

Reverse Osmosis (RO) Process Spiral Elements

Thin-film composite (TFC) membrane with high rejection rates and enhanced durability



Reverse Osmosis (RO) process spiral elements are designed to provide extended life in a wide range of industrial fluid processing. The high-rejection membranes are well-suited for processes requiring dewatering or product concentration.

Membranes Available

Membrane Type	Material
RO2	Thin-film composite
RO3	
ROH	High pressure thin-film composite



Contact Information

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Benefits

- Proprietary thin film composite membrane with high salt rejection and superior performance
- Element construction developed for enhanced durability and extended life
- Elements designed to conform to FDA/CFR Title 21 standards
- Certified EU1935/2004EC & Plastics Regulation 10/2011
- Available in standard diameter or custom sized configurations for maximum performance and optimal cleaning
- Parker proprietary Crease Protector Technology (CPT)

Applications

- RO permeate polisher
- Evaporator condensate polisher
- Starch recovery
- Juice concentration
- Rinse water recycle
- Dye concentration
- Gelatin concentration
- Blood plasma concentration
- Bio Fuel
- Bio Pharma

ENGINEERING YOUR SUCCESS.

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Materials of Construction

Membrane: Thin-film composite
 Support Material: Polyester
 Permeate tube: Polysulfone standard

- Special element construction available for high temperature/ high pressure/non-standard pH ranges & validation requirements
- Stainless steel & other polymer permeate tube configurations available
- Polysulfone ATD & interconnectors provided

Operating Parameters

Maximum Operating Temperature* 145°F (63°C)
 Typical Inlet Pressure** 150-550 psi (10.3-37.4 bar)
 RO2/RO3 Maximum Inlet Pressure 850psi @ <30°C
 ROH Maximum Inlet Pressure 1400psi @ <30°C
 pH Range, continuous 3-10
 pH Range, short-term cleaning*** 1.8-11 @ 122°F (50°C)
 Maximum chlorine concentration Below detectable limits
 Hydrogen peroxide limits**** 1000 ppm
 Max. @ 77°F (25°C)

- * Temperature >40°C require reduced element differential & trans membrane pressure (TMP)
- ** Recommended cross flow rates or ΔP are dependent on various process parameters
- *** Use only membrane-specific tested & approved chemicals & water quality standards which meet published specification
- **** Consult with a Parker technical representative for specific limitations

Notes:

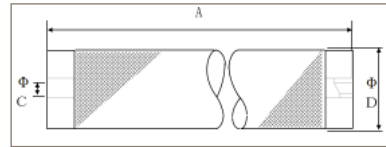
- Elements can be high temperature sanitized, consult a Parker technical representative for details
- Separate specifications are available including RO NF cleaning guidelines and water quality documents

Element Dimensions

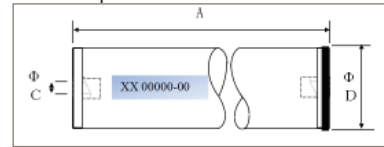
Model	Diameter (D)		Length (A)		Central Tube ID* (C)	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
4040	4.00	101.6	40.00	1016.0	0.625	15.9
8040	7.92	201.2	40.00	1016.0	1.125	28.6

*Other PWT ID available upon request, consult your Parker representative for details

Netted w/ATD



Hard wrap



Element Area

Model	Spacer																			
	Diamond									Parallel										
	K		P		B		O		L		A		M		Q		E		F	
	(20 mil) ft ²	(.6 mm) m ²	(28 mil) ft ²	(.7 mm) m ²	(31 mil) ft ²	(0.8 mm) m ²	(43 mil) ft ²	(1.1 mm) m ²	(65 mil) ft ²	(1.7 mm) m ²	(80 mil) ft ²	(2.0 mm) m ²	(100 mil) ft ²	(2.5 mm) m ²	(46 mil) ft ²	(1.2 mm) m ²	(65 mil) ft ²	(1.7 mm) m ²	(80 mil) ft ²	(2.0 mm) m ²
4040	91	8.5	84.7	7.9	79	7.3	63	5.9	44.5	4.1	35.9	3.3	31.2	2.9	61.1	5.7	44.5	4.1	35.9	3.3
8040	423	39.3	393	36.5	374	34.8	304	28.3	215	20.0	184	17.1	152	14.1	295	27.4	215	20.0	184	17.1

Ordering Information

Each element is identified with a product number and lot number for traceability.

□	□	□	-	□	-	□					
Membrane Type		Diameter		Length		Feeder Spacer		Control Number		Outer Wrap	
Code	Material	Code	Inches	Code	Inches	Code	Size	Consult a Parker representative for the specific code to regulate construction.		Code	Description
RO2	TFC	40	4.0"	40	40"	Diamond				S	Std. full-fit (4in.)
RO3	TFC	80	7.9"			K 20 mil		ST	Reinforced full-fit		
						P 28 mil		QT	Extra reinforced full-fit		
						B 31 mil		H	Hard wrap		
						O 43 mil					
						L 65 mil					
						A 80 mil					
						M 100 mil					
						Parallel					
						Q 46 mil					
						E 65 mil					
						F 80 mil					

