



ECONOMY



ENVIRONMENT



CSR

- Reduce hauling and sandfill costs
- Carbon harvesting
- Less wear and tear
- Product lifespan of 15-25 years
- Reduction of emissions
- No use of chemicals

SAND WASHER

PRE-TREATMENT

FACTS ABOUT THE STJERNHOLM

SAND WASHER

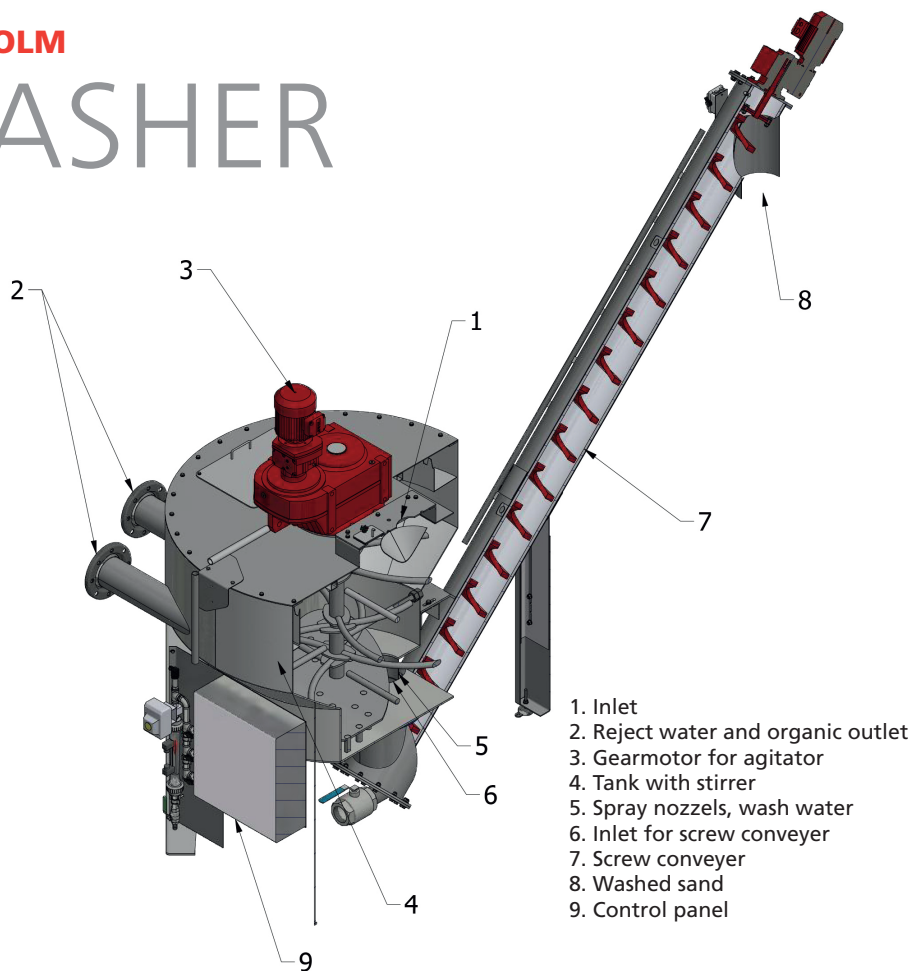
Sand, organics and water from the sand chamber is introduced in the top of the sand washer to the tank where a slow spinning agitator is stirring the blend at 4-7 rpm to maintain a retention time of at least 4-7 minutes – just enough to keep the organics in suspension while allowing the sand to settle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

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

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



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

TECHNICAL DATA

MODEL	SR-1600	SR-1900	SR-2200	SR-2500
Tank volume	1.600 l	3.500 l	5.400 l	6.550 l
Capacity without cyclone	0-7 l/s	7-15 l/s	15-22 l/s	22-27 l/s
Capacity with cyclone	7-15 l/s	15-32 l/s	22-40 l/s	27-50 l/s
Sand 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% sand > 125 μ , less than 3% organics and 95% total solids in washed sand.

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

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.

On our website you can calculate your savings potential.

FACTS

Product Lifespan

STJERNHOLM SAND WASHER

Minimum 15 years

Max capacity

3 ton/h

Material standard

EN 1.4301 / EN 1.4404

Material thickness, wear parts

10 mm

Material thickness, agitator

30 mm

Gear type

SEW Helical gear unit

Electrical motors

120 / 460V - 60 Hz. optionally speed regulated

Electrical motor, agitator/conveyer

2/0.75 HP

Retention rate

Up to 90% washed sand > 125 μ

Dry matter content

Up to 95%

Organic matter content

Below 3%

Steering strategy

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

Control

Operating system / SCADA

Hygiene

Closed system

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

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

The Stjernholm Sand Washer is highly customizable.



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



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



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



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

Stjernholm A/S would like 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 SAND WASHER THAT MEANS:

ECONOMY

- **Reduce hauling and landfill costs:**
Separating sand and organic material and dewatering of the sand can significantly reduce the disposal volume (up to 90 %)
- **Carbon harvesting:**
By separation of sand 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 sand buildup in tanks and digesters:**
Optimal operation of an aerated sand chamber can reduce the energy use in the sand chamber by up to 75% energy in order to retain as much sand as possibly

- **Sand Washer lifespan of 15-25 years** with a return of investment (RIO) of 4-6 years

ENVIRONMENT

- **Resource recovery:**
Utilization of organics to biogas production
- **Sand reuse:**
What is the reuse potential of sand in your area with maximum 3% organics in sand 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 sand 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