

Projection Tool for PVDF Hollow Fiber Membrane Module "HF-Series"

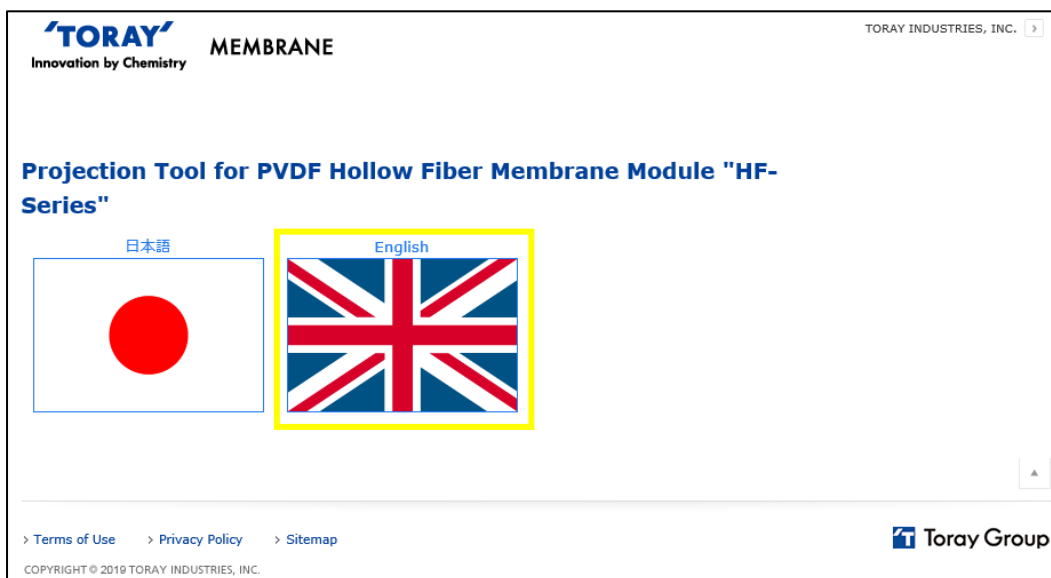
Manual

URL: <https://tdsuf.toraywater.net/cgi-bin/userinfo.pl>



This application can calculate how many modules is required and how high flux can be applied in your project.

1. Please access above URL.
2. Please Chose English.



3. Please Input "User Name" and "E-mail Address". And then, click "Agree & Submit". If you have any question, please click "Contact US".

4. Please input about Project (Project Name & Product Water).
Unit can be changed by clicking on "Change Unit" button.
And select "Water category", "With or Without Coagulant" and "With or Without TMC".

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[Contact Us](#)

User Name:

E-mail Address:

Project

Project Name		<input type="text" value="Itest"/>
Product Water	m ³ /day	<input type="text" value="1000"/>
Water Category		<input type="text" value="Sea Water"/>
Coagulant		<input type="text" value="With Coagulant"/>
Toray Maintenance Cleaning (TMC)		<input type="text" value="Without TMC"/>

Water category (Sea, Waste, Surface)

With or Without Coagulant

With or Without TMC

5. Please input UF Feed Info (Feed water quality).
 Attention 1) All of default values are "0".
 Attention 2) Please Input value of each item correctly. UF design may be varied with each input value.
 Attention 3) Gray cells (e.g. "Water Cleanness") are determined automatically after calculation.

UF Feed Info		
Feed nominal max. Turbidity (0-30)	NTU	0
Feed peak max. Turbidity (0-100)	NTU	0
Feed nominal max. TSS (0-30)	mg/L	0
Feed peak max. TSS (0-100)	mg/L	0
Feed max. Color	deg	0
Feed max. Fe	mg/L	0.000
Feed max. Mn (0-0.05)	mg/L	0.000
Feed max. TOC	mg/L	0.000
Feed max. COD	mg/L	0.000
Feed max. UV260 (0-0.075)	abs/cm	0.000
Feed max. NH ₄ ⁺	mg/L	0.000
Feed max. Oil & Grease (0-1)	mg/L	0.000
Feed Water min. Temp. (0-40)	deg C	0.00
Water Cleanness		Normal

"Water Cleanness" is determined automatically after calculation

6. Please select “Module Type” and input configuration info.
After input all items, please click “Calculation” button (“Calculation” button is also located in the upper region.).

Configuration Info			
Module Type			HFU-2020series ▾
Membrane Area	m ²		72
Total Number of Trains (Without Standby Trains for CIP)			1
Filtration (15-60)	min		30.00
CIP Frequency Factor (0.5-2.0)			1.000

Recommendation:
30 minutes.
Input between 15
and 60.

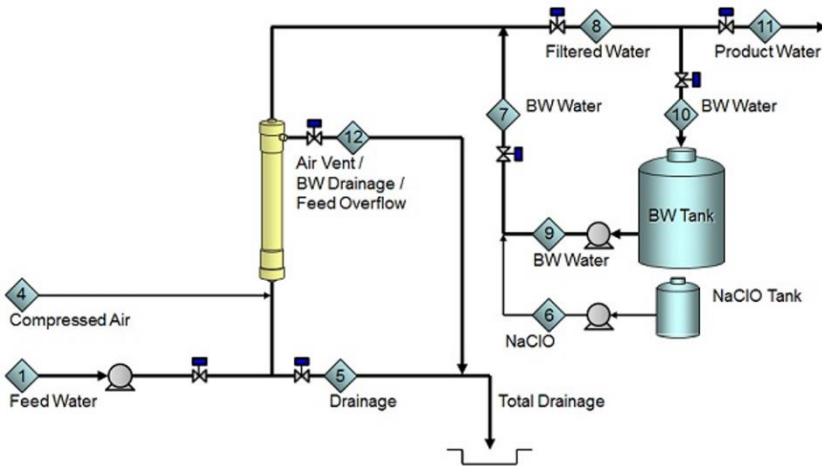
Standard: 1.
If need to be, input
between 0.5 and 2.0.

7. "Operation Conditions", "Duration", "Capacity" and "Flow Diagram" are calculated.

Operation Conditions			
Instantaneous Filtration Flux	m ³ /m ² /day		1.344
Filtration Flowrate per one Module	m ³ /day		96.755
Backwash Flux	m ³ /m ² /day		1.478
Scrubbing Air Flow Rate per one Module	NL/min		100
Backwash Chlorine	mg/L as Cl ₂		0
TMC Chlorine	mg/L as Cl ₂		300

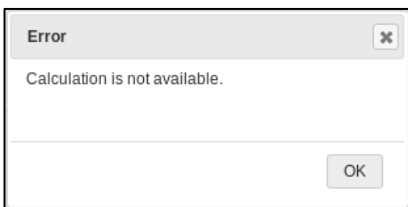
Duration			
Filtration	min		30.00
Backwash with Air	min		0.00
Backwash	min		0.50
Air Scrubbing	min		0.50
Drain	min		0.75
Refill	min		0.91
Control Loss	min		0.75
Total	min		33.41
TMC Time	min		30.00
TMC Pre-backwash	min		0.35
TMC Backwash	min		1.02
Filtration Cycle	cycles/day		42.20
CIP Frequency	times/year		6

Flow Diagram



8: Filtrated Water	m ³ /day	1020.81
7a: Backwash Water	m ³ /day	18.71
7b: TMC Water	m ³ /day	2.10
5: Drainage	m ³ /day	27.12
12: BW Drainage + Feed Overflow	m ³ /day	24.69
5+12: Total Drainage	m ³ /day	51.81
1: Feed Water	m ³ /day	1051.81
11: Product Water	m ³ /day	1000.00
Recovery	%	95.07

★If you get the error message, please recheck input items. If input of feed water quality exceeds our design guideline, the calculation is not performed (See drawing below). Some water category has more strict quality limits. For more detail, please contact us.



UF Feed Info		
Feed max. Mn (0-0.05)	mg/L	0.1
		0 - 0.05

In case of Mn concentration exceeds our design guidelines.

8. The results can be saved by clicking “Download” button.
The “Download” buttons appear when you click “Calculation” button.
The saved results can be reused by clicking “Upload” button.

Calculation **Download** **Upload** Change Unit

Project

Configuration Info

Module Type		HFU-2020series
Membrane Area	m ²	72
Total Number of Trains (Without Standby Trains for CIP)		1
Filtration (15-60)	min	30.00
CIP Frequency Factor (0.5-2.0)		1.000

Calculation **Download** **Upload** Change Unit

This projection software manual is subject to revision from time to time.
Unauthorized use or reproduction of this manual is forbidden.
If you should require any further information, please don't hesitate to contact us.

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http://www.toray.com/contact/con_e090.html

<http://www.toraywater.com/products/mf/index.html>

