babcockdavis®

Installation, Operation + Maintenance Manual

GRATEdesign

DEEP PIT ALUMINUM FRAMES

Models: BFD74D3C, BFD74D4C

GRATEdesign Rigid Grille is sturdy and offers design flexibility and is effective in any type of high-traffic entrance.

Introduction + Safety

Please read the complete instructions carefully before beginning any work. To ensure proper installation and performance of the product, 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 its own analysis to select products suitable for their specific application requirements, ensure they are properly maintained, and limit their use to its intended purpose. Follow proper 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.
- 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.

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.

©2025 Babcock-Davis
Rev 12/2025

Tool List

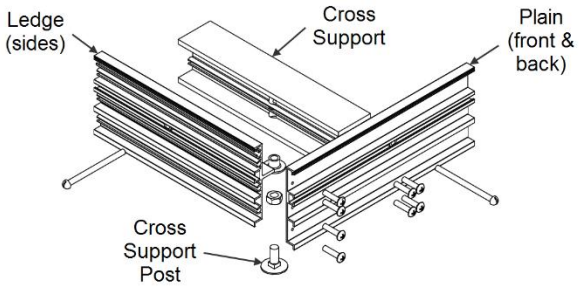
- Level
- Hammer
- Screwdrivers, Flat & Phillips
- Wrench, Adjustable
- Silicone caulk, Caulk gun
- Shims
- Pry Bar
- Clean-up tools – see section on Cleaning the Treads

INSTALLATION

INSTALL THE FRAME

Properly installed frames are critical to the overall performance of the grille. Improperly installed frames may cause deflection in the grille and may possibly cause tripping hazards.

1. The rough opening must be deep enough to allow the cross supports to fit under the grille and 6” wider than the overall frame dimensions. This provides clearance for the anchor bolts and gives sufficient mortar strength to support the frame and grille assembly and allows room to maneuver the frame.
2. Insert the 1/4" by 3” anchor bolts and nuts in the frame channels. The anchor bolts should be spaced at a maximum distance of 24” on all sides of the frame.
3. Assemble the frame sections according to the shop drawings. Note that there are two types of frames: ledge (sides) and plain (front and back.) If frames lengths are provided in sections, splice bolts are provided for connecting pieces together. Insert the 1/4-20” by 1” self-threading screws through the pre-punched holes in the plain sections of the frame and into the screw bosses on the ledge sections without tightening them completely. If there are cross supports, insert them between the plain side frame sections and attach them with the remaining screws. When the frame is completely assembled, finish tightening all screws. Install the support posts for the cross supports on the bottom of the supports as indicated in the shop drawings. Adjust support post heights as necessary.



4. If applicable, lay the pan sections on the bottom of the recess and caulk all seams. *(All caulking to be provided by others.)* Make any drain or trap connections. *(All drain accessories provided by others)*
5. Place the assembled frame into the opening. Shim as necessary to level the frame to the final height of the finished floor surface.

©2025 Babcock-Davis

6. Pour cement mortar around edges of the frame and trowel in sufficient amount so that it will provide proper support for the frame and grille.
7. Before the mortar sets, check the frame to make sure that it is plumb, that the members join at the correct angles, and that it is at the correct height. Also, check the measurements of the frame against the shop drawings in several locations to make sure that the sizes are correct. The grille will not fit if the frame is not installed exactly as indicated on the shop drawings. *Use spreaders if necessary to hold the frame at the correct dimensions.*
8. When the cement has hardened, install plywood or other material in the recess to protect the edges of the frame until it is time to install the grilles. Wait to install the grille until the building is ready for use.

INSTALL THE GRILLE

1. Remove the plywood or other filler from the recess and clean the recess thoroughly. Note that debris will cause irregularities in the recess that will in turn cause the grille to rock or create a tripping hazard.
2. Consult drawings to determine the correct locations of the grille sections. *Note that grilles must be in the proper location, with all sections facing the same direction*. The triangular keylock holes will all point the same direction when installed properly.
3. Move the cushions to the outer edges of each section and on 2 feet centers between the outer edges.
4. Set grilles into the recess.
5. Adjust cushions to compensate for irregularities in the recess.
6. Save the installation and maintenance instructions and include them with the closeout documentation for the owner and maintenance personnel.

MAINTENANCE

Continued maintenance is critical to the long-term safety and performance of the grille. Remove the grille and clean the recess periodically to prevent the surface from becoming uneven. Debris build up within the recess could lead to deflection in the grille and may possibly cause tripping hazards.

The type and schedule of maintenance of your grille will depend upon location and amount of traffic. See the outline below for cleaning instructions for the variety of tread insert materials.

©2025 Babcock-Davis

EcoTread

- Use a mild detergent and water with a soft bristle brush or microfiber mop.
- *Do not use petroleum-based products to clean recycled rubber.* These types of solvents will damage or fade the treads.

Premium Carpet

- A good heavy-duty vacuum cleaner with a rotating brush is the most effective way to routinely clean the carpet in your entrance grille. By vibrating the fibers, this type of vacuum not only cleans the surface of the carpet, but also removes soil that is imbedded into the pile. The rotating brush aids in keeping the pile upright for longer lasting beauty.
- The heaviest traffic areas should be vacuumed daily and the light traffic areas as infrequently as weekly.
- Carpet should be deep cleaned with a hot water extraction cleaner once per month or when vacuuming will no longer remove the soil. This may be monthly, quarterly, or longer, depending upon soil and traffic conditions.
- Inspect the grille regularly for spots and stains, to reduce the possibility of them becoming permanent.
- Removing Spots
    - If the spot is semi-solid, scrape with a spoon or spatula and then blot with a damp sponge. Work from the edge of the spot to the center. This will keep the stain from spreading. If this procedure does not work, use a spot remover.
    - We recommend a dry system because it reduces solid build-up won't leave floors wet and slippery, and there is no risk in damaging the carpet from dye bleeding. For most spills such as coffee, tea, pet stains, etc., a dry soil extractor works best.
    - Wet cleaning methods, including aerosols, foams, hot water extraction, or shampoo will work, but sometimes they leave sticky detergent residue that will accelerate soil build-up.
    - For oily stains such as tar, grease, paint, etc., a non-flammable dry cleaning solvent works best. Be extremely careful when using dry cleaning solvent. Take care to check for color fastness before cleaning the entire surface. Put a few drops of stain remover in an inconspicuous area and press the area with a clean cloth for ten seconds. If the color fades or changes, discontinue use.

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.

©2025 Babcock-Davis
Rev 12/2025

Ribbed Rubber

- Use a mild detergent and water to damp mop the rubber treads. To remove caked on mud, use a stiff brush.
- *Do not use petroleum-based products to clean rubber.* These types of solvents will damage or fade the treads.

Rugged Scrub®

- The most effective way to clean the treads is with a garden hose or high-pressure washer, as necessary. The treads can withstand pressure of up to 1,000 pounds per square inch. A good heavy-duty vacuum cleaner with a rotating brush will remove most dirt from your Rugged Scrub® treads during routine daily cleaning.
- *Do not use petroleum-based products to clean Rugged Scrub.* These types of solvents will damage or dissolve the treads.

Serrated Aluminum Grilles

- Clean the treads with a vacuum or broom first, and then mop the treads with standard floor cleaner.

Vinyl Abrasive Tread

- Clean the vinyl abrasive treads with a vacuum or broom.
- *Do not use any hydrocarbon solvents such as kerosene, paint thinner or acetone to clean vinyl abrasive treads.* These types of solvents will damage or fade the treads.

Vinyl Tread

- Use a mild detergent and water to damp mop the vinyl treads. To remove caked on mud, use a stiff brush.
- *Do not use petroleum-based products to clean vinyl.* These types of solvents will damage or fade the treads.

QUESTIONS?

For more information on installation, repair or replacement, please visit babcockdavis.com

©2025 Babcock-Davis