

# MUNI RO ULE series

## reverse osmosis ultra-low energy membrane elements for municipal drinking water plants

Engineered to treat municipal potable water at lower pressures, the MUNI RO ULE series enables drinking water processes to achieve reduced operating costs while maintaining a moderate level of salt rejection.

MUNI RO ULE series membrane elements are the solution for purification of drinking water that provide the benefits of both good rejection and ultra-low energy consumption.

MUNI RO ULE elements feature an FRP outer wrap and female end connections and are tested and certified by NSF international against NSF/ANSI Standard 61 for material requirements only.

**Table 1: Element Specification**

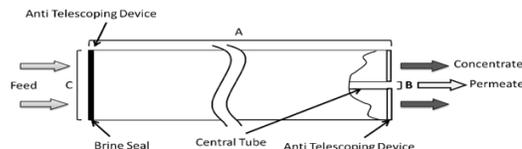
Membrane	Thin-film membrane (TFM*)
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Model	Average permeate flow gpd (m <sup>3</sup> /day) <sup>1,2</sup>	Average NaCl rejection <sup>1,2</sup>	Minimum NaCl rejection <sup>1,2</sup>
MUNI-RO-400-ULE-WT	11,000 (41.6)	95%	92%

<sup>1</sup> Average salt rejection after 24 hours of operation.  
Individual flow rate may vary ±20%.

<sup>2</sup> Testing conditions: 500ppm NaCl solution at 115psi (862kPa) operating pressure, 77°F (25°C), pH7.5 and 15% recovery.

Model	Active area ft <sup>2</sup> (m <sup>2</sup> )	Outer wrap	Part number
MUNI-RO-400-ULE-WT	400 (37.2)	Fiberglass	3147561



**Figure 1 : Element Dimensions Diagram**

**Table 2: Dimensions and Weight**

Model	Dimensions, inches (cm)			Boxed Weight lbs. (kg)
	A	B	C	
MUNI-RO-400-ULE-WT	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	35 (16)

**Table 3: Operating and CIP parameters**

<b>Typical Operating Pressure</b>	70 psi (483 kPa gage)
<b>Typical Operating Flux</b>	10-20GFD (17-34LMH)
<b>Maximum Operating Pressure</b>	400 psi (2,758 kPa)
<b>Maximum Temperature</b>	Continuous operation: 122°F (50°C) Clean-In-Place (CIP): 122°F (50°C)
<b>pH Range</b>	Optimum rejection pH: 7.0-7.5, Continuous operation: 4.0-11.0, Clean-In-Place (CIP): 1.0-13.0'
<b>Maximum Pressure Drop</b>	Over an element: 12 psi (83 kPa) Per housing: 50 psi (345 kPa)
<b>Chlorine Tolerance</b>	1,000+ ppm-hours, dechlorination recommended
<b>Feedwater<sup>2</sup></b>	NTU < 1 SDI < 5

<sup>1</sup>Please refer to Cleaning Guidelines Technical Bulletin TB1194

<sup>2</sup>SDI is measured on a non-linear scale using a 0.45-micron filter paper. Additionally, finer colloids, particulates and microorganisms that pass through the filter paper and not measured in the SDI test, will potentially foul the RO element. For performance consistency and project warranty, please use Winflows projection software and consult your GE representative.

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