



ELECTRICAL SEQUENCE OF OPERATION FOR THE PISTA® GRIT REMOVAL SYSTEM USING THE TOP-MOUNTED PISTA® TURBO™ GRIT PUMP

The Smith & Loveless PISTA® Grit Removal System is a complete grit removal system. It includes a paddle drive unit for the PISTA® Grit Chamber, a Top-Mounted PISTA® TURBO™ Grit Pump for grit removal from the PISTA® Grit Chamber, a PISTA® Grit Concentrator for grit washing and hydraulic load reduction, and a PISTA® TURBO™ Grit Washer (or PISTA® Grit Screw Conveyor) for dewatering material discharged by the PISTA® TURBO™ Grit Pump. Additionally, Smith & Loveless supplies a control panel to automatically control the operation of this system. The proper sequence of each piece of equipment is important to maintain efficient operation of the system.

The PISTA® Grit Chamber's paddle drive runs continuously. There is no reason to shut down the paddle drive except for preventative maintenance or repair. An "Off-On" selector switch on the front of the control panel controls the drive.

The PISTA® TURBO™ Grit Pump and PISTA® TURBO™ Grit Washer (or PISTA® Grit Screw Conveyor) operate as a unit in the automatic mode to remove the grit from the bottom of the PISTA® Grit Chamber. Each has its own Hand-Off-Auto selector switch, if needed, for manual operation.

The PISTA® TURBO™ Grit Pump is controlled by a 24-hour, 96-pin clock timer controlling the frequency of initiation of the pump. In parallel with the timer, there is a pushbutton on the panel for manual starting of the PISTA® TURBO™ Grit Pump at anytime without interfering with the timed cycle. Once the PISTA® TURBO™ Grit Pump is running there is a timer to control the length of time the pump operates each cycle. The PISTA® TURBO™ Grit Pump stops when the timer "times out". The priming of the pump starts automatically within the startup sequence of the PISTA® TURBO™ Grit Pump. The PISTA® TURBO™ Grit Pump will only start after it receives a signal from a control relay saying that it has primed. There is also a "Fail" timer on the prime circuit. If it takes too long to prime, the grit cycle shuts down and a prime fail light on the panel illuminates.

The PISTA® TURBO™ Grit Washer (or PISTA® Grit Screw Conveyor) will start once the PISTA® TURBO™ Grit Pump is proven to be running. It is connected to an adjustable "Off Delay" timer to continue running (10-15 minutes) to remove all the grit once the PISTA® TURBO™ Grit Pump is shut off. Once the conveyor stops, the entire system is reset and ready for the next cycle. If the conveyor fails to start within 30 seconds, a timer will also time out and shut down the PISTA® TURBO™ Grit Pump.

ENGINEERING DATA



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PISTA® Grit Removal System
Electrical Sequence of Operation
Flooded Suction
Remote-Mounted PISTA®
TURBO™ Grit Pump
August 2012
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ELECTRICAL SEQUENCE OF OPERATION FOR THE PISTA® GRIT REMOVAL SYSTEM USING THE FLOODED SUCTION REMOTE-MOUNTED PISTA® TURBO™ GRIT PUMP

The Smith & Loveless PISTA® Grit Removal System is a complete grit removal system. It includes a paddle drive unit for the PISTA® Grit Chamber, a Flooded Suction Remote-Mounted PISTA® TURBO™ Grit Pump for grit removal from the PISTA® Grit Chamber, a PISTA® Grit Concentrator for grit washing and hydraulic load reduction, and a PISTA® TURBO™ Grit Washer (or PISTA® Grit Screw Conveyor) for dewatering material discharged by the PISTA® TURBO™ Grit Pump. Additionally, Smith & Loveless supplies a control panel to automatically control the operation of this system. The proper sequence of each piece of equipment is important to maintain efficient operation of the system.

The PISTA® Grit Chamber's paddle drive runs continuously. There is no reason to shut down the paddle drive except for preventative maintenance or repair. An "Off-On" selector switch on the front of the control panel controls the drive.

The PISTA® TURBO™ Grit Pump and PISTA® TURBO™ Grit Washer (or PISTA® Grit Screw Conveyor) operate as a unit in the automatic mode to remove the grit from the bottom of the PISTA® Grit Chamber. Each has its own Hand-Off-Auto selector switch, if needed, for manual operation.

The PISTA® TURBO™ Grit Pump is controlled by a 24-hour, 96-pin clock timer controlling the frequency of initiation of the pump. In parallel with the timer, there is a pushbutton on the panel for manual starting of the PISTA® TURBO™ Grit Pump at anytime without interfering with the timed cycle. Once the PISTA® TURBO™ Grit Pump is running there is a timer to control the length of time the pump operates each cycle. The PISTA® TURBO™ Grit Pump stops when the timer "times out".

The PISTA® TURBO™ Grit Washer (or PISTA® Grit Screw Conveyor) will start once the PISTA® TURBO™ Grit Pump is proven to be running. It is connected to an adjustable "Off Delay" timer to continue running (10-15 minutes) to remove all the grit once the PISTA® TURBO™ Grit Pump is shut off. Once the conveyor stops, the entire system is reset and ready for the next cycle. If the conveyor fails to start within 30 seconds, a timer will timeout and also shut down the PISTA® TURBO™ Grit Pump.