

Quick Review Chart of Water Filtration Medias

Following table includes a list of some of the water filtration medias offered by Continental Carbon Group (CCG) for removal of certain contaminants, sedimentation and oxidation chemicals.

Filter Media	Application	Service Flow (gpm/ft ²)	Backwash Flow (gpm/ft ²)	Density (lb/ft ³)	Bed Depth (in)
Activated Alumina	Flouride, Arsenic, Selenium, Silica, Humic Acid	1-2	8-10	43	36+
Anthracite	Sediment	5	12-18	50	24-36
Birm	Iron, Manganese	3.5-5	10-12	46	30-36
CCG MAG-50	Iron, Manganese, H ₂ S	5-12	25-30	115	36
Calcite	pH neutralization	2-6	10-12	100	24-30
Corosex	pH neutralization	5-6	10-12	100	24-30
Filter-Ag	Sediment	5	8-10	25	24-36
Filox	Iron, Manganese, H ₂ S	6	12-15	114	20
Garnet	Sediment	10	25-30	140	10+
GAC	Chlorine	3-5	8-10	28	24-36
GAC	Organics	1-3	8-10	28	24-36
Katalox Light	Iron, Manganese, Heavy Metals	4-8	10-12	66	30
KDF 55 (Water)	Chlorine, Heavy Metals, Bacteria	15	30	171	10+
KDF 85 (wastewater)	Iron, Manganese, H ₂ S, Bacteria	15	30	171	10+
GreenSand Plus	Iron, Manganese, H ₂ S	2-12	12-15	88	30-36
MangOX	Iron, Manganese, H ₂ S	5-10	12-15	125	36-48
Micro Z	Sediment	12-20	12-18	55	36-48
MTM	Iron,	3-5	8-10	27	24-36

	Manganese, H ₂ S				
Multi-Media	Sediment	10	15	92	36
NextSand	Sediment	12-20	13-22	55	36
OrganoClay	Hydrocarbons, Heavy metals	3-4	NA	58	NA
Sand	Sediment	3-5	15-20	100	18-30
Turbidex	Sediment	12-20	14-18	50	30-48

Why is effective Backwashing critical?

Backwash rates are always expressed in a flow-rate-to-bed-surface-area relationship called gpm/ft² for all medias. Backwash flow rates for all media including resins are expressed in terms of gpm/ft². To understand gpm/ft², take a 14-inch diameter vessel that has a surface area of 1 square foot. If a filter media specification sheet calls for a maximum service flow rate of 5 gpm/ft² and a backwash requirement of 15 gpm/ft², then when installed into a 14" diameter media vessel this system would have a peak service flow rate of 5 GPM and require a 15 GPM drain line flow controller.

As a rule of thumb, backwash rate is approximately twice that of the service flow rate of a filtration media. Water temperature and media density play a very important role in deciding the amount of flow rate and time required for effective backwashing. Generally, a minimum of 10 minutes of backwashing is recommended to make sure the media bed is cleaned thoroughly and ready for use. Proper backwashing is a very important step in the operation of a filtration system. If the backwashing is not complete, systems will eventually develop operational problems including flow channeling, lose of water flow, plugging and pressure drop. For best results treated water should be used for the backwash process.