

## UL 555/555S - Classified Motorized Fire Smoke Damper

## B-21 Series

**Type** : Motorized Fire Smoke Damper  
**Model** : MSFD-GB-21C3-A/R  
**Fire Rating** : 21 Series-1½ hour.  
**Leakage Rating** : Class - III  
**Blade Type** : 3V Single Skin; A : Parallel Operation  
**Construction** : Galvanized Steel (GI)

MSFD B-21 Series is a high performance UL 555 / 555S Classified combination of fire and smoke damper with 1½hr. fire rating, installed vertically or horizontally (with blades running horizontally) and is rated for airflow and leakage Class - III leakage in either direction.

### UL-555S Test Ratings

**Fire Rating** : 1½ hrs.  
**Leakage Rating** : Class - III  
**Max Velocity** : 2000 fpm  
**Max Operating Pressure**: 4 in. w.g (1000 pa)  
**Operating Temperature** : 350°F (176°C) for ½ hr - Class-III

### Additional Test Ratings

**Operating Temperature** :250°C (482 °F) for 1 hr\* (HKFSD)  
:250°C (482 °F) for 2 hr\* (HKFSD)

### Standard Construction

#### Frame

16 gauge (1.4 mm - 1.7 mm) thick galvanized steel.

#### Blades

Parallel operated 3 'V' type blade made of 16 gauge (1.4 mm - 1.7 mm) thick galvanized steel.

#### Blade Seals

Silicon rubber blade seals.

#### Jamb Seals

Stainless steel.

#### Jack Shaft

12 mm diameter Galvanized steel shaft.

#### Thermal Response Device (TRD)

165°F.

#### Actuator

Honeywell, Belimo, Seimens (24V AC, 120V AC, 230V AC)

#### Sleeve

Minimum 0.9 mm, single section is field or factory installed.

Multiple section is factory installed.

Sleeve thickness as per NFPA table 3-4.6.3.

#### Limit Switches

For BMS open / close indication.

### Optional Fittings

#### Retaining Angles

1½" x 1½" x 16 gauge (40 x 40 x 1.5 mm).

#### Indicator

Externally mounted open, close visible Indicator.

#### Push Button

For manual reset of damper.

#### Transitions (R)

Neck adapter for round duct connections.

#### Junction Box

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.



MSFD-GB-21C3-A

**Model** : MSFD-GB-21C3 -A/R UL 555/555S Damper meets the required standards of SMACNA, NFPA, IBC, BOCA, ICBO, UL.

### MSFD - B-21 Series- Model Details

Model	Material		Damper Operation	
	Frame	Blade	Standard	Optional
MSFD-GB-21C3-A/R	GI	GI	FC	FO

### Minimum Sleeve thickness for Breakeaway joints as per NFPA 90A Table 3-4.6.3

Air Duct Diameter or Maximum Width		Minimum sleeve thickness	
Inch	mm	Inch	gauge
12 or Less	305	0.018	26
13-30	330-762	0.024	24
31-54	787-1372	0.03	22
55-84	1397-2134	0.036	20
85 or more	2159	0.047	18

Actuator Location		Operating Voltage	
Standard	Optional	Standard	Optional
Left Side	Right side	230 V	120 V / 24 V

**Actuator location standard:** Left side from rear view (Jack shaft view)

Note :

FC : Fail Close in the event of Fire

FO : Fail Open in the event of Fire

\* The temperature ratings are for Honeywell 20 Nm actuators with thermal enclosures.

### Optional Construction (UL Certification N/A)

**Frame** : Stainless Steel 16 gauge (304/316L)

**Blade** : Stainless Steel 16 gauge (304/316L)

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Model : MSFD-GB-21C3-A/R

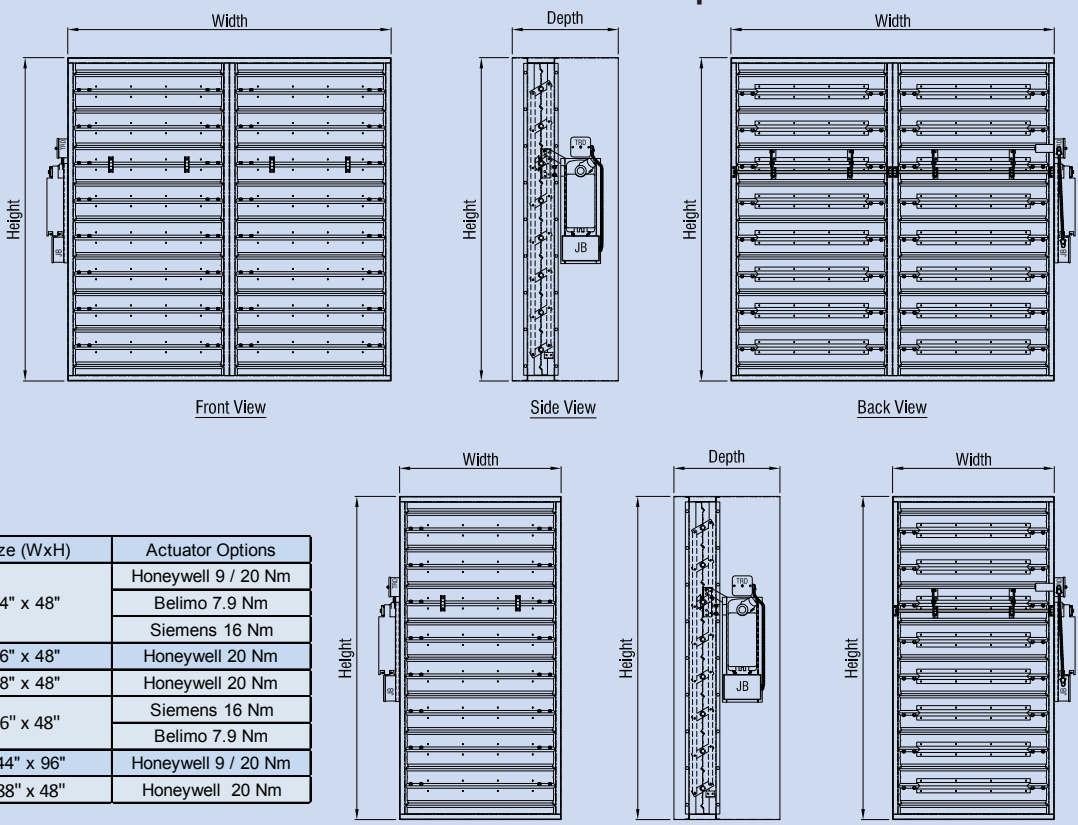
Fire Rating : 21 Series-1½ hour.

Leakage Rating : Class - III


Blade Type : 3V Single Skin; A : Parallel Operation

Construction : Galvanized Steel (GI)

### Motorized Fire Smoke Damper



Module	Size (WxH)	Actuator Options
Single	24" x 48"	Honeywell 9 / 20 Nm
		Belimo 7.9 Nm
		Siemens 16 Nm
Single	36" x 48"	Honeywell 20 Nm
Single	48" x 48"	Honeywell 20 Nm
Multiple	96" x 48"	Siemens 16 Nm
		Belimo 7.9 Nm
Multiple	144" x 96"	Honeywell 9 / 20 Nm
Multiple	288" x 48"	Honeywell 20 Nm



UL Classified (see mark on product)  
 UL Classified to American/Intl safety standards  
 UL Standard 555 (Listing # R21925)

Size Limitation		
Module	Size : Width X Height	Mounting Position
Single	Min X Min. 6" x 9"	V/H
Single	Max X Max. 24" x 48"	V/H
Multiple	Max X Max. 48" x 48"	V/H
Multiple	Max X Max. 144" x 96"	V/H

V-Mounting - 3hrs, H-Mounting-1½ hrs

Standard Sizes Any Combination of W x H			
Width (W)	Height (H)	Depth (D)	Module
6"	9"	16"	Single
8"	9"	16"	Single
10"	10"	16"	Single
12"	12"	16"	Single
16"	16"	16"	Single
20"	20"	16"	Single
24"	24"	16"	Single
24"	48"	16"	Single
48"	48"	16"	Single/Multiple
144"	96"	16"	Multiple

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