References

Rainwater retention tank to cope with heavy rainfall at new factory in Roskilde



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As part of the construction of a new curtain factory in Roskilde, an underground stormwater retention tank is being built to retain stormwater and regulate discharge in line with the capacity of the local authority's stormwater network. The solution is designed to reduce the risk of flooding around the new development during heavy rainfall.

Project Facts:

Location	Completion
Denmark	2026
Building Type	Product systems
Industrial	Storm water, Well system

When building a new factory into an area, stormwater management must be planned in conjunction with the existing drainage system. During heavy rainfall, water can accumulate faster than the municipal stormwater network can handle. Therefore, there is a need to create space for the water before it is discharged into the network.

This is the basis for the stormwater solution at a new curtain factory in Roskilde, where contractor Gorm Hansen is installing an underground tank using Weholite PE tanks from GF.

Space for the water when the rain is at its heaviest

The tank is designed to collect and temporarily store excess stormwater from the area surrounding the factory. This spreads the discharge over a longer period, meaning that the peak inflow during a rainfall event does not have to be handled directly by the municipal network.

With a total length of 166 metres and a diameter of Ø2000mm – and a tank capacity of 522 m³ – the size of the tank ensures that there will be no flooding in the area, as it has been dimensioned based on the specified rainfall intensities for the area.

Challenging soft ground in the excavation

Even before the project started, the original plan to use concrete pipes was changed to Weholite PE pipes. Easier handling and lower weight were the main reasons for choosing this solution – and the weight factor became particularly important when the excavation revealed extremely soft ground.

Martin Steinmejer, Project Manager at Gorm Hansen, emphasises that the conditions confirmed the advantages of the PE material. The lighter PE pipes placed less strain on the subsoil, and by adding extra fill to the bottom of the excavation, the contractor was able to create a stable base for the new stormwater tank.

Discharge adapted to the municipal network

The collected stormwater is channelled onwards via a pumping station. The pumping is adjusted to the capacity of the municipal stormwater network, so that the tank acts as a buffer between the inflow of water and its subsequent discharge.

The combination og storage and pumping is crucial to the solution: the tank provides space for the water during heavy rainfall, whilst the pumping station ensures it can be conveyed onwards at an adjusted discharge rate.

From separate pipes to one single, fully welded basin

The tank is constructed from 13 pipe sections, which are assembled on-site at the construction site. The lightweight Weholite PE pipes make transport and handling easy during installation, and GF's own welding team ensures watertight joints between the pipes.

The complete system is therefore a beneficial solution both for the curtain factory, which avoids flooding, and for the municipal sewer network, which is not overloaded.

Installation














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