# PRODUCTS FOR WASTE WATER TREATMENT PLANTS AND BIOGAS PLANTS

K&K K&K TECHNOLOGY

JOINT - STOCK COMPANY



Serves to flush sediments settled in rainwater tanks.

Shutter volume 400 up to 1200 l/min. Tank width up to 6 m

#### **HYDRAULIC GRAB**

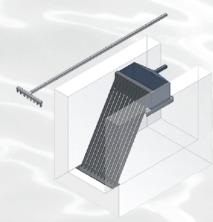
It is designed for installation on a grit, sand, sludge mining facility.

Grab capacity 50, 100, 300 I.

**BAR SCREEN BASKET** 

Serves to catch raw impurities and therefore protect pumps in pumping stations from damage or prevent WWTP area from raw material pollution.

Dimensions up to client's need.



#### HAND OPERATED SCREENS

It is used to prevent effluent large debris from moving through the drain system and diversion channels.

Channel width 400 - 2000 mm, Channel depth 500 - 3000 mm, Screens inclination 35 - 60°, Standard screen openings width 15, 20, 30, 60, 100 mm

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#### CHECK GATE, SHUTTER

Closing or regulating valve in channels shall be installed to close openings in sides of pits and tanks.

Designed to be anchored to channel sides or anchor slot, manual or electric drive. Dimensions and version up to client's need.



#### CLEANING DEVICES FOR EDGES OF SEDIMEN-TATION TANKS

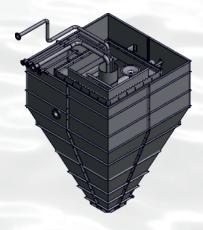
It is designed to clean sediments from steel or concrete channel outlet edges in sedimentation tank and secondary sedimentation tanks.

Length / brush Ø: 110 mm/200mm, Electric engine power (brush power input): 2 x 0,12 kW, 230/400V, 50 Hz **PRODUCTS, FACILITIES, ASSEMBLIES** 









# TILTING THROUGH FOR SKIMMING FLOATING DEBRIS

The tilting trough is used to skim floating debris from longitudinal sedimentation tanks. Manual or electrical control.

Length up to client's need.

# EQUIPMENT OF IN-BUILT SECONDARY SEDIMEN-TATION TANK

It serves to activate sludge gravity separation. It is intended for small and medium-sized WWTP.

W x L 3,5 x 6 m, Tank depth 4,3 - 5 m.

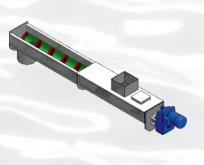


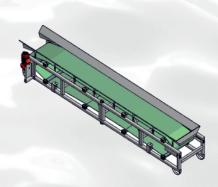
#### **MAMMOTH PUMP**

It primarily serves to pump sludge fluids and hydro-mixtures. It is used preferentially to pump hydro-mixtures in sand traps.

DN 80 up to DN 200, mechanical pumping of impurities up to particle size 8 mm.







# MANUAL HOIST

It's a simple device to lift up pumps, mixers and bar screen baskets.

Lifting capacity up to 500 kg.

# **SCREW CONVEYOR**

Designed to convey screenings, dewatered sludge and organic matter of similar composition.

Power input 0,25 - 12 kW, Through rated diameter from 260 až 600 mm, Shaft screw length up to 6 m, Non-shaft screw lenght up to 24 m, Conveyor mounting gradient up to 30°, 90°, Conveying capacity 0,5 až 16 m³/h.

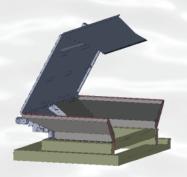
#### **BELT CONVEYOR**

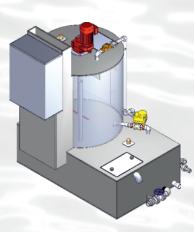
Device designed to convey dewatered sludge and non-cohesive matter of similar composition.

Nominal belt width 500, 600 mm, Gradient 0-20°, Conveying capacity 0,5 - 3 m<sup>3</sup>/h, Drive 0,55 kW up to 3 kW, 230/400 V, 50 Hz.

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#### **CLOSING - HOPPER**

It is used when unloading substrates from trucks through ceiling openings right into homogenization tanks.

When closed, it prevents smells from spreading from the tank.

# **FLOCCULATION STATION**

It is designed to prepare powder or liquid flocculant solutions in required concentrations.

Standard capacity 1m<sup>3</sup>/h, 2m<sup>3</sup>/h or customized to customer requirements.



#### SUBSTRATE FEEDER

It is used to load out, mix and convey solid substrates to the biogas plant fermenter.

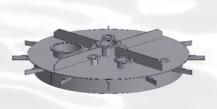
Tub capacity 32 m<sup>3</sup>. We also carry out overhauls of other manufacturers' products.

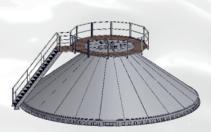


# **CONVEYOR - FEEDER**

It serves to convey mixed substrates from the feeder tube to the BP fermenter.

Produced to suit the BP layout.





# **STEEL DIGESTER COVER**

It is used to close digester cap on WWTP digester tank.

Sizes are available due to client's need. A foot-board can be supplied as a part of the cover.

#### **STEEL DIGESTER CAP**

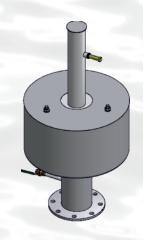
It's a simple device to gastight digester top part.

Sizes are available due to client's need. A foot-board can be supplied as a part of the cover.

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# LONG SHAFT STIRRER

Long shaft stirrer is used to mix and homogenize the biogas plant fermenter contents.

Stirrer power series: 15 KW, 18,5 KW, 22 KW, shaft length is according to the fermenter size.

#### DIGESTER TANK MECHA-NICAL SAFETY VALVE

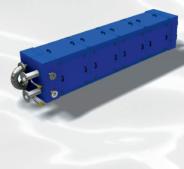
It reliably protects the digester tank against overpressure from digester contents "foaming out".

DN 150, DN 200, Maximum opening overpressure 7 kPa

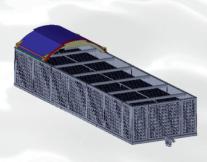


### HELICAL HEAT EXCHANGER

It is used for indirect heating of mixed sludge with hot water and to maintain the process temperature during anaerobic sludge stabilization in digester tanks. Heat transfer area: 6, 12, 18, 26 m<sup>2</sup>.







#### **TUBE HEAT EXCHANGER**

It is used for indirect heating of mixed sludge with hot water and to maintain the process temperature during anaerobic sludge stabilization in digester tanks.

Heat transfer area: 8, 16, 24 m<sup>2</sup> Sizes are available to client's need.

#### **RAIL TROLLEY**

It is used to handle containers on a railway.

Designed to suit the container type and drive requirements.

#### **DEODORIZATION FILTER**

It serves to biologically decrease odour emissions when ventilating buildings and processes where air is biologically polluted.

Filter size to the technological design.

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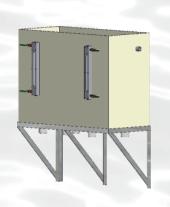




# LIQUID PRESSURE RELIEF VALVE

It is designed to secure gas-operated area in WWTP digesters and gas holder. It is installed on equipment to protect them from inadmissible over- and underpressure.

DN 80 up to DN 200, operating overpressure maximum 2,5 kPa, operating temperature -25 až +50 °C.



#### WATER RESERVOIR

It is used as a water supply for water seals of sealing fluid capacity up to 120I.

1x165 l or 2x165 l plastic reservoir, Stainless steel supporting bracket.



# WATER SEAL

It is a safety element used in gas management for gas-tight closure of gas piping in hazardous situations according to standard ČSN 75 6415.

DN 100 up to DN 250, Straight or corner variant, Operating overpressure maximum 2,5 kPa.



# **BIOGAS RECEIVER**

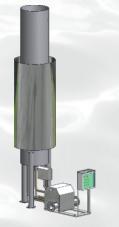
Facility for reliable collection of biogas on the digester or fermenter cover.

Operating overpressure maximum 4,9 kPa.



#### WATER DRAIN

It is used to collect condensate from biogas that occurs when water vapours condense on the piping cool surface. DN 80-200, straight or corner variant, Operating overpressure maximum 4,9 kPa Manual or automatic drainage.



# **BIOGAS DISPOSAL DEVICE**

It is designed to burn residual biogas.

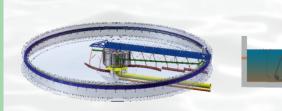
Variant up to 110 m<sup>3</sup>/h and up to 260 m<sup>3</sup>/h,

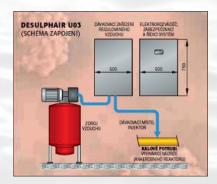
Operating overpressure 1,5 - 4,9 kPa, Facility output 650 or 1560 kW at 2 kPa overpressure.

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# CIRCULAR SEDIMENTATION TANK EQUIPMENT

Technological equipment of sedimentation and secondary sedimentation tanks for gravity separation of primary or activated sludge from waste water. Variants available with a travelling bridge or a chain scraping system.

# Tank diameter up to 45 m During the winter, the submerged chain

scraper assembly benefits from no moving overhead parts.

# LONGITUDINAL SEDIMEN-TATION TANK EQUIPMENT

Technological equipment of sedimentation and secondary sedimentation tanks for gravity separation of primary or activated sludge from waste water. Variants available with a travelling bridge or a chain scraping system.

Tank width up to 12 m. The variant with the chain scraping system benefits from the absence of any overhead parts and from scraping being fully balanced.

# BIOGAS DESULPHURIZA-TION FACILITY

It is designed to remove hydrogen sulphide ( $H_2S$ ) from biogas generated when processing substrates through anaerobic fermentation in digester tank or fermenter.

# DIGESTER TANK WITH SUB-MERSIBLE STIRRERS

A shallow tank with flat bottom for anaerobic stabilization of sewage sludge agitated by means of submersible stirrers and heated using an external heat exchanger or an internal heat coil. It is the latest design for digester tanks.

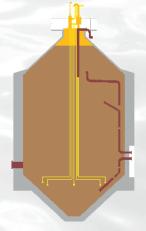
Low-cost shallow tanks with adjustable stirrer position and without any foaming concerns.

# DIGESTER TANK WITH A LOW SPEED STIRRER

It is predominantly used for anaerobic stabilization of sewage sludge by means of a large-blade low speed stirrer.

The design provides the highest economies in mixing power demand. It reduces sludge foaming.

# Low-cost, maintenance-free and reliable facility.



# DIGESTER TANK WITH IN-FLOOR BIOGAS AERATION

Pneumatic sludge agitation by means of compressed sludge gas brought to a couple of nozzles installed in the tank bottom. The sludge is heated using an external heat exchanger.

The sludge gas circulation process increases methane concentration and total output.

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