

MODEL FS1G/F (Leakage Class I)

- FRONT ACCESS DAMPERS FOR GRILLE INSTALLATIONS (VERTICAL & HORIZONTAL)
- LEAKAGE AND TEMPERATURE RATED COMBINATION FIRE/SMOKE DAMPERS
- TEMPERATURE CLASS 250°F/350°F

STANDARD MATERIALS AND CONSTRUCTION

FRAME: 5 1/2" x 7/8" x 16-GA galvanized steel hat channel.
BLADES: 16-GA galvanized steel, single thickness, parallel action.

AXLES: Square, plated solid steel stub.

BEARINGS: Oil Impregnated Bronze.

LINKAGE: In-jamb type, located out of the airstream; galvanized steel angle interconnect, with stainless steel pivots.

STOPS: 20-GA galvanized steel at head and sill.

BLADEEDGE

SEALS: Silicone.

JAMB SEALS: Stainless steel.


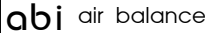
SLEEVE: 20-GA galvanized steel by 15" long (1 1/2" grille clearance) or 17" long (3 1/2" grille clearance) with 13/16" front flange.

FINISH: Mill on galvanized steel.

ACTUATOR: 120 VAC electric with 165°F thermal disc, factory-installed for Power-Open/Spring-Return (fail close) operation. Actuator is internally mounted and accessible from grille side.

NOTE: Maximum Velocity of 2000 fpm and 4 in. wg static pressure.

UNDERWRITERS LABORATORIES INC.®
 CLASSIFIED FIRE DAMPER
 FIRE RESISTANCE RATING 1 1/2 HR
 ALSO AS TO LEAKAGE RESISTANCE CLASS I

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

- Underwriters Laboratories Inc. Standards 555 and 555S
- National Fire Protection Association Standards 90A, 92A and 92B
- ICC's International Building Code
- ICBO's Uniform Building Code
- SBCCI's Standard Building Code
- BOCA's National Building Code
- New York City MEA Listing #111-99-M
- California State Fire Marshall Listing #3225-1328:113, 114

DIMENSIONAL DATA

Minimum Size: *12"W x 12"H

Maximum Size: 36"W x 42"H

ROUND DUCT TRANSITION:

Minimum Size: 10" Diameter

Maximum Size: 34" Diameter

*Units under 16" in width are leakage Class II.

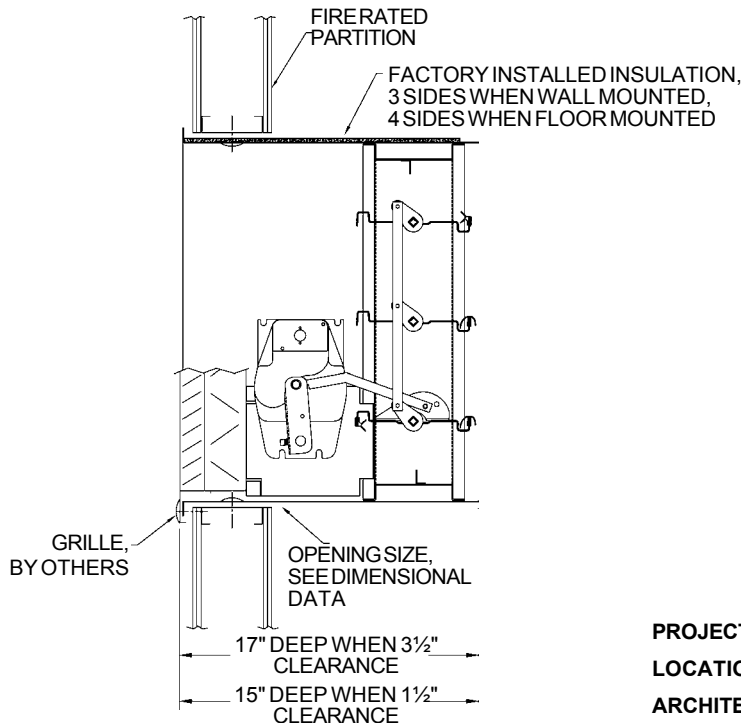
Overall sleeve width and sleeve height will be 2" greater than ordered round duct size.

Opening Size - No expansion clearance is required but sufficient clearance between the damper and the opening is required for the insulation and for mounting. The minimum width shall be 3/8" larger than the nominal size. The minimum opening height shall be 1/4" larger than the nominal size when vertically mounted. When horizontally mounted, the opening height shall be 3/8" larger than the nominal size. The maximum sizes shall be no more than 1/4" greater than the minimum sizes.

Example: An 18" wide by 24" high nominal size damper when mounted vertically, will require a minimum opening width of 18 3/8" and a minimum opening height of 24 1/4".

AVAILABLE OPTIONS: (Must Be Specified)

1. 212°F thermal disc.
2. Dual position indication package. These optional auxiliary blade position indication switches are intended to make or break a circuit and will not provide variable or proportional resistance.
3. Tab-Lock Retaining Angles.
4. Round duct transition, one or two sides.
5. "Sens-O-Therm" Thermally Reopenable Temperature Sensing System is available with 165°F (Standard) or 212°F settings. This system includes open and closed position indicator switches. It also includes a second thermal disc to re-close the damper when the rated degradation temperature (250°F or 350°F) is reached.



PROJECT:
LOCATION:
ARCHITECT:
ENGINEER:
CONTRACTOR:
PO NUMBER:
DATE:

AIR BALANCE SUBMITTAL DATA

PERFORMANCE

**MAXIMUM DIFFERENTIAL
PRESSURE:** 4 in. wg
MAXIMUM VELOCITY:
2000/3000 FPM Based on Actuator Model

LEAKAGE

Definition: UL 555S Class I:
Leakage Not Greater Than:
4 CFM per sq. ft. @ 1 in. wg
8 CFM per sq. ft. @ 4 in. wg

ELECTRIC

HONEYWELL	Voltage	Maximum Single Panel Size		Minimum Size
		@250°F	@350°F	
ML4202/4302 ML8202/8302	120VAC 24VAC	1 Sq. Ft.	N/A	12" x 12"
ML4115 ML8115	120VAC 24VAC	24" x 24"	N/A	12" x 12"
MS4209/4309 MS8209/8309	120VAC 24VAC	36" x 36"	24" x 24"	12" x 12"
MS4120 MS8120	120VAC 24VAC	36" x 42" (Up to 36" x 36" rated to 3000 fpm, 4 in. wg.)	36" x 42"	12" x 20"

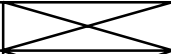

SIEMENS

GGD221 GGD121 GGD321	120VAC 24VAC 230VAC	36" x 42"	N/A	12" x 20"
----------------------------	---------------------------	-----------	-----	-----------

BELIMO

FSNF120 FSNF24	120VAC 24VAC	36" x 36"	36" x 36"	12" x 20"
-------------------	-----------------	-----------	-----------	-----------

PNEUMATIC

SIEMENS		Maximum Single Panel Size		Minimum Size
		@250°F	@350°F	
331-4830		24" x 24" @ 25 psi	N/A	12" x 16"
331-2977		36" x 36" @ 20 psi	24" x 24" @ 25 psi (Sens-O-Therm N/A)	12" x 20"

GENERAL NOTES

1. Underwriters Laboratories Inc. approved for dual direction flow and dynamic applications.
2. Underwriters Laboratories Inc. Classified for use in fire resistance ratings of less than 3 hours, in accordance with UL Standard 555.
3. Underwriters Laboratories Inc. Classified leakage rated damper for use in smoke control systems designed for Leakage Class I, and Temperature Class 250°F of 350°F in accordance with UL Standard 555S.
4. Installation must comply with the requirements of NFPA-90A & -92A. Actuators must be arranged to operate automatically, must fail close upon loss of power, and must be controlled by a smoke detection system.