



AUTOTROL® BRAND MEMBRANE ELEMENTS

Autotrol Reverse Osmosis Residential Products

Osmonics Household Group, with its superior line of products, has been at the forefront of the water treatment industry for three decades, and we continue to lead the way with our ongoing research and development. Our commitment to quality, customer service, and leading-edge technology means that you can expect reliable products that meet and exceed your water-treatment needs.

Osmonics is dedicated to creating tomorrow's fluid solutions today.



A Full Line of Membrane Elements Built on Desal® Products Tradition

Autotrol brand residential RO membranes are built on a strong tradition of RO technology at Osmonics. Our Desal brand membranes have led the industry for years in design and manufacture of high quality membrane elements. That tradition continues with Autotrol residential elements as well. All of the technology of Desal and Osmonics, combined with the superior quality and customer service that Autotrol brand products have been known for, gives you the very best value in potable water RO on the market!

Innovative, Proven Membrane Technology Ensures RO Efficiency

Unlike conventional filtration which can be maintenance-intensive, costly, and environmentally unfriendly, membrane-separation technology employs crossflow filtration where captured impurities on the membrane are constantly swept away by the concentrate stream. Thus the membrane surface is continuously cleaned, prolonging the life of the membrane and reducing maintenance costs.

In residential applications, RO membranes are used to purify varying qualities of saline water. In a common application, the appropriate RO membrane element is housed inside a pressure vessel that accepts inflowing, pressurized saline feedwater. Crossflow filtration across the membrane then divides the flow into two outflow streams: the cleansed permeate feed and the concentrate or reject stream.

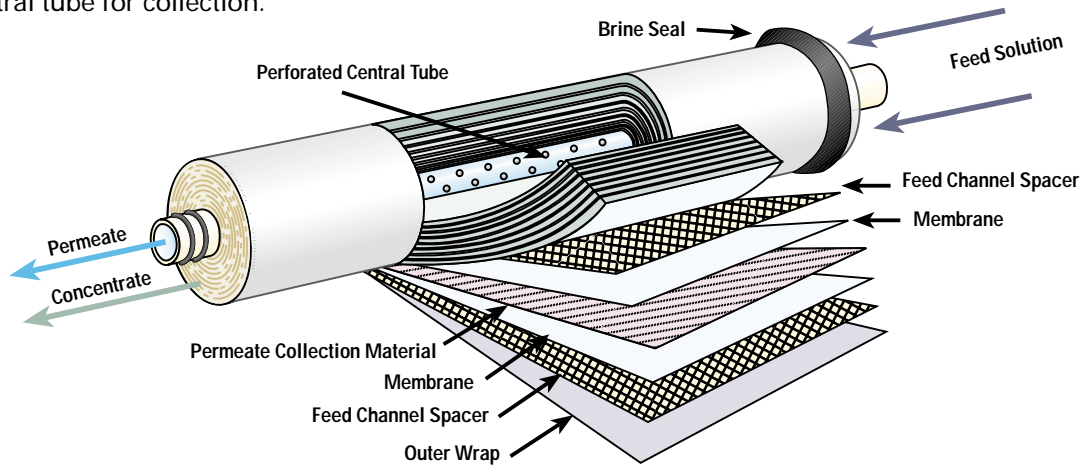
Commercial Applications Take Advantage of Osmonics Membranes

In addition to residential applications, Autotrol brand membrane elements are available for commercial applications, including:

- Drinking water for restaurants
- Drinking water vending machines
- Aquarium water treatment
- Softened water for homes, hotels, commercial laundries and car washes
- Post-treatment of deionized water
- Pure water for pharmaceuticals, laboratories and electronics
- Hemodialysis
- Oil/water separation

How the Membrane System Works

The spiral membrane is constructed of one or more membrane envelopes wound around a perforated central tube. The permeate passes through the membrane into the envelope and spirals inward to the central tube for collection.



The illustration above represents a simplified spiral-wound membrane element. Recovery can be as high as 90% and systems may be capable of chemical cleaning in place (CIP).

Residential Thin-Film Membrane RO Elements

PART NUMBER	MODEL	AVERAGE NaCl REJECTION (%)	PERMEATE FLOW gpd @ 60 psi
1220188	TFM-18	98.0	18
1220189	TFM-24	98.0	24
1220190	TFM-36	98.0	36
1204694	TFM-50	98.0	50
1204487	TFM-75	96.0	75
1221122	Performa™ TFM-100	96.0	100



Specifications are based on 500 mg/L NaCl solution at 60 psi net pressure (4.1 bar), 77°F (25°C), 15% recovery after 24 hours. Individual element flux may vary ± 15%.

Residential Cellulose Acetate Membrane RO Elements

PART NUMBER	MODEL	AVERAGE NaCl REJECTION (%)	PERMEATE FLOW gpd @ 60 psi
1201330	CTA-10	95.0	10
1201332	CTA-16	95.0	16
1201336	HFCTA-22	92.0	22



Specifications are based on 500 mg/L NaCl solution at 60 psi net pressure (4.1 bar), 77°F (25°C), 15% recovery after 24 hours. Individual element flux may vary ± 15%.

Commercial Thin-Film RO Elements

PART NUMBER	MODEL	AVERAGE NaCl REJECTION (%)	PERMEATE FLOW gpd @ 225 psi
1206718	AG2514TF	99.4	180
1206719	AG2521TF	99.4	300
1206729	AG2540TF	99.4	710
1206748	AG4014TF	99.4	550
1206750	AG4021TF	99.4	1050
1206774	AG4040TF	99.4	2200



Specifications are based on 2000 mg/L NaCl solution at 225 psi net pressure (15.5 bar), 77°F (25°C), 15% recovery after 24 hours. Individual element flux may vary ± 15%.

Commercial Low-Pressure, Thin-Film RO Elements

PART NUMBER	MODEL	AVERAGE NaCl REJECTION (%)	PERMEATE FLOW gpd @ 107 psi
1220978	AK2514TF	99.0	180
1206799	AK2521TF	99.0	300
1206802	AK2540TF	99.0	710
1220979	AK4014TF	99.0	550
1206812	AK4021TF	99.0	1050
1206816	AK4040TF	99.0	2200



Specifications are based on 500 mg/L NaCl solution at 107 psi net pressure (7.4 bar), 77°F (25°C), 15% recovery after 24 hours. Individual element flux may vary ± 15%.

Nanofiltration Elements

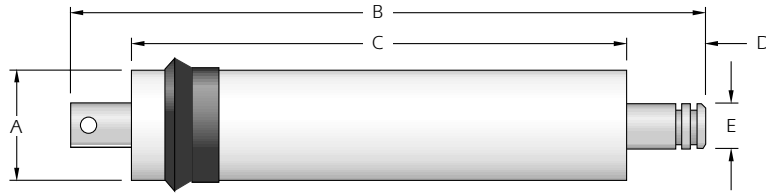
PART NUMBER	MODEL	AVERAGE MgSO ₄ REJECTION (%)	PERMEATE FLOW gpd @ 100 psi
1207225	HL1812	95	140
1207228	HL2514TF	98	220
1207229	HL2521TF	98	380
1207231	HL2540TF	98	860
1220989	HL4014TF	98	700
1220991	HL4021TF	98	1280
1220990	HL4040TF	98	2720



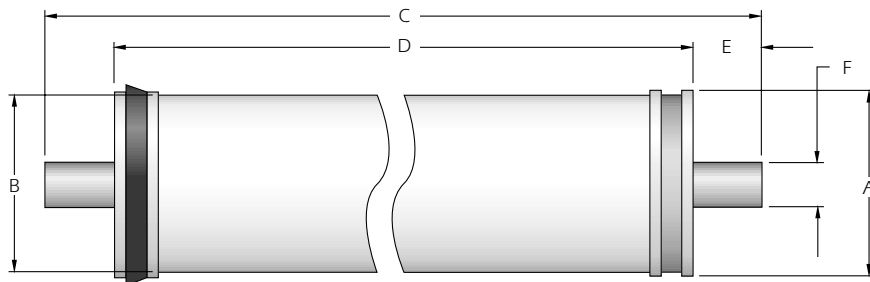
Specifications are based on 2000 mg/L MgSO₄ solution at 100 psi net pressure (6.9 bar), 77°F (25°C), 15% recovery after 24 hours. Individual element flux may vary ± 15%.

Residential / Commercial Products

Size Specifications



MODEL	A	B	C	D	E
TFM-18	1.50	11.75	10.00	0.875	0.678
TFM-24	1.80	11.75	10.00	0.875	0.678
TFM-36	1.80	11.75	10.00	0.875	0.678
TFM-50	1.80	11.75	10.00	0.875	0.678
TFM-75	1.80	11.75	10.00	0.875	0.678
TFM-100	1.80	11.75	10.00	0.875	0.678
CTA-10	1.80	11.75	10.00	0.875	0.678
CTA-16	1.80	11.75	10.00	0.875	0.678
HFCTA-22	1.80	11.75	10.00	0.875	0.678
HL1812	1.80	11.75	10.00	0.875	0.678



MODEL	A	B	C	D	E	F
AG2514TF	2.4	2.3	14.0	11.8	1.1	0.75
AG2521TF	2.4	2.3	21.0	18.8	1.1	0.75
AG2540TF	2.4	2.3	40.0	37.8	1.1	0.75
AG4014TF	3.88	3.75	14.0	12.0	1.0	0.75
AG4021TF	3.88	3.75	21.0	19.0	1.0	0.75
AG4040TF	3.88	3.75	40.0	38.0	1.0	0.75
AK2514TF	2.4	2.3	14.0	11.8	1.1	0.75
AK2521TF	2.4	2.3	21.0	18.8	1.1	0.75
AK2540TF	2.4	2.3	40.0	37.8	1.1	0.75
AK4014TF	3.88	3.75	14.0	12.0	1.0	0.75
AK4021TF	3.88	3.75	21.0	19.0	1.0	0.75
AK4040TF	3.88	3.75	40.0	38.0	1.0	0.75
HL2514TF	2.4	2.3	14.0	11.8	1.1	0.75
HL2521TF	2.4	2.3	21.0	18.8	1.1	0.75
HL2540TF	2.4	2.3	40.0	37.8	1.1	0.75
HL4014TF	3.88	3.75	14.0	12.0	1.0	0.75
HL4021TF	3.88	3.75	21.0	19.0	1.0	0.75
HL4040TF	3.88	3.75	40.0	38.0	1.0	0.75

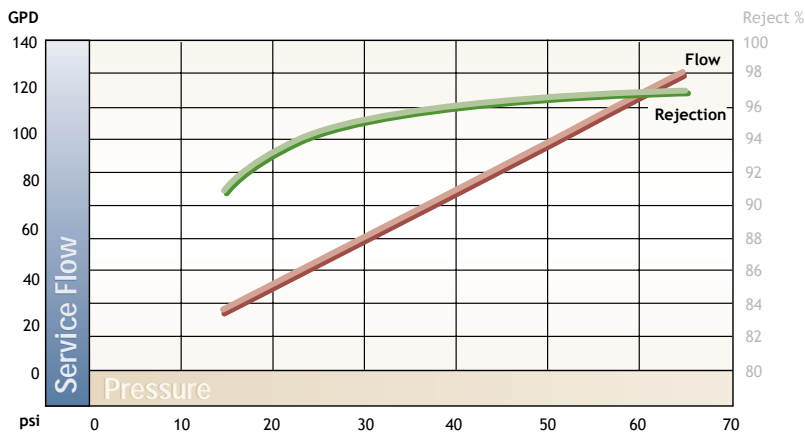
All size specifications are in U.S. inches.

Performa TFM - 100

Testing Data

DISSOLVED SOLUTION (@2HRS)	INFLUENT (mg/L)	SAMPLE	RESULT (mg/L)	REJECTION %
TDS	494	32019-2 2265-3	11.5	98
Nitrate	9.4	32019-2 2265-4	0.73	92
Flouride	130	32019-2 2265-3	1.8	99
Chloride	98	32019-2 2265-3	0.92	99
Arsenic	0.80	32019-2 2265-3	0.0016	99

Performance vs. Pressure



Call (719) 264-3937 for additional information, (800) 605-6698 in the U.S., or visit www.osmonics.com



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