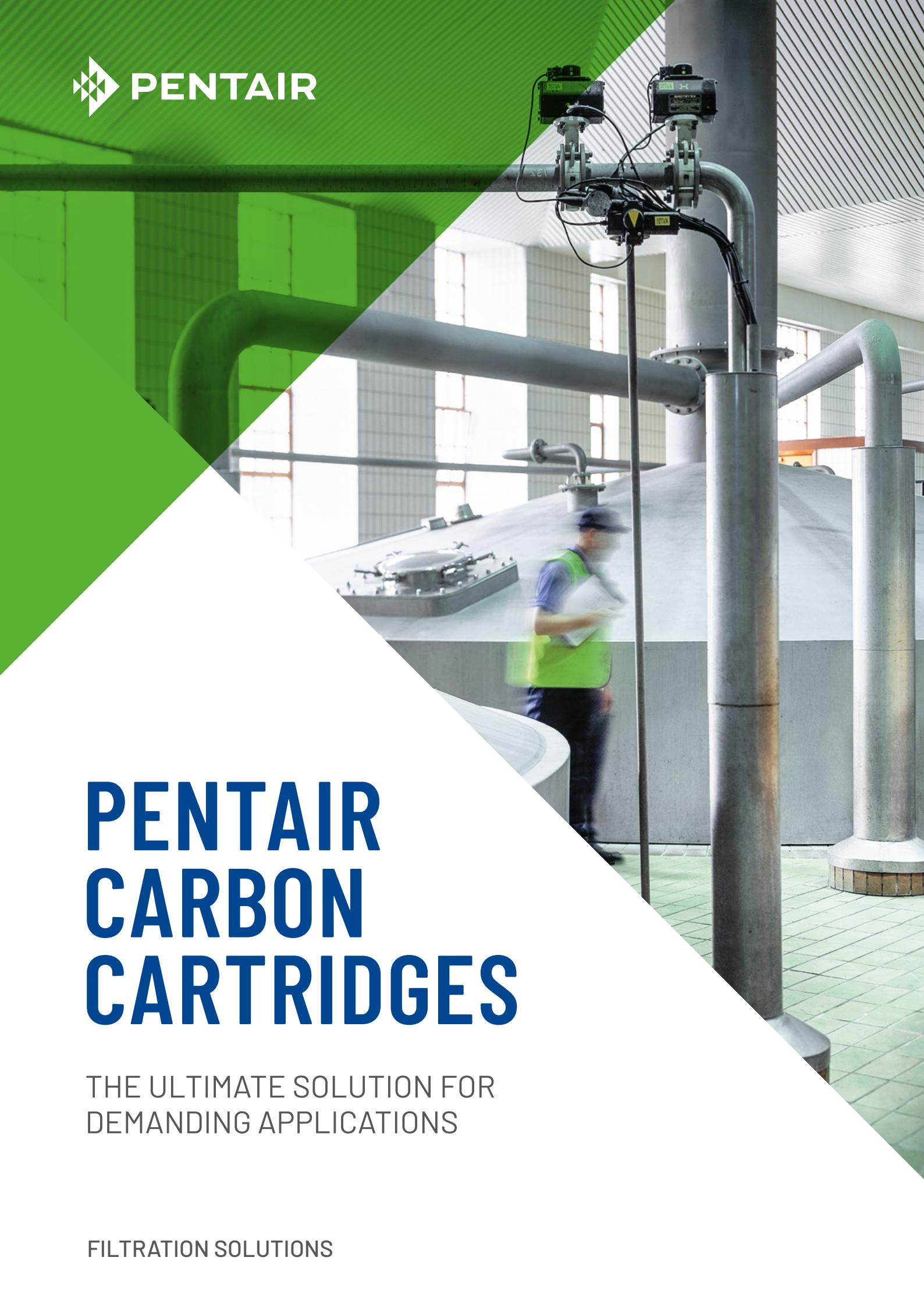




PENTAIR CARBON CARTRIDGES

THE ULTIMATE SOLUTION FOR
DEMANDING APPLICATIONS

FILTRATION SOLUTIONS



UNDERSTANDING THE PRINCIPLE OF ADSORPTION

Pentair offers the industry's most extensive selection of quality carbon cartridges, even suitable for applications requiring chloramine or organic reduction.

Fibredyne technology is recommended when particulate reduction, resistance to plugging, reduction of large organic compounds and low pressure drop over the life of the cartridge matter most.

Our carbon capabilities also include granular and pleated technologies designed to reduce bacteria, cysts, and chlorine taste and odor.

Carbon works on the principle of adsorption, a process by which matter adheres to the surface area of an adsorbent material.

Materials such as coal, wood, coconut are transformed into carbon, which is then activated, either chemically or thermally. This activation creates pores in the carbon surface resulting in a product with a very large amount of active surface area.

Carbon pores are classified into 3 categories:

1/ Macropores

Size is more than 5000 Å (0.5 µm), typical of wood

2/ Mesopores

Size is more than 40 Å (> 0.004 µm) but less than 5000 Å, typical of coal

3/ Micropores

Size is less than 40 Å (< 0.004 µm), typical of coconut

The type and size of the contaminant to be removed determines which carbon material type needs to be used.

Note: chlorine, typically sodium hypochlorite HOCl⁻, is not removed by adsorption but through a catalytic process.

Thanks to activated carbon, sodium hypochlorite will be transformed into a state that does no longer have any bad taste and smell properties.

TYPES OF CARTRIDGES

Carbon blocks

Our extruded activated carbon blocks are the primary filters used in point of use/point of entry water treatment devices for the control of chlorine, taste and odor.

They consist of virgin carbon powder, a thermoplastic binder and specialty adsorbents.

Fibredyne

The unique Fibredyne technology consists of cellulose-free synthetic fibers impregnated with powdered activated carbon. Cartridges are then wet molded. The result combines the benefits of carbon and sediment filters to deliver up to two times chlorine taste and odor reduction as well as dirt-holding capacity of standard carbon blocks and sediment cartridges.

Granular activated carbon

GAC filters are designed to allow water to enter the bottom of the cartridge, then being filtered through the entire carbon bed before exiting at the top to maximize the contact time. These upflow cartridges are designed to remove chlorine from feed water. The nominal 20 micron rating will help to reduce carbon fines and other suspended particles as well.

Impregnated carbon

Constructed of a carbon-impregnated cellulose or polyester media, these dual-purpose cartridges filter out fine sediment particles and reduce unwanted taste, odor and chlorine taste & odor from tap water. Pleats (NCP series) provide additional surface area for high dirt-loading capacity, while maintaining minimal pressure drop.

The complete range of Pentair carbon cartridges

	Carbon blocks										Granular activated carbon cartridges				Impregnated carbon cartridges	
	Diamond flow series	EPM series	EP series	Chlorplus series	CBC series	SCBC series	CBR2 series	CCBC series	Floplus series	GAC series	CC series	TSGAC series	RFC series	C series	NCP series	
Benefits	Good chlorine reduction with high dirt loading capacity	Economically priced cartridge for good chlorine reduction	Very good chlorine reduction with high dirt loading capacity	Excellent chlorine & chloramine as well as pesticide reduction (for dialysis and sterilisation applications)	Reduce cysts & bacteria	Reduce cysts & bacteria and are treated to inhibit biofilm build up in the filter	Used for lead reduction	Highly effective at reducing unwanted taste and odor as well as fine sediment	Unique dirt holding capacity due to the fibredyne technology - no fine release! Reduce cysts & bacteria	Good chlorine reduction, optimal adsorption	Coconut shell based activated carbon: best VOC reduction	Used for scale prevention	Incorporate a spun polypropylene core sandwiched between the outer shell and the granular activated carbon significantly reducing the release of carbon fines commonly associated with GAC style	Economical solution for all general purpose water filtration needs. Has to be used on chlorinated water due to its cellulose media	Polyester media allows cartridges to be resistant to bacterial attack and to be used on non chlorinated water applications	
Available length	9 3/4; 20 & 10"BB	9 3/4; 20; 10BB & 20"BB	From 4 1/2 to 20"BB	9 3/4; 20 & 20"BB	From 4 1/2 to 20"BB	9 3/4"	9 3/4"	9 3/4"	10; 20; 10BB & 20"BB	From 5 to 20"BB	9 3/4"	9 3/4"	9 3/4"BB & 20"BB	4 1/2; 9 3/4 & 20"	9 3/4; 20; 10BB & 20"BB	
Available micron rating nominal	10 µm	10 µm	5 µm	1 µm	0.5 µm	0.5 µm	0.5 µm	1 µm	0.5 µm	20 µm	20 µm	20 µm	20 µm	25 µm	5 µm	10 µm
Dirt loading capacity	++++	+++	+++	++	+++	+++	+++	++++	+++++	++	+	+	+	+++	++++	++++
Chlorine taste and odor reduction	++	+	++	++	++	++	+	++	++	+	+	+	+	+	+	+
VOC reduction	+	+	+	+	+	+	+	+	+	+	+	++++	+	+	+	+
Chloramine reduction	+	+	+	++++	+	+	+	+	+	+	+	+	+	+	+	+
Cysts and bacteria reduction	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No
Pesticides	+	+	+	++++	+	+	+	+	+	+	+	+	+	+	+	+
Hot water applications (up to 82°C)	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No

Manufacturing sites

Our Pentair carbon cartridges are made in 2 different locations each one having its own specialty.

Center of Excellence for Pentair's industrial filtration lines, Dover is the place where the famous Fibredyne technology was born. Dover makes fiber-wound carbon and melt blown filters.

Pentair's premier asian facility, certified ISO 9001:2008, located in Suzhou has over 14'000 m² of manufacturing space. Multiple products such as carbon extrusion, GAC, melt blown cartridges, ultrafiltration modules, residential reverse osmosis membranes, filtration housings and systems are manufactured in Suzhou.

Pentair of Dover, US



Pentair of Suzhou, China

www.pentairaquaeurope.com



The exact list of NSF approved references is available on demand