Subsurface Sport
Turf Applications

ADS StormTech™

StormTech Subsurface Sport Field Turf Applications

The increasing popularity of sports fields for both indoor and outdoor events places growing demands and opportunities on turf design and maintenance. Proper drainage is perhaps the most productive investment in the long-term health and playability of all recreational surfaces. Innovation in the water management industry over the last few decades has allowed us to manage the drainage of a field from below the surface.

The StormTech Chamber product line was originally developed for commercial and roadway applications. Our proven performance makes it more than structurally qualified for all types of turf applications. StormTech has over 27,000 systems in service worldwide since 2002.

In many of our project designs, the use of chambers increases the available capacity for storm water runoff not just from the field itself but from adjacent non-porous surfaces such as stadium seating, running tracks, adjacent buildings' roof drains and parking surfaces. **Chamber size and capacity is one of the biggest advantages to using chambers on a complete stadium complex design.** StormTech can be designed with direct connections of manifold pipes and catch basins so storm water can be collected at various impervious locations thus avoiding sheet flow of storm water runoff directly on to the playing surface.

Consider the following benefits of a well-designed and maintained drainage system:

Healthier Natural Playing Surfaces
Good drainage promotes deeper root growth and the "knitting" effect of the roots, which stabilizes the playing surface. Turf that has good drainage will be more resistant to fungus, disease and increases long-term playability and minimizes recovery time.

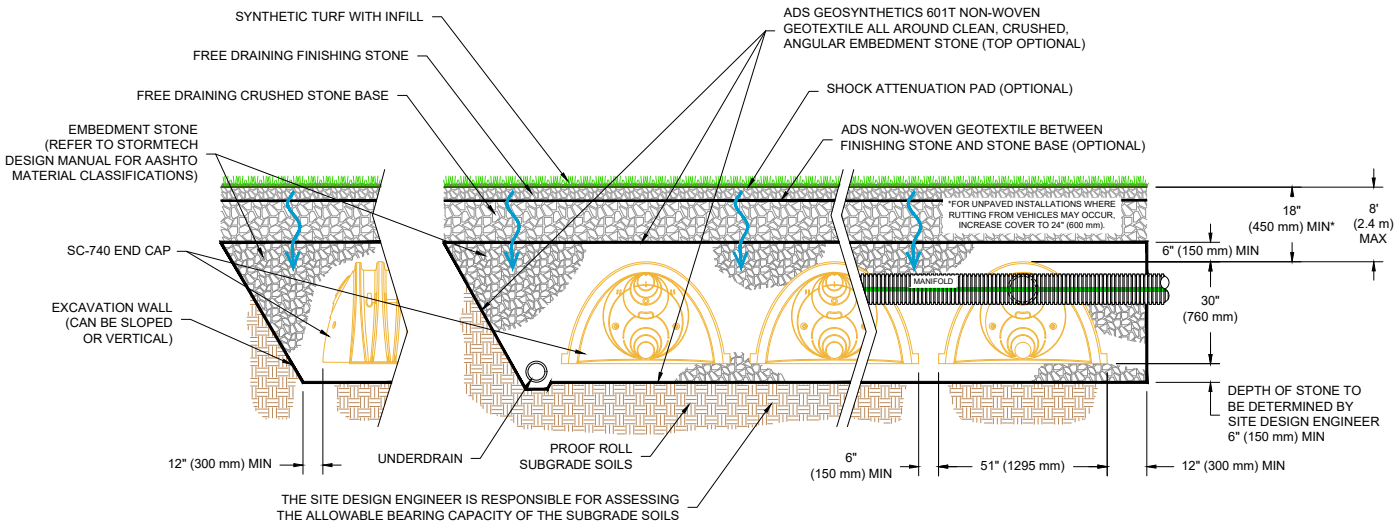
Functional Synthetic Playing Surfaces
Synthetic or artificial surfaces are becoming more and more popular because of ease of maintenance and zero recovery time. These surfaces depend on proper subsurface drainage systems to maintain playability.

Maximum playability
Fewer games and events will be cancelled or extensively delayed due to heavy rain. Games are able to resume play faster, with less damage to the playing surface.

Safer surfaces
Good drainage reduces field deformation and turf instability, providing players with better footing and less chance of injury. This is true for both natural and synthetic playing surfaces.

Our chambers are designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to provide advanced drainage to address today's increasing demand for sports fields ranging from elementary schools to the professional sports field.

SYNTHETIC TURF APPLICATION
TYPICAL (SC-740 EXAMPLE) CROSS SECTION
NOTE: SITE SPECIFIC & CHAMBER TYPE CROSS SECTIONS AVAILABLE UPON REQUEST.



StormTech Chambers

All StormTech chambers are designed with an optimized joining system. The height and width of the end corrugations have been designed to provide the required structural safety factors while providing an unobstructed flow path down each row.

All StormTech chambers are designed to the full scope of ASTM Standards to assure 2-to-1 safety factor for both live and long-term dead loads. StormTech's continuously curved; elliptical arch, integral stiffening ribs and the surrounding angular backfill are the key components of the structural system to assure a long, safe service life. The chambers are produced using high-pressure injection molding which creates a product with consistent wall thickness and are produced from high-quality, impact-modified resins which are tested for short-term and long-term mechanical properties.

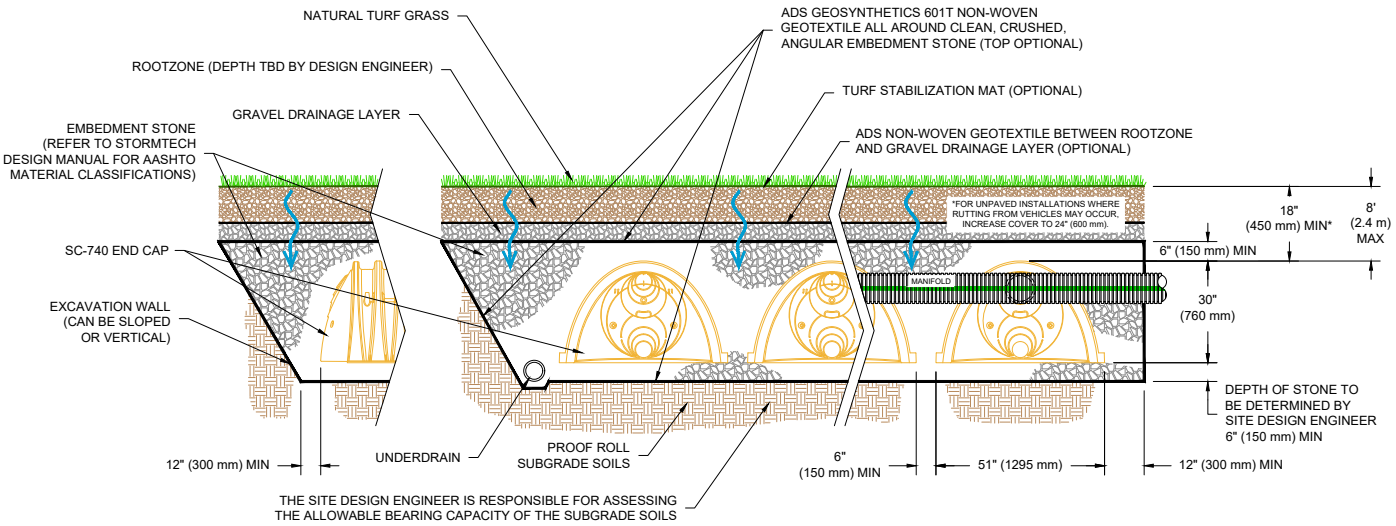
How it Works

As it rains, water is soaked into the field and flows through the various layers of cover with the runoff flowing into the chambers and filter fabric protected aggregate. The StormTech chambers and aggregate serve to store the water mitigating surface ponding of rainwater. Depending on the design, rainwater can infiltrate into the soil or flow to an outlet structure to be released downstream per regulatory requirements. Additionally, many applications have a combination of both retention and detention designs. Any application or design methodology is subject to specific site conditions and / or regulations.

Advanced Drainage Systems offer a variety of related products that provide solutions for specific project applications and regulatory requirements

- Solid and perforated HDPE or HP pipe for conveyance, manifolds and drainage applications
- Full line of high performance ADS Geotextiles
- Nyloplast® PVC basins are a better solution to all applications from the field to the parking lot
- ADS Water Quality Products
- StormTech patented Isolator® Row Plus to minimize maintenance intervals.
- FlexStorm® catch basin inserts.
- Duraslot® is another surface product that can easily be integrated as a part of the complete design

NATURAL TURF GRASS APPLICATION
TYPICAL (SC-740 EXAMPLE) CROSS SECTION
NOTE: SITE SPECIFIC & CHAMBER TYPE CROSS SECTIONS AVAILABLE UPON REQUEST.



Major Features and Benefits of StormTech

Complete Line of Chambers

- Fits all application by reducing the system footprint, avoiding SHWT, Infiltration (LID), matching existing inverts, deep and shallow cover.

Meets or Exceeds AASHTO LRFD & ASTM F-2787 Structural Design Specifications. F-2418 PP & F-2922 PE

- 2-to-1 safety factors for live and dead loads providing a service life of 75 years
- Easy installation for the contractor and assured design service life for the owner and engineer

Patented Isolator Row Plus to Protect the Chamber System Performance

- Consolidates maintenance into designated rows – Less frequent maintenance for the owner
- Isolator Row Flamp allows O&M to occur without confined space entry and allows collected sediment to be removed with greater ease and speed
- Recognized by regulators worldwide as a water quality device

Injection Molded

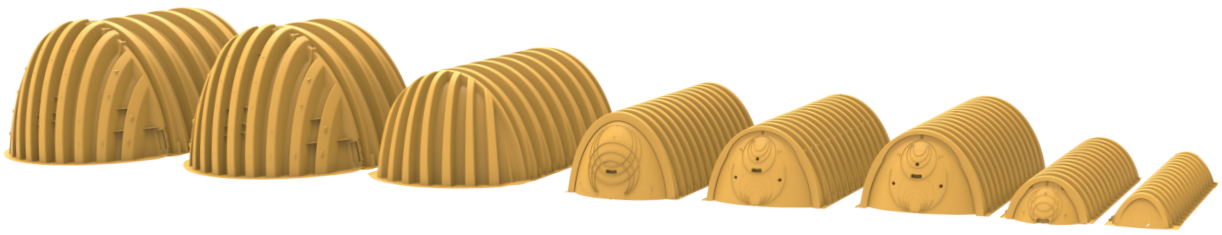
- Uniform wall thickness and repeatable quality which assures performance for the owner

Traditional Manifold / Open Design

- Allows the designer to use conventional hydraulic equations to verify flow equalization
- Open Design - no repeating end walls enable unobstructed flow
- Owners are assured that standing water is mitigated in large rain events

Engineering Services Department: The ADS Engineering Services Department is available to assist the designer with the layout of all of the chamber sizes and answer questions regarding layout and design of all the StormTech chamber models. Email the Engineering Services Department at ADSdesigntool@ads-pipe.com for assistance.

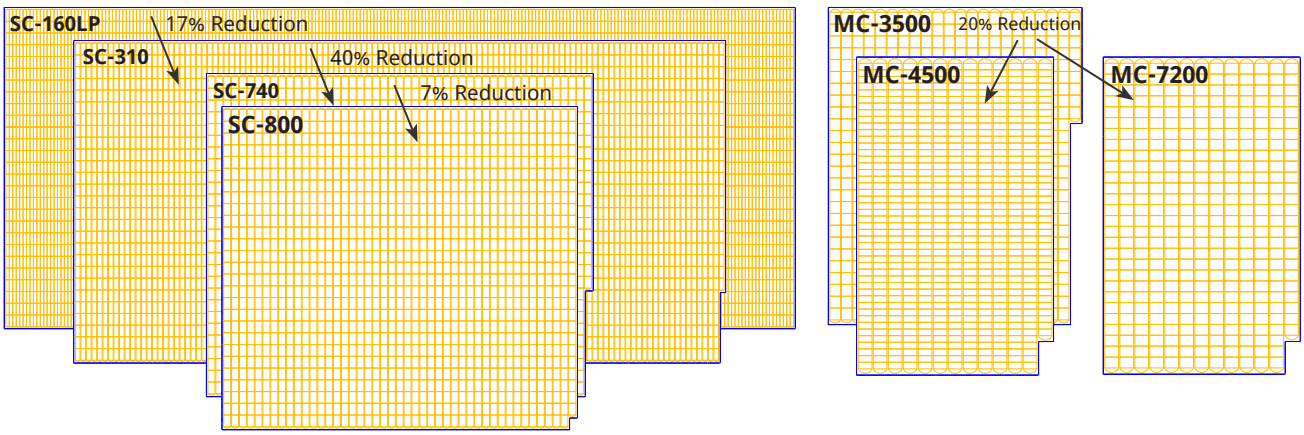
Stormtech Subsurface Stormwater Management

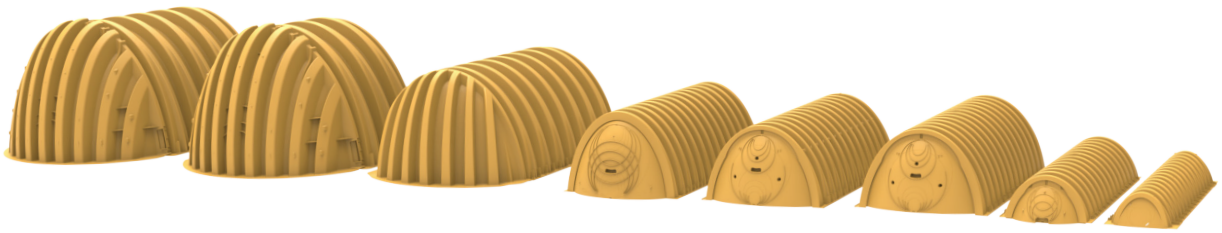


MC-7200 MC-4500 MC-3500 SC-800 DC-780 SC-740 SC-310 SC-160LP

Product Specifications	MC-7200	MC-4500	MC-3500	SC-800	DC-780	SC-740	SC-310	SC-160LP
Height, in. (mm)	60 (1524)	60 (1524)	45 (1143)	33 (838)	30 (762)	30 (762)	16 (406)	12 (305)
Width, in. (mm)	100 (2540)	100 (2540)	77 (1956)	51 (1295)	51 (1295)	51 (1295)	34 (864)	25 (635)
Length, in. (mm)	83.4 (2120)	52.0 (1321)	90.0 (2286)	90.6 (2301)	90.7 (2304)	90.7 (2304)	90.7 (2304)	90.7 (2304)
Installed length, in. (mm)	79.1 (2010)	48.3 (1227)	86.0 (2184)	85.4 (2169)	85.4 (2169)	85.4 (2169)	85.4 (2169)	85.4 (2169)
Bare Chamber Storage, cf (cm)	175.9 (4.98)	106.5 (3.01)	109.9 (3.11)	50.6 (1.43)	46.2 (1.3)	45.9 (1.3)	14.7 (0.42)	6.85 (0.19)
Stone above, in. (mm)	12 (305)	12 (305)	12 (305)	6 (152)	6 (152)	6 (152)	6 (152)	6 (152)
Minimum stone below, in. (mm)	9 (229)	9 (229)	9 (229)	6 (152)	9 (229)	6 (152)	6 (152)	4 (102)
Row spacing, in. (mm)	9 (229)	9 (229)	6 (152)	6 (152)	6 (152)	6 (152)	6 (152)	N/A
Minimum installed storage, cf (cm)	267.3 (7.56)	162.6 (4.60)	175 (4.96)	81 (2.29)	78.4 (2.20)	74.9 (2.12)	31 (0.88)	14.9 (0.42)
Storage per unit area, cf/sf (cm/sm)	4.46 (1.35)	4.44 (1.35)	3.53 (1.07)	2.39 (0.72)	2.31 (0.70)	2.21 (0.67)	1.3 (0.39)	1 (0.30)
Max cover from ground, in. (mm)	84 (2133)	84 (2133)	96 (2438)	96 (2438)	144 (3657)	96 (2438)	96 (2438)	120 (3048)

Example: Footprint Comparison-100,000 CF Project





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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.

For more information visit
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