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Installation, Operation + Maintenance Manual

Roof Hatch, Smoke Vent, and Floor Door Safety Railings

Models: BSRB/BSRC/BSRT/BSRV

GENERAL DESCRIPTION

Safety Railing products are designed for use as a safety accessory to roof hatch, smoke vent and floor door products.

The following are general instructions for installing, operating and maintaining Roof Hatch, Smoke Vent and Floor Door Safety Railings.

Introduction + Safety

Please read the complete instructions carefully before beginning any work. To ensure proper installation and performance of the Safety Railing the following actions must be completed by the installing contractor. Failure to do so will affect product warranty.

GENERAL SAFETY PRECAUTIONS Improper selection, installation, or use can cause personal injury or property damage. It is solely the responsibility of the user, through their own analysis, to select products suitable to the specific application requirements, ensure proper maintenance and use as intended. Follow local, state, and federal regulations for proper installation and operation requirements.

Transportation + Storage

- Inspect all shipments and materials for missing or damaged components and hardware.
- Railings may ship in multiple boxes, depending on its size and exit configuration. To help keep systems together, the boxes will come banded together that form a full system.
- Material must be stored in a clean, dry location.

Preparation

- Locate the packing slip(s) and/or shop drawings.
- Verify that all products listed on the packing slip are included in the package.
- Check the products for damage. If products are damaged, report a freight claim immediately and leave the products in their packaging. If you sign for products without reporting damage you waive your right to a freight claim and will be responsible for their replacement cost.
- Read the instructions thoroughly before beginning installation.

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Tool List

- Level
- 1/2" Drill Bit
- 1/2” Wrench
- Marking Tool
- Caulking
- 9/16” Socket
- Drill
- 3/16” Allen Wrench (included)
- Torque Wrench

INSTALLATION – ROOF HATCHES & SMOKE VENTS

Review shop drawings for project specific detailed information.

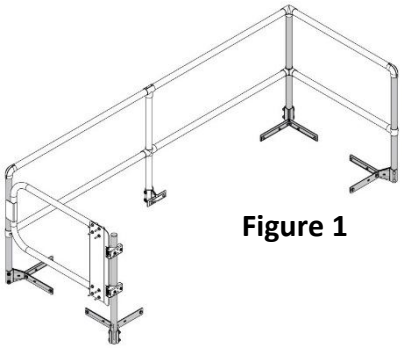

Figure 1

Corner Posts and Brackets (Figures 1, 2)

Before assembly, note the relative position of the door, hatch exit and the safety railing exit. Your roof hatch may be labeled “EXIT THIS SIDE”.

1. Temporarily assemble corner brackets using temporary assembly holes in bracket halves (10) and a 3/8-16 nut, bolt, and washer (20, 30, 40) **(Figure 2)**.

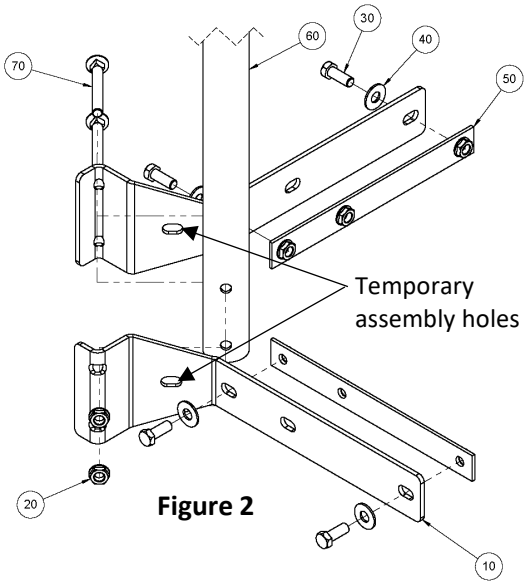

Figure 2

Item #	Description	QTY
10	CORNER BRACKET, HALF, 1-1/4” PIPE	2
20	NUT, HEX, LOCK, FLANGE, 3/8”-16	2
30	HEX HEAD SCREW, 3/8”-16 X 3/4"	4
40	WASHER, FLAT, 3/8”	4
50	THREADED NUT PLATE	2
60	POST, 1-1/4”, SCHEDULE 40	1
70	CARRIAGE BOLT, 3/8”-16 X 3.00”	2

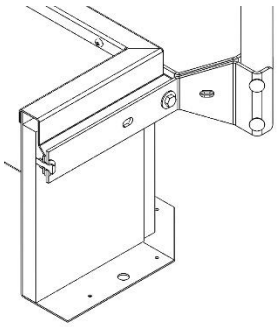

Figure 3

2. The railing brackets are designed for mounting on the counterflashing of the roof hatch **(Figure 3)**. *Do not mount brackets through the roof hatch curb or through roofing material.*
3. Ensure that the bracket is sitting square and level on the counterflashing.
4. Mark the mounting holes on each corner and drill 1/2” diameter holes. Remove 3/8”-16 nut and bolt (20, 30) from the bracket halves (10).
5. Fasten to the corner on counterflashing using 3/8”-16 x 3/4” bolts (30), washers (40), and threaded nut plate (50), which is placed behind the counterflashing for quick, easy installation.

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   a. If mounting holes were drilled, apply roofer's caulk around hole in counterflashing.
   b. Align and hold the threaded nut plate (50) behind the counterflashing.
   c. Screw the 3/8"-16 x 3/4"bolts (30) and washers (40) through the bracket and into the threaded nut plate.
6. Tighten all mounting brackets to the counterflashing making sure that all brackets are square and level with each other.
7. Set torque to 29 ft/lbs.
8. Insert the 35-inch upright post (60) into the installed brackets and insert the 3/8"-16 x 3" bolts (70). Tighten the bolts using the 3/8"-16 nuts (20).
9. Repeat for all corner posts.

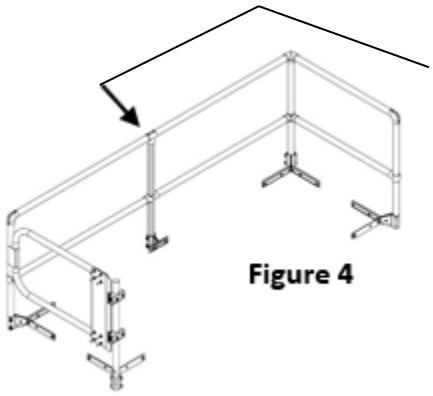

Figure 4

Center Post (Figure 4)

Center posts are included for roof hatch lengths greater than 6-1/2 feet.

Before installation, note the position of the door. The center post should be placed opposite the hinge side of the roof hatch or floor door to protect the opening.

1. Temporarily assemble center brackets using temporary assembly holes in bracket halves and a 3/8"-16 nut and bolt. (See **Figure 2** on p.2 for example with corner brackets)
2. Assemble top rail and center post. Temporarily attach it to corner posts to verify location of center post bracket.
3. Assure that the bracket is sitting square and level on the counterflashing.
4. Mark the mounting holes on the counterflashing and drill 1/2" diameter holes. Remove 3/8"-16 nut and bolt from bracket halves and top rail assembly.
5. Fasten to the center of the counterflashing using 3/8"-16 x 3/4" bolts, washers, and threaded nut plate.
   a. If mounting holes were drilled, apply roofer's caulk around hole in counterflashing.
   b. Align and hold the threaded nut plate behind the counterflashing.
   c. Screw the 3/8"-16 x 3/4" bolts and washers through the bracket and into the threaded nut plate.
6. Tighten all mounting brackets to the counterflashing making sure that all brackets are square and level with each other.
7. Set torque to 29ft/lbs.
8. Insert the 35"upright post into the installed brackets and insert the 3/8"-16 x 3" bolts. Tighten the bolts using the 3/8"-16 nuts.
9. Repeat for all center posts.

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Railing: Top and Mid Rails (Figure 5)

Before installation, note the position of the door. The top and mid-rails should be placed opposite the hinge side of the roof hatch or floor door to protect the opening.

1. Assemble the appropriate fittings with the horizontal rails and tighten the set screws using the provided 3/16" Allen wrench.

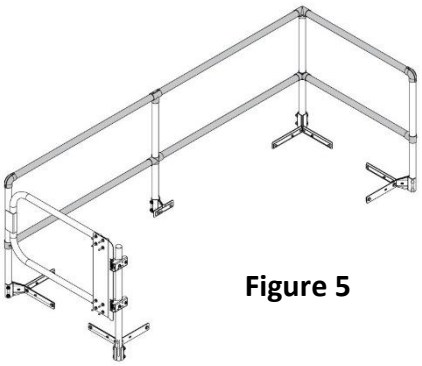

Figure 5

2. Slide the horizontal mid rails over the upright posts.
3. If necessary, install collar fitting over upright post that will not have an elbow.
4. Install the top rails over the upright posts and tighten the set screws.
5. Position the mid-rail 21" center-to-center from the top rail.
6. If necessary, install end cap on single upright post.

Exit Option – Self-Closing Gate (Figures 6, 7)

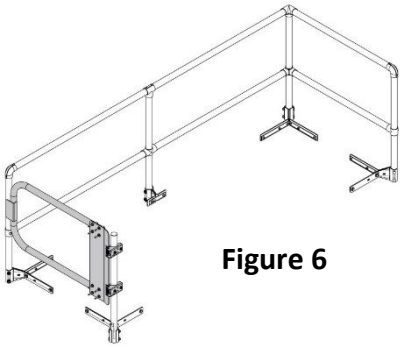

Figure 6

This option is intended for roof hatch and floor door applications.

1. Railing packages include a chain. If installing a gate, the chain is not used.
2. Remove provided hardware pouch attached to the safety gate.
3. Install safety gate using two U-bolt mounting brackets on applicable upright post **(Figure 7)**.
4. Set the safety gate to the height of the top safety rail and temporarily tighten using the provided hardware.
5. Rotate gate hinges so the gate stop contacts the opposing upright post.
6. Tighten U-bolt on the hinge to 20 ft/lbs.
7. Test the full range of gate operation to ensure the gate automatically closes when opened fully.

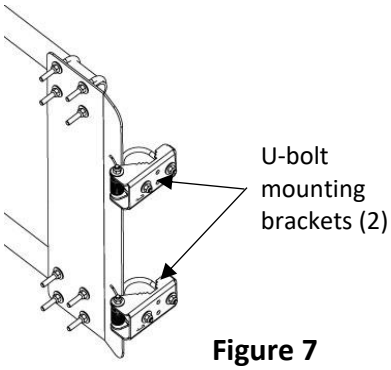

Figure 7

Great Products. Better Partners.
Babcock-Davis is a leader in roof hatches, smoke vents and safety railings for the commercial roofing market. We also manufacture architectural access and safety-related building products for commercial structures. Babcock-Davis provides local connections through a broad distribution network to accelerate and simplify the building process for contractors and building owners, offering hassle-free services including access to technical experts, REVIT tools for BIM, HPDs for LEED v4, 3-part specifications and AIA-accredited continuing education courses.

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Exit Option – Chain (Figures 8, 9)

This option is intended for roof hatch and floor door applications.

Figure 8

1. Remove set screws from top elbow or collar fitting of railing system.
2. Install provided eye bolts in set screw holes **(Figure 9)**.
3. Assemble chain and spring clips and install on eye bolts.

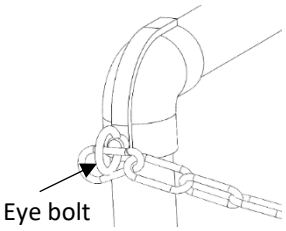
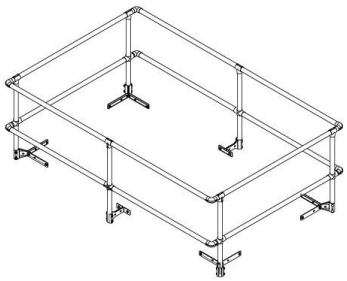


Figure 9

Exit Option – No Exit, Two and Four-Sided Rails

This option is intended for smoke vents and equipment roof hatches when there is no required exit.



INSTALLATION – FLOOR DOORS

Railing is mounted to the floor with the supplied Foot Bases (Figure 10).

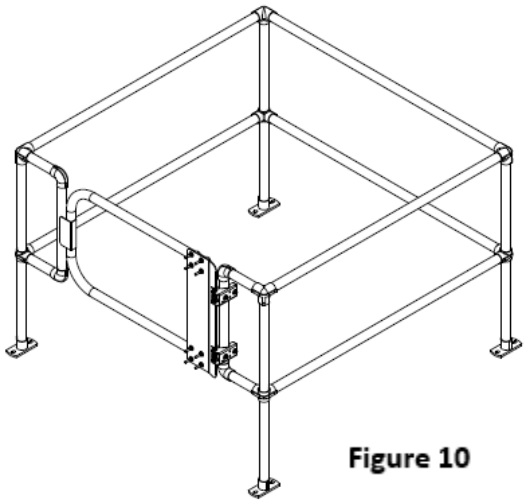
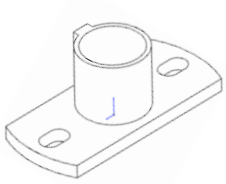


Figure 10

FLOOR DOOR RAILINGS ARE SIZED FOR 6-INCHES AROUND THE PERIMETER OF THE DOOR.
Note: Foot Bases MUST be fastened to the floor.
Hardware is supplied by others, depending on the floor material.
Slots measure 0.563 dia. x 0.875 lg.
See shop drawing for detail.

See Figures 6 & 7 on p.4 for optional self-closing gate installation.



Foot Base

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OPERATION

Assure that all fasteners are tightened to the suggested torque. The gate should fully open and close with no interference. The roof hatch or floor door should operate without interfering with the safety railing.

MAINTENANCE

It is recommended that the springs in the gate be lubricated once a year to preserve the spring, and that all fasteners meet the recommended torque setting.

QUESTIONS?

For more information on installation, repair or replacement, please contact Customer & Sales Support at 888-412-3726 or visit babcockdavis.com

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