

# Lenticular Depth Filter Cartridges

## Technical Data Sheet

### Description

Lenticular Depth Filters are a family of depth filters designed to provide optimal clarification for water treatment, food and beverage fluids, and bio-pharma. Each module is made from three main components: individual filter cells, a center core, and end adaptors. Individual cells consist of two sheets of depth filter media with a polypropylene separator in between. This separator is sandwiched within the cell on the downstream side of the two sheets, as the flow path is from the outer surface of the sheets to the inside. In addition, a polypropylene seal around the outer edge is used to bond the two sheets together to form a complete cell; The cells are stacked on top of each other until the desired height is reached; End caps are then affixed to the center core, thus locking each cell in place and forming a complete module. The media of depth filter sheets are composed of cellulose, inorganic filter aids (e.g. diatomaceous earth, activated carbon), and wet strength agent system, which can provide more efficient filtration. And the filtration effect of these sheet-based products is based on a combination of surface, depth, and adsorption filtration.



### Technical Parameters

<b>Materials of Construction</b>	Depth Filter Media	Cellulose, diatomaceous earth (DE), wet strength agent			
	Standard Module	Polypropylene			
	Gaskets	Silicone sealing gasket (optionally NBR, FKM)			
<b>Module Version</b>	Standard lenticular module				
<b>Filter Configuration</b>	Outside Diameter	12" (282mm)		16" (425mm)	
	Adaptor Type <sup>[1]</sup>	DOE	DOR	DOE	DOR
	Number of Cells <sup>[2]</sup>	16		16	
	Filtration Area (m <sup>2</sup> )	1.7		4.0	
<b>Recommended Sterilization</b>	Hot water or autoclave 30 min at 121°C (250°F)				
<b>Operating Parameters</b>	Maximum Allowable Differential Pressure	2.0 bar (29.0psi) @ 25°C			
	Maximum Operating Temperature	80°C (176°F)			
	Rinsing Volume	50 L/m <sup>2</sup>			

<sup>[1]</sup> DOE: Double Open End (flat adaptor), DOR: Double O-Ring

<sup>[2]</sup> Modules with reduced number of cells are available upon request

## Features

- Modular design to fulfill different applications scenes
- Both DOE, DOR adaptors can be provided
- Broad range covered for different needs, from bacterial reduction filtration to coarse pre-filtration
- Swift filter module replacement
- Low extractable after small amount of pre-flushing
- Meet FDA quality
- Economic running cost

## Applications

The filtration process is carried out by depth filter sheets, which are available in a range of porosities, from coarse to fine, and even germ-reducing filtration.

### >> Examples of Industries:

- Food&Beverage (wine, beer, spirits, juice, fructose...)
- Solvents
- Fine chemicals
- Process water

## Filter Media Specifications

Code	Grade	Retention Rating <sup>[1]</sup> (µm)	Mass Per Unit Area (g/m <sup>2</sup> )	Thickness (mm)	Typical Water in Permeability <sup>[2]</sup> (L/min/m <sup>2</sup> )	Ash Content (%)
200	STKP-Y-4	5-12	1400	3.6-4.0	235	52.5
100	STKP-Y-5	3-7	1300	3.6-4.0	197	51.8
050	STKP-Y-6	1-5	1450	3.6-4.0	90	44.2
010	STKP-Y-7	0.6-1.0	1300	3.6-4.0	76	48.3
005	STKP-Y-8	0.2-0.5	1450	3.6-4.0	54	48.0
002	STKP-Y-9	0.1- 0.2	1550	3.6-4.0	48	49.2

<sup>[1]</sup>Effective removal performance of filter sheets is dependent on process conditions

<sup>[2]</sup>The permeability was measured under test conditions with deionized water at Δp of 1 bar (14.5 psi). And, the water flow value is not related in any way to the actual filtration

## Ordering Information

Code	Filter Type	Adaptor Type	Size	Gasket Material	Number of Cells <sup>[1]</sup>	General Use
CRDS	200	D	12	S	16	G
CRDS	Filter Media Code from Specifications Table	D:Double Open End (flat adaptor) S:Double O-Ring	12:12 inch 16:16 inch	S:Silicone N:NBR V:FKM	16	G:General Use

<sup>[1]</sup>Modules with reduced number of cells are available upon request