



COUNTERBALANCED BACKDRAFT DAMPER
HIGH PERFORMANCE • HEAVY DUTY
STEEL FRAME • EXTRUDED ALUMINUM BLADES
MODEL: 1390CB

Model 1390CB is a counterbalanced backdraft damper designed for pressure relief to automatically assist in maintaining and limiting desired pressures in medium to heavy duty commercial and light duty industrial HVAC or process air systems. The unique extruded aluminum blade design and fully adjustable counterbalance assembly offer pressure relief at extremely low pressure differentials. The rugged steel mitered corner frame is reinforced to resist racking, and ball bearings provide extreme sensitivity and ultra-smooth operation. Neoprene blade seals provide quiet closure as well as extra weather protection.

STANDARD CONSTRUCTION:

Frame: 5" x 7/8" x 16 ga. (127 x 22 x 1.6) galvanized steel hat channel with die-formed corner gussets. Low profile (flat top and bottom) for 12" (305) high and under.

Blades: .070" (1.8) nominal wall thickness Type 6063-T5 extruded aluminum on 5 1/2" (140) centers.

Linkage: Non-adjustable, face mounted on rear of blades. Plated steel.

Axes: 1/2" (13) dia. plated steel.

Bearings: Ball bearing type, pressed into frame.

Blade Seals: Neoprene.

Finish: Mill.

Counter-Balance: CBE Adjustable, externally mounted (standard). Counter-balance assembly may be rotated through 360° to assist opening or closure.

Minimum Size: 6" x 10" (152 x 254).

Maximum Size: Single section: 48" x 60" (1219 x 1524).
Multiple section: 96" (2413) wide x unlimited height.

Max Temp: 200°F (93°C).

Max Pressure: 4 to 16 in. w.g. (see page 2).

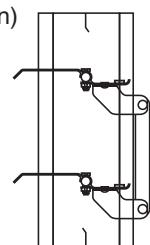
Max Velocity: 3000 fpm (3500 fpm max. spot velocity).

MOUNTING:

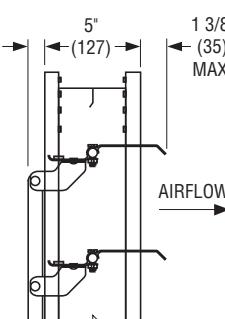
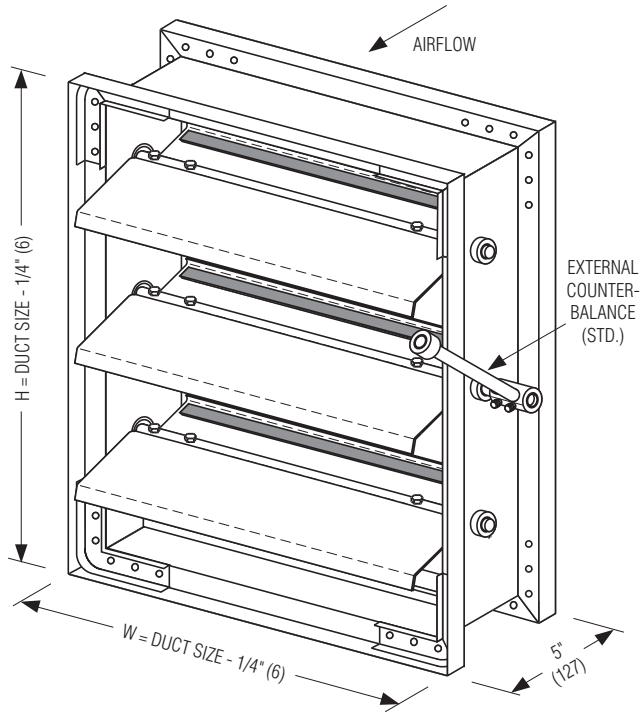
VM Vertical mount (standard)
 HMU Horizontal mount (airflow up)
 HMD Horizontal mount (airflow down)

OPTIONS:

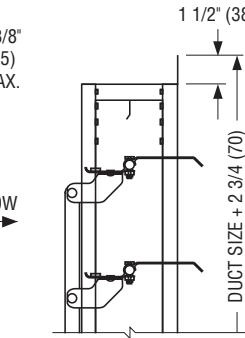
EAF Extruded aluminum frame. 0.125" (3.2) wall thickness. Type 6063-T5.
 FF Front flange
 FFB Front flange with bolt holes
 FR Rear flange
 FRB Rear flange with bolt holes
 CBI Internal Counterbalance
 Special features: _____.



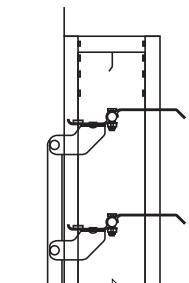
LOW PROFILE FRAME
FOR DAMPERS 12" (305)
HIGH AND UNDER



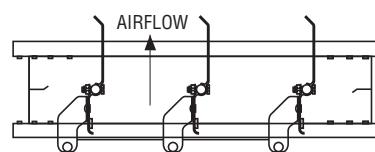
**Channel Frame
(Duct Mount)
(Standard CF)**



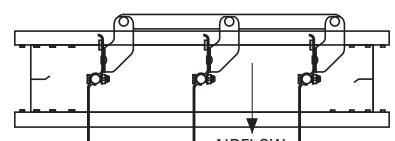
**Front Flange
(on discharge side)
(Option FF)**



**Rear Flange
(on intake side)
(Option FR)**



**Horizontal Mount – Airflow up
(Option HMU)**



**Horizontal Mount – Airflow down
(Option HMD)**

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 2

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
12 - 17 - 25	1300	2 - 5 - 07	1390CB



COUNTERBALANCED BACKDRAFT DAMPER
HIGH PERFORMANCE • HEAVY DUTY
PERFORMANCE DATA
MODEL: 1390CB

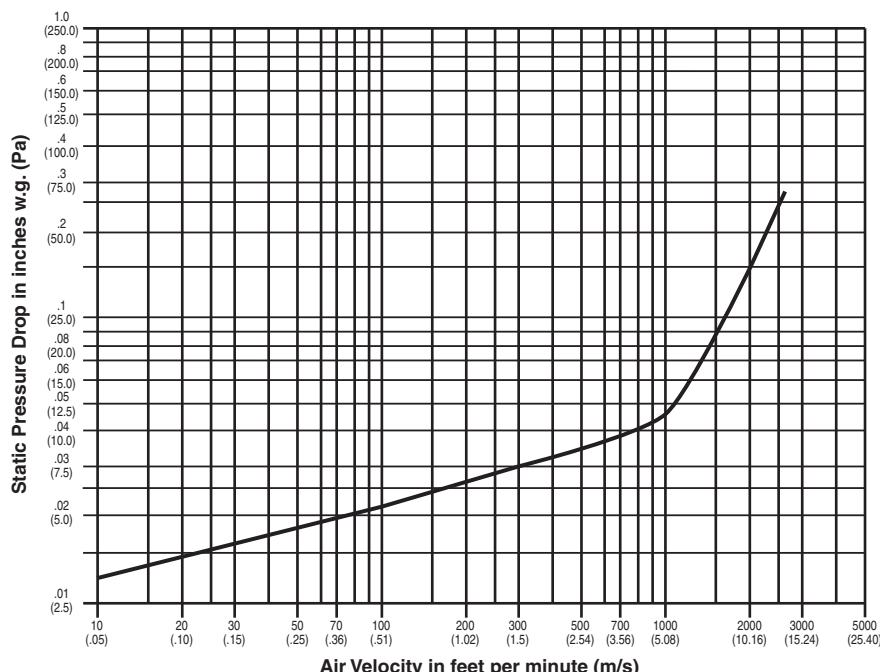
PERFORMANCE LIMITATIONS AND LEAKAGE DATA:

Damper Width	Maximum Back Pressure	Maximum System Velocity	Operational Data		Leakage*	
			Blades Begin Opening	Blades Fully Open	% of Maximum Flow	CFM per Sq. Ft.
48" (1219)	4.0" w.g.	2500 fpm	.01" w.g. (2.5 Pa)	.06" w.g. (14.9 Pa)	1.48	37
36" (914)	8.0" w.g.	2500 fpm			1.68	42
24" (610)	12.0" w.g.	2500 fpm			2.04	51
12" (305)	16.0" w.g.	2500 fpm			3.36	84

Pressure and velocity limitations shown are guidelines for design purposes. Although ratings are on the conservative side, contact Nailor for requirements beyond limitations shown.

*Leakage data is based upon a pressure differential of 1 in. w.g., tested in accordance with AMCA Standard 500-D.

PRESSURE DROP: SIZE: 36" x 36" (914 x 914)



Tested per AMCA Standard 500-D using test set-up figure 5.3, ductwork upstream and downstream.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 2

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
12 - 17 - 25	1300	2 - 5 - 07	1390CB