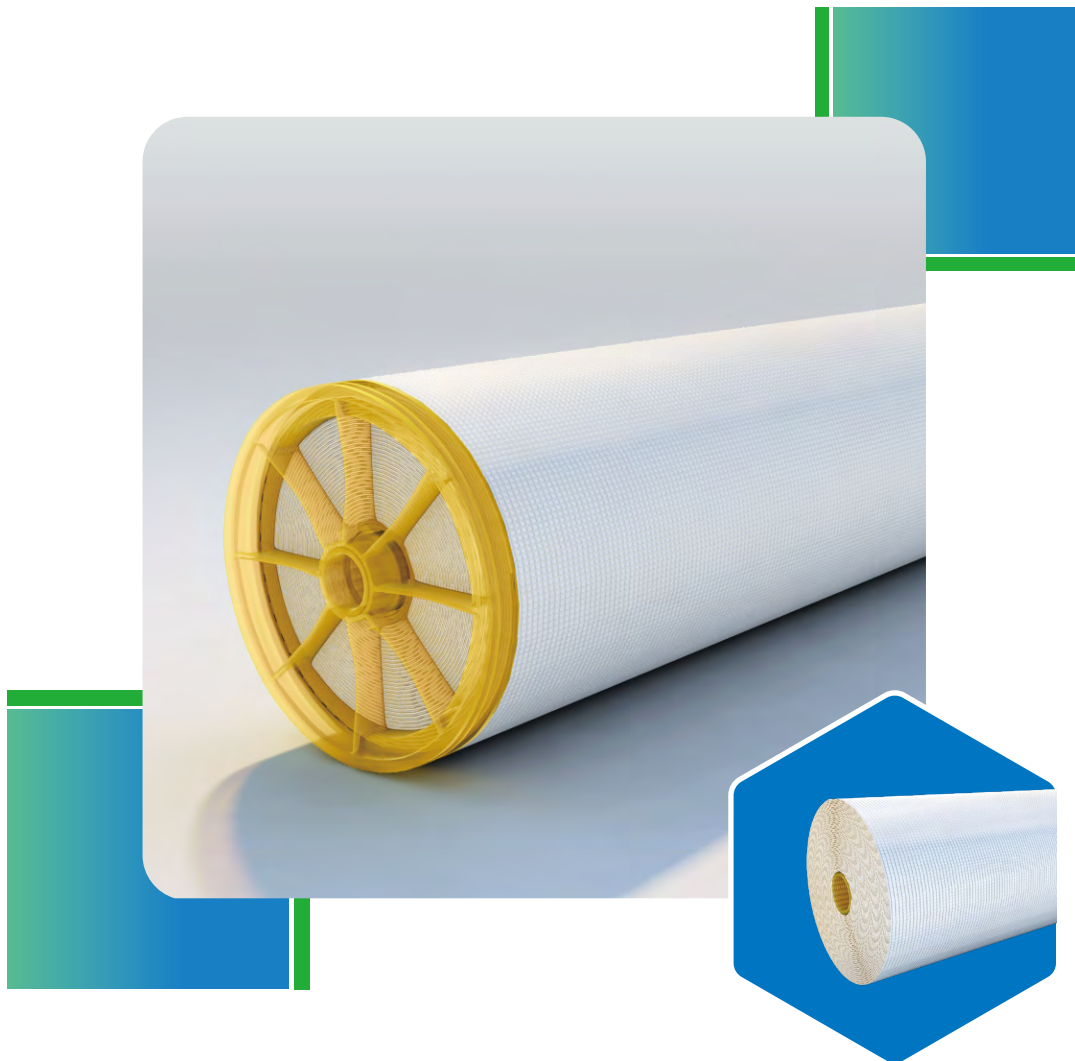


Spiral Wound Elements



Wide range



High temperature
and pH

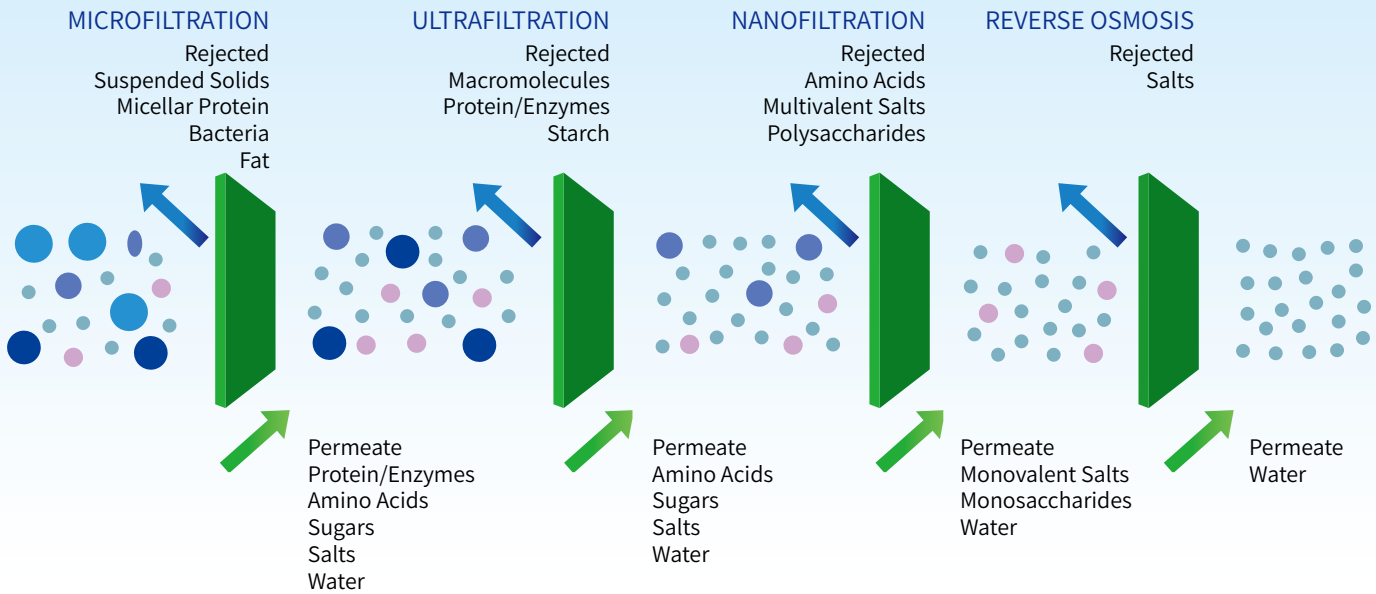


FDA Compliant
Materials



Custom-made

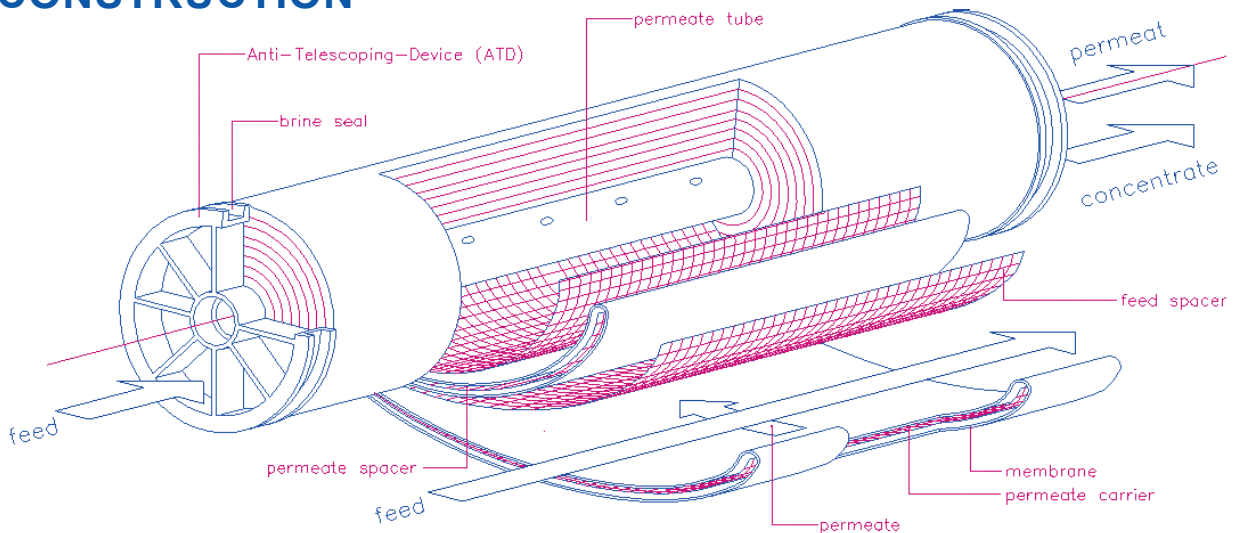
To cover the high variety of applications, UNISOL provides the complete spectrum of MF, UF, NF and RO spiral wound elements, the module design stretches from standard elements to fully customized specialty products.



EXAMPLES OF APPLICATIONS

E-coat	Standardization of milk	Cream cheese production
Concentration of protein and gelatin	Whey concentration processing	Clarification of cheese brine
Enzymes, fermentation broths	Clarification of soy sauce	Acid recovery
Caustic recovery	Industrial water	Oil / Water emulsions






SPIRAL WOUND ELEMENT CONSTRUCTION



PRODUCT CODES FOR SPIRAL WOUND ELEMENTS

SN	UPS010	8038	C
Design / Application	Membrane Type / MWCO	Diameter / Length	Feed spacer
<p>SN Sanitary Design SH Sanitary Design ID Industrial Design EC Electro Coating PD Pharmaceutical Design FG Fiberglass CR Caustic Resistant AR Acid Resistant HP High Pressure Resistant TR Temperature Resistant</p> <hr/> <p>Example Sanitary Design</p>	<p>Membrane Materials</p> <ul style="list-style-type: none"> UPS Polyethersulfone USP Polysulfone UPV Polyvinylidene Flouride MPV Polyvinylidene Flouride NFDK/NFDL Piperazinamide SW3013 Polyamide <hr/> <p>Example Polyethersulfone MWCO 10kDa</p>	<p>Standard Dimensions</p> <ul style="list-style-type: none"> 2540 3838 4040 4333 6338 8038 8040 8338 <hr/> <p>Example Diameter 8.0inch Length 38inch</p>	<p>Standard Feed Spacers</p> <ul style="list-style-type: none"> A 34mil (parallel) B 31mil (diamond) C 46mil (diamond) D 51mil (parallel) E 65mil (diamond) F 80mil (diamond) G 80mil (parallel) H 60mil (parallel) J 28mil (diamond) M 34mil (diamond) <hr/> <p>1 mil = 0.001 inch 1 mil = 0.0254 mm</p> <hr/> <p>Example 46mil diamond</p>

ADVANTAGES

 FDA Compliant Materials	 Wide range of membrane types	 High temperature resistance
<p>pH High pH, solvent resistance</p>	 Great mechanical strength	 Customization

OPERATING CONDITION FOR SPIRAL WOUND ELEMENTS

	SN/ID/PD	SH	FG	EC	CR	AR	HP	TR
Max. operating pressure loss (bar)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Max. operating pressure loss (psi)	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Max. Temperature (°C)	50	80	50	50	50	50	50	80
Max. Temperature (°F)	122	176	122	122	122	122	122	176
pH range during filtration	2-10	2-11	2-11	2-10	3-13	1-12	2-11	2-10
Outer wrap	Net Wrap	Net Wrap	FRP	Net Wrap	FRP	FRP	FRP	FRP



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