

ROTAMAT® Complete Plant Ro 5

THE ORIGINAL
ROTAMAT®!!!



Complete headworks for up to 5 MGD including:

- Fine screen
- Screenings washing and compaction
- Aerated grit channel
- Grit classifier and optional grit washer
- Grease trap with automatic grease removal (optional)

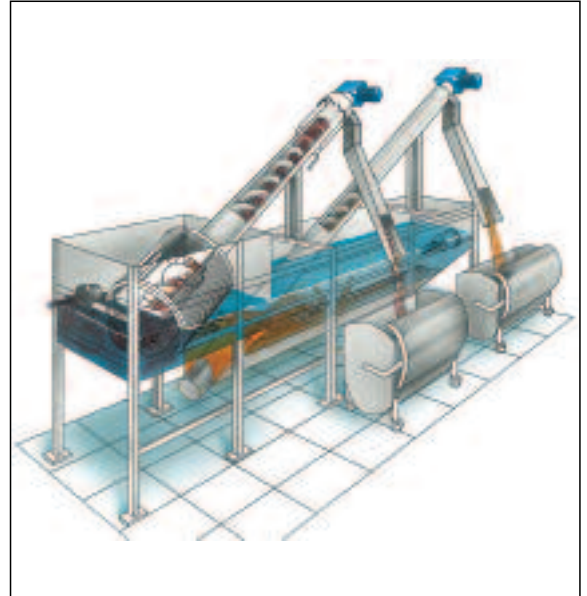


►► Complete Headworks

Our Complete Plant Ro 5 is quick and easy to install above ground or in a concrete pit. Construction costs are greatly reduced. The compact unit performs complete wastewater pre-treatment including:

1. Fine screening
2. Screenings treatment (conveying, washing, dewatering and compaction)
3. Grit separation
4. Grit classifying and (optional) washing
5. Grease separation and removal (optional)

We developed and supplied our first ROTAMAT® Complete Plant Ro 5 during the 1980s. Since then hundreds of Consulting Engineers and Operators have selected and installed our Complete Plants for flows of up to 5 MGD (220 l/s) because of their dependable operation and low maintenance. Planning and installation of our ROTAMAT® Complete Plants is not only quick and easy, it also saves considerable construction costs.



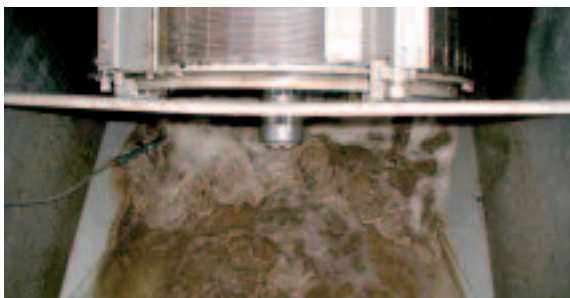
►► Features

1. Fine Screening

Depending on the specific conditions and data, such as peak flow, screenings load and grit load, one of the following screens is selected:

- ROTAMAT® Fine Screen Ro1 with a bar spacing of 1/4" or 3/8" (6 or 10 mm)
- ROTAMAT® Wedge Section Screen Ro2 with a wedge wire spacing between 0.04" and 1/4" (1 to 6 mm), or with perforations between 1/8" and 1/4" (3 to 6 mm)
- ROTAMAT® Micro Strainer Ro 9 with a wedge wire spacing between 0.04" and 1/4" (1 to 6 mm), or with perforations from 1/8" to 1/4" (3 to 6 mm)
- STEP SCREEN® SSF with a spacing of 1/8" or 1/4" (3 or 6 mm) and a Screenings Washpress WAP

Separate brochures are available for all screens and WAP units.



Wedge Section Screen Ro 2 with a spacing of 2 mm (0.08")

2. Screenings Treatment

All ROTAMAT® Screens include a screenings press. Usually they are also provided with an integrated screenings washing system (IRGA):

- Dewatering and compaction in integrated screenings press
- Screenings washing with IRGA (optional)
- Solids concentration of screenings: Up to 45 % DS

A separate Screenings Washpress WAP is usually installed behind a Step Screen®. Solids concentrations of up to 50 % DS are achieved, depending on the type of WAP.

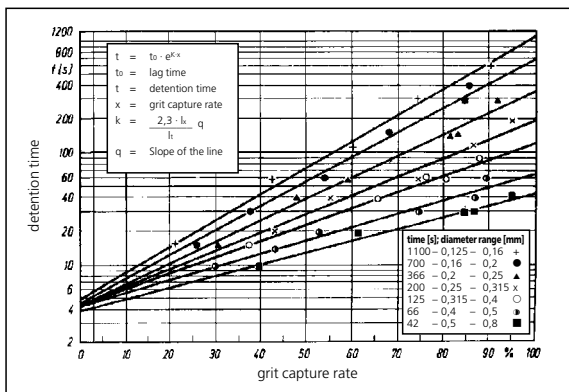
Optional baggers prevent odor nuisance.



Washed and compacted screenings can be used as fuel for an incinerator

3. Grit Separation

The aerated grit channels of our ROTAMAT® Complete Plants are designed in accordance with international standards to achieve a grit capture rate of 90 % with 75 mesh grit (200 micron particle diameter). We also offer smaller economy versions having 75 mesh capture rates between 73 % and 83 %.



Detention time in a grit channel required to achieve a certain grit capture rate for various grit fractions; ATV (DWA) Handbook for Mechanical Wastewater Treatment, 4th Edition, Page 111

4. Grit Classifying and (optional) Washing

The settled grit is removed from the bottom of the grit channel with a horizontal grit screw. Another inclined grit screw conveys, agitates and dewateres the collected grit. The classified grit slides from the upper end of the inclined screw into a container or grit washer RoSF 4/t.



Classified grit slides from the inclined screw into a Grit Washer RoSF 4/t

5. Grease Separation and Removal (Optional)

Fat, oil and grease are collected in a grease trap that is connected with the parallel grit channel through slots in a separating wall. The rotational movement in the grit channel that is generated by air diffusion drives fat and grease through the slots into the grease trap.

Floating fats and oils are skimmed off the water surface with a paddle scraper that is slowly pulled with a stainless steel rope. The paddle is shaped such that it removes virtually all floating matter from the grease trap. Anaerobic degradation of fat and grease, and therewith odor nuisance, is prevented.

The skim layer is pushed over a weir into a grease hopper and then pumped to further treatment or blended and compacted with the screenings in the inclined tube of the ROTAMAT® screen.



Paddle scraper for grease removal from the grease trap

➤➤ **Benefits**

- Complete and compact headworks unit performing the following process steps:
 - Fine screening
 - Screenings washing
 - Screenings dewatering and compaction
 - Grit separation
 - Grit dewatering and classifying
 - Grit washing (in additional unit)
 - Grease separation and removal
- Excellent grit capture rate
- Grease trap with automated grease removal
- Quick and easy planning and installation
- Construction cost savings
- Compact unit with small footprint
- Sturdy design for high reliability and long life
- No odor nuisance due to enclosure and screenings bagger
- Made of stainless steel, pickled in an acid bath for perfect finishing and corrosion protection
- Frost protection for outdoor installation (optional)



A pair of ROTAMAT® Complete Plants Ro5 discharging the screenings into a Washpress WAP



Complete Plant Ro 5 discharging the screenings into a Super Launder Washpress WAP/SL



Indoor removal of screenings, grit and grease without odor nuisance



Below ground installation of a pair of Ro 5 Complete Plants

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Subject to technical modification

ROTAMAT®
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