



RO Membranes and Vessels

2023 - 2024



**Residential/Light
Commercial**



Commercial



**FRPV Membrane
Vessels**

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RO Membranes and Vessels

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Water



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.



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

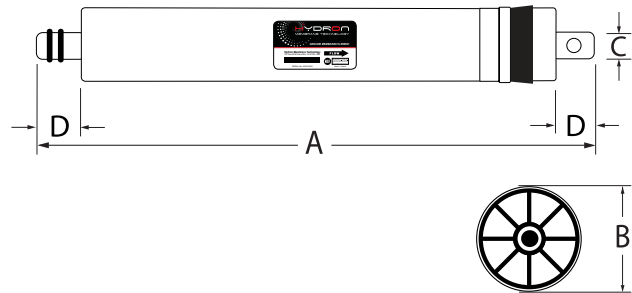
Polyamide Compound

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





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COMPONENT

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.

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) |

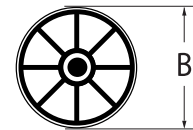
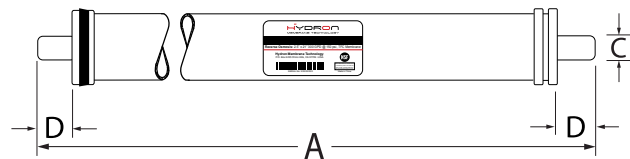
HLP-2521, HLP-2540 & HLP-4021 MEMBRANE TYPE

TESTING CONDITIONS

- › Testing Pressure
- › Temperature of Testing Solution
- › Concentration of Testing Solution (NaCl)
- › pH Value of Testing Solution
- › Recovery Rate of Single Membrane Element

Polyamide Compound

| | | |
|----------|----------------------|-------------|
| 150 psi | (1.03 MPa) | (10.34 bar) |
| 77 °F | (25 °C) | |
| 1500 ppm | | |
| 7.5 | | |
| 8% | (HLP-2521, HLP-4021) | |
| 15% | (HLP-2540) | |



EXTREME OPERATION CONDITIONS

- › Max. Working Pressure
- › Max. Feedwater Temperature
- › Max. Feedwater SDI
- › Single Membrane Max. Pressure Drop
- › Residual chlorine Concentration of Feedwater
- › pH Range of Feedwater during Continuous Operation
- › pH Range of Feedwater during Chemical Cleaning
- › Max. Temperature for Continuous Operation above pH 10

| HLP Membrane Measurements | | | | |
|---------------------------|----------------|----------------|-----------------|-----------------|
| Part Number | A | B | C | D |
| | in (mm) | in (mm) | in (mm) | 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 medication that may be harmful.

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Uncompromised Performance

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

COMPONENT

HYDRON Commercial Membranes

BW-4040 / HLE-4040

HYDRON Commercial Membrane Elements with their hard shell fiberglass exterior provide outstanding performance for commercial systems. HYDRON Membranes are manufactured in a State-of-the-Art, ISO-9001-2000 certified automatic rolling facility which provides you with a precise and advanced membrane element. HYDRON Membranes not only deliver an attractive cost to benefit ratio, but also gives you a membrane that has consistently high quality and performance.

HYDRON Commercial Membrane Elements can be used in a variety of mid sized commercial applications, such as car wash, bottling, manufacturing, water stores, food processing, and many other applications where a reliable, performance membrane is needed.

| BW / HLE Membrane Specifications - 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) | Max. Feed Temp. °F (°C) |
| BW | BW-4040 | 225 (15.5) | 2400 (9.1) | 99.5 | 90 (8.4) | 113 (45) |
| HLE | HLE-4040 | 100 (6.9) | 2800 (10.6) | 98.0 | 90 (8.4) | 113 (45) |

BW-4040
MEMBRANE TYPE Polyamide Compound

TESTING CONDITIONS

- › Testing Pressure **225 psi (1.55 MPa) (15.5 bar)**
- › Temperature of Testing Solution **77 °F (25 °C)**
- › Concentration of Testing Solution (NaCl) **2000 ppm**
- › pH Value of Testing Solution **7.5**
- › Recovery Rate of Single Membrane Element **15%**

EXTREME OPERATION CONDITIONS

- › Max. Working Pressure **600 psi (4.14 MPa) (41.4 bar)**
- › Max. Feedwater Flow **16 gpm (3.6 m³/hr)**
- › 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**

HLE-4040
MEMBRANE TYPE Polyamide Compound

TESTING CONDITIONS

- › Testing Pressure **100 psi (0.69 MPa) (6.9 bar)**
- › Temperature of Testing Solution **77 °F (25 °C)**
- › Concentration of Testing Solution (NaCl) **500 ppm**
- › pH Value of Testing Solution **7.5**
- › Recovery Rate of Single Membrane Element **15%**

EXTREME OPERATION CONDITIONS

- › Max. Working Pressure **600 psi (4.14 MPa) (41.4 bar)**
- › Max. Feedwater Flow **16 gpm (3.6 m³/hr)**
- › 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**

BW-4040/HLE-4040

A=40" (1016 mm) B=3.9" (99.7 mm) C=0.75" (19.1 mm) D=1.05" (26.7 mm)



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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Advanced Membrane Technology

HYDRON
MEMBRANE TECHNOLOGY





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

COMPONENT

HYDRON Commercial / Industrial Membranes

BW-8040 / HLP-8040

HYDRON Commercial/Industrial Membrane Elements with their hard shell fiberglass exterior provide outstanding performance for commercial/industrial systems. HYDRON Membranes are manufactured in a State-of-the-Art, ISO-9001-2000 certified automatic rolling facility which provides you with a precise and advanced membrane element. HYDRON Membranes not only deliver an attractive cost to benefit ratio, but also gives you a membrane that has consistently high quality and performance.

HYDRON Commercial/Industrial Membrane Elements can be used in a variety of applications, such as car wash, bottling, manufacturing, water stores, food processing, and many other applications where a reliable, performance membrane is needed.

BW / HLP Membrane Specifications - Commercial / Industrial

| Series | Part Number | Applied Pressure psi (bar) | Average Permeated Flow gpd (m ³ /d) | Stable Rejection Rate (%) | Active Membrane Area ft ² (m ²) | Max. Feed Temp. °F (°C) |
|--------|-----------------|-------------------------------|---|------------------------------|---|----------------------------|
| BW | BW-8040 | 225 (15.5) | 11500 (43.5) | 99.5 | 440 (41) | 113 (45) |
| HLP | HLP-8040 | 150 (10.3) | 13000 (49.2) | 98.0 | 400 (37) | 113 (45) |

BW-8040

MEMBRANE TYPE

Polyamide Compound

TESTING CONDITIONS

- › Testing Pressure **225 psi (1.55 MPa) (15.5 bar)**
- › Temperature of Testing Solution **77 °F (25 °C)**
- › Concentration of Testing Solution (NaCl) **2000 ppm**
- › pH Value of Testing Solution **7.5**
- › Recovery Rate of Single Membrane Element **15%**

EXTREME OPERATION CONDITIONS

- › Max. Working Pressure **600 psi (4.14 MPa) (41.4 bar)**
- › Max. Feedwater Flow **75 gpm (17 m³/hr)**
- › 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**

BW-8040/HLP-8040

A=40" (1016 mm) B=7.95" (201.9 mm) C=1.125" (28.6 mm)

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.

HLP-8040

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 **15%**

EXTREME OPERATION CONDITIONS

- › Max. Working Pressure **600 psi (4.14 MPa) (41.4 bar)**
- › Max. Feedwater Flow **75 gpm (17 m³/hr)**
- › 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**



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Reliability Assured

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HYDRON 4" FRPV Membrane Housing

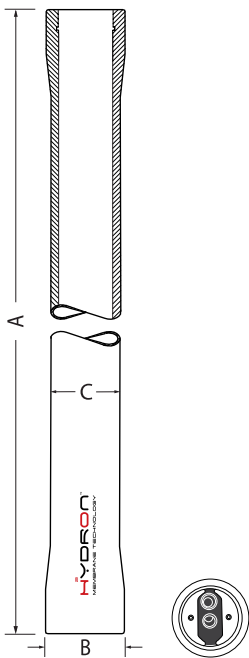
FRPV-4030EF / FRPV-403080EF / FRPV-4012030EF

HYDRON 4" FRPV Series II Membrane Housings are durable composite reinforced membrane vessels designed for use in commercial and industrial Reverse Osmosis systems. FRPV vessels are coated with high gloss polyurethane paint to provide resistance to UV rays and other elements.

HYDRON 4" FRPV Series II Membrane Housings can accommodate any standard 40" membrane element, have a compact design and offer a reliable head seal area. Hydron FRPV membrane housings are made to meet the demands of long term and continuous use.

- Accommodates all standard 4"x 40" membrane elements.
- Locking plate with allen head bolts for easy maintenance and safety.
- Manufactured to meet the demands of long term and continuous use.
- High Gloss Polyurethane Exterior Coating for resistance to UV rays and other elements.
- Compact design for commercial and industrial reverse osmosis and ultrafiltration applications.

| 4" FRPV Membrane Housing Specifications | | | | | | |
|---|----------------|----------------------------|-------------------------------|-------------------------------|------------|---------------|
| Elements | Part Number | Maximum Operating Pressure | Maximum Operating Temperature | Minimum Operating Temperature | Inlet Port | Permeate Port |
| 1 | FRPV-4030EF | 300 psi (21 bar) | 150° F (66° C) | 14° F (-10° C) | 1/2" | 1/2" |
| 2 | FRPV-403080EF | 300 psi (21 bar) | 150° F (66° C) | 14° F (-10° C) | 3/4" | 1/2" |
| 3 | FRPV-4012030EF | 300 psi (21 bar) | 150° F (66° C) | 14° F (-10° C) | 3/4" | 1/2" |



INTENDED USE

The model FRPV-4030EF Fiberglass RO/UF Pressure Vessel is designed for continuous, long-term use as a housing for single reverse osmosis and ultrafiltration elements in typical commercial water treatment systems at pressures up to 300 psi.

Any make of 4"x 40" nominal diameter spiral-wound element is easily accommodated.

The model FRPV-4030EF must be installed, operated and maintained in accordance with the listed precautions, and good industrial practice to assure safe operation over a long service life.

The high performance reinforced plastic shell must be allowed to expand under pressure; undue restraint at support points or piping connections can cause leaks to develop in the shell.

The end closure, incorporating close-fitting, interlocking metal components, must be kept dry and free of corrosion; deterioration can lead to catastrophic mechanical failure of the head assembly.

*Specifications subject to change without notice.

PRECAUTIONS

DO... read, understand and follow all instructions; failure to take every precaution will void warranty and may result in vessel failure.

DO... inspect end closures regularly; replace components that have deteriorated and correct causes of corrosion.

DO... provide overpressure protection for vessel set at not more than 105% of design pressure.

DO... mount shell on horizontal or vertical members at central span "S" using compliant, vessel supports; tighten hold down straps just snug.

DO NOT... pressurize vessel until double checking to verify that the retaining rings are in place.

DO NOT... work on any component until first verifying that pressure is relieved from vessel.

DO NOT... tolerate leaks or allow end closures to be routinely wetted in any way.

DO NOT... operate vessel with permeate pressure in excess of 125 psi at 120 °F (0.86 MPa at 49°C).

DO NOT... make rigid piping connections to parts or clamp vessel in any way that restricts growth of fiberglass shell under pressure; Δ DIA = 0.01 in. (0.25 mm) and Δ L = 0.3 in. (.8 mm) for a length code -1 vessel.

DO NOT... hang piping manifolds from parts or use vessel in any way to support other components.

DO NOT... operate at pH levels below 3 or above 11.

DO NOT... operate vessel at pressures and temperatures in excess of its rating.

| FRPV Membrane Housing Measurements | | | | |
|------------------------------------|----------------|-------------------------------|------------------------------|------------------------------|
| Elements | Part Number | A | B | C |
| | | in (mm) | in (mm) | in (mm) |
| 1 | FRPV-4030EF | 44.88" + 0.08" (1140 + 2) | Ø4.80" + 0.08" (Ø122 + 2) | Ø4.25" + 0.08" (Ø108 + 2) |
| 2 | FRPV-403080EF | 84.88" + 0.08" (2156 + 2) | Ø4.80" + 0.08" (Ø122 + 2) | Ø4.25" + 0.08" (Ø108 + 2) |
| 3 | FRPV-4012030EF | 124.88" + 0.08" (3172 + 2) | Ø4.80" + 0.08" (Ø122 + 2) | Ø4.25" + 0.08" (Ø108 + 2) |

CAUTION

EYE PROTECTION SHOULD BE WORN WHEN REMOVING OR INSTALLING RETAINING RINGS. KEEP FINGERS CLEAR FROM RETAINING RING WHILE INSTALLING LAST OF TWO TURNS. RING MAY SNAP INTO POSITION POSSIBLY PINCHING FINGERS.

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HYDRON 8" Side Entry FRPV Membrane Housing (300 psi)

FRPV-8030S-1F, FRPV-8030S-2F, FRPV-8030S-3F, FRPV-8030S-4F, FRPV-8030S-5F, FRPV-8030S-6F, FRPV-8030S-7F

HYDRON 8" FRPV Series II Membrane Housings are durable composite reinforced membrane vessels designed for use in commercial, municipal and industrial Reverse Osmosis systems. Hydron FRPV vessels are coated with high gloss polyurethane paint to provide resistance to UV rays and other elements and are available in 300 psi and 600 psi ratings.

HYDRON 8" FRPV Series II Membrane Housings can accommodate any standard 8" x 40" membrane elements, have a compact design, and offer a reliable head seal area. Hydron FRPV membrane housings are made to meet the demands of long term and continuous use.

- Accommodates all standard 8"x 40" membrane elements.
- Manufactured to meet the demands of long term and continuous use.
- Locking plate with secure head bolts for easy maintenance, safety and security.
- High Gloss Polyurethane Exterior Coating for resistance to UV rays and other elements.
- Compact design for commercial, municipal and industrial reverse osmosis and ultrafiltration applications.

8" FRPV Membrane Housing Specifications

| Elements | Part Number | Maximum Operating Pressure | Maximum Operating Temperature | Minimum Operating Temperature | Inlet Port | Permeate Port |
|----------|---------------|----------------------------|-------------------------------|-------------------------------|------------|---------------|
| 1 | FRPV-8030S-1F | 300 psi (21 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 2 | FRPV-8030S-2F | 300 psi (21 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 3 | FRPV-8030S-3F | 300 psi (21 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 4 | FRPV-8030S-4F | 300 psi (21 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 5 | FRPV-8030S-5F | 300 psi (21 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 6 | FRPV-8030S-6F | 300 psi (21 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 7 | FRPV-8030S-7F | 300 psi (21 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |

INTENDED USE

Hydron FRPV Membrane Housings are designed for continuous, long-term use as a housing for single and multiple reverse osmosis and ultrafiltration elements in typical commercial water treatment systems at pressures from 300 psi - 600 psi.

Hydron FRPV Membrane Housings must be installed, operated and maintained in accordance with the listed precautions, and good industrial practice to assure safe operation over a long service life.

The high performance reinforced plastic shell must be allowed to expand under pressure; undue restraint at support points or piping connections can cause leaks to develop in the shell.

The end closure, incorporating close-fitting, interlocking metal components, must be kept dry and free of corrosion; deterioration can lead to catastrophic mechanical failure of the head assembly.

**Specifications subject to change without notice.*

8" FRPV Membrane Housing Measurements

| Elements | Part Number | A | | | B | | | C | | |
|----------|---------------|-----------------|----------------|----------------|----------|----------|----------|---------|--|--|
| | | in (mm) | | | in (mm) | | | in (mm) | | |
| 1 | FRPV-8030S-1F | 58.82" + 0.12" | Ø9.49" + 0.07" | Ø8.27" + 0.12" | 1494 + 3 | Ø241 + 2 | Ø210 + 3 | | | |
| 2 | FRPV-8030S-2F | 98.82" + 0.12" | Ø9.49" + 0.07" | Ø8.27" + 0.12" | 2510 + 3 | Ø241 + 2 | Ø210 + 3 | | | |
| 3 | FRPV-8030S-3F | 138.82" + 0.12" | Ø9.49" + 0.07" | Ø8.27" + 0.12" | 3526 + 3 | Ø241 + 2 | Ø210 + 3 | | | |
| 4 | FRPV-8030S-4F | 178.82" + 0.12" | Ø9.49" + 0.07" | Ø8.58" + 0.12" | 4542 + 3 | Ø241 + 2 | Ø210 + 3 | | | |
| 5 | FRPV-8030S-5F | 218.82" + 0.12" | Ø9.49" + 0.07" | Ø8.58" + 0.12" | 5558 + 3 | Ø241 + 2 | Ø210 + 3 | | | |
| 6 | FRPV-8030S-6F | 258.82" + 0.12" | Ø9.49" + 0.07" | Ø8.58" + 0.12" | 6574 + 3 | Ø241 + 2 | Ø210 + 3 | | | |
| 7 | FRPV-8030S-7F | 298.82" + 0.12" | Ø9.49" + 0.07" | Ø8.58" + 0.12" | 7590 + 3 | Ø241 + 2 | Ø210 + 3 | | | |

PRECAUTIONS

DO... read, understand and follow all instructions; failure to take every precaution will void warranty and may result in vessel failure or serious injury or death.

DO... inspect end closures regularly; replace components that have deteriorated and correct causes of corrosion.

DO... provide overpressure protection for vessel set at not more than 105% of design pressure.

DO... mount shell on horizontal or vertical members at central span "S" using compliant, vessel supports; tighten hold down straps just snug.

DO NOT... pressurize vessel until double checking to verify that the Locking Plates are in place.

DO NOT... work on any component until first verifying that pressure is relieved from vessel.

DO NOT... tolerate leaks or allow end closures to be routinely wetted in any way.

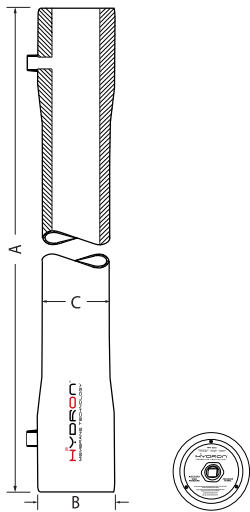
DO NOT... operate vessel with permeate pressure in excess of 125 psi at 120 °F (0.86 MPa at 49 °C).

DO NOT... make rigid piping connections to parts or clamp vessel in any way that restricts growth of fiberglass shell under pressure; ▲DIA = 0.01 in. (0.25 mm) and ▲L = 0.3 in. (8 mm) for a length code -1 vessel.

DO NOT... hang piping manifolds from parts or use vessel in any way to support other components.

DO NOT... operate at pH levels below 3 or above 11.

DO NOT... operate vessel at pressures and temperatures in excess of its rating.



CAUTION

INCORRECT INSTALLATION, OPERATION AND MAINTENANCE OF THESE VESSELS MAY CAUSE LOSS OF LIFE, SEVER BODILY INJURY, AND OR PROPERTY DAMAGE.

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International: 1-954-570-3464





HYDRON 8" Side Entry FRPV Membrane Housing (600 psi)

FRPV-8060S-1F, FRPV-8060S-2F, FRPV-8060S-3F, FRPV-8060S-4F, FRPV-8060S-5F, FRPV-8060S-6F, FRPV-8060S-7F

HYDRON 8" FRPV Series II Membrane Housings are durable composite reinforced membrane vessels designed for use in commercial, municipal and industrial Reverse Osmosis systems. Hydron FRPV vessels are coated with high gloss polyurethane paint to provide resistance to UV rays and other elements and are available in 300 psi and 600 psi ratings.

HYDRON 8" FRPV Series II Membrane Housings can accommodate any standard 8" x 40" membrane elements, have a compact design, and offer a reliable head seal area. Hydron FRPV membrane housings are made to meet the demands of long term and continuous use.

- Accommodates all standard 8"x 40" membrane elements.
- Manufactured to meet the demands of long term and continuous use.
- Locking plate with secure head bolts for easy maintenance, safety and security.
- High Gloss Polyurethane Exterior Coating for resistance to UV rays and other elements.
- Compact design for commercial, municipal and industrial reverse osmosis and ultrafiltration applications.

8" FRPV Membrane Housing Specifications

| Elements | Part Number | Maximum Operating Pressure | Maximum Operating Temperature | Minimum Operating Temperature | Inlet Port | Permeate Port |
|----------|---------------|----------------------------|-------------------------------|-------------------------------|------------|---------------|
| 1 | FRPV-8060S-1F | 600 psi (41 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 2 | FRPV-8060S-2F | 600 psi (41 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 3 | FRPV-8060S-3F | 600 psi (41 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 4 | FRPV-8060S-4F | 600 psi (41 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 5 | FRPV-8060S-5F | 600 psi (41 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 6 | FRPV-8060S-6F | 600 psi (41 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |
| 7 | FRPV-8060S-7F | 600 psi (41 bar) | 150° F (66° C) | 14° F (-10° C) | 1.5" | 1" |

INTENDED USE

Hydron FRPV Membrane Housings are designed for continuous, long-term use as a housing for single and multiple reverse osmosis and ultrafiltration elements in typical commercial water treatment systems at pressures from 300 psi - 600 psi.

Hydron FRPV Membrane Housings must be installed, operated and maintained in accordance with the listed precautions, and good industrial practice to assure safe operation over a long service life.

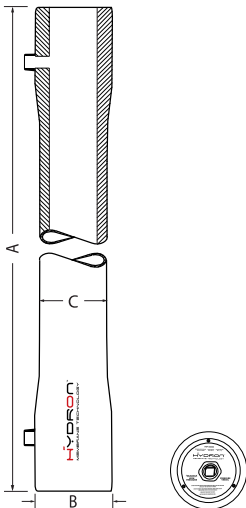
The high performance reinforced plastic shell must be allowed to expand under pressure; undue restraint at support points or piping connections can cause leaks to develop in the shell.

The end closure, incorporating close-fitting, interlocking metal components, must be kept dry and free of corrosion; deterioration can lead to catastrophic mechanical failure of the head assembly.

*Specifications subject to change without notice.

8" FRPV Membrane Housing Measurements

| Elements | Part Number | A | B | C |
|----------|---------------|-------------------------------|------------------------------|------------------------------|
| | | in (mm) | in (mm) | in (mm) |
| 1 | FRPV-8060S-1F | 62.28" + 0.12" (1582 + 3) | Ø9.96" + 0.07" (Ø253 + 2) | Ø8.58" + 0.12" (Ø218 + 3) |
| 2 | FRPV-8060S-2F | 102.28" + 0.12" (2598 + 3) | Ø9.96" + 0.07" (Ø253 + 2) | Ø8.58" + 0.12" (Ø218 + 3) |
| 3 | FRPV-8060S-3F | 142.28" + 0.12" (3614 + 3) | Ø9.96" + 0.07" (Ø253 + 2) | Ø8.58" + 0.12" (Ø218 + 3) |
| 4 | FRPV-8060S-4F | 182.28" + 0.12" (4630 + 3) | Ø9.96" + 0.07" (Ø253 + 2) | Ø8.58" + 0.12" (Ø218 + 3) |
| 5 | FRPV-8060S-5F | 222.28" + 0.12" (5646 + 3) | Ø9.96" + 0.07" (Ø253 + 2) | Ø8.58" + 0.12" (Ø218 + 3) |
| 6 | FRPV-8060S-6F | 262.28" + 0.12" (6662 + 3) | Ø9.96" + 0.07" (Ø253 + 2) | Ø8.58" + 0.12" (Ø218 + 3) |
| 7 | FRPV-8060S-7F | 302.28" + 0.12" (7678 + 3) | Ø9.96" + 0.07" (Ø253 + 2) | Ø8.58" + 0.12" (Ø218 + 3) |



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