Vertical Self-Cleaning
Hydraulic Filter

VDF

HYDROFILT AUTOMATIC SCREEN FILTERS

Drip & Micro Irrigation | Greenhouse Irrigation | Landscape Irrigation | Pivot Irrigation | Municipal & Drinking Water Pre-Filtration | Process & Cooling Water | Wastewater & Recycling

Experience Complete Independence.

The VDF series delivers non-stop filtration using a robust hydraulic system that requires zero external power, providing both proven reliability and intrinsic safety for hazardous environments. This powerful combination is packed into a smart, space-saving vertical design, perfect for any facility where uptime and security are critical.



BEYOND Filtration BEYOND LIMITS

GENERAL **SPECIFICATION**

Body Material	:	S235JR / SS304L / SS316L
Screen Material (Internal Kit)	:	SS304L,PA6GFR30
Maximum Working Pressure	:	10bar ; 145Psi (up to 16 bar available upon request)
Minimum Working Pressure	:	2.5 bar ; 36Psi
Maximum Working Temperature	:	60 °C ; 140°F
Back Washing Time	:	Pressure Difference Setup
Control System	:	Hydraulic
Filtration Sensitivity	:	20-2000 µ (micron)
Painting Method	:	Electrostatic Powder Coating
Paint Coating Material	:	Epoxy-Polyester

CLEANING PROCESS

The cleaning process is triggered either by elapsed time or a differential pressure threshold. Differential pressure results from particle accumulation on the screen surface, which restricts water flow. This pressure difference—an undesirable condition—is resolved by the cleaning cycle. The filter is programmed to automatically start the cleaning process once the user-defined differential pressure value (recommended at 0.5 bar) is reached, thereby restoring normal operation. When the drain valve opens, a strong vacuum effect is created inside the filter, drawing debris from the screen surface. This suction helps the nozzles effectively remove particles from the screen and discharge them from the system. Once the process is complete, the cleaning collector automatically returns to its original position, and normal filtration resumes. During backwashing, the filtering process continues. To ensure efficient operation, the inlet pressure should not be less than 2 bar (29 psi) during backwashing.

WORKING PRINCIPLE

Water enters through the inlet line and flows toward the outlet line of the filter. During the cleaning process, the drain line serves as the discharge path for accumulated contaminants. The piston rod is responsible for linear motion, allowing the nozzles to scan the surface of the filter screens during cleaning. When water enters the system, it first passes through a coarse screen for preliminary filtration, followed by a fine screen for further filtration. As water flows through the fine screen, particles are retained on its surface. During the cleaning cycle, these particles are suctioned by the nozzles and transported to the cleaning collector. The turbine chamber is connected to the atmosphere and houses the turbine, which generates rotational motion to drive the nozzles. The combination of the linear motion of the piston rod and the rotational motion from the turbine ensures complete coverage of the screen surfaces. The hydraulic piston drives the piston rod. Activation of the piston and the opening of the drain valve occur simultaneously.

Technical Specifications

CODE	Inlet/Outlet		A	B	L1	L	D	F	Drain Flow Rate		Main Flow Rate		Filtration Area	Nozzle	Screen	Weight
	Inch	DN	mm	mm	mm	mm	Inch	Inch	L/s	GPM(US)	m³/h	GPM(US)	cm²	Qty.		kg
VDF/CVDF102F	2	50	310	270	205	760	10	2	3,3	53	30	132	658	2	1	22
VDF/CVDF1025F	2 1/2	65	310	270	205	760	10	2	3,3	53	40	176	658	2	1	23
VDF/CVDF102	2	50	390	270	365	920	10	2	3,3	53	40	176	1317	2	2	37
VDF/CVDF1025	2 1/2	65	390	270	365	920	10	2	3,3	53	50	220	1317	2	2	38
VDF/CVDF103	3	80	390	270	365	920	10	2	3,3	53	55	242	1317	2	2	39
VDF/CVDF103S	3	80	440	270	465	1020	10	2	4,1	66	70	308	1975	3	3	42
VDF/CVDF104	4	100	440	270	465	1020	10	2	4,1	66	100	440	1975	3	3	44



