TIMEX
Filtration & Water Systems

TDV Series

High efficiency range of filters that filter down to sub 1.0 micron to produce a supply of clean water that is free of solids and has a reduced bacterial count

flow rates	filtration performance	Inlet/outlet diameters	minimum operating pressure
up to 68 m^3/h	0.45-10 micron*	up to 3"	1 bar (15 psi)

features:

- All stainless steel vessel material construction Special alloys upon request
- Giving High Performance filtration through a combination of unique design and specially formulated media
- Filtration of process water with efficiencies of up to 99%
- Filtration of up to 5 times more water as a conventional filter achieving only 20 micron filtration
- Ensuring very short backwash times
- Cleaning up already contaminated systems and achieving improved performance
- Reducing backwash loss of process water by up to 95%
- The requirement of only 1 bar inlet pressure to operate
- Design and technology allows for high flow rates and high performance of filtration
- Applications: Municipal Water, Industrial Water, Irrigation, Oil & Gas and closed loop heating systems

* Media bed construction dependent

How TDV Filters Work

General

The TIMEX TDV Automatic Filter is an extremely simple but highly effective technology that brings a more effective way of water filtration than has previously been available. The TDV series is a range of 6 filters that can handle flow rates from 0.74m^3/h up to 68m^3/h in the larger TDV-1200 CF vessel.

The Filtering Process

Untreated water enters via the inlet which is located at the top of the vessel and is passed through the patented TDV vortex generator. This pipe has a dual outlet configuration inside the vessel which generates a double vortex. This allows for the solids to be suspended above the filter bed. This leaves the water being cleaned free to pass through the specially constructed media bed with less resistance whilst giving the filter bed longer life before backwashing is needed. The filter bed is constructed of 4 different grades of Active Glass media of which the coarse layer is used at the bottom, followed by 2 additional layers of support media and the special blend top layer. The cleaning process is achieved by backwashing the media.

The Self-Cleaning Process

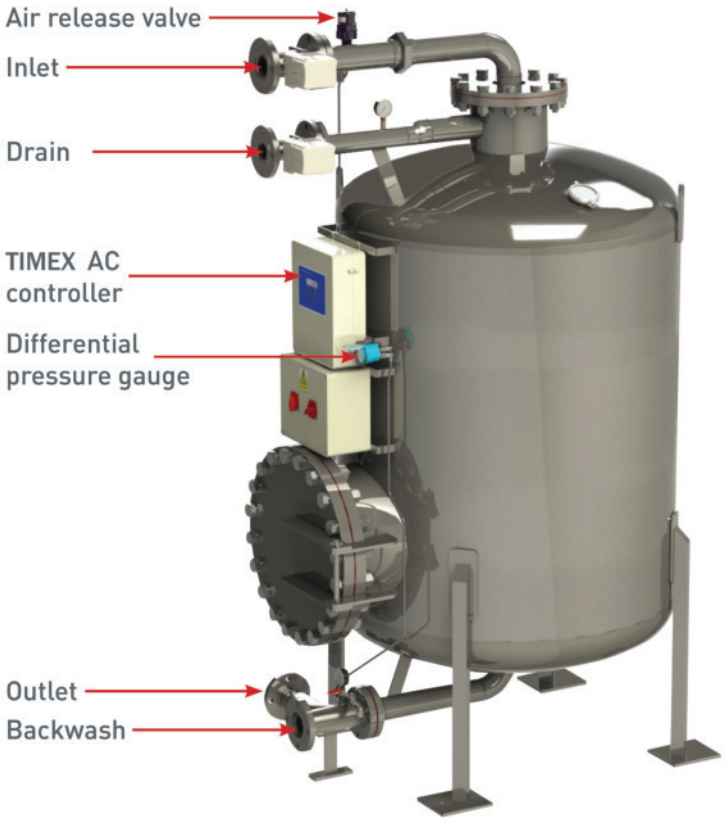
Backwashing the filter bed is achieved by either a set time or, if backwashing is needed sooner, a pressure differential gauge which senses the Delta P when it reaches the pre-set value. Once this has been triggered either by time or pressure differential, then the self-cleaning process begins. The inlet valve shuts followed by the process water out valve. The backwash valve then opens followed by the drain valve. This forces the water being used for backwashing up through the nozzles at the bottom of the vessel, through the filter bed which lifts the solids from the top layer of the media. Once lifted off the bed it is discharged through the drain which is located at the top of the vessel. When the backwash is finished at a pre-determined time, the valves shut in reverse and filter process is resumed.

The Control System

The TIMEX AC controller which is used with the TDV Series allows for the backwash timings to be altered to suit the specific site requirements. It also allows for pumps to be added to the system to aid with process and/or backwash flow. There is also a manual backwash facility which will work in conjunction with the set time and differential pressure settings for the filters.

The self-cleaning cycle is initiated as a result of any of the followings:

- Receiving a signal from the pressure differential gauge
- Time interval parameter set at the controller
- Manual start
- Remote access



TDV 125/200/300/600/900/1200

Technical Specifications

Filter Type	TDV 125	TDV 200	TDV 300	TDV 600	TDV 900	TDV 1200
General Data						
Maximum flow rate*	0.75 m³/h	2 m³/h	4.3 m³/h	17 m³/h	40 m³/h	68 m³/h
Inlet/outlet diameter**	½" inlet ½" outlet	1" inlet 1" outlet	1" inlet 1" outlet	1 ½" inlet 1 ½" outlet	2" inlet 2" outlet	3" inlet 3" outlet
Design pressure maximum	5 barg	7 barg				
Minimum working pressure	1 bar					
Maximum allowed DP	1.5 bar					
Maximum temperature***	65 degrees					
Shipping weight (approx.)****	90 kg	280 kg	387 kg	875 kg	2155 kg	3800 kg

* Consult TIMEX for optimum fow depending on fltration degree & water quality.

** Flange standards as per request.

*** High temperature option available.

**** Standard shipping weight, not export shipping weight.

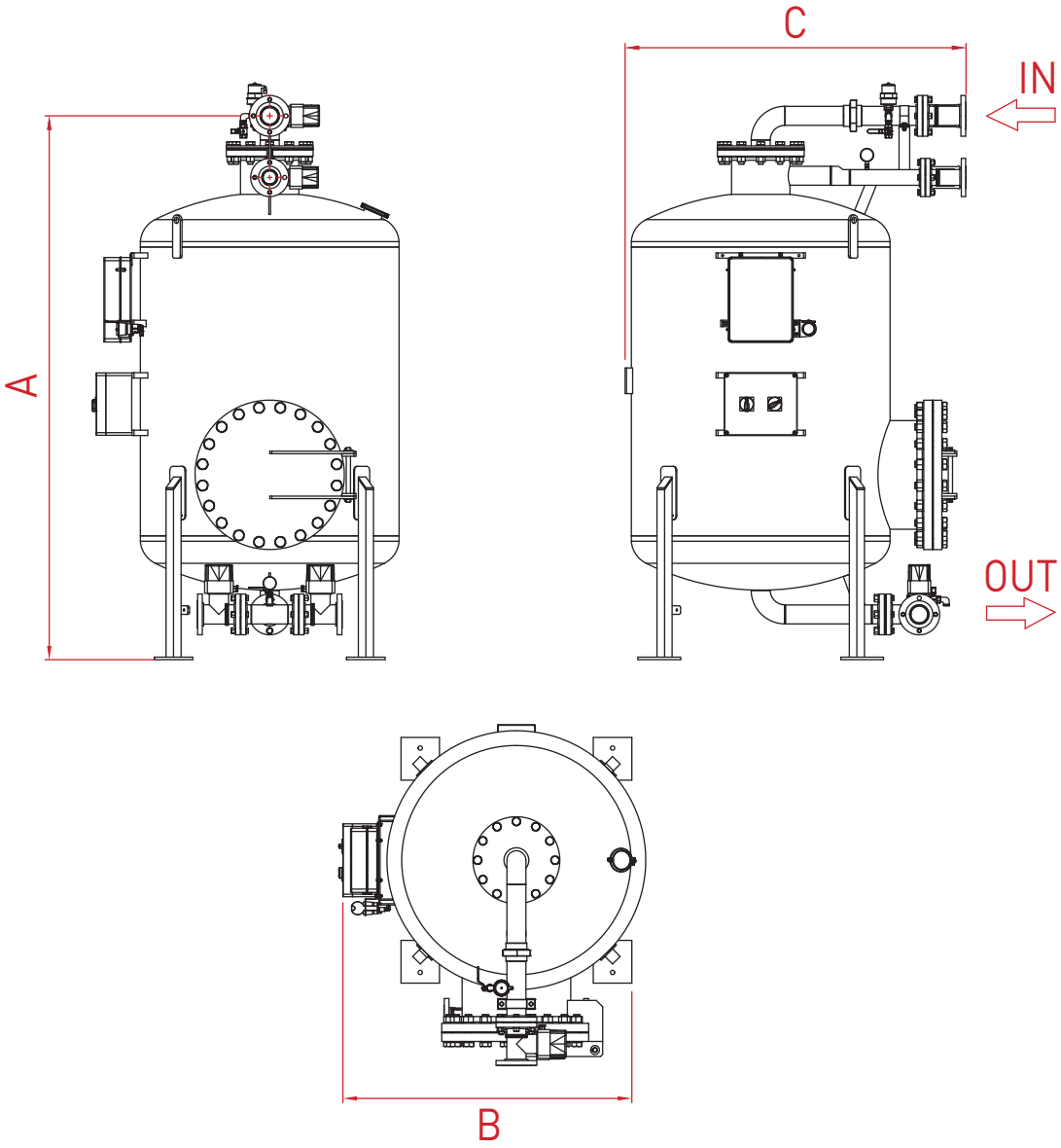
Backwash Data						
Backwash flow at 2 bar	0.3 m³/h	0.79 m³/h	1.77 m³/h	7.07 m³/h	16 m³/h	28 m³/h
Backwash time	2 – 4 mins adjustable					
Backwash water volume	10 l based on a 2 min cycle	26 l based on a 2 min cycle	59 l based on a 2 min cycle	240 l based on a 2 min cycle	530 l based on a 2 min cycle	940 l based on a 2 min cycle
Rated operation voltage*	110v or 240v/1/50hz					

* Auxiliary panel will be needed for 3 phase option.

Construction materials	
Filter housing and lid*	SS 304 Built according to PED 5500:2006 Category 3 Other options available upon request
Nozzles*	Polypropylene for use below 60 degrees Other options available upon request for higher temperature applications
Gaskets*	Synthetic rubber, NBR
Filter media	4 varying layers of Activated Glass
Filter base*	Galvanised steel
Pipework*	Standard PVCu, copper or stainless steel

* Other construction materials and coatings for corrosive use or for drinking water are available upon request.

TDV 125/200/300/600/900/1200



Approximate dimensions request GA for design

Dimensions	TDV125	TDV200	TDV300	TDV600	TDV900	TDV1200
A	740 mm	1,125 mm	1,750 mm	2,161 mm	2,313 mm	2,542 mm
B	418 mm	423 mm	427 mm	648 mm	860 mm	1,375 mm
C	445 mm	533 mm	617 mm	886 mm	1,334 mm	1,593 mm

Weight	TDV125	TDV200	TDV300	TDV600	TDV900	TDV1200
Vessel Empty	63.4 kg	162 kg	162 kg	295 kg	524 kg	815 kg
Media	3.8 kg	30.5 kg	87 kg	257 kg	800 kg	1,465 kg
Water	2.8 kg	27 kg	78 kg	224 kg	729 kg	1,420 kg
Total weight	70 kg	220 kg	327 kg	776 kg	2,053 kg	3,700 kg

industry
Automotive, Aviation, Ballast treatment, Electronics, Food & Beverage; Mining, Oil & Gas, Petrochemical, Power Generation, Pulp & Paper

municipal
Potable Water, Waste Water, Desalination, Brackish Water, High rise buildings, Pre-filtration to Membranes

irrigation
Agriculture, Golf & Turf, Green Houses

aquaculture
Fish Farming, Recirculating Aquaculture Systems (RAS), Fish Processing Industry

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