

H1000 - SMS

Simplex Model H1000 Skid

LIQUID/SOLID SEPARATOR FILTER

V 1.0

PRODUCT DESCRIPTION

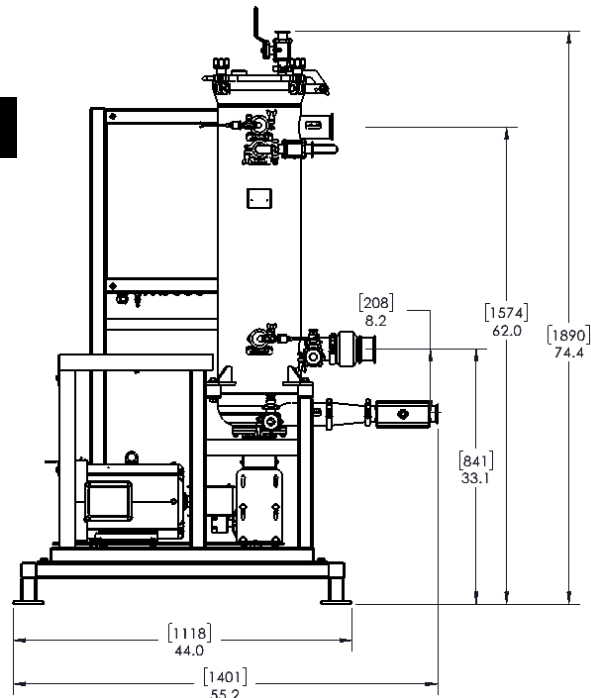
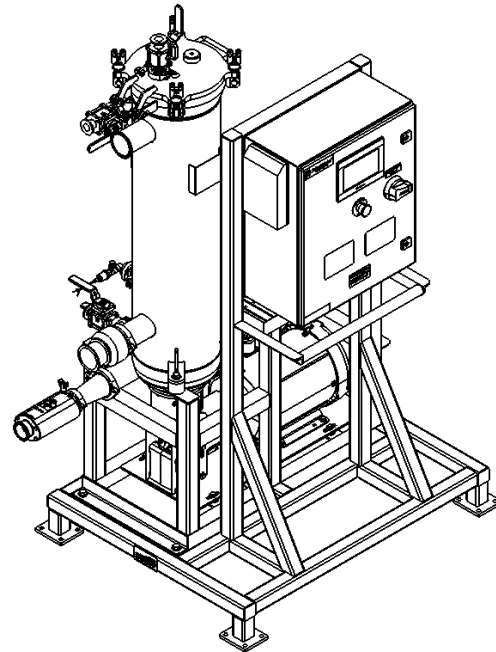
The H1000-SMS is a liquid/solid separator and automatic self-cleaning filter system designed to remove Ultra High and Variable Total Suspended Solids (TSS) from a fluid stream. Each filter unit contains a motor-driven, spiral-shaped brush that continuously cleans collected debris from inside the filter element. Solids collect at the bottom of the filter housing to be expelled through an automatic purge valve or a continuous concentrate stream. The system does not require high pressures to operate and performs at very low differential pressure. No backwash, cross flow or booster pumps required.

APPLICATIONS

Recycled Secondary Wastewater, Protection of Monitoring Equipment, Nozzle Protection, Bearing and Seal Protection, Wastewater, Recycled Water, TSS and BOD Reduction

TECHNICAL SPECIFICATION

Inlet:	3" Tri-Clamp Flange
Filtered Outlet:	3" Tri-Clamp Flange
Purge Outlet:	2" Tri-Clamp Flange
Max Flow:	1090 m ³ /day (200 gpm)
Filtration Rating:	15 - 100 micron
Max TSS:	15,000 ppm
Max Operating Press:	10.3 bar (150 psi) @70°F
Min Operating Press:	0.35 bar (5 psi)
Max Temp:	90°C (190°F)
Head Loss:	<0.1 bar (2 psi)
Purge Valve:	Pneumatic Pinch Valve
Power Requirement:	3-Ph, 230VAC, 20A (460VAC Optional)
Air Requirement:	30psi above inlet pressure
Max Air Pressure:	90 psi



MATERIALS OF CONSTRUCTION

Wetted Components: 304 SS, Nylon 6.12
Elastomers: Buna-N, EPDM or Viton
Filter Elements: 316 SS

PERFORMANCE SPECIFICATION

The spiral shaped brush is designed to rotate continuously, so there is always less than 1 psi head loss across the filter screen. Flow through the filter unit is limited by both solids loading and hydraulic loading on the screen. Flow rates listed below assume a viscosity of 1.0 cP and TSS up to 1000 mg/l. The control system can monitor the solids build up in the housing and open the purge valve when necessary. The unit will include a 5 psi cracking pressure check valve on the filtered outlet and a pinch valve on the purge outlet. Operating pressure in the 5 to 20 psi range is optimal, though the unit is capable of operating at 150 psi.

Flow Rates for TSS up to 1000 ppm

Filter Screen	Nominal Filtration Rating (microns)	Max Flow Rate (gpm, [m ³ /hr])
SWT1000-FE-BB	15	100 [22.7]
SWT1000-FE-GG	20	133 [30.2]
SWT1000-FE-YY	25	165 [37.5]
SWT1000-FE-RR	50	200 [45.4]

Note: The higher the solids, the higher the perceived apparent viscosity. At TSS above 1000 ppm, lower flow rates are required to avoid fouling of the filter screen.



Brush



Filter Screen