

Ref. **MMULP4021**  
**Ultra-Low Pressure RO Membrane Element**

**SPECIFICATIONS:**

General Features	
Permeate flow rate:	950 GPD (3,6 m <sup>3</sup> /day)
Nominal salt rejection:	99,3 %
Effective membrane area:	36 ft <sup>2</sup> (3,34 m <sup>2</sup> )

- The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:
  - 1500 mg/L NaCl solution at 150 psig (1,03 MPa) applied pressure
  - 15% recovery
  - 77 °F (25 °C)
  - pH 7,5 - 8,0
- Minimum salt rejection is 99,0%.
- Permeate flow rate for each element may vary + 25 / - 15%.
- All elements are vacuum sealed in a polyethylene bag containing 1,0% SBS (sodium bisulfite) solution and individually packaged in a cardboard box.

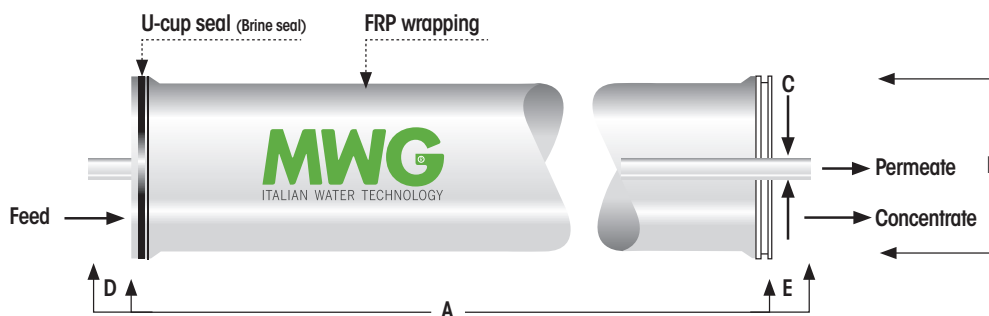
Membrane type:	Thin-Film Composite
Membrane material:	Polyamide (PA)
Element configuration:	Spiral-Wound, FRP Wrapping

Operating Limits	
Max. pressure Drop / Element	15 psi (0.1 MPa)
Max. Operating Pressure	600 psi (4.14 MPa)
Max. Feed Flow Rate	16 gpm (3,6 m <sup>3</sup> /hr)
Max. Operating Temperature	45°C (113 °F)
Operating pH Range	2.0-11.0
pH Range of Feed Water During Chemical Cleaning	1.0-13.0
Max. SDI (15 min)	5.0
Max. Chlorine Concentration	< 0.1 mg/L

- Each membrane element supplied with one brine seal, one interconnector (coupler) and four o-rings.
  - All ULP4021 elements fit nominal 4,0 inch (101,6 mm) I.D. pressure vessels.
- The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. This document does not express or implies any warranty as to the merchantability or fitness of the product.

**DIMENSIONS:**

						Part Number	
Model Name	A	B	C	D / E	Interconnector	Brine Seal	
ULP4021	21,0 inch (533,4 mm)	3,9 inch (99 mm)	0,75 inch (19 mm)	1,05 inch (26,7 mm)			



**GENERAL HANDLING PROCEDURES**

- Elements contained in the boxes must be kept dry at room temperature (7-32°C; 40-95°F) and should not be stored in direct sunlight. If the polyethylene bag is damaged, a new preservative solution (sodium bisulfite) must be added and air-tight sealed to prevent drying and biological growth.
- Permeate from the first hour of operation should be discarded to flush out the preservative solution.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing biological growth.
- Keep elements moist at all times after initial wetting.
- Avoid excessive pressure and flow spikes.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.