Synder Filtration

Membranes that perform. People who deliver. ™

Sanitary Ultrafiltration Spiral-Wound Element: MT (PES 5kDa)

Synder Filtration's Ultrafiltration Elements offer an optimal combination of both flux and rejection in a comprehensive range of MWCO's. Contact us today to learn more about our complete line of membrane products and services.

STANDARD SERIES BENEFITS

- *Conforms to 3-A, FDA, and USDA sanitary standards*
- *Widest range of UF MWCO's available*
- *Good resistance to pH and temperature*
- *High resistance to fouling*
- *Customizable dimensions for unique housings*

RECOMMENDED OPERATING PARAMETERS

Operating Parameters	
Maximum Temperature	55°C (131°F)
pH Range @ Max Temperature	3-9
pH Range @ Ambient Temperature	2-10

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.

Cleaning Parameters	
Maximum Temperature (Short term <30min)	50°C (122°F)
pH Range @ Max Temperature	2-11
pH Range @ Ambient Temperature	1.8-11

Chlorine	Norm ppm	Max ppm
Free Chlorine During Operation	0	<0.1
Chlorine During CIP at pH10.8-11.0 and 50°C	150	180

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

Dairy Product Total Solids Limits	Feed Spacer (in mils)			
	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.

COMMON APPLICATIONS

- *Whey protein concentrate & isolate production*
- *Enzyme concentration*

CONTACT US

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

Synder Filtration ISO 9001:2008 CERTIFIED 10002403

USP CLASS VI

ELEMENT DIMENSIONS

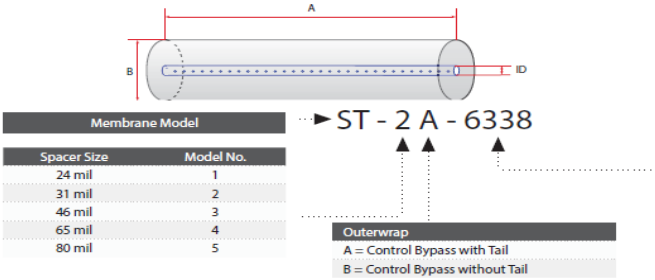
Element	Model No.	Diameter (B) in	Length (A) in	P.W.T. ID
1.8″	1812F	1.8	12	0.63
2.5″	2519	2.5	19.25	0.63
	2540F	2.5	40	0.63
	2540M*	2.5	38	0.75
3.8″	3838	3.8	38	0.83
	3838.75	3.8	38.75	0.83
	3850	3.8	50	0.83
	3938.75	4.0	38.75	0.63
4.3″	4333	4.3	33	0.83
	4335	4.3	35	0.83
	4335.5	4.3	35.5	0.83
	4336	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
9.8″	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″	m³/hr	1	1	1	2	2
	gpm	4	5	6	7	7
2.5″	m³/hr	2	2	3	3	3
	gpm	9	10	11	12	13
3.8″	m³/hr	5	6	7	8	8
	gpm	22	25	29	33	35
4.3″	m³/hr	6	7	9	10	10
	gpm	29	32	38	44	46
5.8″	m³/hr	12	13	16	18	19
	gpm	51	59	69	78	83
6.3″	m³/hr	15	17	20	22	24
	gpm	65	74	88	99	105
8″	m³/hr	21	24	29	33	35
	gpm	94	107	128	143	154
10″	m³/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. Please consult Synder Filtration if additional information is needed.



MEMBRANE AREA (SQ. FT.)

Element	Model No.	Feed Spacer (in mils)				
		24	31	46	65	80
1.8″	1812F	N/A	3.6	N/A	N/A	N/A
2.5″	2519	15	13	10	N/A	N/A
	2540F	34	29	22	N/A	N/A
	2540M	35	30	23	N/A	N/A
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
4.3″	4333	99	86	66	53	44
	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
9.8″	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 also available with or without a controlled bypass tail. Additional feed spacers are also available. Trials should be conducted to determine optimal application conditions.

ELEMENT DESCRIPTIONS

Model No.	OD (in.)	L (in.)	ID* (in.)	Weight (lb)	Weight (kg)
1812F	1.8	12	0.63	1.0	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	24	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)
NOTE: Different diameters are available. Please specify you requirements when ordering. Specifications are subject to change without notice.