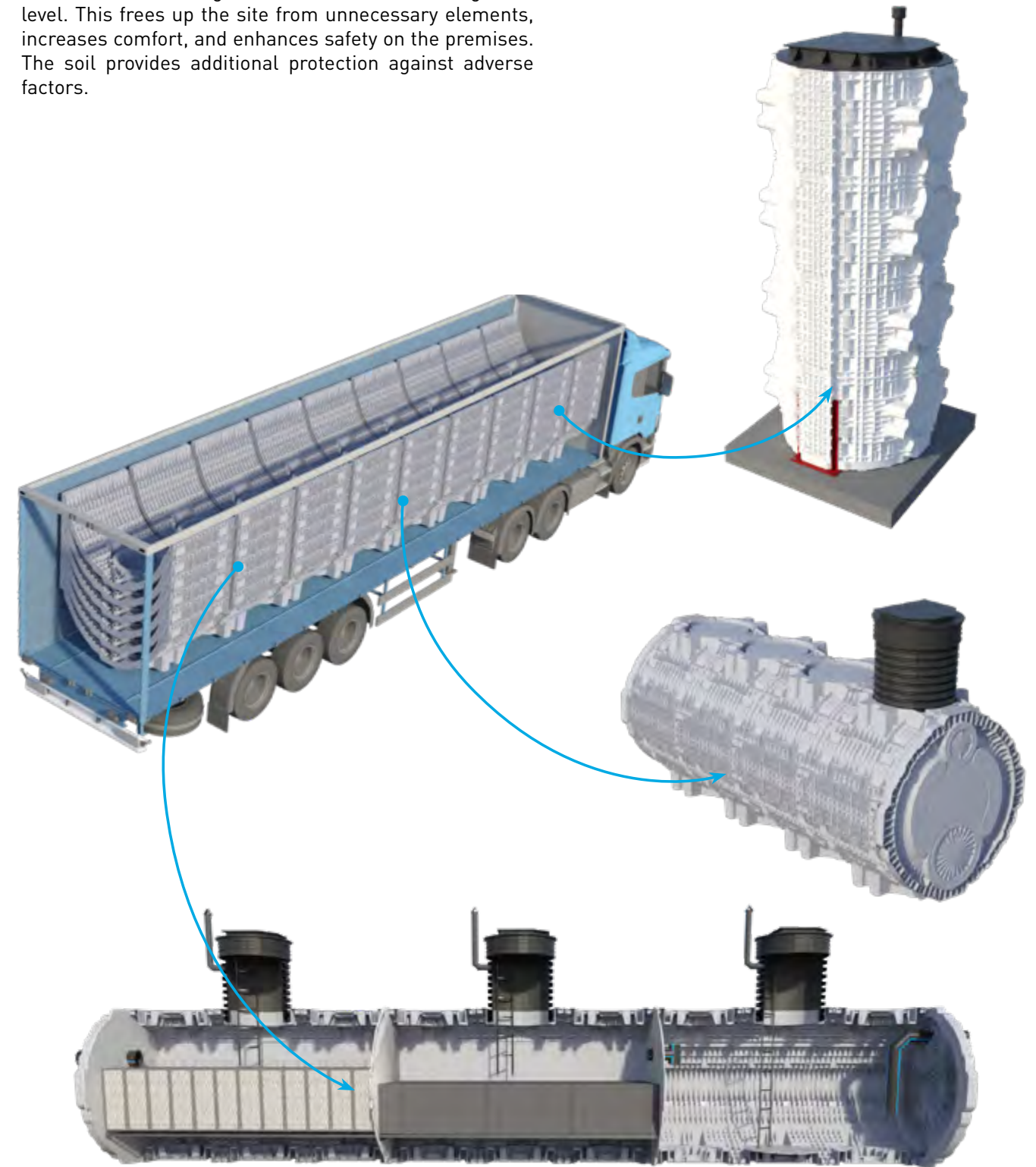




UNDERGROUND TANKS AQUABOX

AQUABOX

The **modular underground** tank is a stackable tank made of identical elements produced by injection molding. The tank is used for collecting, accumulating, and storing various liquids and wastewater. As the name suggests, the structure is designed for installation below ground level. This frees up the site from unnecessary elements, increases comfort, and enhances safety on the premises. The soil provides additional protection against adverse factors.

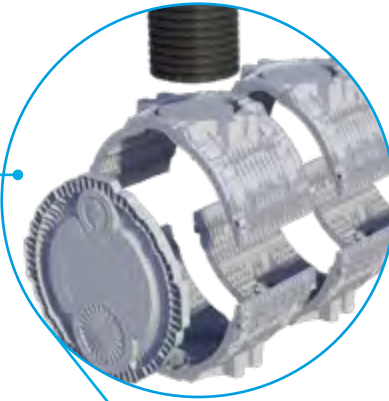


ADVANTAGES



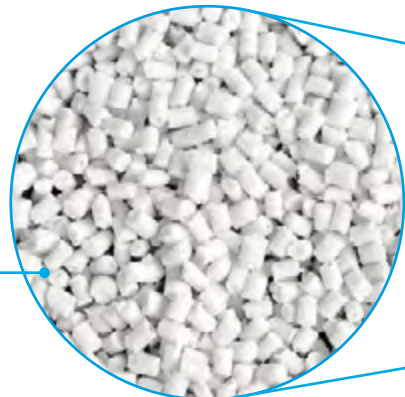
• Production speed – up to 150 modules per day or 360 m³ in tank volume, always in stock

• Possibility of repairing/ maintaining utilities



• Stackability, compactness, logistics savings, no need for special transport, delivery to hard-to-reach places

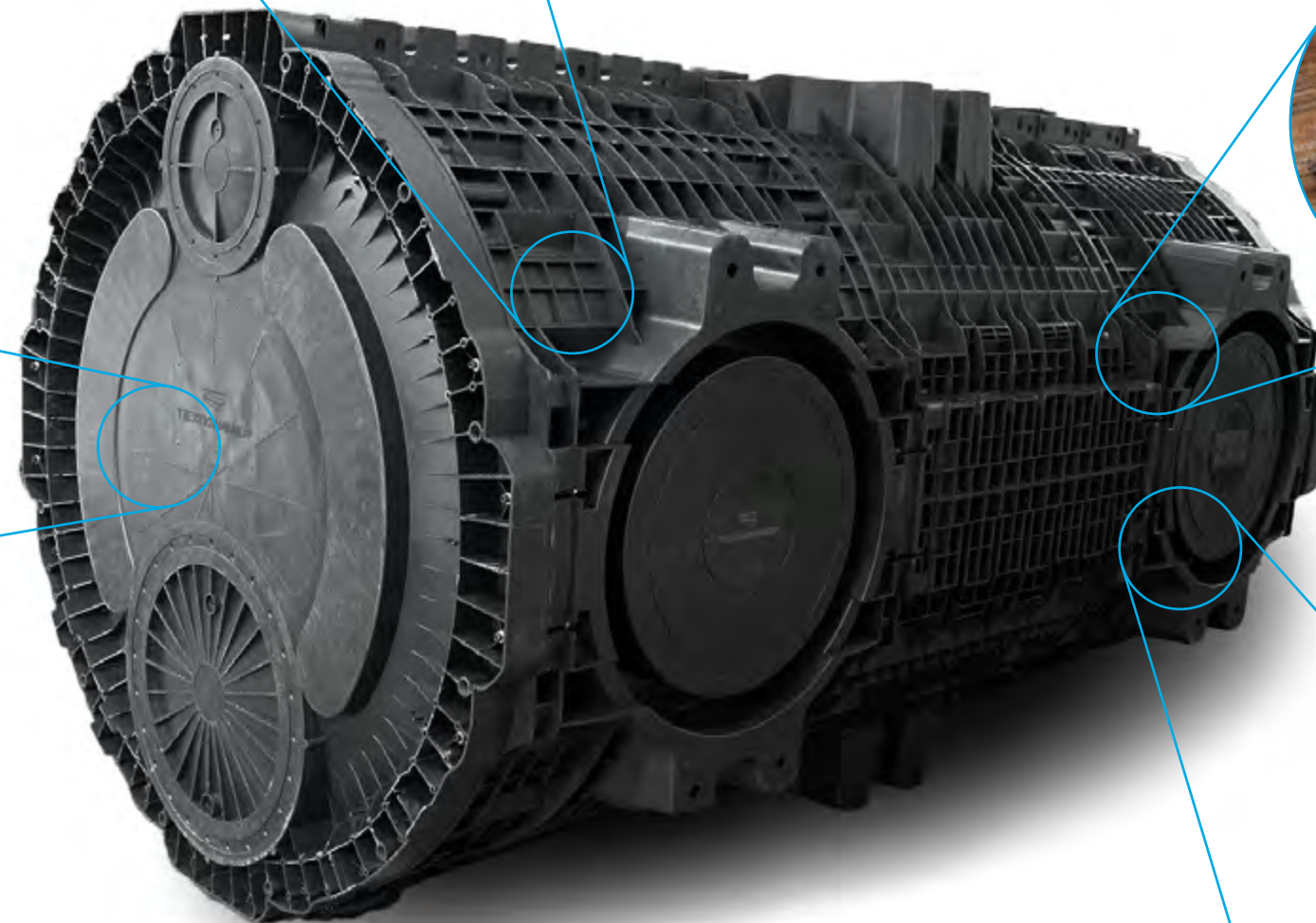
• Maximum depth of 3 meters



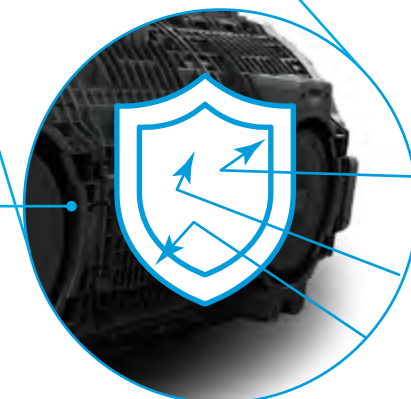
• Eco-friendliness, secondary use of plastic



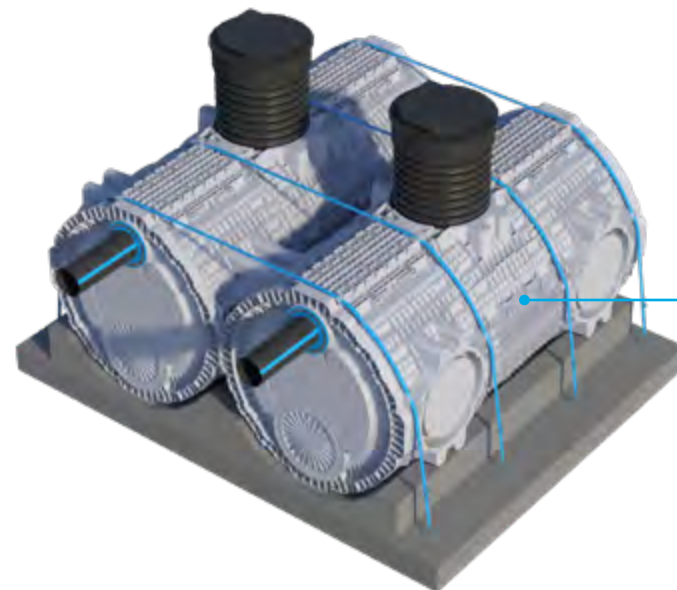
• Lightweight construction (module weight - 125 kg) – no heavy machinery required for installation



• Unlimited volume due to a composite tank with complex geometry



• Resistance to alkalis, acids, bacteria, fungi, and petroleum products



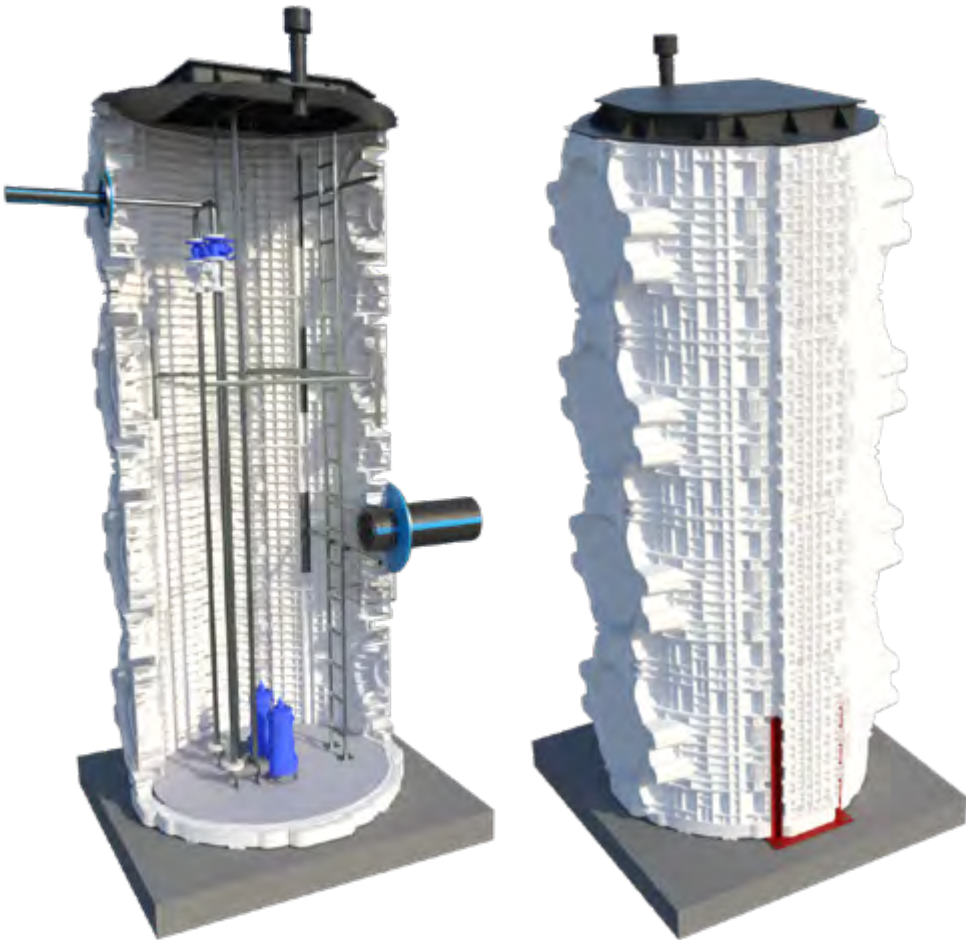
APPLICATIONS

Underground tank

Underground tanks are sealed reservoirs for accumulating and storing wastewater or liquids. Any underground tank requires pumping as it fills up. Underground tanks are also called accumulators.

The use of tanks ensures:

- The ability to discharge any wastewater
- Accumulation of wastewater in regions with quicksand
- Organization of irrigation fields with soil post-treatment
- Water accumulation on the site



Sewage pumping station (SPS)

For gravity drainage of sewage in sewer systems, it is necessary to maintain a slope when installing sewer pipes. In some areas, this is impossible due to terrain features or limited space.

A sewage pumping station is a complete, ready-to-install pumping station that ensures the pumping of stormwater and sewage in systems where gravity drainage is not possible.

Local treatment facilities (LTF)

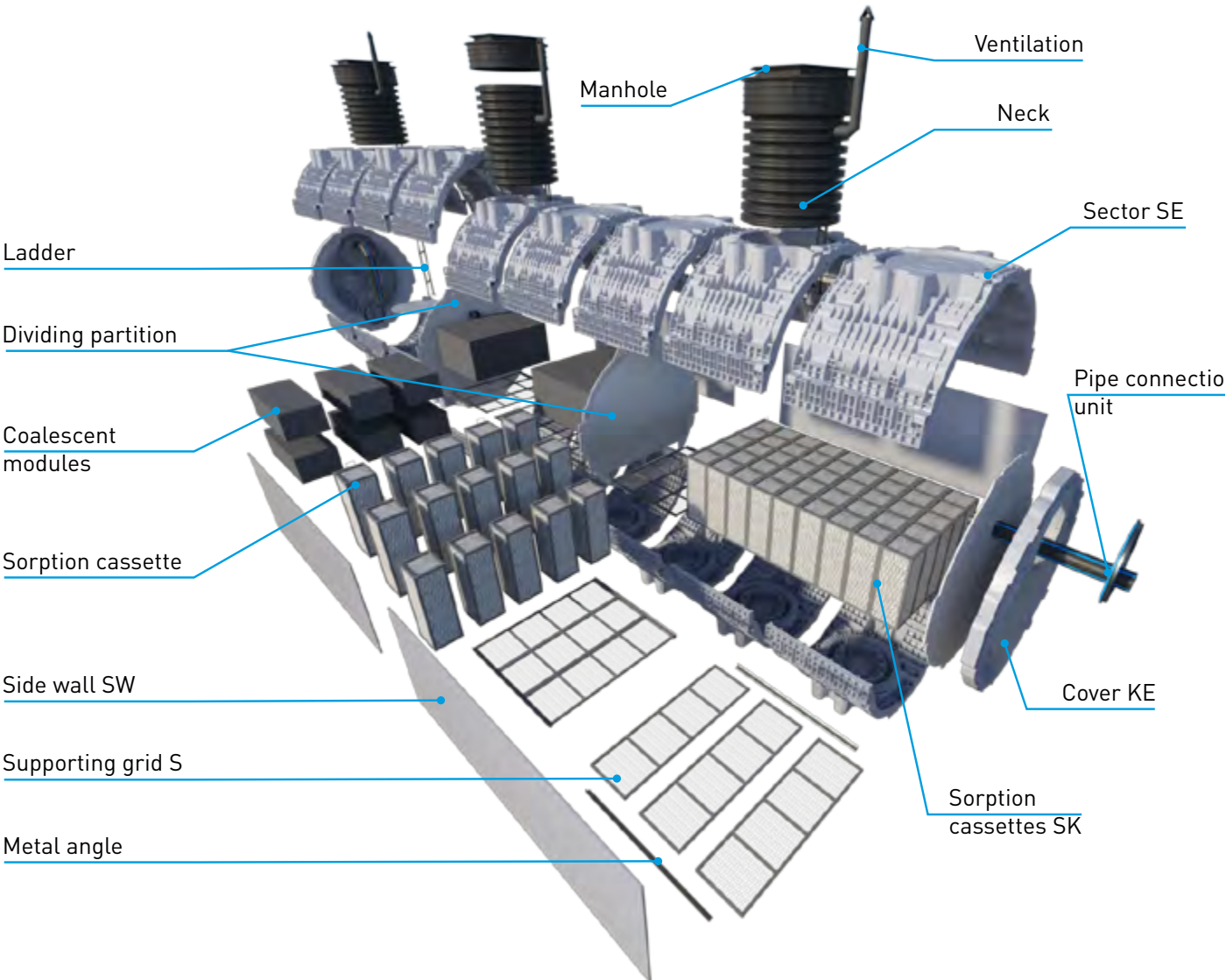
Local treatment facilities (LTF), or stormwater drainage systems, are systems for collecting, treating, and storing liquid precipitation. LTF typically consists of three components: a system for collecting wastewater through channels and filtering elements.

The second compartment of the LTF usually contains filters for mechanical treatment of large contaminants. The third compartment contains filters for fine treatment of small-dispersed contaminants in wastewater. In addition to treatment systems, LTF also includes reservoirs and tanks for storage.

Performance, m³/h	Length, m		
	LTF (Sand separator + oil separator + sorption unit)*	Sand separator + oil separator**	Oil separator + sorption unit**
Up to 10	4,26	2,93	2,93
Up to 20	6,92	4,26	4,26
Up to 35	8,24	5,59	5,59
Up to 50	12,23	8,24	8,24
Up to 70	13,56	9,57	8,24
Up to 85	17,54	12,23	10,90
Up to 100	21,52	14,88	13,56
Up to 140	-	18,87	16,21
Up to 180	-	22,85	21,52

Equipment with a capacity of more than 100 m³/h is calculated upon request.
** Equipment with a capacity of more than 180 m³/h is calculated upon request.

AQUABOX-LTF-10	Stormwater treatment facilities (Sand separator + oil separator + sorption unit).
AQUABOX-PN-10	Sand separator + oil separator.
AQUABOX-NS-10	Oil separator + sorption unit.



CHARACTERISTICS

The elements of "AQUABOX" are made of safe mineral-filled polypropylene using injection molding, which increases production speed tenfold compared to fiberglass or rotomolded tanks.

The unit has a reinforced design, thoughtfully designed for user convenience. Lightweight construction eliminates the need for heavy machinery.

Plastic models reduce labor costs for installation, the volume of work, and the time required. The tank's usability lasts for decades. Plastic models are easy to maintain and clean.

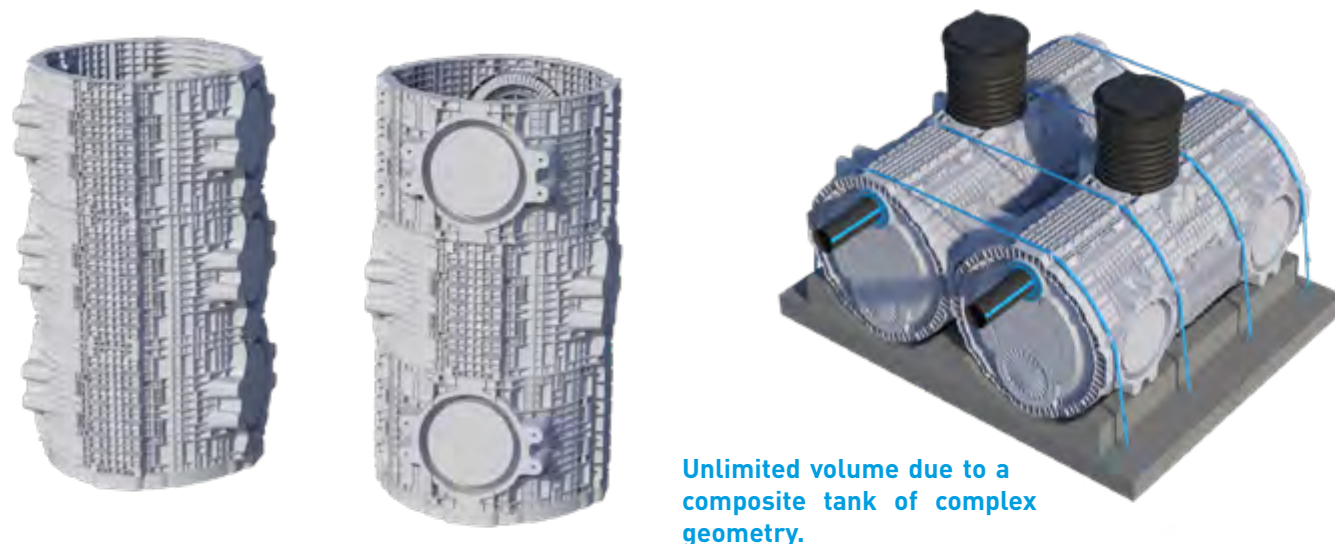


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Volume, m³	Length of body, m	Diameter of body, m	Empty weight, kg
120	31	23	6180
110	29		5680
110	26		5180
90	23		4680
80	21		4180
70	18		3680
60	16		3180
50	13		2680
40	10		2180
30	8		1680
20	5		1180



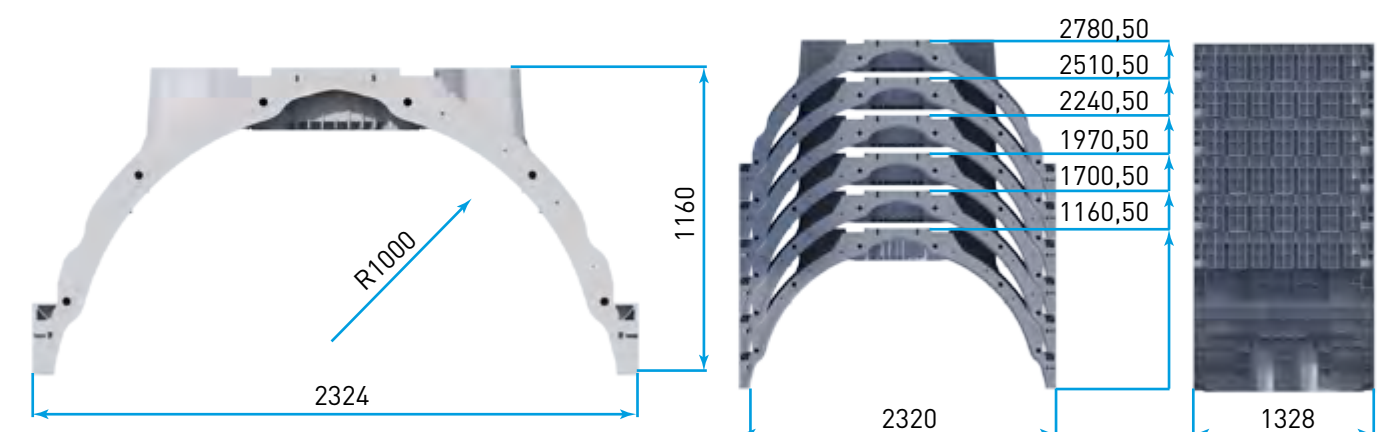
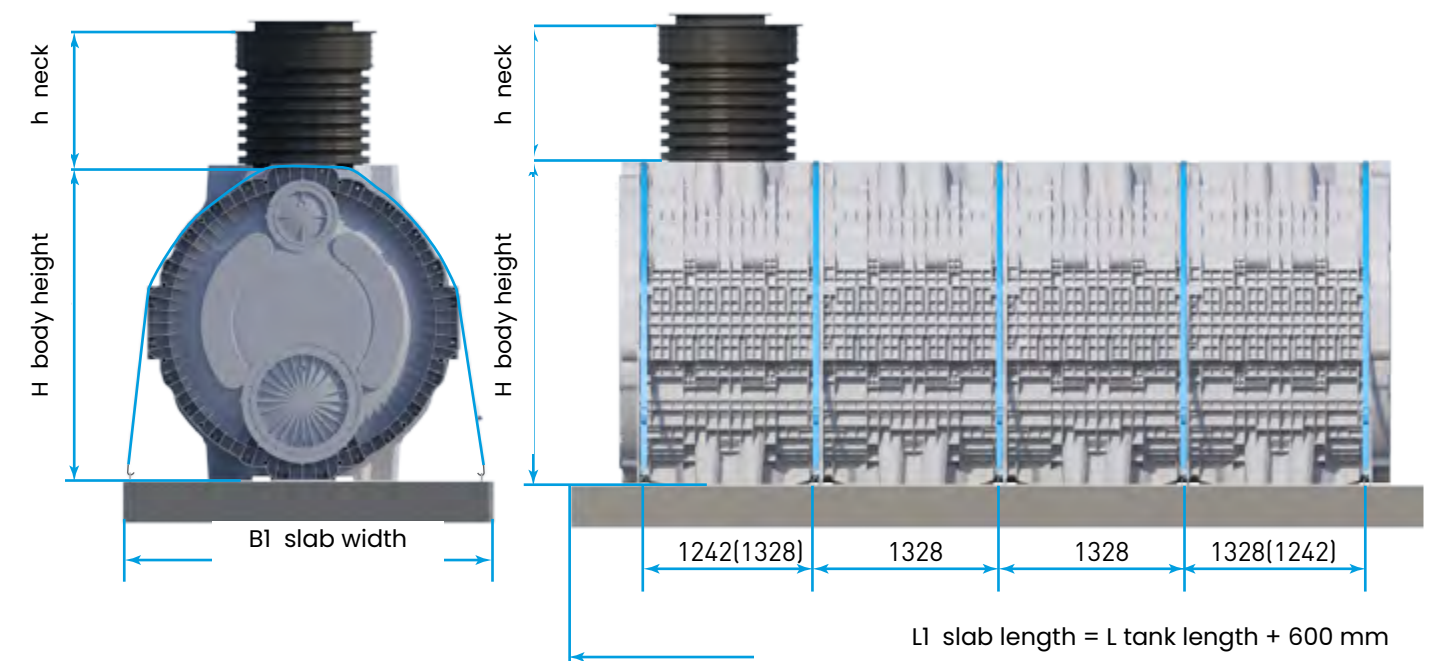
The horizontal AQUABOX accumulator tank is secured to the foundation slab with tie-down straps of synthetic non-elastic material.



Unlimited volume due to a composite tank of complex geometry.



Thanks to its design, the maximum achievable volume of "AQUABOX" is unlimited.



PIPE CONNECTION UNIT

Pipe connection unit to the tank cover

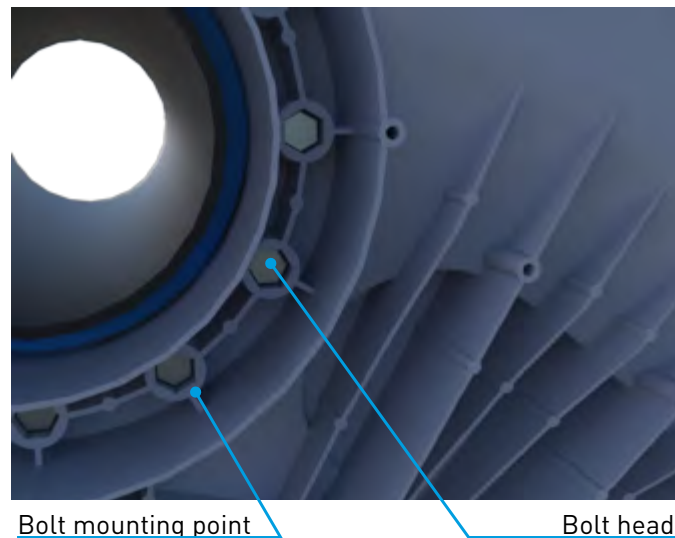
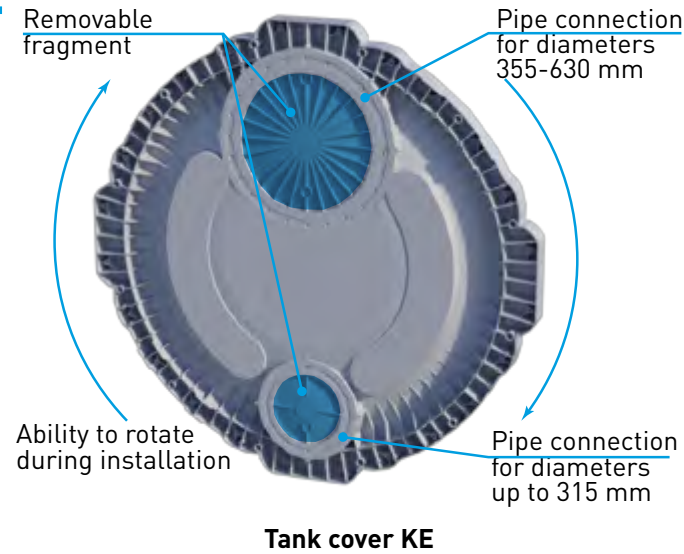
In tank equipment, there is almost always a need to connect inlet and/or outlet pipelines.

- In horizontal tanks, pipes are connected through the side cover. The cover has 2 mounting points:
 - Up to 315 mm
 - From 355 to 630 mm (for pressure PE pipes).
- The unit consists of a welded nozzle welded to a polymer plate and bolts with sockets.
- If necessary, steel flanges DN700 or DN350 are installed.
- The cover can be rotated 90° and 180° for easy installation.
- Further installation is done by welding, couplings, sockets, sleeves, and flanges.

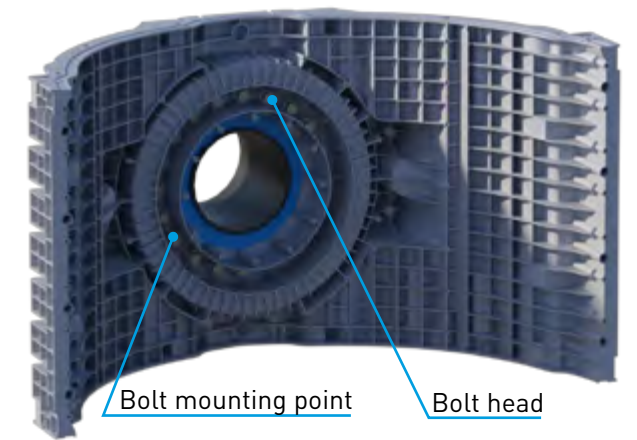
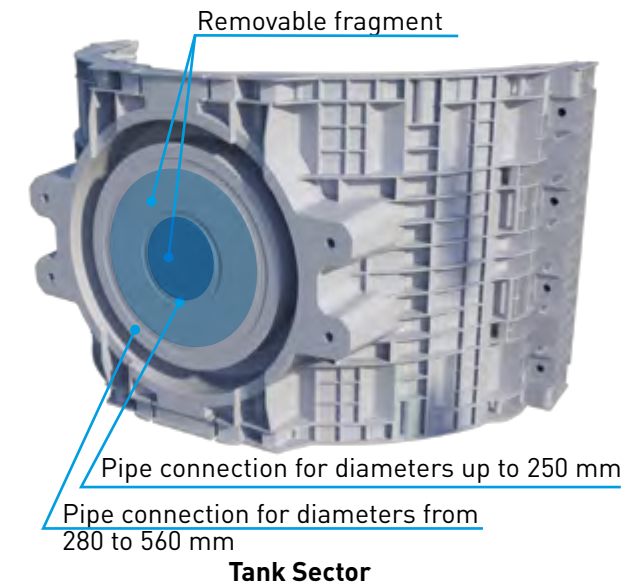
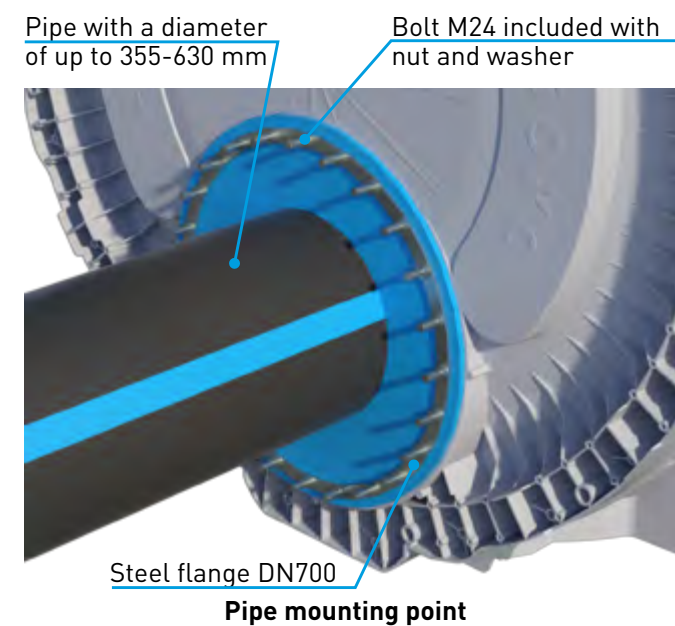
Pipe connection unit to the tank sector

In vertical tanks, pipes are connected through the sector.

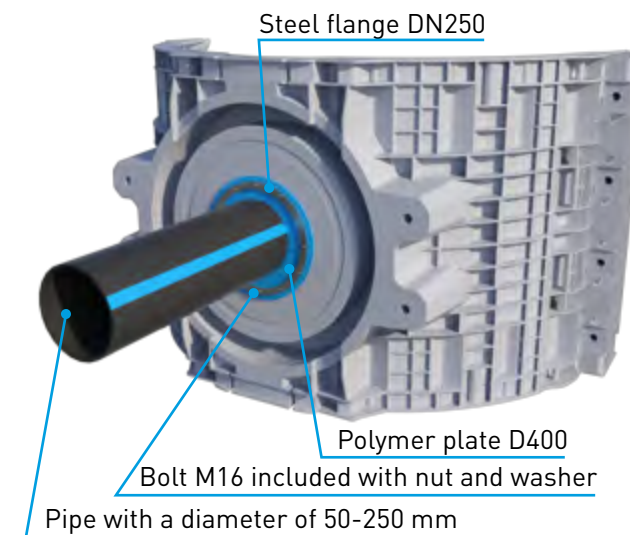
- The sector has recesses for pipes with diameters up to 250 mm and from 280 to 560 mm.
- If necessary, flanges DN 250 and DN 600 are installed.
- The unit consists of a welded nozzle welded to a polymer plate and secured with bolts.
- The bolts are fixed in sockets to prevent rotation.
- The inner walls of the flange and bolt passages are prepared before installing the nozzle.



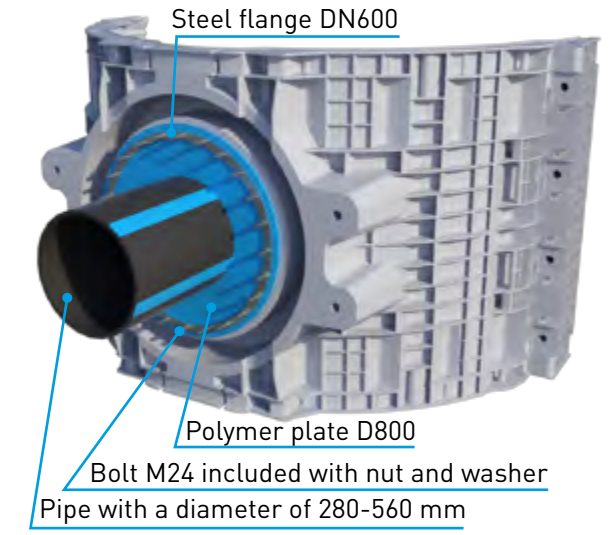
View of the pipe connection unit from the inside



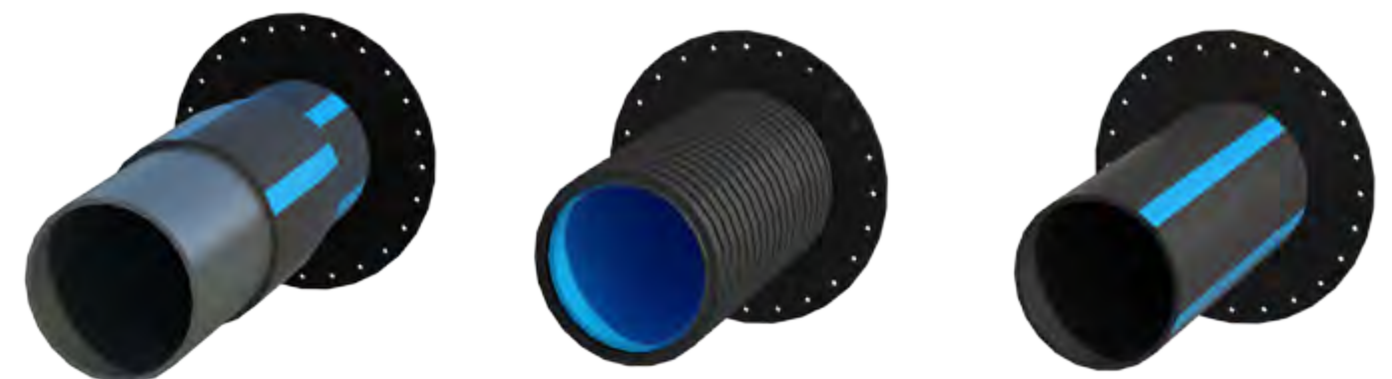
View of the pipe connection unit from the inside



Pipe mounting point for diameters up to 250 mm



Pipe mounting point for diameters from 280 to 560 mm

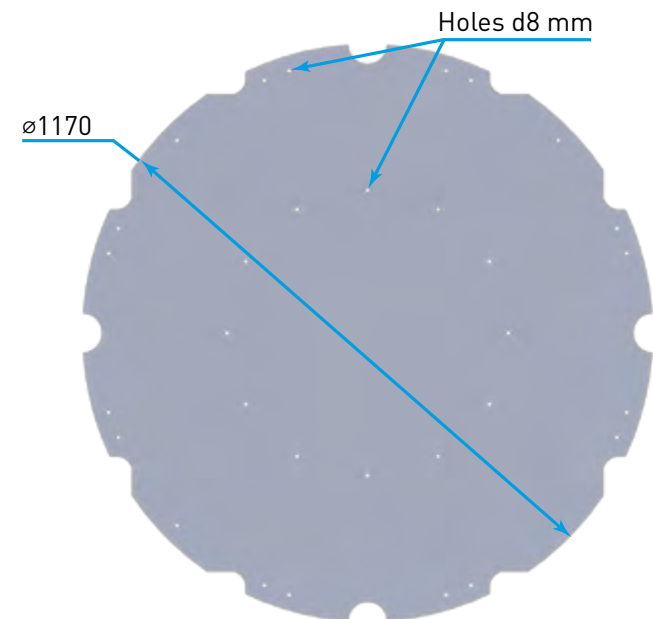


Nozzle for connecting steel pipes, corrugated pipes, and pressure PE pipes

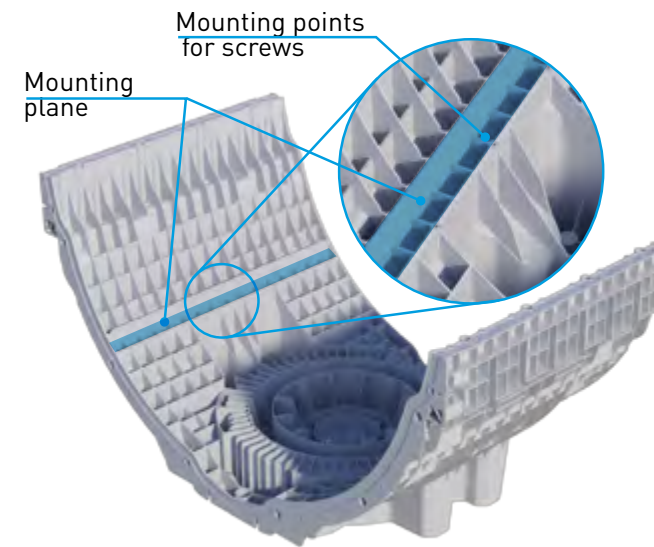
MOUNTING

Mounting of elements inside the body

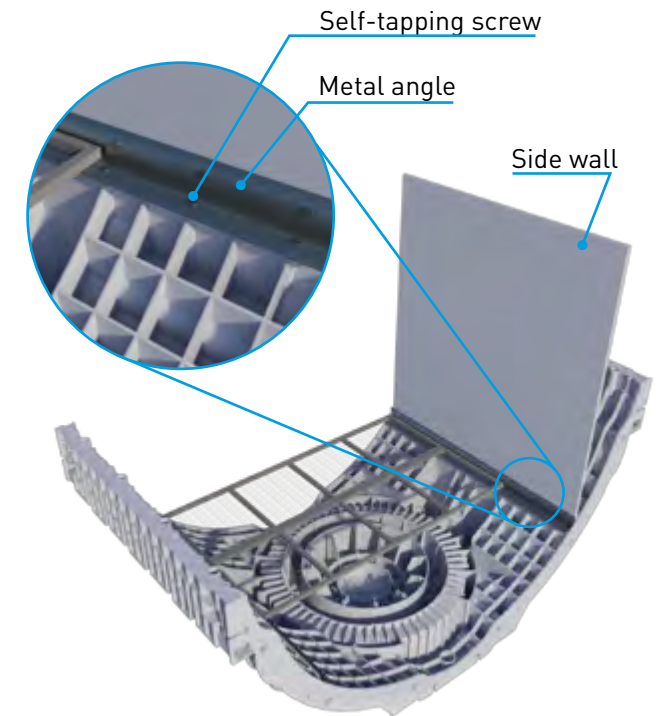
- Mounting of internal elements in tanks is carried out using base plates made of polymer sheet of two types: for installation in the tank sector in horizontal tank equipment and for installation on the tank cover in vertical equipment.
- Shelves and mounting planes are used to attach metal or polymer elements to the body walls.
- The plates are attached to the AQUABOX modular elements using self-tapping screws made of stainless steel with a diameter of 10 mm.
- The plates are made of polyethylene or polypropylene with a thickness of 12-16 mm and have notches for easy installation.
- Internal elements are attached to the plates with screws and bolts according to the project.
- Ladders and pumping equipment are also installed in horizontal and vertical tanks.



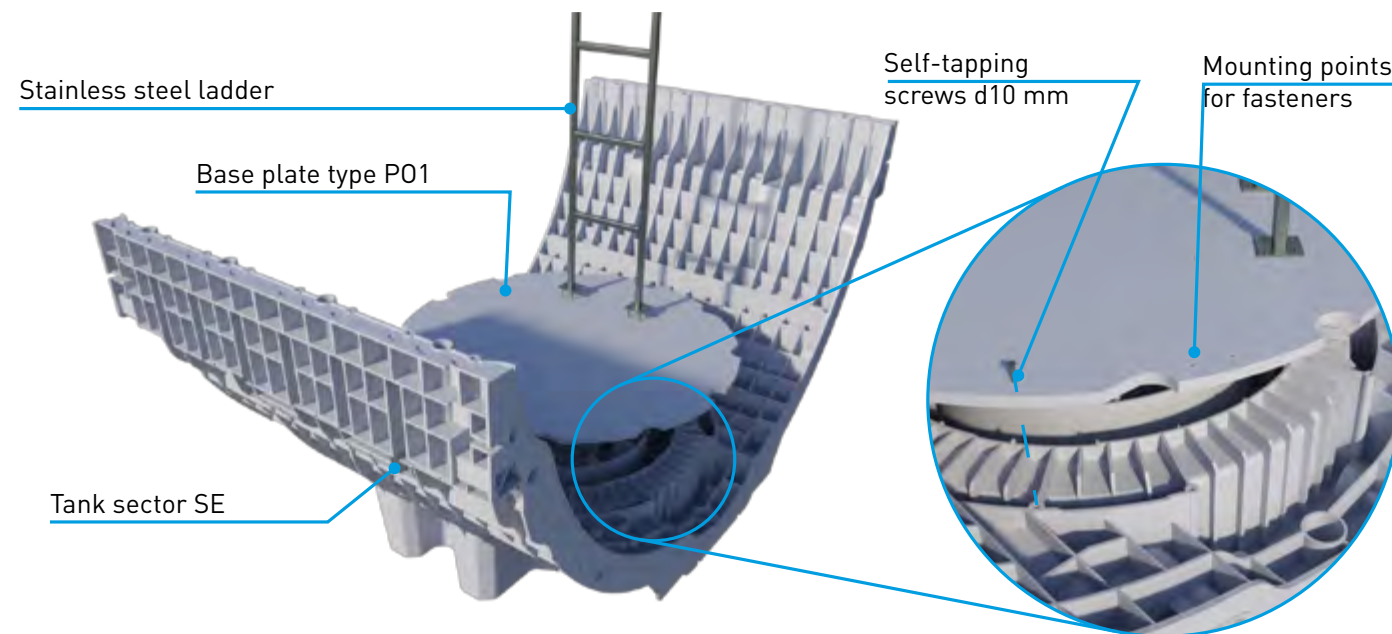
Base plate for equipment mounting, type P01



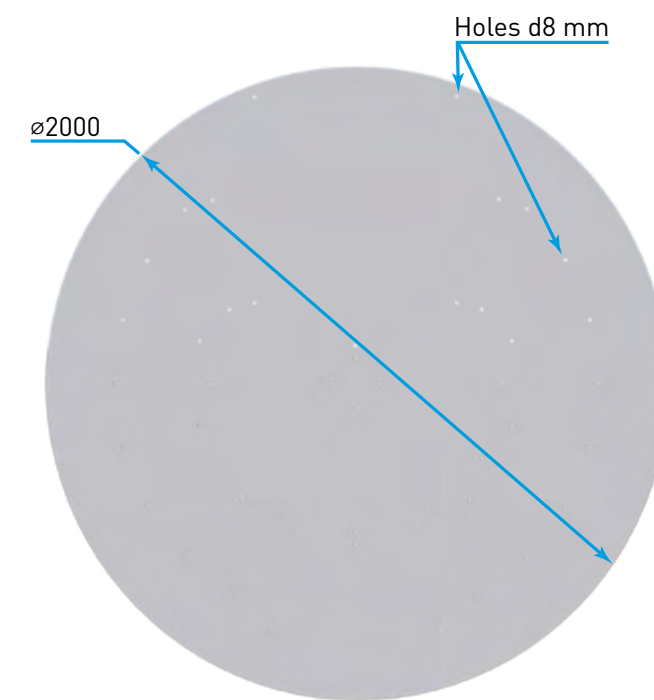
Tank Sector SE



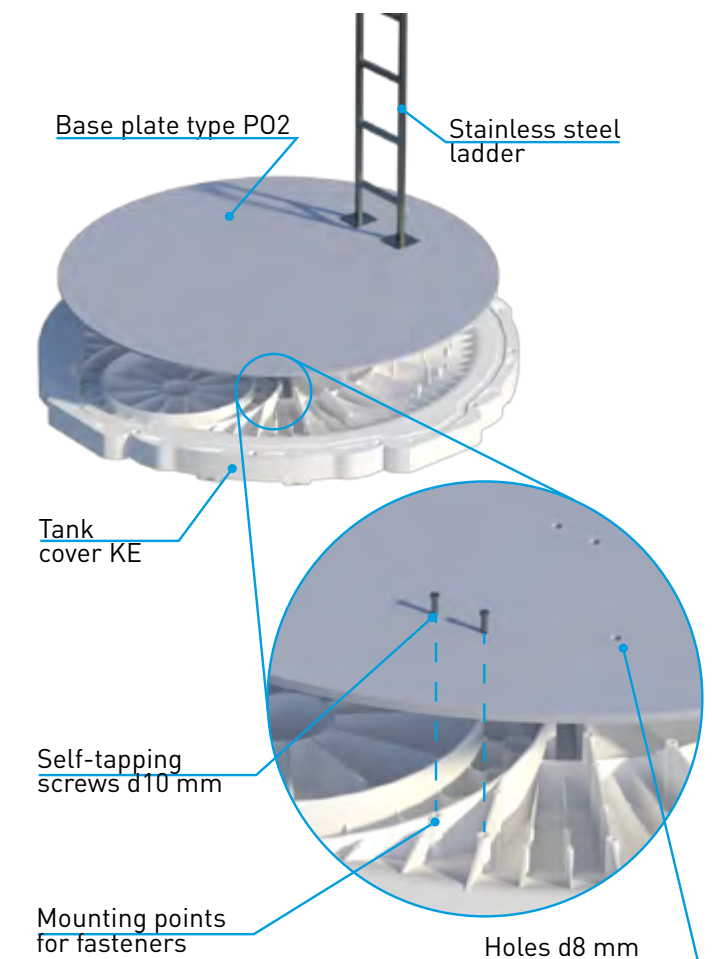
Mounting of side walls



Mounting of equipment in a horizontal tank



Base plate for equipment mounting, type P02



Mounting of equipment in a vertical tank

COMPARATIVE TABLE OF TANK EQUIPMENT

Parameter	Fiberglass Tank	Modular Tank "AQUABOX"
Production Time	1 tank / 6-8 weeks	5 tanks x 60 m ³ / day
Transportation	Only in assembled form	In disassembled form in standard trucks and containers
Transportation Cost	Increased costs due to special transport and permits for oversized cargo	Reduced costs due to standard transport and optimized logistics
Storage	Large-sized	Stackable – takes up minimal space
Versatility	Only made-to-order	Universal for any tank parameters, pumping stations (volume, pipe diameters) – possibility of project adjustments during installation
Quality Control	No quality control (risks of reduced wall thickness)	Quality control of raw materials and dimensions of each product (all products are repeatable and stable)
Assembly/Unloading	Use of heavy machinery	Use of a manipulator / forklift / truck
Eco-Friendliness	Cannot be recycled (landfill)	Can be recycled
Production Safety	Toxic production	Safe production



Loading of a Fiberglass Tank



Loading of an "AQUABOX" Tank



Transportation of a Fiberglass Tank



Transportation of an "AQUABOX" Tank

LOGISTICAL CHARACTERISTICS

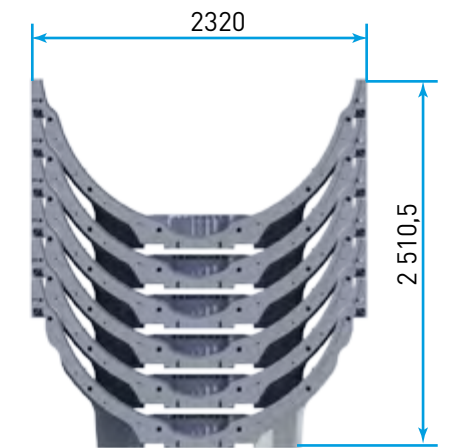
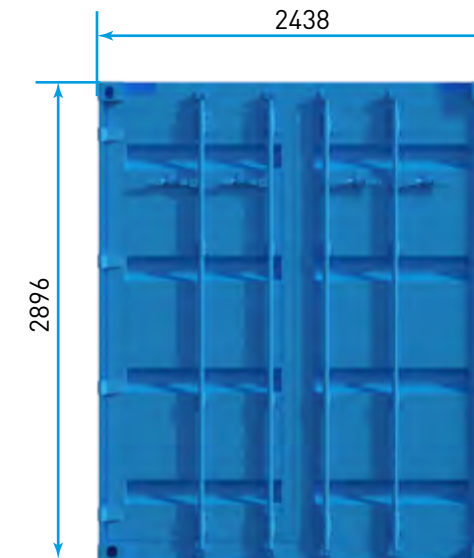
The tank elements have enhanced logistical characteristics (stackability) and can be transported to geographically hard-to-reach places in standard vehicles/shipping containers.

20-foot container:
60 m³ of useful volume.

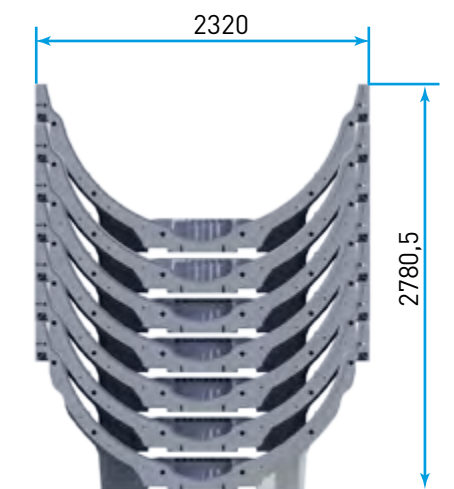
40-foot container:
120 m³ of useful volume.

Euro truck:
175 m³ of useful volume.

Existing analogs – metal or fiberglass tanks – are transported assembled on oversized trailers, which significantly limits their use.



Comparative dimensions of the container and stack



Comparative dimensions of the Euro truck and stack



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