

# ST MAX (PES 10,000Da)

## Sanitary UF High pH/Temp Membrane

### MAX SANITARY ELEMENT OPERATING SPECIFICATIONS

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. - 2-10 At Ambient Temp. - 2-10.5
Cleaning Parameters	At Max Temp. - 2-11 At Ambient Temp. - 2-12.5

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) pH 10.5 and 50°C (PAN)	150	180

NOTE: Maximum chlorine exposure for all elements is 30 minutes per day at pH and temperature conditions listed above.

### 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

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

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



### CONTACT US

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All inquiries will be responded to by a Synder employee personally within 24 hours.



## ELEMENT DIMENSIONS

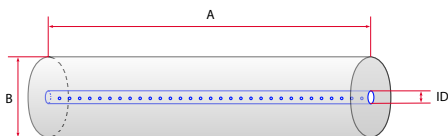
Element	Model No.	Diameter (B) in	Length (A) in	P.W.T. ID
1.8"	1812F	1.8	12	0.63
	2519	2.5	19.25	0.63
2.5"	2540F	2.5	40	0.63
	2540M*	2.5	38	0.75*
	3838	3.8	38	0.83
3.8"	3838.75	3.8	38.75	0.83
	3850	3.8	50	0.83
	3938.75	4.0	38.75	0.63
	4333	4.3	33	0.83
	4335	4.3	35	0.83
4.3"	4335.5	4.3	35.5	0.83
	4336	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
	8038	8.0	38	1.14
	8040	8.0	40	1.14
8"	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



Membrane Model **ST - 2B - 6338-MAX**

Spacer Size	Model No.
24mil	1
31mil	2
46mil	3
46mil (ribbed)	3P
65mil	4
80mil	5
80mil (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
	3838	85	72	58	46	38
3.8"	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
	4335	105	91	71	56	47
4.3"	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
	8038	414	368	287	225	189
	8040	414	368	287	225	189
8"	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. Trials should be conducted to determine optimal application conditions.

## ELEMENT WEIGHT

Model No.	Weight (lb)	Weight (kg)
1812F	1	0.5
2519	2	0.9
2540F	4	1.8
2540M	4	1.8
3838	10	4.5
3838.75	10	4.5
3850	13	5.9
3938.75	10	4.5
4333	11	5.0
4335	11	5.2
4335.5	11	5.2
4336	11	5.2
4338	12	5.4
5838	15	7.0
6338	16	7.0
6324	17	7.7
6438	29	13.2
6424	18	8.2
7838	40	18.2
7824	26	11.8
8038	38	17.2
8040	39	17.7
8238	38	17.2
8240	40	18.0
8338	40	18.0
8340	40	18.0
9838	42	19.1
10338	50	22.7