

EUROTROL®

WATER TREATMENT COMPONENTS



MWG
CSM, TORAY,
VONTRON
membranes
reverse osmosis
and Ultra Filtration

INDEX

MWG Membranes



Ref	Description	Fam.	Subfam.	Disp. Stock	
MMRO1812-50	MWG 1.8" MEMBRANE RO1812-50	030	151	•	
MMRO1812-75	MWG 1.8" MEMBRANE RO1812-75	030	151	•	
MMRO2012-100	MWG 2" MEMBRANE RO2012-100	030	151	•	
MMRO2012-150	MWG 2" MEMBRANE RO2012-150	030	151	•	
MMRO2812-200	MWG 2.8" MEMBRANE RO2812-200	030	156	•	
MMRO3012-300	MWG 3" MEMBRANE RO3012-300	030	156	•	
MMRO3012-400	MWG 3" MEMBRANE RO3012-400	030	156	•	
MMNF1812	MWG 1.8" MEMBRANE NF-1812	030	151	•	
MMNF2012	MWG 2" MEMBRANE NF-2012	030	151	•	
MMNF3012	MWG 3" MEMBRANE NF-3012	030	156	•	
MMXLP2521	MWG 2.5" MEMBRANE XLP-2521	030	161	•	
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MMXLP4021	MWG 4" MEMBRANE XLP-4021	030	162	•	
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MMULP8040	MWG 8" MEMBRANE ULP-8040	035	163	•	
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MMBW4040FR	MWG 4" MEMBRANE BW-4040FR	030	162	•	
MMBW8040	MWG 8" MEMBRANE BW-8040	035	163	•	
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MMBW8040HR	MWG 8" MEMBRANE BW-8040HR	035	163	•	
MMSW2521	MWG 2.5" MEMBRANE SW-2521	030	161	•	
MMSW2540	MWG 2.5" MEMBRANE SW-2540	030	161	•	
MMSW4021	MWG 4" MEMBRANE SW-4021	030	162	•	
MMSW4040	MWG 4" MEMBRANE SW-4040	030	162	•	
MMSW4040HR	MWG 4" MEMBRANE SW-4040HR	030	162	•	
MMSW8040	MWG 8" MEMBRANE SW-8040	035	163	•	
MMSW8040HR	MWG 8" MEMBRANE SW-8040HR	035	163	•	
MMSW8040MR	MWG 8" MEMBRANE SW-8040MR	035	163	•	
MMNF2-2540	MWG 2.5" MEMBRANE NF2-2540	030	161	•	
MMNF1-4040R	MWG 4" MEMBRANE NF2-4040	030	162	•	
MMNF2-4040	MWG 4" MEMBRANE NF2-4040	030	162	•	
MMNF2-8040	MWG 8" MEMBRANE NF2-8040	035	163	•	

MWG Membranes

Ref	Mod.	Permeate flow rate GPD (m ³ /d)	Rejection NaCl (%)	Effective area m ² (ft ²)	Spacer (mil)	Test	NSF
MMRO1812-50	TW RO	50 (0,19)	98,0	0,37 (4)	X	1	58
MMRO1812-75	TW RO	75 (0,28)	98,0	0,37 (4)	X	1	58
MMRO2012-100	TW RO	100 (0,38)	98,0	0,56 (6)	X	1	58
MMRO2012-150	TW RO	150 (0,57)	98,0	0,56 (6)	X	1	58
MMRO2812-200	TW RO	200 (0,76)	98,0	0,93 (10)	X	1	58
MMRO3012-300	TW RO	300 (1,14)	98,0	1,3 (14)	X	1	58
MMRO3012-400	TW RO	400 (1,52)	98,0	1,3 (14)	X	1	58
MMNF1812	TW NF	100 (0,38) 100 (0,38)	30-5096,0	0,37 (4)	X	2	X
MMNF2012	TW NF	150 (0,57) 150 (0,57)	30-5096,0	0,56 (6)	X	2	X
MMNF3012	TW NF	350 (1,32) 350 (1,32)	30-5096,0	1,3 (14)	X	2	X
MMXLP2521	XLP	300 (1,13)	99,2	1,3 (14)	X	3	X
MMXLP2540	XLP	600 (2,27)	99,2	2,5 (27)	X	3	X
MMXLP4021	XLP	800 (3,04)	99,2	3,4 (36)	X	3	X
MMXLP4040	XLP	2.400 (9,1)	99,2	7,9 (85)	X	4	X
MMXLP8040	XLP	11.000 (41,6)	99,2	37,2 (400)	X	4	X
MMXLP8040HR	XLP	9.000 (34,1)	99,3	35,3 (380)	X	4	X
MMULP2540	LP	750 (2,84)	99,3	2,5 (27)	X	5	X
MMULP4021	LP	950 (3,6)	99,3	3,4 (36)	X	5	61
MMULP4040	LP	2.600 (9,8)	99,3	7,9 (85)	X	5	61
MMULP4040HR	LP	1.800 (6,8)	99,7	7,9 (85)	X	5	61
MMULP4040MR	LP	2.200 (8,3)	99,6	7,9 (85)	X	5	61
MMULP8040	LP	12.000 (45,4)	99,3	39 (420)	X	5	61
MMULP8040MR	LP	10.000 (37,8)	99,6	37,2 (400)	X	5	X
MMBW4040	BW	2.400 (9,1)	99,6	7,9 (85)	X	6	61
MMBW4040FR	BW	2.000 (7,6)	99,7	7,2 (78)	X	6	X
MMBW8040	BW	10.500 (39,7)	99,6	37,2 (400)	X	6	61
MMBW8040FR	BW	9.000 (34,1)	99,7	34 (365)	X	6	X
MMBW8040HR	BW	9.500 (35,9)	99,7	35,5 (380)	X	6	X
MMSW2521	SW	300 (1,13)	99,7	1,3 (14)	X	7	58
MMSW2540	SW	600 (2,27)	99,7	2,5 (27)	X	7	58
MMSW4021	SW	800 (3,04)	99,7	3,4 (36)	X	7	58
MMSW4040	SW	1.800 (6,8)	99,7	7,9 (85)	X	7	58
MMSW4040HR	SW	1.500 (5,7)	99,7	7,2 (78)	X	7	58
MMSW8040	SW	8.500 (32,1)	99,7	37,2 (400)	X	7	58
MMSW8040HR	SW	6.500 (24,6)	99,7	35,3 (380)	X	7	58
MMSW8040MR	SW	7.500 (28,3)	99,7	37,2 (400)	X	7	X
MMNF2-2540	NF	800 (3,04) 800 (3,04)	30-50 96,0	2,5 (27)	X	8	X
MMNF1-4040R	NF	1.800 (6,8) 1.800 (6,8)	> 85 99,0	7,9 (85)	X	8	X
MMNF2-4040	NF	2.400 (9,1) 2.400 (9,1)	30-50 96,0	7,9 (85)	X	8	X
MMNF2-8040	NF	12.000 (45,4) 12.000 (45,4)	30-50 96,0	37,2 (400)	X	8	X
Certificates		Manufacturer			Sectors		
DM174-2004		MWG			Domestic, Commercial, Industrial		



MWG Membranes

Test condition	Pressure (psi)	Temperature of solution NaCl (°C)	Concentration of NaCl solution (ppm)	Concentration of MgSO4 solution (ppm)	pH	Recovery rate (%)
1	60	25	250	-	7,5-8,0	15
2	60	25	250	250	7,5-8,0	15
3	100	25	500	-	7,5-8,0	8
4	100	25	500	-	7,5-8,0	15
5	150	25	500	-	7,5-8,0	15
6	225	25	2000	-	7,5-8,0	15
7	800	25	32000	-	7,5-8,0	8
8	70	25	500	2000	7,5-8,0	15

TW RO: Residential RO - **XLP:** Extra Low Pressure - **BW:** Brackish Water - **NF:** Nano Filtration - **TW NF:** Industrial NF - **LP:** Low Pressure - **SW:** Sea Water

CSM Membranes



Ref	Description	Fam.	Subfam.	Disp. Stock	
MCRE1812-50	CSM 1.8" MEMBRANE RE1812-50	030	150	•	
MCRE1812-60	CSM 1.8" MEMBRANE RE1812-60	030	150	•	
MCRE1812-80	CSM 1.8" MEMBRANE RE1812-80	030	150	•	
MCRE1812-HR+	CSM 1.8" MEMBRANE RE1812-HR+	030	150	•	
MCRE2012-100	CSM 2" MEMBRANE RE2012-100	030	150	•	
MCRE2012-150	CSM 2" MEMBRANE RE2012-150	030	150	•	
MCRE2012-400	CSM 2" MEMBRANE RE2012-400	030	150	•	
MCRE2012-LP	CSM 2" MEMBRANE RE2012-LP	030	150	•	
MCRE2012-LPF	CSM 2" MEMBRANE RE2012-LPF	030	150	•	
MCRE2812-300	CSM 2.8" MEMBRANE RE2812-300	030	155	•	
MCRE3012-500	CSM 3" MEMBRANE RE3012-500	030	165	•	
MCRE3512-TK	CSM 3.5" MEMBRANE RE3512-TK	030	155	•	
MCNE1812	CSM 1.8" MEMBRANE NE1812	030	150	•	
MCRE2514-TL	CSM 2.5" MEMBRANE RE2514-TL	030	160	•	
MCRE2514-TLF	CSM 2.5" MEMBRANE RE2514-TLF	030	160	•	
MCRE2521-BLN	CSM 2.5" MEMBRANE RE2521-BLN	030	160	•	
MCRE2521-BLF	CSM 2.5" MEMBRANE RE2521-BLF	030	160	•	
MCRE2540-BLN	CSM 2.5" MEMBRANE RE2540-BLN	030	160	•	
MCRE2540-BLF	CSM 2.5" MEMBRANE RE2540-BLF	030	160	•	
MCRE2540-BLR	CSM 2.5" MEMBRANE RE2540-BLR	030	160	•	
MCRE4021-BLN	CSM 4" MEMBRANE RE4021-BLN	030	165	•	
MCRE4021-BLF	CSM 4" MEMBRANE RE4021-BLF	030	165	•	
MCRE4040-BLN	CSM 4" MEMBRANE RE4040-BLN	030	165	•	
MCRE4040-BLF	CSM 4" MEMBRANE RE4040-BLF	030	165	•	



CSM Membranes

Ref	Mod.	Permeate flow rate GPD (m ³ /d)	Rejection NaCl (%)	Effective area m2 (ft2)	Spacer (mil)	Test	NSF
MCRE1812-50	TW RO	50 (0,19)	98		X	6	58
MCRE1812-60	TW RO	60 (0,22)	98		X	6	58
MCRE1812-80	TW RO	80 (0,30)	98		X	6	58
MCRE1812-HR+	TW RO	80 (0,30)	99		X	6	58
MCRE2012-100	TW RO	100 (0,38)	98		X	6	58
MCRE2012-150	TW RO	150 (0,57)	98	0,59 (6,4)	X	6	58
MCRE2012-400	TW RO	400 (1,52)	96		X	6	58
MCRE2012-LP	TW RO	50 (0,19)	93		X	7	58
MCRE2012-LPF	TW RO	60 (0,22)	93		X	7	58
MCRE2812-300	TW RO	300 (1,14)	96		X	10	58
MCRE3012-500	TW RO	500 (1,90)	97		X	10	x
MCRE3512-TK	TW RO	600 (2,27)	95		X	9	58
MCNE1812	TW NF	80 (0,30)	40-60		X	8	x
MCRE2514-TL	LP	250 (0,94)	97,5	0,65 (7)	X	2	X
MCRE2514-TLF	LP	250 (0,94)	96,5	0,65 (7)	X	3	X
MCRE2521-BLN	LP	400 (1,52)	99,2	1,1 (12)	X	2	X
MCRE2521-BLF	LP	350 (1,32)	99,2	1,1 (12)	X	3	X
MCRE2540-BLN	LP	930 (3,50)	99,2	2,5 (27)	X	2	x
MCRE2540-BLF	LP	800 (3,04)	99,2	2,5 (27)	X	3	x
MCRE2540-BLR	LP	740 (2,80)	99,6	2,5 (27)	X	2	x
MCRE4021-BLN	LP	1200 (4,50)	99,2	3,3 (35)	X	2	x
MCRE4021-BLF	LP	1050 (3,88)	99,2	3,3 (35)	X	3	61
MCRE4040-BLN	LP	2600 (9,62)	99,2	7,9 (85)	X	2	61
MCRE4040-BLF	LP	2500 (9,25)	99,2	7,9 (85)	X	3	61

CSM Membranes

Ref	Description	Fam.	Subfa m.	Disp. Stock	
MCRE4040-BLR	CSM 4" MEMBRANE RE4040-BLR	030	165	•	
MCRE8040-BLN	CSM 8" MEMBRANE RE8040-BLN	035	190	•	
MCRE8040-BLN440	CSM 8" MEMBRANE RE8040-BLN440	035	190	•	
MCRE8040-BLR	CSM 8" MEMBRANE RE8040-BLR	035	190	•	
MCRE8040-BLR440	CSM 8" MEMBRANE RE8040-BLR440	035	190	•	
MCRE8040-BLF	CSM 8" MEMBRANE RE8040-BLF	035	190	•	
MCRE8040-BLF440	CSM 8" MEMBRANE RE8040-BLF440	035	190	•	
MCRE2521-BE	CSM 2.5" MEMBRANE RE2521-BE	030	160	•	
MCRE2540-BE	CSM 2.5" MEMBRANE RE2540-BE	030	160	•	
MCRE4021-BE	CSM 4" MEMBRANE RE4021-BE	030	165	•	
MCRE4040-BE	CSM 4" MEMBRANE RE4040-BE	030	165	•	
MCRE8040-BN	CSM 8" MEMBRANE RE8040-BN	035	190	•	
MCRE8040-BE	CSM 8" MEMBRANE RE8040-BE	035	190	•	
MCRE8040-BE440	CSM 8" MEMBRANE RE8040-BE440	035	190	•	
MCRE8040-BR	CSM 8" MEMBRANE RE8040-BR	035	190	•	
MCRE8040-BR400	CSM 8" MEMBRANA RE8040-BR400	035	190		
MCRE4040-BLR	CSM 4" MEMBRANE RE4040-BLR	030	165	•	
MCRE2540-FEn	CSM 2.5" MEMBRANE RE2540-FEn	030	160	•	
MCRE4040-FEn	CSM 4" MEMBRANE RE4040-Fen	030	165	•	
MCRE4040-FLR	CSM 4" MEMBRANE RE4040-FLR	030	165	•	
MCRE8040-FEn34	CSM 8" MEMBRANE RE8040-FEn34	035	190	•	
MCRE8040-FEn	CSM 8" MEMBRANE RE8040-FEn	035	190	•	
MCRE8040-FEN440	CSM 8" MEMBRANA RE8040-FEn440	035	190		
MCRE8040-FL	CSM 8" MEMBRANE RE8040-FL	035	190		
MCRE8040-FLR34	CSM 8" MEMBRANE RE8040-FLR	035	190	•	

CSM Membranes

Ref	Mod.	Permeate flow rate GPD (m ³ /d)	Rejection NaCl (%)	Effective area m2 (ft2)	Spacer (mil)	Test	NSF
MCRE4040-BLR	LP	2100 (7,70)	99,6	7,9 (85)	X	2	61
MCRE8040-BLN	LP	12000 (45,4)	99,5	45,4 (400)	x	2	61
MCRE8040-BLN440	LP	13000 (48,1)	99,5	40,9 (440)	x	2	61
MCRE8040-BLR	LP	10000 (37,9)	99,6	37,2 (400)	x	2	61
MCRE8040-BLR440	LP	11000 (41,6)	99,6	40,9 (440)	x	2	61
MCRE8040-BLF	LP	11500 (42,6)	99,2	37,2 (400)	x	3	61
MCRE8040-BLF440	LP	12650 (46,8)	99,2	40,9 (440)	x	3	61
MCRE2521-BE	BW	400 (1,52)	99,5	1,1 (12)	x	1	x
MCRE2540-BE	BW	1000 (3,80)	99,5	2,5 (27)	x	1	x
MCRE4021-BE	BW	1200 (3,80)	99,5	3,3 (35)	x	1	x
MCRE4040-BE	BW	2400 (8,88)	99,7	7,9 (85)	x	1	61
MCRE8040-BN	BW	9500 (35,1)	99,7	33,9 (365)	x	1	61
MCRE8040-BE	BW	11000 (40,7)	99,7	37,2 (400)	x	1	61
MCRE8040-BE440	BW	12000 (44,4)	99,7	40,9 (440)	x	1	61
MCRE8040-BR	BW	6000 (22,2)	99,75	35,3 (380)	x	1	x
MCRE8040-BR400	BW	6000 (22,2)	99,75	37,2 (400)	x	1	x
MCRE4040-BLR	CR	2280 (8,43)	99	7,9 (85)	x	1	61
MCRE2540-FEn	FR	1000 (3,80)	99,5	2,5 (27)	x	1	x
MCRE4040-FEn	FR	2400 (8,88)	99,7	7,9 (85)	x	1	x
MCRE4040-FLR	FR	2100 (7,90)	99,6	7,9 (85)	x	1	x
MCRE8040-FEn34	FR	11000 (40,7)	99,7	37,2 (400)	34	1	61
MCRE8040-FEn	FR	11000 (40,7)	99,7	37,2 (400)	32	1	61
MCRE8040-FEN440	FR	12000 (44,4)	99,7	40,9 (440)	28	1	61
MCRE8040-FL	FR	11000 (40,7)	99	37,2 (400)	x	2	x
MCRE8040-FLR34	FR	10000 (37,0)	99,6	37,2 (400)	34	2	61

CSM Membranes

Ref	Description	Fam.	Subfam.	Disp. Stock	
MCRE2521-SHF	CSM 2.5" MEMBRANE RE2521-SHF	030	160	•	
MCRE2540-SHN	CSM 2.5" MEMBRANE RE2540-SHN	030	160	•	
MCRE2540-SHF	CSM 2.5" MEMBRANE RE2540-SHF	030	160	•	
MCRE4021-SHN	CSM 4" MEMBRANE RE4021-SHN	030	165	•	
MCNE2540-90	CSM 2.5" MEMBRANE NE2540-90	030	160	•	
MCNE4040-90	CSM 4" MEMBRANE NE4040-90	030	165	•	
MCNE4040-70	CSM 4" MEMBRANE NE4040-70	030	165		
MCNE4040-40	CSM 4" MEMBRANE NE4040-40	030	165		
MCNE8040-90	CSM 8" MEMBRANE NE8040-90	035	190	•	
MCNE8040-70	CSM 8" MEMBRANE NE8040-70	035	190		
MCNE8040-40	CSM 8" MEMBRANE NE8040-40	035	190		

Ref	Mod.	Permeate flow rate GPD (m ³ /d)	Rejection NaCl (%)	Effective area m ² (ft ²)	Spacer (mil)	Test	NSF
MCRE2521-SHF	SW	270 (0,99)	99,70	1,1 (12)	x	4	x
MCRE2540-SHN	SW	500 (1,90)	99,75	2,2 (24)	x	4	x
MCRE2540-SHF	SW	560 (2,10)	99,70	2,2 (24)	x	4	x
MCRE4021-SHN	SW	600 (2,27)	99,75	3,3 (24)	x	4	x
MCNE2540-90	NF	500 (1,90)	85-95	2,5 (27)	x	5	x
MCNE4040-90	NF	1700 (6,30)	85-97 90-97	7,9 (85)	x	5	61
MCNE4040-70	NF	1500 (5,55)	40-70 45-70	7,9 (85)	x	5	61
MCNE4040-40	NF	2100 (7,70)	20-40	7,9 (85)	x	5	61
MCNE8040-90	NF	8000 (29,6)	85-97 90-97	37,2 (400)	x	5	61
MCNE8040-70	NF	7000 (25,9)	40-70 45-70	37,2 (400)	x	5	61
MCNE8040-40	NF	10000 (37,9)	20-40	37,2 (400)	x	5	61

Test condition	Pressure (psi)	Temperature of solution NaCl (°C)	Concentration of NaCl solution (ppm)	Concentration of MgSO ₄ solution (ppm)	pH	Recovery rate (%)
1	225	25	2000	-	6,5-7,0	8 ± 15%
2	150	25	1500	-	6,5-7,0	8 ± 15%
3	100	25	500	-	6,5-7,0	8 ± 15%
4	800	25	32000	-	6,5-7,0	4 ± 8%
5	75	25	2000	500	6,5-7,0	15%
6	60	25	200	-	6,5-7,0	15%
7	20	25	100	-	6,5-7,0	15%
8	60	25	250	-	6,5-7,0	15%
9	60	25	200	-	6,5-7,0	30%
10	80	25	200	-	6,5-7,0	40%
11	150	25	2000	-	6,5-7,0	15%

TW RO: Residential RO - **LP:** Low Pressure - **BW:** Brackish Water - **SW:** Sea Water - **TW NF:** Industrial NF - **FR:** Fouling Resistant - **CR:** Chlorine Resistant - **NF:** Nano Filtration **Produttore:** CSM

Certificates	Manufacturer	Sectors
DM174-2004	CSM	Domestic, Commercial, Industrial

CSM Membranes Brine Seal and Interconnector



- Each membrane element supplied with one brine seal and one interconnector (excepted for 2,5" membrane element, supplied without interconnector).

Ref	Description	Fam.	Subfam.	Disp. Stock	
DC005	EPDM BRINE SEAL 2.5" CSM	030	160	•	
DD003	EPDM BRINE SEAL 4" CSM	030	165	•	
EA798	EPDM BRINE SEAL 8" CSM	035	190	•	

Ref	Description	Material	For Membranes
DC005	EPDM BRINE SEAL 2.5" CSM	EPDM	2,5"
DD003	EPDM BRINE SEAL 4" CSM	EPDM	4"
EA798	EPDM BRINE SEAL 8" CSM	EPDM	8"

Certificates	Manufacturer	Sectors
DM174-2004		Domestic, Industrial

Ref	Description	Fam.	Subfam.	Disp. Stock	
DD004	ABS FEMALE INTERCONNECTOR CSM 2.5" & 4" WITH O-RING - WHITE COLOR	030	165	•	
EA799	ABS MALE INTERCONNECTOR 1.125" CSM WITH O-RING -BW TYPE BLACK COLOR	035	190	•	

Ref	Material	Color	For Membranes
DD004	ABS	Bianco	2,5" - 4"
EA799	ABS	Nero	8"

Certificates	Manufacturer	Sectors
DM174-2004		Domestic, Industrial

TORAY Membranes



Ref	Description	Fam.	Subfam.	Disp. Stock	
MTMG10D	TORAY 4" MEMBRANE TMG10D	030	165	•	
MTMH20A-400C	TORAY 8" MEMBRANE TMH20A-400C	035	190	•	
MTMH20A-440C	TORAY 8" MEMBRANE TMH20A-440C	035	190		
MTMG20D-400	TORAY 8" MEMBRANE TMG20D-400	035	190	•	
MTMG20D-440	TORAY 8" MEMBRANE TMG20D-440	035	190		
MTM710D	TORAY 4" MEMBRANE TM710D	030	165	•	
MTM720D-400	TORAY 8" MEMBRANE TM720D-400	035	190	•	
MTM720D-440	TORAY 8" MEMBRANE TM720D-440	035	190		
MTM720L-440	TORAY 8" MEMBRANE TM720L-440	035	190		
MTML10D	TORAY 8" MEMBRANE TML10D	030	165	•	
MTML20D-400	TORAY 8" MEMBRANE TML20D-400	035	190	•	
MTM810C	TORAY 4" MEMBRANE TM810C	030	165	•	
MTM810V	TORAY 4" MEMBRANE TM810V	030	165	•	
MTM820M-400	TORAY 8" MEMBRANE TM820M-400	035	190	•	
MTM820M-440	TORAY 8" MEMBRANE TM820M-440	035	190		
MTM820V-400	TORAY 8" MEMBRANE TM820V-400	035	190	•	
MTM820V-440	TORAY 8" MEMBRANE TM820V-440	035	190		

Ref	Mod.	Permeate flow rate GPD (m ³ /d)	Rejection NaCl (%)	Effective area m ² (ft ²)	Spacer (mil)	Test	NSF
MTMG10D	LP	2850 (10,8)	99,7	8 (87)	34	11	x
MTMH20A-400C	LP	11000 (41,6)	99,3	37 (400)	34	3	x
MTMH20A-440C	LP	11000 (40,6)	99,3	41 (440)	28	3	x
MTMG20D-400	LP	12100 (45,8)	99,7	37 (400)	34	11	x
MTMG20D-440	LP	12100 (45,8)	99,7	41 (440)	28	11	x
MTM710D	BW	2600 (9,80)	99,8	8 (87)	31	1	x
MTM720D-400	BW	11000 (40,7)	99,8	37 (400)	34	1	x
MTM720D-440	BW	11000 (40,7)	99,8	41 (440)	28	1	x
MTM720L-440	BW	11000 (40,7)	99,5	41 (440)	28	1	x
MTML10D	BW	1900 (7,20)	99,8	7 (73)	34	1	x
MTML20D-400	FR	10500 (38,9)	99,8	37 (400)	34	1	x
MTM810C	FR	1200 (4,50)	99,75	7 (73)	31	4	x
MTM810V	SW	1900 (7,20)	99,8	8 (87)	28	4	x
MTM820M-400	SW	7000 (25,9)	99,8	37 (400)	34	4	x
MTM820M-440	SW	7700 (25,9)	99,8	41 (440)	28	4	x
MTM820V-400	SW	9000 (33,3)	99,8	37 (400)	28	4	x
MTM820V-440	SW	9900 (37,5)	99,8	41 (440)	28	4	x

LP: Low Pressure - **BW:** Brackish Water - **SW:** Sea Water - **FR:** Fouling Resistant - **Produttore:** TORAY



TORAY Membranes

Test Condition	Pressure (psi)	Temperature of solution (°C)	Concentration NaCl solution (ppm)	Concentration MgSO4 solution (ppm)	pH	Recupery rate (%)
1	225	25	2000	-	6,5-7,0	8 ± 15%
2	150	25	1500	-	6,5-7,0	8 ± 15%
3	100	25	500	-	6,5-7,0	8 ± 15%
4	800	25	32000	-	6,5-7,0	4 ± 8%
5	75	25	2000	500	6,5-7,0	15%
6	60	25	200	-	6,5-7,0	15%
7	20	25	100	-	6,5-7,0	15%
8	60	25	250	-	6,5-7,0	15%
9	60	25	200	-	6,5-7,0	30%
10	80	25	200	-	6,5-7,0	40%
11	150	25	2000	-	6,5-7,0	15%

Certificates	Manufacturer	Sectors
DM174-2004	Toray	Commercial, Industrial

Vontron Membranes



Ref	Description	Fam.	Subfam.	Disp. Stock	
MVULP1812-50	VONTRON 1.8" MEMBRANE ULP1812-50	030	152	•	
MVULP1812-75	VONTRON 1.8" MEMBRANE ULP1812-75	030	152	•	
MVULP2012-100	VONTRON 2" MEMBRANE ULP2012-100	030	152	•	
MVULP2812	VONTRON 2.8" MEMBRANE ULP2812	030	157	•	
MVULP3012	VONTRON 3" MEMBRANE ULP3012	030	157	•	
MVVNF1-1812	VONTRON 1.8" MEMBRANE VNF1-1812	030	152	•	
MVVNF1-2012	VONTRON 2" MEMBRANE VNF1-2012	030	152	•	
MVVNF2812	VONTRON 2.8" MEMBRANE VNF-2812	030	157	•	
MVXLP11-4040	VONTRON 4" MEMBRANE XLP11-4040	030	166	•	
MVXLP12-8040	VONTRON 8" MEMBRANE XLP12-8040	035	167	•	
MVULP21-2540	VONTRON 2.5" MEMBRANE ULP21-2540	030	159	•	
MVULP21-4021	VONTRON 4" MEMBRANE ULP21-4021	030	166	•	
MVULP21-4040	VONTRON 4" MEMBRANE ULP21-4040	030	166	•	
MVULP31-4040	VONTRON 4" MEMBRANE ULP31-4040	030	166	•	
MVULP22-8040	VONTRON 8" MEMBRANE ULP22-8040	035	167	•	
MVULP32-8040	VONTRON 8" MEMBRANE ULP32-8040	035	167	•	
MVULP440	VONTRON 8" MEMBRANE ULP440	035	167	•	
MVLP100	VONTRON 4" MEMBRANE LP100	030	166	•	
MVLP21-4040	VONTRON 4" MEMBRANE LP21-4040	030	166	•	
MVLP21-8040	VONTRON 8" MEMBRANE LP21-8040	035	167	•	
MVLP22-8040	VONTRON 8" MEMBRANE LP22-8040	035	167	•	
MVFR11-4040	VONTRON 4" MEMBRANE FR11-4040	030	166	•	
MVFR11-8040	VONTRON 8" MEMBRANE FR11-8040	035	167	•	
MVFR12-8040	VONTRON 8" MEMBRANE FR12-8040	035	167	•	
MVPURO-LE	VONTRON 8" MEMBRANE PURO-LE	035	167	•	
MVSW11-2521	VONTRON 2.5" MEMBRANE SW11-2521	030	159	•	
MVSW11-4021	VONTRON 4" MEMBRANE SW11-4021	030	166	•	
MVSW4040HR	VONTRON 4" MEMBRANE SW4040HR	030	166	•	
MVSW4040LE	VONTRON 4" MEMBRANE SW4040LE	030	166	•	
MVSW8040HR-400	VONTRON 8" MEMBRANE SW8040HR-400	035	167	•	
MVSW8040LE-400	VONTRON 8" MEMBRANE SW8040LE-400	035	167	•	
MVVNF1-2540	VONTRON 2.5" MEMBRANE VNF1-2540	030	159	•	
MVVNF1-4040	VONTRON 4" MEMBRANE VNF1-4040	030	166	•	
MVVNF1-8040	VONTRON 8" MEMBRANE VNF1-8040	035	167	•	

Vontron Membranes

Ref	Mod.	Permeate flow rate GPD (m ³ /d)	Rejection NaCl rate (%)	Effective area m2 (ft2)	Spacer (mil)	Test	NSF
MVULP1812-50	TW RO	50 (0,19)	97,5	X X	X	1	58
MVULP1812-75	TW RO	75 (0,28)	97,5	X X	X	1	58
MVULP2012-100	TW RO	100 (0,38)	95,0	X X	X	1	58
MVULP2812	TW RO	200 (0,76)	97,0	X X	X	3	58
MVULP3012	TW RO	300 (1,14)	97,0	X X	X	3	58
MVVNF1-1812	TW RO	100 (0,8) 100 (0,8)	30,0 ± 10 ≥ 85	X X	X	2	58
MVVNF1-2012	TW RO	120 (0,45) 120 (0,45)	30,0 ± 10 ≥ 85	X X	X	2	58
MVVNF2812	TW NF	300 (1,14) 300 (1,14)	30,0 ± 10 ≥ 85	X X	X	2	58
MVXLP11-4040	TW NF	2.000 (7,6)	98,0	8,4 (90)	X	3	61
MVXLP12-8040	TW NF	9.000 (34)	98,0	37,2 (400)	X	3	X
MVULP21-2540	XLP RO	750 (2,84)	99,0	2,8 (30)	X	4	61
MVULP21-4021	XLP RO	950 (3,6)	99,0	3,3 (36)	X	4	61
MVULP21-4040	LP	2.400 (9,1)	99,0	8,4 (90)	X	5	61
MVULP31-4040	LP	1.900 (7,2)	99,4	8,4 (90)	X	5	61
MVULP22-8040	LP	12.100 (45,7)	99,0	37,2 (400)	X	5	61
MVULP32-8040	LP	10.500 (39,7)	99,5	37,2 (400)	X	5	61
MVULP440	LP	12.000 (45,4)	99,5	40,9 (440)	X	6	X
MVLP100	LP	2.500 (9,5)	99,7	9,3 (100)	X	7	X
MVLP21-4040	LP	2.400 (9,1)	99,5	8,4 (90)	X	7	61
MVLP21-8040	BW	9.600 (36,3)	99,5	33,9 (365)	X	7	61
MVLP22-8040	BW	10.500 (39,7)	99,5	37,2 (400)	X	7	61
MVFR11-4040	BW	2.200 (8,3)	99,5	8,4 (90)	X	7	61
MVFR11-8040	BW	9.600 (36,3)	99,5	33,9 (365)	34	7	61
MVFR12-8040	FR	10.500 (39,7)	99,5	37,2 (400)	34	7	X
MVPURO-LE	FR	10.000 (37,9)	99,5	37,2 (400)	34	8	X
MVSW11-2521	SW	270 (1,0)	99,5	1,1 (12)	x	9	61
MVSW11-4021	SW	750 (2,8)	99,5	3,1 (33)	x	9	61
MVSW4040HR	SW	1.600 (6,1)	99,8	7,9 (85)	x	10	61
MVSW4040LE	SW	1.900 (7,2)	99,7	7,9 (85)	x	10	61
MVSW8040HR-400	SW	7.500 (28,4)	99,8	37,2 (400)	x	10	61
MVSW8040LE-400	SW	9.000 (34,1)	99,8	37,2 (400)	x	10	61
MVVNF1-2540	NF	800 (3,03) 650 (2,46)	30-50 ≥ 96	2,6 (28)	x	11	x
MVVNF1-4040	NF	2.400 (9,1) 2.000 (7,5)	30-50 ≥ 96	7,4 (80)	x	11	x
MVVNF1-8040	NF	12.000(45,4) 10.000 (37,9)	30-50 ≥ 98	37,2 (400)	x	11	x



Vontron Membranes

Test condition	Pressure (psi)	Temperature of solution NaCl (°C)	Concentration of NaCl solution (ppm)	Concentration of MgSO4 solution (ppm)	pH	Recovery rate (%)
1	60	25	250	-	6,5-8,5	15
2	60	25	250	CaCl2 250	6,5-8,5	15
3	100	25	500	-	7,5	15
4	150	25	1500	-	7,5	8
5	150	25	1500	-	7,5	15
6	150	25	500	-	7,5	15
7	225	25	2000	-	7,5	15
8	150	25	2000	-	7,5	15
9	800	25	32800	-	7,5	4
10	800	25	32800	-	7,5	8
11	100	25	2000	MgSO4 2000	7,5	15

TW RO: Residential RO - **XLP RO:** Extra Low Pressure - **BW:** Brackish Water - **SW:** Sea Water - **TW NF:** Industrial NF - **LP:** Low Pressure - **FR:** Sea Water - **NF:** Nano Filtration

Certificates	Manufacturer	Sectors
DM174-2004	Vontron	Domestic, Commercial, Industrial

Antiscaling for R. O. Membranes Permascale Eut 110



- PERMASCALE EUT110 is a product that prevents scales and iron sediment on R.O. membranes systems;
- For industrial systems and for potable water treatment systems;
- Very effective on various kinds of water, minimize the fouling and reduce the frequency of membranes cleaning;
- Particularly suitable for big plants with permeate flows higher than 100 m3/day;
- Compatible with all kinds of membranes;
- Replace totally or partially the acidification;
- Easy to use due to the liquid form.

Use

- Injection by dosing pump of pure or diluted product.
- The dosage is according to the concentration of scaling salts and iron, and can vary from 2 to 10 cm3/m3 of feed water

Instructions and Packaging

- Handling: following safety data sheet. Take the normal precautions to handle chemical products.
- Packaging: 25 kg drum.
- Storage: closed on the original packaging, sheltered from cold and heat.

Characteristics:	
Formulation	special phosphonated
pH	7,8 ± 0,5
Appearance	light yellow liquid
Density a 20°C	1,30 ± 0,05 g/ml
Checking	phosphonated value
Solubility in water	complete

Ref	Description	Fam.	Subfam.	Disp. Stock
EA100	PERMASCALE EUT 110	035	191	•

Certificates	Manufacturer	Sectors
	MWG	Commercial, Industrial

Antiscaling for R.O. Membranes Permascale EUT 120



- PERMASCALE EUT120 is a product that prevents scales and iron sediment on R.O. membranes systems;
- Very effective on various kinds of water, minimize the fouling and reduce the frequency of membranes cleaning;
- Particularly suitable for plants with permeate flows lower than 100 m³/day;
- Compatible with all kinds of membranes;
- Replace totally or partially the acidification;
- Easy to use due to the liquid form.

Use

- Injection by dosing pump of pure or diluted product:
- The dosage is according to the concentration of scaling salts and iron, and can vary from 3 to 13 cm³/m³ of feed water.

Instructions and packaging

- Handling: following safety data sheet. Take the normal precautions to handle chemical products.
- Packaging: 25 kg drum.
- Storage: closed on the original packaging, sheltered from cold and heat.

Characteristics	
Formulation	special phosphonated
pH	7,5 ± 0,5
Appearance	light yellow liquid
Density a 20°C	1,30 ± 0,02 g/ml
Checking	phosphonated value
Solubility in water	complete

Ref	Description	Fam.	Subfam.	Disp. Stock
EA101	PERMASCALE EUT 120	035	191	•

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
	MWG	Commercial, Industrial

Antiscaling for R. O. Membranes PermaTreat PC-391T

- PermaTreat PC-391T is recommended for systems that produce less than 545 m3/day (100 GPM) of permeate. This program is less concentrated than PermaTreat PC-191T and, therefore, offers the benefits and advantages of neat feed for smaller RO systems;
- PermaTreat PC-391T has exhibited excellent performance against the following foulants: calcium carbonate, calcium sulfate, barium sulfate, strontium sulfate and iron;
- Packaging: 25 kg drum. Minimum order quantity = 4 drums.
- **Compatible Materials**
- Stainless Steel 304, CPVC Piping, Polyethylene, Polypropylene, Plaste 4300 and Plaste 7122.
- All membrane elements based on Polyamide chemistries including Thin Film Composite (TFC) membranes when used as directed.
- **Not Compatible Materials**
- Neoprene, Hypalon elastomer, Buna-N and EPDM: P.S. for all these materials, O-rings are acceptable for static applications. If the fitting is opened, O-ring must be replaced.
- Brass, Polyurethane and Viton.
- **Dosage and Feeding**
- PermaTreat PC-391T must be fed continuously. The feedpoint location should be as close to the RO membrane as practical but one that ensures good mixing with the feedwater prior to entering the RO system.
- PermaTreat PC-391T dosage is dependent on feedwater chemistry, membrane type, system operating parameters (e.g., recovery, temperature and pressure). These parameters determine the potential foulant that is likely to foul the membrane elements.
- Please, consult our Technical Department for detailed dosage and feeding information.
- **Consequences of overfeed**
- Overfeed of PermaTreat PC-391T will result in higher chemical cost.
- **Consequences of underfeed**
- Underfeed of PermaTreat PC-391T will result in poor scale inhibition. This will lead to fouled RO membranes and reduce system performance and/or premature membrane replacement. In RO units, scaling is typically seen in the tail-end elements that have the highest reject concentration (4:1 for a 75% recovery system).
- Please, consult our Technical Department for detailed dosage and feeding information.
- **Environmental and toxicity data**
- Refer to the MSDS for all available mammalian and aquatic toxicity information.
- ppm/ppm product
- Biological Oxygen Demand (5-day BOD5) Not Available
- Chemical Oxygen Demand (COD) Not Available
- Total Organic Carbon (TOC) Not Available
- **Safety and handling**
- Before using PermaTreat PC-391T, please refer to the Material Safety Data Sheet (MSDS) for proper personal protective equipment (PPE) and for health effects.
- **Storage**
- PermaTreat PC-391T has a suggested in-plant storage limit of one year. The suggested maximum storage temperature is 38°C.
- Refer to the (MSDS) for the most current data.
- **Remarks**
- For Medical and Transportation Emergencies, please see the MSDS.

Physical	
Color	Clear, yellow
Form	Liquid
Odor	Slight ammonia smell
Density gravity a 25°C	1,10
pH (neat)	10,8
Solubility in water	complete

Ref	Description	Fam.	Subfam.	Disp. Stock
EA102	PERMATREAT PC -391T	035	191	

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Antiscaling for R. O. Membranes PermaTreat PC-191T

- PermaTreat PC-191T is a highly effective scale inhibitor whose active components were developed to treat reverse osmosis (RO) systems;
- PermaTreat PC-191T has shown excellent performance against the following scalants: calcium carbonate, calcium sulfate, barium sulfate, strontium sulfate, calcium fluoride, silica and iron;
- For RO units with a feedwater flowrate of 545 m3/day (100 GPM) or less, the recommended product would be PermaTreat PC-391T (our ref. EA102);
- PermaTreat PC-191T is used when the silica level in the brine is less than 185 mg/l at a brine pH of 7,5 and temperature 25°C;
- Packaging: 25 kg drum.
- **Compatible Materials**
- Stainless Steel 304, CPVC Piping, Polyethylene, Polypropylene, Plasite 4300 and Plasite 7122.
- All membrane elements based on Polyamide chemistries including Thin Film Composite (TFC) membranes when used as directed.
- **Not Compatible Materials**
- Neoprene, Hypalon elastomer, Buna-N and EPDM: P.S. for all these materials, O-rings are acceptable for static applications. If the fitting is opened, O-ring must be replaced.
- Brass, Polyurethane and Viton.
- **Dosage and Feeding**
- PermaTreat PC-191T must be fed continuously. The feedpoint location should be as close to the RO membrane as practical but one that ensures good mixing with the feedwater prior to entering the RO system.
- PermaTreat PC-191T dosage is dependent on feedwater chemistry, membrane type, system operating parameters (e.g., recovery, temperature and pressure). These parameters determine the potential foulant that is likely to foul the membrane elements.
- Please, consult our Technical Department for detailed dosage and feeding information.
- **Consequences of overfeed**
- Overfeed of PermaTreat PC-191T will result in higher chemical cost.
- **Consequences of underfeed**
- Underfeed of PermaTreat PC-191T will result in poor scale inhibition. This will lead to fouled RO membranes and reduce system performance and/or premature membrane replacement. In RO units, scaling is typically seen in the tail-end elements that have the highest reject concentration (4:1 for a 75% recovery system).
- Please, consult our Technical Department for detailed dosage and feeding inform
- **Environmental and toxicity data**
- Refer to the MSDS for all available mammalian and aquatic toxicity information.
- Biological Oxygen Demand (5-day BOD5) Not Available
- Chemical Oxygen Demand (COD) Not Available
- Total Organic Carbon (TOC) Not Available
- **Safety and handling**
- Before using PermaTreat PC-191T, please refer to the Material Safety Data Sheet (MSDS) for proper personal protective equipment (PPE) and for health effects.
- **Storage**
- PermaTreat PC-191T has a suggested in-plant storage limit of one year. The suggested maximum storage temperature is 38°C.
- Refer to the (MSDS) for the most current data.
- **Remarks**
- For Medical and Transportation Emergencies, please see the MSDS.

Physical	
Color	Clear, yellow
Form	Liquid
Odor	Slight ammonia smell
Density a 25°C	1,36
pH (neat)	10,5
Solubility in water	Complete

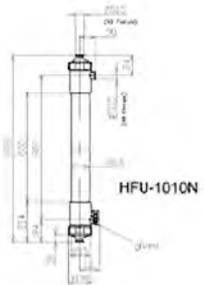
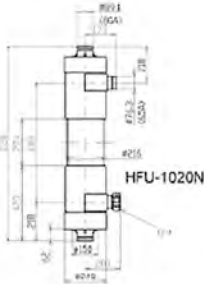
Ref	Description	Fam.	Subfam.	Disp. Stock
EA103	PERMATREAT PC -191T	035	191	

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
NSF60		Domestic, Industrial

TORAY PVDF Hollow Fiber Membrane Module HFU series (type N)

- Membrane Material = PVDF (Polyvinylidene fluoride);
- Housing Material = PVC and/or ABS;
- Potting Material = Epoxy Resin or Urethane Resin;
- Nominal Molecular Weight Cut Off = 150.000;
- Cleaning pH Range 0 ÷ 12;
- Maximum Cleaning Temperature 40°C;
- Maximum Concentration of NaClO Cleaning as Cl2 = 3.000 mg/liter (10≤pH≤12);
- Maximum NaClO Exposure (lifetime contact time) as Cl2 = 1.000.000 mg/liter hours;
- Maximum Acid Exposure Contact Time = 1.000 hours (pH≥0).



Operating conditions	
Filtration Method	Outside to inside, dead end
Maximum Inlet Pressure	300 kPa (43,5 psi)
Maximum Trans Membrane Pressure	300 kPa (43,5 psi)
Typical Operating Trans Membrane Pressure	
Operating Temperature Range	0 ÷ 40°C
Operating pH Range	1÷ 10

Ref	Description	Fam.	Subfam.	Disp. Stock	
MTHFU-2020AN	TORAY 8" MEMBRANE HFU-2020AN	035	188		
MTHFU-1020N	TORAY 4" MEMBRANE HFU-1020N	035	188		
MTHFU-1010N	TORAY 4" MEMBRANE HFU-1010N	035	188		
MTHFU-2008N	TORAY 8" MEMBRANE HFU-2008N	035	188		

Ref	Membrane surface area (Outer surface) m ² (ft ²)	Diameter (mm)	Lenght (mm)	Weight (Full of water) Kg	Weight (Drained) Kg
MTHFU-2020AN	72 (775)	216	2160	110	67
MTHFU-1020N	29 (312)	216	1120	60	40
MTHFU-1010N	7 (75)	114	1078	15	9
MTHFU-2008N	11,5 (124)	89	2000	18	11

Certificates	Manufacturer	Sectors
	Toray	Industrial