

# ROTAMAT® Ro 1 Fine Screen Cylindrical Bar Screen



Compact and sturdy fine screen for wastewater and sludge

- designed for shallow channels or tank-mounting
- integrated screenings washing and compaction
- simple robust design utilizing a single drive
- optional frost-protection available

## ➤➤ Applications

- Municipal wastewater pre-treatment
- Industrial wastewater treatment
- Sludge screening
- Scum and grease separation
- Water treatment plants

## ➤➤ Objectives

- Reduced scum formation on clarifiers and other tanks
- No clogging of aerators, pumps, pipes and other equipment
- Less cleaning and maintenance work
- Improved plant operation and reliability
- Little debris in sludge and biosolids
- Reduced sludge production and disposal costs
- Washed, dewatered and compacted screenings
- Return of fecal matter into wastewater and improved denitrification (with IRGA)
- Eliminate odor nuisance (with basket cover and bagger)

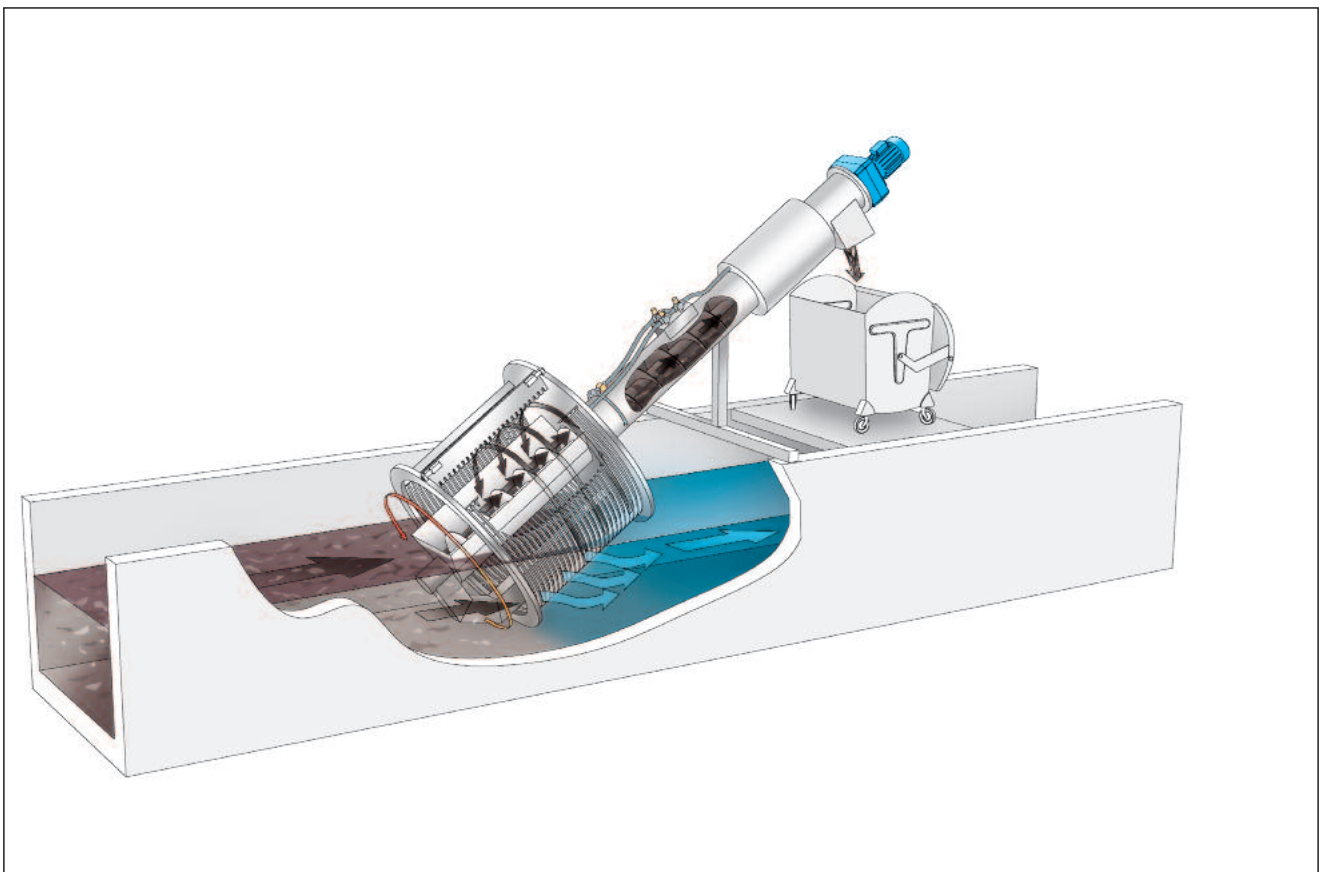
## ➤➤ Features

ROTAMAT® Ro 1 Circular Bar Screens are either installed in shallow channels or supplied as tank-mounted units.

Wastewater (or sludge) flows into the open end of an inclined screen basket and then through the spacings between its circular bars. Floating and suspended debris are retained within the basket. It forms a screenings carpet, further improving the screen's capture rate.

Controlled by the head loss, a rake arm starts rotating within the screen basket. The rake's tines fully penetrate the gaps between the bars, thus guaranteeing positive screen cleaning. Near its 12 o'clock position, the rake engages with a hinged comb to wipe the screenings off the rake. The screenings drop into a perforated hopper located at the screen basket's central axis.

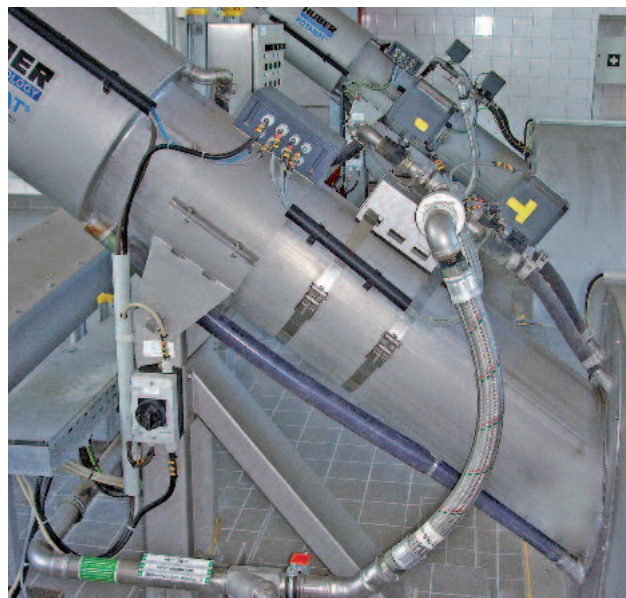
The hopper is provided with a shafted screw that is supported through a maintenance-free bearing. The screw rotates together with the rake arm and pushes the screenings up the inclined hopper and into an auger tube. Most Ro 1 screens are provided with an integrated screenings washing system (IRGA): the screenings are washed and fecal matter is returned into the wastewater flow. Within the auger tube, the screenings are dewatered and compressed. At the upper end of the auger tube, they drop into a container or bagger.



## ➤➤ Integrated Screenings Washing System IRGA

Most ROTAMAT® Ro 1 screens are provided with an integrated screenings washing system (IRGA). With this option, a spray bar is installed above the screenings hopper. In addition, three spray nozzles are installed around the auger tube. Water spraying is automatically controlled through solenoid valves.

- Fecal matter is washed out and returned into the wastewater flow
- Improved screenings compaction to around 40 % DS
- Further reduction of screenings mass, volume and disposal costs by up to 50 %
- Virtually odorless screenings product
- Low-cost screenings washing
- Quick and easy installation
- Easy to retrofit



*ROTAMAT® Ro 1 installed in a channel and provided with an integrated screenings washing system IRGA*

## ➤➤ Benefits

### ➤ **High flow capacity - low head loss**

Due to the screen basket's shape and 35° inclination, far larger screen area is available, in comparison to vertical or steeply inclined conventional bar screens

### ➤ **High screenings removal capacity**

Due to frequent rake rotation, far faster screenings removal is realized, in comparison to conventional climber screens with their slow rake movement

### ➤ **Low screenings disposal costs**

Minimized volume, weight and disposal costs due to effective screenings washing and compaction

### ➤ **Multi-functional and compact unit**

Simple and reliable: screening, raking, conveying, washing, dewatering, compaction and bagging can be accomplished utilizing a single drive

### ➤ **Dependable, self-cleaning operation**

No impairment by grit or grease, and positive cleaning through full tine engagement

### ➤ **No by-passing of screenings**

Centerfeed design assures screenings remain inside the screen basket

### ➤ **No odor nuisance**

A fully enclosed unit, equipped with a bagger, provides maximum odor control

### ➤ **Outdoor installation**

Optional frost-protection is available for outdoor installation

### ➤ **Low maintenance**

Maintenance-free main bearing. Regular checking and visual inspection are sufficient

### ➤ **Long life**

Made of stainless steel and pickled in an acid bath for perfect finishing and corrosion protection

### ➤ **Experience**

Thousands of installations

►► Examples from  
 Thousands of Installations



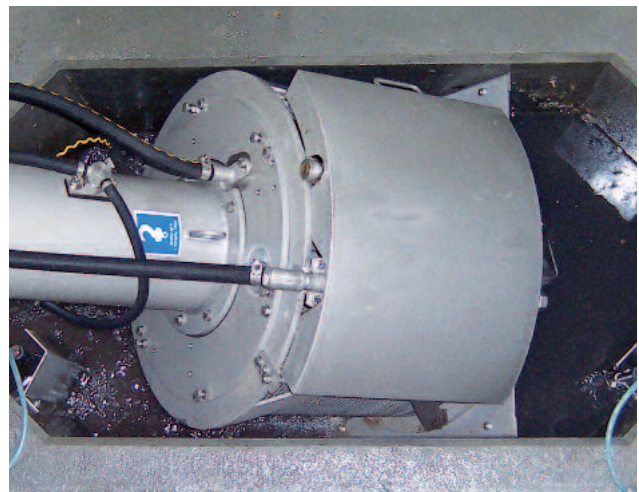
*Outdoor installation of a ROTAMAT® Ro 1 Cylindrical Bar Screen with frost-protection and bagger*



*ROTAMAT® Ro 1 Cylindrical Bar Screens installed in parallel channels*



*ROTAMAT® Ro 1 Cylindrical Bar Screen supplied in a tank for sludge screening*



*ROTAMAT® Ro 1 Cylindrical Bar Screen with spray guard*

►► Screen sizes

Screen basket diameter: 2 to 10 ft (0.6 to 3 m)  
 Inclination: 35°

Bar spacing: 6 or 10 mm (1/4" or 3/8")  
 (Other bar spacings available on request)

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