



PRODUCT SPECIFICATION

8" ACM RO Turboclean Element Series

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-M3P4T6	10,500 (39.0)	99.50	98.50

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 225.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	ACM Fully Aromatic Polyamide Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell
Active Membrane Area.....	355 ft ² (32.6 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	General Pharmaceutical



Element Weight : 45 (20)
 Length (A) : 40.00 (1,016) Diameter (B) : 7.90 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" ACM-LP Low Pressure RO Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-M4C2T6	14,000 (52.0)	99.00	98.00

Performance is based on the following test conditions: 2,000.0 ppm NaCl, 225.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	ACM-LP Fully Aromatic Polyamide Low Pressure Advanced Composite
Configuration.....	Spiral Wound, Turboclean Shell
Active Membrane Area.....	355 ft ² (32.6 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	Pharm Process Water



Element Weight : 45 (20)
 Length (A) : 40.0 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" ACM RO High Temperature Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-M4J9W7	15,400 (58.0)	99.00	98.00

Performance is based on the following test conditions: 2,000.0 ppm NaCl, 225.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	ACM-LP Fully Aromatic Polyamide Low Pressure Advanced Composite
Configuration.....	Spiral Wound, Turboclean Shell
Active Membrane Area.....	385 ft ² (35.4 m ²)
Recommended Applied Pressure.....	50 - 300 psi (3 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	4.0
Maximum Turbidity.....	1 NTU
Application.....	Pharmaceutical Water, High Temp.



Element Weight : 50 (23)
 Length (A) : 40.0 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.028" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" ACM RO High Temperature Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-M5P4T9	11,500 (43.0)	98.50	97.50

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 150.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	ACM-LP Fully Aromatic Polyamide Low Pressure Advanced Composite
Configuration.....	Spiral Wound, High Temperature Turboclean Shell
Active Membrane Area.....	355 ft ² (32.6 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	General Pharmaceutical



Element Weight : 45 (20)
 Length (A) : 40.00 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" X-20 Low Fouling RO Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-N117S5	7,100 (26.0)	99.00	98.00

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 225.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	X20 Fully Aromatic Polyamide-Urea Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell with FoulGuard Technology
Active Membrane Area.....	270 ft ² (24.8 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	95 GPM (22 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	Bacteria Concentration



Element Weight : 40 (18)
 Length (A) : 40.00 (1,016) Diameter (B) : 7.90 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.047" thick parallel spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" X-20 RO High Temperature Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-N118S4	7,100 (26.0)	99.00	98.00

Performance is based on the following test conditions: 2,000.0 ppm NaCl, 225.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	X20 Fully Aromatic Polyamide-Urea Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell with FoulGuard Technology
Active Membrane Area.....	270 ft ² (24.8 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	95 GPM (22 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	Enzyme Concentration



Element Weight : 40 (18)
 Length (A) : 40.0 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.047" thick parallel spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" X-20 RO High Temperature Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-N1J4S4	7,100 (26.0)	99.00	98.00

Performance is based on the following test conditions: 2,000.0 ppm NaCl, 225.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	X20 Fully Aromatic Polyamide-Urea Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell with FoulGuard Technology
Active Membrane Area.....	270 ft ² (24.8 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	95 GPM (22 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	Peptide Concentration



Element Weight : 40 (18)
 Length (A) : 40.0 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.047" thick parallel spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" X-20 RO High Temperature Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-N1J4T9	9,400 (35.0)	99.50	98.50

Performance is based on the following test conditions: 2,000.0 ppm NaCl, 225.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	X20 Fully Aromatic Polyamide-Urea Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell with FoulGuard Technology
Active Membrane Area.....	355 ft ² (32.6 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	Peptide Concentration



Element Weight : 40 (18)
 Length (A) : 40.0 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" X-20 Low Fouling RO Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-N1P4T5	7,100 (26.0)	99.00	98.00

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 225.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	X20 Fully Aromatic Polyamide-Urea Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell with FoulGuard Technology
Active Membrane Area.....	270 ft ² (24.8 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	95 GPM (22 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	General Pharmaceutical



Element Weight : 40 (18)
 Length (A) : 40.00 (1,016) Diameter (B) : 7.90 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.046" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" X-20 Low Fouling RO Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-N1P4T6	9,400 (35.0)	99.50	98.50

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 225.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	X20 Fully Aromatic Polyamide-Urea Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell with FoulGuard Technology
Active Membrane Area.....	355 ft ² (32.6 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	General Pharmaceutical



Element Weight : 45 (20)
 Length (A) : 40.00 (1,016) Diameter (B) : 7.90 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" X-20 Low Fouling RO Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-N1P4X8	6,500 (24.0)	99.00	98.00

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 225.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	X20 Fully Aromatic Polyamide-Urea Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell with FoulGuard Technology
Active Membrane Area.....	250 ft ² (23. m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	95 GPM (22 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	General Pharmaceutical



Element Weight : 40 (18)
 Length (A) : 40.00 (1,016) Diameter (B) : 7.90 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.065" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" XN45 NF High Temperature Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-N2P4W1	7,100 (26.0)	95.00	92.00

Performance is based on the following test conditions: 2,000.00 ppm MgSO₄, 110.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	XN45 Polyamide Advanced Nanofiltration Membrane
Configuration.....	Spiral Wound, High Temperature, Turboclean Shell
Active Membrane Area.....	270 ft ² (24.8 m ²)
Recommended Applied Pressure.....	40 - 200 psi (3 - 14 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	0.5 ppm nominal, 1.0 ppm max
Maximum Feed Flow.....	95 GPM (22 m ³ /hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	General Pharmaceutical



Element Weight : 40 (18)
 Length (A) : 40.00 (1,016) Diameter (B) : 7.90 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.047" thick parallel spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" AUM UF High Temperature Turboclean Element

Model	Permeate flow GPD (m3/day)*	M.W.C.O.
8040-N6J1W6	10,000 (37.0)	10,000

Performance is based on the following test conditions: 500.0 ppm Dextran, 30.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	AUM Advanced Ultrafiltration Membrane
Configuration.....	Spiral Wound, High Temperature Turboclean Shell
Active Membrane Area.....	252 ft ² (23.4 m ²)
Recommended Applied Pressure.....	20 - 200 psi (1.4 - 14 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	10.0 ppm
Maximum Feed Flow.....	95 GPM (22 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	Enzyme Fractionation



Element Weight : 40 (18)
 Length (A) : 40.0 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.047" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
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PRODUCT SPECIFICATION

8" AUM UF High Temperature Turboclean Element

Model	Permeate flow GPD (m3/day)*	M.W.C.O.
8040-N6J7W6	10,400 (39.0)	10,000

Performance is based on the following test conditions: 500.0 ppm Dextran, 30.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	AUM Advanced Ultrafiltration Membrane
Configuration.....	Spiral Wound, High Temperature Turboclean Shell
Active Membrane Area.....	260 ft ² (23.9 m ²)
Recommended Applied Pressure.....	20 - 200 psi (1.4 - 14 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	10.0 ppm
Maximum Feed Flow.....	95 GPM (22 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	Pyrogen Free Water



Element Weight : 40 (18)
 Length (A) : 40.0 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.047" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8.3" AUM Ultrafiltration Turboclean Element Series

Model	Permeate flow GPD (m3/day)*	M.W.C.O.
8340-N6I8Y1	15,000 (56.0)	10,000

Performance is based on the following test conditions: 500.00 ppm 10K PEG, 30.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	AUM Advanced Ultrafiltration Membrane
Configuration.....	Spiral Wound, Turboclean Shell
Active Membrane Area.....	372 ft ² (34.6 m ²)
Recommended Applied Pressure.....	5 - 200 psi (0.3 - 14 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	10.0 ppm
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	Enzyme Concentration



Element Weight : 50 (23)
 Length (A) : 40.00 (1,016) Diameter (B) : 8.30 (210) Permeate Tube (C) : 1.14 (29.0)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Osmo Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8.3" AUM Ultrafiltration Turboclean Element Series

Model	Permeate flow GPD (m3/day)*	M.W.C.O.
8340-N6J8W8	15,000 (56.0)	10,000

Performance is based on the following test conditions: 500.0 ppm 10K PEG, 60.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	AUM Advanced Ultrafiltration Membrane
Configuration.....	Spiral Wound, Turboclean Shell
Active Membrane Area.....	372 ft ² (34.6 m ²)
Recommended Applied Pressure.....	5 - 200 psi (0.3 - 14 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	10.0 ppm
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	Ultrapure Water Particle Removal



Element Weight : 50 (23)
 Length (A) : 40.0 (1,016) Diameter (B) : 8.3 (210) Permeate Tube (C) : 1.14 (29.0)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Osmo Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



TurboClean™ Sanitary Elements for Industrial Applications

TurboClean elements have been used extensively in the industrial market for process and wastewater applications. The polypropylene outershell construction is resistant to chemical attack while maintaining a sanitary element environment.

The sanitary nature of the TurboClean element provides a continuous by-pass flow around the outside of the element. This eliminates the stagnant area normally present on standard brine seal elements, which can result in bio-growth that can contaminate the product. This stagnant area is difficult to clean or sanitize in place, as there is no flow of cleaning or sanitizing chemicals into this area. If cleaning or sanitizing chemicals do get into this area, it is difficult to predict the rinse out time for these chemicals.

Standard net wrap sanitary elements have traditionally been used in food and dairy applications. Due to the high by-pass flow inherent with these designs, food and dairy systems incorporate large recirculation pumps to insure a certain minimum flow through the elements. These net wrap elements cannot be used in standard 2-1 arrays normally used in water applications.

The TurboClean element minimized by-pass flow to 15-20% of the feed flow. This allows the TurboClean element to be used in standard water type applications like cooling tower recycle. Following are some TriSep TurboClean elements specifically engineered for the industrial water market.



PRODUCT SPECIFICATION

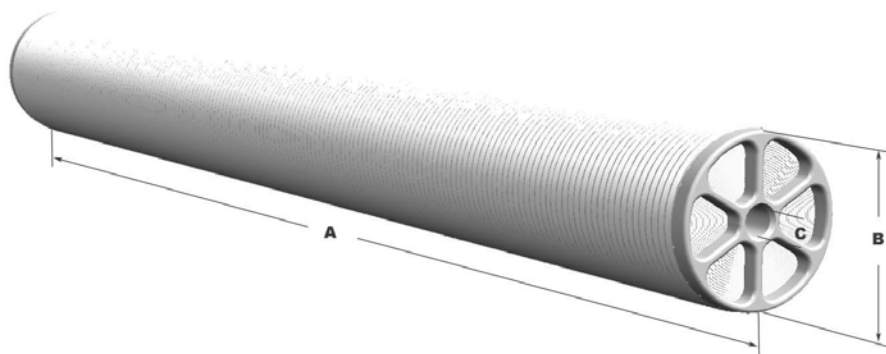
4" X-20 Low Fouling RO Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
4040-N1L4V5	1,800 (6.0)	99.00	98.00

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 225.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	X20 Fully Aromatic Polyamide-Urea Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell with FoulGuard Technology
Active Membrane Area.....	65 ft ² (5.9 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	1000 psi (69 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	25 GPM (5.6 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	Agricultural Waste Water



Element Weight : 12 (5.4)
 Length (A) : 40.00 (1,016) Diameter (B) : 4.0 (101) Permeate Tube (C) : 0.62 (15.9)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Desal/DuPont Style Core Tube
 Feed Spacer: 0.047" thick parallel spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" X-20 RO High Temperature Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-N1A2W1	7,100 (26.0)	99.00	98.00

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 225.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	X20 Fully Aromatic Polyamide-Urea Advanced Composite Membrane
Configuration.....	Spiral Wound, High Temperature Turboclean Shell
Active Membrane Area.....	270 ft ² (24.8 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	1000 psi (69 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	95 GPM (22 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	Nitrate Removal



Element Weight : 40 (18)
 Length (A) : 40.00 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.047" thick parallel spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

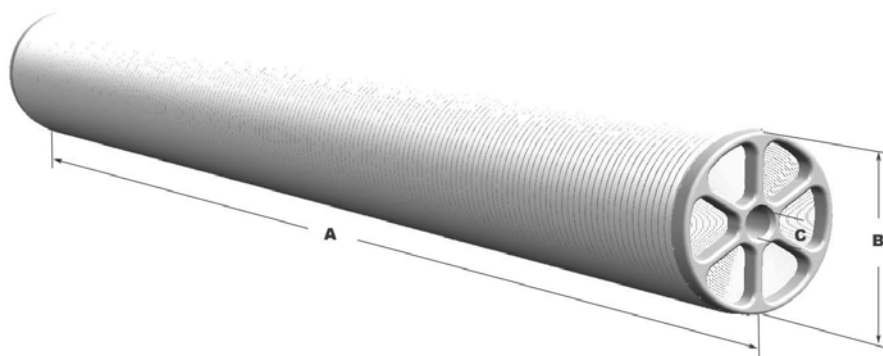
4" AUM Ultrafiltration Turboclean Element Series

Model	Permeate flow GPD (m3/day)*	M.W.C.O.
4040-N6E2U8	3,100 (11.0)	10,000

Performance is based on the following test conditions: 500.00 ppm PEG, 30.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	AUM Advanced Ultrafiltration Membrane
Configuration.....	Spiral Wound, Turboclean Shell
Active Membrane Area.....	78 ft ² (7.2 m ²)
Recommended Applied Pressure.....	5 - 200 psi (0.3 - 14 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	10.0 ppm
Maximum Feed Flow.....	20 GPM (4.5 m ³ /hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	RO Pretreatment



Element Weight : 12 (5.4)
 Length (A) : 40.00 (1,016) Diameter (B) : 4.00 (101) Permeate Tube (C) : 0.62 (15.9)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Desal/DuPont Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" ACM RO High Temperature Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-M2F8S4	7,200 (27.0)	99.00	98.00

Performance is based on the following test conditions: 2,000.0 ppm NaCl, 225.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	ACM Fully Aromatic Polyamide Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell
Active Membrane Area.....	270 ft ² (24.8 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 140°F (2 - 60°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	95 GPM (22 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	Boiler Condensate Recovery



Element Weight : 40 (18)
 Length (A) : 40.0 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.047" thick parallel spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

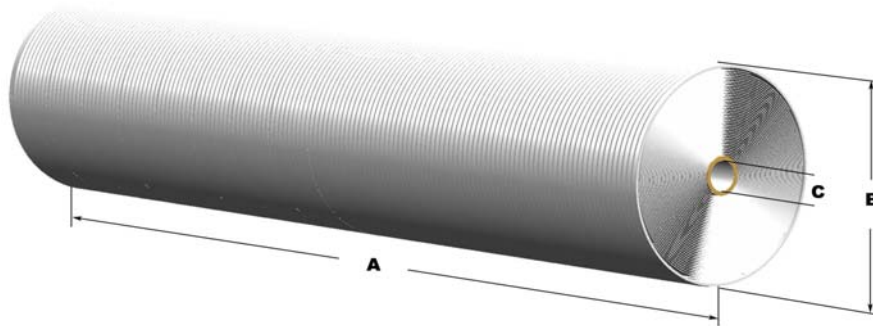
8" CA RO Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8037-O1B3Z6	6,500 (24.0)	98.00	97.00

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 420.00 psi, 25°C, 15% recovery, pH 5.50, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	SB Cellulose Acetate Blend
Configuration.....	Spiral Wound, Turboclean Shell
Active Membrane Area.....	340 ft ² (31.6 m ²)
Recommended Applied Pressure.....	200 - 500 psi (14 - 34 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	50 - 90°F (10 - 32°C)
Feedwater pH Range.....	5.5 nominal, 4 - 7
Chlorine Tolerance.....	0.5 ppm nominal, 1.0 ppm max
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	Chemical Waste Water



Element Weight : 45 (20)
 Length (A) : 37.00 (939) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.40 (35.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Stainless Steel Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" X-20 Low Fouling RO Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-N1J8T6	9,400 (35.0)	99.50	98.50

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 225.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	X20 Fully Aromatic Polyamide-Urea Advanced Composite Membrane
Configuration.....	Spiral Wound, Turboclean Shell with FoulGuard Technology
Active Membrane Area.....	355 ft ² (32.6 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	2 NTU
Application.....	Ultra Pure Water



Element Weight : 45 (20)
 Length (A) : 40.00 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



PRODUCT SPECIFICATION

8" CA RO Turboclean Element

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-O1G8T6	7,000 (26.0)	98.00	97.00

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 420.00 psi, 25°C, 15% recovery, pH 5.50, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	SB Cellulose Acetate Blend
Configuration.....	Spiral Wound, Turboclean Shell
Active Membrane Area.....	350 ft ² (32.5 m ²)
Recommended Applied Pressure.....	200 - 500 psi (14 - 34 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	50 - 90°F (10 - 32°C)
Feedwater pH Range.....	5.5 nominal, 4 - 7
Chlorine Tolerance.....	0.5 ppm nominal, 1.0 ppm max
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU
Application.....	Cooling Water Blowdown Recycle



Element Weight : 45 (20)
 Length (A) : 40.00 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.12 (28.6)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
SOLUTIONS



TriSep ACM Composite RO Membrane Elements ACM1, ACM2, ACM3, ACM4, ACM5

TriSep offers five versions of its popular ACM series reverse osmosis membrane elements. The ACM line is the workhorse of the TriSep RO line. It delivers high flux and high rejection in a durable and economical membrane. The membrane has good combination of chemical resistance and mechanical strength. This is exhibited by wide operating pH ranges (2-12), some resistance to oxidants such as chlorine (up to 2,000 ppm-hrs) and hydrogen peroxide, and pressures up to 1,000 psi (70 bar) with the proper construction.

ACM RO membranes typically have higher salt (NaCl) rejection than cellulose acetate or nanofiltration membranes, but in the ACM4 and ACM5 configurations have high specific flux rates and can, therefore, operate at lower feed pressures. ACM RO membranes have the ability to reject a wide range of feed species, specifically: particulates, colloidal and microbiological species, hardness, sulfate and other multivalent ions, and soluble low molecular weight (> 200 Daltons) neutral and charged organic compounds.

The ACM product line is available in 5 versions. The ACM1 and ACM2 offer the highest rejection (99.5%) and typically operate at 150 - 200 psi (10 - 14 bar). The ACM2 is one of our most popular membrane elements. It is a defacto standard for typical water purification requirements. The ACM1 and ACM2 are preferred in applications with high feedwater TDS (>3,000 ppm) and/or high recovery. The lower specific flux of these membranes compared to the ACM4 and ACM5 allows for a more balanced hydraulic flow through the system and more balanced permeate flux rates due to the high osmotic pressure of these feedwaters.

For applications where a lower operating pressure is required but you still need very high salt rejections, the ACM3 may fit the bill. This membrane typically operates at 125 - 175 psi (9 - 12 bar) but still maintains a very high salt rejection (99.5%).

For ultra low pressure operation, the ACM-LP line of ACM4 and the new ACM5 may be the best choice. These membranes have extremely high specific flux, comparable to NF membranes, while still offering excellent salt rejection (98.5-99.2%). These membranes typically operate at feed pressures of 75-150 psi (5 - 10 bar). Due to the high specific flux, these membranes are best suited to applications with relatively low TDS (<3,000 ppm) to achieve balanced flux rates within the system.



TriSep ACM1 Composite RO Membrane Elements

The ACM1 offers the highest rejection (99.5%) and typically operate at 150 - 200 psi (10 - 14 bar). The ACM1 is preferred in applications with high feedwater TDS (>3,000 ppm) and/or high recovery. The lower specific flux of this membrane compared to the ACM4 and ACM5 allows for a more balanced hydraulic flow through the system and more balanced permeate flux rates due to the high osmotic pressure of these feedwaters.

4040-ACM1-TSA	4" diameter by 40" long, 0.75" I.D. female permeate tube, flush cut
4040-ACM1-TSF	4" diameter by 40" long, 0.75" O.D. male permeate tube, protruding permeate tube
4040-ACM1-TWF	4" dia. by 40" long, 0.75" O.D. male perm. tube, protruding perm. tube, high area.
8040-ACM1-TSA	8" diameter by 40" long, 1.50" I.D. female permeate tube, flush cut
8040-ACM1-UWA	8" diameter by 40" long, 1.50" I.D. female permeate tube, flush cut, high area.



PRODUCT SPECIFICATION

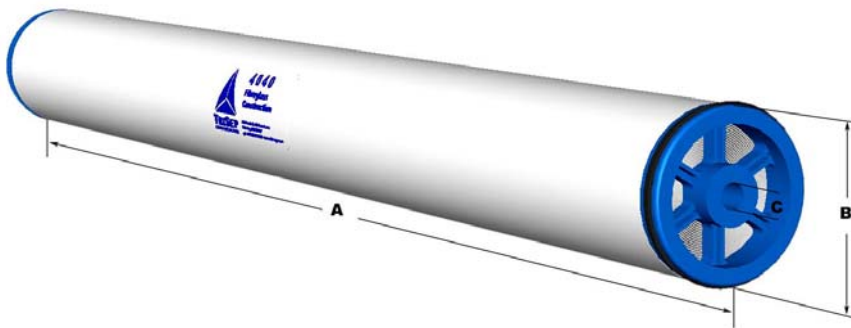
4" ACM RO Element Series

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
4040-ACM1-TSA	1,950 (7.0)	99.50	98.50

Performance is based on the following test conditions: 2,000.0 ppm NaCl, 225.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	ACM Fully Aromatic Polyamide Advanced Composite Membrane
Configuration.....	Spiral Wound, Fiberglass Outer Wrap
Active Membrane Area.....	88 ft ² (8.1 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	20 GPM (4.5 m ³ /hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU



Element Weight : 15 (7)
 Length (A) : 40.0 (1,016) Diameter (B) : 4.0 (101) Permeate Tube (C) : 0.75 (19.1)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: TriSep Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



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PRODUCT SPECIFICATION

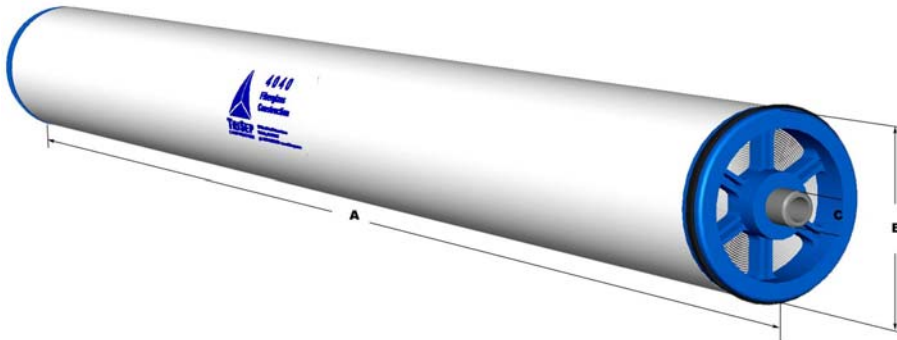
4" ACM RO Element Series

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
4040-ACM1-TSF	1,900 (7.0)	99.50	98.50

Performance is based on the following test conditions: 2,000.0 ppm NaCl, 225.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	ACM Fully Aromatic Polyamide Advanced Composite Membrane
Configuration.....	Spiral Wound, Fiberglass Outer Wrap
Active Membrane Area.....	85 ft ² (7.9 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	20 GPM (4.5 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU



Element Weight : 15 (7)
 Length (A) : 40.0 (1,016) Diameter (B) : 4.0 (101) Permeate Tube (C) : 0.75 (19.1)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
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PRODUCT SPECIFICATION

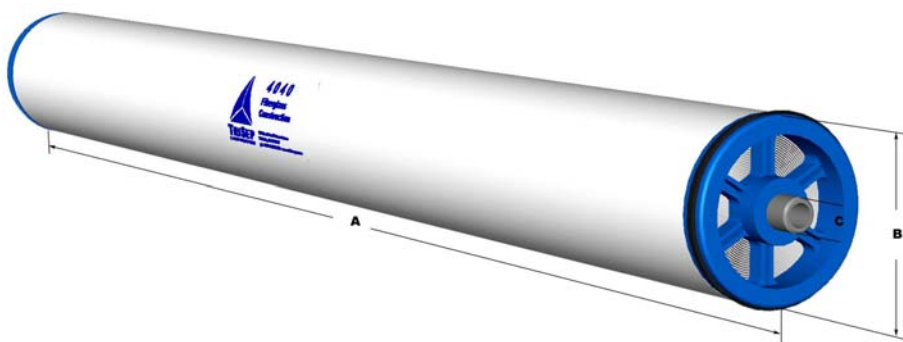
4" ACM RO Element Series

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
4040-ACM1-TWF	2,000 (7.0)	99.50	98.50

Performance is based on the following test conditions: 2,000.00 ppm NaCl, 225.00 psi, 25°C, 15% recovery, pH 8.00, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	ACM Fully Aromatic Polyamide Advanced Composite Membrane
Configuration.....	Spiral Wound, Fiberglass Outer Wrap
Active Membrane Area.....	90 ft ² (8.4 m ²)
Recommended Applied Pressure.....	40 - 300 psi (3 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	20 GPM (4.5 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU



Element Weight : 15 (7)
 Length (A) : 40.00 (1,016) Diameter (B) : 4.0 (101) Permeate Tube (C) : 0.75 (19.1)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: Filmtec Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



Engineered Membrane
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PRODUCT SPECIFICATION

8" ACM RO Element Series

Model	Permeate flow GPD (m3/day)*	Average Salt Rejection (%)	Minimum Salt Rejection (%)
8040-ACM1-TSA	8,000 (30.0)	99.50	99.00

Performance is based on the following test conditions: 2,000.0 ppm NaCl, 225.0 psi, 25°C, 15% recovery, pH 8.0, 30 minutes operation.

OPERATIONAL AND DESIGN DATA

Membrane Type.....	ACM Fully Aromatic Polyamide Advanced Composite Membrane
Configuration.....	Spiral Wound, Fiberglass Outer Wrap
Active Membrane Area.....	365 ft ² (33.5 m ²)
Recommended Applied Pressure.....	100 - 300 psi (7 - 21 bar)
Maximum Applied Pressure.....	600 psi (41 bar)
Recommended Operating Temperature.....	35 - 113°F (2 - 45°C)
Feedwater pH Range.....	2 - 11 continuous
Chlorine Tolerance.....	<0.1 ppm
Maximum Feed Flow.....	80 GPM (18 m3/hr)
Minimum Brine Flow/Permeate Flow Ratio....	5:1
Maximum SDI (15 minutes)	5.0
Maximum Turbidity.....	1 NTU



Element Weight : 45 (20)
 Length (A) : 40.0 (1,016) Diameter (B) : 7.9 (200) Permeate Tube (C) : 1.50 (38.1)
 Units in pounds and inches, units in paranthesis in kilograms and millimetres.
 Mechanical Configuration: TriSep Style Core Tube
 Feed Spacer: 0.031" thick diamond spacer

* Permeate flow is clean water flux at standard conditions above. Not applicable for all feedwater conditions. Individual element's permeate flow may vary +/- 15%.



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