# MUNI RO HR Series

*FACT SHEET*

## Reverse osmosis high rejection membrane elements for municipal drinking water plants

Engineered to treat municipal potable water with high total dissolved solids, the MUNI RO HR series enables drinking water processes to achieve enhanced salt rejection.

MUNI RO HR series membrane elements are the solution for purification of drinking water that provides the benefits of both high rejection and high flux.

MUNI RO HR 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*) |

| Model | Average permeate flow gpd ($m^3$/day) (1,2) | Average NaCl rejection (1,2) | Minimum NaCl rejection (1,2) |
|---|---|---|---|
| MUNI-RO-400-HR | 11,000 (41.6) | 99.8 | 99.3 |
| MUNI-RO-430-HR | 12,000 (45.4) | 99.8 | 99.3 |

(1) Average salt rejection after 24 hours of operation. Individual flow rate may vary ±20%.

(2) Testing conditions: 2,000ppm NaCl solution at 225psi (1,550kPa) operating pressure, 77°F (25°C), pH7 and 15% recovery.

| Model | Active area f[illegible] (m[illegible]) | Outer wrap | Part number |
|---|---|---|---|
| MUNI-RO· ·HR | | Fiberglass | |
| MUNI-RO· ·HR | | Fiberglass | |

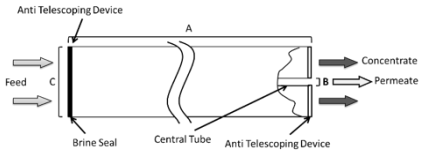


**Figure 1: Element Dimensions Diagram**

**Table 2: Dimensions and Weight**

| Model | Fig. | Dimensions, inches (cm) | | | Boxed |
|---|---|---|---|---|---|
| | | A | B | C | Weight lbs (kg) |
| MUNI-RO-***-HR | 1 | 40.0 (101.6) | 1.125 (2.86) | 7.9 (20.1) | 35 (16) |

**Table 3: Operating and CIP parameters**

| | |
|---|---|
| **Typical Operating Pressure** | 200psi (1,379kPa) |
| **Typical Operating Flux** | 10-20GFD (15-35 LMH) |
| **Maximum Operating Pressure** | 600psi (4,137kPa) |
| **Maximum Temperature** | Continuous operation: 122°F (50°C),<br>Clean In Place (CIP): 122°F (50°C) |
| **Minimum Crossflow** | 30gpm (6.8$m^3$/hr) |
| **pH Range** | Continuous operation: 2.0 – 11.0<br>Clean In Place (CIP): 1.0 - 13.0 (1) |
| **Maximum Pressure Drop** | Over an element: 12psi (83kPa)<br>Per housing: 50psi (345kPa) |
| **Chlorine Tolerance** | 1,000+ ppm-hours,<br>dechlorination recommended, |
| **Feedwater** | NTU < 1<br>$SDI_{15}$ < 5 |
| **Recommended single element recovery** | < 15 % |

Please refer to Cleaning Guidelines Technical Bulletin TB1194.

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