

(ENGINEERS)
SUBMITTAL DATA
CONTROL DAMPERS
Standard Blade

OPPOSED BLADE - PARALLEL BLADE DAMPER

Suggested Specifications:

Furnish and install at location shown on drawing or in accordance with schedules dampers meeting the following specifications: Rectangular damper shall have 0.125" [3.18mm] extruded aluminum blades and .081" [2.06] extruded aluminum frame. CD-100, 101 meets the leakage requirements for Minimum AntiTerrorism Standards for Buildings (UFC 4-010-01, section B-4.2.3, max. leakage rates of 3 cfm/sq. ft. with differential pressure of 1" [25mm] w.g.). Blade and jamb seals must be used to achieve optimal leakage rating. Damper to have thrust bushings and meet the low pressure drop equal to S&P Air Control MODEL CD-100 or CD-101.

FPM Table Pressure - up to 3" [76mm] w.g. - See pressure limit table

12" wide	- 2600 FPM
24"	- 2200
36"	- 2000
48"	- 1700
52"	- 1600

Jackshafting provided over 52" [1321mm] wide

Standard Construction:

Frame: 0.081 [2.06mm] Extruded Aluminum

Blade: 0.125 [3.18mm] Extruded Aluminum

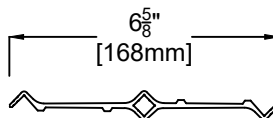
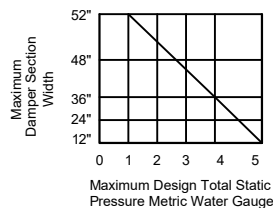
Bearing: Nylon

Linkage: Concealed in frame

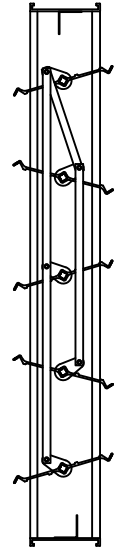
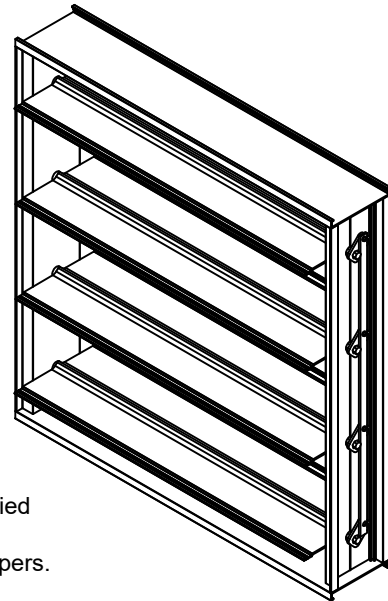
Axles: 3/8" [9.35mm] square, zinc plated steel

Control Shaft: 1/2" x 6" [13mm x 152mm] long outboard support bearing supplied with all single section dampers for field mounted actuators.
Factory-installed jackshaft supplied with all multi-section dampers.

Pressure Limitations



Blade Detail



Undersized 1/4"
[6.35mm]

Minimum Size: 5"w x 4"h [127mm x 102mm]
8" [203mm] and under single blade

Maximum Size: 52"w x 72"h [1320mm x 1829mm]
(single section) Multi-section: unlimited

Options:

- ☐ 0.125 [3.18mm] Extruded Aluminum Frame (box frame)
- ☐ 0.125 [3.18mm] Extruded Aluminum Frame w/ 1-1/2" [38mm] integral flange
- ☐ Bronze Bushing
- ☐ Blade Seals PVC (175°F [79°C])
- ☐ Blade Seals Silicone (400°F [204°C] & #304 Stainless Steel Bushing)
- ☐ Compression Jamb Seals (stainless steel)
- ☐ Header Plates (End Flange)
- ☐ Hand Quadrant
- ☐ Factory Installed Pneumatic or Electric Actuators (see cat. sheet H-1)
- ☐ Stand Off Bracket, 2" [51mm]
- ☐ Position Switch
- ☐ CO2 sensor (24V)
 - ☐ 0-5, 0-10 vdc output (without display)
 - ☐ 0-5, 0-10 vdc output (with display)
 - ☐ 4-20 mA output (without display)
- ☐ Face and By-pass Damper
- ☐ Chain Operator
- ☐ Heresite coated (air dry)
- ☐ Epoxy coated (powder coated @ 415°[213° C])
- ☐ Weather Shield Enclosure for Actuator
- ☐ Explosion-proof Enclosure for Actuator



size tested: 36"w x 36"h
[914mm x 914mm] 12"w x
12"h [305mm x 305mm]



size tested: 36"w x 36"h
[914mm x 914mm] 12"w x
12"h [305mm x 305mm]



Due to continuing research, S&P Air Control reserves the right to change specifications without notice.

Job Name:	 S&P Air Control	☐ MODEL CD-100 (Opposed)	
Location:		☐ MODEL CD-101 (Parallel)	
Architect:		DRAWN BY:	DATE:
Engineer:		CLJ	11-20-01
Contractor:	REV. NO.	APPROVED BY:	REV. DATE:
	49		5/26/26
			DWG. NO.:
			A-1

Model CD-100, CD-101 Damper Performance Data

LEAKAGE PERFORMANCE

Damper Width X Height	1 in. w.g. Class	4 in. w.g. Class	8 in. w.g. Class
12" x 12"	3.6 (Class 1A)	7.6 (Class 1A)	10.3 (Class 1A)
36" x 36"	0.5 (Class 1A)	5.6 (Class 1A)	20.8 (Class 1A)

Note: At 1" w.g. 12"x12" damper leaks 3.6 cfm per square foot.
Note: At 1" w.g. 36"x36" damper leaks 0.5 cfm per square foot.



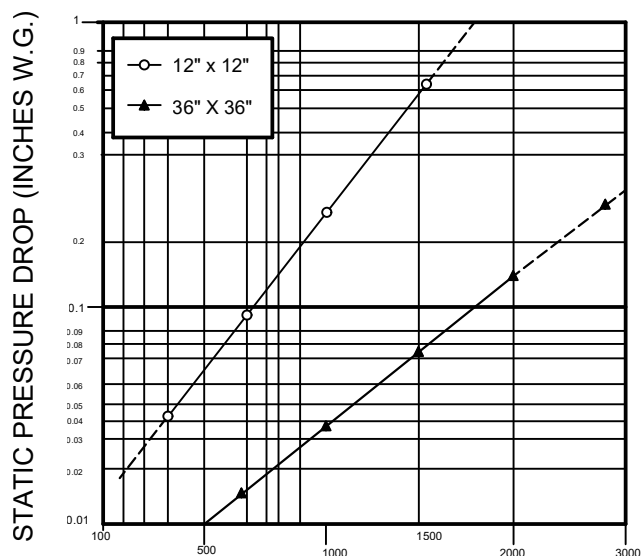
S&P Air Control certifies that the CD-100-I, CD-101-I is licensed to bear the Certainaire Certified Air Ratings Seal. The ratings shown are based on tests made in accordance with AMCA standard 500.

AMCA STANDARDS

		Leakage, ft ³ /min /ft ²			
Class	Pressure	Required Rating		Extended Ranges (optional)	
		0.25 kPa (1")	1.0 kPa (4")	2.0 kPa (8")	3.0 kPa (12")
1A		15.2 (3)	40.6 (8)	55.9 (11)	71.1 (14)
1		20.3 (3)	40.6 (8)	55.9 (11)	71.1 (14)
2		50.8 (10)	102 (20)	142 (28)	178 (35)
3		203 (40)	406 (80)	569 (112)	711 (140)

Leakage Classification per AMCA publication 511-99

PRESSURE DROP



Face Velocity (FT/MIN)

Based on STANDARD AIR- .075 lb. per cubic foot.

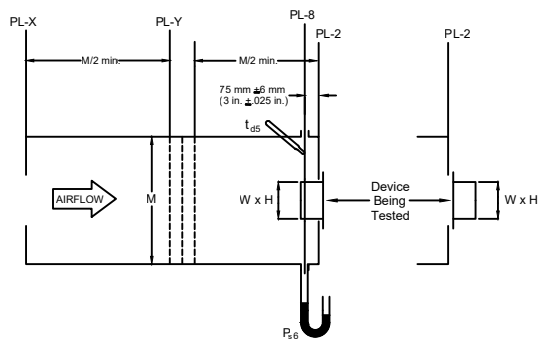


Figure 5.5- Test Device Setup with Inlet Chamber

12" x 12" (305mm x 305mm)

Face Velocity ft/min (m/s)	Pressure drop w.g. (PA)
407 (2.0)	.040 (1.24)
820 (4.1)	.150 (4.97)
1234 (6.3)	.340 (12.42)
1641 (8.3)	.610 (22.35)
2057 (10.4)	.950 (34.77)

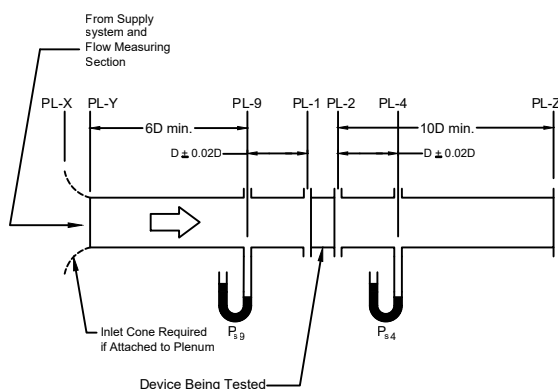


Figure 5.3- Test Device Setup with Inlet and Outlet Ducts

36" x 36" (914mm x 914mm)

Face Velocity ft/min (m/s)	Pressure drop w.g. (PA)
392 (1.99)	.005 (1.24)
789 (4.01)	.02 (4.97)
1208 (6.14)	.05 (12.42)
1598 (8.12)	.09 (22.35)
2006 (10.19)	.14 (34.77)