

**SPECIFICATIONS**  
**FOR**  
**POTABLE CLEARWELL BAFFLES**

*By*

 **SLICKBAR**<sup>®</sup>

# **SPECIFICATIONS FOR CLEARWELL BAFFLE**

## **SECTION A - GENERAL**

### **1. PURPOSE**

A Clearwell Baffle is required to provide detention time in the Clearwell and to set up a designated flow-through path for finished water following treatment and prior to delivery to the distribution system. The baffle provides designated cells and thereby prevents short-circuiting.

### **2. GENERAL DESCRIPTION**

The Baffle shall consist of flotation components, elastomeric-coated skirt and necessary sealed-in tension and edge members to provide for system integrity and proper sealing of the baffle system to the concrete floor and sides of the Clearwell. The manufacturer shall furnish connecting and anchoring hardware to be attached to the Baffle System. The baffle shall be fully assembled when shipped to the field. Field installation shall require connection of individual sections as well as the securing of the baffle to the Clearwell floor and walls with the Manufacturer furnished floor and wall anchoring system. The Clearwell Baffle System shall be manufactured by Slickbar Products Corporation, or approved equal.

### **3. MAINTAINABILITY**

Design of the Baffle System shall be such that the flotation components can be replaced in the field. The manufacturer shall maintain a stock of replacement parts for a period of not less than five years for user support.

The Manufacturer shall have at least 15 years experience in the design and manufacture of floating baffle systems.

### **4. SUBMITTALS**

Complete submittal packages containing necessary descriptive specifications and drawings of the assembled Baffle System and all of its related components shall be submitted to the Engineer and approved by him in writing prior to manufacture.

## **SECTION B - COMPONENTS**

### **1. FLOTATION**

Flotation shall be molded 6 lb/cu ft density polyethylene foam, containing UV inhibitors and anti-oxidants in order to insure long life. The flotation members (floats) shall be made in two halves bolted to the fabric skirt with type 304 stainless steel nuts and bolts. The floats shall be at least 4 feet long and be attached with a space between them to provide a hinge for folding for ease of shipment. The color of the floats shall be yellow or orange. The outside skin of the flotation elements shall be densified from the same material as the internal closed cell foam. The floats shall be resilient and capable of being compressed without permanent deformation. The floats shall support the membrane with a minimum freeboard of 5 inches at the design water level. Log type flotation of polystyrene, polyurethane foam materials or other log type materials sealed into the fabric are not acceptable.

### **2. CLEARWELL BAFFLE SKIRT**

The Baffle Skirt shall be Seaman Corporation #8130 XR-5® PW coated polyester fabric based membrane with a PVC coating that is NSF 61 approved for contact with potable water.

The fabric shall be of good appearance and free of defects such as holes, tears, delaminations, blisters and any other defects that may affect its serviceability. The coated fabric shall be not less than 30 mils thickness with a +10% -5% allowable variation. There shall be not less than 6.5 mils thickness of polymer coating over the non-wicking polyester base fabric. For Baffles requiring widths greater than the available from the supplier, 1 3/4" minimum width horizontal heat seals shall be used to obtain the desired width. The strength of the seam shall be as great or greater than the parent material in shear strength. The coated fabric shall possess good ozone resistance when exposed to the atmosphere for long periods. The adhesion of the coating shall be not less than 10 lbs. / inch as measured by ASTM Standard D751 Dielectric Weld. Additional specifications are as follows:

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Base Fabric - Type	Polyester	
Fabric - Weight	6.5 oz. / sq. yd.	
Finished Coated Weight	30+2 / -1 oz. /sq. yd.	ASTM D-751
Tongue Tear	125/125 lbs. (8"x10" sample size)	ASTM D-751
Trapezoidal Tear	35/35 lbs.	ASTM D-1117
Grab Tensile	475/425 lbs.	ASTM D-751
Strip Tensile	400/350 lbs./in.	ASTM D-751, Procedure B
Adhesion (min.)	10 lbs./in.	ASTM D-751
Hydrostatic Resistance	500 psi	ASTM D-751, Procedure A
Bursting Strength	600 lbs.	ASTM D-751
Dead Load	2" seam	
Room Temperature	210 lbs.	
106 /71 C	105 lbs.	
Low Temperature		
ASTM D-2136	Pass -30F	
Flame Resistance	Not consumed	
Method 5910	within 2 minutes	

The Baffle Skirt shall be terminated on the sides and bottom by a minimum 3/8" diameter synthetic rope heat sealed into the Skirt fabric.

All fabric welding seaming shall be completed in the factory using minimum 1 3/4" wide seams completed with a radio frequency, hot air or flame heat sealers.

The color of the Baffle Skirt shall be white or black.

### 3. TENSION MEMBER

A non-metallic, low elongation tension member shall be provided. The tension member shall be constructed of high tenacity, low elongating, continuous filament parallel polyester fibers contained within an outer braided polyester fiber jacket. The outer jacket shall have a urethane coating that chemically bonds the pigmented urethane to the cover fiber. The synthetic tension member shall exhibit excellent resistance to moist conditions and shall be impervious to rot, mildew and degradation associated with a marine environment. Materials used in the construction of the tension member shall not be affected by continuous immersion in treated potable water. The breaking strength of each tension member shall be not less than 10,000 lbs. Total elongation of the synthetic tension member shall not exceed 4.5% at 30% of the assembled breaking strength.

The synthetic tension member shall be heat sealed into a pocket of the membrane at the top edge of the Baffle above the floats. It shall be straight and parallel with the long axis of the Baffle; no dips or bends are permitted. The tension member shall be secured with a minimum of two crimped sleeves around 1/2" steel thimble which shall be connected to the sidewall connecting angles. All intermediate connecting links or turnbuckles shall be of sufficient strength to withstand the full breaking strength of the tension member without visible signs of deformation. All hardware associated with the tension member shall be type 304 stainless steel.

#### 4. FLOOR AND WALL CONNECTORS

All floor and wall connectors shall be comprised of at least 2 1/2"x 2 1/2" x 3/16" type 304 stainless steel angles and 1 1/2" x 3/16" type 304 stainless steel flat bars as shown on the drawing details. Stainless steel angles and flat bars shall be pre-drilled by the manufacturer on minimum 12" centers to accept the anchorage. Placement of the Baffle Skirt directly in contact with the wall or floor shall not be permitted. All hardware used in connecting the Baffle Skirt to the floor and wall connectors shall be type 304 stainless steel. Nylock nuts shall be used on all bolts.

All anchorage to the reinforced concrete walls and floor of the clearwell shall be minimum 3/8" type 316 stainless steel "Redhead" wedge type anchor bolts or equal. Anchor bolts shall be spaced as indicated on the drawings.

#### 5. FLOW THROUGH WINDOWS

There shall be provided as shown on the drawings "flow through" windows and drainage vents in the Baffle Skirt, where required. Windows shall be of the size indicated on the drawings and they shall each be reinforced around the perimeter with a minimum 1 3/4" wide double heat seal of the basic Baffle Skirt material. Stitched, sewn or glued seaming is not acceptable. Maximum water velocity through any window at maximum flow conditions should not exceed 3 feet per minute. Small openings at the lower corners or spaced along the bottom of each baffle to allow drainage for Clearwell cleanout shall be provided.

## 6. WARRANTY

The Baffle manufacturer shall warrant the System to be free from defects in materials or workmanship for a period of 12 months from the time of first beneficial use or 15 months from shipment, whichever occurs first.

## SECTION C - DELIVERY AND INSTALLATION

The Clearwell Baffle System shall be delivered to the jobsite from the manufacturer in sturdy palletized shipping containers. Containers shall be marked with the section number as required and as identified on the installation drawings. The manufacturer shall provide the installation contractor with installation drawings and instructions to enable the contractor to install the Baffle System in the locations and with the details as determined or as indicated by the Engineer.

The manufacturer shall provide the services of a qualified field representative to supervise the installation as required by the Contract Documents.

 **SLICKBAR**  
PRODUCTS CORPORATION  
18 Beach St. • Seymour, CT 06483  
Ph (203) 888-7700 • FAX (203) 888-7720  
TOLL FREE: 1-800-921-2221

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Slickbar oil booms and accessories are protected under one or more of the following  
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