

# PRODUCT CATALOG







THE MOST ADVANCED NAME IN WATER MANAGEMENT SOLUTIONS®

# STORMTECH SUBSURFACE STORMWATER MANAGEMENT

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The ADS StormTech Design Tool will help designers, owners and contactors design conceptual layouts and cost estimates.

Now available at https://designtool.ads-pipe.com



# STORMTECH SUBSURFACE STORMWATER MANAGEMENT

StormTech has thousands of chamber systems in service throughout the world. All StormTech chambers are designed to meet the most stringent industry performance standards for superior structural integrity. The StormTech system is designed primarily to be used under parking lots, roadways and heavy earth loads saving valuable land and protecting water resources for commercial and municipal applications. In our continuing desire to answer designers' challenges, StormTech has expanded the family of products providing engineers, developers, regulators and contractors with additional site specific flexibility.

## ADVANCED STRUCTURAL PERFORMANCE FOR GREATER LONG-TERM RELIABILITY

StormTech developed a state of the art chamber design through:

- · Collaboration with world-renowned experts of buried drainage structures to develop and evaluate the structural testing program and product design
- Designing chambers to exceed American Association of State Highway and Transportation Officials (AASHTO) LRFD design specifications for HS-20 live loads and deep burial earth loads
- Subjecting the chambers to rigorous full scale testing, under severe loading conditions to verify the AASHTO safety factors for live load and deep burial applications
- Designing chambers to conform to the product requirements of ASTM F2418 and ASTM F2922 and design requirements of ASTM F2787 ensuring both the assurance of product quality and safe structural design

# **OUR CHAMBERS PROVIDE**

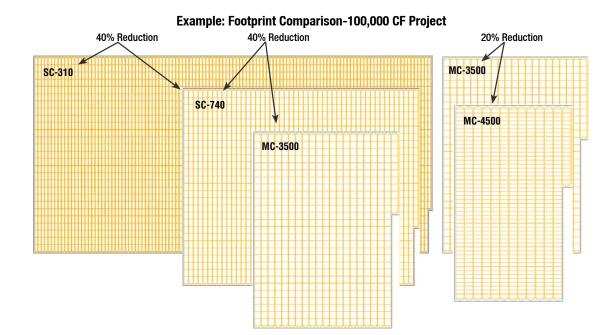
- · Large capacity that fits very tight footprints providing developers with more usable land for development
- A proven attenuation alternative to cumbersome large diameter metal pipe or snap together plastic crates and unreliable multi-layer systems
- · Provides the strength of concrete vaults at a very competitive price
- The robust continuous true elliptical arch design, which effectively transfers loads to the surrounding backfill providing the long-term safety factors required by AASHTO. Offers developers a cost-effective underground system that will perform as designed for decades.
- Designed in accordance with the AASHTO LRFD Bridge Design Specifications providing engineers with a structural performance standard for live and long-term dead loads
- · Polypropylene and polyethylene resins tested using ASTM standards to ensure long and short-term structural properties
- Injection molded for uniform wall thickness and repeatable quality
- Third-party tested and patented Isolator Row PLUS for less frequent maintenance, water quality and long-term performance
- Incorporates traditional manifold/header designs using conventional hydraulic equations that can easily verify flow equalization and scour velocity
- Open chamber design requiring only one chamber model to construct each row assuring ease of construction and no repeating end walls to obstruct access or flow.

StormTech offers a variety of chamber sizes (SC-160LP, SC-310, SC-740, DC-780, MC-3500 and MC-4500) so the consulting design engineer can choose the chamber that is best suited for the site conditions and regulatory requirements. StormTech has thousands of chamber systems in service worldwide. We provide plan layout and cost estimate services at no charge for consulting engineers and developers.

# STORMTECH SUBSURFACE STORMWATER MANAGEMENT



MC-4500 MC-3500 DC-780 SC-740 SC-160LP **Product Specifications** SC-310 Height, in. (mm) 60 (1524) 45 (1143) 30 (762) 30 (762) 16 (406) 12 (305) Width, in. (mm) 100 (2540) 77 (1956) 51 (1295) 51 (1295) 34 (864) 25 (635) Lenth, in. (mm) 52 (1321) 90 (2286) 90.7 (2300) 90.7 (2300) 90.7 (2300) 90.7 (2300) Installed length, in. (mm) 48.3 (1227) 86.0 (2184) 85.4 (2170) 85.4 (2170) 85.4 (2170) 85.4 (2170) Bare Chamber Storage, cf (cm) 106.5 (3.01) 109.9 (3.11) 46.2 (1.30) 45.9 (1.30) 14.7 (0.42) 6.85 (0.19) 6 (152) 6 (152) 6 (152) Stone above, in. (mm) 12 (305) 12 (305) 6 (152) Minimum stone below, in. (mm) 9 (229) 9 (229) 9 (229) 6 (152) 6 (152) 4 (100) Row spacing, in. (mm) 9 (229) 6 (152) 6 (152) 6 (152) 6 (152) N/A Minimum installed storage, cf (cm) 162.6 (4.60) 175.0 (4.96) 78.4 (2.22) 74.9 (2.12) 31.0 (0.39) 15.0 (0.42) Storage per unit area, cf/sf (cm/sm) 4.45 (1.35) 3.53 (1.08) 2.32 (0.70) 2.21 (0.67) 1.31 (0.39) 1.01 (0.30)





# STORMTECH SC-160LP CHAMBER

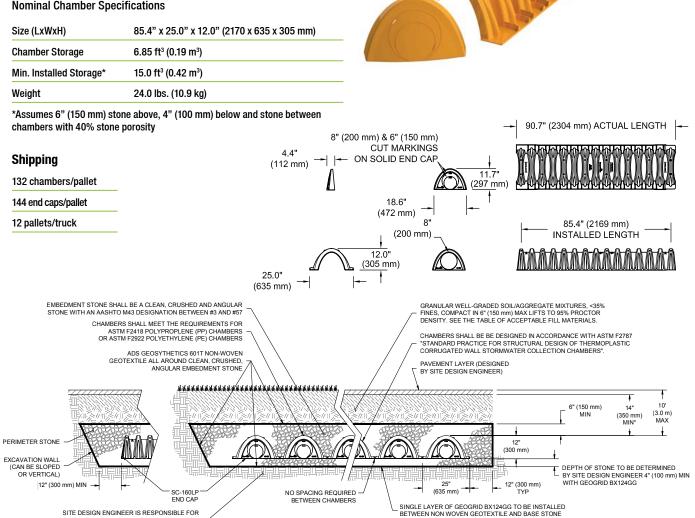
Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for commercial and municipal applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

The SC-160LP chamber was developed for infiltration and detention in shallow cover applications

- Only 14" (350 mm) required from top of chamber to bottom of pavement
- Only 12" (300 mm) tall
- · Installs toe to toe-no additional spacing between rows

#### StormTech SC-160LP (not to scale)

**Nominal Chamber Specifications** 



THE ENSURING THE REQUIRED BEARING CAPACITY OF SUBGRADE SOILS

\*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR. INCREASE COVER TO 20\* (510 mm).

THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

# SC-160LP CUMLATIVE STORAGE VOLUMES PER CHAMBER

Assumes 40% Stone Porosity. Calculations are Based Upon a 4" (100 mm) Stone Base Under Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage ft³ (m³)		Total System Cumulative Storage ft³ (m³)
22 (559)		6.85 (0.194)	14.98 (0.424)
21 (533)		6.85 (0.194)	14.49 (0.410)
20 (508)	Stone	6.85 (0.194)	14.00 (0.396)
19 (483)	Cover	6.85 (0.194)	13.50 (0.382)
18 (457)		6.85 (0.194)	13.01 (0.368)
17 (432)	<b>V</b>	6.85 (0.194)	12.51 (0.354)
16 (406)		6.85 (0.194)	12.02 (0.340)
15 (381)		6.80 (0.193)	11.49 (0.325)
14 (356)		6.67 (0.189)	10.92 (0.309)
13 (330)		6.38 (0.181)	10.25 (0.290)
12 (305)		5.94 (0.168)	9.49 (0.269)
11 (279)		5.40 (0.153)	8.67 (0.246)
10 (254)		4.78 (0.135)	7.81 (0.221)
9 (229)		4.10 (0.116)	6.91 (0.196)
8 (203)		3.36 (0.095)	5.97 (0.169)
7 (178)		2.58 (0.073)	5.01 (0.142)
6 (152)		1.76 (0.050)	4.02 (0.114)
5 (127)		0.89 (0.025)	3.01 (0.085)
4 (102)		0 (0)	1.98 (0.056)
3 (76)	Stone	0 (0)	1.48 (0.042)
2 (51)	Foundation	0 (0)	0.99 (0.028)
1 (25)	\	0 (0)	0.49 (0.014)

Note: Add 0.49  $ft^3$  (0.014  $m^3\!)$  of storage for each additional inch (25 mm) of stone foundation.

### AMOUNT OF STONE PER CHAMBER

	Stor	e Foundation D	epth
ENGLISH TONS (yds <sup>3</sup> )	4"	6"	8"
StormTech SC-3160LP	1.1 (0.8)	1.2 (0.9)	1.3 (0.9)
METRIC KILOGRAMS (m <sup>3</sup> )	100 mm	150 mm	200 mm
StormTech SC-3160LP	952 (0.7)	1,074 (0.8)	1,197 (0.8)

Note: Assumes 6" (150 mm) of stone above and only embedment stone between chambers.

### VOLUME EXCAVATION PER CHAMBER YD<sup>3</sup> (M<sup>3</sup>)

	Stone Foundation Depth					
	4" (100) 8" (200) 12" (300)					
StormTech SC-160LP	1.4 (1.1)	1.6 (1.2)	1.8 (1.3)			

Note: Assumes no row separation and 14" (350 mm) of cover. The volume of excavation will vary as depth of cover increases.



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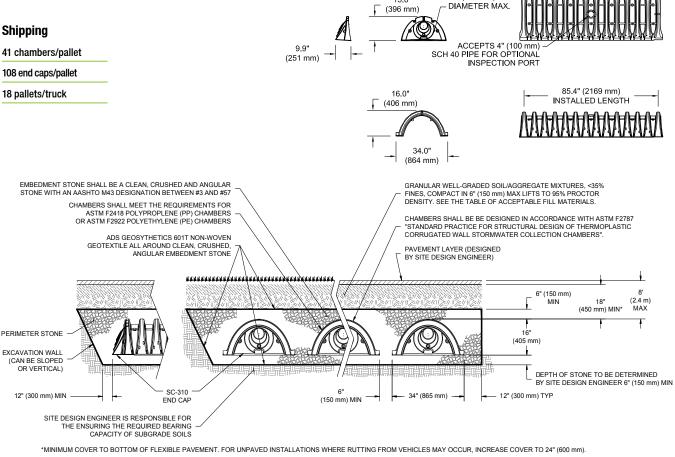
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# **STORMTECH SC-310 CHAMBER**

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

StormTech SC-310 Chamber (not to scale) Nominal Chamber Specifications					
Size (Lx W x H)	85.4" x 34.0" x 16.0" (2170 x 864 x 406 mm)				
Chamber Storage	14.7 ft³ (0.42 m³)				
Min. Installed Storage*	31.0 ft³ (0.88 m³)				
Weight	37.0 lbs (16.8 kg)				

\*Assumes 6" (150 mm) stone above, below and between chambers and 40% stone porosity.



Martin

90.7" (2304 mm) ACTUAL LENGTH

12" (300 mm)

15.6"

THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

# SC-310 CUMLATIVE STORAGE VOLUMES PER CHAMBER

Assumes 40% Stone Porosity. Calculations are Based Upon a 6" (150 mm) Stone Base Under Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage ft <sup>3</sup> (m <sup>3</sup> )		Total System Cumulative Storage ft <sup>3</sup> (m <sup>3</sup> )
28 (711)		14.70 (0.416)	31.00 (0.878)
27 (686)		14.70 (0.416)	30.21 (0.855)
26 (680)	Stone	14.70 (0.416)	29.42 (0.833)
25 (610)	Cover	14.70 (0.416)	28.63 (0.811)
24 (609)		14.70 (0.416)	27.84 (0.788)
23 (584)	*	14.70 (0.416)	27.05 (0.766)
22 (559)		14.70 (0.416)	26.26 (0.748)
21 (533)		14.64 (0.415)	25.43 (0.720)
20 (508)		14.49 (0.410)	24.54 (0.695)
19 (483)		14.22 (0.403)	23.58 (0.668)
18 (457)	13.68 (0.387)		22.47 (0.636)
17 (432)	12.99 (0.368)		21.25 (0.602)
16 (406)		12.17 (0.345)	19.97 (0.566)
15 (381)		11.25 (0.319)	18.62 (0.528)
14 (356)		10.23 (0.290)	17.22 (0.488)
13 (330)	9.15 (0.260)		15.78 (0.447)
12 (305)		7.99 (0.227)	14.29 (0.425)
11 (279)		6.78 (0.192)	12.77 (0.362)
10 (254)		5.51 (0.156)	11.22 (0.318)
9 (229)		4.19 (0.119)	9.64 (0.278)
8 (203)		2.83 (0.081)	8.03 (0.227)
7 (178)		1.43 (0.041)	6.40 (0.181)
6 (152)	•	0	4.74 (0.134)
5 (127)		0	3.95 (0.112)
4(102)	Stone Fo	0	3.16 (0.090)
3 (76)	Stolle FO	undation 0	2.37 (0.067)
2 (51)		0	1.58 (0.046)
1 (25)	*	0	0.79 (0.022)

Note: Add 0.79 ft  $^{\!3}$  (0.022 m  $^{\!3}) of storage for each additional inch. (25 mm) of stone foundation.$ 

#### STORAGE VOLUME PER CHAMBER FT<sup>3</sup> (M<sup>3</sup>)

	Bare Chamber Storago		hamber and S Idation Depth i	
	Storage ft <sup>3</sup> (m <sup>3</sup> )	6 (150)	12 (300)	18 (450)
StormTech SC-310	14.7 (0.4)	31.0 (0.9)	35.7 (1.0)	40.4 (1.1)

Note: Assumes 6" (150 mm) of stone above chambers, 6" (150 mm) row spacing and 40% stone porosity.

#### **AMOUNT OF STONE PER CHAMBER**

	Stone Foundation Depth			
ENGLISH TONS (yds <sup>3</sup> )	6"	12"	18"	
StormTech SC-310	2.1 (1.5 yd³)	2.7 (1.9 yd³)	3.4 (2.4 yd³)	
METRIC KILOGRAMS (m <sup>3</sup> )	150 mm	300 mm	450 mm	
StormTech SC-310	1,830 (1.1 m <sup>3</sup> )	2,490 (1.5 m <sup>3</sup> )	2,990 (1.8 m <sup>3</sup> )	

Note: Assumes 6" (150 mm) of stone above, and between chambers.

#### **VOLUME EXCAVATION PER CHAMBER YD<sup>3</sup> (M<sup>3</sup>)**

	Stone Foundation Depth				Stone Foundation Depth		
	6" (150 mm) 12" (300 mm) 18" (450 mm)						
StormTech SC-310	2.9 (2.2)	3.4 (2.6)	3.8 (2.9)				

Note: Assumes 6" (150 mm) of row separation and 18" (450 mm) of cover. The volume of excavation will vary as the depth of the cover increases.





# **STORMTECH SC-310-3 CHAMBER**

The proven strength and durability of the SC-310-3 Chamber allows for a design option for sites where limited cover, limited space, high water table and escalated aggregate cost are a factor. The SC-310-3 has a minimum cover requirement of 16" (400 mm) to bottom of flexible pavement and reduces the spacing requirement between chambers by 50% to 3" (76 mm). This provides a reduced footprint overall, reduces aggregate needed, and allows the designer to offer a traffic bearing application yet comply with water table separation regulations. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

### StormTech SC-310-3 Chamber (not to scale)

SITE DESIGN ENGINEER IS RESPONSIBLE FOR THE ENSURING THE REQUIRED BEARING CAPACITY OF SUBGRADE SOILS

12" (300 mm) MIN

SC-310 END CAP

Nominal Chamber Sp	pecifications	
Size (Lx W x H)	85.4" x 34.0" x 16.0" (2,170 x 864 x 406 mm)	
Chamber Storage	14.7ft³ (0.42 m³)	
Min. Installed Storage*	29.3 ft <sup>3</sup> (0.83 m <sup>3</sup> )	
Weight	37.0 lbs (16.8 kg)	
*Assumes 6" (150 mm) spacing and 40% stone	stone above and below chambers, 3" (76 mm) row porosity.	→ 90.7" (2304 mm) ACTUAL LENGTH → 15.6" 12" (300 mm)
Shipping	А	
41 chambers/pallet	A	
108 end caps/pallet	9.9" (251 mm)	ACCEPTS 4" (100 mm) – SCH 40 PIPE FOR OPTIONAL
18 pallets/truck	(251 mm) i i	INSPECTION PORT
		(406 mm)
STONE WITH AN AASH CHAMI A OR J	SHALL BE A CLEAN. CRUSHED AND ANGILLAR TO MIS DESIGNATION BETWEEN KS AND 457 BERS SHALL MEET THE REQUIREMENTS FOR ISTM F2418 POLYPROPLEME (PP) CHAMBERS ADS GEOSYTHETICS 801T NON-WOVEN DEOTEXTLE ALL ARCUND CLEAN, CRUSHED ANGULAR EMBEDMENT STONE	GRANULAR WELL-GRADED SOL/AGGREGATE MIXTURES, <35% FINES, COMPACT IN 6° (150 mm) MAX LIFTS TO 95% PROCTOR DENSITY. SEE THE TABLE OF ACCEPTABLE FILL MATERIALS. CHAMBERS SHALL BE BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATE DWALL STORMWATE COLLECTION CHAMBERS". PAVEMENT LAYER (DESIGNED BY SITE DESIGN ENGINEER)
(CAN BE SLOPED		

THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

"MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 24" (600 mm)

(75 mm) MIN

(865 mm)

DEPTH OF STONE TO BE DETERMINED BY SITE DESIGN ENGINEER 6" (150 mm) MIN

12" (300 mm) TYP

# SC-310-3 CUMLATIVE STORAGE VOLUMES PER CHAMBER

Assumes 40% Stone Porosity. Calculations are Based Upon a 6" (150 mm) Stone Base Under Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage ft³ (m³)		Total System Cumulative Storage ft³ (m³)
28 (711)	A	14.70 (0.416)	29.34 (0.831)
27 (686)		14.70 (0.416)	28.60 (0.810)
26 (660)	Stone	14.70 (0.416)	27.87 (0.789)
25 (635)	Cover	14.70 (0.416)	27.14 (0.769)
24 (610)		14.70 (0.416)	26.41 (0.748)
23 (584)	*	14.70 (0.416)	25.68 (0.727)
22 (559)		14.70 (0.416)	24.95 (0.707)
21 (533)		14.64 (0.415)	24.18 (0.685)
20 (508)		14.49 (0.410)	23.36 (0.661)
19 (483)		14.22 (0.403)	22.47 (0.636)
18 (457)		13.68 (0.387)	21.41 (0.606)
17 (432)		12.99 (0.368)	20.25 (0.573)
16 (406)		12.17 (0.345)	19.03 (0.539)
15 (381)		11.25 (0.319)	17.74 (0.502)
14 (356)		10.23 (0.290)	16.40 (0.464)
13 (330)		9.15 (0.260)	15.01 (0.425)
12 (305)		7.99 (0.226)	13.59 (0.385)
11 (279)		6.78 (0.192)	12.13 (0.343)
10 (254)		5.51 (0.156)	10.63 (0.301)
9 (229)		4.19 (0.119)	9.11 (0.258)
8 (203)		2.83 (0.080)	7.56 (0.214)
7 (178)		1.43 (0.041)	5.98 (0.169)
6 (152)		0 (0)	4.39 (0.124)
5 (127)		0 (0)	3.66 (0.104)
4 (102)	Stone	0 (0)	2.93 (0.083)
3 (76)	Foundation	0 (0)	2.19 (0.062)
2 (51)		0 (0)	1.46 (0.041)
1 (25)	*	0 (0)	0.73 (0.021)

Note: Add 0.73 ft  $^{\!3}$  (0.021 m  $^{\!3}\!)$  of storage for each additional inch (25 mm) of stone foundation.

### STORAGE VOLUME PER CHAMBER FT<sup>3</sup> (M<sup>3</sup>)

	Bare Chamber	Chamber and Stone Foundation Depth in. (mm)		
	Storage ft <sup>3</sup> (m <sup>3</sup> )	6 (150)	12 (300)	18 (450)
SC-310-3 Chamber	14.7 (0.42)	29.3 (0.83)	33.7 (0.95)	38.1 (1.08)

Note: Assumes 6" (150 mm) of stone above chambers, 3" (76 mm) row spacing and 40% stone porosity.

### AMOUNT OF STONE PER CHAMBER

	Stone Foundation Depth			
ENGLISH TONS (yds <sup>3</sup> )	6"	12"	16"	
SC-310-3	1.9 (1.4)	2.5 (1.8)	3.1 (2.2)	
METRIC KILOGRAMS (m <sup>3</sup> )	150 mm	300 mm	450 mm	
SC-310-3	1,724 (1.0)	2,268 (1.3)	2,812 (1.7)	
Note: Assumes 6" (150 mm)	of stone above a	nd and 3" (76 mr	m) row spacing.	

#### VOLUME EXCAVATION PER CHAMBER YD<sup>3</sup> (M<sup>3</sup>)

	Stone Foundation Depth				
	6 (150) 12 (300) 18 (45				
SC-310-3	2.6 (2.0)	3.0 (2.0)	3.4 (2.6)		

**Note:** Assumes 3" (76 mm) of row separation and 6" (150 mm) of stone above the chambers and 16" (400 mm) of cover. The volume of excavation will vary as depth of cover increases





# **STORMTECH SC-740 CHAMBER**

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

#### land usage for private (commercial) and public applications. StormTech A. C. S. S. S. chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices. StormTech SC-740 Chamber (not to scale) **Nominal Chamber Specifications** Size (Lx W x H) 85.4" x 51.0" x 30.0" (2,170 x 1,295 x 762 mm) **Chamber Storage** 45.9 ft3 (1.30 m3) Min. Installed Storage\* 74.9 ft3 (2.12 m3) 90.7" (2304 mm) Weight 74.0 lbs (33.6 kg) ACTUAL LENGTH \*Assumes 6" (150 mm) stone above, below and between chambers and 24" (600 mm) 40% stone porosity. DIAMETER MAX. Shipping 29.3' 30 chambers/pallet (744 mm) 60 end caps/pallet 12.2" (310 mm) 45.9" (1166 mm) 12 pallets/truck 85.4" (2169 mm) INSTALLED LENGTH 30.0" (762 mm) 51.0" ł (1295 mm) EMBEDMENT STONE SHALL BE A CLEAN, CRUSHED AND ANGULAR STONE WITH AN AASHTO M43 DESIGNATION BETWEEN #3 AND #57 GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES, COMPACT IN 6" (150 mm) MAX LIFTS TO 95% PROCTOR DENSITY. SEE THE TABLE OF ACCEPTABLE FILL MATERIALS. CHAMBERS SHALL MEET THE REQUIREMENTS FOR ASTM E2418 POLYPROPLENE (PP) CHAMB FRS CHAMBERS SHALL BE BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". OR ASTM F2922 POLYETHYLENE (PE) CHAMBERS ADS GEOSYTHETICS 601T NON-WOVEN GEOTEXTILE ALL AROUND CLEAN, CRUSHED, ANGULAR EMBEDMENT STONE PAVEMENT LAYER (DESIGNED BY SITE DESIGN ENGINEER) 18" (2.4 m) MAX (450 mm) MIN\* 6" (150 ) MIN 30 PERIMETER STONE (760 mm) EXCAVATION WALL (CAN BE SLOPED OR VERTICAL) DEPTH OF STONE TO BE DETERMINED BY SITE DESIGN ENGINEER 6" (150 mm) MIN SC-740 12" (300 mm) MIN END CAP SITE DESIGN ENGINEER IS RESPONSIBLE FOR 12" (300 mm) TYP 51" (1295 mm) THE ENSURING THE REQUIRED BEARING CAPACITY OF SUBGRADE SOILS (150 mm) MIN

\*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 24\* (600 mm).

THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

## SC-740 CUMLATIVE STORAGE VOLUMES PER CHAMBER

Assumes 40% Stone Porosity. Calculations are Based Upon a 6" (150 mm) Stone Base Under Chambers.

Depth of Water in System Inches (mm)		/e Chamber e ft³ (m³)	Total System Cumulative Storage ft³ (m³)
42 (1067)	•	45.90 (1.300)	74.90 (2.121)
41 (1041)		45.90 (1.300)	73.77 (2.089)
40 (1016)	Stone	45.90 (1.300)	72.64 (2.057)
39 (991)	Cover	45.90 (1.300)	71.52 (2.025)
38 (965)		45.90 (1.300)	70.39 (1.993)
37 (940)		45.90 (1.300)	69.26 (1.961)
36 (914)		45.90 (1.300)	68.14 (1.929)
35 (889)		45.85 (1.298)	66.98 (1.897)
34 (864)		45.69 (1.294)	65.75 (1.862)
33 (838)		45.41 (1.286)	64.46 (1.825)
32 (813)		44.81 (1.269)	62.97 (1.783)
31 (787)		44.01 (1.246)	61.36 (1.737)
30 (762)		43.06 (1.219)	59.66 (1.689)
29 (737)		41.98 (1.189)	57.89 (1.639)
28 (711)		40.80 (1.155)	56.05 (1.587)
27 (686)		39.54 (1.120)	54.17 (1.534)
26 (660)		38.18 (1.081)	52.23 (1.479)
25 (635)		36.74 (1.040)	50.23 (1.422)
24 (610)		35.22 (0.977)	48.19 (1.365)
23 (584)		33.64 (0.953)	46.11 (1.306)
22 (559)		31.99 (0.906)	44.00 (1.246)
21 (533)		30.29 (0.858)	1.85 (1.185)
20 (508)		28.54 (0.808)	39.67 (1.123)
19 (483)		26.74 (0.757)	37.47 (1.061)
18 (457)		24.89 (0.705)	35.23 (0.997)
17 (432)		23.00 (0.651)	32.96 (0.939)
16 (406)		21.06 (0.596)	30.68 (0.869)
15 (381)		19.09 (0.541)	28.36 (0.803)
14 (356)		17.08 (0.484)	26.03 (0.737)
13 (330)		15.04 (0.426)	23.68 (0.670)
12 (305)		12.97 (0.367)	21.31 (0.608)
11 (279)		10.87 (0.309)	18.92 (0.535)
10 (254)		8.74 (0.247)	16.51 (0.468)
9 (229)		6.58 (0.186)	14.09 (0.399)
8 (203)		4.41 (0.125)	11.66 (0.330)
7 (178)	A	2.21 (0.063)	9.21 (0.264)
6 (152)		0 (0)	6.76 (0.191)
5 (127)		0 (0)	5.63 (0.160)
4 (102)	Stone	0 (0)	4.51 (0.128)
3 (76)	Foundation	0 (0)	3.38 (0.096)
2 (51)		0 (0)	2.25 (0.064)
1 (25)	V	0 (0)	1.13 (0.032)

Note: Add 1.13 ft  $^{\!3}$  (0.032 m  $^{\!3}$ ) of storage for each additional inch (25 mm) of stone foundation.

#### STORAGE VOLUME PER CHAMBER FT<sup>3</sup> (M<sup>3</sup>)

	Bare Chamber		hamber and S Idation Depth	
	Storage ft <sup>3</sup> (m <sup>3</sup> )	6 (150)	12 (300)	18 (450)
SC-740 Chamber	45.9 (1.3)	74.9 (2.1)	81.7 (2.3)	88.4 (2.5)

Note: Assumes 6" (150 mm) stone above chambers, 6" (150 mm) row spacing and 40% stone porosity.

#### AMOUNT OF STONE PER CHAMBER

	Stone Foundation Depth			
ENGLISH TONS (yds <sup>3</sup> )	6"	12"	16"	
SC-740	3.8 (2.8)	4.6 (3.3)	5.5 (3.9)	
METRIC KILOGRAMS (m <sup>3</sup> )	150 mm	300 mm	450 mm	
SC-740	3,450 (2.1)	4,170 (2.5)	4,490 (3.0)	

Note: Assumes 6" (150 mm) of stone above and between chambers.

#### VOLUME EXCAVATION PER CHAMBER YD<sup>3</sup> (M<sup>3</sup>)

	Stone Foundation Depth   6 (150) 12 (300) 18 (450)			
SC-740	5.5 (4.2)	6.2 (4.7)	6.8 (5.2)	

Note: Assumes 6" (150 mm) of row separation and 18" (450 mm) of cover. The volume of excavation will vary as depth of cover increases.





# **STORMTECH DC-780 CHAMBER**

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

- 12' (3.6 m) Deep Cover Applications
- Designed in accordance with ASTM F2787 and produced to meet the ASTM 2418 product standard.
- AASHTO safety factors provided for AASHTO Design Truck (H20 and deep cover conditions.)

#### StormTech DC-780 Chamber (not to scale)

Nominal Chamber Specifications

Size (Lx W x H)	85.4" x 51.0" x 30.0" (2169 x 1295 x 762 mm)
Chamber Storage	46.2 ft <sup>3</sup> (1.30 m <sup>3</sup> )
Min. Installed Storage*	78.4 ft <sup>3</sup> (2.2 m <sup>3</sup> )

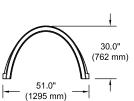
\*Assumes 9" (230 mm) stone below, 6" (150 mm) stone above, 6" (150 mm) row spacing and 40% stone porosity.

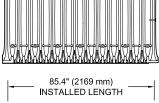
#### Shipping

24 chambers/pallet

#### 60 end caps/pallet

12 pallets/truck





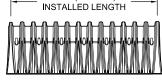
90.7" (2304 mm) ACTUAL LENGTH

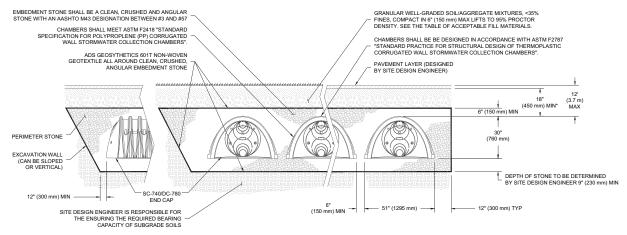
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\*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 24" (600 mm).

THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

### DC-780 CUMULATIVE STORAGE VOLUMES PER CHAMBER

Assumes 40% Stone Porosity. Calculations are Based Upon a 9" (230 mm) Stone Base Under Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage ft <sup>3</sup> (m <sup>3</sup> )		Total System Cumulative Storage ft <sup>3</sup> (m <sup>3</sup> )
45 (1,143)		46.27 (1.310)	78.47 (2.222)
44 (1,118)		46.27 (1.310)	77.34 (2.190)
43 (1,092)	Stone	46.27 (1.310)	76.21 (2.158)
42 (1,067)	Cover	46.27 (1.310)	75.09 (2.126)
41 (1,041)		46.27 (1.310)	73.96 (2.094)
40 (1,016)	♥	46.27 (1.310)	72.83 (2.062)
39 (991)		46.27 (1.310)	71.71 (2.030)
38 (965)		46.21 (1.309)	70.54 (1.998)
37 (940)		46.04 (1.304)	69.32 (1.963)
36 (914)		45.76 (1.296)	68.02 (1.926)
35 (889)		45.15 (1.278)	66.53 (1.884)
34 (864)		44.34 (1.255)	64.91 (1.838)
33 (838)		43.38 (1.228)	63.21 (1.790)
32 (813)		42.29 (1.198)	61.43 (1.740)
31 (787)		41.11 (1.164 )	59.59 (1.688)
30 (762)		39.83 (1.128)	57.70 (1.634)
29 (737)		38.47 (1.089)	55.76 (1.579)
28 (711)		37.01 (1.048)	53.76 (1.522)
27 (686)		35.49 (1.005)	51.72 (1.464)
26 (660)		33.90 (0.960)	49.63 (1.405)
25 (635)		32.24 (0.913)	47.52 (1.346)
24 (610)		30.54 (0.865)	45.36 (1.285)
23 (584)		28.77 (0.815)	43.18 (1.223)
22 (559)		26.96 (0.763)	40.97 (1.160)
21 (533)		25.10 (0.711)	38.72 (1.096)
20 (508)		23.19 (0.657)	36.45 (1.032)
19 (483)		21.25 (0.602)	34.16 (0.967)
18 (457)		19.26 (0.545)	31.84 (0.902)
17 (432)		17.24 (0.488)	29.50 (0.835)
16 (406)		15.19 (0.430)	27.14 (0.769)
15 (381)		13.10 (0.371)	24.76 (0.701)
14 (356)		10.98 (0.311)	22.36 (0.633)
13 (330)		8.83 (0.250)	19.95 (0.565)
12 (305)		6.66 (0.189)	17.52 (0.496)
11 (279)		4.46 (0.126)	15.07 (0.427)
10 (254)		2.24 (0.064)	12.61 (0.357)

Depth of Water in System Inches (mm)	Cumulative Chamber Storage ft³ (m³)			Total System Cumulative Storage ft <sup>3</sup> (m <sup>3</sup> )
9 (229)			0 (0)	10.14 (0.287)
8 (203)			0 (0)	9.01 (0.255)
7 (178)			0 (0)	7.89 (0.223)
6 (152)			0 (0)	6.76 (0.191)
5 (127)	Stone Foundation		0 (0)	5.63 (0.160)
4 (102)			0 (0)	4.51 (0.128)
3 (76)			0 (0)	3.38 (0.096)
2 (51)			0 (0)	2.25 (0.064)
1 (25)	1	1	0 (0)	1.13 (0.032)

Note: Add 1.13 ft  $^{\rm 3}$  (0.032 m  $^{\rm 3}) of Storage for Each Additional Inch (25 mm) of Stone Foundation.$ 

#### STORAGE VOLUME PER CHAMBER FT<sup>3</sup> (M<sup>3</sup>)

	Bare Chamber	Chamber and Stone Foundation Depth in. (mm)			
	Storage ft <sup>3</sup> (m <sup>3</sup> )	9" (230 mm)	12" (300 mm)	18" (450 mm)	
DC-780 Chamber	78.4 (2.2)	78.4 (2.2)	81.8 (2.3)	88.6 (2.5)	

Note: Assumes 40% porosity for the stone, the bare chamber volume, 6" (150 mm) of stone above, and 6" (150 mm) row spacing.

### **AMOUNT OF STONE PER CHAMBER**

	Stone Foundation Depth				
ENGLISH TONS (yds <sup>3</sup> )	9"	12"	18"		
DC-780 Chamber	4.2 (3.0)	4.7 (3.3)	5.6 (3.9)		
METRIC KILOGRAMS (m <sup>3</sup> )	230 mm	300 mm	450 mm		
DC-780 Chamber	3,810 (2.3)	4,264 (2.5)	5,080 (3.0)		

Note: Assumes 9" (150 mm) of stone above, and between chambers.

#### VOLUME EXCAVATION PER CHAMBER YD<sup>3</sup> (M<sup>3</sup>)

	Stone Foundation Depth			
	9" (230 mm) 12" (300 mm) 18" (450 m			
DC-780 Chamber	5.9 (4.5)	6.3 (4.8)	6.9 (5.3)	

Note: Assumes 6" (150 mm) separation between chamber rows and 18" (450 mm) of cover. The volume of excavation will vary as depth of cover increases.



# **STORMTECH MC-3500 CHAMBER**

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

# StormTech MC-3500 Chamber (not to scale)

Nominal Chamber Specifications

Size (Lx W x H)	90" x 77" x 45" (2,286 x 1,956 x 1,143 mm)
Chamber Storage	109.9 ft³ (3.11 m³)
Min. Installed Storage*	175.0 ft³ (4.96 m³)
Weight	134 lbs (60.8 kg)

\*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below chambers, 9" (230 mm) of stone between chambers/end caps and 40% stone porosity.

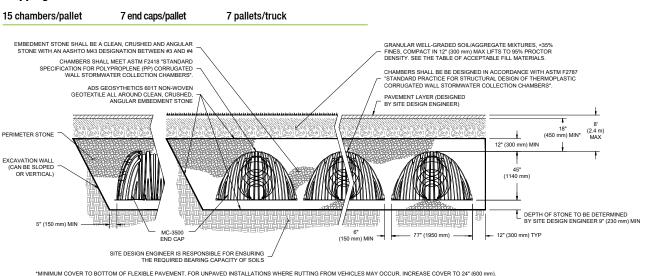
#### StormTech MC-3500 End Cap (not to scale)

**Nominal Chamber Specifications** 

Size (Lx W x H)	26.5" x 71" x 45.1" (673 x 1,803 x 1,145 mm)
End Cap Storage	14.9 ft³ (0.42 m³)
Min. Installed Storage*	45.1 ft³ (1.28 m³)
Weight	49 lbs (22.2 kg)

\*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below, 6" (150 mm) of stone perimeter, 6" (150 mm) of stone between chambers/end caps and 40% stone porosity.

### Shipping



22.5" (571 mm) INSTALLED

25.7"

(653 mm)

90.0" (2286 mm)

ACTUAL LENGTH

86.0" (2184 mm)

INSTALLED

45.0" (1143 mm)

ŧ

45.0'

(1143 mm)

77.0'

(1956 mm)

77.0" (1956 mm)

THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.

### STORAGE VOLUME PER CHAMBER FT<sup>3</sup> (M<sup>3</sup>)

	Bare Chamber	Chamber and Stone Foundation Depth in. (mm)			
Storage ft <sup>3</sup> (m <sup>3</sup> )	9" (230 mm)	12" (300 mm)	15" (375 mm)	18" (450 mm)	
MC-3500 Chamber	109.9 (3.11)	175.0 (4.96)	179.9 (5.09)	184.9 (5.24)	189.9 (5.38)
MC-3500 End Cap	14.9 (.42)	45.1 (1.28)	46.6 (1.32)	48.3 (1.37)	49.9 (1.41)

Note: Assumes 6" (150 mm) row spacing, 40% stone porosity, 12" (300 mm) stone above and includes the bare chamber/end cap volume.

### **AMOUNT OF STONE PER CHAMBER**

ENGLISH TONS (yds³)	Stone Foundation Depth			
	9"	12"	15"	18"
MC-3500 Chamber	8.5 (6.0)	9.1 (6.5)	9.7 (6.9)	10.4 (7.4)
MC-3500 End Cap	3.9 (2.8)	4.1 (2.9)	4.3 (3.1)	4.5 (3.2)
METRIC KILOGRAMS (m <sup>3</sup> )	230 mm	300 mm	375 mm	450 mm
MC-3500 Chamber	7711 (4.6)	8255 (5.0)	8800 (5.3)	9435 (5.7)
MC-3500 End Cap	3538 (2.1)	3719 (2.2)	3901 (2.4)	4082 (2.5)



Note: Assumes 12" (300 mm) of stone above and 6" (150 mm) row spacing and 6" (150 mm) of perimeter stone in front of end caps.

### VOLUME EXCAVATION PER CHAMBER YD<sup>3</sup> (M<sup>3</sup>)

	Stone Foundation Depth			
	9" (230 mm)	12" (300 mm)	15" (375mm)	18" (450 mm)
MC-3500 Chamber	11.9 (9.1)	12.4 (9.5)	12.8 (9.8)	13.3 (10.2)
MC-3500 End Cap	4.0 (3.1)	4.1 (3.2)	4.3 (3.3)	4.4 (3.4)

Note: Assumes 6" (150 mm) of separation between chamber rows and 24" (600 mm) of cover. The volume of excavation will vary as depth of cover increases.





# **STORMTECH MC-4500 CHAMBER**

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

#### StormTech MC-4500 Chamber (not to scale)

**Nominal Chamber Specifications** 

Size (Lx W x H)	52" x 100" x 60" (1321 x 2540 x 1524 mm)
Chamber Storage	106.5 ft <sup>3</sup> (3.01 m <sup>3</sup> )
Min. Installed Storage*	162.6 ft <sup>3</sup> (4.60 m <sup>3</sup> )
Weight	Nominal 125 lbs (56.7 kg)

\*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below chambers, 9" (230 mm) of stone between chambers/end caps and 40% stone porosity.

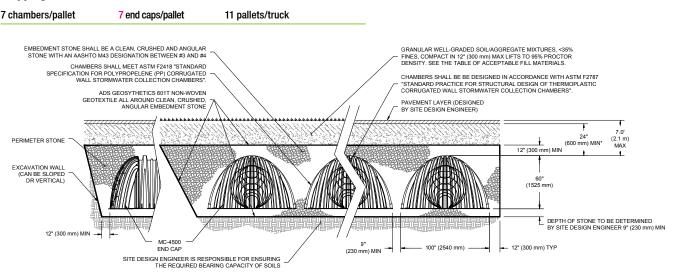
# StormTech MC-4500 End Cap (not to scale)

**Nominal Chamber Specifications** 

Size (Lx W x H)	38" x 90" x 61" (965 x 2286 x 1549 mm)
End Cap Storage	39.5 ft³ (1.12 m³)
Min. Installed Storage*	115.3 ft <sup>3</sup> (3.26 m <sup>3</sup> )
Weight	Nominal 90.0 lbs (40.8 kg)

\*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below, 12" (300 mm) of stone perimeter, 9" (230 mm) of stone between chambers/end caps and 40% stone porosity.

#### Shipping



38" – (965 mm) ACTUAL

32.8" (833 mm)

INSTALLED

61

(1549 mm

90" (2286 mm)

100.0" (2540 mm)

48.3" (1227 mm) \_ INSTALLED LENGTH

> 60.0" (1524 mm)

52.0" (1321 mm) ACTUAL LENGTH

\*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).



18

### STORAGE VOLUME PER CHAMBER FT<sup>3</sup> (M<sup>3</sup>)

	Bare Chamber Storage ft <sup>3</sup> (m <sup>3</sup> )		Chamber and Stone Foundation Depth in. (mm)				
		9" (230 mm)	12" (300 mm)	15" (375 mm)	18" (450 mm)		
MC-4500 Chamber	106.5 (3.01)	162.6 (4.60)	166.3 (4.71)	169.9 (4.81)	173.6 (4.91)		
MC-4500 End Cap	39.5 (1.12)	115.3 (3.26)	118.6 (3.36)	121.9 (3.45)	125.2 (3.54)		

Note: Assumes 9" (230 mm) row spacing, 40% stone porosity, 12" (300 mm) stone above and includes the bare chamber/end cap volume. End cap volume assumes 12" (300 mm) stone perimeter in front of end cap.

#### **AMOUNT OF STONE PER CHAMBER**

ENGLISH TONS (yds³)	Stone Foundation Depth				
	9"	12"	15"	18"	
MC-4500 Chamber	7.4 (5.2)	7.8 (5.5)	8.3 (5.9)	8.8 (6.2)	
MC-4500 End Cap	9.8 (7.0)	10.2 (7.3)	10.6 (7.6)	11.1 (7.9)	
METRIC KILOGRAMS (m <sup>3</sup> )	230 mm	300 mm	375 mm	450 mm	
MC-4500 Chamber	6713 (4.0)	7076 (4.2)	7529 (4.5)	7983 (4.7)	
MC-4500 End Cap	8890 (5.3)	9253 (5.5)	9616 (5.8)	10069 (6.0)	

Note: Assumes 12" (300 mm) of stone above and 9" (230 mm) row spacing and 12" (300 mm) of perimeter stone in front of end caps.

### VOLUME EXCAVATION PER CHAMBER YD<sup>3</sup> (M<sup>3</sup>)

	Stone Foundation Depth			
	9" (230 mm)	12" (300 mm)	15" (375mm)	18" (450 mm)
MC-4500 Chamber	10.5 (8.0)	10.8 (8.3)	11.2 (8.5)	11.5 (8.8)
MC-4500 End Cap	9.7 (7.4)	10.0 (7.6)	10.3 (7.9)	10.6 (8.1)

**Note:** Assumes 9" (230 mm) of separation between chamber rows, 12" (300 mm) of perimeter in front of the end caps, and 24" (600 mm) of cover. The volume of excavation will vary as depth of cover increases.







# STORMTECH ISOLATOR ROW<sup>®</sup> PLUS

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row PLUS is a technique to inexpensively enhance Total Suspended Solids (TSS) removal and provide easy access for inspection and maintenance.

The Isolator Row PLUS is a row of StormTech chambers that is typically surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as stormwater rises in the Isolator Row PLUS and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC-310-3, and SC-740 models) allow stormwater to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row PLUS, protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

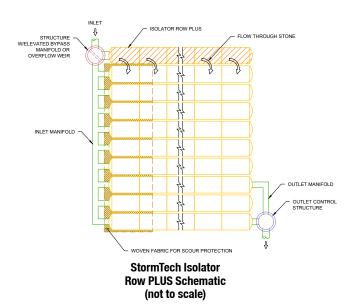
Two different fabrics are used for the Isolator Row PLUS. A single layer of ADS PLUS fabric is placed between the stone and the chambers. The fabric provides a media for stormwater filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row PLUS is typically designed to capture the "first flush" and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row PLUS, but typically includes a high flow weir such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row PLUS crest the weir and discharge through a manifold to the other chambers. An alternative design using a "high/ low" concept is an acceptable method. This creates a differential between the Isolator Row PLUS and the manifold thus allowing for settlement time in the Isolator Row PLUS.

The Isolator Row PLUS may also be part of a treatment train. By treating stormwater prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins and oil-water separators or can be innovative stormwater treatment devices. The design of the treatment train and selection of pretreatment devices by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row PLUS is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs.

**Note:** See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row PLUS.





Note: Non-woven fabric is only required over the inlet pipe connection into the end cap for DC-780, MC-3500 and MC-4500 chamber models and is not required over the entire Isolator Row PLUS.

### INSPECTION

The frequency of Inspection and Maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, public, residential) anticipated pollutant load, percent imperviousness, climate, rain fall data, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row PLUS should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row PLUS incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If, upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row PLUS, clean-out should be performed.

### MAINTENANCE

The Isolator Row PLUS was designed to reduce the cost of periodic maintenance. By "isolating" sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for confined space entries.

Maintenance is accomplished with the jetvac process. The jetvac process utilizes a high pressure water nozzle to propel itself down the Isolator Row PLUS while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/jetvac combination vehicles. Selection of an appropriate jetvac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45" are

#### Isolator Row PLUS Detail

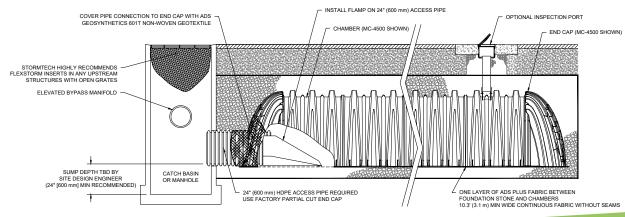
best. Most jetvac reels have 400 feet of hose allowing maintenance of an Isolator Row PLUS up to 50 chambers long. The jetvac process shall only be performed on StormTech Isolator PLUS rows that have ADS PLUS fabric over their angular base stone. JetVac nozzle pressures should be limited to 2000 psi.



#### Examples of culvert cleaning nozzles appropriate for Isolator Row PLUS maintenance. (These are not StormTech products.)

A FLAMP (fared end ramp) is attached to the inlet pipe on the inside of the chamber end cap to provide a smooth transition from pipe invert to fabric bottom. It is confgured to improve chamber function performance over time by distributing sediment and debris that would otherwise collect at the inlet. It also serves to improve the fluid and solid flow back into the inlet pipe during maintenance and cleaning, and to guide cleaning and inspection equipment back into the inlet pipe when complete.







# A FAMILY OF PRODUCTS AND SERVICES

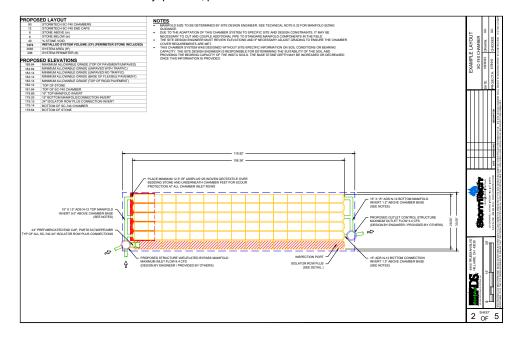
- MC-4500 Chambers and End Caps
- MC-3500 Chambers and End Caps
- SC-310 Chambers and End Caps
- SC-310-3 Chambers and End Caps
- DC-780 Chambers and End Caps
- SC-740 Chambers and End Caps
- SC-160LP Chambers and End Caps
- SC, DC and MC Fabricated End Caps
- Fabricated Manifold Fittings
- Patented Isolator Row PLUS for Maintenance and Water Quality
- Inserta Tee® Connections
- Nyloplast<sup>®</sup> Basins and Inline Drains
- Flexstorm<sup>®</sup> Inserts
- · In-House System Layout Assistance
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- Worldwide Technical Sales Group
- · Centralized Product Applications Department
- Research and Development Team
- Technical Literature, 0&M Manuals and Detailed CAD drawings all downloadable via our Web Site
- StormTech Design Tool



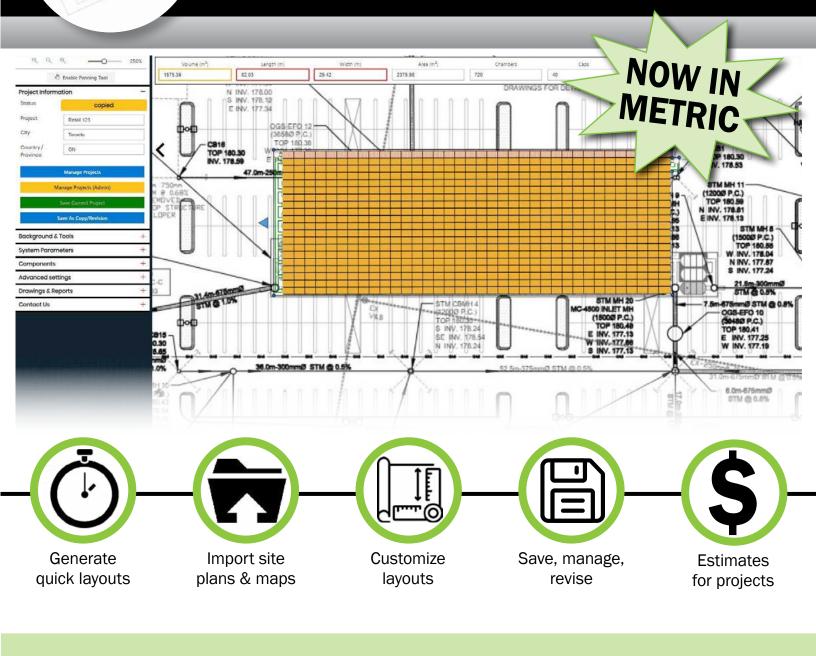
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# **Save Valuable Land and Protect Water Resources**

This catalog is not intended to provide requirements for design or installation of StormTech chambers. Refer to the appropriate "StormTech Design Manual" and "StormTech Construction Guide" for design and installation specifications.



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