

# Submerge Type POREFLON™ Module

## Features

### [Durability]

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

### [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.

### [Energy saving(Low operational costs)]

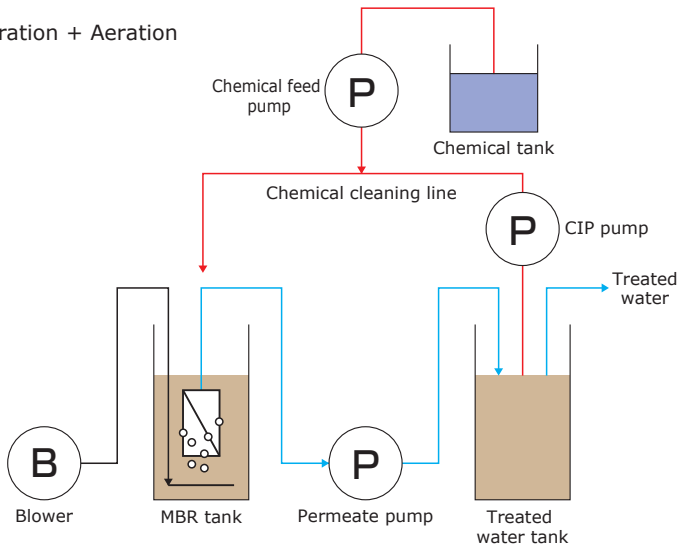
Our original "U-shaped structure" employed at the end bottom prevents activated sludge accumulation and allows efficient air diffusion.

The above features make it compatible with a wide range of wastewater. Stable treatment capacity is achieved even for wastewater that contains oil.



## Standard operating conditions

### Filtration + 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	50~90L/min/1module
Filtration amount	15ml/5min

## 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/m <sup>2</sup> +All pipes	30 min - 2 hours	Every 1 - 2 weeks
Target:Inorganic foulant	300 - 3,000mg/L HCl, H <sub>2</sub> SO <sub>4</sub> , Citric acid, Oxalic acid			

### H-CIP(or Offline cleaning)

	Chemical concentration	Immersion duration	Cleaning guideline
Target:Organic foulant	0.5 - 4wt% NaOH+300 - 3,000mg/L NaClO (mixture)	6 - 12 hours	Every 6 months
Target:Inorganic foulant	0.3 - 3 wt% HCl, H <sub>2</sub> SO <sub>4</sub> , Citric acid, Oxalic acid		

\* Cleaning conditions vary depending on raw water quality

## Standard Specification List

Model No.			SPMW			
			11B6	12B6	11B12	12B12
Membrane	Nominal pore size	μm	0.08	0.1	0.08	0.1
	Outer diameter	mm	2.3	2.3	2.3	2.3
	Membrane area	m <sup>2</sup>	6	6	12	12
	Material		PTFE			
	Hydrophilic treatment		Hydrophilic			
Material	Cap		ABS resin (Joint nut : SUS304)			
	Potting		epoxy resin , urethane resin			
	Supporting bar		SUS304			
Dimensions	Length	mm	1300		2410	
	Bottom section	mm	154x164			
Operating condition	Filtration method		Suction filtration			
	Trans membrane pressure	Filtration	> -60kPa			
		Backwash	<100kPa			
	Maximum temperature limit		50			
Operating & Cleaning pH range		0-14				

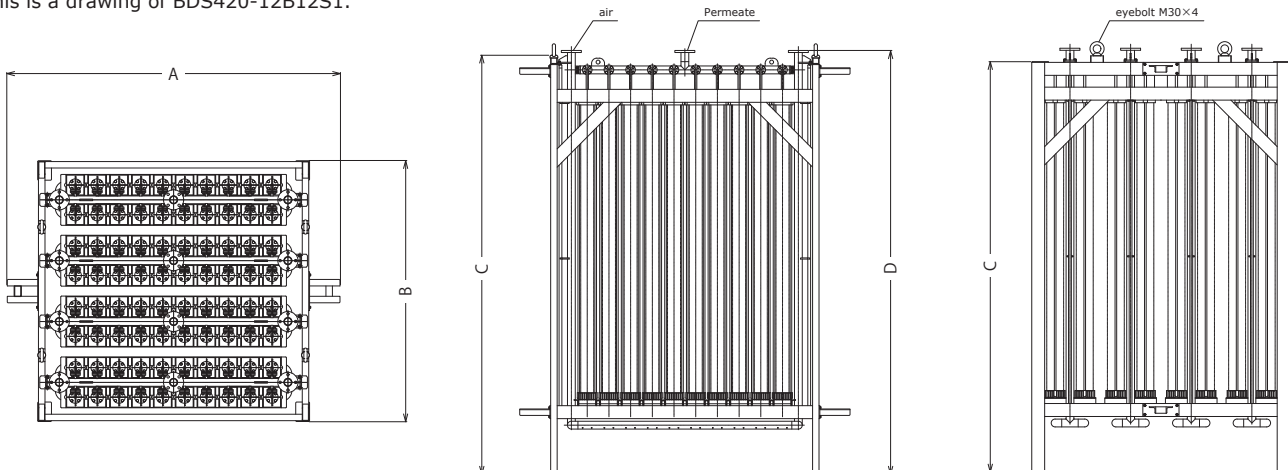
Type		BDS			BDS		
		220	320	420	220	320	420
		SPMW-11,12B6			SPMW-11,12B12		
Quantity of membrane modules		40	60	80	40	60	80
Cassette membrane area	m <sup>2</sup>	240	360	480	480	720	960
Dimensions	A	2558	2558	2558	2558	2558	2558
	B	1072	1544	2014	1072	1544	2014
	C	2051	2051	2051	3161	3161	3161
	D	2160	2160	2160	3270	3270	3270
Standard frame material		SUS304			SUS304		
Flange	Permeate	2×50	3×50	4×50	2×50	3×50	4×50
	Air	2×50	3×50	4×50	2×50	3×50	4×50

## About Submerged Square Type Membrane Block

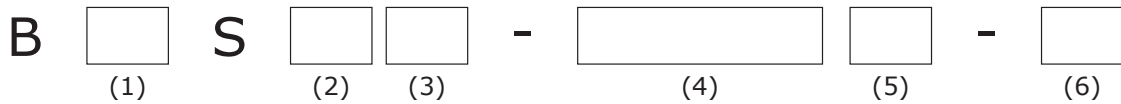
A membrane unit consists of several to dozens of submerged square type membrane modules assembled in a unit frame, and a membrane block consists of several of these unit products assembled in a block frame.

## Outline Drawing

This is a drawing of BDS420-12B12S1.



Please contact Sumitomo Electric if you need an evaluation module.



(1) Industrial vstandard	(2) Number of Membrane Modules	(3) Number of Modules	(4) Membrane Module Type	(5) Frame Material	(6) Special Specifications
J: JIS D: DIN A: ANSI I: ISO	2: 2units 3: 3 units 4: 4 units	06: 6modules 08: 8modules 10: 10modules 12: 12modules 14: 14modules 16: 16modules 18: 18modules 20: 20modules	11B6: SPMW-11B6 12B6: SPMW-12B6 11B12: SPMW-11B12 12B12: SPMW-12B12	S1: SUS304 S2: SUS316L	Special specifications and options for unit frames (e.g., accessory parts)

e.g. B D S 4 2 0 - 1 2 B 1 2 S 1

(1) The industrial standard for frames is "DIN".

(2) (3) The block consists of 4 units with 20 membrane modules.

(4) Membrane module model: SPMW-12B12  
(Membrane area: 12m<sup>2</sup>, Nominal pore size: 0.1μm)

(5) Block and Unit frame material: SUS304

(6) No special specifications.

This block has 4units installed 20 pcs of SPMW-12B12,  
so the total membrane area is 960m<sup>2</sup>.

Specifications are subject to change without notice.



Sales Department, Water Processing Division  
1-1-1, Koyakita, Itami-shi, Hyogo 664-0016, Japan Tel : +81-72-771-1732  
<https://global-sei.com/poreflon/>

Sumitomo Poreflon