

Separation and Clarification Solutions

Depth-Stack Filters

High Quality, High Efficiency, High Reliability





Great Wall Depth-Stack Filter Cartridges are available in multi-material filter sheets, which are widely used in pharmaceutical and food & beverage industries. The filter sheets are made from cellulose fibers and inorganic filter aids (Diatomaceous earth etc., it has three functions of surface filtration, depth filtration and electrostatic adsorption.

BDS series adopt domestic filter sheets, which shows excellent high throughput and cost-effective performance. Generally, larger particles in feed liquids are mechanically intercepted through three-dimensional and porous structure, while smaller particles and microorganisms are intercepted by positively charged electrostatic adsorption.

PDS series adopt imported filter sheets, which has excellent features as like low density, high porosity, large particle removal capacity and long service life etc. The product is mainly suitable for filtration of viscous materials, colloid particles or coarse dispersed materials with low differential pressure.

KKS series adopt domestic filter sheets, the unique buckling connection allows for stack-to-stack usage and it is easy to be installed and dismantled.

Guarantees

- Manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified quality management system
- All components materials meet the requirements of the EU framework regulation [1935/2004/EC] regrading materials and articles intended to contact food.
- All components materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182.

Dimension

| | |
|-----------------|---|
| Cells | 8 cells / 9 cells / 12 cells / 15 cells / 16 cells |
| Outer Diameter | 8", 10", 12", 16" |
| Filtration Area | 0.36m ² (Φ8", 8cells) / 1.44m ² (Φ10", 16cells) 1.08m ² (Φ12", 9cells) / 1.44m ² (Φ12", 12cells) 1.8m ² (Φ12", 15cells) / 1.92m ² (Φ12", 16cells) 2.34m ² (Φ16", 9cells) / 3.12m ² (Φ16", 12cells) 3.9m ² (Φ16", 15cells) / 4.16m ² (Φ16", 16cells) |

Material of Constructions

| | |
|-------------------|-----------------------------------|
| Media | Cellulose, Filter aids, Resin etc |
| Support/Diversion | Polypropylene |
| Seal Material | Silicone, EPDM, NBR, FKM |

Performance

| | |
|----------------------------|------------------------|
| Max. Operating Temperature | 80°C |
| Max. Operating DP | 2Bar@25°C 1Bar@80°C |

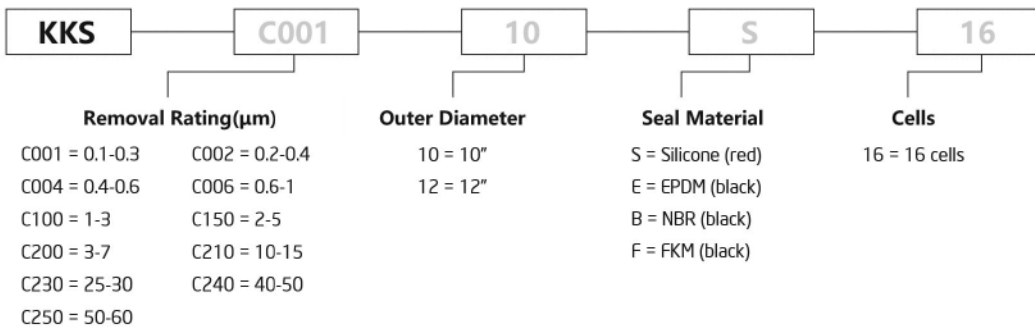
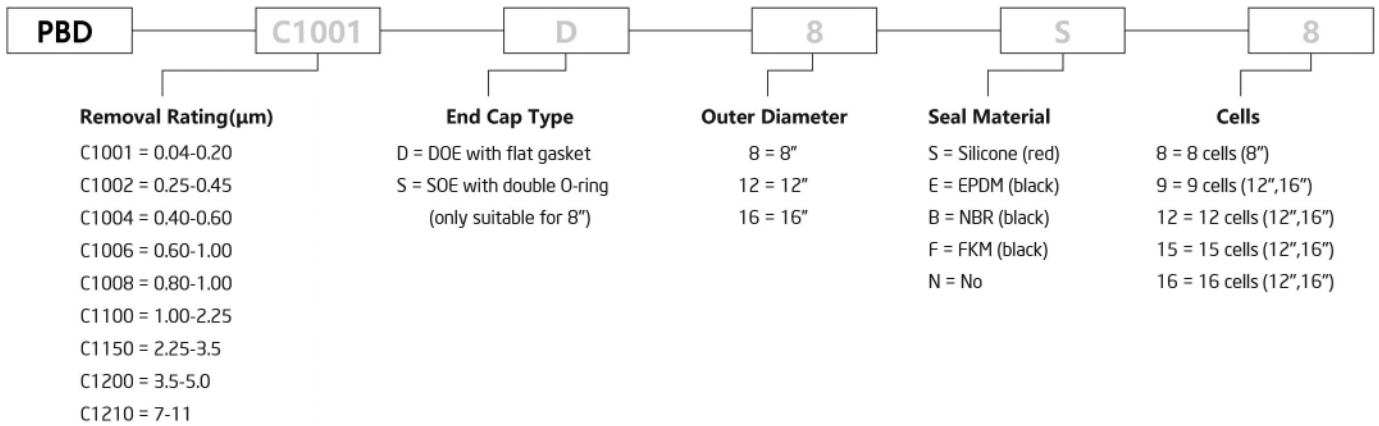
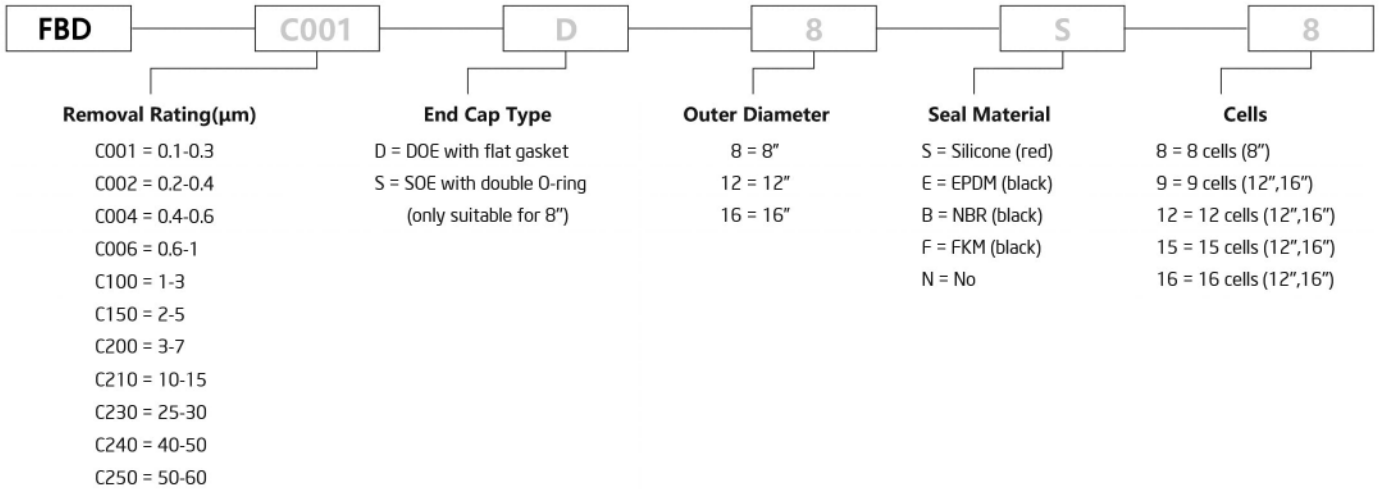
Features

- High flux filtration in pharmaceutical and food & beverage industries
- Thermal filtration fluid has no adverse influence to depth filter sheets
- Protection for subsequent sterile filters as well as chromatography columns
- Permeability and absorbability of filter sheets improving due to charged resins
- High dirt holding capacity combined with low protein adsorption
- Long service life and high economic efficiency
- Easy to operate, available in multiple grades and sizes

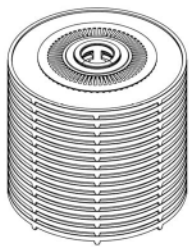
Applications

- Clarification of API liquids
- Filtration of vaccine production
- Blood plasma fractionation process
- Filtration of sugar syrups

Ordering Information



KKS Drawing



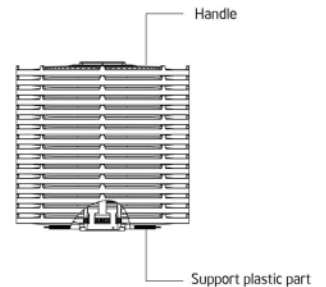
TP

Top&Bottom support plastic part



HD

Top handle



HT

Top handle and Bottom support plastic part



Depth-Stack Sanitary Filter Housings are a new type of depth-stack filter housing. Designed to meet requirements for sanitary construction with smooth crevice-free welding and TC-type sanitary connections. Easy to clean and disassemble. The co-linear inlet and outlet flow paths beneath the vessel shell serve to minimize liquid turbulence. Available for 8", 12" and 16" diameter cartridges up to four high modules to meet high flow rates requirements.

Features

- Ultra-high degree of polishing: Internal: $Ra \leq 0.3 \mu m$
External: $Ra \leq 0.4 \mu m$
- Liquid turbulence is minimized with co-linear inlet-outlet porting beneath the housing shell.
- Specially designed drain valves can optionally be installed on the inlet and outlet ports for easy liquid drainage.
- Allows vertical stacking of up to four depth-stack cartridges and provides high flow rates at high retention efficiency.
- Segmented cartridge design makes it more convenient to replace depth-stack cartridges and helps to reduce liquid loss.

Surface Finish

| | |
|-------------------------|--|
| Finish Process Options: | Passivated, Electropolished, Mech. Polished |
| Polish Quality: | Internal: $Ra \leq 0.3 \mu m$ External: $Ra \leq 0.4 \mu m$ |

Materials

| | |
|-----------------|-----------------------------|
| Shell Options: | 304 or 316L Stainless Steel |
| Vent Valve: | 304 or 316L |
| Eyebolts: | 304 |
| Legs: | 304 |
| Seal Materials: | Silicone, FKM, EPDM |

Operating Conditions

| | |
|-----------------------------|----------------|
| Design Pressure: | 0.6MPa (90psi) |
| Max. Operating Temperature: | 150°C (302°F) |

Connection

| | |
|-------------------------|--|
| Shell Connection: | Eyebolt |
| Inlet & Outlet: | Tri-clamp or Flange |
| Vent Valve/Drain Valve: | Inner bore 4mm Connects with 8mm pipe |
| Pressure Gauge: | 1.5" TC |

Applications

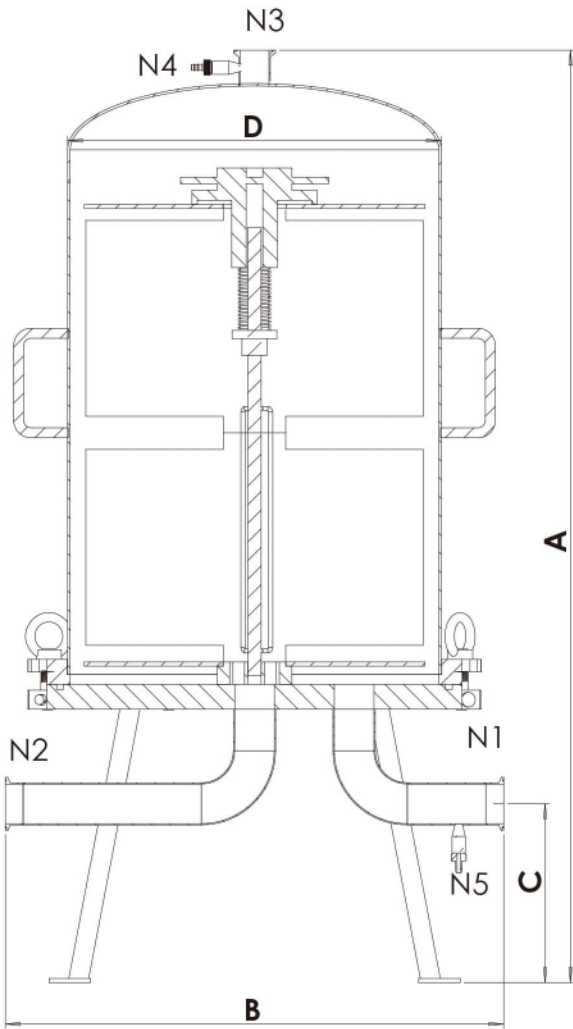
- Pharmaceuticals: filtration of injectables, LVPs, water for injection, and other biological products
- Food and beverage: filtration of beer, wine, and distilled spirits, juices, syrups, and edible oils
- Chemical industry: filtration of grease and dirt, sludge, and gelatinous materials

Cartridge Sealing System

A spring-loaded sealing system provides optimal sealing compression to help prevent filter bypass even under the most arduous process conditions.



Dimensions (mm)



| OD | No. of Cells | No. of Modules | A | B | C | D |
|-----|--------------|----------------|-------|-----|-----|------|
| 8" | 8 | 1 | 590 | 350 | 150 | Φ250 |
| | 2*8 | 2 | 730 | | | |
| | 3*8 | 3 | 870 | | | |
| | 4*8 | 4 | 1,010 | | | |
| 12" | 9 | 1 | 729 | 500 | 220 | Φ350 |
| | 12 | 1 | 773 | | | |
| | 15/16 | 1 | 846 | | | |
| | 2*12 | 2 | 989 | | | |
| | 2*16 | 2 | 1,126 | | | |
| | 3*12 | 3 | 1,205 | | | |
| | 3*16 | 3 | 1,406 | | | |
| | 4*16 | 4 | 1,686 | | | |
| 16" | 9 | 1 | 786 | 550 | 270 | Φ350 |
| | 12 | 1 | 835 | | | |
| | 15/16 | 1 | 899 | | | |
| | 2*12 | 2 | 1,051 | | | |
| | 2*16 | 2 | 1,179 | | | |
| | 3*16 | 3 | 1,459 | | | |
| | 4*16 | 4 | 1,739 | | | |

Great Wall | Dedicated & Experienced in Filtration Industry
 Depth Filtration Solutions

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