

# **MoRui Membrane**

**RO NF UF**



## *company profile*



Morui Environmental Technology Co., Ltd is a high-tech enterprise specializing in the R&D, production, sales and services of ultrafiltration and reverse osmosis membranes. We have enjoyed a long-lasting good reputation in the world market with nearly 20 years of professional experience in the water treatment industry.

With the foreign advanced complete set of production equipment and our own leading formula technique, we provide professional products and supporting technology solutions to our customers. Morui can develop a full range of separation membrane products in ultrafiltration and reverse osmosis membranes which can represent the domestic advanced separation membrane manufacturing level. The company has advanced core ultrafiltration technology with multiple membrane materials successfully compositely modified, such as PES, PS, PVDF, PAN, PVC and etc. World's first-class membrane films have been used in the production of reverse osmosis membranes, such as Toray, GE and CSM.

Our products are high cost-effective with best quality, perfect appearance and competitive price. We can also provide OEM services under customers' requirements. Now, the membrane products have widely used in drinking water, the treatment of municipal water supply, boiler make-up water, industrial ultra pure water, medical pharmaceutical, food and beverage, life sewage and waste water treatment, water reuse, material enrichment industries.

*shanghaimorui*

# **MR** Reverse Osmosis

**High-quality, convenient,  
efficient and stable**





# HOUSEHOLD RO MEMBRANE

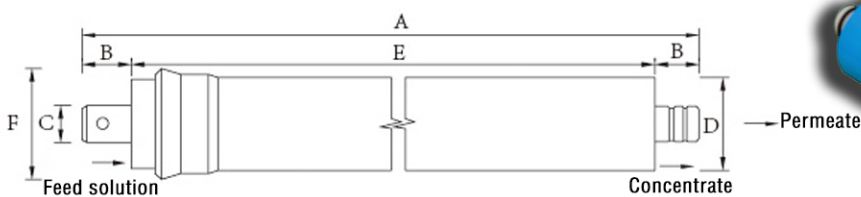
## Parameters

Project	Parameter				
Model	MR-1812-50	MR-1812-75	MR-2012-100/125	MR-3012-200/300	MR-3013-400
Effective membrane area ft <sup>2</sup> (m <sup>2</sup> )	5.0(0.46)	5.0(0.46)	6.0(0.56)/7.4(0.69)	10(0.92)/14(1.3)	16(1.48)
Operating pressure psi(Mpa)	65(0.45)	65(0.45)	65(0.45)	65(0.45)	65(0.45)
Average yield GPD(m <sup>3</sup> /d)	75(0.28)	75(0.28)	100(0.38)/125(0.47)	200(0.76)/300(1.14)	400(1.51)
Salt rejection(%)	96.0	96.0	96.0	96.0	96.0
Recovery rate(%)	15	15	15	15	15
Max.operating pressure psi(Mpa)	300(2.1)	300(2.1)	300(2.1)	300(2.1)	300(2.1)
Max.inflow temperature(°C)	45	45	45	45	45
Max.inflow SDI	5	5	5	5	5
Max.water flow GPM(m <sup>3</sup> /h)	2(0.46)	2(0.46)	2(0.46)	2(0.46)	2(0.46)
Free chlorine concentration	<0.1	<0.1	<0.1	<0.1	<0.1
Continuous running water pH range	3-10	3-10	3-10	3-10	3-10
Chemical cleaning water pH range	2-11	2-11	2-11	2-11	2-11
Max.single membrane element pressure drop	15(0.1)	15(0.1)	15(0.1)	15(0.1)	15(0.1)



MR Residential RO Membrane Unit: mm

Standard	A	B	C	D	E	F
MR-1812	298	20.0	17	45.0	258	53.5
MR-2012	298	20.0	17	48.0	258	55.5
MR-3012	298	20.0	17	76.2	258	81.5
MR-3013	330	20.0	17	76.2	258	81.5





# INDUSTRIAL RO MEMBRANE

## Parameters

Project	Parameter			
	MR-LP-4040	MR-ECO-4040	MR-BW-4040	MR-XLP-4040
Model	MR-LP-4040	MR-ECO-4040	MR-BW-4040	MR-XLP-4040
Effective membrane area ft <sup>2</sup> (m <sup>2</sup> )	78(7.2)	85(7.9)	78(7.2)	78(7.2)
Operating pressure psi(Mpa)	150(1.05)	75(0.51)	225(1.55)	100(0.69)
Average yield GPD(m <sup>3</sup> /d)	2500(9.5)	2100(7.9)	2500(9.5)	2800(10.6)
Salt rejection(%)	99.0	98.0	99.5	99.0
Recovery rate(%)	15	15	15	15
Max.operating pressure psi(Mpa)	600(4.2)	600(4.2)	600(4.2)	600(4.2)
Max.inflow temperature(℃)	45	45	45	45
Max.inflow SDI	5	5	5	5
Max.water flow GPM(m <sup>3</sup> /h)	14(3.2)	14(3.2)	14(3.2)	14(3.2)
Free chlorine concentration	<0.1	<0.1	<0.1	<0.1
Continuous running water pH range	3-10	3-10	3-10	3-10
Chemical cleaning water pH range	2-11	2-11	2-11	2-11
Max.single membrane element pressure drop	15(0.1)	15(0.1)	15(0.1)	15(0.1)

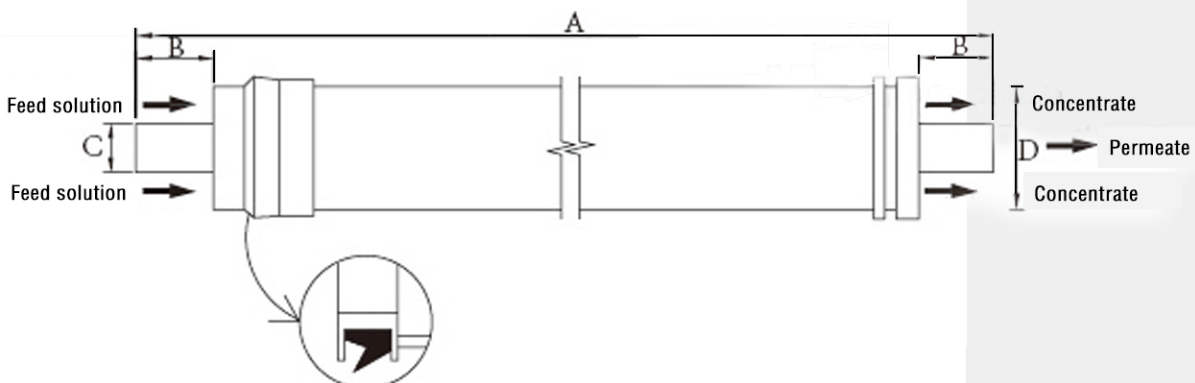
4040 Module Cutting



### MR-4040

Unit: mm

Standard	A	B	C	D
MR-4040	1016.0	26.7	19.1	100.1



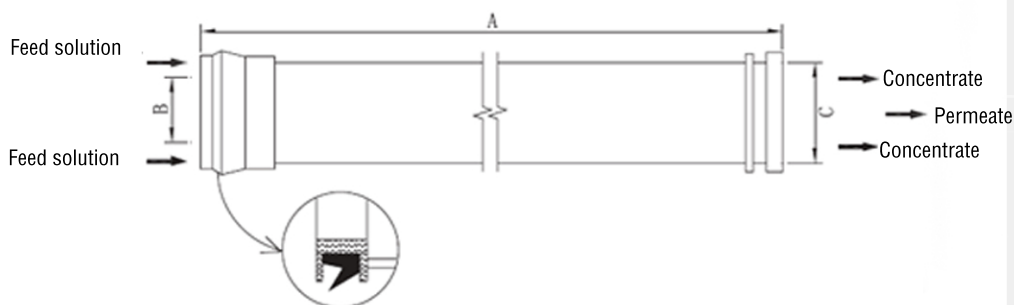




# INDUSTRIAL RO MEMBRANE

## Parameters

Project	Parameter		
Model	MR-LP-8040	MR-BW-8040	MR-ECO-8040
Effective membrane area ft <sup>2</sup> (m <sup>2</sup> )	400(37)	400(37)	400(37)
Operating pressure psi(Mpa)	150(1.05)	255(1.55)	150(1.05)
Average yield GPD(m <sup>3</sup> /d)	12000(45)	11000(41)	11500(43)
Salt rejection(%)	99.5	99.5	99.7
Recovery rate(%)	15	15	15
Max.operating pressure psi(Mpa)	600(4.2)	600(4.2)	600(4.2)
Max.inflow temperature(°C)	45	45	45
Max.inflow SDI	5	5	5
Max.water flow GPM(m <sup>3</sup> /h)	80(18)	80(18)	80(18)
Free chlorine concentration	<0.1	<0.1	<0.1
Continuous running water pH range	3-10	3-10	3-10
Chemical cleaning water pH range	2-11	2-11	2-11
Max.single membrane element pressure drop	15(0.1)	15(0.1)	15(0.1)



Model	A	B	C
8040	1016.0(40.0)	29.0(1.1)	201(7.9)

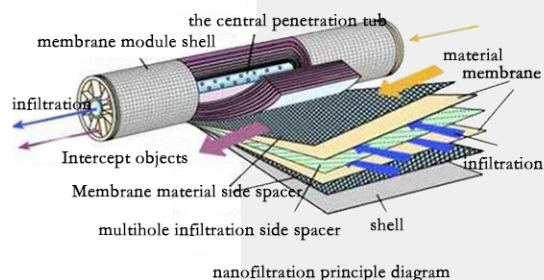




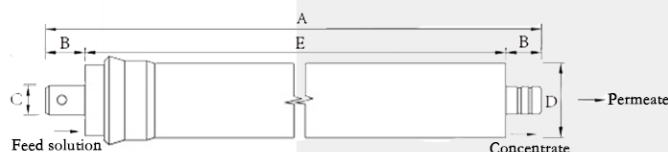
# HOUSEHOLD NF MEMBRANE

## Parameters

Project	Parameter			
	MRNF-1812	MRNF-2012	MRNF-4040	MRNF-8040
Model	MRNF-1812	MRNF-2012	MRNF-4040	MRNF-8040
Effective membrane area ft <sup>2</sup> (m <sup>2</sup> )	4.4(0.41)	5.0(0.46)	80(7.4)	400(37.2)
Operating pressure psi(MPa)	30(0.2)	30(0.2)	70(0.5)	70(0.5)
Average yield GPD(m <sup>3</sup> /d)	60(0.22)	100(0.38)	2400(9.1)	12000(45.5)
Salt rejection (%)	NaCl CaCl <sub>2</sub> 30-50 >60	NaCl CaCl <sub>2</sub> 60-70 >60	NaCl MgSO <sub>4</sub> 40-60 >96	NaCl MgSO <sub>4</sub> 40-60 >96
Recovery rate(%)	15%	15%	15%	15%
Max. operating pressure psi(MPa)	300(2.07)	300(2.07)	600(4.14)	600(4.14)
Max. inflow temperature(°C)	45 °C	45 °C	45 °C	45 °C
Max. inflow SDI	5	5	5	5
Max. water flow GPM(m <sup>3</sup> /h)	2(0.46)	2(0.46)	14(3.2)	80(18)
Free chlorine concentration	<0.1	<0.1	<0.1	<0.1
Continuous running water pH range	3-10	3-10	3-10	3-10
Chemical cleaning water pH range	2-11	2-11	2-11	2-11
Max. single membrane element pressure drop	15(0.1)	15(0.1)	15(0.1)	15(0.1)



1812/2012/4040

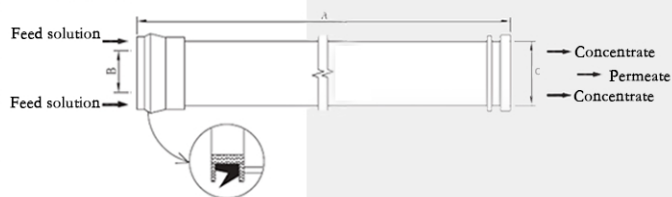


## MR Residential NF Membrane

Unit: mm

Standard	A	B	C	D	E
NF-1812	298	21.0	17	44.5	256
NF-2012	298	21.0	17	48.2	256
NF-4040	1016	26.7	19.1	99.7	962.6
NF-8040	1016	28.6	201.9	—	—

8040



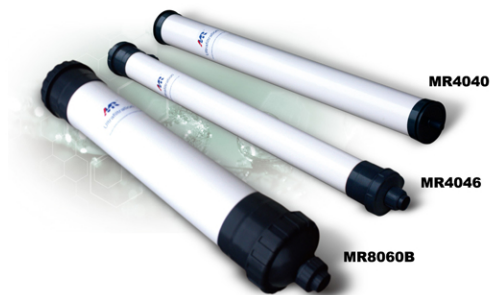


# MR 8060 4046 4040

## Parameters

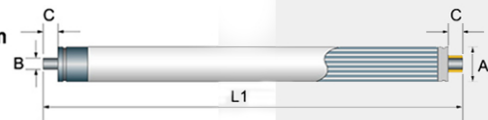
Project	Parameter		
Model	MR8060	MR4046	MR4040
Design flux <sup>①</sup> (L/m <sup>2</sup> /h)	40-120	40-120	40-120
Produced water pollution index <sup>②</sup> (SDI <sub>15</sub> )	<3	<3	<3
Permeate turbidity <sup>③</sup> (NTU)	<<1	<<1	<<1
E. coli removal rate (log)	>6	>6	>6
Virus removal rate(log)	>4	>4	>4
Filter type	dead-end or cross-flow filtration	dead-end or cross-flow filtration	dead-end or cross-flow filtration
Membrane materials and types	PES、PS、PVC、PAN inside out pressur	PES、PS、PVC、PAN inside out pressur	PES、PS、PVC、PAN inside out pressure
Shell and seal materials	PVC、epoxy resins	PVC、epoxy resins	PVC、epoxy resins
Molecular weight cutoff (dalton)	100,000	100,000	100,000
Fiber inner/ outer diameter (mm)	1.0/1.6	1.0/1.6	1.0/1.6
Effective membrane area (m <sup>2</sup> )	25	4.5	4
Max. inflow pressure (MPa)	0.3	0.3	0.3
Max. transmembrane pressure (MPa)	<0.2	<0.2	<0.2
Optimal permeate pressure (MPa)	0.01-0.1	0.01-0.1	0.01-0.1
Max. operating temperature (°C)	40	40	40
PH range	PES/PS 2-12, PVC/PAN 3-9	PES/PS 2-12, PVC/PAN 3-9	PES/PS 2-12, PVC/PAN 3-9
Backwash pressure (MPa)	<0.2	<0.2	<0.2
Backwash flow(L/m <sup>2</sup> /h)	100-200	100-200	100-200

①According to water conditions ②③Refers to the test of water turbidity <20NTU



**MR4040 Shape size unit:mm**

Standard	A	B	C	L1
MR4040	101	19	27	1016



**MR4046 Shape size unit:mm**

Standard	A	B	C	L1	L2
MR4046	169	113	112.5	985	1155



**MR8060B Shape size unit:mm**

Standard	A	B	C	L1	L2
MR8060B	302	237	183.5	1020	1415





# MR1060

**MORUI-** PAN PES PS PVC PVDF

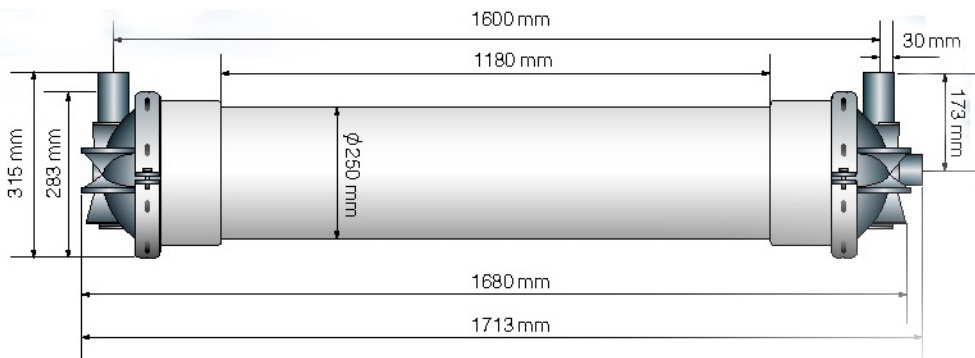
## Parameters



Project	MR1060	MRW1060
Design flux <sup>①</sup> (L/m <sup>2</sup> /h)	60-200	40-80
Produced water pollution index <sup>②</sup> (SDI <sub>15</sub> )	<3	<3
Permeate turbidity <sup>③</sup> (NTU)	<<1	<<1
E.coli removal rate(log)	>6	>6
Virus removal rate(log)	>4	>6
Filter type	dead-end or cross-flow filtration	dead-end or cross-flow filtration
Membrane materials and types	PES PS PVC PAN inside	PVDF inside
Shell and seal materials	PVC/epoxy resins	PVC/epoxy resins
Fiber inner/outer diameter(mm)	1.0/1.6	1.0/1.6
Effective membrane area (m <sup>2</sup> )	50	75
Max.inflow pressure (Mpa)	0.3	0.3
Optional permeate pressure(Mpa)	0.01-0.1	0.01-0.1
Max.operating temperature(℃)	40	50
PH range	2-13	2-13
Backwash pressure(Mpa)	<0.2	<0.2
Backwash flow(L/m <sup>2</sup> /h)	100-200	100-200

① According to water conditions

② ③ Refers to the test water turbidity <20NTU







# MRW0860 0660

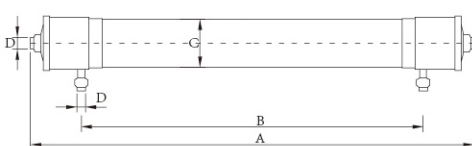
## Parameters

Project	Parameter	
Model	MRW0660	MRW0860
Design flux①(L/m <sup>2</sup> /h)	40-80	40-80
Produced water pollution index ②(SDI <sub>15</sub> )	<3	<3
Permeate turbidity③(NTU)	<0.1	<0.1
E.coli removal rate(log)	>6	>6
Virus removal rate(log)	>6	>6
Filter type	dead-end or cross-flow filtration	dead-end or cross-flow filtration
Membrane materials and types	PVDF outside in pressure	PVDF outside in pressure
Shell and seal materials	UPVC/ABS、epoxy resins/Polyurethane	UPVC/ABS、epoxy resins/Polyurethane
Molecular weight cutoff(dalton)	6000-150000	6000-150000
Fiber inner/outer diameter(mm)	0.8/1.4,0.7/1.3	0.8/1.4,0.7/1.3
Effective membrane area(m <sup>2</sup> )	40	50
Max.inflow pressure(Mpa)	0.25	0.3
Max.transmembrane pressure(Mpa)	0.15	0.15
Optimal permeate pressure(Mpa)	0.01-0.1	0.01-0.1
Max.operating temperature(℃)	45	45
PH range	2-11	2-11
Max.backwash pressure(Mpa)	0.25	0.25

- ① According to water conditions  
 ② ③ Refers to the test water turbidity <20NTU

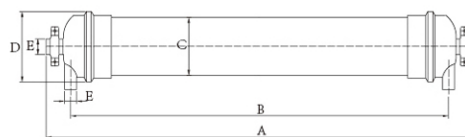
**MRW0660** Unit: mm

Standard	A	B	C	D
MRW0660	1800	1386	∅160	DN32&DN25



**MRW0860** Unit: mm

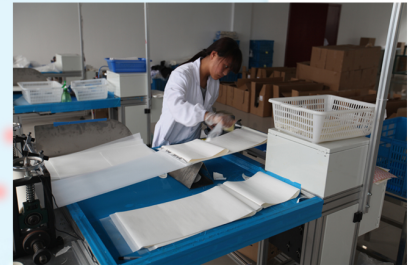
Standard	A	B	C	D	E
MRW0860	1884	1720	∅200	∅244	DN50





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We offer excellent technical support and after-sale services as well as our mature and perfect pre-sale service system. Backed by professional and creative talents in the field, we could offer best advice for all clients to make correct choices. Meanwhile, we guarantee the equal quality among our products.



Adhere to the principle of good faith of the perfect brand image, we offer the following services: Product introduction, Successful cases presentation, regular product inspection and



maintenance ,technical training etc.

After-sale department of SHANGHAI MORUI can offer online services. We respect every valuable comment on our products and improve quality according to it.



yours sincerely

MORUI  
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## Quality Inspection



leading quality control,  
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## Project Cases



the Yellow River Water Treatment 1300T/h  
Project for one Coal Chemical Company in  
Kaifeng, Henan



Reclaimed Water Reuse 200T/h Project  
for one Plating Company in Guangzhou



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