

# Depth Filtration

## Claricap CSD & Roheap CSD



# Claricap CSD & Roheap CSD Depth Filtration Series

Cobetter Claricap CSD & Roheap CSD series filter is composed of high purity lignocellulose and inorganic filter aid agent by special technology. Its three-dimensional inner structure makes it to be a depth filter medium while providing excellent filtration efficiency and high dirt holding capacity.

Filter paper is manufactured using super-matic production lines. All raw materials are tested by a strict quality control process to ensure filter quality and good performance in any application.

## Excellent Retention Efficiency

Claricap CSD & Roheap CSD Series Filter has three-dimensional inner structure, and the pore size decreases gradually as the depth increases, the flow rate of the solid particles will be reduced which allows them to be collected.

Diatomaceous earth-as an inorganic filter aid, its natural porous structure provides a good particle adsorption effect and increases the permeability of paperboard.

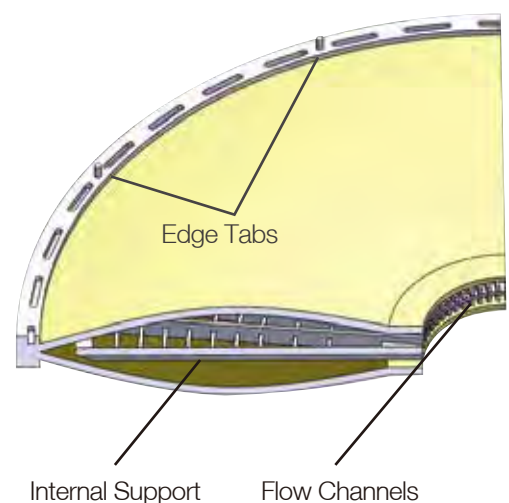
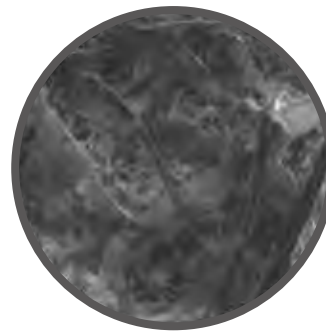
There's a small amount of synthetic resin in the filter paper which can not only improve the wet strength of the paper, but also provides a positive charge that ensure the adsorb efficiency.

## Excellent Characteristics

Using a high purity cellulose, reducing the level of ion precipitation and endotoxin makes the CSD Series suitable for biopharmaceutical and other high purity applications. The filter designs solve many of the problems found in typical disk-style filters such as leakage, heavy use, and high costs. The filter aid agent in the filter paper creates an inner crisscrossing three-dimensional structure which ensures a higher dirt holding capacity and longer lifetime.

## Applications

- Fermentation broth and cell culture media clarification filtration
- Serum and blood products filtration
- Enzyme preparation filtration
- Particle removal filtration
- Colloidal and viscous materials filtration

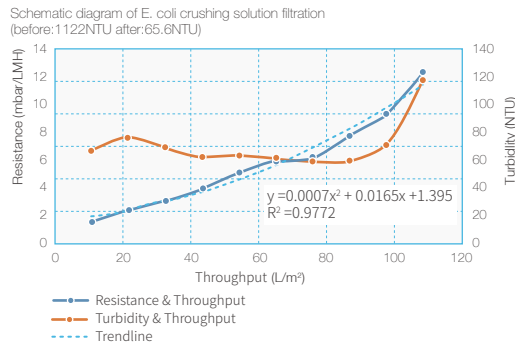
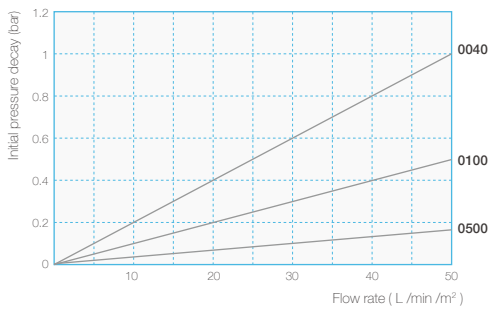


## Material of Construction

|              |   |
|--------------|---|
| Filter Media | Cellulose, diatomite filter aid and ionic wet-strength resin          |
| Process Type | P pharmaceutical    C High dirt holding capacity with positive charge |



## Features of Flow rate



## Filter Types

Round/Square Filter Sheets

Roheap CSD Filter

CDFC Capsule Filter

Large Scale Clarification Capsule Filter  
(used with stainless steel holder)

## Operating Conditions

|                           | Roheap CSD Filter  | CDF Capsule Filter |
|---------------------------|--|--------------------|
| Max Temperature           | 80°C   | 40°C               |
| Max Differential Pressure | 0.24 MPa /80°C   | 0.3 MPa /40°C      |
| Flush                     | Single Layer: 50L/m², Double Layer:100L/m², flow rate 10L/min/m² |                    |

## Flush

|                          |   |
|--------------------------|---|
| Endotoxins               | <0.25 EU/ml   |
| Biological Compatibility | Meet the requirement of USP<87> in Vitro Cytotoxicity Test.<br>Meet the criteria of the USP <88> Biological Reactivity Test for Class VI-121°C plastics |

## Chemical Compatibility

| Solvent                        | Concentration | @20°C | @80°C |
|--------------------------------|---------------|-------|-------|
| NaOH                           | 2%            | G     | P     |
| HCl                            | 5%            | G     | P     |
| HNO <sub>3</sub>               | 5%            | G     | P     |
| H <sub>2</sub> SO <sub>4</sub> | 10%           | G     | P     |
| Acetic Acid                    | 38%           | G     | G     |
| Citric Acid                    | 10%           | G     | G     |
| Acetic Peracid                 | 0.1%          | G     | G     |
| Butanol                        | 80%           | G     | G     |
| Ethanol                        | 80%           | G     | G     |

G=Compatible; P=Incompatible



## Extractable Metal Ions

| PC | Ions | ppb    | Ions | ppb   |
|----|------|--------|------|-------|
|    | Mg   | 5.201  | Ni   | 0.334 |
|    | Al   | 34.540 | Cu   | 0.770 |
|    | Ca   | 63.447 | As   | 0.532 |
|    | Cr   | 0.047  | Pb   | 0.04  |
|    | Fe   | 27.287 |      |       |

Filtration Area

|   | Specification                      | Single Layer                           | Double Layers                          |
|---|------------------------------------|--|--|
|    | CDFC                               | 23cm <sup>2</sup>                      | 23cm <sup>2</sup>                      |
|    | L05SS                              | 207cm <sup>2</sup>                     | 115cm <sup>2</sup>                     |
|    | L10SS                              | 414cm <sup>2</sup>                     | 230cm <sup>2</sup>                     |
|    | L03TT                              | 225cm <sup>2</sup>                     | 90cm <sup>2</sup>                      |
|   | L05TT                              | 405cm <sup>2</sup>                     | 180cm <sup>2</sup>                     |
|   | L08TT                              | 585cm <sup>2</sup>                     | 270cm <sup>2</sup>                     |
|   | CSCA                               | 0.2m <sup>2</sup>                      | 0.15m <sup>2</sup>                     |
|  | CSCC                               | 0.4m <sup>2</sup>                      | 0.4m <sup>2</sup>                      |
|  | CSCE                               | 0.5m <sup>2</sup>                      | 0.4m <sup>2</sup>                      |
|  | CSCD                               | 0.2m <sup>2</sup>                      | 0.15m <sup>2</sup>                     |
|  | CSCB                               | 1.15m <sup>2</sup>                     | 0.92m <sup>2</sup>                     |
|  | CSCM                               | /                                      | 1.1m <sup>2</sup>                      |
|  | CSD12"Per Layer<br>CSD16"Per Layer | 0.11m <sup>2</sup> /0.23m <sup>2</sup> | 0.11m <sup>2</sup> /0.23m <sup>2</sup> |

# Roheap Depth Part Number Configurator

## Capsule Filter Example : CDFCSCSD0004PBP

### Cobetter Claricap Lab Single-Layer Depth Capsule Filters



Filter Format

- L05SS** Claricap L05 (207cm<sup>2</sup>)
- L10SS** Claricap L10 (414cm<sup>2</sup>)
- L03TT** Claricap L03 (225cm<sup>2</sup>)
- L05TT** Claricap L05 (405cm<sup>2</sup>)
- L08TT** Claricap L08 (585cm<sup>2</sup>)



Filter Media

- CSD** Roheap CSD depth filter media



Number of Layers

- S** Single-Layer



Removal Ratings

- 0004** 0.04-0.2µm
- 0020** 0.2-0.4µm
- 0040** 0.4-0.6µm
- 0060** 0.6-0.8µm
- 0100** 0.8-1.5µm
- 0150** 1.5-3.0µm
- 0300** 3.0-6.0µm
- 0400** 4.0-9.0µm
- 0500** 5.0-12.0µm
- 0600** 6.0-15.0µm
- 0700** 7.0-18.0µm
- 0800** 8.0-20.0µm
- 0900** 9.0-30.0µm
- H003** 0.02-0.2µm
- H004** 0.04-0.2µm



Type

- PC** Positive Charge
- PE** Negative Charge



- P** Pharmaceutical



### Cobetter Claricap Lab Double-Layer Depth Capsule Filters



Filter Format

- L05SS** Claricap L05 (115cm<sup>2</sup>)
- L10SS** Claricap L10 (230cm<sup>2</sup>)
- L03TT** Claricap L03 (90cm<sup>2</sup>)
- L05TT** Claricap L05 (180cm<sup>2</sup>)
- L08TT** Claricap L08 (270cm<sup>2</sup>)



Filter Media

- CSD** Roheap CSD depth filter media



Number of Layers

- D** Double-Layer



Removal Ratings

- 01** 0.04-0.2µm
- 02** 0.2-0.4µm
- 04** 0.4-0.6µm
- 06** 0.6-0.8µm
- 10** 0.8-1.5µm
- 15** 1.5-3.0µm
- 30** 3.0-6.0µm
- 40** 4.0-9.0µm
- 42** 6.0-12.0µm
- 50** 5.0-12.0µm
- 60** 6.0-15.0µm
- 70** 7.0-18.0µm
- 72** 7.0-30.0µm
- 80** 8.0-20.0µm
- H0** 0.02-0.2µm
- HP** 0.02-0.2µm
- H2** 0.01-0.2µm
- S8** 0.1-0.2µm



Type

- PC** Positive Charge
- PE** Negative Charge



- P** Pharmaceutical



## Cobetter Claricap D Single-Layer Depth Capsule Filters



Filter Format

- CDFC** Claricap Lab (23cm<sup>2</sup>)
- CSCA** Claricap D08 (0.2m<sup>2</sup>)
- CSCB** Claricap D16 (1.15m<sup>2</sup>)
- CSCC** Claricap D08 Pro (0.4m<sup>2</sup>)
- CSCD** Claricap D08 - II (0.2m<sup>2</sup>)
- CSC E** Claricap D08 Pro - II (0.5m<sup>2</sup>)



Number of Layers

- S** Single-Layer



**CSD** For CDFC Series



Removal Ratings

- 0004** 0.04-0.2µm
- 0020** 0.2-0.4µm
- 0040** 0.4-0.6µm
- 0060** 0.6-0.8µm
- 0100** 0.8-1.5µm
- 0150** 1.5-3.0µm
- 0300** 3.0-6.0µm
- 0400** 4.0-9.0µm
- 0500** 5.0-12.0µm
- 0600** 6.0-15.0µm
- 0700** 7.0-18.0µm
- 0800** 8.0-20.0µm
- 0900** 9.0-30.0µm
- H003** 0.02-0.2µm
- H004** 0.04-0.2µm



Type

- PC** Positive Charge
- PE** Negative Charge



**P** Pharmaceutical



## Cobetter Claricap D Double-Layer Depth Filter Cassette



Filter Format

- CDFC** Claricap Lab (23cm<sup>2</sup>)
- CSCA** Claricap D08 (0.15m<sup>2</sup>)
- CSCB** Claricap D16 (0.92m<sup>2</sup>)
- CSCC** Claricap D08 Pro (0.4m<sup>2</sup>)
- CSCD** Claricap D08 - II (0.15m<sup>2</sup>)
- CSC E** Claricap D08 Pro - II (0.4m<sup>2</sup>)
- CSCM** Claricap M11 (1.1m<sup>2</sup>)



Number of Layers

- D** Double-Layer



**CSD** For CDFC Series



Removal Ratings

- 01** 0.04-0.2µm
- 02** 0.2-0.4µm
- 04** 0.4-0.6µm
- 06** 0.6-0.8µm
- 10** 0.8-1.5µm
- 15** 1.5-3.0µm
- 30** 3.0-6.0µm
- 40** 4.0-9.0µm
- 42** 6.0-12.0µm
- 50** 5.0-12.0µm
- 60** 6.0-15.0µm
- 70** 7.0-18.0µm
- 72** 7.0-30.0µm
- 80** 8.0-20.0µm
- H0** 0.02-0.2µm
- HP** 0.02-0.2µm
- H2** 0.01-0.2µm
- S8** 0.1-0.2µm



Type

- PC** Positive Charge
- PE** Negative Charge



**P** Pharmaceutical



## CSD Depth Cartridge Filter

**C S D**

Filter Format

**CSD**



Removal Ratings

**0004** 0.04-0.2µm  
**0020** 0.2-0.4µm  
**0040** 0.4-0.6µm  
**0060** 0.6-0.8µm  
**0100** 0.8-1.5µm  
**0150** 1.5-3.0µm  
**0300** 3.0-6.0µm  
**0400** 4.0-9.0µm  
**0500** 5.0-12.0µm  
**0600** 6.0-15.0µm  
**0700** 7.0-18.0µm  
**0800** 8.0-20.0µm  
**0900** 9.0-30.0µm  
**REL P** 0.5-0.8µm  
**H003** 0.02-0.2µm  
**H004** 0.04-0.2µm



Type

**PC** Positive Charge  
**PE** Negative Charge



End Cap

**DOE**  
**TCT**



Diameter

**12** 12inch  
**16** 16inch



Number of Cells

**W** 2 Cells  
**Y** 3 Cells  
**G** 4 Cells  
**B** 5 Cells  
**H** 8 Cells  
**N** 9 Cells  
**X** 10Cells  
**Q** 11Cells  
**T** 12Cells  
**E** 14Cells  
**F** 15Cells  
**D** 16Cells



O-ring Material

**S** Silicone **P** Pharmaceutical  
**E** EPDM  
**V** Fluoroelastomer  
**T** FEP/PFA encap-sulated O-rings

## CSD Depth Cartridge Filter

**C S D**

Filter Format

**CSD**



**- II**

Number of Layers

**- II** Double-Layer



Removal Ratings

**01** 0.04-0.2µm  
**02** 0.2-0.4µm  
**04** 0.4-0.6µm  
**06** 0.6-0.8µm  
**10** 0.8-1.5µm  
**15** 1.5-3.0µm  
**30** 3.0-6.0µm  
**40** 4.0-9.0µm  
**42** 6.0-12.0µm  
**50** 5.0-12.0µm  
**60** 6.0-15.0µm  
**70** 7.0-18.0µm  
**72** 7.0-30.0µm  
**80** 8.0-20.0µm  
**H0** 0.02-0.2µm  
**HP** 0.02-0.2µm  
**H2** 0.01-0.2µm  
**S8** 0.1-0.2µm



Type

**PC** Positive Charge  
**PE** Negative Charge



End Cap

**DOE**  
**TCT**



Diameter

**12** 12inch  
**16** 16inch



Number of Cells

**A** 1 Cell  
**W** 2 Cells  
**Y** 3 Cells  
**G** 4 Cells  
**B** 5 Cells  
**H** 8 Cells  
**N** 9 Cells  
**X** 10Cells

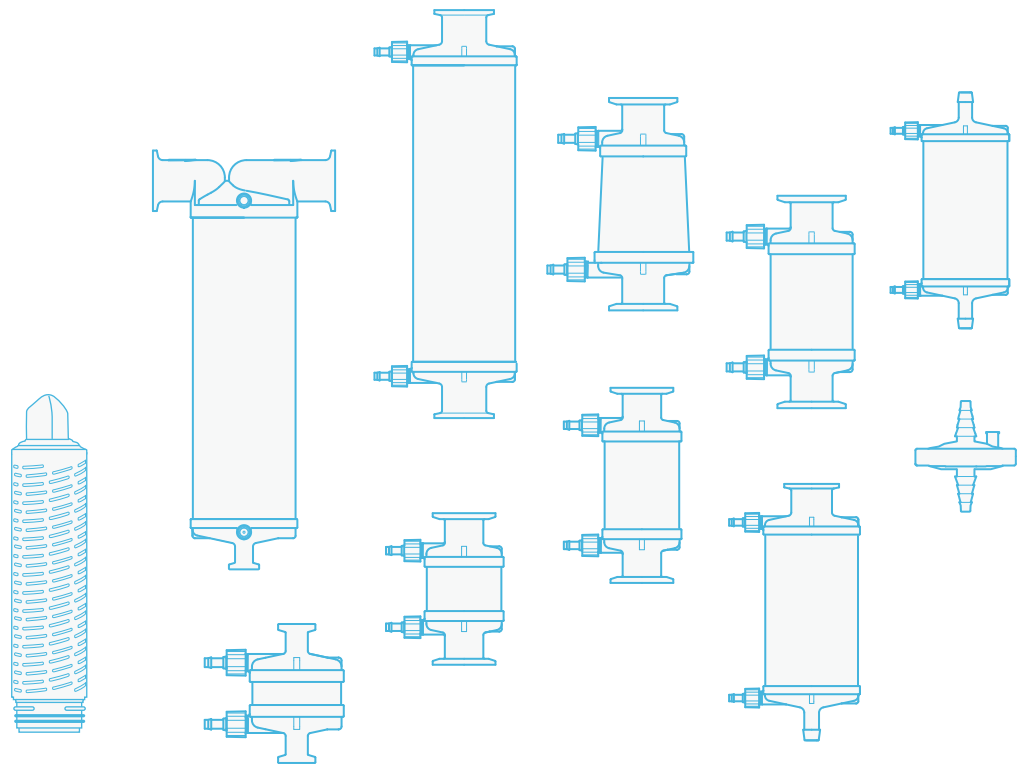


O-ring Material

**S** Silicone **P** Pharmaceutical  
**E** EPDM  
**V** Fluoroelastomer  
**T** FEP/PFA encap-sulated O-rings

# Our Mission

Through Excellent Products & Sustainable Innovative Solutions,  
We Help Customers Solve Process Problems & Increase Yield.



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