Hydro International

Oldcastle Infrastructure
A CRH COMPANY

SlurryCup™

Grit Washing and Sludge Degritting

Product Summary

Increasing performance as flows increase

The SlurryCup™ system is a highly efficient process used to capture, classify, and remove fine grit, sugar sand, high density fixed solids from grit slurries, and both primary and secondary sludge.

Performance

- Removes 95% of grit particles 75 µm and larger at the design flow rate
- Less than 15% volatile solids and greater than 60% total solids when used with a Hydro dewatering system

Capacity

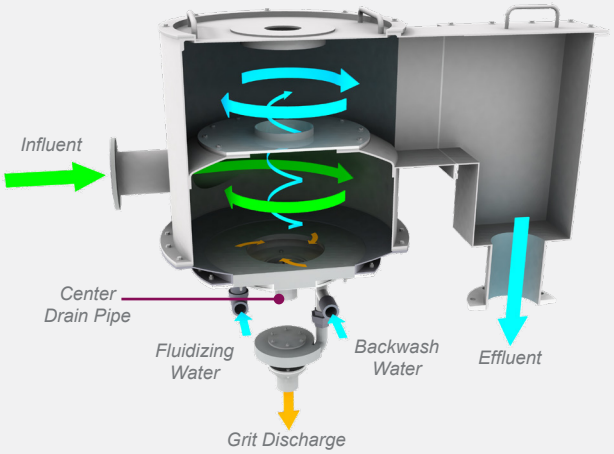
- Handles flow of 150 to 1,000 gpm (9.5 to 63.1 L/s)
- Two SlurryCup™ units can be mounted on a single grit clarifier to increase capacity
- Solids concentrations up to 1.5%
- Sizes from 24” to 56” (0.61 to 1.42 m) diameter

How it Works

Flow enters the stainless steel vessel tangentially at a controlled rate and velocity. The flow regime established in the device forms an open free vortex which results in high centrifugal forces and a thin predictable boundary layer. 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, into the collection chamber at the bottom of the unit.

The concentrated slurry exits the vessel through a hydraulic valve where a secondary wash occurs prior to discharge. Two levels of washing produces clean grit ready for dewatering. The water containing the volatile solids exits from the overflow through the discharge box for additional treatment by downstream processes.

SlurryCup™ Flow Pattern



Benefits

- Industry leading performance
- Boundary layer grit washing retains 95% of all grit 75 micron (µm) and larger
- No moving parts and no power needs
- Durable 304 or 316 stainless steel construction

Applications

- Grit washing at WWTP headworks
- Primary and secondary sludge degritting
- Continuous grit discharge

Water & Wastewater Solutions

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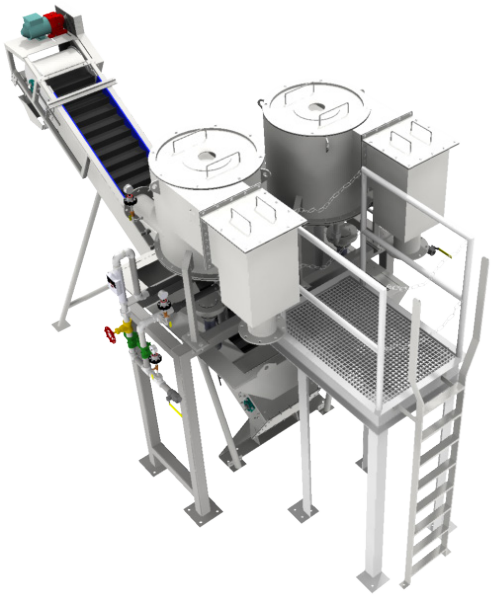
Configurations

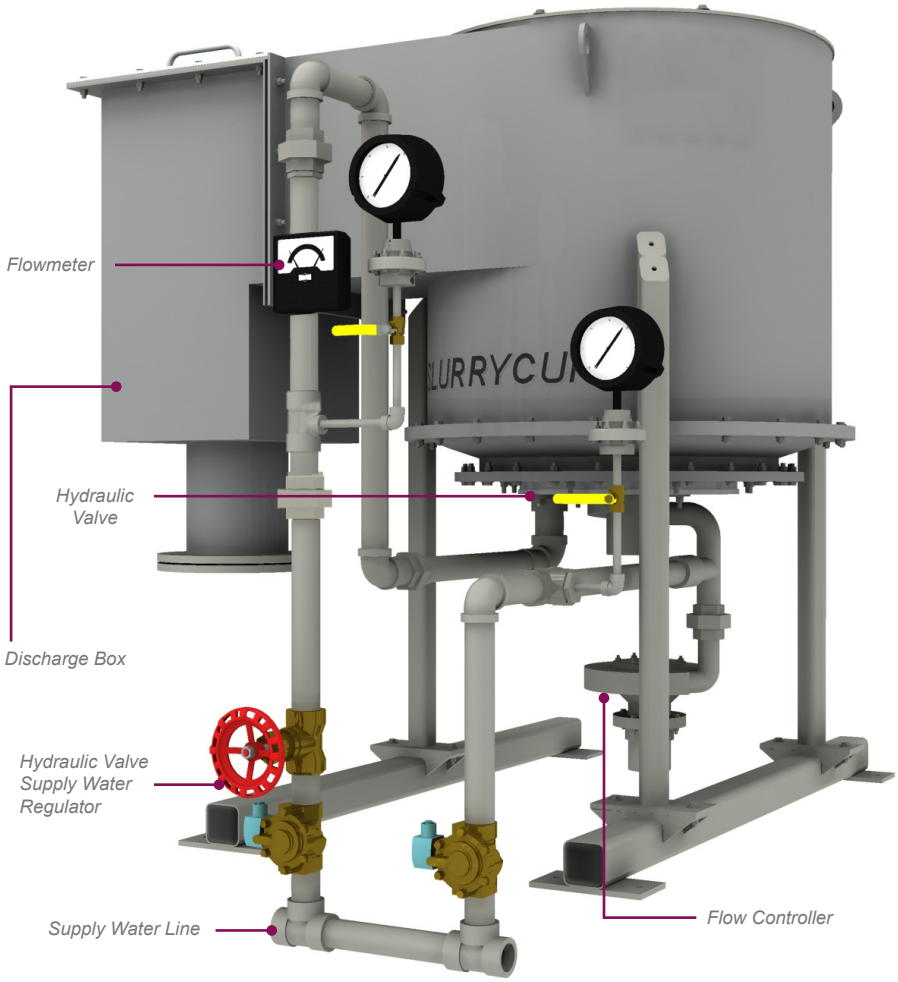
- Inlet and outlet can be oriented to accommodate many piping configurations
- The system can be provided with an optional maintenance access platform



SlurryCup™ / Grit Snail® with optional access platform

Design Notes

- Reduces downstream deposits and mechanical wear
- Increasing performance as flows increase
- All hydraulic design with no internal moving parts is simple to operate and ensures long component life
- Large diameter easily handles peak flow grit volumes
- Final grit slurry typically contains 60% total solids with less than 15% organic solids
- Hydraulic valve provides secondary grit washing



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Hydro International
2925 NE Aloclek Suite 140 | Hillsboro, OR 97124
Tel: (866) 615-8130
Email: questions-AWW@oldcastle.com
Web: www.hydro-int.com

Learn more

Visit our website to learn how SlurryCup™ grit washing and sludge degritting systems will protect your plant, reduce your operational costs, and improve the performance of your entire plant.

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