Micro-Wynd® II Blanket Media Filter Cartridges

Better By Design…

- **Enhanced Removal Efficiency**
- **Superior Capacity for Long Life**
- **Wide Range of Removal Ratings**
- **CFR21 Compliant Materials**

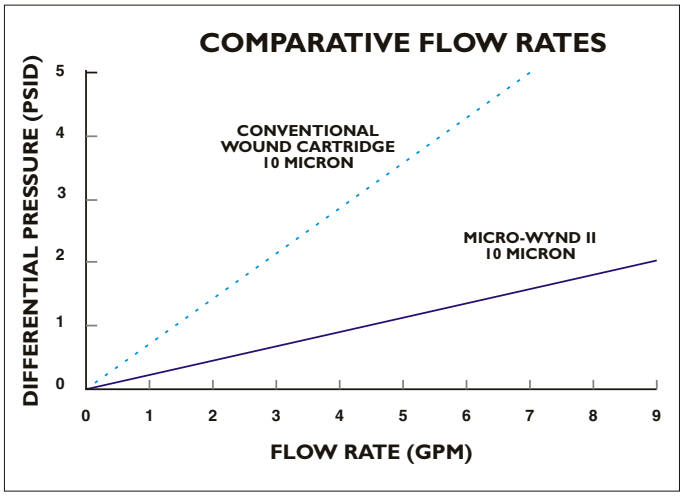
The Micro-Wynd® II filter cartridge is a major advance in blanketed filter technology. By combining an enhanced open wind process with an internal media blanket, the Micro-Wynd II provides superior flow rates, greater filtration efficiency, and consistent filtration characteristics from cartridge to cartridge, lot to lot.

The superior performance is a direct result of the advanced winding pattern of the yarn matrix combined with CUNO's exclusive patented process of separately applying a tailored media "blanket" between successive layers of yarn. This winding pattern creates much larger diamond shaped contaminant holding chambers. The separately inserted blanket encloses the chambers and maintains the consistency and integrity of filtration. These two factors combine to achieve a balance of filtration characteristics *impossible to obtain with ordinary wound filter cartridges* with teased or brushed up random fibers on the yarn to produce a filtering media.

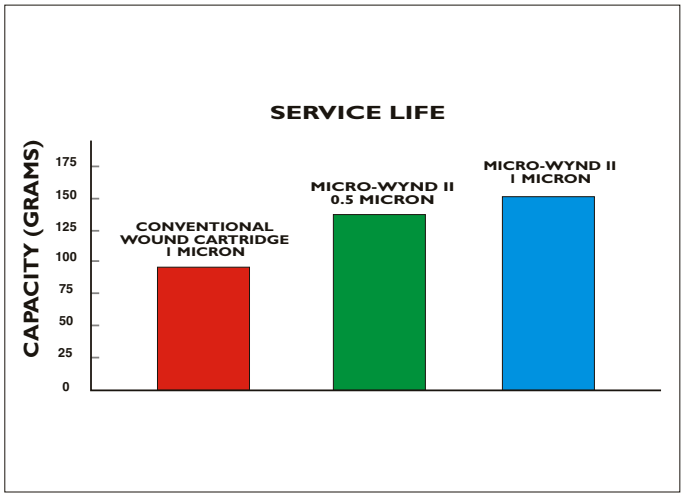
The Micro-Wynd II winding pattern also provides less restriction than the patterns common to ordinary wound cartridges. Consequently, it is not unusual for Micro-Wynd II filter cartridge to provide up to 2 ½ times more open area, enhancing the flow rate by up to 500% for the same pressure drop (see Graph 1 on the following page).

Features	Benefits
■ Blanket media filter cartridge	■ Higher filtration efficiency at the selected rating
■ CFR 21 listed materials of construction	■ Suitable for food & beverage, and other regulated applications
■ Graded density construction	■ Very low pressure drop and high flow rates ■ Longer filter life and more cost effective filtration
■ Low extractable levels	■ Suitable for water, electronics and electroplating
■ Integral lengths from 9 7/8" To 40"	■ Eliminates joints that cause blinding or by-pass ■ Easy to install and remove
■ Choice of construction materials	■ Ensures process and system compatibility
■ High dirt holding capacity	■ Reduces filter change-outs
■ Wide variety of end fittings	■ Suitable for all filter housings
■ Cleaner, more durable construction	■ Less media migration than conventional wound cartridges

Micro-Wynd II - *Better By Design*



GRAPH 1. - FLOW COMPARISON



GRAPH 2. - SERVICE LIFE

Micro-Wynd II is a blanket media cartridge offering true graded density, with more open filtration on the outside of the filter and fine, more efficient filtration, on the inner layer of the cartridge. Blinding of the filtration surfaces by large particles is minimized and cartridge life extended. Lower cartridge replacement costs are achieved as demonstrated in Graph 2.

Micro-Wynd II filter cartridges, with nominal ratings from 0.5 to 350 microns, are available with various media, matrix, and core materials to ensure compatibility with your process. Standard materials include cotton yarn/cotton media blanket for use in applications involving water, alcohol, and other polar liquids. Cotton materials are CFR 21 compliant for use with potable water, food, and beverage products.

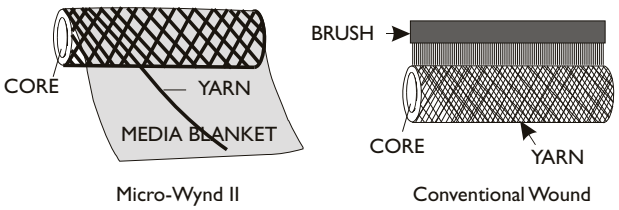
The polypropylene yarn/polypropylene media blanket configuration, also CFR 21 compliant, is excellent for use with acids, alkalis, strong oxidizing and reducing agents, and other chemicals in aqueous solutions.

Cartridge Disposal

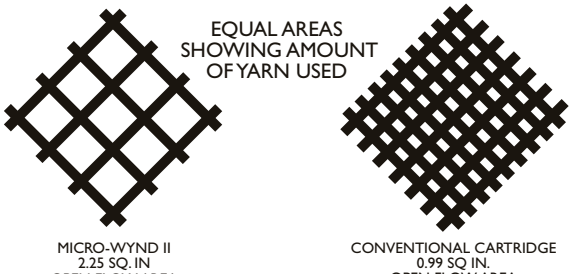
Micro-Wynd II cartridges can be incinerated or shredded when configured with polypropylene cores. Metal cores can be crushed by high pressure techniques after media incineration. Other methods may be more economical when using metal cores.

Configurations

Cartridges can be configured with tinned steel, stainless steel, or polypropylene cores. The use of various core materials provide an advanced range of compatibility.



The Micro-Wynd II media blanket is superior to the brushing method of conventional wound cartridges that breaks the yarn fibers resulting in media migration. The media blanket produces greater filtration efficiency, increased contaminant holding capacity, and substantially cleaner filtration.



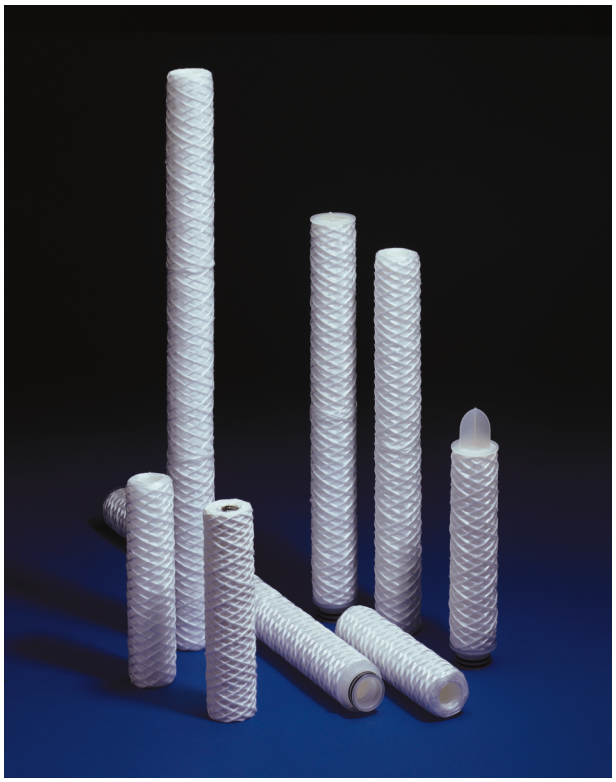
The Micro-Wynd II winding pattern combined with the media blanket produces a more rigid structure and reduces the restriction caused by the yarn. This results in an enhanced flow of up to 500%, in turn reducing the size and cost of filtration hardware!

Micro-Wynd II - *Better By Design*

Table 1 lists the various configurations for Micro-Wynd II filters. Micro-Wynd II cartridges can be configured with various end-treatments and o-ring materials to fit competitive filter housings (see Ordering Guide on back).

MICRON RATING	TINNED STEEL	304 SS CORE	316 SS CORE	POLYPROPYLENE CORE
POLYPROPYLENE MEDIA BLANKET/YARN CARTRIDGES (150°F)				
0.5	D-PPFZ	D-PPSZ	D-PPTZ	D-PPPZ
1	D-PPFY	D-PPSY	D-PPTY	D-PPPY
3	D-PPFA	D-PPSA	D-PPTA	D-PPPA
5	D-PPFB	D-PPSB	D-PPTB	D-PPPB
10	D-PPFC	D-PPSC	D-PPTC	D-PPPC
25	D-PPFF	D-PPSF	D-PPTF	D-PPPF
50	D-PPFL	D-PPSL	D-PPTL	D-PPPL
75	D-PPFQ	D-PPSQ	D-PPTQ	D-PPPQ
100	D-PPFV	D-PPSV	D-PPTV	D-PPPV
350	D-PPFW	D-PPSW	D-PPTW	D-PPPW
COTTON MEDIA BLANKET/YARN CARTRIDGES				
	(250°F)			(150°F)
0.5	D-CCFZ	D-CCSZ	D-CCTZ	D-CCPZ
1	D-CCFY	D-CCSY	D-CCTY	D-CCPY
3	D-CCFA	D-CCSA	D-CCTA	D-CCPA
5	D-CCFB	D-CCSB	D-CCTB	D-CCPB
10	D-CCFC	D-CCSC	D-CCTC	D-CCPC
25	D-CCFF	D-CCSF	D-CCTF	D-CCPF
50	D-CCFL	D-CCSL	D-CCTL	D-CCPL
75	D-CCFQ	D-CCSQ	D-CCTQ	D-CCPQ
100	D-CCFV	D-CCSV	D-CCTV	D-CCPV
350	D-CCFW	D-CCSW	D-CCTW	D-CCPW

TABLE 1. - CARTRIDGE CONFIGURATIONS



Micro-Wynd II Cartridge Configurations

Cartridge Flow Rates

Aqueous Flow Rates - Micro-Wynd II cartridges exhibit excellent flow performance. For good filter practice, the flow values listed in Table 2, by grade designation, are recommended for maximum service life.

GRADE	FLOW RATE *(gpm)
Z	2
Y	2
A	3
B,C	4
F,L,Q,V,W	5
* Flow rates are for single length cartridges (9 7/8 - 10")	

TABLE 2. - AQUEOUS FLOW RATES

Non Aqueous Flow Rates - Calculate using the formula in conjunction with the values shown in Table 3. The specific pressure drop values may be effectively used when three of the four variables (Viscosity, Flow, Differential Pressure, and Cartridge Grade) are set.

$$\underset{\text{psi (mbar)}}{\text{Clean } \triangle p} = \frac{\left(\text{Total system gpm [lpm]}\right)\left(\text{Viscosity in cst}\right)\left(\text{Value from table}\right)}{\left(\text{Number of Equivalent Single Length Cartridges in housing}\right)}$$

Grade	Nominal Rating (µm)	Specific Pressure Drop per 10" Cartridge *			
		Polypropylene Media		Cotton Media	
		psid/gpm /cst	mbar/lpm/cst	psid/gpm /cst	mbar/lpm/cst
Z	0.5	0.21	3.84	0.62	11.20
Y	1	0.14	2.55	0.47	8.62
A	3	0.10	1.86	0.39	7.10
B	5	0.04	0.71	0.17	3.12
C	10	0.03	0.49	0.08	1.49
F	25	0.02	0.33	0.05	0.93
L	50	0.010	0.19	0.03	0.47
Q	75	0.008	0.15	0.013	0.24
V	100	0.005	0.10	0.011	0.20
W	350	0.004	0.08	0.006	0.11

* Specific pressure drop at ambient temperature for a single length equivalent (10") cartridge. Table values are shown for liquids with kinematic viscosity equal to 1.0. Kinematic viscosity in centistokes (cst) can be calculated by dividing the viscosity in centipoise by the specific gravity of the fluid. For multiple cartridge lengths, divide the total flow by the number of equivalent lengths.

TABLE 3. - MICRO-WYND II FLOW RATES

Micro-Wynd II Ordering Guide

For SOE Cartridges, otherwise leave blank

Basic Catalog Number	Media Blanket	Matrix	Core Material	Grade Designation		Nominal Cartridge Length		End Modification*	O-Ring Material
				Grade	Nominal Rating (µ)	Code	Length (in.)		
D - No Extended Core	C - Cotton	C - Cotton	P - Polypropylene	Z	0.5	1**	9 7/8"	C - Code 8 Double O-Ring Connector & Spear	A - Silicone
S - 316 S.S. Extended Core	P - Polypropylene	P - Polypropylene	F - Tinned Steel	Y	1	2	19 ½"		B - Fluorocarbon
P - Polypropylene Extended Core			S - 304 S.S.	A	3	2x	20"		C- EPR
			T - 316 S.S.	B	5	3	29 ¼"	F - Code 3 Double O-Ring Connector & Flat Cap	D - Nitrite
				C	10	3x	30"		
				F	25	4	39"		
				L	50	4x	40"		
				Q	75				
				V	100				
				W	350				

Option: For voile covered core, insert the letter V before the grade designation

* End Modification Requires use of the polypropylene core

** Fits 9 ¾" and 10" housings