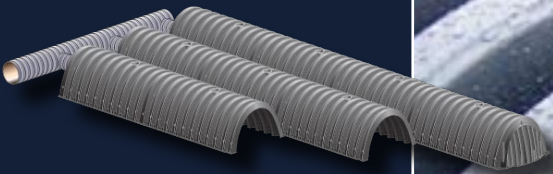




Plastic Retention Chambers

Retention/Detention

CHAMBERMaxx™



Knowledge. Solutions. Service.

ChamberMaxx™

ChamberMaxx is the latest in corrugated, open-bottom arch systems designed to economically collect, detain, retain and infiltrate stormwater runoff. The below-grade system maximizes available land for development, and can support traffic loading for installation under parking lots and roadways. The chambers are injection molded using structurally efficient and corrosion-resistant polypropylene resin.

In retention applications, the ChamberMaxx system effectively recharges groundwater to achieve reduced discharge objectives, including **Low Impact Development (LID)**, and **Leadership Energy and Environmental Design (LEED)**. The system is most effective on sites where the depth from finished grade to storm sewer outlet is



less than 54-inches (1.37-meters). For sites with deeper applications refer to the other CONTECH family of retention/detention products, such as concrete arches and corrugated metal pipe systems.

With 49 ft³ (1.39 m³) of available storage per chamber, ChamberMaxx is the most cost efficient of its kind. Innovative sub-corrugations provide greater strength and the chambers utilize a resin efficient design. A short height profile optimizes stormwater storage on shallow sites. Lightweight chambers allow for placement without the use of heavy equipment.

Install a CONTECH pre-treatment water quality unit, upstream of the ChamberMaxx system for the highest level of performance at the lowest cost. This combined water quality and quantity system reduces maintenance



costs by capturing the pollutants in one confined location, and extends the performance life of the overall system by reducing occlusion of the void space within the surrounding stone.

CONTECH also offers the optional ChamberMaxx Containment Row. Contact your local representative for assistance in selecting the most efficient pre-treatment solution.

**Going Green?
Looking for LID Solutions?
Need LEED Credits?**

**Specify ChamberMaxx
on Your Next Project!**



Performance Testing

ChamberMaxx has undergone a thorough structural analysis by structural engineers and full scale in-ground field burial tests have been performed. The chambers are structurally designed to exceed HS-20/HS-25 live loads in accordance with AASHTO (Section 12) LRFD design specifications for stormwater chambers. Structural performance is dependent on proper installation per the ChamberMaxx installation guidelines.

Design

ChamberMaxx has a multitude of layout and configuration options. Contact your local representative for assistance optimizing your system to meet your site specific design requirements.

For flow routing see the ChamberMaxx stage-storage curve (available in this brochure) or download the ChamberMaxx stage-storage calculator at www.contechstormwater.com.

Design Your Own Detention System

Our DYODS™ (Design Your Own Detention System) sizing calculator, makes it is easy to design the right ChamberMaxx for your site.

Visit www.contechstormwater.com/dyods to:

- Size system and lay out footprint
- Quantify construction materials
- Receive graphic plan view layout

HydroCAD®

ChamberMaxx is supported in HydroCAD — a computer aided design tool for modeling stormwater runoff available from our partners at HydroCAD Software LLC.

- Download at www.hydrocad.net
- Easy modeling for stormwater flows — automatic storage calculations
- Simple to use — just select CONTECH products from drop-down menu
- Effortlessly compare systems with real time evaluation of hydraulic differences

DYODS™
Design Your Own Detention System



**Make your job easier with
our design tools!**

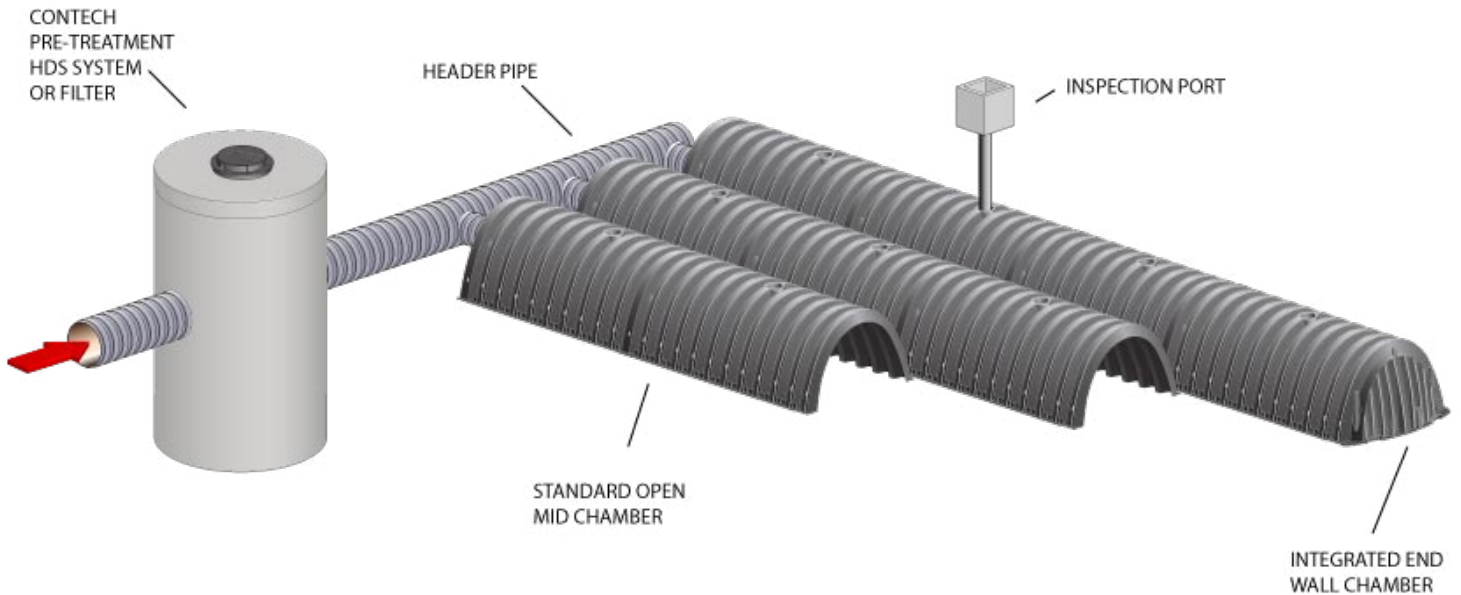
Sizing

The ChamberMaxx system combines middle chambers, which are open on both ends, with start and end chambers, which include an integral end wall. All chambers have sidewall perforations that allows water to equalize throughout the system.

ChamberMaxx utilizes a header manifold system that can be manufactured from various materials. Commonly utilized header pipe materials are corrugated metal pipe (CMP) and HDPE pipe, and are available from CONTECH in a single package. The start and end chambers can accept up to a 24-inch diameter (0.61 meter) inlet pipe.

Chamber Part	Width		Height		Weight		Actual Length		*Installed Length		Storage Volume		*Installed Storage Volume	
	in	(m)	in	(m)	lbs	(kg)	in	(m)	in	(m)	cf	(m ³)	cf	(m ³)
Start	51.4	(1.31)	30.3	(0.77)	85.0	(38.55)	98.4	(2.50)	96.2	(2.44)	52.5	(1.48)	78.7	(2.22)
Middle	51.4	(1.31)	30.3	(0.77)	77.0	(34.92)	91.0	(2.31)	85.4	(2.17)	49.3	(1.40)	76.7	(2.17)
End	51.4	(1.31)	30.3	(0.77)	76.0	(34.47)	92.0	(2.34)	88.5	(2.25)	48.2	(1.36)	76.1	(2.15)

*Six-inches (0.15 meters) of stone below and above chamber and 5-inch (0.13 meters) chamber spacing and 40% stone porosity.

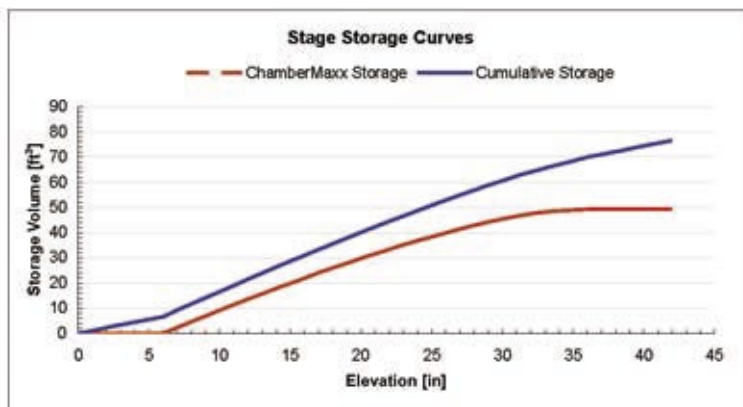


ChamberMaxx Flow Routing

Stage Storage Table

Elevation		Storage Volume Including 12" of Stone		Chamber Storage Volume		Cumulative Volume Increment		*Cumulative Storage Volume	
in	(m)	ft ³	(m ³)	ft ³	(m ³)	ft ³	(m ³)	ft ³	(m ³)
42.0	(1.07)	62.6	(1.77)	49.3	(1.40)	1.3	(0.04)	76.7	(2.17)
40.8	(1.04)	61.3	(1.74)	49.3	(1.40)	1.3	(0.04)	75.3	(2.13)
39.6	(1.01)	59.9	(1.70)	49.3	(1.40)	1.3	(0.04)	74.0	(2.10)
38.4	(0.98)	58.6	(1.66)	49.3	(1.40)	1.3	(0.04)	72.6	(2.06)
37.2	(0.94)	57.3	(1.62)	49.3	(1.40)	1.3	(0.04)	71.3	(2.02)
36.0	(0.91)	55.9	(1.58)	49.3	(1.40)	0.2	(0.01)	70.0	(1.98)
34.8	(0.88)	55.7	(1.58)	49.0	(1.39)	0.5	(0.01)	68.2	(1.93)
33.6	(0.85)	55.2	(1.56)	48.6	(1.38)	0.7	(0.02)	66.5	(1.88)
32.4	(0.82)	54.5	(1.54)	47.8	(1.35)	1.1	(0.03)	64.8	(1.84)
31.2	(0.79)	53.5	(1.52)	46.8	(1.33)	1.3	(0.04)	62.8	(1.78)
30.0	(0.76)	52.2	(1.48)	45.5	(1.29)	1.5	(0.04)	60.7	(1.72)
28.8	(0.73)	50.7	(1.44)	44.0	(1.25)	1.6	(0.05)	58.5	(1.66)
27.6	(0.70)	49.0	(1.39)	42.4	(1.20)	1.8	(0.05)	56.1	(1.59)
26.4	(0.67)	47.3	(1.34)	40.6	(1.15)	1.9	(0.05)	53.8	(1.52)
25.2	(0.64)	45.4	(1.29)	38.8	(1.10)	1.9	(0.05)	51.3	(1.45)
24.0	(0.61)	43.5	(1.23)	36.8	(1.04)	2.0	(0.06)	48.8	(1.38)
22.8	(0.58)	41.5	(1.18)	34.8	(0.99)	2.1	(0.06)	46.3	(1.31)
21.6	(0.55)	39.4	(1.12)	32.7	(0.93)	2.2	(0.06)	43.7	(1.24)
20.4	(0.52)	37.2	(1.05)	30.5	(0.86)	2.2	(0.06)	41.0	(1.16)
19.2	(0.49)	35.0	(0.99)	28.3	(0.80)	2.3	(0.07)	38.3	(1.09)
18.0	(0.46)	32.7	(0.93)	26.0	(0.74)	2.4	(0.07)	35.6	(1.01)
16.8	(0.43)	30.3	(0.86)	23.6	(0.67)	2.4	(0.07)	32.9	(0.93)
15.6	(0.40)	27.9	(0.79)	21.2	(0.60)	2.5	(0.07)	30.1	(0.85)
14.4	(0.37)	25.4	(0.72)	18.7	(0.53)	2.5	(0.07)	27.2	(0.77)
13.2	(0.34)	22.8	(0.65)	16.2	(0.46)	2.6	(0.07)	24.4	(0.69)
12.0	(0.30)	20.3	(0.58)	13.6	(0.39)	2.6	(0.07)	21.5	(0.61)
10.8	(0.27)	17.6	(0.50)	10.9	(0.31)	2.7	(0.08)	18.6	(0.53)
9.6	(0.24)	14.9	(0.42)	8.3	(0.24)	2.7	(0.08)	15.6	(0.44)
8.4	(0.21)	12.2	(0.35)	5.6	(0.16)	2.8	(0.08)	12.7	(0.36)
7.2	(0.18)	9.5	(0.27)	2.8	(0.08)	2.8	(0.08)	9.7	(0.28)
6.0	(0.15)	6.7	(0.19)	0.0	(0.00)	1.3	(0.04)	6.7	(0.19)
4.8	(0.12)	5.3	(0.15)	0.0	(0.00)	1.3	(0.04)	5.3	(0.15)
3.6	(0.09)	4.0	(0.11)	0.0	(0.00)	1.3	(0.04)	4.0	(0.11)
2.4	(0.06)	2.7	(0.08)	0.0	(0.00)	1.3	(0.04)	2.7	(0.08)
1.2	(0.03)	1.3	(0.04)	0.0	(0.00)	1.3	(0.04)	1.3	(0.04)
0.0	(0.00)	0.0	(0.00)	0.0	(0.00)	-	-	0.0	(0.00)

*Six-inches (0.15 meters) of stone below and above chamber and 5-inch (0.13 meters) chamber spacing and 40% stone porosity.



Proper design of any detention system typically requires that flow routing be performed. Engineers at CONTECH can be a valuable resource when designing a ChamberMaxx retention system.

Typically stage-storage curves like those shown are utilized in the analysis. CONTECH stage-storage calculator is available for download on www.contechstormwater.com. This information can simply be inserted into common hydrology/hydraulic software such as HydroCAD, HydroFlow, PondPack, or TR20. This makes a flow routing design with ChamberMaxx just as simple as an above-ground pond design.

Installation

ChamberMaxx retention systems require adherence to the installation procedure for the structural integrity of the system to be maintained. Full installation instructions are available at www.contechstormwater.com, or contact your local CONTECH representative.

ChamberMaxx systems include chambers, fabricated header/manifold components, scour protection netting, inspection port materials, and C-40 NW geotextile material.

Typical Installation Sequence:

1. Excavate and prepare
2. Install pre-treatment system
3. Prepare foundation & bedding
4. Set header pipe/manifold system
5. Place scour protection netting underneath all chambers with inlet pipes
6. Set Start, Mid and End chambers into place by hand
7. Connect header and other required inlet and outlet piping
8. Place geotextile fabrics
9. Backfill and complete

Maintenance

Each chamber is manufactured with inspection portals. Location of inspection portals to be specified by the project design Engineer.

It is recommend that the system is inspected annually and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities rather than the size or configuration of the system.

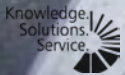
For more details please refer to the ChamberMaxx operations and maintenance guideline at www.contechstormwater.com or contact your local CONTECH representative.



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CONTECH Construction Products Inc.



Provider of: Bridge, Drainage, Erosion Control, Retaining Wall, Sanitary, Soil Stabilization and Stormwater Solutions.

The product(s) described may be protected by one or more of the following US patents: 5,322,629; 5,624,576; 5,707,527; 5,759,415; 5,788,848; 5,985,157; 6,027,639; 6,350,374; 6,406,218; 6,641,720; 6,511,595; 6,649,048; 6,991,114; 6,998,038; 7,186,058; 7,296,692; 7,297,266; related foreign patents or other patents pending.

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