

Magnetically Coupled Strainer

MCS 500™

High flow strainer

Mechanically
Cleaned

Permanent
Media

MCS 500 strainer's magnetically coupled actuation eliminates the need for dynamic seals. This technology provides quick and easy access for maintenance, reduces potential leaks and requires few moving parts while providing a long service life.



Environmentally sustainable design

Features

- No dynamic seals
- Minimal purge for low waste operation
- Easy in-line installation
- Continuous 24/7 operation
- Maintenance-friendly design means lower labor costs
- Eco-friendly
- 316 stainless steel housing

Options

- Multi-station configuration
- EPT/EPDM (Nordel™) or Viton® seal material
- Advanced programmable microprocessors
- Construction according to "AD 2000-Merkblätter", DIN EN 13445 or ASME Code
- Automatic pressure transmitters
- Purge welding
- Air bleed capability
- 304 stainless steel controller enclosure
- Gauge ports: 1/4"

The MCS Series™ is engineered to conserve valuable process water while protecting costly equipment from debris. It offers minimal purge volumes in fresh water applications—allowing you to save on the cost of make up liquids, chemical treatment and heating energy.

Featuring fast cleaning magnetically coupled actuation, this design offers an optimized configuration to help improve and reduce costly maintenance and downtime. In addition, this actuation method eliminates the need for cover thru-holes and their associated seals.

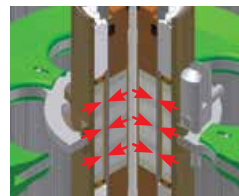
Typical applications

- paper coatings • pcc/gcc slurries • phenolic resins • petroleum based greases • ethanol processing
- cip fluids (sodium hydroxide) • hot fry oils • starch • lime slurries • curtain coaters • nutraceuticals
- machining coolants • adhesives • paints • inks • chocolate • edible oils • detergents • tallow

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The actuation piston and cleaning disc are coupled by powerful rare earth magnets—a simple design that delivers tremendous benefits by eliminating the need for shaft or external drive seals.

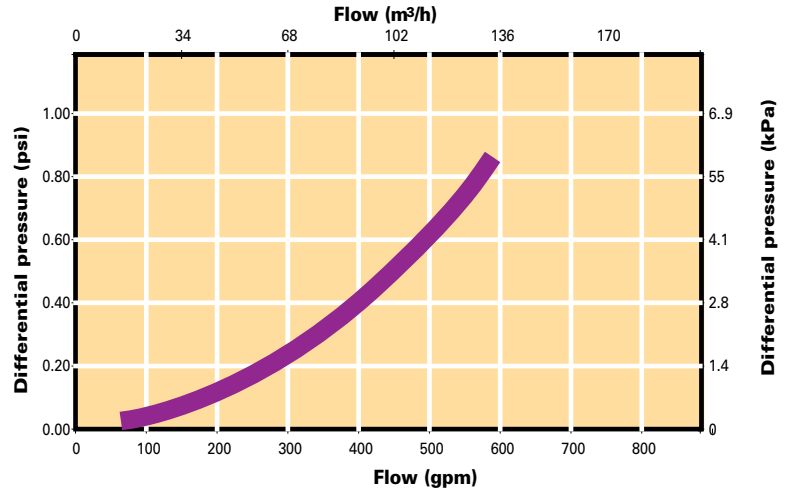
MCS 500 Magnetically Coupled Strainer

MCS 500 high flow strainer specifications

Approx. weight	350 lb (159 kg)
Service height	66 in (1,676 mm)
Flow rates at 100 µm	Up to 500 gpm (114 m³/h)
Operating pressure	30 - 150 psi (2 - 10.5 bar)
Operating temperature, max.	180 °F (82 °C)
Viscosity	Water/water-like fluids
Standard retention*	150 - 1,100 microns
Housing material	316 stainless steel
Elastomers	EPT/EPDM (Nordel) or Viton
Process connections	6 in 150# flanged/DN 200 flanged
Purge connection	1 ½ in NPT/1 ½ in BSPT
Air for actuator drive (clean, dry, non lubricated air)	80 psi (5.5 bar) min. - 116 psi (8 bar) max. 5.0 cfm (141.5 l/min)
Electrical for controllers	115 VAC or 230 VAC 50/60 Hz
Semi-auto voltage	24 VAC, 115 VAC, 230 VAC 24 VDC 115/230 VAC

*Tighter retentions available. Please contact Eaton for more information.

MCS 500 flow rates



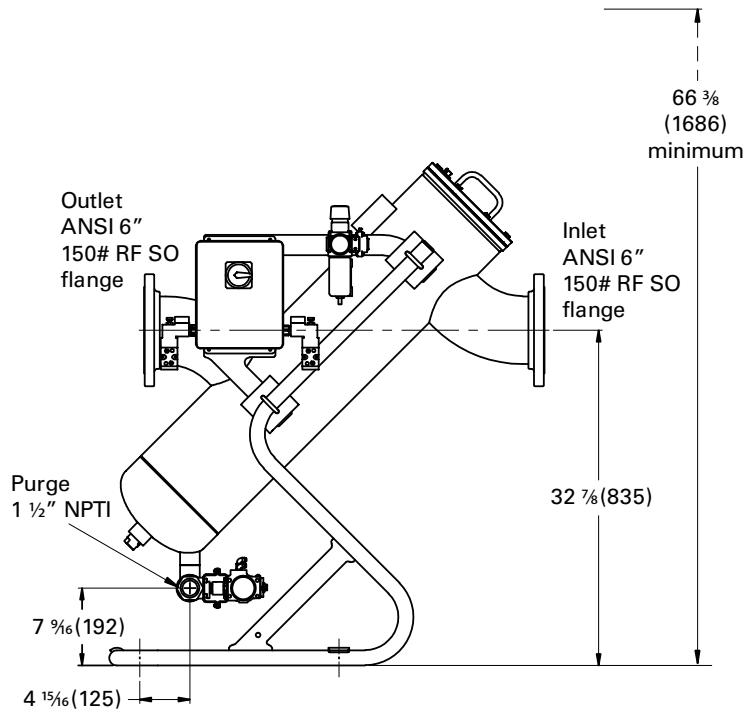
Up to eight MCS units can be configured into a multi-plex system for high volume requirements.

Slotted wedge wire strainer element options

Inch	Micron	Mesh	% Open area
.002	50	325	6
.003	75	200	9
.004	100	150	12
.006	150	100	17
.008	180	80	19
.008	200	70	21
.009	230	60	23
.015	380	40	33
.024	600	30	44
.030	700	20	50
.045	1140	15	60



Additional retentions available, consult Eaton.



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