



ROTATING SCRAPERS
for primary and final settling tanks



Rotating scraper bridges

are designed for desludging and descuming of primary - and final settling tanks.

The scraper unit is consisting of :

- the drive carriage
- the central pivot
- the bridge with catwalk
- the floor scraper arrangement
- the descuming unit

The drive unit is assembled with two number of wheel boxes which are connected by means of bolts to the carriage frame. Due to this swivelling connection a precise adjustment of the travelling wheels is guaranteed.

The wheels are made of mild steel with a hard rubber lining (polyurethane). The shafts and axles are supported by overlarge flange bearings. That flange bearings will be supplied with lifetime lubrication.

The drive motor is coupled directly to the shaft and supported by a torque lever.

The scraper bridge is made of folded steel plates with a thickness of 5 mm.

This rigid construction causes that the deflection of the bridge is less than 1/500 corresponding to a life load of 250 kg / m².

The catwalk is fitted with open mesh flooring with a width of 90 cm.

The preferred material is gal. steel or stainless steel according to requirement.



Suction type scraper will be furnished with multiple desludging units which will be fixed by the scraper bridge. V-shaped suction hoods from stainless steel are equipped with rubber lining and suction pipes.

The suction hoods will be erected some millimetres above floor level. Due to this, no wear will be affected to the rubber lining and no maintenance will be required. Also no additional support-wheels are required for the floor desludging.

The suction pipes are ending in the sludge collecting chamber. Each pipe will be furnished with the separate control unit to optimize desludging.


If required, the sludge collecting chamber will be furnished with an excess / return sludge pump.

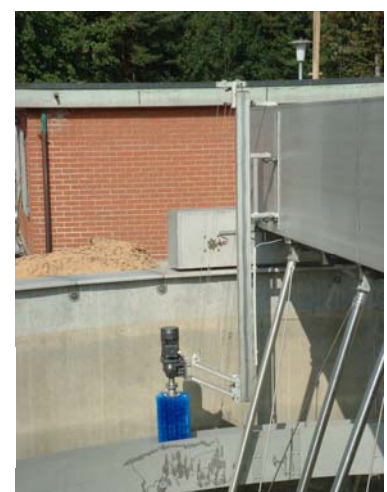


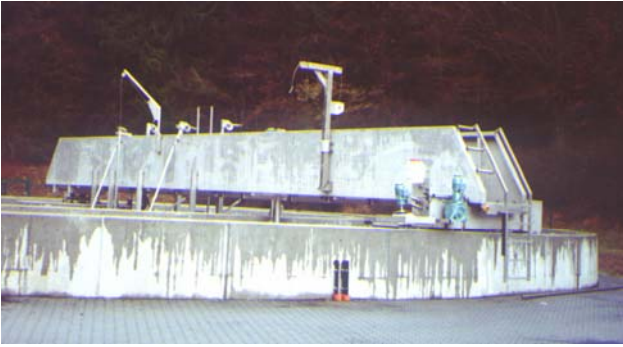
For descumming of water surface adjustable scum channels are available on request. Provision is made for descumming by means of motorized scum paddles for abnormal amount of floating sludge.




Runway cleaning and de-icing equipment will be bolted to the drive carriage. It is driven by an electric motor.

rotating channel cleaning brush 





Adjustable scum collecting channel with removal pump and guide baffles. 



Floor scrapers with electric shield



Control panel made of stainless



Waste water equipment

- screens
- screening dewatering presses
- compact clarifier
- grit removal
- grit classifier
- rotating & travelling scrapers
- non-metallic sludge collectors
- sludge thickeners
- accessories

Bulk & storage handling equipment

- dump container up to 20 m³
- multi-lift container up to 40 m³
- container driver units
- belt conveyors
- screw & spiral conveyors

Scum removal system

for rotating scrapers

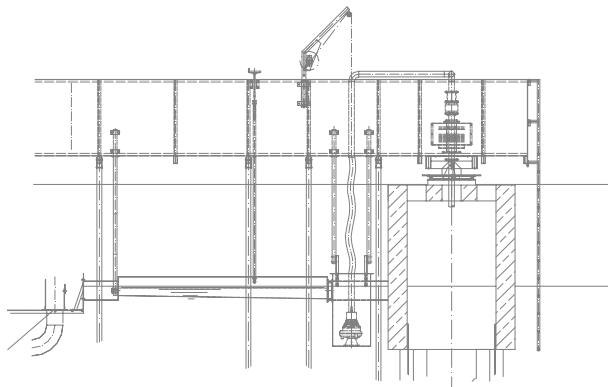
AAF ENVIROTEC GmbH 



The scum removal system for rotating scrapers is consisting of a swinging scum collection channel of polygon shape. It is manufactured with a slope to the scum collection box. The height of the overflow edge is adjustable by means of a spindle with hand wheel. Due to this the quantity of withdrawn scum can be modified and alternating water levels doesn't disturb the function.

The scum collection box is furnished with a submersible sewage pump for scum discharge. Provision is made for easy maintenance of the pump by means of submersible duck foot coupling system and lifting crane. For repair or service the pump can be lifted to the scraper bridge within seconds.

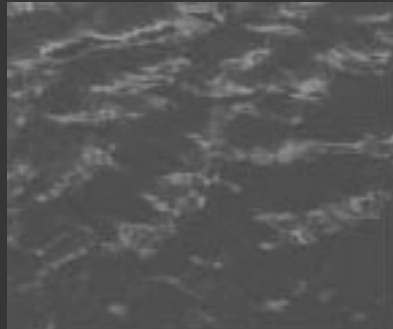
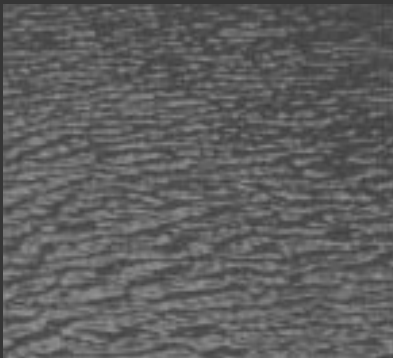
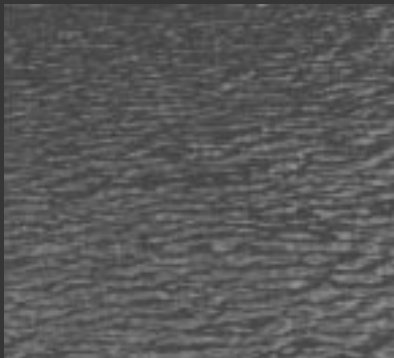
The connection between rotating bridge and fixed centre column to place with a swivel pipe joint of ample size. Any connection is flexible and requires no maintenance. To collect all floating material the outlet channel will be furnished with a scum board.



scope of supply :

- scum board
- scum channel
- scum box
- submersible sewage pump
- scum pipe
- swivel pipe joint
- scum shield
- automatic electric panel

Non metallic sludge collector



The AAF non-metallic sludge collector is designed to suit rectangular settling tanks of water & wastewater treatment plants.

The drive unit is furnished with a UHMW-PE sprocket and overload release clutch.

The drive chain type NH - 78 is made of acetyl links connected by stainless steel bolts. The working load is 7.750 N, the breaking load is 17.800 N. Due to the black colour ultra-violet radiation causes no harm to the chain.

The channel shaped flights are made of pultruded fibreglass and they are designed for strongest applications e.g. primary settling sludge.

The non-metallic collector chain, type NCS 720 S is made of glass reinforced polyester, chain pitch 6" (152,4mm), working load of collector chain : 12.000N, breaking load: 26.600N. Collector chain connected with pin (dia 23,6mm) of reinforced polyester, pin with T-head and lock ring for positioning.

The chain sprockets are completely made of UHMW-PE (ultra high molecular weight PE) in split design for easy installation with long-life sprocket teeth contour and chain saver rim.

The 23 T drive sprockets are made with a pitch dia. of 565mm, the 19 T return sprockets with a pitch dia. of 468mm.

Head shafts (drive) are key seated for both collector sprockets and the driven sprocket.

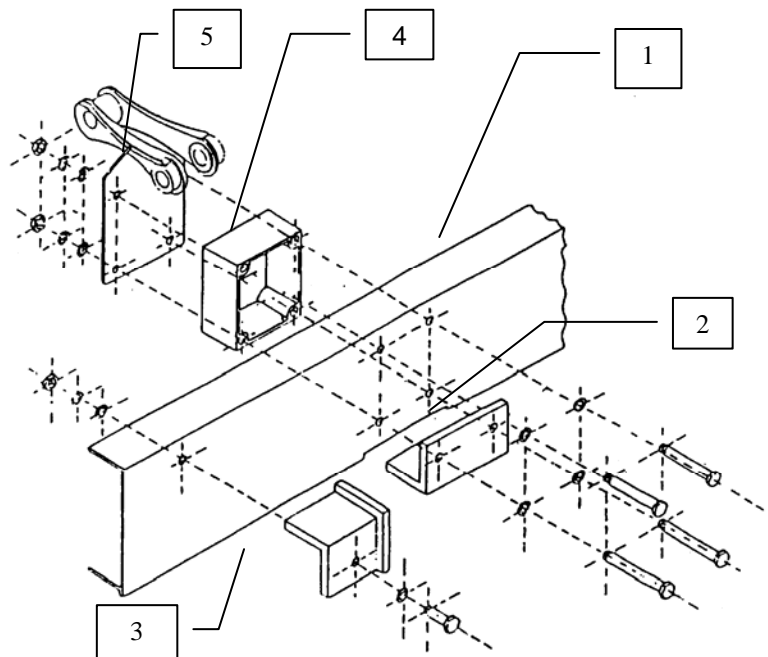
For the floor rails and return tracks wear strips with a low friction coefficient are applied. Strips are made from UHMW-PE, thickness 1/2" (12,7mm). Length approx. 3m with countersunk bolt and special washer made of stainless steel 1.4571 (316).

All hardware e.g. bolts, nuts ... will be made of stainless steel 1.4571 (316).



Fast and simple installation of all components

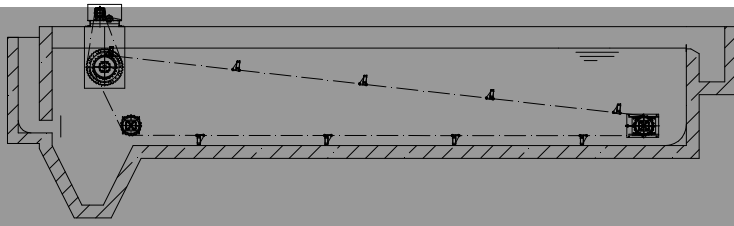
- 1 collector flight
- 2 wear shoe
- 3 return wear shoe
- 4 filler block
- 5 attachment link



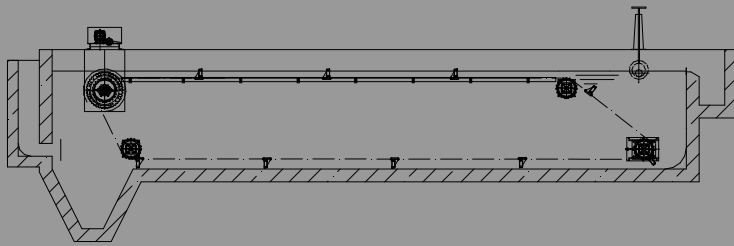
We only use material with high resistance against corrosion and wear

collector flights :	material :	pultruded fibre with 55 % glass content
chain :	material :	reinforced polyamide
filler block :	material :	polyethylene
wear shoe :	material :	UHMW-PE
return wear shoe :	material :	UHMW-PE

Kind of operation

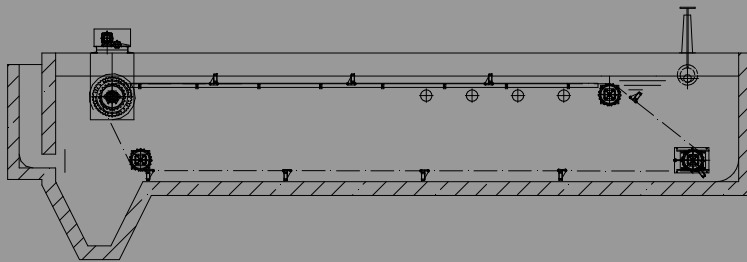


floor sludge collector



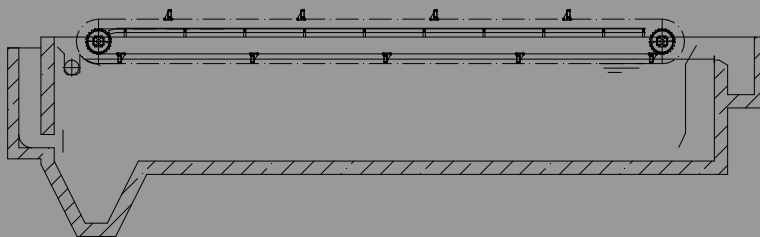
floor sludge and scum removal

clear water outlet via concrete channel



floor sludge and scum removal

clear water outlet via submerged pipes



for dissolved air flotation

Advantages of AAF ENVIROTEC Non metallic sludge collector

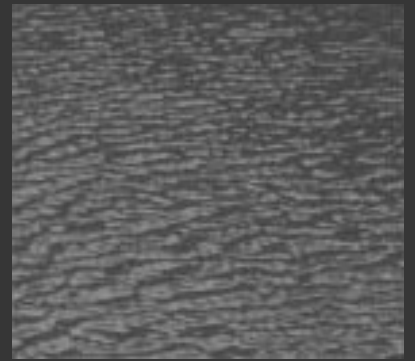
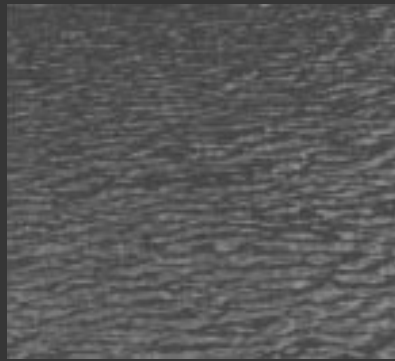
- ◆ no corrosion
- ◆ low weight
- ◆ less wear
- ◆ little maintenance for new tanks or
- ◆ as replacement for collectors with steel chains

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Travelling scraper LSR



Travelling scraper

as shield or suction scrapers for primary and final settling tanks

The scraper bridge is made of folded steel sheets with lateral and diagonal struts. The catwalk is furnished with open mesh flooring which could be easily removed for maintenance and revision.

The drive carriage is designed either for travelling on rails or on the side walls of the tank directly. Tanks with high sludge load or heavy duty settlements are preferably fitted with rails. The drive motion will be transferred via a rack and pinion drive.

For standard tanks the drive carriage is furnished with rubber tyres and polyurethane rollers for lateral guidance.

In any case the travelling scraper is equipped with one common drive. It is connected by means of two cardanic shafts with the drive wheels. One of the undriven wheels is fitted with a motion control system.

The power supply to the scraper is raised by a motorized cable drum. The control panel is mounted on the bridge. Provision is made for free programmable settings of floor and scum removal intervals.



The bottom scraper is furnished with renewable rubber lining made of PERBUNAN ® which gives maximum resistance against oil and chemical agents probably contained in sewage.

During return trip of the scraper the bottom scraper is raised automatically by an electric motor.

Suction type scraper will be furnished with multiple desludging units which will be fixed under. V-shaped suction hoods from stainless steel are equipped with suction pipes.

The suction hoods will be erected some millimetres above floor level. Due to this, no wear will be affected to the rubber lining and no maintenance will be required.

Also no additional support-wheels are required for the floor desludging.



The suction pipes are ending in the sludge collecting chamber. Each pipe will be furnished with the separate control unit to optimize desludging.

If required, the sludge collecting chamber will be furnished with an excess / return sludge pump.

All scum and floating sludge will be removed automatically by means of a scum removal shield. It is hinged at the bridge and raised and lowered by electric motor.

The scum removal channel will be located above the sludge hoppers in opposite to the outlet channel.



On request, there are also run-way cleaning and deicing devices for travelling scrapers available.



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