



Sanitary Spiral Wound Elements

Alfa Laval Microfiltration - MFG Series

The spiral elements for microfiltration are tailor-made for a range of processes i.e. dairy, food, chemical, and pharmaceutical applications.

The elements are based on a unique construction of polypropylene (PP) support material in a sanitary full-fit design that provides optimum cleaning conditions.

They are available in different combinations of length, diameter, spacer size and pore size

All the materials used for the production of these spiral elements comply with EU Regulations (EC) 1935/2004 and FDA regulations (CFR) Title 21.

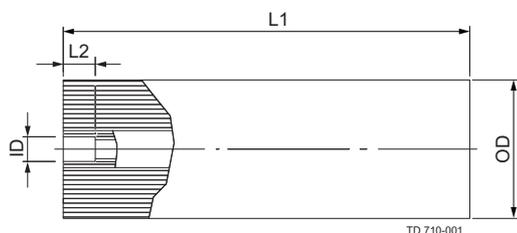


Designation	Characteristics	Pore size
MFG1	Polysulphone polymer	0.1 µm
MFG2	Polysulphone polymer	0.2 µm

Spiral membrane designation

Alfa Laval MFG1-6338/48	
MFG1	= Membrane type
63	= Outer diameter of element (6.3")
38	= Element length (38") without ATD
48	= Feed spacer thickness

Dimensions:



- OD = outer diameter of element
- HD = nominal inner diameter of housing*
- L1 = total length of element without ATD
- ID = diameter of ATD socket
- L2 = depth of ATD socket

Standard sizes	Outer diameter (OD)		Housing diameter (HD)		Element length (L1)		ATD socket diameter (ID)		ATD socket depth (L2)	
	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches
2517	64.0-65.0	2.52-2.56	66	2.6	432	17.01	21.1	0.83	50	1.97
3838	95.0-96.5	3.74-3.80	97.55	3.84	965	37.99	21.1	0.83	50	1.97
6338	160.0-162.0	6.30-6.38	163.1	6.42	965	37.99	28.9	1.14	76	2.99
8038	198.5-201.5	7.82-7.93	204.14	8.04	965	37.99	28.9	1.14	76	2.99
8338	208.5-210.5	8.21-8.29	213.1	8.34	965	37.99	28.9	1.14	76	2.99

For other element sizes, please contact Alfa Laval.

Standard element configurations with code numbers - please specify code number when ordering

Size	Spacer	MFG1	MFG2
2517/	48 mil	531068	531576
3838/	48 mil	531632	531049
	80 mil	527942	527940
6338/	48 mil	531647	531648
	80 mil	531633	531649
8038/	48 mil	531635	531634
id 28.9	80 mil	531637	531636
8338/	48 mil	531639	531638
id 28.9	80 mil	531641	531640

Typical cross-flow and max. pressure drop at cP 1

Outer diameter Spacer size	2.5"		3.8"		6.3"		8.0"		8.3"	
	m3/h	bar								
48 mil	1.3	0.6	8	1.1	23	1.1	25	1	30	1
80 mil	-	-	11	1.1	30	1.1	35	1.1	35	1.1

Note: Calculated at tight fit of spiral element and housing and by use of standard ATD system.

Recommended operation limits

	pH range (reference temperature 25°C)	Pressure bar	Temperature °C
Production	1.5 - 12	0.3 - 2.5	5 - 75
Cleaning * (3 hours per day)	1 - 13	0.3 - 1.5	5 - 75

*) Please consult Alfa Laval's cleaning instructions and water quality specifications.

Important information

- New spiral elements must be cleaned prior to first use. The cleaning procedure should be in accordance with the instructions provided in Alfa Laval's cleaning description for the spiral element type concerned.
- The customer is fully responsible for the effects that any incompatible chemicals may have on the spiral elements.
- After initial wetting, the spiral elements must be kept moist at all times.
- If the operating specifications given in this product description are not strictly followed, the limited warranty will be null and void.
- To prevent biological growth during system shutdowns, Alfa Laval recommends that spiral elements should be immersed in a protective solution.
- Avoid permeate-side back pressure at all times.
- Alfa Laval recommends using a rigid stainless steel ATD end device at the housing outlet end.
- Alfa Laval recommends that the inner diameter of the housing should be approx. 2 mm (0.079 inches) bigger than the outer diameter of the spiral element in question.
- For storage conditions please see Shelf Life and Storage document.
- For warranties, please see Spiral Element Warranty document.

Operating guidelines

Avoid any abrupt pressure or cross-flow variations on the spiral elements during startup, shutdown, cleaning or other sequences, in order to prevent possible damage.

Alfa Laval recommends the following start-up procedure from standstill to operating condition:

- The unpressurized plant should be refilled with water.
- Feed pressure should be gradually increased over a 30–60 second time scale.
- Before initiating cross-flow at high permeate flux conditions (e.g. start-up with high-temperature water), the set feed pressure should be maintained for 5–10 minutes.
- Cross-flow velocity at the set operating point should be gradually achieved over a period of 15–20 seconds.
- Temperature variations should be implemented gradually over a period of 3–5 minutes.