

Model 2596 Automatic Self-cleaning Strainers

Control Systems & Elements

Eaton Automatic Control Systems (ACS) are specifically designed to monitor and operate the backwash cleaning system of Eaton Automatic Strainers. Simple to operate, reliable, and easily maintained. The design allows field adjustments to suit the demands of the service conditions, ensuring effective cleaning with a minimum use of backwash fluid.

STANDARD CONTROL SYSTEM FEATURES

ACS-1 This system features a NEMA 4 rated (water and dust tight) panel box complete with adjustable timer, differential pressure override, 10 amp control relay for backwash valve activation, display lights to indicate Power On, Backwash Valve Open, and High Differential Pressure. A selector switch is also included to manually control the backwash valve functions of Off-On-Auto. The panel also has contact terminals for a motor starter and an external alarm connection. The panel requires 110 VAC input, UL approval is available as an option. The panel has a differential pressure switch and an electrically actuated ball valve that controls the backwash function.

ACS-2 This system has all of the features of the ACS-1 and includes a motor starter in addition to the other standard equipment.

ACS-3 This system has all of the features of the ACS-2 system and includes a 460V/120V step down transformer.

Optional designs to meet specific requirements with special wiring arrangements, panel boxes (NEMA 7, 9), control valves, and air actuation among others, can be furnished.

MODES OF OPERATION

The automatic intermittent mode is adjustable by setting the timer in the panel that controls the frequency of backwashing and the "open" time of the backwash valve. Field adjustments should be made to suit the application. A differential pressure switch to initiate backwashing under high load conditions also can be adjusted.

The continuous backwashing mode is recommended where the backwashing fluid can be recycled to its source or when very high solid loadings are encountered.

In both the automatic intermittent and continuous backwashing modes the backwash arm continuously rotates at a low 2-4 RPM.



COMPONENTS

Motors An electric motor and gear box are furnished as part of the strainer. The standard TEFC motor is 120V/220V, Single phase 60 Hz, or 230V/460V Three Phase 60 Hz, at customer option. Other motors are available.

Differential Pressure Switch A diaphragm-type differential pressure switch is a standard component in all Control Systems. It compensates for sudden high pressure loading by overriding the time cycle and initiating backwashing. The differential pressure setting as well as a delay time setting can be adjusted. Two psid above the clean reading is the differential setting recommended. A delay timer will continue the cleaning to customer's requirement. The time delay can be adjusted from 0.6 seconds to 24 hours, depending on system's needs.

Backwash Valve Electrically actuated (115 VAC/60 Hz) ball valves are also standard in the Control Systems. Materials of construction are suitable for water service. Other materials, valve types and pneumatic actuation are optional.

Backwash Valve Sizes

Strainer Size	Valve Size
2", 3", 4"	1"
6", 8"	1 1/2"
10", 12", 14", 16"	2"
18", 20", 24", 30"	3"
36"	6"
48", 60"	8"



Powering Business Worldwide

Model 2596 Automatic Self-cleaning Strainers

Eaton offers a full range of element choices for Automatic Strainers. All are manufactured to the toughest industry standards and are designed for long term use in even the most demanding applications.

DuraWedge® Element

DuraWedge® is a nonclogging, rugged stainless steel straining element constructed from V-shaped profile wire. Available only from Eaton.



Convolut Element



This is a sturdy, economical stainless steel element for general service use. It is ideal in applications where leaves, twigs, and large amounts of miscellaneous debris are encountered. The generous spaces created by the convolutions provide an area for the debris to collect. "Packing" does not occur due to the gradual contoured shape of the convolutions. During backwashing the debris is easily dislodged and carried away through the backwash arm and out of the strainer.

FEATURES

- Two point contact straining from the "smooth" side prevents plugging or packing of debris and particles.
- Effective dislodging of dirt, debris, and fibers from the element during backwash. This is accomplished by the increased velocity of the reverse flow (during backwash) from the "open side" of the vee.
- Fiber stapling is reduced because of smooth surfaces and the design contour of the profile wire.
- Vertical collector bars form spaces to accumulate debris and dirt, preventing snow plowing of materials by the rotating backwash arm and port shoe.
- No bypass. Elements are sealed.
- Longer service life. All-welded design with circumferential reinforcing bands provides structural integrity.

FEATURES

- Circumferential reinforcing bands for added resistance to pressure and flexing ensures long service life.
- Cartridge design for easy removal and cleaning.
- Convoluted sections are individually isolated by the port shoe during backwash for increased cleaning efficiency.
- No snow plowing. Convoluted profile provides collection spaces for debris.
- Extended area design offered only by Eaton.
- No bypass.
- Sinter bonded mesh available - An Eaton exclusive.

DuraWedge Media Selection

Strainer Size	Standard Openings
2", 3", 4", 6", 8"	1/16", 1/32", 0.015"
10", 12", 14", 16"	1/8", 1/16", 1/32", 0.015", 0.009"
18", 20", 24"	3/16", 1/8", 1/16", 1/32", 0.015", 0.009"

Convolut Media Selection

Strainer Size	Standard Openings
Convolut Perf Element	
2", 3", 4", 6", 8"	1/8", 1/16", 1/32"
10", 12", 14", 16"	1/8", 1/16", 1/32"
18", 20", 24"	5/32", 1/8", 1/16"
Convolut Mesh Element	
All Sizes	20 mesh (0.015") to 200 mesh (0.003")

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