



WATER TREATMENT TECHNOLOGIES & EQUIPMENT

Available from:

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WAMGROUP®

WAMGROUP® offers state-of-the-art solutions through a comprehensive product range of machines and equipment for effluent pre-treatment and sludge treatment in both municipal and industrial waste water purification plants.

WAMGROUP® develops innovative market-oriented, industrially manufactured products distributed through its own global network.

WAMGROUP® is determined to supply the most comprehensive range of equipment available to deliver the one-stop-solution to its customers.

WAMGROUP® offers customers in any place in the world the highest possible quality product and service at a fair price.

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ARCHIMEDEAN WATER SCREW PUMPS

Archimedean Screw Pumps PA

Since the late 1970s more than 1,200 Archimedean Water Screw Pumps ranging from 0.5 to 4 metres (1.6 to 13 ft) in diameter and flow rates of up to 4,500 litres per second (160 cu ft per sec) have been successfully operating.

- Single, double or triple flight
- Drive power installed up to 500 kW (680 HP) and more
- Constant efficiency over time

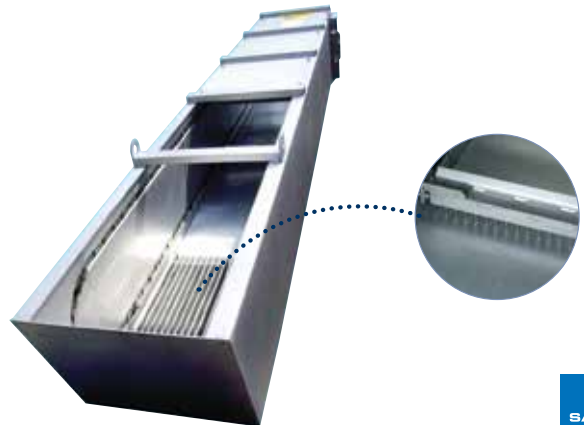


MULTIRAKES

Sub-vertical Mechanical Bar Screens GVB

GVB Sub-vertical Mechanical Bar Screens are used for coarse screening in both municipal and industrial waste water plants.

- 10 ~ 50 mm spacing
- 2 or more cleaning rakes ensuring quick, efficient solids removal
- Channel width: 400 ~ 2,000 mm
- 75-90 degree incline angle



SAVI



Sub-vertical Mechanical Fine Bar Screens GVF

GVF Sub-vertical Mechanical Bar Screens are used for medium-fine screening in both municipal and industrial waste water treatment plants.

- 6 ~ 10 mm spacing
- 4 or more cleaning rakes depending on screen height
- Channel width: 400 ~ 2,000 mm
- 75-90 degree incline angle



SAVI

Sub-vertical Mechanical Perforated Screens GVS

GVS Sub-vertical Mechanical Bar Screens are used for fine screening in both municipal and industrial waste water plants. In particular, they are applied for screening process water in industrial processing plants.

- 3 ~ 6 mm perforation
- 4 or more cleaning blades and wipers depending on screen height
- Channel width: 400 ~ 2,000 mm
- 75-90 degree incline angle



SAVI

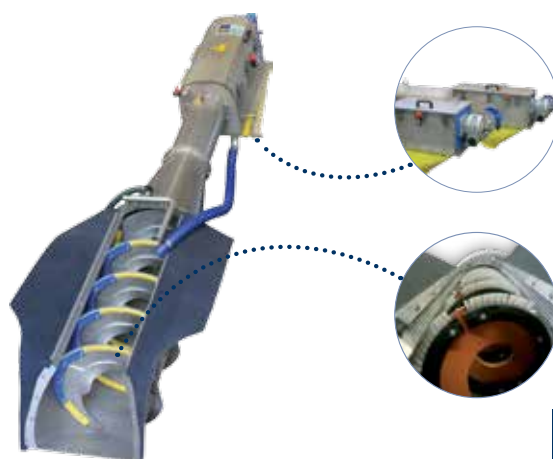


SCREW SCREENS

WASTEMASTER® GCP-GCE Screw Screens

GCP and GCE-type Screw Screens ensure efficient solids-liquid separation in the primary treatment section of civil waste water treatment plants, as well as in various industrial applications.

- Flow rates of up to 1,000 m³/h (590 cfm)
- Solids extraction of up to 0.33 dm³/s
- Solids volume reduction of up to 35%



WASTEMASTER® GCPC-GCEC In-Tank Screw Screens

Installed in a self-supporting tank, GCPC / GCEC-type Screw Screens can be easily installed and connected to the pipework in both civil and industrial effluent treatment plants.

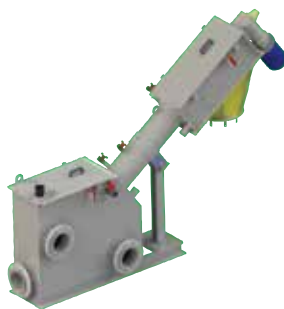
- Sturdy metal framework (completely enclosed structure in compliance with safety regulations and preventing odours) manufactured entirely from 304L/316L stainless steel
- Throughput up to 1,000 m³/h
- Solids extraction capacity up to 0.33 dm³/h
- Solids volume reduction up to 35%



WASTEMASTER® TSF 1 Mechanical Effluent Pre-treatment Plants

The TSF1 Compact Plant combines separation of solids present in effluents with compacting and de-watering of the solids extracted. The special design of the machine combined with a specific functional control results in a complete mechanical pre-treatment of waste water for small treatment plants.

- Flow rates of up to 500 m³/h (300 cfm)
- Solids extraction of up to 0.18 dm³/s (0.38 cfm)
- Solids volume reduction of up to 40%



WASTEMASTER® GCV Vertical Screw Screens

GCV Vertical Screw Screens enable efficient removal of suspended solids in installations with little space available. Moreover, the GCV is the ideal protection system for pumping stations with submersible pumps.

- Throughput rates of up to 320 m³/h (188 cfm)
- Solids extraction of up to 0.35 dm³/s
- Solids volume reduction of up to 40%



WASTEMASTER® GCEV In-Channel Vertical Screw Screens

GCEV Vertical Screw Screens enable efficient removal of suspended solids from deep channels,

- Capacity up to 180 m³/h
- Fabricated parts and screws manufactured from 304L/316L stainless steel or high-strength steel
- Variable degree of screening (2, 3, 5, 6, or 10mm)



WASTEMASTER® CT-CTC Mini-Screw Screens

Its lightweight design makes the CT Mini-Screw Screen the ideal choice for applications with low flow rates.

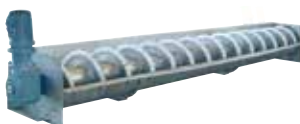
- Lightweight design (less than 40 kg)
- Anti-wear SINT™ engineering polymer screw for high extraction efficiency
- Screens with 2 or 5 mm mesh size



Overflow Spillways VSE

VSE Overflow Spillways are used to treat overflows. They consist of a semicircular filter installed on the edge of the spillway.

- 3 sizes available (300 / 500 / 700 mm)
- 2 opening sizes available (6 / 8 mm perforated plate)
- Lengths from 1 to 12 m





PERFORATED BELT SCREENS / STEP SCREENS

Fine Belt Screens VFR

VFR Fine Belt Screens are used for fine screening in both municipal and industrial waste water treatment plants.

- 6 sizes up to 2,000 mm wide
- 65 degree incline angle
- Perforated media openings from 2 to 6 mm
- Chain drive recessed into side rails
- Double cleaning system



Step Screens VTR

VTR Step Screens are another option for fine screening in municipal and industrial waste water treatment plants.

- Different sizes up to 1,800 mm wide
- Discharge height from 1,400 to 3,500 mm
- 3 and 6 mm spacing
- 55-degree incline angle





DRUM SCREENS

SPIRAMATIC VSA Fine Drum Screens

SPIRAMATIC VSA Fine Drum Screens screen, wash, convey, and dewater screenings all in one unit, thus eliminating the need for multiple pieces of equipment. They are used in both municipal and industrial applications, as well as for the pre-treatment in MBR plants.

- Filter mesh sizes for MBR pre-treatment:
1.0 – 1.5 – 2.0 – 3.0 mm round punch holes
- Filter mesh sizes (other than MBR use):
5.0 – 6.0 mm round holes or 0.5 – 6.0 mm wedge wire
0.25 – 1 mm square mesh
- Channel width: 600 ~ 3,000 mm
- 35-degree incline angle
- In-tank installation



SAVI

WASTEMASTER® FTR Rotary Drum Screens

FTR is a Rotating Drum Screen designed to combine separation of solids present in effluents with compacting and de-watering of the screenings.

- Capacity up to 1,550 l/s
- Variable degree of screening with either round punch hole or wedge wire screen
- Solids removal capacity up to 15 m³/h



Internally Fed Rotating Drum Screens RTV

RTV Internally Fed Rotating Drum Screens are suitable for pre-treatment of both municipal and industrial waste water treatment, as well as MBR plants.

- 9 different sizes available
- Standard perforated media spacing: 1 ~ 6 mm or 0.5 ~ 6.0 mm wedge wire or 0.25 ~ 1 mm square mesh
- Recommended spacing for MBR application: 1 ~ 3 mm



SAVI

Externally Fed Drum Screens SGR

SGR Externally Fed Drum Screens are used for fine screening of sewage in civil waste water plants or for process water from industrial processing plants.

- Slot width: 0.25 ~ 2.5 mm
- Wedge wire filter with so-called "slot zero" to ensure drum resistance
- Screen in 304 L / 316 L stainless steel



SAVI



COMPACTORS

WASTECOM® CPS Screw Compactors

The CPS is a de-watering Screw Compactor for screened solids in civil and industrial waste water treatment plants.

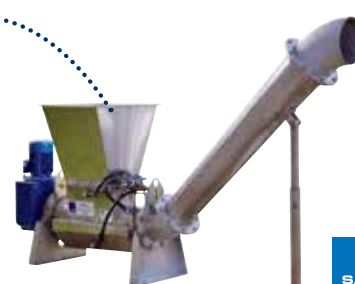
- Trough liner manufactured from high-density, low-friction HDPE polymer
- Shaftless screw without end bearing
- Outlet diaphragm ensuring high compaction efficiency



Shafted Washer Compactors VWP

VWP Shafted Washer Compactors are used to compact screenings removing, at the same time, organic particles in both municipal and industrial waste water treatment plants.

- 3 sizes available
- From 1.5 up to 6 m³/h of screenings
- Washing system for removal of organic matter
- Dry solids content up to 45%



Shafted Intensive Washer Compactors VWP WM

VWP WM Shafted Washer Compactors are used to remove organic particles through a special washing system, at the same time compacting the solids.

- 3 sizes available
- From 1.5 up to 6 m³/h of screenings
- High performance washing system with special hopper and impeller
- Volume reduction up to 70%



Hydraulic Compactors CHP

CHP Compactors are used to compact screenings by means of a hydraulic ram.

- 3 sizes available
- Screenings throughput from 1.5 up to 3.5 m³/h
- Volume reduction of up to 60%





GRITSEP® DSF Areated Grit Chambers

GRITSEP® DSF combines a typical aerated grit chamber including sedimentation and fat removal with a built-in grit classifier.

- Flow rates of up to 210 litres per second (445 cfm)
- Sand separation: 95% particle size $\geq 200 \mu\text{m}$
- Grease removal



Travelling Bridges for Grease and Grit Removal PVD

PVD Travelling Bridges are used to remove grease and grit from effluent in municipal and industrial waste water treatment plants.

- Quick installation
- High efficiency grit and grease removal
- Easy installation even in existing tanks



Circular Grit Traps DSP

DSP Grit Traps are designed to remove grit from sewage in waste water treatment plants.

- Available for up to 6-metre diameter tanks
- Central bearing
- Carbon steel hot dip-galvanised or 304 L / 316 L stainless steel



GRITSEP® FGC Fluid Dynamic Grit Classifiers

GRITSEP® FGC is an innovative sand and Grit Classifier designed to achieve the highest sand removal rate available on the market today.

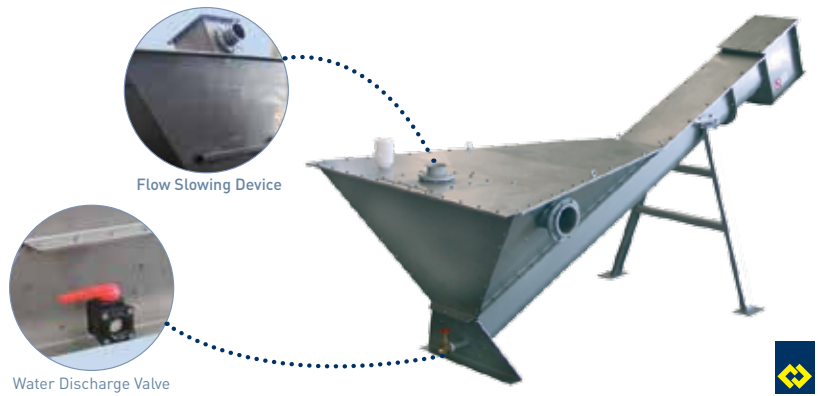
- Sand separation with particle size $\geq 200 \mu\text{m}$ and specific gravity ranging from 2.60 to 2.65 t/m^3
- Low drive power installed
- Small footprint



GRITSEP® DS Grit Classifiers

The GRITSEP® DS Grit Classifier ensures efficient separation of grit or sand from waste water through decantation and removal by means of a conveyor screw.

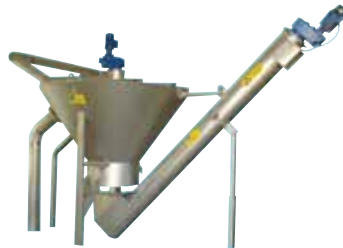
- Liquid throughput:
5 ~ 36 m³/h (3 ~ 21 cfm)
- Solids throughput:
0.2 ~ 1.3 dm³/s (0.4 ~ 2.7 cfm)
- 90% sand sedimentation



Sand Washer Classifiers CLSW

CLSW Sand Washers are used to separate sand from water and to wash the grit at the same time in order to remove organic particles.

- 3 sizes available
- Flow rates of up to 30 litres per second
- High washing performance with organic residue < 3%



GRITSEP® LCS Grit Washers

GRITSEP® LCS is a Grit Washer with high performances obtained thanks to SINT™ engineering polymer components with excellent anti-wear features.

- Solid throughput: from 0.10 m³/h up to 0.40 m³/h
- High washing performance with organic residue < 2%
- Minimum footprint





COMPACT PLANTS

WASTEMASTER® TSF 2-3 Compact Plants for Mechanical Effluent Pre-treatment

The TSF2 and TSF3 Compact Pre-treatment Plants efficiently combine between two, respectively three functions of pre-treatment of sewage from civil or industrial installations.

- Flow rates of up to 210 litres per second (445 cfm)
- Sand separation with:
95% particle size $\geq 200 \mu\text{m}$
- Grease removal with TSF3
- Up to 35% solids volume reduction



WASTEMASTER® MIT Waste Water Mini-Treatment Plants

The MIT Mini-Treatment Plant carries out up to three different processes with the smallest ever overall dimensions: Screening, De-gritting and De-greasing.

- 90% separation of grain size $\geq 0.2 \text{ mm}$
- Variable screening (2 and 5mm)
- Floating screw for removal of floating matter





SEPTAGE RECEIVING STATIONS

Septage Receiving Stations VFA DM “THE BEAST”

VFA DM “THE BEAST” Septage Receiving Stations are also used for FOG and digester/sludge cleaning. The station screens, washes, conveys, and dewater screenings all in one unit, thus eliminating the need for multiple pieces of equipment.

- 3 sizes available
- Max. flow rate up to 200 m³/h at 4% solids concentration
- Dual motor drive system
- Drum screen round punch holes 5.0 – 6.0 mm wide
- Drum screen incline angle: 25 degrees



WASTEMASTER® TSB 1 Septage Receiving Stations

For pre-treatment of septage from cesspool tanks or industrial plants collected by special purge tankers, the TSB1 carries out two different processes: separation of solids present in the septage, as well as de-watering and compacting of the extracted solids.

- Sturdy metal framework (completely enclosed structure in compliance with safety regulations and preventing odours) manufactured entirely from 304L/316L stainless steel
- Shaftless conveyor screw manufactured from 304L/316L stainless steel or special high-resistance steel



WASTEMASTER® TSB 2-3 Septage Receiving Stations

The TSB2 and TSB3 Septage Receiving Stations carry out up to two, respectively three different processes: de-watering and compacting of screened solid waste, separation of sand and - TSB3 only - removal of floating greasy matter.

- Flow rates of up to 30 litres per second (63.5 cfm)
- Inlet screen mesh: 5, 6, 7 mm



WASTEMASTER® TSB 4 Septic Tank Sludge Treatment Plants

The TSB4 Septic Tank Sludge Treatment Plants carry out up to 4 different processes: screening, de-watering, de-greasing and compacting of sewage from septic tanks or industrial plants.

- Designed to treat highly concentrated waste
- Removes heavy solids, grit and grease/scum
- Floating screw for removal of floating matter
- Capacity up to 100 m³/h



Internally Fed Rotating Drum Screens RTV SEPTIC

RTV SEPTIC Internally Fed Rotating Drum Screens are suitable for septage receiving stations.

- Flow rates up to 120 m³/h at 4% solids concentration
- Perforated screen: 5 - 6 - 10 mm





CLARIFIERS

Travelling Bridges for Settlement Tanks PVS

PVS Travelling Bridges installed in settling tanks in effluent treatment plants are used to remove sludge and scum from the bottom of the tank.

- Available for up to 13 m wide and 50 m long tanks
- Sludge and scum removal devices included



Peripheral Traction Clarifiers PTP / PTA

PTP Peripheral Traction Clarifiers are used to remove biological sludge and floating particles in both circular primary and secondary settling tanks.

- Available for tanks of up to 60 m in diameter
- Scum removal device included
- Hot dip-galvanised carbon steel or 304 L / 316 L stainless steel



Central Traction Clarifiers PTC

PTC Central Traction Bridge Clarifiers are used to remove biological sludge in circular primary and secondary settling tanks in both municipal and industrial waste water treatment plants.

- Available for tanks of up to 18 m in diameter
- Central bearing for units larger than 14 m in diameter
- Electric torque limit switch, scum removal device, and walkway on request





SLUDGE TREATMENT EQUIPMENT / SCREENINGS CONVEYING EQUIPMENT

Sludge Thickeners ISP

ISP Sludge Thickeners are used to thicken sludge in municipal and industrial effluent treatment plants.

- For up to 18 m-diameter tanks
- Central bearing for units larger than 12 m in diameter
- Hot dip-galvanised carbon steel or 304 L / 316 L stainless steel



Shaftless Screw Conveyors SSC

SSC Shaftless Screw Conveyors offer large volume capacity and the possibility of handling screenings and floating matter, as well as de-watered, thickened, or conditioned sludge.

- Throughput rates: up to 45 m³/h (26.4 cfm) for sludge; up to 13 m³/h (7.6 cfm) for screenings
- Drive power: 0.55 kW (0.75 HP) ~ 9.2 kW (12.5 HP)
- Trough and spiral manufactured from carbon steel or 304L / 316L stainless steel
- UHMWP trough liner



Slide Valves VL

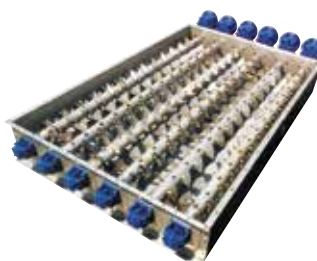
VL Slides Valves are the ideal equipment for intercepting the flow of powdery or granular materials, as well as screenings and sludge in gravity or conveying applications.



Live Bin Bottoms MU

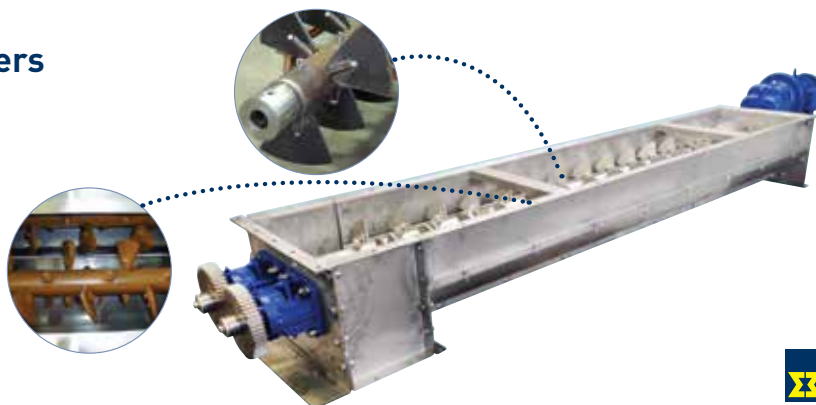
For discharging difficult materials such as municipal or industrial sludge from polygonal hoppers or silos, MU Live Bin Bottoms (Multiple Screw Feeders) are the ideal equipment.

- Screw diameter: 150 ~ 600 mm (6 ~ 24 in)
- Up to six screws in one trough
- Open trough length ranging from 1,500 to 4,000 mm (5 ~ 13 ft)



Continuous Twin Shaft Paddle Mixers MESC

The MESC-type Twin Shaft Paddle Mixer is among the most efficient yet economic mixer types for inerting sludge.



Continuous Single Shaft Mixers WAH

The WAH Continuous Single Shaft Mixer is the ideal machine to obtain highest quality mixtures. Mixing with WAH is quick though gentle and efficient.





LIME DOSING

Especially tailored to lime dosing requirements, WAMGROUP® has developed highly application-oriented equipment for silo venting and silo safety, for discharging, feeding, conveying, and intercepting lime powder in Lime Dosing Plants as used in waste water treatment.

Bin Activator BA

The BA is the ultimate Bin Activator. Industrially manufactured in large series the BA excels by its seamless cone and its double-flanged, seamless gasket. Its unique design features ensure perfectly safe operation over time.

- Gasket with integrated upper and lower flange ensuring safe dustproof connection
- No welding seams on cone and seal
- Easy to fit



Tubular Screw Feeder TU

The TU Tubular Screw Feeder is designed to accurately feed lime from a storage silo into a micro-batch feeder or directly into a lime dissolver or a sludge conditioning mixer.

- Accurate feed rate
- High efficiency
- Enhanced reliability



Micro-batch Feeder MBF

The MBF Micro-Batch Feeder is particularly suitable for feeding quicklime or hydrated lime with high accuracy into a milk of lime dissolver or a sludge conditioning mixer.

- High feeding accuracy
- Easy and quick maintenance due to small number of components
- Minimum material residue



Silo Safety System KCS



EXTRABEND® Anti-wear Pipe Elbows



Spring-loaded Pressure Relief Valve VCP



Pressure Switch Meters IPM / IPE



Butterfly Valve VFS



Pinch Valve VM



WAMFLO® Silo Venting Filter



Membrane Pressure Relief Valve VHS-C



Rotary Level Indicator ILT



Drop-Through Rotary Valve RV / RVR



MISCELLANEOUS EQUIPMENT & ACCESSORIES

Penstocks PAR

PAR Penstocks are used in municipal and industrial waste water treatment plants to isolate a piece of equipment or parts of a plant.

Purposes:

- Isolating a piece of equipment
- Shutting off a whole part of a plant
- Controlling water level and/or flow rates



SAVI

EASYFILL™ FIBC Filling Systems

EASYFILL FIBC™ Filling Stations enable efficient filling of bulk bags. The empty FIBC is attached to stretching arms integrated into the filling head.



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FIBC Dischargers SBB

SBB-type FIBC Dischargers ensure economic, dust-free discharging of bulk solids from bulk bags.



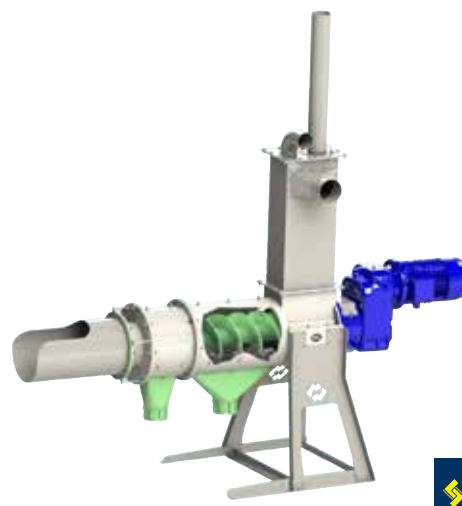
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BIOSOLIDS EQUIPMENT

SEPCOM® Horizontal Solids-Liquid Screw Separator Presses

SEPCOM® Horizontal is an innovative solids-liquid Screw Separator Press. Thanks to its special features, a variety of materials from biogas plants, industrial processes, as well as slurry from livestock breeding can be treated.



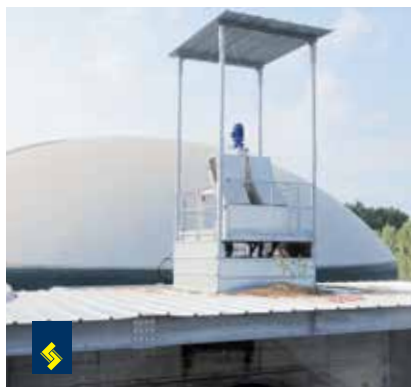
SEPCOM® MFT Micro-Filters

The SEPCOM® MFT Micro-Filter is a machine for micro-screening of the liquid phase from a previous separation process of slurry, digestate from biogas generation processes or waste water from industrial processes. It can be applied in all water purification processes.



SEPCOM® Vertical Solids-Liquid Screw Separator Presses

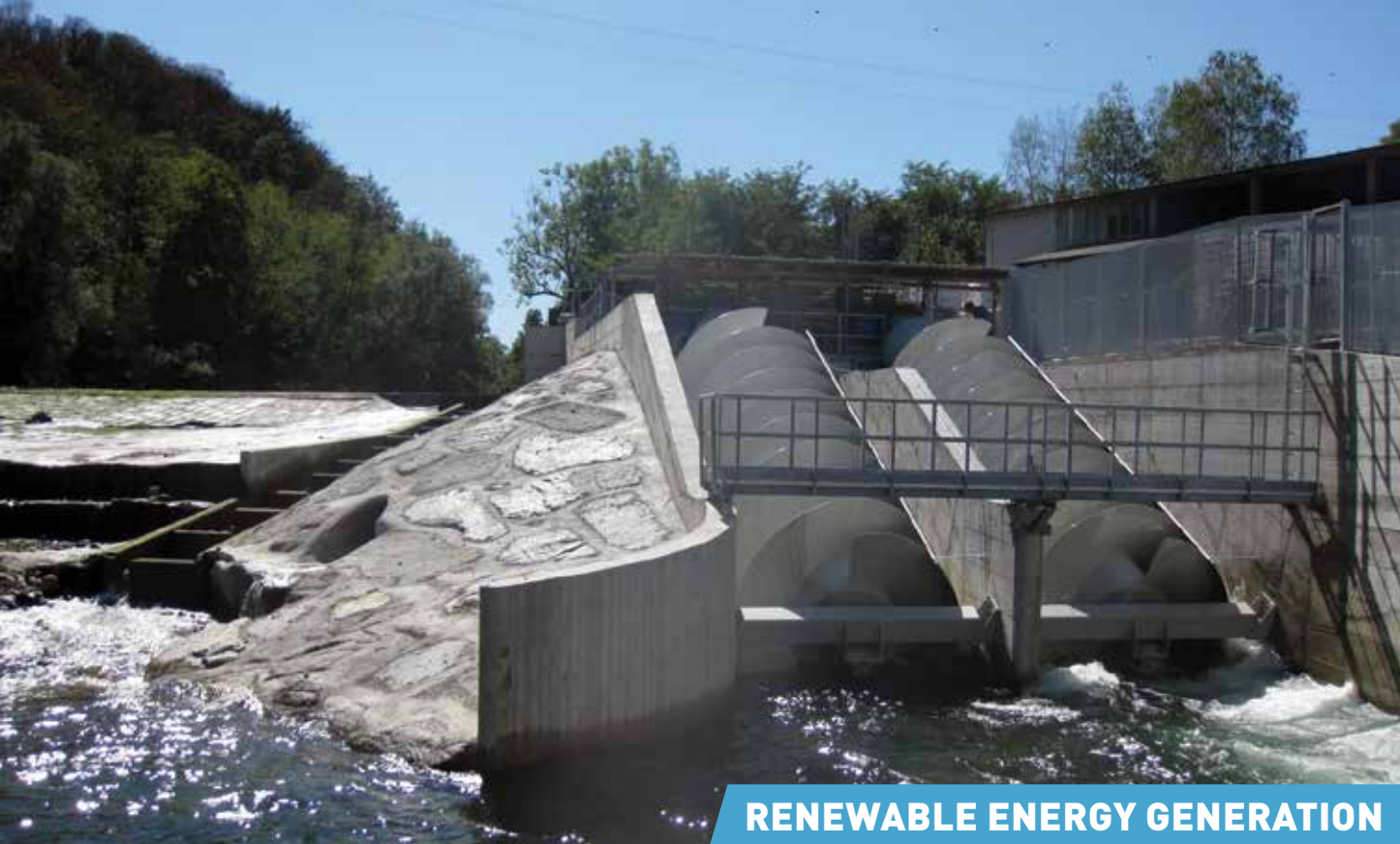
SEPCOM® Vertical is an innovative solids-liquid screw separator press. Thanks to its special features, vertical work position and a twin-screw design, a variety of materials from biogas plants, industrial processes, as well as slurry from livestock breeding can be treated.



Bulk Biomass Digester Feeding Systems TCB

The TCB Bulk Biomass Conveying System represents the most reliable solution to any feeding and conveying requirement for biomass handling in Biogas plants such as manure, crops, green waste, etc.





RENEWABLE ENERGY GENERATION

Hydrodynamic Screws PAE

Naturally downward flowing water starts the PAE Hydrodynamic Screw, which transforms hydropower into electric energy. Hydrodynamic Screws exploit waterfalls of limited height and moderate flow rates ensuring an efficiency that cannot be matched by any other type of turbine.





www.wamgroup.com/wwt

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