



VAF 2000 AUTOMATIC FILTER

How It Works

Please refer to the **cutaway drawing of the VAF2000, 3" filter** shown.

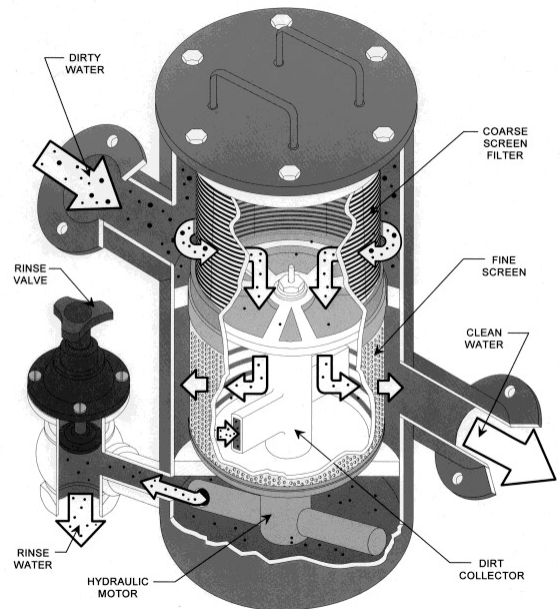
Dirty water enters the filter through the inlet and then passes through the **coarse screen**. It flows downward and then passes through the **fine screen**. Dirt is collected on the inside of the fine screen. The **clean water** then exits through the filter outlet and on to the system.

The dirt cake buildup on the fine screen causes a pressure drop through the filter. When the pressure drop (called the differential pressure) reaches a preset level, the filter controller starts a backwash cycle by opening the hydraulic operated **rinse valve**. This valve exhausts to atmosphere at "0" psi.

The **rinse valve** is connected to the **hydraulic motor compartment** which is separated from the filter compartment by a steel floor shown in the drawing. However, the hollow **dirt collector** extends through the steel floor, thus providing a "path" from the **dirt collector inlet nozzle** thru the **hydraulic motor**, into the **motor compartment** and out the **rinse valve** to atmosphere. The pressure at the nozzle is the pressure inside the filter and as water flows through the "path", it drops to "0" psi when it leaves the **rinse valve**. This creates an aggressive "suction" at the **dirt collector inlet nozzle**. The **nozzle clearance at the fine screen** is very small. The extreme low pressure at the **nozzle** creates a backflow which "sucks" the dirt from the **fine screen**.

The **hydraulic motor** has holes on opposite sides near it's ends. Water jetting out of these holes creates a reaction force (like a pin wheel) which rotates the **motor** and the **dirt collector**. Each **nozzle** on the **collector**, as it rotates, cleans a band on the **fine screen**.

After a preset time, the **rinse valve** closes and the rinse cycle is complete. Very little rinse water is used for each rinse. Please note the filter continues to supply water to the system during the rinse cycle.



Valve and Filter

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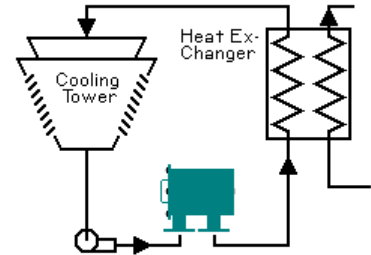
VALVE AND FILTER CORPORATION

Specifications

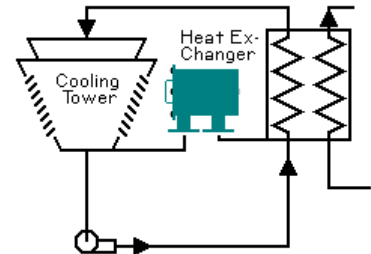
Model	Flange Size	Nominal Flow		Screen Area		Empty Weight lbs
		std	HC	sq ft	sq in	
VF2002L	2" NPT	100	130	0.5	72	100
VF2002LP	2" NPT	100	130	0.5	72	100
VF2003	3"	175	200	0.5	72	120
VF2003P	3"	175	200	0.5	72	120
VF2003L	3"	200	250	1.7	245	180
VF2003LP	3"	200	250	1.7	245	180
VF2004	4"	350	400	0.8	115	150
VF2004P	4"	350	400	0.8	115	150
VF2004L	4"	400	700	3.3	475	230
VF2004LP	4"	400	700	3.3	475	230
VF2006	6"	660	700	1.7	245	230
VF2006P	6"	660	700	1.7	245	230
VF2006L	6"	660	800	3.3	475	280
VF2006LP	6"	660	800	3.3	475	280
VF2006XLP	6"	660	800	4.9	706	350
VF2008	8"	1320	1500	3.3	475	360
VF2008P	8"	1320	1500	3.3	475	360
VF2008LP	8"	1320	1500	4.9	706	450
VF2010	10"	1750	2000	4.4	634	600
VF2010P	10"	1750	2000	4.4	634	600
VF2012	12"	2630	3000	6.6	950	800
VF2012P	12"	2630	3000	6.6	950	800
VF2014	14"	3960	4500	7.4	1066	900
VF2014P	14"	3960	4500	7.4	1066	900
VF2016P	16"	4500	5000	7.4	1066	1100

P = On-Line Filter
 L = Long Screen
 LP = Long Screen, On-Line Filter
 XLP = Extra-Long Screen, On-line Filter

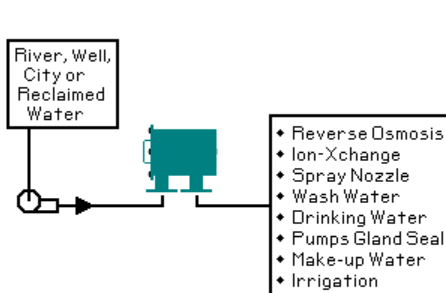
Typical Applications



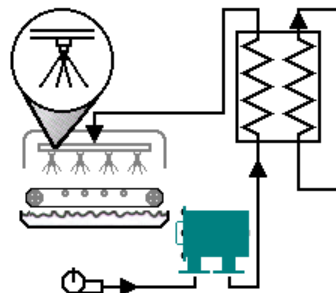
① Cooling - full flow



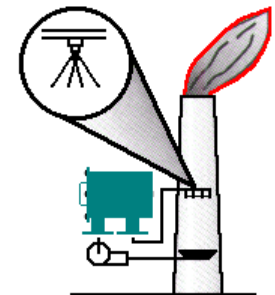
② Cooling - side stream



③ Utility Water



④ Spray Nozzle Protection



⑤ Pollution Control

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