

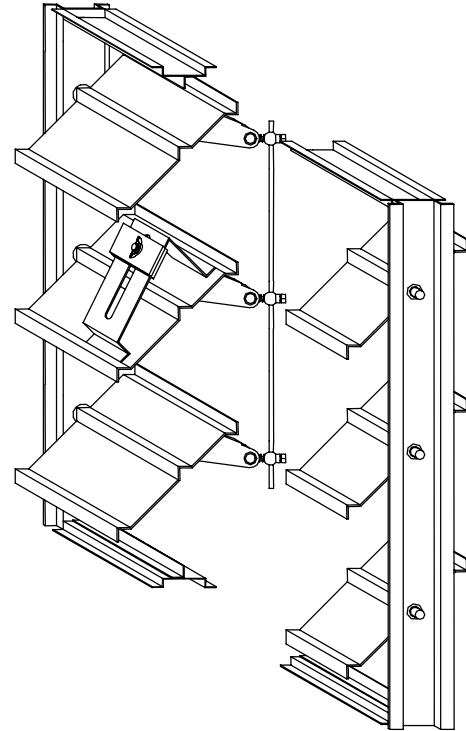
## Barometric Relief Damper - Model BRL

**Design Features** – Traditional medium to light duty galvanized & aluminum backdraft damper with adjustable blade mounted counter weight.

PLEASE SPECIFY HORIZONTAL OR VERTICAL AIR FLOW

### STANDARD CONSTRUCTION

- FRAME**  
4-1/2" deep, 16 gauge galvanized steel, style # 2.
- BLADES**  
.063" aluminum, 6" to 12" 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 the width dimension of face of blades
- COUNTER WEIGHT**  
Adjustable, on .063" aluminum bracket
- MAXIMUM VELOCITY & STATIC PRESSURE**  
2500 FPM @ 2" static pressure
- MAXIMUM TEMPERATURE**  
250<sup>0</sup> F
- MAXIMUM SIZE**  
Unlimited, with mullions, structural bracing supplied by others
- MAXIMUM SINGLE SECTION**  
48"W x 96"H
- MINIMUM SIZE**  
6"W x 14"H
- UNDERSIZED**  
1/4" (6.35) under ordered size unless specified Exact or Actual
- FINISH**  
Mill
- OPERATOR**  
None

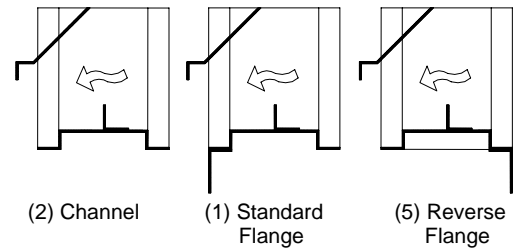


### OPTIONAL CONSTRUCTION

- FRAME** – Available in galvanized steel or aluminum up to 10 ga.
- BLADES** - Available in galvanized steel or aluminum up to 14 ga.
- SPECIFIED MATERIAL** – Available in stainless steel
- BLADE & JAMB SEALS** – Neoprene blade edge and/or foam rubber side seals
- SLEEVE AND DUCTWORK CONNECTION** – 10 ga. To 20 ga.  
Galvanized steel to 30" in length. – Transition available in: round, oval, rectangular or custom. Factory can install access door, retaining angles, or flange connections.
- FINISH** – Air-dry primer, polyurethane, epoxy, or enamel, baked epoxy or enamel, Kynar, or Powder coat.

### SPECIAL PURPOSE CONSTRUCTION

- Fully welded construction
- Security bars
- Hinged as walk through door or swing out access
- Filter racks
- Sleeved for ductwork connection



DATE	ARCHITECT			CUSTOMER
PROJECT				
ITEM	QTY	W	H	DESCRIPTION

DEPENDABLE PRODUCTS SINCE 1955

**SAFE-AIR/DOWCO**

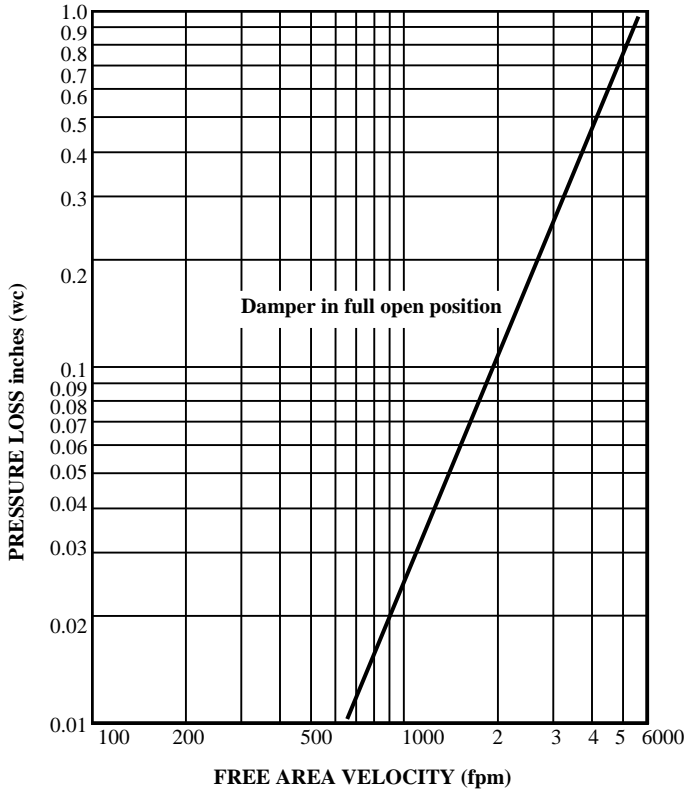
*Engineering and General Offices*

1855 South 54<sup>th</sup> Avenue, Cicero, Illinois 60804

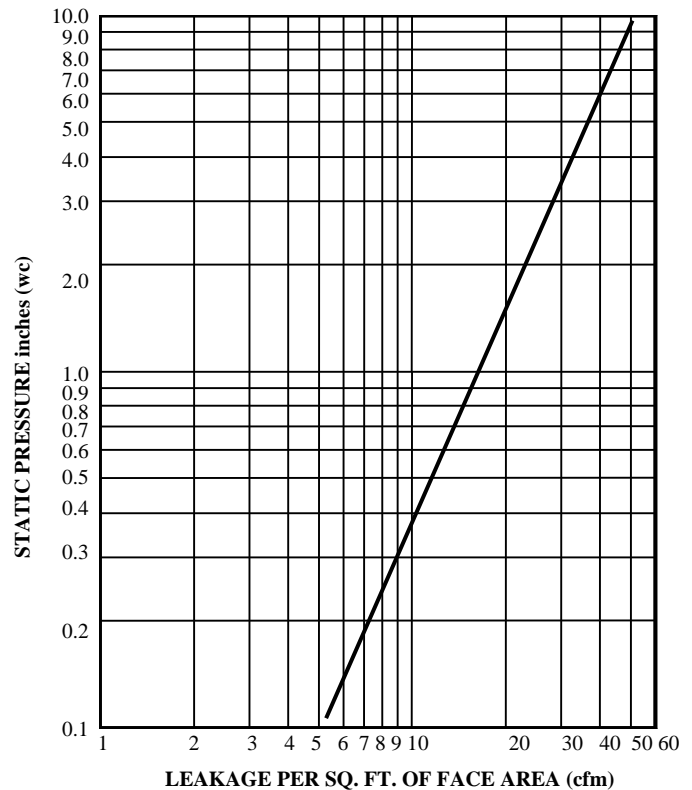
Phone 708-652-9100 FAX 708-652-9158

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

### AIR PERFORMANCE



### AIR LEAKAGE



**LEAKAGE PER SQ. FT. OF FACE AREA (cfm)**  
Tested per AMCA Std. 500, Fig. 5.5, w/ blade and jamb seals

### BRL Performance Data

Damper Width Inches	Max. Pressure	Maximum System Velocity	Blade start to open	Blades fully open
48"	4" w.g.	2500 fpm		
36"	8" w.g.	2500 fpm	.01" wg.	.05" wg.
24"	12" w.g.	2500 fpm		
12"	16" w.g.	2500 fpm		

### 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.

MAXIMUM SINGLE SECTION SIZE – 48"W x 96"H

MINIMUM SINGLE SECTION SIZE – 6"W x 19"H

### FREE AREA CALCULATIONS WIDTH

Inches	12	16	20	24	28	32	36	40	44	48
12	0.56	0.78	1.00	1.22	1.44	1.67	1.89	2.11	2.33	2.56
16	0.83	1.17	1.50	1.83	2.17	2.50	2.83	3.17	3.50	3.83
20	1.06	1.48	1.91	2.33	2.75	3.18	3.60	4.02	4.45	4.87
24	1.28	1.80	2.31	2.83	3.34	3.85	4.37	4.88	5.40	5.91
28	1.51	2.11	2.72	3.32	3.93	4.53	5.14	5.74	6.34	6.95
32	1.79	2.50	3.22	3.93	4.65	5.36	6.08	6.80	7.51	8.23
36	2.01	2.82	3.63	4.43	5.24	6.04	6.85	7.65	8.46	9.26
40	2.24	3.14	4.03	4.93	5.82	6.72	7.61	8.51	9.41	10.30
44	2.47	3.45	4.44	5.42	6.41	7.40	8.38	9.37	10.35	11.34
48	2.74	3.84	4.94	6.03	7.13	8.23	9.33	10.42	11.52	12.62
52	2.97	4.16	5.34	6.53	7.72	8.91	10.09	11.28	12.47	13.66
56	3.19	4.47	5.75	7.03	8.31	9.58	10.86	12.14	13.42	14.69
60	3.42	4.79	6.16	7.52	8.89	10.26	11.63	13.00	14.36	15.73
64	3.70	5.18	6.66	8.14	9.61	11.09	12.57	14.05	15.53	17.01
68	3.92	5.49	7.06	8.63	10.20	11.77	13.34	14.91	16.48	18.05
72	4.15	5.81	7.47	9.13	10.79	12.45	14.11	15.77	17.43	19.09
76	4.43	6.20	7.97	9.74	11.51	13.28	15.05	16.82	18.59	20.36
80	4.65	6.51	8.38	10.24	12.10	13.96	15.82	17.68	19.54	21.40
84	4.88	6.83	8.78	10.73	12.68	14.64	16.59	18.54	20.49	22.44
88	5.10	7.15	9.19	11.23	13.27	15.31	17.35	19.40	21.44	23.48
92	5.38	7.53	9.69	11.84	13.99	16.15	18.30	20.45	22.60	24.76
96	5.61	7.85	10.09	12.34	14.58	16.82	19.07	21.31	23.55	25.80