



SMITH & LOVELESS INC.

PISTA[®]

Grit Removal System



PISTA[®] Grit Screw Conveyor

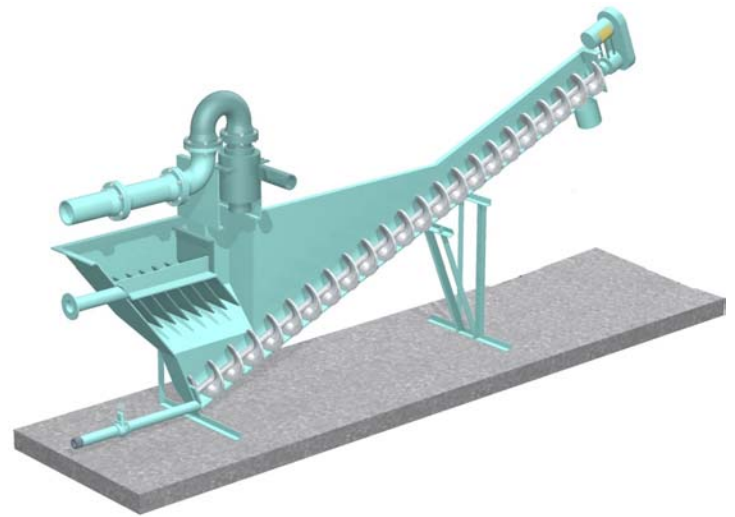
The second-stage PISTA[®] Grit Screw Conveyor is designed to work in concert with the complete PISTA[®] Grit Removal System, providing superb dewatering and

high retention of fine grit without the burden of high maintenance. Dewatered grit discharges into a container for disposal while the flow and residual organics are

returned to the inlet channel prior to the grit chamber, typically 93% of the flow and 95% of the organics.

PISTA[®] Grit Screw Conveyor

Introduced:	1989
System Benefit:	Lamella plate design aids in retention of fine grit while reducing turbulence & overflow
Upgrade from:	Screens
Sizing:	Models 15 & 17



The PISTA[®] Grit Screw Conveyor retains ultra-fine grit and effectively washes and dewateres it for disposal—all in a hassle-free operation. Lamella parallel plates facilitate high rate settling.

Key Points

1 Unique Design Elements Retain Ultra-Fine Grit

The PISTA[®] Grit Screw Conveyor's separate inlet zone, large Lamella parallel plate section that acts as a high-rate settling device, and double-sided weir trough work in concert to capture silt and ultra fine grit. The inlet zone facilitates energy dissipation in order to reduce turbulence. This allows easier settling in the plate section while the larger weir trough lowers the carry-over rate.

2 Ideal Upgrade for Screens

Screens are typically maintenance-intensive because of their messy operation. Additionally, they can allow ultra-fine grit to be returned to the flow stream. The PISTA[®] Grit Screw Conveyor greatly reduces maintenance concerns (and mess) while producing dryer grit.



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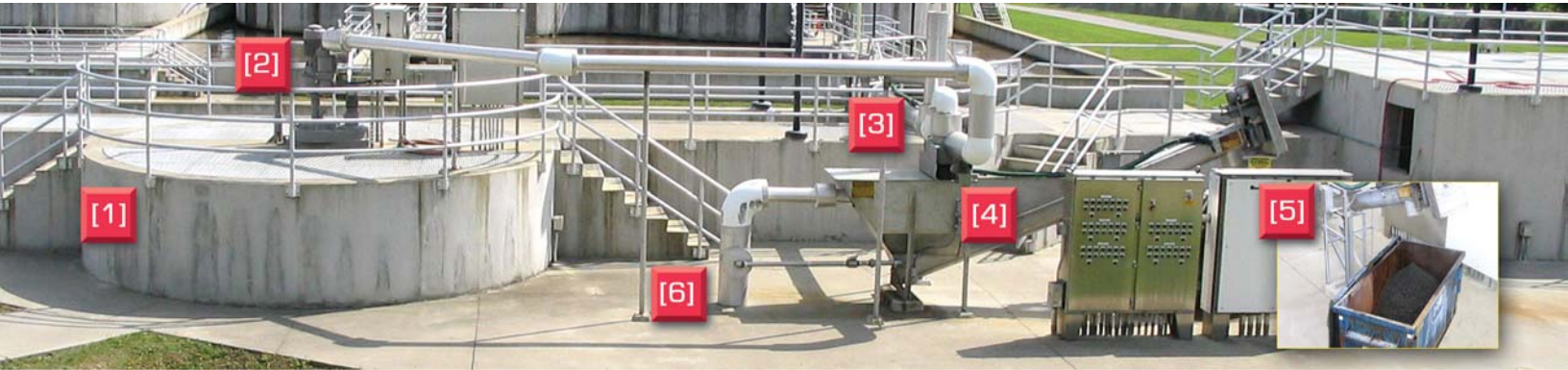
SMITH & LOVELESS INC. SYSTEM INNOVATORS FOR GLOBAL PUMPING, WATER AND WASTEWATER TREATMENT



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PISTA® Grit Removal System

PISTA® Complete Grit Removal, Handling & Dewatering System Flow Scheme



For maximum grit removal, the PISTA® Grit Chamber should be complemented with Smith & Loveless PISTA® grit handling and dewatering components, which transport, dewater and prepare the grit for final disposal. These components can be retrofitted to increase the efficiency of your grit handling system originally equipped with older components or non-Smith & Loveless accessories.

Smith & Loveless' commitment to market leadership in grit removal kindles on-going research and development, which leads to continued system and component innovations. See the timeline below of key PISTA® design milestones.

Unparalleled Innovation For 30+ Years

- 1973 - PISTA® Grit Removal System (270°)
- 1974 - PISTA® Grit Screw Conveyor
- 1981 - 50 MGD PISTA® Grit Chamber
- 1982 - PISTA® Grit Turbo Grit Pump (4")
- 1982 - 175 GPM PISTA® Grit Concentrator
- 1984 - 70 MGD PISTA® Grit Chamber
- 1988 - 360° PISTA® In-Line Design
- 1988 - 250 GPM PISTA® Grit Concentrator
- 1989 - Parallel Plate PISTA® Grit Screw Conveyor
- 1992 - PISTA® Grit Fluidizer
- 1992 - 4" PISTA® Grit Turbo Grit Pump
- 1998 - 6" PISTA® Grit Turbo Grit Pump
- 1998 - 500 GPM PISTA® Grit Concentrator
- 1999 - 100 MGD PISTA® Grit Chamber
- 2004 - PISTA® Grit Flow Control Baffle
- 2006 - PISTA® Grit Stick Deflector

PISTA® Grit Removal System Components & Scheme

- [1] **PISTA® Grit Chamber** — Influent enters flat-floor grit chamber hydraulically guided by coanda ramp, internal baffles and central, low-speed propeller. Forced vortex drives grit particles to center chamber floor and into lower grit hopper while organics and flow continue to plant.
- [2] **PISTA® Turbo Grit Pump** — Top-mounted or remote mounted unit pumps collected grit slurry (kept fluid by the PISTA® Grit Fluidizer) to the PISTA®'s second-stage grit washing and dewatering system while also providing proper head.
- [3] **PISTA® Grit Concentrator** — Specifically engineered for the PISTA® system, this abrasion-resistant Ni-Hard unit washes grit further. It positions on the grit discharge line.
- [4] **PISTA® Grit Screw Conveyor** — Grit from the concentrator deposits into the parallel (lamella) plate section of the S&L dewatering screw conveyor, which aids in retaining finer grit and reducing the stream's turbulence and overflow rate.
- [5] **Dewatered Grit Discharges** from the top of the inclined screw conveyor into a container for disposal.
- [6] **The Flow and any Residual Organics are Returned** to the inlet channel prior to the grit chamber, typically 93% of flow and 95% of organics.

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