



ECONOMY



ENVIRONMENT



CSR

- Reduce hauling and sandfill costs
- Carbon harvesting
- Less wear and tear
- Product lifespan of 15-20 years
- Reduction of emissions
- No use of chemicals

GRIT WASHER

PRE-TREATMENT

FACTS ABOUT THE STJERNHOLM

GRIT WASHER

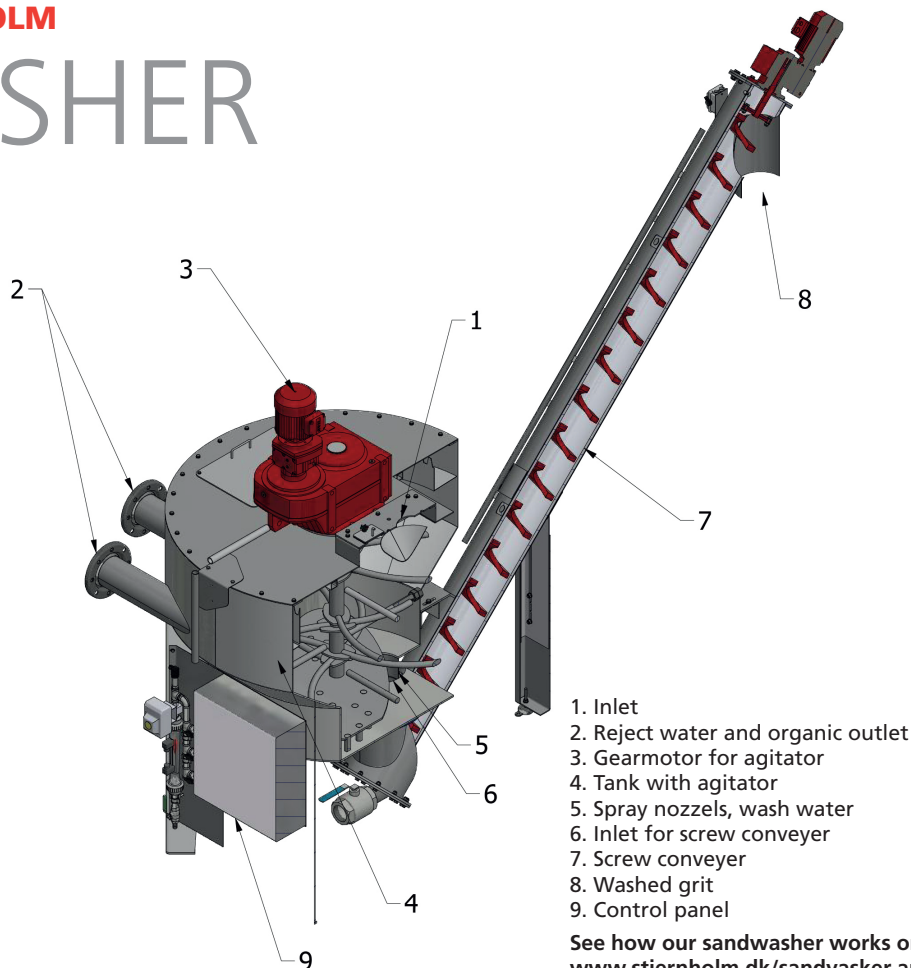
Grit, organics and water from the grit chamber is introduced in the top of the grit washer to the tank where a slow spinning agitator is stirring the blend at 4-7 rpm to maintain a retention time of at least 4-7 minutes – just enough to keep the organics in suspension while allowing the grit to settle to the bottom.

The grit is washed in the bottom of the grit washer where a fluidized grit bed is created by introduction of low-pressure wash water.

The washed grit enters the screw conveyer from the bottom of the tank and is dried by gravity while conveyed e.g. to a container ready for transportation. The screw conveyer is controlled according to the agitator load.

The organics are carried out by the upward flow created by the wash water and over the overflow weir as reject water for additional treatment downstream.

The Stjernholm Grit Washer is available in 4 different sizes with a capacity up to 3 ton washed grit per hour with two screw conveyers per grit washer.



1. Inlet
2. Reject water and organic outlet
3. Gearmotor for agitator
4. Tank with agitator
5. Spray nozzels, wash water
6. Inlet for screw conveyer
7. Screw conveyer
8. Washed grit
9. Control panel

See how our sandwasher works on www.stjernholm.dk/sandvasker-animation/

TECHNICAL DATA

MODEL	SR-1600	SR-1900	SR-2200	SR-2500
Tank volume	422 us gal	924 us gal	1425 us gal	1730 us gal
Capacity without cyclone	0-111 gal/m	111-238 gal/m	238-349 gal/m	349-428 gal/m
Capacity with cyclone	111-238 gal/m	238-507 gal/m	349-634 gal/m	428-793 gal/m
Grit output capacity per screw conveyer	1.5 ton/h	1.5 ton/h	1.5 ton/h	1.5 ton/h

Performance guarantee: Retention of 90% of grit > 125 μ (120 mesh), less than 3% organics and 95% total solids in grit output.

COMPARE WITH OTHER SOLUTIONS HERE AND CALCULATE YOUR SAVINGS POTENTIAL ON OUR WEBSITE

OUR FOCUS:

We want to create tangible and measurable customer advantages in our solutions. We want the investment to pay off and we typically work with a payback time of 2-5 years on initial investments.

Visit our website www.stjernholm.dk/en/calculator and insert your numbers to calculate your savings potential.

FACTS

Product Lifespan

Max capacity

Material standard

Material thickness, wear parts

Material thickness, agitator

Gear type

Electrical motors

Electrical motor, agitator/conveyer

Retention rate

Dry matter content

Organic matter content

Steering strategy

Control

Hygiene

STJERNHOLM GRIT WASHER

Minimum 15 years

3 ton/h

AISI-304 or AISI-316

3/8 inch

1 1/4 inches

SEW Helical gear unit

120 / 460V - 60 Hz. optionally speed regulated

2/0.75 HP

Up to 90% washed grit > 125 microns (120 mesh)

Up to 95%

Below 3%

The agitator is driven by a worm gear. screw conveyer is controlled according to agitator load

Operating system / SCADA

Closed system

THE STJERNHOLM GRIT WASHER IS THE PERFECT SOLUTION FOR GRIT WASHING AND DEWATERING AT...

- Municipal wastewater treatment plants as new installations, expansion and upgrades or replacements for worn out grit washers or grit classifiers
- Receiving station for vacuum trucks and street sweepers
- Large lift stations (grit pit/ponds)
- Dairy farms using sand bedding
– separation of slurry and sand (99% reuse of sand).

The Stjernholm Grit Washer is highly customizable.



The grit final output contains less than 3% organics and 5% water.



Capacity of the grit washer can be increased by mounting a cyclone at the inlet.



By the addition of a second screw conveyer, the grit output capacity increases to 3 tons/h per grit washer.



The washed grit is dried by gravity while conveyed directly to a container – ready for transportation and reuse.

Stjernholm A/S aims to actively contribute to the fulfilment of the KPIs for purification plants and we promise our customers sustainable solutions that offer measurable value within three key areas:



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FOR OUR GRIT WASHER THAT MEANS:

ECONOMY

- **Reduce hauling and landfill costs:**
Separating grit and organic material and dewatering of the grit can significantly reduce the disposal volume (up to 90 %)
- **Carbon harvesting:**
By separation of grit and organic material, organics are sent to the treatment process downstream. As a rule of thumb 1 lb organics produces 16 ft³ biogas
- **Less wear and tear of downstream equipment and less grit buildup in tanks and digesters:**
Optimal operation of an aerated grit chamber can reduce the energy use in the grit chamber by up to 75% energy in order to retain as much grit as possible
- **Product lifespan of 15-20 years**

ENVIRONMENT

- **Resource recovery:**
Utilization of organics to biogas production
- **Grit reuse:**
What is the reuse potential of grit in your area with maximum 3% organics in grit output? E.g. as construction material
- **Reduction of emissions:**
Reduced hauling reduces the total CO₂ emissions
- **Reduction of emissions:**
Very energy efficient electrical motor and gears help reduce the total emissions of the plant

CSR

- **Less odor:**
Closed system and minimal organics in output = happier neighbors and a better working environment and reduced risks for the operators
- **No chemicals:**
Mechanical separation of grit and organics

DIALOGUE

Stjernholm A/S develops, produces and markets better technical solutions with a high level of sustainability. Under the headline "Cooperation with Value" we focus on areas where we can make a difference within the areas of **economy, environment and CSR**.

We base our cooperation with our customers and suppliers on **MUTUAL RESPECT, AND OPEN AND STRAIGHTFORWARD DIALOGUES**.

That is why we want to invest time in a direct dialogue about your task before drawing up an enquiry or a tender, and before placing the order:

DIALOGUE

TENDER

PROPOSAL

DIALOGUE

EVALUATION

ORDER

In this way, we ensure that the final solution is selected based on sustainable and long-term operational optimisation – to the delight of the consumers.



Our products go with the flow towards the UN Sustainable Development Goals.

See details at www.stjernholm.dk