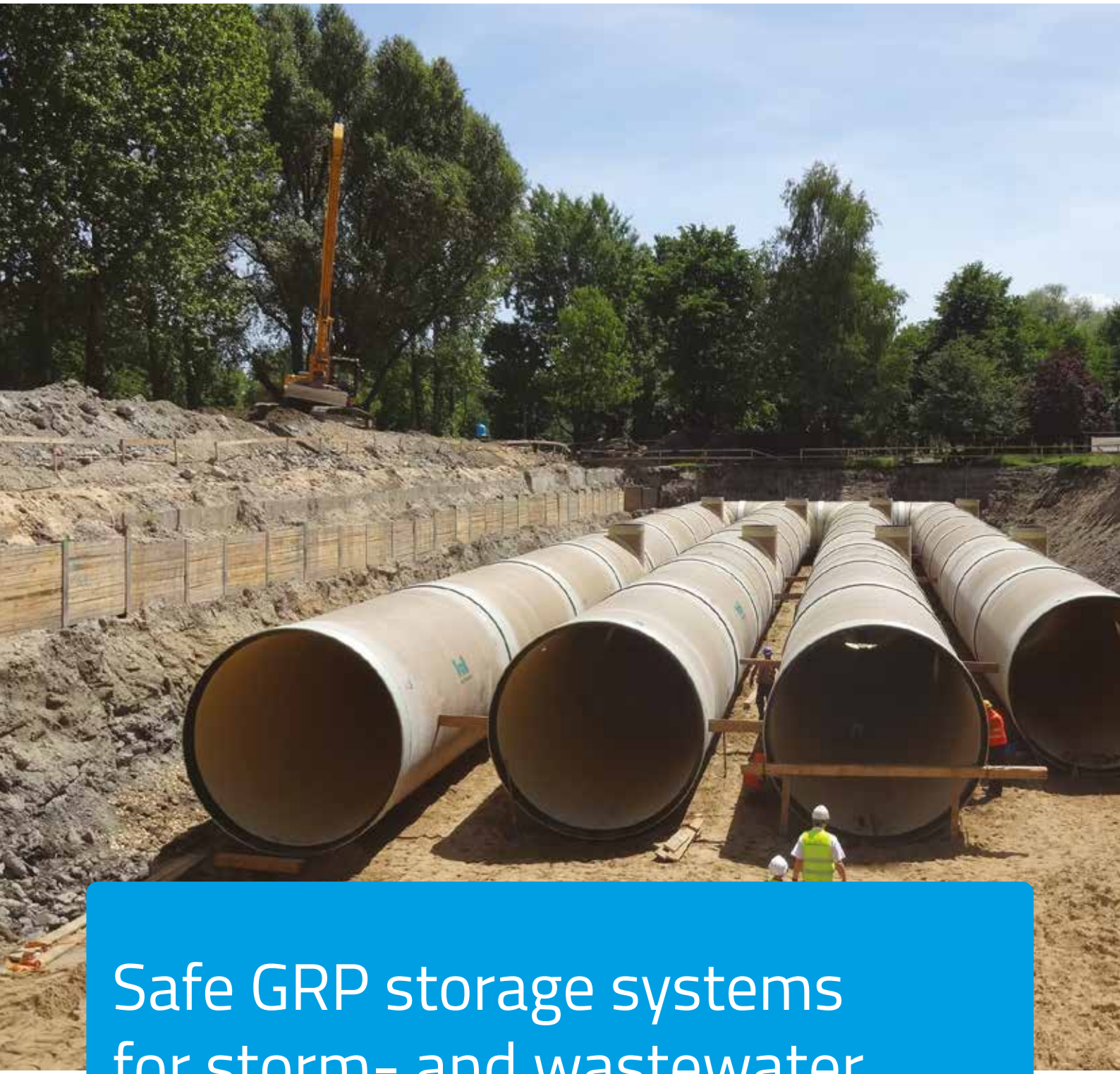
Amiblu®

Amiblu Pipe Systems
Engineered for the next generations



Safe GRP storage systems for storm- and wastewater

Customized solutions for flood prevention and environmental security

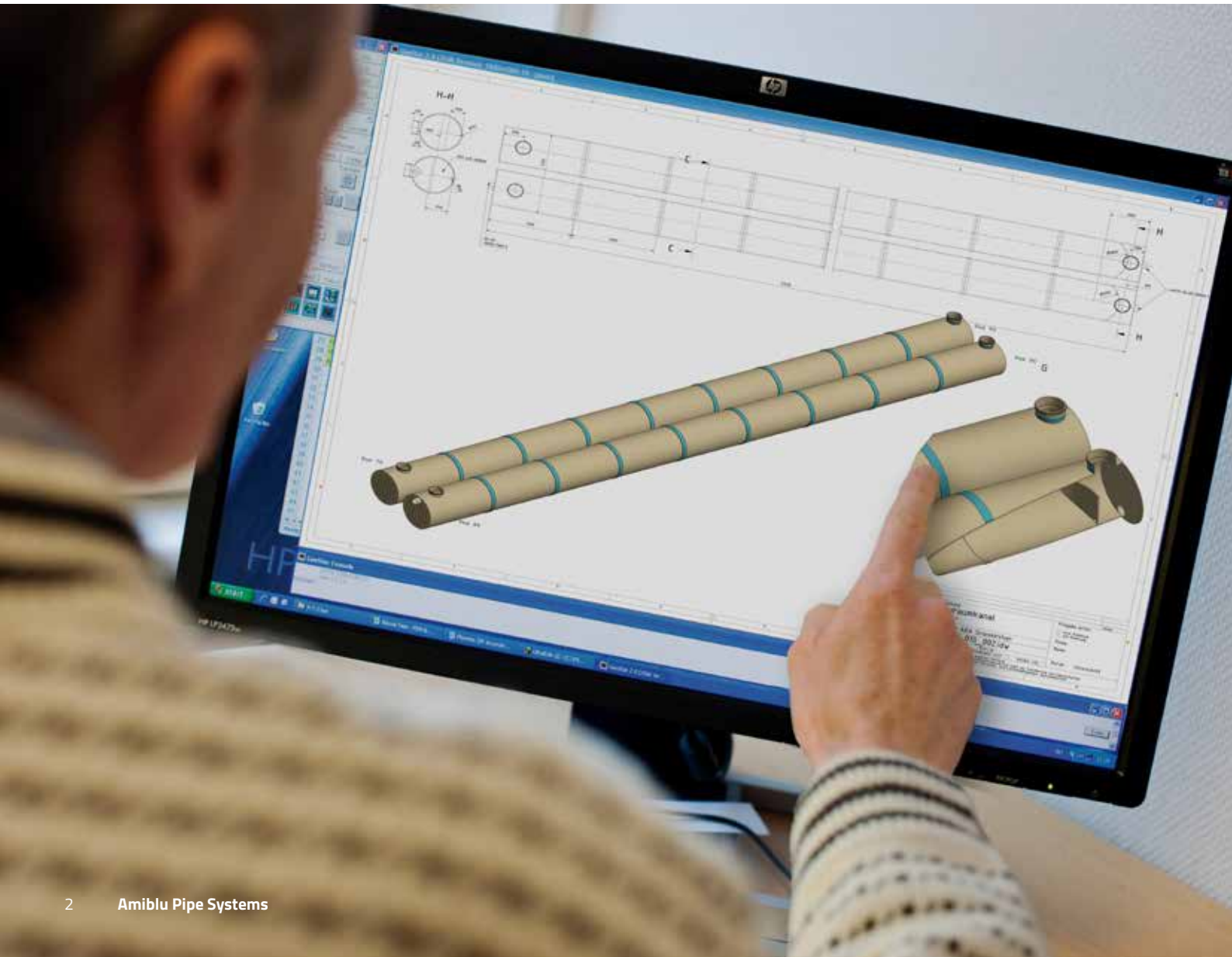
FLOWTITE®

HOBAS®

Amiblu GRP pipe systems engineered for the next generations

Glassfiber reinforced plastic (GRP) pipe systems by Amiblu are the product of over six decades of innovation, experience and development. With our centrifugally cast Hobas and filament wound Flowtite products, we offer two premium technologies for all types of project requirements. This way, we guarantee that you get the best option for your individual project – our Amiblu experts are happy to assist you in making the optimal choice.

FLOWTITE® HOBAS®



Our promise: We rise to the challenges of climate change and urbanization

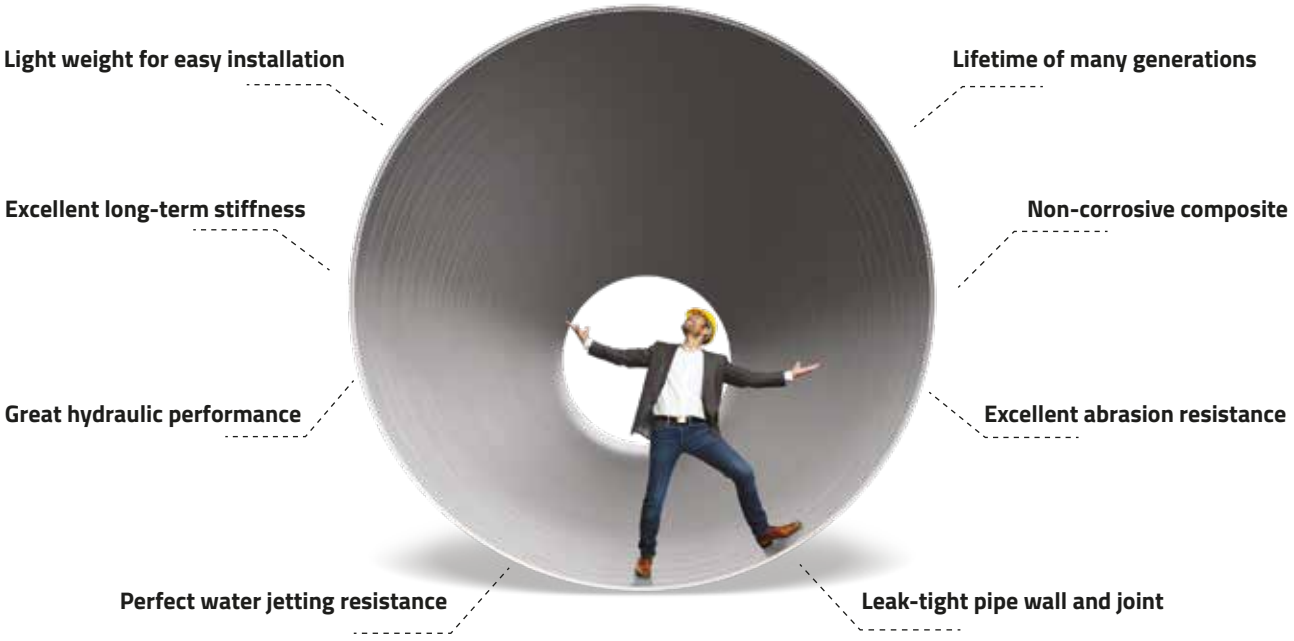
Extreme weather events and the constant expansion of urban areas make the reliable, efficient treatment of wastewater a key issue for water facilities and municipalities. Rainfalls become increasingly heavy, impervious surfaces such as roofs and asphalted roads lead larger amounts of rain directly into sewer systems, and more and more people are connected to existing pipe networks. As a result, urban sewers and wastewater treatment plants often reach their capacity limit. And it is not always reasonable to expand the existing network by kilometers of new pipe.

Amiblu GRP retention tanks and storage sewers help temporarily store and treat excessive amounts of storm- and wastewater in separate and combined sewer systems. They can be easily included in pipe networks and make them operate flawlessly even at peak times. This way, floodings can be prevented and wastewater treatment plants protected from overloads.

Environmental sustainability
Our thermoset resins are designed to be inert and stable for generations. Glassfibers add stability and strength.

Economic sustainability
Lowest capital cost, lowest installed cost, and lowest lifetime cost. Sustainability doesn't have to cost the earth.

Social sustainability
Operators of water, sewer, and energy infrastructure need our pipe technologies. We design GRP pipe networks for generations to come.



Your benefit: custom solutions for a future-proof sewer system

Amiblu GRP storage solutions are installed underground in single or multi-line configurations. Depending on the type of sewer system (combined or separate), they usually feature a storage chamber, a flow control system in a separate chamber, a stormwater overflow, an emergency discharge, and inspection manholes. When integrated in combined sewer networks, Amiblu storage solutions are often equipped with additional solids retention systems: Amiscreen and CSO chamber are two highly effective products for this purpose.

Storage tanks and sewers can be custom-tailored in terms of pipe diameter, storage volume, and required equipment to perfectly meet the project requirements. Thanks to their high structural stability, they need only little coverage even in urban areas with high traffic loads.

Engineered for decades of operations
The results of our stringent long-term product tests support an expected service life of several generations. This is confirmed by the evidence from existing installations that are as good as new after over 40 years of service.

Full corrosion resistance
Environments of pipe systems can have a corrosive nature, e.g. in the case of aggressive soils or stray currents. Amiblu GRP pipe systems are inherently resistant to corrosion and need no cathodic or other additional protection.

Watertight components
Amiblu storage tanks are delivered to the construction site as prefabricated components, which are then connected with leak-proof couplings or laminated on site. This results in a perfectly watertight storage solution.

Excellent flushing performance
Amiblu pipes have a smooth, resin-rich internal surface. This ensures very good flushing of sediments even at low water volumes and gradients, resulting in minimum maintenance.

Complete system solution
Amiblu supplies stormwater retention tanks as complete system solutions. These include e.g. inspection manholes with berms and ladder, flow control features, and emergency discharge.

Light weight, easy handling
Neither the visual appearance nor the mechanical properties of Flowtite and Hobas GRP pipes are impacted by UV radiation. Therefore, our potable water tanks may be installed and operated above ground.

Unique structural stability

Amiblu GRP products have very stable mechanical properties, are highly load resistant, and require less soil coverage than traditional materials. They feature low creep, a low coefficient of thermal expansion, and are resistant to seismic activities and structural settlements. All of this at a wall thickness that is much lower than that of comparable concrete pipes.

No buoyancy

Compared to other materials, the overall weight of GRP pipes is low. Nevertheless, the material generally does not float. If groundwater is high and soil cover not sufficient, geogrid and non-woven geotextile can be used to prevent buoyancy. Amiblu experts advise on the required measures and provide all necessary analyses.

Large diameters and volumes

No demand is too big, no request too extraordinary: Amiblu offers stormwater retention tanks from small to enourmous volumes, made of GRP pipes with diameters up to 4 m. At the same time, the highly rigid GRP material permits thin pipe walls, making it possible to reduce the necessary volume of excavated material to a minimum.

Solids retention systems for combined sewers

Storage tanks for combined sewer systems can be equipped with special Amiblu solutions such as Amiscreen and CSO chamber. Both systems help retain suspended solids inside the pipe reservoir of the storage sewer, making sure that the outflowing water is optimally cleaned. This prevents overloads at the wastewater treatment plant and guarantees that natural water courses are no longer subject to pollution.

Storage sewer with Amiblu Amiscreen elements. The large screening surfaces effectively filter suspended solids from the wastewater.

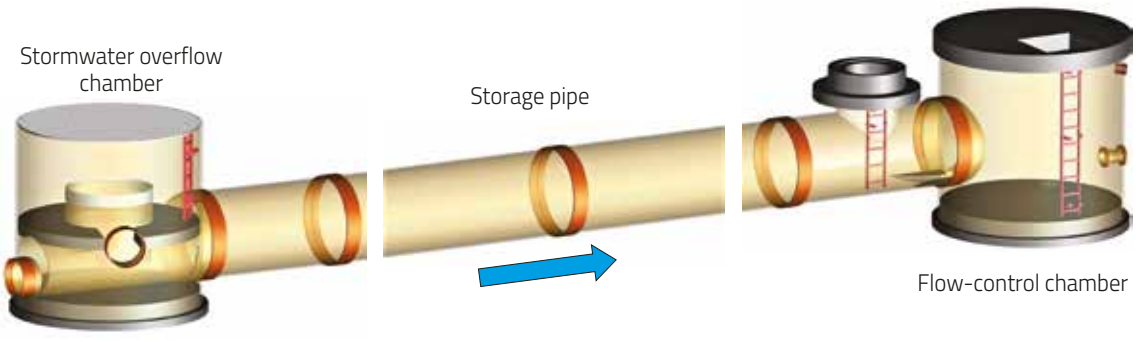
Flexible, self-cleaning GRP bars retain sediments in the Amiblu CSO chamber. The cleaned water exits the chamber through an overflow.

Find more details about the Amiscreen and CSO chamber on our website **www.amiblu.com**.

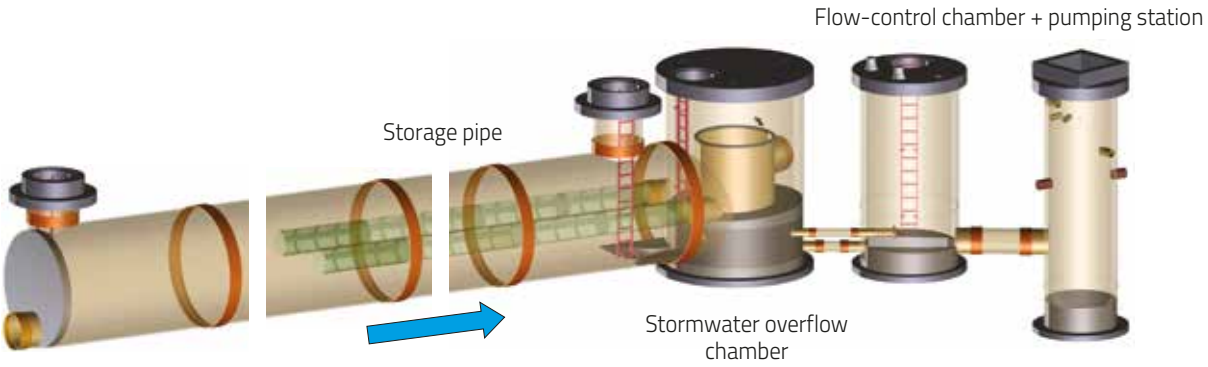
Retention systems for combined sewage

Storage sewers are special forms of retention tanks. They usually consist of a storage pipe, a flow control chamber, and a storm-water overflow manhole. Storage sewer can be designed with overhead discharge or invert discharge. Both systems enable sedimentation and are designed to retain suspended matter in the case of heavy rain, so the over- and outflowing water is as clean as possible.

Thanks to the very smooth inner surface of GRP storage sewers, sediments are washed out with the next rain and the sewer is cleaned very easily, even with very low volumes of water and shallow gradients. This self-cleaning behaviour makes additional cleaning facilities or dry weather channels unnecessary.



Storage sewer channel with overhead discharge



Storage sewer channel with invert discharge (incl. Amiscreen)

Whether constructed as central overflow (water flows out from the inside), as cup inlet or trough inlet (water flows in from the outside), Amiblu GRP stormwater overflows fit inside manholes DN 2000 to DN 3600.

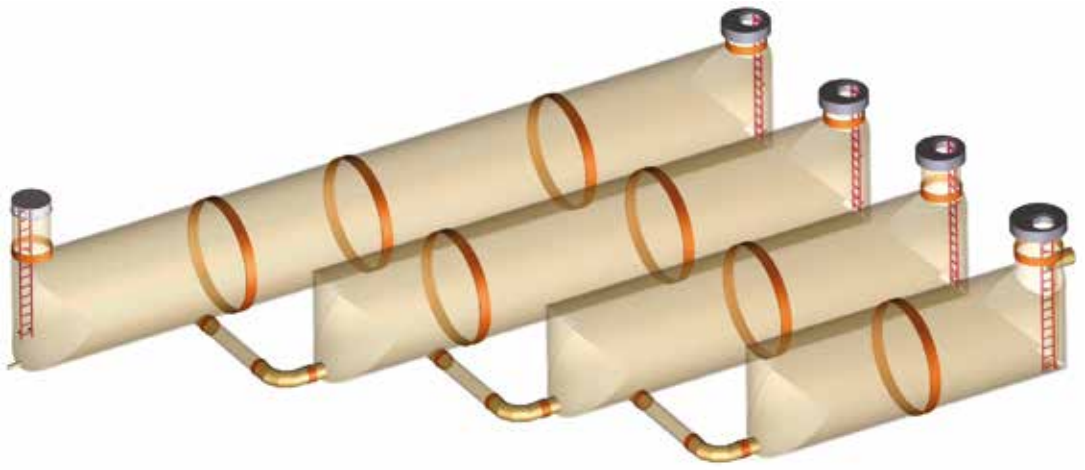
Stormwater overflows for storage sewers including weir: spring pot (left), cup inlet (upper right) and trough inlet (lower right).

A combined sewer usually includes dry or semi-dry operated flow-control systems. These are integrated in separate chambers. Depending on the flow-control system, the chambers are designed in nominal diameters of DN 1500 to DN 3000. They can even be implemented as horizontal, accessible pipes from DN 2400 to DN 3000 in custom lengths.

Electrical flow control, dry operation

Mechanical flow control, semi-dry operation

Storage solutions for stormwater



Multi-line (battery) configuration of an Amiblu GRP stormwater retention tank

The installation of above-ground stormwater retention basins is often not a practicable or even possible option, particularly in densely populated areas like city centers. Open ponds are prone to siltation and clogging, and they can cause long-term aesthetic problems as well as odor issues.

Subsurface GRP retention systems by Amiblu use available land much more efficiently. They provide temporary storage for excessive amounts of stormwater, which is discharged into a local body of water in a delayed and controlled manner. Amiblu stromwater retention tanks require very low maintenance and, once installed, go unnoticed from the citizens who fully benefit from them. They usually feature an emergency circulation and emergency overflow. Used as cisterns, stormwater tanks are not configured with any flow control system. Incoming water is stored for a later use, e.g. as fire-fighting or process water.

Left: Throttle valve without moving parts, wet well installation
Right: Mechanical float/slide throttle valve, wet well installation

XXL TANK DN 3600 PROTECTS POLISH CITY AGAINST FLOODS
A 2410 m³ retention system was installed in Dąbrowa Górnicza in southern Poland. The reservoir is built of four 62 m rows of Hobas GRP pipes DN 3600, shafts, as well as bends with in- and outlet pipes.

Reference projects all around the globe

Amiblu storm- and wastewater retention systems made of Hobas centrifugally cast and Flowtite filament wound GRP pipes have an impressive track record all around the globe.

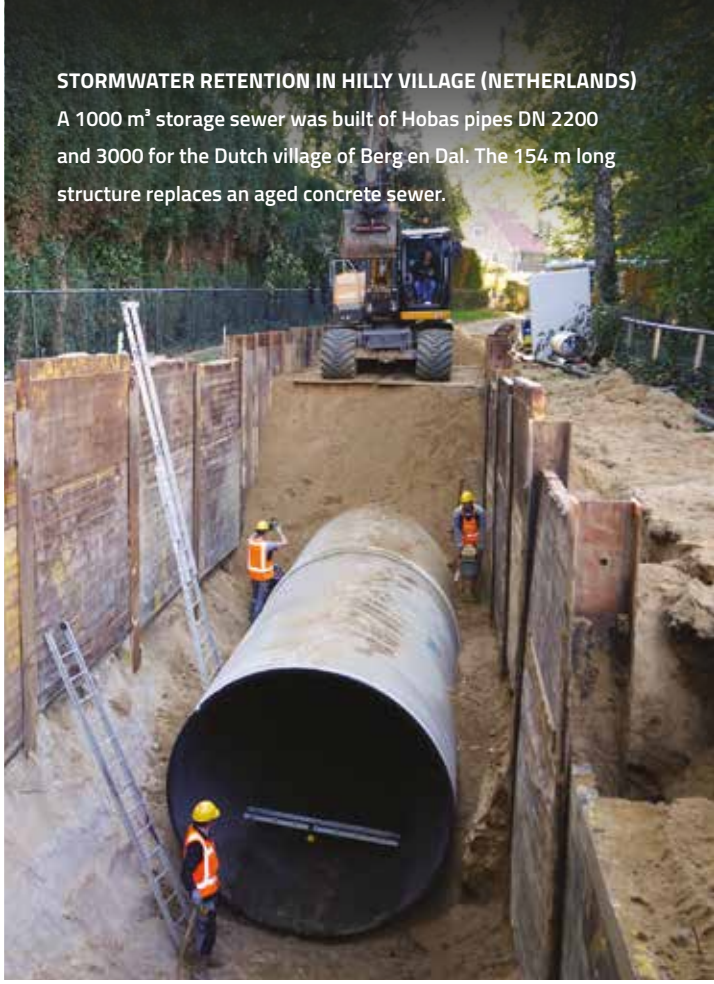
50 000 M³ STORAGE SYSTEM FOR CARGO FREIGHT CENTER (GERMANY)
At the JadeWeserPort cargo freight center, a giant GRP stormwater retention system was installed in only two months time. The tank is built of Flowtite pipes DN 1000 to DN 3000 and has a length of 10 000 m.

KITE-SHAPED SEWER FOR WILHELMSHAVEN (GERMANY)
A 320 m long Flowtite storage sewer DN 1500 with a kite-shaped inside profile was installed in northern Germany. The special design ensures sufficient flow even during dry periods.

1450 M³ RETENTION TANK FOR FASA-RENAULT (SPAIN)
Amiblu supplied a 1450 m³ Flowtite GRP retention tank to the FASA-Renault Suppliers Park in the Spanish city of Valladolid. The tank consists of three 120 m long pipelines DN 2200, a 12 m long module DN 2600, a vertical manhole DN 3000, and three additional chambers for cleaning.

STORAGE TANK WITH AMISCREEN FOR COMBINED SEWAGE (GERMANY)
Amiblu supplied a 61 m long Flowtite storage tank DN 2200 with 200 m³ capacity for the city of Straubing. The tank features a 56 m long Amiscreen solids retention system and a stormwater overflow shaft DN 3400.

LARGE STORAGE SPACE FOR STORMWATER (AUSTRIA)
A 750 m³ Hobas GRP retention tank, consisting of two pipe strings DN 3000 of 53 m each and four prefabricated manholes DN 1000 was installed for the town of Grieskirchen in Upper Austria.



STORMWATER RETENTION IN HILLY VILLAGE (NETHERLANDS)
A 1000 m³ storage sewer was built of Hobas pipes DN 2200 and 3000 for the Dutch village of Berg en Dal. The 154 m long structure replaces an aged concrete sewer.

980 M³ RETENTION CAPACITY FOR VW (SLOVAKIA)
Two Hobas GRP retention tanks – one two-string DN 1200 with 230 m³ and one three-string DN 2200 of 750 m³ – were installed for Volkswagen Slovakia as part of an expansion of production facilities.

1200 M³ STORMWATER STORAGE TANK WITH SAND TRAP (GERMANY)
It took only three days to successfully install a 1200 m³ Flowtite GRP storage system DN 2500. The GRP structure has a total length of 255 m and consists of three lines, each equipped with a sand trap and flow control shaft.

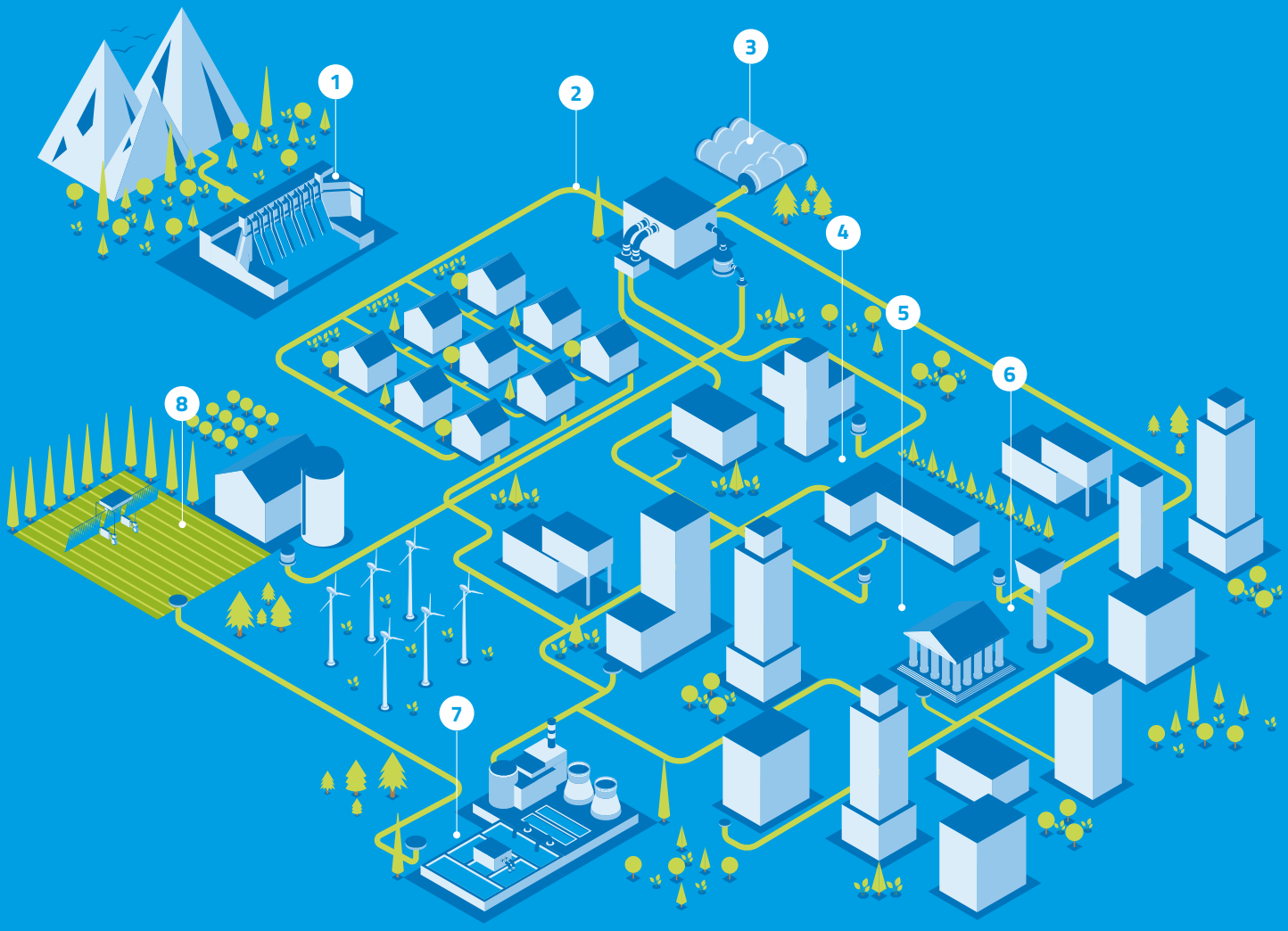
Let our team help your team!

On any project, you need to know that the people you work with are as committed to your success as you are. We believe in the long view and the longterm. So we partner with our customers from concept through to operation. We add value with innovative GRP solutions that outscore traditional alternatives on every parameter. We help you solve your problems and overcome your challenges to guarantee longterm, sustainable performance.

Amiblu®

Let’s value water as we should.

1. Hydropower
2. Potable Water
3. Storage Tanks
4. Sewage and Stormwater
5. NC Pipes Rehabilitation
6. Jacking Pipes
7. Industry
8. Irrigation



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