

HYDROCYCLONE FILTERS

HCF 150CL SERIES



A Hydrocyclone filter uses centrifugal force to separate heavier particles from lighter particles. The tangential nozzle at the top induces a whirl which creates a centrifugal force. The heavy debris particles are pushed to the side walls and the lighter clean liquid flows out through the top outlet Nozzle. Filtration is further enhanced by the conical body which further accelerates the flow and increases centrifugal force.

Applications

- Separation of sand and other solids from water
- Pre filtering of water with high loads of sand before sand before secondary filters
- Protects pumps valves and other capital irrigation equipments from abrasion from by debris

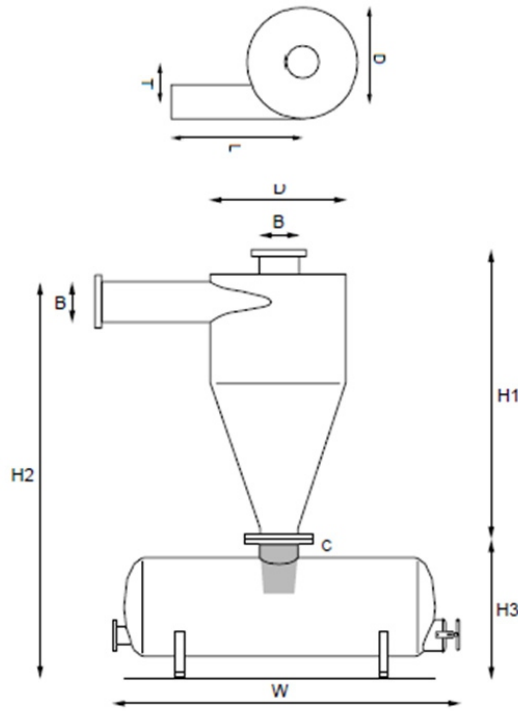
Design Features

- Vessels are designed to ASME SEC VIII Div - I
- Max. Pressure 120 psi
- Min. head loss for effective operation 3 to 8 psi
- Conical body accelerates flow increasing centrifugal force and enhances filtration
- Reduced flushing frequency due to large debris chamber
- Debris hand hole is standard, Clamped cleaning port on request
- Manual butterfly valve for flushing is standard
- Motorized butterfly valve with control timer can be supplied on request
- Rubber cones for sizes higher than 14" is standard to avoid erosion of the neck
- 100 micron polyester oven-cured protective coating with zinc sulphate under layer
- ANSI, DIN, IS connection flanges can be supplied
- CS TO IS 2062, SA 516 GR 60-70, SS 304, SS 316 Materials of Construction
- Nozzles can be of CS TO IS 1239/3589 , A106, SS304, SS316 MOC

Installation & Operating Procedure

- Debris chamber must be drained when it is 1/3 rd full
- Flow at the outlet should be throttled to 3 to 8psi for effective filtration
- The flow has to be constant by and large for the filtration to be efficient
- Hydrocyclone filters are required when the turbidity is 2 to 20ppm
- An automatic drain valve is recommended when the ppm is high

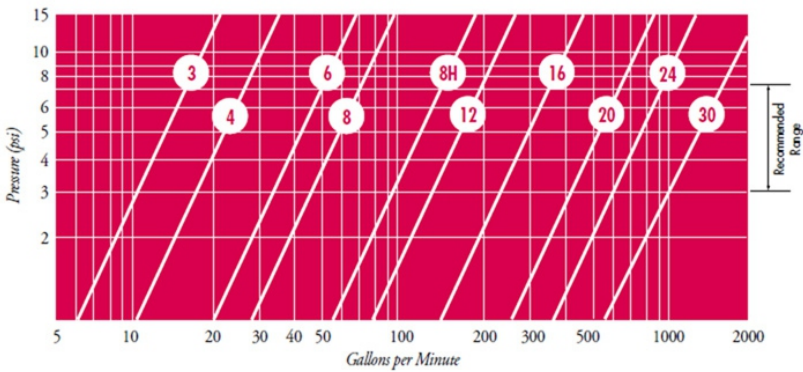
Dimensions



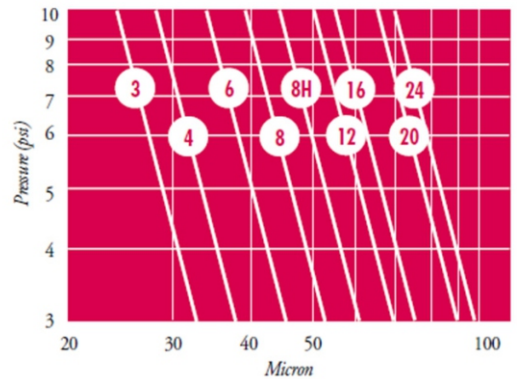
Line Size B nb	Min Flow lpm	Max. Flow lpm	D nb	C nb	L mm	T mm	H1 mm	H2 mm	W mm	H3 nb
20	35	60	75	20	120	32	260	325	250	150
25	36	125	100	25	150	40	330	400	250	150
40	126	200	150	40	235	65	495	545	350	200
50	201	285	200	50	300	75	580	615	350	200
80	286	570	250	80	300	105	675	735	550	790
100	287	1370	400	150	595	130	875	1480	750	890
150	1371	2660	500	200	595	165	1150	1610	750	1370
150	2661	3800	600	200	595	215	1405	1860	750	1370
200	3801	6080	750	200	700	265	1940	2210	750	1370

Pressure Drop Curve

Hydrocyclone Headloss



Particle size separation in Micron



NOTE: The Micron chart is based on sand with a specific gravity of 2.7 gr/cm