



# PROWASH

Leaders in Products, Service and Support

## WATER TREATMENT SERIES | Carbon Filter

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Last month we covered the water softening process. The softened water is used in all areas of the car wash from rinsing to making soap. Another important area of water treatment in the car wash plant room is Reverse Osmosis, or Spot Free production. Typically the first stage in this further treatment is chlorine removal by means of a carbon filter.

The carbon filter works in a similar manner to the softener. As the water passes through the activated carbon media the negatively charged chlorine is attracted to the positively charged carbon. Carbon filters need to be regularly back flushed (generally on a timer set to come on at night when the wash is quiet) to “fluff up” the carbon media and prevent the water from finding the path of least resistance through the media and forming channels. This back washing also presents fresh surface area of carbon to the water for chlorine absorption. If properly serviced and maintained, one pound of activated carbon provides a surface area of about 100 acres on which to absorb chlorine and other volatile organic compounds. Carbon filters are not effective at removing the minerals that are removed by the softener.

It is important to remove this chlorine from the water before the Reverse Osmosis system. The R/O membranes are very sensitive to corrosion by chlorine and prolonged exposure will result in contaminants passing through the membranes and a high TDS reading. All sites should have on hand a chlorine test kit to check that the carbon filter is effectively removing chlorine from the water, thereby prolonging the life and efficiency of the R/O membranes and improving the quality of your spot free water.

The next stage is the pre filter between the carbon filter and the R/O membranes. These filters can filter down to as little as 1 micron. It is used to remove the worst of the remaining particles before the water enters the R/O system. This filter may have a pressure gauge either side and should be changed every six months, or when you see a pressure drop of 10 psi across the filter, whichever comes first. All sites should carry a spare filter ready to change. In extreme cases, a heavily clogged filter could trip the low water pressure switch on the system. This is designed to protect the membrane pump from running dry. Next month we will cover the process of Reverse Osmosis that produces the Spot Free Rinse water.

Filters, test kit and accessories available from Prowash Customer Service (03) 8340 3200