

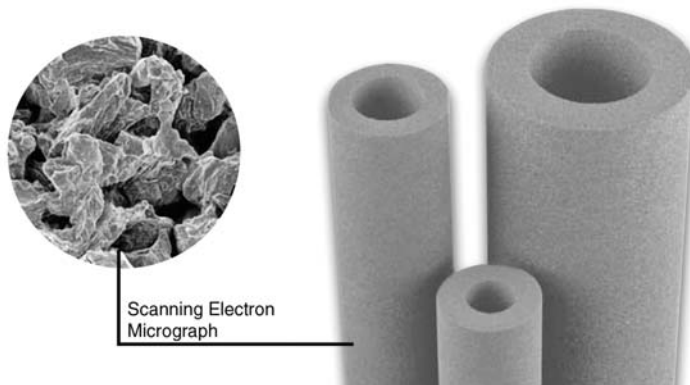


Pall® Carbo Filter Elements

Description

Pall Carbo filter elements are manufactured from high quality carbon material. The various grades of Carbo elements available are manufactured from different grain size fractions with the carbon grains being integrally linked by carbon bridges. Carbo filter elements exhibit a high chemical resistance, due to their binder-free carbon structure.

Carbo elements are utilised across a wide field of applications. The fine porous types with a smooth surface are particularly suitable for fine filtration utilising back-wash cleaning technology. The coarser types exhibit a slightly rougher surface, and these are ideal for use in pre-coat filtration applications employing cellulose as the filter aid has an affinity for the rough Carbo filter element surface.



Scanning Electron
Micrograph

Applications

- Particle filtration of liquids
 - Polish filtration of aggressive liquids
 - Catalytic recovery from reaction solutions
 - Caustic soda
 - Particle separation from condensate
- Particle filtration of gases
 - Particle separation from water vapour
 - Particle separation from aggressive exhaust gases
- Support body for precoat filtration - Polish filtration of cell brine in chlor-alkali-electrolysis according to the membrane or diaphragm process

Chemical Resistance¹

Carbo filter elements are resistant against hot and cold acids and alkaline solutions in the range from pH 0 to pH 14. They have limited resistance against strongly oxidizing liquids. Water vapour can be filtered using Carbo elements and back-washing of the filter media is possible. Carbo filter elements show excellent resistance against salt solutions.

¹ As end use conditions can vary, it is the users responsibility to verify compatibility with their specific use conditions.

General Information

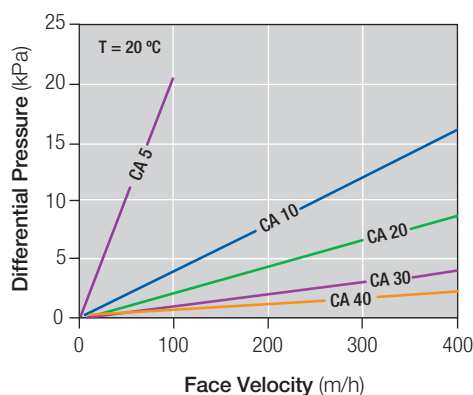
- Ceramic elements are to be handled with care.
- Elements can be easily glued using commercial glues which Pall can supply.
- Careful consideration should be paid to operating temperature and chemical resistance.
- The filter elements are usually installed in the filter housing using a metal tie-rod system, flat gaskets and a temperature compensation plate.

Technical Information

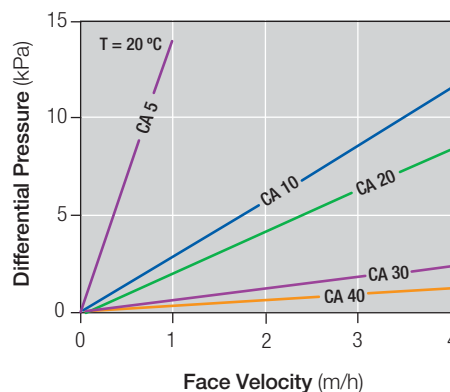
Carbo (CA)	5	10	20	30	40
Filtration of Liquids	< 1 µm	1.5 µm	10 µm	15 µm	40 µm
Filtration of Gases	< 1 µm	< 1 µm	2 µm	4µm	8 µm
Porosity	33 %	35 %	35 %	35 %	35 %
Material Density	1.35 g/cm ³	1.30 g/cm ³	1.30 g/cm ³	1.25 g/cm ³	1.20 g/cm ³
Specific Permeability	4 10 ⁻¹³ m ²	20 10 ⁻¹³ m ²	35 10 ⁻¹³ m ²	65 10 ⁻¹³ m ²	230 10 ⁻¹³ m ²
Bending Strength (O-Ring Compression)	>12 MPa	> 10 MPa	> 8 MPa	> 7 MPa	7 MPa
Maximum Temperature Resistance					
Oxidizing Atmosphere	200 °C	200 °C	200 °C	200 °C	200 °C
Reducing Atmosphere	1000 °C	1000 °C	1000 °C	1000 °C	1000 °C
Expansion Co-efficient (25 - 200 °C)	3.5 10 ⁻⁶ /K	3.5 10 ⁻⁶ /K	3.5 10 ⁻⁶ /K	3.5 10 ⁻⁶ /K	3.5 10 ⁻⁶ /K
Thermal Conductivity (200 °C)	2 W/m K	2 W/m K	2 W/m K	2 W/m K	2 W/m K
Dimensions (Do / Di)	70 / 40 mm	70 / 40 mm	70 / 40 mm	70 / 40 mm	120 / 70 mm

Flow vs Differential Pressure

Differential Pressure for Air Flow



Differential Pressure for Water Flow



Standard Dimensions

Part Number	Carbo (CA)	Type	Do / Di (mm)	Length* (mm)	Area (m ²)	Weight (kg)
88018300	Cylinder	CA 5	70 / 40	500	0.11	1.8
88010600		CA 10	70 / 40	500	0.11	1.7
88151300		CA 10	70 / 40	1000	0.22	3.4
88012500		CA 20	70 / 40	500	0.11	1.7
88012700		CA 20	70 / 40	1000	0.22	3.4
88015200		CA 30	70 / 40	500	0.11	1.6
88015400		CA 30	70 / 40	1000	0.22	3.2
88016800		CA 40	120 / 70	500	0.19	4.5

Please contact Pall for enquiries relating to dimensions not specified above.

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