H2O

HYDRON™
MEMBRANE TECHNOLOGY

ADVANCED MEMBRANE TECHNOLOGY

Price
Performance
Profitability

HYDRON
MEMBRANE TECHNOLOGY

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HYDRON Membrane Technology
Membrane Elements

TW SERIES (Residential/ Light Commercial)

HYDRON Residential/Light Commercial Membrane Elements are a reliable alternative for your residential/light commercial and small system membrane needs HYDRON Membranes are manufactured in a State-of-the-Art, ISO-9001-2000 certified automatic rolling facility, providing you with a precise and advanced membrane element that not only delivers an attractive cost to benefit ratio, but also gives you a membrane that has consistently of high quality and performance.

HYDRON Residential/Light Commercial Membrane Elements can be used in a variety of small size system applications, such as household water purification, laboratory, hydroponics, hospital, and many other applications where a reliable, performance membrane is needed.

NSF

This Membrane is Tested and Certified by NSF International against NSF / ANSI Standard 58 for material requirements only.

COMPONENT

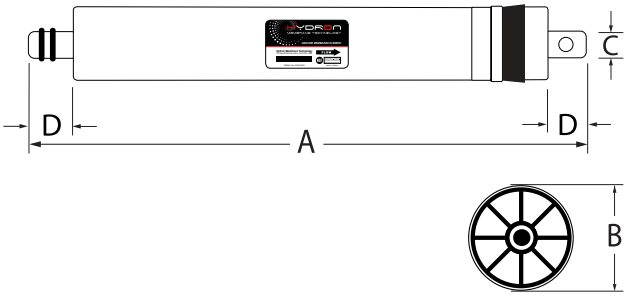
TW Membrane Specifications - Residential / Light Commercial

Series	Part Number	Applied Pressure psi (bar)	Average Permeated Flow gpd (m^3/d)	Stable Rejection Rate (%)
TW	TW-1812-50	60 (4.1)	50 (0.19)	97.5
	TW-1812-75	60 (4.1)	75 (0.28)	97.5
	TW-2012-100	60 (4.1)	100 (0.38)	95.0
	TW-2012-150	60 (4.1)	150 (0.57)	95.0
	TW-3012	60 (4.1)	300 (1.14)	95.0

TW SERIES
MEMBRANE TYPE Polyamide Compound

TESTING CONDITIONS

- Testing Pressure **60 psi** **(0.41 MPa) (4.1 bar)**
- Temperature of Testing Solution **77 °F** **(25 °C)**
- Concentration of Testing Solution (NaCl) **250 ppm**
- pH Value of Testing Solution **7.5**
- Recovery Rate of Single Membrane Element **15%**



EXTREME OPERATION CONDITIONS

- Max. Working Pressure **300 psi** **(2.07 MPa) (20.7 bar)**
- Max. Feedwater Temperature **113 °F** **(45 °C)**
- Max. Feedwater SDI **5**
- Single Membrane Max. Pressure Drop **10 psi** **(0.07 MPa) (0.7 bar)**
- Residual chlorine Concentration of Feedwater **<0.1 ppm**
- pH Range of Feedwater during Continuous Operation **3~10**
- pH Range of Feedwater during Chemical Cleaning **2~12**
- Max. Temperature for Continuous Operation above pH 10 **95°F** **(35°C)**

TW Membrane Measurements

Part Number	A	B	C	D
	in (mm)	in (mm)	in (mm)	in (mm)
TW-1812-50	11.76" (298.7)	1.81" (46)	0.67" (16.9)	1.04" (26.5)
TW-1812-75	11.76" (298.7)	1.81" (46)	0.67" (16.9)	0.85" (21.6)
TW-2012-100	11.76" (298.7)	1.91" (48.5)	0.67" (16.9)	0.85" (21.6)
TW-2012-150	11.76" (298.7)	1.91" (48.5)	0.67" (16.9)	0.85" (21.6)
TW-3012	11.76" (298.7)	2.99" (76)	0.67" (16.9)	0.85" (21.6)

IMPORTANT INFORMATION

Under certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty, HYDRON recommends removing residual free chlorine by pre treatment prior to membrane exposure. Any specific application must be limited within the extreme operating conditions. We strongly recommend you to refer to the latest edition of technology manual and design guide prepared by HYDRON Membrane Technology or consult experts proficient in membrane technology. In case the customer fails to follow the operating conditions as specified in this manual, HYDRON Membrane Technology will assume no liability for all results. The permeate flow listed in the table is the average value. The permeate flow of single membrane element is within a tolerance not exceeding ±20% of nominal value. Discard the RO-filtered water produced during the first one hour after system start-up. During storage time and run time, it is strictly prohibited to dose any chemical medicament that may be harmful.

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Quality Delivered

HYDRON
MEMBRANE TECHNOLOGY

HYDRON Membrane Technology
Membrane Elements

HLP SERIES (Light Commercial)

HYDRON Light Commercial Membrane Elements are a reliable alternative for your light commercial and small system membrane needs. HYDRON Membranes are manufactured in a State-of-the-Art, ISO-9001-2000 certified automatic rolling facility, providing you with a precise and advanced membrane element that not only delivers an attractive cost to benefit ratio, but also gives you a membrane that has consistently of high quality and performance.

HYDRON Light Commercial Membrane Elements can be used in a variety of small size system applications, such as household water purification, laboratory, hydroponics, hospital, and many other applications where a reliable, performance membrane is needed.

NSF

This Membrane is Tested and Certified by NSF International against NSF / ANSI Standard 61 for material requirements only.

COMPONENT

HLP Membrane Specifications - Light Commercial

Series	Part Number	Applied Pressure psi (bar)	Average Permeated Flow gpd (m^3/d)	Stable Rejection Rate (%)	Active Membrane Area ft^2 (m^2)
HLP	**HLP-2521**	150 (10.3)	300 (1.3)	99.0	14 (1.3)
	HLP-2540	150 (10.3)	750 (2.84)	99.0	30 (2.79)
	HLP-4021	150 (10.3)	1000 (3.8)	98.0	36 (3.34)

HLP-2521, HLP-2540 & HLP-4021

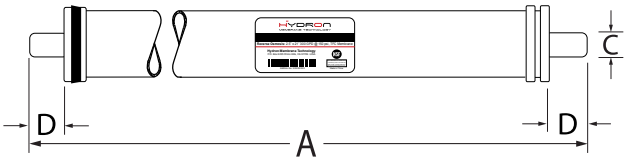
MEMBRANE TYPE — Polyamide Compound

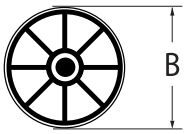
TESTING CONDITIONS

- Testing Pressure — **150 psi (1.03 MPa) (10.34 bar)**
- Temperature of Testing Solution — **77 °F (25 °C)**
- Concentration of Testing Solution (NaCl) — **1500 ppm**
- pH Value of Testing Solution — **7.5**
- Recovery Rate of Single Membrane Element — **8% (HLP-2521, HLP-4021)**, **15% (HLP-2540)**

EXTREME OPERATION CONDITIONS

- Max. Working Pressure — **600 psi (4.14 MPa) (41.4 bar)**
- Max. Feedwater Temperature — **113 °F (45 °C)**
- Max. Feedwater SDI — **5**
- Single Membrane Max. Pressure Drop — **15 psi (0.1 MPa) (1.03 bar)**
- Residual chlorine Concentration of Feedwater — **<0.1 ppm**
- pH Range of Feedwater during Continuous Operation — **3~10**
- pH Range of Feedwater during Chemical Cleaning — **2~12**
- Max. Temperature for Continuous Operation above pH 10 — **95°F (35°C)**





HLP Membrane Measurements

Part Number	A in (mm)	B in (mm)	C in (mm)	D in (mm)
HLP-2521	21" (533.4)	2.4" (61)	0.75" (19.1)	1.19" (30.2)
HLP-2540	40" (1016)	2.4" (61)	0.75" (19.1)	1.19" (30.2)
HLP-4021	21" (533.4)	3.9" (99.7)	0.75" (19.1)	1.05" (26.7)

IMPORTANT INFORMATION

Under certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty, HYDRON recommends removing residual free chlorine by pre treatment prior to membrane exposure. Any specific application must be limited within the extreme operating conditions. We strongly recommend you to refer to the latest edition of technology manual and design guide prepared by HYDRON Membrane Technology or consult experts proficient in membrane technology. In case the customer fails to follow the operating conditions as specified in this manual, HYDRON Membrane Technology will assume no liability for all results. The permeate flow listed in the table is the average value. The permeate flow of single membrane element is within a tolerance not exceeding ±20% of nominal value. Discard the RO-filtered water produced during the first one hour after system start-up. During storage time and run time, it is strictly prohibited to dose any chemical medicament that may be harmful.

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