

Application

The SD-25R smoke damper employs a single round blade for point-of-origin control of smoke in static and dynamic smoke management systems. This unique damper comes standard with mounting plates for interface to round or square openings in masonry, metal stud, or wood stud assemblies and is ideal for all round duct applications. The SD-25R, standard construction, is qualified to 2000 fpm (10.2 m/s) and 4 in. wg. (1.0 kPa) at 250° F (121°C). Optional construction is qualified to 3000 fpm (15.3 m/s) and 4 in.wg. (1.0 kPa) at 350° F (177°C) and may be installed in, or adjacent to vertical walls or partitions, or horizontally in, or adjacent to floors or assemblies.

Standard Construction

Sleeve/Frame: Integral 16" × 20 gauge (203 × 1.0) galvanized steel with reinforcing beads.

Retaining Plates: Dual sided system suitable for round or square penetrations.

Blade: 14 gauge (2.0) equivalent galvanized steel — round.

Axles: 1/2" (13) diameter plated steel, D<8" (203), 3/4" (19), D≥8" (203).

Linkage: In the air-stream.

Bearings: Bronze oilite, sleeve-type.

Seal: Silicone blade edge seal.

Actuator: 120 VAC, power-open, spring-close, external mount.

Minimum Size: 6" Ø (152 Ø)

Maximum Size: 24" Ø (610 Ø)

Options

- Alternate actuator:
 - 24 VAC
 - 230 VAC
 - Pneumatic
- Alternate sleeve/frame length:
 - 20" (508)
 - 24" (610)
- Remote control stations:
 - RCP-1 (single)
 - RCP-1K (single, key controlled)
 - RCP-1M (single, momentary switch)
- Type-304 stainless steel construction.

Ratings

UL 555S Leakage Class: 1 [8 cfm/sq.ft. @ 4 in.wg.]
[(0.04 m³/s/m² @ 1.0 kPa)]

Maximum Dynamic Closure Velocity: 3,000 fpm (15.3 m/s)

Maximum UL555S Rated Pressure: 4 in.wg. (1.0 kPa)

Maximum Temperature: 350°F (177°C)

Listings

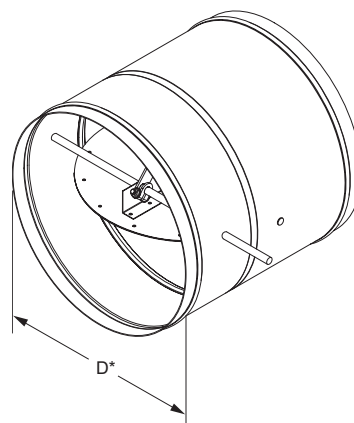
UL 555S listing: R11767

CSFM listing: 3230-0368:113

New York City MEA listing: 295-98-E

Meets NFPA Standards: 90A, 92A, 92B and 101

Meets Building Code Standards: IBC, NBC, NFPA, SBC and UBC



Model **SD-25R**
(standard)

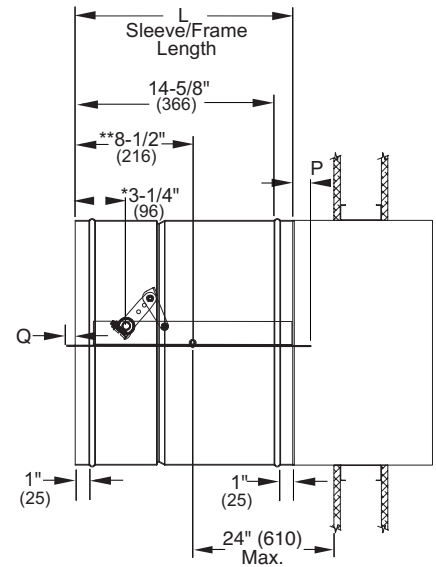
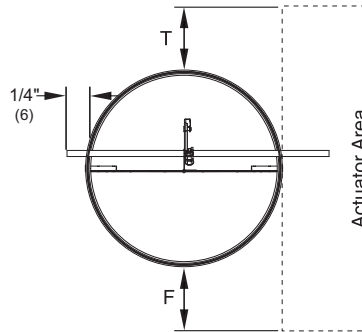
*Damper dimensions furnished approximately 1/8" (3) undersize. Outside diameter including reinforcing beads is approximately $D + 1/8$ (3), and at axle center line diameter including axle heads is approximately $D + 3/8$ (10).

Actuator and Sleeve Dimensional Data

The drawings and corresponding table illustrate the position of the damper and the relative space required for a given actuator. The standard mounting locations provide enough space for installation of retaining plates and duct connections.

| | Damper Diameter | Actuator Model | | | | | |
|-----|-----------------|-------------------|-------------------|------------------|------------------|----------|----------|
| | | FSLF120 FSLF24 | FSNF120 FSNF24 | GGD221 GGD121 | ML4115 ML8115 | 331-4826 | 331-2998 |
| F | 6" | 3-1/2" | 5" | 7" | 3-1/2" | 8" | 12" |
| | 8" | 2-1/2" | 4" | 6" | 2-1/2" | 6" | 10" |
| | 10" | 2-1/2" | 3" | 5" | 2-1/2" | 5" | 9" |
| | 12" | 2-1/2" | 2-1/2" | 4" | 2-1/2" | 4" | 8" |
| | 14" | 2-1/2" | 2-1/2" | 3" | 2-1/2" | 3" | 7" |
| | 16" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 6" |
| | 18" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 5" |
| | 20" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 4" |
| | 22" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 3" |
| | 24" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" |
| T | All | 0" | 0" | 0" | 0" | 0" | 0" |
| S | All | 6" | 6" | 6" | 6" | 6-1/2" | 8-3/4" |
| P | 8"-14" | 0" | 0" | 0" | 0" | 0" | 0" |
| | 16" | 1/2" | 1/2" | 1/2" | 1/2" | 1/2" | 1/2" |
| | 18" | 1-1/2" | 1-1/2" | 1-1/2" | 1-1/2" | 1-1/2" | 1-1/2" |
| | 20" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" | 2-1/2" |
| | 22" | 3-1/2" | 3-1/2" | 3-1/2" | 3-1/2" | 3-1/2" | 3-1/2" |
| 24" | 4-1/2" | 4-1/2" | 4-1/2" | 4-1/2" | 4-1/2" | 4-1/2" | |
| Q | 8-16" | 0" | 0" | 0" | 0" | 0" | 0" |
| | 18" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" |
| | 20" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" | 1-1/4" |
| | 22" | 2-1/4" | 2-1/4" | 2-1/4" | 2-1/4" | 2-1/4" | 2-1/4" |
| 24" | 3-1/4" | 3-1/4" | 3-1/4" | 3-1/4" | 3-1/4" | 3-1/4" | |

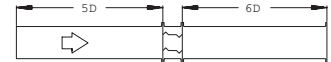
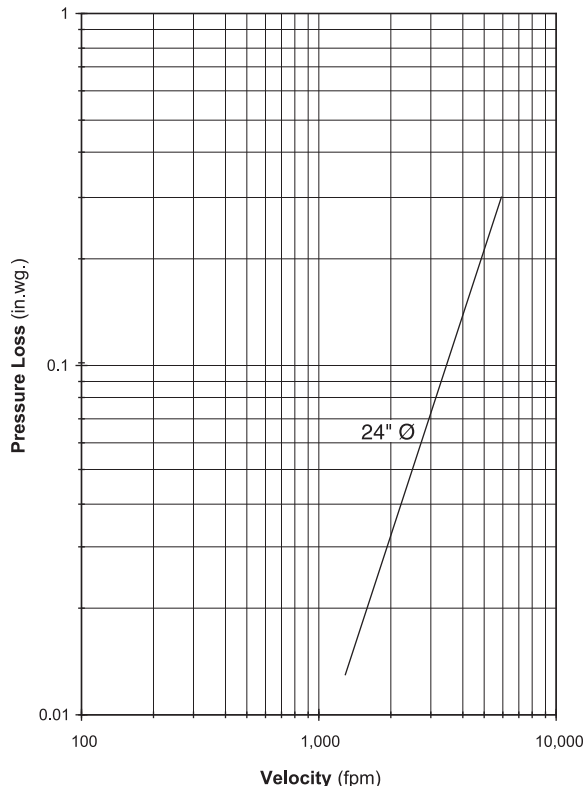
NOTE: 1. Standard sleeve length "L" = 16" (406).
2. Dimensions for ML-4115/ML-8115 apply to MS-4209/MS-8209.



*3-3/4" (95) D<8" (203)
**8-5/8" (219) D<8" (203)

Pressure Drop Performance Data

Pressure drop testing was performed in accordance with AMCA Standard 500-D. All data has been corrected to represent air density of 0.075 lb/ft. Actual pressure drop in any ducted HVAC system is a combination of many elements. This information, along with analysis of other system influences, should be used to estimate actual pressure losses for a damper installed in a given HVAC system.



Ducted Inlet and Outlet
AMCA Figure 5.3 illustrates a fully ducted damper. This configuration represents the low pressure drop because entrance and exit losses are minimized by straight duct runs upstream and downstream of the damper.