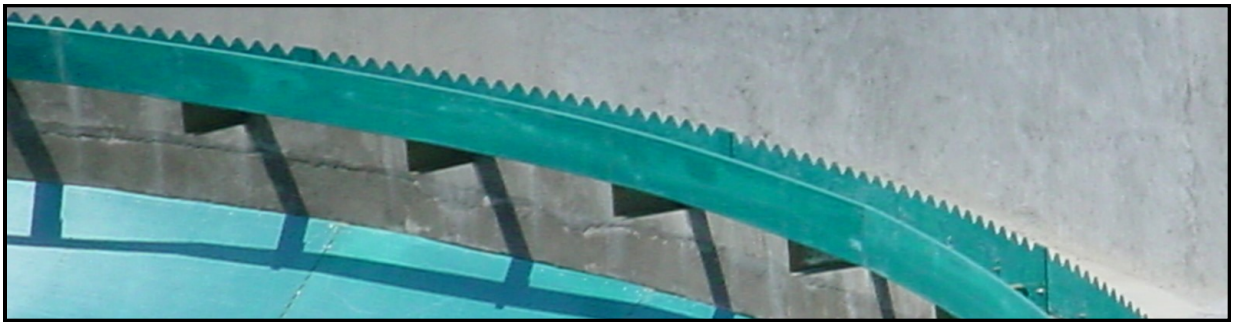
FIBERGLASS WEIR & BAFFLE SYSTEMS
FOR WASTEWATER & INDUSTRIAL APPLICATIONS



GENERAL:

All flow control weir shall be produced from fiberglass reinforced isophthalic polyester resins. Weirs may be v-notched, square notched, straight flat edge, or straight beveled edge. V-Notch weirs shall have evenly spaced notches throughout the length of the weir except at the splice joint.

Scum baffles, scum baffle brackets, weir washers, and splice plates shall be made of same materials as the weirs above.

FABRICATION:

Weir plates shall be furnished with oversized holes or slots for mounting. Typical mounting holes are 2-5/8"ø on 2'0" c-c. Other hole sizes or slots at other center to center configurations can be furnished as required. Weir and baffle splice plates are fabricated from sheet molded plates, manufactured as above.

AVAILABILITY:

Standard weir sizes are:

¼" x 9" tall with 2" vee on 4" centers x 11'11-1/2" long
¼" x 9-1/2" tall with 2-1/2" vee on 6" c-c x 11'11-1/2" long
¼" x 10" tall with 3" vee on 6" centers x 11'11-1/2" long

Standard scum baffles are:

¼" x 12" tall x 12'0" long

Standard scum baffle brackets are:

upper - 4" wide x 6" deep x 10" tall
lower - 4" wide x 7" deep x 10" tall

MANUFACTURE OF COMPONENTS:

Standard weir plates, scum baffle plates, scum baffle support brackets, weir washers, and splice plates are sheet molded in match metal molds to produce smooth resin rich surfaces free of voids and porosity. Pressure in molds will exceed 10 psig. Molded edges of all parts are sealed in the mold. Holes or other cuts are sealed after cutting. Bevels on standard vee patterns are molded-in bevels.

PHYSICAL PROPERTIES OF LAMINATE: (RESIN TRANSFER MOLDED)

Tensile Strength	14,000 psi min ASTM D638
Flexural Strength	25,000 psi min ASTM D790
Flexural Modulus	1.0×10^{6} min ASTM D790
Impact, Notches, Izod, foot pounds per inch	15.0 min ASTM D256
Barcol Hardness	35 min, 40 avg.
Average coefficient of thermal expansion, inch per degree F	10.5×10^{-6}
Water absorption % 24 hours	0.10 ASTM D570

NON-STANDARD SIZES OR CONFIGURATIONS:

Glass·Steel, Inc. in addition to its standard line of weirs and baffles can produce weirs and baffles in any size or configuration required. Materials can be molded or pultruded in thickness of ¼", 3/8", ½", 5/8", ¾", or 1". V-Notches can be cut can be cut in for smaller quantities or molded in if quantities justify.

PHYSICAL PROPERTIES OF LAMINATE: (PULTRUDED)

Tensile Strength	30,000 psi min ASTM D638
Flexural Strength	30,000 psi min ASTM D790
Modulus of Elasticity	2.6×10^{6} min full section
Impact, Notches, Izod, foot pounds per inch	20.0 min ASTM D256
Barcol Hardness	40 min
Average coefficient of thermal expansion, inch per degree F	8.0×10^{-6}
Water absorption % 24 hours	0.60 ASTM D570

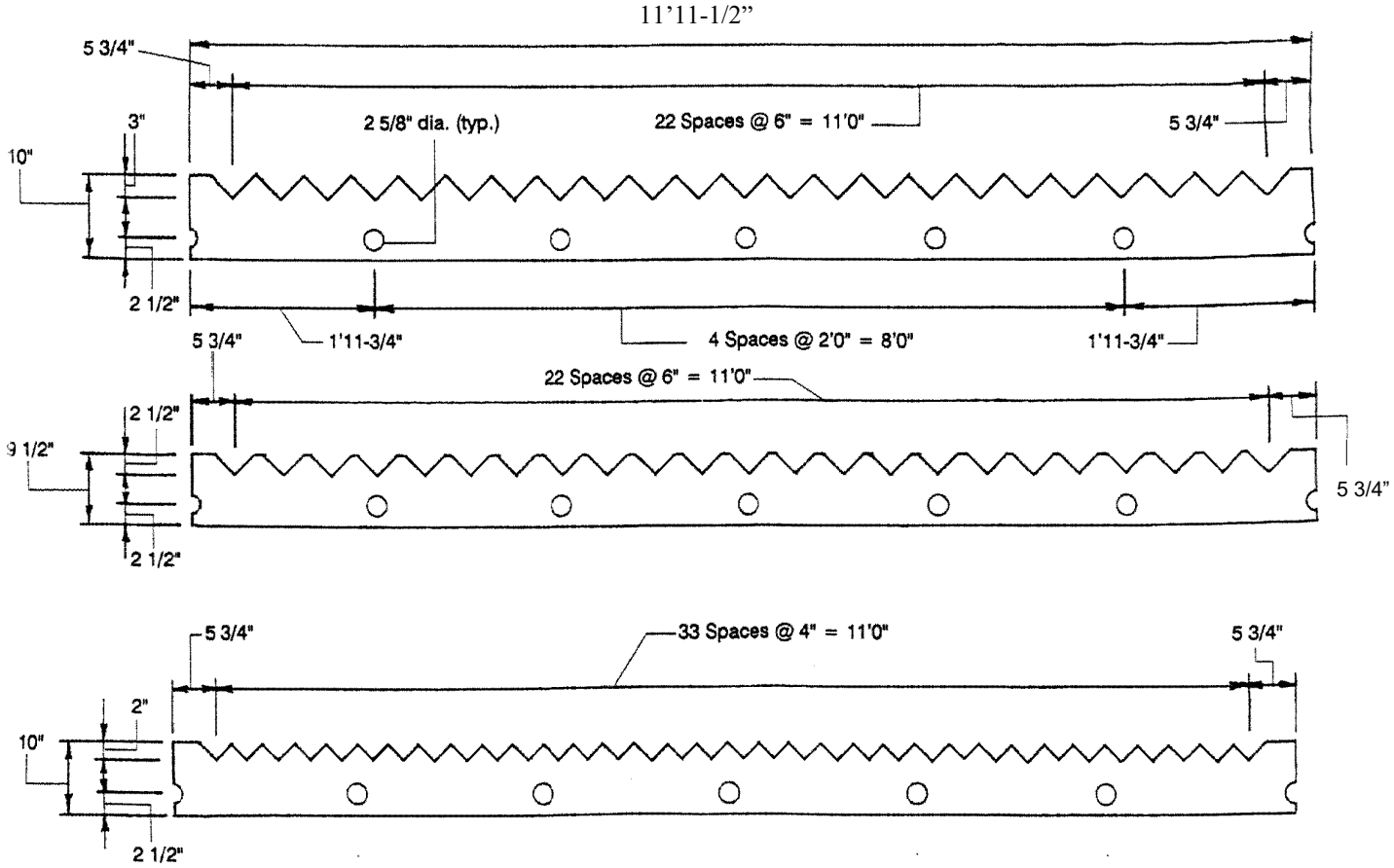
COMPLIMENTARY ITEMS:

Glass·Steel, Inc. is a full line fiberglass fabricator of composite structures. Products that we manufacture that compliment our weir and baffle products are composite fiberglass troughs, fiberglass trough support brackets, fiberglass bridges, fiberglass rails, and fiberglass gratings. Glass·Steel, Inc. has in house engineering and design capabilities to handle custom requirements.

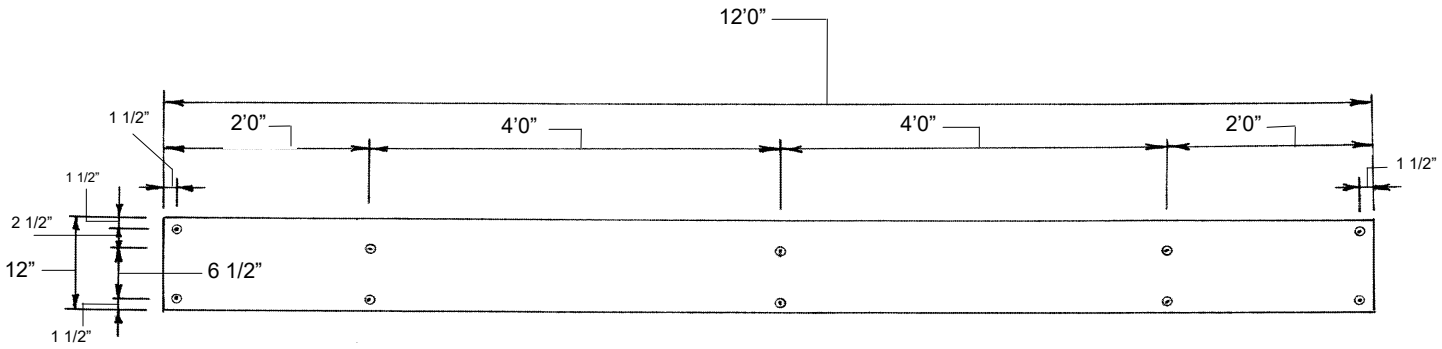
Other related items Glass·Steel, Inc. also provides are, fiberglass structural buildings, fiberglass odor control covers, composite diverter baffles, composite fiberglass stop logs and guides, fiberglass stairs, fiberglass ladders, fiberglass platforms, fiberglass water screening systems, etc.■

FIBERGLASS WEIR AND BAFFLE PLATE DETAILS

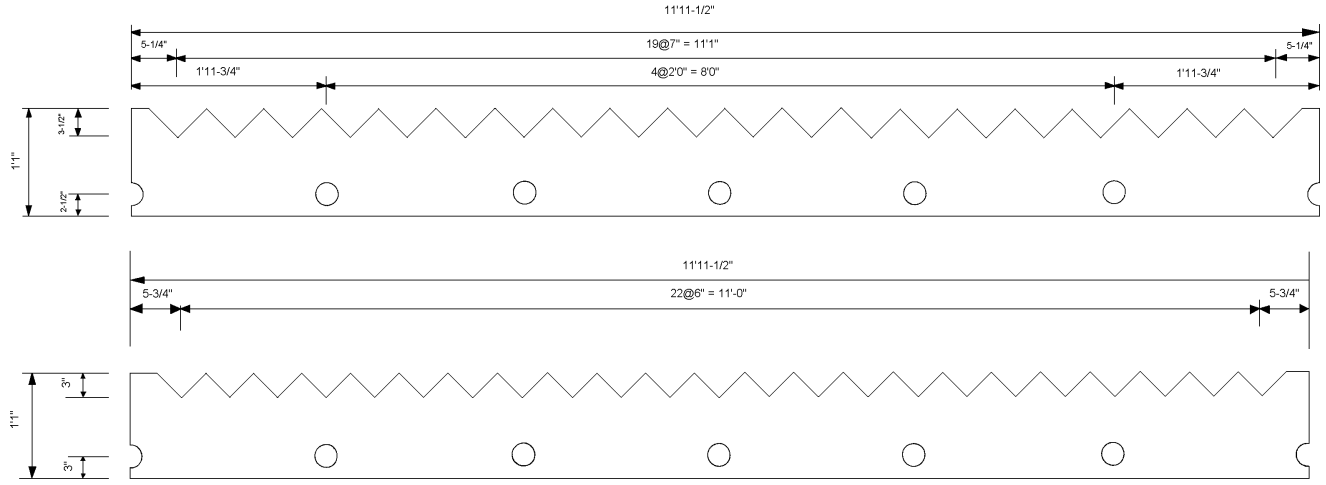
FRP WEIR PLATES



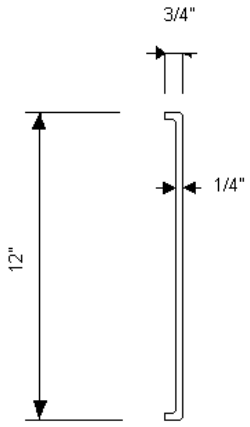
FRP BAFFLE PLATE



ADDITIONAL WEIR AND SCUM BAFFLE OPTIONS

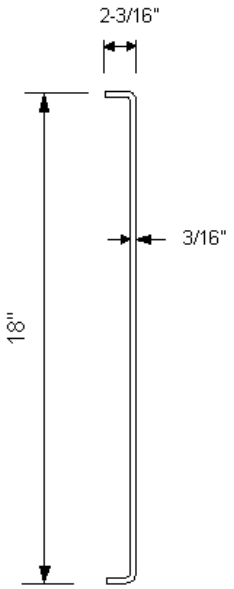


The sizes of weirs & baffles indicated are sizes that are available as standards in molded or pultruded weirs and baffles. In pultruded weirs any size and notch configuration may be furnished. In scum baffles there are many more pultruded options available up to 4' tall scum baffles in flat plate and reinforced baffles as indicated below.

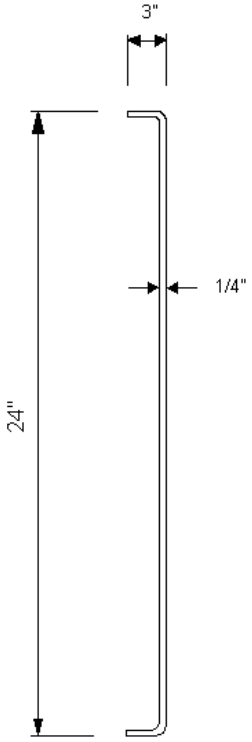


Scum Baffle with Integral Reinforcing legs

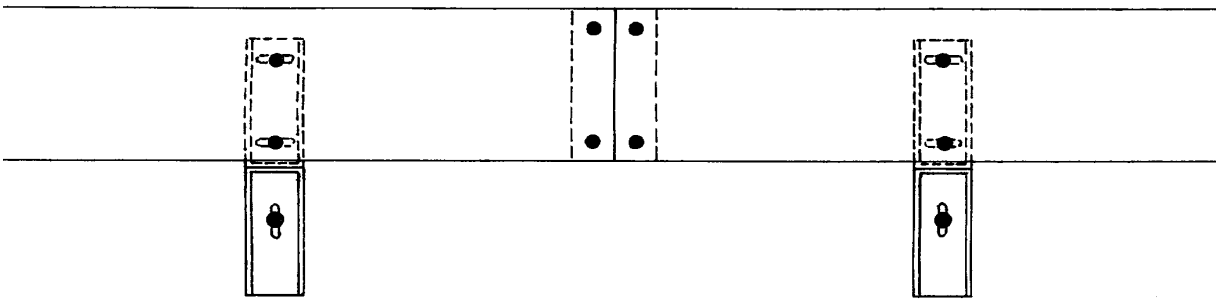
Layout for counter sunk holes will depend on the bracket system used & the bracket spacing used. Reinforced baffles can span distances up to 6'0"c-c.



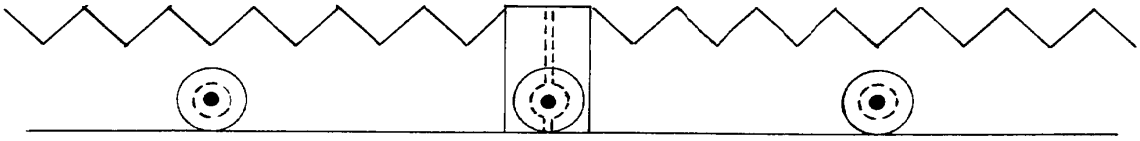
Use only for clarifiers 100' diameter or larger or straight applications



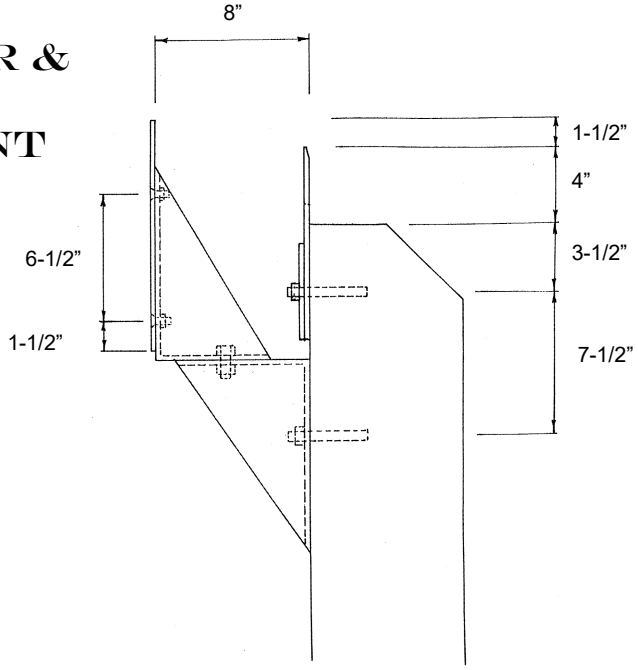
Use only for clarifiers 150' diameter or larger or straight applications



WEIR PLATE SPLICE

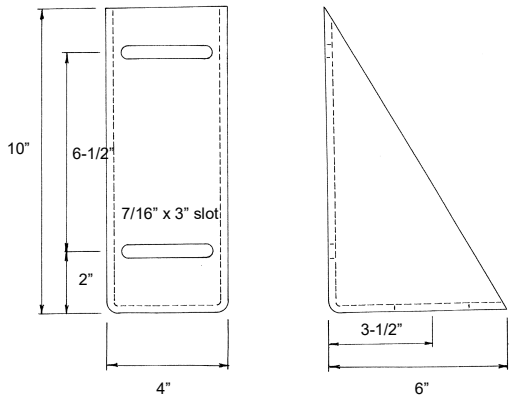


TYPICAL WEIR & SCUM BAFFLE ARRANGEMENT

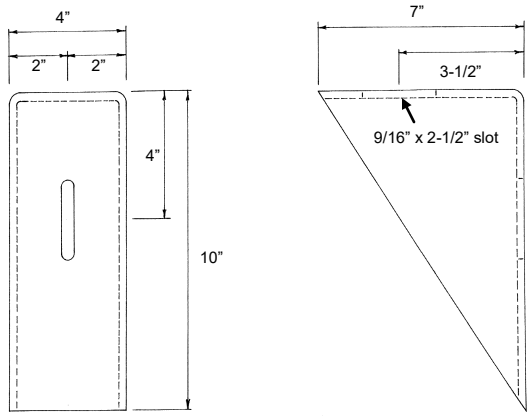


WASHER AND SPLICE PLATE DETAILS

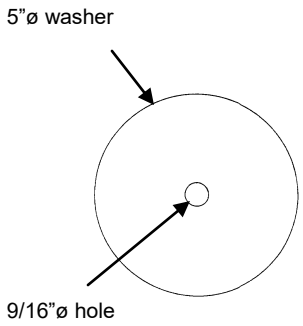
Upper Baffle Bracket



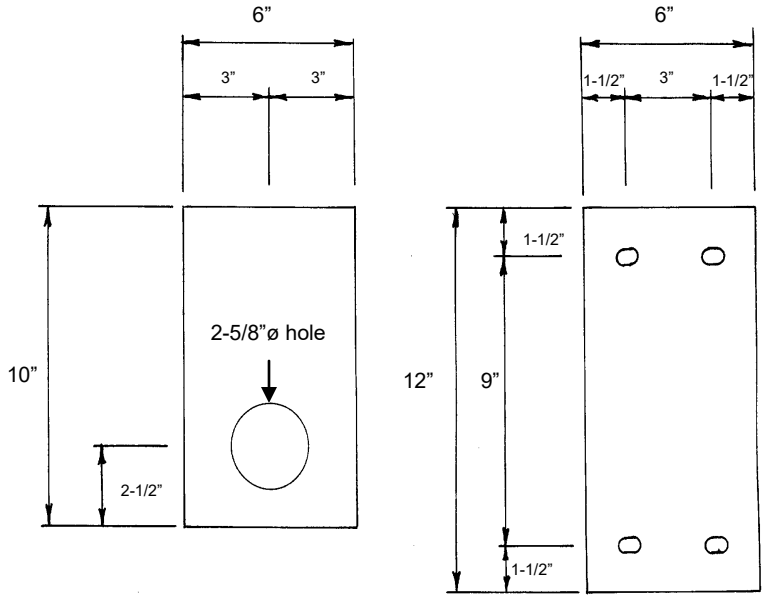
Lower Baffle Bracket



*Also available in ungusseted pultruded angle 9" x 6" x 5/16" x 4" long.

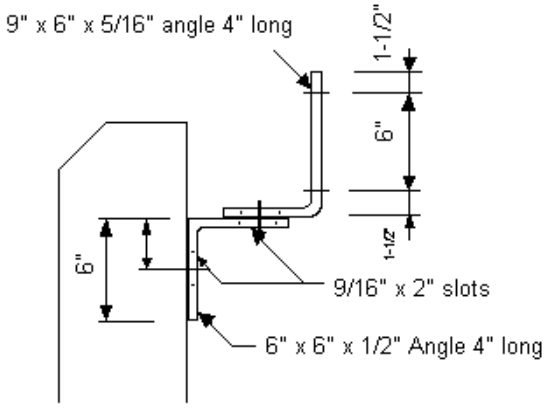


Weir Washer



*Also available in 7"ø, 8"ø, and 9"ø

ADDITIONAL BRACKET SET STYLE FOR ALGAE SWEEP APPLICATIONS



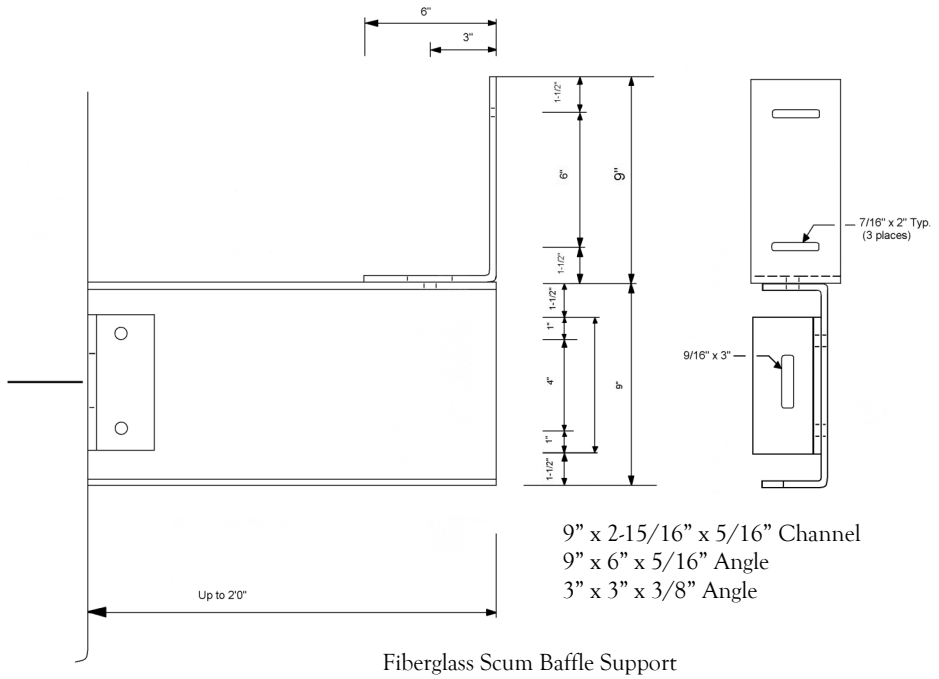
Fiberglass Scum Baffle
Alternate Support Brackets

Angle sizes can be interchanged, sizes that are available are:

6" x 6" x 3/8"
6" x 6" x 1/2"
9" x 6" x 5/16"
8" x 3-1/2" x 3/4"

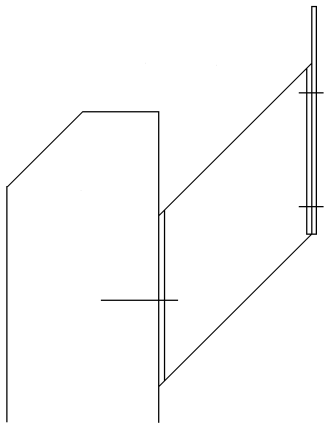
Each of these may be used for upper or lower brackets. The hole spacing will depend on the angle size used and the application. Also channel supports may be used as indicated below. Sizes available are:

8" x 2-3/16" x 1/4"
8" x 2-3/16" x 3/8"
9" x 3" x 5/16"
10" x 2-3/4" x 1/2"



9" x 2-15/16" x 5/16" Channel
9" x 6" x 5/16" Angle
3" x 3" x 3/8" Angle

Fiberglass Scum Baffle Support
Bracket for Extended Distances



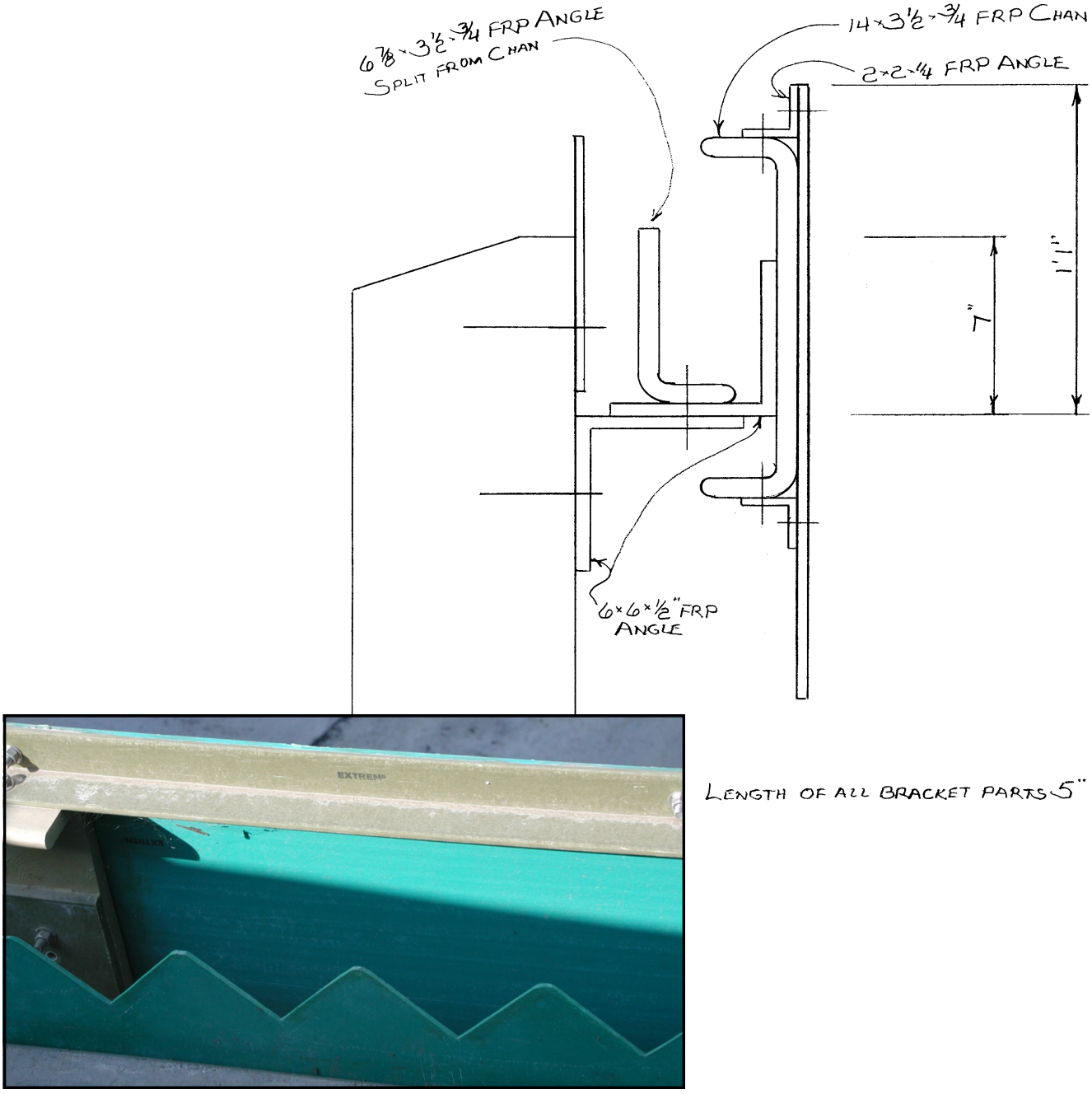
Vertical Channel Bracket
for Scum Baffles*

*Weirs not shown. Any weir size may be used with any bracket configuration or baffle size and type.

THEORETICAL FLOW PER FOOT OF WEIR

h (inches)	q	2"-90° V-Notch[1] on 4" centers			3"-90° V-Notch[2] on 6" centers			3-1/2"-90° V-Notch[3] on 7" centers		
		CFS	GPM	GPD	CFS	GPM	GPD	CFS	GPM	GPD
½"	.40	.0025	1.14	1,642	.0017	0.77	1,109	.0015	.67	965
5/8"	.71	.0045	2.00	2,880	.0030	1.35	1,944	.0026	1.18	1,699
¾"	1.11	.0070	3.15	4,536	.0047	2.13	3,067	.0041	1.85	2,664
7/8"	1.64	.0130	4.64	6,682	.0070	3.14	4,522	.0061	2.73	3,931
1"	2.28	.0144	6.47	9,317	.0098	4.38	6,307	.0085	3.80	5,472
1-1/8"	3.07	.0194	8.69	12,514	.0031	5.88	8,467	.0114	5.12	7,373
1-1/4"	3.99	.0252	11.31	16,286	.0170	7.65	11,016	.0148	6.65	9,576
1-3/8"	5.07	.320	14.35	20.664	.0216	9.71	13,982	.0188	8.45	12,168
1-1/2"	6.30	.0397	17.84	25,690	.0269	12.07	17,381	.0234	10.50	15,120
1-5/8"	7.69	.0485	21.79	31,378	.0328	14.74	21,226	.0286	12.82	18,461
1-3/4"	9.26	.0584	26.23	37,771	.0395	17.74	25,546	.0344	15.44	22,234
1-7/8"	10.98	.0693	31.12	44,813	.0469	21.05	30,312	.0408	18.30	26,352
2"	12.93	.0816	36.62	52,733	.0552	24.77	35,669	.0480	21.55	31,032
2-1/8"	15.04	-------	-------	--------	.0642	28.83	41,515	.0559	25.07	36,101
2-1/4"	17.35	-------	-------	--------	.0741	33.26	47,894	.0644	28.92	41,645
2-3/8"	19.86	-------	-------	--------	.0848	38.07	54,821	.0738	33.11	47,679
2-1/2"	22.58	-------	-------	--------	.0964	43.28	62,323	.0839	37.64	54,202
2-5/8"	25.51	-------	-------	--------	.1089	48.89	70,402	.0948	42.53	61,243
2-3/4"	28.66	-------	-------	--------	.1224	54.92	79,085	.1064	47.78	68.803
2-7/8"	32.02	-------	-------	--------	.1368	61.38	88,387	.1189	53.38	76,867
3"	35.62	-------	-------	--------	.1521	68.27	98,309	.1323	59.38	56,707
3-1/8"	39.45	-------	-------	--------	-------	-------	--------	.1391	62.43	89,899
3-1/4"	43.51	-------	-------	--------	-------	-------	--------	.1616	72.53	104,797
3-3/8"	47.82	-------	-------	--------	-------	-------	--------	.1776	79.72	114,797
3-1/2"	52.37	-------	-------	--------	-------	-------	--------	.1945	87.30	125,712

h = Head in inches
q = Flow in Gallons per minute of 1 notch
Flow values based on Thompson Formula $q = 2.285(h)^{5/2}$
(1) 2.833 Notches per foot based on 34 notches in 12'0" length
(2) 1.916 Notches per foot based on 23 notches in 12'0" length
(3) 1.667 notches per foot based on 20 notches in 12'0" length



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