Industrial Damper

GI51

10" Deep • Airfoil Blade • 450°F Max. Temperature • Up to 20 in.wg Static Pressure • Galvanized Steel

STANDARD CONSTRUCTION

FRAME: 2" x 10" x 2" - 10-GA galvanized steel formed channel frame
BLADE: 12-GA airfoil for dampers < 48"W; 10-GA airfoil for dampers 48"W - 60"W
SHAFTS: ¾" dia. corrosion resistant, plated cold finished steel for dampers < 48"W; 1" dia. for dampers 48"W - 60"W
BEARINGS: Stainless steel flanged sleeve, bolted to frame
LINKAGE: ½" dia. inter-connecting rod with trunnion pivot fastener; Located in jamb
OPERATOR: Manual hand quadrant or lever arm for electric or pneumatic actuator
FINISH: Mill
TEMP. LIMITS: 450°F; Consult factory for temp. > 450°F

OPTIONS

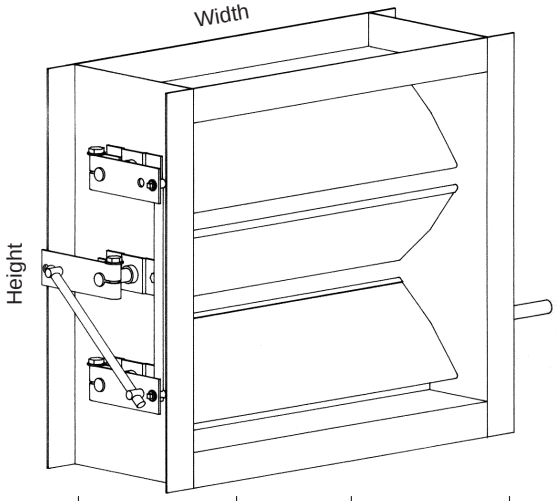
Stainless Steel Blade Edge Seals or Jamb Seals
Stuffing Boxes and Replaceable Packing
Variable Flange Sizes
Finish - Baked Enamel, Kynar, Anodize
Perimeter Holes - One Flange or Both Flanges
Other Material

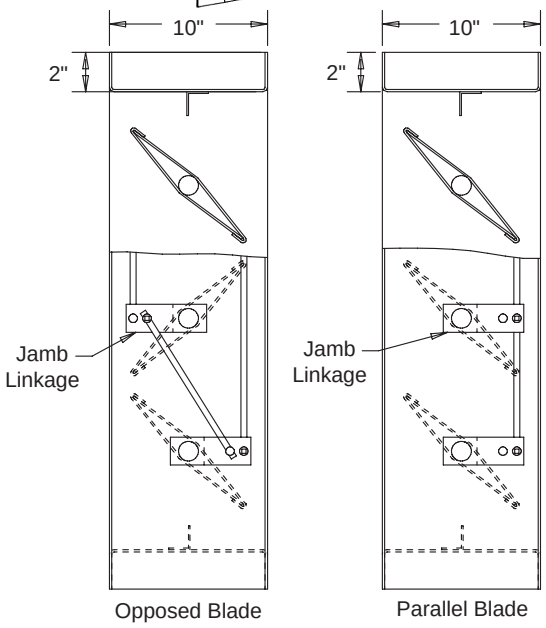
NOTES

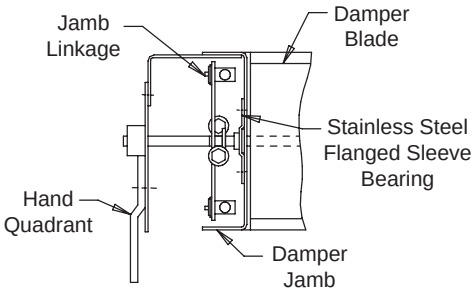
1. "A" width and "B" height are opening dimensions. Dampers are provided by inside dimension.

DAMPER SIZE

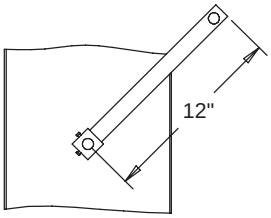
Panels	Min Panel (ID)	Max Single Panel (ID)
GI51	6"W x 6"H Single Blade 6"W x 12"H Opposed Blades	60"W x 96"H



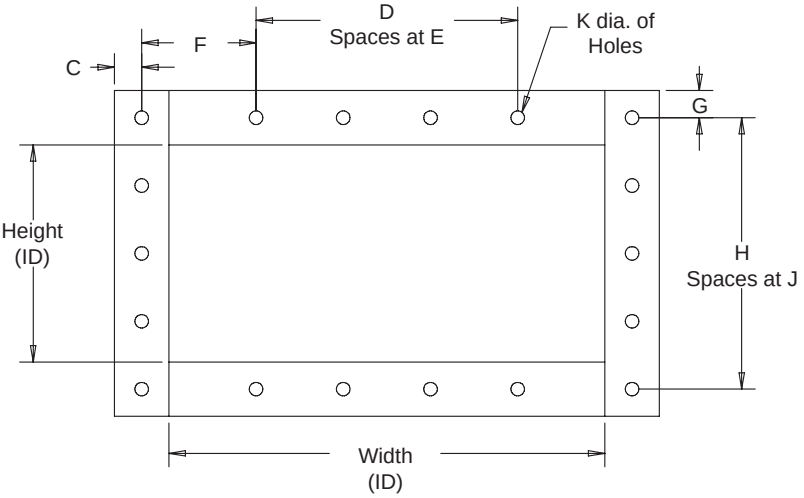




Jamb Linkage Detail



Lever for Motor Operation



Optional Flange with Holes
(Must Specify Dimensions C-K)

Louvers & Dampers
A Mestek Company

SD-GI51-09.01

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January 2009

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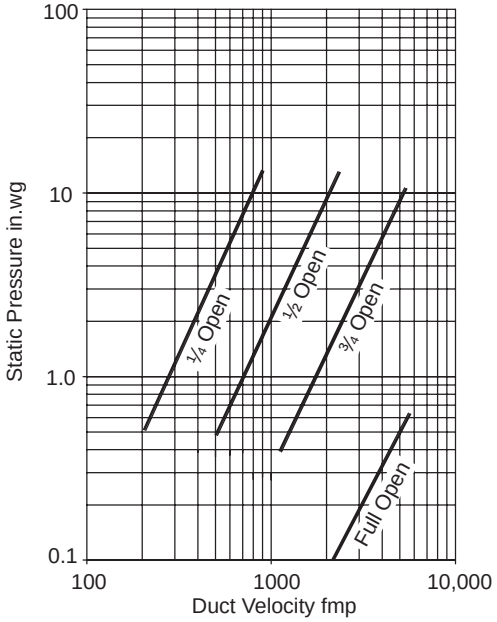
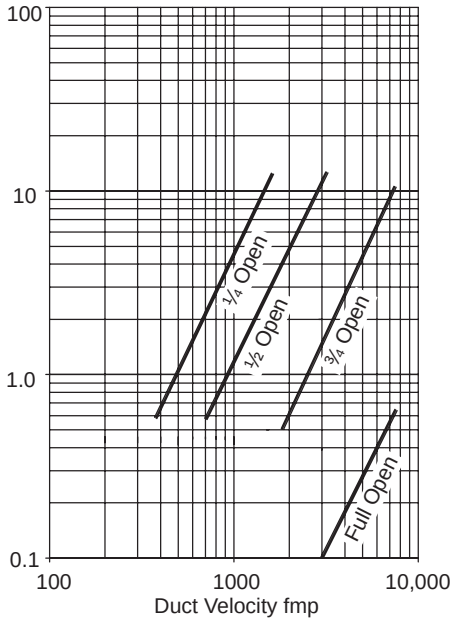
Free Area:

Pressure drop curves listed are based on AMCA Standard 500, using test set up Fig. 5.3 for damper installed with duct upstream and downstream. Static pressures are corrected to .075 lb/cu.ft air density.

Pressure Drop vs. Duct Velocity
42"W x 42"H (Inside Dimension)
Opposed Blade



Pressure Drop vs. Duct Velocity
42"W x 42"H (Inside Dimension)
Parallel Blade



Air Leakage:

Air leakage quantities show in the chart are results of tests per AMCA Standard 500 and are shown at 1 in.wg differential pressure and corrected to .075 lb/cu.ft. air density.

Air Leakage cfm

Height \ Width	12	18	24	30	36	42	48	54	60
12	5	7	10	12	14	17	19	22	24
24	10	14	19	24	29	34	39	43	48
36	14	22	29	36	43	51	58	65	72
48	19	29	39	48	58	68	77	87	96
60	24	36	48	60	72	84	96	108	121
72	29	43	58	72	87	101	116	130	145
84	32	51	68	84	101	118	135	152	169
96	39	58	77	96	116	135	154	174	193

Air leakage ratings are based on AMCA Standard 500 using test set up 5.4 with a damper closing torque applied to the damper of 75 in.lb/sq.ft. of damper area for a size 60"W x 96"H, with a minimum of 55 in.lb/sq.ft. of damper area for a size 60"W x 8"H.

Damper air leakage show is based upon publishing only the most conservative leakage results for the L&D Model GI51 Industrial Damper for an entire range of damper sizes.

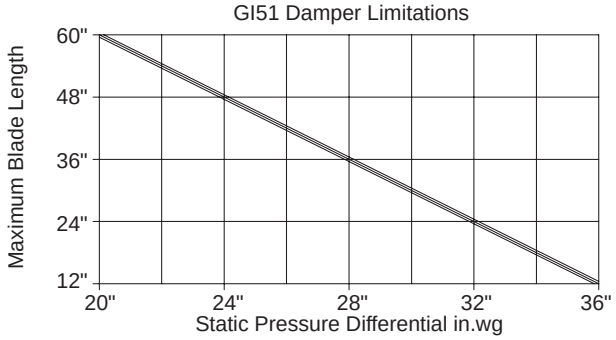
To ensure proper damper operation and air leakage performance for this damper design. The static pressure/blade length limits shown provide the user with this information and in addition provides a relationship between damper cost and the application.

For determining leakage values greater than 1 in.wg to a maximum of 20 in.wg use the multiplier correction chart below.

Static Pressure	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Multiplier Correction Factor	1.3	1.6	1.9	2.2	2.4	2.6	2.8	3.0	3.2	3.3	3.5	3.6	3.7	3.9	4.0	4.1	4.2	4.4	4.5

The GI51 damper design at a blade length of 6" has a maximum allowable blade deflection of L/360 for the static pressure indicated on the chart. At reduced blade lengths higher static pressure limits can be attained without sacrificing damper operating and performance characteristics.

GI51 Damper Limitations



Louvers & Dampers
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In the interest of product development, Louvers & Dampers reserves the right to make changes without notice.

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