



Providing Increased Design Flexibility for Grit Removal Systems

The **PISTA® VIO™** Grit Removal System provides unprecedented application flexibility and superior grit removal efficiencies with a design that allows for full variability of the inlet and outlet channels.

PISTA® VIO™ features a hydraulic vortex grit chamber design that utilizes a ring and tunnel system to create the vortex flow pattern that facilitates grit removal, rather than a baffle system typical of other vortex systems.

This type of grit removal system —one of the first of its kind in the industry— provides the ability to design the inlet and outlet channels at any variable angle up to the full 360° of the chamber. Designers can flexibly arrange the system to fit existing sites, or maximize space during construction on new sites.

The ring and tunnel system, in addition to providing application flexibility, also offers superior grit removal efficiencies. A ring attached to the chamber wall promotes the vortex flow pattern and separates the inlet and outlet paths, minimizing grit bypass. Influent flow is assisted through a tunnel that directs it towards the flat chamber floor for removal of grit.

Product Features & Benefits

- Ring and tunnel system creates the effective vortex flow pattern required to efficiently remove grit — up to 95% of 140 mesh (105 micron).
- Design inlet and outlet channels at any variable angle up to the full 360° of the chamber.
- Influent flume and underdrive promote necessary velocities, aiding low flow applications.
- Effluent flume counteracts the weir effect, reducing grit bypass.

OTHER PRODUCTS

Smith & Loveless knows grit removal and headworks. Our experience flows from more than four decades of thorough R&D and 2400+ PISTA® installations throughout North America and the world. Along the way, we've continued to enhance the complete system with innovations that deliver unparalleled results. With the PISTA® Grit Removal System you receive the finest in system performance backed by the value-added experience and support of Smith & Loveless.

GRIT CHAMBERS

- PISTA® 360™
- PISTA® 270™

PACKAGED GRIT REMOVAL

- PISTA® WORKS™
- PISTA® PRO-PAK™

GRIT HANDLING COMPONENTS

- PISTA® TURBO™ Grit Pump
- PISTA® Grit Concentrator
- DURALYTE® Grit Concentrator
- PISTA® TURBO™ Grit Washer

BAFFLE SYSTEM

- OPTIFLOW 270™ - New Equip
- OPTIFLOW 270™ - Retrofit



Smith & Loveless Inc.

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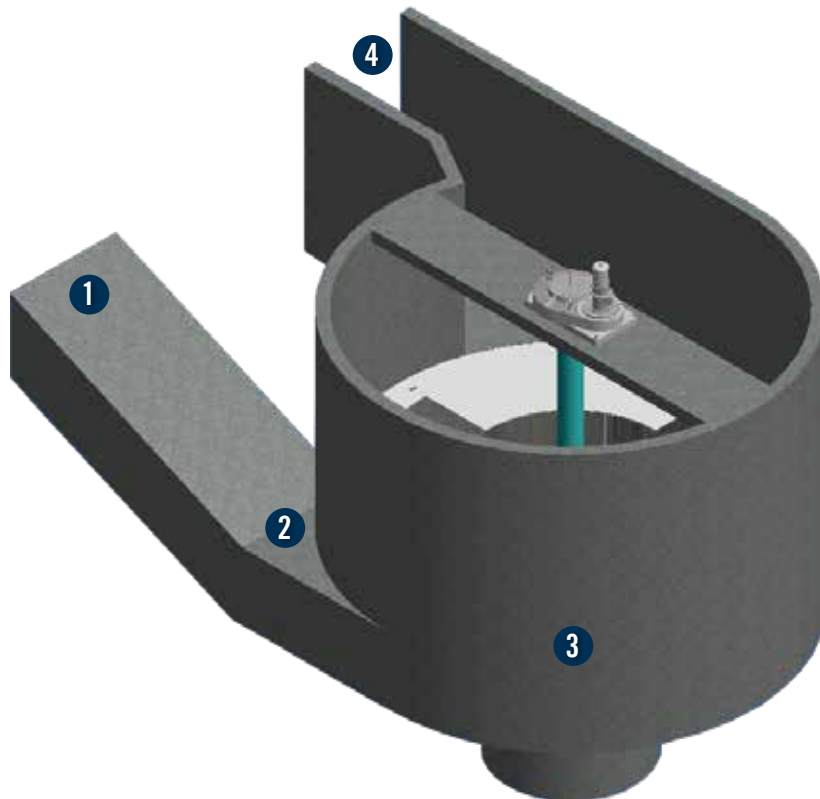
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The PISTA VIO™ provides the ability to design the inlet and outlet channels at any variable angle up to the full 360° of the chamber. Pictured at left: 360° arrangement.

Chamber Innovations Promote Vortex Grit Removal



1 Influent Flume
Directs the flow towards the wall of the chamber to promote vortex movement and the necessary velocities

2 Underdrive
Supports influent flow velocity, especially helpful in low flow applications.

3 Axial-flow Propellers
Redesigned axial-flow propellers have been improved to create better lift in the deeper chamber.

4 Effluent Flume
Designed to minimize the harmful weir effect that can contribute to grit bypass in these types of systems.