



**3960**  
**Duct-Mount**



**3961 Quick 'N' Stall**  
**Duct-Mount**



**3965**  
**Flanged-to-Duct**



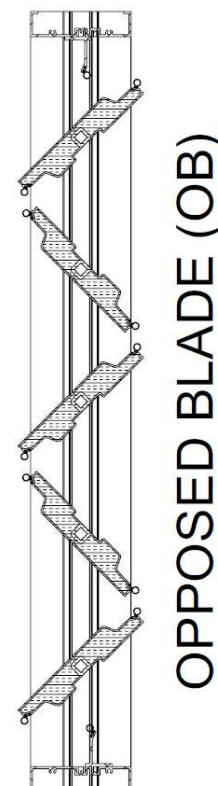
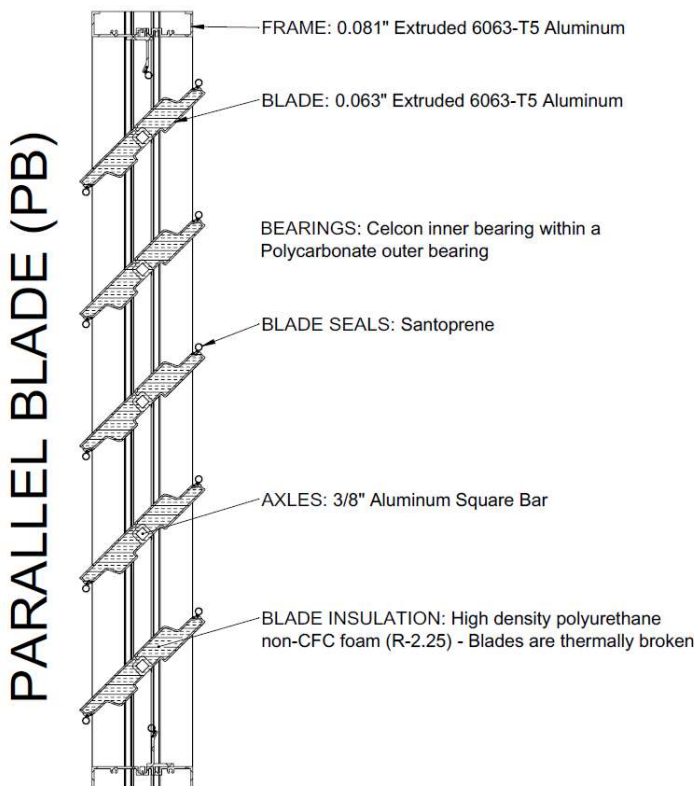
**3967**  
**Front Flanged**

#### STANDARD CONSTRUCTION

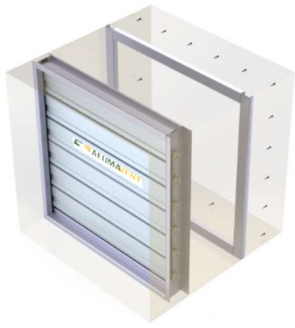
**Depth:** 4" (102 mm) – 3960/3965/3967  
5.25" (133 mm) – 3961  
**Depth with Blades Open:** 6.125" (156 mm)  
**Minimum Height:** 6" (152 mm) - Single Blade  
15" (381 mm) - Multiple Blade  
**Maximum Panel Width:** 48" (1219 mm)  
**Maximum Panel Height:** 60" (1524 mm)  
**Maximum Panel Size:** 20 Sq.Ft.  
**Maximum System Pressure:** See chart on page 2. Operating  
**Operating Temperature Range:** -40° to +212° F  
**Standard Finish:** Mill  
**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 (3960/3961)      Outside of Frame (3965/3967)**

#### OPTIONS / ACCESSORIES

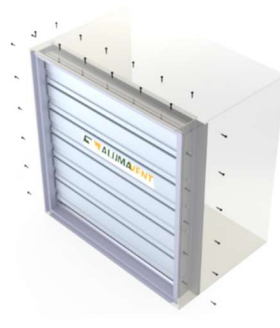
- Factory Supplied Actuators
- End Switch for signaling peripheral devices.
- Jack Shaft
- Hand Quadrants
- Chain Operation for manual operation spring closed
- Silicone Blade and Jamb Seals – Specify 3900SI
- Salt Water Construction – Specify 3900SW
- Available finish: Clear Anodized
- Frame Insulation: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



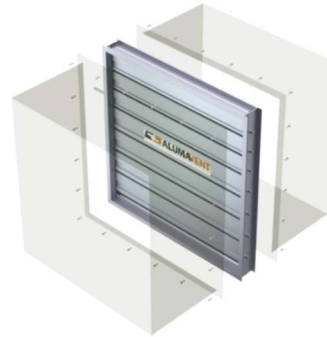
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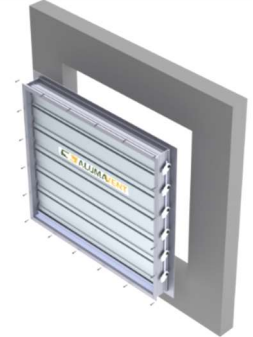
**3960**  
*Duct-Mount Requires Mounting Angle*



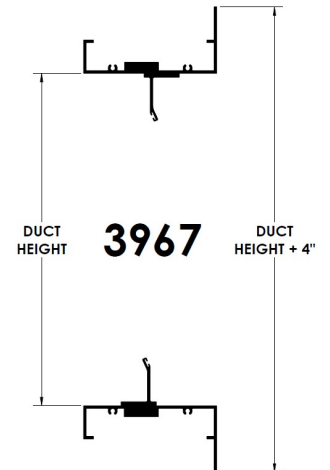
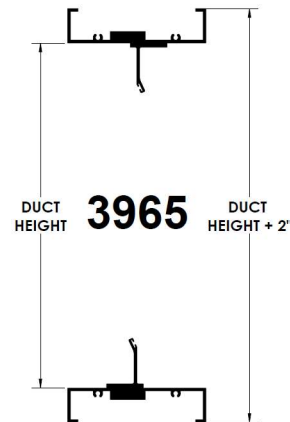
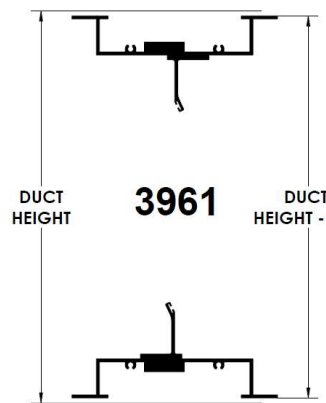
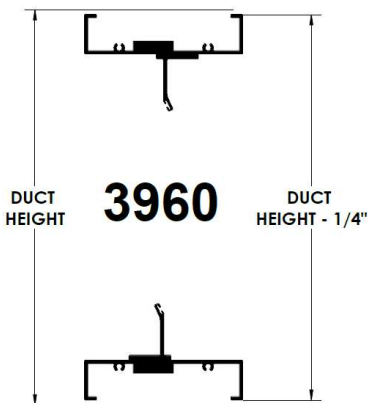
**3961 Quick 'N' Stall**  
*Duct-Mount*



**3965**  
*Flanged-to-Duct*



**3967**  
*Front Flanged*

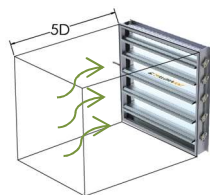
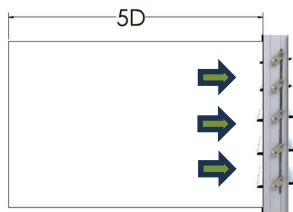


## RECOMMENDED SPECIFICATION

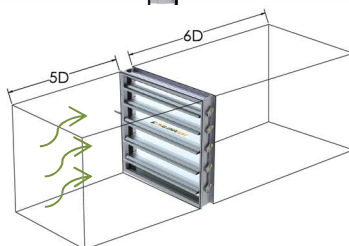
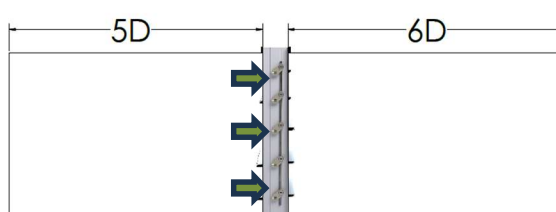
Furnish and install control damper models 3960 / 3961 / 3965 / 3967 as manufactured by Alumavent, Alliston Ontario. Dampers must be licensed to bear the AMCA seal. Blades shall be 0.063" (1.60 mm) thick, thermally broken with high density Polyurethane non-CFC injected foam insulation. Frame shall be 0.081" (2.06 mm) thick. Axles shall be 0.375" (9.53 mm) thick, aluminum square bar. Blade and jamb seals shall be Santoprene. Linkage is concealed in frame for models 3960 / 3961 and outside of frame for model 3965. Air leakage through a 36" x 36" (914 mm x 914 mm) damper shall not exceed 3 CFM/ft<sup>2</sup> (15.2 L/s/m<sup>2</sup>) 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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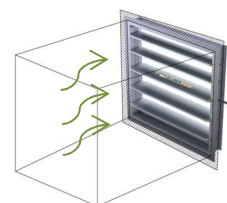
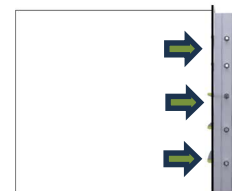
### AMCA 5.2



### AMCA 5.3



### AMCA 5.5



#### 3900 SERIES CONTROL DAMPER PRESSURE DROP

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

#### 3900 SERIES CONTROL DAMPER PRESSURE DROP

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

#### 3900 SERIES CONTROL DAMPER PRESSURE DROP

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

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**DEFINITION OF LEAKAGE CLASSIFICATION**

CLASS	LEAKAGE ft <sup>3</sup> /min/ft <sup>2</sup> (L/s/m <sup>2</sup> )			
	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.<sup>3</sup>.

**AMCA Certified Energy Efficiency Performance**

Alumavent Inc. 3900 insulated control Damper has a Thermal Efficiency Ratio of 448.48%

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./ft<sup>2</sup> (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 ratings and air leakage ratings and efficiency ratings.

