

Factory Direct Closed Loop Filters

Automatic Backwash Control

The Electric H₂O Closed Loop Filtration System (CL Filter) is a high-pressure media filter, constructed from epoxy-lined carbon steel and designed to remove suspended solids down to 10, 5 and 0.5 microns from closed loop heating and cooling systems. The system is designed to maximize filtration flow and minimize backwash time and volume. As the filtered particulates accumulate on the media bed, the pressure differential across the bed increases. When a pre-determined set point is reached, the self-cleaning automatic city-water backwash cycle is initiated, after which filtration is resumed. The NEMA 4X control panel also incorporates a manual and timed override automatic backwash. Dual electric actuators and four two-way bronze ball valves prevent any closed loop system water loss during backwash.



Improve...

- Heat Transfer Efficiency
- Pump Operation
- Evaporator Tube Cleanliness
- Corrosion Rate
- Biological Control

Dual Electric Actuators

Carbon Steel Vessel

Four Actuated Bronze Ball Valves

Stainless Steel Bottom Laterals

Access Port for Chemical Addition

PVC Top Laterals

ELECTRIC H₂O, INC.

Electric H₂O Closed Loop Filter Specifications

Closed Loop Filter Sizing and Selection

Closed loop systems are not exposed to airborne contaminants and therefore have lower particulate concentrations than open systems. Filter sizing is based upon a fluid turnover rate of four times per day. The result is that the entire fluid volume in the system is filtered every six hours.

Filter Sizing

Total System Circulation Rate x 2% = Filter Flow Rate

OR

Total Water Volume / 360 = Filter Flow Rate

Filter Model	Valve Size in	Filter Area ft ²	Flow Rate gpm	Shipping Weight lbs	Operating Weight lbs	Dimensions in			Optional Pump HP
						H	W	L	
CL-12	1	0.78	20	200	250	30	27	20	0.5
CL-18	1.5	1.77	45	350	480	37	32	23	1
CL-24	1.5	3.14	65	420	580	38	38	26	2
CL-30	2	4.91	100	610	820	43	50	30	3
CL-36	2.5	7.06	145	1050	1225	48	54	36	3
CL-42	3	9.61	195	1550	1825	51	65	42	5

Components	Standard Design	Options
Filter Vessel	Epoxy lined carbon steel	304 or 316SS
Design Pressure	150 psig	300 psig
Design Temperature	150 degrees F	300 degrees F
Backwash	Automatic	Manual
Backwash Water	City Water	N/A
Backwash Duration	Three (3) minutes	Application Specific
Upper Internals	Schedule 80 PVC	304 Stainless Steel for 300 psig
Lower Internals	304 Stainless Steel	N/A
Booster Pump	N/A	TEFC motor with prestainer
Control Valves (4)	Bronze two-way ball valves	304 stainless steel
Filter Media	90% removal less than 5 microns	Iron/Manganese removal
Actuators (2)	Electric	Manual
Skid	Epoxy lined carbon steel	304 stainless steel
Control Panel	NEMA 4X	PLC control
Supply Power	115 VAC	Customer specified
Warranty	2 years against defects in materials and workmanship (FOB: Factory)	

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