



STORMWATER QUALITY UNIT SPECIFICATION

Scope

This specification designates the requirements for Prinsco's Water Quality Unit in diameters 36" through 60" in diameter.

Device Requirements

The Prinsco Water Quality Unit shall have annular exterior corrugations with a smooth interior. The unit shall have two containment zones, the first to collect sediment, and the second to collect floatables including oil and grease. Each zone shall be separated with the use of a reinforced weir or baffle plate welded to the interior of the unit. The weir and baffle plates shall be welded at all interfaces between the plate and Water Quality Unit. Each containment zones shall contain an access riser to allow for clean-out and personnel access for inspection.

Materials

The Prinsco Water Quality Unit shall be manufactured using High Density Polyethylene (HDPE) meeting the minimum requirements of cell classification of 424420C for 4- through 10- inch diameters and 435400C for 12- through 60- inch diameters, as defined and described in ASTM D3350 except the carbon black content shall be 2 – 4%.

The HDPE pipe material for 12- through 60- inch diameters shall be tested for slow crack growth resistance using the notched constant ligament-stress (NCLS) test as specified in sections 9.4 and 5.1 of AASHTO M294 and ASTM F2306, respectively. Average failure time of the five test specimens shall not be less than 24 hours.

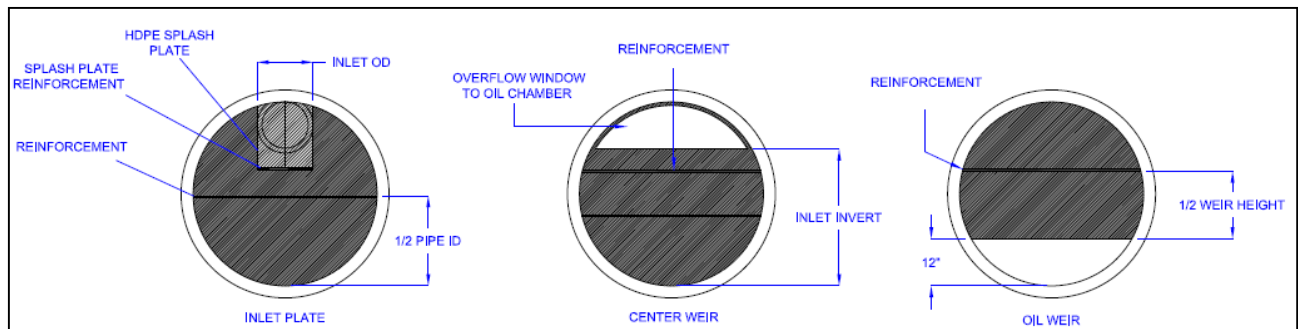
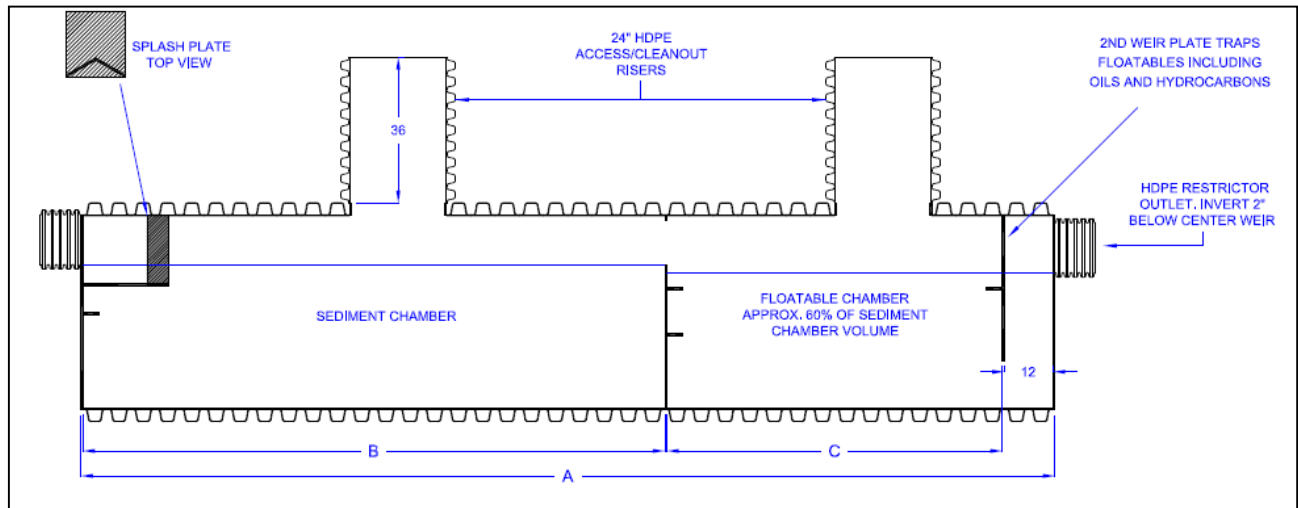
Joint Performance

Connections to Water Quality Unit shall be of the same joint quality as specified for the remainder of the stormwater pipe system on the project.

SWQU Dimensions

Product Code	SWQU ID in	Inlet Stub ID in	Length A (ft)	Total Storage Volume ft ³	Sediment Chamber Storage Volume ft ³	Floatable Chamber Volume ft ³	Sediment Chamber Length B in	Floatable Chamber Length C in	Max Treated Flow Rate @ 140 Sieve Size CFS	Max Treated Flow Rate @ 200 Sieve Size CFS
WQU3620	36	10	20	114	72	42	144	84	1.51	0.75
WQU3640			40	234.1	152	82	304	164	3.21	1.6
WQU4220	42	12	20	147.1	92.9	54.2	144	84	1.77	0.88
WQU4240			40	301.9	196.1	105.8	304	164	3.74	1.86
WQU4820	48	12	20	192.1	121.3	70.8	144	84	2.31	1.15
WQU4840			40	394.3	256.1	132.2	304	164	4.88	2.44
WQU6020	60	15	20	273.5	172.7	100.7	144	84	2.97	1.48
WQU6040			40	561.3	364.6	196.7	304	164	6.28	3.14

Product Details



Installation

Pipe and fittings shall be installed in accordance with ASTM D2321 and Prinsco's published installation guidelines. Minimum cover for AASHTO H-25 loads shall be 24" measured from the top of the unit to the bottom of flexible pavement or to top of rigid pavement. Maximum cover for green or trafficked areas shall be no more than 8'. Contact your local Prinsco representative or visit www.prinsco.com for the latest installation guidelines.

Reference Specifications

This specification references the latest edition and revisions of the following standard specifications:

- AASHTO M294 – *Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter*
- AASHTO M252 - *Standard Specification for Corrugated Polyethylene Drainage Pipe*
- ASTM F2306 – *Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications*
- ASTM D3350 – *Standard Specification for Polyethylene Plastics Pipe and Fittings Materials*
- ASTM D2321 – *Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications*