Submerged Cassette Type POREFLON™Module

Features

[Energy saving]
The proprietary aeration system helps efficiently scour the membranes and reduces aeration energy. In addition, the large membrane surface area per projection area greatly reduces the installation space.

[Durability]
Poreflon hollow fiver that has a high tensile strength is durable against shaking and flexing allows use for extended periods.

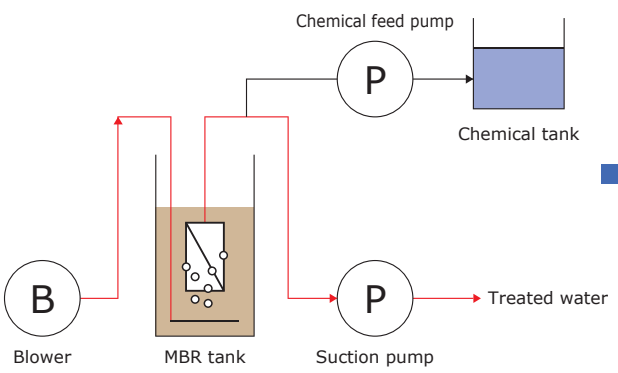
[Compatible with a wide range of wastewater]
Stable treatment capacity is achieved even for wastewater that contains oil and refractory organicmatter.

[Chemical resistance]
The module can be cleaned with chemicals from pH0 to 14, including high-concentration alkalis. It has a well flow rate recovery.

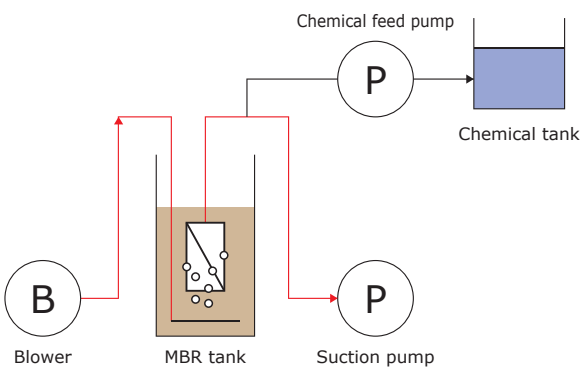
[Easy handling]
The PTFE hollow fibers are treated to be hydrophilic for ease of transport and installation while dry.

Standard operating conditions

Filtration + Aeration



Aeration



Example of MBR operating conditions

MLSS	7,000~12,000mg/L
Designed Flux	0.3~0.8m/d
Filtration time	9min
Unit downtime	1min
Water temperature	20~40℃
Aeration flow rate	100~160L/min/1module (Normally, no backwash is carried out.)
Filtration amount	15ml/5min

Example of water quality

	Tolerance of row water quality	Treated water quality
CODcr	<10,000mg/L	<50mg/L
BOD	<5,000mg/L	<10mg/L
TSS	—	<1mg/L
Oil & Grease (Mineral oil)	<50mg/L	<5mg/L
Oil & Grease (Animal & vegetable oil)	<300mg/L	

Standard chemical cleaning conditions

CIP

	Chemical concentration	Chemical dosage	Cleaning duration	Cleaning guideline
Target:Organic foulant	100-500mg/L NaOH+300-3,000mg/L NaClO(mixture)	2L/m²+All pipes	30 min - 2 hours	Every 1 - 2 weeks
Target:Inorganic foulant	300-3,000mg/L HCl, H_2SO_4, Citric acid, Oxalic acid			

	Chemical concentration	Cleaning duration	Cleaning guideline
Target:Organic foulant	0.5-4wt% NaOH+300-3,000mg/L NaClO (mixture)	6 - 12 hours	Every 3 - 6 months
Target:Inorganic foulant	0.3-3 wt% HCl, H_2SO_4, Citric acid, Oxalic acid		

* Cleaning conditions vary depending on the quality of the waste water to be treated and operating conditions.

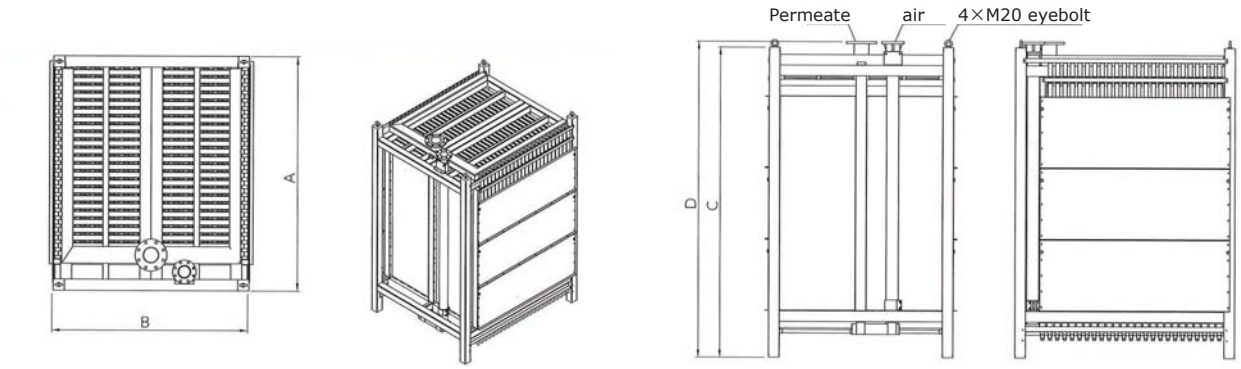
Standard specifiication List

Model No.			11B38	12B38	11B57	12B57
Membrane	Nominal pore size	um	0.08	0.1	0.08	0.1
	Inner diameter	mm	1.1	1.1	1.1	1.1
	Outer diameter	mm	2.3	2.3	2.3	2.3
	Membrane area	m^2	38	38	57	57
	Material		PTFE			
	Hydrophilic treatment		Hydrophilic			
Material	Cap		ABS resin			
	Potting		Heat & chemical-resistant epoxy resin			
	Supporting bar		–			
Dimensions	Length	mm	2200		3220	
	Bottom section	mm	50x840			
Operating condition	Filtration method		External pressure dead-end filtration			
	Trans membrane pressure	Filtration	>-60kPa			
		Backwash	<100kPa			
	Maximum temperature limit		50			
	Operating pH range		0-14			
	Cleaning pH range		0-14			

Type		USPMW-11,12B38				USPMW-11,12B57			
		-00	-01	-02	-03	-00	-01	-02	-03
Quantity of membrane modules		48	36	24	12	48	36	24	12
Cassette membrane area	m^2	1824	1368	912	456	2736	2052	1368	684
Dimensions	A	2084	1664	1117	667	2084	1664	1117	667
	B	1750	1750	1750	1750	1750	1750	1750	1750
	C	2940	2940	2940	2940	3960	3960	3690	3960
	D	2995	2995	2995	2995	4015	4015	4015	4015
Standard frame material		SUS304				SUS304			
Flange	Permeate	DN150	DN125	DN80	DN80	DN150	DN125	DN80	DN80
	Air	DN100	DN100	DN80	DN50	DN100	DN100	DN80	DN50
Weight	Dry kg	1480	1220	960	700	2100	1720	1340	960
	Wet kg	2104	1688	1272	856	3012	2404	1796	1188

*The flange is compatible with various standards.

Outline Drawing



Please contact Sumitomo Electric if you need an evaluation module.

* The POREFLON™ module and related technical information may be subject to control under the Export Trade Control Order or other regulations. In case where this module is included in your export products subject to such legal control, please note that you are responsible for following the prescribed procedure including making an application for export permission.

Specifications are subject to change without notice.

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