



SOLENO
Mastering Storm Water



HydroStorTM

THE SYSTEM FOR EXPERTS

The most versatile range of underground storage

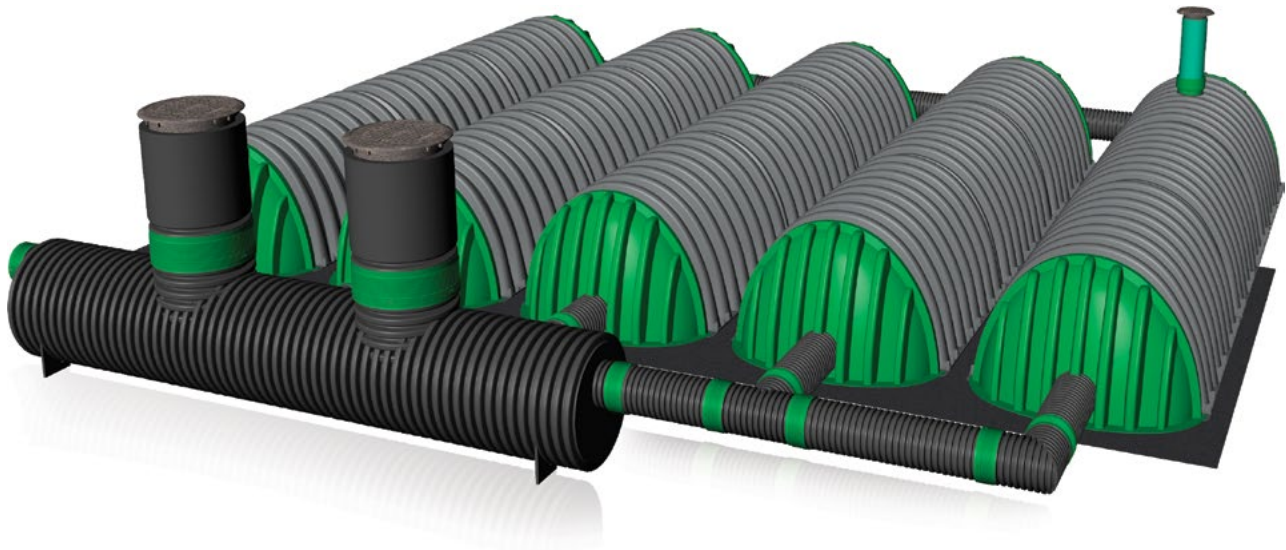
Retention System with or without groundwater replenishment

The HydroStor™ storage system is exceptionally efficient.

The pretreatment unit retains sediments, oils, and floating debris to eliminate their migration to the retention basin. This avoids any risk of clogging while preserving the quality of the water table.

- + The system is made of a fully recyclable and extremely durable material.
- + HydroStor™ chambers fit together with interconnecting joints.

- + The HydroStor™ pretreatment system eliminates 100% of confined space work, during regular maintenance.



The HydroStor™ pretreatment unit included in the system upstream of the diffuser eliminates the possibility of sediment migration into the chambers. Fine particles obeying Stokes' law* remain trapped. The unique design of the system prevents the dispersion of hydrocarbons and floating debris. Because it is factory-built, the performance of the HydroStor™ pretreatment system never depends on the quality of the installation.

*Stokes law: which defines the behavior of solid particles in a fluid.

LEED® CANADA-NC:

AES 6.1 - Stormwater Design

Our retention ponds with groundwater replenishment can contribute directly to the Stormwater Management: Rate and Quantity credit when integrated into a development plan that encourages natural water flow and infiltration.

SS Credit Prerequisite 1

Our non-replenishing retention ponds can contribute directly to the Stormwater Management: Rate and Quantity credit by allowing rain-water to be reused for purposes that do not require potable water, such as landscape irrigation or building and vehicle maintenance.

MR 4.1 / 4.2 / 5.1 / 5.2

All our solutions qualify for associated points in the Materials and Resources category.



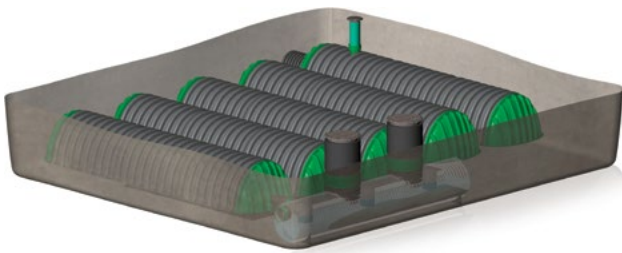
STOCKAGE

Alternative system configurations

HydroStor™ system with pretreatment
with Soleno sedimentation row



Basin without groundwater replenishment
with waterproof geomembrane



System without pretreatment
with diffuser and collector



We recommend contacting Soleno Technical Services before specifying a HydroStor™ system without pretreatment.

Options



HydroStor™^{MD}
Pretreatment



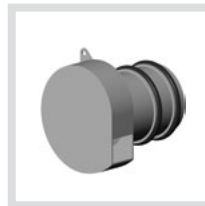
Diffuser



Collector

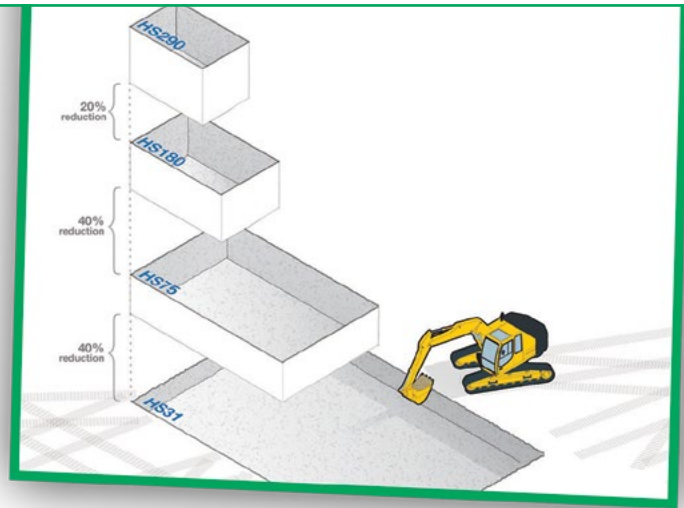


Access stacks



Flow regulator

Technical data



	HS31	HS75	HS180	HS290
Lenght	87.8 in 2230 mm	87.1 in 2212 mm	88.7 in 2253 mm	51.8 in 1316 mm
Installed Lenght	85.4 in 2169 mm	84.9 in 2156 mm	85.3 in 2167 mm	48.3 in 1227 mm
Height	15.9 in 404 mm	29.7 in 754 mm	45.5 in 1156 mm	59.5 in 1511 mm
Width	33.9 in 861 mm	51.0 in 1295 mm	77.8 in 1976 mm	100.5 in 2553 mm
Volume (chamber only)	14.9 ft ³ 0.42 m ³	46.4 ft ³ 1.31 m ³	113.6 ft ³ 3.22 m ³	109.6 ft ³ 3.10 m ³
Mass	32,0 lb 14.5 kg	70.0 lb 31.8 kg	127.0 lb 57.6 kg	125.0 lb 56.7 kg

Specifications for installation



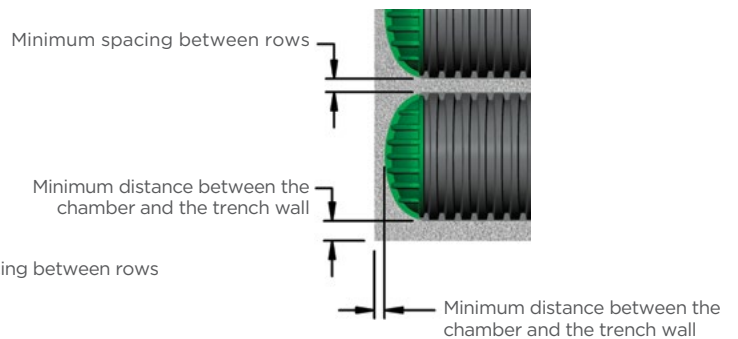
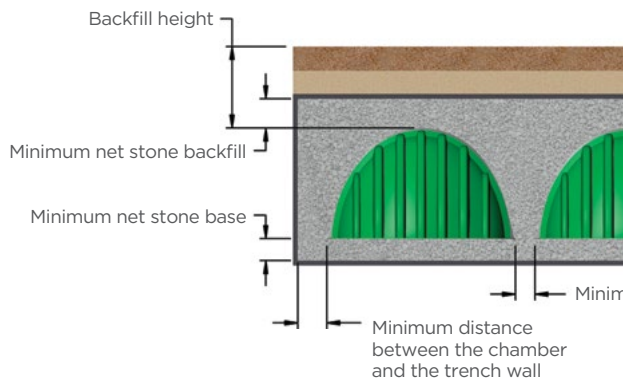
HS31

HS75

HS180

HS290

Minimum backfill height	18.0 in 457 mm	18.0 in 457 mm	18.0 po 457 mm	24,0 po 610 mm
Maximum backfill height	8.0 ft 2.44 m	8.0 ft 2.44 m	8.0 ft 2.44 m	8.0 ft 2.44 m
Minimum net stone base	6.0 in 152 mm	6.0 in 152 mm	9.0 in 229 mm	9.0 in 229 mm
Minimum net stone backfill	6.0 in 152 mm	6.0 in 152 mm	12.0 in 305 mm	12.0 in 305 mm
Minimum spacing between rows	6.0 in 152 mm	6.0 in 152 mm	5.0 in 127 mm	8.5 in 216 mm
Minimum distance between the chamber and the trench wall	12.0 in 305 mm	12.0 in 305 mm	12.0 in 305 mm	12.0 in 305 mm
Minimum spacing between end cap and trench wall	12.0 in 305 mm	12.0 in 305 mm	176.0 in 4.98 mm	164.5 in 4.66 mm
Minimum retention volume Chamber	31.1 ft ³ 0.88 m ³	74.9 ft ³ 2.12 m ³	176.0 ft ³ 4.98 m ³	164.5 ft ³ 4.66 m ³
Minimum retention volume End cap	5.0 ft ³ 0.14 m ³	13.9 ft ³ 0.39 m ³	44.8 ft ³ 1.27 m ³	114.5 ft ³ 3.24 m ³



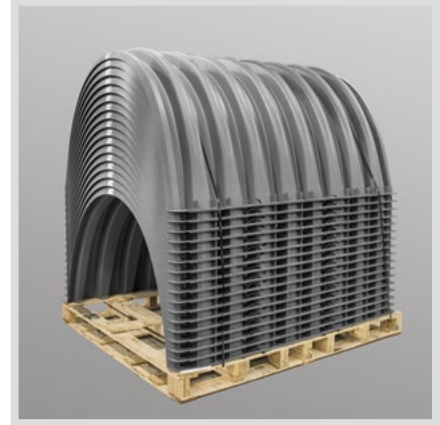
Details that make a difference



4 integrated handles for easy installation on site.



2 people can easily unload each unit thanks to the lifting handles and molded spacers.



Heavy-duty pallet that securely holds 10 units of HS290, 19 units of HS180, 33 units of HS75 and 45 units of HS31.

The easiest storage system to maintain



The HydroStor™ pretreatment system retains sediment, oil and floating debris. It is easy to maintain with 2 access stacks and **requires no confined space work**. To operate at full efficiency, the system must be maintained on a regular basis.

Contact your Soleno representative for [soleno.com/hydrostor](https://www.soleno.com/hydrostor)

Case Study

HYDROSTOR™ UNDERGROUND RETENTION SYSTEM IN LAVAL Storm water storage: a simple and customized solution.

For the constructor, Construction G-Nesis inc., the installation of Hydrostor™ chambers was a first. Among the numerous benefits of the product, it was the economic aspect and the simple and rapid installation of it that were Patrick Giguere's, project manager at Construction G-Nesis inc., primary motivations in trusting Soleno's storage product with groundwater table regeneration.



The context

The system in question was thought to allow the replacement of the opened retention system with the target to regain space and be able to expand Construction G-Nesis' yard; situated at 4915 Louis B. Mayer street. In the hopes to maximize the yard's storage surface, the underground retention system's layout of 36,621 ft³ (1,037 m³) was required to compensate for the initial retention system's volume already in place.



The solution

The Hydrostor™ retention system with groundwater table regeneration was therefore selected by the constructor as the solution and installed. The statures installation of around 190 Hydrostor™ HS180 chambers surrounded by clean stone in a restrained pond of 118 in (36 m) in length by 95 in (29 m) in width, made it possible to now stock 36,621 ft³ (1,037 m³) of water during a harsh rainstorm. In addition, a Hydrostor™ pretreatment unit, included in the upstream system of the diffuser, was installed as well.



The benefits

This system, made of high-density polypropylene and polyethylene, which is easy to install due to its lightweight, allowed an installation in only 4 days; including the excavation work. The HS180 Hydrostor™ chambers designed for high-volume projects, or when space is limited, permit to store of over 180.1 in³ (5.1 m³) of stormwater per chamber and offer 5% more volume than originally specified in the plan, making it more economic by reducing by a large amount the construction site's surface area.

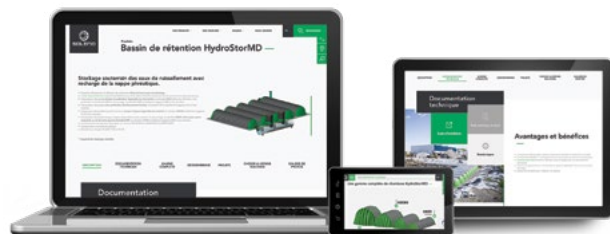
Exclusive to Soleno, the pretreatment unit, made of extremely durable material, retains the hydrocarbons and floating debris, therefore, preserving the quality of the groundwater table by eliminating the possibility of sediments migration towards the chambers; which eliminates all risks of clogging. The pretreatment system allows the recuperation of the suspended matter, oil, and grease while assuring the sustainability of the system. As well, it eliminates the work in confined spaces, which facilitates the overall periodical maintenance.



Our expertise at your disposal

At Soleno, the excellence of our solutions is based on our **specialized consulting services** and on the expertise we have developed over the years with designers, network managers and contractors responsible for the installation and maintenance of infrastructures.

Our engineers are available to assist you in identifying and implementing best management practices for the protection for the protection of water resources that may be affected by runoff in rural or urban areas.



Visit soleno.com/hydrostor to learn more about the HydroStor™ system. Installation video, installation guide, technical specifications and quotation.



SOLENO IS CERTIFIED ISO 9001
(Saint-Jean-sur-Richelieu plant only)



SOLENO HAS EARNED its **ECOECORESPONSIBLE** Certification - Level 2 in sustainable development management from the Council in Sustainable Development

(for the Soleno plant located at 1160, route 133, Saint-Jean-sur-Richelieu only)

SOLENO IS A MEMBER OF THE FOLLOWING ORGANIZATIONS:



OUR PRODUCTS AND SOLUTIONS ARE DESIGNED AND MANUFACTURED TO THE HIGHEST STANDARDS.