



Flexmicron S (Standard)

Description

The filter elements in the Flexmicron S (Standard) product line are SpunSpray depth filter elements produced using melt-blown technology.

They are used particularly in applications where a high level of fluid cleanliness and material purity is required.

Applications

- Industrial part washing systems (aqueous up to 60 °C)
- Transmission test rigs, hydraulic test rigs
- Superfinishing with cooling lubricants
- Paints and coatings
- Cooling circuits on machines
- Filling systems
- Refineries, chemical industry
- Semiconductor industry
- Offline filtration in large hydraulic systems
- Offline filtration in lubrication systems

Special features

- Filtration rating 1 ... 90 µm
- Material purity
- Caps welded, not glued
- Wide range of adapters
- Good price/performance ratio
- Materials: Polypropylene, Polyamide
- SpunSpray technology, material not wound
- High level of cleanliness due to graded depth filter construction
- High contamination retention due to large depth effect of the filter material
- Excellent fluid compatibility
- Standard element geometry

Technical specifications

General data	
Length	10", 20", 30", 40"
Filtration rating	1 ... 90 µm
Filtration efficiency	99.8 %

Model code

N 40 FM-S 005 - PP 1 F

Element length

10 = 10"
20 = 20"
30 = 30"
40 = 40"

Element type

FM-S = Flexmicron S (Standard)

Filtration rating

001 = 1 µm
003 = 3 µm
005 = 5 µm
010 = 10 µm
020 = 20 µm
030 = 30 µm
040 = 40 µm
050 = 50 µm
070 = 70 µm
090 = 90 µm

Filter material

PP = Polypropylene
PA = Polyamide

End cap type

0 = compression ring (DOE), no cap or seal (Ø 63 mm)
1 = plug-in adapter (1x 222 O-ring), flat end cap (Ø 64 mm)
2 = plug-in adapter (2x 222 O-ring), flat end cap (Ø 64 mm)
10 = gasket (DOE) (Ø 63 mm)
13 = plug-in adapter (2x 222 O-ring), locating spigot (Ø 64 mm)
14 = bayonet (2x 226 O-ring), locating spigot (Ø 64 mm)
others on request

Seal material

F = FPM (Viton)
N = NBR
E = EPDM

Other element types on request.

R (Resistance) factors

		Aqueous fluids	
		PA	PP
Filtration rating	1 µm	274	321
	3 µm	116	186
	5 µm	42	132
	10 µm	15	99
	20 µm	11	54
	30 µm	6	16
	40 µm	3.8	12
	50 µm	1.9	10
	90 µm	0.6	6

Maximum differential pressure Δp_{\max} and permitted temperature range at the element:

Fluid temperature	Filter material	
	PA	PP
-10...30 °C	7 bar	4 bar
-10...60 °C	5.5 bar	2 bar
-10...100 °C	3.5 bar	–

Sizing

The total pressure drop of the filter at a certain flow rate is the sum of the housing Δp and the element Δp . The housing pressure drop can be determined using the pressure drop curves. The pressure drop of the elements is calculated using the R factors.

The following calculation is based on clean filter elements.

$$\Delta p [\text{mbar}] = \frac{R \times V (\text{mm}^2/\text{s}) \times Q (\text{l}/\text{min})}{n \times l (\text{inch})}$$

R = R factor
V = Viscosity (mm²/s)
Q = Flow rate (l/min)
n = No. of elements
l = Element length (inch)

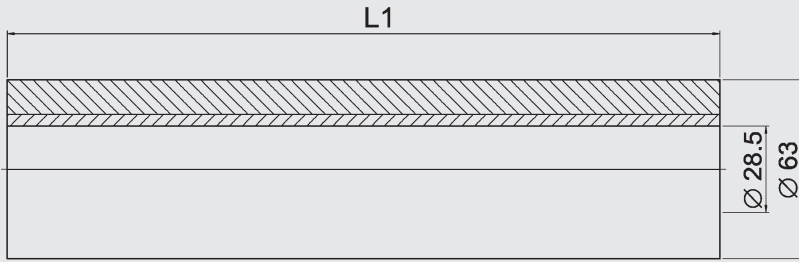
Max. permitted flow rate

Element length	Max. permitted flow rate
10"	15 l/min
20"	30 l/min
30"	45 l/min
40"	60 l/min

Other flow rates on request.

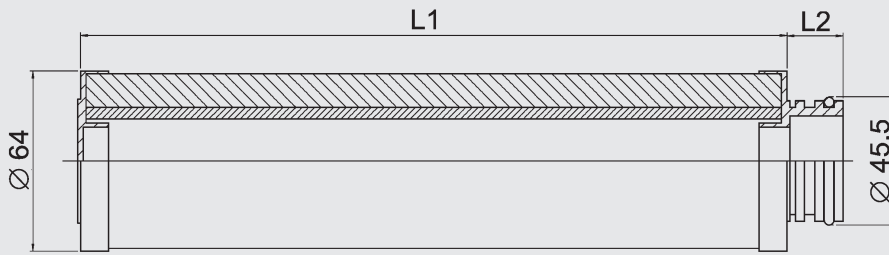
Dimensions of Flexmicron S Elements

Type 0: Compression ring (DOE), no cap or seal



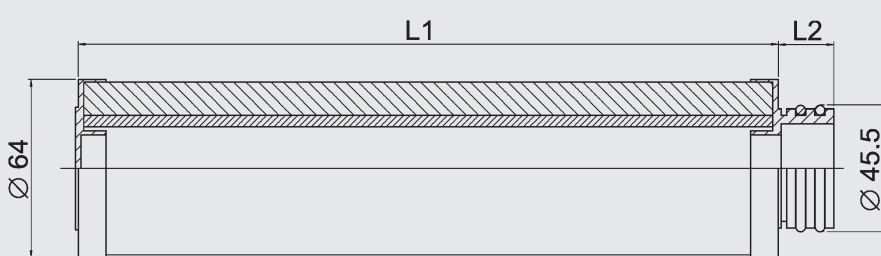
Designation	L1 in mm
N10FM-S...	254
N20FM-S...	508
N30FM-S...	762
N40FM-S...	1016

Type 1: Plug-in adapter, 1 x O-ring (-222), flat end cap



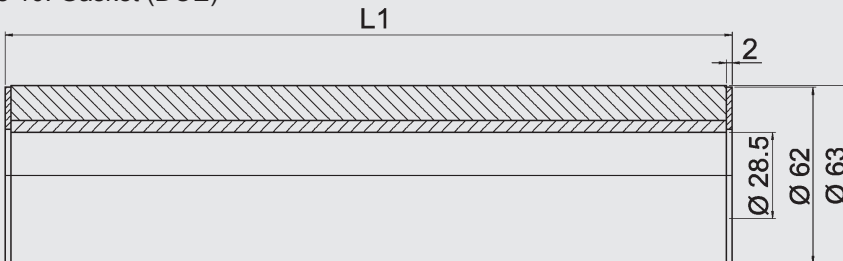
Designation	L1 in mm	L2 in mm
N10FM-S...	263	20
N20FM-S...	517	20
N30FM-S...	771	20
N40FM-S...	1025	20

Type 2: Plug-in adapter, 2 x O-ring (-222), flat end cap



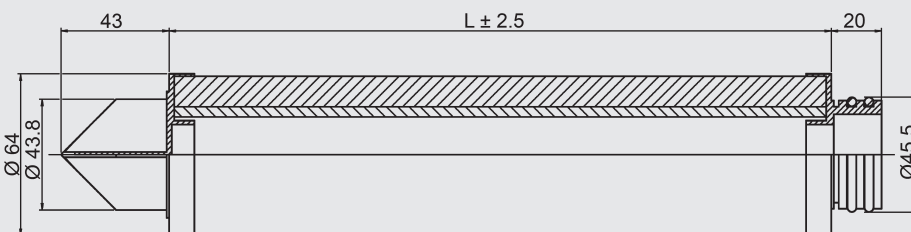
Designation	L1 in mm	L2 in mm
N10FM-S...	263	20
N20FM-S...	517	20
N30FM-S...	771	20
N40FM-S...	1025	20

Type 10: Gasket (DOE)



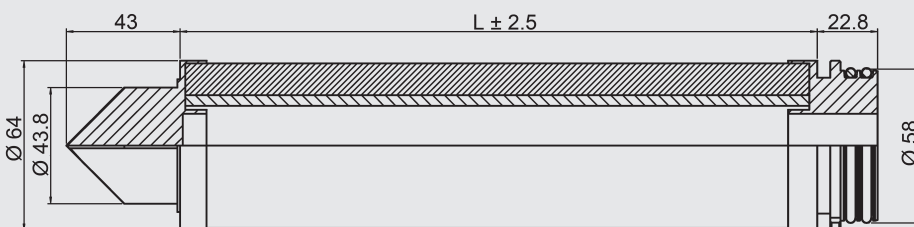
Designation	L1 in mm
N10FM-S...	254
N20FM-S...	508
N30FM-S...	762
N40FM-S...	1016

Type 13: Plug-in adapter, 2 x O-ring (-222), locating spigot



Designation	L1 in mm	L2 in mm
N10FM-S...	263	43
N20FM-S...	517	43
N30FM-S...	771	43
N40FM-S...	1025	43

Type 14: Bayonet, 2 x O-ring (-226), locating spigot



Designation	L1 in mm	L2 in mm
N10FM-S...	241	43
N20FM-S...	495	43
N30FM-S...	749	43
N40FM-S...	1003	43

Note

The information in this brochure relates to the operating conditions and applications described.

For applications and operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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