Automatic Filters for Wastewater Filtration

Eaton High-Flow MCS automatic basket strainers maximize efficiency and operational reliability in sewage treatment plants

Wastewater passes through several mechanical and biological treatment stages in a sewage plant before it can be discharged back into the municipal water network or ecosystem. The primary objective of the mechanical treatment stage is to remove solids of varying sizes. Depending on the specific facility, coarse pre-cleaning via rake and sand trap is conducted and may be followed by the use of basket strainers to separate any residual contaminants such as plastic particles, leaves, wood splinters, etc. Basket strainers are equipped with permanent filter elements that are selected according to the size of the solids to be separated. Using manual strainers requires maintenance personnel to manually clean them several times a day. Automatic cleaning strainers are ideal for low maintenance and efficient operation as they do not require manual intervention.

Eaton offers sophisticated and robust basekt strainers with mechanical cleaning that are proven in wastewater filtration. These strainers automatically initiate the cleaning sequence either when a specified pressure differential is reached or at a preset time. During the cleaning process, a spring-loaded disc in contact with the filter element safely and independently removes the solids for dirt discharge.

Filter Element Options

Eaton offers two filter elements for automatic mechanically cleaned MCS basket strainers. The filter elements are manufactured to the highest industry standards and are designed for long term use in even the most demanding applications.

The perforated filter element has a robust hole pattern and has been successful in sewage treatment plant applications as a replacement for automatic basket strainers. It is ideal for complete retention of large quantities of diverse, coarse dirt particles and solids.

A slotted wedge wire screen is suitable for retaining smaller dirt particles. Depending on the application, this element is used for filter finenesses down to 15 µm.

Perforated filter element

	Specifications MCS automatic strainers		
Flow rates	Up to 340 m^3/h at ≥ 150 µm	MCS-1500	MCS-500
Operating pressure	2–10 bar		
Operating temperature	Max. 82°C		
Design	AISI 316L stainless steel with ergonomic 45-degree inclination		
Filter element options	• Perforated filter elements (sizes 1.6, 3.2 and 6,35 mm*) • Slotted wedge wire screens (filter fineness 1,140 to 15 µm)		
Cleaning	Automatic, mechanical self-cleaning		
Maintenance	Simple due to few moving parts and without special tools		
Control systems	• PLC or Smart Relay controls deliver programmable stand-alone performance • Eaton solutions range from EasyE4 Relay to superior HMI PLC control packages* • Integration into the process control system possible		

* Other options upon request

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