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| This guide specification was prepared utilizing 3-part format recommended by the Construction Specifications Institute (CSI), and generally incorporates recommendations from their SectionFormat®/Page Format®, and MasterFormat®, latest Editions, insofar as practicable.Carefully review and edit the text to meet the Project requirements and coordinate this Section with the remainder of the Specifications and the Drawings. Where bracketed text is indicated, e.g. [text], make appropriate selection and delete the remainder of text within additional brackets, highlighting, and bold face type, if any.Consult the manufacturer for assistance in editing this guide specification for specific Project applications where necessary.This Specification was current at the time of publication but is subject to change. Please confirm the accuracy of these specifications with the manufacturer prior to use. Shape  Description automatically generated with medium confidence |

**SECTION 07 72 33**

 **ROOF ACCESSORIES**

**PART 1 - GENERAL**

* 1. **SUMMARY**

A. Section Includes:

1. REH DURA-HATCH EQUIPMENT SERIES
2. REHV DURA-HATCH DOMED EQUIPMENT SERIES

B. Related Requirements:

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

*SPECIFIER: Revise section numbers and titles in subparagraphs below per CSI Master Format****™*** *and Project requirements.*

1. Section 01 33 00 - Submittal Procedures: For administrative and procedural requirements for processing of submittals during the construction phase.

2. Section 01 77 00 - Closeout Procedures: For administrative and procedural requirements for completion of the Work.

*SPECIFIER: Retain subparagraphs below to suit Project requirements; revise section numbers and titles per project requirements.*

 3. Section 05 51 00 – Metal Stairs and Ladders and railings

 4. Section 07 72 00 – Roof and Wall Specialties and Accessories

5. Section 09 9100 - Painting: For field painting of roof hatches.

**1.02 ALLOWANCES**

A. Roof access equipment hatches are part of a roof access and equipment hatch allowance.

**1.03 REFERENCES**

*SPECIFIER: Use care when indicating the edition date of the referenced standards; these standards are subject to regular review, and updated; accordingly, review list carefully for inclusion.*

A. Reference Standards:

1. ASTM International (ASTM):

a. ASTM A36/A36M-12, Standard Specification for Carbon Structural Steel

b. ASTM A153/A153M-09, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

c. ASTM A653/A653M-11, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process

d. ASTM A879/A879M-12, Standard Specification for Steel Sheet, Zinc Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface

e. ASTM A1008/A1008M-12a, Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable

f. ASTM B209-10, Standard Specification for Aluminum and Aluminum-Alloy Sheet

and Plate

g. ASTM B221-12a, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes

h. ASTM F2329-11, Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners

2. International Code Council (ICC):

a. International Building Code (IBC) - [**current**] Edition.

**1.04 ACTION SUBMITTALS**

*SPECIFIER: Revise Section number in the paragraph below to match that used in the Project Manual.*

A. Submit in accordance with Section [**01 33 00**] [**other**]:

1. Product Data:

a. Materials description for roof access equipment hatches including details showing mounting type, relationships to surrounding construction, hatch type, materials, and construction, and locking features.

b. Installation instructions for each product specified.

2. Shop Drawings:

a. Include details of each hatch type, size and description of components, materials, attachment devices, description of frame and finish and construction details.

b. Schedule showing each type of hatch, locations, sizes, latching or locking provisions, and other data pertinent to installation

c. Indicate installation procedures and accessories required for a complete installation.

**1.05 QUALITY ASSURANCE**

A. Comply with standards referenced in Article 1.03 REFERENCES.

B. Provide roof hatches produced by a single manufacturer.

C. Manufacturer Qualifications: Roof access equipment hatch must be manufactured by a company with a minimum of 5 years’ experience in production and sales of roof access equipment hatches.

**1.06 DELIVERY, STORAGE, AND HANDLING**

A. Deliver, store, and handle roof hatches using means and methods that will prevent damage, deterioration, or loss.

1. Deliver units in manufacturer's original packaging, properly labeled for identification.

B. Warranty: Provide manufacturer’s standard 5-year warranty. Roof access equipment hatch shall be free from manufacturer’s defects in materials and fabrication for a period of 5 years from the date of shipment. Should a product fail to function in normal use within this period, manufacturer shall furnish a replacement or a new part at manufacturers discretion.

**PART 2 - PRODUCTS**

**2.01 ROOF ACCESS EQUIPMENT HATCH MANUFACTURERS**

1. Acceptable Manufacturers:

Dur-Red Products - Part of Activar Construction Products Group, Inc.

9702 Newton Avenue S.

Bloomington, MN 55431

(800) 554-6077

 [www.activarcpg.com](http://www.activarcpg.com)

info@activarcpg.com

B. Substitutions: Manufacturers seeking approval of their products are required to comply with the Owner's Instructions to Bidders, generally contained in the Project Manual.

**2.02 REHA SERIES - ALUMINUM EQUIPMENT HATCH**

A. Style REHA: Aluminum roof equipment hatch.

1. Model REHA- [**insert remainder of model number from subparagraph 6 below**].

2. Cover: Insulated, 11-gauge aluminum exterior and 18-gauge aluminum liner, with continuous bulb-type neoprene door seal.

a. Insulation: 1-inch (25.40 mm) thick polyisocyanurate insulation.

3. Curb: Insulated, 11-gauge aluminum, 12 inches (305 mm) high with 4 inch (101.60 mm) wide flange for securing to roof deck.

a. Insulation: 1-inch (25.40 mm) thick polyisocyanurate insulation.

4. Hardware: Heavy duty galvanneal steel or aluminum hinge with bolt pin, Pressure intensifiers with compression springs provide lift assistance. Adjustable torsion springs will be provided for oversized models. Clear zinc-plated steel hold-open arm with red plastic coating, Two-point universal spring latches on each cover with exterior and interior handles.

5. Hatch Finish: Powder coat silver texture.

6. Hatch Opening Size (width by hinge length):

 a. REHA-4848ST: 48 inches x 48 inches (1219.20 mm x 1219.20 mm)

b. REHA-6060ST: 60 inches x 60 inches (1524.0 mm x 1524.0 mm)

c. REHA-6096ST: 60 inches x 96 inches (1524.0 mm x 2438.40 mm)

d. REHA-7272ST: 72 inches x 72 inches (1828.80 mm x 1828.80 mm)

e. REHA-7296ST: 72 inches x 96 inches (1828.80 mm x 2438.40 mm)

f. <Insert dimensions>

 7. Model REHA Options:

*SPECIFIER: Select specific options listed below, if desired.*

1. Double Wall Curb
2. Curb Mounted
3. Curb Heights, choose from 13 inches (330.2 mm) up to 24 inches (609.6 mm) in height; [\_\_\_\_inches]
4. 1-inch Fiberboard Insulated Curb
5. Energy-efficient polyisocyanurate insulation, 2 inches (50.8mm) (R-12) on curb walls.
6. 1-inch x 6-inch Wood Nailer Top/Polyisocyanurate Bottom of Curb
7. Stainless hardware.

**2.03 REHG SERIES - GALVANNEAL STEEL EQUIPMENT HATCH**

A. Style REHG: Galvanneal steel roof equipment hatch.

1. Model REHG.

2. Cover: Insulated, 14-gauge galvanneal steel exterior and 22-gauge galvanneal steel liner, with continuous bulb-type neoprene door seal.

a. Insulation: 1-inch (25.40 mm) thick polyisocyanurate insulation.

3. Curb: Insulated, 14-gauge galvanneal steel, 12 inches (305 mm) high with 4 inch (101.60 mm) wide flange for securing to roof deck.

a. Insulation: 1-inch (25.40 mm) polyisocyanurate insulation.

4. Hardware: Heavy duty galvanneal steel or aluminum hinge with bolt pin, Pressure intensifiers with compression springs provide lift assistance. Adjustable torsion springs will be provided for oversized models. Clear zinc-plated steel hold-open arm with red plastic coating, Two-point universal spring latches on each cover with exterior and interior handles.

5. Hatch Finish: Powder coat gray texture.

6. Hatch Opening Size (width by hinge length):

 a. REHG-4848GT: 48 inches x 48 inches (1219.20 mm x 1219.20 mm)

b. REHG-6060GT: 60 inches x 60 inches (1524.0 mm x 1524.0 mm)

c. REHG-6096GT: 60 inches x 96 inches (1524.0 mm x 2438.40 mm)

d. REHG-7272GT: 72 inches x 72 inches (1828.80 mm x 1828.80 mm)

e. <Insert dimensions>

 7. Model REHG Options:

*SPECIFIER: Select specific options listed below, if desired.*

1. Double Wall Curb
2. Curb Mounted
3. Curb Heights, choose from 13 inches (330.2 mm) up to 24 inches (609.6 mm) in height; [\_\_\_\_inches]
4. 1-inch Fiberboard Insulated Curb
5. Energy-efficient polyisocyanurate insulation, 2 inches (50.8mm) (R-12) on curb walls
6. 1-inch x 6-inch Wood Nailer Top/Polyisocyanurate Bottom of Curb
7. Stainless hardware

**2.04 REHGA SERIES - GALVANNEAL STEEL CURB, ALUMINUM COVER EQUIPMENT HATCH**

A. Style REHGA: Galvanneal steel curb with aluminum cover roof equipment hatch.

1. Model REHGA- [**insert remainder of model number from subparagraph 6 below**].

2. Cover: Insulated, 11-gauge aluminum exterior and 18-gauge aluminum liner, with continuous bulb-type neoprene door seal.

 a. Insulation: 1-inch (25.40 mm) thick polyisocyanurate insulation.

3. Curb: Insulated, 14-gauge galvanneal steel, 12 inches (305 mm) high with 4 inch (101.60 mm) wide flange for securing to roof deck.

a. Insulation: 1-inch (25.40 mm) polyisocyanurate insulation.

4. Hardware: Heavy duty galvanneal steel or aluminum hinge with bolt pin, Pressure intensifiers with compression springs provide lift assistance. Adjustable torsion springs will be provided for oversized models. Clear zinc-plated steel hold-open arm with red plastic coating, Two-point universal spring latches on each cover with exterior and interior handles.

5. Hatch Finish: Powder coat silver texture.

6. Hatch Opening Size (width by hinge length):

a. REHGA-7296ST: 72 inches x 96 inches (1828.80 mm x 2438.40 mm).

b. <Insert dimensions>

 7. Model REHGA Options:

*SPECIFIER: Select specific options listed below, if desired.*

1. Double Wall Curb
2. Curb Mounted
3. Curb Heights, choose from 13 inches (330.2 mm) up to 24 inches (609.6 mm) in height; [\_\_\_\_inches]
4. 1-inch Fiberboard Insulated Curb
5. Energy-efficient polyisocyanurate insulation, 2 inches (50.8mm) (R-12) on curb walls
6. 1-inch x 6-inch Wood Nailer Top/Polyisocyanurate Bottom of Curb
7. Stainless hardware

**2.05 REHVA SERIES - DOMED ALUMINUM EQUIPMENT HATCH**

A. Style REHVA: Domed aluminum roof equipment hatch.

1. Model REHVA- [**insert remainder of model number from subparagraph 6 below**].

2. Cover: Insulated, 11-gauge aluminum exterior and 18-gauge aluminum liner, with continuous bulb-type neoprene door seal.

a. Insulation: 1-inch (25.40 mm) thick polyisocyanurate insulation.

b. Dome Type: Double-glazed (insulating) acrylic domes, clear over white set in 0.070 inch (1.78 mm) extruded aluminum alloy #6063-T5 frame, with self-contained sloping condensation and weepage gutter for drainage.

3. Curb: Insulated, 11-gauge aluminum, 12 inches (305 mm) high with 4 inch (101.60 mm) wide flange for securing to roof deck.

a. Insulation: 1 inch (25.40 mm) thick polyisocyanurate insulation.

4. Hardware: Heavy duty galvanneal steel or aluminum hinge with bolt pin, Pressure intensifiers with compression springs provide lift assistance. Adjustable torsion springs will be provided for oversized models. Clear zinc-plated steel hold-open arm with red plastic coating, Two-point universal spring latches on each cover with exterior and interior handles.

5. Hatch Finish: Powder coat silver texture.

6. Hatch Opening Size (width by hinge length):

a. REHVA-7272ST: 72 inches x 72 inches (1828.80 mm x 1828.80 mm).

b. REHVA-7296ST: 72 inches x 96 inches (1828.80 mm x 2438.40 mm).

c. <Insert dimensions>

 7. Model REHVA Options:

*SPECIFIER: Select specific options listed below, if desired.*

1. Double Wall Curb
2. Curb Mounted
3. Curb Heights, choose from 13 inches (330.2 mm) up to 24 inches (609.6 mm) in height; [\_\_\_\_inches]
4. 1-inch Fiberboard Insulated Curb
5. Energy-efficient polyisocyanurate insulation, 2 inches (50.8mm) (R-12) on curb walls
6. 1-inch x 6-inch Wood Nailer Top/Polyisocyanurate Bottom of Curb
7. Stainless hardware
8. Double Polycarbonate Clear over White Domes
9. Acrylic Single Dome White
10. Polycarbonate Single Dome White

**2.06 REHVG SERIES - DOMED GALVANNEAL STEEL CURB EQUIPMENT HATCH**

A. Style REHVG: Domed galvanneal steel roof equipment hatch.

1. Model REHVG- [**insert remainder of model number from subparagraph 6 below**].

2. Cover: Insulated, 14-gauge galvanneal steel exterior and 22-gauge galvanneal steel liner, with continuous bulb-type neoprene door seal.

a. Insulation: 1-inch (25.40 mm) thick polyisocyanurate insulation.

b. Dome Type: Double-glazed (insulating) acrylic domes, clear over white set in 0.070 inch (1.78 mm) extruded aluminum alloy #6063-T5 frame, with self-contained sloping condensation and weepage gutter for drainage.

3. Curb: Insulated, 14-gauge galvanneal steel, 12 inches (305 mm) high with 4 inch (101.60 mm) wide flange for securing to roof deck.

a. Insulation: 1-inch (25.40 mm) polyisocyanurate insulation.

4. Hardware: Heavy duty galvanneal steel or aluminum hinge with bolt pin, Pressure intensifiers with compression springs provide lift assistance. Adjustable torsion springs will be provided for oversized models. Clear zinc-plated steel hold-open arm with red plastic coating, Two-point universal spring latches on each cover with exterior and interior handles.

5. Hatch Finish: Powder coat gray texture.

6. Hatch Opening Size (width by hinge length):

a. REHVG-7272G: 72 inches x 72 inches (1828.80 mm x 1828.80 mm)

b. <Insert dimensions>

 7. Model REHVG Options:

*SPECIFIER: Select specific options listed below, if desired.*

1. Double Wall Curb
2. Curb Mounted
3. Curb Heights, choose from 13 inches (330.2 mm) up to 24 inches (609.6 mm) in height; [\_\_\_\_inches]
4. 1-inch Fiberboard Insulated Curb
5. Energy-efficient polyisocyanurate insulation, 2 inches (50.8mm) (R-12) on curb walls
6. 1-inch x 6-inch Wood Nailer Top/Polyisocyanurate Bottom of Curb
7. Stainless hardware
8. Double Polycarbonate Clear over White Domes
9. Acrylic Single Dome White
10. Polycarbonate Single Dome White

**2.07 REHVGA SERIES - DOMED GALVANNEAL STEEL CURB, ALUMINUM COVER EQUIPMENT HATCH**

A. Style REHVGA: Domed galvanneal steel curb, aluminum cover roof equipment hatch.

1. Model REHVGA- [**insert remainder of model number from subparagraph 6 below**].

2. Cover: Insulated, 11-gauge aluminum exterior and 18-gauge aluminum liner, with continuous bulb-type neoprene door seal.

a. Insulation: 1-inch (25.40 mm) thick polyisocyanurate insulation.

b. Dome Type: Double-glazed (insulating) acrylic domes, clear over white set in 0.070 inch (1.78 mm) extruded aluminum alloy #6063-T5 frame, with self-contained sloping condensation and weepage gutter for drainage.

3. Curb: Insulated, 14-gauge galvanneal steel, 12 inches (305 mm) high with 4 inch (101.60 mm) wide flange for securing to roof deck.

a. Insulation: 1-inch (25.40 mm) polyisocyanurate insulation

 4. Hardware: Heavy duty galvanneal steel or aluminum hinge with bolt pin, Pressure intensifiers with compression springs provide lift assistance. Adjustable torsion springs will be provided for oversized models. Clear zinc-plated steel hold-open arm with red plastic coating, Two-point universal spring latches on each cover with exterior and interior handles.

5. Hatch Finish: Powder coat silver texture.

6. Hatch Opening Size (width by hinge length):

a. REHVGA-7272ST: 72 inches x 72 inches (1828.80 mm x 1828.80 mm)

b. REHVGA-7296ST: 72 inches x 96 inches (1828.80 mm x 2438.40 mm)

c. <Insert dimensions>

 7. Model REHVGA Options:

*SPECIFIER: Select specific options listed below, if desired.*

1. Double Wall Curb
2. Curb Mounted
3. Curb Heights, choose from 13 inches (330.2 mm) up to 24 inches (609.6 mm) in height; [\_\_\_\_inches]
4. 1-inch Fiberboard Insulated Curb
5. Energy-efficient polyisocyanurate insulation, 2 inches (50.8mm) (R-12) on curb walls
6. 1-inch x 6-inch Wood Nailer Top/Polyisocyanurate Bottom of Curb
7. Stainless hardware
8. Double Polycarbonate Clear over White Domes
9. Acrylic Single Dome White
10. Polycarbonate Single Dome White

**2.09 MATERIALS**

A. Steel Plates, Shapes, and Bars: ASTM A36/A36M.

B. Steel Sheet: Uncoated or electrolytic zinc coated, ASTM A879/A879M, with cold‑rolled steel sheet substrate complying with ASTM A1008/A1008M, Commercial Steel (CS), exposed.

C. Metallic‑Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating

D. Aluminum Extrusions: ASTM B221, Alloy 6063-T5.

E. Aluminum Sheet: ASTM B209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than strength and durability properties of Alloy 5005‑H15; with minimum sheet thickness, according to ANSI H35.2.

**2.10 FABRICATION**

A. General: Furnish each roof hatch assembly manufactured as an integral unit, complete and ready for installation.

**PART 3 - EXECUTION**

**3.01 EXAMINATION**

A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. Notify the Contractor in writing of conditions detrimental to proper and timely completion of the installation.

2. Verify dimensions of roof openings for roof accessories.

3. Proceed with installation only after unsatisfactory conditions have been corrected.

**3.02 INSTALLATION**

A. General: Comply with manufacturer's written instructions for installing roof hatches and accessories, if any.

1. Install roof hatches level, plumb, true to line and elevation, and without warping, jogs in alignment, buckling, or tool marks.

2. Anchor roof hatches securely in place so they are capable of resisting indicated loads.

3. Use fasteners, separators, sealants, and other miscellaneous items as required to complete installation of roof hatches and fit them to substrates.

4. Install roof hatches to resist exposure to weather without failing, rattling, leaking, or loosening of fasteners and seals.

B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other.

C. Installation: Install roof hatch so top surface of hatch curb is level.

**3.03 ADJUSTING AND CLEANING**

 A. Verify that roof hatches operate properly.

B. Clean, lubricate, and adjust operating mechanism and hardware.

C. Clean exposed surfaces according to manufacturer's written instructions.

D. Replace roof hatches that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

 END OF SECTION