DEPENDABLE PRODUCTS SINCE 1955

Extruded Aluminum Light Duty Shutters - Models SHN / SHL / SHC

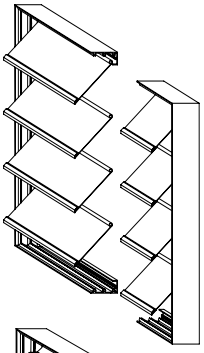
Design Features – Light duty construction for low static pressure applications.

PLEASE SPECIFY HORIZONTAL OR VERTICAL FLOW

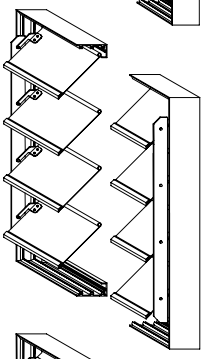
STANDARD CONSTRUCTION

FRAME
2" deep, .063" thk. extruded aluminum in style #2
BLADES
.025", 5005-H34 alloy aluminum
BLADE AXLES & BEARINGS
AXLE – 3/16" dia. aluminum pin
BEARING – Brass sleeve
LINKAGE
BLADE BRACKET – 16 gauge aluminum
LINKAGE BAR - .025", 5005-H34 aluminum (SHL & SHC only)
SEALS
Polyurethane foam blade edge
COUNTER WEIGHT
Adjustable, on .080 aluminum bracket (SHC only)
MAXIMUM TEMPERATURE
200^0 F
MAXIMUM SIZE
Unlimited, with mullions, structural bracing supplied by others
MAXIMUM SINGLE SECTION SIZE
36"W x 72"H
MINIMUM SIZE
6"W x 6"H
UNDERSIZED
1/4" under ordered size unless specified Exact or Actual
FINISH
Mill
OPERATOR
None

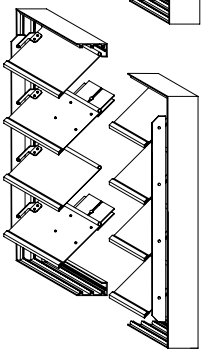
SHN – non-linked blades



SHL – with dual tie bar



SHC – with dual tie bar and counterweights



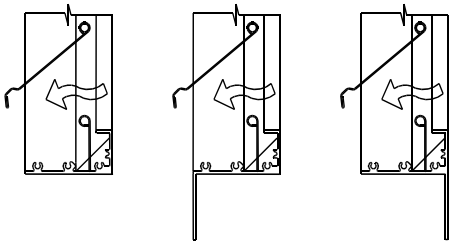
OPTIONAL CONSTRUCTION

FLANGE FRAME – Standard flange, Reverse flange
COUNTER WEIGHT – Galvanized steel, .063" aluminum bracket, (Must specify retard or assist on the order)
SEAL - Neoprene or Vinyl blade seal
OPERATOR – Manual, chain, electric or pneumatic, internally mounted (SHL only)
FINISH – Air-dry primer, polyurethane, epoxy, or enamel, baked epoxy or enamel, Anodized, Kynar, or Powder coat.

SPECIAL PURPOSE C0NSTRUCTION

Security bars
Horizontal mount up flow or down flow configurations
Filter racks
Sleeved for ductwork connection

Note: for fan discharge applications, the minimum distance between the damper and the fan must be equal to 2/3 of the fan diameter.



#2-Channel | #1-Std. Flange 1-1/2" | #5-Reverse Flange 1-1/2"

FRAME STYLES

DATE	ARCHITECT / ENGINEER	CUSTOMER
PROJECT		

ITEM	QTY	W	H	DESCRIPTION

DEPENDABLE PRODUCTS SINCE 1955

SAFE AIR / DOWCO

Engineering and General Offices

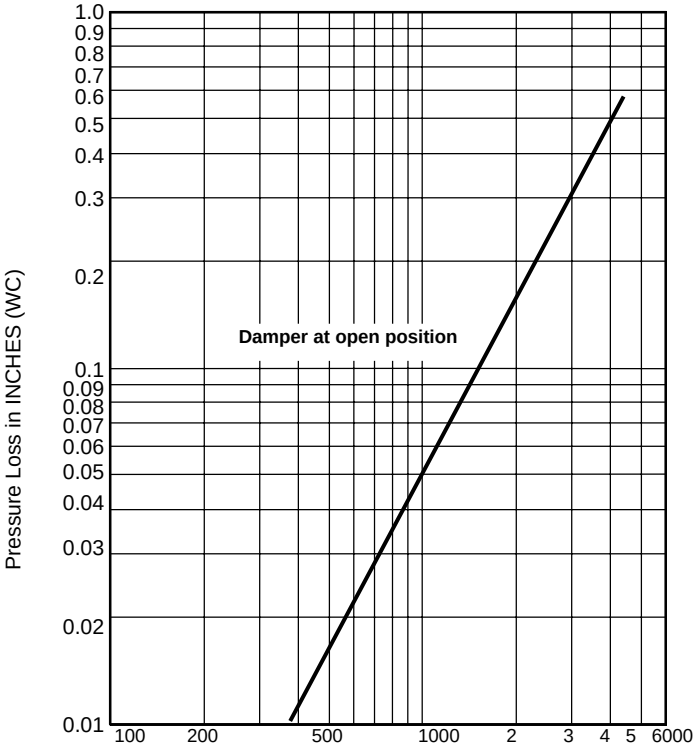
1855 South 54th Avenue, Cicero, Illinois 60804

Phone 708-652-9100 FAX 708-652-9158

Model – SHN / SHL / SHC

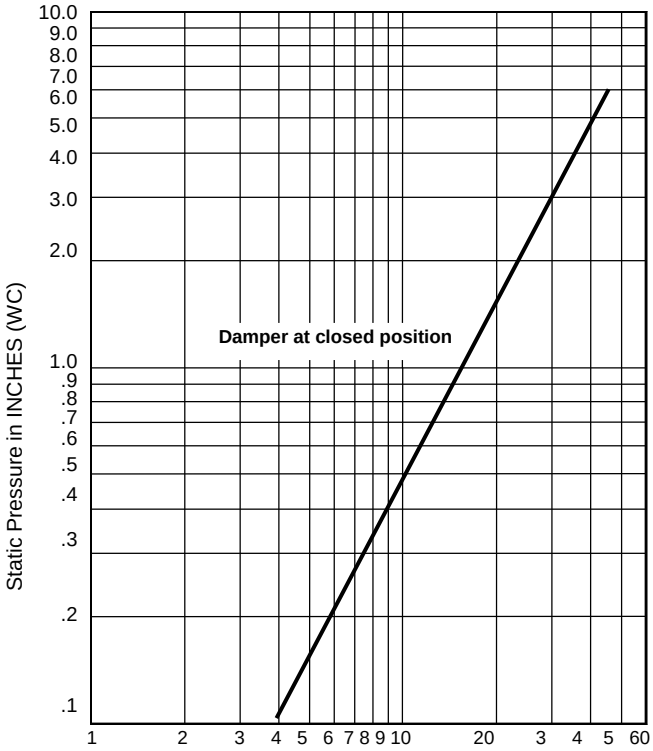
All tests performed at an independent laboratory and based on AMCA standard for air performance.

AIR PERFORMANCE



FACE AREA VELOCITY (fpm)
24 x 24 sample tested per AMCA Std. 500, Figure 5.5

AIR LEAKAGE



LEAKAGE PER SQ. FT. OF FACE AREA (cfm)
24" x 24" sample tested per AMCA Std. 500, Figure 5.5

PERFORMANCE						
Width	Max. Velocity	Max. Pressure	without counter weight		CW to assist	
			Blade start to open	Blade fully open	Blade start to open	Blade fully open
36"	500 fpm	1" wg.	.03" wg.	.10" wg	.01" wg	.06" wg.
24"	750 fpm	2" wg.				
12"	1000 fpm	3" wg.				

TO MINIMIZE LEAKAGE
The Leakage performance of a damper will improve with size and varies with aspect ratio. Leakage may always be minimized by selecting dampers as tall as possible, minimizing width. Testing was performed at an independent laboratory using test procedures based on Industry Standards for air leakage.

LEAKAGE	
Pressure Differential	CFM per sq. ft.
1" wg.	17
.50" wg.	10

Note:
Performance data shown are approximate numbers under intermittent conditions and are to be used only as reference under standard generic installation. Consult Safe Air for additional technical information.

FREE AREA CALCULATIONS (SQ. FT.)

		WIDTH						
		12	16	20	24	28	32	36
HEIGHT	12	0.60	0.83	1.07	1.30	1.54	1.78	2.01
	18	0.98	1.37	1.75	2.14	2.53	2.92	3.31
	24	1.38	1.93	2.47	3.02	3.57	4.12	4.67
	30	1.76	2.46	3.16	3.86	4.56	5.27	5.97
	36	2.16	3.02	3.88	4.74	5.60	6.46	7.32
	42	2.54	3.55	4.57	5.58	6.60	7.61	8.62
	48	2.94	4.11	5.29	6.46	7.63	8.81	9.98
	54	3.32	4.65	5.97	7.30	8.63	9.95	11.28
	60	3.72	5.21	6.69	8.18	9.66	11.15	12.64
	66	4.10	5.74	7.38	9.02	10.66	12.30	13.94
	72	4.50	6.30	8.10	9.90	11.70	13.49	15.29