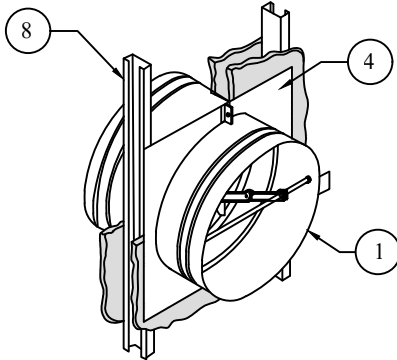
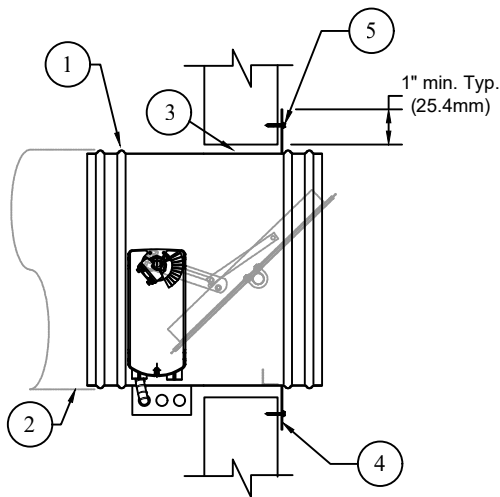


OPTION 1: VERTICAL MOUNT

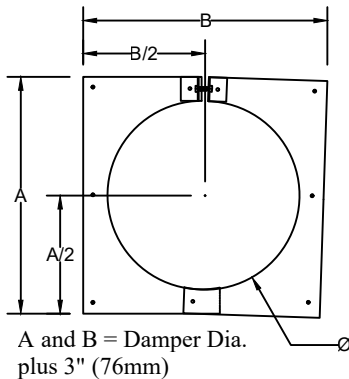
When UL is referred to in this document, it represents UL/ULC



Typical wood, metal stud or masonry opening.
 (Refer to Metal or Wood Stud Framing For Fire Dampers In Drywall Partitions)



Cross Section Of Opening



Retaining Plate Detail

IMPORTANT
DO NOT CAST DAMPER IN PLACE.
CYCLE DAMPER AFTER INSTALLATION
TO INSURE FREE MOVEMENT.
DO NOT INSTALL DAMPER OUT
OF ROUND.

1. Galvanized (or #304 stainless) steel integral sleeve shall be of the **SAME GAUGE** or heavier as the duct to which it is attached. Gauges shall conform to SMACNA or ASHRAE duct standards. The length of the sleeve extending beyond the wall opening shall not exceed 16" (406mm) on the operator side or 6" (152mm) on the opposite side.

2. The connecting duct shall terminate at the integral sleeve and is connected by using either:

- (a) a minimum of 3 - #10 sheet metal screws spaced equidistant around the sleeve for 22" and smaller duct.
- (b) a minimum of 5 - #10 sheet metal screws spaced equidistant around the sleeve for greater than 22" duct.
- (c) a 4" (101mm) drawband.

3. Clearance between the damper sleeve and the round or square wall opening shall be a minimum of 1/2" (13 mm) and a maximum of 1" (25 mm).

4. Damper will be factory supplied with one or two (shipped loose) clinch plate(s). Clinch plate is installed by wrapping around the damper and tightening the phillips screw clinch plate clip angles.

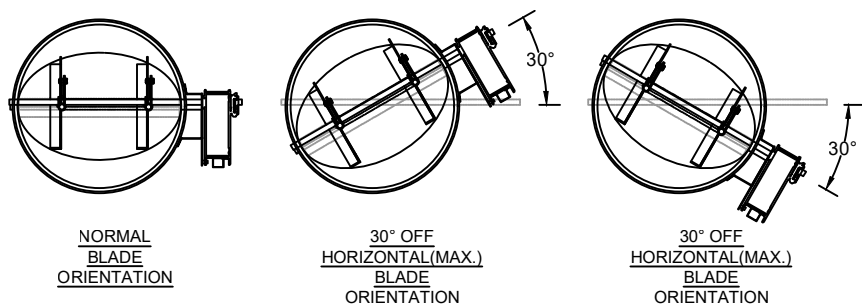
5. Fasteners attaching the clinch plate to the wall are shown in the table below

Fire-Rated Partition Type	Damper Orientation	Number of Clinch Plates Required	Number of Fasteners (Per Clinch Plate)	Max. Fastener Spacing	Fastener Type
Metal/Gypsum	Vertical	1	6 (3 per side)	10"	#8 x 2-3/8" drywall screw
Wood/Gypsum	Vertical	1	6 (3 per side)	10"	#8 x 2-3/8" drywall screw
Concrete	Vertical	1	6 (3 per side)	10"	3/16" x 1-1/4" tapcon

6. **Option 1:** The damper may be installed in a wood/gypsum, steel stud/gypsum, or masonry fire partition in the vertical position

(blade shaft running no more than 30 degrees from horizontal) with a retaining plate flush against one side of the fire partition. **Installation:** with the factory provided retaining plate flush to the fire partition, tighten the phillips screw in the clinch plate angles, then apply screws as listed in the table above.

MAXIMUM ALLOWABLE CANTED INSTALLATION



COMBINATION FIRE/SMOKE DAMPER

Installation Instructions

6B. **Option 2:** The damper may also be installed in a steel /gypsum, or masonry partition, in a horizontal position (blade running horizontal), with retaining plates on both sides of the partition. Installation: with the factory provided clinch plate flush to the fire partition (both sides) - see table below for fastener types and spacing



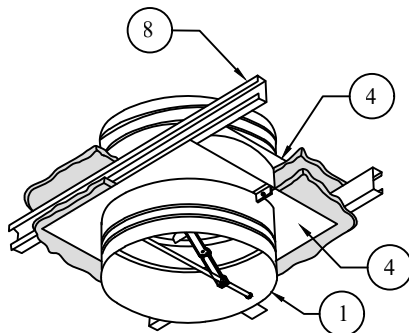
Fire-Rated Partition Type	Damper Orientation	Number of Clinch Plates Required	Number of Fasteners (Per Clinch Plate)	Max. Fastener Spacing	Fastener Type
Metal/Gypsum	Horizontal	2	6 (3 per side)	10"	#8 x 2-3/8" drywall screw
Concrete	Horizontal	2	6 (3 per side)	10"	3/16" x 1-1/4" tapcon

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

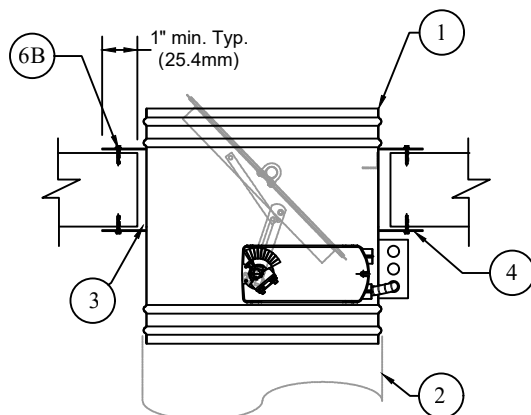
8. Refer to the installation instruction for Drywall Type Construction for the material and opening framing details.

9. As with all joints, the contractor must seal duct-collar connections, in the field, after installation.

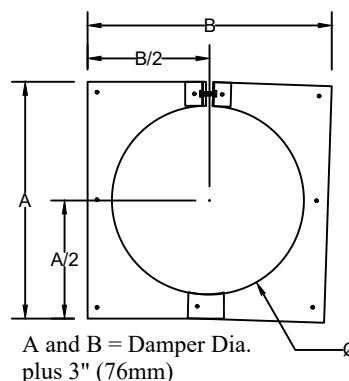
OPTION 2: HORIZONTAL MOUNT



Typical Fire Rated masonry or metal/gypsum opening.



Cross Section Of Opening



Retaining Plate Detail

IMPORTANT
DO NOT CAST DAMPER IN PLACE.
CYCLE DAMPER AFTER INSTALLATION
TO INSURE FREE MOVEMENT.
DO NOT INSTALL DAMPER OUT
OF ROUND.

Manufacturer's Recommendations

All moving parts of the damper must be inspected and cycled at intervals not greater than every 12 months or in accordance with the latest edition of NFPA 90A, 92A, local codes and the actuator manufacturer. In addition, fuse links shall be removed and inspected for corrosion. Dry lubricants are recommended.

This installation sheet has been reviewed and accepted by Underwriters Laboratories.
When UL is referred to in this document, it represents UL/ULC.