

HUBER Solutions for Grit Treatment



A complete system with integrated wash water recycling
to minimise fresh water consumption

Treatment of

- Grit from sewer systems and wastewater treatment plants
- Gully waste, road refuse
- Oil separator contents

➤➤ Grit Treatment System RoSF5 with integrated wash water recycling



acceptance tank for suction/pressure tank



grit from the
ROTAMAT® Rotary
Drum Fine Screen
Ro 2 / RPPS

DR > 30 % (> 1 mm)



sediment sludge
dewatering with
ROTAMAT® Screw Press
RoS 3

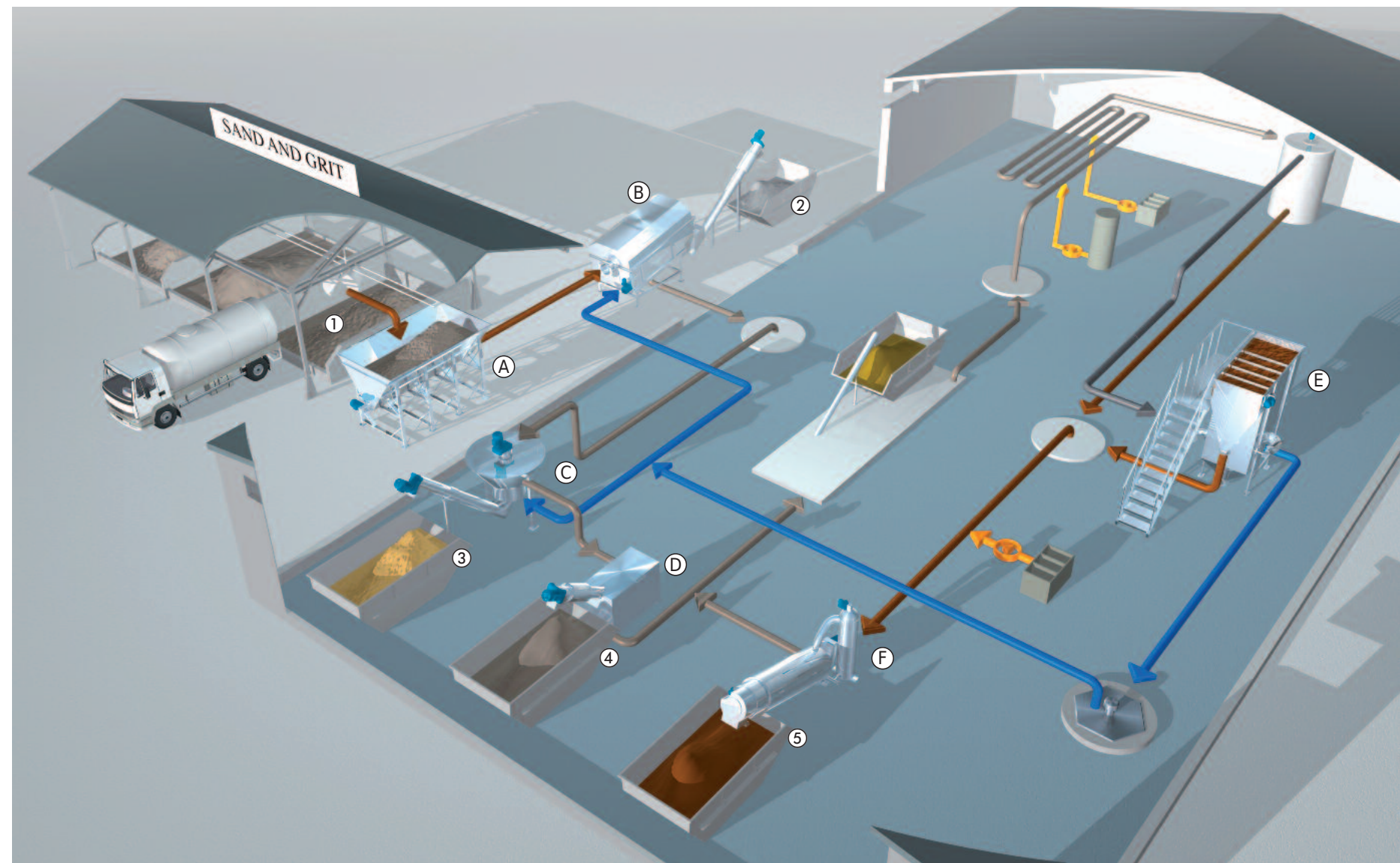
DR > 50 %



separation of washed out coarse material
> 10 mm with ROTAMAT® Wash Drum



grit from COANDA Grit Washer RoSF4
DR > 90%, loss on ignition < 3%



►► Process description



Grit acceptance and feed

The suction/pressure trucks discharge the raw material into a tank or directly into the intermediate storage tank of the HUBER system from where the integrated screw conveyor transports the material on a continuous basis into the wash drum.



Coarse material washing and separation

Within the ROTAMAT® Wash Drum the inlet material is homogenised by adding wash water with solids < 10 mm washed out. Coarse material > 10 mm is statically dewatered and can be additionally separated into a mineral and organic fraction as an option.



Grit classifying and washing

The mixture of grit, organics and water (particles < 10 mm) is removed from a pump sump situated below the Wash Drum and fed into the COANDA Grit Washing Plant. The COANDA Grit Washing Plant which is the main part of the grit treatment system is where the mineral material is separated from the organic particles by means of the COANDA effect and other physical principles. The mineral particles (grit and gravel < 10 mm grain size) with a loss on ignition < 3% are statically dewatered within a screw conveyor and can then be reused or landfilled.



Treatment of circulating water

The total effluent from the COANDA Grit Washing Plant and optional coarse material washer is then fed into the ROTAMAT® Rotary Drum Fine Screen where all organic particles > 1 mm are screened out and dewatered (DR > 30%). The screened wastewater quality is of sufficient quality to be used as part of the flow for service water for the ROTAMAT® Wash Drum, but requires additional treatment if to be used as service water for other components.

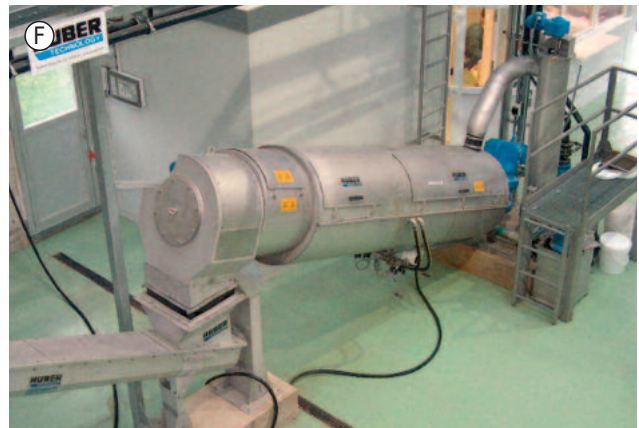
➤➤ Wash water recycling

In order to obtain clean wastewater that can be returned into the process, precipitants and coagulant agents are added and mixed in by a flocculator. The fine mineral material settles within the subsequent sedimentation tank and is pumped to an intermediate sludge storage tank.

The clear water flows into the HUBER Dissolved Air Flotation Plant HDF where any still present fine material is removed and the clarified wastewater is then discharged into a service water storage tank. The flotatate and sediment from the flotation plant are also pumped into the intermediate sludge storage tank which feeds the ROTAMAT® Screw Press RoS 3.

➤➤ Sludge dewatering

To reduce the sludge volume and weight the separated sludge from the storage tank is dewatered in the ROTAMAT® Screw Press RoS 3 that achieves dry substance contents in excess of 50 %.



Photomontage: exterior view of Bolliger company, Switzerland and RoSF 5 flow diagram

➤➤ System variants

- Separation of the pure gravel particles by means of subsequent screening/classifying
- Without wash water recycling system – provided by the customer
- Optional coarse material washing
- Optional fine grit separation

➤➤ We will be delighted to show you one of our reference installations worldwide.

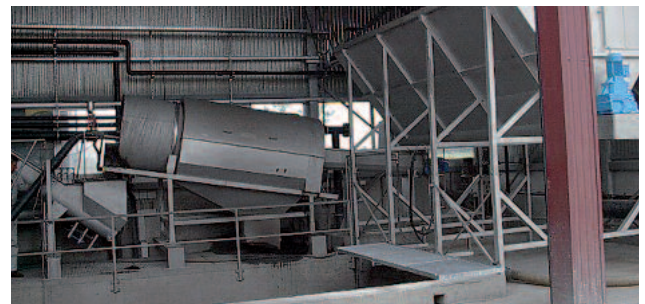


Eerola, Finland

➤➤ A universally usable and economical process of grit preparation to solve your problems!

- Reduction of the organic content to < 3% in the mineral fraction
 - Allows landfilling according to landfill class 1
 - Disposal volume and cost reduction
- Maximum yield of mineral material
 - Separation capacity > 95% for grit of grain size 0.2 mm
 - Coarse material separation size: 10 mm

➤➤ Please do not hesitate to contact us and we will find solutions!



Bolliger, Switzerland



Notter, Switzerland



Cridec, Switzerland

HUBER SE

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HUBER
Grit Treatment Systems RoSF