CARTRIDGE FILTERS

Activated Carbon Cartridge Filter

Cartridge filter made with coconut shell or coal-based activated carbon that works by adsorption. In CTO (block) and GAC (granular) types, it removes chlorine, odour, taste and VOCs from water; used for RO pre-treatment, drinking and process water, and on food and chemical lines.



CARBON TYPE	CHLORINE CAPACITY	MAX. TEMPERATURE	LENGTH
CTO / GAC	**13,000 L**	**82 °C**	**5″ – 30″**
Block or granular	CTO 10″ · 2 mg/L FAC	GAC · CTO 38 °C	Standard and Big Blue

Technical specifications

Filter media	Coconut shell or coal (anthracite)-based activated carbon
Carbon type	CTO (compressed carbon block) · GAC (granular activated carbon)
Working principle	Adsorption; removal of chlorine, odour, taste, colour, VOCs and organic molecules (does not retain particles)
Outer netting / sleeve	PE or HDPE outer netting (70 µm nominal) · Nonwoven polyester inner / outer sleeve (fines retention)
End cap / inner core	Polypropylene (PP)
Outer diameter	65 mm · 70 mm (Big Blue: 115 mm)
Inner diameter	28 mm
Length options	5″ · 10″ · 20″ · 30″
End cap type	DOE (with gasket) · 222 O-ring
Gasket / O-ring material	NBR (standard) · EPDM · Viton · Silicone · PTFE
Operating temperature	CTO 4–38 °C · GAC 4–82 °C
Max. operating pressure	CTO 2.4 bar @ 38 °C · GAC 4.2 bar @ 25 °C · Reverse flow 2.1 bar @ 25 °C
pH range	2–11 (optimum for chlorine removal: pH 6–9)
Quality control	Post-production visual, dimensional and adsorption capacity verification

Chlorine removal capacity (CTO)

SIZE	LENGTH	FLOW RATE	CAPACITY @ 2 MG/L	CAPACITY @ 0.2 MG/L
10″	254 mm	3.8 L/min	13,000 L	114,000 L
20″	508 mm	7.6 L/min	26,000 L	228,000 L
30″	762 mm	11 L/min	39,000 L	340,000 L

Test: free chlorine (FAC), continuous flow. GAC capacity at 2 mg/L: 10″ 8,000 L · 20″ 16,000 L.

Chemical compatibility

CHEMICAL GROUP	ACTIVATED CARBON
Drinking / process water	E
Strong acids (dilute)	E
Oxidising acids (nitric, chromic)	F
Alkalis (NaOH, KOH)	E
Polar organic solvents	G
Aromatic hydrocarbons	F
Chlorinated solvents (DCM, TCE)	F
Mineral and industrial oils	G

E: Excellent · G: Good · F: Fair / Limited · P: Poor · N/R: Not recommended. Verify the PE binder in CTO cartridges separately with strong solvents, aromatic and chlorinated compounds.

End cap and connection options

DOE

Double open end; gasket seal at both ends. PP end cap on the gasket model.

222 O-ring

Single open end (SOE); push-in fit with a 222 O-ring. Standard O-ring: NBR.

Use and maintenance

- Activated carbon does not retain particles; install a PP sediment filter upstream.
- At first installation, flush the cartridge for at least 5 minutes so that carbon fines do not pass downstream.
- Replace the cartridge when inlet–outlet measurement shows chlorine at the outlet.
- Do not exceed the recommended flow rate; higher flow shortens contact time and causes early chlorine breakthrough.
- The O-ring must seat fully; use only silicone grease.
- After a long shutdown, replace the cartridge and disinfect the line.

Values in this data sheet are typical and for information only. Product selection should be made with our engineers based on process fluid, temperature, pressure and flow conditions. Proses T.İ.M. reserves the right to change product specifications without prior notice.

PROSES T.İ.M.®

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