



Shanghai Morui Technology Group Co., Ltd.

# MBR MEMBRANE CATALOG



# Shanghai Morui Technology Group Co., LTD.

## Company Profile

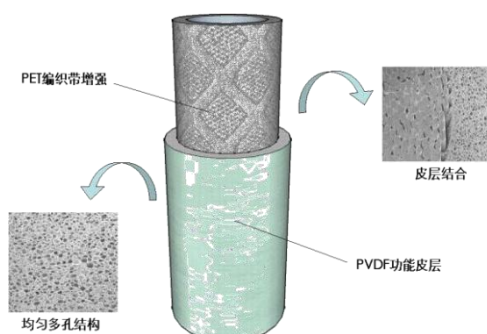
Morui company is a 20-year-experience professional manufacturer for PVDF MBR membranes, Hollow fiber UF membranes, Spiral Wound UF membranes, Reverse Osmosis membranes, Sea water membranes and Nanofiltration membranes as well as integral solution provider in drinking water and wastewater treatment. Supreme materials, complete set of advanced equipment, skilled workers, special leading formula technique and 3 inspection lines ensure us provide a full range of professional products in high and stable quality and supporting technology solutions to the customers. Morui has already enjoyed a high reputation at home and abroad since its series of membrane products are sold to more than 60 countries and districts with good feedback and repeated orders. We can also provide OEM services under customers' requirements. Now, the membrane products have been widely used in drinking water, municipal water, boiler make-up water, industrial ultra pure water, food and beverage, etc. Morui company devotes to the world water security and environmental protection and win-win cooperation with customers by providing high-quality products and excellent technical services. With us, you can find what you need.



## MBR INTRODUCTION

The MBR inner-supported hollow fiber membrane with PVDF as the membrane material is a new generation of high-performance product successfully launched by Shanghai Morui Environmental Protection Technology Co., Ltd. after years of research and development. This membrane is produced using a composite phase separation membrane making process, with a polyester braided tube as a support inside. It has high strength (tensile strength  $\geq 20.0\text{MPa}$ ), peeling resistance (peel strength  $\geq 1.0\text{MPa}$ ), and high porosity ( $\geq 60\%$ ), large flux ( $\geq 200\text{L/m}^2\cdot\text{h}$ - $0.01\text{MPa}$ ) and other characteristics. The PVDF inner support membrane has a filtration pore size of  $0.1\mu\text{m}$ .

Morui MR-MBR membrane module adopts the form of hollow fiber curtain membrane. The product components are in various forms and can be split or combined according to the user's usage conditions. Users are most concerned about several parameters such as flux, strength, filtration accuracy and anti-pollution ability when selecting membrane modules. Higher filtration precision can ensure the quality of product water; large throughput can reduce project costs; high strength and anti-pollution capabilities can extend the service life of components and reduce operation and maintenance costs. Murui R&D personnel started by improving the membrane material and component form to improve the above performance of the product.



## MBR Membrane Element Introduction

Brand	Morui	Max. TMP	80Kpa
Operating pressure	0.03 Mpa	Operating TMP	10-60 Kpa
Temperature	5-45 °C	PH	2-10
Flux	15-30 LMH	Max. NaClO	5000 ppm
Operating type	Suction	Max. Cl	5000 ppm
Material	PVDF	Anti-stripping strength of membrane	≧ 1.0Mpa
Pore size	0.2 um	NTU of Effluence water	≧ 3
Membrane style	External pressure hollow micro-filter membrane		

## Features of MR-MBR Membrane Element

### 1. Large flux, high-quality water production

The components are made of the company's patented product - hydrophilic modified PVDF material, polyester liner reinforced hollow fiber membrane, thin functional layer, high porosity, filtration pore size 0.1μm, guaranteed MBR has large water production flux and produced water turbidity <0.3NTU;

### 2. High peeling strength

The membrane fiber has high peeling strength, supports instant high-pressure backwashing, and the membrane fiber is hydrophilized to make it more resistant to pollution;

### 3. Various forms

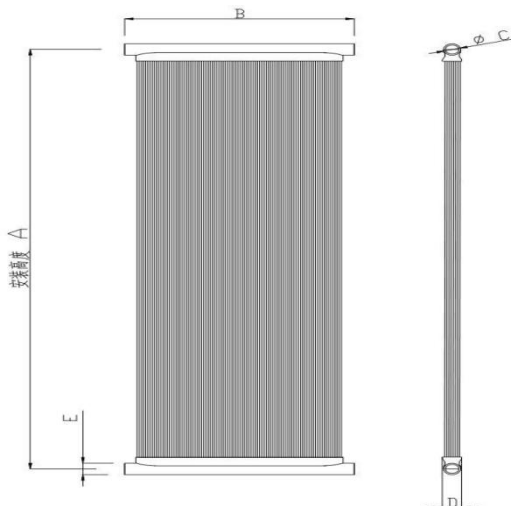
The components are in various forms, can be superimposed and expanded, and have a high degree of integration. They can be split or combined according to the user's usage conditions, making the application form more flexible;

### 4. Better way to install

The filling area per unit volume is large, saving space. Adopt socket installation method, easy to install and disassemble. The cleaning methods are diversified and the cleaning plan can be customized, which is suitable for large and medium-sized system water treatment projects.

## "I" - MBR Module Model

Model	MR010-1	MR015-1	MR020-1
H*L*W(mm)	1000*534*46	1500*534*46	2000*534*46
Effective Area(m <sup>2</sup> /piece)	10/12.5	15/20	20/30
OD(mm)	2.5/2.0	2.5/2.0	2.5/2.0
Nominal poresize(μM)	0.2/0.065	0.2/0.065	0.2/0.065
Maximum custom area	16.5	26.5	34.6

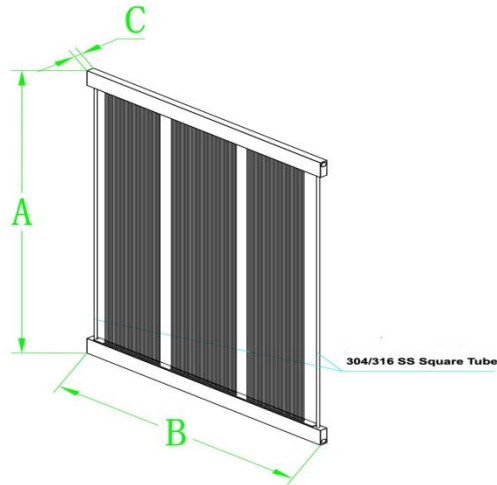


Model	A	B	C	D	E
MR010-1	1000	534	32	46	40
MR015-1	1500	534	32	46	40
MR020-1	2000	534	32	46	40



## “ || ” - MBR Element Introduction

MORUI MBR parameter							
Model	MR313/MR388	MR227/MR282	MR193/MR238	MR113/MR140	MR097/MR120	MR071/MR088	MR057/MR060
Size H*L*W(mm)	2000*1250*30	1500*1250*30	1300*1250*30	1500*680*30	1300*680*30	1015*680*30	1015*480*25
Effective Area(m <sup>2</sup> /piece)	31.3/38.8	22.7/28.2	19.3/23.8	11.3/14.0	9.7/12.0	7.1/8.8	5.7/6.0
OD	2.5/2.0	2.5/2.0	2.5/2.0	2.5/2.0	2.5/2.0	2.5/2.0	2.5/2.0
Nominal pore size(um)	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Bracket Material	SUS(304/316)	SUS(304/316)	SUS(304/316)	SUS(304/316)	SUS(304/316)	SUS(304/316)	SUS(304/316)
Hollow fiber material	PVDF	PVDF	PVDF	PVDF	PVDF	PVDF	PVDF



Model	A	B	C
MR313/MR388	2000	1250	30
MR227/MR282	1500	1250	30
MR193/MR238	1300	1250	30
MR113/MR140	1500	680	30
MR097/MR120	1300	680	30
MR071/MR088	1015	680	30
MR057/MR060	1015	480	25



## All MBR Model List

Model No.	Element Model No.	Numbers of elements	Membrane Surface Area	Capacity
MR-057-10	MR-057	6 Pieces	34m <sup>2</sup>	10m <sup>3</sup> /d
MR-057-12	MR-057	7Pieces	40m <sup>2</sup>	12m <sup>3</sup> /d
MR-057-15	MR-057	9Pieces	51m <sup>2</sup>	15m <sup>3</sup> /d
MR-057-20	MR-057	12 Pieces	68m <sup>2</sup>	20m <sup>3</sup> /d
MR-057-30	MR-057	18 Pieces	103m <sup>2</sup>	30m <sup>3</sup> /d
MR-097-30	MR-097	11 Pieces	107m <sup>2</sup>	30m <sup>3</sup> /d
MR-057-50	MR-057	30 Pieces	171m <sup>2</sup>	50m <sup>3</sup> /d
MR-097-50	MR-097	18 Pieces	175m <sup>2</sup>	50m <sup>3</sup> /d
MR-097-80	MR-097	28 Pieces	272m <sup>2</sup>	80m <sup>3</sup> /d
MR-113-80	MR-113	24 Pieces	272m <sup>2</sup>	80m <sup>3</sup> /d
MR-113-100	MR-113	30 Pieces	339m <sup>2</sup>	100m <sup>3</sup> /d
MR-193-100	MR-193	18 Pieces	347m <sup>2</sup>	100m <sup>3</sup> /d
MR-193-150	MR-193	26 Pieces	502m <sup>2</sup>	150m <sup>3</sup> /d
MR-227-150	MR-227	22 Pieces	500m <sup>2</sup>	150m <sup>3</sup> /d
MR-193-200	MR-193	35 Pieces	676m <sup>2</sup>	200m <sup>3</sup> /d
MR-227-200	MR-227	30 Pieces	681m <sup>2</sup>	200m <sup>3</sup> /d
MR-313-200	MR-313	22 Pieces	689m <sup>2</sup>	200m <sup>3</sup> /d
MR-313-400	MR-313	43 Pieces	1346m <sup>2</sup>	400m <sup>3</sup> /d
MR-313-500	MR-313	54 Pieces	1690m <sup>2</sup>	500m <sup>3</sup> /d

## Product show



***Remark: This small sample is available, only for test.***



## “MBR” Module

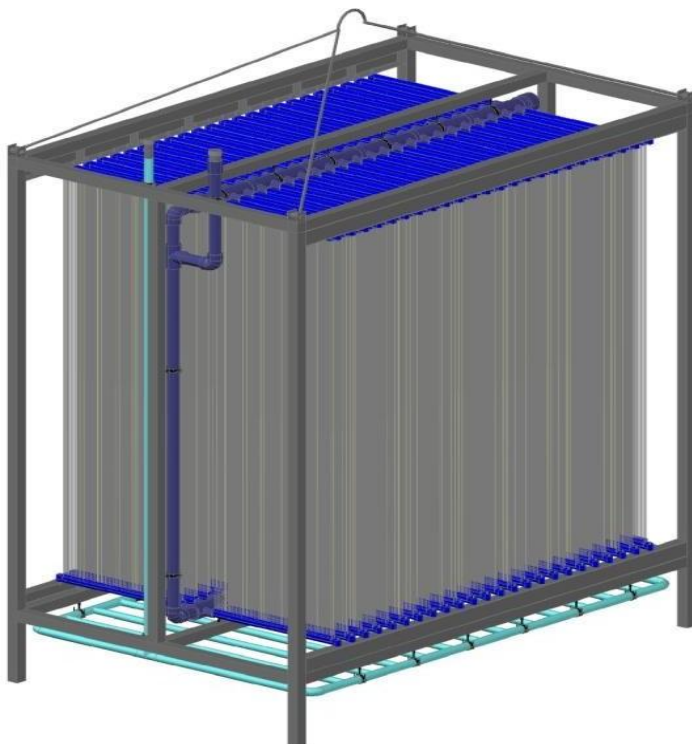
The membrane module is composed of membrane bracket (SUS304), water collecting pipe (ABS), and diaphragm.

(See picture left) Each standard membrane module is composed of 32 membranes, and the membrane module area is 640 m<sup>2</sup> (20m<sup>2</sup>/piece × 32 pieces).

As shown in the following table:

Membrane quantity (n)	20 m <sup>2</sup> / piece×32 piece
Membrane area (m <sup>2</sup> )	640
Membrane module size (mm)	1686×1487×2556

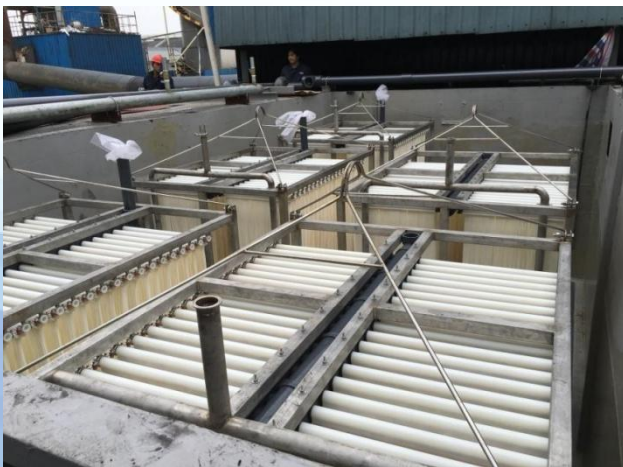
More membrane can also be assembled into a group according to the actual water volume, as shown in Figure left:



# Municipal sewage treatment



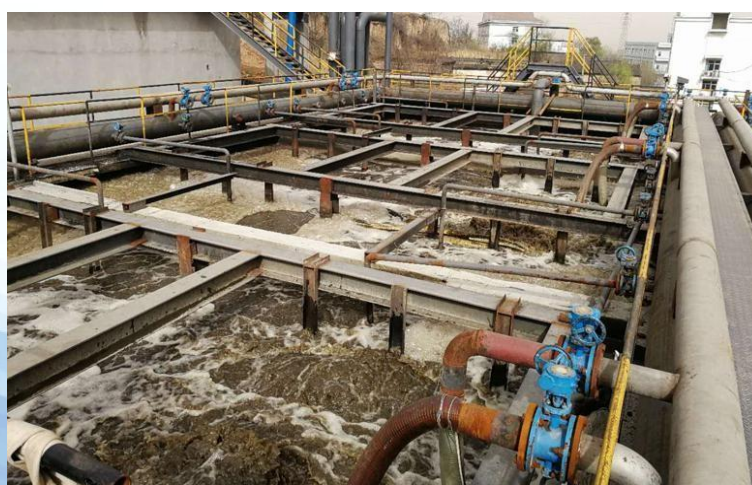
# Dyeing Waste Water



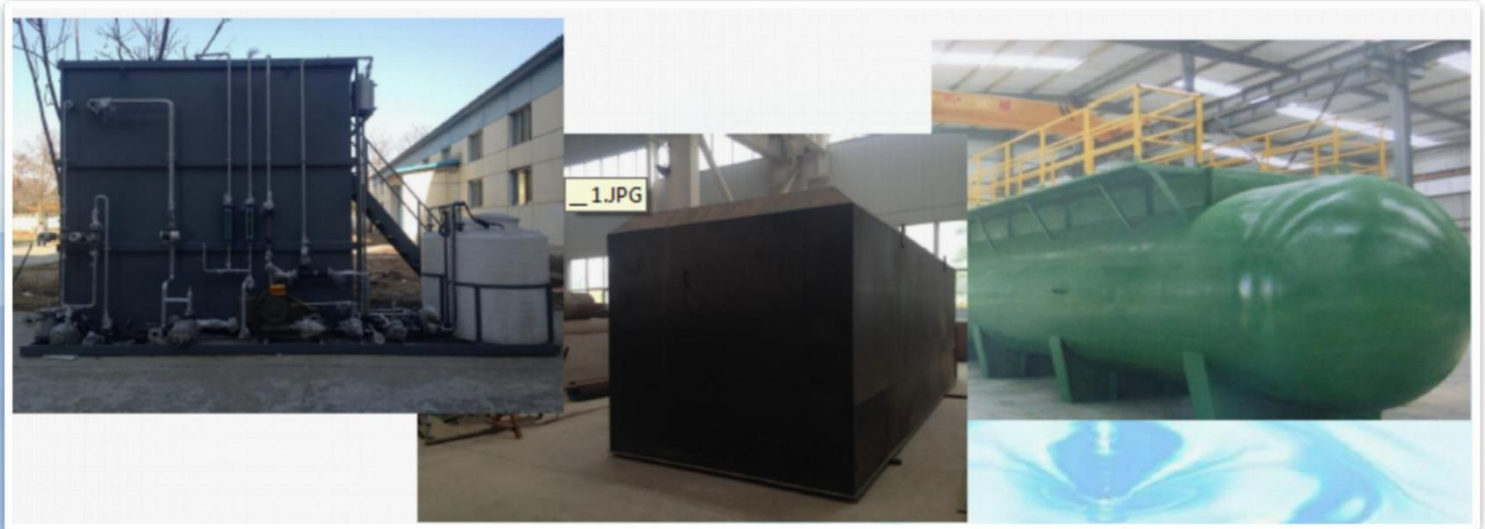
## Chemical waste water



## Rubber waste water



# Integrated sewage treatment equipment



# Grinding waste water





# Landfill leachate treatment



**Thank you for watching.**