





# 1-GATES

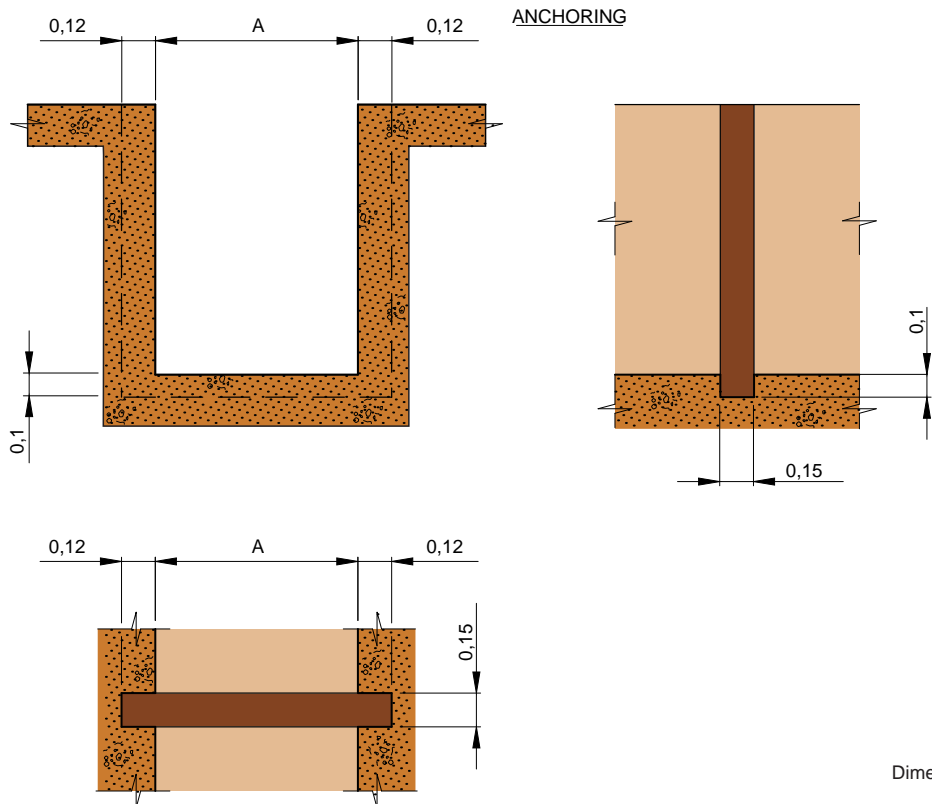
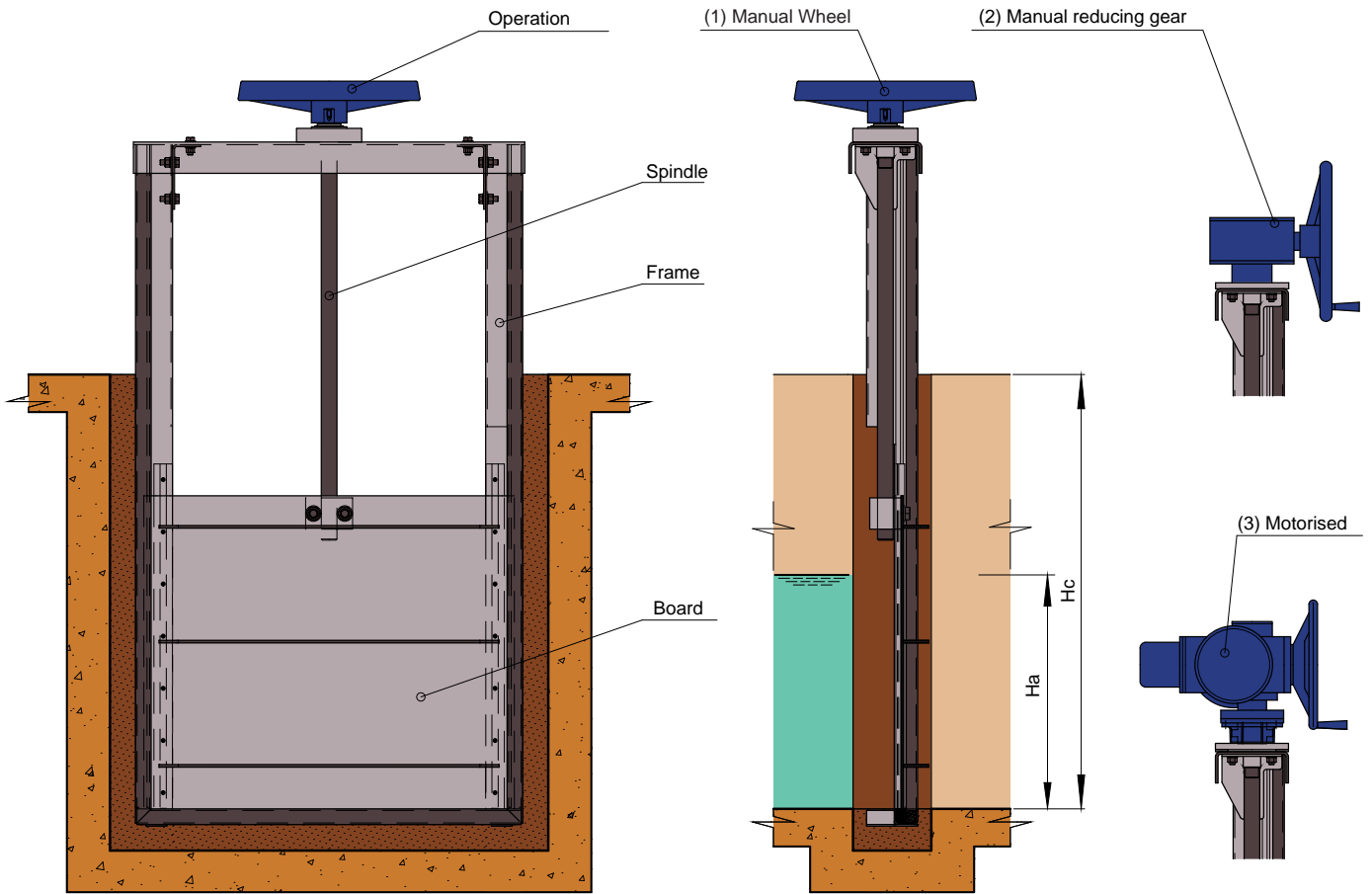
### CHANNEL PENSTOCK type MR03-40

Designed for assembling on an open channel and with a frame embedded in concrete. Penstock that can be used for both water directions.

#### Descriptions and Features:

- **Sliding frame.** Structure welded from stainless steel profiles with low-density polyethylene sliding guides, which decreases the coefficient of friction.
- **Board.** Gate made in stainless steel plate with stiffening ribs according to the dimensions of the gate. Three-side closure with special V-shaped elastomer profiles.
- **Spindle.** Stainless steel with acme screw thread, according to DIN 103 standard and dimensioned by buckling with the W method. The board is moved through a NON-ascending spindle.
- **Type of operation:**
  - Bronze operation screw.
  - (1) **Manual type.** With polyamide wheel PA6 with fibreglass 300 mm and bearing to absorb axial efforts.
  - (2) **Manual type.** With speed reduction gear with wheel.
  - (3) **Motorised type.** Via an actuator with clutch system for emergency manual operation, including end stops and torque limiter. Optional adjusting actuator for 4-20 mA signal.





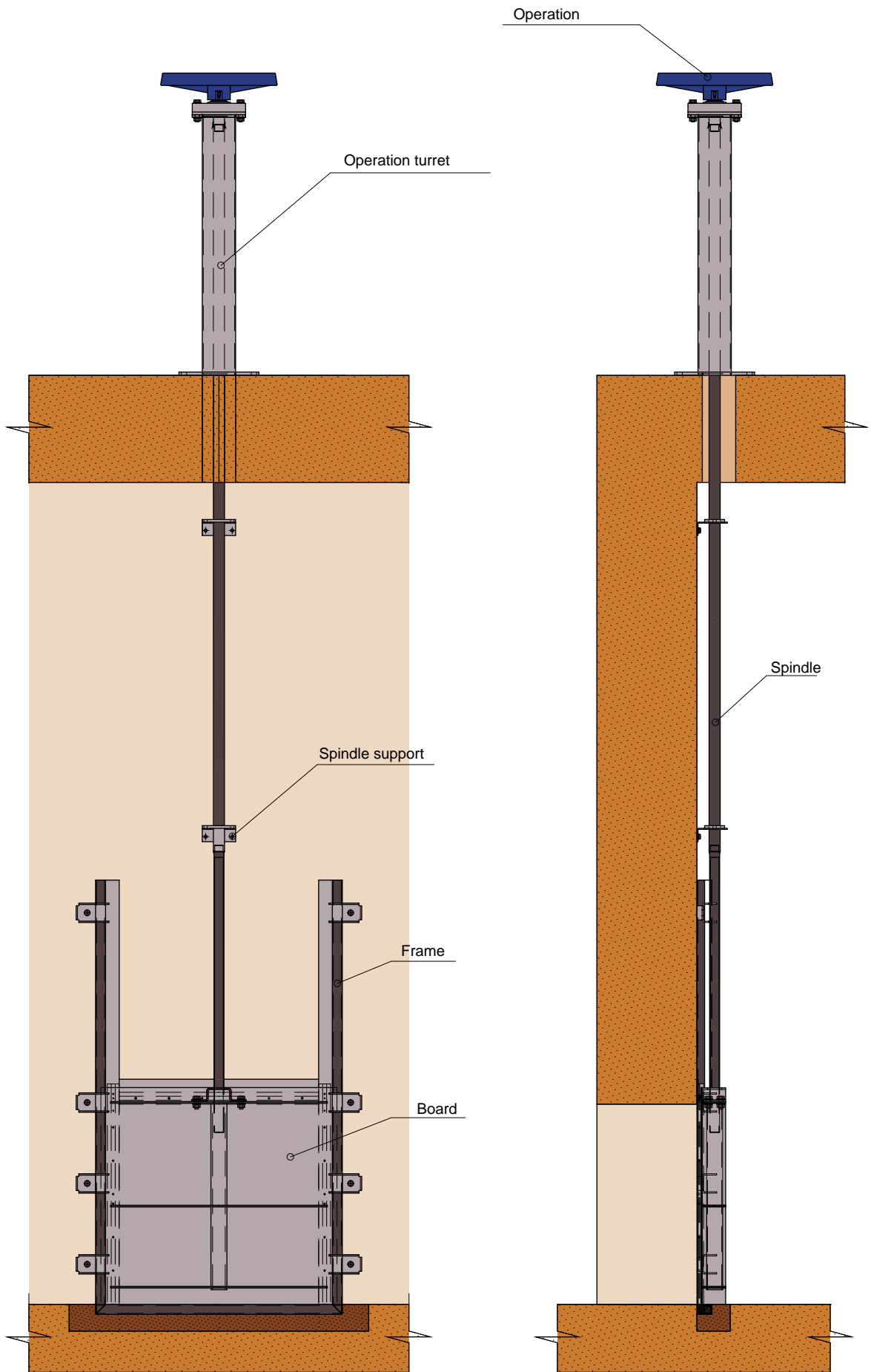
Dimensions in meters

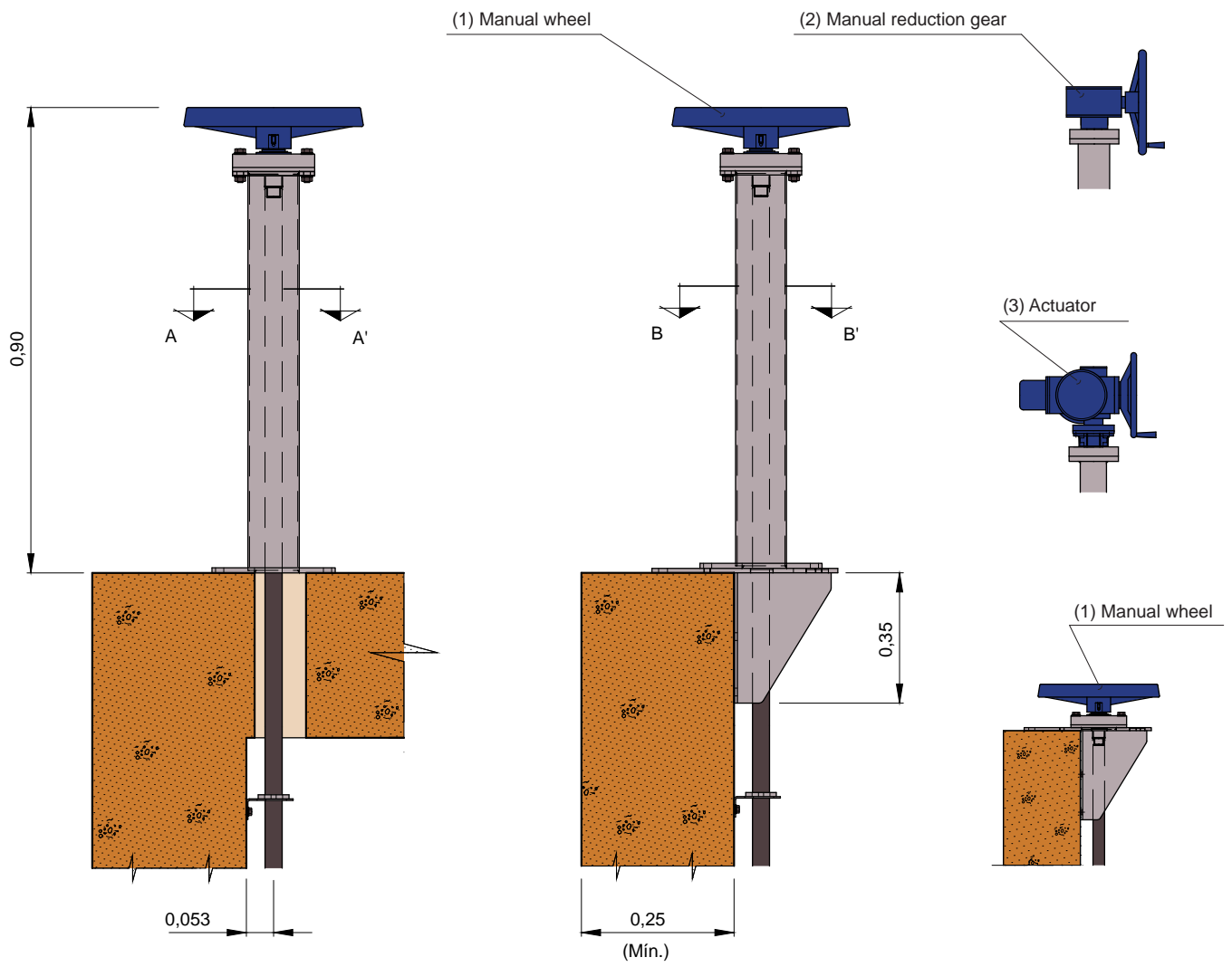
Designed for assembling on a concrete wall and with a frame meant to anchor at the front with drop-in anchors. Penstock that can be used for both water directions.

### Descriptions and Features:

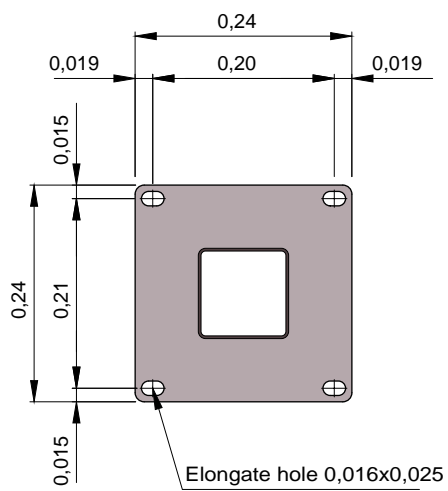
- **Sliding frame.** Welded structure in stainless steel profiles with low-density polyethylene sliding guides, which decreases the coefficient of friction. Anchoring to the concrete is carried out with drop-in anchors.
- **Board.** Gate made in stainless steel plate with stiffening ribs according to the dimensions of the gate. Three-side closure with special V-shaped elastomer profiles.
- **Spindle.** Stainless steel with acme screw thread according to DIN 103 standard and dimensioned by buckling with the W method with spindle-guiding supports. Movement of the board via NON-ascending spindle.
- **Operation support turret.** Steel plate and tubular construction.
- **Type of operation:**
  - Bronze operation screw.
  - (1) **Manual type.** With polyamide wheel PA6 with fibreglass 300 mm diameter and bearing to absorb axial efforts.
  - (2) **Manual type.** With speed reduction gear with wheel.
  - (3) **Motorised type.** Via an actuator with clutch system for emergency manual operation, including end stops and torque limiter. Optional adjusting actuator for 4-20 mA signal.



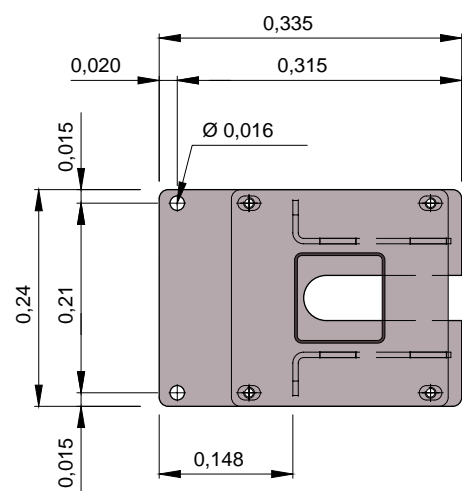




SECTION "A-A"

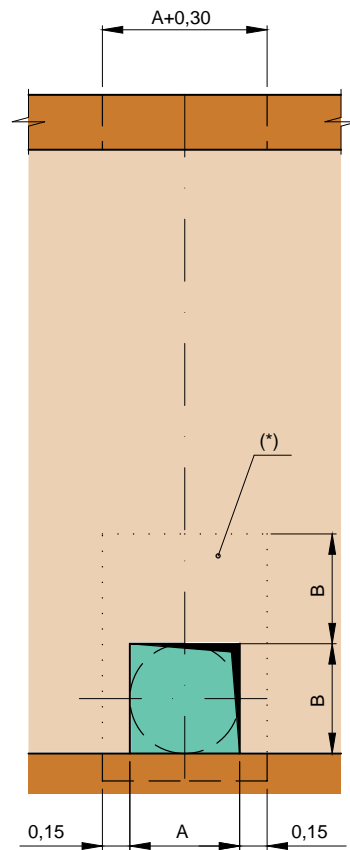
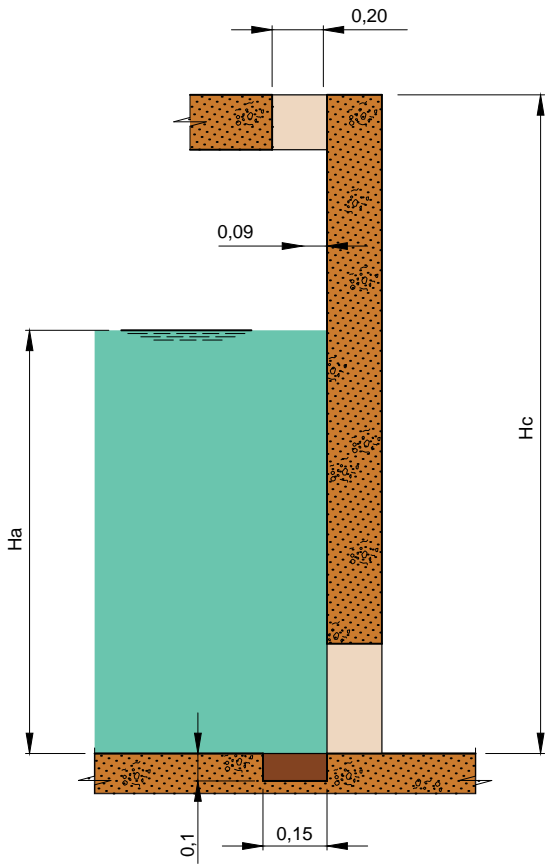
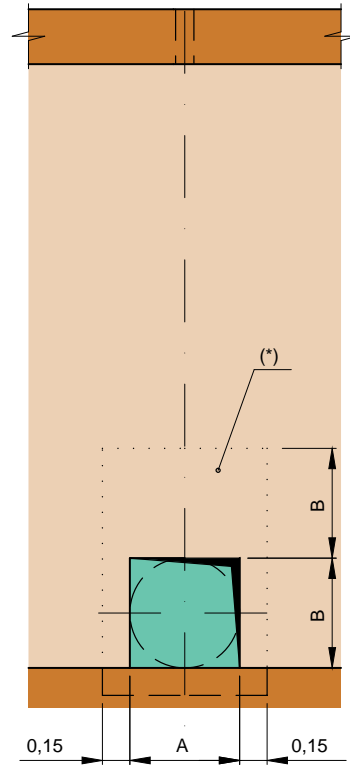
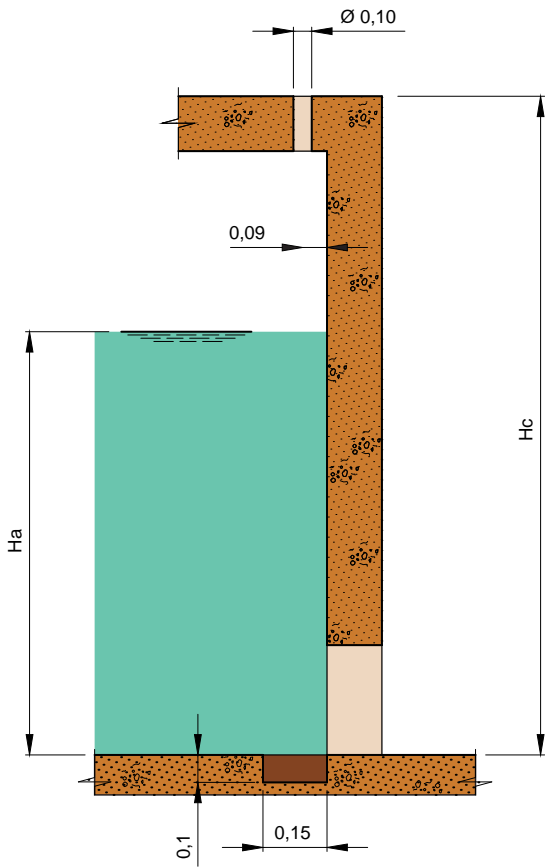


SECTION "B-B"



Dimensions in meters





(\*) : Even surface to support the wall gate sliding frame.

Dimensions in meters

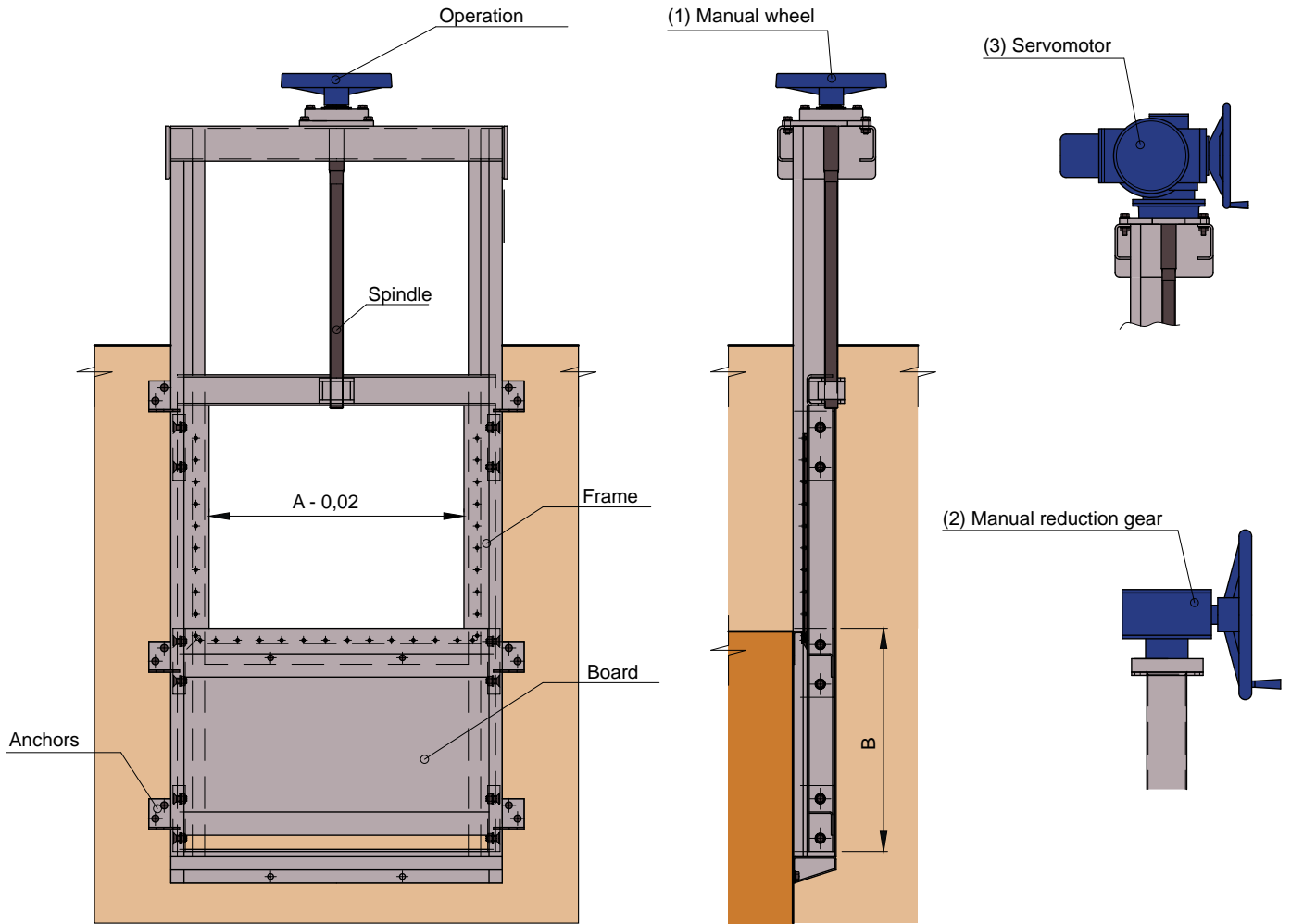
## ADJUSTABLE GUILLOTINE WEIR GATE Type: MR-07G

This weir gate system is designed for spillways at the end of open channels in water treatment plants.

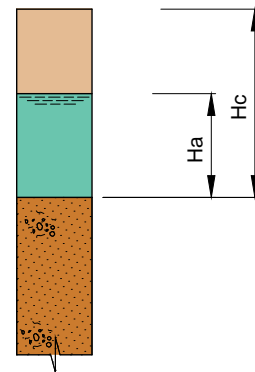
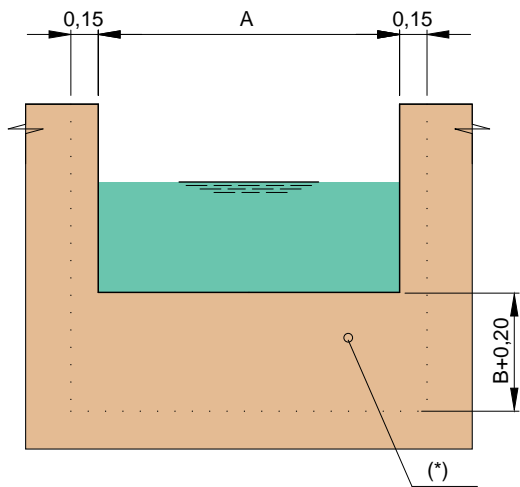
### Descriptions and Features:

- **Sliding frame.** Welded structure in stainless steel profiles. Anchoring to the concrete is carried out with drop-in anchors.
- **Board.** Gate made of a steel plate with stiffening ribs according to the dimensions of the weir. Three-side closure with special V-shaped elastomer profiles.
- Water level adjustment between 0.00 and 0.50 meters.
- **Watertightness.** Three-side closure with elastomer profiles.
- **Spindle.** Stainless steel with acme screw thread according to DIN 103 standard and dimensioned by buckling with the W method. Movement of the gate by means of a NON-ascending spindle.
- **Type of operation:**
  - Bronze operation screw.
  - (1) **Manual type.** With polyamide wheel PA6 with fibreglass 300 mm diameter and bearing to absorb axial effort.
  - (2) **Manual type.** With speed reduction gear with wheel.
  - (3) **Motorised wheel.** Via an actuator with clutch system for emergency manual operation, including end stops and torque limiter. Optional adjusting actuator for 4-20 mA signal.





ANCHORS



(\*) : Flat zone for support frame landfill.

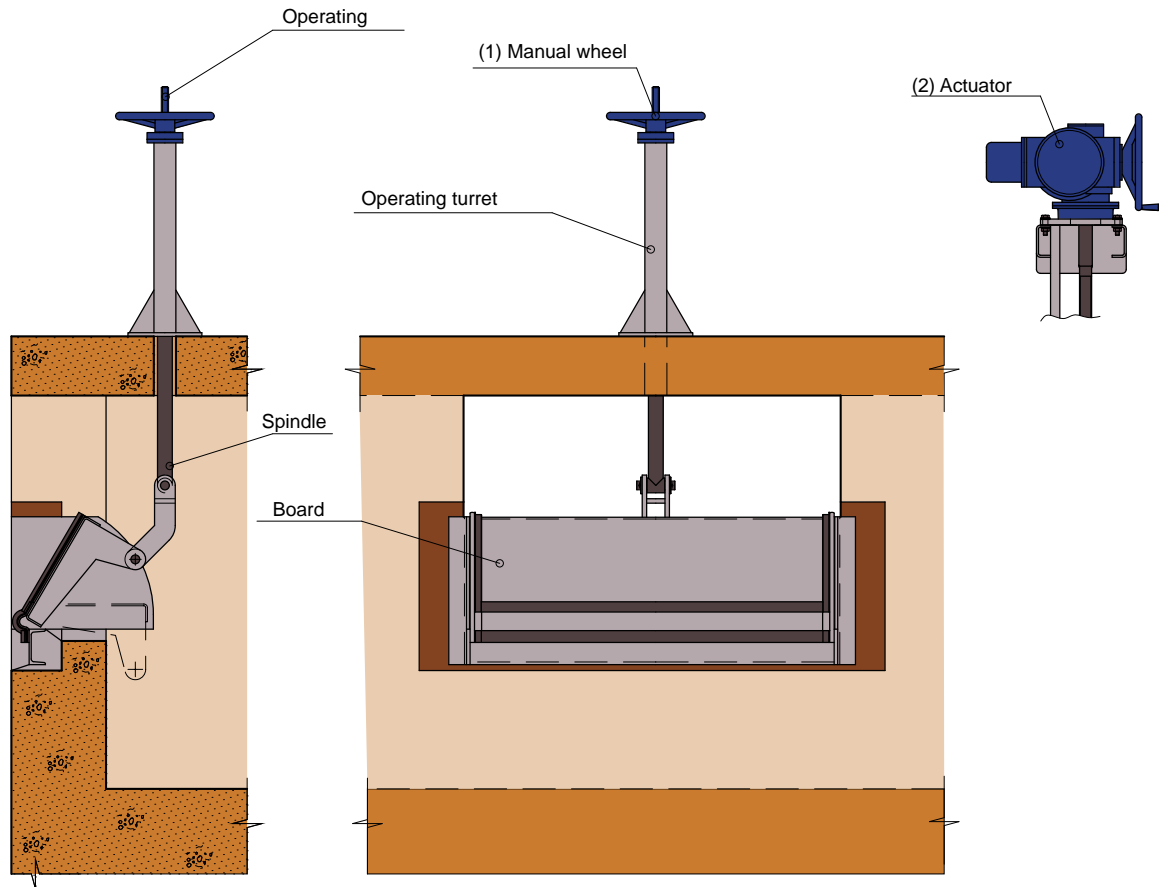
Dimensions in meters

Weir gate designed specifically for aeration basin spillways and with frame embedded in concrete, for water treatment plants.

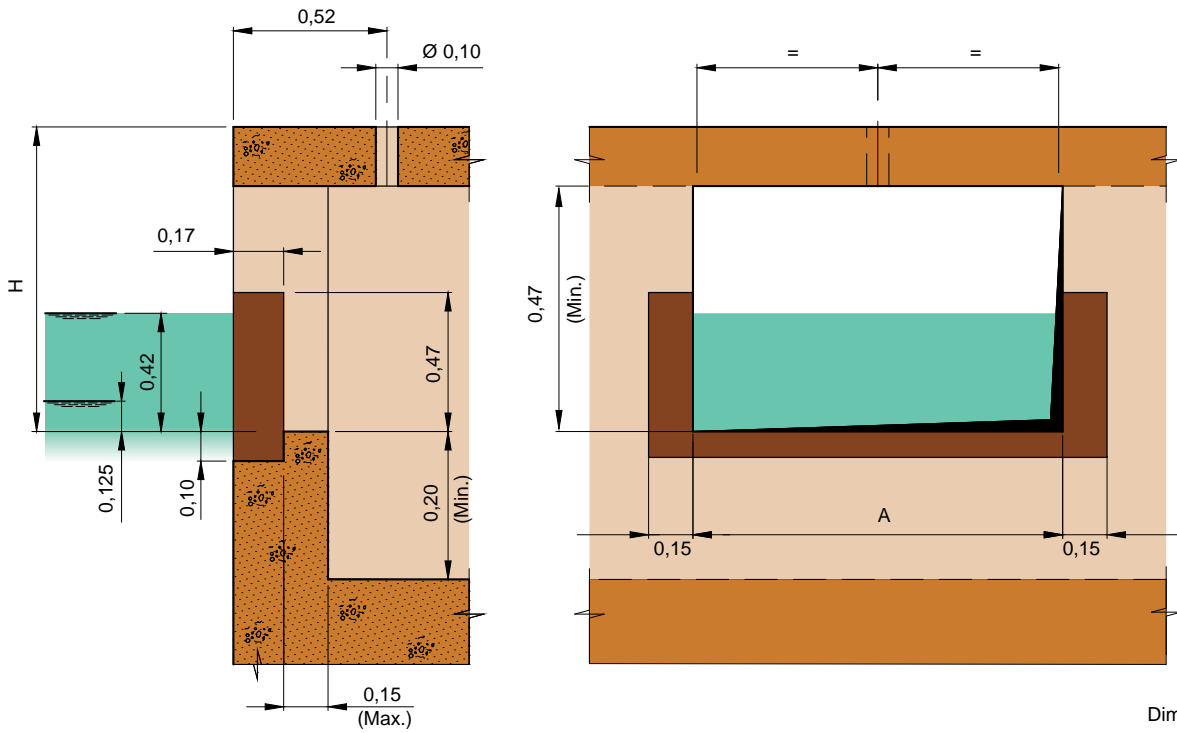
### Descriptions and Features:

- **Frame and board.** Carbon steel A42b components, painted or galvanised. Also available in stainless steel (AISI304/316 standard).
- **Board.** Made of steel plate, with stiffening ribs according to the dimensions of the weir. Three-side closure with special elastomer profiles.
- **Water level regulation.** Normalised to 0.295 meters.
- **Spindle.** In acme screw thread in accordance with DIN103. Movement of the knife gate by means of an ascending spindle.
- **Water level adjustment system.** By oscillation of the knife gate.
- **Operating stem turret.** Steel plate and tubular construction.
- **Operating stem.**
  - (1) **Manual type.** With 400 mm diameter wheel, bronze screw and ball bearing.
  - (2) **Motorised type.** Via an actuator with clutch system for emergency manual operation, including end stops and torque limiter. Optional adjusting actuator for 4-20 mA signal.





ANCHORING



Dimensions in meters



# 2-SCREENS

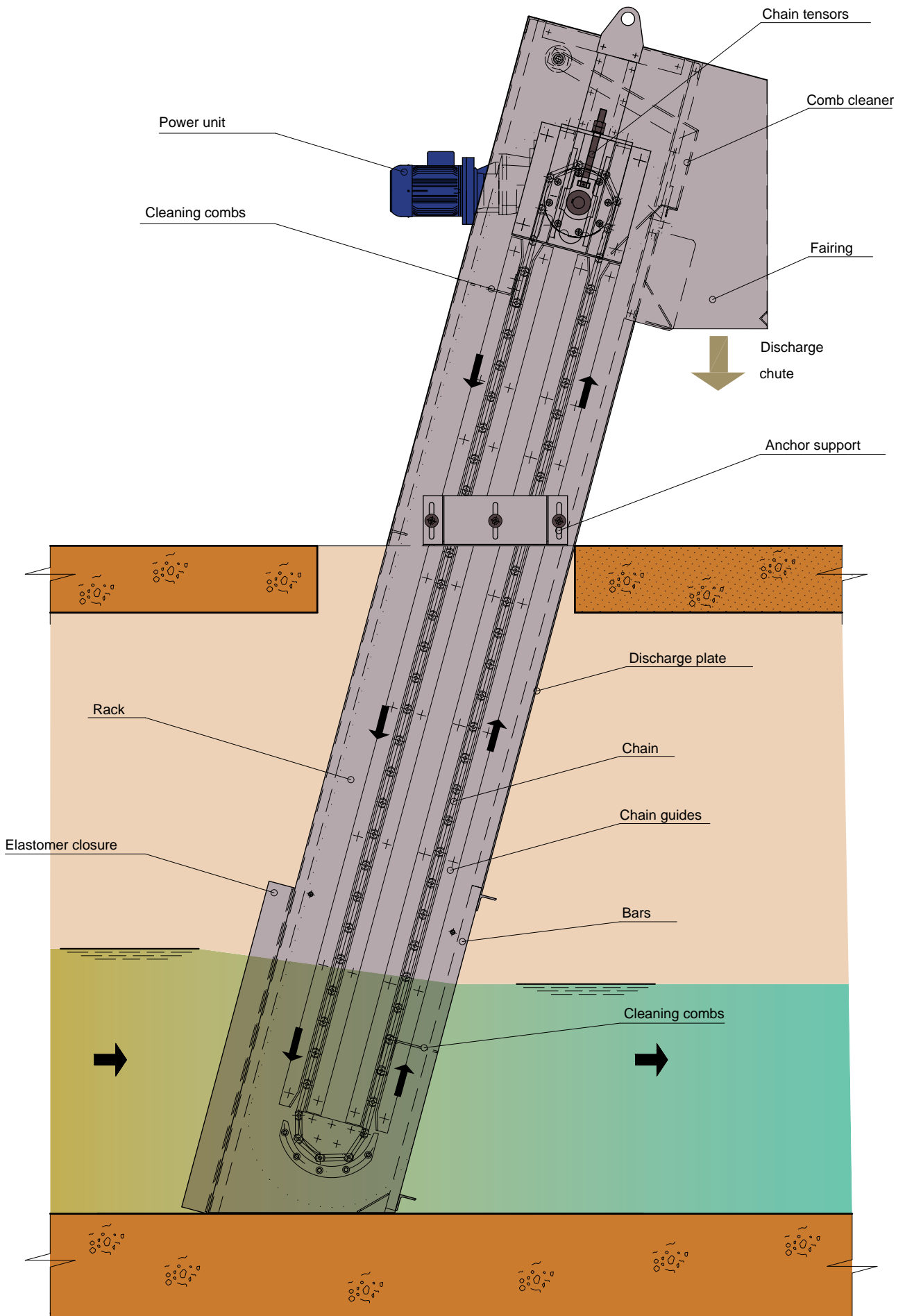
### LONGITUDINAL SCREEN type MR29F

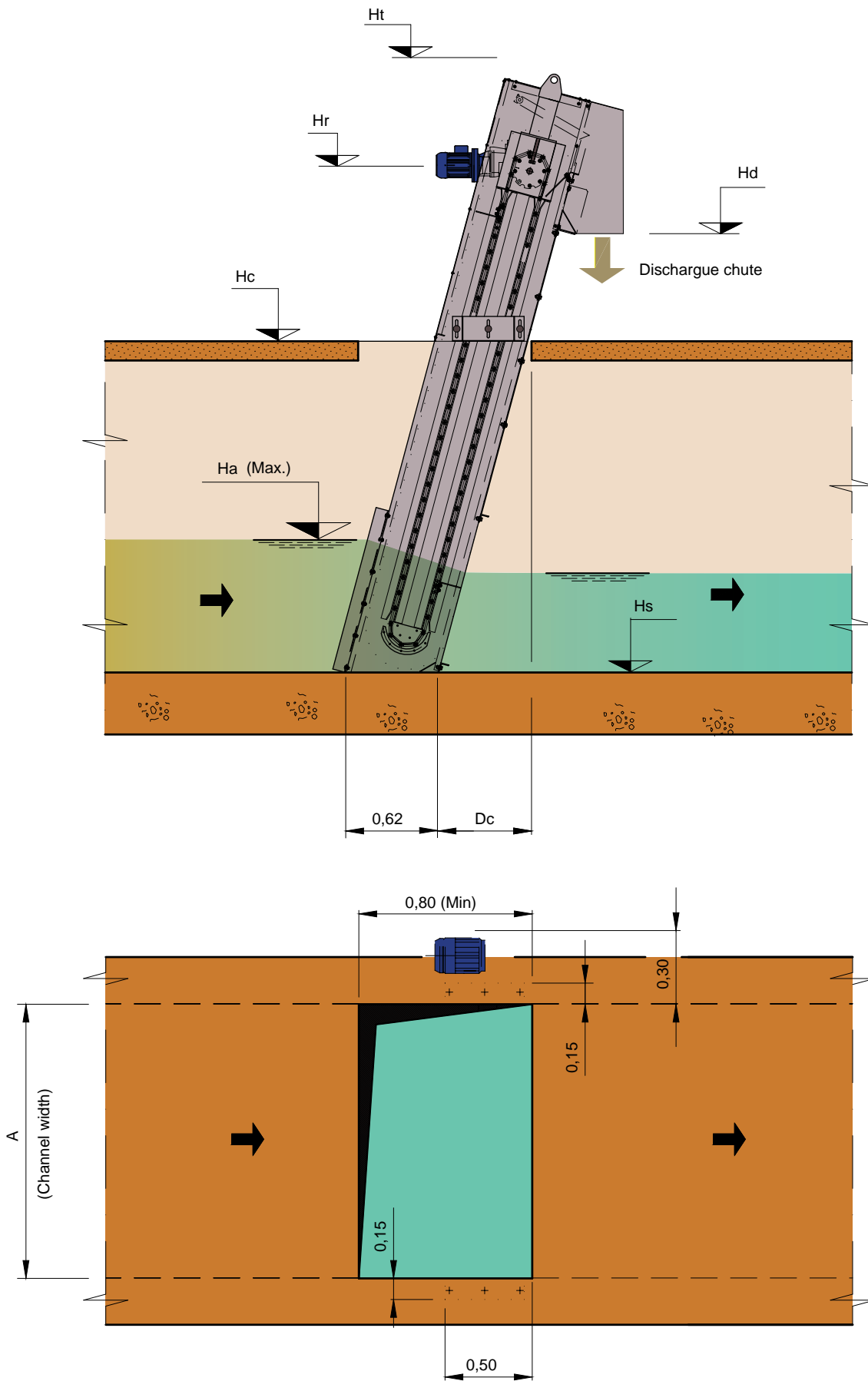
The automatic cleaning screen is a single block piece designed for installation in channels and for automatically extracting solids from the water with a screener. The F light-range model, is useful for channels up to 1.3 m wide, a water height of 2.7 m and 200 kg load elevation.

#### Descriptions and Features:

- **Rack.** Single block type, completely shrouded and built in steel plate. Serves as a support for all the movement elements, automatisms, bars and discharge plate. With adjustable anchoring support for on-site anchoring. Closing elastomers included for adjustment to the channel walls.
- **Bars.** Rectangular section and variable useful spacing starting at 10 mm.
- **Power unit.** Consisting of a geared motor and a drive axle that operates the two lateral conveyor belts, with the cleaning combs attached to it. The chains are tightened via a spindle system for easy and safe operation.
- **Cleaning combs.** Attached at the ends to the conveyor belts; they serve to clean the bars. As a general rule, the number of combs increases proportionally to the discharge height and the type of waste to treat.
- **Comb cleaner.** A nylon scraper embedded in pivoting arms; it evacuates the waste on the cleaning combs.
- **Discharge plate.** Variable dimensions according to the discharge point and the water height. Serves to pour the waste at the required height.
- **Control equipment** (optional). The equipment can be configured for a scheduled operation or for a load loss at variable flow.







Dimensions in meters

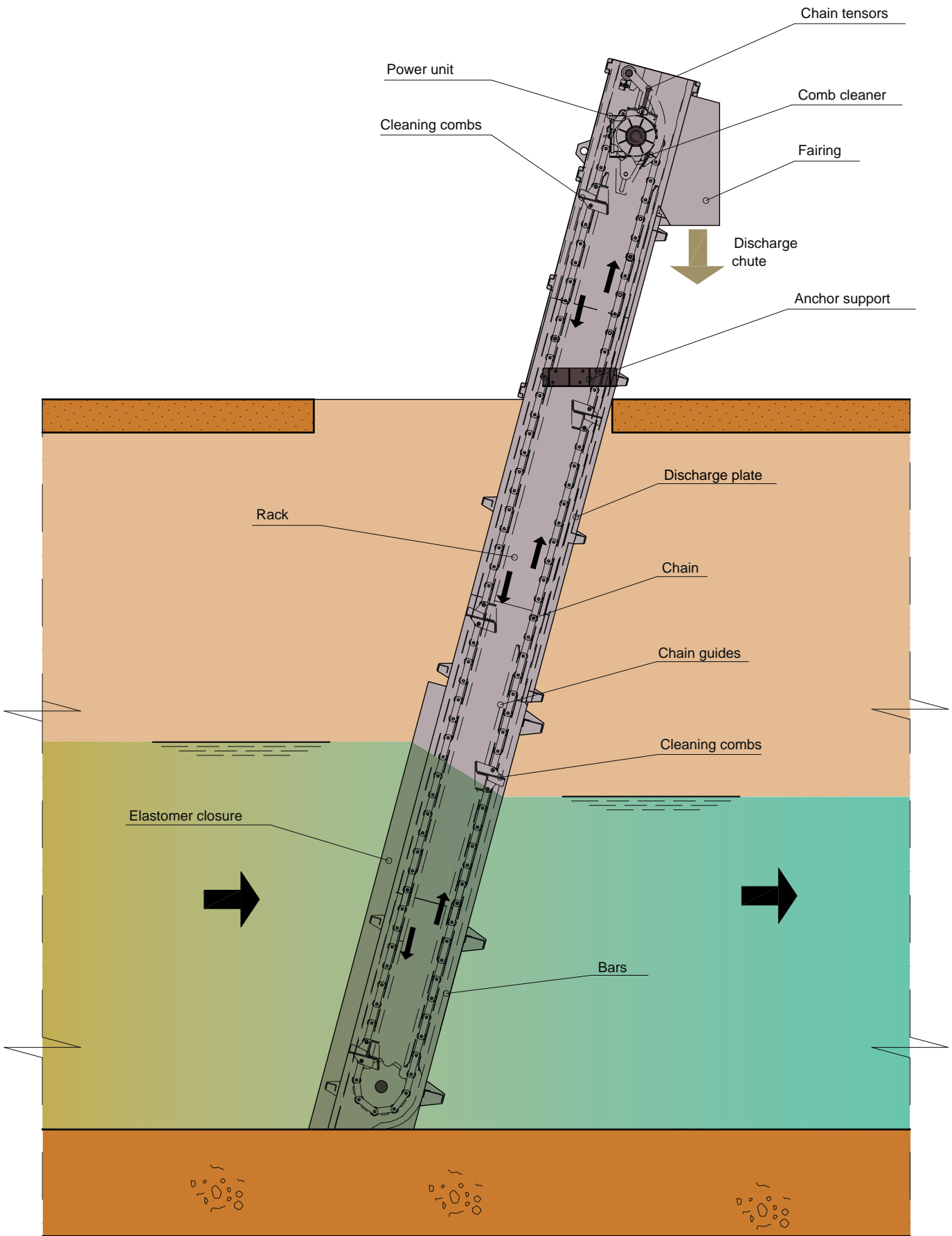


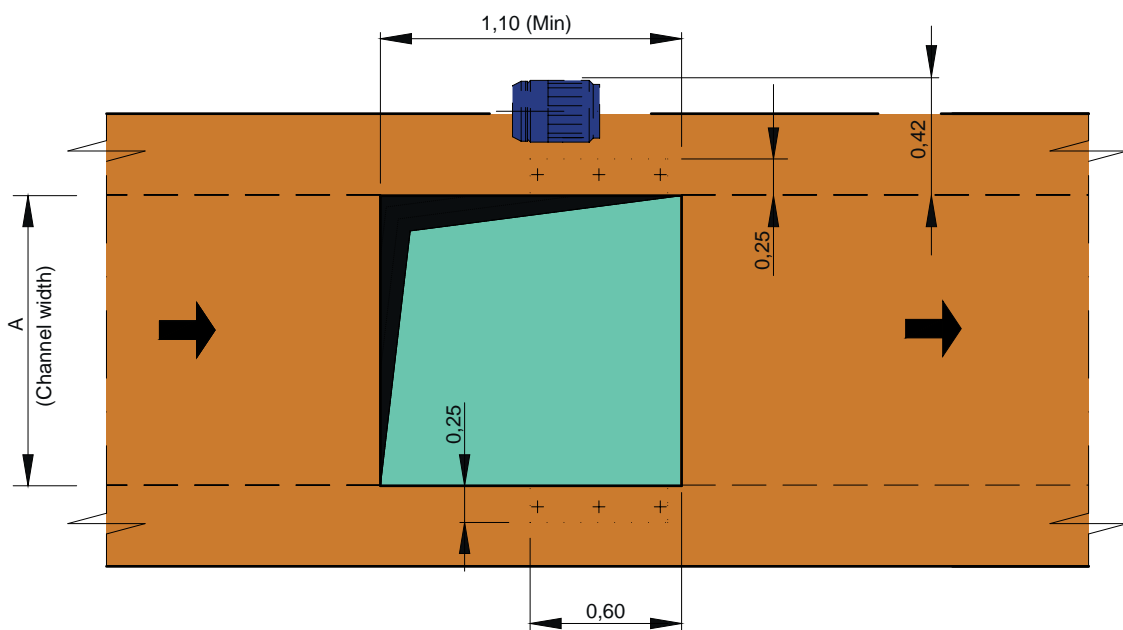
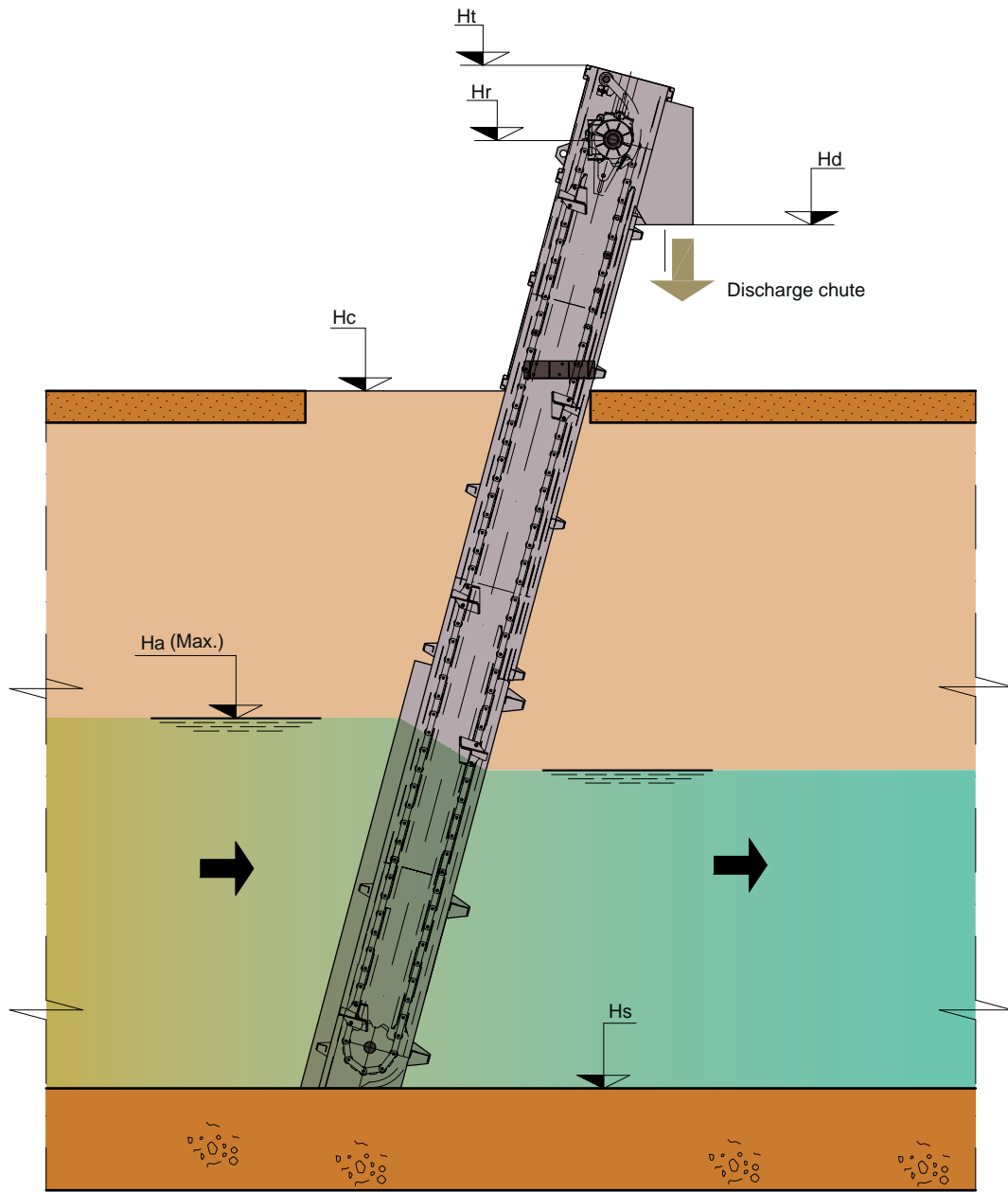
### LONGITUDINAL SCREEN type MR29N

The automatic cleaning screen is a single block piece designed for channels and for automated extraction of solids from the water with a screener. The N medium-range model is useful for channels up to 2 m wide, a water height of 9 m and a load elevation of 400Kg.

#### Descriptions and Features:

- **Rack.** Single block type, completely shrouded and built in steel plate. Serves as a support for all the movement elements, automatism, bars and discharge plate. With adjustable anchoring support for on-site anchoring. Closing elastomers included for adjustment to the channel walls.
- **Bars.** Rectangular section and variable useful spacing starting at 10 mm.
- **Power unit.** Consisting of a geared motor and a drive axle that operates the two lateral conveyor belts, with the cleaning combs attached to it. The chains are tightened via a spindle system for easy and safe operation.
- **Cleaning combs.** Attached at the ends to the conveyor belts; they serve to clean the bars. As a general rule, the number of combs increases proportionally to the discharge height and the type of waste to treat.
- **Comb cleaner.** A nylon scraper embedded in pivoting arms; it evacuates the waste on the cleaning combs. This model is designed to allow the cleaning unit to reverse the direction of comb rotation in case of a jam.
- **Discharge plate.** Variable dimensions according to the discharge point and the water height. Serves to pour the waste at the required height.
- **Control equipment** (optional). The equipment can be scheduled operation or for operation upon load loss at variable flow.





Dimensions in meters





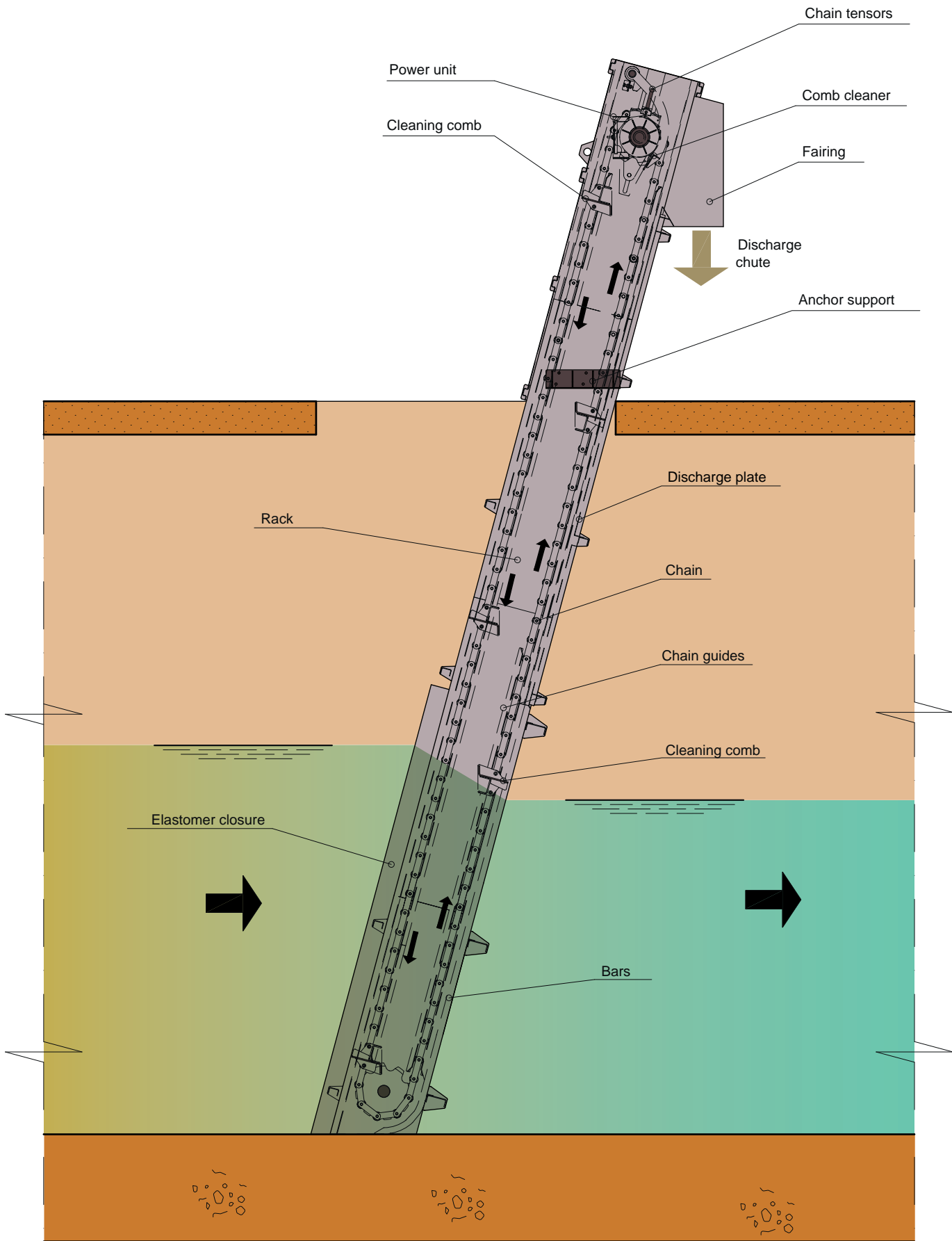
### LONGITUDINAL SCREEN type MR29G

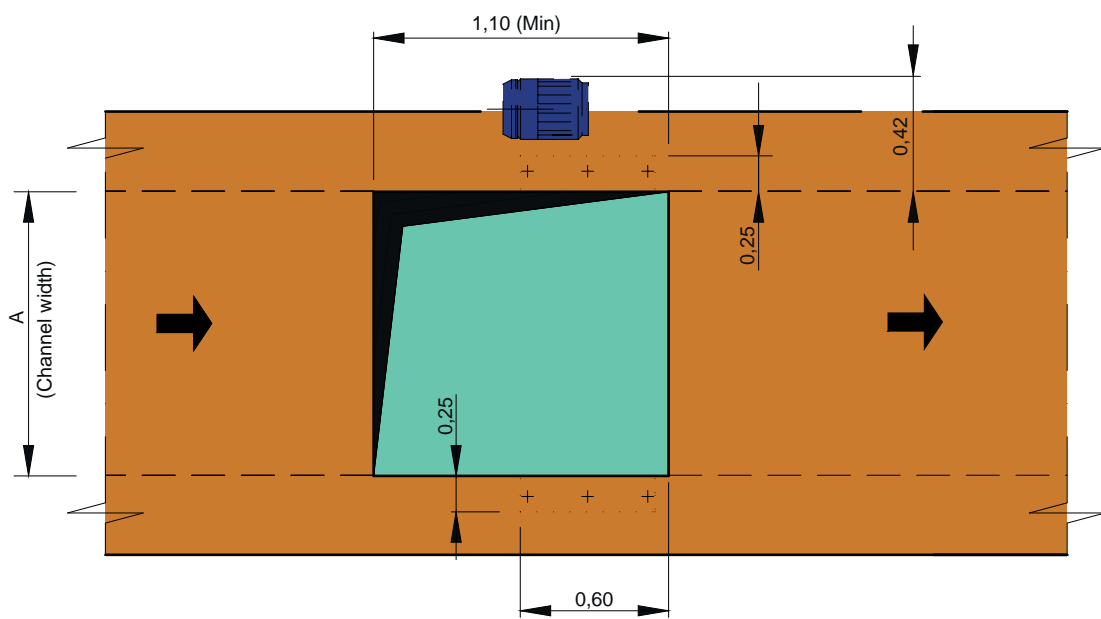
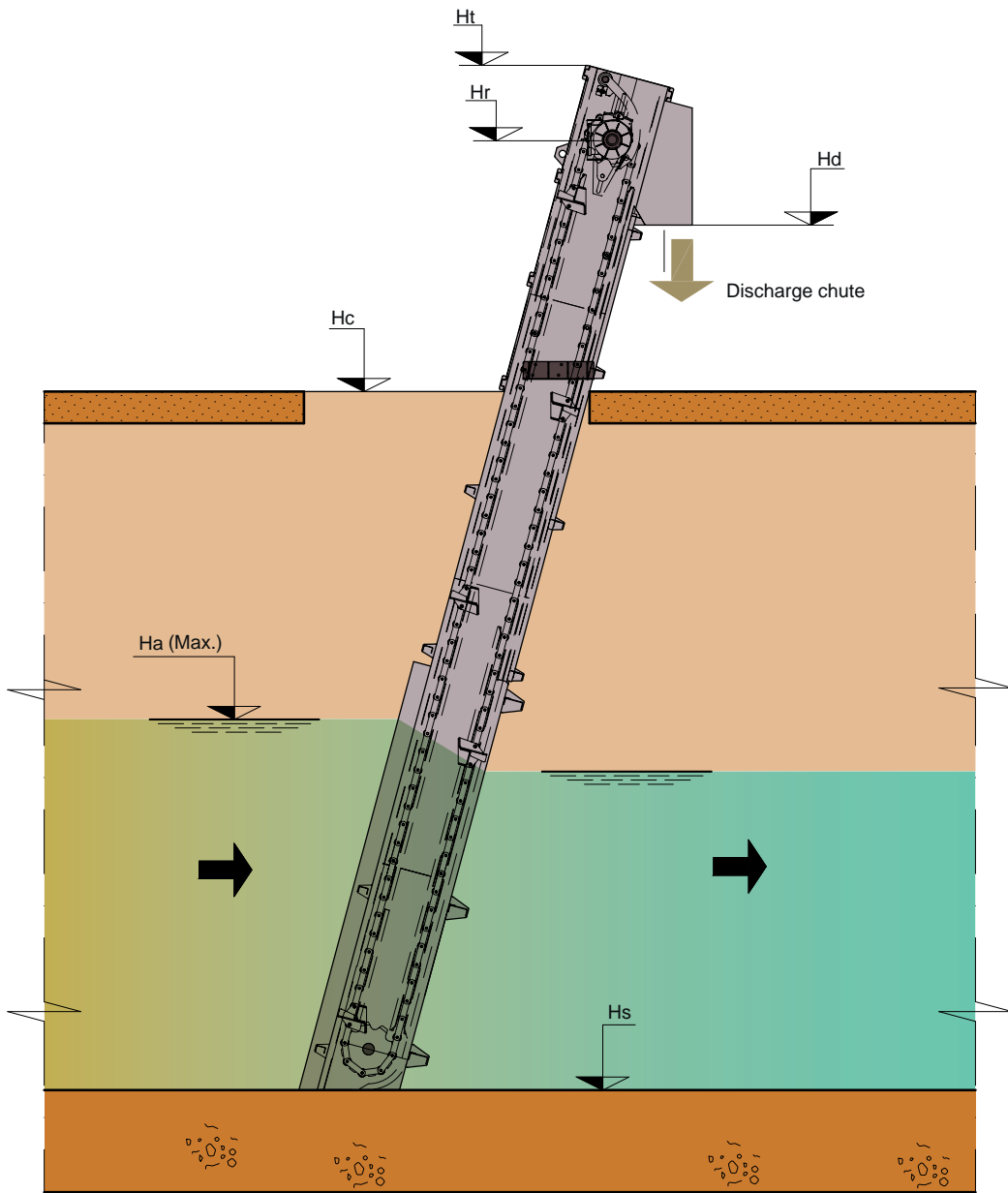
The automatic cleaning screen is a single block piece designed for installation in channels and for automatic extraction of solids from the water with a screener. The N medium-range is useful for channels up to 3 m wide, a water height of 11 m and a load elevation of 800Kg.

#### Descriptions and Features:

- **Rack.** Single block type, completely shrouded and built in steel plate. Serves as a support for all the movement elements, automatisms, bars and discharge plate. With adjustable anchoring support for on-site anchoring. Closing elastomers included for adjustment to the channel walls.
- **Bars.** Rectangular section and variable useful spacing starting at 10 mm.
- **Power unit.** Consisting of a geared motor and a drive axle that operates the two lateral conveyor belts, with the cleaning combs attached to it. The chains are tightened via a spindle system for easy and safe operation.
- **Cleaning combs.** Attached at the ends to the conveyor belts; they serve to clean the bars. As a general rule, the number of combs increases proportionally to the discharge height and the type of waste to treat.
- **Comb cleaner.** A nylon scraper embedded in pivoting arms; it evacuates the waste on the cleaning combs. This model is designed to allow the cleaning unit to reverse the direction of the comb rotation in case of a jam.
- **Discharge plate.** Variable dimensions according to the discharge point and the water height. Serves to pour the waste at the required height.
- **Control equipment** (optional). The equipment can be configured for scheduled operation or for operation upon load loss at variable flow.







Dimensions in meters





# 3-FINE SCREEN AND FILTERS

# FINE SCREEN AND FILTERS

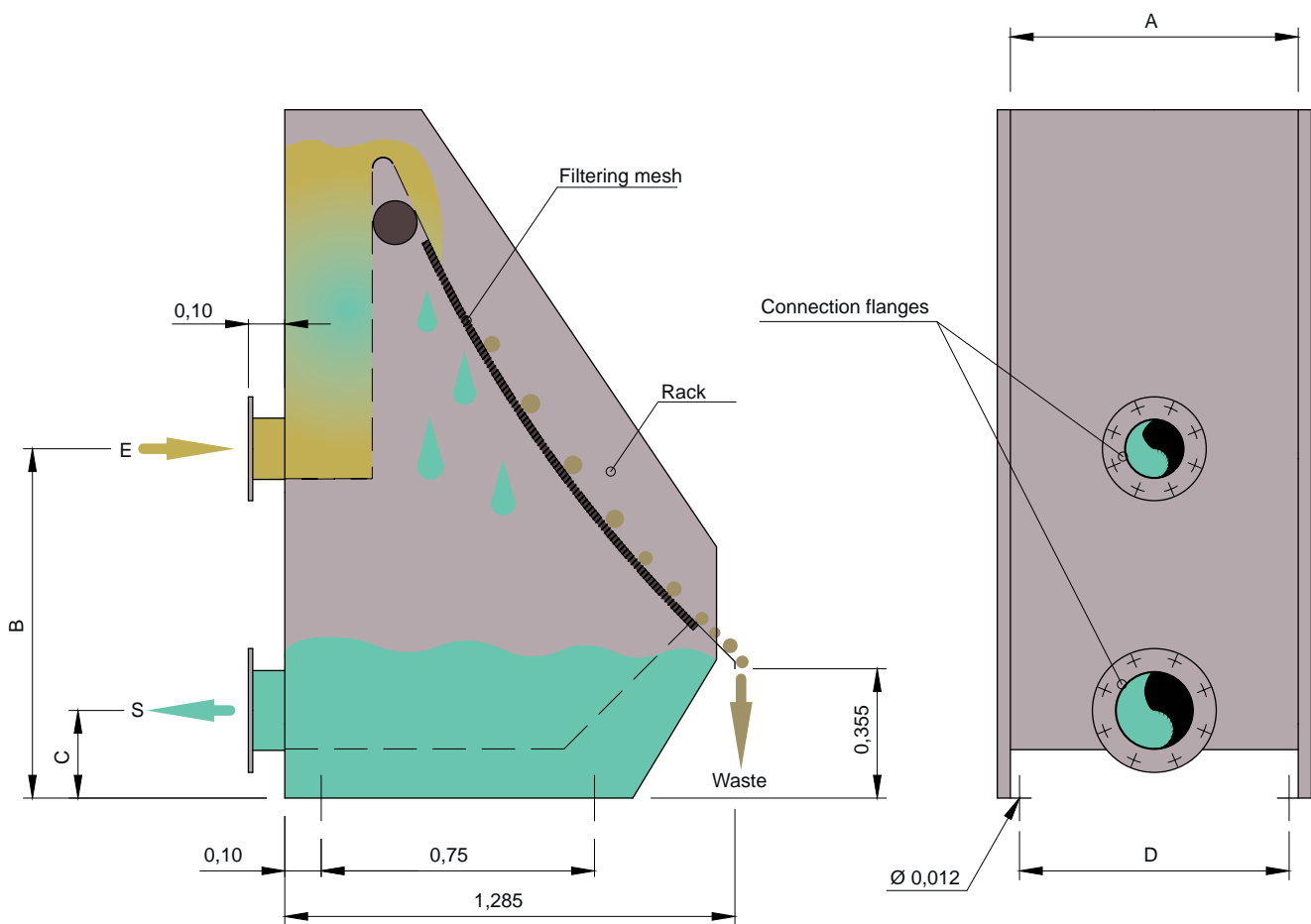
## STATIC SIEVE "TAMISTATIC" Type: MR35

Equipment designed for liquid-solid separation in a continuous process, that does not require any power source or maintenance.

### Descriptions and Characteristics:

- **Rack.** Single block type, completely shrouded and built in steel plate.
- **Filtering mesh.** Stainless steel with wedge-shaped profiles.
- **Waste separation system.** By gravity.





Technical characteristics:

TYPE	DIMENSIONS				FLANGES PN10 S/DIN2576		NOMINAL FLOW m <sup>3</sup> /h. Pitch in mm.			
	A	B	C	D	Input	Output	0,50	0,75	1,00	1,50
MR35-30	0,30	0,932	0,188	0,25	DN100	DN100	5-21	6-25	8-30	10-35
MR35-50	0,50	0,932	0,215	0,45	DN100	DN150	6-30	8-37	10-44	13-51
MR35-80	0,79	0,959	0,215	0,74	DN150	DN150	8-40	10-50	12-58	16-68
MR35-120	1,21	0,959	0,240	1,16	DN150	DN200	13-82	18-92	25-100	30-130
MR35-180	1,84	0,984	0,294	1,79	DN200	DN300	25-125	32-135	37-155	47-200

The indicated flows depend on the main characteristics of the outflow, like:  
Solids concentrations, viscosity, temperature, etc...

Dimensions in meters

# FINE SCREEN AND FILTERS

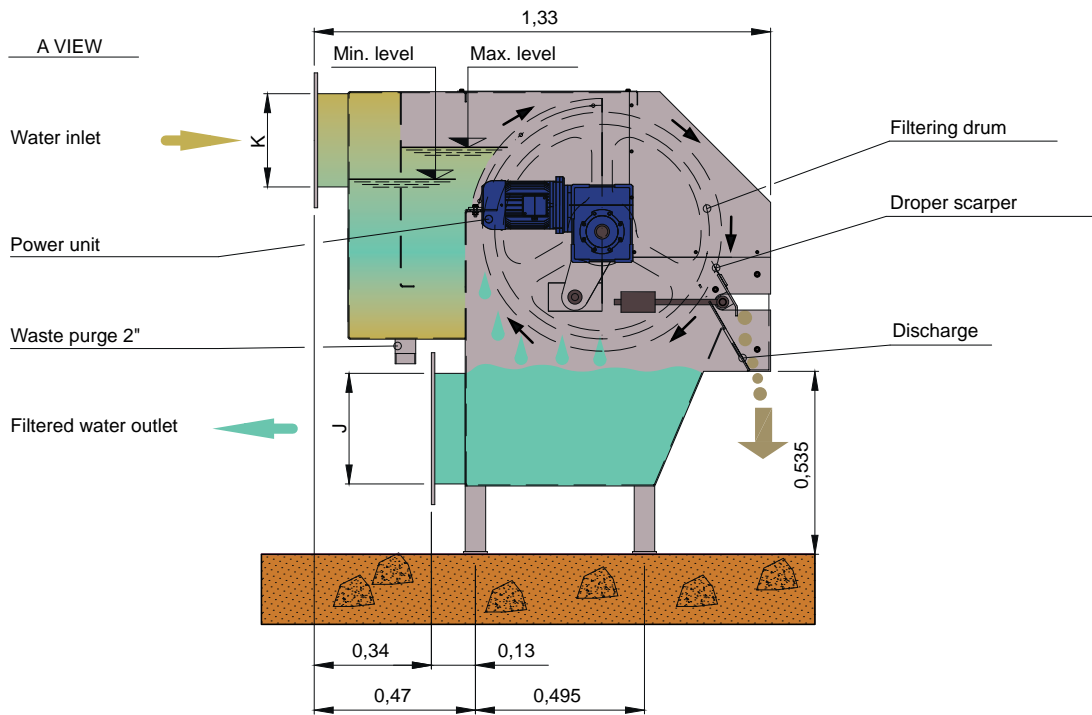
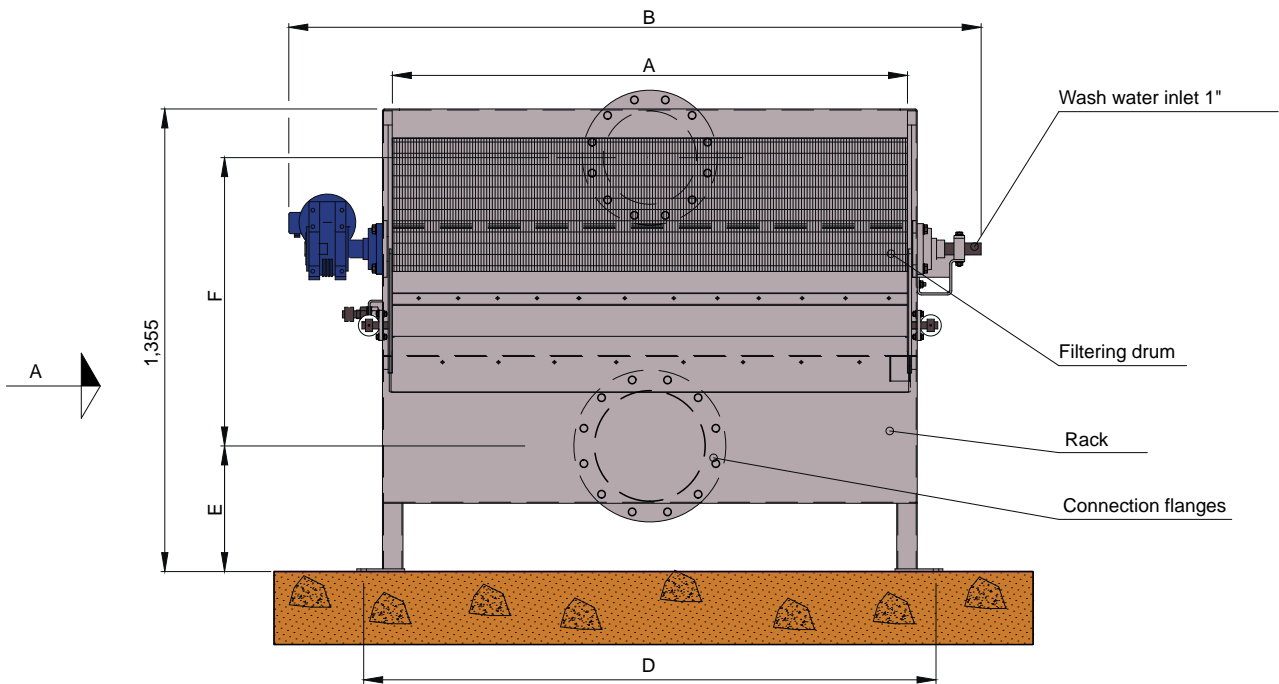
## ROTATING SIEVE "ROTOTAMIZ" Type: MR36

Equipment designed for solid - liquid separation in a continuous process. Ideal for sieving processes in food industry, wastewater treatment plants, etc. Thanks to its filtering mesh, the waste retained is separated without the possibility of overloading.

### Descriptions and Features:

- **Rack.** Single block in steel plate. It hosts the filtering drum and supports the power unit. Its structure conforms two independent enclosures: a top one that stores the inflow and a lower one that collects the already sieved liquid.
- **Power unit.** A geared motor unit installed on one side of the equipment operates the filtering drum. According to the needs, a frequency converter can be installed, thus increasing the filtering capacity.
- **Filtering drum.** In stainless steel with wedge-shaped profiles, which produces an auto-cleaning effect. Particles larger than the sieve holes are contained at the surface where they are eliminated through an ejecting scraper. It is built with variable hole sizes based on demand and the nature of the fluid to sieve.
- **Waste elimination system.** This is carried out with an ejecting scraper that constantly scrapes the filtering drum, tearing off the waste adhered to the mesh, which is then collected by a container, belt, screw conveyor, etc.
- **Cleaning system.** Designed with nozzles inside the drum that clean the mesh with pressurised water. This water sweeps along the waste adhered to the outside of the drum, evacuating it along with the sieved water.

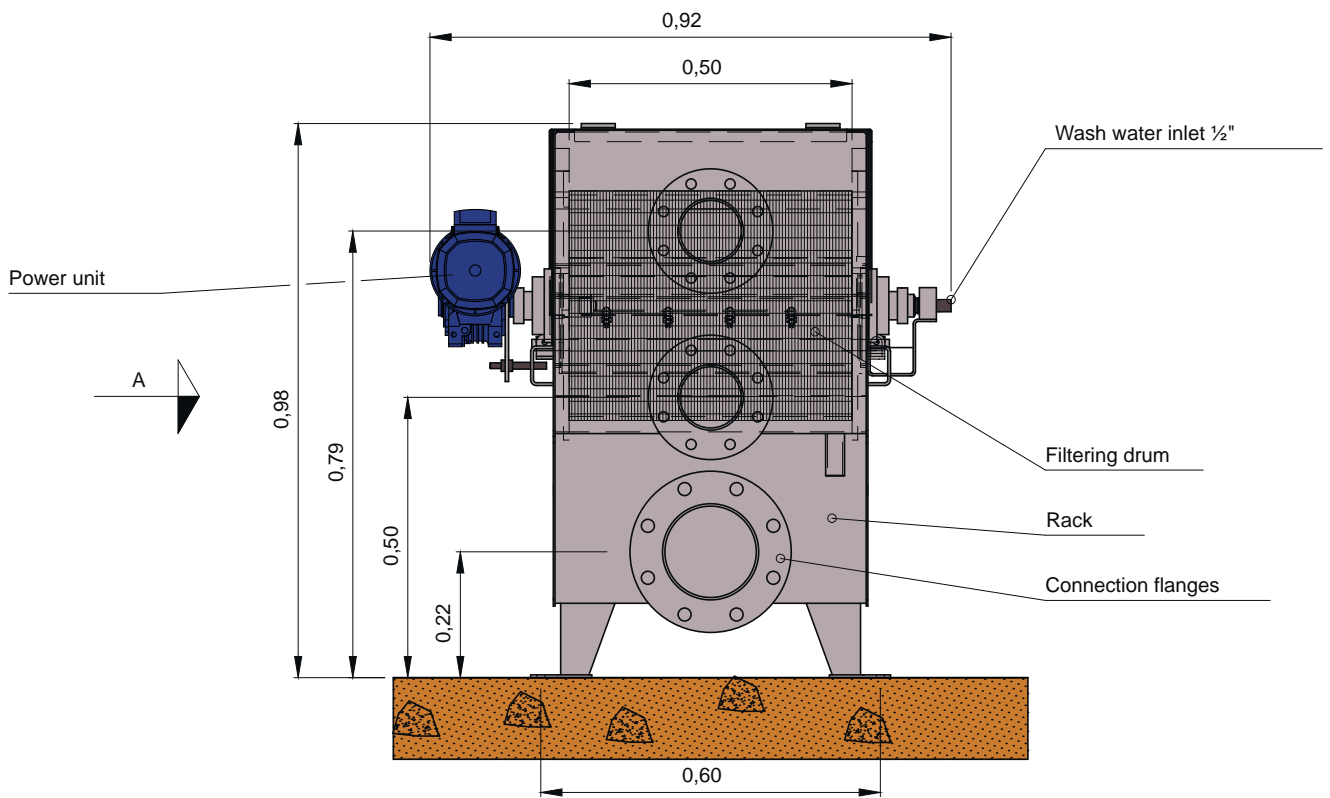




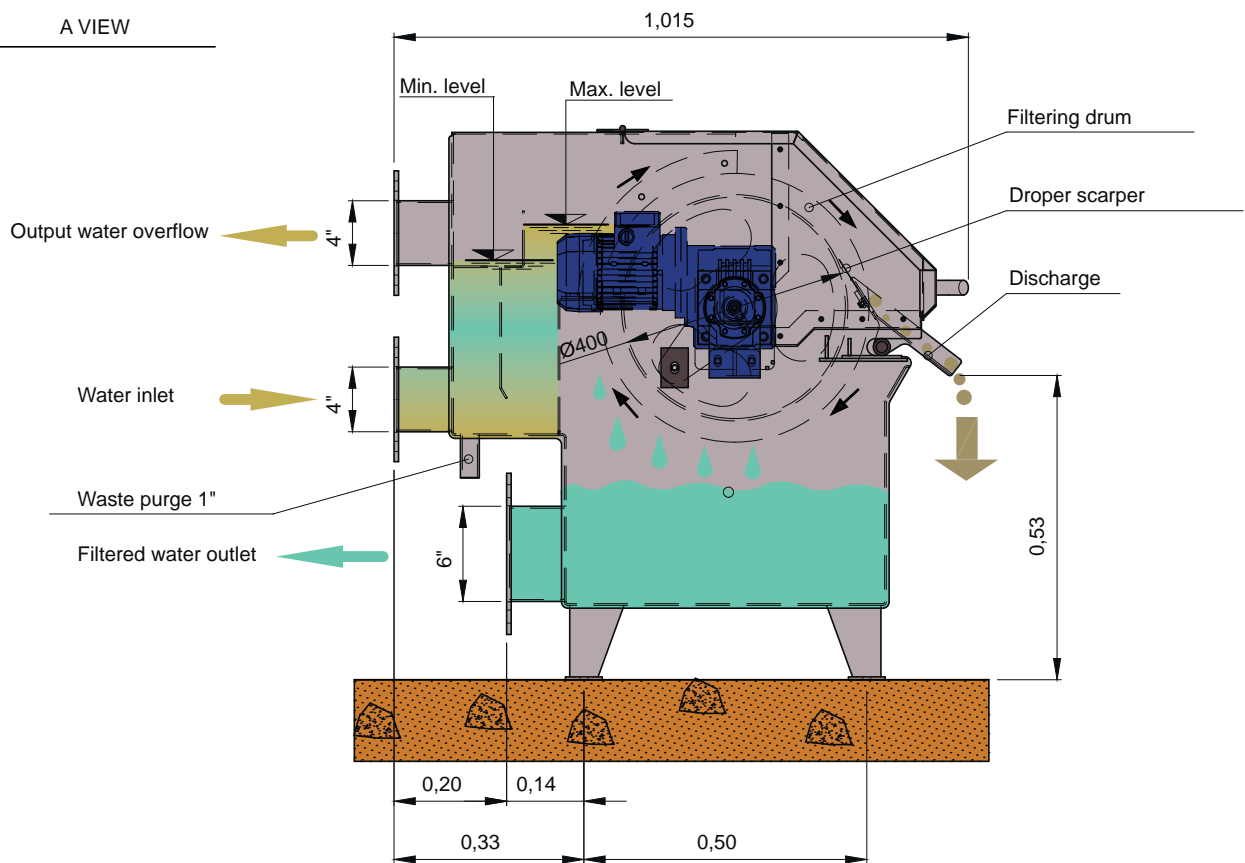
MR 36								Max. flow rates m <sup>3</sup> /h - Mesh measures (mm)					
TYPE	A	B	D	E	F	J	K	0,5	1	1,5	2	2,5	3
030	0,30	0,81	0,47	0,28	1,01	5"	4"	37,6	60,0	74,4	84,8	92,8	99,20
060	0,60	1,11	0,77	0,32	0,95	8"	6"	74,4	119,2	148,8	170,4	186,40	198,4
090	0,90	1,41	1,07	0,32	0,95	8"	6"	112,0	179,2	223,20	255,2	279,2	298,4
120	1,20	1,71	1,37	0,34	0,89	10"	8"	148,8	238,4	298,4	340,8	372,8	397,6
150	1,50	2,01	1,67	0,37	0,84	12"	10"	186,4	298,4	372,8	425,6	465,6	496,8
180	1,80	2,31	1,97	0,37	0,84	12"	10"	223,2	357,6	447,2	511,2	559,2	596,0

Flows for clean water. It will have apply a percentage of reduction depending on the ppm of the water.

Dimensions in meters



A VIEW



MR 36 A	MESH STEPS (mm.)								
	0,15	0,25	0,50	0,75	1	1,5	2	2,5	3
FLOW m <sup>3</sup> /h	19	28	48	63	75	91	102	110	117

Flows for clean water. It will have apply a percentatge of reduction depending on the ppm of the water.

Dimensions in meters



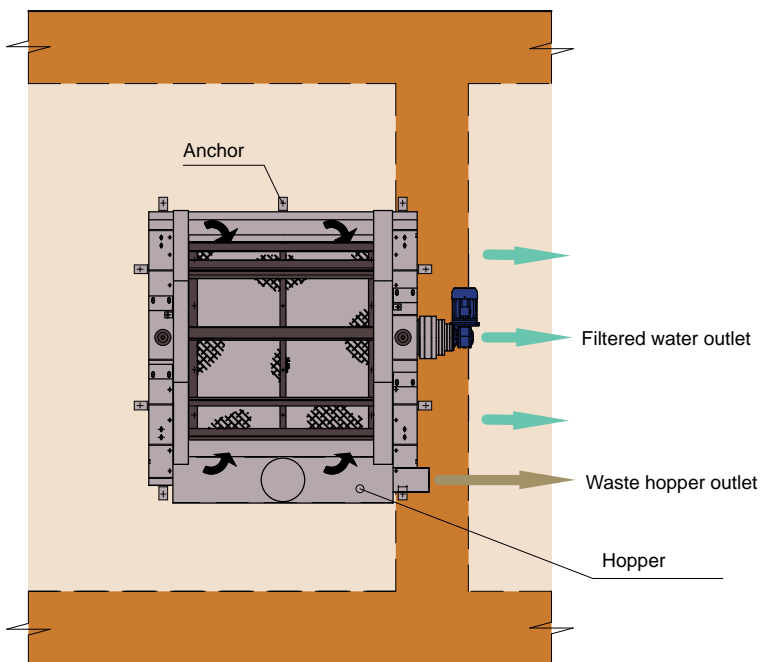
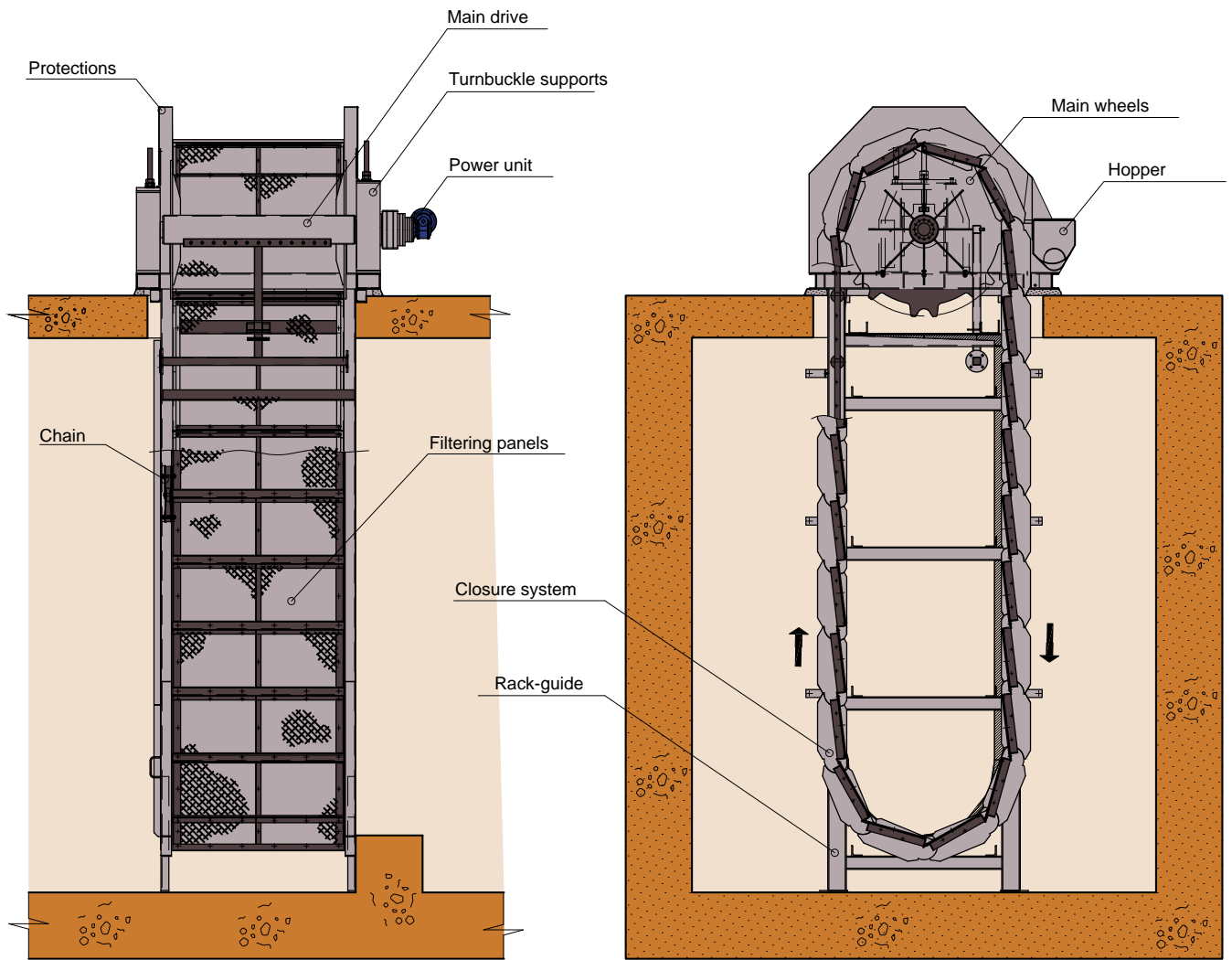
# FINE SCREEN AND FILTERS

## CHAIN FILTER Type: MR15

Equipment designed for sieving water in deep channels with variable level flows. Blocks waste with sizes between 150 microns and 6 mm. Single block construction, so it is assembled and tested before shipment from factory, thus facilitating on-site installation.

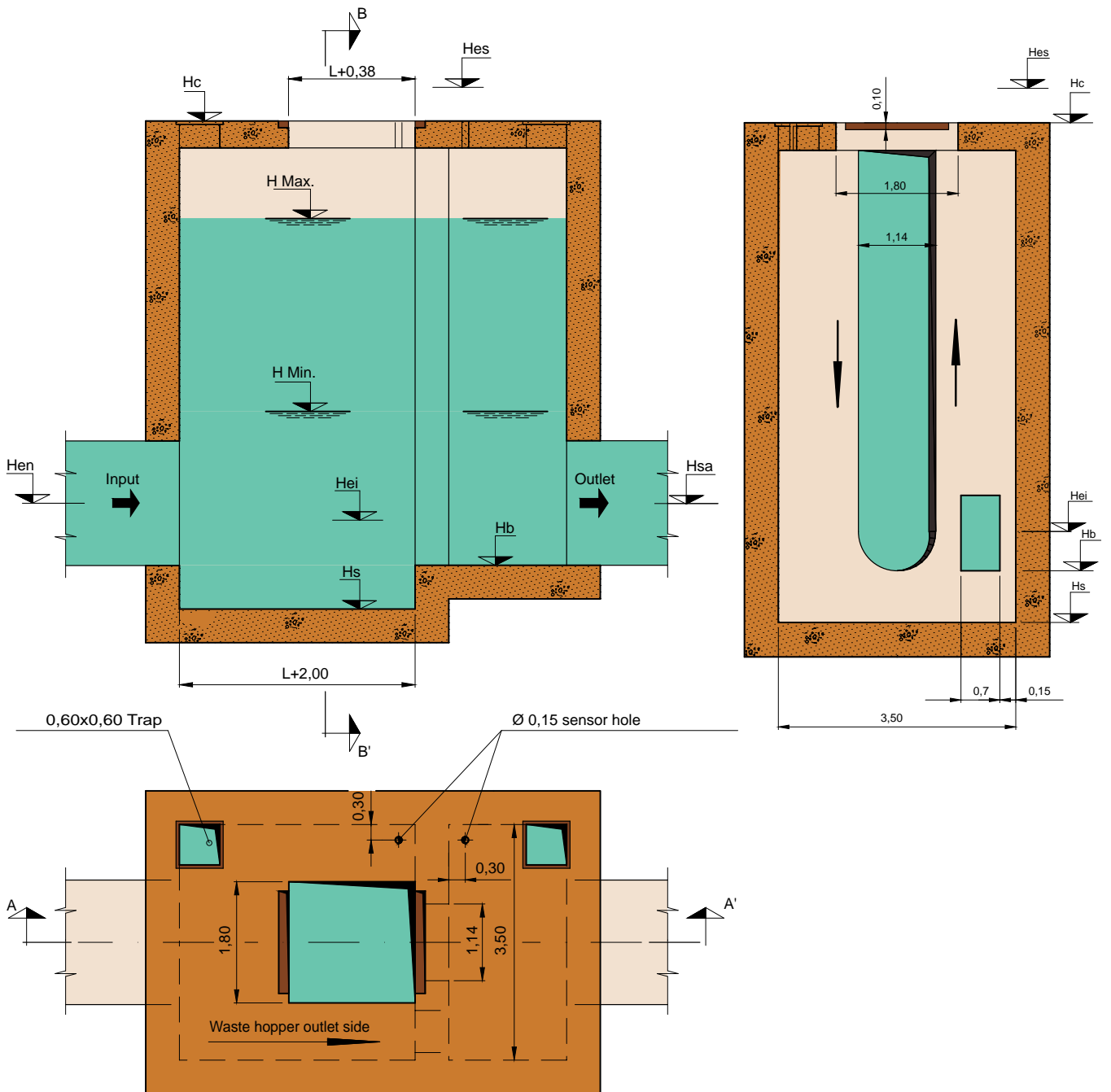
### Descriptions and Features:

- **Rack.** Single block type, completely shrouded and built in steel plate. Serves as a support for all the movement components, automatism, water-tightness and discharge hopper. After placing the filter on the installation, it is screwed and sealed to the walls of the location.
- **Power unit.** Consisting of a geared motor that acts directly on the main axle, mounted on steel guides to tighten and untighten the conveyor belt. Based on the filtering needs, this power unit can contain a two-speed motor, one for normal operation and a faster one for cases of exceptional filtering mesh overload. The main axle is a steel tube that connects both main wheels jointly. One of the ends is connected to the geared motor with a rigid coupling and the other end is supported by a self-aligning ball bearing. The entire unit has a specifically designed shock-absorbing system to prevent vibrations and tensions that might occur during normal operation.
- **Filtering panels.** Modular unit mounted on conveyor belts. Each panel is designed as a tray where the filtering mesh is connected, with useful spacing based on the filtering requirements, easily replaceable in case of deterioration.
- **Pulling belts.** Conveyor belts with a roller system geared to the main wheels. Guided with steel profiles along the filter. They can be tightened at the top. Built in galvanised or stainless steel, axles and sockets in stainless steel and rollers in anti-wear synthetic materials.
- **Closure system.** The filtering panels have steel plate on their ends with a design suitable to impede passage of solids between panels and guides, everything adapted to the sieving requirements. Also, the panels are built so they overlap to prevent passage of solids between panels.



SECTION " A-A' "

SECTION " B-B' "



Dimensions in meters



- **Guides.** Built with steel profiles, ensuring perfect operation of the filter. The rollers of the chain travel within them effectively guiding the filtering panel unit.



- **Cleaning unit.** The fabric is cleaned with pressurised water (3 to 4 Kg/cm<sup>2</sup>), with fan-shaped spraying. The cleaning water comes from a series of sprinklers located along a pipe inside the filter. The water hits the fabric from the outside, thus scraping the waste adhered to it and driving it towards the inside of the hopper.



- **Waste collection hopper.** Built entirely in steel plate and specifically designed for each type of waste and installation, the hopper ejects all waste along with the projected cleaning water through one of its ends. It has logs for inspection and cleaning.



- **Control equipment** (optional). The equipment can be configured for scheduled operation or for operation upon load loss at variable flow.



# FINE SCREEN AND FILTERS

## THIN MATERIALS SIEVE Type: MR52

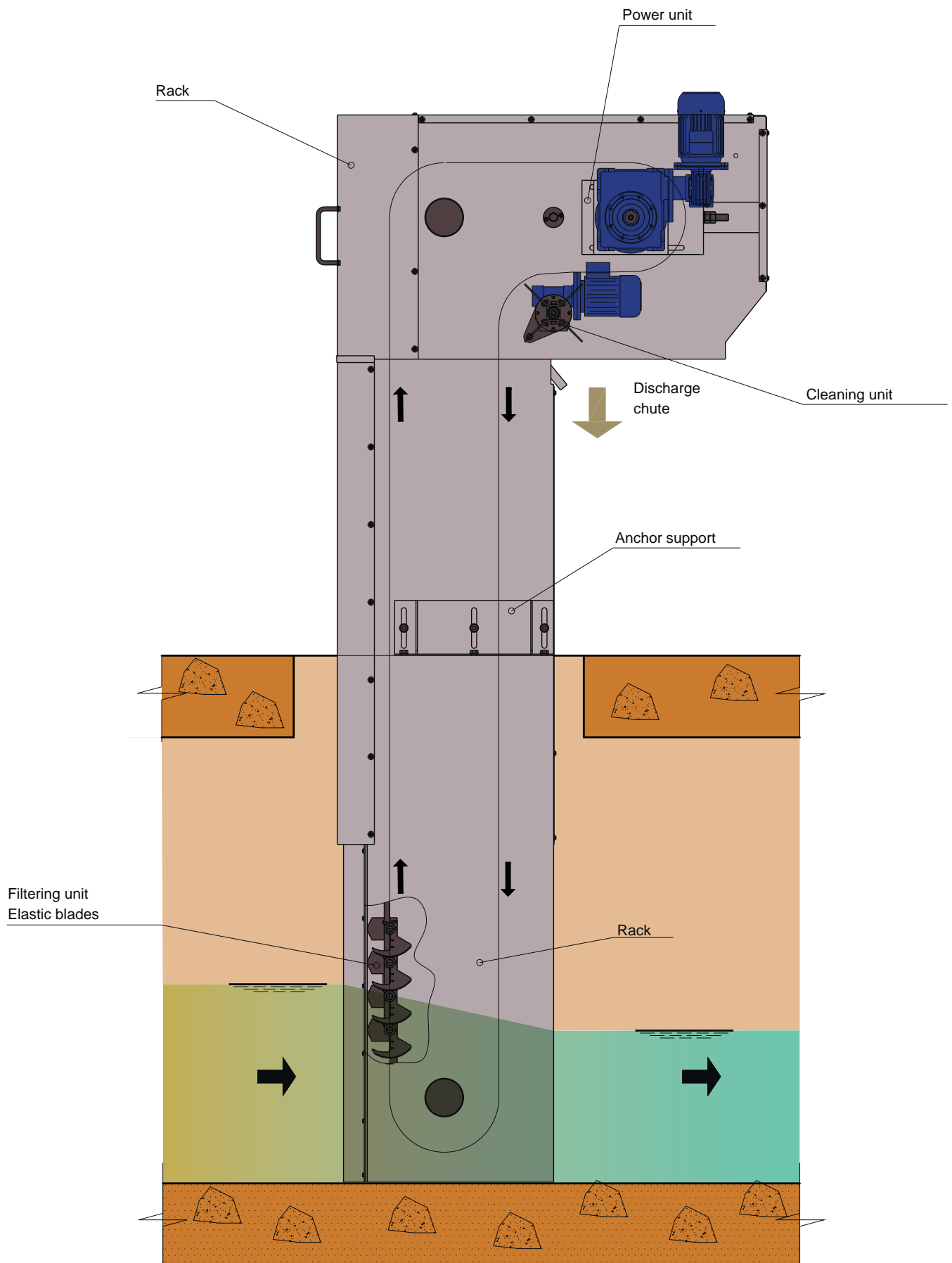
### THIN MATERIALS SIEVE type MR52

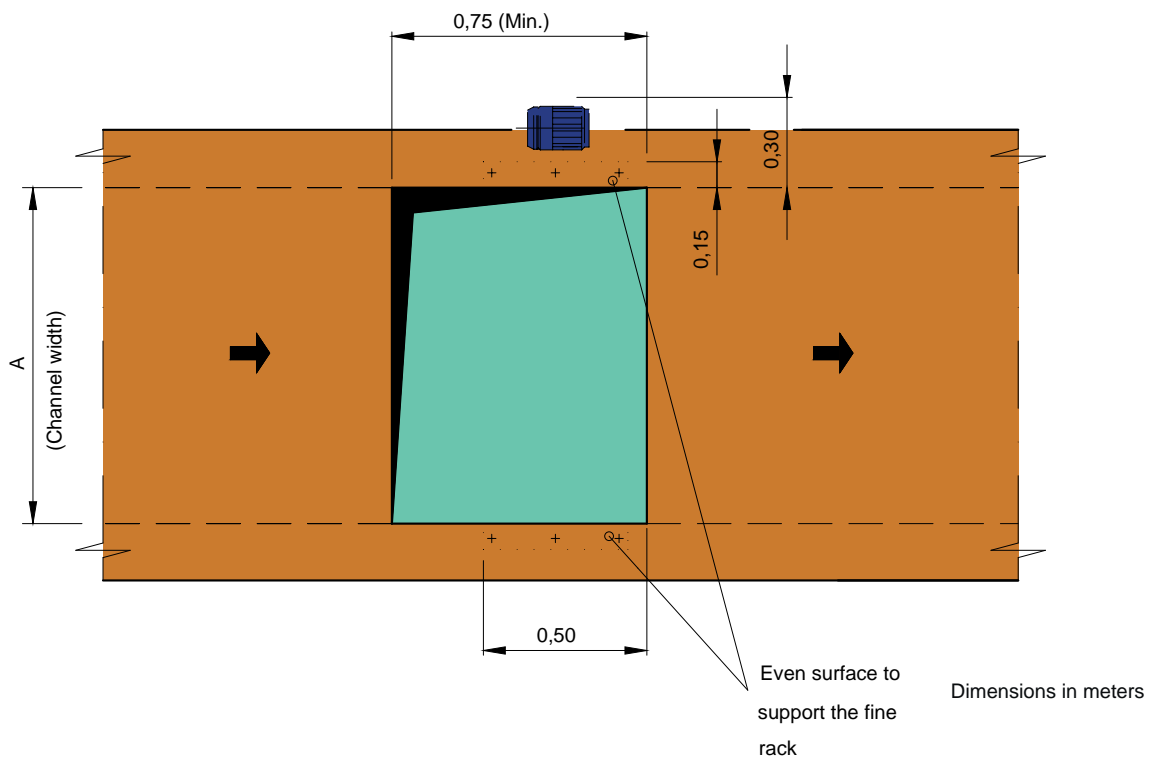
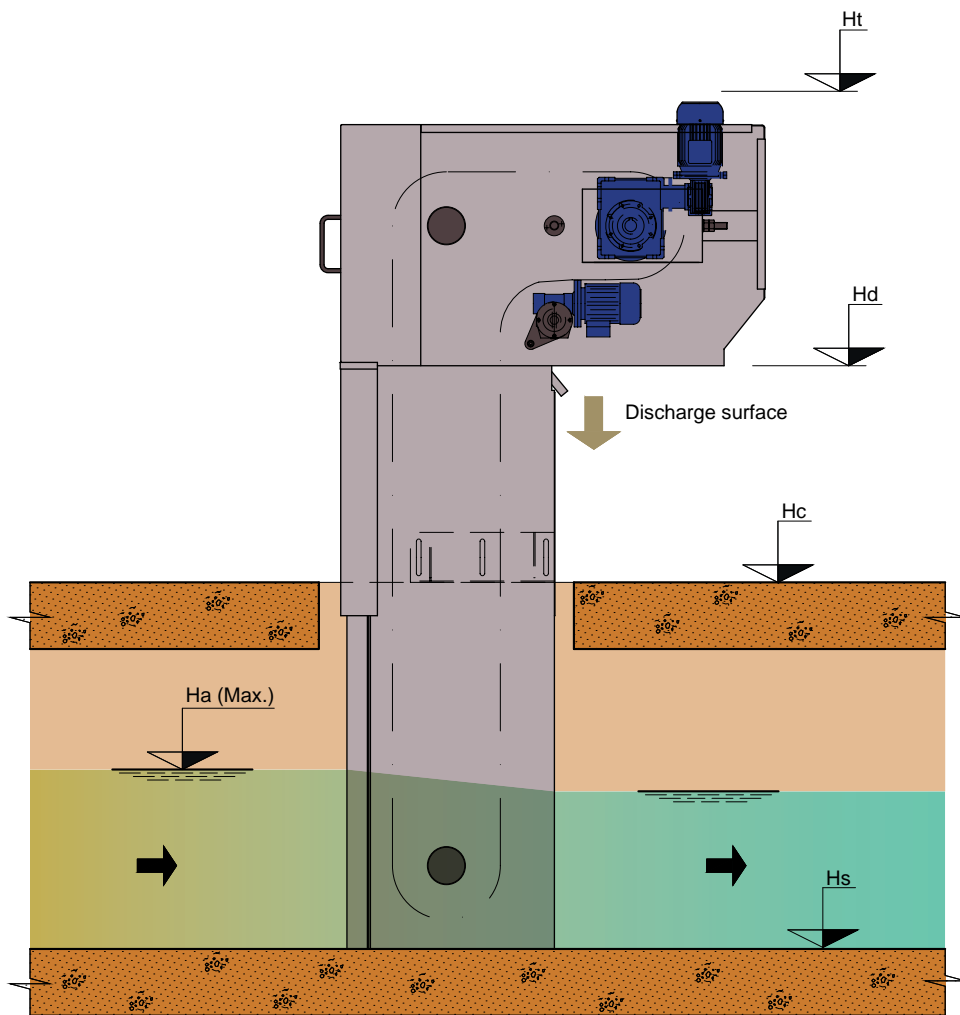
This single-block sieve, with mesh size for solids between 1.5 mm and 6 mm, is suitable for wastewater treatment processes and solids removal in industrial processes. This equipment maximises performance by working intermittently, minimising wear and increasing sieving effectiveness thanks to a slow mesh saturation, which increases its solid retention capacity and facilitates discharge into the dumping point. Its mobile blades ascending to displace the blanket to the upper part until it reaches the discharge area.

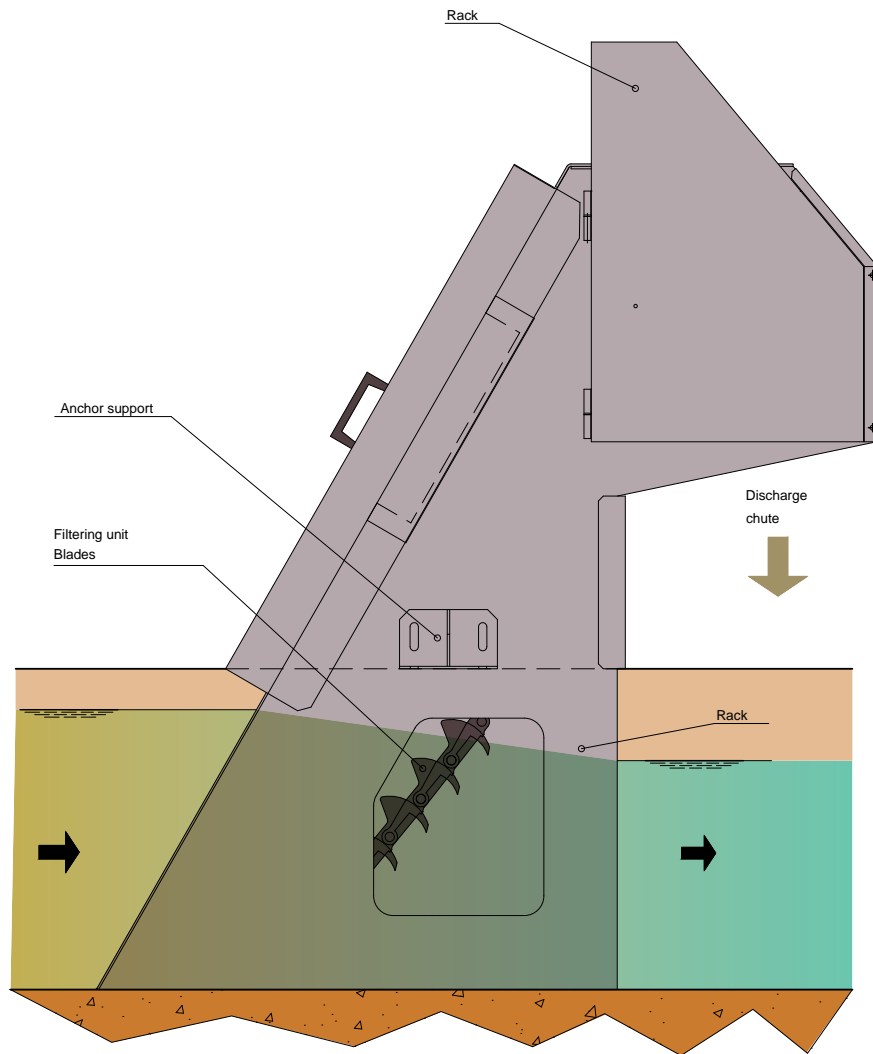
#### Descriptions and Features:

- **Rack.** Single-block type, resulting in a stable and resistant unit. Built in stainless steel plate, supports all movement components as well as height-adjustable anchoring for on-site fastening.
- **Filtering unit.** Designed to prevent wear due to abrasion and consisting of blades and highly resistant elements such as ABS that result in a continuous sieving mesh. The available useful spacing's of this unit are 1.5, 3 and 6 mm.
- **Power unit.** Consisting of a geared motor and a drive axle that operates the two lateral conveyor belts, with the filtering elements attached to it. A tightening system can be used to carry out this operation very easily when required.
- **Cleaning unit.** Consisting of elastic blades operated by a geared motor that eliminates the waste adhered to the filtering elements during rotation. A series of sprinklers that spray pressurised water on the filtering elements complement this device.
- **Control equipment** (optional). The equipment can be configured for scheduled operation or for operation upon load loss at variable flow.









\* Canted option



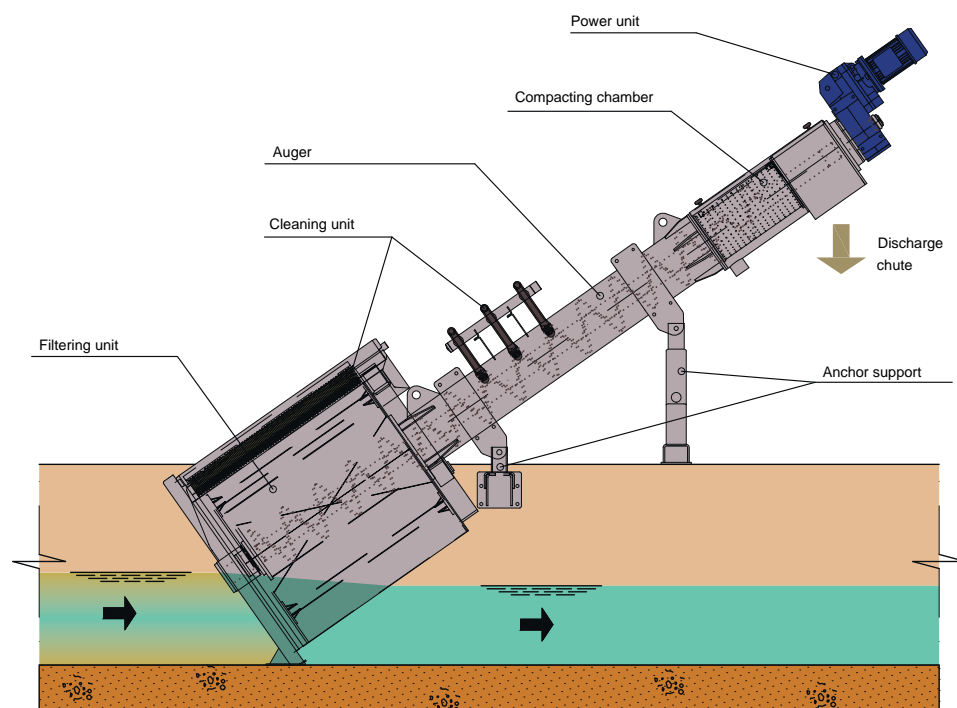
# FINE SCREEN AND FILTERS

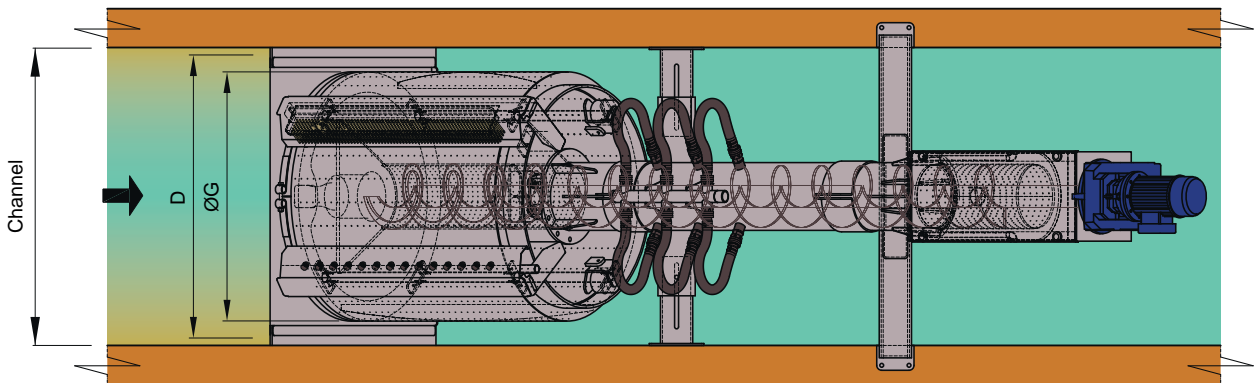
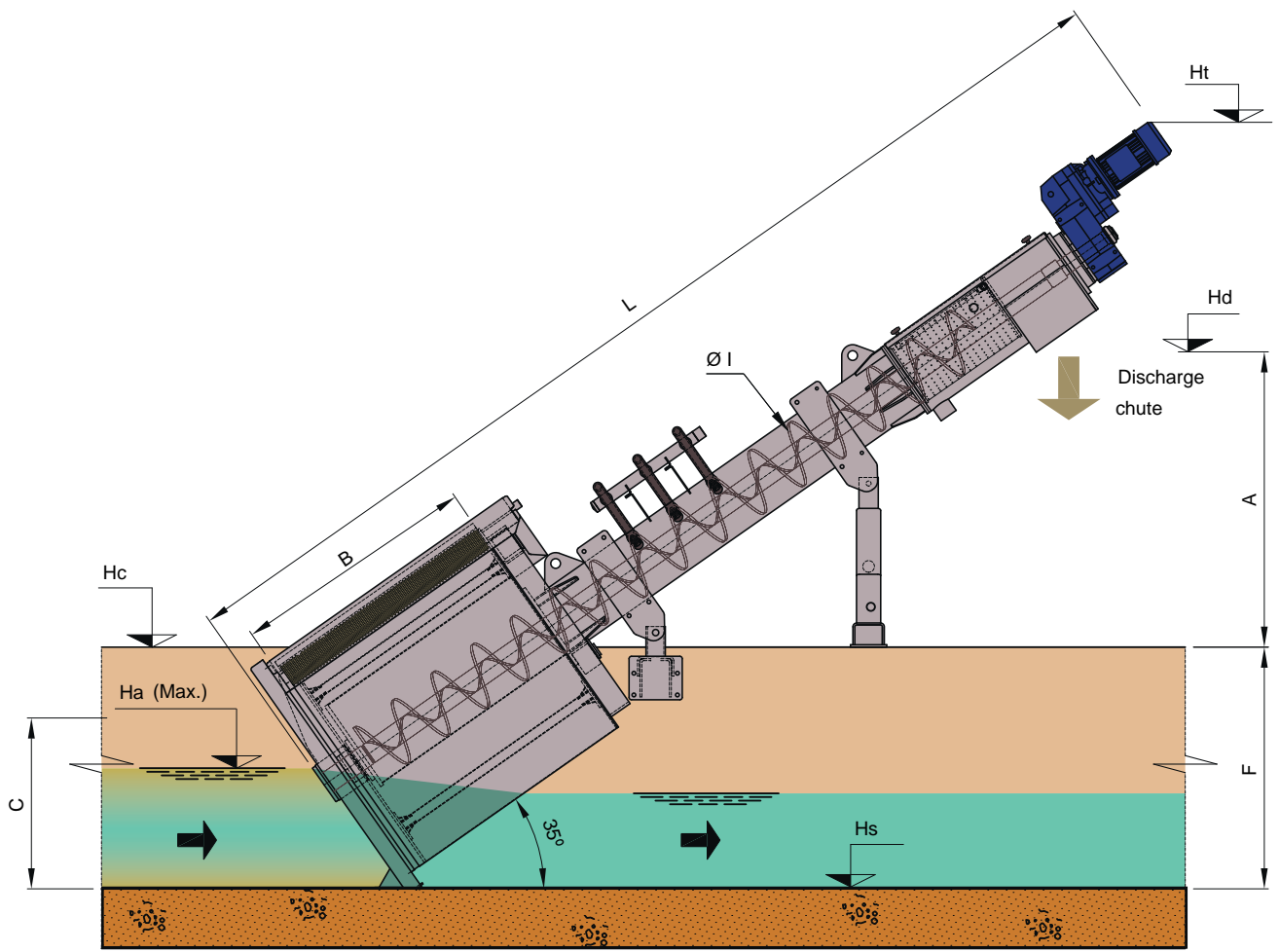
## ROTATING DRUM SIEVE SCREEN Type: MR52C

Single-block equipment designed for installation on channels or metallic containers, with spacing for solids between 0.5 mm and 10 mm. Its main characteristic is over-filtering, thanks to the formation of a waste blanket over the filtering basket. The basket sieve is a device suitable for wastewater treatment processes and solids removal in industrial processes.

### Descriptions and Features:

- **Rack.** Built in stainless steel plate, single-block type, resulting in a stable and resistant unit on which all the elements of the equipment are installed, as well as the height-adjustable anchors for on-site fastening.
- **Filtering unit.** Consisting of a perforated metal slab or wedge-shaped profile mesh, capable of filtering between 0.5 and 10 mm. The particles larger than the spacing of the drum are dropped on the screw conveyor, which hoists and ejects the waste outside the channel. Before being ejected, the waste is compacted and dehydrated in the compacting chamber.
- **Power unit.** Consisting of a geared motor and a drive axle that operates the screw conveyor and the rotation of the filtering drum. The absence of tightening elements and its simple operation facilitate maintenance.
- **Cleaning unit.** This equipment has two cleaning systems. In the drum area it consists of a brush and sprinklers that clean the drum from the outside to the inside. The lower area of the conveyor contains sprinklers that remove soluble substances, decreasing the amount of waste.
- **Control equipment** (optional). The equipment can be configured for scheduled operation or for operation upon load loss at variable flow.





DIMENSIONS									
TYPE	Channel	A	B	C	D	F	ØG	ØI	L
MR52-C-80	1,00	1,22	0,80	0,40	0,94	0,80	0,80	0,25	4,17
MR52-C-100	1,20	1,22	1,00	0,50	1,14	1,00	1,00	0,25	4,37
MR52-C-120	1,40	1,22	1,20	0,60	1,34	1,20	1,20	0,25	4,60

Dimensions in meters



# 4-TRANSPORT AND COMPACTATION

# TRANSPORT AND COMPACTATION

## COMPACTING SCREW Type: MR53C

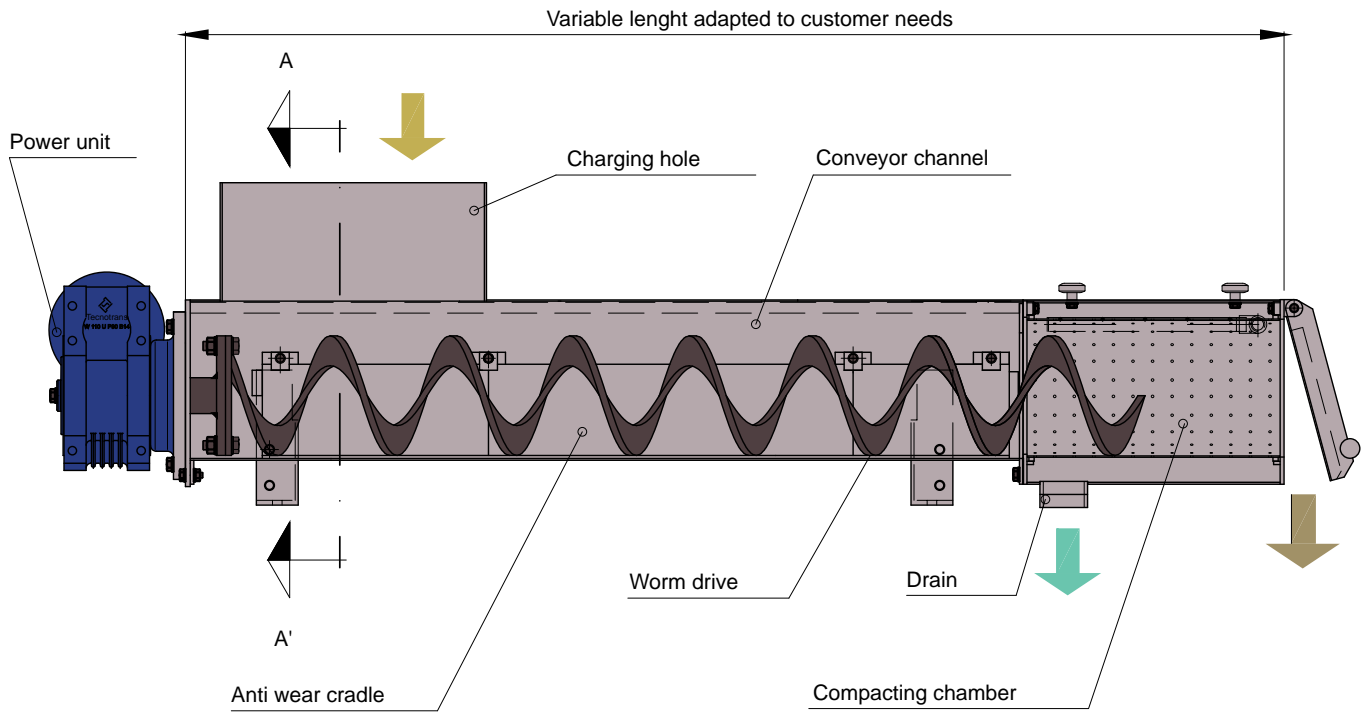
Device specifically designed for transporting, compacting, draining and volume reduction of moist solid waste from wastewater screening (Grids and Sieves).

### Descriptions and Features:

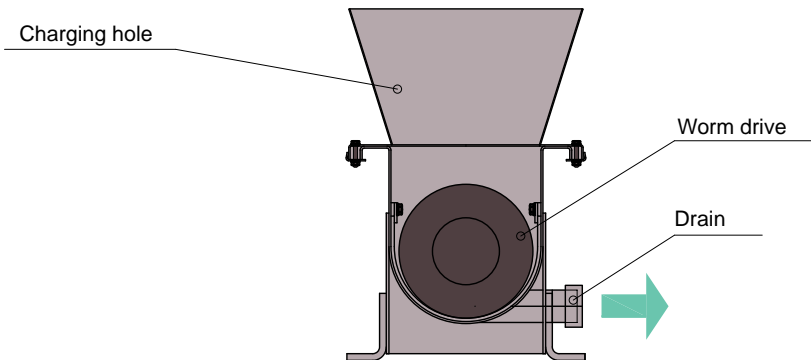
- **Conveyor channel.** Built with stainless steel. The upper part is closed with screwed caps that can be removed to facilitate equipment inspection and cleaning. The lower ends have small legs for anchoring and support.
- **Worm drive.** A coreless conveyor screw made of carbon steel or stainless steel that, when rotating, scrapes an anti-wear polyethylene cradle to move the waste.
- **Power unit.** Consisting of a geared motor and a coupling to the worm drive.
- **Charging hole.** The position and amount of charging holes are adjustable. Each of them is screwed to the conveyor channel.
- **Compacting chamber.** This is located on the upper part of the screw and consists mainly of a highly resistant filtering cylinder and a counterweighed flanged discharge lid.







SECTION " A-A' "



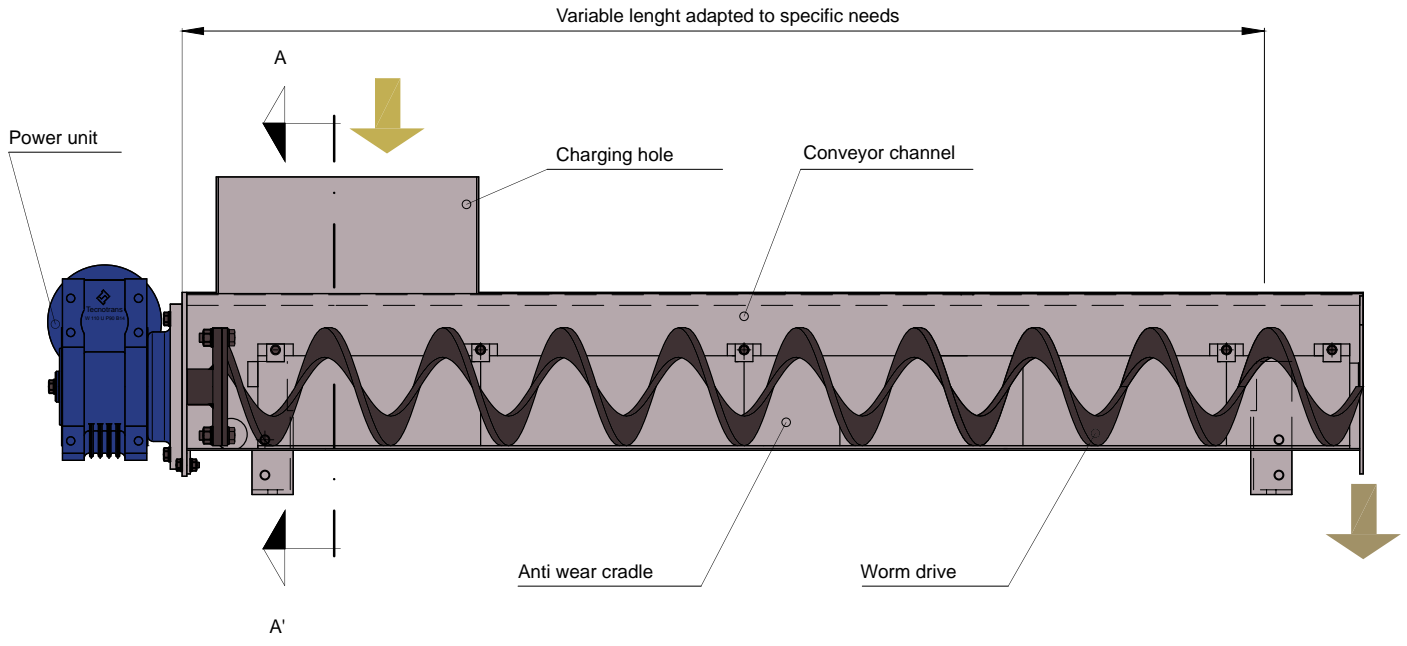
# TRANSPORT AND COMPACTATION

## SCREW CONVEYOR Type: MR53T

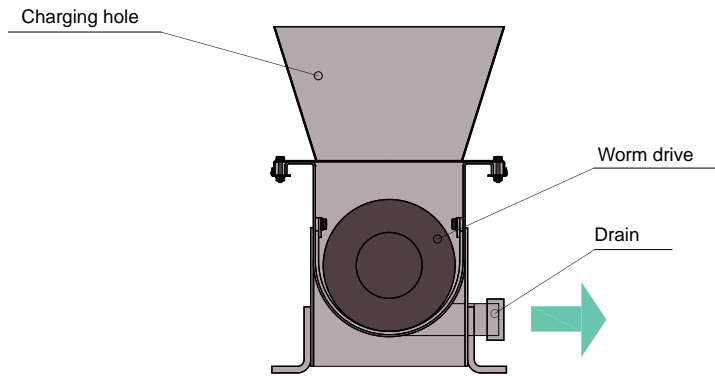
Device specifically designed for transportation of moist solid waste from wastewater screening (Grids and Sieves).

### Descriptions and Features:

- **Conveyor channel.** Built with stainless steel. The upper part is closed with screwed caps that can be removed to facilitate inspection and cleaning of the device. The lower ends have small legs for anchoring and support.
- **Worm drive.** A coreless conveyor screw, made of carbon steel or stainless steel that, on rotation, scrapes an anti-wear polyethylene cradle to move the waste.
- **Power unit.** Consisting of a geared motor and a coupling to the worm drive.
- **Charging hole.** The position and amount of charging holes are adjustable. Each of them is screwed to the conveyor channel.



SECTION "A-A"



# TRANSPORT AND COMPACTATION

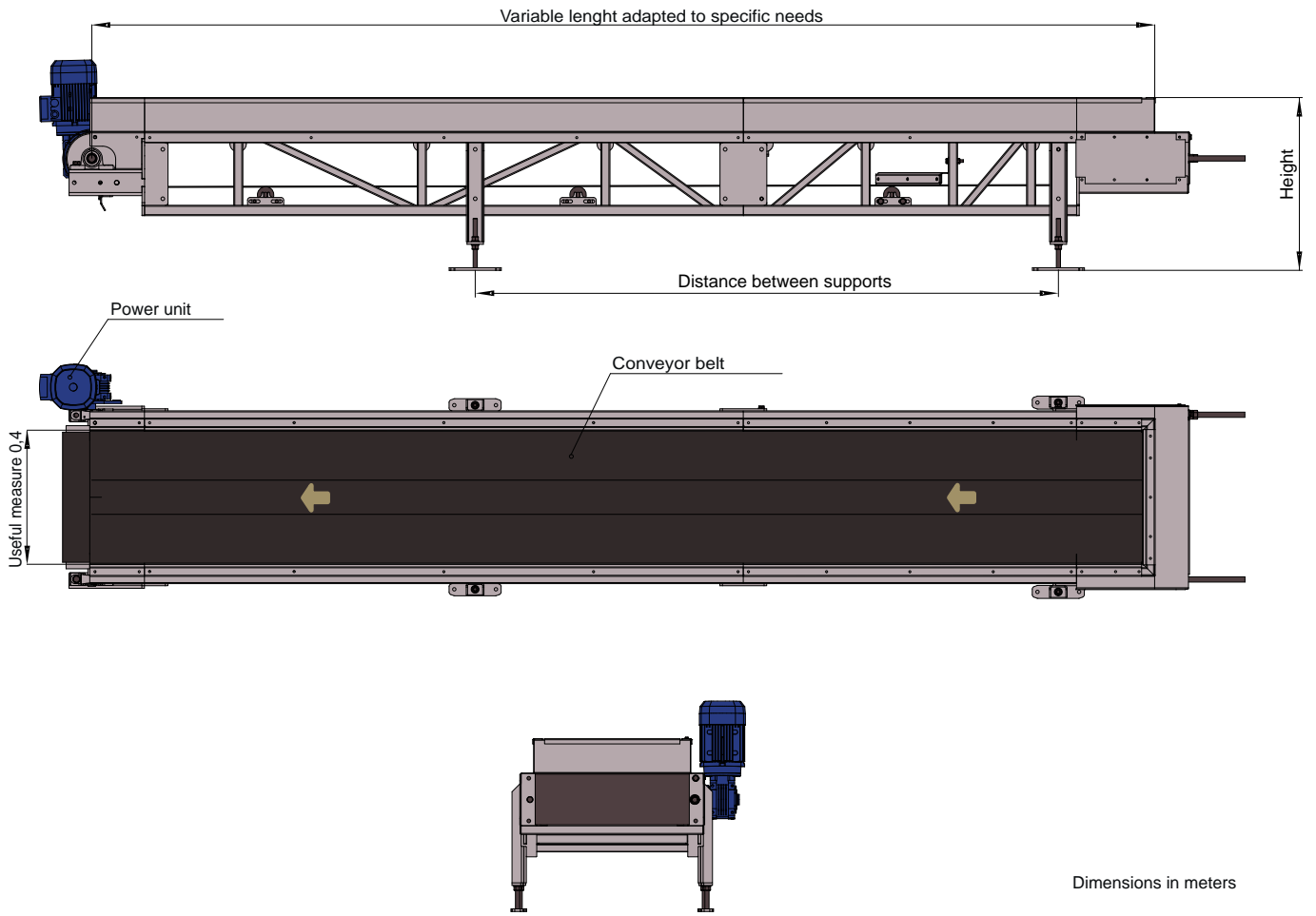
## CONVEYOR BELT Type: MR48

This device is specifically designed for transportation of large amounts of solid waste from wastewater screening, particularly from devices such as screens.

### Descriptions and Features:

- **Rack.** Modular, with tubular space grid, designed to facilitate transportation, on-site assembly and adaptation of the equipment to any shape, with high resistance and minimum weight.
- **Power unit.** Consisting of a geared motor directly connected to a drive axle that operates the pulling drum.
- **Conveyor belt.** The most common belt width for this type of waste is 500 mm, leaving a useful space of 400 mm on the belt.
- **Roller system.** The roller supports are located on the frame in a V shape, which makes centring and alignment of the conveyor belt easy.
- **Charge and discharge.** The solids are collected in the discharge area and transported on the conveyor belt to the discharge point.







# 5-COMPACT PRETREATMENT

# COMPACT PRE-TREATMENT

## COMPACT PRE-TREATMENT Type: MR54

### COMPACT PRE-TREATMENT type MR54

Compact plan designed and intended for initial treatment of both urban and industrial wastewater.

The wastewater enters the equipment through the Screw Sieve area, which separates incoming solid waste. Grit sediments at the bottom of the chamber, where it is collected by two screw conveyors and hoisted up to the surface where it is discharged into a container along a ramp. Fats are equalised with an air injection system focused on the area meant for removal, where a surface scraper sweeps towards the collection hopper.

Its installation is extremely easy. It replaces and improves any conventional facility in foundation works of small town purifying plants. As it is a single-block unit, it only needs anchoring to the curb of the location and connections to the inflow and outflow pipe.

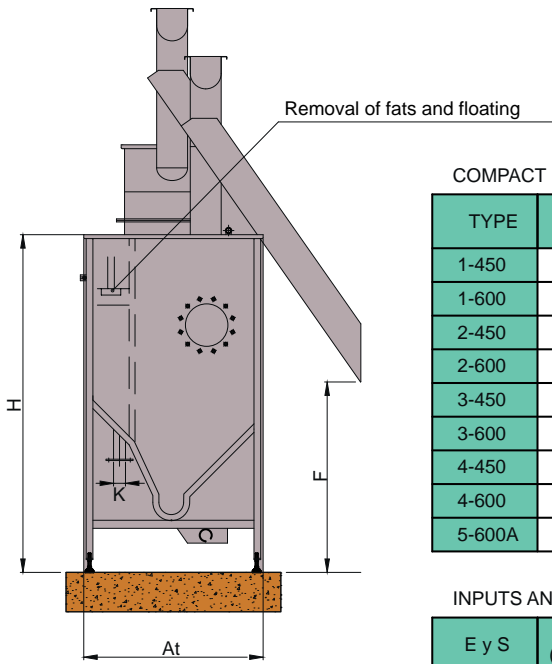
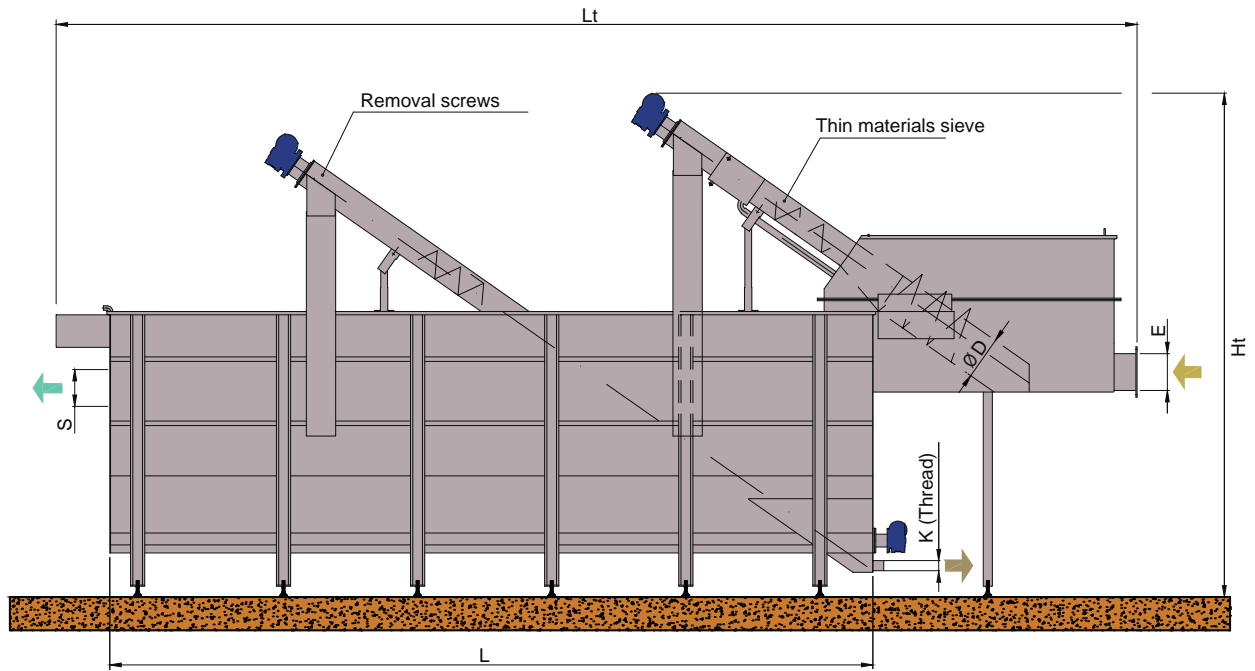
Some of its most important advantages are safe operation, easy installation in small areas, lack of foul smells and splashes and low operating expenses.

It is manufactured in several standardised sizes, based on the flows to treat, via modular elements that facilitate transportation.

#### Descriptions and Features:

- **Thin materials sieve.** Consisting of the power unit, the filtering grid, a helix system with cleaning brush, with extension of hoisting screw and compacting and draining area.
- **Removal screws.** For grits, core-less. They rotate and scrape an anti-wear polyethylene cradle, hosting the grits to the discharge area.
- **Removal of fats and floating substances.** Based on an air injection system via a collector at the bottom of the tank. The process is completed with a separator plate with special openings and a motorised pulley and cable set that moves the surface scraper along one side and the entire chamber, discharging the fats into a hopper located on one end.





COMPACT PRETREATMENT

TYPE	At	F	H	Ht	K	L	Lt	Ø D	Q max. (m³/h)
1-450	1,14	1,40	1,82	4,07	DN80	4,50	6,06	0,40	85
1-600	1,14	1,40	1,82	4,07	DN80	6,00	7,56	0,40	110
2-450	1,14	1,40	2,07	4,32	DN80	4,50	6,06	0,40	100
2-600	1,14	1,40	2,07	4,32	DN80	6,00	7,56	0,40	135
3-450	1,53	1,40	2,30	4,54	DN80	4,50	6,12	0,50	180
3-600	1,53	1,40	2,30	4,54	DN80	6,00	7,62	0,50	240
4-450	1,90	1,40	2,58	5,34	DN80	4,50	6,12	0,50	260
4-600	1,90	1,40	2,58	5,34	DN80	6,00	7,62	0,50	325
5-600A	2,26	1,40	2,86	5,81	DN80	6,00	7,62	0,50	325

INPUTS AND OUTPUTS

E y S	Q (m³/h)	Q (l/s)
6" DN150	75	21
8" DN200	147	41
10" DN250	263	73
12" DN300	407	113





# 6-GRITS AND GREASES REMOVAL

# GRITS AND GREASES REMOVAL

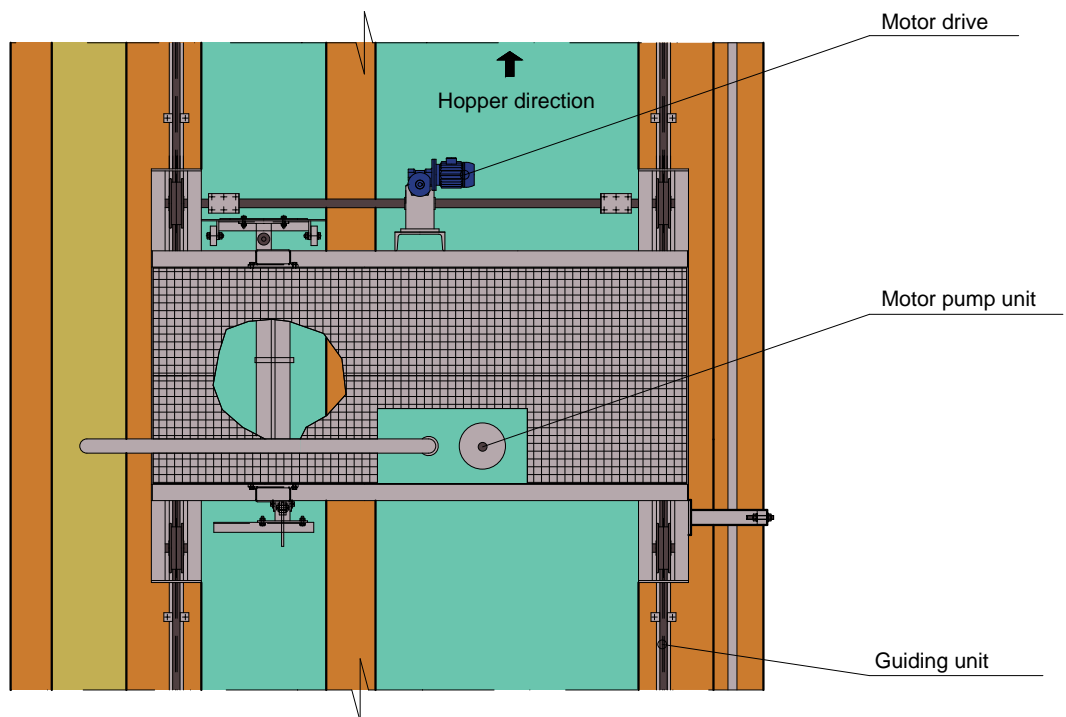
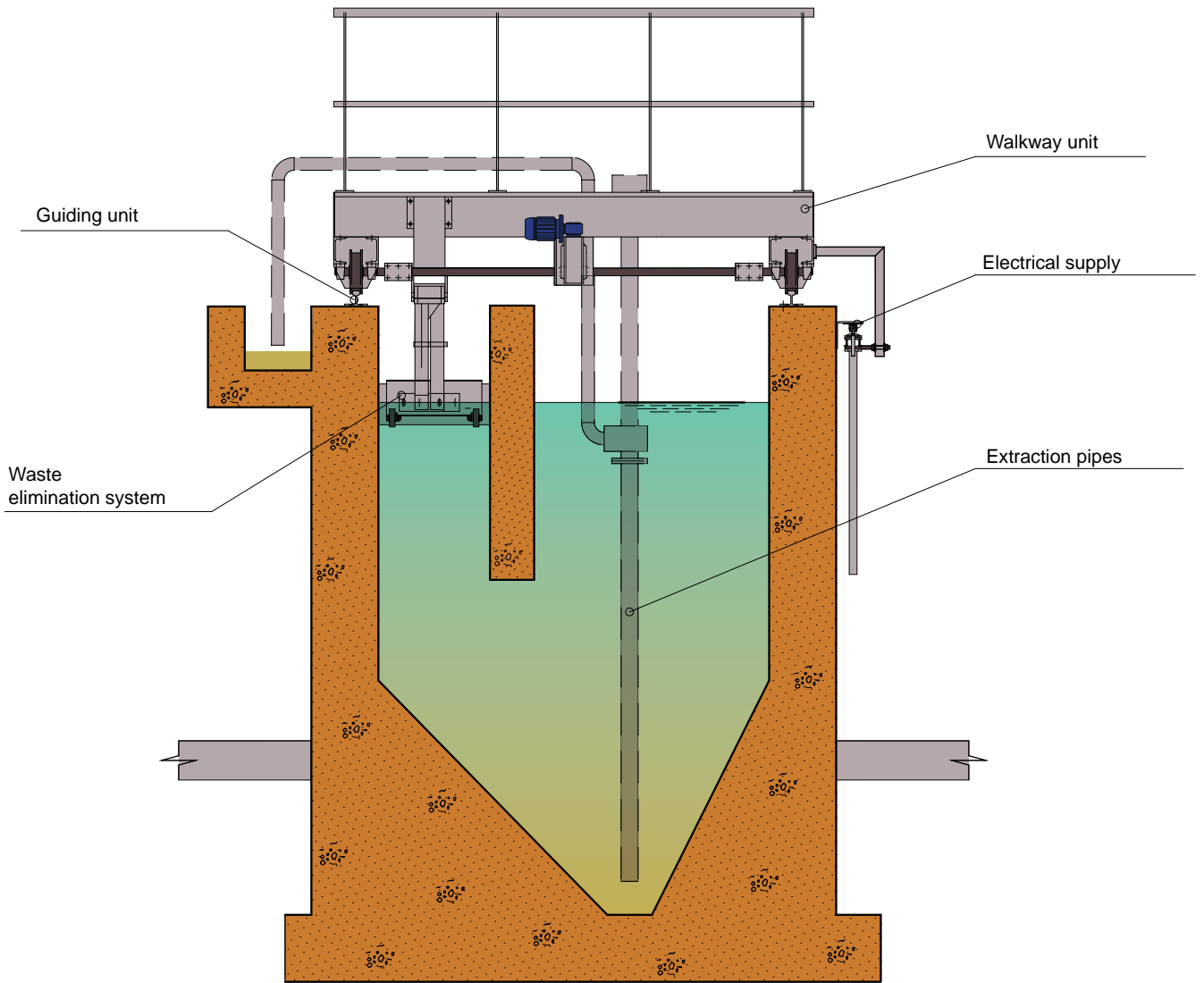
## DEGREASING BRIDGE - LONGITUDINAL Type: MR16

Device designed and adapted for removal of grits and floating substances in rectangular pre-treatment tanks.

### Descriptions and Features:

- **Walkway unit.** Built with steel plate, drawer type (low profile) and with stainless steel railway on both sides. Galvanised metal or GFRP lattice work for passage. Connected motorised unit on both sides of the walkway.
- **Motor drive.** Consisting of a geared motor that operates the primary axle. Power wheels mounted on its ends. Those wheels, like the drive wheels, are completely metallic so they can move through rails.
- **Guiding unit.** Through rails anchored to the top slab, on both sides of the side walls and along the longitudinal direction of the enclosure.
- **Waste elimination system.** Consisting of two scrapers that sweep the fat area, moving the fat towards one of the ends of the enclosure where they are poured into a hopper. The layout of the scrapers eliminates the possibility of dead areas. The entire unit hangs from the walkway. The operation is mechanic but, depending on the side of the scrapers, it can work via electric traction.
- **Motor pump unit and extraction pipes.** Consisting of a vertical motor pump, installed on the walkway of the bridge. (Not included in the supply).
- **Electrical supply system.** To be installed along the enclosure and on one external side. Provides electrical supply to the manoeuvring cabinet, based on a foldable cable attached to carts that move along a metallic guide.
- **Control equipment** (optional). A switchboard controls the entire automatic operation of the equipment, with inductive end stops that control the forward and backward movement of the unit. It is also used to operate the grit removal motor pump based on the direction of the bridge.





# GRITS AND GREASES REMOVAL

## GREASE CONCENTRATOR WITH TANK Type: MR08D

### GREASE CONCENTRATOR WITH TANK type MR08D

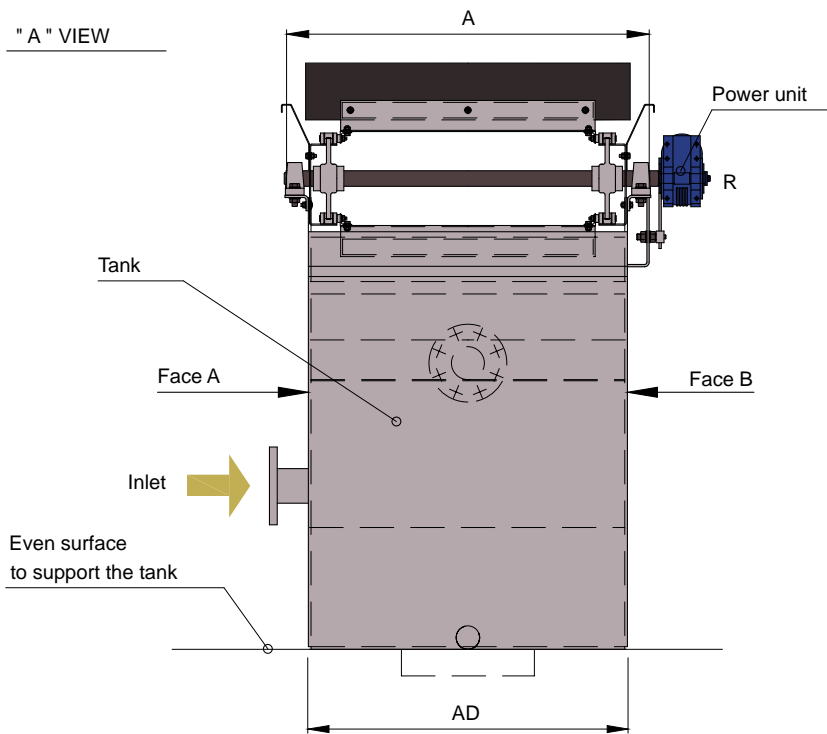
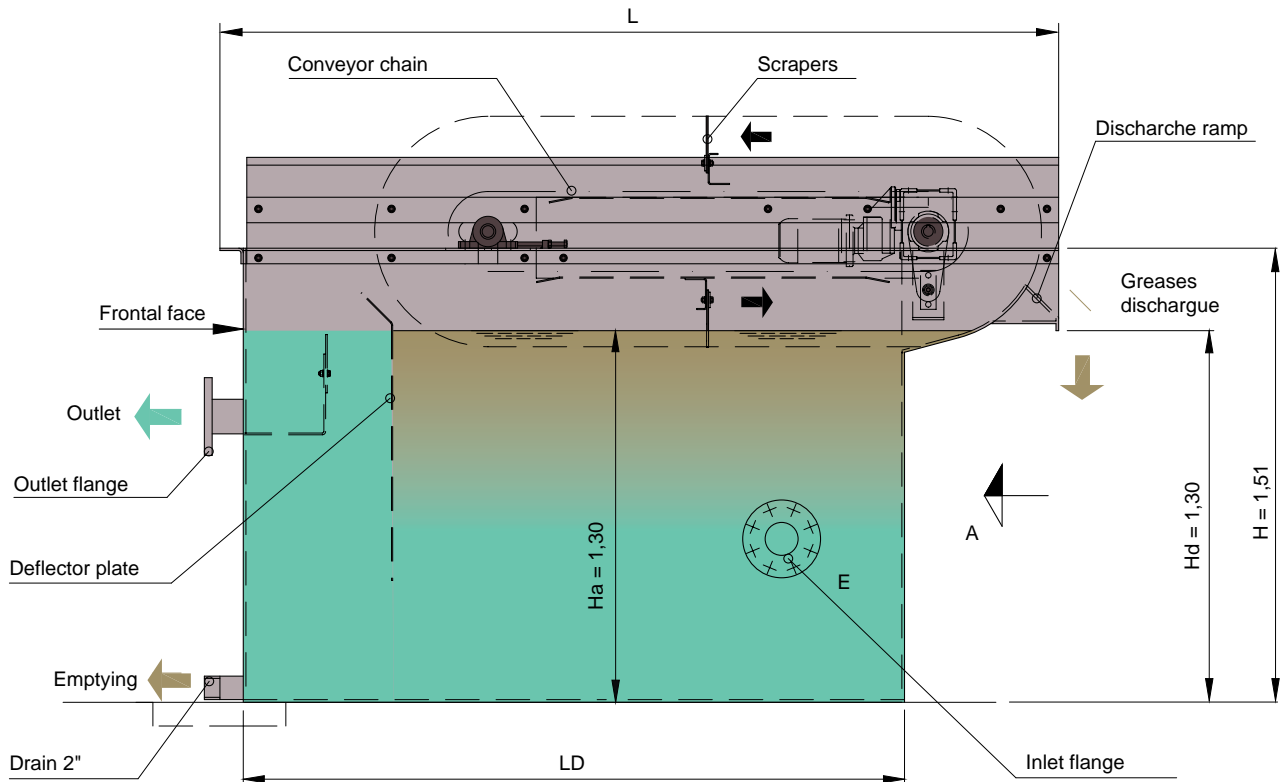
Unit designed to remove grease and floating substances from the surface of the water, which generally come from a degritting-degreasing process, an elutriation process, etc.

Single-block unit, based on a system of two conveyor belts that move scrapers that sweep the surface, thus pouring the grease. The sweeping device is installed on the upper part of the metal barrel.

#### Description and Features:

- **Tank.** Metal stainless steel plate barrel that serves to support all moving elements. With a deflector, a discharge ramp and inflow, outflow and emptying flanges.
- **Power unit.** Consisting of a geared motor unit and a drive axle that operates a set of gears, geared with two lateral conveyor belts where the surface sweeping scrapers are attached.
- **Surface scrapers.** Built in stainless steel plate. Flexible material adjustable profiles are mounted on them, resulting in a proper adaptation to the sides of the enclosure and the discharge ramp.





DIMENSIONS								
TYPE	072x179	082x179	102x204	132x204	132x242	162x242	172x293	212x293
Max flow (m <sup>3</sup> /h)	12,00	15,00	20,00	25,00	30,00	40,00	50,00	60,00
Power (C.V.)	0,25	0,25	0,25	0,25	0,25	0,25	0,25	0,25
Inlet flange	DN 80	DN 80	DN 80	DN 80	DN 80	DN 100	DN 100	DN 125
Outlet flange	DN 80	DN 80	DN 80	DN 100	DN 100	DN 100	DN 125	DN 150
Exterior width A	0,72	0,82	1,02	1,32	1,32	1,62	1,72	2,12
Interior width AD	0,60	0,70	0,90	1,20	1,20	1,50	1,60	2,00
Exterior height L	1,79	1,79	2,04	2,04	2,42	2,42	2,93	2,93
Interior height LD	1,33	1,33	1,58	1,58	1,96	1,96	2,47	2,47

Dimensions in meters



# GRITS AND GREASES REMOVAL

## GREASE CONCENTRATOR Type: MR08N

### GREASE CONCENTRATOR type MR08N

Unit designed to remove grease and floating substances on the surface of the water, which generally come from a degritting-degreasing process, an elutriation process, etc.

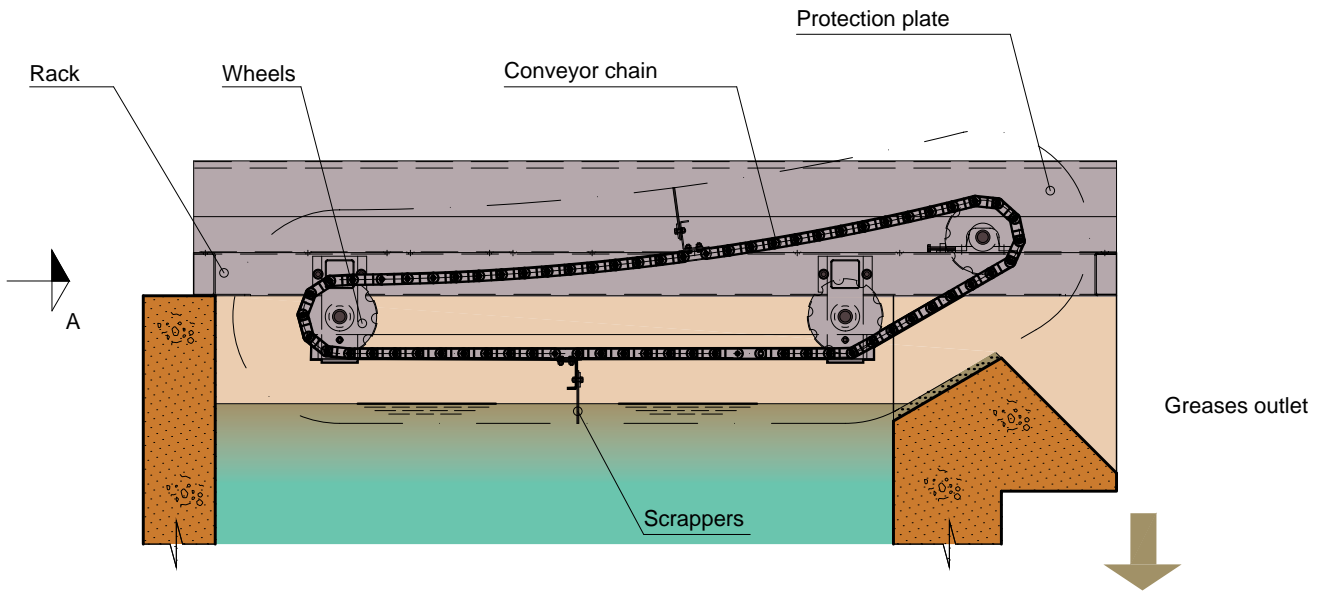
Single-block unit, based on a system of two conveyor belts that move scrapers that sweep the surface, thus pouring the grease. The sweeping device is installed on the concrete enclosure.

#### Description and Features:

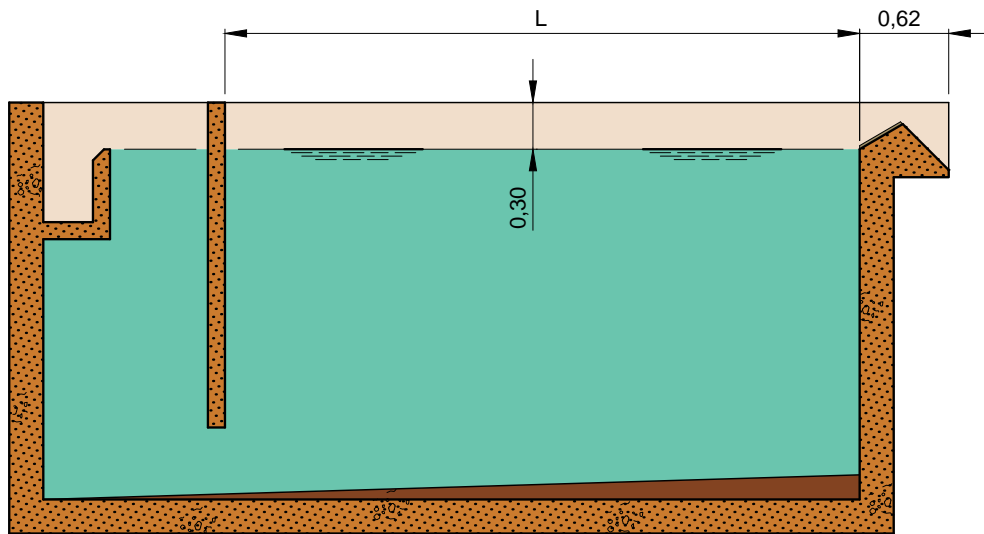
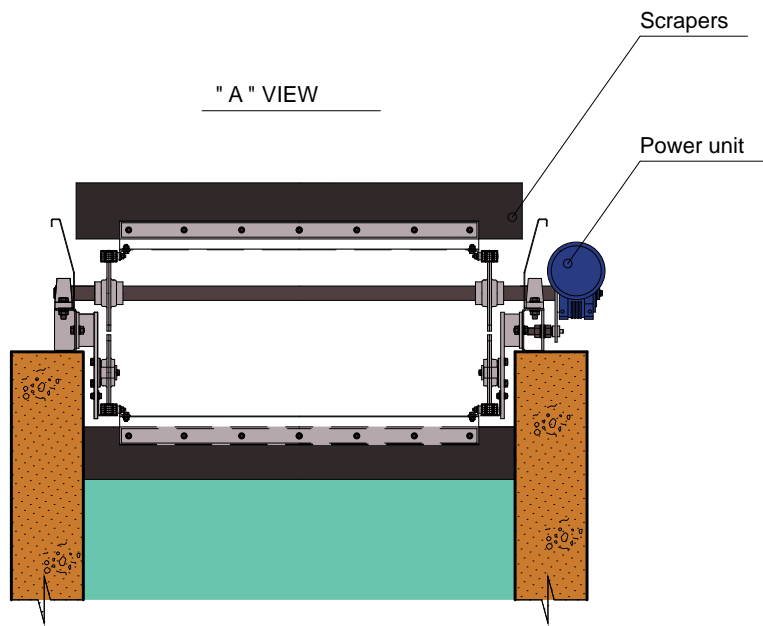
- **Rack.** Single-block type, resulting in a stable and resistant unit. Built in steel plates, supports all moving elements.
- **Power unit.** Consisting of a geared motor unit and a drive axle that operates a set of gears, geared with two lateral conveyor belts where the surface sweeping scrapers are attached.
- **Surface scrapers.** Built in stainless steel plate. Flexible material adjustable profiles are mounted on them, resulting in a proper adaptation to the sides of the enclosure and the discharge ramp.







"A" VIEW



Dimensions in meters

# GRITS AND GREASES REMOVAL

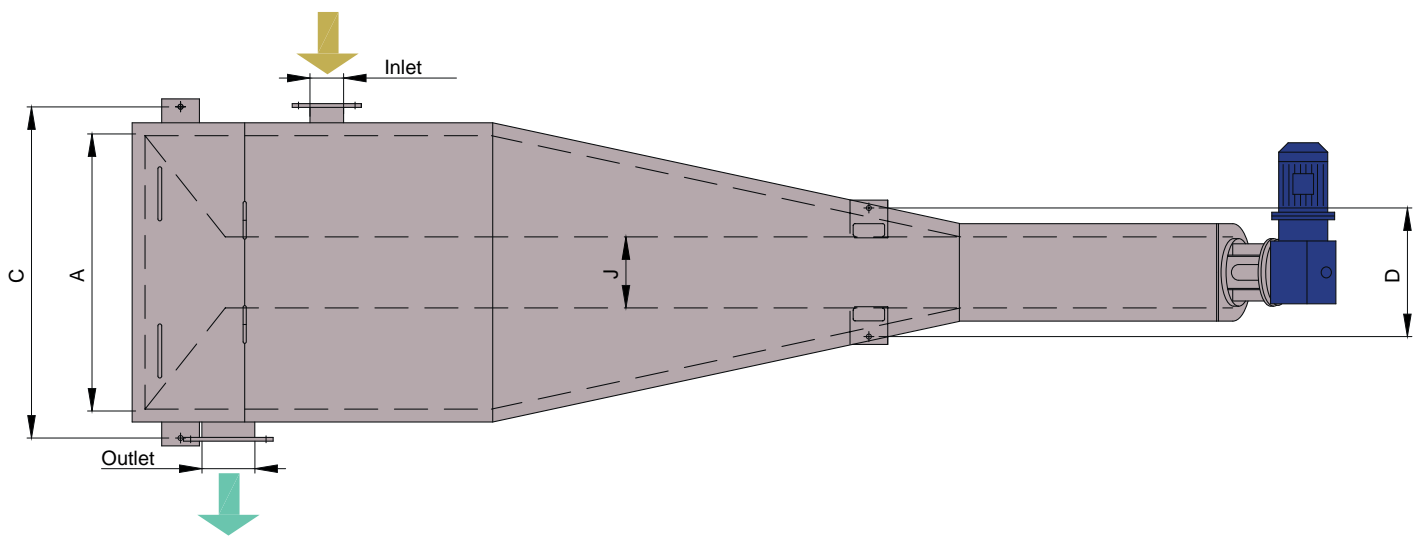
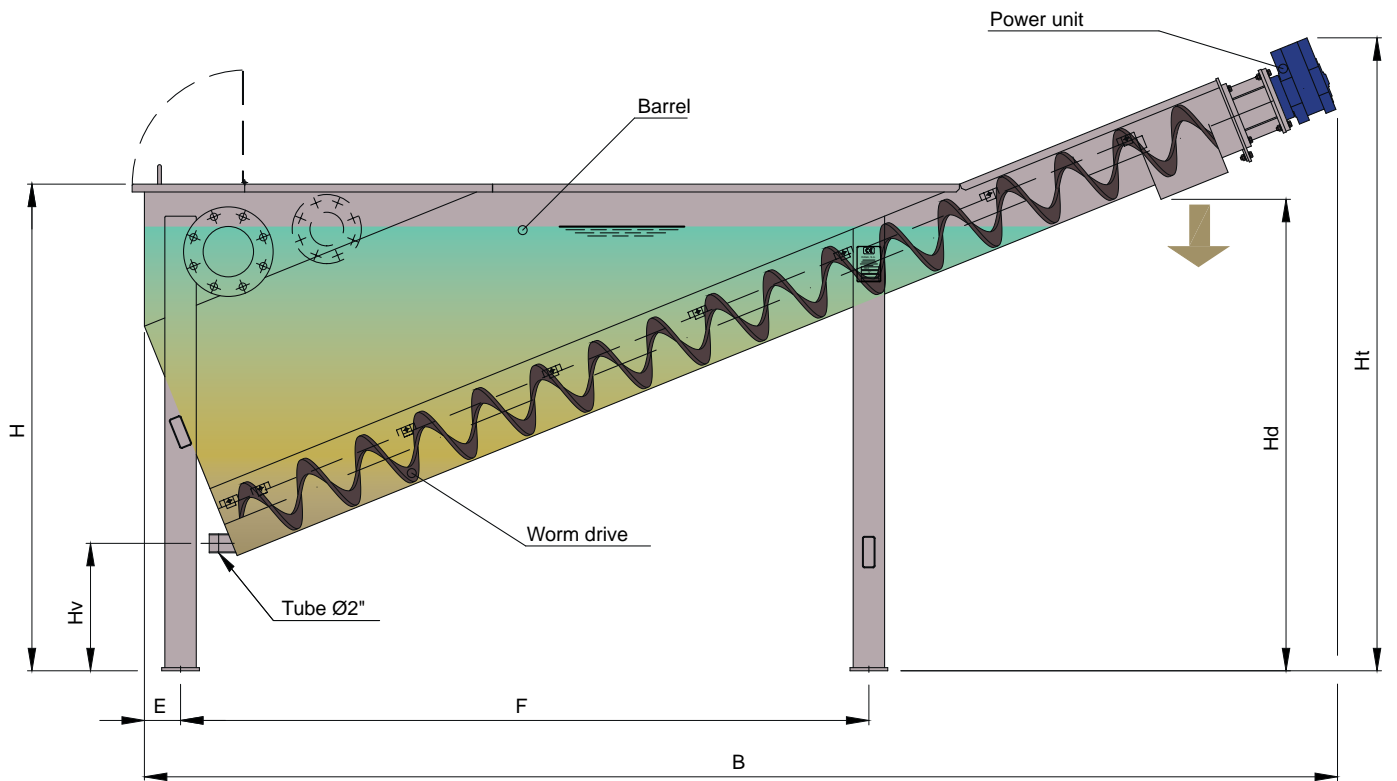
## WORM DRIVE GRIT REMOVER Type: MR37T

Single-block stainless steel unit, based on the operation of a screw conveyor, designed and adapted to extract grits from a degritting enclosure. This unit is built in several sizes and layouts according to the flow to treat and its location.

### Descriptions and Features:

- **Metallic barrel.** Closed with grit input on its rear via a flanged connection with a channel for water discharge. Equipped with a top lid for correct inspection and cleaning.
- **Worm drive.** Coreless transporting device that hoist the grits on the bottom to the upper part, where the discharge point is. It scrapes an anti-wear polyethylene cradle while rotating.
- **Power unit.** Consisting of a geared motor and a coupling module to the worm drive.





DIMENSIONS															
TYPE	Leakage max. (m <sup>3</sup> /h)	Power (H.P.)	FLANGES DIN 2576 DN...		A	B	C	D	E	F	H	Hd	J	Ht	Hv
			Inlet	Outlet											
MR37T-015	20	0,50	80	100	0,65	2,96	0,83	0,37	0,12	1,53	1,36	1,30	0,19	1,77	0,49
MR37T-035	50	0,75	100	150	0,88	3,79	1,05	0,41	0,12	2,19	1,36	1,30	0,23	1,82	0,21
MR37T-050	65	0,75	100	150	1,02	4,14	1,20	0,41	0,12	2,54	1,40	1,35	0,23	1,87	0,14
MR37T-080	100	1,00	150	200	1,44	4,66	1,62	0,51	0,12	2,71	1,56	1,50	0,33	2,10	0,12
MR37T-150	180	1,00	150	250	1,57	5,72	1,75	0,51	0,12	3,80	1,95	1,90	0,33	2,50	0,14

Dimensions in meters



# 7-CLARIFYNG SCRAPER BRIDGES

# CLARIFYNG SCRAPER BRIDGES

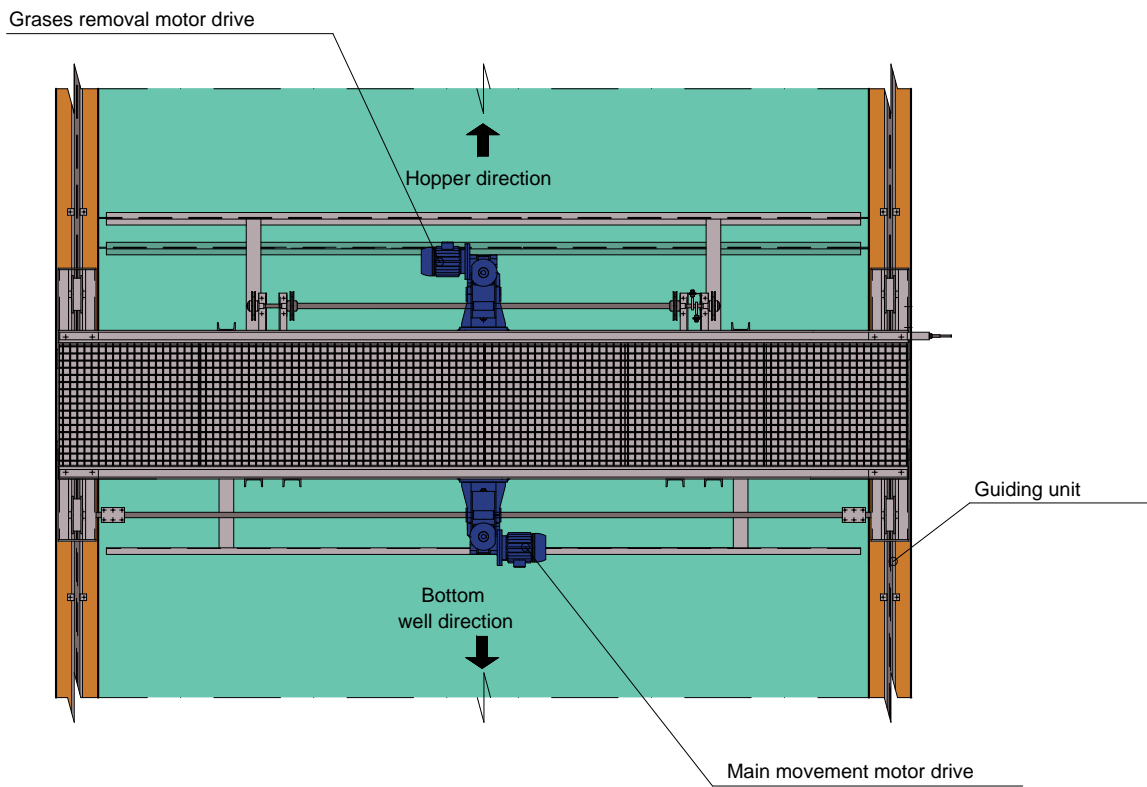
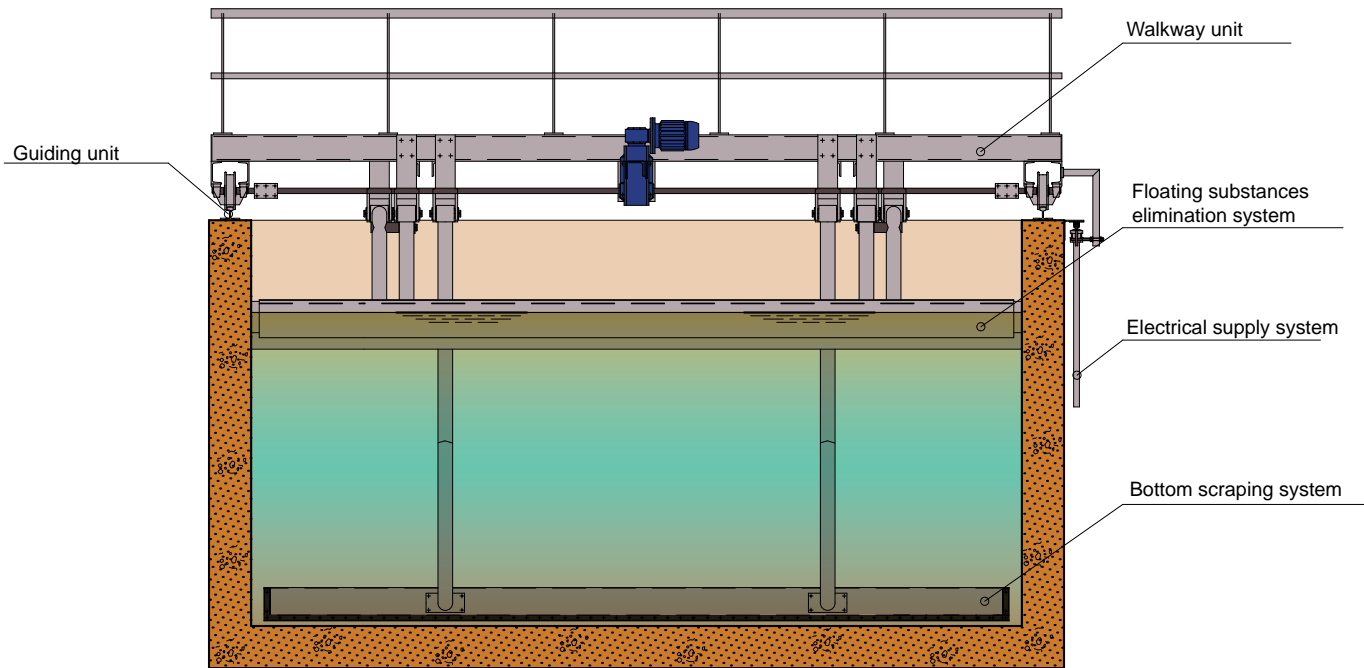
## DECANTING BRIDGE - LONGITUDINAL ENCLOSURE Type: MR46

This equipment is designed for mechanical separation of solids and suspended particles, which are decanted due to their nature or with the help of a flocculant reagent, in the primary and secondary decanting processes of water treatment plants. Sludge is extracted with a slightly inclined slab and a scraper that conducts it to the final collection basin.

### Descriptions and Features:

- **Walkway unit.** Built with steel plate, drawer type and with stainless steel railway on both sides. Galvanised metal or GFRP lattice work for personnel access. Connected motorised unit on both sides of the walkway.
- **Motor drive.** Consisting of a geared motor that operates the primary axle. Power wheels mounted on its ends. These wheels, like the drive wheels, are completely metallic so they can move through rails.
- **Guiding unit.** Through rails anchored to the top slab, on both sides of the side walls and along the longitudinal direction of the enclosure.
- **Bottom scraping system.** Scraper built in steel plate, with an adjustable elastomer built on it for a perfect adaptation to the curb of the enclosure. Motorised hoisting operation.
- **Floating substances elimination system.** Consisting of two scrapers that sweep the fat area, moving the fats towards one of the ends of the enclosure where they are poured into a hopper. The layout of the scrapers eliminate the possibility of dead areas. The entire unit hangs from the walkway. The operation is mechanical but, depending on the side of the scrapers, it can work via electric traction.
- **Electrical supply system.** To be installed along the enclosure and on one external side. Provides electrical supply to the manoeuvring cabinet, based on a foldable cable attached to carts that move along a metallic guide.
- **Control equipment** (optional). A switchboard controls the entire automatic operation of the equipment, with inductive end stops that control the forward and backward movement of the unit. It also operates the bottom scraping system according to the bridge movement direction.





# CLARIFYNG SCRAPER BRIDGES

## DECANTING BRIDGE - CIRCULAR ENCLOSURE Type: MR06

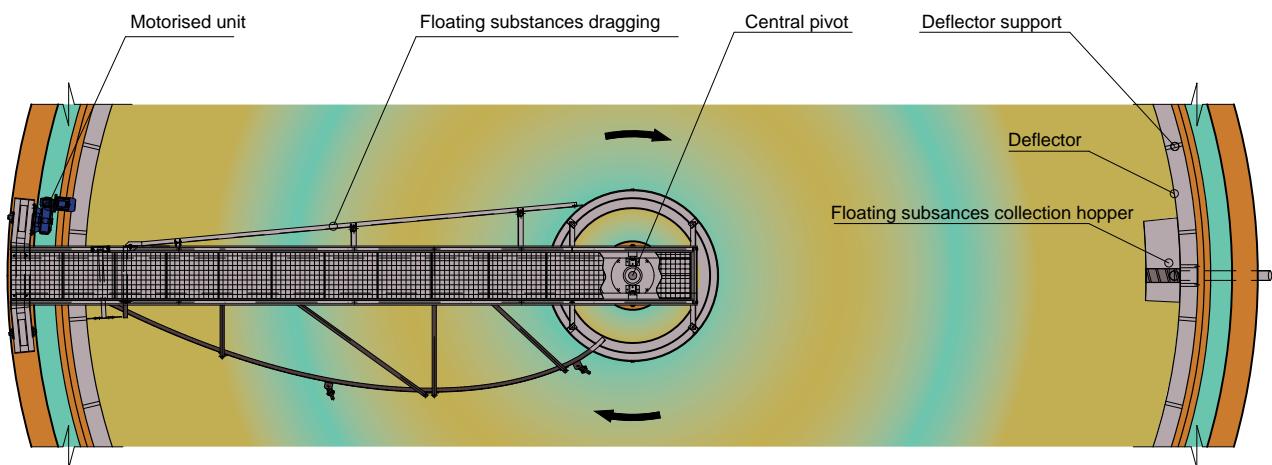
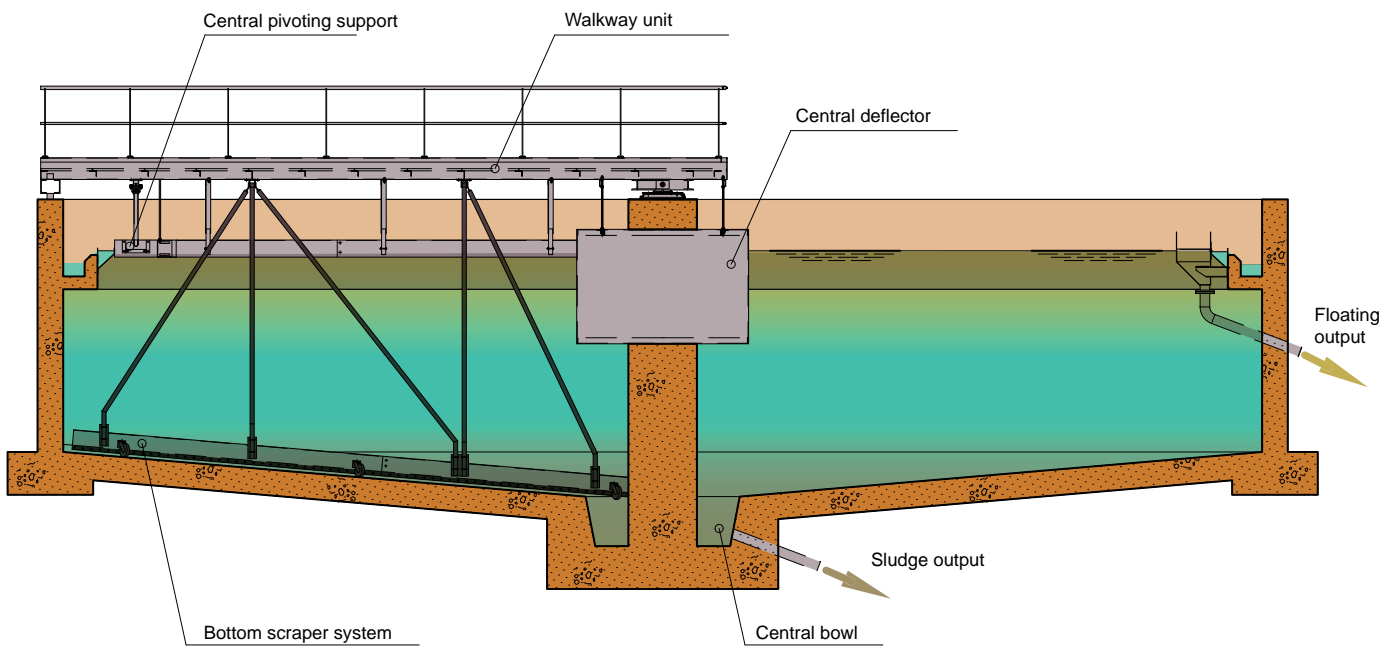
This equipment is designed for mechanical separation of solids and suspended particles, which are decanted due to their nature or with the help of a flocculant reagent, in the primary and secondary decanting processes of water treatment plants. Sludge is extracted with a slightly inclined slab and a spiral scraper (peripheral driven sludge scraper) that conducts it to the central basin.

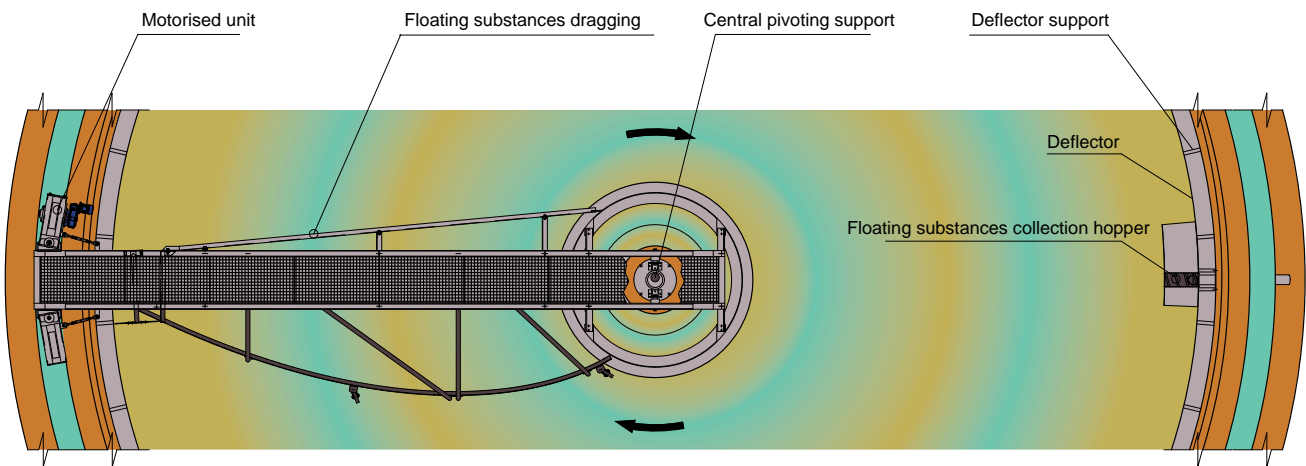
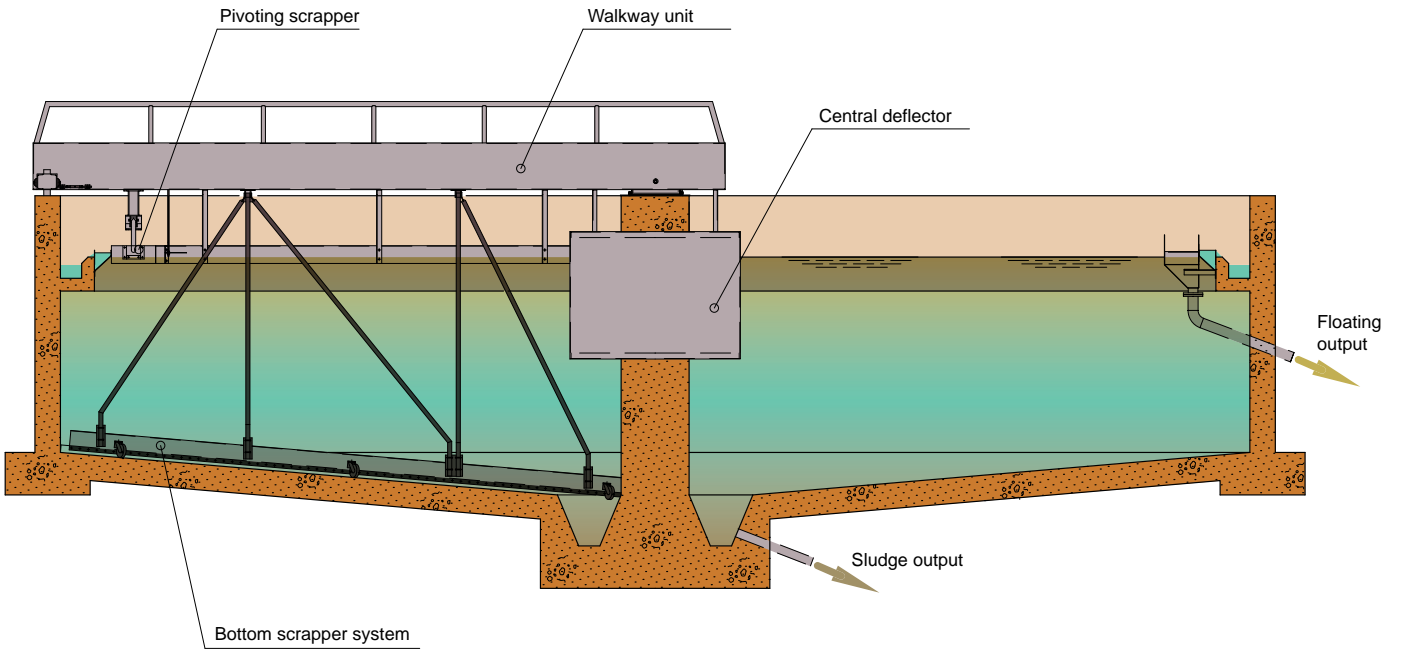
### Descriptions and Features:

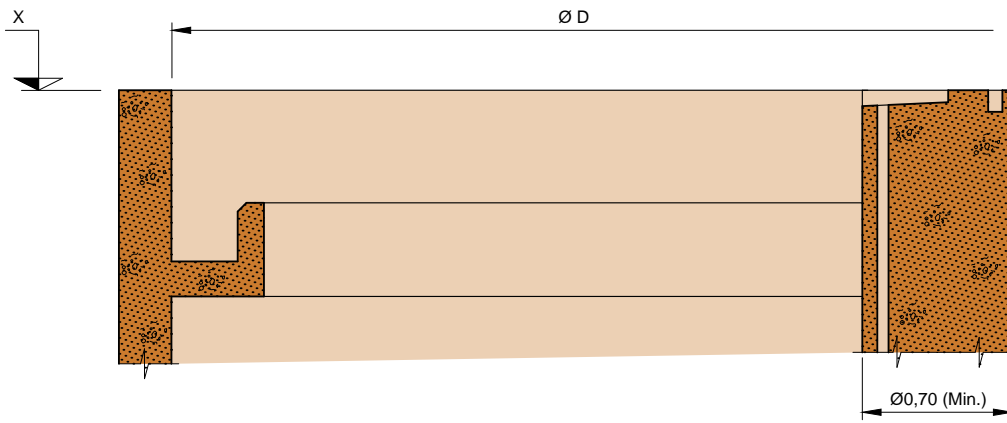
- **Walkway unit.** One end rests on the central pivot and the other one is connected to the motorised unit. Built with steel plate, drawer type and with stainless steel railway on both sides. Galvanised metal or GFRP lattice work for personnel access.
- **Motorised unit.** Located on one end of the walkway and consisting of a geared motor and two wheels, one powered, one guided with red-band wheels and supported by ball bearings.
- **Bottom scraper.** Consisting of the scraper and its hanging system. The scraper is a continuous spiral, built in steel plate and an adjustable elastomer profile that carries out the scraping. It moves on a wheel set. The entire system hangs from the walkway, from stabilising and tightening pipes. Storage and extraction occur in the central basin, located on the curb of the decanter.
- **Floating substances dragging system.** Consisting of the surface sweeping scraper, with a special design to move the floating substances to the outer end, where a pivoting arm introduces them inside the collection hopper.
- **Floating substances collection hopper.** Installed on the outer end of the enclosure and directly anchored to the foundation work. It can be manufactured in two versions, overwater (standardised) or underwater.
- **Central pivoting support.** This articulated unit allows circular movement of the walkway. The unit rests on one end of the walkway and, thanks to a large diameter bearing, supports any stress resulting from irregularities of the terrain. It has an integrated contact ring collector for the electrical supply of the motor.
- **Central deflector.** Welded in steel plate. Its purpose is to slow down water inflow to the decanter, resulting in even distribution throughout the entire enclosure.



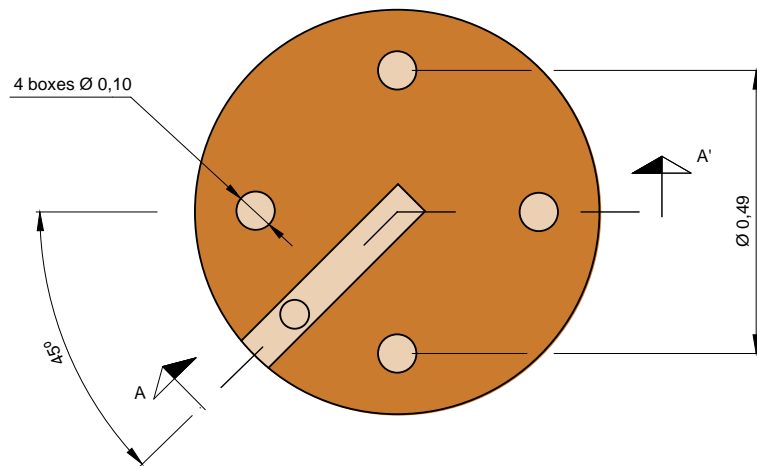
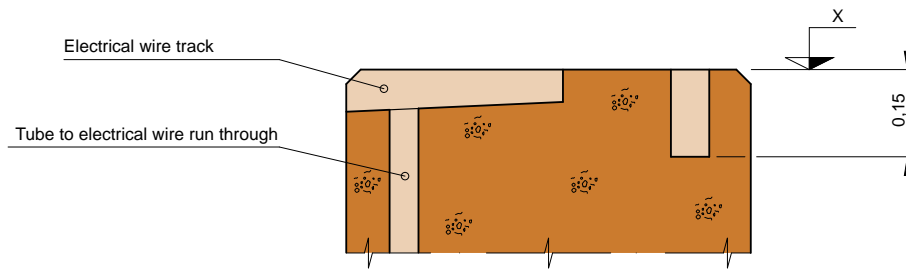






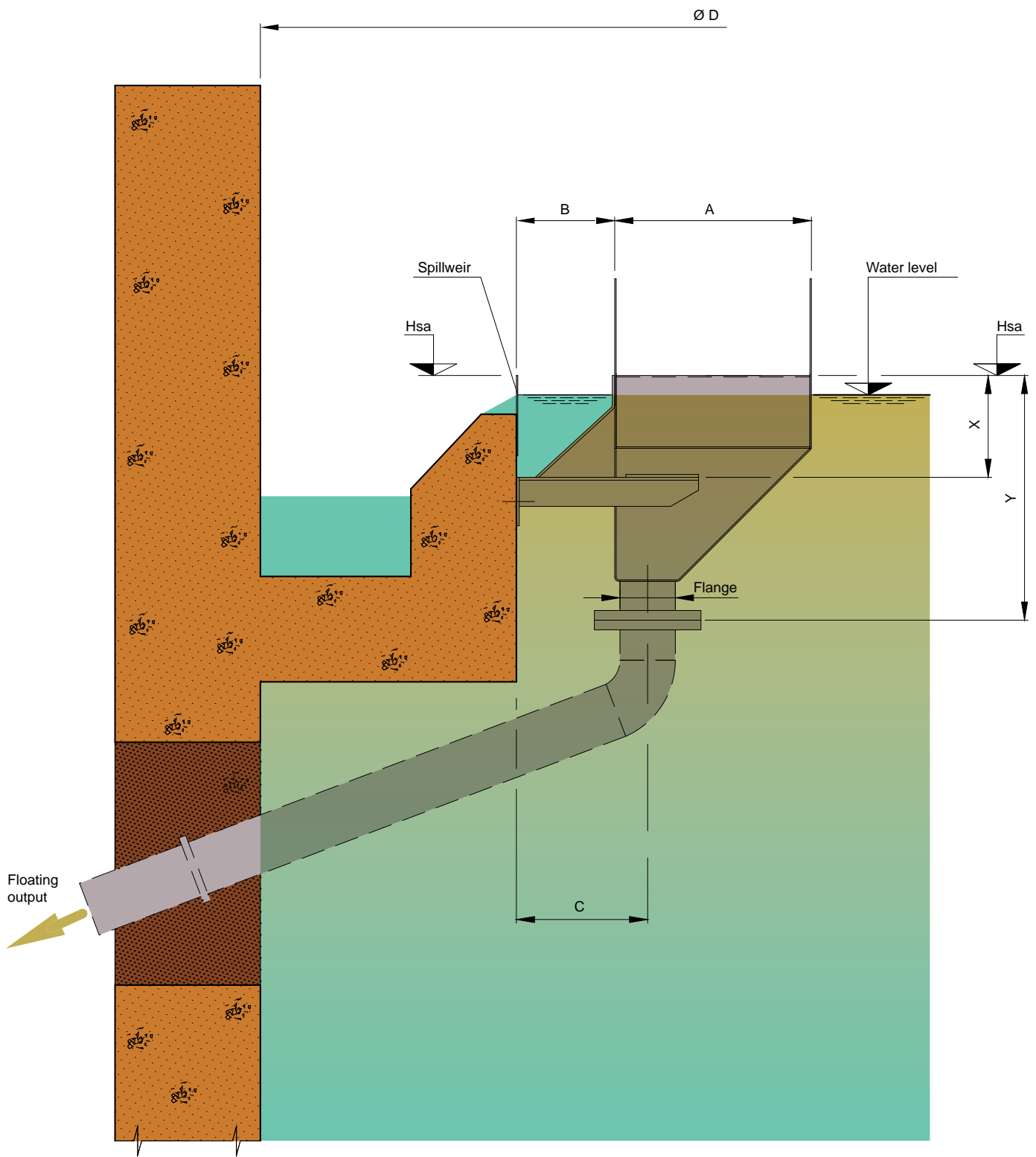


SECTION "A-A"



Dimensions in meters





Settling Ø D	A	B	C	X	Y	Flange
	0,40	0,20	0,27	0,21	0,50	Ø 4"
	0,80	0,20	0,30	0,21	0,59	Ø 6"

Dimensions in meters





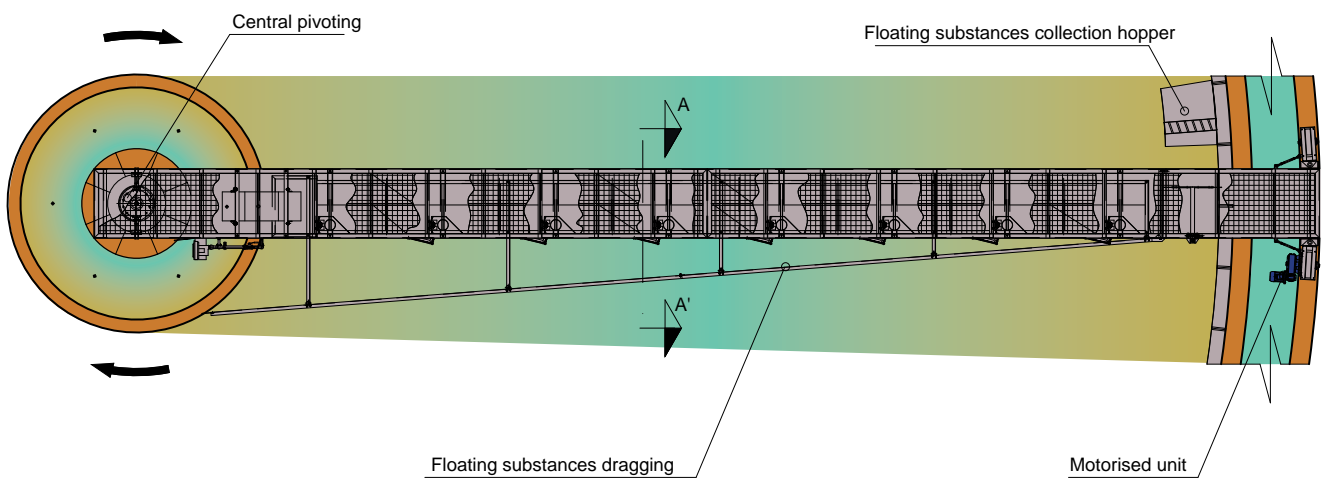
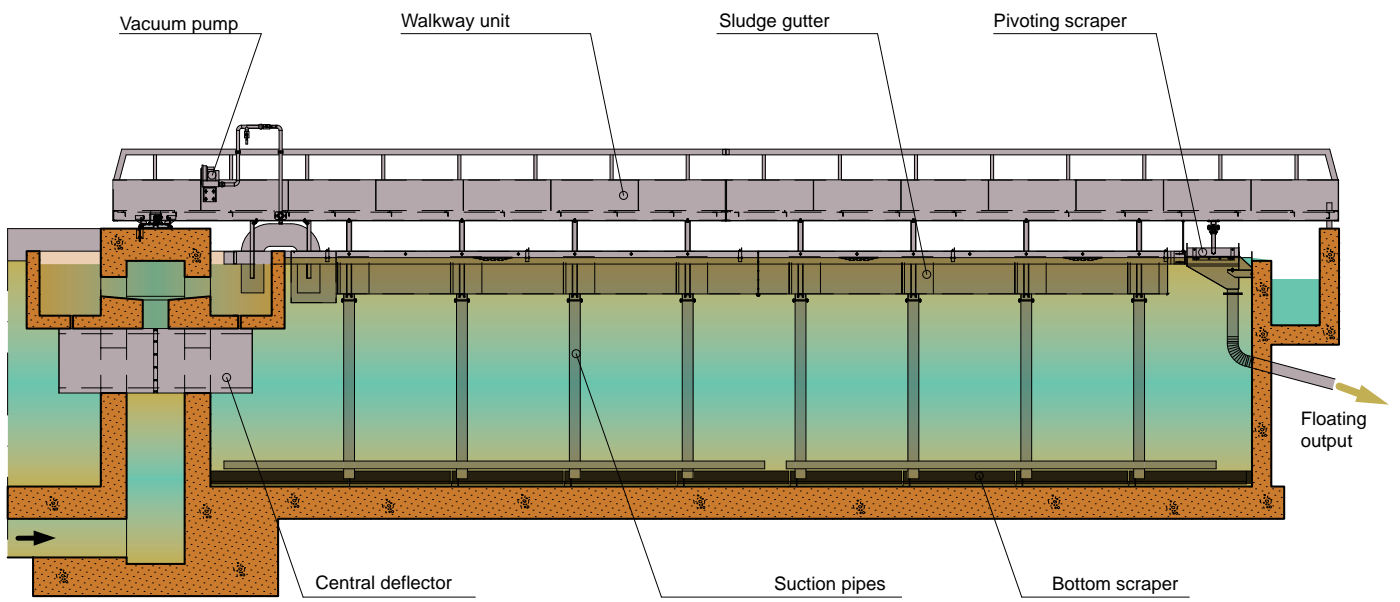
# CLARIFYNG SCRAPER BRIDGES

## SUCTION DECANTING BRIDGE - CIRCULAR ENCLOSURE Type: MR39

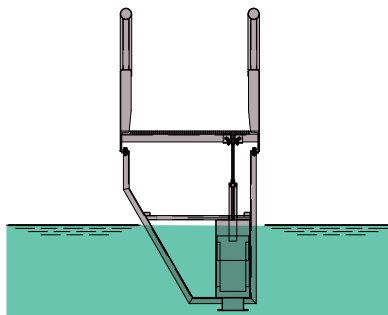
This equipment is designed for mechanical separation of solids and suspended particles, which are decanted due to their nature or with the help of a flocculant reagent, in the primary and secondary decanting processes of water treatment plants. Sludge is extracted via a suction system that hoists them to the outside.

### Descriptions and Features:

- **Walkway unit.** One end rests on the central pivot and the other one is connected to the motorised unit. Built in drawer-like steel plate and tubular profiles that also serve as a handrail. Galvanised metal or GFRP lattice work for personnel access.
- **Motorised unit.** Located on one end of the walkway and consisting of a geared motor and two wheels, one powered, one guided with red-band wheels and supported by ball bearings.
- **Central pivoting support.** This articulated unit allows circular movement of the walkway. The unit rests on one end of the walkway and, thanks to a large diameter bearing, supports the possible efforts due to irregularities of the terrain. It has an integrated contact ring collector for the electrical supply of the motor.
- **Central deflector.** Welded in steel plate. Its purpose is to slow down water inflow to the decanter, resulting in even distribution throughout the entire enclosure.
- **Bottom scraper.** With adjustable elastomer profile that carries out the sweeping, attached to a saw tooth shaped plate that conducts the sludge towards the suction pipes.
- **Suction pipes.** These pipes suction the sludge from the bottom of the enclosure and hoist it to the inside of the sludge gutter while supporting the bottom scrapers.
- **Sludge gutter.** Built in steel plate, it collects the sludge suctioned by the suction pipes and conducts it to the trap, which conducts it to the central sludge gutter for removal. It hangs from supports on the walkway and has regulation knife gates for sludge inflow.
- **Trap.** Element that serves to transfer sludge from the sludge gutter to the central concrete channel, for extraction.
- **Vacuum pump.** Primes the trap, which serves to transfer the sludge between the gutters. It is installed on one side of the walkway and connected to the upper part of the trap.
- **Floating substances dragging system.** Consisting of the surface sweeping scraper that has a special design to move the floating substances to the outer end, where a pivoting arm introduces them inside the collection hopper.
- **Floating substances collection hopper.** Installed on the outer end of the enclosure and directly anchored to the foundation work. It can be manufactured in two versions, overwater (standardised) or underwater.

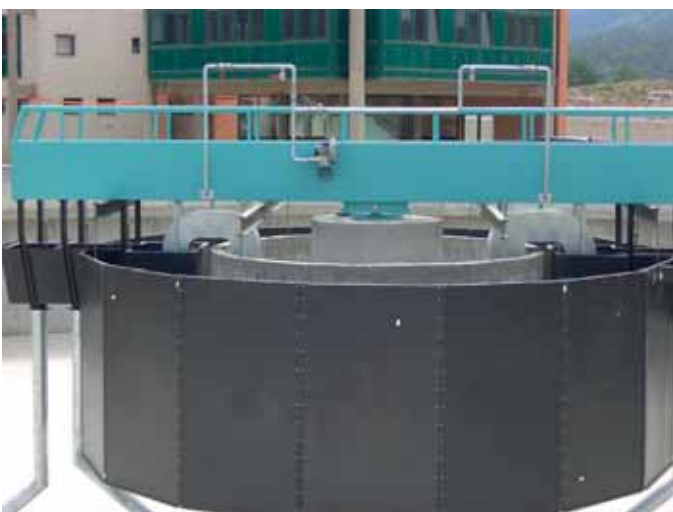


SECTION "A-A"



\* Gutter detail









# CLARIFYNG SCRAPER BRIDGES

## SPILLWEIR AND DEFLECTOR Type: MR02

### Spillweir:

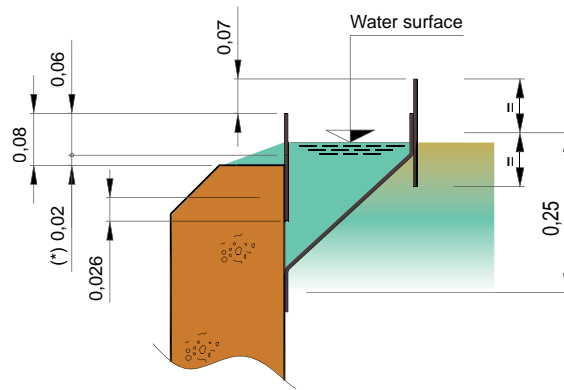
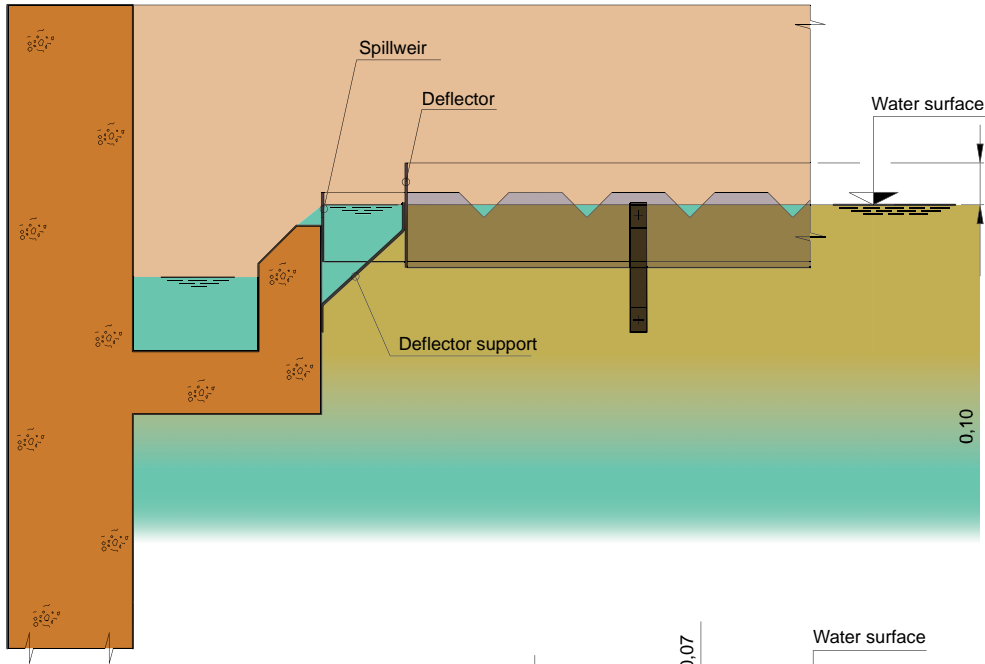
Screen for pouring clarified water into the circular or rectangular decanting and thickening tanks.

Stainless steel or aluminium plate figure, manufactured in 2000 mm lengths and various heights and with 90°, 60 mm deep triangular notches. To facilitate levelling, it is anchored with screws that can be moved along slotted holes.

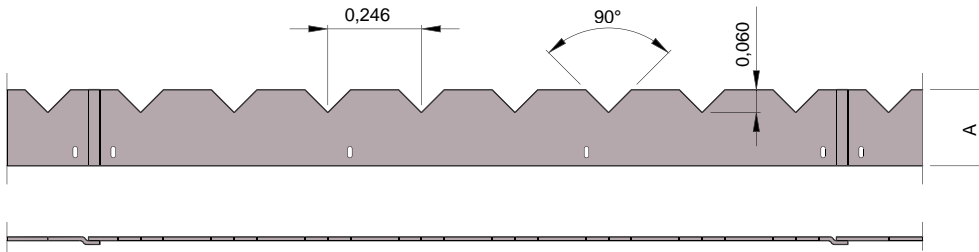
### Deflector:

Protective screen to contain floating substances in the circular or rectangular decanting tanks.

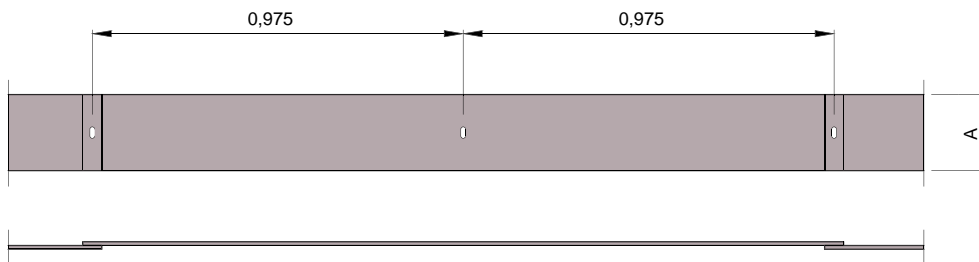
Stainless steel or aluminium plate figure, manufactured in 2000 mm lengths and various heights. To facilitate levelling, it is anchored with screws that can be moved along slotted holes.



SPILLWEIR



DEFLECTOR



Dimensions in meters



# 8-THICKENERS

# THICKENERS

## THICKENER Type: MR21

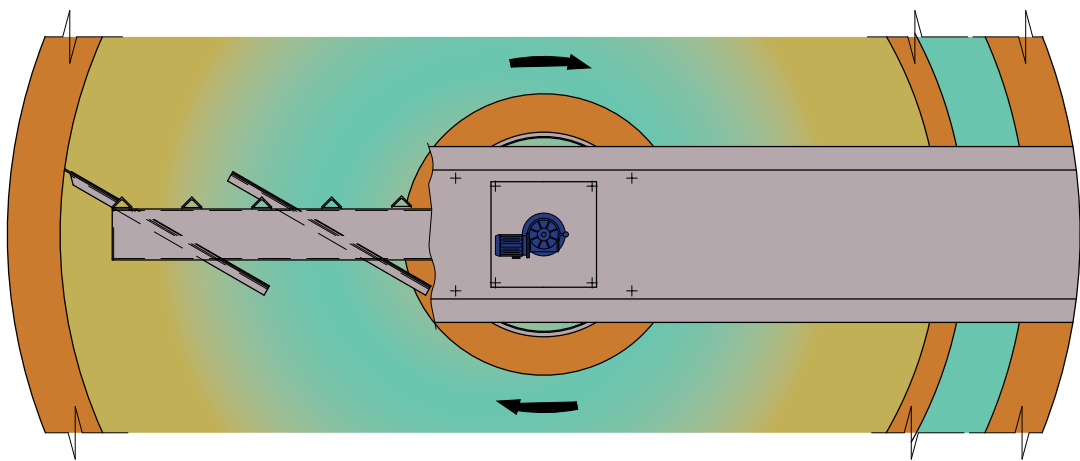
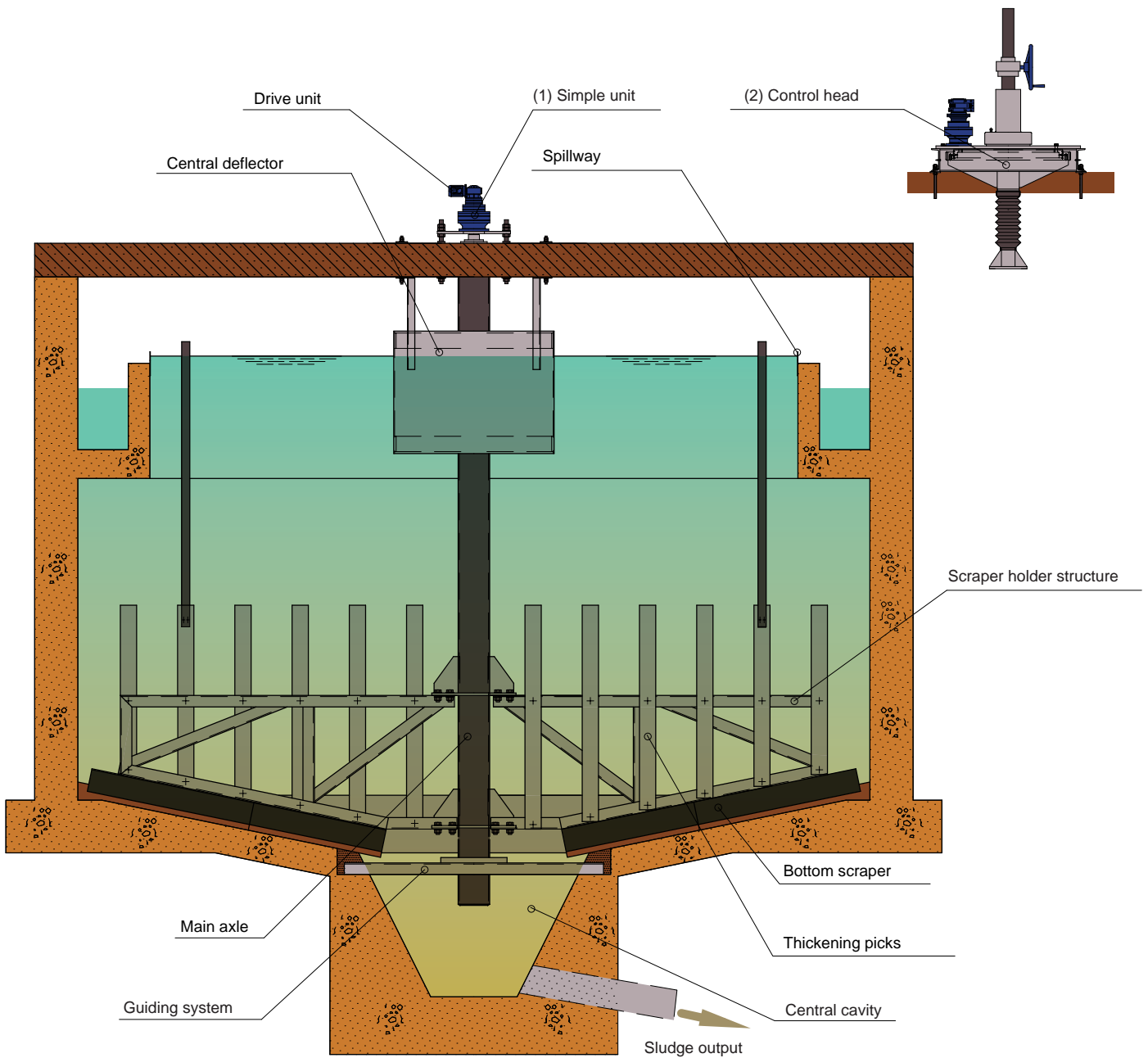
This equipment, designed for installation in circular enclosures, mechanically separates the sludge, which is decanted due to its composition or with the help of a flocculant reagent, in the thickening processes of water treatment plants.

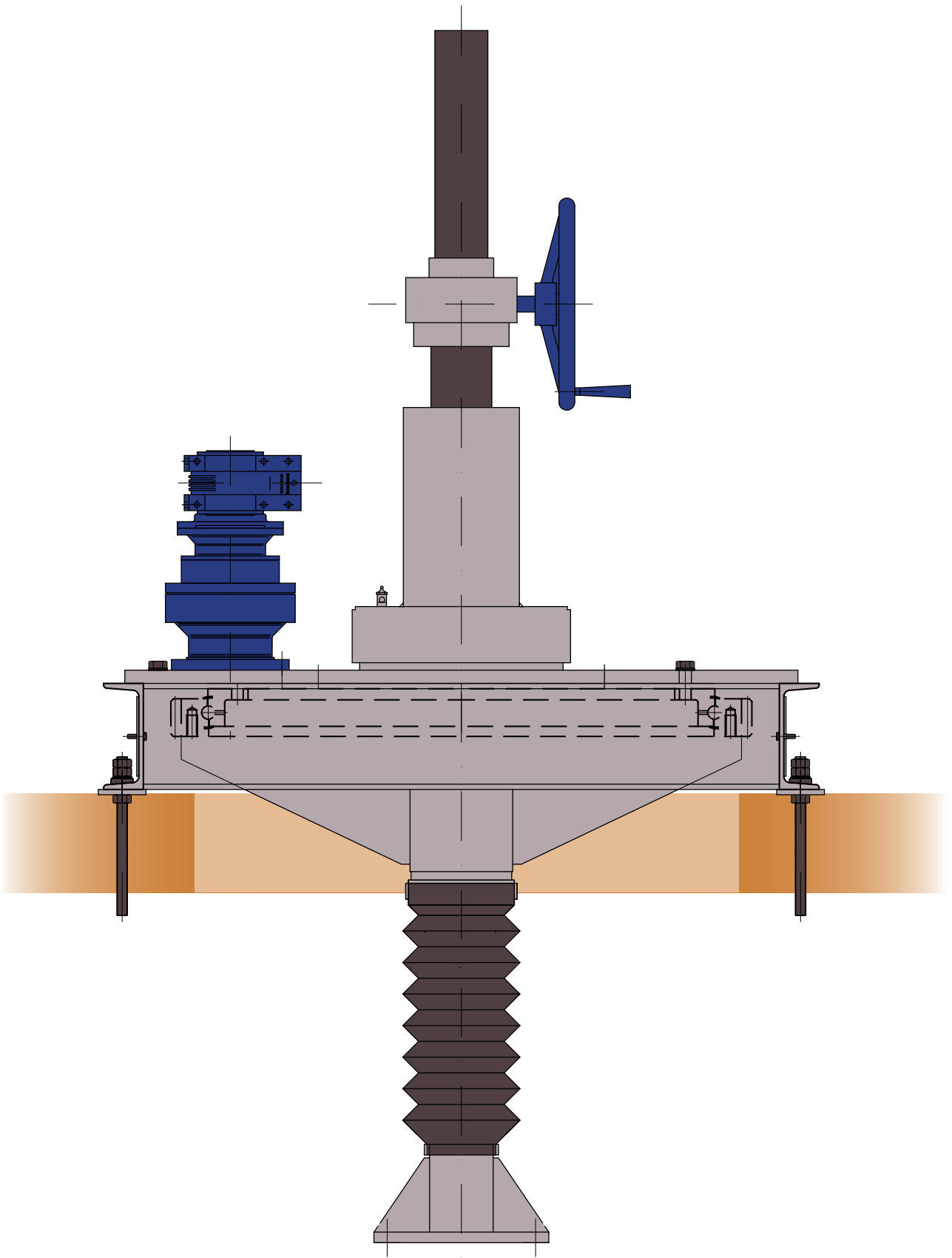
### Descriptions and Features:

- **Power unit.**
  - (1) **Simple unit:** Central operation, anchored to the walkway, consisting of a geared motor unit that acts directly on the main axle of the thickener.
  - (2) **Control head:** Central operation device anchored to the walkway, consisting of a geared motor and a set of parts that is used to elevate the thickening mechanism in case of high concentrations of sludge.
- **Main axle.** Connected to the power unit. Through a flanged connection, it transmits all the effort to the bottom scraper and thickening pick units. The scraper holder structure is anchored to the lower part of the axle.
- **Scraper holder structure.** A steel plate structure consisting of two radial arms on opposite sides of the circle and properly braced that the picks and scrapers are mounted on.
- **Thickening picks.** The profiles used to break the floc are built in steel plate screwed to the scraper carrier arms.
- **Bottom scraper.** With adjustable elastomer profile that carries out the sweeping, anchored to a steel plate that conducts the sludge to the central basin.
- **Central deflector.** Welded in steel plate. Its purpose is to slow down water inflow to the decanter, resulting in even distribution throughout the entire enclosure.
- **Guiding system.** Built in steel plate and technical plastic, which serves to maintain the central axle in a vertical position during its rotation.

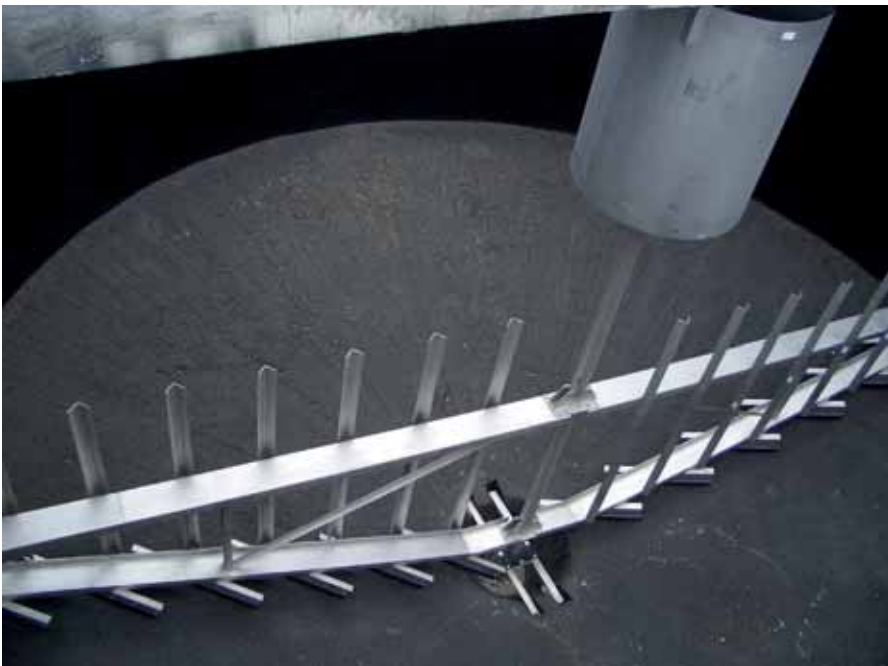
### **Optional elements:**

- **Central walkway.** Diameter fixed walkway that supports the entire thickening unit. Built in drawer-like steel plate and tubular profiles that also serve as a hand-rail. Galvanised metal or GFRP lattice work for personnel access.
- **Floating substances dragging system and deflector.** Consisting of the surface sweeping scraper that, due to its design, moves the floating substances to the outer end, where a pivoting arm introduces them inside the collection hopper.
- **Electronic overload clutch.** To control overloading.











# 9-AERATORS

# AERATORS

## AERATION ROTOR Type: MR10

Unit designed for transferring oxygen in the biological stage of the wastewater treatment plants. Introduces oxygen by stirring the mixed liquor with blades.

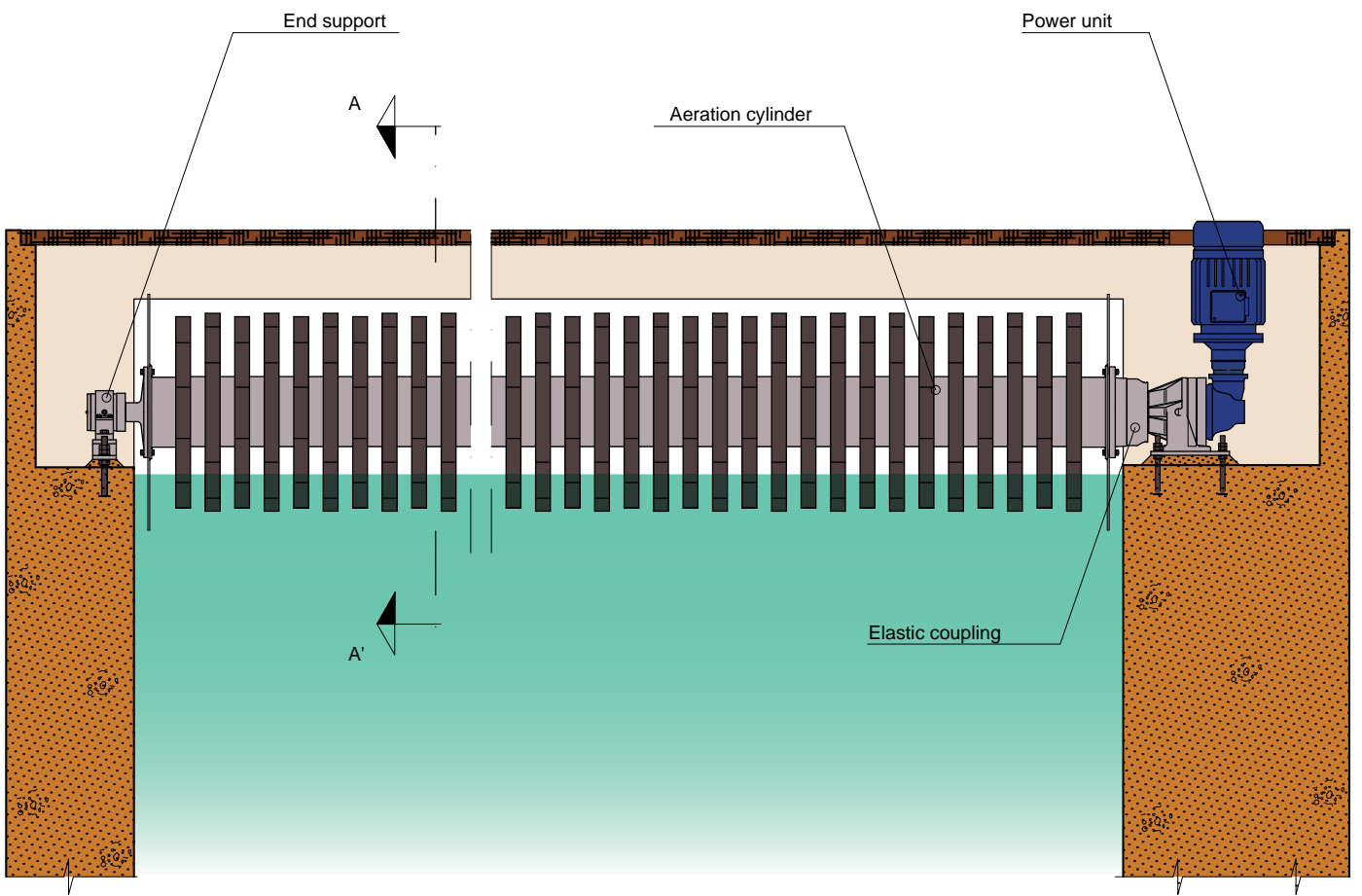
The number of rotors and their length will be determined by oxygen demand and tank dimensions.

The oxygenation capacity and the power consumed are related to the submergibility of the rotor. Water immersion can be controlled with an automatic operation spillway, controlled by a signal coming from the dissolved oxygen measuring probes. This system results in large electrical power savings.

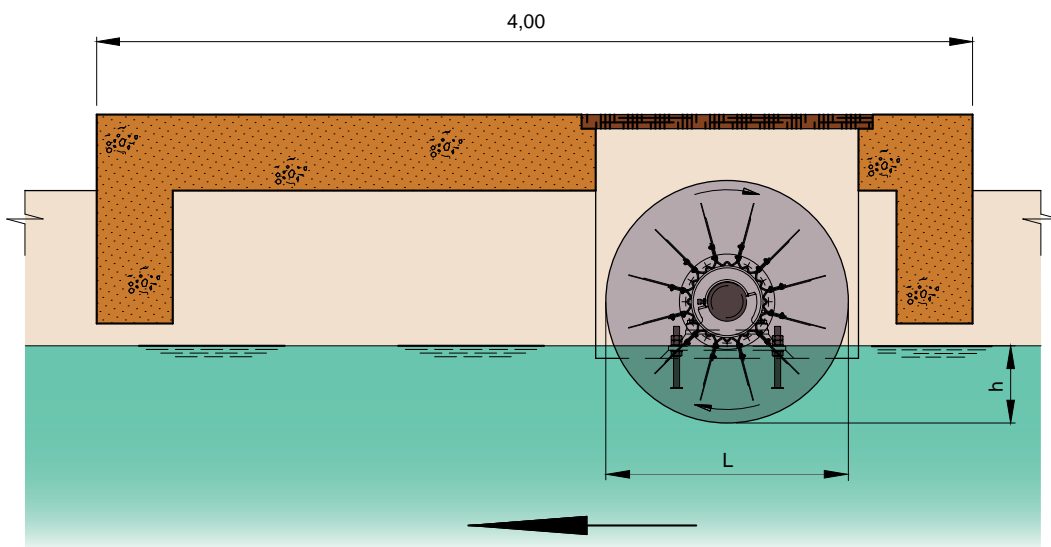
For plants with variable volumetric loads, these units can be geared with two-speed motors.

### Description and Features:

- **Power unit.** Consisting of a special geared motor with epicyclical gears coupled to a vertical layout three-phase motor. This power unit has heat resistances to facilitate the start-up of the motor.
- **Elastic coupling.** The mechanism that joins and transmits the torque of the power unit to the rotor. Built in special rubber materials with steel core, its elasticity serves to absorb small assembly alignment deviations, as well as possible effects caused by axle buckling.
- **Aeration cylinder.** Connected to the power unit, via an elastic coupling, it supports the lateral blade and disk modules for protection against spills on the power unit and opposite support.
- **Blade modules.** Manufactured with polyamide reinforced with fibreglass, these blades form a 12-point star and are anchored to the anchor with stainless steel with straps to facilitate assembly and disassembly. When rotating, they transfer the oxygen to the inside of the liquid mass.
- **End support.** Consisting on an axle with a flange, two bearings, and everything installed inside a sealed box with labyrinth closure. The support allows for accurate support of the equipment on the opposite side of the reducer. A greasing system will serve for periodic lubrication of the device.
- **Optional element:**
  - **Deflector screen (Baffle).** Its installation provides a higher oxygen supply performance, as it pushes the air bubbles towards the bottom of the enclosure, thus increasing the oxygenation area. Installed slightly submerged before the rotor, in the same direction as water circulation, with a 30° angle with the vertical side and its ends supported by guides. On the middle part, a tightening screw provides a better anchoring when the rotor is working.

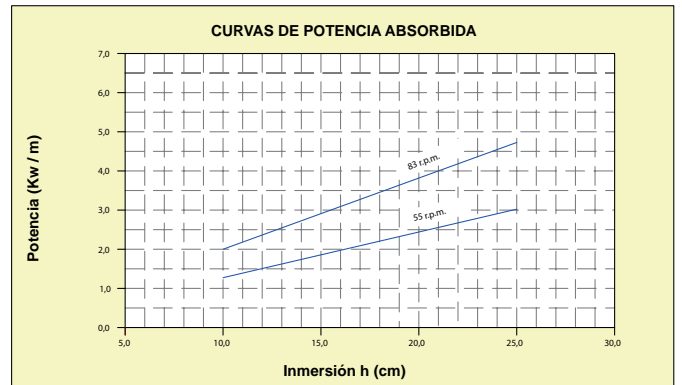
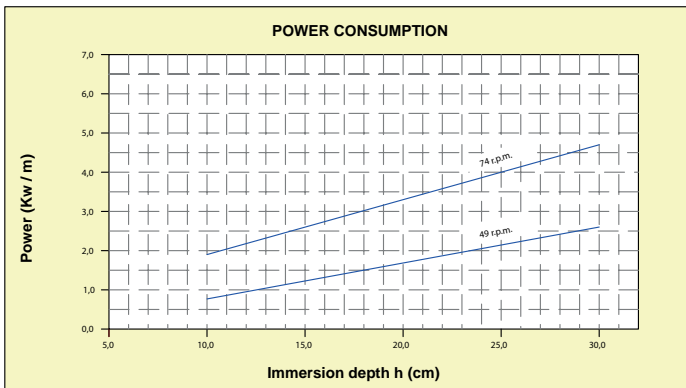
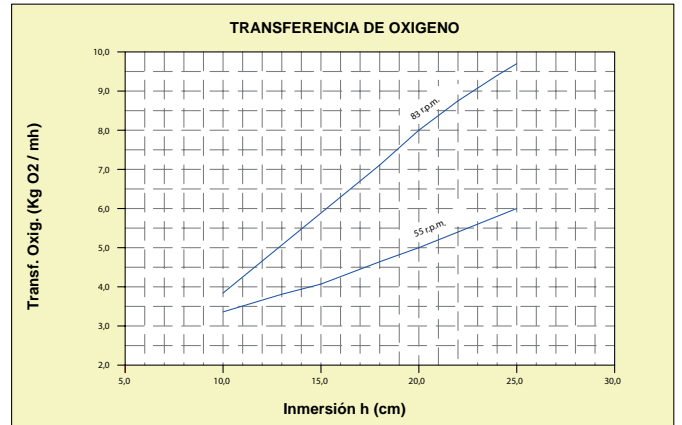
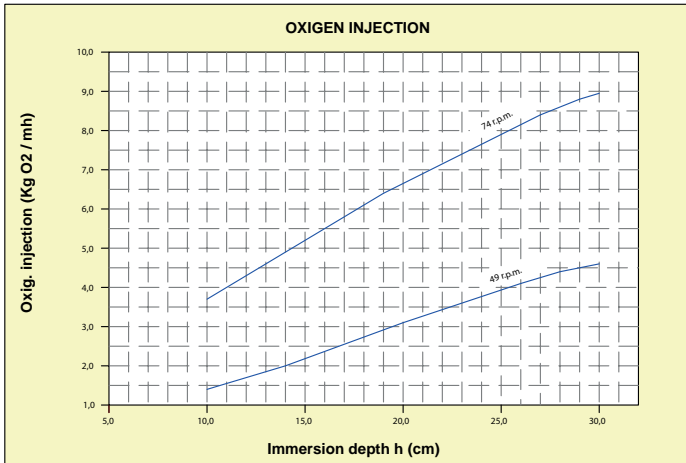


SECTION "A-A"





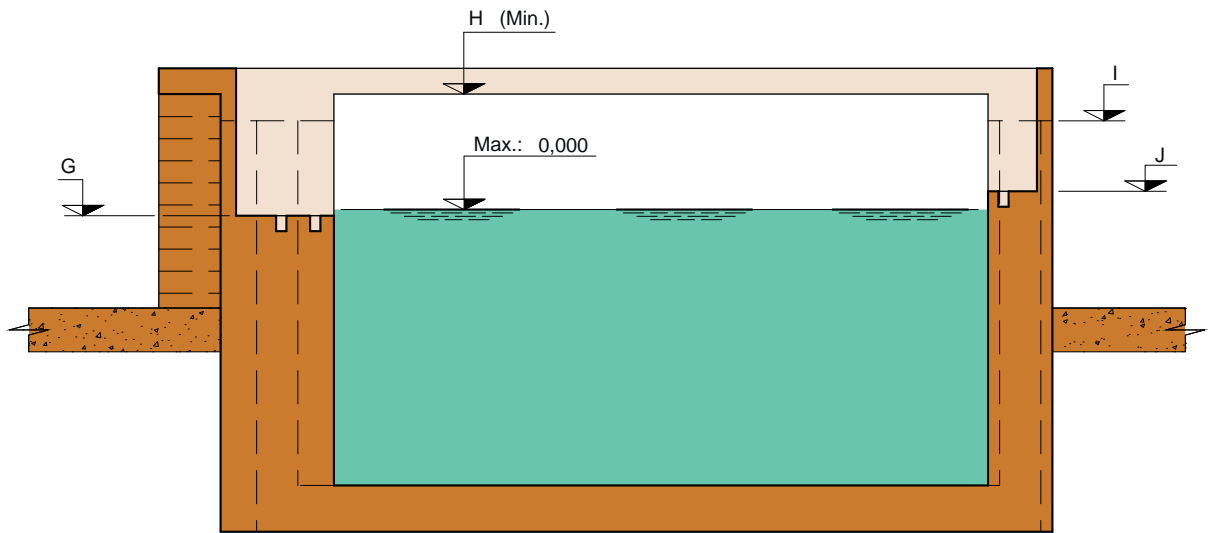




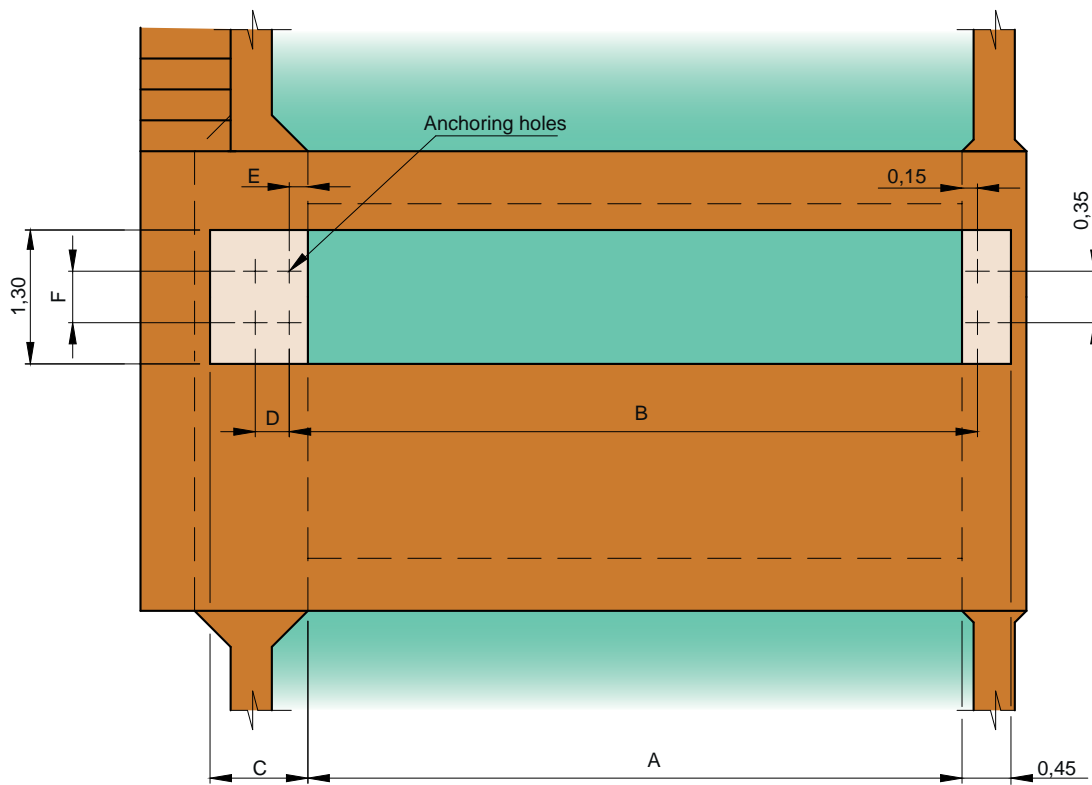
Type	L (m)	Rotor Speed(r.p.m.)	Motor power (H.P.)	Power (Kw)	Motor Speed(r.p.m.)	Maximum immersion (cm.)
MR10-300	3,00	74 (74/49)	20 (20/13,4)	15 (15/10)	1500 (1500/1000)	29
MR10-450	4,50	74 (74/49)	30 (30/19,7)	22 (22/14,7)	1500 (1500/1000)	29

Tipo	L (m)	Velocidad Rotor (r.p.m.)	Potencia (CV)	Potencia (Kw)	Velocidad Motor (r.p.m.)	Inmersión Máx. (cm.)
MR10-600	6,00	83 (83/55)	40 (43/28,2)	30 (32/21)	1500 (1500/1000)	24
MR10-750	7,50	83 (83/55)	50 (48,3/32,2)	37 (36/24)	1500 (1500/1000)	24
MR10-900	9,00	83 (83/55)	60 (67/42,9)	45 (50/32)	1500 (1500/1000)	24





SECTION " A-A' "



TYPE	A	B	C	D	E	F	G	H (Min.)	I	J
MR10-300	3,35	3,681	0,95	0,33	0,181	0,50	-0,040	0,82	0,500	0,02
MR10-450	4,85	5,181	1,10	0,33	0,181	0,50	-0,060	0,82	0,500	0,02
MR10-600	6,35	6,681	1,10	0,33	0,181	0,50	-0,010	0,87	0,500	0,07
MR10-750	7,85	8,181	1,10	0,33	0,181	0,60	-0,035	0,87	0,500	0,07
MR10-900	9,35	9,771	1,20	0,35	0,271	0,70	-0,090	0,87	0,500	0,07

Dimensions in meters







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