

METROL SEA-SCREEN

Coarse strainers

APPLICATIONS

- Seawater
- Aquifer water
- River water
- Estuary water
- Produced water

BENEFITS

- High reliability because of more effective backwashing of the screens
- Backflushing while the strainer remains online
- Excellent cleanability
- Low water usage for cleaning
- Trouble-free operation

FEATURES

- Design incorporating highly effective strainer area
- Higher backwash velocities compared with other designs
- High-efficiency cleaning system
- Low friction contact parts
- Automatic operation
- Proven technology with large installed base
- Components of proven standard design
- Alternative designs available for high flow rates where footprint is limited

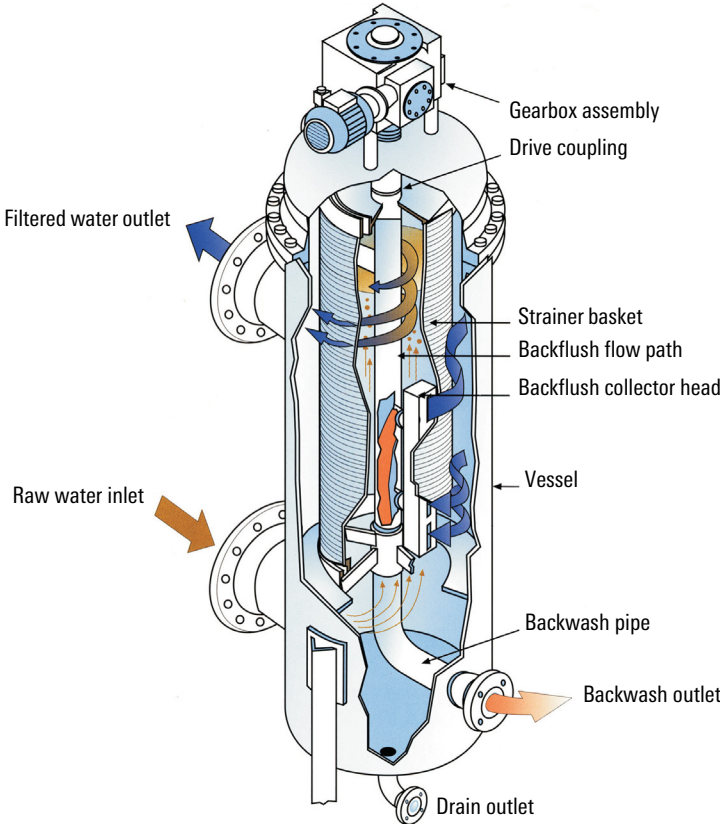
Water is used extensively by the oil industry for cooling, water injection, and utility purposes. It requires filtration to protect downstream equipment and injection and production formations. METROL SEA-SCREEN* coarse strainer designs have supported the oil industry for more than 20 years.

Operating principle and key features

Pressurized water enters the strainer basket at the bottom and passes up and radially outward through the cylindrical strainer basket. Entrained solids larger than the straining slot become trapped in the horizontal recesses on the inlet face of the basket. As the volume of solids increases, the differential pressure across the strainer basket rises, requiring removal of the solids. This is achieved by a high-efficiency automatic backflushing mechanism, which can be initiated in one of three ways:

- backflush interval timer
- manual push button
- differential pressure switch.

The SEA-SCREEN coarse strainer stays online during the backflushing process, at almost full forward flow, with no deterioration in strainer performance. There is automatic sequential cleaning in all the strainer baskets within the package. On conclusion of a backflushing sequence, the control system resets automatically.



Cut-away view of METROL SEA-SCREEN strainer.

METROL SEA-SCREEN

Performance

The SEA-SCREEN coarse strainer range is typically 25 μm up to 2,000 μm [2 mm], and these units are normally guaranteed to at least 98% efficiency without requiring the use of chemicals.

Product range

- Six standard strainer basket size models: 100, 200, 300, 400, 600, and 800
- Individual vessels containing one to seven strainer baskets
- Flow capacity from 20 to 2,270 galUS/min [100 to 10,000 m^3/h] per vessel at 80 microns
- Materials of construction from lined carbon steel vessels with stainless-steel internals to customized alloys
- Custom-wound wedgewire baskets for exacting particle size tolerances

Options and types

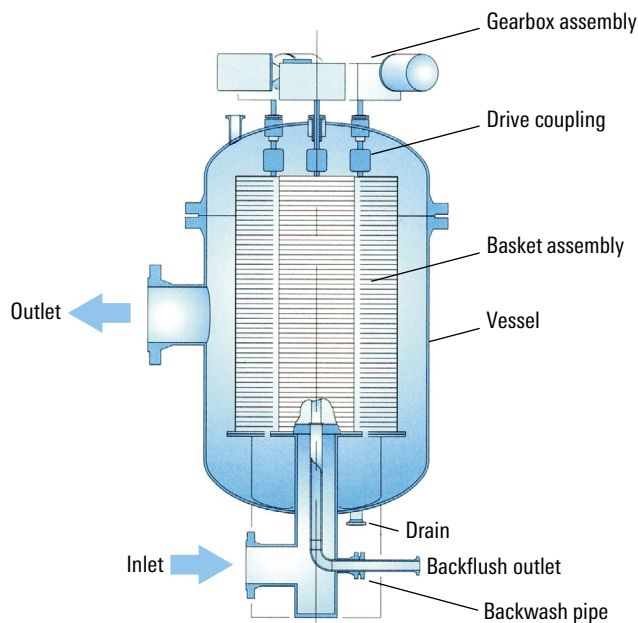
Vessel diameter ranges from 28 to 86 in [700 to 2,200 mm]. Schlumberger uses the versatility of component options to engineer strainer packages to meet our customers' operational requirements within the physical space available. Equipment packages can incorporate all associated pipework, valves, instruments, and controls necessary for reliable operation, including, where required, walkways, ladders, and lifting gantry for basket removal.

Installation examples

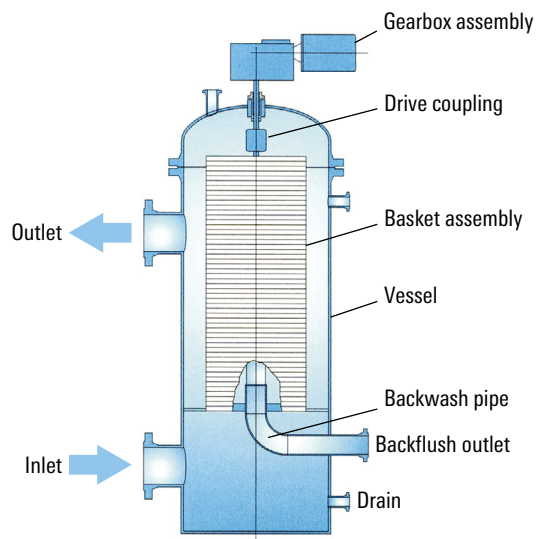
- More than 100 strainer packages currently in service worldwide
- Standard and custom packages handling flows from 220 galUS/min [50 m^3/h] to more than 52,800 galUS/min [12,000 m^3/h]
- Floating production, storage, and offloading (FPSO) vessels, fixed platforms, and onshore installations



Schlumberger offers alternative SEA-SCREEN strainer designs for high-flow-rate applications in which footprint and costs are significant factors.



Multibasket coarse strainer.



Single-basket coarse strainer.

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