

### OPOSED BLADE - PARALLEL BLADE DAMPER

**Suggested Specifications:**

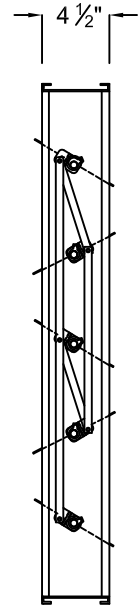
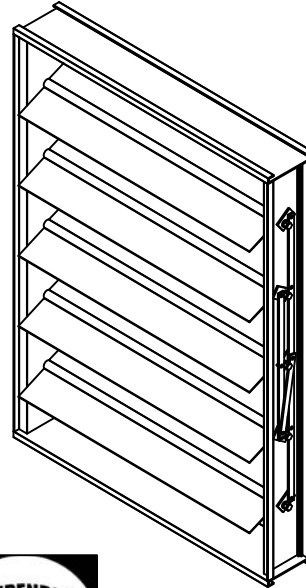
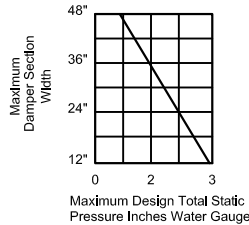
Furnish and install at location shown on drawing or in accordance with schedules dampers meeting the following specifications: Rectangular damper shall have .125 airfoil extruded aluminum blades and .081 extruded aluminum frame. Damper to have thrust bushings and meet the low pressure drop equal to ADP. MODEL CDOB or CDPB.

Pressure - up to 3" w.g. - See pressure limit table

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

Jackshafting provided over 52" wide

Pressure Limitations



Undersized 1/4"

**Standard Construction:**

- Frame:** .081 Extruded Aluminum
- Blade:** .125 Extruded Aluminum
- Bearing:** Bronze Oilite
- Linkage:** \*Concealed in frame
- Axles:** 1/2"Ø Cast Zinc with thrust bushings
- Control Shaft:** 1/2" x 6" long outboard support bearing supplied with all single section dampers for field mounted actuators. Factory-installed jackshaft supplied with all multi-section dampers.

**Options:**

- .125 Extruded Aluminum Frame (box frame)
- 1-1/2" .125 Extruded Aluminum Flanged Frame
- Blade Seals PVC (175°F)
- Blade Seals Silicone (400°F & #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"
- Position Switch
- Face and By-pass Damper
- Chain Operator
- Heresite coated (air dry)
- Epoxy coated (powder coated @ 415°)
- Weather Shield Enclosure for Actuator
- Explosion-proof Enclosure for Actuator



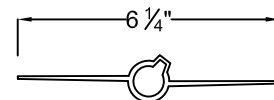
size tested: 36"w x 36"h  
12"w x 12"h

Minimum Size: 5"w x 4"h  
8" and under single blade  
Maximum Size: 52"w x 72"h (single section)  
Multi-section: unlimited

\*Over 36" wide or 48" high, blade linkage will be modified.



size tested: 36"w x 36"h  
12"w x 12"h



Blade Detail

Job Name:	<input type="checkbox"/> <b>MODEL CDOB (Opposed)</b>		
Location:	<input type="checkbox"/> <b>MODEL CDPB (Parallel)</b>		
Architect:	DRAWN BY: CLJ	DATE: 11-20-01	REV. DATE: 07-24-09
Engineer:	REV. NO. 36	APPROVED BY: BGT	DWG. NO.: <b>A-1</b>
Contractor:			

# Model CDOB, CDPB Damper Performance Data

## LEAKAGE PERFORMANCE

Leakage -  $L/s/m^2$  ( $FT^3/min/ft^2$ )

Damper Width X Height	1 in. w.g. Class	4 in. w.g. Class	8 in. wg 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.



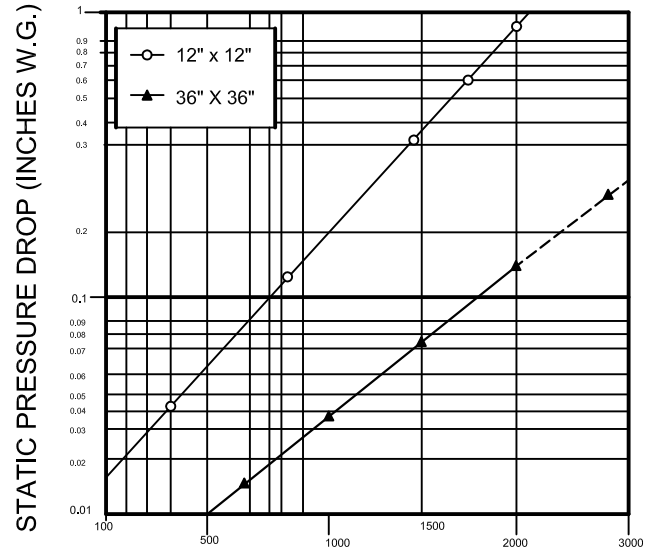
The CDOB, CDPB is licensed to bear the Certaire Certified Air Ratings Seal. The ratings shown are based on tests made in accordance with AMCA standard 500.

## AMCA STANDARDS

Pressure Class	Leakage, $ft^3/min/ft^2$			
	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.

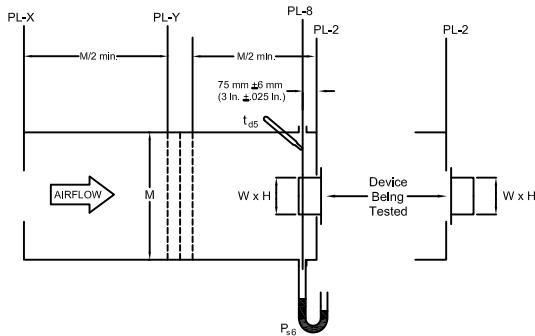


Figure 5.5- Test Device Setup with Inlet Chamber

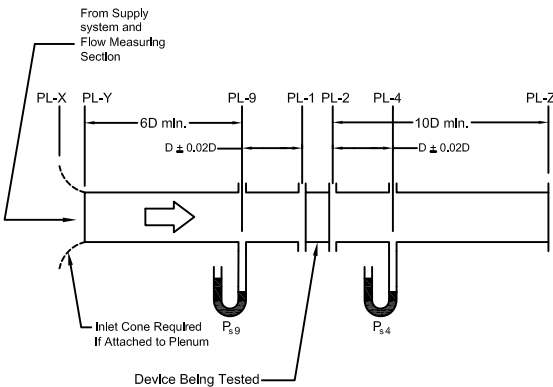


Figure 5.3- Test Device Setup with Inlet and Outlet Ducts

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

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

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

Face Velocity ft/min (m/s)	Pressure drop w.g. (PA)	CFM
392 (1.99)	.005 (1.24)	3528
789 (4.01)	.02 (4.97)	7100
1208 (6.14)	.05 (12.42)	10,877
1598 (8.12)	.09 (22.35)	14,382
2006 (10.19)	.14 (34.77)	18,061