

SECTION 07 71 23
MANUFACTURED GUTTERS AND DOWNSPOUTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Aluminum gutters
- B. Aluminum downspouts
- C. Accessories

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer current technical literature for each type of product.
- B. Samples: Provide nominal 3 x 5 inch sample of each color indicated for aluminum gutters, downspouts and accessories.
- C. Quality Assurance Submittals
 - 1. Manufacturer Instructions: Provide manufacturer's written instructions including proper material storage, material handling, installation sequence, and attachment methods.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer shall have a minimum of five (5) years experience in the production of aluminum gutters and downspouts.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials and components in manufacturer's original, unopened, undamaged packaging with identification labels intact.
- B. Store siding materials on dry, level, firm, and clean surface.

1.5 WARRANTY

A. Limited Warranty – Gutter & Downspouts:

1. Manufacturing Defects: Standard form in which manufacturer agrees to repair or replace items that fail by blistering, checks, crazes, flakes, peels or weathers unevenly due to a defect in manufacturing within warranty period from date of original installation.
2. Warranty Period: 20 years.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Variform; Ply Gem Siding Group (800-788-1964) (www.Variform.com); 2600 Grand Boulevard, Suite 900; Kansas City, Missouri 64108.

1. Product: Variform “Rainware” Aluminum Gutters and Downspouts.

B. Substitutions:

1. Requests for substitutions will be considered with approved submission.

2.2 MATERIALS

A. General:

1. Formed and coated aluminum coil stock; 3105 H24 aluminum.
2. Gutter Material Thickness: 0.027 min
3. Downspout Material Thickness: 0.019

2.3 ALUMINUM GUTTERS

A. Gutter Coil:

1. Gutter Size: to match existing
2. Profile: to match existing.
3. Texture: Smooth
4. Finish: 2 coat acrylic; applied to [one-side] [two-sides].
5. Color: to match existing

B. Accessories:

1. Gutter Support:
 - a. Spike and Ferrule
 - b. Zip hanger; Mill finish.
 - c. Combination strap hanger; Mill finish.
 - d. Snap-in hanger; Mill finish.

- e. Snug-fit Hanger; Mill finish.
 - f. Combination Hanger; Mill finish.
 - g. Strap Hanger; Mill finish.
 - h. Bar Hanger; Mill finish.
 - i. Bar Hanger; Mill finish.
 - j. Roof Hanger; Mill finish.
2. Miscellaneous Components: Provide all necessary inside and outside corners, corner reinforcing, eave tubes, and end caps required for a complete installation.

2.4 ALUMINUM DOWNSPOUTS

A. Sectional Downspouts:

1. Downspout Size: to match existing
2. Profile: Rectangular
3. Texture: Corrugated
4. Length: 8 feet min.
5. Finish: 2 coat acrylic.
6. Color: to match existing

B. Accessories:

1. Downspout Support: Concealed bracket; mill finish.
2. Downspout Support:
 - a. Profile: Exposed strap
 - b. Color: to match existing
3. Miscellaneous components: Provide all necessary elbows, downspout offset sections, and pop rivets as required for a complete installation. All miscellaneous components shall match downspouts.

2.5 ACCESSORIES

A. Fasteners:

1. Aluminum fasteners, as recommended by manufacturer, of sufficient length to penetrate minimum 1 inch into substrate.
2. Size: As recommended by manufacturer.

B. Flashing: Provide 0.019 inch thick aluminum roof apron and fascia apron flashing; color to match existing.

C. Flashing: Provide aluminum flashing at roof apron, fascia apron, and where indicated. Flashing color to match gutters

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify that substrates are in place and ready for installation of gutters and downspouts.

3.2 INSTALLATION

- A. General: Install gutters and downspouts per manufacturer's written installation instructions. Install Work securely in place and provide for expansion and contraction of components using lapped and sealed joints
 1. Do not install damaged components.
 2. Separate dissimilar metals to prevent galvanic action through the use of bituminous coating or other permanent separation recommended by SMACNA.
 3. Space expansion joints in gutters at a maximum of 50 foot centers
 4. Rivet joints where required for strength, exposed rivet shall match gutter or downspout color.
 5. Torch cutting of components is not allowed.
- B. Install roof apron flashings at roof edge conditions as indicated on Drawings.
- C. Gutters:
 1. Install gutter supports at no more than 36 inches on center.
 2. Slope gutters evenly to downspouts; provide end caps at gutter ends and seal watertight per manufacturer's instructions.
 3. Install eave tubes at all downspout locations, seal watertight.
 4. Apply joint sealants at gutter joints per manufacturer's installation instructions.
 5. Install gutter protection per manufacturer's instructions; provide factory fabricated corners at all inside and outside corners.
- D. Downspouts:
 1. Install downspouts, provide elbows and offsets, and secure downspouts to wall construction using downspout supports spaced no more than 10 feet on center. Maximum distance of downspout support from top or bottom of downspout shall be 2 feet. Provide 45 degree elbow at bottom of downspout to direct water away from wall surface or foundation.
 2. Where downspout connects to building perimeter drainage system, lap downspout and perimeter drainage pipe a minimum of 3 inches. At concrete perimeter drainage pipe, grout downspout in place, slope grout to shed rain away from downspout.

3.3 CLEANING AND PROTECTION

- A. Remove damaged, defective or improperly installed materials. Replace with new materials installed per requirements of this section.
- B. Clean finished surfaces according to manufacturer's written instructions; maintain clean condition until Final Completion.

END OF SECTION