

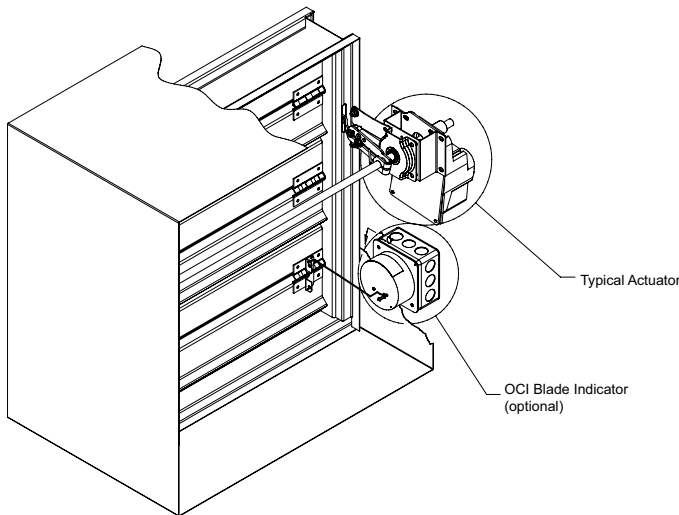


# Part Number 461338 SMD-XXX, SESMD-XXX, SSSMD-XXX, SMDRXXX, SESMDR-XXX, and SSSMDR-XXX MODELS

Leakage Rated Smoke Dampers  
Vertical or Horizontal Mount

## Installation, Operation and Maintenance Instructions

These instructions apply to the installation of SMD-XXX, SESMD-XXX SSSMD-XXX, SMDR-XXX, SESMDR-XXX and SSSMDR-XXX series leakage rated smoke dampers supplied with factory installed damper actuators. Specific requirements in these instructions are mandatory. These instructions meet the requirements of UL 555S and UL classification R13317.



SMD-XXX, SESMD-XXX, SSSMD-XXX, SMDR-XXX, SESMDR-XXX, and SSSMDR-XXX Model Dampers are intended for installation in accordance with smoke damper requirements established by:

**National Fire Protection Association**  
NFPA Standards 90A, 92A, 92B, & 105

**IBC International Building Codes**  
New York City (MEA listing #260-91-M)

**California State Fire Marshal** (Listing #3230-0981:108)

**“UL CLASSIFIED (see complete marking on product)”**  
**“UL CLASSIFIED to Canadian safety standards (see complete marking on product)”**  
UL Standard 555S (Classification #R13317)



**RECEIVING AND HANDLING**

Upon receiving dampers, check for both obvious and hidden damage. If damage is found, record all necessary information on the bill of lading and file a claim with the final carrier. Check to be sure that all parts of the shipment, including accessories, are accounted for.

Dampers must be kept dry and clean. Indoor storage and protection from dirt, dust and the weather is highly recommended. Do not store at temperatures in excess of 100°F (38°C).

**INSTALLATION SUPPLEMENTS**

Refer to the appropriate Greenheck installation supplements for special requirements:

- Smoke Detector Supplement (463813)
- No Flow Duct Smoke Detector (465915)
- Drive Slip Breakaway Supplement (468769)
- Quick Connect Breakaway Supplement (468502)
- Open or Close Indicator Supplement (459656)
- Double Flange Mounted Supplement (472664)

**SAFETY WARNING:**

**Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment.**

**WARRANTY**

Greenheck warrants this equipment to be free from defects in material and workmanship for a period of one year from the shipment date. Any units or parts which prove to be defective during the warranty period will be repaired or replaced at our option. Greenheck shall not be liable for damages resulting from misapplication or misuse of its products. Greenheck will not be responsible for any installation or removal costs. Greenheck will not be responsible for any service work or backcharges without prior written authorization.

This manual is the property of the owner, and is required for future maintenance. Please leave it with the owner when the job is complete.

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## Pre-Installation Guidelines

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The basic intent of a proper installation is to secure the smoke damper in, not to, the opening or duct in such a manner as to prevent distortion and disruption of damper operation. The following items will aid in completing the damper installation in a timely and effective manner.

- 1) Lift or handle damper using sleeve or frame. Do not lift damper using blades or actuators.
- 2) Damper (rectangular) has label on outside of sleeve indicating a 'No Screw' area. Do not install screws into this area as screws may interfere with unexposed blade linkage and prevent damper blades from opening and/or closing.
- 3) Damper must be installed into duct or opening square (round) and free of twist or other misalignment. Damper must not be squeezed or stretched into duct or opening. Out of square, out of round, racked, twisted or misaligned installations can cause excessive leakage and/or torque requirements to exceed damper/actuator design.
- 4) Damper and actuator must be kept clean and protected from dirt, dust and other foreign materials prior to and after installation. Examples of such foreign materials include but are not limited to:
  - a) Mortar dust
  - b) Drywall dust
  - c) Firesafing materials
  - d) Wall texture
  - e) Paint overspray
- 5) Damper should be sufficiently covered as to prevent overspray if wall texturing or spray painting will be performed within 5 feet of the damper. Excessive dirt or foreign material deposits on damper can cause excessive leakage and/or torque requirements to exceed damper/actuator design.
- 6) Caulking is not necessary, nor is it allowed, between the damper sleeve and the wall or floor opening (annular space). However, caulking may be applied to the retaining angles.
- 7) The Code Authority Having Jurisdiction (AHJ) must evaluate and provide approval of final installation where variations to these instructions are necessary.

**1. SMOKE DAMPER REQUIREMENTS**

Smoke dampers are required to close and prevent the passage of air and smoke through ducts or ventilation openings in smoke barriers. Smoke dampers are also applied in engineered smoke control systems to establish air pressure differentials and thereby prevent the spread of smoke.

**2. LOCATION OF DAMPER IN DUCTWORK**

Place the damper assembly in its proper position relative to the barrier as shown (in figure 2 below right). The plane of the closed damper blades must be within 24 in. (610mm) of the rated smoke barrier and before any duct inlets or outlets.

**3. ATTACHING DAMPER TO THE DUCT**

Attach the damper to the duct using #10 sheet metal screws, 1/4 in. (6mm) diameter bolts and nuts, tack or spot welds, or 3/16 in. (5mm) diameter steel pop rivets. Attachments must be made at each flange spaced a maximum of 6 in. (152mm) on centers and a maximum of 2 in. (51mm) from corners on rectangular dampers, and on round dampers as follows: Ducts 22 in. (559mm) in diameter and smaller shall have three attachments. Ducts larger than 22 in. (559mm) in diameter up to and including 36 in., (914mm) have five attachments.

**4. INSTALLING MULTIPLE DAMPER SECTION ASSEMBLIES**

The damper assembly is not restricted to a maximum number of sections, but must not exceed the section sizes and assembly sizes shown below.

Damper model	Maximum Single Section Size in. (mm)	Maximum Overall Size for Multiple Section Dampers in. (mm)
SMD-201, 202, 203	36 x 48 or 32 x 50 (914 x 1219 or 813 x 1270)	144 x 100 or 288 x 50 (3658 x 2540 or 7315 x 1270)
SMD-301, 302	32 x 50 (813 x 1270)	128 x 100 or 256 x 50 (3251 x 2540) or (6502 x 1270)
SMD-301M, 302M	32 x 50 (813 x 1270)	128 x 100 or 256 x 50 (3251 x 2540) or (6502 x 1270)
SMD-401	48 x 60 (1219 x 7315)	192 x 72, 48 x 288, or 384 x 36 (4877 x 1829, 1219 x 7315 or 9754 x 914)
SMDR, SESMDR, SSSMDR	24 (610)	NA
SESMD-201, SSSMD-201	36 x 48 or 32 x 50 (914 x 1219 or 813 x 1270)	144 x 100 or 288 x 50 (3658 x 2540 or 7315 x 1270)
SMD-301V	50 x 32 (1270 x 813)	100 x 32 (2540 x 813)
SMD-401M	48 x 36 (1219 x 914)	144 x 36 (3658 x 914)

The damper sections must be attached together with #10 sheet metal screws, 1/4 in. (6mm) diameter nuts and bolts, 1/2 in. (13mm) long welds, or 3/16 in. (5mm) diameter steel pop rivets.

On multiple section damper assemblies, the temperature rating of wiring run in the airstream shall be at least equal to the damper temperature rating plus 50°F (10°C).

**5. SEALING THE INSTALLATION**

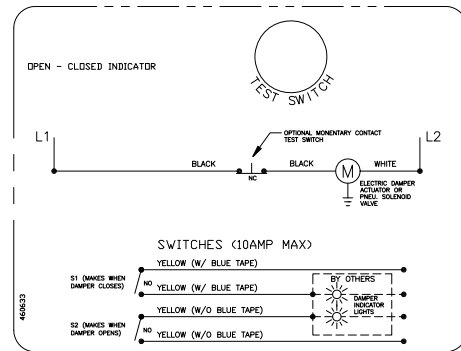
After installing the damper in the ductwork, seal the joint between the damper frame and the duct using Dow Corning RTV 732 sealant, GE1200 sereis silicone construction adhesive or Component Hardware SLT-5000 silicone sealant. Make sure to press the sealant into the joint to guarantee a proper seal. Use the minimum amount of material required to completely seal the joint. See Figure 2 to the bottom.

**6. ACTUATOR CONNECTIONS**

Electrical and/or pneumatic connections to damper actuators should be made in accordance with wiring and piping diagrams developed in compliance with applicable codes, ordinances and regulations.

**7. CONNECTION AND OPERATION OF OPEN/CLOSE INDICATOR**

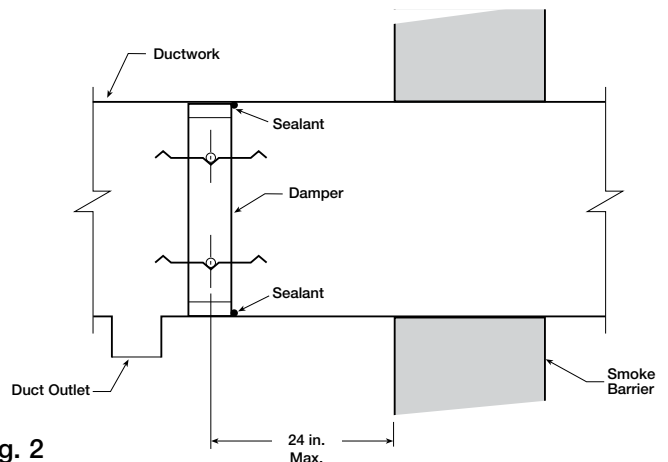
**OCI** - The OCI (open or closed indicator) option contains a single pole, double throw switch used to indicate the damper blade position. The switch provides a positive open or closed signal when used in conjunction with remote indicator lights. Refer to Fig. 1 for wiring of the OCI option.



**Fig. 1 OCI Wiring**

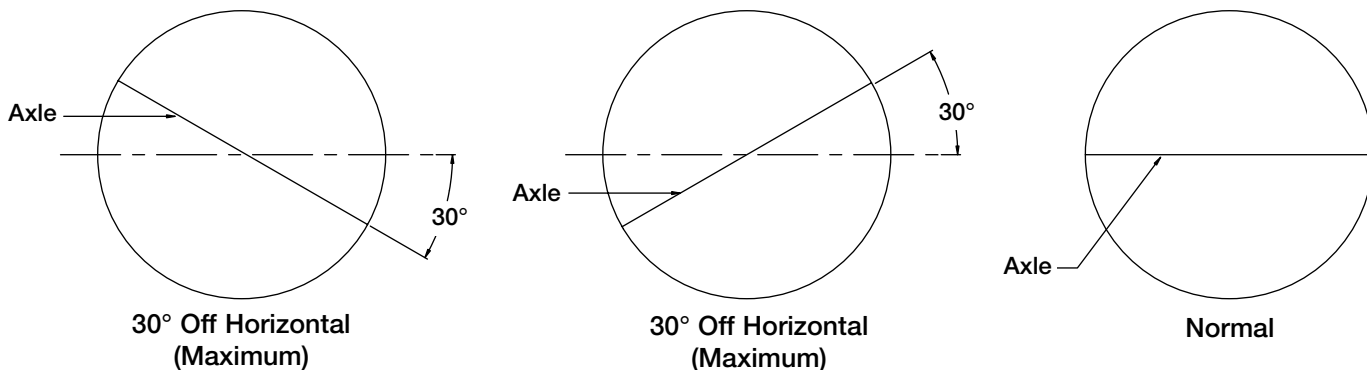
**RATINGS**

- Integral Switch Type:** Single Pole, double throw
- Electrical:** 10 Amps, 1/3 hp, 120 or 240 Vac  
1/2 Amp, 120 Vdc; 1/4 Amp 240 Vdc  
5 Amps, 120 Vac "L" (lamp load)  
1.0 Amps, 24 Vac  
1.5 Amps, 24 Vdc



**Fig. 2**

## SMDR-XXX and SSSMDR-XXX Blade Orientation



## Damper Maintenance

Dampers do not typically require maintenance as long as they are kept dry and clean. If cleaning is necessary, use mild detergents or solvents. If lubrication is desired for components such as axle bearings, jackshaft bearings and jamb seals, do not use oil-based lubricants or any other lubricants that attract contaminants such as dust.

Damper actuator(s) must be maintained, cycled, and tested in accordance with:

- The latest editions of NFPA 90A, 92A, 92B, 105, UL864, AMCA 503-03 and local codes.
- Actuator manufacturer recommendations.

## Damper Troubleshooting

The following is a possible cause and correction list for common concerns with the dampers.

Symptom	Possible Cause	Corrective Action
Damper does not fully open and/or close	Frame is 'racked' causing blades to bind on jamb seals	Adjust frame such that it is square and plumb
	Actuator linkage loose	Close damper, disconnect power, adjust and tighten linkage
	Defective motor	Replace
	Screws in damper linkage	Damper installed too far into wall. Move out to line as designated on damper label
	Contaminants on damper	Clean with a non-oil based solvent (see Damper Maintenance)
RRL or TOR sensor tripped	Heat	Push reset button located on backside of RRL or TOR
Damper does not operate	No power supplied to the actuator	Add power supply

