

Combination Fire/Smoke Damper • 3 Hr. Rated • Single Thickness Blade • Leakage Class I • 250°F or 350°F Rated • Galvanized Steel

**STANDARD CONSTRUCTION**

- FRAME:** 5½" x 7½" x 16 GA. galvanized steel hat channel; Flat 16 GA. galvanized head and sill for maximum free area on dampers ≤ 13" high.
- BLADES:** 16 GA. galvanized steel single thickness, 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 or on-blade type
- STOPS:** 18 GA. galvanized steel angles 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.
- 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 from jackshaft side of damper.
- FINISH:** Mill.

**OPTIONS**

Exact size (no undercut)

Actuators - 120V, 24V, 230V or pneumatic

Right hand and/or internal actuator mounting locations (restrictions apply)

Dual Position Indication (DPI) switches

Sensotherm Re-Openable Heat Response Device (ESOT) for electric actuator

Sensotherm Re-Openable Heat Response Device (PSOT) for pneumatic actuator

Model SM-501 flow-rated smoke detector

Model 2151 no-flow smoke detector (12" minimum damper height)

Momentary test switch

Remote test boxes

Copper tubing (for pneumatic actuators)

Transformers

Tab-lock retaining angles - 1 or 2 Sets

Stainless steel bearings

Stainless steel axles

Security bars

Sleeves of various depths and gauge thickness (restriction apply)

No sleeves (restriction apply)

Round or oval transitions

Short-width (<8") and/or short-height (<6") transitions

**NOTES**

- Nominal deductions will be made to the opening size given.
- Dampers greater than or equal to 12" in height with factory mounted SM-501 smoke detectors require a minimum 19" deep sleeve (10½" on the actuator side); detectors will be mounted on the side of the damper opposite actuator.
- Dampers less than 12" in height with factory mounted SM-501 smoke detectors require a minimum 20" deep sleeve (11½" on the actuator side); detectors will be mounted on the bottom or top of damper.
- Smoke detectors can be ordered for field mounting with standard 18" deep sleeve.
- Dampers for horizontal installation can only be mounted in a fire barrier constructed of masonry/concrete materials.
- Unless ordered with a smoke detector, the 3" sleeve setback on the non-jackshaft side will increase when sleeve lengths greater than 18" are ordered. Custom non-jackshaft side setback dimensions must be specified on order. When ordered with a smoke detector, additional sleeve length is added to jackshaft side. If ordered with smoke detector and additional sleeve length (beyond requirements of notes 2 and 3), additional sleeve length will be added to jackshaft side unless custom setback dimension is otherwise specified on order.

**DAMPER SIZES**

Orientation	Horz & Vert	2000 fpm, 4 in.wg				3000 fpm, 4 in.wg		
		Horizontal		Vertical		Horz & Vert	Horizontal	Vertical
Panels	** Min Panel	Max Single Panel	Max Assy Panel	Max Single Panel	Max Assy Panel	Max. Panel 250°	Max Assy 250°	Max Assy 250°
Rectangular	4"W x 4"H (8"W x 6"H frame)	30"W x 48"H 36"W x 30"H	60"W x 48"H	36"W x 48"H	108"W x 48"H	36"W x 36"H	60"W x 36"H	108"W x 36"H
Round	4" dia. (8"W x 6"H frame)	28" dia.	47" dia.	34" dia.	46" dia.	34" dia.	34" dia.	46" dia.
Oval	4"W x 4"H (8"W x 6"H frame)	28"W x 46"H 34"W x 28"H	58"W x 47"H	34"W x 46"H	106"W x 46"H	34"W x 34"H	58"W x 34"H	106"W x 34"H

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

www.louvers-dampers.com

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

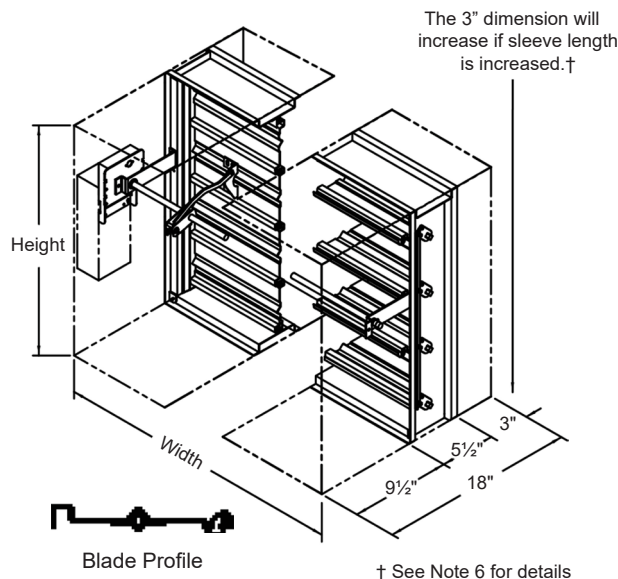
Louvers **LD** Dampers

**FILE # R16591**

**UL**

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

- Underwriters Laboratories Inc. Standard 555 and 555S.
- National Fire Protection Association Standards 80 and 90A.
- ICC's International Building Code.
- California State Fire Marshal Listing #3225-1328:115.
- New York City MEA Listing # 111-99-M.
- 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 I 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 detections system.

**Sizing Chart Notes:**

\* Dampers smaller than the minimum frame size require a transition. Reference SD-TRFS for details.

\*\* For damper sizes smaller than 16"W x 8"H, airfoil blades will be supplied.

\* For a true 6" high, width is limited to 16". When ordered as 6" high and width is less than 16", an 8" high damper with 2" short-height transition will be supplied.

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Maximum Differential Pressure: 4 in. w.g.

Maximum Face Velocity: 2000 fpm (3000 fpm for selected size/actuator combinations)

**LEAKAGE RATINGS**

UL Leakage Class I

4 cfm per sq.ft. maximum @ 1 in.wg

8 cfm per sq.ft. maximum @ 4 in.wg

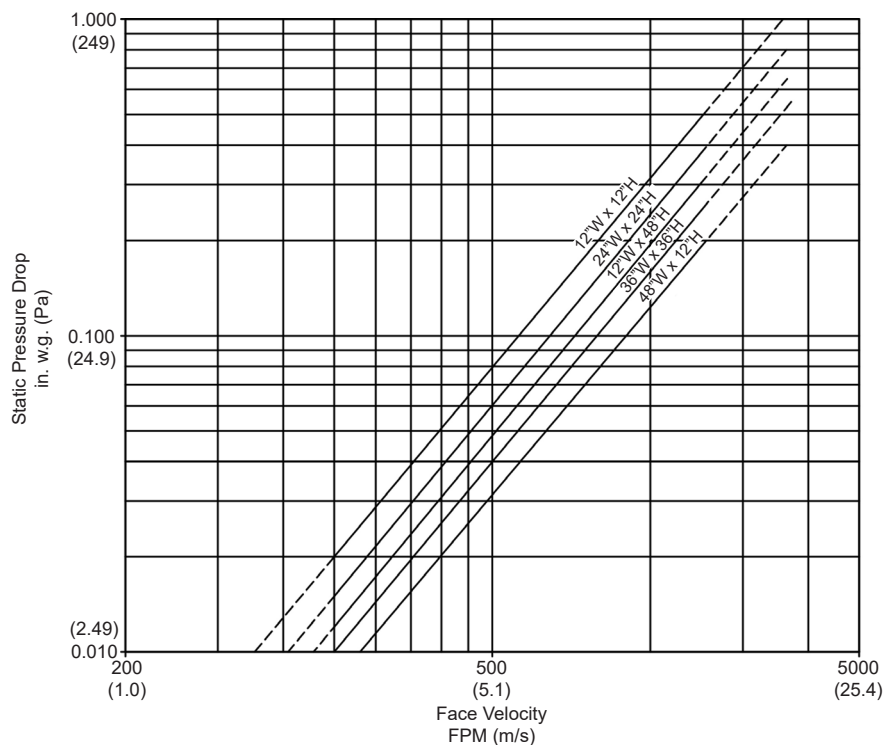
**SOUND RATINGS**


The Noise Criterion data below was tested in accordance with ASTM E477.99 in the center octave band.

Noise Criterion (NC)				
Damper Size	Velocity (fpm)			
	1000	2000	3000	4000
12"W x 12"H	31	53	64	71
24"W x 24"H	33	54	65	-

**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.

This product was tested  
in accordance with AMCA  
Standard 500D, Figure 5.3.Intake air converted to  
standard air density.

										
Item #	Qty	Damper Size	Horizontal	Vertical	250°F	350°F	Velocity	Pressure		<b><u>Union Made</u></b>
			Orientation		Temp. Rating		Operational Rating			
Arch. / Eng.:					EDR:		ECN:		Job:	
Contractor:										
Project:					Date:		DWN:		DWG:	

