



**Smith & Loveless Inc.**

*Above All Others.™*

**PISTA.**  
GRIT REMOVAL SYSTEM



# State-of-The-Art Grit Removal



The world's premier headworks grit removal system features the patented **V-FORCE BAFFLE™**, the latest S&L innovation to push engineering excellence and cost savings to new levels. The **PISTA®**'s high removal efficiencies originate from its unparalleled hydraulic design, including its flat grit chamber floor, **V-FORCE BAFFLE™** designed for job-specific hydraulic conditions and low-energy axial-flow propeller. This combination creates a true vortex which effectively separates grit from organics and the waste stream.

Combined with state-of-the-art grit handling system components, comprising grit pumping, washing and dewatering technologies, the complete **PISTA®** Grit Removal System delivers unparalleled performance and protection for downstream equipment.

## Benefits

- New **PISTA® 360™ V-FORCE BAFFLE™** provides critical hydraulic and velocity control, validated with CFD analysis
- Eliminates need for downstream level control
- Low overall installation, construction, operation, and maintenance costs
- Wide range of daily flow variations without performance loss

## PISTA 360™ WITH V-FORCE BAFFLE™



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

*Multiple unit arrangements can be designed. Models available in concrete, carbon steel and stainless steel*

# Complete System Flow Scheme

## [1] PISTA® 360™ Grit Chamber with V-FORCE BAFFLE™

The PISTA® 360™ with V-FORCE BAFFLE™ is custom-engineered specific to project hydraulics. Directing inlet flow into the chamber, the V-FORCE BAFFLE™ ensures proper vortex flow, prevents short circuiting and allows a full 360° rotation from the inlet to the outlet. Flat-bottom design facilitates the forced vortex flow pattern inside the chamber.

## [2] PISTA® TURBO™ Grit Pump

The PISTA® TURBO™ Grit Pump's heavy-duty, Ni-hard grit slurry pump with recessed impeller evacuates the grit storage hopper. Available in top-mounted and flooded suction configurations (see below).

[5] The flow and any residual organics are returned to the inlet channel prior to the grit chamber.

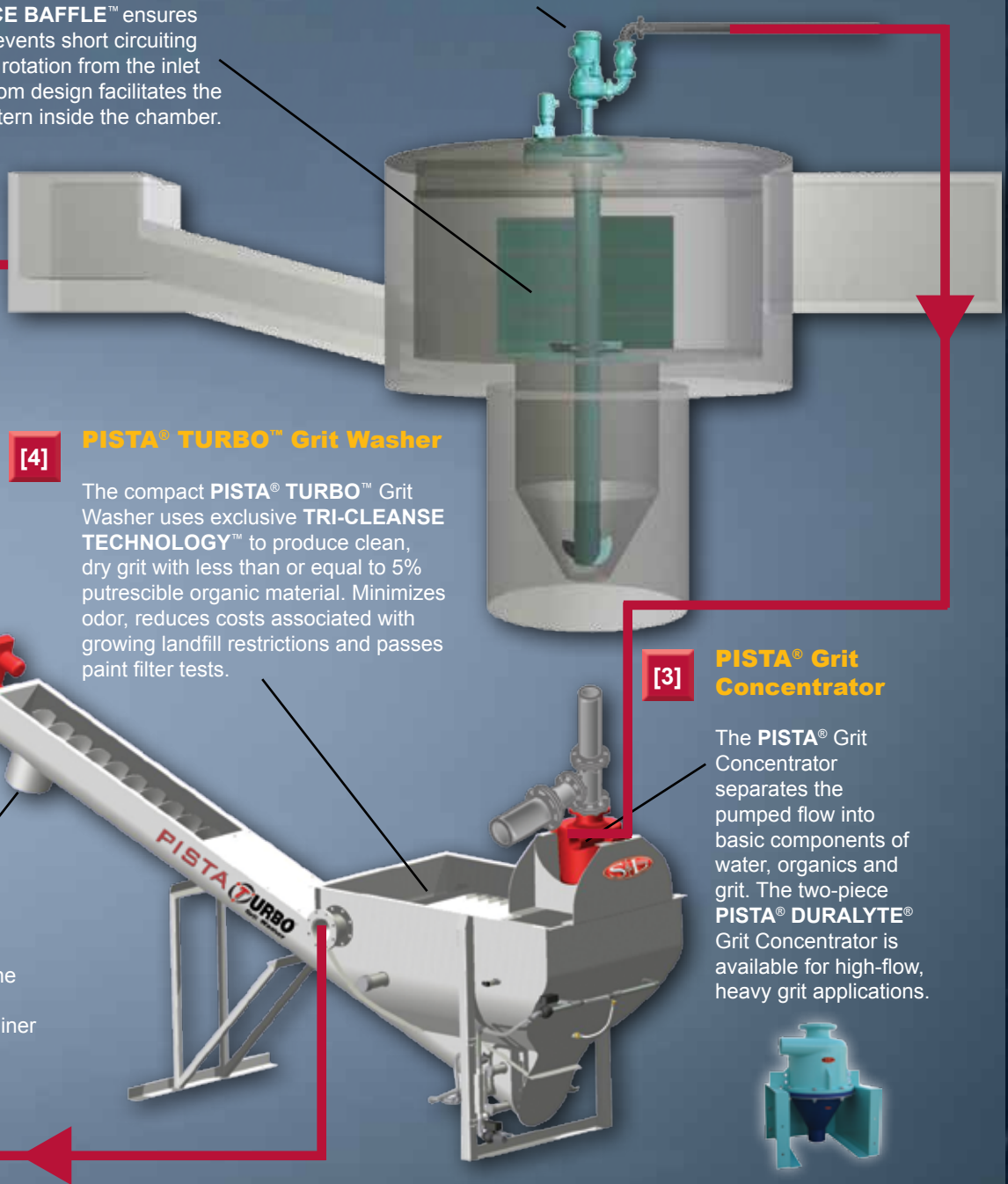
## [4] PISTA® TURBO™ Grit Washer

The compact PISTA® TURBO™ Grit Washer uses exclusive TRI-CLEANSE TECHNOLOGY™ to produce clean, dry grit with less than or equal to 5% putrescible organic material. Minimizes odor, reduces costs associated with growing landfill restrictions and passes paint filter tests.

## [3] PISTA® Grit Concentrator

The PISTA® Grit Concentrator separates the pumped flow into basic components of water, organics and grit. The two-piece PISTA® DURALYTE® Grit Concentrator is available for high-flow, heavy grit applications.

[6] Dewatered grit discharges from the top of the inclined screw into a container for disposal.



PISTA® 360™ Grit Chamber

PISTA® TURBO™ Grit Washer

Weather-Protected PISTA® PRO-PAK™

Stainless Steel PISTA®

Flooded Suction Grit Pump





# Unparalleled Headworks



**PISTA® 360™ w/  
V-FORCE BAFFLE™**



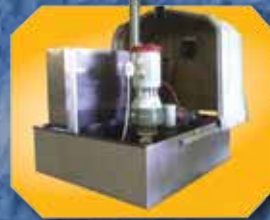
**PISTA® DURALYTE®  
Grit Concentrator**



**PISTA® TURBO™  
Grit Washer w/  
TRI-CLEANSE  
TECHNOLOGY™**



**PISTA® WORKS™  
Pre-Engineered  
Headworks**



**PISTA® PRO-PAK™**



**OBEX™ Fine  
Screens by S&L**

*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.*

 [facebook.com/SmithandLoveless](https://www.facebook.com/SmithandLoveless)

Smith & Loveless  
14040 Santa Fe Trail Drive  
Lenexa, KS 66215-1284

Phone: (913) 888-5201  
Toll Free: 1-800-898-9122  
Fax: (913) 888-2173

**[www.SmithandLoveless.com](http://www.SmithandLoveless.com)**