

# Synder® Filtration



Deniz KASAP  
Gıda Mühendisi

Septa Filtrasyon Teknolojileri Sanayi ve Ticaret Limited Şirketi

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## SANITARY MEMBRANE CATALOG



# High Temperature / pH (MAX Series)

Synder Filtration's MAX Series Elements offer exceptional physical and chemical durability, in the same wide range of MWCO's as our standard UF elements.

## MAX SERIES BENEFITS

- Conforms to 3-A, FDA, and USDA sanitary standards
- Hot sanitization eliminates chlorine during CIP
- High resistance to pH and temperature
- High resistance to fouling
- Customizable dimensions for unique housings



## MEMBRANE MODELS

MODEL	MWCO	MATERIAL
XT	1,000	PES
VT	3,000	PES
MT	5,000	PES
ST	10,000	PES
SM	20,000	PES
MK	30,000	PES
MQ	50,000	PES
LY	100,000	PES
LV	200,000	PES
LX	300,000	PES
BN	50,000	PVDF
BY	100,000	PVDF
BX	250,000	PVDF
A6	500,000	PVDF
FR	800,000	PVDF
V0.1	0.1 µm	PVDF
V0.2	0.2 µm	PVDF

NOTE: Trials should be made to determine temperature and viscosity effects. Ribbed spacers are also available for high solids applications.

## MAX SANITARY ELEMENT OPERATING SPECS

Pressure	PSI	Bar
Max. Inlet Pressure	120	8.3
Min. Outlet Pressure	10	0.7
Max. Differential Pressure per Element	18	1.2
Max. Permeate Backpressure	5	0.3

NOTE: Soft start on boost pumps required to minimize pressure/flow shocks to elements.

Temperature	Fahrenheit	Celsius
Max. Operating	140°	60°
Max. CIP Temperature	185°	85°

pH Parameters	pH
Operating Parameters	At Max Temp. - PES: 2-10   PVDF: 3-10 At Ambient Temp. - PES: 2-10.5   PVDF: 2-10.5
Cleaning Parameters	At Max Temp. - PES: 2-11   PVDF: 2-11 At Ambient Temp. - PES: 2-12.5   PVDF: 2-12

Chlorine	Norm. ppm	Max. ppm
Free Chlorine in DF Water or Product	0	< 0.1
Chlorine during CIP at: pH 10.8-11.0 and 50°C (PES/PVDF)	150	180

Dairy Product Total Solids Limits	Spacer (in mils)			
Products	31	46	65	80
Sweet Whey Max. T.S. %	15	25	28	30
Acid Whey Max. T.S. %	15	24	26	28
Skim Milk Max. T.S. %	14	24	26	28
Whole Milk Max. T.S. %	15	30	33	35



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# MAX Spiral-Wound Sanitary Elements

## ELEMENT DIMENSIONS

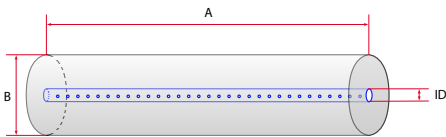
Element	Model No.	Diameter (B) in	Length (A) in	P.W.T. ID
1.8"	1812F	1.8	12	0.63
	2519	2.5	19.25	0.63
2.5"	2540F	2.5	40	0.63
	2540M*	2.5	38	0.75*
3.8"	3838	3.8	38	0.83
	3838.75	3.8	38.75	0.83
	3850	3.8	50	0.83
	3938.75	4.0	38.75	0.63
	4333	4.3	33	0.83
4.3"	4335	4.3	35	0.83
	4335.5	4.3	35.5	0.83
	4336	4.3	36	0.83
	4338	4.3	38	0.83
5.8"	5838	5.8	38	1.14
6.3"	6338	6.3	38	1.14
	6324	6.3	24	1.14
6.4"	6438	6.4	38	1.14
	6424	6.4	24	1.14
7.8"	7838	7.8	38	1.14
	7824	7.8	24	1.14
8"	8038	8.0	38	1.14
	8040	8.0	40	1.14
	8238	8.2	38	1.14
	8240	8.2	40	1.14
	8338	8.3	38	1.14
	8340	8.3	40	1.14
9"	9838	9.8	38	1.14
10"	10338	10.3	38	1.14

\*1" permeate tube extensions (0.75" OD)

## RECOMMENDED ELEMENT CROSS FLOW RATE

Element		Feed Spacer (in mils)				
		24	31	46	65	80
1.8"	m <sup>3</sup> /hr	1	1	1	2	2
	gpm	4	5	6	7	7
2.5"	m <sup>3</sup> /hr	2	2	3	3	3
	gpm	9	10	11	12	13
3.8"	m <sup>3</sup> /hr	5	6	7	8	8
	gpm	22	25	29	33	35
4.3"	m <sup>3</sup> /hr	6	7	9	10	10
	gpm	29	32	38	44	46
5.8"	m <sup>3</sup> /hr	12	13	16	18	19
	gpm	51	59	69	78	83
6.3"	m <sup>3</sup> /hr	15	17	20	22	24
	gpm	65	74	88	99	105
8"	m <sup>3</sup> /hr	21	24	29	33	35
	gpm	94	107	128	143	154
10"	m <sup>3</sup> /hr	42	48	57	64	68
	gpm	184	213	250	283	299

The recommended cross flow rate will be subject to differential pressure limitations and specific applications.



Membrane Model	Model No.
ST - 2B - 6338-MAX	
Spacer Size	Model No.
24 mil	1
31 mil	2
46 mil	3
46 mil (ribbed)	3P
65 mil	4
80 mil	5
80 mil (ribbed)	5P

Outerwrap
A = Control Bypass with Tail
B = Control Bypass without Tail

## MEMBRANE AREA (SQ FT)

Element	Model No.	Feed Spacer (in mils)				
		24	31	46	65	80
1.8"	1812F	4.3	3.6	2.9	2.1	1.8
	2519	15	13	10	8	7
2.5"	2540M	34	29	22	17	15
	2540F	35	30	23	18	16
3.8"	3838	85	72	58	46	38
	3838.75	86	74	59	47	39
	3850	100	84	70	52	46
	3938.75	102	89	69	53	47
	4333	99	86	66	53	44
4.3"	4335	105	91	71	56	47
	4335.5	107	93	72	57	48
	4336	108	94	73	58	49
	4338	115	100	77	62	52
5.8"	5838	210	184	147	114	96
6.3"	6324	150	134	107	83	70
	6338	246	220	176	136	115
6.4"	6424	157	140	112	83	74
	6438	258	230	184	136	122
7.8"	7824	242	210	166	132	110
	7838	396	344	273	216	180
8"	8038	414	368	287	225	189
	8040	414	368	287	225	189
	8238	441	384	302	238	201
	8240	441	384	302	238	201
	8338	450	400	311	245	207
	8340	450	400	311	245	207
9"	9838	N/A	564	440	351	296
10"	10338	N/A	620	492	386	326

## TECHNICAL NOTES

For element sizes not listed, please call or email Synder Filtration for details. We can design an element to fit your exact needs - just specify the element outer diameter (OD) or vessel/housing inner diameter (ID), element inner diameter (ID), and length. Elements are available with or without a controlled bypass tail. Additional feed spacers are also available. Trials should be conducted to determine optimal application conditions.

Model No.	OD (in.)	L (in.)	ID* (in.)	Element Descriptions	
				Weight (lb)	Weight (kg)
1812F	1.8	12	0.63	1	0.5
2519	2.5	19.25	0.63	2	0.9
2540F	2.5	40	0.63	4	1.8
2540M	2.5	38	0.75*	4	1.8
3838	3.8	38	0.83	10	4.5
3838.75	3.8	38.75	0.83	10	4.5
3850	3.8	50	0.83	13	5.9
3938.75	4.0	38.75	0.63	10	4.5
4333	4.3	33	0.83	11	5.0
4335	4.3	35	0.83	11	5.2
4335.5	4.3	35.5	0.83	11	5.2
4336	4.3	36	0.83	11	5.2
4338	4.3	38	0.83	12	5.4
5838	5.8	38	1.14	15	7
6338	6.3	38	1.14	16	7
6324	6.3	24	1.14	17	7.7
6438	6.4	38	1.14	29	13.2
6424	6.4	38	1.14	18	8.2
7838	7.8	38	1.14	40	18.2
7824	7.8	24	1.14	26	11.8
8038	8.0	38	1.14	38	17.2
8040	8.0	40	1.14	39	17.7
8238	8.2	38	1.14	38	17.2
8240	8.2	40	1.14	40	18
8338	8.3	38	1.14	40	18
8340	8.3	40	1.14	40	18
9838	9.8	38	1.14	42	19.1
10338	10.3	38	1.14	50	22.7

\*1" permeate tube extensions (0.75" OD). Specifications are subject to change without notice.