

**Corridor Fire/Smoke Combination Damper – Model 471 CLASS I**

**Features** – U.L. rated for dynamic closure & leakage CLASS I @ 250° F or 350° F. Meets NFPA 90A & UL 555 & UL 555S. Seismic and Fragility tested. Meets California State Fire Marshal Requirements.

**STANDARD CONSTRUCTION**

**FRAME**

4-5/16" deep, 16 gauge galvanized steel

**BLADES**

6 1/2" wide, 16 gauge galvanized steel  
(Bottom blade width may vary depending on damper height)

**BLADE AXLES & BEARINGS**

AXLES – 7/16" Dia. Plated hex mechanically fastened to blade  
BEARINGS – 1/2" Dia. Bronze oil impregnated

**LINKAGE**

Plated steel in opposed blade configuration, concealed inside the jamb

**SEALS**

Extruded Silicone blade edge and stainless steel jamb seals

**MAXIMUM UL CLASSIFIED LEAKAGE CLASS I SIZE**

24" W x 24"H

**MINIMUM UL CLASSIFIED LEAKAGE CLASS I SIZE**

12"W x 9"H

**SLEEVE**

18 ga. x 16" deep galvanized steel

**UNDERSIZED**

1/4" under ordered size unless specified Exact or Actual

**FINISH**

Mill

**HEAT SENSOR**

120 VAC, 165° to 350°

**OPERATOR**

Refer to UL approved actuator chart

**MOUNTING ANGLES**

1-1/2" x 1-1/2" x 18 ga. galvanized steel

**OPTIONAL CONSTRUCTION**

**SLEEVE AND DUCTWORK CONNECTION** – 10 ga. to 20 ga. galvanized steel to 30" in length. – Transitions available in: round, oval, rectangular or custom. Factory can install access door, retaining angles, or flange connections.

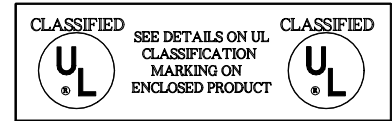
\*Dampers 11" high and under will be single blade, and extend from the frame proportionately

**ACCESSORIES**

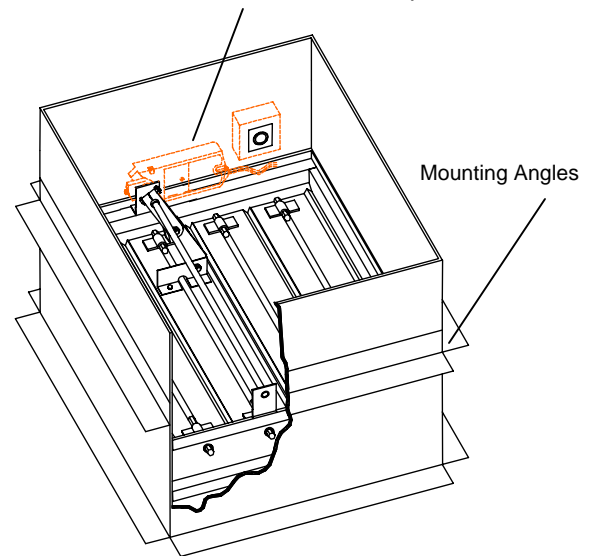
- Smoke Detector
- Indicator Switches
- Monitoring Station
- Dual Sensors



03225-0751-104



Internal Motor Mount Only



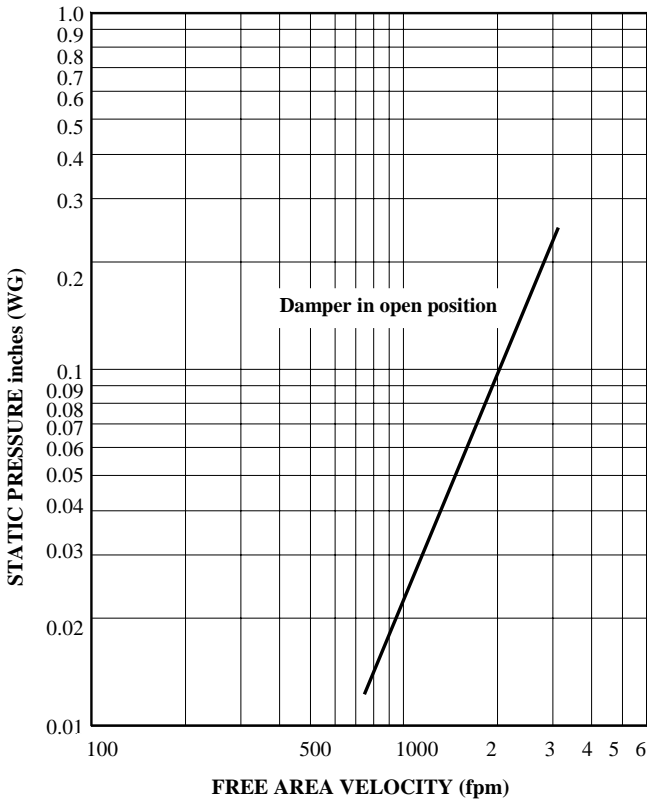
**APPROVED ACTUATORS**

	Honeywell	Siemens	Belimo
24 Vac -	ML 8115	GND121.1U	FSNF24 US*
	MS 8209	GND126.1U	
	MS 8120	GGD121.1U	
120 Vac -	ML 4115	GND221.1U	FSNF120 US*
	MS 4209	GND226.1U	
	MS 4120	GGD221.1U	
230 Vac -		GND321.1U	
		GGD321.1U	
Pneumatic -		331-2961	
		331-3060	
		331-4826	

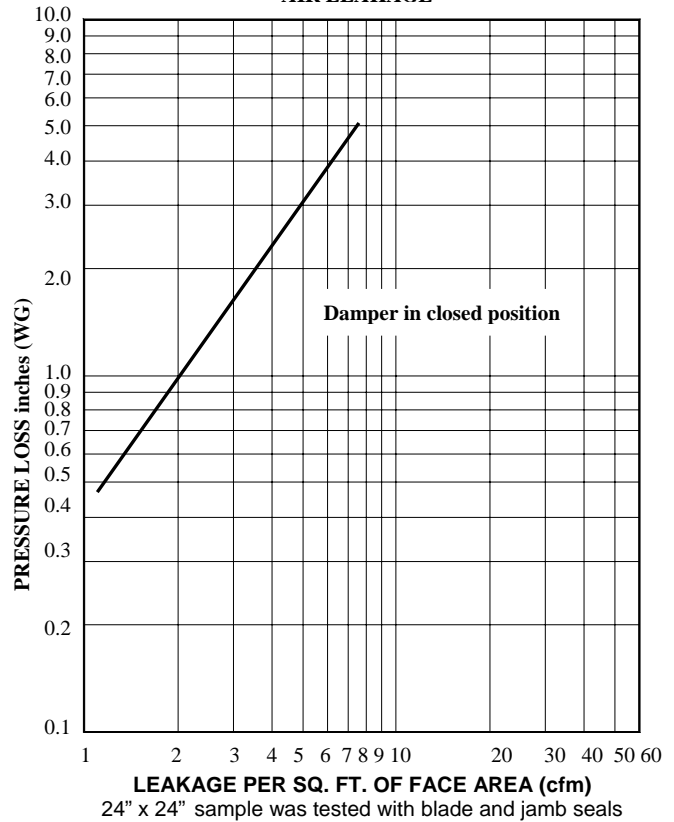
\* Only for dampers up to 24" x 24"

DATE	ARCHITECT			ENGINEER
PROJECT				
ITEM	QTY	W	H	DESCRIPTION

**AIR PERFORMANCE**



**AIR LEAKAGE**



**CALCULATING PRESSURE LOSS:**

Based upon a given flow rate (in CFM), the flowing pressure loss may be determined from the "air performance graph, knowing the sq. ft. of free area of the damper. Alternately, the free area may be determined based upon a volumetric flow rate and a maximum pressure loss. Utilizing the "air performance" graph.

\_\_\_\_\_ in. W.C. Max. Pressure Loss Intake or Exhaust  
 \_\_\_\_\_ FPM (Free Area Velocity From "Air Performance" Graph)  
 \_\_\_\_\_ CFM / \_\_\_\_\_ FPM Free Area Velocity = \_\_\_\_\_ Sq. Ft. Free Area

**U. L. CLASSIFIED DYNAMIC CLOSURE RATING**

Our maximum recommended operating for this damper is 2000 fpm @ 4" static pressure. This damper has been tested in accordance with the U.L. requirements for closure under installed " system in operation " conditions, (Dynamic closure). Single sections 24" w x 24" h have been tested capable to close, mounted either vertical or horizontal, at 3000 fpm. @ 8" static pressure.

**FREE AREA CALCULATIONS IN SQ. FT.**

		WIDTH			
HEIGHT	Inches	12	16	20	24
	12	0.56	0.78	1.00	1.22
	16	0.83	1.17	1.50	1.83
	20	1.06	1.48	1.91	2.33
	24	1.28	1.80	2.31	2.83