

TRITON C-10 PRODUCT SPECIFICATIONS

1.0 General

1.1 Triton chambers are designed to control stormwater runoff. As a subsurface retention or detention system, Triton chambers retain and allow effective infiltration of water into the soil. As a subsurface detention system, Triton chambers detain and allow for the metered flow of water to an outfall.

2.0 Chamber Parameters

- 2.1 The chamber shall be injection compression molded of a structural grade 1010 green soy resin composite to be inherently resistant to environmental stress cracking (ESCR), creep, and to maintain proper stiffness through temperature ranges of -40 degrees Fahrenheit to 180 degrees Fahrenheit (-40 degrees Celsius to 82.2 degrees Celsius).
- 2.2 The material property for the chamber and end cap must meet or exceed the following:
 Tensile Strength- Ultimate: 21,755 PSI (150 Mpa)
 Tensile Strength-Yield: 17,404 PSI (120 Mpa)
 Tensile Modulus: 1,750-2,240 KSI (12,066 Mpa - 15,444 Mpa)
 Flex Modulus: 1,600 KSI (11,032 Mpa)
 Flex Yield Strength: 33,100 PSI (228 Mpa)
 Compressive Strength: 30,457 PSI (210 Mpa)
 Shear Strength: 11,500 PSI (79 Mpa)
- 2.3 The nominal chamber dimensions of the Triton C-10 shall be 25.0 inches tall (635 millimeters), 39.7 inches wide (1008 millimeters) and 31.52 inches long (801 millimeters). Lay-up length is 29.58 inches (751 millimeters).
- 2.4 The chamber shall have an elliptical curved section profile.
- 2.5 The chamber shall be open-bottomed.
- 2.6 The chamber shall incorporate an overlapping corrugation joint system to allow chamber rows to be constructed.
- 2.7 The nominal storage volume of a Triton C-10 chamber shall be 17.45 cubic feet (0.494 cubic meters) per chamber when installed per Triton's typical details. This equates to 1.86 cubic feet (0.053 cubic meters) of storage per square foot of bed. This does not include perimeter stone.
- 2.8 The chamber shall have both of its ends open to allow for unimpeded hydraulic flows and visual inspections down a row's entire length.
- 2.9 The chamber shall have five corrugations to achieve strengths defined above.
- 2.10 The chamber shall have five circular and elliptical, indented and raised, surfaces on the top to the chamber for a maximum of 18 inch (450 millimeter) diameter optional top feed inlets, inspection ports and/or clean-out access ports.
- 2.11 The chamber side shall be capable of accepting pipe O.D. up to 12 inches (300 millimeters).

- 2.12 The chamber shall be analyzed, designed and field tested using AASHTO LRFD bridge design specifications 1. Design live load shall meet or exceed the AASHTO HS30 or a rear axle load of 48,000 pounds (21,772.4 kg). Design shall consider earth and live loads without pavement as appropriate for the minimum 18 inches (457 millimeters) of total cover to a maximum total cover of 50 feet (15.24 meters).
- 2.13 The chamber shall be manufactured in an ISO/TS16949:2002 and ISO 14001:2004 certified facility
- 2.14 The service life of the product is over 60 years under a constant sustained load of 10,000 PSI (68.95 Mpa) which is equal to the H-20 loading condition. Under typical loading conditions the Chamber and End Cap has a useful life span of 120 years from date of when manufactured.

3.0 End Cap Parameters

- 3.1 The end cap shall be Injection Compression molded of 1010 green soy resin to be inherently resistant to environmental stress cracking (ESCR), creep and to maintain proper stiffness through temperature ranges of -40 degrees Fahrenheit to 180 degrees Fahrenheit (-40 degrees Celsius to 82.2 degrees Celsius).
- 3.2 The end cap shall be designed to fit inside the last corrugation of a chamber, which allows the capping of each end of the chamber row.
- 3.3 The end cap shall have 7 different diameter connection guides across the front face of the bull nosed surface. The maximum diameter that the end cap can accept is 20 inches (500 millimeter) PS46, ASTM F679 PVC pipe.
- 3.4 The end cap shall have excess structural adequacies to allow cutting an orifice of any size at any invert elevation.
- 3.5 The primary face of an end cap shall have five corrugations and be angled outward to resist horizontal loads generated near the edges of beds.
- 3.6 The end cap shall be manufactured in an ISO/TS16949:2002 and ISO 14001:2004 certified facility.
- 3.7 The service life of the product to be over 60 years under a sustained load of 10,000 PSI (68.95 Mpa) which is equal to the H-20 loading condition.
- 3.8 The nominal storage volume of a Triton C-10 end cap shall be 3.86 cubic feet (0.109 cubic meters) per end cap when installed per triton's typical details. This equates to 1.52 cubic feet (0.043 cubic meters) of storage per square foot of bed.

4.0 Installation

- 4.1 Installation shall be in accordance with the latest Triton Installation manual that can be downloaded from the Triton website: www.tritonsws.com/support/downloads

CONCEPTUAL PLAN DISCLAIMER

THIS GENERIC DETAIL DOES NOT ENCOMPASS THE SIZING, FIT, AND APPLICABILITY OF THE TRITON CHAMBER SYSTEM FOR THIS SPECIFIC PROJECT. IT IS THE ULTIMATE RESPONSIBILITY OF THE DESIGN ENGINEER TO ASSURE THAT THE STORMWATER SYSTEM DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. TRITON PRODUCTS MUST BE DESIGNED AND INSTALLED IN ACCORDANCE WITH TRITON'S MINIMUM REQUIREMENTS. TRITON STORMWATER SOLUTIONS DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS. THE DESIGN ENGINEER IS RESPONSIBLE FOR ALL DESIGN DECISIONS.



7600 EAST GRAND RIVER, STE.195
 BRIGHTON, MI 48114
 PHONE: (810) 222-7652 • FAX: (810) 222-1769
WWW.TRITONSW.COM

C-10 PRODUCT SPECIFICATIONS

TRITON - STANDARD DETAILS

REVISED:

03-02-16 JWM