

HUBERT

water treatment installations

Coarse screens

Drum screens



Grit removal systems

Screw pumps

Clarifiers

Surface aerators

Thickeners

Hubert chain-operated coarse screen

The Kobar coarse screen is a front raked, chain operated coarse screen. It is designed for automatic pre-cleaning of surface water or wastewater influent

The Kobar coarse screen is used particularly for removing debris from a water intake with a low water level.

The Kobar is a pre-assembled unit for direct installation at site. The rake is mounted in and operated by two chains. The rake is in open position when moving downwards.

At the bottom of the channel the rake closes and removes all debris from the coarse screen when moving upwards.

At deck level the debris is removed from the rake by a scraper and discharged on a conveyor belt, concrete gutter or in a container (choice to be made by client).

Advantages

The advantages of the Kobar coarse screen are:

- Only the rake enters the water. Chains and bearings etc. remain above water level
- Easy to install
- The bar screen is cleaned in one cycle over the complete bar screen width.
- Low installed power, low energy cost
- Low maintenance

Standard dimensions

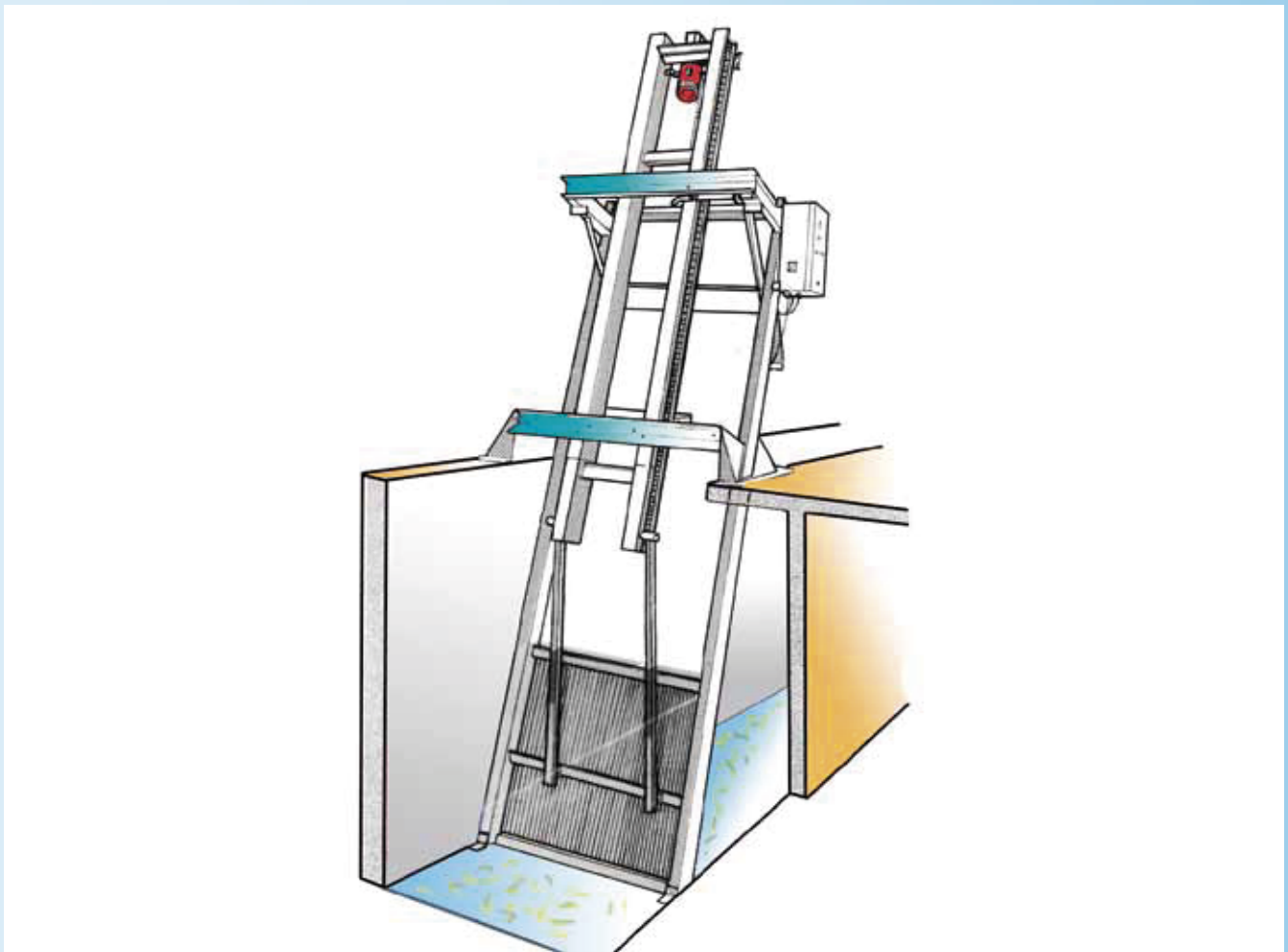
Width: up to 4 m.

Depth: up to 12 m.

Bar space: from 6 up to 20 mm.

Installation angle: from 70° up to 90°

Specific dimensions or materials on request.



Hubert drum screen / horizontal

The Horizontal Drum screen is designed for a single exit flow pattern. The water flows through the mesh panels of the Drum screen at the circumference and the filtered water exits the drum through the concrete outlet.

The dirt particles, which are trapped on the outside of the screen panels, will be removed by high pressure spray water and discharged through the trash hoppers.

The cleaning process can be executed automatically and semi-automatically.

The drum is placed in a concrete pit or tank and rotates on a stationary shaft.

All Hubert rotary drums screens are executed with maintenance free (sea-) water lubricated slide bearings. Furthermore, the horizontal drum screen is executed with a special ring gear and drive pinion, which are made of a special wear resistant polyamide.

The Horizontal Drum screens are very suitable for use in cooling water intake systems. They are successfully being used in:

- Energy Power plants

- Oil Refineries
- LNG plants
- Chemical/industry plants

The smaller units are ideal for:

- Filtration of process water
- Pre-filtration of waste water
- Pre-filtration of surface water for potable water production
- Filtration of feed water in desalination plant

Advantages

The advantages of the Horizontal Drum screen are:

- Light, but robust and stable construction
- Resistant to corrosion
- Reliable
- Low maintenance
- Water lubricated bearings
- Environmental friendly
- Long lifetime (30 years or more)

Standard dimensions

Capacity: between 100 and 10,000 m³/hr.

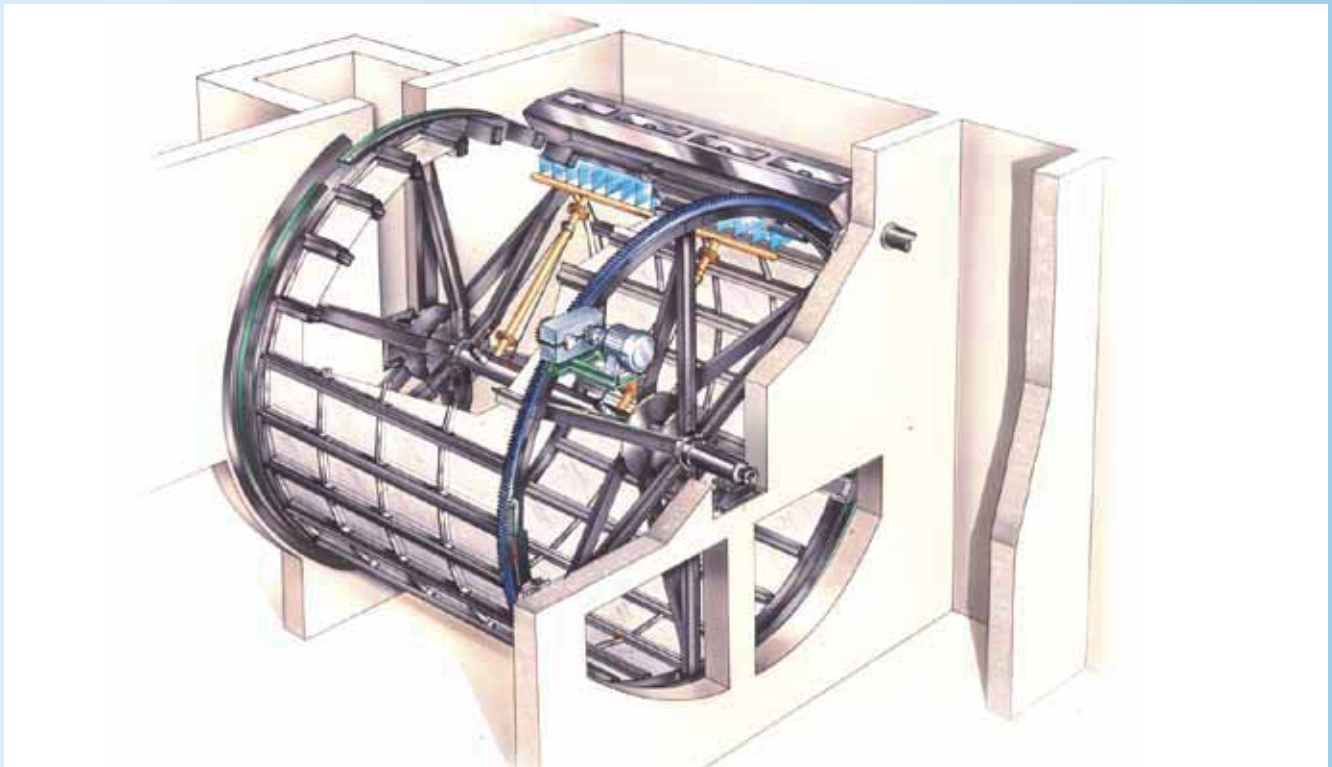
Mesh opening: between 2x2 and 10x10 mm.

Drum length: up to 6 m.

Diameter: up to 12 m.

Material: coated or stainless steel

Specific dimensions or materials on request.



Hubert drum screen / vertical

The Vertical Drum screen is designed with A-shaped spokes. These specially designed A-shaped spokes provide a light but robust and stable construction and also ensure a very accurate seal against the channel walls.

Even the large diameter (>12 m) Vertical Drum screen is, due to this accurate seal, suitable for filtration with 2x2 mm.

All Hubert rotary drums screens are executed with maintenance free (sea-) water lubricated slide bearings. Furthermore, the vertical drum screen is executed with a special ring gear and drive pinion, which are made of a special wear resistant polyamide.

Hubert drum screens are available for different flow patterns.

The Vertical Drum screen is a rotating drum screen, provided with fine mesh screen panels.

The dirt particles, which are trapped on the screen panels, will be removed by high pressure spray water and discharged through the trash hoppers. The cleaning process can be executed automatically and semi-automatically.

The Vertical Drum screens are very suitable for use in cooling water intake systems. They are successfully being used in:

- Energy Power plants
- Oil Refineries
- LNG plants
- Chemical/industry plants

Advantages

The advantages of the Vertical Drum screen are:

- Light, but robust and stable construction
- Large flow capacities
- Resistant to corrosion
- Reliable
- Low maintenance
- Water lubricated bearings
- Environmental friendly
- Long lifetime (30 years or more)
- Fish removal system

Standard dimensions

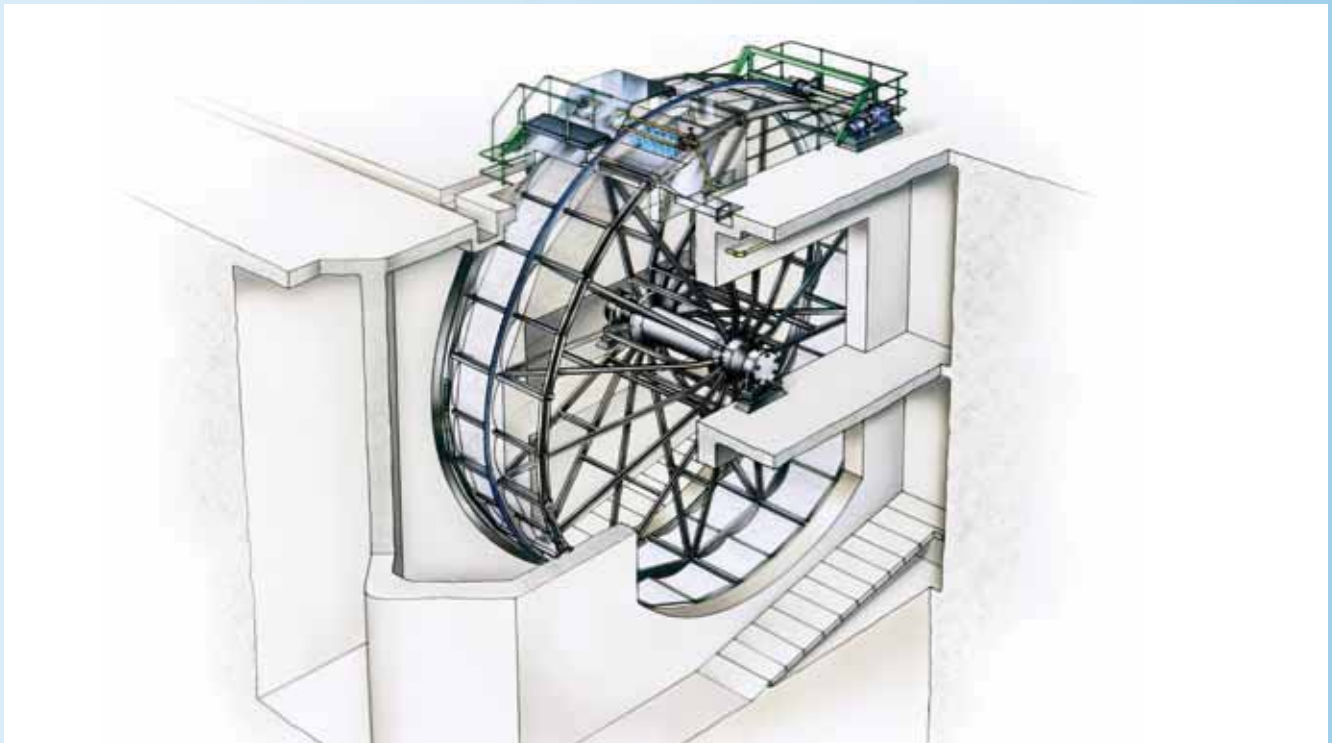
Capacity: between 10,000 and 120,000 m³/hr.

Mesh opening: between 2x2 and 10x10 mm.

Drum length: up to 5 m.

Diameter: between 5 and 20 m.

Material: stainless steel AISI 304/316/316Ti
Specific dimensions or materials on request.



Hubert micro screen

The Micro screen is developed for very fine filtration of surface, process and recirculation water.

The Micro screen is a rotating drum screen, provided with fine mesh screen panels or a filter cloth.

The dirt particles, which are trapped on the screen panels, will be removed by high pressure spray water and discharged through the trash hoppers and the hollow shaft.

The cleaning process can be executed automatically and semi-automatically.

Application

The Micro screen is suitable for:

- Pre-treatment of waste water
- Pre-treatment of potable water
- Effluent polishing
- Process water filtration (recycling)
- Feed water filtration for desalination plants
- Cooling water filtration

Advantages

The advantages of the Micro screen are:

- Resistant to corrosion
- Very fine filtration possible
- Reliable
- Low maintenance
- Water lubricated bearings
- Environmental friendly
- Long lifetime

Standard dimensions

Capacity: between 40 and 1500 m³/hr.

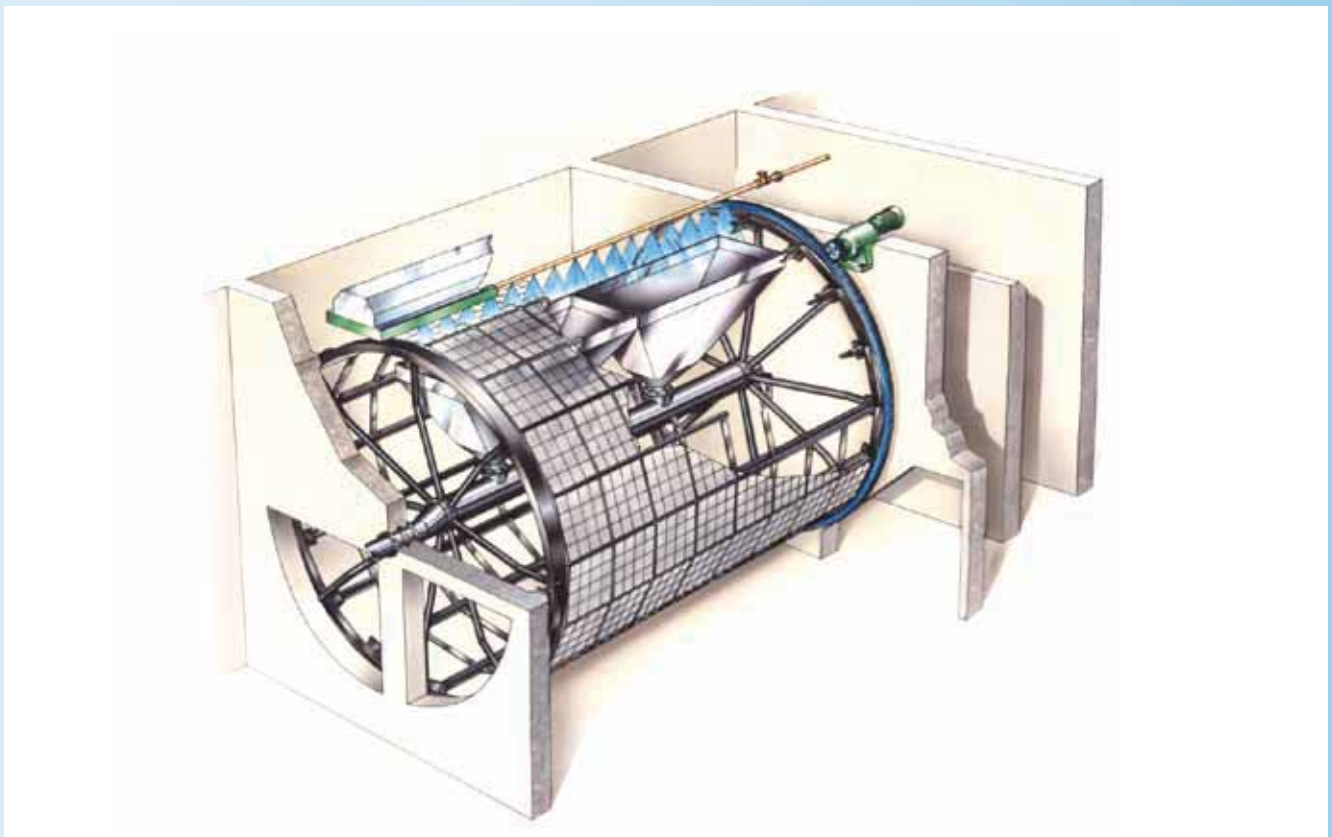
Mesh opening: between 11 and 500 µm.

Drum length: up to 6 m.

Diameter: between 0,7 and 3,5 m.

Material: stainless steel AISI 304/316/316Ti

Specific dimensions or materials on request.



Introduction

The Hubert grit removal system provides continuous, low-cost separation and removal of sand from the raw influent in wastewater treatment plants. Hubert designs grit removal systems to accommodate the most challenging influent profiles and treatment standards. The system consists of grit collecting and washing mechanisms which operate separately but in hydraulic communication with each other.

Efficient removal of sand

The Hubert square flat sand trap combined with rake classifier (sand washer) and return of organic matter is designed to remove sand from the crude influent in water treatment plants. The grit collecting mechanism is normally installed in a square shallow concrete tank with sloping corners.

Reliable operation

The crude influent enters the square sand trap on one side and is distributed equally across the entire trap area by means of adjustable baffles. The grit settles at the bottom of the trap. The effluent will be discharged via a weir at the opposite end.

The collecting mechanism consists of two steel arms which are attached to a vertical shaft and fitted with outward raking blades (with scoops on the ends).



Hubert screw pump

The (Archimedean) screw pump is one of the oldest devices for vertical displacement of liquids. Since the beginning of the last century Hubert is the main supplier, world-wide, for the screw pumps.

The screw pumps are used particularly in waste water treatment plants for pumping industrial or municipal waste water. In the early years screw pumps were also used for drainage purposes in combination with wind mills, steam engines or diesel engines.

For pumping biological activated return sludge the screw pump is the best suitable solution, because the delicate activated biology will not be damaged by this pump.

The screw pump can handle coarse waste water, which is a very important advantage. Gravel, rags, small branches and other debris can easily be displaced by the screw pump.

The capacity can vary between 50 m³/hr and 38.000 m³/hr and is determined by several variables, such as outer diameter, pitch, windings, speed and angle of inclination. The Hubert selection procedure guarantees the most economical design.

Advantages

The advantages of the Hubert screw pump are:

- Can handle coarse waste water with debris
- Ideal for pumping activated sludge
- Low maintenance
- Resistant to pollution
- Extremely reliable
- Simple and efficient
- Capacity range
- Low speed

Hubert ECO-friendly lower bearing

The Hubert screw pump is also available in an environment friendly execution. The pump is then executed with a so called ECO-friendly lower bearing.



Hubert Clarifier

Hubert Clarifier

The Hubert clarifiers remove sludge efficiently from primary and secondary settling tanks.

The Hubert clarifiers come in different sizes and executions. The most common clarifier is executed with a triangular aluminium bridge, with walkway, across the tank. The bridge is supported on a two-wheel peripheral drive unit and a trust bearing in the centre of the tank. The parabolic bottom scraper blades are suspended from the bridge. A scum scraper at water level is mounted on the bridge and directs the scum into the scum discharge.

The Hubert Clarifiers are designed for the following bridge spans:

- $\frac{1}{2}$ tank diameter
- $\frac{2}{3}$ tank diameter
- Full tank diameter
- 3-spoke

The Clarifier can also be executed with a steel coated tubular bridge or any other shape or material required.

General Options

- Scum scraper with scum discharge
- Inlet drum
- Inlet deflection plate
- Overflow rim
- Scum baffle
- Central drive unit
- Gull wire on the bridge handrail
- (Stainless) steel overflow gutter
- Gutter cleaning device

Options for the peripheral drive unit

- Overload protection
- Obstacle protection
- Slip protection
- Snowplow



Hubert surface aerator

Hubert surface aerator

The use of devices to add oxygen to wastewater dates back at least to the 1880's. Mechanical aerators, originally introduced in 1920, gained popularity in the Netherlands.

Since 1960 Hubert has supplied several types of mechanical aerators. With the Simcar aerator and from 1973 with the HB-aerator, Hubert became one of the leading companies in mechanical surface aeration.

In 1990 Hubert developed a new type of vertical surface aerator, the Hubair®, with an efficiency between 2.0 and 3.2 kg O²/kWh.

Design and construction

In standard design the Hubair® aerator is made of carbon steel with an epoxy coating. For aeration in highly aggressive environment a stainless steel aerator is available.

On special request Hubert can supply horizontal brush aerators.

Advantages

The advantages of the Hubair® aerator are:

- High oxygen input efficiency up to 3.2 kg O²/kWh
- Low energy consumption
- Restricted aerosol emission
- Low maintenance
- Resistant to pollution
- Extremely reliable
- Extremely high oxygen input by a single Hubair® aerator; up to 500 kg o²/h
- Excellent water propulsion and mixing capacity
- Simple control system

The Hubair® aerator is also available in floating execution for placement in tanks, large basins and lagoons.

Additional equipment

- Float assemblies
- Bridges
- Shrouds
- Aerocaps
- Bottom baffles
- Wall baffles
- Draft tubes
- Sun shields
- Noise covers



Hubert Thickener

For the thickening and removal of primary, secondary and stabilized sludge Hubert has developed a complete range of thickeners.

The Hubert Thickeners are designed for circular tanks and incorporate a rotating thickening and raking mechanism.

The Hubert Thickeners are available with peripheral drive and with central drive.

Central drive thickener

The Hubert central drive thickener consists of a twin-arm raking mechanism with thickening bars.

The mechanism is connected to the central drive unit by means of a shaft or a cage construction.

The fixed bridge, spanning the tank, consists of two beams and incorporates a walkway. If required, a concrete bridge is possible.

The drive unit can be executed with an overload alarm sensor.

Peripheral drive thickener

The Hubert peripheral drive thickener consists of a twin-arm raking mechanism with thickening bars.

The mechanism is connected to the central bearing unit by means of a shaft or a cage construction and supported by the peripheral drive at each end.

The bridge can be executed as spanning half tank diameter and full tank diameter

The drive unit(s) can be executed with an overload alarm sensor.

Scum removal

Hubert thickeners can be provided with a complete scum removal device.

