

Get efficient grit washing and dewatering at smaller plants with no washwater requirements

The GritCup® is a compact, unpowered grit washing system with no moving parts that delivers clean grit ready for dewatering by a SpiraSnail® dewatering system, effectively separating and classifying 95% of all particles 106 µm and larger and 75% of 75-106 µm particles.

Ideally suited for plants below 440 l/s peak, the GritCup® processes 12.6 l/s and the SpiraSnail® has 0.6 m³/hr conveying capacity. Output grit contains less than 20% volatile solids content and greater than 60% total solids at design flow.

Applications

- Grit washing/dewatering for new, expanding and upgrading WWTPs.
- Grit washing for plants with no available washwater.
- Grit washing for advanced grit removal systems such as the HeadCell® and Grit King®.
- Replacement for worn out or ineffective grit washing and dewatering systems.
- Treatment plant retrofits.

Performance

GritCup® -

- 95% separation of 106 µm particles and larger.
- 75% separation of 75-106 µm particles.
- Capacity of 13 l/s.

SpiraSnail® -

- 95% separation of 106 µm particles and larger.
- 75% separation of 75-106 µm.
- >60% total solids in output grit at design flow.
- <20% volatile solids in output grit at design flow.



Benefits

Get efficient grit washing/dewatering optimised for smaller plants

The GritCup® and SpiraSnail® have been optimised for use at smaller plants - meaning that they are able to provide effective, economical grit washing, dewatering, separation and classification while maintaining a high performance.

Minimise operational and maintenance costs

The GritCup® has no moving parts, no power requirements and has removable access hatches, making maintenance tasks quick and easy. The system can run fully automatically and is optimised for intermittent operation. The SpiraSnail®'s shafted screw design prevents the need for difficult to replace liners or steel wear bars, and the four-bolt external bearing can be accessed from outside the trough.

Eliminate wear and replacement parts

The GritCup® is a single self-contained unit with no moving parts, meaning that wear and expensive replacement parts are not a factor.

Get operator-friendly dewatering

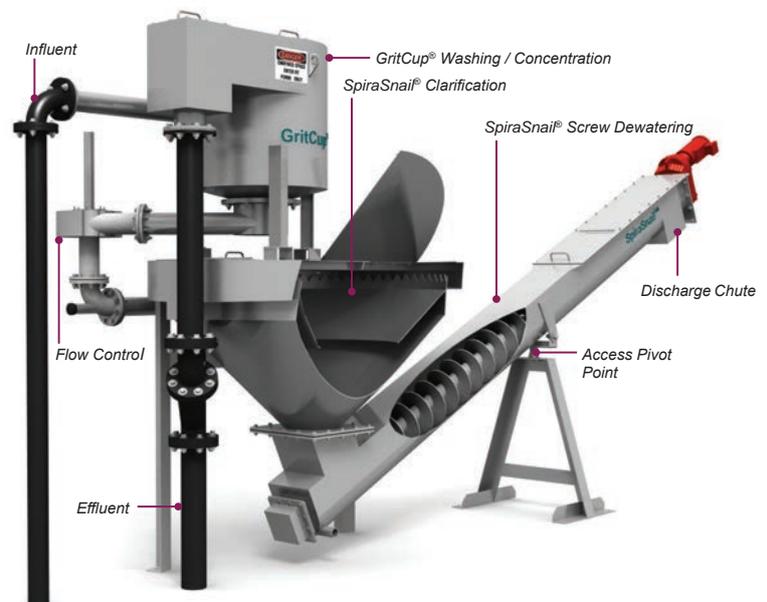
The SpiraSnail®'s minimal number of wear parts and easy access for maintenance reduce operating costs, maximised internal clearances prevent clogging, and a unique clarifier design allows the auger trough to be rotated away from the clarifier, allowing maintenance even when the unit is full of water.

Product Information

- Optimised grit washing - free vortex washing GritCup® unit uses accelerated gravity to create a separation zone in which volatile solids are removed from the heavier grit.
- Innovative clarifier design on the SpiraSnail® optimises the settling tank characteristics.
- Efficient dewatering design - The innovative clarifier design on the SpiraSnail® provides increased surface area while the shallow incline and slow screw speed delivers 90 - 95% capture of 106 µm and larger grit particles.
- Classifier can be coupled with an optional explosion proof motor for use in classified environments.

How it works

1. Concentrated grit slurry from the grit collection process enters the GritCup® tangentially at a controlled rate and velocity establishing a free vortex flow regime.
2. Grit is forced to the outside perimeter or held in suspension until it falls by gravity into the boundary layer which sweeps the grit, but not volatile solids, to the centre for collection.
3. Excess water and separated organic materials flow out of the unit to downstream processes for additional processing.
4. A Hydro-Brake® vortex valve regulates the volume of washed grit slurry exiting the GritCup® and introduces it tangentially into the SpiraSnail® clarifier. This tangential entry forces the grit to the outside of the clarifier cone.
5. From there it settles into the SpiraSnail® conveyor trough.
6. The slowly rotating screw conveys the captured grit and dewateres it as it moves towards the discharge chute and into the grit receptacle ready for landfilling.
7. Clarified water passes over the perimeter weir before being sent back to the plant for further treatment.



Learn more

To learn more about how GritCup® and SpiraSnail® can help you to make better water management decisions, visit hydro-int.com, search GritCup and SpiraSnail online or contact us:

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