

## Stainless steel pipe tank (HST-L, HST-LB)

**Drinking water storage systems made of stainless steel are the ideal solution and guarantee maximum water quality is maintained. Stainless steel is inert and has long proven to be reliable for drinking water storage using HydroSystemTanks® installed in buildings.**

Pipe tanks are used in smaller tanks systems or where it is not possible to construct a building to house upright tanks. Constraints on construction might be accessibility, altitude, transport of materials or planning permission requirements related to nature conservation, species protection, landscape preservation or similar.

In such cases, the water is actually stored in one or more parallel stainless steel pipe tanks.

**Design** All connections and the DN 800 manhole to access the tank interior are grouped together in a rectangular connector panel measuring 1300 mm wide and 2200 mm high. An inspection glass and a LED spotlight fitted on the outside allow the tanks to be checked thoroughly during operation. The water chambers are ventilated through the overflow line via air filters installed in the control compartment (with a siphon acting as an air barrier).

In the case of small tank volumes, the control compartment (service chamber) is integrated directly into the pipe tank (positioned in the centre for smaller dual-chamber tanks). All necessary components are installed in the control compartment. Access to the control compartment can be provided via a dome on top or via a door at ground level.

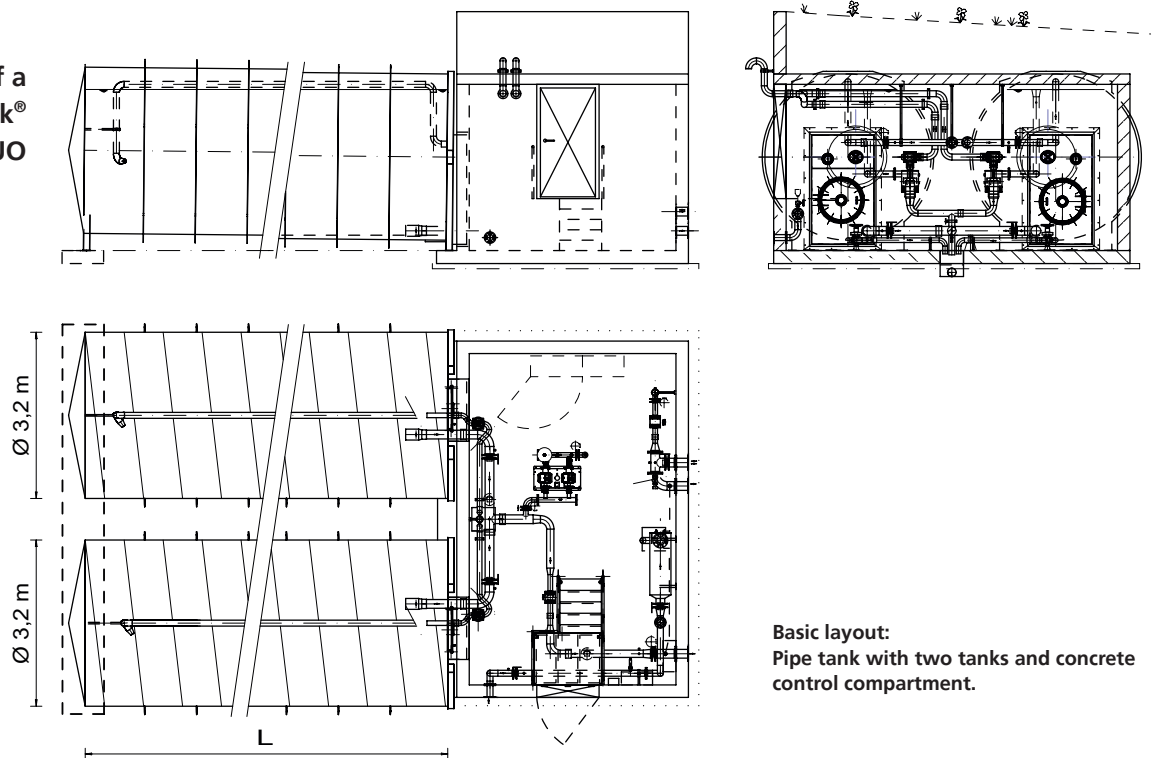
**Example of a  
HydroSystemTank®  
HST-L**



**Structural analysis** A structural analysis in accordance with ATV-DVWK-A 127 was performed for the system consisting of a stress, strain, deformation and stability analysis for flexible pipes using the finite element method. The calculation was based on empty tank with vertical and lateral soil pressure with soil pressure loads according to VdTÜV 1063 and Eurocode EN 1993 but without live loads, snow load or negative pressure.

**Control room** Service chambers can be fully pre-fabricated in stainless steel or concrete. Pre-fabricated stainless steel frames are embedded in concrete to connect the tank. The tank's connector panel is inserted into this frame and fully welded to the frame all around its circumference.

Example of a HydroSystemTank® HST- LB/ DUO



Basic layout:  
Pipe tank with two tanks and concrete control compartment.

- Benefits to you**
- Compact, safe, space-saving and easy to operate
  - Optimum drinking water quality thanks to hermetic encapsulation
  - Long service life thanks to high-grade duplex 1.4162 stainless steel
  - For tank systems up to 3 x 100 m<sup>3</sup>
  - Extremely short construction time as tanks are delivered ready for use

Data for individual tanks

Volume V	[m <sup>3</sup> ]	15	30	45	60	75	90	100
Cylindrical length L	[m]	2.0	4.0	6.0	8.0	10.0	12.0	13.7
Transport length about	[m]	3.0	5.0	7.0	9.0	11.0	13.0	14.7

Tanks are 3.2 m in diameter for all volumes

**Transport and installation**

Depending on the installation situation, the pickled, passivated stainless steel tanks made of duplex 1.4162 steel can be given a full coat of high-grade protective paint and/or sheathed in drainage matting and dimpled sheeting to provide protection for the outer skin.

Manufactured in a single piece, the seamless stainless steel tanks are delivered to their site of operation on heavy load vehicles. A mobile crane or helicopter, for example, is used to place the tank in construction pits and on floor slabs ready prepared on site.