

Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, contained in the *CSI Manual of Practice*.

The section must be carefully reviewed and edited by the Engineer to meet the requirements of the project. Coordinate this section with other specification sections and the drawings.

Delete all "Specifier Notes" when editing this section.

SECTION 11204

FRP WEIR PLATES AND SCUM BAFFLES

Specifier Notes: This section covers MFG Water Treatment Products Company FRP weir plates, scum baffles, and scum baffle support brackets. Consult MFG Water Treatment Products Company for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. FRP weir plates.
- B. FRP scum baffles.
- C. FRP scum baffle support brackets.

1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- A. Section 11200 - Water Supply and Treatment Equipment.
- B. Section 11201 - Troughs.
- C. Section 11205 - Density Current Baffles.
- D. Section 11300 - Fluid Waste Treatment and Disposal Equipment.

1.3 REFERENCES

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

- A. ANSI/AWWA F102 - Matched-Die-Molded, Fiberglass-Reinforced Plastic Weir Plates, Scum Baffles, and Mounting Brackets.
- B. ANSI/NSF 61 - Drinking Water System Components - Health Effects.
- C. ASTM D 256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics.
- D. ASTM D 570 - Standard Test Method for Water Absorption of Plastics.
- E. ASTM D 618 - Standard Practice for Conditioning Plastics for Testing.
- F. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.
- G. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- H. ASTM D 2583 - Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

1.4 SUBMITTALS

- A. Comply with Section 01330 - Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including description and physical properties of fiberglass reinforced plastic laminate. Submit manufacturer's installation instructions.
- C. Shop Drawings: Submit manufacturer's shop drawings showing plans, elevations, sections, and details of materials, components, structural supports, dimensions, tolerances, connections, attachments, adjustments, openings, mounting, fasteners, anchors, and assembly hardware.
- D. Samples: Submit manufacturer's 6-inch square sample of fiberglass reinforced plastic laminate of same construction, nominal thickness, and color as materials specified.
- E. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.

Specifier Notes: Use the following sentence when NSF certification is required.

- F. Product Certification: Submit proof of NSF labeled products.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site banded on skids or other suitable packaging for ease of handling and to minimize damage during shipping, with labels clearly identifying manufacturer.
- B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions.
- C. Handling: Protect materials from damage during handling and installation.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. MFG Water Treatment Products Company

2.2 FRP WEIR PLATES AND SCUM BAFFLES

A. Material:

1. Fiberglass reinforced isophthalic polyester resin match-die-molded composite laminate.
2. Final Laminate Thickness: Plus or minus 10 percent of nominal specified thickness.

B. Fiberglass Reinforced Plastic (FRP) Laminate Physical Properties:

1. Tensile Strength, ASTM D 638: 7,500 psi.
2. Flexural Strength, ASTM D 790: 16,000 psi.
3. Flexural Modulus, ASTM D 790: 800,000 psi.
4. Barcol Hardness, ASTM D 2583: 35.
5. Notch Izod Impact, ASTM D 256: 13.5 ft-lbs/inch.
6. Water Absorption, ASTM D 570: 0.2 percent.
7. Test Coupon Preparation: ASTM D 618.

C. Compliance:

Specifier Notes: Specify the required standards.

1. ANSI/AWWA F102, Type I.
2. ANSI/AWWA F102, Type II.
3. ANSI/NSF 61.

D. Weir Plates:

1. Nominal Thickness: 1/4 inch.
2. Color: Aqua. Color molded-in with ultraviolet inhibitor.
3. Notch Configuration and Dimensions:
 - a. Weirs cut from flat sheet are not acceptable for listed sizes.

Specifier Notes: Specify one of the following standard notch configurations and dimensions for weir plates and delete the others.

Custom notch configurations and dimensions for weir plates are available. Consult MFG Water Treatment Products Company for additional information.

- b. 2-inch deep 90-degree V-notch, 4-1/4 inches on center, 10-1/4 inches high by 12 feet long.
- c. 2-inch deep 90-degree V-notch, 6 inches on center, 10-1/4 inches high by 12 feet long.
- d. 2-1/2-inch deep 90-degree V-notch, 6 inches on center, 9 inches high by 12 feet long.
- e. 2-1/2-inch deep 90-degree V-notch, 6 inches on center, 12-1/2 inches high by 6 feet long.
- f. 3-inch deep 90-degree V-notch, 6-1/8 inches on center, 10-1/4 inches high by 12 feet long.
- g. 3-inch deep 90-degree V-notch, 6 inches on center, 12 inches high by 8 feet long.
- h. 3-inch deep 90-degree V-notch, 8 inches on center, 12-1/2 inches high by 6 feet long.
- i. 4-inch deep 90-degree V-notch, 10 inches on center, 18 inches high by 8 feet long.
- j. 4-inch deep 90-degree V-notch, 12 inches on center, 12-1/2 inches high by 6 feet long.
- k. Flat-crested weir 12 inches high by 12 feet long.
4. Mounting Holes: Minimum of 2 inches vertical or horizontal adjustment.
 - a. Straight Runs: 2-1/2-inch diameter at 12 inches on center.
 - b. Curved Runs: 2-1/2-inch diameter at 24 inches on center.
5. Mounting:
 - a. To Concrete Wall or Concrete Trough: 1/2-inch diameter by 3-3/4-inch stainless steel expansion anchor bolts along with 5-inch diameter fiberglass reinforced plastic washer cover.
 - b. To FRP Trough: 1/2-inch diameter by 1-1/2-inch stainless steel bolt, nut, and 2 washers including 5-inch diameter fiberglass reinforced plastic washer.

6. Splice Plates: Required to secure ends and to allow for horizontal expansion.
 - a. Nominal Thickness: Same as weir.
 - b. Color: Same as weir.
 - c. Size: As indicated on the drawings.

E. Scum Baffle Plates:

1. Nominal Thickness: 1/4 inch.
2. Color: Aqua. Molded-in with ultraviolet inhibitor.

Specifier Notes: Specify one of the following types of scum baffle plates.

3. Type: 12 inches high by 12 feet long, Nonflanged.
4. Type: 12 inches high by 12 feet long, 3/4-inch turned-back top and bottom flange.
5. Mounting Holes: 7/16-inch diameter, countersunk at 10 locations.
6. Mounting: 3/8-inch by 1-1/2-inch flat head machine bolt with nut and 2 washers.
7. Length: As required, 12 feet maximum.
8. Splice Plates: Required to secure ends and to allow for horizontal expansion.
 - a. Nominal Thickness: Same as weir.
 - b. Color: Same as weir.
 - c. Size: As indicated on the drawings.

F. Scum Baffle Support Brackets:

1. Size: 1/4 inch thick, 3 inches wide.
2. Spacing: Approximately 48 inches on center.
3. Adjustment: Slotted to allow a minimum of 1-1/2 inches vertical and horizontal adjustment.

Specifier Notes: Specify nonalgae or algae sweep tank design baffle support brackets.

4. Type: Nonalgae Sweep Tank Design:
 - a. Upper Baffle Support Bracket: 6 inches by 9 inches gusseted both sides.
 - b. Lower Baffle Support Bracket: 6 inches by 8 inches gusseted both sides.
5. Type: Algae Sweep Tank Design:
 - a. Upper L-Baffle Support Bracket: 6 inches by 9 inches not gusseted.
 - b. Lower Baffle Support Bracket: 6 inches by 8 inches gusseted both sides.

Specifier Notes: Specify Type 304 or Type 316 stainless steel assembly hardware.

- G. Assembly Hardware: [Type 304] [Type 316] stainless steel.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive materials.
- B. Verify field dimensions.
- C. Notify Engineer of conditions that would adversely affect installation. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install materials in accordance with manufacturer's instructions.
- B. Install materials plumb, level, square, in true and proper alignment, and without warp or twist.

- C. Provide required splice plates, washers, and support brackets.
- D. Secure baffle plates to support brackets and splice plates.
- E. Adjust weir plate elevation for flow as indicated on the drawings.
- F. Adjust lengths of plates as necessary due to field conditions as approved by Engineer. Do not perform excessive cutting.
- G. Seal with manufacturer's sealant field cut edges and drilled holes.

END OF SECTION