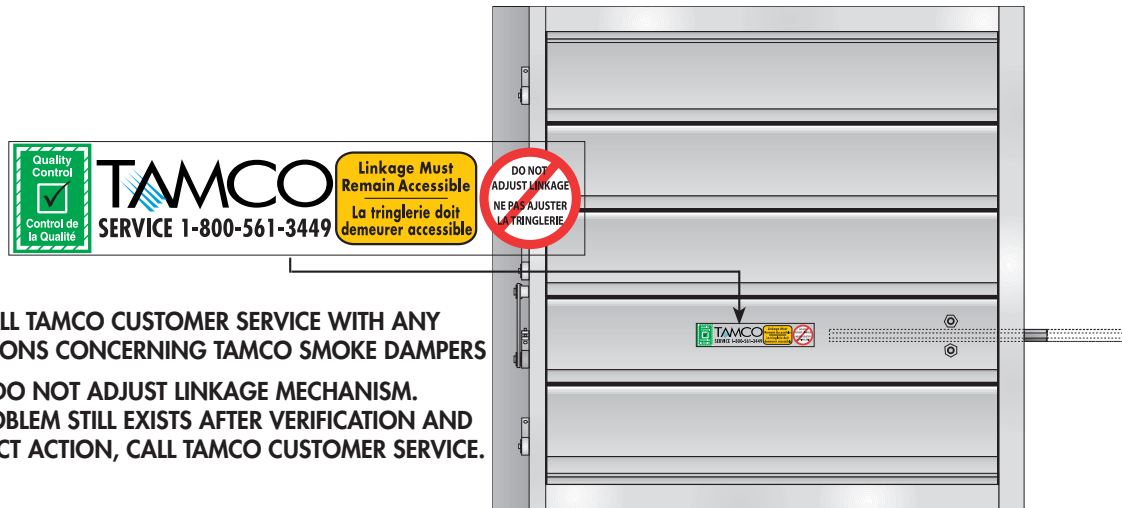


# TAMCO UL/ULC APPROVED SMOKE DAMPER INSTALLATION GUIDELINES

## SERIES 1000 SM / 1000 SM SW / 1000 SM EF / 1000 SM SW EF

READ ENTIRE INSTALLATION GUIDELINES MANUAL BEFORE INSTALLING DAMPERS.

CHECK ALL DAMPER SIZES AND TAGS TO ENSURE THAT SMOKE DAMPERS ARE INSTALLED IN THEIR CORRESPONDING OPENINGS.



CALL TAMCO CUSTOMER SERVICE WITH ANY QUESTIONS CONCERNING TAMCO SMOKE DAMPERS

DO NOT ADJUST LINKAGE MECHANISM.  
IF PROBLEM STILL EXISTS AFTER VERIFICATION AND CORRECT ACTION, CALL TAMCO CUSTOMER SERVICE.

FRONT / TOP END UP / RIGHT HAND

### MANUFACTURER'S RECOMMENDATIONS:

- When smoke dampers arrive at the job site, inspect all material for obvious and hidden damage. Report any damage or missing parts to TAMCO Customer Service.
- Store dampers indoors to protect them from environmental conditions and to avoid damage.
- All moving parts of the damper must be inspected and cycled at intervals not greater than every twelve (12) months or in accordance with the latest edition of NFPA 80, 90A, 92A, local codes and the actuator manufacturer.
- Dry lubricants are recommended.
- Smoke dampers do not typically require maintenance, if the environment they are installed in is kept dry and clean.

### GENERAL INSTALLATION NOTES:

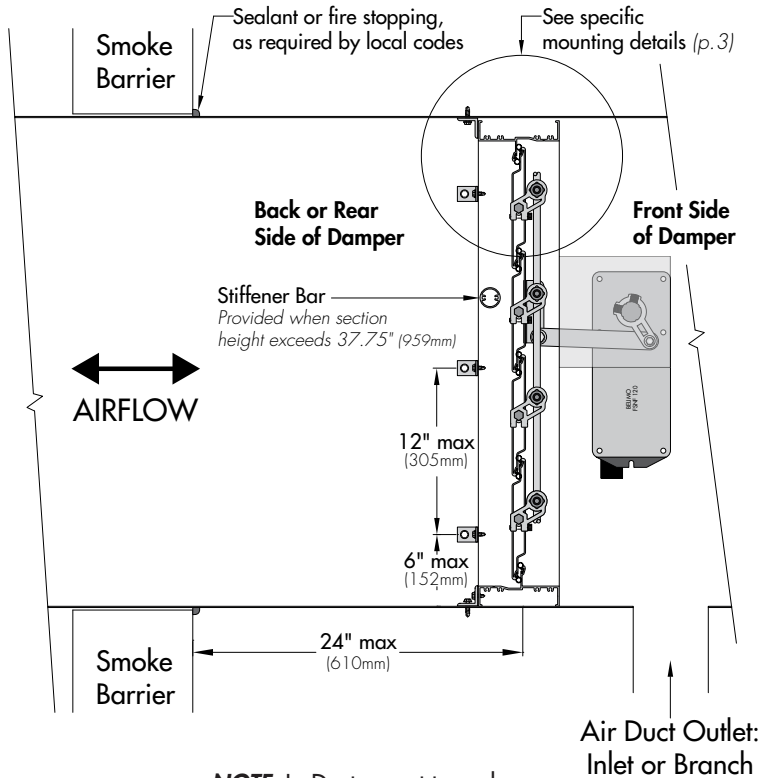
- Smoke dampers must be installed square and free from racking, to ensure proper operation and performance.
- Dampers must be installed without stretching or compression, to allow them to maintain their original factory adjustment, thereby retaining their low leakage rating.
- TAMCO Smoke Dampers are approved to be installed either standing in the vertical plane, or lying in the horizontal plane. If smoke dampers are installed standing in the vertical plane, damper blades must be horizontal.
- Only lift dampers via sleeve or damper frame. Never lift damper by holding on to the damper blades or actuator.
- All connections on the back or rear side of the smoke damper frame (*opposite to sticker side*), where the damper makes contact with the duct, sleeve, or substrate must be sealed using a 1/8" (3.2 mm) bead of silicone sealant. (*See instructions on page 3, for recommended silicone seal brands.*)
- When installing a multiple-section smoke damper assembly, all joints where damper frames meet must be sealed, using a bead of silicone sealant.
- TAMCO Smoke Dampers must be kept in an environment that is free of dirt, dust, wall texture, paint over-spray, and other contaminants, prior to and after installation, to ensure proper damper operation and to guard against damage.
- Any alteration to or deviation from TAMCO's UL Classified, Smoke Damper Installation Guidelines must be approved by the local AHJ (Authority having jurisdiction).
- Angle clips described in these installation guidelines are a minimum 16 ga (1.5mm) zinc-plated or stainless steel with legs measuring 1" x 1" x 1/2" (25.4mm x 25.4mm x 12.7mm) wide, or .125" (3mm) extruded aluminum with legs 1"x 1"x 1/2" (25.4mm x 25.4mm x 12.7mm) wide and with 0.15" (4mm) diameter screw holes.
- Smoke dampers must be installed at, or adjacent to (but no more than 24" (609mm)) from the point where the duct or opening passes through the smoke barrier. This must be done in accordance with NFPA 90A.
- Duct air inlets, outlets or branches shall not be located between the smoke damper and the smoke barrier.
- Smoke dampers must not be installed in fibrous, glass-lined ducts in a manner that will damage the material, or interfere with damper blade operation.
- Provide a duct hanger at a smoke damper location, when the duct strength is inadequate for the damper and its operator.
- An access door must be provided, if the damper actuator is mounted inside the duct.

# OPTIONS FOR ACTUATOR MOUNTING

Actuator wiring must be connected in accordance with local codes, ordinances, and NEC/CSA regulations. Multiple actuators mounted on a single unit shall be wired to a single point to allow simultaneous operation.

## JACK SHAFT MOUNTED

(side view)



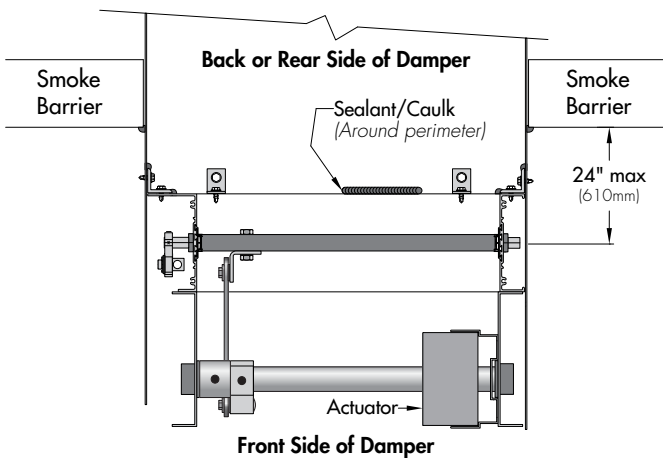
**NOTE:** In-Duct mount type shown.  
(See details on page 3 for other mounting type.)

## ACTUATOR WIRING GUIDE:

- Wiring used to connect each actuator shall be, as a minimum, No. 16 ga. AWM.
- The minimum temperature rating of the wiring is to be 302°F (150°C).
- All wiring must be routed through a metal conduit or EMT, with fittings (all Listed materials).
- Connections shall occur within the field wiring enclosures integral to the operators or the Listed box.

## JACK SHAFT MOUNTED

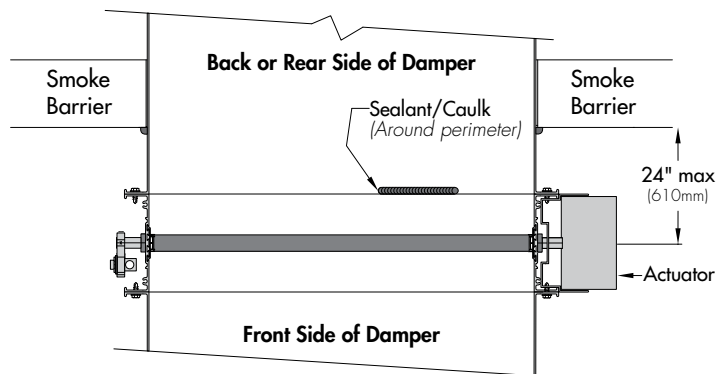
(top view)



**NOTE:** In-Duct mount type shown.  
(See details on page 3 for other mounting type.)

## DIRECT COUPLED TO DRIVE ROD

(top view)

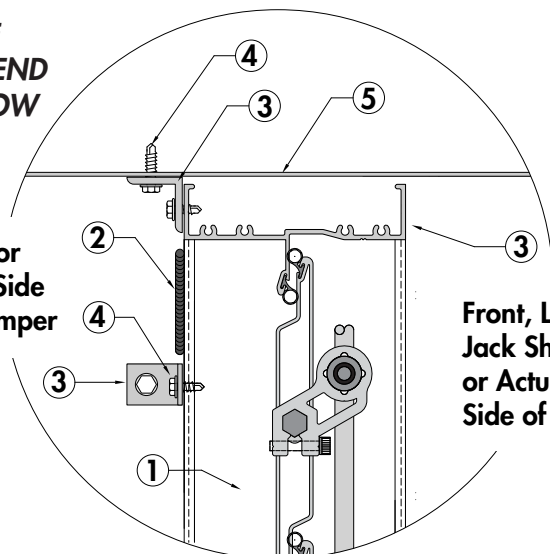


**NOTE:** Flanged-to-Duct mount type shown.  
(See details on page 3 for other mounting type.)

# INSTALLATION PROCEDURES FOR SMOKE DAMPER MOUNT TYPES

**\*SEE  
LEGEND  
BELOW**

**Back or  
Rear Side  
of Damper**



**Front, Label,  
Jack Shaft,  
or Actuator  
Side of Damper**

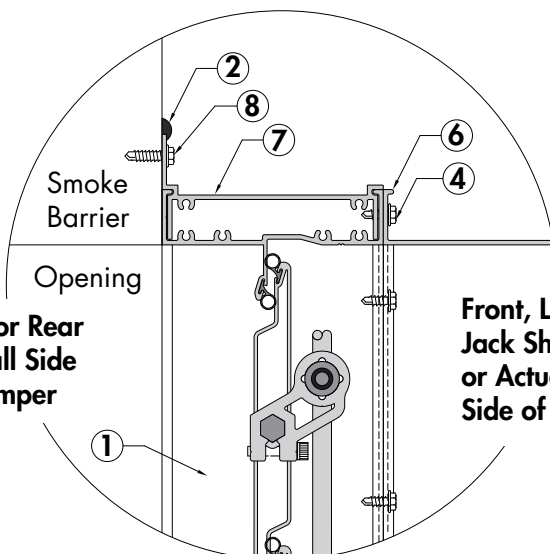
## IN-DUCT MOUNT TYPE

- Determine the location where the damper is to be installed inside the duct or sleeve. This location must be within 24" (609mm) of the smoke barrier.
- Slide the damper into pre-determined sleeve or duct location. Ensure that the damper is square and true.
- Situate the clips around the back or rear perimeter of the damper frame, at a maximum of 12" (305mm) on center (oc) intervals and so they begin at no more than 6" (152mm) from the corners. A minimum of 1 clip is required per side.
- Fasten clips to the duct first and then to the damper using, as a minimum; #8 sms screws, 3/16" (4.8mm) rivets, #12 bolts/nuts, or tack welds. Clips are not required on the front (label) side of the damper.
- Run a bead of silicone caulk<sup>2</sup> around the inside perimeter of the back side of the damper, where it comes into contact with the sleeve or duct. It is not necessary to caulk around the front (label) side of the damper. If caulking is applied after installation, it is recommended to caulk around all clips to minimize leakage.

## WALL MOUNT TYPE (EXTENDED REAR FLANGE)

- Dampers should be ordered from the factory with extended rear flanges if they are to be wall mounted.
- Measure both the wall opening and the damper ID, to ensure that the two dimensions are identical.
- Run a bead of silicone caulk<sup>2</sup> around the perimeter of the damper flange face, where it will come into contact with the substrate upon installation. This is to prevent leakage between the damper and the wall. Caulking may be applied at this step, or following step "e", once the smoke damper has been fastened in place.
- Place the damper in the desired location on the wall, so that the inside of the damper's frame aligns with the edges of the wall opening.
- Secure the damper to the wall using, as a minimum; #8 sms screws, 3/16" (4.8mm) rivets, #12 bolts/nuts, 1/4" (6.4mm) Tapcons, or tack welds, placed at 12" (305mm) oc intervals. Fasteners should begin at no more than 6" (152mm) from the corners. A minimum of 1 clip is required per side.

**Back or Rear  
or Wall Side  
of Damper**



**Front, Label,  
Jack Shaft,  
or Actuator  
Side of Damper**

## FLANGED-TO-DUCT MOUNT TYPE

- Measure and if necessary, adjust the duct or opening to ensure that it is true and square.
- Run a bead of silicone caulk<sup>2</sup> around the inside perimeter of the flange, where it comes into contact with the damper frame, to prevent leakage at the connection point between the duct and damper frame. This step may be performed now or after step "d", once the smoke damper has been fastened in place.
- Position the Flanged-to-Duct mount type smoke damper, so that it is adjacent to the flanged duct.
- Secure the flanged connections together using, as a minimum; #8 sms screws, 3/16" (4.8mm) rivets, #12 bolts/nuts, flange mount system, or tack welds, placed at 12" (305mm) oc intervals. Fasteners should begin at no more than 6" (152mm) from the corners. A minimum of 1 clip is required per side.

### <sup>2</sup>APPROVED SILICONE CAULK:

✓ Dow Corning:	RTV Silicone Silastic 732 Xiameter 732 Xiameter SLT 5100
✓ Momentive Performance Materials:	RTV 108

### **\*LEGEND:**

- |                       |                               |                          |
|-----------------------|-------------------------------|--------------------------|
| 1. TAMCO Smoke Damper | 4. Fastener                   | 7. Extended flange frame |
| 2. Silicone caulk     | 5. Sleeve /duct               | 8. Substrate fastener    |
| 3. Clip angle         | 6. Flanged-to-Duct connection |                          |

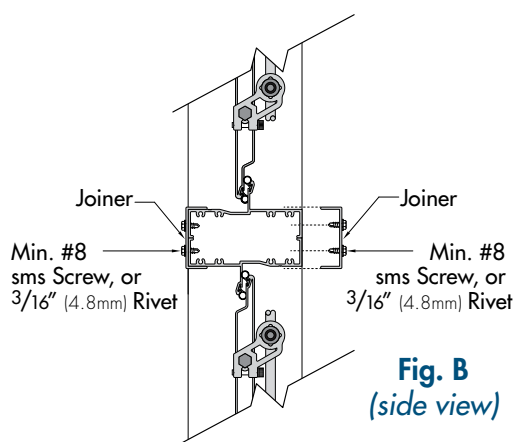
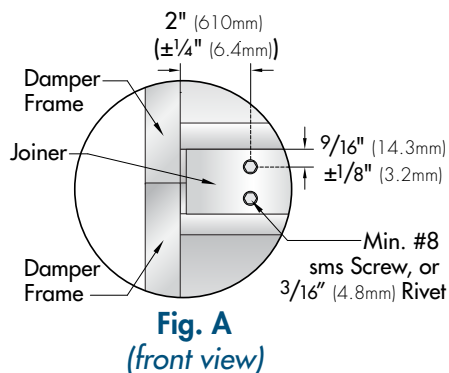
# INSTALLATION PROCEDURES FOR MULTI-SECTION SMOKE DAMPER ASSEMBLIES

## INSTRUCTIONS BELOW ARE IN ADDITION TO APPLICABLE MOUNT TYPE INSTALLATION PROCEDURES

Multiple section smoke damper assemblies should be installed using same fasteners and fastening patterns as described in the instructions for single-section smoke dampers.

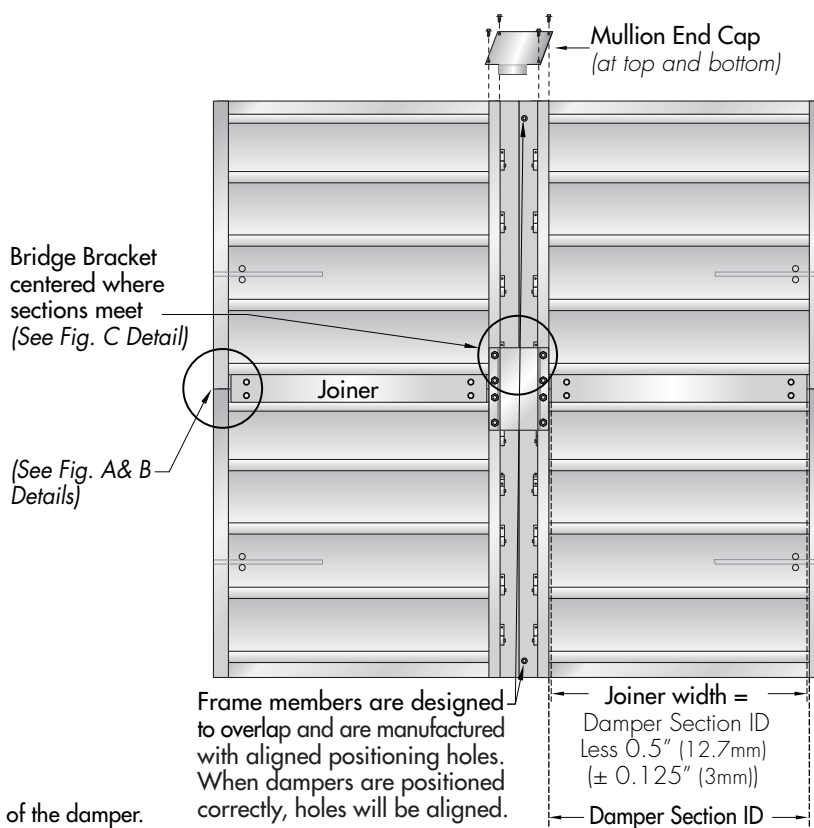
### ASSEMBLING SMOKE DAMPERS THAT ARE MULTIPLE SECTIONS HIGH:

- Slide joiners over frame members, where top and bottom sections meet.
- Joiners must be secured to both the front (label) and back (rear) side of damper assemblies.
- Attach each joiner to the damper frame members using, as a minimum, four #8 sms screws or rivets as shown in Figures A & B.



### ASSEMBLING SMOKE DAMPERS THAT ARE MULTIPLE SECTIONS HIGH AND MULTIPLE SECTIONS WIDE:

- Slide joiners over frame members, where top and bottom sections meet.
- Joiners must be secured to both the front (label) and back (rear) side of damper assemblies.
- Attach each joiner to the damper frame members using, as a minimum, four #8 sms screws or rivets as shown in Figures A & B.
- Install the bridge bracket connecting the lower sections. Place the bridge bracket so that it is centered over the joint where all four damper sections meet.
- Fasten the Bridge Bracket in place, using 1/4 inch-20 bolts, making sure they are secured in the pre-set, factory-supplied rivet nut holes.



### OPTIONAL MULLION END CAPS

FOR FLANGED TO DUCT TYPE, MULTI-SECTION DAMPER INSTALLATIONS

- Mullion end caps are provided with all multi-section dampers that are to be installed as Flanged to Duct mount type.
- These are required to prevent air flow from passing through open channels. (Mullion end caps are not intended for use as structural support.)
- Caulk surfaces between mullion end caps and damper frame for an airtight seal.
- Mullion end caps are not required for Installed in Duct type, multi-section dampers nor for Rear Extended Flange Option dampers. As such they are not provided as standard, but are available for order as separate parts.

