

SPIRAL WATER MODEL 850

The latest and most popular model in Spiral Water's line of 800 Series advanced automatic self-cleaning filters, the Model 850 automatic self-cleaning filter is a powerful, smaller sized option for use in specific industrial applications and for wastewater with a high or variable level of solids.

Engineered with our patented filtration technology, the Model 850 removes total suspended solids (TSS) up to 2,000 mg/l TSS providing continuous 15-to-1500-micron filtration. In addition, these filters automatically manage upset conditions without the need of operator assistance, providing ease of operation and peace of mind.

Each filter unit contains a motor-driven, rotating spiral-shaped mechanical cleaning device that continuously filters the water passing through the unit and collects TSS particulates and debris from inside the filter element. Solids collect at the end of the filter housing to be expelled through an automatic purge valve or a continuous concentrate stream.

Unlike backwash filters, the SWT system does not require high pressure; it operates at system pressure of less than 15 psi and performs at very low differential pressure. No backwash, cross flow or booster pumps are required. The purge chamber can be configured to dump solids directly to waste or for removal and concentration of solids for reuse. The Model 850 cleans itself and does not need external/additional process water for cleaning.

Industrial applications range from water filtration systems that extend the life of downstream equipment, to protecting process cooling systems; indoor ag and vertical farming; industrial water recovery and reuse; food processing and food processing wastewater; energy: power generation, hydropower and filtration for equipment protection in natural water sources; cooling



water filtration; seawater filtration for protection of marine and shipboard desalination; breweries, wineries, industrial membrane (MBR) protection systems; irrigation systems that require ongoing fluid flow for nozzle protection; and industrial filters with membrane filtration components.

Standard materials of construction include PVC, CPVC, and stainless steel housings and internals.

The filters are available in single (SWT850-OEM) or multiple (SWT850-DPX) filter configurations to satisfy higher customer application flow rates:

[SWT850-OEM Cut Sheet](#)

[SWT850-SMS Cut Sheet](#)

[SWT850-DPX Cut Sheet](#)

In addition to our standalone filters, we also provide engineered systems with [multiple Model 850 filters](#) for up to 1000 gpm.

Benefits of Model 850 Filters

- Automatic self-cleaning processes: The unit collects debris at the bottom of the filter and, once there is a sufficient pressure differential, automatically trigger a purge sequence to clean the filter and remove the debris.
- Performance without high-pressure levels: The SWT850 works with a system pressure of below 20 psi and low pressure differentials.
- Handles a high TSS level: This filtration unit can remove high levels of suspended solids from flows with high or varying levels of solid waste.
- Versatility: Customers can select the right configuration based on their applications' specific flow rate by using single (SWT850-OEM) filters or multiple (SWT850-DPX) filters.



HOW TO CHOOSE BETWEEN SPIRAL WATER'S MODELS 850 AND 1000 FILTERS

Criteria for the appropriate filter selection typically fall into three categories: Total Suspended Solids, Screen Micron Size, and Required Flow Rate.

Model 850

All versions are single filter housing units (PVC, CPVC, 316 SSSL)

- Each Model 850 filter housing accommodates a flow rate of 10-80 gpm.
- They are typically used for TSS of 2000 mg/l and under.
- The screen micron size ranges from 15um to 1500um.
- The Design Flow for plastic units should be less than 5 ft/second to minimize water hammer effects.
- The higher the temperature above 100F, the more it derates the pressure rating in plastic filters.
 - The normal maximum allowable working pressure (MAWP) is 150 psi; above 120F, it reduces to 70 psig.

Model 1000

All versions are single filter housing units (T1000& H1000 304 SSSL standard)

- The Flow Rate for each Model T1000 filter housing ranges from 30-185 gpm.
- Model 1000 filters are typically used for higher TSS of 200 up to ~1.5% or 15,000 mg/l, but they can also be used effectively in low TSS applications as an insurance filter for variable upset conditions.
 - The higher the TSS, the lower the flowrate.
 - The smaller the screen micron size, the lower the flow.
- Screens range from 15um to 1500um.
- Flow velocities are similar to all metal pipes.
- Temperatures up to 190F do not reduce the MAWP

To learn more, visit our website at www.spiralwater.com, call us at 1-732-629-7553 or email us at info@spiralwater.com.