

HUBER Equipment for Drinking Water Reservoirs PG 8



A complete system solution for drinking water reservoirs

- Complete solutions with stainless steel products
- for drinking water production, treatment, storage, distribution

►► Drinking water

Our most important resource

Water is our most valuable resource. We all expect clear and clean water when we open the tap. Drinking water reservoirs are built to balance the difference between the water delivered and the actual water demand, provide for a fire water reserve, and ensure perfect water quality through mixing different types of water. The water stored in reservoirs must be absolutely hygienic, neutral in colour and taste, and odourless.

Why stainless steel?

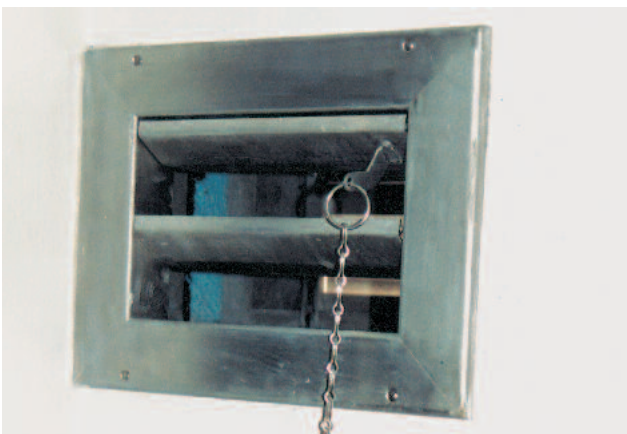
Water reservoirs must be made of a material that does not impair the quality of our drinking water. The use of wrong materials for built-in components leads to the multiplication of microorganisms in the drinking water. Also cleaning and disinfection of the drinking water reservoir can cause corrosion if its components are made of inappropriate material. Stainless steel with its material-neutral properties and very smooth surface reduces the growth of microorganisms. German DVGW W 300 standards therefore recommend the use of non-corrosive 1.4571 stainless steel according to EN 10088.

Full range of equipment for drinking water reservoirs

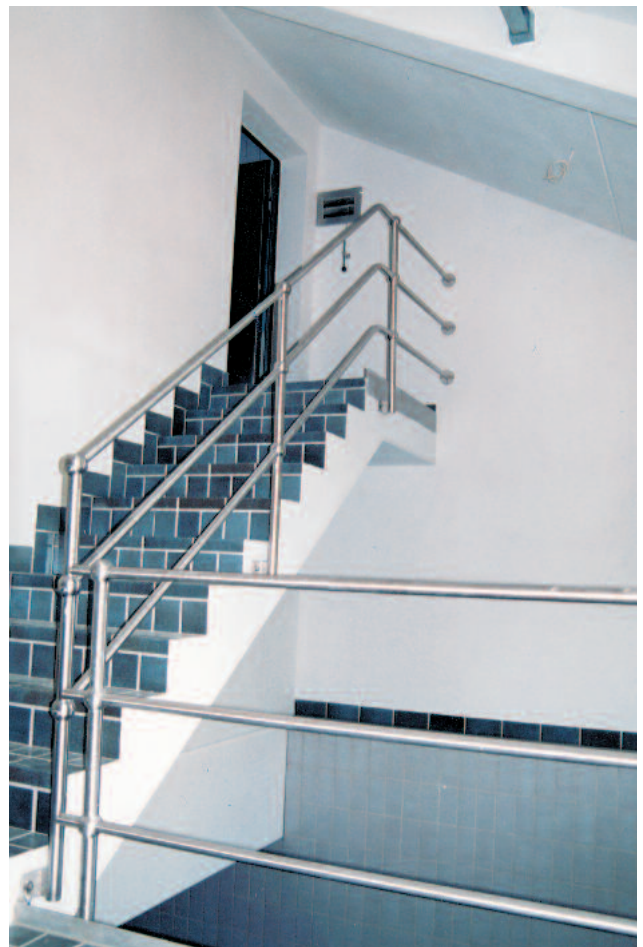
For many years, HUBER has been committed to the development and supply of equipment for drinking water reservoirs and today is able to offer a wide range of standardised products. Our program comprises manhole covers, aeration/deaeration chimneys, entrance ladders, doors, louvres, windows, pressure doors, pipeline fittings, feed and withdrawal fittings, wall ducts, railings, entrances and crossings. We keep many of our standardised parts in stock for immediate delivery but also develop tailored solutions for our customers.



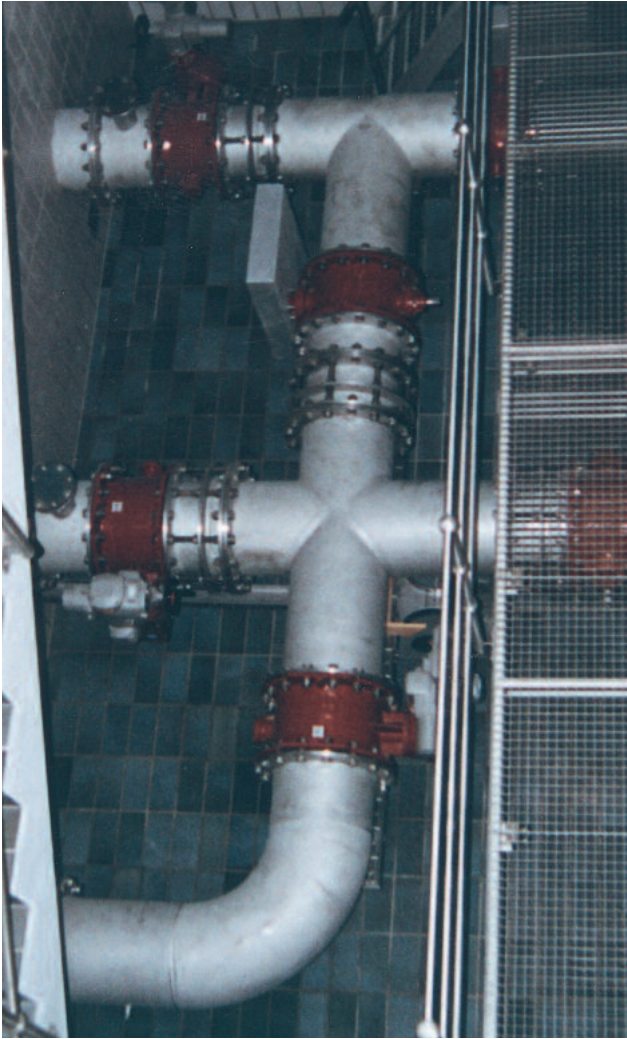
Attack-proof entrance door



Adjustable stainless steel louvres



Stainless steel railing systems



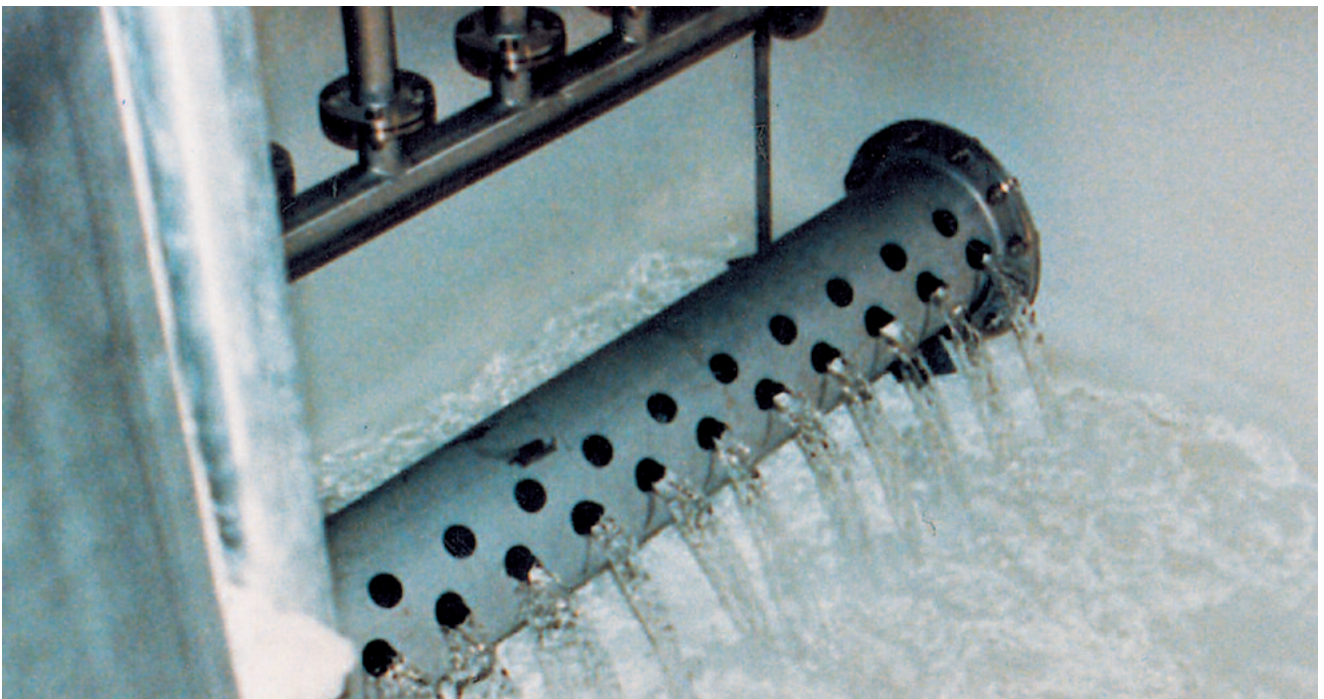
Clear pipework arrangement



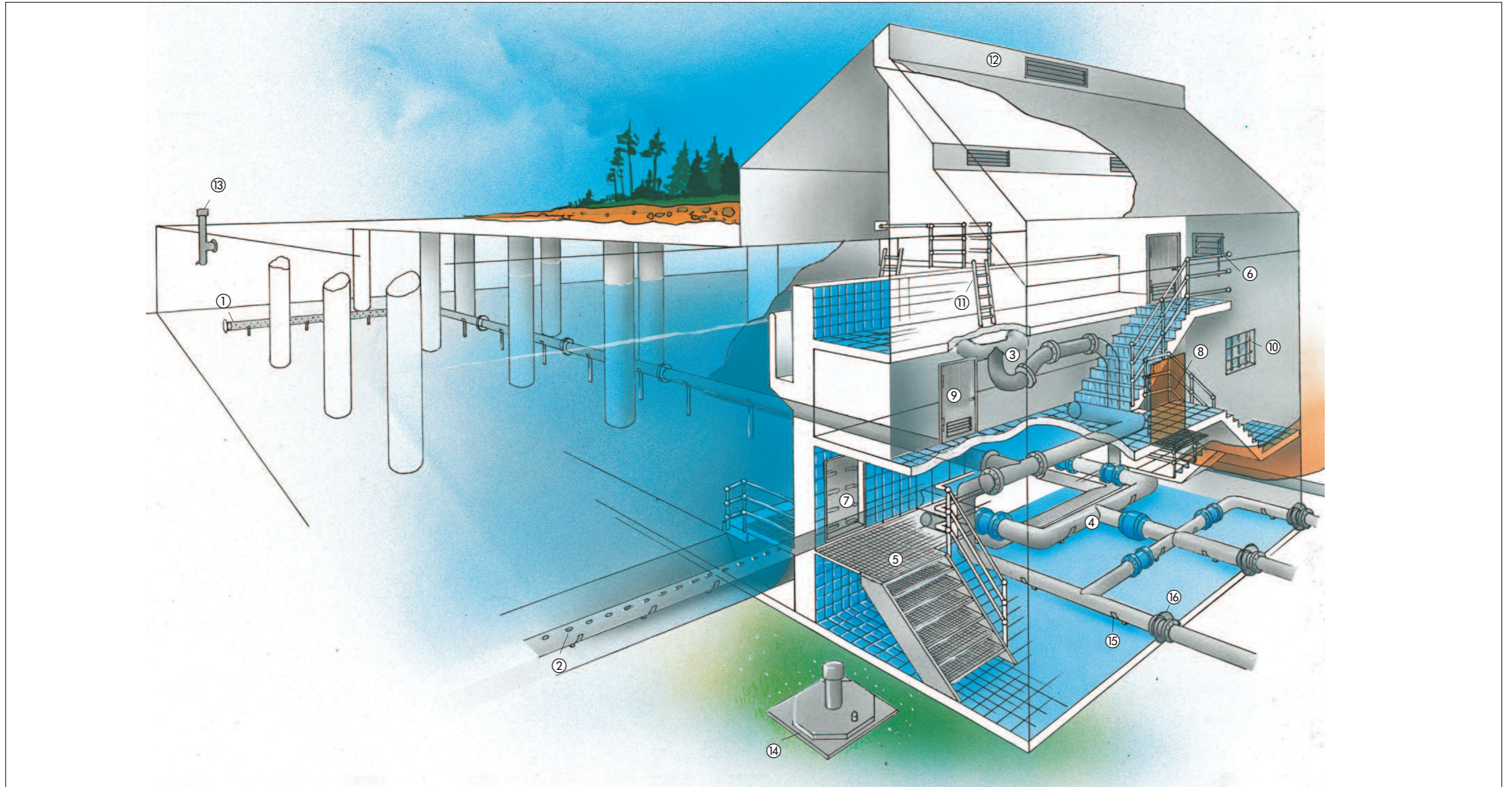
Platforms and stairs with a non-slip surface



Window protection grilles



Stainless steel feed pipe



► Key

- ① Feed pipe
- ② Withdrawal
- ③ Overflow
- ④ Fittings in valve chamber

- ⑤ Platform with stairs
- ⑥ Railing
- ⑦ Pressure door
- ⑧ Security door

- ⑨ Door with louvre
- ⑩ Window with grille
- ⑪ Access ladder
- ⑫ Ventilation louvre

- ⑬ Deaeration system
- ⑭ Manhole cover
- ⑮ Pipe support
- ⑯ Wall duct

►► High requirements

On the structural design and mechanical equipment of drinking water reservoirs

Tank flow

Water replenishment in the chambers of a drinking water reservoir must be sufficient to avoid dead zones and water germination. Straight feed and outlet pipes create a uniform parallel flow in rectangular tanks, whereas in circular tanks the combination of a feed pipe and outlet turbine generates a spiral flow towards the tank centre. Depending on the tank shape and the flow to and from the tank, a stable and optimised tank flow can be achieved with other tank designs.

Object protection

We must eliminate the risk of any manipulation of our drinking water and its quality. Access to the free water surface must be prevented and the plants protected against vandalism and theft. The exterior shell of objects should therefore be designed as a mechanical barrier with a long resistance time. Criminal investigation departments recommend the use of doors certified to security class WK3 or WK4 in compliance with DIN V-EN V 1627 and equip windows with grilles. Certified safety

manholes are recommended for vertical accesses, and ventilation systems must not end over the free water surface.

Pipelines

Every drinking water reservoir is connected with the drinking water pipeline network and underground pipes empty into the reservoir. The ingress of vermin and dust or pressing water must be prevented. Also settlement between the pipeline and tank must be taken into account. The galvanic formation of cells can be prevented by using plastic sealings. We offer a variety of solutions that meet all these requirements.

►► Safety for men

Hygiene and cleanness

Pipelines are required for every drinking water reservoir, whether for feeding or withdrawal, as bottom outlet or overflow. To avoid welding and complicated installation work on site, pipelines should be prefabricated in the factory to the greatest possible extent. Prefabrication increases the quality of the whole installation compared to field assembly. It is no problem to manufacture complicated fittings from stainless steel. To avoid the quality of drinking water being impaired by sediments or germination in pipe fittings, a smooth and corrosion-free material surface is required. Stainless steel is able to perfectly meet these requirements.

Access to water chamber

To meet the constructional, technical and hygienic requirements of drinking water reservoirs, the doors for access openings to the water chamber must be suitable to be fully submerged. All doors in the area of the (stable or varying) water level must close watertight. HUBER offers perfectly suitable pressure doors for such openings. These doors are supplied with lever handles or a central lock easy to operate from both sides. They are pressure-tight up to a water gauge of 10 m, submersible and suitable to be lined on both sides (and hygienic due to the use of a food-safe sealing). The pressure doors are completely manufactured from stainless steel and acid treated in a pickling bath for passivation.

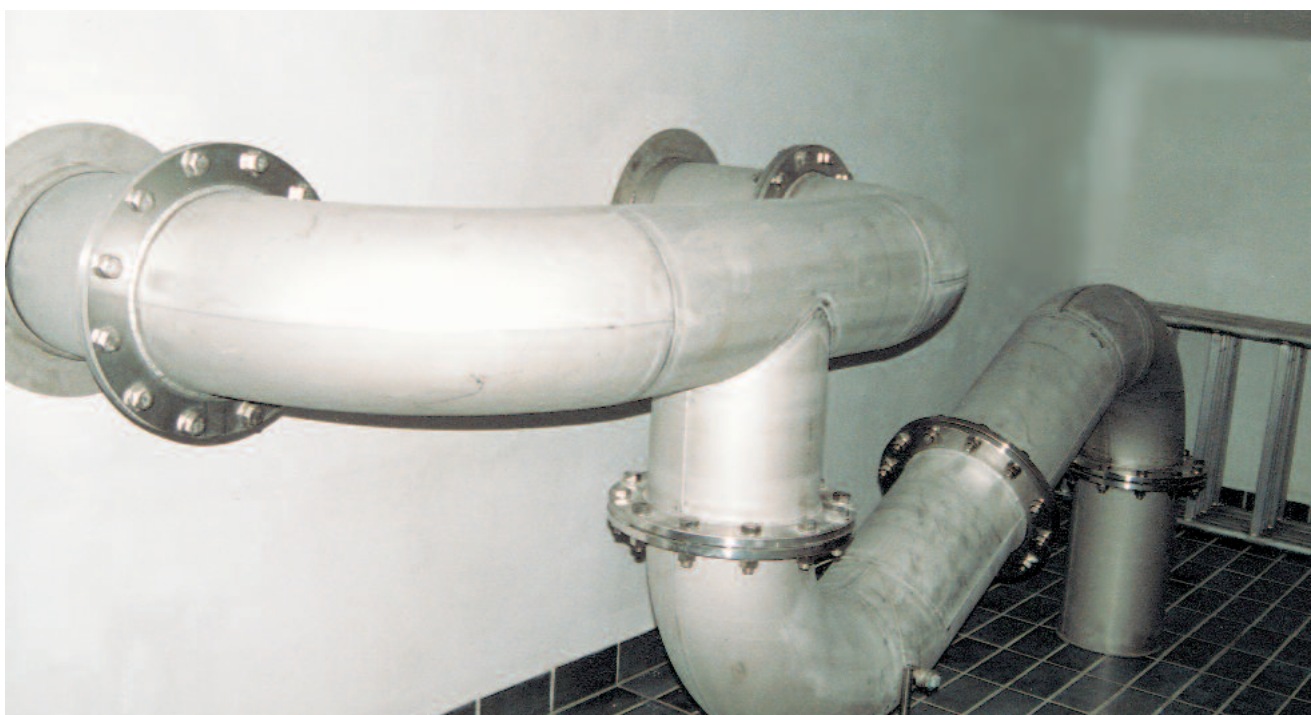
➤ Installation examples



Stainless steel pressure door



Stainless door with ventilation louvre



Stainless steel pipelines

➤➤ The benefits for planners and operators



The HUBER SE factory at Erasbach near Berching

➤➤ Safety for men

- Safety at work prevents accident risks.
- Optimal flow conditions prevent the development of dead zones and germination of drinking water.
- Individually adjustable to any tank shape and inlet/outlet requirements, whether for new structures or refurbishment
- Completely made of stainless steel and acid treated in a pickling bath for a very long product life
- Compliance with DVGW standards for planning reliability

➤➤ Safety for objects

- Security doors, window grilles and manhole covers applicable for objects with increased security requirements
- Stainless steel components for reliable operation

- Complete corrosion protection from pickling bath and passivation
- Low investment costs through standardised component parts
- No sedimentation in the pipe invert due to the smooth surface

➤➤ Safety for investors

- Long product life for reliable water supply without disturbances
- Careful manufacture under precisely the right conditions for the material including final pickling bath treatment and subsequent passivation ensures that each product receives the best possible protection against corrosion.
- Low investment costs through standardised component parts
- High availability through large stock holding

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