

Submittal Data

Model PELV-100 Penthouse Elevator Vent Louver

Application and Design

The PELV-100 Penthouse Elevator Vent Louver is a gravity ventilator penthouse with three sides fabricated of Buckley's EAL-4 stationary louver model. A smoke damper with a 120 volt actuator is located in the throat of the unit. The unit is shop assembled and shipped attached to the curb with the damper shipped loose.

Standard Construction

Louvered Perimeters

Heavy gauge extruded 6063-T5 aluminum
4 in. x 0.081 nominal wall thickness

Birdscreen

3/4" in. x 0.051 in flattened expanded aluminum, inside mount

Finish

Mill

Curb

18 ga. cold rolled steel, 2 in. mounting flange, welded construction

Hood

0.090 formed aluminum with 0.5 in. insulation

Boxed Corner

0.090 formed aluminum

Glass

0.125 in. clear tempered glass

Roof Opening

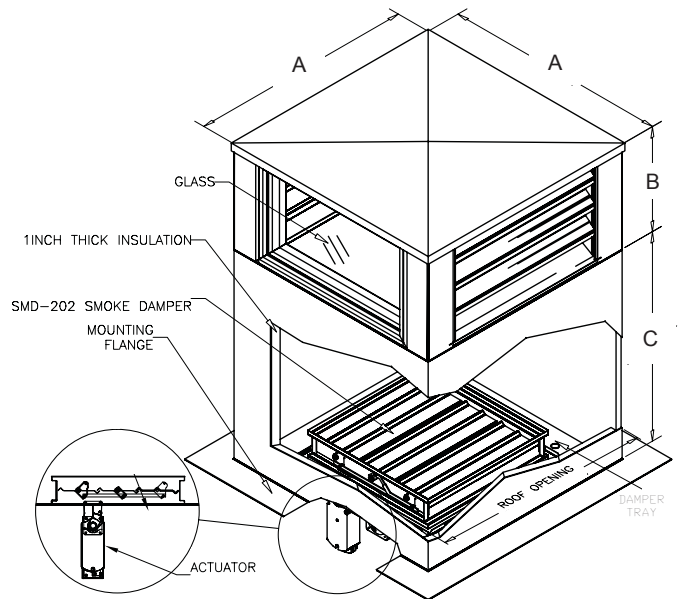
Based on Smoke Damper Size

Curb

18 ga. cold rolled steel, 2 in. mounting flange, welded construction

Model Buckley BRC-100

Size..... See Chart



Smoke Damper

Model Greenheck SMD-202

Size See Chart

Free Area See Chart

Actuator 120V, Mounted Internally with
End Switch, Power Closed, Fail Open

Louver

Model Buckley EAL-4

Size See Chart

Free Area See Chart

Models Available

Model	Dimensional Data			Curb Size (O.D.)	Louver		Smoke Damper		
	A	B	C		(Qty) Size	Free Area	Size	Free Area	Actuator
PELV-100-32	32	18	36	31½ × 31½	(2) 27½ × 18 (1) 31¾ × 18	4.20 sq. ft.	24 × 24	2.66 sq. ft.	MS4120F1204
PELV-100-38	38	18	36	37½ × 37½	(2) 33½ × 18 (1) 37¾ × 18	4.75 sq. ft.	30 × 30	4.36 sq. ft.	MS4120F1204
PELV-100-44	44	18	36	43½ × 43½	(2) 39½ × 18 (1) 43¾ × 18	5.50 sq. ft.	36 × 36	6.48 sq. ft.	MS4120F1204

Unless otherwise noted, all dimensions are in inches.

Buckley Associates, Inc.

Manufactured by Buckley Associates, Inc, Hanover, Massachusetts
Sheet Metal Union Local 17.

PELV-100
August 2009 Revision 6



SMD-202

Leakage Rated Smoke Damper

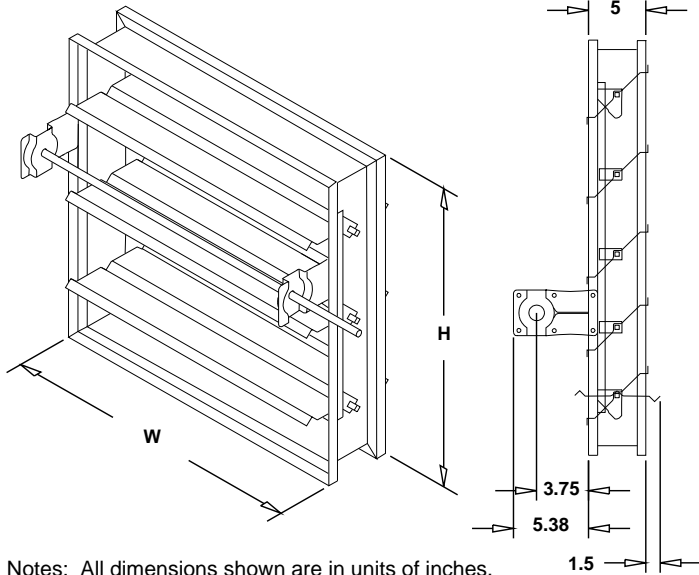
Application & Design

Model SMD-202 is a leakage rated smoke damper with 3-Vee style blades. The SMD-202 has been qualified to 2,000 ft/min and 4 in wg for operational closure in emergency smoke control situations. Model SMD-202 may be installed vertically (with blades running horizontally) or horizontally and is rated for airflow and leakage in either direction.

- Frame: Galvanized steel hat channel with reinforced corners.
- Blades: 3-Vee of galvanized steel.
- Seals: Flexible stainless steel jamb seals.
- Leakage: UL 555S Class II

SIZE LIMITATIONS

- Minimum Size: 8 in W x 6 in H
- Maximum Single Section Size: 32 in W x 50 in H or 36 in W x 48 in H
- Maximum Multiple Section Size: 144 in W x 100 in H



Notes: All dimensions shown are in units of inches.

W & H furnished approximately 0.25 in undersized and only refer to damper dimensions (sleeve thickness is not included).

Electrical accessory wiring terminates at the accessory.
Field wiring is required to individual components.

Codes Approved

This model meets the requirements for smoke dampers established by:

- National Fire Protection Association
NFPA Standards 90A, 92A, 92B & 101
- Underwriters Laboratories
UL Classified to U.S. and Canadian safety standards
Standard 555S (Listing #R13317)
- IBC, BOCA, ICBO, SBCCI (Building Codes)
- CSFM California State Fire Marshall:
Leakage (Smoke) Damper Listing (#3230-0981:104)
New York City (MEA Listing #260-91-M)

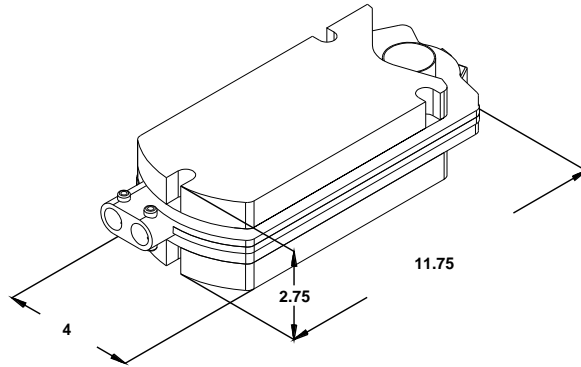


CONSTRUCTION FEATURES

Mounting:	Horizontal	Actuator Location:	Left Side
Frame Thickness (ga):	16	Fail Position:	Open
Axle Bearings:	Bronze	Temperature (F):	250
Sizing:	Nominal	Velocity (ft/min):	2,000
Actuator Type:	120 VAC	Cycle:	60 Cycle
Actuator Mount:	Internal	Auxiliary Switches:	Yes

ID #	Tag	Qty	W (in)	H (in)	Drive Arr.	Actuator	Act. Qty.
20-1		1	24.000	24.000	11-1FIL-1	MS4120F1204	1
20-2		1	30.000	30.000	11-1FIL-1	MS4120F1204	1
20-3		1	36.000	36.000	11-1FIL-1	MS4120F1204	1

Honeywell MS4120F1204 Actuator

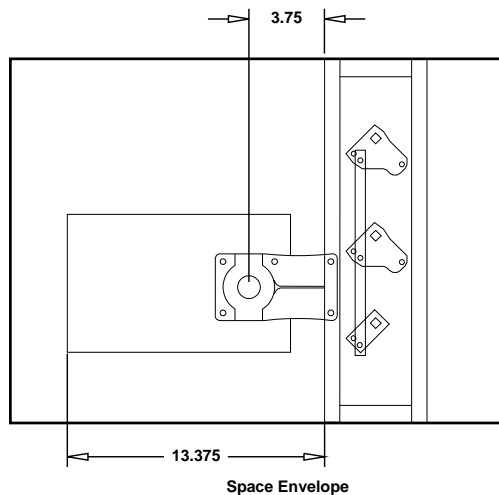


All Dimensions shown are in units of inches.

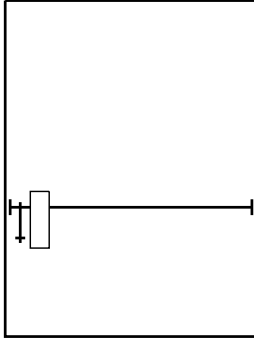
Actuator wiring terminates at the actuator. Field wiring is required to individual actuator(s).

This actuator is for two position, spring return applications. With the power on, the actuator runs to open (close) the damper. With the power off, the spring returns the damper to the opposite position. It is strongly recommended that all life safety systems are functionally checked periodically. The actuator has 2 SPST auxiliary switches. One at each end of the stroke. These switches are not adjustable.

- * Power supply: 120 Vac, 60Hz
- * Running Amps: 0.35
- * Holding Amps: 0.15
- * Rated Torque: 175 in-lb
- * Locations: NEMA Type 1 enclosure, indoor only
- * Cycle time (Running or Spring Return) 15 seconds.



Damper & Louver Drive Arrangements



11-1FIL-1 or 11-1CIL-1

MS4120F; MS4620F,S; MS8120F,S; S2024-F; S20230-F Fast-Acting, Two-Position Actuators

PRODUCT DATA



FEATURES

- 175 lb-in. (20 N•m) minimum driving torque at 350°F (176°C).
- Reversible mounting facilitates use in either clockwise (cw) or counterclockwise (ccw) spring rotation.
- Integral spring return ensures level of return torque.
- Stainless steel internal spring.
- Fifteen-second spring return timing.
- No special cycling required during long-term holding. (See Operation section.)
- No audible noise during holding.
- Patent pending design eliminates need for limit switches to reduce power consumption.
- Models available for 24, 120, and 230 Vac applications.
- Ninety-five degree angle of rotation.
- Actuator holds rated torque at reduced power level.
- Die-cast aluminum housing.
- Housing design allows flush mounting to damper.
- Self-centering shaft adapter (SCSA), patent pending.
- Designed to operate reliably in smoke control systems requiring Underwriter's Laboratories Inc. UL555S ratings up to 350°F.

APPLICATION

The MS4120F, MS4620F, MS8120F, S2024-F, and S20230-F Fast-Acting, Two-Position Actuators are spring return direct coupled actuators (DCA) for on/off damper control. The actuator accepts an on/off signal from a single-pole, single-throw (spst) controller. Reversible mounting allows actuator to be used for either clockwise (cw) or counterclockwise (ccw) spring rotation.

Designed to operate reliably in smoke control systems requiring Underwriter's Laboratories Inc. UL555S ratings up to 350°F.

APPLICABLE LITERATURE

— Specification Data Sheet	63-2592
— Motor/Actuator Selection Guide for Damper Applications	63-8419
— Engineering Manual of Automatic Control (also called The Gray Manual)	77-1100
— Direct Coupled Actuator Quick Selection Guide	63-8553
— Damper Torque Calculator	63-8437

MS4120F, MS4620F, MS8120F

- High temperature Teflon[®] lead wires.
- Models available with integral high temperature (350°F) SPST position-indicating switches (7°, 85° stroke).

S2024-F, S20230-F, MS4620S, MS8120S

- Double-insulation rating.
- High-temperature, halogen-free, silicone-free leadwires.
- Models available with integral high temperature (350°F) SPDT position-indicating switches (7°, 85° stroke).



SPECIFICATIONS

Models: See Tables 1, 2, and 3.

Table 1. Models.

Model	Voltage in Vac	Internal Auxiliary Switches
MS4120F1006	120	None
MS4120F1204	120	2 SPST ^a
MS4620F1005	230	None
MS4620F1203	230	2 SPST ^a
MS8120F1002	24	None
MS8120F1200	24	2 SPST ^a
S2024-F (MS8120S1006)	24	None
S20230-F (MS4620S1009)	230	
S2024-F-SW2 (MS8120S1204)	24	2 SPDT ^a
S20230-F-SW2 (MS4620S1207)	230	

^a Internal switches are designed to pass UL555S requirements (at 350°F).

Dimensions: See Fig. 1.

Device Weight: 7 lb (3.2 kg).

Stroke: 95° ± 3°, mechanically limited.

Electrical Ratings:

Power Input:

MS4120F: 120 Vac ±10%, 60 Hz.

MS4620F,S; S20230-F: 230 Vac ±10%, 50/60 Hz.

MS8120F,S; S2024-F: 24 Vac +20%, -10%, 50/60 Hz (Class 2).

Power Consumption:

MS4120F: Driving: 0.35A, 35W. Holding: 0.15A, 10W.

MS4620F,S; S20230-F:

Driving: 0.20A, 35W. Holding: 0.14A, 10W.

MS8120F,S; S2024-F: Driving: 45 VA. Holding: 10 VA.

Electrical Connections:

Lead Wires:

MS4120F, MS4620F, MS8120F: 1m Teflon wire.

MS4620S, MS8120S, S2024-F, S20230-F: 1m halogen-free, silicone-free wire.

Two integral 3/8 in. flexible conduit connections.

Timing (At Rated Torque and Voltage):

Drive Open: 15 seconds typical.

Spring Close: 15 seconds typical.

Auxiliary Switches:

Ratings (maximum load): 250 Vac, 5A resistive, 3A inductive.

Settings (fixed): 7° nominal stroke, 85° nominal stroke.

Torque Rating (at Rated Voltage):

Typical Holding (minimum at 350°F): 175 lb-in. (20 N•m).

Spring Return (minimum at 350°F): 175 lb-in. (20 N•m).

Stall Maximum (fully open at 75°F): 425 lb-in. (48.0 N•m).

350°F Minimum Driving: 175 lb-in. (20 N•m).

Design Life (at Rated Voltage): 30,000 full stroke cycles.

Minimum Damper Shaft Length:

1 in. (25 mm); 3-1/4 (83 mm) recommended.

Cycling Requirements:

Prolonged holding-period (1 year) testing of these actuators has been performed with no spring return failures. The actuator and the internal spring are designed to require no special cycling during long-term holding.

Honeywell recommends following all local, state and national codes for periodic testing of the entire smoke control system. Refer to National Fire Protection Association (NFPA) National Fire Codes®: NFPA90A, NFPA92A and NFPA92B for your application.

NFPA recommends periodic examination of each fire/smoke damper (semi-annually or annually) to ensure proper performance.

Mounting: Self-centering shaft adapter.

Round Damper Shafts: 0.5 to 1.06 in.

Square Damper Shafts: 1/2 to 3/4 in.

Actuator can be mounted with shaft in any position.

IMPORTANT

- *Honeywell does not recommend using linkages with these actuators because side-loading of the output hub reduces actuator life.*
- *3/4 in. or greater shaft diameter recommended.*

Noise Rating at 1m (Maximum):

Driving or Spring Return: 70 dBA.

Holding: 20 dBA (no audible noise).

ORDERING INFORMATION

When purchasing replacement and modernization products from your TRADELINE® wholesaler or distributor, refer to the TRADELINE® Catalog or price sheets for complete ordering number.

If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:

1. Your local Honeywell Automation and Control Products Sales Office (check white pages of your phone directory).
2. Honeywell Customer Care
1885 Douglas Drive North
Minneapolis, Minnesota 55422-4386

In Canada—Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Scarborough, Ontario M1V 4Z9.

International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.

Temperature Ratings:

Ambient: -40°F to 130°F (-40°C to 55°C).
Shipping and Storage: -40°F to 140°F (-40°C to 60°C).

IMPORTANT

The actuator is designed to meet UL555S standards at 350°F (176°C). The actuator must be tested with the damper to achieve this rating.

NOTE: The actuator is designed to operate for 30 minutes during a one-time excursion to 350°F (176°C).

Humidity Ratings: 5% to 95% RH noncondensing.

Environmental Protection Ratings:

NEMA2 and IP54 when mounted on a horizontal shaft.

Accessories:

205649 Mounting Bracket (not supplied with actuator).

Approvals: See Table 4.

Controller Type:

MS4120F: Line voltage (120 Vac), 2-position, spst (Series 40).
MS4620F,S; S20230-F: Line voltage (230 Vac), 2-position, spst (Series 40).
MS8120F,S; S2024-F: Low voltage (24 Vac), 2-position, spst (Series 80).

Table 2. Actuator Selection (MS Series).

M	Electrical Motor
S	Fail Safe Function (Spring Return)
41	120 Vac 2-position Control; Reversible Mount Spring Return
46	230 Vac 2-position Control; Reversible Mount Spring Return
81	24 Vac 2-position Control; Reversible Mount Spring Return
20	175 lb-in. (20 N•m)
F	Fire and Smoke (US)
S	Fire and Smoke (EU)
1	No Feedback
0	No Auxiliary Switches
2	Two Auxiliary Switches
XX	System Controlled Numbers

M	S	41	20	F	1	2	XX
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Table 3. Actuator Selection (S20 Series).

S	Fail Safe Function (Spring Return)
20	20 N•m (175 lb-in.)
24	24 Vac 2-position Control; Reversible Mount Spring Return
230	230 Vac 2-position Control; Reversible Mount Spring Return
F	Fire and Smoke Actuator
	No Auxiliary Switches
-SW2	Two Auxiliary Switches

S	20	24	-	F	-SW2
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Table 4. Approvals.

	MS4120F	MS4620F, MS8120F	S20230-F, S2024-F, MS4620S, MS8120S
UL/cUL	X	X	
UL873 Plenum Rating, File No. E4436; Guide No. XAPX. ^a	X	X	
CE		X	X
C-TICK		X	X

^a Plenum applications require that conductors be enclosed in conduit (see Wiring section for conduit details).

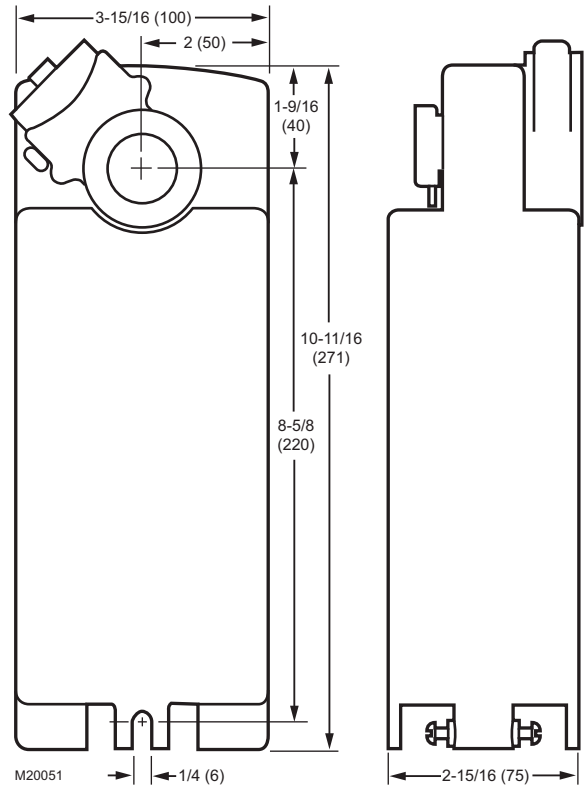


Fig. 1. Dimensional drawing of actuator in inches (mm).