



PURE LIFE

FRP RO MEMBRANE HOUSINGS

PURELIFE KSA COMPANY | We partner for the filtration future





FRP RO MEMBRANE HOUSINGS

FIBERGLASS REINFORCED POLYESTER

Pure Life RO membrane housings are designed to optimize the performance of water treatment and purification systems. Made from high-quality fiberglass reinforced polyester (FRP), our pressure vessels offer exceptional durability and can accommodate up to 8 membrane elements, supporting a wide range of operating pressures ranging from 150 psi to 1200 psi. The 8" and 4" diameter membrane housings are widely recognized and extensively used in various projects worldwide. Engineered for critical and demanding applications such as reverse osmosis, nanofiltration, and ultrafiltration systems, our pressure vessels are designed for reliable, long-term, continuous operation. Whether you're building a new water treatment plant or upgrading an existing one, Pure Life's RO membrane housings provide the ideal filtration solution to meet your needs.

FRP RO MEMBRANE HOUSINGS (FIBERGLASS REINFORCED POLYESTER)

FEATURES:

- Applicable design codes: ASME-X/EN13121-3
- Available pressure rating: from 150 psi to 1200 psi.
(Higher pressure under request)
- Operating Temperature up to 65 °C / 149 °F
- Complete FRP membrane housing range is compliant with NSF/ANSI 61-G and 372 standards.
- Multi-porting option
- Well heat-insulating property.
- High sealing pressure performance.
- Unique quick locking system
- Smooth inner wall and brightly surface
- Standard Paint Color RAL 7035 or defined by customer (RAL chart)
- Standard and non-standard options are available upon request.

APPLICATIONS:

- Reverse Osmosis filtration
- Sea Water Desalination
- Water Treatment
- Process Water
- Power generation
- Oil & Gas
- Agriculture
- Food and beverage





RO MEMBRANE HOUSINGS SERIES

1 PL 40E SERIES

Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1- 6)

2 PL40S SERIES

Configuration: Side port
Pressure rating: 150-1200 psi
Element length: 40" x (1- 6)

3 PL80E SERIES

Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1- 8)

4 PL80S SERIES

Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1- 8)

PRODUCT INFORMATION

PL 40 E 300 - 40 - 6

PureLife
4 or 8 Inch Diameter
Membrane
Feed/Concentrate
Side or End Port



Membranes per
Membrane Length
40 Inch
Maximum Operating
Pressure (PSI)

PL40E SERIES

DESCRIPTION

The PL40E filters are made of the industry's top-rated materials and manufactured in compliance with international design codes, ensuring a long and effective service life. This series of 4" diameter membrane housing with end port design is available in operating pressure ranging from 150 PSI to 1200 PSI. Compatible with various standard membrane elements, it presents the perfect solution for water treatment systems.

NON-CODED MODELS



MATERIALS OF CONSTRUCTION



REF	QTY	DESCRIPTION	MATERIAL
SHELL			
1	1	SHELL	FRP (Fiber Glass Reinforced Polyester)
HEAD			
2	2	End plug Sub-assembly	Engineering Thermoplastic
3	2	Head Seal	EPDM - O - Ring
4	2	PWT Seal	EPDM - O - Ring
5	2	Plug	Engineering Thermoplastic
HEAD INTERLOCK			
6	2	Locking baffles	Stainless Steel
VESSEL SUPPORT			
7	2	Saddle	Engineering Thermoplastic.
8	2	Strap Assembly	304 Stainless Steel - PVC cushion
9	4	Strap screw	5/16"-18-1.5" - 304 Stainless Steel (18-8)

PL40E SERIES

CODED MODELS



TECHNICAL SPECIFICATIONS

Model No.	Max. Operating Pressure	Operating Temperature	Connection	Operating pH Range	Feed/Conc. Port	Permeate Port	Element Length
PL40E150	150 psi / 10 bar	-10 °C – 49 °C	End port	pH 3-11	3/4"	1/2"	40" × (1-6)
PL40E300	300 psi / 20 bar	-10 °C – 49 °C	End port	pH 3-11	3/4"	1/2"	40" × (1-6)
PL40E450	450 psi / 31 bar	-10 °C – 49 °C	End port	pH 3-11	3/4"	1/2"	40" × (1-6)
PL40E600	600 psi / 41 bar	-10 °C – 49 °C	End port	pH 3-11	3/4"	1/2"	40" × (1-6)
PL40E1000	1000 psi/68 bar	-10 °C – 49 °C	End port	pH 3-11	3/4"	1/2"	40" × (1-6)
PL40E1200	1200 psi/82 bar	-10 °C – 49 °C	End port	pH 3-11	3/4"	1/2"	40" × (1-6)

REF	QTY	DESCRIPTION	MATERIAL
SHELL			
1	1	SHELL	FRP (Fiber Glass Reinforced Polyester)
HEAD			
2	2	Bearing Plate	Aluminum-Alloy
3	2	Sealing Plate	Engineering Thermoplastic.
4	2	Head Seal	EPDM - O - Ring
5	2	Permeate Port	Engineering Thermoplastic.
6	2	Permeate Port Seal	EPDM - O - Ring
7	2	Port Retainer	Stainless Steel
8	2	Feed/Conc. Port	Super Duplex SS steel
9	2	Port Retainer Set	Stainless Steel Two-piece set
10	2	Adapter Seal	EPDM - O - Ring
11	2	Plug	Engineering Thermoplastic
HEAD INTERLOCK			
12	2	Locking Kit segment	Stainless Steel
13	2	Securing ring	Stainless Steel/Engineering Thermoplastic
VESSEL SUPPORT			
14	2	Saddle	Engineering Thermoplastic.
15	2	Strap Assembly	304 Stainless Steel - PVC cushion
16	4	Strap screw	5/16"-18-1.5" - 304 Stainless Steel (18-8)
ELEMENT INTERFACE			
17	2	Adapter	Engineering Thermoplastic.
18	4	PWT Seal	EPDM - O - Ring



RO MEMBRANE HOUSINGS SERIES

1

PL 40E SERIES

Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1- 6)

2

PL40S SERIES

Configuration: Side port
Pressure rating: 150-1200 psi
Element length: 40" x (1- 6)

3

PL80E SERIES

Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1- 8)

4

PL80S SERIES

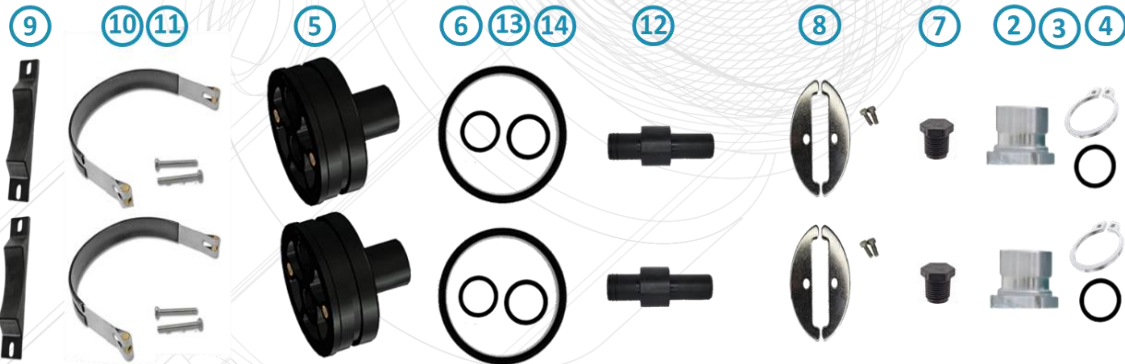
Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1- 8)

PL40S SERIES

DESCRIPTION

The PL40S filters are made of the industry's top-rated materials and manufactured in compliance with international design codes, ensuring a long and effective service life. This series of 4" diameter membrane housing with side port design is available in operating pressure ranging from 150 PSI to 1200 PSI. Compatible with various standard membrane elements, it presents the perfect solution for water treatment systems.

NON-CODED MODELS



MATERIALS OF CONSTRUCTION



REF	QTY	DESCRIPTION	MATERIAL
SHELL			
1	1	SHELL	FRP (Fiber Glass Reinforced Polyester)
2	2	F / C Port	Stainless Steel
3	2	F / C Port Seal	EPDM - O - Ring
4	2	F / C Port Retainer	Stainless Steel
HEAD			
5	2	End Plug	Engineering Thermoplastic.
6	2	Head Seal	EPDM - O - Ring
7	2	Plug	Engineering Thermoplastic
HEAD INTERLOCK			
8	2	Locking baffles	Stainless Steel
VESSEL SUPPORT			
9	2	Saddle	Engineering Thermoplastic.
10	2	Strap Assembly	304 Stainless Steel - PVC cushion
11	4	Strap Screw	5/16"-18-1.5" - 304 Stainless Steel (18-8)
ELEMENT INTERFACE			
12	2	Adapter	Engineering Thermoplastic.
13	2	Adapter seal	EPDM - O - Ring
14	2	PWT seal	EPDM - O - Ring

PL40S SERIES

CODED MODELS



REF	QTY	DESCRIPTION	MATERIAL
SHELL			
1	1	SHELL	FRP (Fiber Glass Reinforced Polyester)
2	2	F / C Port	Stainless Steel
3	2	F / C Port Seal	EPDM - O - Ring
4	2	F / C Port Retainer	Stainless Steel
HEAD			
5	2	Bearing Plate	Stainless Steel
6	2	Sealing Plate	Engineering Thermoplastic.
7	2	Head Seal	EPDM - O - Ring
8	2	Permeate Port	Engineering Thermoplastic.
9	2	Permeate Port Seal	EPDM - O - Ring
10	2	Port Retainer	Stainless Steel
11	2	Plug	Engineering Thermoplastic
HEAD INTERLOCK			
12	2	Locking Kit segment	Stainless Steel
13	2	Securing ring	Stainless Steel/Engineering Thermoplastic
VESSEL SUPPORT			
14	2	Saddle	Engineering Thermoplastic.
15	2	Strap Assembly	304 Stainless Steel - PVC cushion
16	4	Strap Screw	5/16"-18-1.5" - 304 Stainless Steel (18-8)
ELEMENT INTERFACE			
17	2	Adapter	Engineering Thermoplastic.
18	2	Adapter seal	EPDM - O - Ring
19	4	PWT seal	EPDM - O - Ring

TECHNICAL SPECIFICATIONS

Model No.	Max. Operating Pressure	Operating Temperature	Connection	Operating pH Range	Feed/Conc. Port	Permeate Port	Element Length
PL40S150	150 psi / 10 bar	-10 °C – 49 °C	Side port	pH 3-11	1"	1/2"	40" × (1-6)
PL40S300	300 psi / 20 bar	-10 °C – 49 °C	Side port	pH 3-11	1"	1/2"	40" × (1-6)
PL40S450	450 psi / 31 bar	-10 °C – 49 °C	Side port	pH 3-11	1"	1/2"	40" × (1-6)
PL40S600	600 psi / 41 bar	-10 °C – 49 °C	Side port	pH 3-11	1"	1/2"	40" × (1-6)
PL40S1000	1000 psi/68 bar	-10 °C – 49 °C	Side port	pH 3-11	1"	1/2"	40" × (1-6)
PL40S1200	1200 psi/82 bar	-10 °C – 49 °C	Side port	pH 3-11	1"	1/2"	40" × (1-6)



RO MEMBRANE HOUSINGS SERIES

1

PL 40E SERIES

Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1-6)

2

PL40S SERIES

Configuration: Side port
Pressure rating: 150-1200 psi
Element length: 40" x (1-6)

3

PL80E SERIES

Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1-8)

4

PL80S SERIES

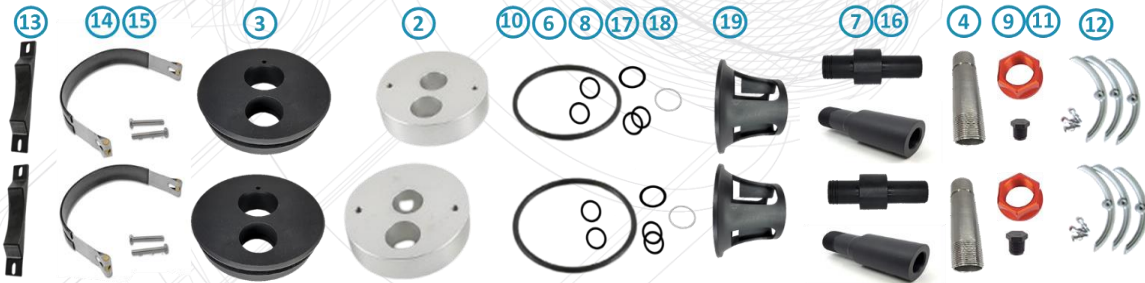
Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1-8)

PL80E SERIES

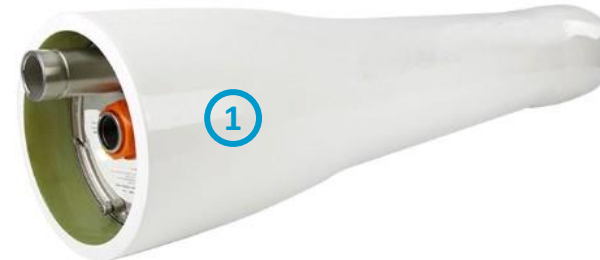
DESCRIPTION

The PL80E filters are made of the industry's top-rated materials and manufactured in compliance with international design codes, ensuring a long and effective service life. This series of 8" diameter membrane housing with end port design is available in operating pressure ranging from 150 PSI to 1200 PSI. Compatible with various standard membrane elements, it presents the perfect solution for water treatment systems.

CODED LOW-PRESSURE MODELS



MATERIALS OF CONSTRUCTION



REF	QTY	DESCRIPTION	MATERIAL
SHELL			
1	1	SHELL	FRP (Fiber Glass Reinforced Polyester)
HEAD			
2	2	Bearing Plate	Aluminum-Alloy
3	2	Sealing Plate	Engineering Thermoplastic.
4	2	Feed/Conc Port	Super Duplex SS steel
5	2	Port Retainer Set	Stainless Steel Two-piece set
6	2	F/C Port seal	EPDM - O - Ring
7	2	Permeate Port	Engineering Thermoplastic.
8	2	Permeate Port Seal	EPDM - O - Ring
9	2	Port Nut	Engineering Thermoplastic
10	2	Head Seal	EPDM - O - Ring
11	2	Plug	Engineering Thermoplastic
HEAD INTERLOCK			
12	2	Locking Kit segment	Stainless Steel
VESSEL SUPPORT			
13	2	Saddle	Engineering Thermoplastic.
14	2	Strap Assembly	304 Stainless Steel - PVC cushion
15	4	Strap screw	5/16"-18-1.5" - 304 Stainless Steel (18-8)
ELEMENT INTERFACE			
16	2	Adapter	Engineering Thermoplastic.
17	4	PWT seal	EPDM - O - Ring
18	2	Adapter seal	EPDM - O - Ring
19	2	Thrust Ring	Engineering Thermoplastic.

PL80E SERIES

CODED HIGH-PRESSURE MODELS



REF	QTY	DESCRIPTION	MATERIAL
SHELL			
1	1	SHELL	FRP (Fiber Glass Reinforced Polyester)
2	2	F / C Port	Stainless Steel
3	2	F / C Port Seal	EPDM - O - Ring
4	2	F / C Port Retainer	Stainless Steel
HEAD			
5	2	Bearing Plate	Aluminum-Alloy
6	2	Sealing Plate	Engineering Thermoplastic.
7	2	Permeate Port	Engineering Thermoplastic.
8	2	Permeate Port Seal	EPDM - O - Ring
9	2	Port Nut	Engineering Thermoplastic
10	2	Head Seal	EPDM - O - Ring
11	2	Plug	Engineering Thermoplastic
HEAD INTERLOCK			
12	2	Locking Kit segment	Stainless Steel
13	2	Securing ring	Stainless Steel/Engineering Thermoplastic
VESSEL SUPPORT			
14	2	Saddle	Engineering Thermoplastic.
15	2	Strap Assembly	304 Stainless Steel - PVC cushion
16	4	Strap screw	5/16"-18-1.5" - 304 Stainless Steel (18-8)
ELEMENT INTERFACE			
17	2	Adapter	Engineering Thermoplastic.
18	4	PWT seal	EPDM - O - Ring
19	2	Adapter seal	EPDM - O - Ring
20	2	Thrust Ring	Engineering Thermoplastic.

TECHNICAL SPECIFICATIONS

Model No.	Max. Operating Pressure	Operating Temperature	Connection	Operating pH Range	Feed/Conc. Port	Permeate Port	Element Length
PL80S150	150 psi / 10 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" x (1-8)
PL80S300	300 psi / 20 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" x (1-8)
PL80S450	450 psi / 31 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" x (1-8)
PL80S600	600 psi / 41 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" x (1-8)
PL80S1000	1000 psi/68 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" x (1-8)
PL80S1200	1200 psi/82 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" x (1-8)



RO MEMBRANE HOUSINGS SERIES

1

PL 40E SERIES

Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1-6)

2

PL40S SERIES

Configuration: Side port
Pressure rating: 150-1200 psi
Element length: 40" x (1-6)

3

PL80E SERIES

Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1-8)

4

PL80S SERIES

Configuration: End port
Pressure rating: 150-1200 psi
Element length: 40" x (1-8)

PL80S SERIES

DESCRIPTION

The PL80S filters are made of the industry's top-rated materials and manufactured in compliance with international design codes, ensuring a long and effective service life. This series of 8" diameter membrane housing with side port design is available in operating pressure ranging from 150 PSI to 1200 PSI. Compatible with various standard membrane elements, it presents the perfect solution for water treatment systems.

CODED LOW-PRESSURE MODELS



MATERIALS OF CONSTRUCTION



REF	QTY	DESCRIPTION	MATERIAL
SHELL			
1	2	SHELL	FRP (Fiber Glass Reinforced Polyester)
2	2	F / C Port	Stainless Steel
3	2	F / C Port Seal	EPDM - O - Ring
4	2	F / C Port Retainer	Stainless Steel
HEAD			
5	2	Bearing Plate	Aluminum-Alloy
6	2	Sealing Plate	Engineering Thermoplastic.
7	2	Permeate Port	Engineering Thermoplastic.
8	2	Permeate Port Seal	EPDM - O - Ring
9	2	Port Nut	Engineering Thermoplastic
10	2	Head Seal	EPDM - O - Ring
11	2	Plug	Engineering Thermoplastic
HEAD INTERLOCK			
12	2	Locking Kit segment	Stainless Steel
VESSEL SUPPORT			
13	2	Saddle	Engineering Thermoplastic.
14	2	Strap Assembly	304 Stainless Steel - PVC cushion
15	4	Strap screw	5/16"-18-1.5" - 304 Stainless Steel (18-8)
ELEMENT INTERFACE			
16	2	Adapter	Engineering Thermoplastic.
17	4	PWT seal	EPDM - O - Ring
18	2	Adapter seal	EPDM - O - Ring
19	2	Thrust Ring	Engineering Thermoplastic.

PL80S SERIES

CODED HIGH-PRESSURE MODELS



REF	QTY	DESCRIPTION	MATERIAL
SHELL			
1	1	SHELL	FRP (Fiber Glass Reinforced Polyester)
2	2	F / C Port	Stainless Steel
3	2	F / C Port Seal	EPDM - O - Ring
4	2	F / C Port Retainer	Stainless Steel
HEAD			
5	2	Bearing Plate	Aluminum-Alloy
6	2	Sealing Plate	Engineering Thermoplastic.
7	2	Permeate Port	Engineering Thermoplastic.
8	2	Permeate Port Seal	EPDM - O - Ring
9	2	Port Nut	Engineering Thermoplastic
10	2	Head Seal	EPDM - O - Ring
11	2	Plug	Engineering Thermoplastic
HEAD INTERLOCK			
12	2	Locking Kit segment	Stainless Steel
13	2	Securing ring	Stainless Steel/Engineering Thermoplastic
VESSEL SUPPORT			
14	2	Saddle	Engineering Thermoplastic.
15	2	Strap Assembly	304 Stainless Steel - PVC cushion
16	4	Strap screw	5/16" - 18 - 1.5" - 304 Stainless Steel (18-8)
ELEMENT INTERFACE			
17	2	Adapter	Engineering Thermoplastic.
18	4	PWT seal	EPDM - O - Ring
19	2	Adapter seal	EPDM - O - Ring
20	2	Thrust Ring	Engineering Thermoplastic.

TECHNICAL SPECIFICATIONS

Model No.	Max. Operating Pressure	Operating Temperature	Connection	Operating pH Range	Feed/Conc. Port	Permeate Port	Element Length
PL80S150	150 psi / 10 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" × (1-8)
PL80S300	300 psi / 20 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" × (1-8)
PL80S450	450 psi / 31 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" × (1-8)
PL80S600	600 psi / 41 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" × (1-8)
PL80S1000	1000 psi/68 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" × (1-8)
PL80S1200	1200 psi/82 bar	-10 °C – 49 °C	Side port	pH 3-11	1.5"/2"/2.5"/3"	1"	40" × (1-8)

THANK YOU

“ Thank you for taking the time to browse our catalogue. We hope you found what you were looking for! If you're interested in learning more about our products or services, we invite you to visit our website or contact us for a custom quote or consultation. Our team is always happy to help answer your questions and provide personalized solutions tailored to your unique needs. Don't hesitate to reach out - we would love to hear from you! “



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PURE LIFE

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