Micro-Klean™ CS Series

Micro-Klean™ CS Series Filter Cartridges

Micro-Klean™ CS series filters are an improved conventionally wound cartridge manufactured by 3M Purification Inc. on state-of the art precision winding machines. Yarn-wound filter cartridges are simple and versatile. The materials of construction (core and roving) offer broad chemical compatibility and economical filtration. Continuous length winding (no matter what the cartridge length) eliminates the "dead" spots found on conventionally wound cartridges. A single roving strand employs a strictly controlled material to produce a consistent and high quality cartridge. This advanced manufacturing technology, combined with a choice of media types and wind patterns, ensures filtration that best fits the application to provide economical and efficient results time and time again.

Applications

Chemical	Food & Beverage	Paint & Ink
Utilities	Printed Circuits	Well Services
Electronics	Pharmaceutical	Petrochemical
Photographic	Oil & Gas	Plating

Construction

Micro-Klean CS series filters represent an improved cartridge manufacturing process that eliminates "joints" found in conventional multiple length cartridges. This eliminates problems of by-pass, restricted flow, and inconsistent micron retention.

The standard media include bleached cotton, unbleached cotton, rayon, and polypropylene. The Micro-Klean CS series cartridge core is available in a variety of materials including tin plated steel, 304 and 316 stainless steel, and polypropylene. Consult Table 3 for further information.

Operating Parameters

Table 1. – Micro-Klean™ CS Series Operating Parameters

Operating Data	
Maximum Operating Temperature	See Table Below
Maximum Operating Pressure	70 psid (4.8 bar)
Maximum Flow Rate	See Table 3

Performance

The Micro-Klean CS series cartridge is a nominal rated cartridge available with ratings from 0.5 to 350 mm. Recommended aqueous fluid flow rates, along with nominal ratings for each grade are listed in table 2. Note that the flow rate should never exceed 10 gpm.

Table 2. – Micro-Klean™ CS Series Grades and Flow

Grade	Nominal Rating (µm)	Flow Rate* (gpm)
Z	0.5	< 1
Y	1	1
A	3	2
B	5	4
C	10	5
F	25	6
L	50	6
Q	75	6
V	100	6
Q	350	6

*Per 10" nominal increment

Media	Maximum Temperature	Core Material	Applications
Cotton (Bleached)	250 °F / 121 °C	Tin Plated Steel	Use for potable liquids, vegetable oil, beverages, organic solvents, water, dilute acids, and petroleum products. Cartridge materials meet FDA requirements.
	250 °F / 121 °C	304 & 316 Stainless Steel	
	140 °F / 60 °C	Polypropylene	
Cotton (Unbleached)	250°F / 121°C	Tin Plated Steel	Use on non-critical applications.
	250°F / 121°C	304 & 316 Stainless Steel	
	140 °F / 60 °C	Polypropylene	
Polypropylene	210 °F / 121 °C	Tin Plated Steel	Filtration of water, organic acids, alkalies, oxidizing and reducing agents and many other chemicals.
	210 °F / 121 °C	304 & 316 Stainless Steel	
	140 °F / 60 °C	Polypropylene	
Rayon	300 °F / 121 °C	Tin Plated Steel	Chemical compatibility is similar to cotton. Use infiltration of petroleum products.
	300 °F / 121 °C	304 & 316 Stainless Steel	
	140 °F / 60 °C	Polypropylene	

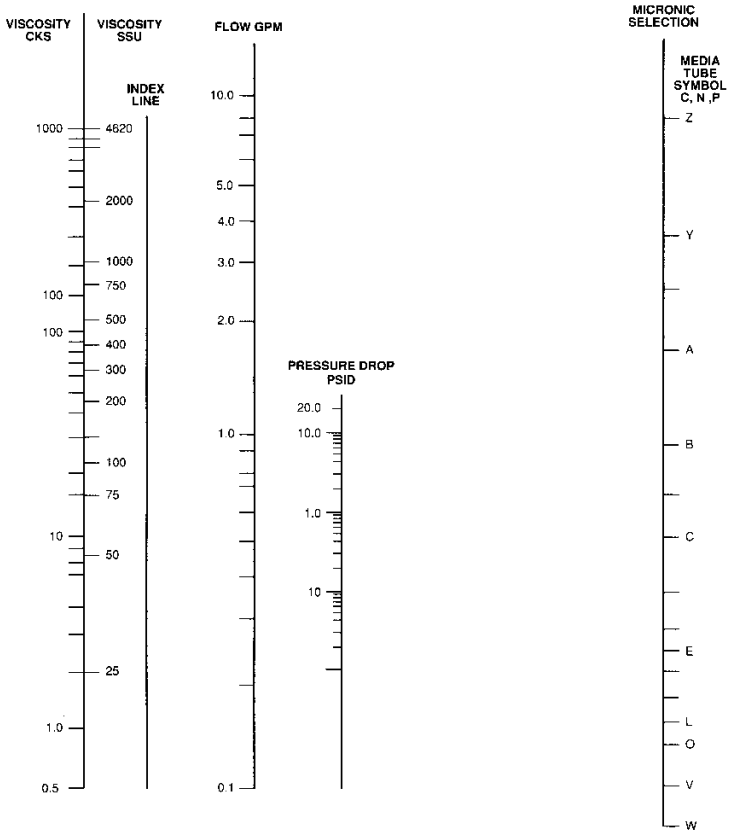
Non-Aqueous Selection Guide

To determine the system requirements for a specific grade selection, refer to Chart 1 and complete the following:

1. Select the required grade from the micron Selection Line (MSL) in Chart 1.
2. Using a straight-edge, draw a line from the grade mark on the MSL through the desired pressure drop to the Index Line.
3. Choose the viscosity of the material to be filtered on the Viscosity Line.
4. Using a straight-edge, draw a line from the viscosity mark, intersecting the mark made prior on the Index Line, to the Flow GPM Line.
5. Adjust the Pressure Drop Line to achieve the required flow.

To select an Micro-Klean™ CS series to fit static system requirements (i.e., flow rate and pressure drop), start with the fluid viscosity and choose the flow rate. Then draw a line from the Index Line, through the desired pressure drop, to the MSL.

Chart 1 - Non-Aqueous Selection Guide



Micro-Klean™ CS Series Ordering Guide

Plant Code 06 Product Code 062

Cartridge Type	Wind Pattern	Cartridge Length	Grade Designation		Core Material	Options
			Grade	Nominal Rating (mircons		
Micro-Klean CS	Standard	09 - 9 7/8”	Z	0.5	P - Polypropylene	N - None
		19 - 19 ½”	Y	1	F - Tinned Steel	P - Polypropylene Core Extender
		20 - 20”	A	3	S - 304 SS	X - 316 S.S. Core Extender
		29 - 29 ¼”	B	5	T - 316 SS	V - Voile Core Covering
		30 - 30”	C	10		
		39 - 39”	F	25		
		40 - 40”	L	50		
			Q	75		
			V	100		
			W	350		

Important Notice

The information described in this literature is accurate to the best of our knowledge. A variety of factors, however, can affect the performance of the Product(s) in a particular application, some of which are uniquely within your knowledge and control. **INFORMATION IS SUPPLIED UPON THE CONDITION THAT THE PERSONS RECEIVING THE SAME WILL MAKE THEIR OWN DETERMINATION AS TO ITS SUITABILITY FOR THEIR USE. IN NO EVENT WILL 3M PURIFICATION INC. BE RESPONSIBLE FOR DAMAGES OF ANY NATURE WHATSOEVER RESULTING FROM THE USE OF OR RELIANCE UPON INFORMATION.**

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3M Purification Inc.
400 Research Parkway
Meriden, CT 06450
U.S.A.
Phone (800) 243-6894
(203) 237-5541
Fax (203) 630-4530
www.3Mpurification.com

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