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4CBD COUNTERBALANCED BACKDRAFT DAMPER

STANDARD CONSTRUCTION

FRAME

4" x 1" x 6063T5 (102 x 25) extruded aluminum .081" (2.1) nominal wall thickness.

BLADES

6063T5 extruded aluminum .070" (1.8) nominal wall thickness.

AXLES

1/2" (13) diameter synthetic.

BEARINGS

Dustproof, ball bearings pressed into frame.

LINKAGE

1/8" x 1/2" (3 x 13) aluminum tiebars with SS pivot pins.

SEALS

Extruded vinyl locked into blade edge.

MOUNTING

Vertical – Air flow horizontal.

Horizontal – Air flow up or down.

MINIMUM SIZE

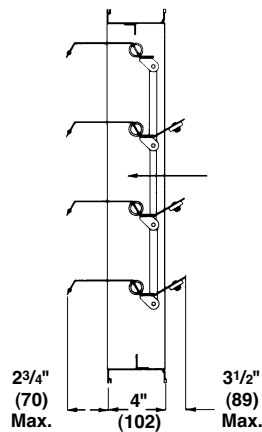
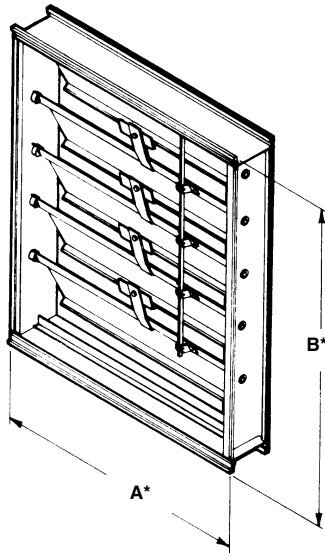
6" w x 11"h (152 x 279)

MAXIMUM SIZE

Single section – 48"w x 52"h (1219 x 1321).

Multiple section assembly – Unlimited size.

Dimensions in parentheses () indicate millimeters.

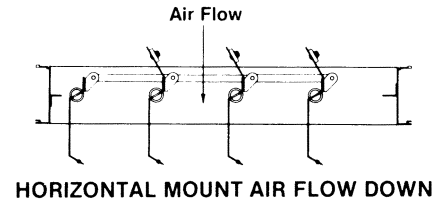
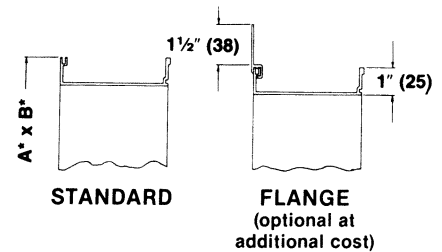


VERTICAL MOUNT
HORIZONTAL
AIR FLOW

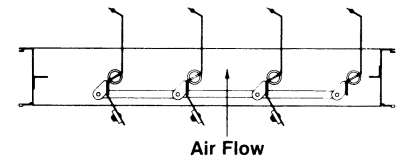
FEATURES

The 4CBD is designed for gravity relief at relatively low pressure differentials and low velocity airflows. Adjustable counterbalance weights enable the damper to operate in the range of .01 to .05 inches water gage.

FRAME CONSTRUCTION



HORIZONTAL MOUNT AIR FLOW DOWN



HORIZONTAL MOUNT AIR FLOW UP



4CBD

SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, counterbalance backdraft dampers that meet the following minimum construction standards: frame shall be (specify) .125" (3.2) wall thickness with 12 gage (2.8) galvanized steel structural brace at each corner or 4" x 1" x .081" (102 x 24 x 2.1) 6063-T5 extruded aluminum. Blades shall be .070" (1.8) wall thickness 6063-T5 extruded aluminum with extruded vinyl blade edge seals

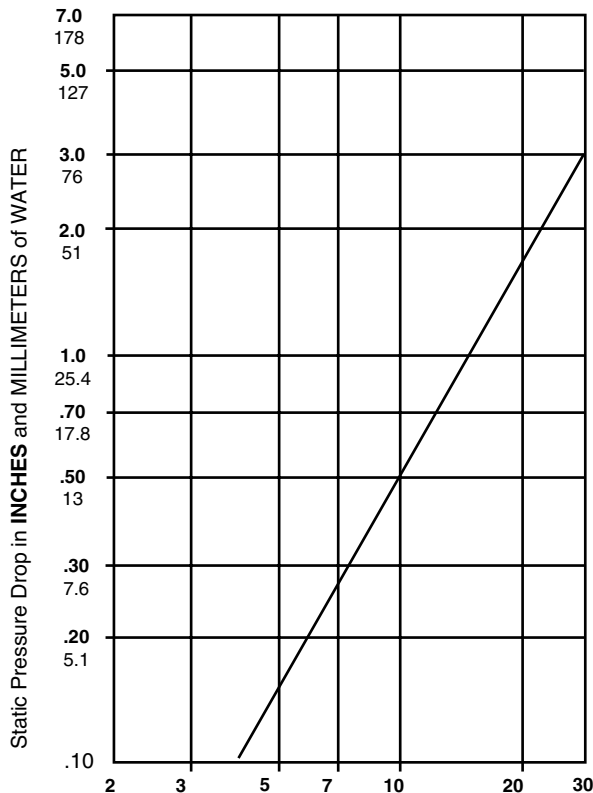
mechanically locked into blade edge. Adhesive or clip-on type seals are unacceptable. Bearings shall be dustproof ball type for quiet low pressure operation. Linkage shall be 1/2" (13) wide tiebar connected to stainless steel pivot pins. Dampers shall be designed for maximum 3500 fpm spot velocities and minimum 4" w.g. back-pressure, depending on damper size. Damper shall be in all respects equivalent to Reliable model 4CBD.

PERFORMANCE DATA

4CBD PERFORMANCE DATA						
DAMPER WIDTH INCHES (MM)	MAXIMUM BACK PRESSURE	MAXIMUM SYSTEM VELOCITY	LEAKAGE*		BLADES START TO OPEN	BLADES FULLY OPEN
			Percent of Max. Flow	CFM/ Sq. Ft.		
48" (1219)	4.0" w.g.	2500 FPM	.7%	17.5	.02" w.g.	.05" w.g.
36" (914)	8.0" w.g.	2500 FPM	.8%	20		
24" (610)	12.0" w.g.	2500 FPM	.9%	23		
12" (305)	16.0" w.g.	2500 PFM	1.6%	40		

AIR LEAKAGE

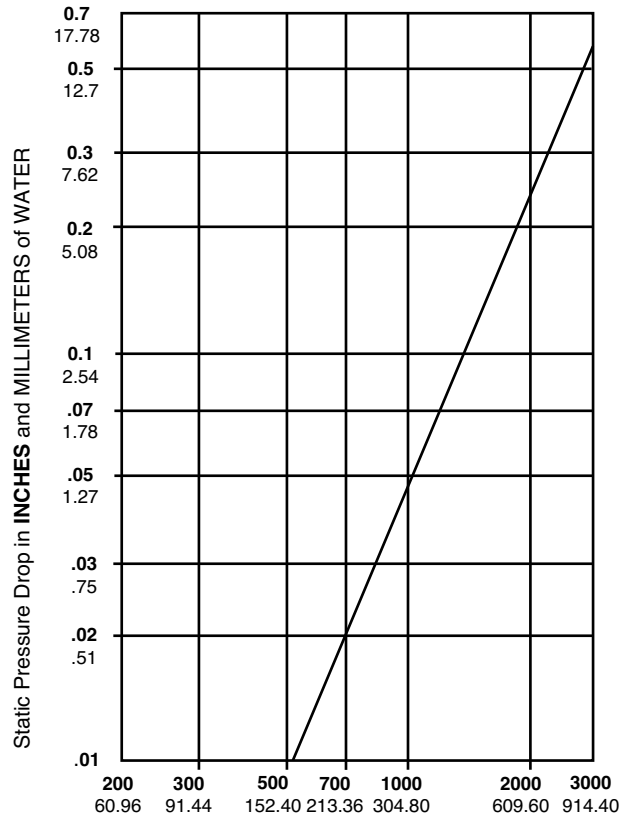
Damper Closed (Max. width)



Air Leakage in **CFM/Sq. Ft.** through FACE AREA.
Tested per AMCA Std. 500, Fig. 5.5, plenum mounted.

PRESSURE DROP

Damper Open (24" x 24" [610 x 610] size)



Air Velocity in **FEET** and **METERS** per minute through FACE AREA.
Tested per AMCA Std. 500, Fig. 5.3, ductwork upstream and downstream.

