

# F-Series Microfiltration (MF) Sanitary Spiral Elements

0.3µm and 0.5µm PVDF Membrane for Fat Removal; Casein Concentration; Whey Protein Separation



F-Series microfiltration sanitary spiral elements are designed for fat removal, and fractionalization of casein from whey proteins. F-Series membranes offer high resistance to fouling. The Polyvinylidene fluoride (PVDF) membrane provides excellent chemical and temperature resistance under a variety of process and sanitizing conditions.

## Membranes Available

Membrane Type	Micron
FG	0.3µm
FH2	0.5µm



## Contact Information

Parker-Hannifin Corporation  
**Bioscience Filtration**  
 2340 Eastman Avenue  
 Oxnard, California, USA 93030

toll free +1 877 784 2234  
 phone +1 805 604 3400  
 fax: +1 805 604 3401  
 bioscience.na@parker.com

[www.parker.com/sanitarymembranes](http://www.parker.com/sanitarymembranes)



## Benefits

- Increased resistance to oxidizing agents
- Element construction developed for enhanced durability & extended life
- Elements designed to conform to 3-A, FDA/CFR Title 21 & USDA standards
- Certified EU1935/2004EC & Plastics Regulation 10/2011
- Halal & Kosher certified
- Available in standard & custom diameter configurations for maximum performance and optimal cleaning
- Power Saver Spiral (PSS) option for increased cross-flow and reduced energy costs

## Applications

- Fat reduction in whey
- Casein separation from whey proteins in skim milk
- Concentration of cheese milk
- Clarification
- Bacteria removal



ENGINEERING YOUR SUCCESS.

# F-Series Microfiltration (MF) Sanitary Spiral Elements

## Materials of Construction:

Membrane	Polyvinylidene fluoride
Backing Material	Polyester
Permeate Tube	Polysulfone

- Special element construction available for high temperature/high pressure conditions/non-standard pH ranges & validation requirements
- Stainless steel permeate tube configurations available
- Power saver spiral (PSS) optional

## Operating Parameters:

Maximum operating temperature*	145°F (63°C)
Typical inlet pressure**	20 psi (1.4 bar)
pH range, continuous	3-10
pH range, short-term cleaning***	1.8 - 11.5 @ 122°F (50°C)
Maximum chlorine concentration	180 ppm @ 9-11 pH
Other oxidizing agents****	Consult factory

- \* Temperature >40°C require reduced element differential
- \*\* Recommended cross flow rates and  $\Delta P$  are dependent on various process parameters.
- \*\*\* Consult factory for cleaning chemical guidelines, and cleaning water quality documents
- \*\*\*\* Consult with a Parker technical representative for specific limitations.

## Notes:

- Elements can be high temperature sanitized, consult a Parker technical representative for details
- Separate specifications are available including MF cleaning guidelines and water quality documents

## Element Area

Model	Spacer																	
	Diamond												Parallel					
	P		B		O		L		A		M		Q		E		F	
(28 mil) ft <sup>2</sup>	(7 mm) m <sup>2</sup>	(31 mil) ft <sup>2</sup>	(0.8 mm) m <sup>2</sup>	(43 mil) ft <sup>2</sup>	(1.1 mm) m <sup>2</sup>	(65 mil) ft <sup>2</sup>	(1.7 mm) m <sup>2</sup>	(80 mil) ft <sup>2</sup>	(2.0 mm) m <sup>2</sup>	(100 mil) ft <sup>2</sup>	(2.5 mm) m <sup>2</sup>	(46 mil) ft <sup>2</sup>	(1.2 mm) m <sup>2</sup>	(65 mil) ft <sup>2</sup>	(1.7 mm) m <sup>2</sup>	(80 mil) ft <sup>2</sup>	(2.0 mm) m <sup>2</sup>	
3819*	-	-	28	2.6	22.9	2.1	-	-	-	-	-	-	-	-	-	-	-	-
3824*	-	-	37.5	3.5	30.6	2.8	-	-	-	-	-	-	-	-	-	-	-	-
3830*	-	-	48.6	4.5	39.7	3.7	-	-	-	-	-	-	-	-	-	-	-	-
3838	68.5	6.4	63.8	5.9	51.9	4.8	36.6	3.4	30.7	2.9	23.6	2.2	51.9	4.8	36.6	3.4	30.7	2.9
6419*	-	-	95.7	8.9	75	7.0	-	-	-	-	-	-	-	-	-	-	-	-
6424*	-	-	123.6	11.5	100	9.3	-	-	-	-	-	-	-	-	-	-	-	-
6430*	-	-	160.7	14.9	130	12.1	-	-	-	-	-	-	-	-	-	-	-	-
6438	223.5	20.8	210.1	19.5	172.4	16.0	125.2	11.6	103.9	9.7	79.9	7.4	172.4	16.0	125.2	11.6	103.9	9.7
7838	348.2	32.4	327.3	30.4	269.2	25.0	200.5	18.6	167.2	15.5	128.5	11.9	269.2	25.0	200.5	18.6	167.2	15.5
8024*	-	-	200.3	18.6	164.3	15.3	122.4	11.4	-	-	-	-	-	-	-	-	-	-
8030*	-	-	260.4	24.2	213.6	19.9	157.3	14.6	-	-	-	-	-	-	-	-	-	-
8038	357.7	33.2	340.5	31.6	279.3	26.0	205.7	19.1	175	16.3	134.5	12.5	279.3	26.0	205.7	19.1	175	16.3
8324*	-	-	224.6	20.9	184.2	17.1	136.1	12.6	-	-	-	-	-	-	-	-	-	-
8330*	-	-	222.3	20.7	239.4	22.2	176.9	16.4	-	-	-	-	-	-	-	-	-	-
8338	396.9	36.9	377.8	35.1	313.1	29.1	231.4	21.5	196.4	18.3	151	14.0	313.1	29.1	231.4	21.5	196.4	18.3
8438	396.9	36.9	377.8	35.1	313.1	29.1	231.4	21.5	196.4	18.3	151	14.0	313.1	29.1	231.4	21.5	196.4	18.3
9824*	-	-	311	28.9	257.8	24.0	190.5	17.7	-	-	-	-	-	-	-	-	-	-
9830*	-	-	392.4	36.5	325.1	30.2	236.3	22.0	-	-	-	-	-	-	-	-	-	-
9838	555.6	51.6	528.9	49.2	438.2	40.7	318.5	29.6	275.8	25.6	212	19.7	438.2	40.7	318.5	29.6	275.8	25.6

\*Other sizes available on request



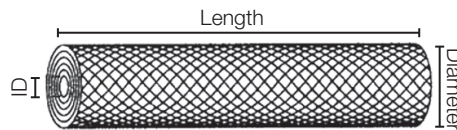
# F-Series Microfiltration (MF) Sanitary Spiral Elements

Element Dimensions

Model	Diameter*		Length (± 1/16 in.)		Central Tube ID	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
3819	3.78	96.0	19.00	482.6	0.83	21.1
3824	3.78	96.0	24.00	609.6	0.83	21.1
3830	3.78	96.0	30.00	762.0	0.83	21.1
3838	3.78	96.0	38.00	965.2	0.83	21.1
6419	6.34	161.0	19.00	482.6	1.138	28.9
6424	6.34	161.0	24.00	609.6	1.138	28.9
6430	6.34	161.0	30.00	762.0	1.138	28.9
6438	6.34	161.0	38.00	965.2	1.138	28.9
7838	7.74	196.6	38.00	965.2	1.125**	28.6
8024	7.92	201.2	24.00	609.6	1.125**	28.6
8030	7.92	201.2	30.00	762.0	1.125**	28.6
8038	7.92	201.2	38.00	965.2	1.125**	28.6
8324	8.25	209.6	24.00	609.6	1.138	28.9
8330	8.25	209.6	30.00	762.0	1.138	28.9
8338	8.25	209.6	38.00	965.2	1.138	28.9
8438	8.36	212.3	38.00	965.2	1.138	28.9
9824	9.70	246.4	24.00	609.6	1.138	28.9
9830	9.70	246.4	30.00	762.0	1.138	28.9
9838	9.70	246.4	38.00	965.2	1.138	28.9

\* Elements will fit housings that are not less than 0.010" larger or not greater than 0.040" larger than published diameter

\*\*1.138" PWT ID available upon request, consult factory



## Ordering Information

Each element is identified with a product number and lot number for traceability. **Example Order Configuration: FG 3838 - BS 03 - S**

Membrane Type		Nominal Diameter		Length		Feeder Spacer		Control Number <small>Consult a Parker representative for the specific code to match your application</small>	Outer Wrap-Sanitary	
Code	Micron	Code	Inches	Code	Inches	Code	Size		Code	Description
FG	0.3	38	3.78	19	19	<b>Diamond</b>			S	Full-fit
FH2	0.5	64	6.34	24	24	P	28 mil		SL	Trim-to-fit
		78	7.74	30	30	B	31 mil		SP	Power Saver Spiral
		80	7.92	33	33	O	43 mil		ST	Reinforced full-fit
		83	8.25	35	35	L	65 mil		QT	Extra reinforced full-fit
		84	8.36	355	35.5	A	80 mil			
		98	9.70	36	36	M	100 mil			
				38	38	<b>Parallel</b>				
				387	38.75	Q	46 mil			
						E	65 mil			
						F	80 mil			



**⚠ WARNING:** This product can expose you to chemicals including N-Methylpyrrolidone, which is known to the State of California to cause birth defects or other reproductive harm, and may expose you to chemicals including DEHP or Titanium Dioxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

---

© 2017 Parker-Hannifin Corporation  
Bioscience Filtration  
All rights reserved.  
Specifications are subject to change without notification.

DS\_SS\_F-Series MF PVDF 02/14 Rev. G

Parker Hannifin Corporation  
**Bioscience Filtration**  
2340 Eastman Avenue  
Oxnard, California, USA 93030  
toll free: +1 877 784 2234  
phone: +1 805 604 3400  
email: [bioscience.na@parker.com](mailto:bioscience.na@parker.com)

[www.parker.com/sanitarymembranes](http://www.parker.com/sanitarymembranes)  
[www.parker.com/bioscience](http://www.parker.com/bioscience)

