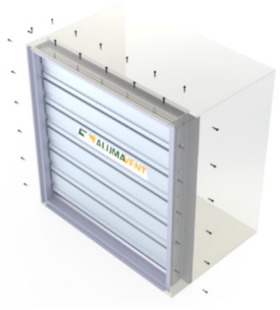
- **Factory Supplied Actuators**
- **End Switch for signaling peripheral devices.**
- **Jack Shaft**
- **Hand Quadrants**
- **Chain Operation for manual operation spring closed**
- **Silicone Blade and Jamb Seals – Specify 3900*SI***
- **Salt Water Construction – Specify 3900*SW***
- **Available finish: Clear Anodized**
- **Frame Insulation: Polystyrene Insulation**



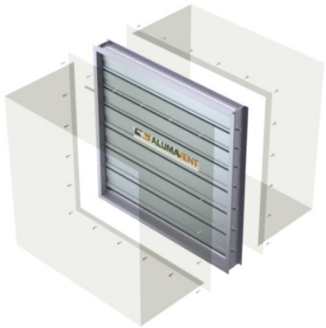
DWG. 3960-3961-3965-3967 NOV 2024



3960
Duct-Mount Requires Mounting Angle

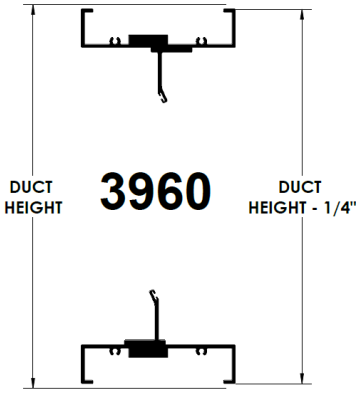


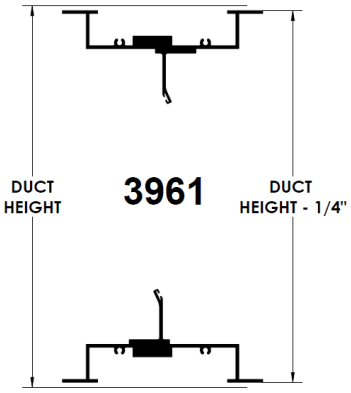
3961 Quick 'N' Stall Duct-Mount

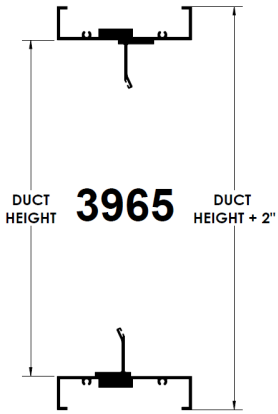


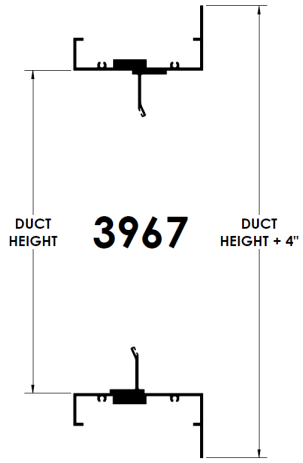
3965
Flanged-to-Duct

3967
Front Flanged









RECOMMENDED SPECIFICATION

Furnish and install control damper models 3960 / 3961 / 3965 / 3967 as manufactured by Alumavent Inc., Alliston Ontario. Damper must be licensed to bear the AMCA seal for Air Leakage, Air Performance and Thermal Efficiency. Blades shall be 0.063" *(1.60 mm)* thick, thermally broken with high density Polyurethane non-CFC injected foam insulation. Frame shall be a extruded aluminum with a minimum wall thickness of 0.081" *(2.06 mm)* thick. Axles shall be 0.375" *(9.53 mm)* thick, aluminum square bar. Blade and jamb seals shall be extuded santoprene. Linkage is concealed in frame for models 3960 / 3961 and outside of frame for model 3965. Air leakage shall not exceed 3 CFM/ft^2 *(15.2 L/s/m^2)* against 1" w.g *(0.25 kPa)* static pressure at standard air (as per AMCA testing). Operating temperature range shall be -40° to +180° F.

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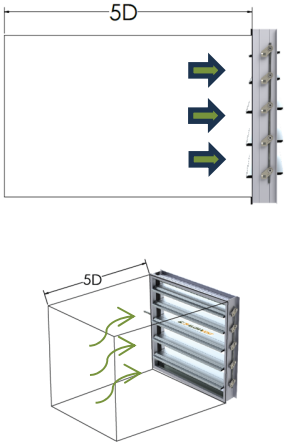
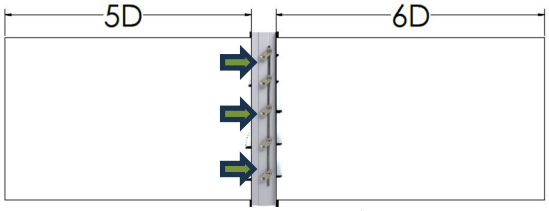
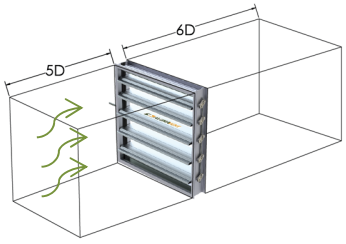
AMCA 5.2



3900 SERIES CONTROL DAMPER PRESSURE DROP	
Velocity [FPM]	Pressure Drop [in. w.g]
12x12 (inches)	
809	0.122
1003	0.182
1478	0.403
2462	1.105
3961	2.887
24x24 (inches)	
491	0.018
588	0.026
783	0.046
986	0.072
4005	1.192
36x36 (inches)	
705	0.035
1503	0.151
1990	0.261
2986	0.586
4239	1.197
12x48 (inches)	
518	0.087
993	0.341
1485	0.827
2486	2.308
3531	4.471
48x12 (inches)	
520	0.037
973	0.133
1469	0.306
2479	0.865
4026	2.1

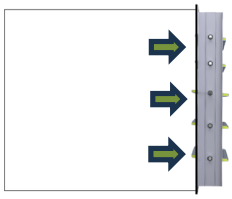
AMCA 5.3

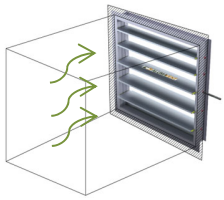




3900 SERIES CONTROL DAMPER PRESSURE DROP	
Velocity [FPM]	Pressure Drop [in. w.g]
12x12 (inches)	
802	0.049
1003	0.076
1473	0.171
2457	0.481
3955	1.264
24x24 (inches)	
494	0.006
579	0.009
787	0.017
980	0.026
4001	0.434
36x36 (inches)	
718	0.009
1504	0.063
1984	0.117
2991	0.255
4242	0.547
12x48 (inches)	
505	0.06
993	0.232
2001	0.971
2995	2.242
3586	4.06
48x12 (inches)	
516	0.016
988	0.057
1494	0.125
2488	0.351
4006	0.884

AMCA 5.5





3900 SERIES CONTROL DAMPER PRESSURE DROP	
Velocity [FPM]	Pressure Drop [in. w.g]
12x12 (inches)	
818	0.173
1017	0.264
1492	0.572
2481	1.570
3970	4.100
24x24 (inches)	
490	0.049
1786	0.672
2782	1.645
3474	2.556
3967	3.328
36x36 (inches)	
486	0.045
1495	0.458
2387	1.187
3183	2.110
3873	3.184
12x48 (inches)	
493	0.061
1482	0.584
2383	1.524
3175	2.771
3854	4.178
48x12 (inches)	
501	0.054
1487	0.498
2386	1.318
3180	2.333
3963	3.702

DEFINITION OF LEAKAGE CLASSIFICATION				
CLASS	LEAKAGE ft³/min/ft² *(L/s/m²)*			
	1" *(0.25 kPa)*	4" *(1.0 kPa)*	8" *(2.0 kPa)*	12" *(3.0 kPa)*
1A	3 *(15.2)*	N/A	N/A	N/A
1	4 *(20.3)*	8 *(40.6)*	11 *(55.9)*	14 *(71.1)*
2	10 *(50.8)*	20 *(102)*	28 *(142)*	35 *(178)*
3	40 *(203)*	80 *(406)*	112 *(569)*	140 *(711)*

3900 SERIES CONTROL DAMPER LEAKAGE RATING			
DAMPER SIZE Width x Height	PRESSURE in w.g (kPa)		
	1" *(0.25 kPa)*	4" *(1.0 kPa)*	8" *(2.0 kPa)*
12"x 12" *(305x305 mm)*	1A	1	1
24"x 24" *(610x610 mm)*	1A	1	1
36"x 36" *(914x914 mm)*	1A	1	1
12"x 48" *(305x1219 mm)*	1A	1	1
48"x 12" *(1219x305 mm)*	1A	1	1
36"x 48" *(914x1219 mm)*	1A	1	1

Leakage test was conducted in accordance with AMCA Standard 500-D, Fig.5.4A.
Data are based on a torque of 10.625 in.-lbs./sq.ft (1.3 N•m) to close and seat the damper during the test. Air leakage is based on operation between 0°C-49°C *(32°F-120°F)*. Data corrected to standard air density of 0.075 lbs./ft.³.

AMCA Certified Energy Efficiency Performance

Alumavent Inc. 3900 insulated control Damper has a Thermal Efficiency Ratio of 378%

A damper's Thermal Efficiency Ratio (E) is a comparison of the thermal performance of the tested damper with that of a standard reference damper, which is a 3V blade damper with blade and jamb seals. A damper with the same thermal efficiency as the reference damper would have an E of 0%. A damper that is twice as efficient as the reference damper would have an E of 100%.

Test Information
Testing was conducted on a 36 in. x 36 in. (914mm x 914mm) sample in AMCA 500-D11 Damper Efficiency Test Report figure 5.10 per AMCA standard 500-D's
Thermal Efficiency test.

Torque
Data are based on a torque of 72 in.lb./ft² (8.1 N·m) applied to close and seat the damper during the test.

3900 Installation Instructions

Jack Shaft Assembly Instructions

Jumper Assembly Instruction

Certification

CERTIFIED RATINGS

Alumavent Inc. certifies that the 3900 Series 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, Air Leakage and Thermal Efficiency ratings.