



Water Treatment

Carbon and Media Cartridges

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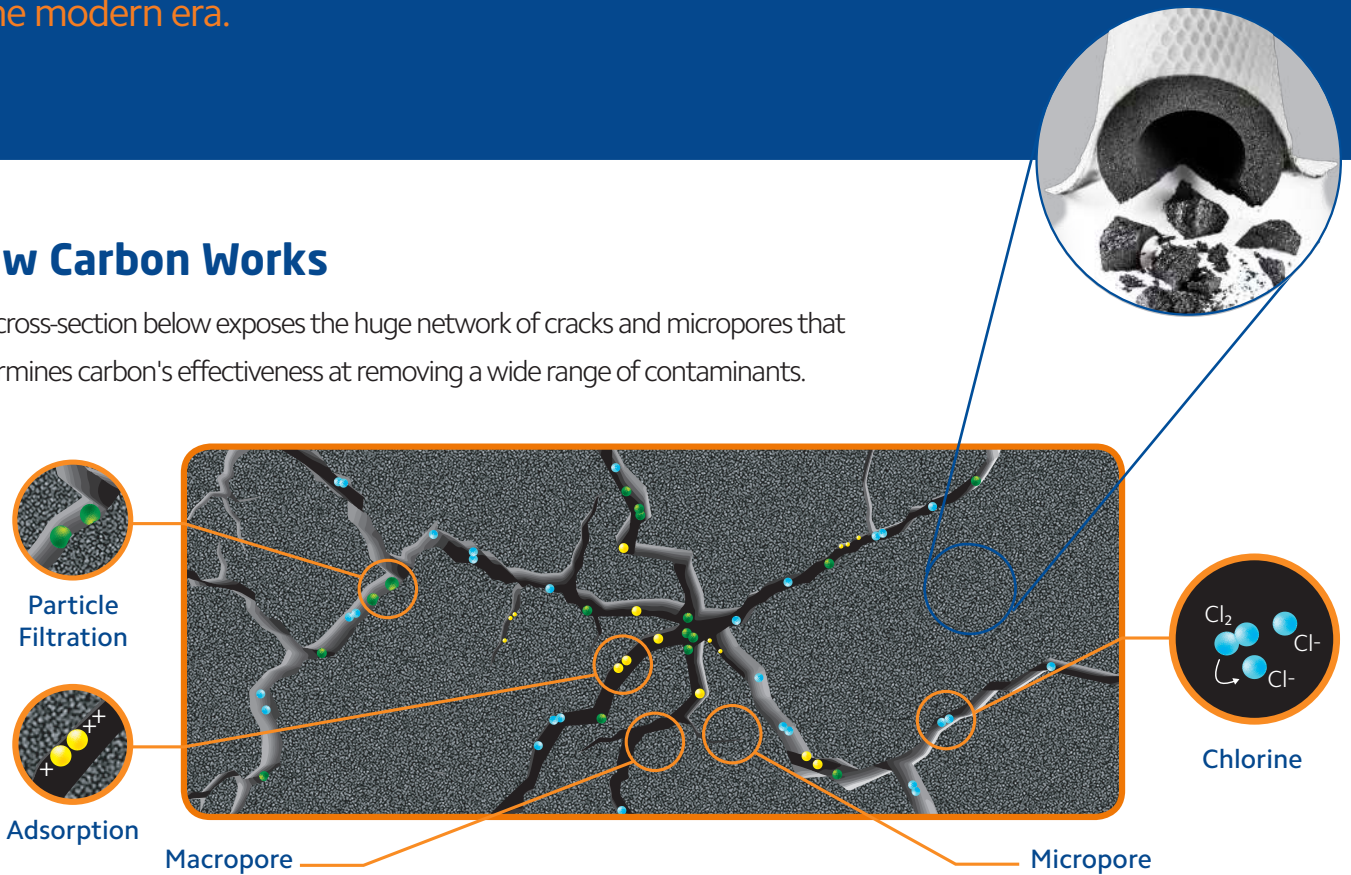


Carbon Technology

Utilised for several hundred years, carbon is considered one of the oldest means of water purification. Although impossible to trace the exact date and time, there is evidence of its usage and importance throughout history, from the ancient world to the modern era.

How Carbon Works

The cross-section below exposes the huge network of cracks and micropores that determines carbon's effectiveness at removing a wide range of contaminants.



Particle Filtration Sediment and Suspended Solids

Every carbon block cartridge has a given micron rating to indicate the physical size of suspended particulate that can be removed by the cartridge. To prevent premature sediment blockage before the chlorine capacity of the carbon has been exhausted, pre-filtration, such as the SPECTRUM SSP or PSP, is recommended to prolong the life of the cartridge.

Adsorption Organics and Heavy Metals

Carbon is a naturally adsorptive media, removing dissolved contaminants from a solution. When heated to 870°C, during the activation process, millions of tiny micropores are created throughout the structure of the cartridge, attracting large organic molecules and heavy metals to the surface.

Chemical Reaction Chlorine and Chloramine

Through chemical interactions with the activated carbon, reactive chlorine molecules are converted to less reactive chloride ions. Chloramine can also be removed through this process although the reaction occurs at a much slower rate. Speciality cartridges such as the SPECTRUM PCB have been specifically designed to effectively target chloramine.

Carbon Flow Rate

The longer water comes into contact with carbon, generally the more effective the treatment process will be, whether removing organics, heavy metals, chlorine or chloramine. Even a small increase over the recommended flowrate can cause dramatic decreases in carbon treatment's effectiveness. Therefore it is imperative to size a carbon treatment system properly, ensuring that the flowrate allows enough contact time to remove the undesired contaminants. The recommended flowrate for each cartridge is shown on the product page (as illustrated, right).

		@ Flow Rate (LPM)	
		3.8	7.6
Max. Operating Temp. 52°C		7.6	7.6
Max. Operating Pressure 2.5 bar		7.6	7.6
SCB Properties			
Capacity (L)	Chlorine Reduction (L) @ 0.2ppm	Pressure Drop (Bar) @	Flow Rate (LPM)
113,750		0.3	3.8
227,500		0.3	7.6
356,850		0.4	7.6
713,700		0.4	15.1
*Chlorine capacity using 2mg/l free available chlorine at 0.5mg/l breakthrough			

Carbon's Effectiveness at Removing...

Excellent

- Chloramine
- Chlorine
- Dyes
- Glycols
- Herbicides
- Hydrogen Peroxide
- Insecticides
- Iodine
- Odours
- Oil-dissolved
- PCBs
- Pesticides
- Sodium Hypochlorite
- Taste
- THMs

Good

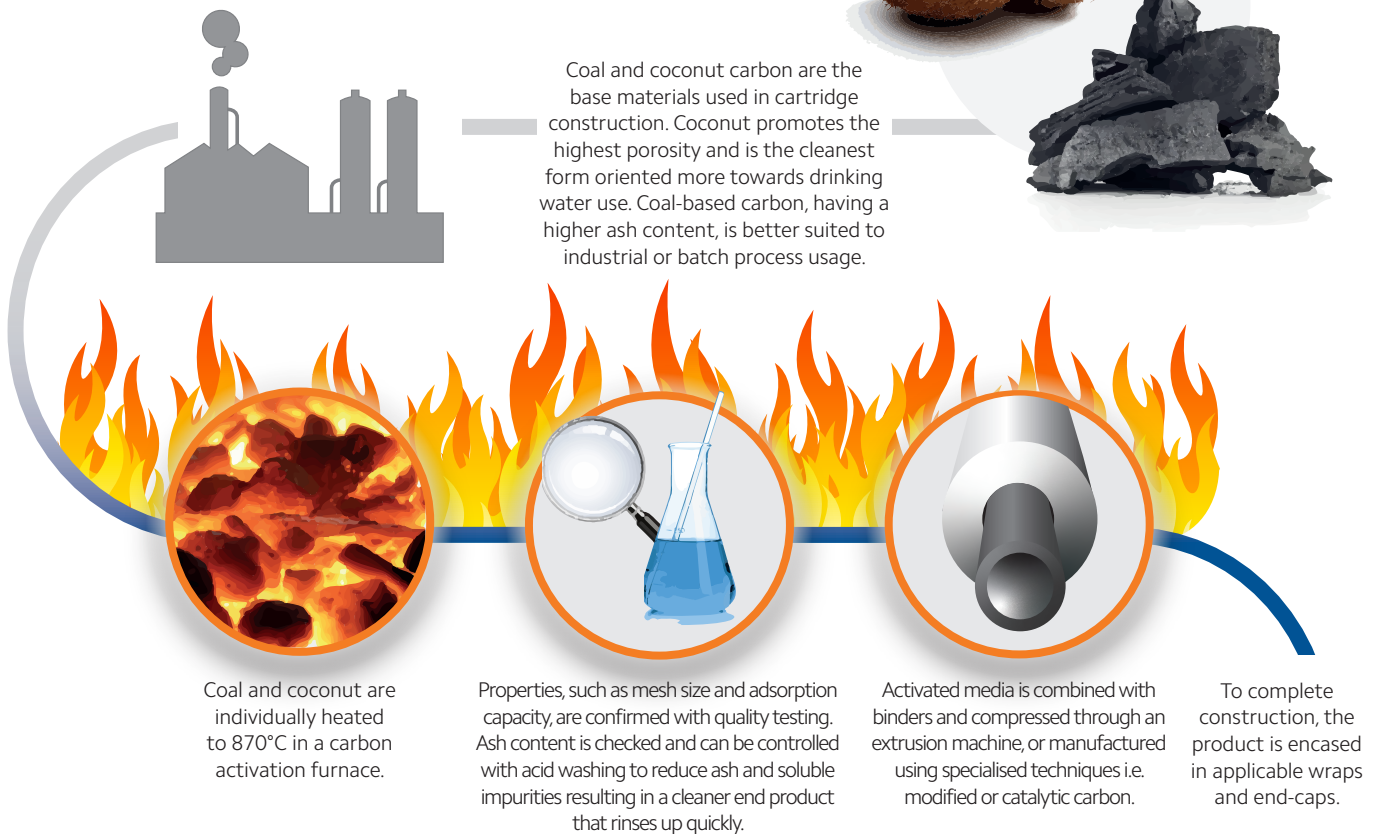
- Organic Acids
- Organic Salts
- Potassium Permanganate
- Solvents
- Sulphonated Oils
- Tannins

Fair

- Acetic Acid
- Detergents
- Heavy Metals
- Hydrogen Sulfide
- Plating Wastes
- Soap

Carbon Cartridge Construction

From raw material, through to activation and end product.



Modified Carbon Block

e.g. CFB-Plus

An advanced technology, Fibredyne combines dissolved contaminant removal with excellent sediment reduction. Uses powdered carbon for effective chlorine reduction.



Powder Carbon Block

e.g. SCB & PCB

Finer carbon mesh size increases surface area, ensuring highly effective removal of small contaminants such as chlorine. Perfect for drinking water applications.



Granular Carbon Block

e.g. CB & ECB

Traditional carbon technology, more effective at removing large molecules such as odours. Suitable for commercial and industrial applications.



C-155 - Fibredyne

The Primary Carbon for Electroplaters

A specialised cartridge for electroplating applications, the C-155 represents the best possible technology available for the marketplace. The bonded PAC used in the Fibredyne C-155 excels in removing organics and particulate and ensures sulphur is not leached into the plating bath, along with a post filtration layer preventing carbon fines after

initial flushing. The C-155 prevents pitted deposits, haze, clouds and discolouration to provide a bright electroplating finish. Building on the same technology as the discontinued ELPC cartridge, the C-155 has a reduced diameter allowing simple retrofitting to a much wider range of standard housings within the finishing industry.

Key Features

- Ultra clean, highly purified carbon prevents sulphur leaching
- Resistant to chemical breakdown in acidic and non-alkaline solutions
- Gaskets permanently moulded onto end-caps to ease filter cartridge changeout
- 67mm diameter to suit standard industry housings
- Lower pressure drop over the life of the cartridge due to its unique modified structure
- Highly efficient nominally rated cartridge 92%+ efficient sediment reduction

Typical Applications

- Surface finishing
- Essential in electroplating applications where organic and particulate removal is necessary



Configurations

Micron (µm)

10

Length (")

10 = 9¾ 20 30 40

Diameter

67mm



Materials of Construction

Carbon Type

Bonded Powder
Activated Carbon

Netting

Polyethylene

End-cap

Polypropylene

Gasket

Santoprene



Specification

Max. Operating Temperature

82°C

Max. Operating Pressure Differential

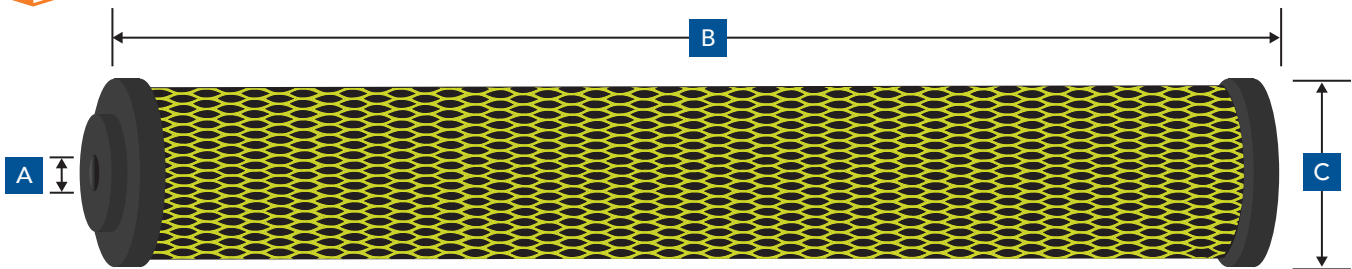
2 bar

C-155 Properties

Length (")	Pressure Drop (Bar)	@	Flow Rate (LPM)
10	0.14		3.8
20	0.14		7.6
30	0.14		11.4
40	0.14		15.1



Dimensions & Packaging



Dimensions (mm)			
Length (")	A	B	C
10	27	248	67
20	27	508	67
30	27	762	67
40	27	1016	67

Packaging	
Box Qty	Box Weight (kg)
30	7
30	14
30	21
12	12

Part Number

Code	Length	Code
C-155X	10, 20, 30, 40	T

e.g. C-155X20T

