CST Wastewater Solutions

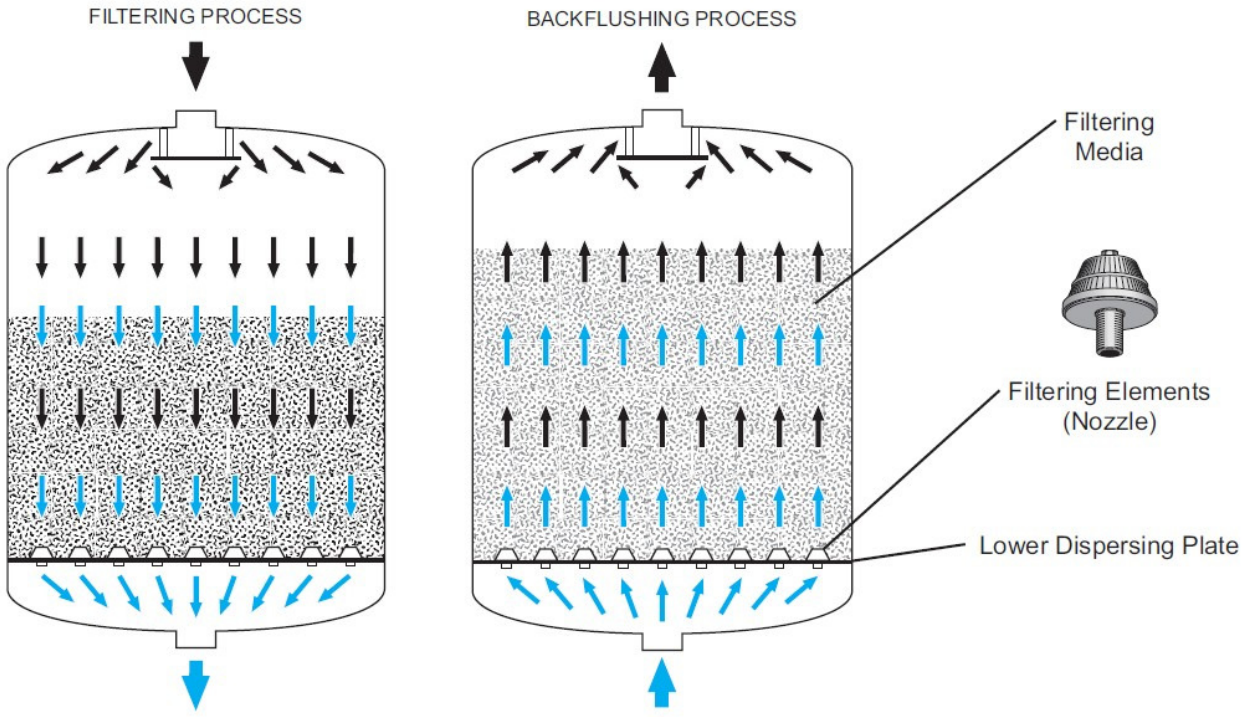
Series 4500

CST MULTI MEDIA FILTERS

CST M-M filters are suitable for the widest range of applications and particularly effective for removal of organic and/or inorganic suspended solids from water down to 5 micron and below.

The Deep Bed, multimedia filters are suited for many applications as re-use applications, water pre-treatment applications for reverse osmosis and de-ionization systems, granular activated carbon, production of drinking water, Iron & Manganese removal from surface, ground or well water, waste water tertiary treatment, swimming pools filtration, cooling water side stream recycling etc. CST M-M filters (series 4500) use a unique design of a double chamber, divided by a welded reinforced steel plate.
The upper chamber contains the media; the lower chamber is empty and collects the filtered water. The plate is covered by "mushroom" type diffusers which are PP, slotted conical units. They disperse the water uniformly, using the whole media volume effectively, avoiding the occurrence of channeling or caking when operated correctly.

The backwash process is designed to clean the filter media. The flow direction is reversed and the flow rate is increased, thus causing a turbulent expansion of the multimedia as a fluidized bed. The backwash process flushes out the entrapped debris effectively. After the backwash is completed, there is a direct wash and then the filter resumes its normal filtering mode as clean as a new filter. Air scour option is available if required.



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Material of Construction:

All filters installed in the filtration systems are manufactured from robust carbon steel ASTM- A570-GR36. They ensure long lasting system operating life.

Protective Coating:

The coating process provides CST products with maximum anti-corrosion protection.

For filters up to 60" (included) the coating process is performed in seven stages, as follows:

1st stage:	Automated shot blast cleaning of products to a level of SA 2.5 as per international standard ISO 8501.
2nd stage:	Phosphatization.
3rd stage:	Rinsing.
4th stage:	Sealing.
5th stage:	Drying.
6th stage:	Electrostatic polyester/epoxy spraying.
7th stage:	Oven curing.

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This process creates a perfectly coated product with a protective layer of 100 micron.

For filters 72" & bigger, the coating process includes two stages, as follows:

Stage 1:	Automated shot-blast cleaning to a level of SA 2 ½ as per ISO 8501.
Stage 2:	Internal coating of 2-3 layers with epoxy paint.

This lining process creates a perfectly coated product with a protective layer of 150-200 micron.

Operation:

- Normal working conditions are obtained when headloss is less than 0.3 bar (5 psi) at a clean filter.
- If head loss exceeds 0.3 bar (5 psi) - filter is either partially clogged or operating under an excessive flow rate.
- Filters back flushing: The flushing process starts automatically, according to one of the following criteria:
  - Differential pressure between the inlet and outlet of the filters (DP=5m).
  - A preset time interval elapses.
  - Manually activated by operators demand.

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Filtration Areas

Model	Body diameter		ea	
	Inch	mm	m^2	$Feet^2$
45008 DW/DWL/SPA/G	8"	220	0.040	0.430
45010 DW/DWL/SPA/G	10"	273	0.060	0.645
45012 DW/DWL/SPA/G	12"	324	0.080	0.861
45016 DW/DWL/SPA/G	16"	390	0.120	1.292
45020 DW/DWL/SPA/G	20"	480	0.180	1.937
45024 DW/DWL/SPA/G	24"	610	0.290	3.121
45030 DW/DWL/SPA/G	30"	750	0.440	4.736
45036 DW/DWL/SPA/G	36"	900	0.640	6.888
45048 DW/DWL/SPA/G	48"	1200	1.130	12.163
45055 DW/DWL/SPA/G	55"	1400	1.540	16.576
45060 DW/DWL/SPA/G	60"	1540	1.860	20.020
45072 DW/DWL/SPA/G	72"	1800	2.540	27.340
45080 DW/DWL/SPA/G	80"	2000	3.140	33.798
45090 DW/DWL/SPA/G	90"	2200	3.800	40.902
45100 DW/DWL/SPA	100"	2500	4.910	52.849
45120 DW/DWL/SPA	120"	3000	7.070	76.099

- **Filter diameters over 1600 mm (64") feature an 18" dia. Manhole.**

Dimensions:

Model DW (Cylinder height 1400 mm):

Model	Body diameter		ØD (mm)	Ø d (inch)	Ø (inch)	Ø (in	H	H1 H	2 m)
	Inch	mm							
45008 DW	8"	220	220	1"	1"	1"	1770	300	1620
45010 DW	10"	273	273	1.5"	1"	1"	1820	300	1500
45012 DW	12"	324	324	2"	1"	1.5"	1800	300	1500
45016 DW	16"	390	390	2"	1"	2"	1800	300	1450
45020 DW	20"	480	480	2"	1"	2"	1925	300	1450
45024 DW	24"	610	610	2"	1"	2"	1925	300	1450
45030 DW	30"	750	750	2"	2"	2"	1875	350	1520
45036 DW	36"	900	900	2"	2"	2"	1880	350	1520
45048 DW	48"	1200	1200	3"	2"	2"	2000	450	1550
45055 DW	55"	1400	1400	4"	2"	2"	2180	600	1550
45060 DW	60"	1540	1540	4"	2"	2"	2200	600	1550
45072 DW	72"	1800	1800	6"	2"	3"	2530	870	1600
45080 DW	80"	2000	2000	6"	2"	3"	2570	870	1720
45090 DW	90"	2200	2200	6"	2"	3"	2600	890	1740
45100 DW	100"	2500	2500	8"	2"	3"	2730	950	1900
45120 DW	120"	3000	3000	8"	2"	3"	3560	1250	2250

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Model DWL (Cylinder height 2000 mm):

Model	Body diameter		ØD (mm)	Ø d (inch)	Ø 1 (inch)	Ø (in	H	H1 H	2 m)
	Inch	mm							
45008 DWL	8"	220	220	1"	1"	1"	2370	300	2220
45010 DWL	10"	273	273	1.5"	1"	1"	2420	300	2100
45012 DWL	12"	324	324	2"	1"	1.5"	2400	300	2100
45016 DWL	16"	390	390	2"	1"	2"	2400	300	2050
45020 DWL	20"	480	480	2"	1"	2"	2525	300	2050
45024 DWL	24"	610	610	2"	1"	2"	2525	300	2050
45030 DWL	30"	750	750	2"	2"	2"	2475	350	2120
45036 DWL	36"	900	900	2"	2"	2"	2480	350	2120
45048 DWL	48"	1200	1200	3"	2"	2"	2600	450	2150
45055 DWL	55"	1400	1400	4"	2"	2"	2780	600	250
45060 DWL	60"	1540	1540	4"	2"	2"	2800	600	2150
45072 DWL	72"	1800	1800	6"	2"	3"	3130	870	2200
45080 DWL	80"	2000	2000	6"	2"	3"	3170	870	2320
45090 DWL	90"	2200	2200	6"	2"	3"	3200	890	2340
45100 DWL	100"	2500	2500	8"	2"	3"	3330	950	2500
45120 DWL	120"	3000	3000	8"	2"	3"	4160	1250	2850

Model SPA (Cylinder height 1150 mm):

Model	Body diameter		ØD (mm)	Ø d (inch)	Ø 1 (inch)	Ø (in	H	H1 H	2 m)
	Inch	mm							
45008 SPA	8"	220	220	1"	1"	1"	1520	300	1370
45010 SPA	10"	273	273	1.5"	1"	1"	1570	300	1250
45012 SPA	12"	324	324	2"	1"	1.5"	1550	300	1250
45016 SPA	16"	390	390	2"	1"	2"	1550	300	1200
45020 SPA	20"	480	480	2"	1"	2"	1675	300	1200
45024 SPA	24"	610	610	2"	1"	2"	1675	300	1200
45030 SPA	30"	750	750	2"	2"	2"	1625	350	1270
45036 SPA	36"	900	900	2"	2"	2"	1630	350	1270
45048 SPA	48"	1200	1200	3"	2"	2"	1750	450	1300
45055 SPA	55"	1400	1400	4"	2"	2"	1930	600	1300
45060 SPA	60"	1540	1540	4"	2"	2"	1950	600	1300
45072 SPA	72"	1800	1800	6"	2"	3"	2280	870	1350
45080 SPA	80"	2000	2000	6"	2"	3"	2320	870	1470
45090 SPA	90"	2200	2200	6"	2"	3"	2350	890	1490

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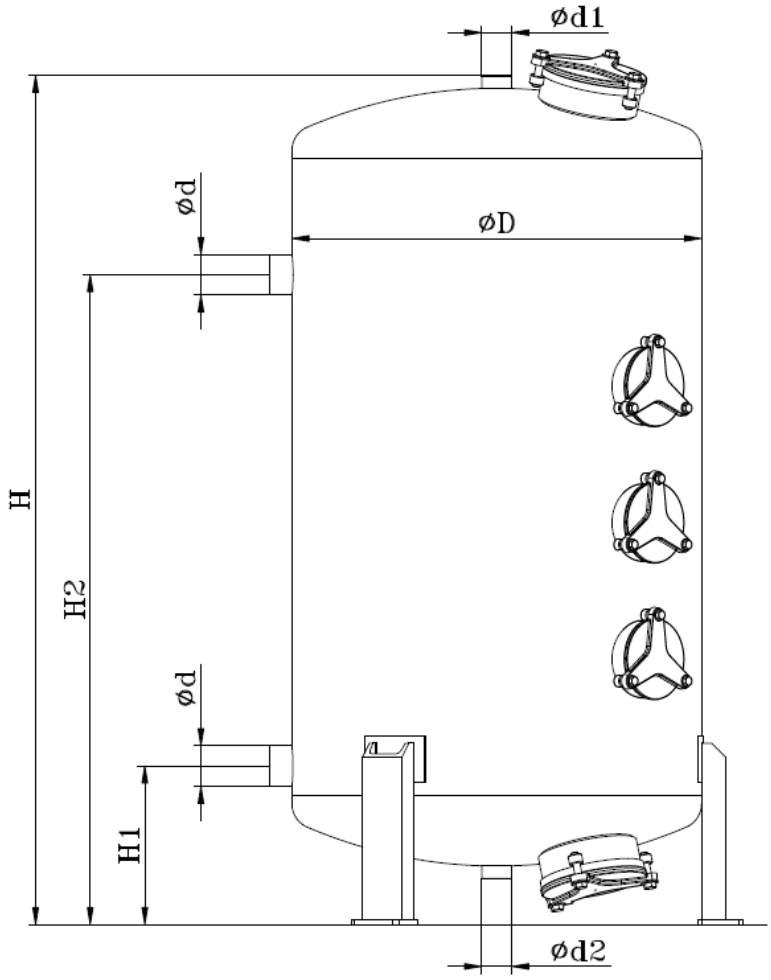
Model G (Cylinder height 980 mm):

Model	Body diameter		ØD (mm)	Ø d (inch)	Ø 1 (inch)	Ø (in	H	H1 H	2 m)
	Inch	mm							
45008 G	8"	220	220	1"	1"	1"	1350	300	1200
45010 G	10"	273	273	1.5"	1"	1"	1400	300	1080
45012 G	12"	324	324	2"	1"	1.5"	1380	300	1080
45016 G	16"	390	390	2"	1"	2"	1380	300	1030
45020 G	20"	480	480	2"	1"	2"	1505	300	1030
45024 G	24"	610	610	2"	1"	2"	1505	300	1030
45030 G	30"	750	750	2"	2"	2"	1455	350	1100
45036 G	36"	900	900	2"	2"	2"	1460	350	1100
45048 G	48"	1200	1200	3"	2"	2"	1580	450	1130
45055 G	55"	1400	1400	4"	2"	2"	1760	600	1130
45060 G	60"	1540	1540	4"	2"	2"	1780	600	1130
45072 G	72"	1800	1800	6"	2"	3"	2110	870	1180
45080 G	80"	2000	2000	6"	2"	3"	2150	870	1300
45090 G	90"	2200	2200	6"	2"	3"	2180	890	1320



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