Khalid Manufacturing Company

Louvers LD Dampers

Fire/Smoke Damper

LA2

Class II • Airfoil Blade • 3 Hour • 250°F or 350°F • Galvanized Steel • UL Classified Damper

STANDARD CONSTRUCTION

FRAME:	5½" x ⅞" x 16-GA galvanized steel hat channel
BLADES:	20-GA galvanized steel double skinned (equal to 14-GA); Parallel action
AXLES:	Plated solid steel stub
BEARINGS:	Oil impregnated bronze
LINKAGE:	Plated steel angle and crank plates with stainless steel pivots; In-jamb type
STOPS:	18-GA galvanized steel at head and sill
BLADE SEALS:	Silicone
JAMB SEALS:	Stainless steel
SLEEVE:	Minimum 20-GA galvanized steel by 18" long (sizes greater than 84" wide or 84" high require minimum 18-GA)
CAULKING:	Hardcast Irongrip 601 or UL-listed equivalent
FINISH:	Mill on galvanized steel
ACTUATOR:	Electric with heat response device (EHRD) or pneumatic with heat response device (PHRD); Factory-installed for Power-Open/Spring-Close (fail close) operation; External left hand mounted as viewed form jackshaft side of damper

OPTIONS

Exact Size
Sleeve - Transitions
Right Hand and/or Internal Actuator Mounting Locations (Restrictions Apply)
Integral Dual Position Indication (IDPI) Switches
Sensotherm Re-Openable Heat Response Device (ESOT) for Electric Actuator
Sensotherm Re-Openable Heat Response Device (ESOP) for Pneumatic Actuator
Model SM-501 Flow-Rated Smoke Detector (10" Minimum Damper Height)
Model 2151 No-Flow Smoke Detector (12" Minimum Damper Height)
Remote Test Box
Copper Tubing (for Pneumatic Actuators)
Transformers
Tab-Lock Retaining Angles
Bearings - Stainless Steel
Axle - Stainless Steel
Security Bars
Short-Width (<8") and/or Short-Height (<8") Transitions

NOTES

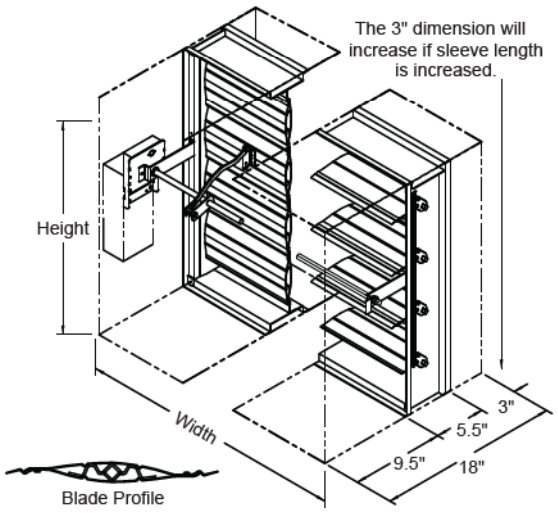
1. Damper frames are provided approximately ¼" undersized. The addition of a sleeve will increase the size of the assembly.
2. Damper with smoke detector must have a minimum sleeve of 19" (10.5" on the actuator side of 3" on the non-actuator side).
3. Dampers for horizontal installation can be mounted in a fire barrier constructed of masonry/concrete materials.

UNDERWRITERS LABORATORIES INC.®
CLASSIFIED DYNAMIC FIRE AND SMOKE DAMPER
FIRE RESISTANCE RATING 3 HR
LEAKAGE RESISTANCE CLASS II

This combination fire/smoke damper meets the construction and performance requirements of:

- Underwriters Laboratories Inc. Standards 555 and 555S
- National Fire Protection Association Standards 80 and 90A
- ICC's International Building Code
- New York City MEA Listing #111-99-M
- California State Fire Marshal Listing #3225-1328:118

- Underwriters Laboratories Inc. Approved for dual direction airflow and dynamic conditions.
- Underwriters Laboratories Inc. Classified for use in fire resistive ratings of 3 hours and longer.
- Underwriters Laboratories Inc. Classified for use in smoke control systems for Leakage Class II and 250°F or 350°F.
- Actuators must be arranged to operate automatically, must fail closed upon loss of power, and must be controlled by a smoke detection system.



DAMPER SIZE

		2000 fpm, 4 in.wg				4000 fpm, 6 in.wg	
Orientation	Hor & Vert	Horizontal		Vertical		Horizontal or Vertical	
Panel	Min Panel 250°/350°	Max Panel 250°/350°	Max Assy 250°/350°	Max Panel 250°/350°	Max Assy 250°/350°	Max Panel 250°	Max Assy 250°
Rectangular	4"W x 4"H (8"W x 8"H frame)	30"W x 48"H	60"W x 48"H	30"W x 48"H	60"W x 48"H	24"W x 24"H	60"W x 24"H
Round	4" dia. (8"W x 8"H frame)	28" dia.	46" dia.	28" dia.	46" dia.	22" dia.	22" dia.
Oval	4"W x 4"H (8"W x 8"H frame)	28"W x 46"H	58"W x 46"H	28"W x 46"H	58"W x 46"H	22"W x 22"H	22"W x 22"H

*Dampers smaller than minimum frame size require a transition. Reference SD-TRFS.

POST BOX No. : 1038, STREET No. 41, NEW INDUSTRIAL AREA, DOHA, QATAR
PHONE : 44980628, 44114635, 44184109, EMAIL : info@kmcqatar.com

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Operations Ratings:

Maximum Differential Pressure: 4 in. wg (6 in.wg for selected size/actuator combinations)
Maximum Velocity: 2000 fpm (4000 fpm for selected size/actuator combinations)

Leakage Ratings:

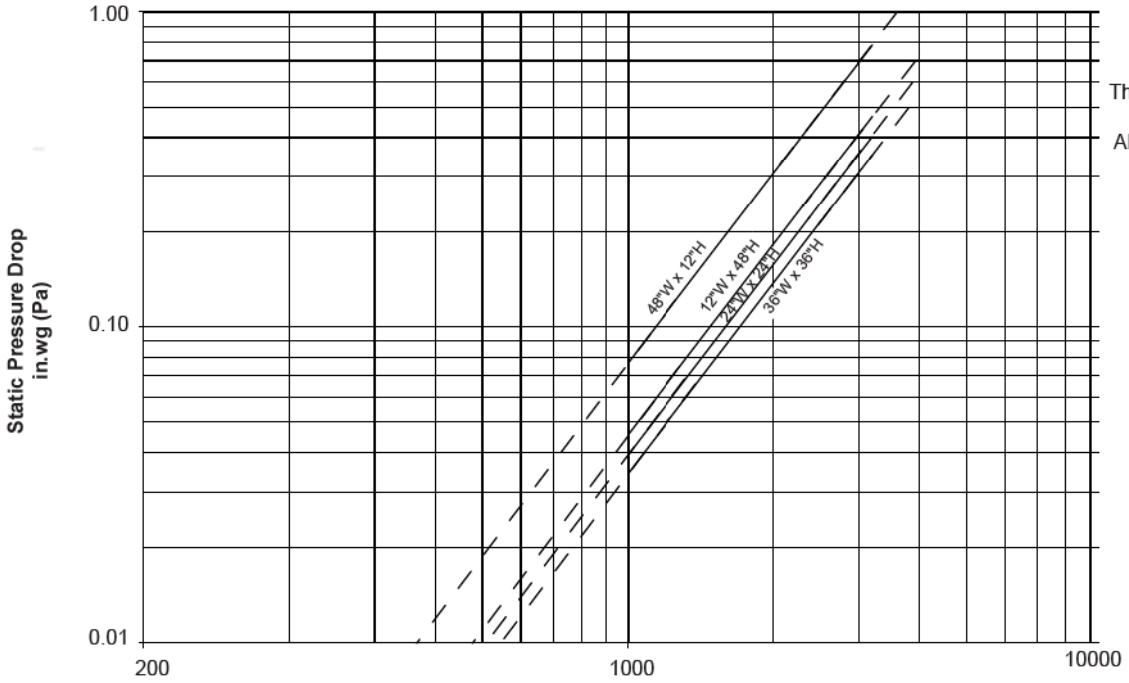
UL Class II
10 cfm per sq. ft. maximum @ 1 in. wg
20 cfm per sq. ft. maximum @ 4 in. wg
24.5 cfm per sq.ft. maximum @ 6 in. wg

Sound Ratings:

None Available

Pressure Drop Ratings:

The Pressure drop data shown below is based on laboratory conditions. The test setup does not take into account elbows or other duct fittings that are part of every actual duct system. The configuration of the actual duct system immediately upstream and downstream of the damper often contributes more pressure loss than the damper itself.



AMCA Figure 5.3

This product was tested in accordance with AMCA Standard 500D.