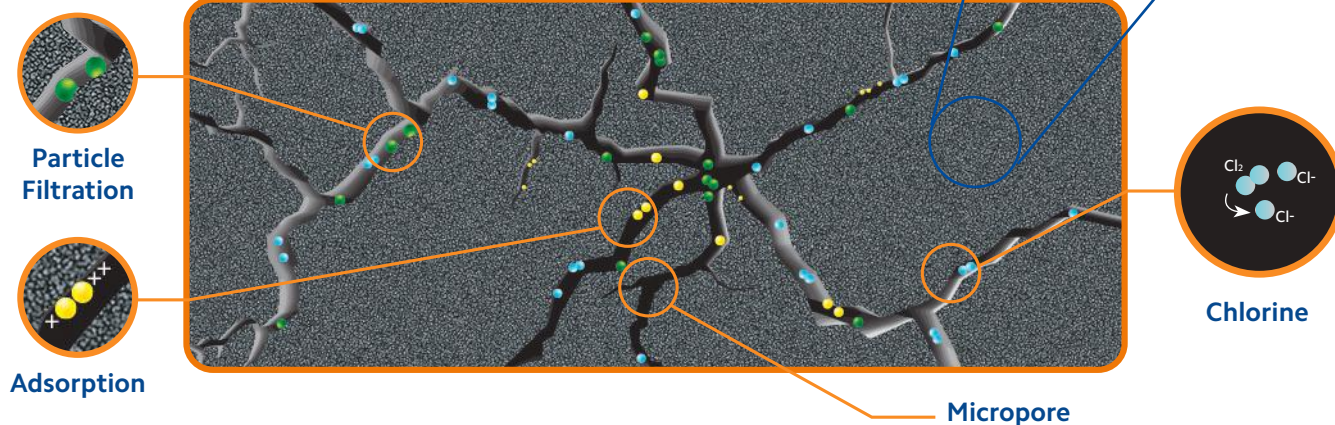


Carbon Technology

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 flow rate can cause dramatic decreases in carbon treatment's effectiveness. Therefore it is imperative to size a carbon treatment system properly, ensuring that the flow rate allows enough contact time to remove the undesired contaminants. The recommended flow rate for each cartridge is shown on the product page (as illustrated, right).

@ Flow Rate (LPM)			
Specifications			
Max. Operating Temp. 52°C			
Max. Operating Pressure 2.5 bar			
SCB Properties			
on (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

rine capacity using 2mg/l free available chlorine at 0.5mg/l breakthrough

Carbon's Effectiveness at Removing...

Excellent

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

Good

Organic Acids
Organic Salts
Potassium
Permanganate
Solvents
Sulphonated Oils
Tannins

Fair

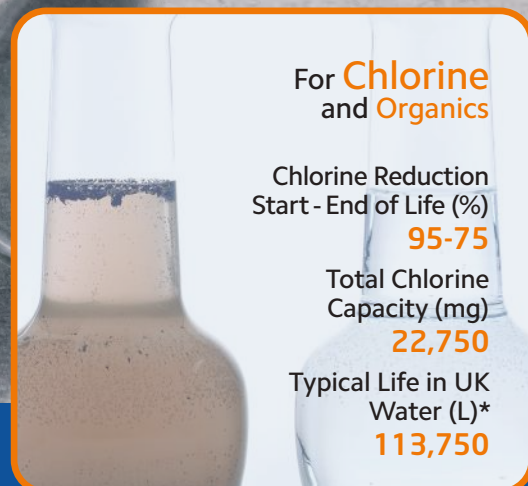
Acetic Acid
Detergents
Heavy Metals
Hydrogen Sulfide
Plating Wastes
Soap

Carbon Cartridge Construction

From raw material, through to activation and end product.



The Go-To for Drinking Water



Performance based on 10" cartridge. *Life in UK water based on free chlorine concentration of 0.2mg/l.

870 Carbon Block - Standard 5 micron

Widely used and favoured for drinking water treatment and beverage production where chloramines are not present; the SCB is formulated from low ash content, microporous coconut carbon that targets VOCs and THMs. Acid washed during the production process and low fine content give excellent rinse-up times as well as regulating pH and taste. The SCB also gives improved flow rate and lower pressure drop than the PCB, reducing the size of the housing required, making it a firm favourite for drinking water, pre-RO and applications where end product consumption is a consideration.



Key Features

- Extruded under high pressure, eliminating the need for overuse of binders, increasing flow and dirt holding capabilities
- Highly porous, lightweight, clean and tight microporous structure effective at reducing chlorine, taste and odour contaminants
- Pre-washed, reducing carbon fines
- 75% minimum free chlorine reduction ensures the SCB's superiority over the ECB



Specification

Max. Operating Temperature
52°C

Carbon Type
Acid Washed Coconut Carbon

End-cap / Gasket
Polypropylene / EPDM

Max. Operating Pressure Differential
2.5 bar

Netting Material
Polyethylene

Wrap
Polypropylene

SCB Properties				
Length (")	Chlorine Reduction (L) @ 2mg/l *	Chlorine Reduction (L) @ 0.2mg/l **	Pressure Drop (Bar) @	Flow Rate (LPM)
4 7/8	6,500	56,875	0.3	1.9
9 3/4	13,000	113,750	0.3	3.8
20	26,000	227,500	0.3	7.6
30	39,000	341,250	0.3	11.4
40	52,000	455,000	0.3	15.2
9 3/4LD	59,500	520,625	0.4	7.6
20LD	119,000	1,041,250	0.4	15.1

*Chlorine capacity using 2mg/l free available chlorine at 0.5mg/l breakthrough
**Calculated chlorine capacity using 0.2mg/l free available chlorine at 0.05mg/l breakthrough



Typical Applications

- Drinking water
- VOC and THM reduction
- RO protection



Configurations

Micron (µm)

5

Length (")

4 7/8

9 3/4

20

30

40

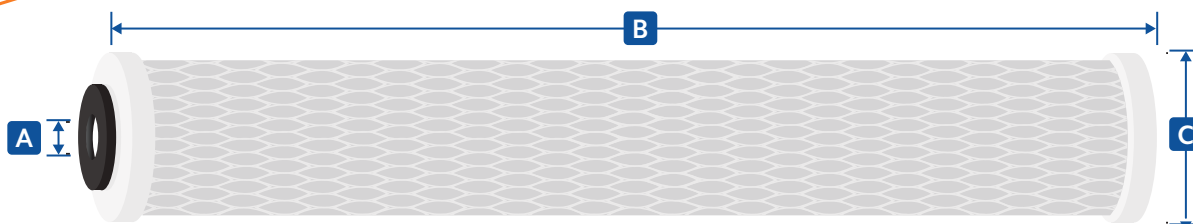
Diameter

Regular

Large = LD



Dimensions & Packaging



Length (")	Dimensions (mm)		
	A	B	C
4 7/8	28	124	71
9 3/4	28	248	71
20	28	508	71
30	28	762	71
40	28	1016	71
9 3/4LD	28	248	115
20LD	28	508	115

Part Number

Code	Micron	Length
SCB	5	4 7/8, 9 3/4, 20, 30, 40
		9 3/4LD, 20LD

e.g. SCB-5-20