

## Heavy Duty Backdraft Damper – Model SH1

**Design Features** – Standard “V” blade heavy-duty backdraft damper designed for use with class I & class II fans.

PLEASE SPECIFY HORIZONTAL OR VERTICAL AIR FLOW

### STANDARD CONSTRUCTION

**FRAME**

8” deep x 2” channel, 14 ga. Galvanized steel

**BLADES**

16 gauge galvanized, 5” to 6” wide (varies with height dimension)

**BLADE AXLES & BEARINGS**

AXLE – 1/2” Plated steel shaft

BEARINGS – 1/2” Bore ball bearings

**LINKAGE**

Mounted at the center point of width dimension on face of blades

**SEAL**

Silicone blade & stainless steel jamb seals

**COUNTER WEIGHT**

Adjustable, on .063” aluminum bracket

**MAXIMUM VELOCITY & STATIC PRESSURE**

48” wide 3000 FPM @ 4” static pressure

36” wide 3000 FPM @ 6” static pressure

24” wide 3000 FPM @ 8” static pressure

12” wide 3000 FPM @ 10” static pressure

**MAXIMUM TEMPERATURE**

250° F

**MAXIMUM SINGLE SECTION**

48”W x 96”H

**MINIMUM SIZE**

6”W x 6”H

**UNDERSIZED**

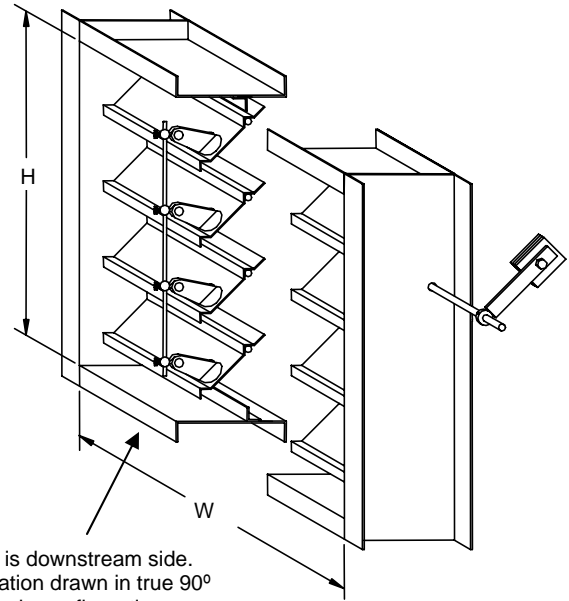
Dampers are sized on ACTUAL INSIDE DIMENSIONS

**FINISH**

Mill

**OPERATOR**

None



### OPTIONAL CONSTRUCTION

**FRAME** – Available in stainless steel or aluminum up to 10 ga.

**BLADES** - Available in stainless steel or aluminum up to 14 ga. up to 8” wide

**SPECIFIED MATERIAL** – Available in stainless steel, aluminum or as requested

**SEALS** – Neoprene foam or polyurethane foam blade edge

**LINKAGE** – Concealed in jamb

**FINISH** – Air-dry primer, polyurethane, epoxy, or enamel, baked epoxy or enamel, Kynar, or Powder coat. For industrial special purpose coating, please consult factory.

### SPECIAL PURPOSE CONSTRUCTION

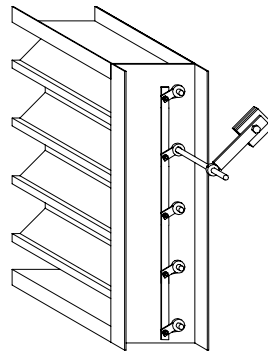
Bolt holes on front and rear flanges

Fully welded construction

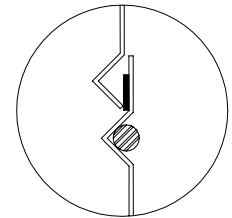
Security bars (mounted in sleeve)

Horizontal mount up flow or down flow configurations

For higher velocities & temperatures, please consult factory



Concealed Linkage (Optional)

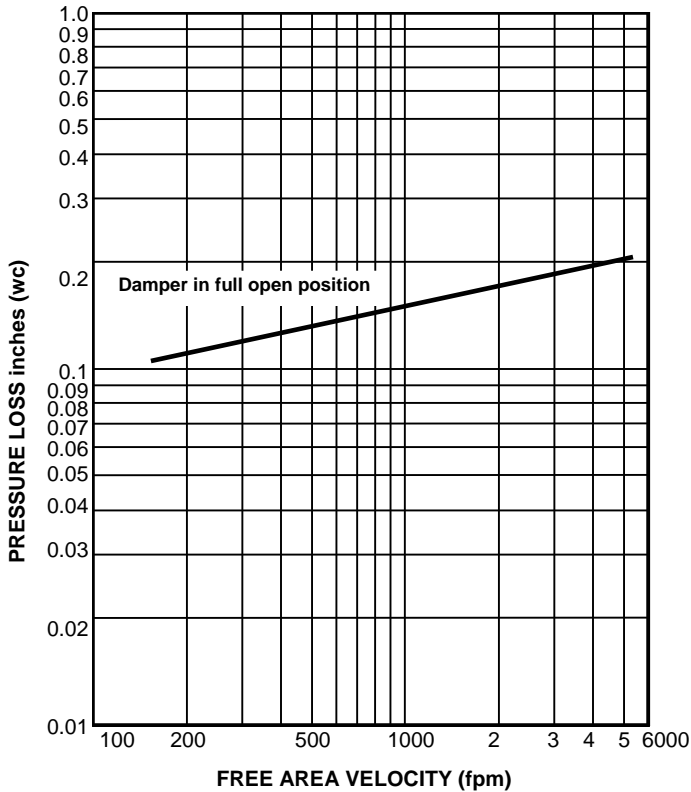


Blade Edge Seal

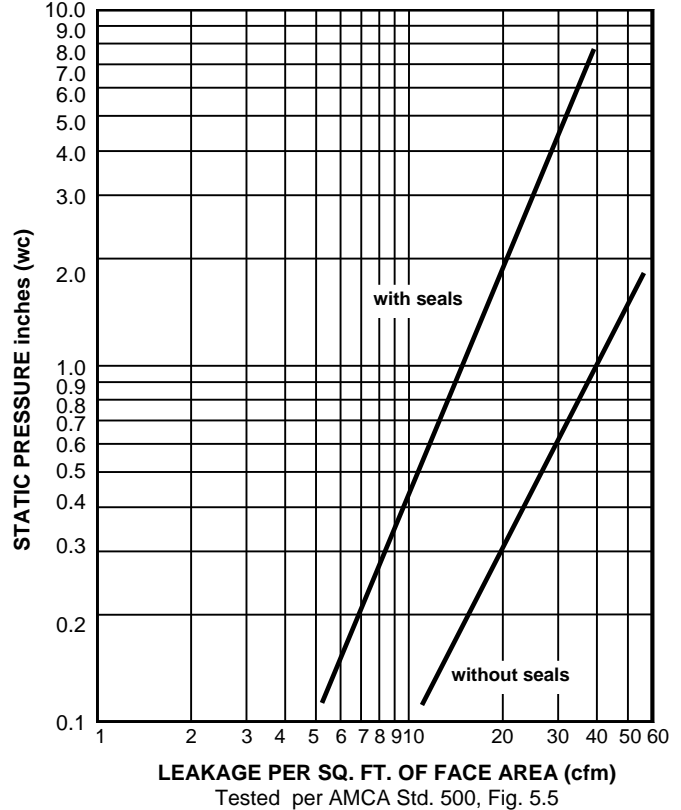
DATE		ARCHITECT/ENGINEER		CUSTOMER	
PROJECT					
ITEM	QTY	W	H	DESCRIPTION	

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

**AIR PERFORMANCE**



**AIR LEAKAGE**



Tested per AMCA Std. 500, Fig. 5.5

**SH-1 Performance Data**

Damper Width Inches	Max. Pressure	Maximum System Velocity	Leakage w/ seals / sq. ft.	Leakage w/out seals / sq. ft.
48"	4" w.g.	3000 fpm	15 cfm	40 cfm
36"	6" w.g.	3000 fpm	15 cfm	50 cfm
24"	8" w.g.	3000 fpm	17 cfm	60 cfm
12"	10" w.g.	3000 fpm	20 cfm	100 cfm

\*Leakage information based on 1" w.g. static pressure.

**FREE AREA CALCULATIONS WIDTH**

Inches	12	16	20	24	28	32	36	40	44	48
12	0.53	0.74	0.95	1.16	1.37	1.58	1.79	2.01	2.22	2.43
16	0.79	1.11	1.43	1.74	2.06	2.38	2.69	3.01	3.33	3.64
20	1.01	1.41	1.81	2.21	2.62	3.02	3.42	3.82	4.23	4.63
24	1.22	1.71	2.20	2.69	3.17	3.66	4.15	4.64	5.13	5.61
28	1.43	2.01	2.58	3.16	3.73	4.30	4.88	5.45	6.03	6.60
32	1.70	2.38	3.06	3.74	4.42	5.10	5.78	6.46	7.13	7.81
36	1.91	2.68	3.44	4.21	4.97	5.74	6.50	7.27	8.04	8.80
40	2.13	2.98	3.83	4.68	5.53	6.38	7.23	8.08	8.94	9.79
44	2.34	3.28	4.22	5.15	6.09	7.03	7.96	8.90	9.84	10.77
48	2.61	3.65	4.69	5.73	6.78	7.82	8.86	9.90	10.94	11.99
52	2.82	3.95	5.08	6.20	7.33	8.46	9.59	10.72	11.85	12.97
56	3.03	4.25	5.46	6.68	7.89	9.10	10.32	11.53	12.75	13.96
60	3.25	4.55	5.85	7.15	8.45	9.75	11.05	12.35	13.65	14.95
64	3.51	4.92	6.32	7.73	9.13	10.54	11.94	13.35	14.75	16.16
68	3.73	5.22	6.71	8.20	9.69	11.18	12.67	14.16	15.66	17.15
72	3.94	5.52	7.10	8.67	10.25	11.83	13.40	14.98	16.56	18.13
76	4.21	5.89	7.57	9.25	10.93	12.62	14.30	15.98	17.66	19.35
80	4.42	6.19	7.96	9.72	11.49	13.26	15.03	16.80	18.56	20.33
84	4.63	6.49	8.34	10.20	12.05	13.90	15.76	17.61	19.47	21.32
88	4.85	6.79	8.73	10.67	12.61	14.55	16.49	18.43	20.37	22.31
92	5.11	7.16	9.20	11.25	13.29	15.34	17.38	19.43	21.47	23.52
96	5.33	7.46	9.59	11.72	13.85	15.98	18.11	20.24	22.37	24.51