



Centrifugal Stone Separator

For all kinds of root and tuber vegetables

NEW Now with significantly longer service life thanks to wall thickness increased by 33% and stainless steel design



- The centrifugal stone separator also acts as a pre-soak tank and makes subsequent washing easier
- Lighter, absorbent stones can be removed as a result of the pre-soaking effect
- Minimum water consumption



Versions

ZSA 1400

Diameter	1,400 mm
Single-pump version:	
Capacity	up to 15 t/h for potatoes up to 7 t/h for carrots

ZSA 2000

Diameter	2,000 mm
Single-pump version:	
Capacity	up to 25 t/h for potatoes up to 10 t/h for carrots

Two-pump version:

Capacity	up to 35 t/h for potatoes up to 15 t/h for carrots
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ZSA 2500

Diameter	2,500 mm
Two-pump version:	
Capacity	up to 50 t/h for potatoes up to 25 t/h for carrots

Accessories and special version

- Clockwise or counterclockwise version
- Drop chute for stones
- Pump console for space-saving pump installation
- Drainage section with collection tank
- Suction flange and dry-run protection when retrofitting the ZSA

Centrifugal Stone Separator

The Centrifugal Stone Separator (ZSA) gently removes stones and other specifically heavier foreign matter from the stream of produce. Separation of stones and produce is based on the source-flow principle. The source water flow is guided into the ZSA from below. It is adjusted exactly so that the flow rate of the water is higher than the settling velocity of, for example, potatoes, but slower than the settling velocity of stones. Only foreign bodies whose specific weight is significantly greater than that of water are discharged.

Due to its large volume of water, the centrifugal stone separator has a pre-soaking effect. In the case of specifically not particularly heavy but absorbent stones and in the case of clods, this can favor their separation. Furthermore, the pre-soaking of the soil adhering to the field crops can also influence the outcome of the subsequent washing process positively.

The produce is fed into the ZSA from above by means of a conveyor belt. The centrifugal stone separator can only be used if another processing unit is connected downstream (a washer for example), into which the flume water can flow. From there, the water can be fed back to the centrifugal stone separator by means of a pump. The produce is sluiced through the discharge chute into the downstream unit while the stones are removed via the stone discharge conveyor. The centrifugal stone separator does not cause any water losses during operation as it works in a circuit. If no suitable unit is available to collect the flume water, a drainage section with collection tank can be installed as an accessory. In case of already existing units such as a washing machine, the design is based on finding the ideal position of the suction flange and dry-run protection.

Technology

The centrifugal stone separator consists basically of the cyclone top with agitator, base frame, stone discharge chute and one or two special pumps. The cyclone top consists of a cylindrical and conical part. The tangential outlet is arranged at the cylindrical part. Above the housing there is a console for holding the agitator. The supports can be adjusted in height. The outlet and stone discharge chute can be mounted at any angle to each other.

The stone discharge conveyor belt is placed loosely into the stone discharge chute and can therefore be easily removed for maintenance work. The lower part of the stone discharge chute contains three maintenance and cleaning flaps that can be used to change bearings and drums, for example. The source flow pump's flow rate is adjusted by means of a frequency converter, which is not included in the scope of delivery. Flume water pump, agitator and discharge conveyor each have their own drive. The centrifugal stone separator is almost entirely made of stainless steel. It is supplied with a piping package and the special pumps.