

# HUBERT

water treatment installations



Stoplogs

Coarse screens

Fine screens

Clariflocculators

### Hubert Stop Log

The Hubert Stop Log is developed for rapid and secure closure of large water inlet channels and pump chambers.

This makes periodic inspection and maintenance of screening system and pumps possible.

The Stop Logs can be executed as stackable for closing deep water inlet channels.

The Stop Logs seal off channels even without water pressure, due to special designed rubber seals.

Guides are installed in the sides of the concrete channel to ensure optimum sealing and installation.

Installation and removal of the Stop Logs is done by means of a lifting beam equipped with an automatic engaging and disengaging mechanism

If required the Stop Log can be executed with pressure equalizing valves, which are operated by a facility mounted in the lifting beam.

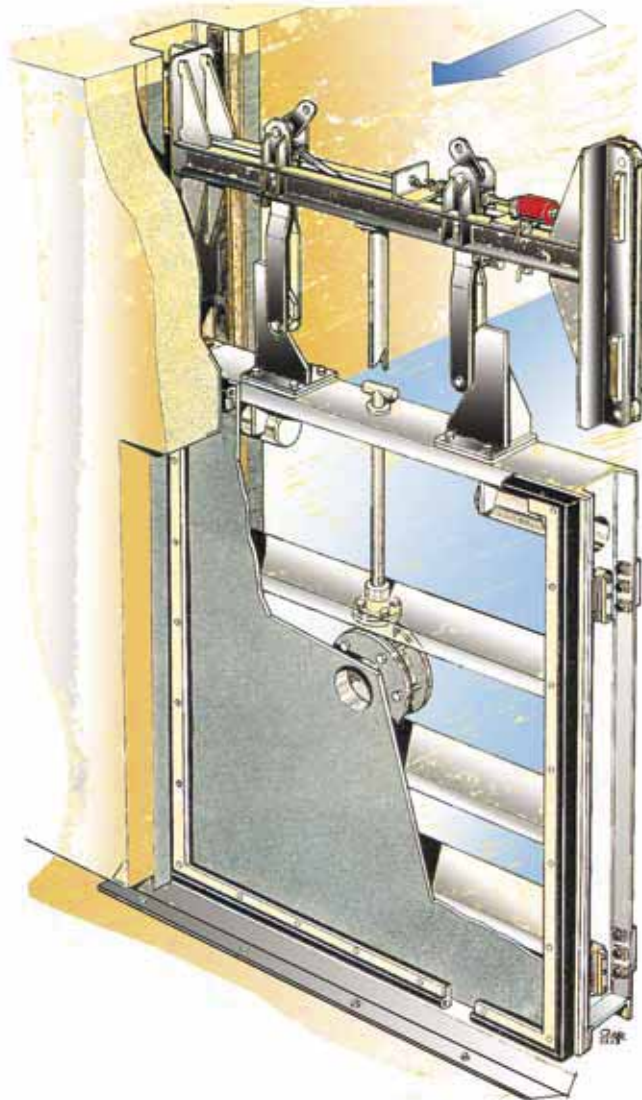
### Standard dimensions

Width: up to 6 m.

Height: up to 12 m.

Material: coated steel or stainless steel.

Specific dimensions or materials on request.



### Hubert cable-operated coarse screen

The Damran coarse screen is a front raked, cable operated coarse screen. It is suitable for cleaning large flows of process-, cooling and wastewater. The Damran coarse screen is used particularly for removing medium and large amounts of coarse debris from a water intake.

The rake is mounted on a trolley with nylon wheels, which run in guides in the channel. 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 Damran coarse screen are:

- Moving parts are above water level in rest position
- Capable of removing large amounts of debris
- Low installed power, low energy cost
- Low maintenance

### Standard dimensions

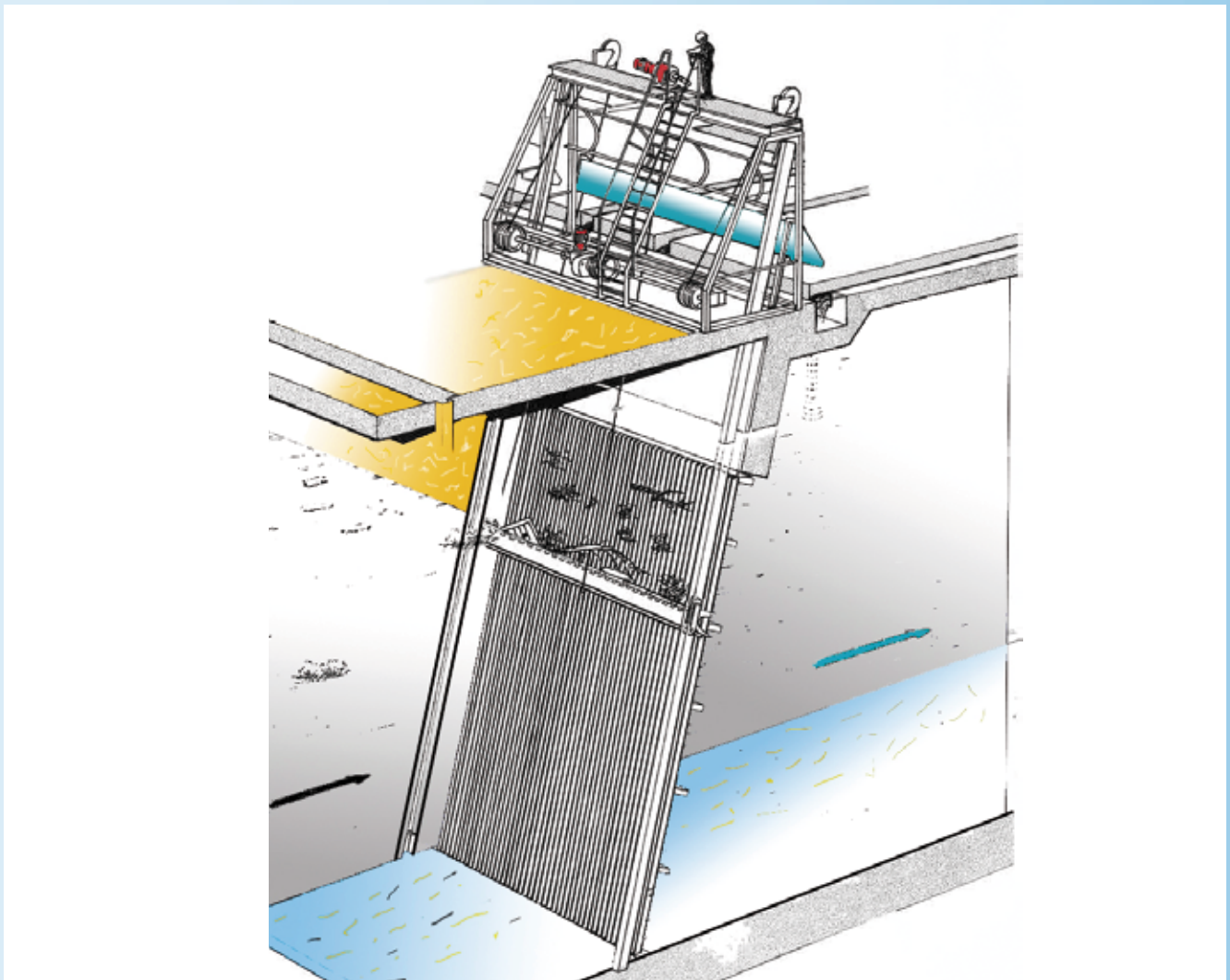
Width: up to 4 m.

Depth: unlimited.

Bar space: from 20 up to 100 mm.

Installation angle: from 70° up to 90°

Specific dimensions or materials on request.



### Hubert cable-operated coarse screen

The Mobile Damran coarse screen is a front raked, cable operated coarse screen. It is suitable for cleaning large flows of process-, cooling and wastewater.

The Damran coarse screen is used particularly for removing medium and large amounts of coarse debris from a water intake.

The Mobile Damran moves on rail tracks along the bar screens. It cleans section by section over the whole width of the intake channel.

The Mobile Damran can be executed with a control platform or cabin with a control panel and a debris hopper.

The rake is mounted on a trolley with nylon wheels. 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 Mobile Damran coarse screen are:

- Moving parts are above water level in rest position
- Capable of removing large amounts of debris
- Capable of cleaning more than one bar screen
- Unlimited screen width
- Low installed power, low energy cost
- Low maintenance

### Standard dimensions

Rake width: up to 4 m.

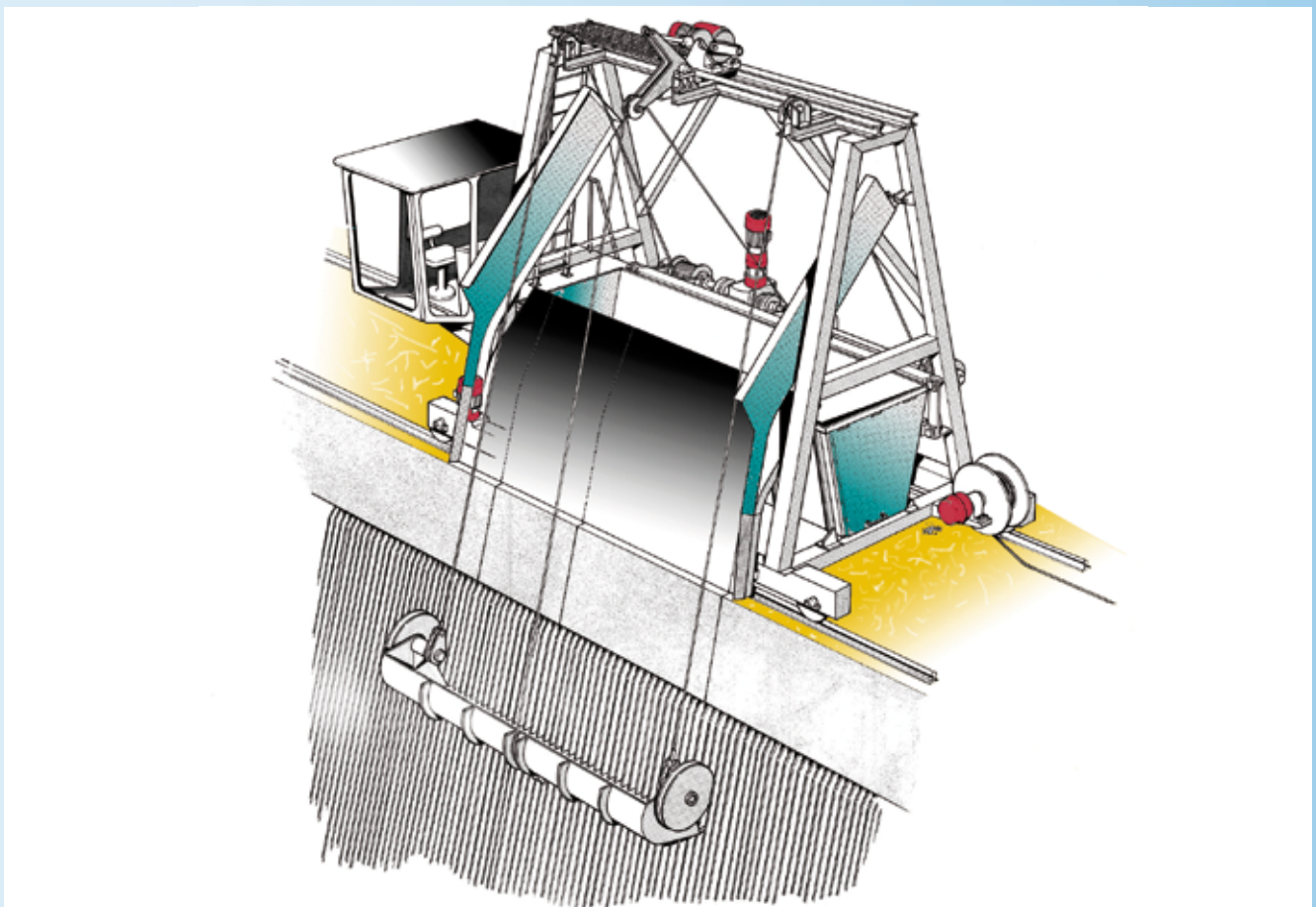
Screen width: unlimited

Depth: unlimited.

Bar space: from 20 up to 100 mm.

Installation angle: from 70° up to 90°

Specific dimensions or materials on request.



### Hubert Trash gripper

The Trash gripper is a gantry crane with a hydraulically operated gripper. It removes debris from a static coarse screen.

The Trash gripper removes the debris from the coarse screen in opened position when moving downwards .

At the bottom of the channel the gripper closes itself and is then lifted out of the water by the gantry crane. The gripper then discharges the debris in a container, truck or on a conveyor belt. (choice to be made by client).

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

### Advantages

The advantages of the Trash gripper are:

- Wide range
- Capable of removing debris from multiple water intakes/ channels in-line.
- Capable of removing large debris
- Moving parts are above water level in rest position
- Low installed power, low energy cost
- Low maintenance

### Standard dimensions

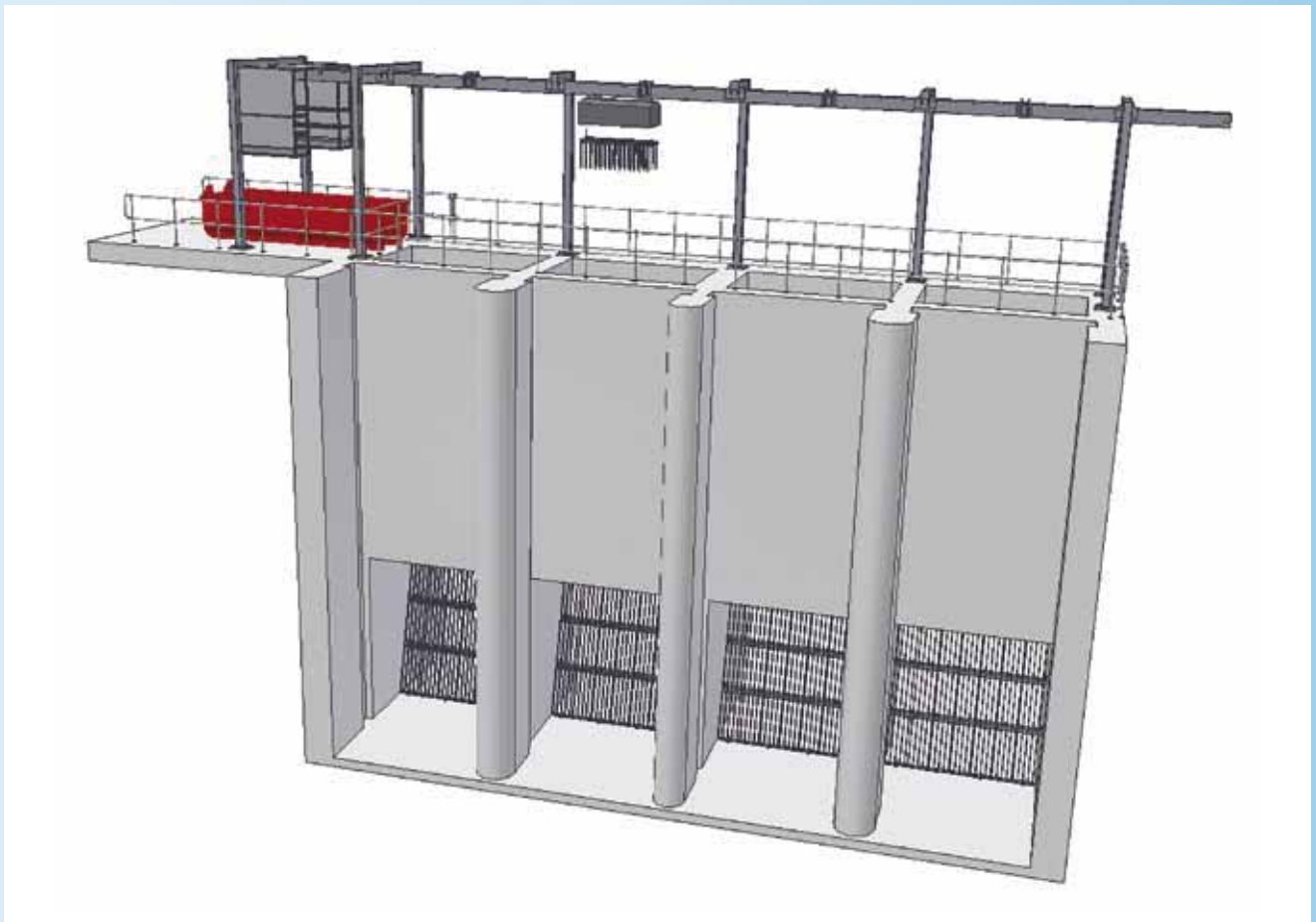
Gripper width: up to 2 m.

Gantry width: unlimited.

Depth: unlimited.

Bar space: from 20 up to 100 mm.

Specific dimensions or materials on request.



### 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

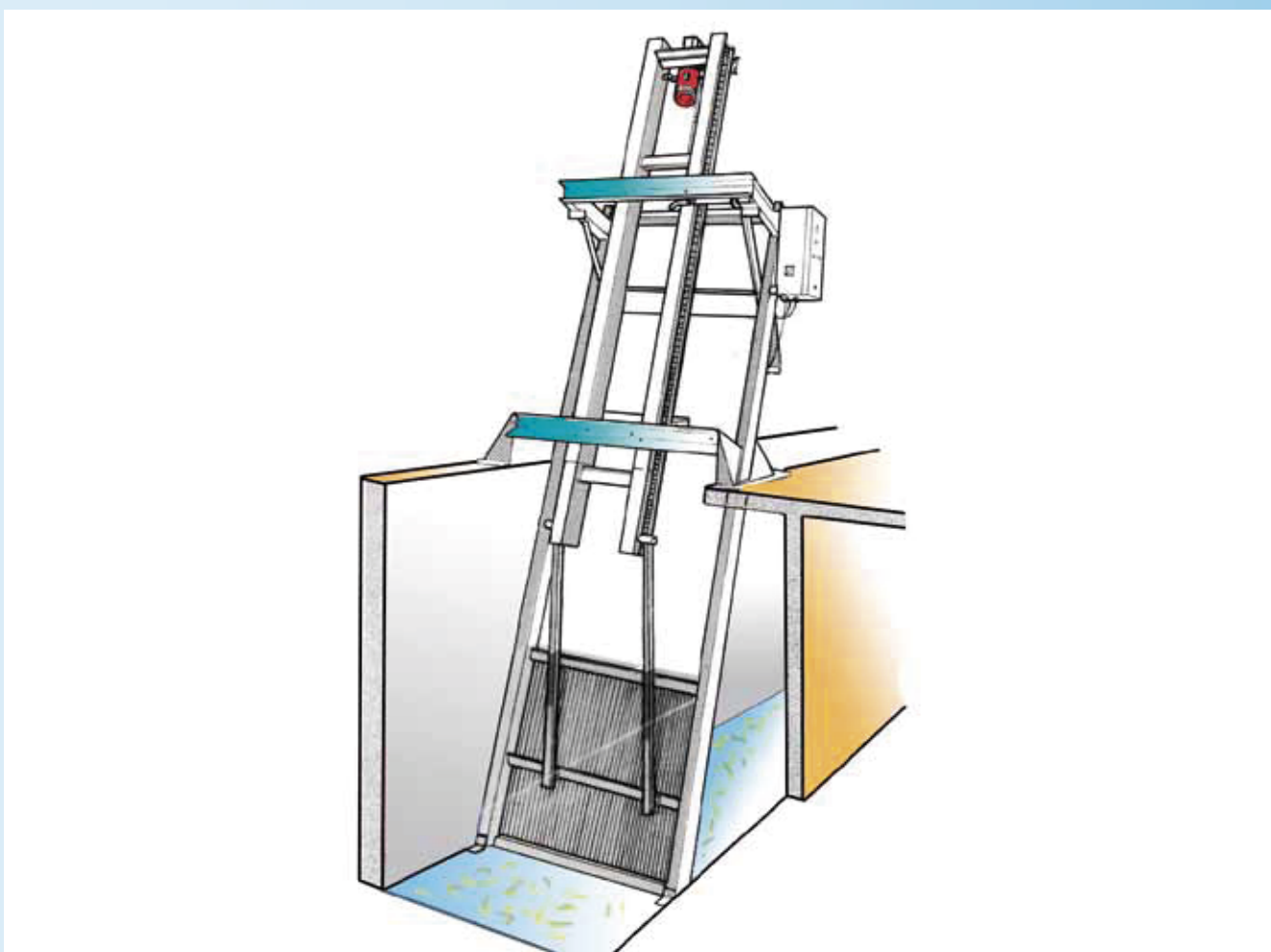
Width: up to 4 m.

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 chain-operated coarse screen

### Hubert chain-operated coarse screen

The Wisa coarse screen is a front raked, chain-operated coarse screen. It is suitable for cleaning medium and large flows of process-, cooling and wastewater. The Wisa coarse screen is used particularly for removing large amounts of coarse debris from a water intake in a short time.

The Wisa coarse screen is suitable for use in a seawater environment.

This Wisa coarse screen consists of a number of revolving rakes, which remove the debris from the bottom of the screen in an upwards movement.

The guiding of the raked coarse screen is mounted against the concrete walls on embedded anchor plates. The design is simple and functional with a maximum cleaning effect.

The Wisa can be provided with special facilities for removing and discharging large quantities of jellyfish.

### Advantages

The advantages of the Wisa coarse screen are:

- Ideal for removing large amount of debris in a short time
- Easy to install
- Low maintenance
- No grease points - greased for life

### Standard dimensions

Width: up to 4 m.

Depth: up to 15 m.

Bar space: from 20 up to 100 mm.

Installation angle: from 70° up to 90°

Specific dimensions or materials on request.



**The Wisa can be provided with special facilities for quickly removing and discharging large quantities of jellyfish.**



## Hubert chain-operated coarse screen

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The Wisa coarse screen is used particularly for removing large amounts of coarse debris from a water intake in a short time.

The Wisa coarse screen is suitable for use in a seawater environment.

This Wisa coarse screen consists of a number of revolving rakes, which remove the debris from the bottom of the screen in an upwards movement.

The Wisa is a pre-assembled skid unit for direct installation at site. The design is simple and functional with a maximum cleaning effect.

The Wisa can be provided with special facilities for removing and discharging large quantities of jellyfish.

### Advantages

The advantages of the Wisa coarse screen are:

- Ideal for removing large amount of debris in a short time
- Easy to install
- Low maintenance
- No grease points - greased for life

### Standard dimensions

Width: up to 4 m.

Depth: up to 15 m.

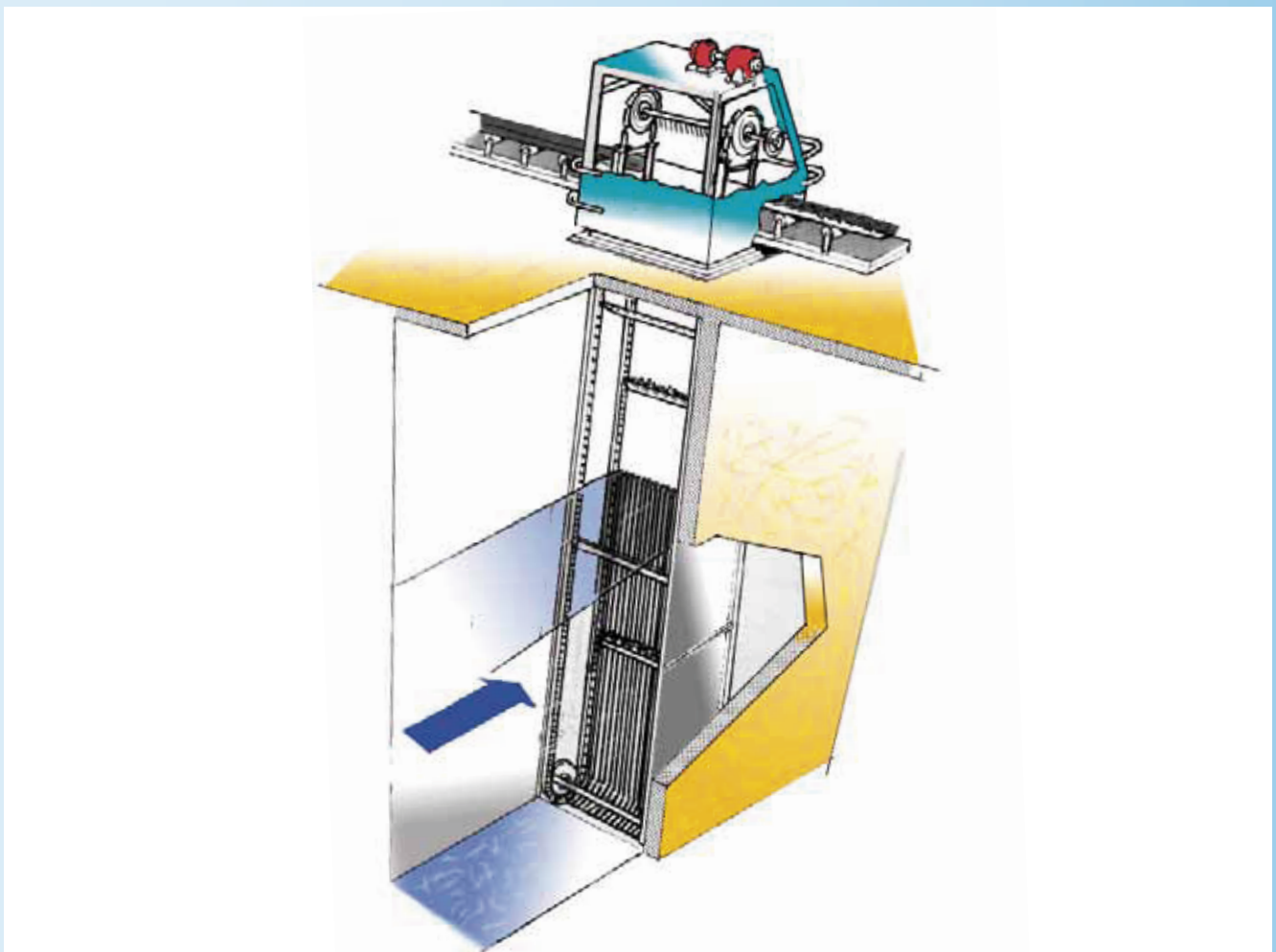
Bar space: from 20 up to 100 mm.

Installation angle: from 70° up to 90°

Specific dimensions or materials on request.



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### Hubert Travelling band screen

The Hubert Travelling band screen is designed for fine filtration of surface and process water. It is fitted vertically in the inlet channel and therefore occupies only a small floor area. Band screens are applied where a short water intake is necessary and where significant variations in surface water levels can occur.

The principle of operation is based on a conveyor belt. However, the belt is replaced by screen panels, which are mounted between two endless transport chains. The chains are driven by two sprockets.

The debris, which is trapped on the screen panels, is removed by high pressure spray water and discharged through a chute.

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

The drive unit and spray water pipe are mounted above deck level under a steel or reinforced plastic housing.

Special models can be provided with facilities for removing and discharging other debris, such as jellyfish, seaweed etc..

### Standard dimensions

Capacity: between 2,500 and 60,000 m<sup>3</sup>/hr.

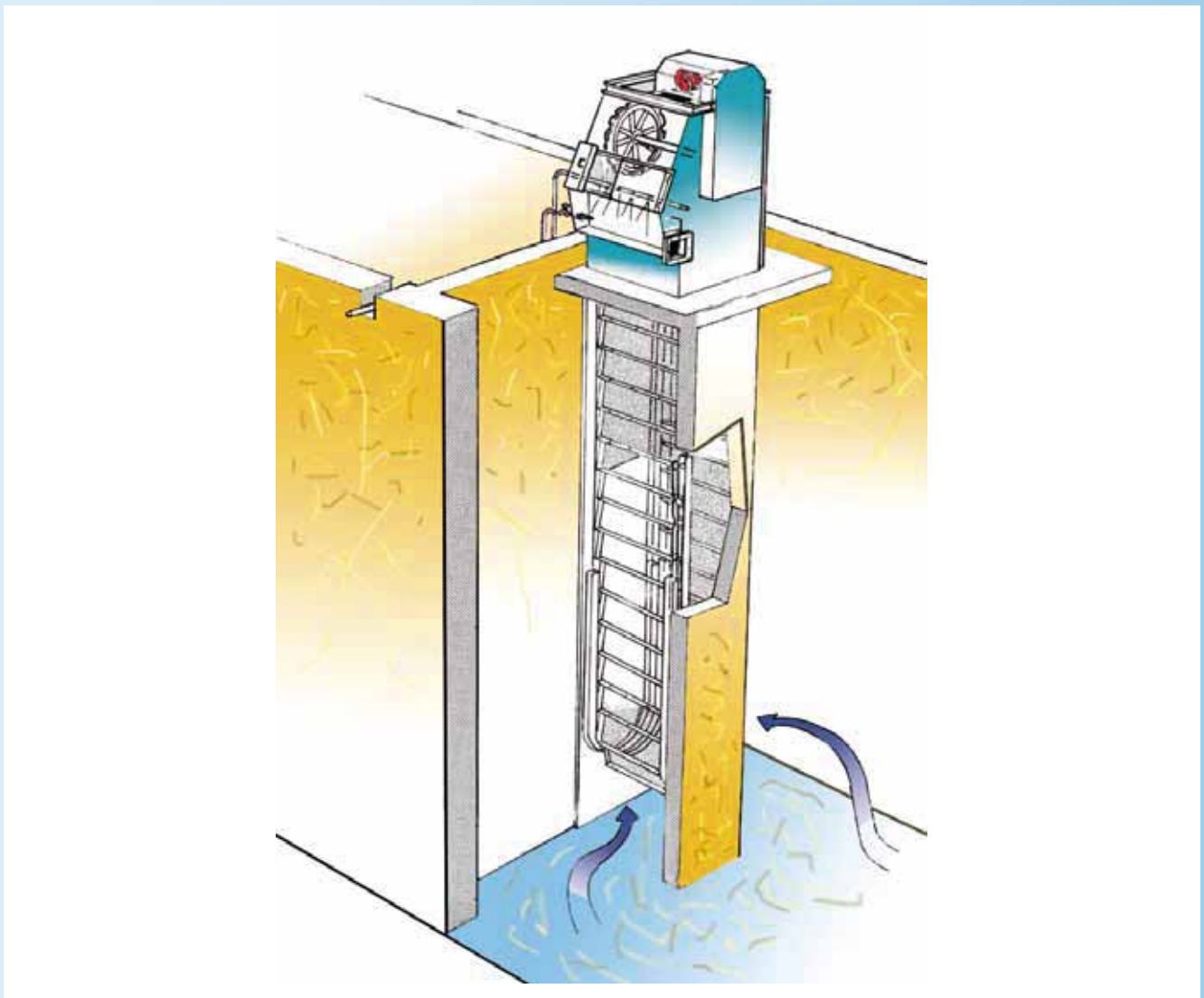
Mesh opening: between 1 and 10 mm.

Pit depth: up to 16 m.

Width: up to 4 m.

Material: Steel coated or stainless steel

Specific dimensions or materials on request.



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### Standard dimensions

Capacity: between 2,500 and 60,000 m<sup>3</sup>/hr.

Mesh opening: between 1 and 10 mm.

Pit depth: up to 16 m.

Width: up to 4 m.

Material: Steel coated or stainless steel

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 m<sup>3</sup>/hr.

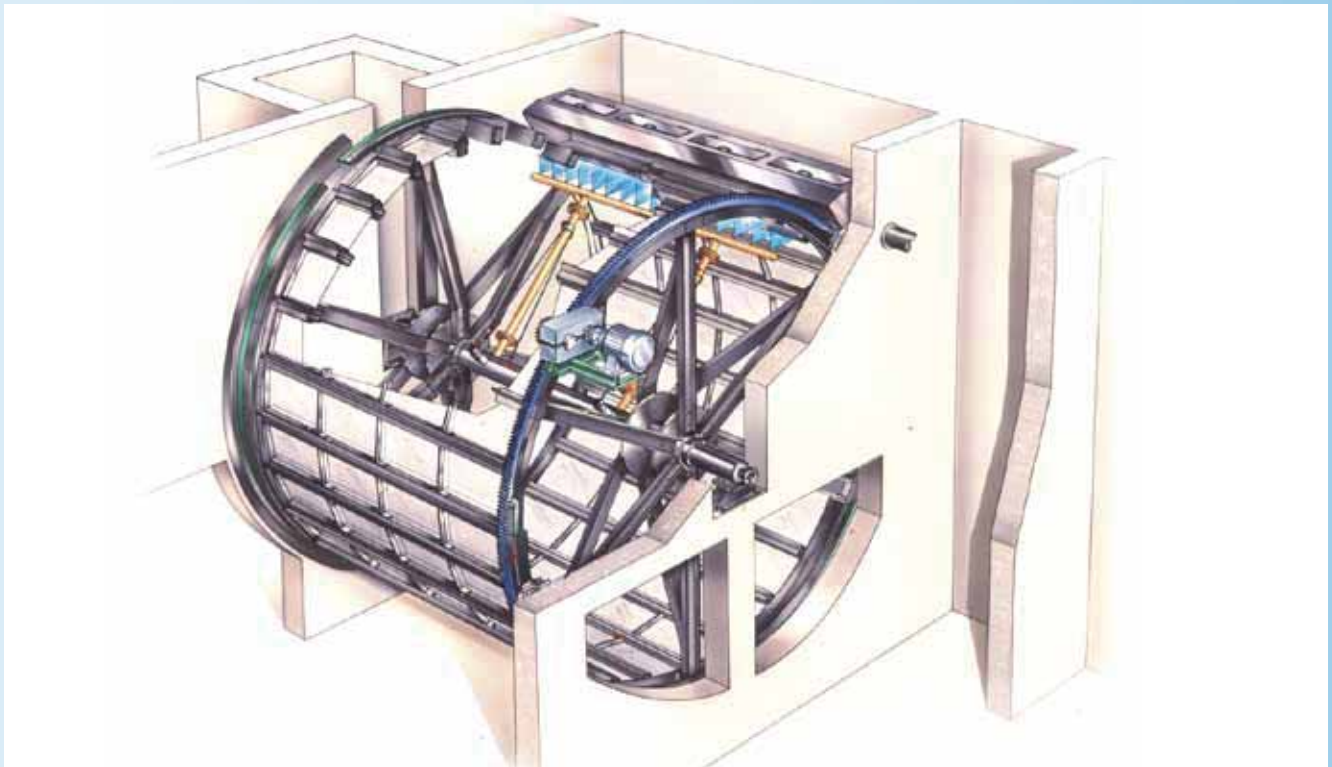
Mesh opening: between 2x2 and 10x10 mm.

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 m<sup>3</sup>/hr.

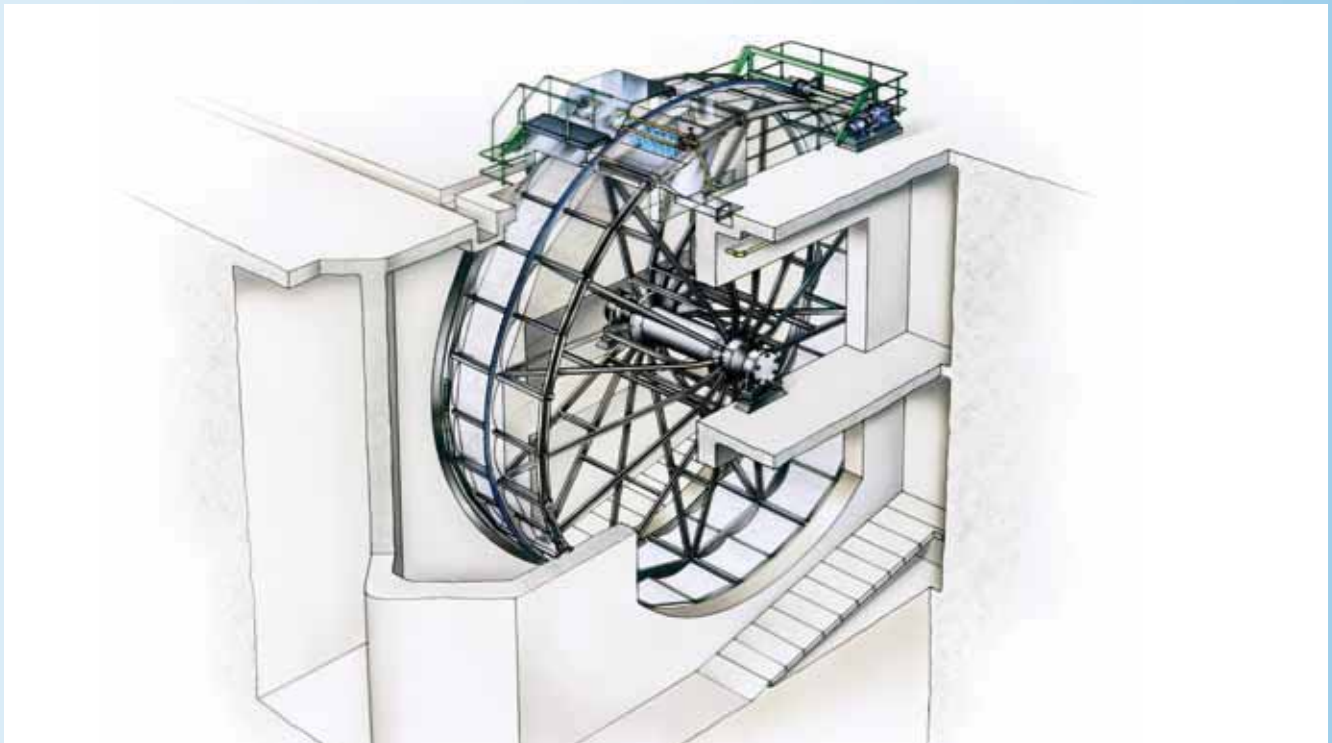
Mesh opening: between 2x2 and 10x10 mm.

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 m<sup>3</sup>/hr.

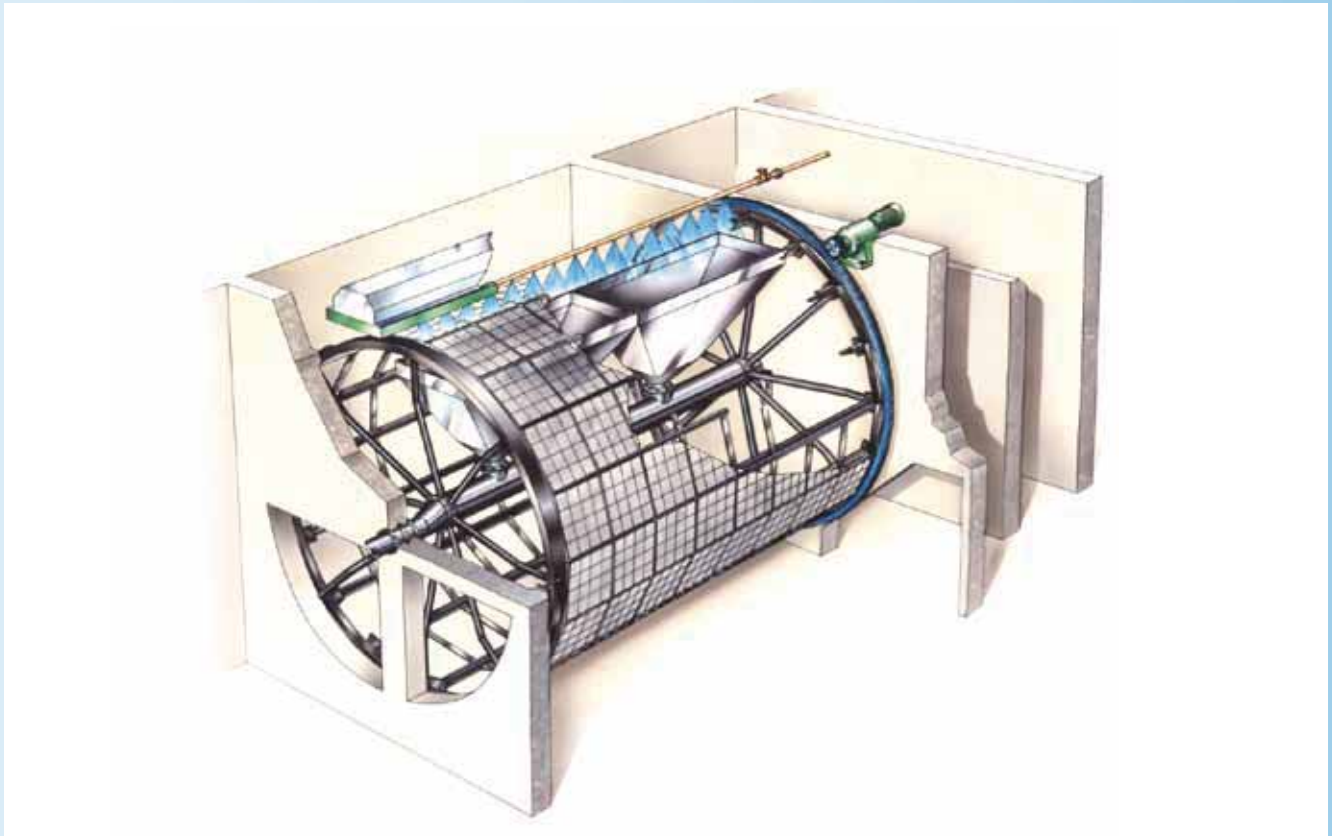
Mesh opening: between 11 and 500 µm.

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.



### Removal of suspended solids by flocculation and sedimentation

In waste water treatment and preparation of potable water the settlement of suspended colloidal solids can be accelerated by prior flocculation. The Hubert circular clariflocculator is ideal for rapid and effective removal of these substances in a combined system.

### High settling rate

The Hubert clariflocculator is a circular clarifier. In the centre of the clarifier is a circular flocculation compartment.

The polluted water enters this compartment in the centre. Depending on the nature of the liquid, coagulants can be added in specific doses.

Two sets of contra-rotating paddles have been fitted to promote rapid flocculation in the central compartment. The flocculated liquid flows smoothly through a large diameter hole in the base of the compartment, passing the sedimentation area radial.

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.

The settled sludge is removed from the sedimentation area by a circular clarifier and scraped towards the centre of the tank. The clarified liquid flows over the overflow rim at the circumference of the tank.

### Description of the mechanism

The mechanism consists of:

- A rotating bridge, supported at one end by a peripheral drive unit and by a central bearing
- A central bearing with a special drive for the paddles that rotate at high speed
- A set of low speed rotating paddles connected to the bridge
- A set of scrapers with rake blades partly connected directly to the bridge and partly to a rotating cage

