

Scope

This specification designates the requirements for Prinsco HydroStor HS290 Chambers to be used for controlling stormwater runoff. The HydroStor chambers function as a subsurface retention system by storing water and allowing infiltration into the soil or as a subsurface detention system by temporarily storing stormwater runoff and releasing the water at a controlled rate through an outlet.

Chamber Requirements

Prinsco HydroStor HS290 chambers shall be curved to form a continuous arch shape with an open bottom. Chambers shall have 4 annular exterior corrugations. Chambers shall be equipped with lifting handles to facilitate the unloading and installation of the chambers.

End caps shall be curved and have adequate structural capacity to allow the end cap inlets to be cut at any invert elevation. Chambers and end caps shall meet or exceed the following standards:

- ASTM F2418 “Standard Specification for Polypropylene (PP) Corrugated Wall Stormwater Collection Chambers”
- ASTM F2787 “Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers”

Materials

Prinsco HydroStor HS290 chambers shall be injection molded and constructed of polypropylene resin resistant to environmental stress cracking (ESCR) and with ability to maintain adequate stiffness through the construction and service life of the chamber. The end caps shall be either thermoformed or injection molded from polyethylene resin.

The chamber material shall meet or exceed the requirements of designation PP0330B99945 as defined in ASTM D4101.

Joint Performance

Joining of chambers shall be accomplished by overlapping the corrugations of longitudinally adjacent chambers along long lengths of chambers. Chambers and joints shall be installed in the direction stamped in the valley of the corrugation.

End caps are designed to fit over top of a corrugation on either end of the chamber. End caps shall have guides to allow easy cutting of various diameters of pipe that may be used to inlet water into the system.

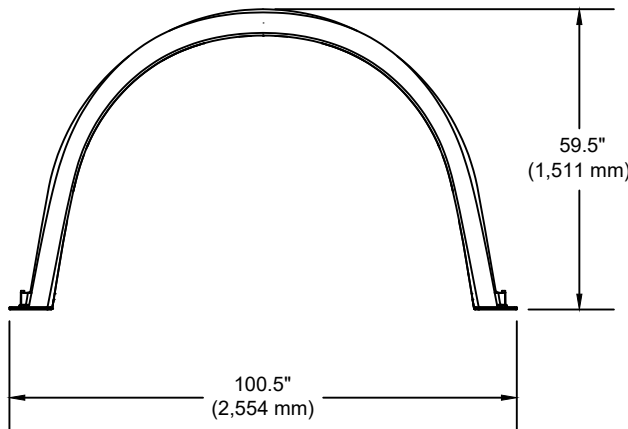
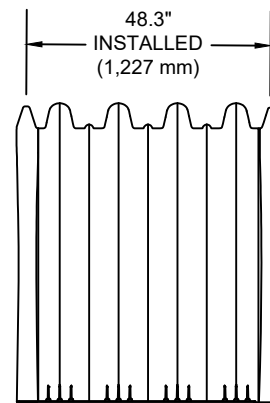
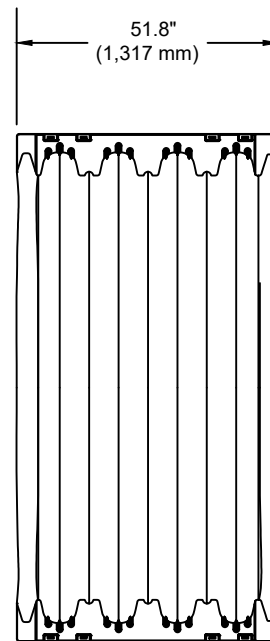
Installation

Chambers and end caps shall be installed in accordance with Prinsco’s published installation guidelines. Minimum cover heights for AASHTO H-20 loads shall be 24” (600 mm) as shown in the cross-section detail. The minimum cover shall be measured from the top of the chamber to the bottom of flexible pavement or to the top of rigid pavement. Visit www.prinsco.com or contact your local Prinsco representative for the latest installation guidelines.

Reference Specifications

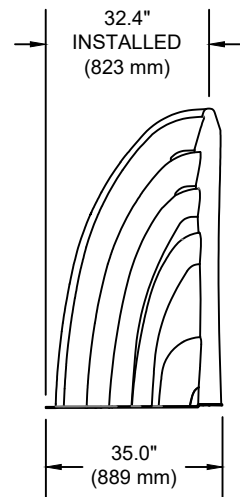
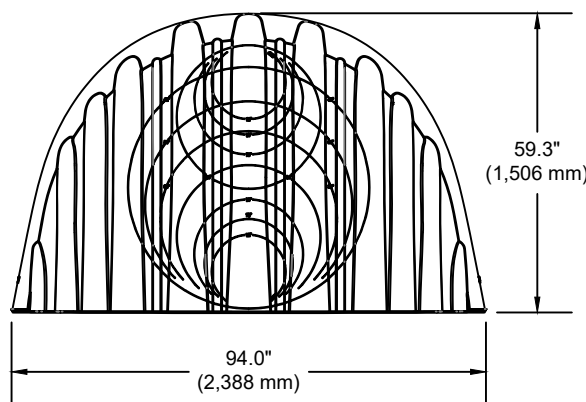
This specification references the latest edition and revisions of the following standard specifications:

- ASTM F2418 – Standard Specification for Polypropylene (PP) Corrugated Wall Stormwater Collection Chambers
- ASTM F2787 – Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers
- ASTM D4101 – Standard Specification for Polypropylene Injection and Extrusion Materials



Chamber Specifications	
Chamber Size (L x W x H)	51.8" x 100.5" x 59.5" (1,317 x 2,554 x 1,511 mm)
Installed Length	48.3" (1,227 mm)
Chamber Storage	109.6 ft ³ (3.10 m ³)
Min. Installed Storage*	164.5 ft ³ (4.66 m ³)
Weight / Chamber	112 lbs (50.80 kg)
Chambers / Pallet	10
Approx. Weight / Pallet	1,350 lbs (612 kg)

End Cap Specifications	
End Cap Size (L x W x H)	35.0" x 94.0" x 59.3" (889 x 2,388 x 1,506 mm)
Installed Length	32.4" (823 mm)
End Cap Storage	39.6 ft ³ (1.12 m ³)
Min. Installed Storage*	114.46 ft ³ (3.10 m ³)
Weight	79.9 lbs (36.24 kg)



*ASSUMES 12" (300 mm) STONE ABOVE CHAMBERS/END CAPS, 9" (230 mm) OF STONE FOR FOUNDATION STONE, 9" (230 mm) OF STONE BETWEEN CHAMBERS/END CAPS, 12" (150 mm) OF STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

THIS DETAIL DEPICTS RECOMMENDED INSTALLATION PRACTICES AND IS NOT INTENDED TO SUPERSEDE ANY NATIONAL, STATE OR LOCAL SPECIFICATIONS. PRINSCO BEARS NO RESPONSIBILITY FOR ANY ALTERATIONS, REVISION AND/OR DEVIATION FROM THIS STANDARD DETAIL. PRINSCO HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICE FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION TO VERIFY SUITABILITY. © PRINSCO, INC.



1717 16TH ST. NE
WILLMAR, MN 56201
www.prinsco.com

TITLE: HYDROSTOR HS290 - SPECIFICATION		
DRAWN BY: SLE	DATE: 27-Jul-22	DRAWING NUMBER:
SCALE: NTS	SHEET: 1 OF 1	D-7-501