ViaCon StormWater Solutions

Corrugated Steel Tanks

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StormWater Solutions

StormWater Solutions made of HelCor spirally corrugated steel pipes can be used for:

- Storage of rainwater and fire fighting water
- Gravity rainwater drainage systems
- Infiltration systems and other similar industrial uses
- Precipitators for the primary disposal of waste water
- Separators for the primary removal of oil compounds from rainwater (surface water)
- Vertically mounted tanks as sewage pumping tanks

Parameters that ensure the high strength of ViaCon StormWater tanks allow these systems to be installed under roads or parking places at a minimum filling height. On the carriageway, the soil filling height can be ≥ 0.6 m, including road construction layers. The maximum installation depth of the reservoir depends on its diameter, but can reach up to several meters.

ADVANTAGES

The installation of underground storage reservoirs using ViaCon StormWater tanks significantly shortens the construction time, as these reservoirs are relatively light, the elements can be of long length, and no load distribution plate is required. Elements longer than 16 m can be connected together to form solid tanks of the required design volume.

ViaCon StormWater tanks can be not only round but also compressed (pipe-arch). Tanks of this cross-section require less deep excavation pit, especially with the limited thickness of the backfill layer.

Cross-sectional parameters of corrugated steel tanks and the used anti-corrosion coating allow installing reservoirs in soil of various aggressiveness and under various hydrological conditions.

D3200 mm, L-23.70 m, V-190 m³, 1 pc.

D3000 mm, L-13.40 m, V-90 m³, 2 pcs.

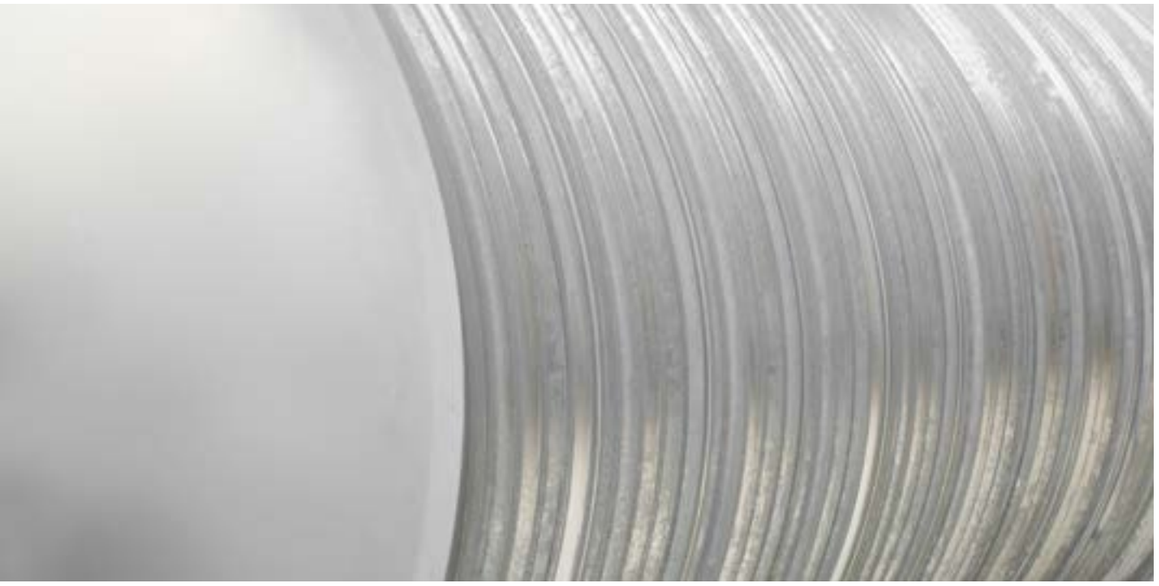
D3000mm, L-14,20m, V-100m3, 2 pcs.

ViaCon StormWater TANK CONSTRUCTION

Tanks of various diameters from 1000 mm to 3800 mm (including compressed profile tanks) are available. Production includes the manufacturing of the reservoir body itself as well as the manufacturing of end caps, inspection wells with ladders, inlet and outlet nozzles and connections between reservoirs. The reservoirs are manufactured in sections and, if necessary, connected using gaskets-fitted flanges on site.

Steel of class S250GD or DX51D used for the manufacture of tanks is protected against corrosion with:

- 42 µm thick zinc coating in accordance with the requirements of EN 10346 standard.
- If necessary, an additional layer of Trenchcoat polymer coating of at least 250 µm thickness on both sides of the sheet, which significantly increases the corrosion resistance, in accordance with the requirements of EN 10169. The durability of corrosion-protected steel sheet in aggressive environments is 100 years.



D3300 mm, L-10.00 m, V-86 m³, 2 pcs. and D3000 mm, L-5.20 m, V-37 m³, 1 pc.

D2300 mm, L-9.80 m, V-40 m3, 1 pc.

When tanks are installed in the vehicle load area, no load distribution plate is required above the ViaCon StormWater , unlike plastic or fiberglass tanks.

The method of manufacturing the tanks from spirally corrugated steel pipes ensures the complete tightness of the tanks.

HelCor pipes, from which tanks are made, are mainly used for laying sewage pipes and other water transmission facilities, as well as for the construction of road culverts. Due to the optimal properties of the materials, it is ideal for the construction of devices with constant contact with running or standing water.

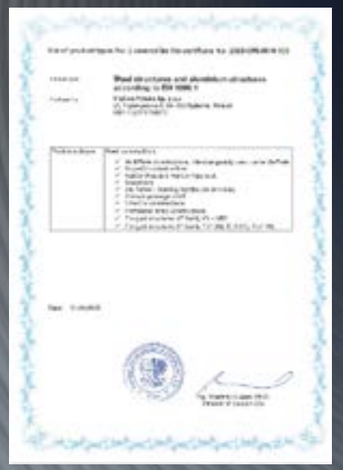
ViaCon StormWater tanks are a great alternative to expensive and labor-intensive reinforced concrete, plastic or fiberglass tanks. Spirally corrugated steel pipes have excellent strength parameters, so they can withstand the high load caused by interaction with the soil. For this reason, the pipes and the tanks made from them can be operated underground at great depths, with a layer of soil several meters or more above them.

Reservoir end caps and inside partitions are made of an analogous sheet metal used to make the tank body. The back cap is connected to the tank casing by an angle welding seam with a thickness of at least 3 mm. The tightness of the seam is checked by the penetrating paint method. In the event of the positive result of the leak test, the welds are protected against corrosion by a zinc-saturated paint coating and an additional polymer coating.

Similarly, nozzles of various diameters for liquid inflow, outflow, overflow, as well as for air ventilation, inspection wells, etc., can be welded to the tank body or end caps. If necessary, flanges of various pressure classes (PN) can also be welded to the nozzles. Pipes, swirl damping plates, pumps, etc. can be installed inside the tank.

The anti-corrosion treatment of all steel elements, as well as welds, edges and fasteners, is performed by the manufacturer indoors.

CERTIFICATE OF CONFORMITY
OF THE FACTORY PRODUCTION CONTROL



CERTIFICATION

Corrugated steel pipes and tanks are with production quality control certificates of conformity issued by independent laboratories and are CE marked. The production quality is checked in accordance with the requirements of the EN 1090-1 standard and has product declarations of performance confirming this. The proper quality control of the product manufacturing ensures their reliability, strength and durability. Products manufactured in accordance with European requirements and installed in accordance with the manufacturer's recommendations are durable and ensure their quality throughout their service life.

TRANSPORTATION AND UNLOADING

The tanks are delivered to the construction site by road vehicles. During loading and unloading, all safety requirements described in the separate installation instructions for the tanks must be observed. Please contact ViaCon specialists for installation instructions.

INSTALLATION OF ViaCon StormWater TANKS

General instructions

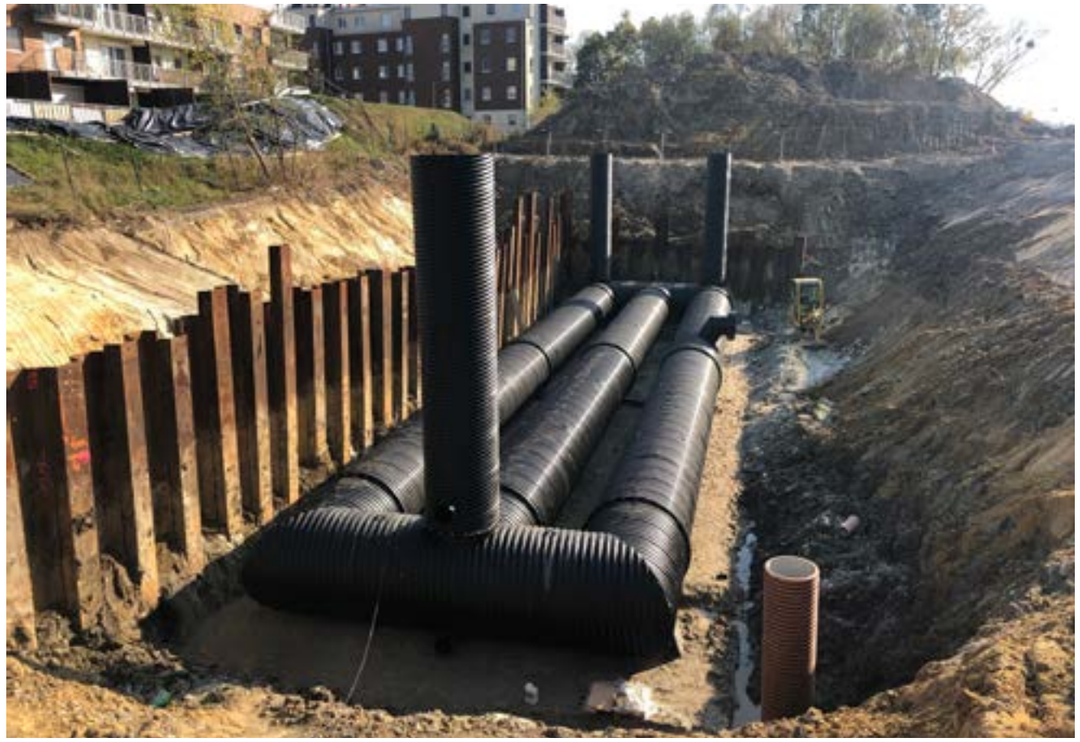
The installation requirements for the tanks are described in separate tank installation instructions. Please contact ViaCon specialists for the installation instructions.

Installation equipment and tools

The installation is carried out manually and using mechanical equipment such as a crane, excavator, loader, vibratory plate with an internal combustion engine.

Installation work is usually performed by a small team.

Earthworks, tightness testing, technical vehicle traffic, installation depth and similar information are described in the installation instructions. Please contact ViaCon Baltic specialists for the installation instructions.



RESTORATION OF ANTI-CORROSION COATING

Local damage to the anti-corrosion coating during the transportation, unloading and installation of ViaCon StormWater tanks can be easily repaired using the anti-corrosion coating materials supplied by the manufacturer with the tanks. The surface restored according to the manufacturer's recommendations ensures no worse quality than the factory-made product. The restoration of the anti-corrosion coating of the tanks is described in a separate instruction. For instructions on restoring the anti-corrosion coating, please contact ViaCon specialists.

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