

## Application

The CFS-131 combination ceiling radiation-smoke and fire-smoke damper employs triple-V blades for point-of-origin control of radiant heat, fire, and smoke in static and dynamic smoke management systems. The CFS-131 is installed horizontally in the ceiling membrane of floor-ceiling or roof-ceiling assemblies with fire resistance ratings up to and including 3 hours and is also qualified for smoke membranes to 2,000 ft/min (10.2 m/s) and 4 in. wg. (1.0 kPa) and may be installed horizontally in floors or assemblies with fire resistance ratings up to 2 hours.

## Standard Construction

**Frame:** 5" × 1" (127 × 25) galvanized steel hat channel with interlocking corner gusset. Equivalent to 13 gauge (2.4) channel frame. Low profile head and sill are used on sizes less than 13" (330) high.

**Blades:** 6" × 16 gauge (152 × 1.6) galvanized steel — triple-V.

**Sleeve:** 14<sup>5</sup>/<sub>16</sub>" × 20 gauge (364 × 1.0) galvanized steel.

**Axles:** ½" (13) diameter plated steel hex.

**Linkage:** Concealed in frame.

**Bearings:** Stainless steel oilite, sleeve-type.

**Seals:** Silicone blade edge seals and flexible metal jamb seals.

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

**Fire Closure Device:** HS-10 (electric actuators)  
 PFV (pneumatic actuators)

**Fire Closure Temperature:** 165°F (75°C).

**Minimum Size:** 6" × 6" (152 × 152)

**Maximum Size:** Square: 12" × 12" (305 × 305)  
 Rectangular: 24" (610) W or 12" (305) H  
 with a maximum area of 144 in.<sup>2</sup> (929 cm<sup>2</sup>)

## Options

- Alternate actuator:
  - 24 VAC    230 VAC    Pneumatic
- DRS-30 — Two temperature fire closure device.  
 (Includes PI-50 switch package)
- PI-50 — Dual position indicator switch package.
- Transitions:    Round    Oval    Square/Rectangular
  - Top    Bottom   Side:  W    P    S & Drive
- Blank-off (top only)
- Plaster Ground:    5.8" (16) deep × 5/8" (16) wide std.
  - 1 1/4" (32) deep × 1 1/4" (32) wide
  - 2" (51) deep × 5/8" (16) wide
- Flange:    3/4" (19) std    1" (25)
- CRB-24 Thermal blanket for steel backed diffuser.
- Duct smoke detector factory mounted and wired:
  - D4120 (100-4,000 fpm [0.5-20.3 m/s])
  - 2151 (0-3,000 fpm [0-15.2 m/s])
- Alternate fire closure temperature:
  - 212°F (100°C)    250°F (121°C)
  - 350°F (177°C).

## Ratings

**UL 555C Fire Resistance Rating:** 3 hour (horizontal, for use in 1, 2 or 3 hour rated assemblies)

**UL 555 Fire Resistance Rating:** 1½ hour (horizontal)  
 1 hour (tunnel-type corridor ceiling)

**UL 555S Leakage Class:** 1 [8 cfm/sq.ft. @ 4 in.wg.]  
 [(0.04 m<sup>3</sup>/s/m<sup>2</sup> @ 1.0 kPa)]

**Maximum Dynamic Closure Velocity:** 2,000 fpm (10.2 m/s)

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

**Maximum Temperature:** 350°F (177°C)

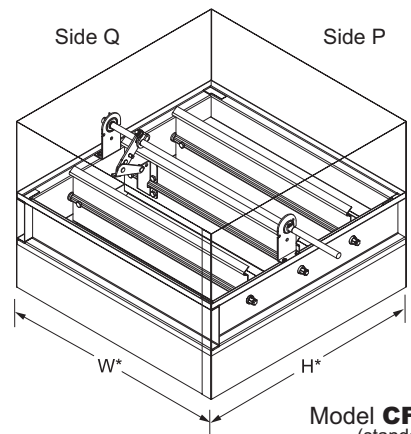
## Listings

**UL 555C, 555 and 555S:** R14980 and R14981

**CSFM listing:** 3226-1404:100

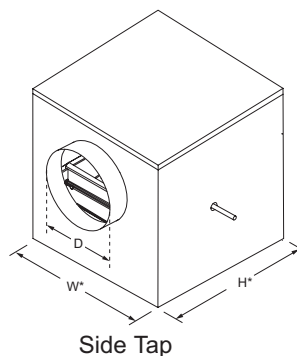
**Meets NFPA Standards:** 90A, 92A, 92B and 101

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

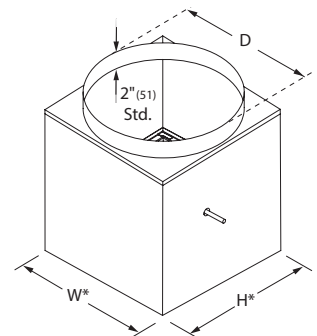


**Model CFS-131**  
(standard)

\*Damper dimensions furnished approximately 1/4" (6) undersize. (sleeve thickness not included)



Side Tap

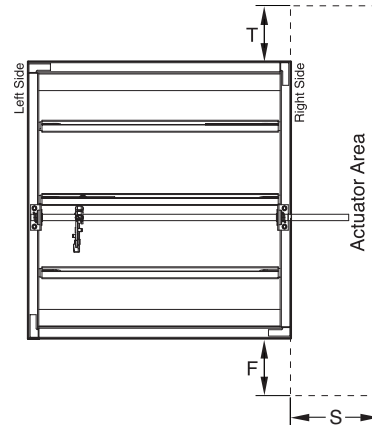


**Type R, Top, (optional)**  
 Round duct transitions are standard with D=W=H. (available with D<W and H)(shown with top transition only)

# Actuator and Sleeve Dimensional Data

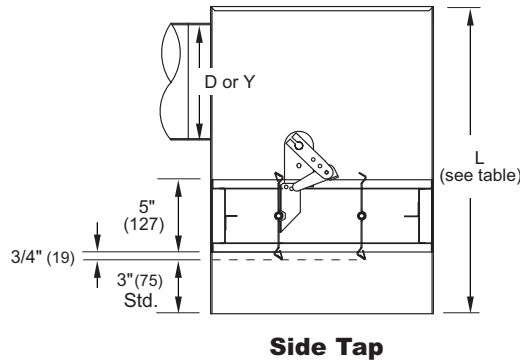
The drawings and corresponding table illustrate the position of the damper when mounted in a factory sleeve and the relative space required for a given actuator. The standard mounting locations provide enough space for installation of retaining angles and duct connections.

	Damper Height	Actuator Model					
		FSLF120 FSLF24	FSNF120 FSNF24	GGD221 GGD121	ML4115 ML8115	331-4826	331-2998
F	6"-7" 8"-9" 10-11" 12"	5" 4" 1" 0"	7" 7" 4" 3"	9" 8" 6" 5"	5" 4" 1" 0"	9" 8" 5" 4"	13" 12" 9" 8"
T	6" and 10" 7" and 11"-12" 8" 9"	3" 2" 1" 0"	3" 2" 1" 0"	3" 2" 1" 0"	3" 2" 1" 0"	3" 2" 1" 0"	3" 2" 1" 0"
S	All	4-1/2"	4-1/2"	4-1/2"	4-1/2"	5"	7-1/4"
X	<8" ≥8"	4" 2-5/8"	4" 2-5/8"	4" 2-5/8"	4" 2-5/8"	4" 2-5/8"	4" 2-5/8"
J	<8" ≥8"	2" 3-3/8"	2" 3-3/8"	2" 3-3/8"	2" 3-3/8"	2" 3-3/8"	2" 3-3/8"

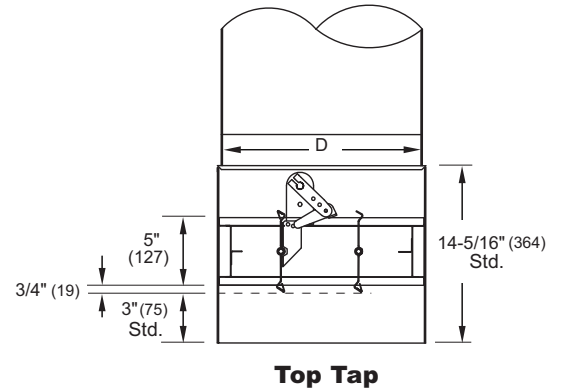


NOTE: For dimensions on actuators not shown above, contact factory.

"D" or "Y" Dimension	Sleeve Length "L" (Side Tap)
D or Y ≤ 6" (152)	16" (406)
D or Y > 6" (152)	D or Y + 10" (254)

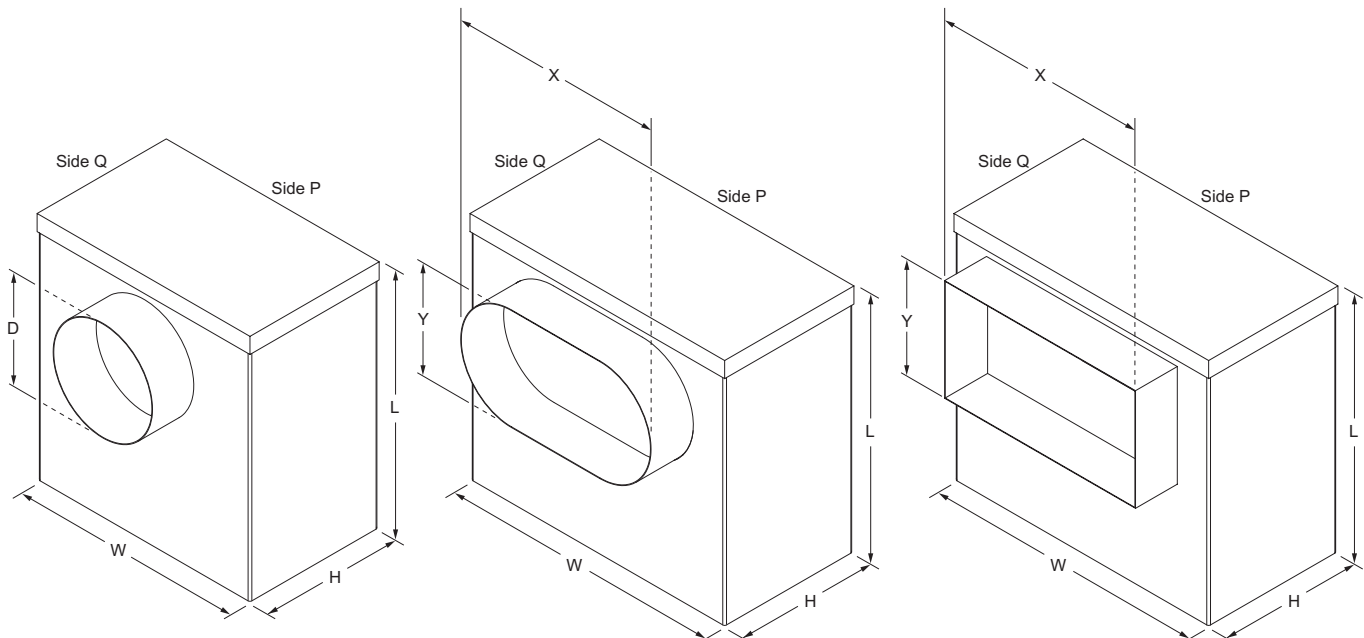


Side Tap



Top Tap

# Typical Duct Transitions



Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses ( ) are millimeters.