

WATER TREATMENT TECHNOLOGIES & EQUIPMENT

SAVECO®
A WAMGROUP® Brand

SAVECO™ provides 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 wastewater purification plants.

SAVECO™ offers innovative market-oriented, industrially manufactured products distributed through its own global network.

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

SAVECO™ assures customers in any place in the world the highest possible quality product and service at a fair price.



SAVECO®
A WAMGROUP® Brand

SPECO® SAVI SEPCOM® WAM® MAP TOREX® EXTRAC® RONCUZZI



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 worldwide.

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

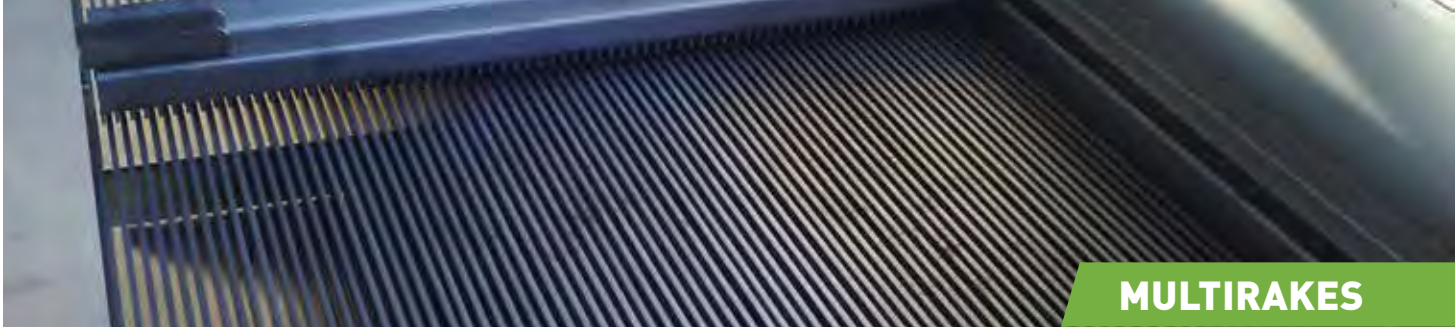










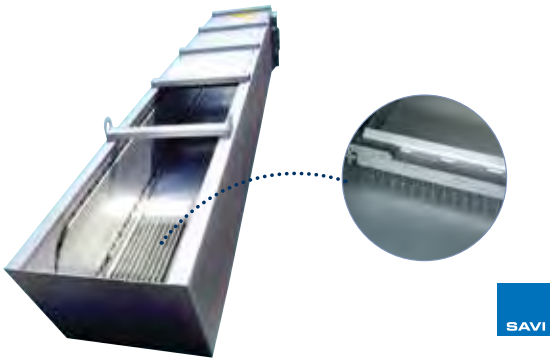


MULTIRAKES

Sub-vertical Mechanical Bar Screens GVB

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

- 10 ~ 40 mm spacing (other spacing on request)
- 2 or more cleaning rakes ensuring quick, efficient solids removal
- Channel width: 400 ~ 2,000 mm
- 75-90 degree incline angle









Sub-vertical Mechanical Bar Screens GVL

GVL screens are used for coarse screening in both municipal and industrial wastewater plants. Developed with the aim of obtaining a highly industrialised product with new standards, GVL combines the known reliability (due to thousands of installations of bar screens during the last 35 years) with low purchase, management and maintenance costs.

- 10 ~ 40 mm spacing
- 2 or more cleaning rakes ensuring quick, efficient soldis removal
- Channel width: 400 ~ 1,200 mm
- 75 degree incline angle





Sub-vertical Mechanical Fine Bar Screens GVF

GVF Sub-vertical Mechanical Bar Screens are used for medium-fine screening in both municipal and industrial wastewater 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





Sub-vertical Mechanical Perforated Screens GVS

GVS Sub-vertical Mechanical Bar Screens, which are provided with neoprene brushes and wipers, are used for fine screening in both municipal and industrial wastewater treatment 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





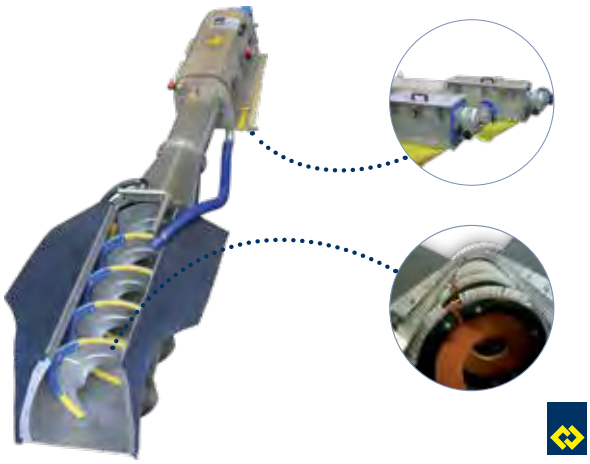


SCREW SCREENS

WASTEMASTER® GCP-GCE Screw Screens

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

- Flow rates of up to 1,000 m^3/h (590 cfm)
- Solids extraction of up to 0.33 dm^3/s
- Solids volume reduction of up to 40% (GCP only)









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 m^3/h
- Solids extraction capacity up to 0.33 dm^3/h
- Solids volume reduction up to 40% (GCPC only)

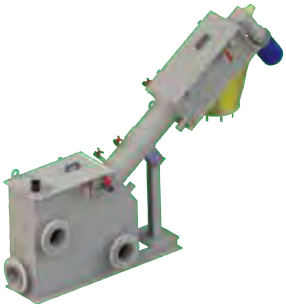




WASTEMASTER® TSF 1 Mechanical Effluent Pre-treatment Plants

The WASTEMASTER® 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 wastewater for small treatment plants.

- Flow rates of up to 500 m^3/h (300 cfm)
- Solids extraction of up to 0.18 dm^3/s (0.38 cfm)
- Solids volume reduction of up to 40%





WASTEMASTER® GCV Vertical Screw Screens

WASTEMASTER® 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 m^3/h (188 cfm)
- Solids extraction of up to 0.35 dm^3/s
- Solids volume reduction of up to 40%





WASTEMASTER® GCEV In-channel Vertical Screw Screens

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

- Capacity up to 180 m^3/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 WASTEMASTER® CT Mini-Screw Screen the ideal choice for applications with low flow rates.

- Lightweight design
- Anti-wear SINT™ engineering polymer screw for high extraction efficiency
- Screens with 2 or 5 mm mesh size
- CTC in-tank stand-alone version available

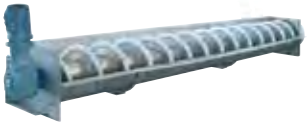




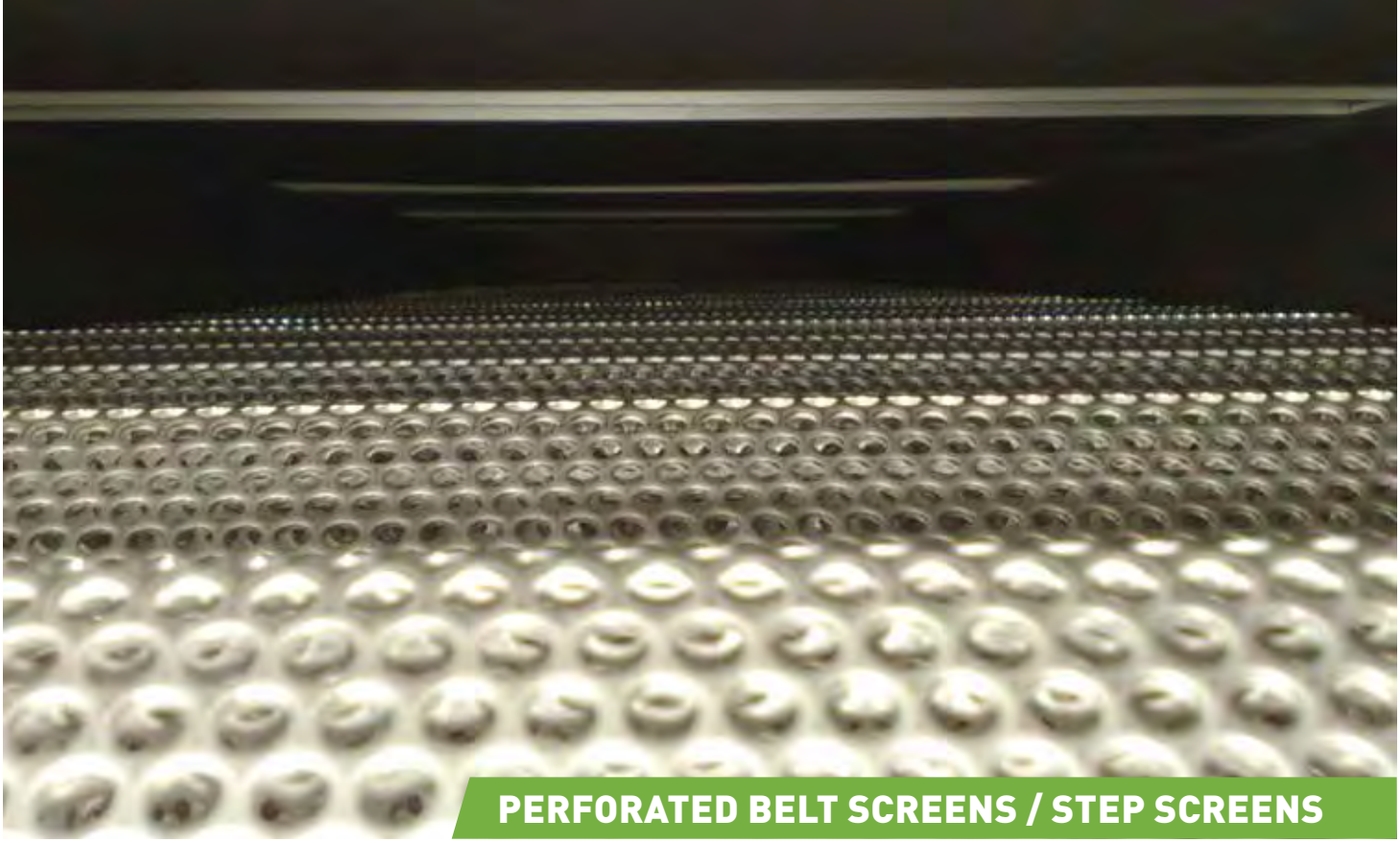
Overflow Spillways VSE

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)
- 3 opening sizes available (3 / 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 wastewater treatment plants.

- 6 sizes up to 2,000 mm wide
- 65-degree incline angle
- Perforated media openings from 3 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 wastewater 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
- 30 - 35-degree incline angle
- In-tank installation up to VSA 1800



Internally Fed Rotating Drum Screens RTV

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

- 11 different sizes available
- Standard media spacing: 1 ~ 6 mm perforated or 0.25 ~ 2.5 mm wedge wire or 0.25 ~ 1 mm square mesh
- Recommended spacing for MBR application: 1 ~ 3 mm





Externally Fed Drum Screens SGR

SGR Externally Fed Drum Screens are used for fine screening of sewage in civil wastewater 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







COMPACTORS

WASTECOM® CPS Screw Compactors

The WASTECOM® CPS is a de-watering Screw Compactor for screened solids in civil and industrial wastewater treatment plants.

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





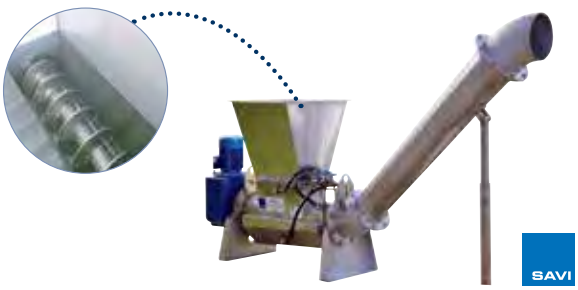




Shafted Washer Compactors VWP

VWP Shafted Washer Compactors are used to compact screenings removing, at the same time, organic particles in both municipal and industrial wastewater 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%



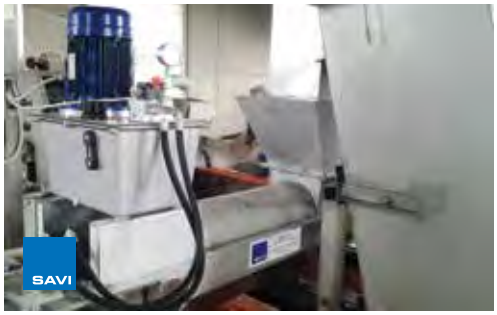


Hydraulic Compactors CHP

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%





WASTECOM® CLE Shafted Compactors

WASTECOM® CLE is a shafted compactor for volume reduction of effluent screenings, as well as a variety of other wet waste materials including fibres.

- 3 sizes available
- Screenings throughput from 1.5 up to 4.5 m³/h
- Volume reduction of up to 60%







GRIT TREATMENT EQUIPMENT

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 300 litres per second (636 cfm)
- Sand separation: 95% particle size ⩾ 200 µm
- Grease removal floating screw (option)





Travelling Bridges for Grease and Grit Removal PVD/PVA

PVD Travelling Bridges are used to remove grease and grit from effluent in municipal and industrial wastewater 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 wastewater 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 ⩾ 200 µm and specific gravity ranging from 2.60 to 2.65 t/m^3
- Low drive power installed
- Small footprint

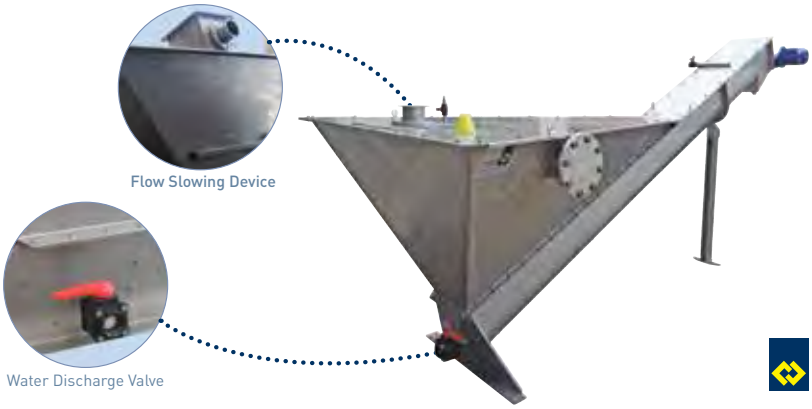




GRITSEP™ DS Grit Classifiers

The GRITSEP™ DS Grit Cassifier ensures efficient separation of grit or sand from wastewater through decantation and removal by means of a conveyor screw.

- 6 sizes available
- Liquid throughput: up to 36 l/s (76.3 cfm)
- Solids throughput: up to 1.3 m^3/h (0.8 cfm)
- 90% sand sedimentation
- Welded Hopper









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 performance achieved thanks to SINT™ engineering polymer components with excellent anti-wear features.

- Solid troughput: from 0.10 m^3/h up to 0.40 m^3/h
- High washing performance with organic residue < 2%
- Minimum footprint







COMPACT PLANTS

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

The WASTEMASTER® TSF2 and TSF3 Compact Pre-treatment Plants efficiently combine two, respectively three functions of pre-treatment of sewage from civil or industrial installations: solids screening, sand dewatering and grease removal.

- Flow rates of up to 300 litres per second (636 cfm)
- Sand separation with:
  95% particle size ⩾ 200 µm
- Grease removal floating screw (TSF3 only)
- Up to 40% solids volume reduction









WASTEMASTER® MIT Wastewater Mini-Treatment Plants

The WASTEMASTER® 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 ⩾ 0.2 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 dewaters screenings all in one unit, thus eliminating the need for multiple pieces of equipment.

- 3 sizes available
- Max. flow rate up to 200 m^3/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 WASTEMASTER® 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 WASTEMASTER® 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, 10 mm
- Grease removal floating screw





WASTEMASTER® TSB 4 Septic Tank Sludge Treatment Plants

The WASTEMASTER® 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 m^3/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 m^3/h at 4% solids concentration
- Perforated screen: 5 - 6 - 10 mm







CLARIFIERS

Travelling Bridges for Settlement Tanks PVS/PVV

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 wastewater 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





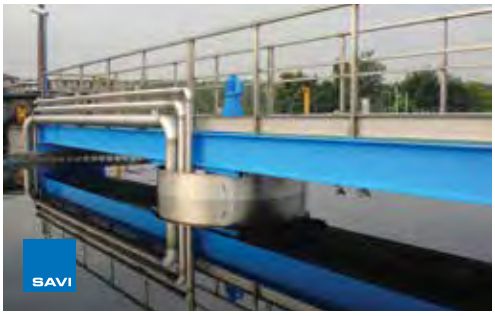


Sludge Thickeners ISP

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

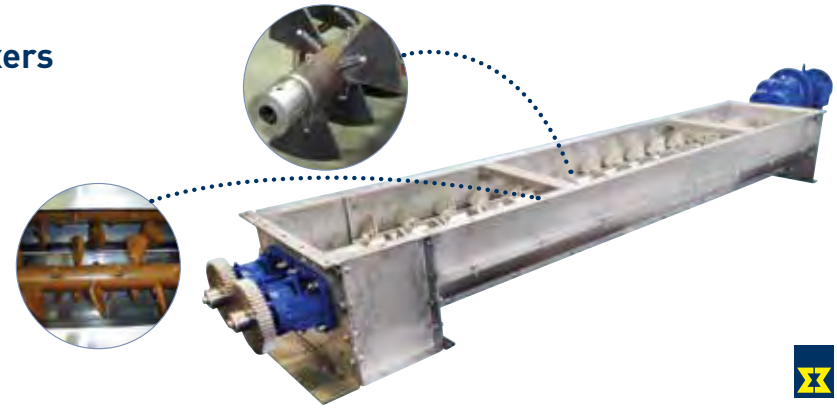
- Screw diameter: 150 ~ 600 mm (6 ~ 24 in)
- Up to six screws in one trough
- Open trough length ranging from 1,500 to 4,000 mm (5 ~ 13 ft)





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.





POLYLESS™ Dynamic Sludge Thickening System

POLYLESS™ is a dynamic sludge thickening system. Sludge thickening is necessary to improve the efficiency of centrifuges in wastewater treatment plants. Furthermore, it decreases the use of polyelectrolyte and waste material.

- WAM® control panel for an integrated 4.0 industry system
- Micro-filter for advanced high efficiency solids-liquid separation









LIME DOSING



Especially tailored to meet 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 wastewater 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





Butterfly Valve VFS

With way over a million units operating worldwide, VFS Butterfly Valves for powdery and granular materials are amongst WAMGROUP®'s most industrialised products.

- Few easy-to-replace components
- Ex-stock delivery from WAM® warehouses worldwide
- ATEX versions available





Drop-through Rotary Valve RV / RVR

RV / RVR Rotary Valves are the ideal solution for controlled discharging and feeding of powdery or granular materials from silos, hoppers, pneumatic conveying systems, bag filter houses, or cyclones.

- Accurate feed rate
- High efficiency
- Enhanced reliability





WAMFLO® Silo Venting Filter

The WAMFLO® Dust Collector range reflects decades of experience in dust filtration technology. Since going into production, tens of thousands of units have left the Group's manufacturing plants all over the world in diverse configurations.

- Advanced dust filtration technology
- Low dust emission
- Industrial design
- ATEX versions available





Membrane Pressure Relief Valve VHS-C

Pressure Relief Valves are the last safety net when abnormal pressure conditions endanger the silo structure. Even though, ideally a Pressure Relief Valve should never have to go into action, it must be efficient and reliable when needed.

- High safety level thanks to channeled flow and reduced emissions
- Lightweight, corrosion-free







Silo Safety System KCS



EXTRABEND® Anti-wear Pipe Elbow



Spring-loaded Pressure Relief Valve VCP-D



Pinch Valve VM



Rotary Level Indicator ILT



Pressure Switch / Meter IPM / IPE



MISCELLANEOUS EQUIPMENT & ACCESSORIES

Penstocks PAR

PAR Penstocks are used in municipal and industrial wastewater 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





FIBC Dischargers SBB-HFF

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









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.

- More than 100 units installed worldwide
- Up to 750 kW installed drive power













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