

A large, high-contrast image of a rotating drum screen. The drum is dark and metallic, with a bright, reflective surface. Debris, appearing as small white specks, is being processed by the drum. The background is blurred, suggesting motion.

A

SEPARATION

# ENCLOSED, COMPACT, AND STAND-ALONE UNITS FOR WASTEWATER PRE-TREATMENT

GIRAPAC AND GIRASIEVE  
ROTATING DRUM SCREENS

**ANDRITZ**

ENGINEERED SUCCESS

ANDRITZ rotating drums - Girapac and Girasieve - are enclosed, compact, and stand-alone units, mainly for full pre-treatment of wastewater entering municipal and industrial WWTPs. This type of rotating drum screen provides high solid/liquid separation, as well as sieving, desanding, degreasing, and additionally, Girapac allows compacting and bagging of waste in one unit.



# Separation, sieving, desanding, and degreasing with Girapac and Girasieve

## OPERATING PRINCIPLE

The effluent feeds a distribution tank before passing over the upper part of the filter drum. Then, it passes through the filter screen, and waste particles larger than the mesh are deposited on the drum and carried away towards the discharge zone. The particles removed when coming into contact with the scraper drop into the screw compactor. The water falls through the lower part of the drum and thus ensures self-cleaning of the filter screen by eliminating the remaining impurities. An internal washing ramp is used to complete cleaning of the drum. In the Girapac system, the waste is conveyed by a shaftless screw towards a compacting zone and then drops into a plastic bagging unit. Filtrates generated in the compacting zone are guided to the drum filtrate tank.

## WASHING DEVICE

The drum is equipped with an efficient washing system to ensure full cleaning. The design of the drum with open side and the structural design of the machine provide easy access to the ramp for checking and cleaning. A specific design of spray ramp can be delivered on the ANDRITZ drum screen for a specific application design: hot water (up to 90°C) or high pressure (up to 100 bar) are available.

## EFFICIENT SCREW COMPACTOR

The Girapac screen is equipped with a screw compactor after the scraping stage, and the particles removed when coming into contact with the scraper drop into this compactor. The waste, which is conveyed by a shaftless screw towards a compacting zone, is retained in the



An efficient screw compactor for easy transport of waste

strainer thanks to a check valve. The pressure exerted by the valve, which is fitted with springs, allows the compacting action to be controlled: the compacted waste, which is pushed through the valve by the screw, falls into an automatic and continuous plastic bagging unit. Filtrates generated by the compacting zone are connected directly and internally to the drum filtrate tank.

The specific design of the compacting zone allows it to be inspected in just a few seconds thanks to a dedicated hatch and enables cleaning. In addition, the compacting zone can be removed completely and washed by means of high pressure jets outside the machine in just a few minutes without requiring any special tools or having to dismantle any equipment.

## YOUR BENEFITS

- Used for pre-treatment or to relieve the pre-treatment effort (capacity to screen and good efficiency in sand and grease removal)
- Fully enclosed, stand-alone unit
- Plug and play: Low investment and easy installation (stand-alone unit, no concrete channels or modifications needed)
- Efficient washing system
- Very simple maintenance as there are very few moving parts (rotation only), easy access through front and rear covers (direct access to main parts)
- Special design of the wedge wire drum to prevent any risk of the wire being detached from it and damaging the drum (longer drum service life)
- Conveying/compacting/bagging with Girapac to reduce cost of waste transportation and combining all functions in a unique system
- Upgrade to standard design, including sampling system for treated effluent, integrated bypass with alarm, feeding tank drainage point, and specific hatches and cover in order to check each side of the process within a few seconds instead of hatches and cover for checking each stage of the process

# How to select the right rotating drum screen technology?

ANDRITZ rotating drum screens are easy to install (plug and play) and only require a small investment. The screening mesh available is between 0.25 and 2.5 mm. Extra fine screening mesh allows a much better final product (sludge and effluent) to be obtained from the WWTP (less non-biodegradable waste), which is important in the event of an agricultural evaluation of the sludge and reject standards for effluent.

## CAPACITY

Rotating screen drums are ideal for small wastewater flows. Girapac can handle flows between 45 and 225 m<sup>3</sup>/hr, while Girasieve can manage flows from 25 to 980 m<sup>3</sup>/hr.

## EFFLUENT ORIGIN

Girapac is used more in municipal wastewater applications. The distribution tank is smaller, and the shape is specifically designed to avoid sedimentation of sand and mineral components. This specific design reduces the capacity of the machine, but definitely provides greater efficiency in removal of mineral elements and keeps the degree of human intervention

required to an absolute minimum. The fine screening mesh of 0.75 mm used in standard units coupled with the special tank and wash ramp designs provide high efficiency in waste removal, but also in removal of sand and grease.

Girasieve is used more frequently in industrial applications. The design of the tank has no restrictions (as only a limited amount of screenings sediment from this kind of waste) and allows higher capacities to be treated. The conveyor/compactor system is not included in the standard design and can be delivered separately as an option if the characteristics of the product allow compacting with such technology.



Double Girapac with unique and common screw compactor

## STANDARD DESIGN

- Stainless steel
- Consists of triangular-section wire wound in a helical shape around a supporting generatrix
- Drum generally available with meshes from 0.25 mm to 2.5 mm
- Efficient washing system for all applications
- Scraper removes waste from the drum
- Integrated screw conveyor/compactor/bagging system (Girapac version)
- Equipment is totally enclosed
- Equipped as standard with a drainage valve for draining the distribution tank, with a filtrate sample take-off for sampling campaigns and a local emergency stop pushbutton on the cover
- Bypass on Girapac allowing 100% of the flow entering to be diverted towards the exit, while Girasieve is only equipped with an overflow
- Integrated bypass feature with alarm sensor (Girapac version)
- Overflow feature with alarm sensor (Girasieve version)

## OPTIONS

- Hydraulic connections: Two solenoid valves and piping
- Connections for only one water feed point
- Electric pre-wiring: Level probe and terminal box supplied for motors and instrument wiring
- High-pressure and/or hot washing ramp
- Vertical discharge pipe for the compacted waste
- Insulation of the compacting zone (also available for complete unit)
- Stainless steel supporting feet
- External by-pass unit (on Girapac only) with manual screening for maintenance or overflow purposes
- Double units with unique conveying/compacting system to collect waste at a single point



Girasieve

# Product range and applications

## GIRAPAC

Model	Drum Ø (mm)	Drum length (mm)	Power (kW)		
			Drum	Screw	Max flow (m³/hr)
GP 500	630	500	0.37	0.75	45
GP 1000	630	1,000	0.37	0.75	90
GP 1500	630	1,500	0.37	0.75	135
GP 2000	630	2,000	0.55	0.75	180
GP 2500	630	2,500	0.55	0.75	225

\*With standard mesh 0.75 mm (municipal)

## GIRASIEVE

Model	Drum Ø (mm)	Drum length (mm)	Motor (kW)	Flow * (m³/hr)
GS 500	630	500	0.37	25-190
GS 1000	630	1,000	0.37	50-385
GS 1500	630	1,500	0.37	75-590
GS 2000	630	2,000	0.55	100-785
GS 2500	630	2,500	0.55	130-980

\*The flows stated are for municipal effluent containing up to 200 mg/l of suspended solids, but no grease or fibrous material.

## APPLICATIONS

### Industrial effluents

- Fruit and vegetable canning
- Wine producers and distilleries
- Slaughterhouses and rendering plants
- Fish processing
- Gut processing plants
- Pre-cooked meals
- Sugar refineries, malthouses, and breweries
- Textiles and laundries
- Tanneries and fellmongers
- Chemicals, pharmaceuticals, refineries
- Pulp and paper
- Paint sludge

### Municipal sewage

- Fine screening
- Full pre-treatment of wastewater
- Revamping of the inlet section of a WWTP
- Storm water screening
- Sludge screening

### Raw intake water

- Screening of industrial intake water
- Screening of fire sprinkler water



# Your full-service provider

With ANDRITZ, you gain access to one of the world's largest OEM manufacturers for solid/liquid separation systems, including such well-known brands as 3Sys Technologies, Bird, Delkor Capital Equipment (Pty) Ltd., Escher Wyss dryers, Frautech, Guinard Centrifugation, KHD Humboldt Wedag, Krauss-Maffei centrifuges, dryers, and filters, Lenser, Netzsch Filtration, Rittershaus & Blecher, Royal GMF Gouda, Sprout Bauer, and Vandenbroek.

Whether you need spare parts, rentals, local service, repairs, upgrades, or modernization of your equipment, ANDRITZ is your true full-service provider. From initial consulting through to service agreements, process optimization, and training programs, we are always looking for ways to minimize downtime and increase

predictability in operations while raising your overall production efficiency. Wherever you operate, our network of 550 service specialists and global service centers ensures we'll always be there to support you for many life cycles to come. Let's sit down and see how we could take your operations to the next level.



## LOCAL SUPPORT

Responsive local service centers and field service technicians



## REPAIRS & UPGRADES

Optimization of machine and process performance, repair work, retrofitting, and modernization



## SECOND-HAND & RENTALS

Certified second-hand and rental machines



## TRAINING

Operator training and tailored seminars for operating and maintenance personnel



## OEM SPARE PARTS

Filter cloths, spare and wear parts from OEMs or with OEM level quality, all readily available



## SERVICE AGREEMENTS

Preventive maintenance, contracts for spare parts, maintenance, inspections, repairs, upgrades, operation, and equipment monitoring



## PROCESS OPTIMIZATION

Automation tools and process expertise to boost your profit



## LAB AND ON-SITE TESTS

Lab and testing capabilities for process optimization and machine upgrades



## WHAT'S YOUR SEPARATION CHALLENGE?

ANDRITZ Separation is the world's leading separation specialist with the broadest technology portfolio and more than 2,000 specialists in 40 countries. For more than 150 years, we have been a driving force in the evolution of separation solutions and services for industries ranging from environment to food, chemicals, and mining & minerals. As the OEM for many of the world's leading brands, we have the solutions and services to transform your business to meet tomorrow's changing demands – wherever you are and whatever your separation challenge. **Ask your separation specialist!**

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