



ODISMATIC HYDRAULIC SELF CLEANING FILTER - SERIES 851D

The Odismatic hydraulic self cleaning filter series 851D are used as an economic compact Automatic Screen Filter in places without electricity. The filter contains a Hydraulically operated collector with suction nozzles to ensure continuous trouble free operation.

Filtration

Water enters the filter from the bottom passing through the screen mesh and exiting at 90°. This build up of deposits creates a differential pressure across the screen and once the preset pressure differential value of 50kPa is reached, the pressure switch gauge will activate the self cleaning process.

Material

Filter housing is carbon steel (option for stainless steel available)
 Filter coating is a 120 micron protective coating of durable polyester
 Coating is applied electrostatically and oven cured on a zinc phosphate layer for anti corrosion protection
 Coating is applied to internally and externally on housing
 All internal parts are made from plastic materials and non-corrosive metals
 Quick access to the internal parts of the filter is from the top
 Screen is weaved wire mesh around pvc cylinder
 Gaskets are natural rubber (option for other materials available)
 Control system is a AC/DC flushing controller with built-in DP switch and valve. DP switch is set at 50 kPa

Applications

- Suitable for irrigation, algae and organic matter



Specifications	Bar	PSI	kPa
Minimum Working Pressure	2	30	206
Maximum Working Pressure	10	150	1000

Mesh Sizing Chart									
Mesh	500	300	200	150	120	100	80	50	40
Micron	30	50	80	100	120	150	200	300	400



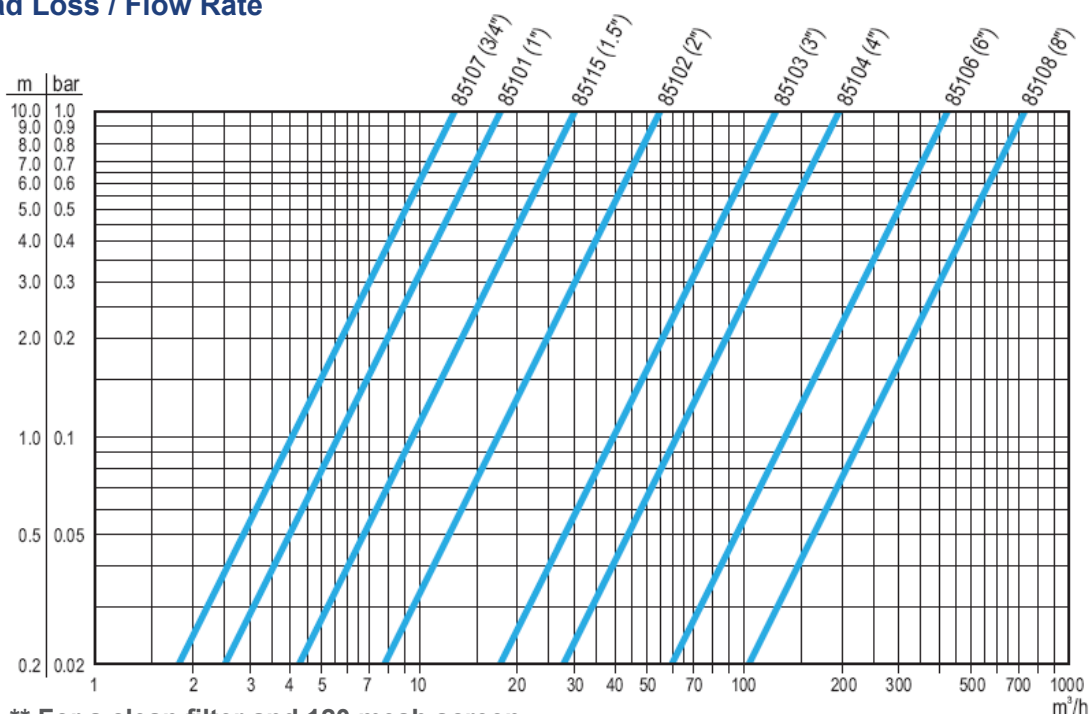
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Recommended Flow Rates

Model	Description	Screen Area	Max Flow M ³ /H	Flush Rate M ³ /H	Flush kPa
85107	20mm hydraulic self cleaning filter	270cm ²	4	2 - 3	200
85101	25mm hydraulic self cleaning filter	270cm ²	7	2 - 3	200
851D15	40mm hydraulic self cleaning filter	850cm ²	15	4 - 5	200
851D02	50mm hydraulic self cleaning filter	850cm ²	25	4 - 5	200
851D03	80mm hydraulic self cleaning filter	1450cm ²	40	4 - 5	200
851D04	100mm hydraulic self cleaning filter	1450cm ²	80	4 - 5	200
851D04L	100mm hydraulic self cleaning filter	2360cm ²	80	8 - 10	200
851D06	150mm hydraulic self cleaning filter	4500cm ²	150	8 - 10	200
851D08	200mm hydraulic self cleaning filter	6200cm ²	300	12 - 14	200
851D08L	200mm hydraulic self cleaning filter	8000cm ²	300	15 - 17	200
851D10	250mm hydraulic self cleaning filter	8000cm ²	400	15 - 17	200

All 851 series filters available ex-factory, please consult HR Products for further technical specifications

Head Loss / Flow Rate



** For a clean filter and 120 mesh screen

■ 1 Bar = 100 kPa = 1.02kg/cm² = 10.2m (W.C) = 14.5 psi

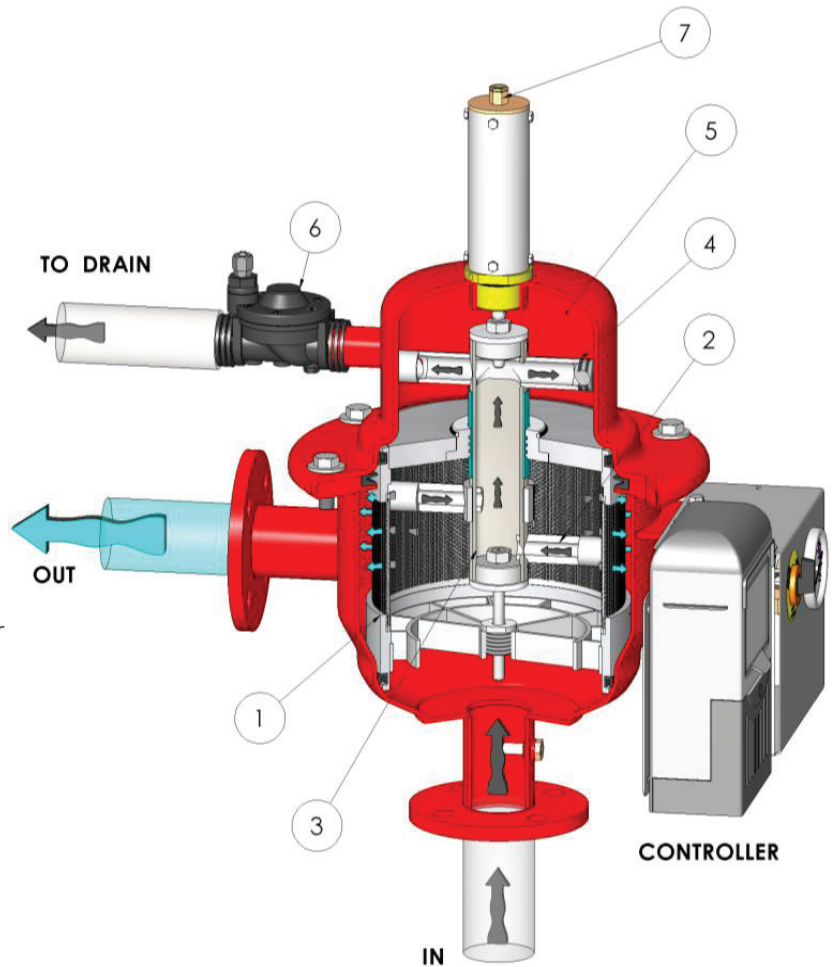


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OPERATING PRINCIPLES

Normal Flow Pattern

Raw water enters the filter through the inlet port, passing through the fine screen (1) and out to the outlet port. The sediments stopped on the screen (1) create a "cake" of sediment. This "cake" improves filtration efficiency as it performs a finer filtration. The sediments accumulated on the screen, create a differential pressure across the screen. The differential pressure rises until the predetermined value is reached [normally 0.5 bar (7.5 psi)]. A pressure switch gauge will activate the self cleaning process. A timer backup guarantees that the time passed from the last self cleaning process will not be longer than the preset value determined by the user.

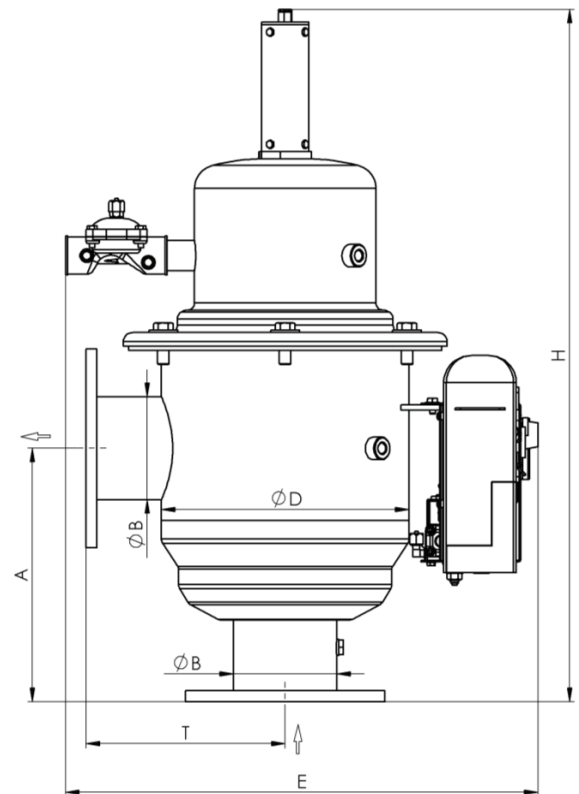
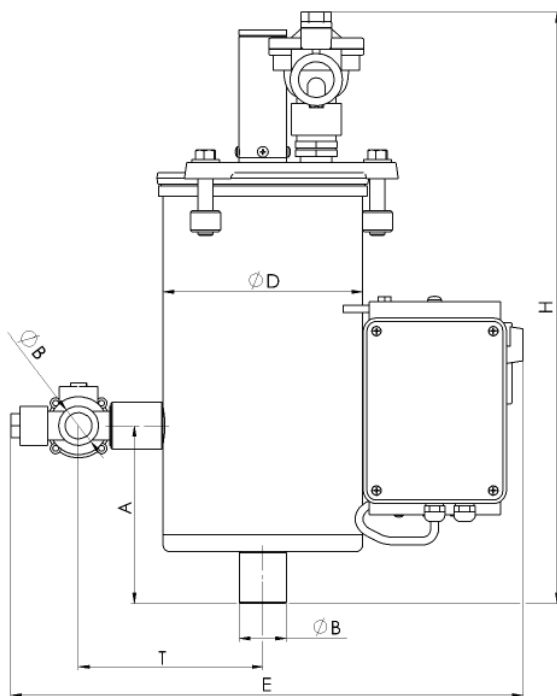


Self Cleaning

On the flushing command, the flush valve (6) will open to atmosphere which creates a pressure drop in the motor chamber (5) and the dirt load is sucked in from the screen by the nozzles (2), at the same time the pressure drop moves the piston (7) and collector in linear movement, the hydraulic motor (4) rotates the collector. These two processes simultaneously create a spiral movement of the nozzles which allows them to cover the whole screen surface enabling the cleaning of the screen. Cleaning time is carried out in seconds (clean times vary on filter size) and when completed the filter returns to the filtering process. This self cleaning flush cycle can be initiated by the DP switch timer or manual by user.
Flushing duration 40mm to 100mm filters is 8 -12 seconds
Flushing duration 150mm to 250mm filters is 14 - 16 seconds

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DIMENSIONS & WEIGHT



MODELS

85107, 85101

MODELS

851D15, 851D02, 851D03,
851D04, 851D04L, 851D06,
851D08

Model	B	D	A*	E*	H*	T*	Weight
	mm	mm	mm	mm	mm	mm	Kg
85107	20	150	150	410	500	155	11
85101	25	150	150	410	500	155	11
851D15	40	250	230	540	600	220	26
851D02	50	250	230	540	600	220	28
851D03	80	250	280	540	770	220	41
851D04	100	250	280	540	770	220	42
851D04L	100	250	280	540	905	220	48
851D06	150	300	540	600	1310	320	65
851D08	200	300	700	600	1530	320	78