

Fiberglass Weirs and Scum Baffles

Corrosion Resistance • Superior Strength • Long Service Life



Performing basic tasks for treatment operations, weirs and scum baffles must be high strength and corrosion resistant materials able to withstand harsh conditions. Delivering long, high quality service, fiberglass weirs and scum baffles, manufactured by Enduro Composites, are ideal, cost effective materials for these requirements.



Fiberglass components manufactured by pultrusion, instead of other methods, typically have higher content of glass reinforcements resulting in superior strength. Pultrusion process, using machined precision dies, produces materials with consistent quality and properties.

Manufactured with isophthalic polyester or vinyl ester resin per AWWA Type I or Type II requirements, FRP materials from Enduro Composites offer outstanding corrosion resistance for immersed conditions and chemical exposures.

- Long, maintenance free service life
- Custom designed for various conditions
- High strength, UV stabilized, corrosion resistant FRP materials
- AWWA & NSF-61 compliant
- Single source design, manufacturing, and fabrication

Weirs

Weir systems from Enduro meet or exceed industry standards for construction and performance. The full product line includes various sizes, shapes, thicknesses, and lengths that can be custom designed for a variety of conditions and applications. Longer panel lengths result in fewer splices and faster installation while reducing chance of short circuiting (leaking) behind the weir. Configurations include standard V-notch, rectangular flat edge, as well as sharp or knife-crested weirs. Complete systems include FRP weir panels, splice connector plates, weir washers, and stainless steel hardware. All fiberglass components are engineered, manufactured, and fabricated by Enduro Composites.

Scum Baffles

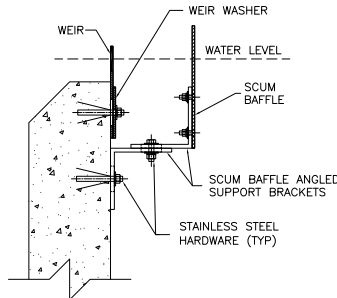
Enduro Scum Baffle systems are custom designed and fabricated to accommodate specific applications and requirements. The equipment includes straight edged FRP baffle panels offered in a variety of widths and lengths. Enduro scum baffles are furnished as complete systems with panels, splice connector plates, FRP or stainless steel support brackets, and full complement of stainless steel hardware.

For water and wastewater treatment operations, Enduro offers fiberglass: Density Current Baffles, Launder Covers, Baffle Walls, Tank Covers, and Building Structures in addition to Weirs and Scum Baffles.

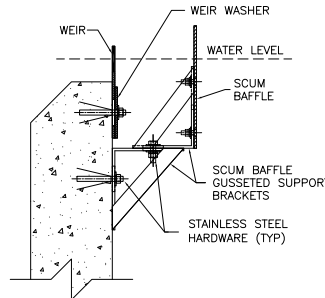
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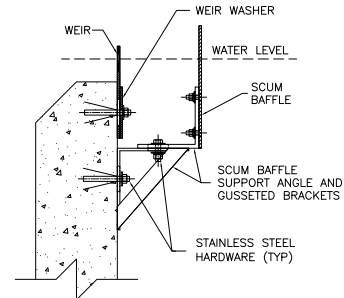
Details



Angled Bracket Configuration



Gusseted Bracket Configuration



Angled & Gusseted Bracket Configuration

Specifications

FIBERGLASS REINFORCED PLASTIC WEIR AND SCUM BAFFLES

PART 1 - GENERAL

1.01 Description of Work

The scope of this section shall include materials and installation for fiberglass reinforced plastic (FRP) Weir and Scum Baffle System.

1.02 Design Criteria

Weir and scum baffle design parameters determine flow characteristics (load) through tank(s) to meet desired plant capacity. The Manufacturer relies on this information for the system to function as intended. Design requirements, which vary, shall be specified by the consulting design engineer.

Design Parameters	Imperial or Metric
1) Weir Invert Elevation	_____
2) Weir V-Notch Depth	_____
3) Weir Size (Height)	_____
4) Weir Wall Top Elevation	_____
5) Weir Wall Inner Radius	_____
6) Tank Water Elevation	_____
7) Weir to Scum Baffle Distance	_____
8) Scum Baffle Size (Height)	_____
9) Scum Baffle Top Elevation	_____
10) Scum Baffle Bracket Elevation	_____

PART 2 - PRODUCTS

2.01 Manufacturer(s)

A. Standard for design, characteristics, and performance shall be based on materials and components by Enduro Composites, Inc., Houston, TX.

2.02 Materials

A. FRP weir and scum baffle panels and appurtenances shall be fiberglass reinforced plastic with uniform smooth surfaces free of voids, porosity, dry spots, crazes, or unreinforced areas.

B. Weir and scum baffle panels shall include glass fiber reinforcement of 50% (min) by weight embedded within UV Stabilized, Type 1 - Polyester Resin.

C. FRP material shall have surfacing veil on both sides.

D. Factory cut edges and drilled holes shall be sealed with ANSI/NSF approved material.

E. FRP weir and scum baffle panels shall exhibit these minimum properties:

Tensile Strength	24,000 psi	ASTM D 638
Flexural Strength	35,000 psi	ASTM D 790
Flexural Modulus	1.2 x 10 ⁶ psi	ASTM D 790

Izod Impact	15.0 ft-lb/in	ASTM D 256
Water Absorption	.20% max	ASTM D 570
Barcol Hardness	40	ASTM D 2853
Coef. of Thermal Expansion	10.5 x 10 ⁻⁶ in/in/F ⁰	ASTM D 696

F. FRP weirs and scum baffle components shall be ANSI/NSF Standard 61 certified for potable water application (as applicable).

G. Resin shall be fire retardant and meet requirements of ASTM D 635 and ASTM E 84, Class 1 with flame spread rating of 25 or less (as applicable).

H. FRP materials shall comply with ANSI/AWWA F102 standards for weirs and scum baffle manufacture.

I. FRP Weir Panels

1. Panels shall be 1/4" thick x 9" high (nom.) x 10'-0" (min) unless noted otherwise (u.n.o.) on drawings.
2. Panel notches shall be 2.5" deep by 90° on 6 in. centers (u.n.o.).
3. Splice plates shall be 1/4" thick x 9" high x 6" long (u.n.o.).
4. Panel mounting holes shall be oversized for vertical and horizontal alignment of 2 in. (min) and shall be 24" on center (max) and covered with 5 in. diam. FRP weir washers.
5. Mounting hardware shall be stainless steel concrete anchors or bolts.

J. FRP Scum Baffle Panels

1. Panels shall be 1/4" thick x 12" high (nom.) x 10'-0" (min) (u.n.o.).
2. Splice plates shall be 1/4" thick x 12" high x 6" long (u.n.o.).
3. Surface mounting holes shall be countersunk for flathead fasteners.
4. Support brackets shall be 3/8" thick x 6" deep x 6" high x 4" long FRP angles with slotted mounting holes with vertical and radial horizontal alignment of 2 inches (min) for installation on 48 in. (max) spacing.
5. Mounting hardware shall be stainless steel anchors or bolts.

K. Hardware

1. Structural hardware shall be: ___304___316 Stainless Steel
2. Anchors shall be expansion (wedge) type sized as required.

PART 3 - EXECUTION

3.01 Installation

A. Contractor shall verify all dimensions are correct and conditions are suitable for installation.

B. Contractor shall install products in accordance with manufacturer's instructions and approved submittal. Contractor shall align and level components to proper elevation and spacing. Minor trimming shall be allowed per engineer's approval and manufacturer's instructions. After completion, contractor shall apply approved sealant between back of weir and top of weir wall to prevent flow of liquid (short circuiting) between the weir and tank wall.