



## MODEL: BMI-V-FSS-MS-101

### COMBINATION FIRE/SMOKE DAMPER

Triple "V" Blade, 1-1/2 hours., Class 1, UL-listed.

#### APPLICATION:

Model BMI-V-FSS-MS-101 is a combination fire/smoke damper with triple "V" style blades. The BMI-V-FSS-MS-101 is a class 1 low leakage damper used to restrict the spread of fire/smoke in HVAC system that are designed to be automatically shut down in the event of the fire. It is rated for airflow and leakage in either direction. The BMI-V-FSS-MS-101 is installed Vertically as well as Horizontally.



#### RATINGS:

Fire Rating:	1-½ hr
Leakage Rating:	Class 1
Max. Velocity:	2000fpm
Max: Static Pressure:	4.0" w.g
Temperature Rating:	250 Degree F.
Operation Rating:	Power Open

#### STANDARD CONSTRUCTION:

Frame	16 Ga. Galvanized Steel Hat Channel
Blade Material	16 Ga. Galvanized Steel
Sensor	Temperature Responsive Device (TRD) 165 Deg F
Blade Type	Triple "V" formed
Actuator	Electric two position spring return 24V or 120V
Axle Material	Fire Resistant Bronze/Brass bushing
Finish	Mill Galvanized
Linkage	2.5mm (0.10") zinc plated steel concealed in the frame
Sleeves	16" x 18-Gauge Galvanized steel factory installed
Blade Seals	Silicone rubber gasket with laminated acrylic adhesive bonded to blade edges
Jamb Seals	Corrosion Resistant Stainless Steel
Connecting Rod	0.472" x 0.472" (12mm x 12mm) Zinc Plated Square Steel
Leakage Class	Class 1 250 Degree F
UL Hour Rating	1.5 Hour

#### MINIMUM & MAXIMUM SIZES:

Minimum Size (W x H)	Maximum Size (W x H)	
Single Section Vertical / Horizontal	Single Section Vertical / Horizontal	Multiple Section Vertical / Horizontal
6" x 6" (152.4 mm) x (152.4 mm)	36" x 36" (914 mm) x (914 mm)	72" x 72" (1828.8 mm) x (1828.8 mm)

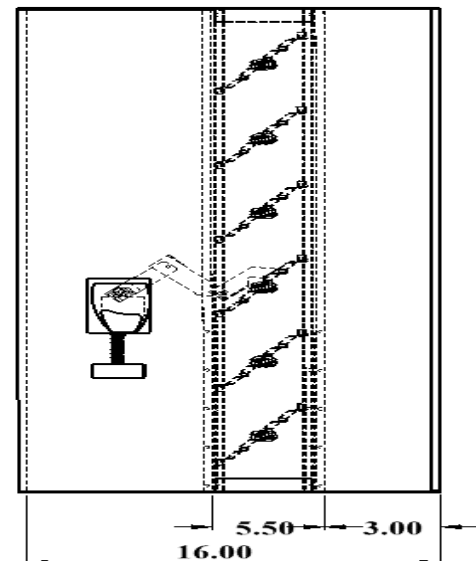
Minimum Duct Size: Vertical / Horizontal Mount 4" x 4" (C-style) (enclosure)

#### LISTINGS:

UL 555 & UL 555S  
ULC S112.1

#### STANDARDS MET:

NFPA 90A  
International Building Code  
National Building Code (NBC Canada)  
SMACNA



#### OPTIONAL CONSTRUCTION:

- ☐ Auxiliary Switch
  - Add to Actuator (recommended)
  - Add to Damper
- ☐ Test Switch (Cycle Test)
- ☐ Retaining Angles
  - One Sided • Two Side
- ☐ Smoke Detector
  - Installed • Loose
- ☐ Actuators
  - Right • Left • Internal

#### ACTUATOR SPECIFICATION:

	Honeywell	Belimo
120 V	MS4104F1210	FSLF120 - S US
	MS4109F1210	FSNF120 - S US
24 V	MS8104F1210	FSLF24 - S US
	MS8109F1210	FSNF24 - S US

### Actuator Requirements:

As per UL555S all leakage rated dampers be provided with factory mounted actuators. Actuators models vary by damper size and velocity, pressure and temperature ratings.

Multiple section damper assemblies require multiple actuators. All electric actuators need to be factory mounted to temperature responsive devices. The default TRD is a thermostat that interrupts power to the actuator allowing for controlled closure.

### Sleeve Requirements:

Standard sleeve length is 16", which is appropriate for use with up to 5" deep wall and two-sided angle installation.

When the actuator is externally mounted and the wall thickness exceeds 5", add 1" for each additional inch of wall thickness to ensure sleeve fully penetrates the wall / floor. Each additional 1" will be added to the non-actuator side.

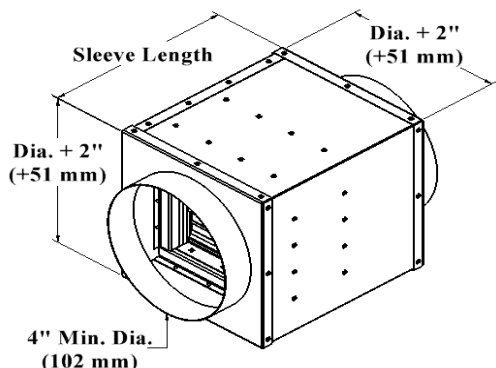
By default, the actuator is externally installed on the lower right-hand of the damper when viewed from the jackshaft side. The damper may be rotated 180 deg. Such that the actuator will be located on the upper left. The top of the damper is either side of the frame as long as the blades are running horizontal.

Damper is not approved for installation with the blades running vertically. Entire damper frame does not have to be installed in the plane of the wall. The requirement is that the blade closure end must be within the plane of the fire rated wall / floor.

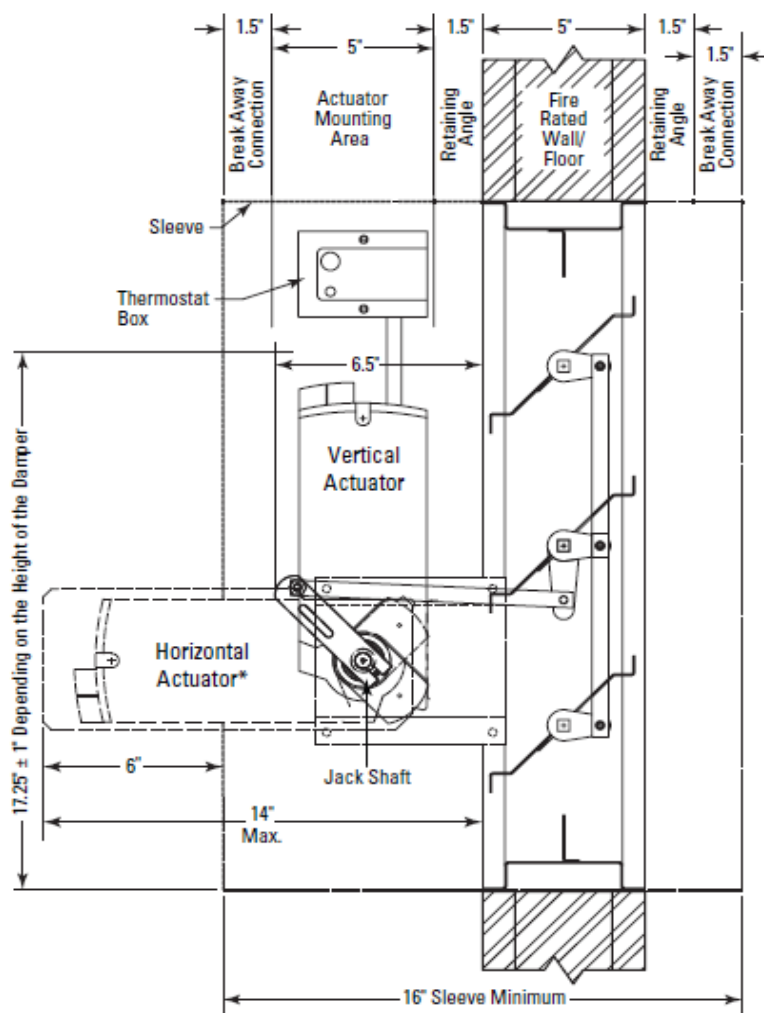
Damper sleeve shall not extend more than 6" (152) beyond the fire wall or partition unless damper is equipped with factory installed access door. Sleeve may extend up to 16" (406) beyond the fire wall or partition on sides equipped with actuator and / or factory installed access door.

### Sleeve Transitions:

RD: Square to Round transitions rivet on both ends of the damper sleeve. Damper will be fabricated 2" (51 mm) larger in width and height. Collar Extends 2.5" (64 mm) beyond the sleeve length. The minimum collar size is Diameter 4" (102 mm).



Square to Round Collar



\*Horizontal Actuators can be provided as "low profile" option and will be provided on a standoff to allow for duct connections. Thermostat Box location will vary, contact factory for exact location if needed.

