

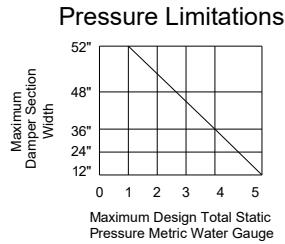
**OPPOSED BLADE - PARALLEL BLADE DAMPER**

**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 United Enertech MODEL CD-100 or CD-101.

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

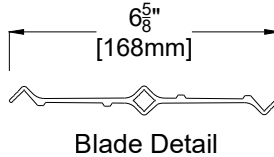
12" wide	- 2600 FPM
24"	- 2200
36"	- 2000
48"	- 1700
52"	- 1600



Jackshafting provided over 52" [1321mm] wide

**Standard Construction:**

- Frame:** 0.081 [2.06mm] Extruded Aluminum
- Blade:** 0.125 [3.18mm] Extruded Aluminum
- Bearing:** Nylon

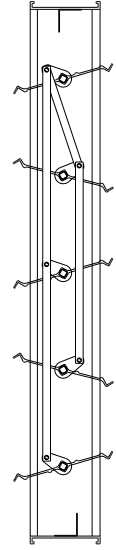
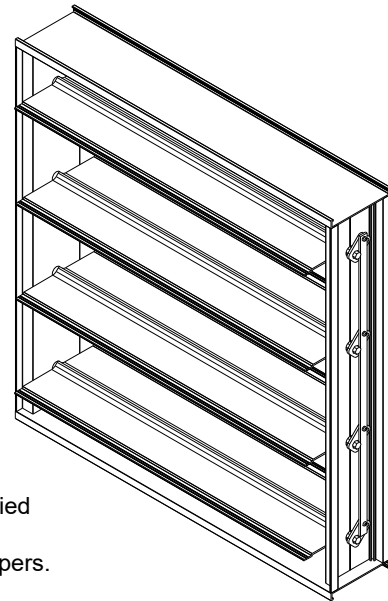


**Linkage:** Concealed in frame

**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.



Undersized 1/4" [6.35mm]

**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

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



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, United Enertech reserves the right to change specifications without notice.

Job Name:	<input type="checkbox"/> <b>MODEL CD-100 (Opposed)</b>		
Location:	<input type="checkbox"/> <b>MODEL CD-101 (Parallel)</b>		
Architect:	DRAWN BY:	DATE:	REV. DATE:
Engineer:	CLJ	11-20-01	12/1/21
Contractor:	REV. NO.	APPROVED BY:	DWG. NO.:
	48	CLJ	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. 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.



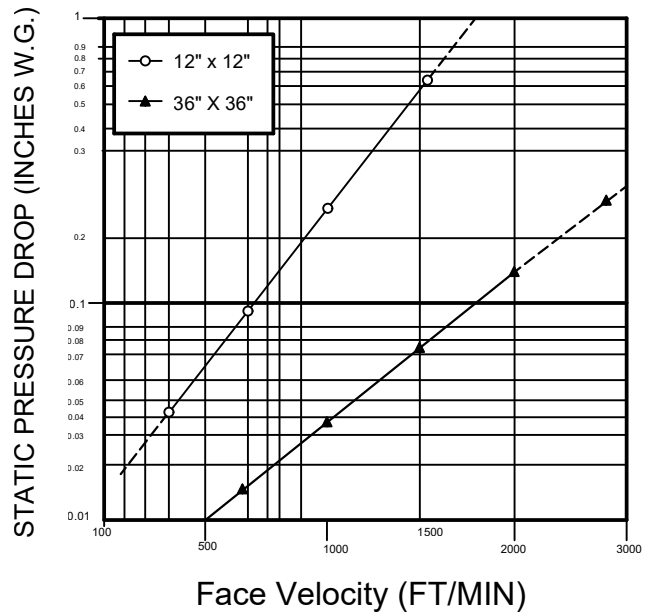
United Enertech certifies that the CD-100-I, CD-101-I is licensed to bear the Certainaire Certified Air Ratings Seal. The ratings shown are based on tests made in accordance with AMCA standard 500.

## AMCA STANDARDS

Class	Pressure	Leakage, ft <sup>3</sup> /min /ft <sup>2</sup>			
		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.

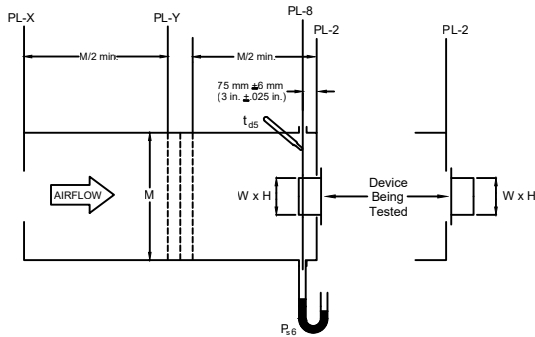


Figure 5.5- Test Device Setup with Inlet Chamber

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)

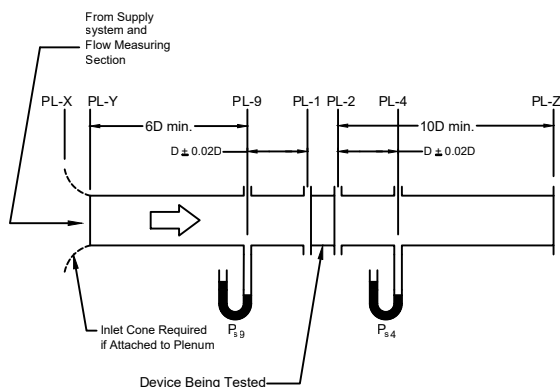


Figure 5.3- Test Device Setup with Inlet and Outlet Ducts

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)