

BorsoMetal-CSP



Cylindrical Sintered Metal Powder Filter Elements

Van Borselen Filters supplies a wide range of industry standard stainless steel filter elements suitable for use in a wide range of industries, including petrochemical and pharmaceutical.

The robustness of design, that is provided by a fully welded metallic element or cartridge, is required to resist deterioration in harsh operating environments where the fluids present are aggressive, high temperatures are experienced or where the operating differential pressures are high.

For some filtration applications, the use of a conventional disposable polymeric cartridge may simply be environmentally unacceptable and the use of a re-cleanable element will often give more cost effective filtration.

These filter elements are offered in the following media configurations:

BorsoMetal-CSF Sintered Metal Fibre
 BorsoMetal-M Metal Mesh
 BorsoMetal-SMC Sintered Metal Composite

BorsoMetal-CSP is a robust material manufactured from sinter-bonded metal powders. Primarily produced in 316L grade for use in temperatures up to 540°C (1004°F), depending on process conditions, and offering resistance to most chemicals, **BorsoMetal-CSP** media can also be produced in other grades of stainless steel and alloys such as Inconel®, Hastelloy® and Monel®.



Features and Benefits:

- BorsoMetal-CSP is a robust filter material manufactured from sinter-bonded metal powders.
- The thickness of our cylinders ensures a reliable high strength filter for longer on-stream life and effective depth filtration.
- The manufacturing process of our elements enables us to achieve a smooth surface finish. This is preferable for backwash applications.
- The self supporting construction eliminates the need for additional hardware.
- The isostatic manufacturing process of our elements eliminates the need for seam welding and offers the option of sinter-bonding the adapters, ensuring the highest integrity filters elements.
- A wide range of micron ratings are available for normal and high pressure applications. Our isostatic manufacturing process ensures greater media uniformity.





Specifications

Materials of Manufacture

316L stainless steel standard. 304L stainless steel, Inconel®, Hastelloy®, Monel® on request or by process selection. Additional alloys are available on request.

Cartridge Dimensions

Diameter: 66mm (2.6") as standard.
 Lengths: 125mm (5"),
 250mm (10"),
 498mm (20"),
 745mm (30"),
 1012mm (40").

* Other diameters and lengths available on request.

Effective Filtration Area

0.05m² (0.55ft²) per 250mm (10") element.

Gaskets and O-Rings

EPDM as standard. Nitrile, PTFE, Silicone, Viton® and PTFE coated Viton® available on request or by process selection.

* FDA approved seals are available.

Typical Maximum Differential Pressure* (all lengths)

Normal flow direction: 25bar (363psi)

Reverse flow direction: 10bar (145psi)

* Grade dependant.

Operating Temperature

Maximum continuous:

From -195°C (-319°F) to 340°C (644°F) seal limiting

From -269°C (-452°F) to 1000°C (1832°F) alloy limiting

BorsoMetal-CSP Stainless Steel Media Grades

Stainless Steel Grades	Micron Rating (µm) (micron code)	Liquids (µm)* (99.9% efficiency)	Gases (µm) (99.99% efficiency)
CSP10	6 (0006)	6	0.7
CSP20	10 (0010)	10	0.8
CSP30	15 (0015)	15	4
CSP36	25 (0025)	25	5
CSP40	30 (0030)	30	6
CSP41	40 (0040)	40	8
CSP50	60 (0060)	60	15

* Single Pass Efficiency Test in accordance with ASTM795 ACFTD.

Element Construction

The **BorsoMetal-CSP** range of filter cartridges and elements are constructed in stainless steel 316L as standard. These filters are available in a cylindrical element configuration, giving 0.05m² (0.55ft²) of active filtration area per 10" length.

Our range of **BorsoMetal-CSP** elements are manufactured by isostatically pressing the powder media under high pressure within a tubular mould. This ensures greater media uniformity with no welds, leading to increased corrosion resistance.

The method of construction and materials used allow for operation from -269°C (-452°F) to 1000°C (1832°F) and up to 25bar (363psi) differential pressure in normal flow direction. Higher operating temperatures and differential pressures can be accommodated by design.



Applications

Typical applications for our **BorsoMetal-CSP** elements include the following:

- **Catalyst recovery and retention**

For use in the collection of catalyst dust on various catalyst hoppers or FCC regenerator stream on refineries.

- **Polymer melt**

For applications in the manufacture of polypropylene film.

- **Chemical production**

For applications in the clean-up of hydrogen process gas, and in the manufacture of magnesium nitrate and caustic solutions.

- **Steam**

For applications in the chemical, food, beverage and pharmaceutical industries.

- **Liquids and liquid backwash**

For applications in catalyst steam backwash applications and in the manufacture of polyols.





Additional Information

Range

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

Product innovation

We understand that product development involves building multidiscipline teams, not only within the company, but often in partnership with our customers, improving project efficiency and ensuring complete customer satisfaction. This continuous development of products and materials is vital, to enable us to offer new and better solutions to applications. Our manufacturing facility has implemented various methodologies to drive out waste and process variance across the company to achieve the ultimate goal of zero defects.

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

Manufacturing and Testing

We have a dedicated team of scientists, engineers, production and quality professionals working towards the best possible filtration solutions for our customers. We have a fully equipped test house and laboratory, and our experienced design engineers use the latest AutoCAD® technology, with 3D solid modelling, integrated with a finite element analysis system to give full structural assurance capability.



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