

### SECTION 07 72 33 ROOF HATCHES

#### PART 1 - GENERAL

##### 1.1 SUMMARY

###### A. Section includes:

1. Hurricane Hatch™ Series roof hatches installed on or in roofing system indicated on Drawings and specified herein. Includes related hardware and attachments. Does not include mechanical or structural items.
2. Safety railing for mounting onto roof hatch counterflashing.
3. Safety Posts for vertical ladder access roof hatches

###### B. Related Sections: [Insert applicable specifications sections]

1. Division 5 - Metal Fabrications.
2. Division 7 – Roof Accessories.
3. Division 7 – Roof Hatch Railing System.
4. Division 7 - Joint Sealants.
5. Division 9 – Paints and Coatings.
6. Division 15 – Mechanical.
7. Division 16 – Electrical.

##### 1.2 REFERENCES

- A. Steel Sheet: ASTM A653 / A653M steel sheet, zinc-coated (galvanized) or zinc-iron alloy-coated (galvannealed) by the hot-dip process
- B. Aluminum Sheet: ASTM B209
- C. Insulation: Manufacturer's standard rigid polyisocyanurate board
- D. Aluminum Extrusion: 6061-T6 aluminum.
- E. Steel Angle: ASTM A36-94 steel frame, structural.
- F. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products"

##### 1.3 SUBMITTALS

- A. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected Work.
  1. Hatch Units: Show types, elevations, thickness of metals, and full size profiles.
  2. Hardware: Show materials, finishes, locations of fasteners, types of fasteners, locations and types of operating hardware, and details of installation.
  3. General: Show connections of units and hardware to other Work. Include schedules showing location of each type and size of unit.
- B. Product Data: Manufacturer's technical data for each type of hatch assembly, including setting drawings, templates, finish requirements, and details of anchorage devices.
  1. Include complete schedule, types, locations, construction details, finishes, latching or locking provisions, and other pertinent data.
- C. Manufacturer's Installation Instructions: Indicate installation requirements and rough-in dimensions.
- D. Quality Control Submittals:

1. Statement of qualifications.

E. Contract Closeout Submittals:

1. Installation, Operating & Maintenance manuals.

### 1.4 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer/Installer: Company specializing in manufacturing and installation of components specified in this Section with minimum of 5 years documented experience.

B. Regulatory Requirements:

1. Miami-Dade County, FL Approved NOA #: 12-0320.29 Expiration Date July 19, 2017
  - a. TAS 201 Impact test
  - b. TAS 202 Uniform Static Air Pressure
  - c. TAS 203 Cyclic Wind Pressure Loading
2. OSHA 29 CFR 1910.23 Guarding floor and wall openings and holes
3. OSHA 29 CFR 1926.502 Fall protection systems criteria
4. International Building Code (IBC) Section 1013.6 Roof Access
5. International Building Code (IBC) Section 1009.11 Means of Egress, Stairways, Stairway to Roof

### 1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site ready use.

B. Exercise proper care in handling of Work so as not to injure finished surfaces. Protect Work from damage after it is in place.

C. Store materials under cover in a dry and clean location off the ground. Remove materials that are damaged or otherwise not suitable for installation from Project site and replace with acceptable materials at no additional cost to Owner.

### 1.6 WARRANTY

A. Provide manufacturer's standard 5 year warranty. All roof hatches shall be free from manufacturing defects in materials and workmanship for a period of five (5) years from the date of shipment. Should a product fail to function in normal use within this period, manufacturer shall furnish a new part at no charge. Special finishes and other special equipment (if applicable) shall be warranted by the manufacturer of those products.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURER

1. Babcock-Davis  
9300 73<sup>rd</sup> Ave N.  
Brooklyn Park, MN 55428

Toll Free Hotline: 888-412-3726

Direct Phone: 763-488-9247

Toll Free Fax: 888-312-3726

Direct Fax: 763-488-9248

### 2.2 MANUFACTURED HURRICANE HATCH™ ALUMINUM

#### A. Performance and Approvals

1. Roof hatch shall be reinforced to support a minimum live load of 40 psf with a maximum deflection of 1/150th of the span with a wind design pressure of +/- 100 psf with a factor of safety of 2.
2. Units shall be Miami-Dade County, FL Product Control Approved meeting large and small missile impact requirements

#### B. Material

1. Cover and liner: 11 gauge (0.090-inch) aluminum cover with 1 inch rigid fiberboard insulation and 18 gauge (0.040-inch) aluminum cover liner.
2. Curb: 11 gauge (0.090-inch) aluminum curb with 1 inch rigid fiberboard insulation.
3. Finish: Mill finished aluminum
4. Hinges: Zinc plated steel tamper-proof hinge contained within hatch as part of spring assembly.
5. Latch: Zinc plated steel slam latch with turn handle and inside/outside padlock hasps.
6. Springs: Greased heavy-duty compression springs in telescoping tubes.
7. Hardware: Zinc plated steel hold open arm(s) with red vinyl grip handle that automatically locks door when opened. Furnish hatches with interior padlock hasp and EPDM draft seal.
8. Weather-stripping: EPDM gasket type weather-stripping continuous around perimeter of cover.
9. Acceptable Product: Model BRHZA [\[Indicate size\]](#)
  - a. Sizes: Width x Length [\[24"x24" up to 30"x54" \]](#) Maximum area of 11.25sqft

### 2.3 MANUFACTURED HURRICANE HATCH™ STEEL

#### A. Performance and Approvals

1. Roof hatch shall be reinforced to support a minimum live load of 40 psf with a maximum deflection of 1/150th of the span with a wind design pressure of +/- 100 psf with a factor of safety of 2.
2. Units shall be Miami-Dade Product Control approved, NOA # 12-0320.29 meeting large and small missile impact requirements

#### B. Material

1. Cover and Liner: 14 gauge (0.075 inch) galvanized steel cover with 1 inch rigid fiberboard insulation and 22 gauge (0.0299 inch) galvanized steel cover liner.
2. Curb: 14-gauge galvanized steel with 3/4 inch rigid fiberboard insulation at curb perimeter.
3. Finish: Red Oxide powder coat finished steel
4. Hinges: Zinc plated steel tamperproof hinge contained within hatch as part of spring assembly.
5. Latch: Zinc plated steel slam latch with turn handle and inside/outside padlock hasps.
6. Springs: Greased heavy-duty compression springs in telescoping tubes.
7. Hardware: Zinc plated steel hold open arm with red vinyl grip handle that automatically locks the door when opened. Furnish hatches with interior padlock hasp and EPDM draft seal.
8. Weather-stripping: EPDM gasket type weather-stripping continuous around perimeter of cover.
9. Acceptable Product: Model BRHZG [\[Indicate size\]](#)
  - a. Sizes: Width x Length [\[24"x24" up to 30"x54" \]](#) Maximum area of 11.25sqft

### 2.4 ACCESSORIES

#### A. Safety Railing for Roof Hatch: Manufacturer's standard complete system including rails, fittings, fasteners, mounting brackets, safety barrier at railing opening and all accessories required for a complete installation.

1. Acceptable Manufactures: Subject to compliance with requirements of the Contract Documents, acceptable manufactures are as follow or approved equal:
  - a. Babcock-Davis Model BSRC
2. Size: Size according to roof hatch size and application [\[24"x24" to 144"x240"\]](#)

3. Description: Railing mounting brackets designed to be bolted on exterior surfaces of curb counterflashing. Railing will provide protection of roof opening while roof hatch is open to comply with OSHA Standards CFR 29 1910.23 and OSHA 29 CFR 1926.502
    - a. Test Load; 200 pounds.
    - b. Top Rail Height: 42 +/- 3 inches above finished roof deck.
    - c. Mid Rail spaced to eliminate passage of 21" diameter sphere.
    - d. Upright post spacing of 8 feet maximum.
  4. Materials:
    - a. Top rail, mid rail, and swinging gate.
    - b. Pipe: Galvanized, 1-1/4 inch ID, A53 Grade B seamed pipe, galvanized
    - c. Self Closing Gate; Galvanized Steel Pipe, 1 1/4" ID A53 Grade B, U bolt with hinge attachment and galvanized mounting bolts and nut hardware.
    - d. Fittings: Manufacturer's standard cast with set screw pipe mount
    - e. Flat bar mounting bracket; zinc plated steel with nuts for easy bolt installation
    - f. Fasteners: Manufacturer's standard 3/8-16 x .75 screws.
- B. Safety Post: Manufacture's standard system for mounting on fixed vertical ladders rungs.
1. Acceptable Manufacturers: Subject to compliance with requirements of the Contract Documents, acceptable manufactures are as follow or approved equal
    - a. Babcock-Davis
  2. Description: Safety Post for installation on fixed vertical ladders mounted below hatch cover. Tubular post shall lock automatically when fully extended. Release lever shall disengage the post to allow it to be returned to its lowered position.
    - a. Materials: Post manufactured of high strength square tubing, 1 1/2" x 1 1/2" x 1/8". A pull up loop shall be provided at the upper end of the post to facilitate raising the post.
      - 1) [BSPY: Steel Yellow Powder Coat]
      - 2) [BSPG: Steel Hot Dip Galvanized]
      - 3) [BSPS: Stainless Steel Type 304]
      - 4) [BSPA: Aluminum Mill]
    - b. Balancing spring: A stainless steel constant force balancing spring mechanism shall provide smooth, easy, controlled operation when raising and lowering the safety post
    - c. Hardware: Shall be zinc plated steel. Attaches directly to the top two rungs of fixed ladder.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which Work is to be performed and identify conditions detrimental to proper or timely completion.
- B. Verify that deck, curbs, roof membrane, base flashing, and other items affecting Work of this Section are in place and positioned correctly.
- C. Verify tolerances and correct improper conditions.
- D. Do not proceed until unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. Install roof hatch and accessory items per manufacturer's instructions.
  1. For Miami-Dade Hurricane Hatch™, install using the manufacturer's anchoring options as detailed on shop drawings and installation instructions for wood curbs, steel curbs or concrete curbs.
- B. Coordinate installation of components of this Section with installation of roof deck, roof structure, roofing membrane, and base flashing.
- C. Coordinate installation of sealant and roofing cement with Work of this Section to ensure water tightness.

#### 3.3 ADJUSTING

- A. Adjust movable parts for smooth operation.

- B. Operational Units: Test-operate units with operable components. Clean and lubricate joints and hardware. Adjust for proper operation.
- 3.4 CLEANING
- A. Clean exposed surfaces per manufacturer's written instructions. Touch up damaged metal coatings.
- END OF SECTION