



**FSM Frankenberger
GmbH & Co. KG**

Equipment for Water
and Waste Water
Inlet Works



Grit wash unit



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FSM Grit wash unit



The FSM grit wash unit has been developed with three aims in mind:

1. To achieve a very high separation performance of finest grit particles
2. To achieve the limit value called for in the document TA Siedlungsabfall (residential waste) for depositing on a Class 1 dumping site with upstream coarse screen.
3. Grit wash unit in dry and wet charged versions.

The FSM grit wash unit consists of two basic items – grit wash tank and discharge screw. Depending upon the effectiveness of the inlet screening unit, the screening drum can be dispensed with. During development, special emphasis was placed on low water consumption at low admission pressure in the service water. The grit wash unit provides high performance coupled with low operating costs.

Functional principle:

The grit/water mixture is fed in via the inlet flange of the grit wash tank. Organic matter is held in suspension and floated off while the grit is sedimented in the tank. With the addition of water, the sedimented grit is separated from the remaining organic constituents using a stirring device and up-current technique. The grit is removed from the tank, de-watered and discharged via a discharge screw.

With the addition of a bunker at the upstream side, the FSM grit wash unit can be extended to become a reception station for sewer grit. If a fractionating and washing drum is positioned between the bunker and the wash unit, the installation can be additionally used for conditioning street sweepings.

Features:

- High reliability through robust construction
- Can be used with upstream coarse screen
- Service water which is substantially free of COD and BOD can be used as wash water

- The grit washer separator can be optionally mounted on a scraper bridge and fed with wash water from the grit chamber
- The organic content can be reduced to volatile solids <3%
- Can be extended to become a reception station for sewer grit and street sweepings
- Can be charged with up to 30 l/s
- Dry charging version as extension or retrofitting for compact installations
- Dry charging version as retrofitting for existing grit sizing machines
- Excellent cost/performance ratio
- Low maintenance costs
- Suitable for outdoor sites / operation in winter
- Easily adapted to suit changed operating conditions
- Machine completely hygienically encapsulated
- The FSM grit wash unit has proved itself in practice at home and abroad.



Applications in municipal and industrial clarification plant

- waste water pre-treatment / grit treatment
- sewer grit/street sweepings reception station
- compact installations

Industrial applications

- meat, fish and shellfish processing / slaughterhouses – preliminary clarification of total waste water
- sugar industry – preliminary clarification of total waste water
- fruit and vegetable processing – preliminary clarification of total waste water
- breweries – preliminary clarification of total waste water
- animal meal production – preliminary clarification of total waste water
- composting installations, waste product and disposal engineering, household and industrial refuse, garden refuse and compost, seepage water treatment
- machinery industry – metal swarf conveying
- glass and ceramic industry

Dimensions:

| | |
|-------------------------|--|
| length/width/height | 5200 / 2200 / 3120 mm, other dimensions on request |
| throughput | up to 40 l/s, other throughputs on request |
| installation size | SWA 10 / SWA 18 / SWA 30 / SWA 40 / TB-SWA |
| organic content of grit | < 3 % volatile solids |
| separating capacity | > 95% of particle size 0.2 mm |

Material/make:

| | |
|----------------|---|
| Machine frame | stainless steel SS304 or SS316, other materials on request |
| Agitator | stainless steel SS304 or SS316, other materials on request |
| Conveyor screw | special steel or stainless steel SS304 or SS316, other materials on request |
| drives | geared motors, make SEW |