

## PRODUCT INFORMATION



### Carbon units

Activated Carbon is a specialist filter media used principally for dichlorination or removal of organic compounds and colour in water. It will also remove other contaminants at low level concentrations.

The benefits of carbon filtration are mainly the elimination of taste and odour and it is sometimes used as a post treatment polishing filter.

Contact time is critical when treating raw water with activated carbon. This means that carbon filtration units are often larger than other treatment systems.

Most activated carbon used in general water treatment is made by carbonising coconut shells. The resulting carbon is then activated with high pressure steam. This leaves the carbon with numerous minute pores in its surface.

Chlorine removal is a catalytic process in which the media does not become exhausted Or blinded by the chlorine. However the catalytic site on the surface of the activated carbon will eventually become blinded by other contaminants in the raw water so that the media will still need to be changed— typically between 1—3 years. De-chlorination will require a contact time of approximately 6 minutes.

During organics removal the molecules of the contaminant travel onto the pores of the media and become trapped. Eventually all the pores in the media become filled and the activated carbon then needs to be changed.

At intervals during its service life the media needs to be backwashed. This is to remove debris that accumulates on the surface of the carbon. Backwashing also helps to reclassify the filter bed and prevents channelling of water through the media. A backwash and rinse cycle typically will take around 20 minutes to complete.

Backwashing frequency is controlled by an automatic valve. This may be set to backwash on a timer basis or on a meter control which would commence the sequence after a certain volume of water has passed through the unit.

Activated carbon can provide an ideal breeding ground for bacteria to grow. It is common therefore to UV sanitise the water both before and after a carbon filter unit.



Vessel	10.44	10.54	12.52	13.54	14.65	16.65
Forward flow cu.m/h	0.30	0.40	0.60	0.70	1.00	1.50
Backwash flow rate cu.m/h	0.40	0.50	0.90	1.0	1.2	0.5

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