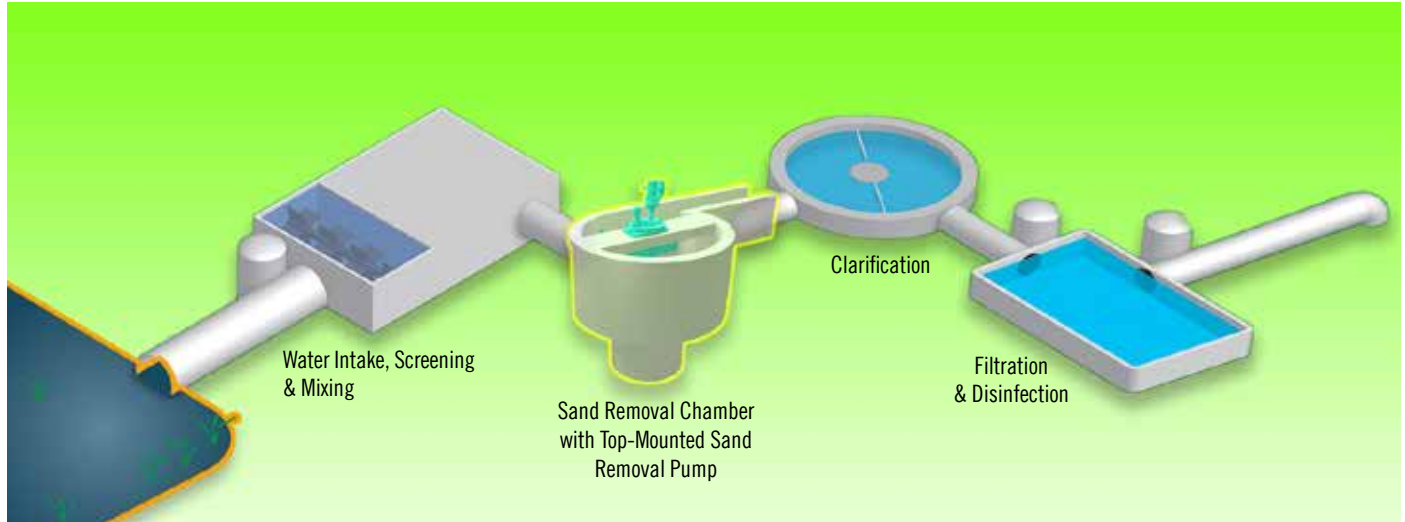


PISTA



Smith & Loveless Inc.

Simplified Sand Removal for Water Treatment Plant Intakes



Applied successfully in thousands of water and sewage treatment schemes on all continents, the **PISTA**® Sand Removal Chamber serves as the efficient choice for sand removal at water treatment plant intakes. In many conventional arrangements, large sedimentation basins require significant space and additional chemical usage to help maintain proper settling. The **PISTA**® Sand Removal Chamber significantly lessens space requirements, while removing 95 percent of river and surface water intake particles from 300+ microns down to 100 microns. The technology is proven in more than 2,700+ Installations, including for Water Treatment Plants.



- **Smaller Footprint Than Conventional Settling Tanks**
- **Lowest Total Installed and Energy / Utility Costs Compared to Others**
- **S&L Offers Unequaled Innovation, Experience & R&D in Sand / Grit Removal Technologies with more than 2,700 Installations Globally and 40+ Years of Product Development**



Hydraulic action from chamber geometry sweeps grit toward hopper.

Municipal Water Plants



Upgrade from large settling tanks that can require higher chemical use to enhance settling and large volumes of facility space.

Power Generation



At this coal and natural gas power plant in the United States, S&L provided two Model 12 PISTA® Grit Chambers to remove rocks and sand from river intake.

Industry



S&L can provide both concrete or steel grit chambers for implementation in any industrial intake system like this one in Australia.

PISTA 360[™]

WITH V-FORCE BAFFLE[™]

System Components



Coanda Ramp

Engineered entry facilitates laminar flow so that it takes a steady tangential direction as it enters the sand removal chamber and properly conditions the sand for entrapment.

Bull Gear Drive

Provides minimum service 5.0 factor and trouble-free operation.

PISTA[®] TURBO[™] Sand Pump

[Top-Mounted & Remote-Mounted Options]

Removes sand from storage hopper to washing and dewatering. Available in vacuum-primed and flooded suction arrangements. Now available with SONIC START[®] prime sensing.

Outlet Channel

S&L can assist with design information for optimal performance.

Exclusive Flat-Bottom Basin Floor

Facilitates the forced vortex flow pattern inside the chamber. Minimizes organic capture while hydraulically directing grit into lower hopper. Patented, 360-degree in-line design.

Hopper Cover Plate

Stationary and recessed, it removes for quick access to storage hopper.

Axial-Flow Propeller

Aids in directing organic-free sand into lower hopper by enhancing flow patterns. Rounded edges prevent solids build-up, thus ensuring high efficiency.

Inlet Channel

Controls velocity of influent and draws sand to the sand removal chamber floor.

PISTA[®] V-FORCE BAFFLE[™]

New, patented innovation enhances removal efficiency for low-flow periods and offers design engineering benefits.

PISTA[®] Sand Fluidizer

Patented blade exclusive to S&L design. Loosens collected sand, preventing compacting.

Storage Hopper

Stores removed sand prior to dewatering.

Key Cost-Saving Benefits

of Units Required

The wider 10:1 turndown can reduce the number of units required, reducing capital costs up to 75%.

Installation Factors

Forced vortex chamber design requires significantly less concrete than conventional and stacked tray systems — as much as 85%.

Flow Control Requirements

PISTA[®] systems minimize headloss and can eliminate the need for downstream level control devices.

Superior Sand Removal Efficiency

PISTA[®] provides 95% sand removal to extend life of downstream equipment and eliminate the need to remove accumulated sand.

Models & Capacities

Model Number	Max. Flow (U.S.)	Max. Flow (Metric)
0.5B	0.5 MGD	1,892 CMD 22 LPS
1.0B	1.0 MGD	3,785 CMD 44 LPS
2.5B	2.5 MGD	9,465 CMD 110 LPS
4.0B	4.0 MGD	15,140 CMD 175 LPS
7.0B	7.0 MGD	26,495 CMD 307 LPS
12.0B	12.0 MGD	45,420 CMD 526 LPS
20.0B	20.0 MGD	75,700 CMD 876 LPS
30.0B	30.0 MGD	113,550 CMD 1,314 LPS
50.0B	50.0 MGD	189,250 CMD 2,190 LPS
70.0B	70.0 MGD	265,000 CMD 3,067 LPS
100.0B	100.0 MGD	378,500 CMD 4,381 LPS

