

# Micro-Klean™ D Series

Depth Filter Cartridges

## A different filter cartridge

Micro-Klean D Series cartridges, formerly known as Micro-Wynd, are produced by an exclusive 3M Purification process which combines 2 separate materials simultaneously on a common core.

The filtering media is applied in blanket form whilst the matrix is wound spirally under controlled tension to bind the media blanket in a firm position.

The winding pattern creates wide diamond shaped chambers which provides the exceptional performances in flow and life time of the Micro-Klean D Series cartridges. With the ordinary wound cartridge, there is no distinct filtering media, the matrix only is operating. It is brushed and separate during the winding operation. This accounts for the shortness of fibres and lack of the very important necessary quantity of matrix, which shortens considerably the life and lowers flow rates.

## Multi-length cartridges

To eliminate any chance of by-pass at the cartridge joints, Micro-Klean D Series cartridges can be delivered in several lengths but in one piece construction from 9"  $\frac{3}{4}$  to 29". In this case, the media blanket is continuous on the whole length of the cartridge, eliminating overlap winding joints. Integral length cartridges also assure easier and shorter change out.

## Operating Conditions

Micro-Klean D Series cartridges are nominally rated (from 1  $\mu$ m to 150  $\mu$ m nominal). Maximum service temperature can be up to 120 °C depending on the material selected (refer to the specifications of each type). Maximum differential pressure is 5 bar, but it is recommended to replace them at 2.5 bar.



## Applications

### Industrial

- Water
- Acids
- Solvents
- Chemical products
- Etc.

## Features and Benefits

### Flow capacity up to 3 times higher than the conventional string wound cartridges

- Reduces total filtration costs

### Dirt holding capacity up to twice greater

- Reduces total filtration costs

### Mechanically able to withstand a very high differential pressure

- Reduces total filtration costs

### High dirt removal efficiency

- Reduces total filtration costs

### Longer life time

- Less maintenance and production down time
- Decreases waste management costs

## Micro-Klean D Series Cartridges Ordering Guide

PPP TYPE			
Nominal Micron rating (micron)	Simple length (250 mm)	Double length (500 mm)	Triple length (750 mm)
1	D-PPPY	D-PPPY-2	D-PPPY-3
3	D-PPPA	D-PPPA-2	D-PPPA-3
5	D-PPPB	D-PPPB-2	D-PPPB-3
10	D-PPPC	D-PPPC-2	D-PPPC-3
25	D-PPPF	D-PPPF-2	D-PPPF-3
50	D-PPPL	D-PPPL-2	D-PPPL-3
75/150	D-PPPHD	D-PPPHD-2	D-PPPHD-3

CCS TYPE			
Nominal Micron rating (micron)	Simple length (250 mm)	Double length (500 mm)	Triple length (750 mm)
1	D-CCSY	D-CCSY-2	D-CCSY-3
3	D-CCSA	D-CCSA-2	D-CCSA-3
5	D-CCSB	D-CCSB-2	D-CCSB-3
10	D-CCSC	D-CCSC-2	D-CCSC-3
25	D-CCSF	D-CCSF-2	D-CCSF-3
50	D-CCSL	D-CCSL-2	D-CCSL-3
75/150	D-CCSHD	D-CCSHD-2	D-CCSHD-3

CCT TYPE			
Nominal Micron rating (micron)	Simple length (250 mm)	Double length (500 mm)	Triple length (750 mm)
1	D-CCTY	D-CCTY-2	D-CCTY-3
3	D-CCTA	D-CCTA-2	D-CCTA-3
5	D-CCTB	D-CCTB-2	D-CCTB-3
10	D-CCTC	D-CCTC-2	D-CCTC-3
25	D-CCTF	D-CCTF-2	D-CCTF-3
50	D-CCTL	D-CCTL-2	D-CCTL-3
75/150	D-CCTHD	D-CCTHD-2	D-CCTHD-3

Several configurations are possible in combining different materials of the media, matrix and core. Micro-Klean D Series cartridges are available in standard length from 9" ¾ to 29" (integral length) and in DOE version. Longer length (i.e. 40") or SOE versions (with end caps and double o-ring) can be produced upon request.

Depending on the chemical compatibility requested by the application, different configurations can be chosen. However, it is always recommended to check the chemical compatibility by a soaking test in the liquid to be filtered.

### PPP TYPE

Polypropylene media, matrix and core.

Cartridge for applications involving strong acid, concentrated alkalis, strong oxidising and reducing agents, electroplating and other chemicals in aqueous solutions. Not suitable for hydrocarbon type solvents such as Hexane, Naphtha, Petroleum, Ether, etc. Maximum service temperature: 80 °C. (60 °C for double and triple lengths).

### CCS TYPE

Cotton media and matrix, 304 stainless steel core.

Proposed for general fluid applications. Temperature up to 120 °C - Dilute acids (1%).

Dilute alkalis (5%). For gases, the temperature must not exceed 100 °C.

Cotton can be bleached and washed to remove all wax and lubricants to permit acceptability on potable water, beverages and food products.

### CCT TYPE

Cotton media and matrix, 316 stainless steel core.

Proposed for all general fluids at temperature rating up to 120 °C. For gases, temperature must not exceed 100 °C.

Same applications as for the CCS but greater chemical resistance of the core to acids and alkalis.

### Special types

Other materials combinations can be produced on request with minimum order quantities, particularly the following types:

- D-PPS: polypropylene media and matrix, 304 SS core
- D-PPT: polypropylene media and matrix, 316 SS core
- D-CCP: cotton media and matrix, polypropylene core
- D-CCF: cotton media and matrix, tinned steel core.

#### Important Notice

3M Purification MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Since a variety of factors can affect the use and performance of a 3M Purification product in a particular application, some of which are uniquely within the user's knowledge and control, user is responsible for determining whether or not the 3M Purification product is fit for a particular purpose and suitable for user's method of application.

#### Limited Warranty

3M Purification warrants it this product to be free from defects in material and workmanship during normal use for a period of one (1) year from the date of shipment from the factory. If the Product(s) is (are) defective within this warranty period, your exclusive remedy and 3M Purification's sold obligations shall be, at 3M Purification's option, to replace or repair the Product(s) or refund the original purchase price of the Product(s). This warranty does not apply to failures that result from abuse, misuse, alteration or damage not caused by 3M Purification or failure to properly follow installation and use instructions.

**Limitation of Liability:** 3M Purification will not be liable for any loss or damage arising from the use of the Product(s), whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

This warranty gives you specific legal rights and you may have other rights which vary from state to state, or country to country.



Note: Micro-Klean D is new name of Micro-Wynd.

3M and Micro-Klean are trademarks of 3M used under licence.

For more contact addresses visit our website [www.3M.eu/filtration](http://www.3M.eu/filtration) or [www.3Mpurification.com/international](http://www.3Mpurification.com/international).

Data may be subject to change without further notice.

© 3M 2010. All rights reserved.

v.2 - DOC10018  
LITCTMKD1.EU - 1110

# Nordic Filtration

At [www.nordicfiltration.com](http://www.nordicfiltration.com) you will find a wide selection of filtration products ready for you to order.

Nordic Filtration offers a wide selection of filtration products for water treatment. We have stock in Denmark from where we distribute all of our products to Scandinavia and the the rest of the world.

You can buy our products on local websites or by contacting us by phone or e-mail. Information about our products as well as brochures and manuals can be found on our website ([www.nordicfiltration.com](http://www.nordicfiltration.com)).

We can adapt all of our filtration products to your needs, and we offer visits from our consultants in order to find the right solution for you.

