

STANDARD MATERIALS AND CONSTRUCTION

- FRAME:** 5½" x 7⁄8" 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 or pneumatic; External left hand mounted as viewed from jackshaft side of damper.
- FINISH:** Mill.

OPTIONS

- Exact Size (no undercut)
- Sleeve - Transition
- Actuators - 120V, 24V, 230V or Pneumatic
- Right Hand and/or Internal Actuator Mounting Locations (Restrictions Apply)
- Dual Position Indication (IDPI) Switches
- Model SM-501 Flow-Rated Smoke Detector.
- Model 2151 No-Flow Smoke Detector (12" Minimum Damper Height)
- Momentary Test Switch
- Remote Test Box
- Copper Tubing (for Pneumatic Actuators)
- Transformers
- Tab-Lock Retaining Angles - 1 or 2 Sets
- Stainless Steel Bearings
- Stainless Steel Axles
- Security Bars
- Short-Width (< 8") and/or Short-Height (< 6") Transitions
- Round or Oval Transitions

NOTES

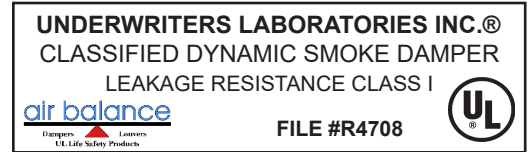
1. "A" width and "B" height are opening dimensions. Dampers are provided approximately ¼" undersize, unless otherwise specified.
2. Factory-installed Power-Open/Spring-Close (fail close) actuator operation only available on damper models rated for 250°F heat resistance, at 2000 fpm air velocity and 4 in. w.g. of differential pressure. Damper size cannot exceed 36"W x 36"H for a single panel or 108"W x 36"H for a complete assembly.
3. Damper ≥ 12" in height with factory mounted SM-501 smoke detectors require a minimum 19" deep sleeve (10.5" on the actuator side); detectors will be mounted on the side of the damper opposite actuator.
4. Damper < 12" in height with factory mounted SM-501 smoke detectors require a minimum 20" deep sleeve (11.5" on the actuator side); detectors will be mounted on the bottom or top of damper.
5. Smoke Detectors can be ordered for field mounting with standard 18" deep sleeve.

DAMPER SIZES

		2000 fpm, 4 in. w.g.				3000 fpm, 4 in. w.g.	
Orientation	Horizontal & Vertical	Horizontal & Vertical				Horizontal & Vertical	
Panels	Min. Panel Size	Max Panel 250°	Max Panel 350°	Max Assy 250°	Max Assy 350°	Max Panel 250°	Max Assy 250°
Rectangular	4"W x 4"H (8"W x 6"H frame)	36"W x 48"H	36"W x 48"H	144"W x 70"H 288"W x 35"H	128"W x 62"H 256"W x 31"H	36"W x 36"H	108"W x 36"H
Round	4" dia. (8"W x 6"H frame)	34" dia.	34" dia.	68" dia.	60" dia.	34" dia.	N/A
Oval	4"W x 4"H (8"W x 6"H frame)	36"W x 46"H	36"W x 46"H	45 sq.ft. 105"W x 68"H	106"W x 60"H	34"W x 34"H	106"W x 24"H

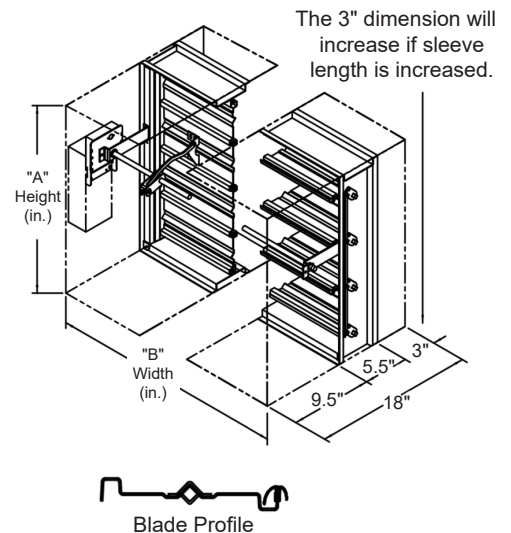
* Dampers smaller than minimum frame size require a transitions. Reference SD-TRFS.

** For sizes smaller than 16"w x 8"h, airfoil blades will be supplied.



This smoke damper meets the construction and performance requirements of:

- Underwriters Laboratories Inc. Standard 555S
- National Fire Protection Association Standards 80 and 90A
- ICC's International Building Code
- California State Fire Marshal Listing #3230-1328:106
- New York City MEA Listing 112-99-M
- Underwriters Laboratories Inc. Approved for dual direction airflow and dynamic conditions.
- Underwriters Laboratories Inc. Classified for use in smoke control systems for Leakage Class I and 250°F or 350°F.
- Actuators must be controlled by a smoke detection system.



Operations Rating:

Maximum Differential Pressure: 4 in.wg
 Maximum Face Velocity: 2000 fpm (3000 fpm for selected size/actuator combinations)

Leakage Rating:

UL Class I
 4 cfm per sq.ft. maximum @ 1 in.wg
 8 cfm per sq.ft. maximum @ 4 in.wg

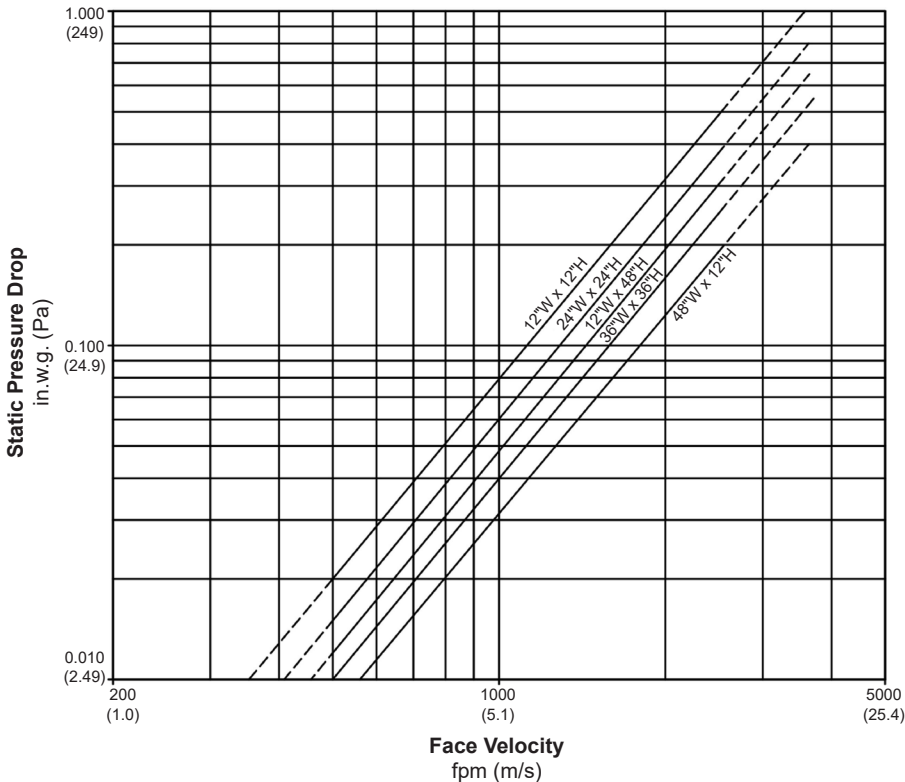
Sound Ratings:

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	n/a

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



Air Balance certifies that the model S1H damper shown here is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Air Performance Ratings only.

Item #	Qty	Width	Height	Temp Rating		Union Made	
		Damper Size					
Arch. / Eng. :				EDR:	ECN:	Job:	
Contractor:							
Project:				Date:	DWN:	DWG:	