United Enertech

(ENGINEERS)

SUBMITTAL DATA

HEAVY DUTY BACKDRAFT DAMPER

Application and Design

The **HCB-700** Series is a vertically or horizontally mounted backdraft damper that is designed to allow vertical or horizontal airflow and prevent reverse airflow.

Ratings:

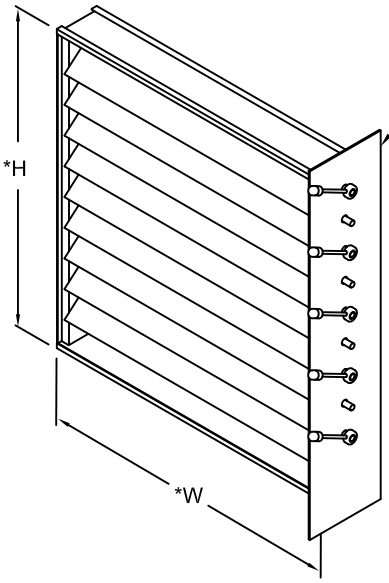
Pressure: 4 in. w.g. [996 Pa] - differential pressure
Velocity: 4000 fpm [20m/s]
Temperature: 180° F (82° C)

Standard Construction:

Frame: 0.081 [2mm] Extruded Aluminum 4-1/2" [114mm] deep
Blade: 6063-T5 Extruded Aluminum 0.125" [3mm] thickness
Linkage: Zinc plated concealed
Axles: 1/2" [13mm] diameter cast zinc & steel
Blade Seals: PVC (180°F) [82° C]
Bearings: Bronze Oilite

Size Limitations:

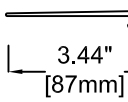
Minimum Size: 6" w x 6" h [152mm x 152mm]
Maximum Single Section: 48" w x 48" h [1219mm x 1219mm]
Maximum Double Section: 96" w x 96" h [2438mm x 2438mm]



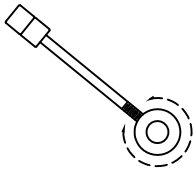
*W & H dimensions furnished approximately 1/4" [6mm}undersize.
Note: For discharge applications, see fan manufacturer's recommendation for minimum distance between damper and fan.

Options and Accessories:

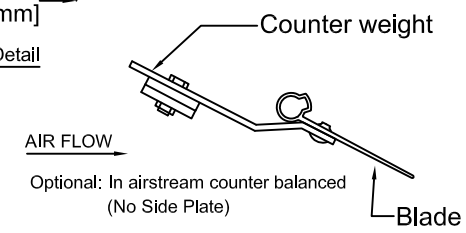
- ☐ 0.125" [3mm] Extruded Aluminum Frame (box frame)
- ☐ 1-1/2" [38mm] flanged frame- 0.125" [3mm] extruded aluminum (no side plate)
- ☐ In airstream counterbalanced weights (no side plate)
- ☐ Epoxy coated (powder coated @ 415°F [213° C])
- ☐ 450°F [232° C] Silicone blade seals
- ☐ Side Plate (20ga. galvanized steel) 6-1/4" w x (H+1") (159mm W x (H+25mm)



Blade Detail



Precision Counter Balanced; both by rotation in hub or slide weight up or down the rod in addition to removal or adding weights.



Optional: In airstream counter balanced (No Side Plate)

Vertical mount with horizontal airflow shown

Optional: In airstream counter balanced (No Side Plate)

Quantity	Size		Other Options
	'W' Width	'H' Height	

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

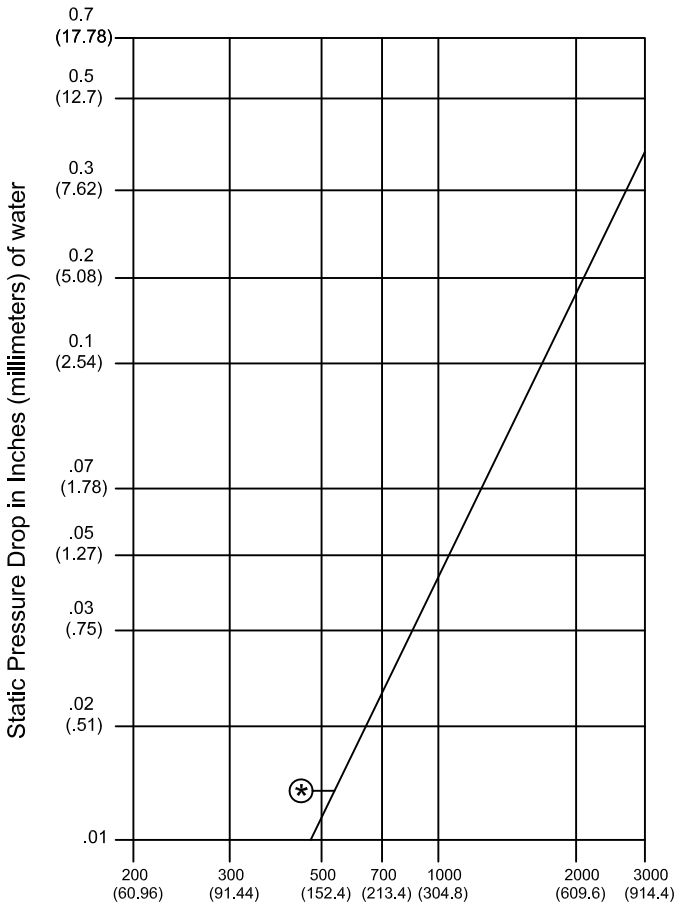
Job Name:	☐ **MODEL HCB-700 (4000 FPM)**		
Location:			
Architect:	DRAWN BY: CLJ	DATE: 12-03-99	REV. DATE: 6-6-16
Engineer:			
Contractor:	REV. NO. 30	APPROVED BY: BGT	DWG. NO.: **F-10**

DAMPER PERFORMANCE

DAMPER WIDTH	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. [996 Pa]	4000 FPM [20 m/s]	0.61	15	**.01" w.g.	**.05" w.g.
36" (914)	8.0" w.g. [1992 Pa]	4000 FPM [20 m/s]	0.6	15		
24" (610)	12.0" w.g. [2988 Pa]	4000 FPM [20 m/s]	0.72	18		
12" (305)	16.0" w.g. [3984 Pa]	4000 FPM [20 m/s]	1	24		

*Leakage information based on pressure differential of 1" w.g. tested per AMCA Std. 500-D.
**set at least resistant to open

DAMPER PRESSURE DROP (24" X 24")



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

*Set at least resistant to open

HCB-700 AIR FLOW ARRANGEMENTS

Standard weights at jamb
(assist to CLOSE)