Combination Fire/Smoke Damper • 11/2 Hr. Rated • Airfoil Blade • Leakage Class II • 250°F or 350°F Rated • Front Grille Access • Galvanized Steel

STANDARD CONSTRUCTION

FRAME: 5½" x 16 GA. galvanized steel hat channel.

BLADES: 20 GA. galvanized steel, double skinned (equal to 14 GA.),

parallel action

AXLES: Square plated solid steel stub. **BEARINGS:** Oil impregnated bronze.

LINKAGE: Plated steel angle and crank plates with stainless steel pivots,

in-jamb type.

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

BLADE SEALS: Silicone.

JAMB SEALS: Stainless steel.

SLEEVE: 20 GA. galvanized steel by 15" long (1½" grille clearance) or 17" long (3½" grill clearance) with 13/16" front flange.

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 poweropen/spring-close (fail close) operation. External left hand mounted as viewed from jackshaft side of damper.

FINISH: Mill or galvanized steel.

OPTIONS

Integral Dual Position Indication (IDPI) Switches

Sensotherm Re-Openable Heat Response Device (ESOT) for Electric Actuator Sensotherm Re-Openable Heat Response Device (ESOP) for Pneumatic Actuator Model SM-501 Flow-rated smoke detector

- Shipped Loose

Model 2D51 No-flow smoke detector (14" Minimum Damper Height)

Tab-Lock retaining angles

Stainless steel bearings

Copper tubing (for Pneumatic Actuators)

Sleeves of various gauge thicknesses

Round or oval transitions

Short-width (less than 10") and/or short-height (less than 10") transitions

NOTES

- 1. Damper frames are provided approximately ¼" undersized. The addition of a sleeve and insulation will increase the size of the assembly. See II-FAGM for sizing openings.
- 2. Damper with smoke detector must have a minimum sleeve of 16" (1½" setback) or 18" (3" setback).
- 3. Dampers for horizontal installation can only be mounted in a fire barrier constructed of masonry/concrete materials.

DAMPER SIZES

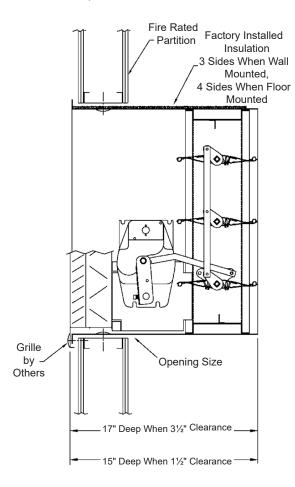
		2000 fpm, 4 in. w.g.	4000 fpm, 6 in. w.g.		
Orientation	Hor & Vert	Hor & Vert	Hor & Vert		
Panel	Min Panel	Max Panel	Max Panel		
Rectangular	10"W x 8"H (10"W x 8"H frame)	32"W x 42"H	24"W x 20"H		
Round	6" dia. (10"W x 8"H frame)	30" dia.	18" dia.		
Oval	8"W x 6"H (10"W x 8"H frame)	30"W x 40"H	22"W x 18"H		

^{*}Dampers smaller than minimum frame size require a transition. Reference SD-TRFS.

UNDERWRITERS LABORATORIES INC.® CLASSIFIED DYNAMIC FIRE AND SMOKE DAMPER FIRE RESISTANCE RATING 1½ HR LEAKAGE RESISTANCE CLASS II LOUVERS Dampers FILE # R16591

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

- Underwriters Laboratories Inc. Standards 555 and 555S
- National Fire Protection Association Standards 80, 90A, 92, 101, 105
- ICC's International Building Code
- New York City MEA Listing #111-99-M
- California State Fire Marshal Listing #3225-1328:118
- Underwriters Laboratories Inc. Approved for dual direction airflow and dynamic conditions.
- Underwriters Laboratories Inc. Classified for use in fire resistive ratings of less than 3 hours.
- Underwriters Laboratories Inc. Classified for use in smoke control systems for Leakage Class II 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 detection system.



For handwritten orders, use the schedule block on page 2.

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

Dampers

A Mestek Company

Combination Fire/Smoke Damper • 11/2 Hr. Rated • Airfoil Blade • Leakage Class II • 250°F or 350°F Rated • Front Grille Access • Galvanized Steel

OPERATIONAL RATINGS

Maximum Differential Pressure: 4 in. w.g. Maximum Velocity: 2000 fpm

LEAKAGE RATINGS

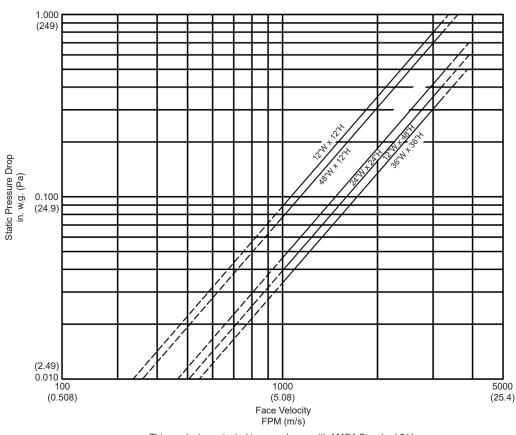
UL Leakage Class II

10 cfm per sq. ft. maximum @ 1 in. w.g.

20 cfm per sq. ft. maximum @ 4 in. w.g.

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.



Sizes listed on this chart exceed the size limitations of the MA2GF. These sizes are based on the model MA2 approval.

This product was tested in accordance with AMCA Standard 511.

Intake air converted to standard air density.

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

