



BorsoCarbon

Activated Carbon Cartridges

Activated Carbon, a porous substance with strong physical adsorption properties, has the highest volume of adsorbing porosity of any material known.

By carbonisation and activation, activated carbon can be made from many substances containing high carbon content such as coal, wood, bamboo and coconut shells.

Activated carbon filters are widely applied in industrial process and civil use as the most efficient method of removing odours, chlorine, volatile organic compounds (VOC), colours, tastes and other contaminants from fluids.

The **BorsoCarbon** series is the new generation of carbon cartridges produced by the extrusion process. They provide long service life and superior adsorption performance compared to conventional granular activated carbon cartridges together with minimum fines. With a high mechanical strength and low ash content, the carbon block structure prevents channelling, bypassing, fluidizing or unloading of carbon fines.

To prevent premature blocking of the activated carbon layer, the **BorsoCarbon** filters incorporate an effective pre-filtration layer designed to intercept gels and large particles.

The **BorsoCarbon** series activated carbon filter cartridges use premium grade coconut shell extruded carbon blocks and can be supplied in any length and end cap configuration, to meet the requirements of the process application.



Features and Benefits:

- Large carbon surface exhibits excellent chlorine reduction characteristics
- All polymeric construction offers excellent chemical compatibility and stability in aqueous solutions
- Safe handling without any loose powder.
- Graded density pre-filtration layer for effective sediment removal and protection of the carbon media
- Construction eliminates fluidising, channeling or bypass
- Large carbon surface exhibits excellent chlorine reduction characteristics





Specifications

Materials of Manufacture

Filter media:	PAC impregnated cellulose	Sintered Block /Polypropylene
End fittings:	Polypropylene	Polypropylene
Inner core:	Polypropylene	Polypropylene
Outer support:	Polypropylene	Polypropylene

Cartridge Dimensions

Diameter:	165mm (6.25")
Length:	254mm (10")
	508mm (20")
	990mm (39")
	1016mm (40")
	1524mm (60")

Gaskets and O-Rings

Ethylene Propylene, FEP encapsulated, Silicone, Viton®, Nitrile available.

Operating Temperatures and Pressures

Polypropylene construction:	83°C (176°F)
PAC construction:	52°C (125°F)
Recommended differential pressure:	1.5 bar g
Collaps differeantial pressure:	4 bar g @ 20°C

Sterilisation and Sanitisation*

Steam:	121°C for 15 mins (20 cycles)
Hot water:	82°C for 30 mins (0.2 bar Δp max)

Chlorine Reduction

10" cartridge	>23,000 litres @ 4 lpm
20" cartridge	>46,000 litres @ 8 lpm
30" cartridge	>69,000 litres @ 15 lpm
40" cartridge	>92,000 litres @ 20 lpm



Applications

BorsoCarbon activated carbon cartridges can be used as prefilters or final filters in the following applications:

- **Pharmaceuticals and Bioprocessing**

Colour reduction from solvents. Water pre-treatment and chlorine reduction.

- **Foods and Beverages**

Colour reduction from alcohol, Bottled waters, General clarification, Ozone reduction.

Oils and aromatic compounds removal.

- **Process Water**

Small and large scale chlorine, odour, colour and trace organic reduction.

- **Chemicals**

Colour reduction from solvents. Water pre-treatment and chlorine reduction.

- **Metal Finishing**

Organic reduction in plating baths





Additional Information

Range

Van Borselen Filters Supplies a full range of filtration products: e.g.:
Filtercartridges (Meltblown/ Membranes/ Activated Carbon)
Filter housings, Filterbags, Lenticular Module Filters, Self Cleaning
Filters, Filter Sheets, Sieving Machines, Porous Sintered Metal,
Oil skimmers, Strainers and many more..

Material Conformity and Validation

The bio-safety of all materials used in the manufacture of **BorsoCarbon** cartridges is assured by FDA approval to Title 21CFR.177. and EC 10/2011

Chemical Compatibility

The **BorsoCarbon** materials of construction are compatible with a wide range of chemicals and solvents, however care must be taken to select the appropriate seal material. Advice on chemical compatibility is available. Since operating conditions vary considerably between applications, verification by the end user is recommended.

Quality control

Our factories are all located in Western Europe and are accredited to ISO 9001-2008.

All our filters are fully traceable and manufactured under clean room conditions.

Engineering capacities

One of our strengths is developing filter vessels for critical applications in the chemical industry.

We have a wide experience in supplying filter vessels, like Duplex (UNS S31803), Super-Duplex (UNS S32750/60), Titanium, RvS316L, CS (optionally with a coating or lining).

Our filter vessels comply with the necessary design codes (ASME VIII, EN13445, U-stamp and PD5500) and comply to ATEX and PED 97/23/EC standards. Both liquids and gases PED classes I, II, III, IV, all modules



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