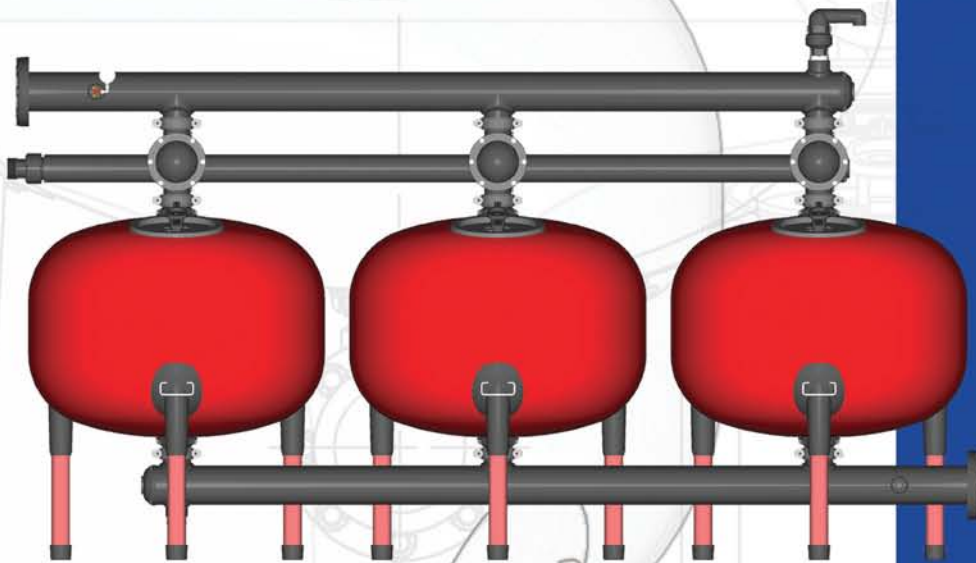


ARKAL
FILTRATION SYSTEMS



AGF FILTERS





Sand Media Technology

AGF Filter - The Principle

- Sand Media filters operate by separating the suspended materials in unfiltered water as it flows through a bed of media in a pressurized tank.
- The recommended filter medias - crushed basalt, quartz sand or catalytic media, have many varying aperture sizes that cause the water to flow through a maze of passages on its way from the inlet to the outlet of the filter.

Sand Media Technology

Due to the large volume and contact area between the water and the media/gravel particles, various physical forces are put into effect and act to retain the contaminating particles.

The efficiency of large particle retention is high as long as the gravel is kept clean.

The catalytic media type applies an additional chemical-physical attraction between the media and particles - especially those of organic nature, giving more efficient organic material separation. In addition, the round shaped particles degrade more quickly and their cleaning requires less water in comparison with other media types.

Filtration Process

During the filtration process, unfiltered water enters the media filter system via the inlet manifold. It is cleaned by flowing through the media and discharged via the outlet manifold.

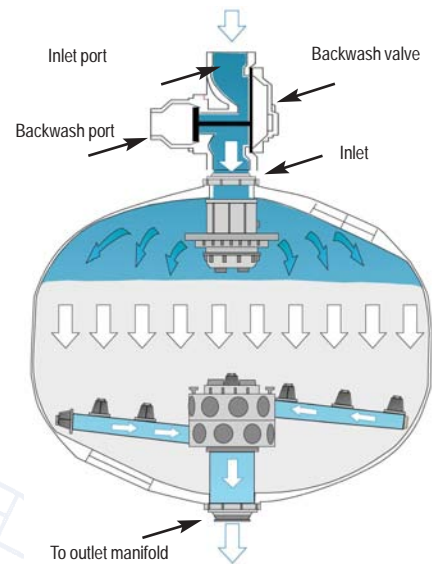
During filtration the inlet ports are open and the backwash ports are closed.

Water flows from the top, over the diffuser, down through the media layer to the outlet through the "mushrooms" located in the bottom part of the filter.

Backwash Process

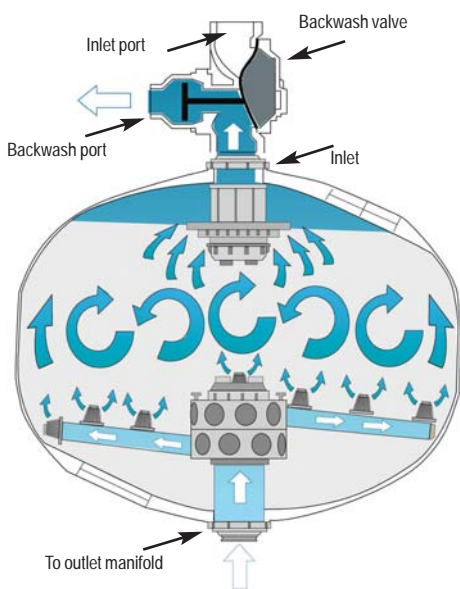
During the backwash process the inlet port closes and the backwash port opens, allowing reverse water flow into the filter.

Clean pressurized water from the other filters now flows into the bottom of the filter, lifting the media and freeing the accumulated dirt and debris that is then flushed out through the backwash valve and into the backwash manifold.



If the backwash restriction valve is adjusted properly, the debris will be flushed out of the filter while the media, being of a higher Bulk Density than the debris will remain fluidized in the filter tank.

Only one filter at a time should backwash. The water that is being used to backwash one filter would have already passed through another filter or filters so that the backwash process is carried out with clean, filtered water.



AGF

All Plastic Media Filters

Features

- Corrosion free
- Special synthetic materials
- Unique under-drain "Mushroom" drainage system
- Two large access ports



Technical Data

	Metric		US	
Connection diameter	mm	114	inch	4
Filtration surface area	m ²	1.16	ft ²	12.48
Minimum backwash pressure	bar	2	psi	28
Maximum pressure	bar	6	psi	85
Backwash flow rate	m ³ /h	40-60	gpm	176-264
Maximum temp.	°C	50	°F	122

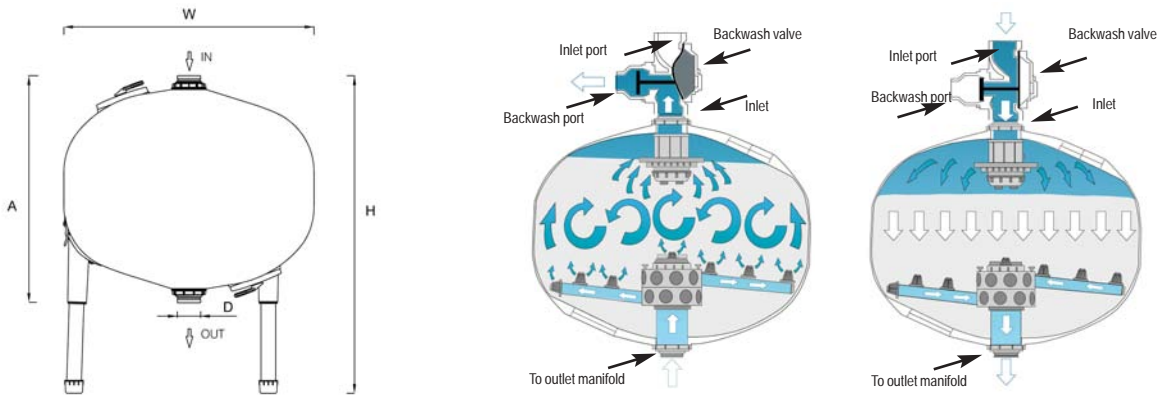
Maximum Filtration Flow Rate / Water Quality

Filtration Grade	Water Quality	m ³ /h	gpm
Media: Basalt media grade 2			
100-80 µ	Good	68	300
	Average	51	220
	Poor	41	180
	Very Poor	33	145
Media: Quartz media grade 1			
50-20 µ	Good	18	79
	Average	16	70
	Poor	13	57
	Very Poor	10	44
Media: AFM Media gradient for absolute depth filtration. Advantage in high organic load in raw water			
20-10 µ	Good	22	97
	Average	19	79
	Poor	16	70
	Very Poor	13	57

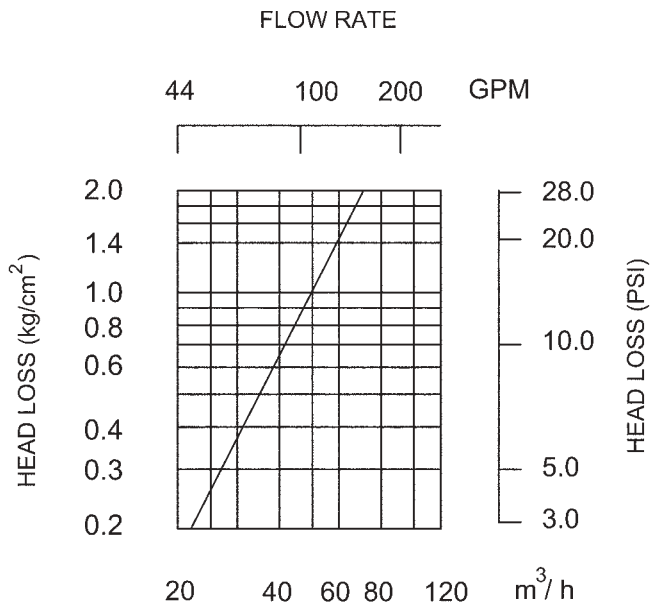
Dimensions and Weights

		Metric		US
D-Inlet/Outlet diameter	mm	114	inch	4
H (height)	mm	1553	inch	61
A (Dist. between filters connect)	mm	1110	inch	43 ²³ / ₃₂
W	mm	1227	inch	48 ⁵ / ₁₆
Approximate shipping weight*	kg	120	lbs	265

(*) Weight of media not included



Head Loss Chart at, Clean State



AGF Filters are available in:
Polymer materials