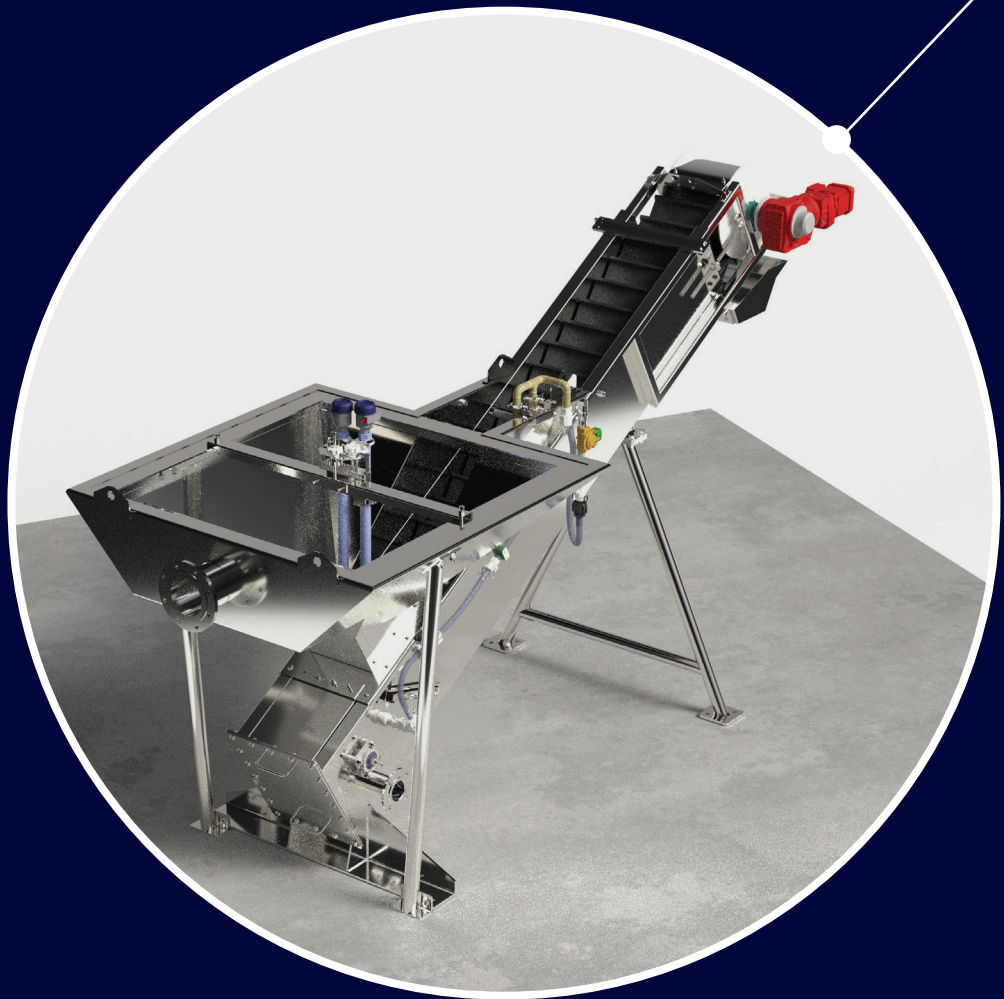


Grit Snail[®]



Quiescent Belt Dewatering Escalator

Engineered by Hydro International[®]

Grit Snail®

The Highest Capacity Grit Dewatering System Just Got a Major Upgrade

Grit Snail® is like no other grit dewatering technology, it is built specifically to address the challenges of fine grit. It is the only belted grit dewatering system on the market, giving it many unique advantages. A slow moving belt maximizes retention of fine grit while offering the highest solids handling capacity on the market at up to 10 yd³/hour (4.5 ft³/min or 7.6 m³/hr).



Product Overview

The Grit Snail® uses a slowly moving cleated belt to gently escalate grit from the clarifier pool without re-suspending fine grit particles which will cause the grit to escape with the clarifier overflow.

Performance

- Removes 95% of all grit 75 micron and larger at the design flow rate when used with an Oldcastle Infrastructure grit washing system
- Removes 60% Total Solids and <15% Volatile Solids when used with Oldcastle's SlurryCup™, TeaCup® or OpTeaCup® washing units

Capacity

- Dewatering capacity from 1 to 10 yd³/hr (0.7 to 7.7 m³/hr) of grit
- Clarifier sizes from 48" to 96" (1.2 to 2.4 m) square
- Belt widths from 6" to 57.5" (0.15 to 1.5 m)
- The Grit Snail® can be configured to match most applications as the clarifier is sized for flow while the belt is sized for grit load

Configurations

- The SlurryCup™ (or TeaCup®) / Grit Snail® system can either be used for headworks degritting or to degrit concentrated slurry captured from a HeadCell® or a Grit King® separation system
- Multiple inlet and outlet arrangements are available to accommodate plant piping conditions

Design Notes

- Large clarifier area allows even very fine grit to settle
- Slow moving belt eliminates grit carry over
- Belt housing is lined with abrasion resistant urethane for long service life

Applications

- Grit dewatering for municipal WWTPs
- Dewateres grit output from a SlurryCup™, OpTeaCup®, or Grit King® unit
- Sludge degritting or headworks dewatering applications
- Agricultural and industrial applications

Benefits

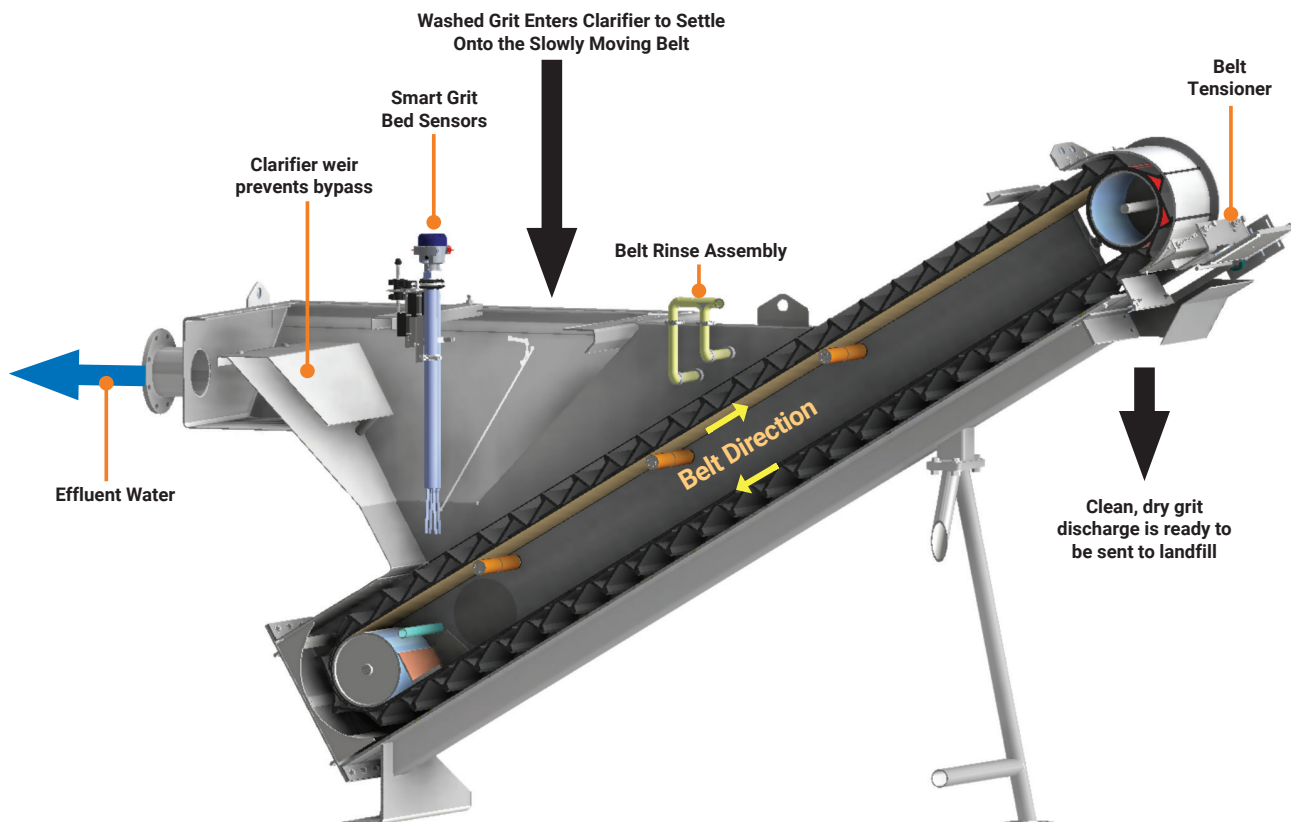
- Non-turbulent process retains the smallest grit particles
- Durable 304 or 316 stainless steel construction ensures a long product life
- Large clarifier with a low overflow rate provides sufficient time for grit to settle
- Dewateres a very large quantity of grit while still retaining fine grit particles as small as 75 µm

How it Works

A washed grit slurry is discharged into the Grit Snail® clarifier. The clarifier is sized to provide sufficient area for particles as small as 75 micron (μm) to settle. Degritted effluent water overflows a weir and goes on to the next treatment process. The captured grit settles to the bottom of the clarifier and onto the belt. The slowly moving belt gently lifts accumulated grit from the clarifier bottom without re-suspending it, eliminating the potential for carry-over. The belt typically moves at 1-2 feet / minute (30-60 cm / minute) which creates quiescent dewatering conditions.

The grit settles onto the stepped cleats and is gently lifted out of the clarifier pool. Dewatering begins as the grit and fine abrasives are slowly raised from the clarifier. The dewatered abrasives are carried to the top of the Grit Snail®, where they are discharged into a container for disposal. The lined belt housing, stepped rubber belt cleats, and no metal-to-metal contact ensures long component life and minimal wear. The variable frequency drive adjusts belt speed to match changing grit loads.

Visit the Grit Snail® product page to learn more. [Grit Snail®](#)



Updated Design for Easier Maintenance & Extended Longevity

Revamped Belt & Support System

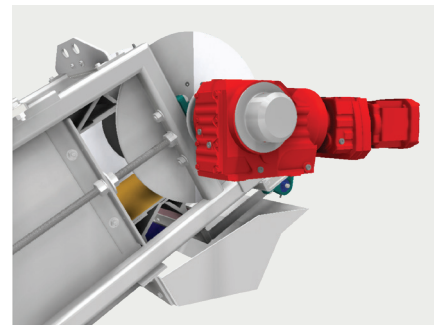
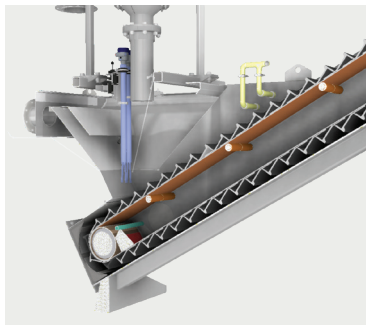
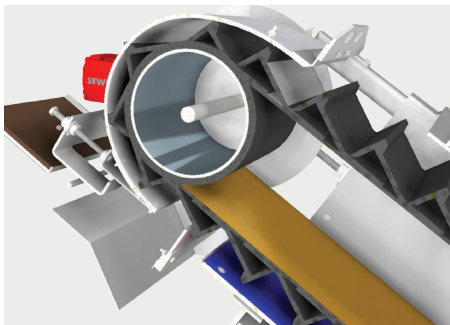
- **Split Belt** - A new belt design allows the replacement to be fed through the system without trough disassembly, reducing time and manpower required to replace it.
- **Easily Replaceable Belt Rollers & Sleeved Belt Support** - One-piece sleeved belt rollers reduce belt wear and provide better support while being easily accessible from outside the belt trough.
- **One Piece Headroll & Tailroll Assemblies** - Simplifies maintenance and parts while preventing belt wear.

Mechanical & Systemic Improvements

- **Improved Bearing Design** - All-stainless bearings eliminate different metal corrosion potential, enhance sealing, and increase long-term performance.
- **Updated Gasketing** - Gasketing has been replaced throughout with thicker more rugged versions to better maintain watertight connections and extend gasket life.
- **Replaceable Trough Liner** - Allows for easier maintenance, enhanced belt protection, and ensures long-term smooth belt operation.
- **New Direct Drive Top End** - Ambidextrous design provides built-in torque protection, speed control, and eliminates chain drive and clutch system.
- **Updated Belt Wash Assemblies** - Simplifies maintenance, improves belt access and ensures consistent belt washing.

Optional New Smart Features

- **Updated Control Panel** - Allows the addition of the smart features, historical data event logging and better control of operating speeds.
- **Smart Grit Bed Sensors** - Grit Bed Sensors continuously monitor the grit bed and adjust the belt speed to match changing loading conditions and enhance dewatering.
- **Smart Tailroll Water Monitoring** - Precisely monitored and controlled tailwater supply is important in maintaining proper belt engagement and grit loading, particularly at belt startup.

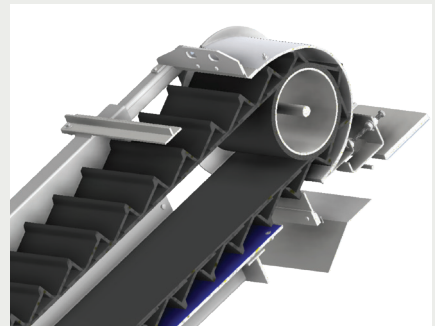
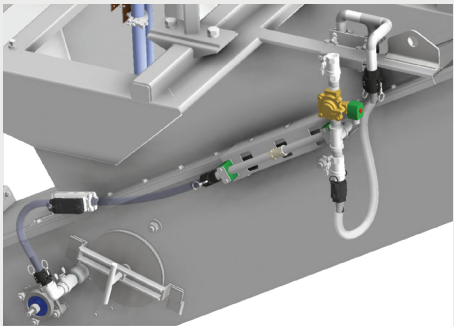


Proven Grit Snail® Performance Just Got Better

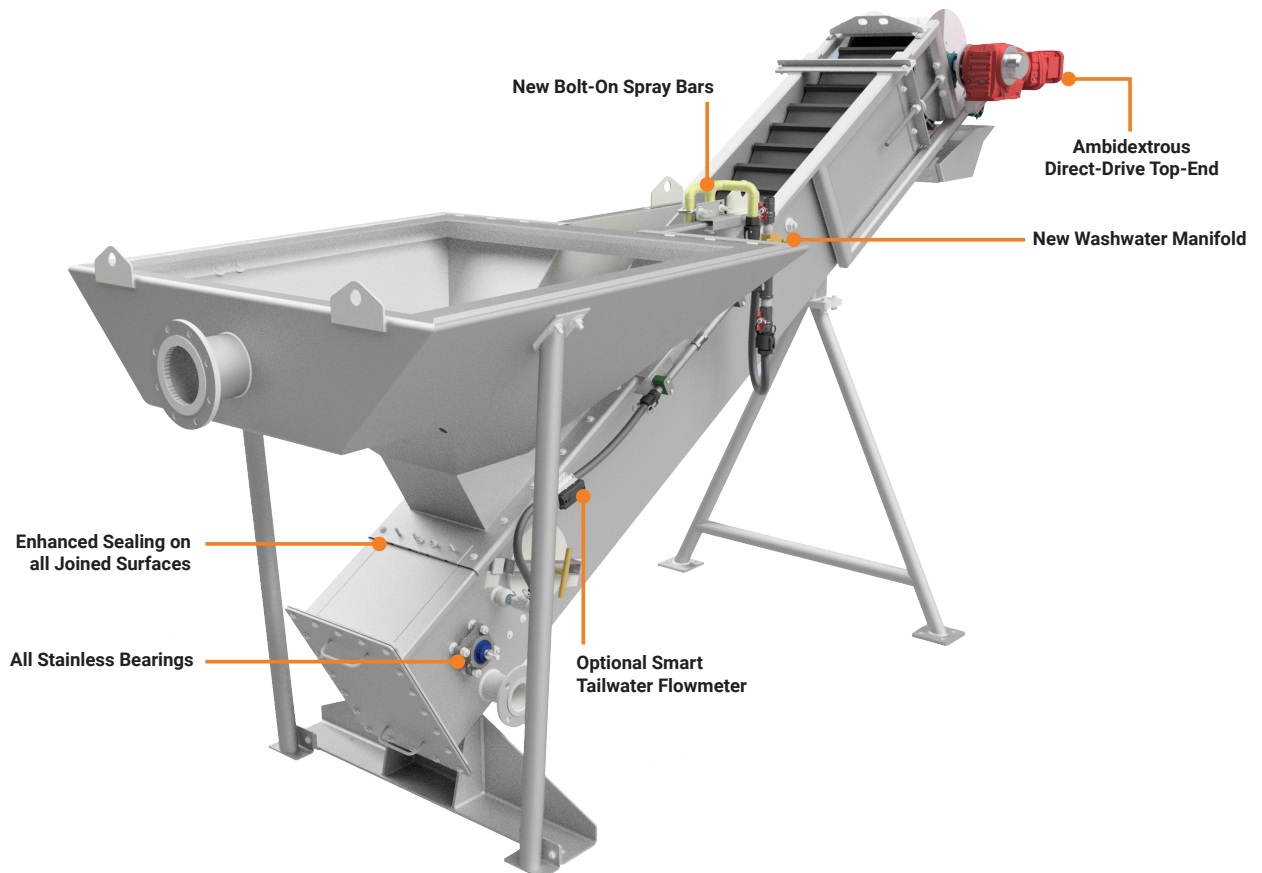
Engineered by Hydro International, the Grit Snail® has over 700 installations throughout the Americas. As a result, the Grit Snail® has been tested and proven to perform under a wide variety of operating conditions. Now as part of Oldcastle, we've taken all the lessons we've learned through the years and re-evaluated the system from the inside out. The result is a significantly improved product designed to dramatically simplify maintenance, minimize downtime and extend the longevity of the entire system.

Key improvements include:

- Significantly reduced maintenance system-wide
- Easier to change belt, with improved supports to extend belt life
- Enhanced component durability and improved gasketing



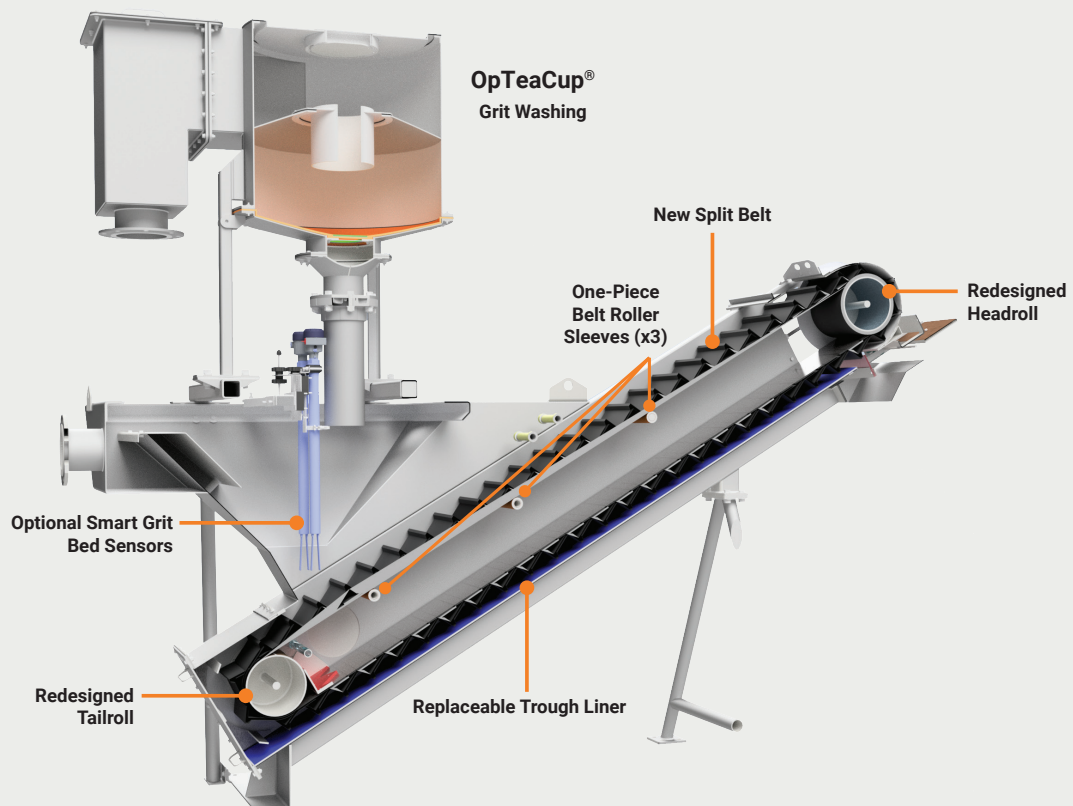
Grit Snail® New Features



Grit Snail® with OpTeaCup® Grit Washing



Grit Snail® New Features





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