Innovation by Chemistry
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Projection Tool for PVDF Hollow Fiber Membrane Module “Toray UF”

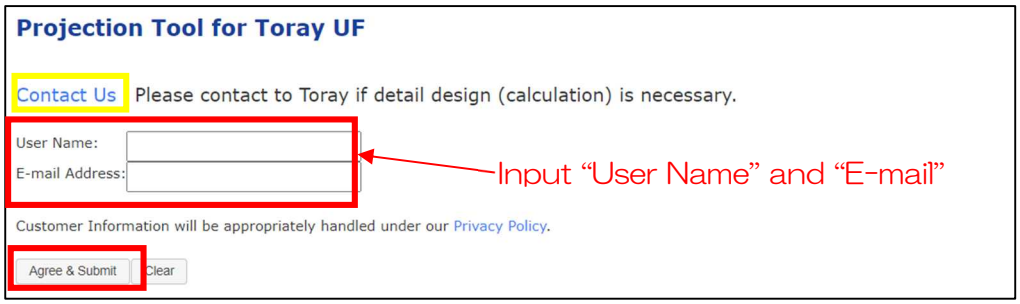
User Manual

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

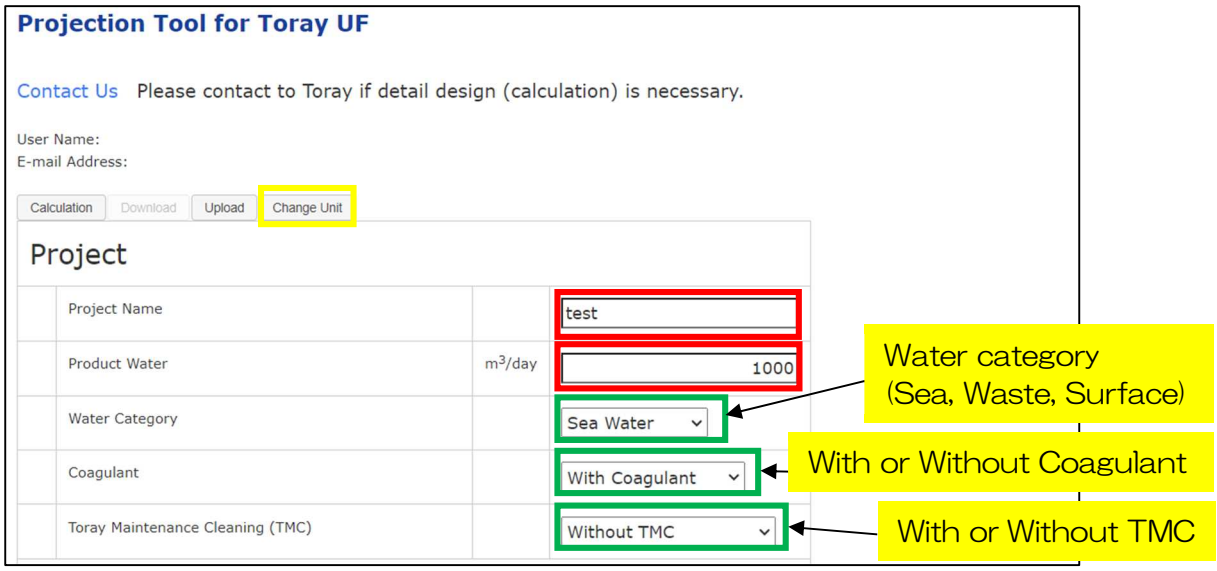
This application can calculate how many modules is required and how high flux can be applied in your project.

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

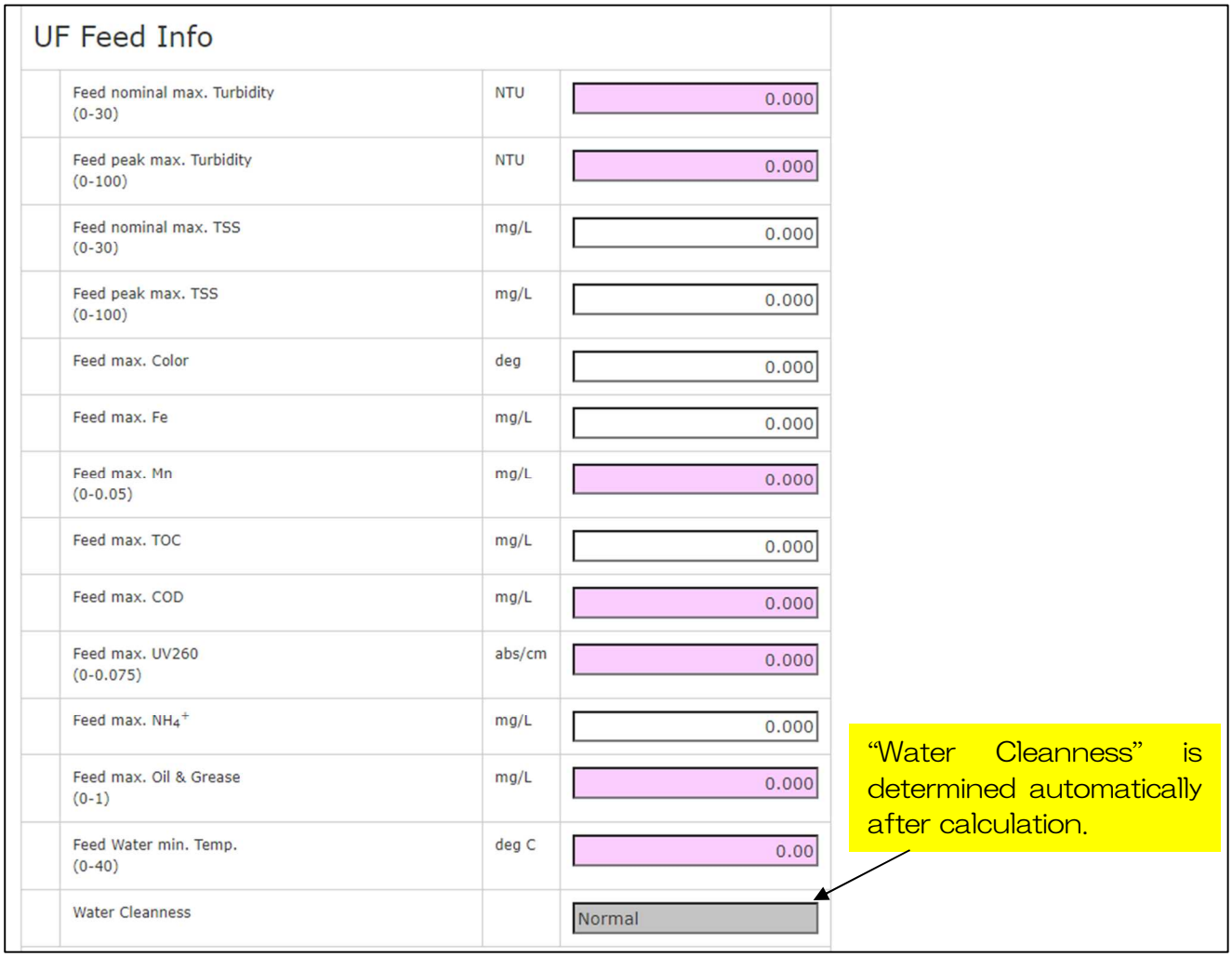
3. Please Input “User Name” and “E-mail Address”. And then, click “Agree & Submit”. If you have any question, please click “Contact US”.



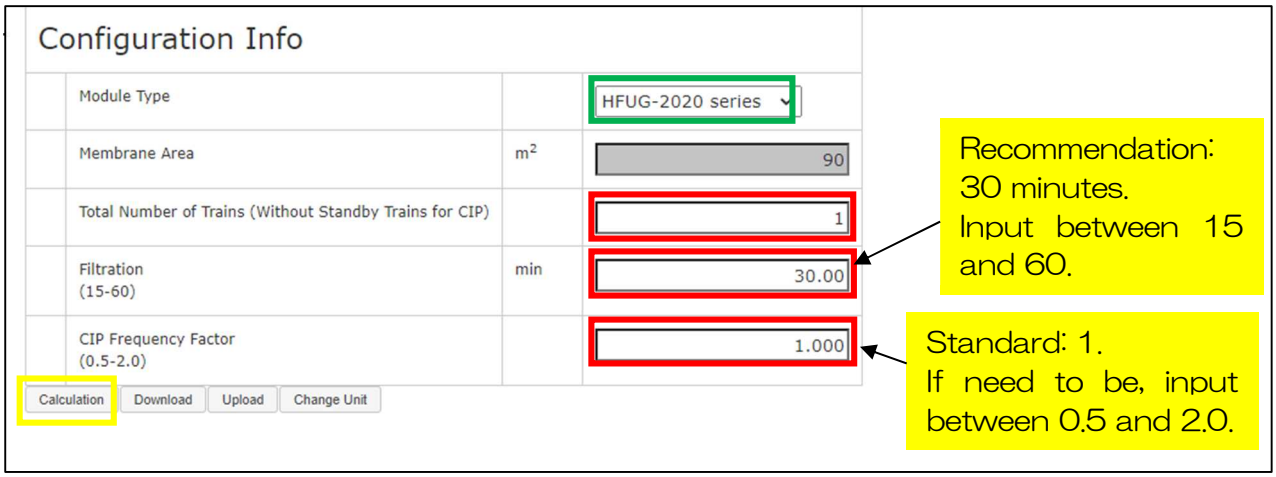
4. Please input about Project (Project Name & Product Water).
   Unit can be changed by clicking on “Change Unit” button.
   And select “Water category”, “With or Without Coagulant” and “With or Without TMC”.



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.



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.).



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

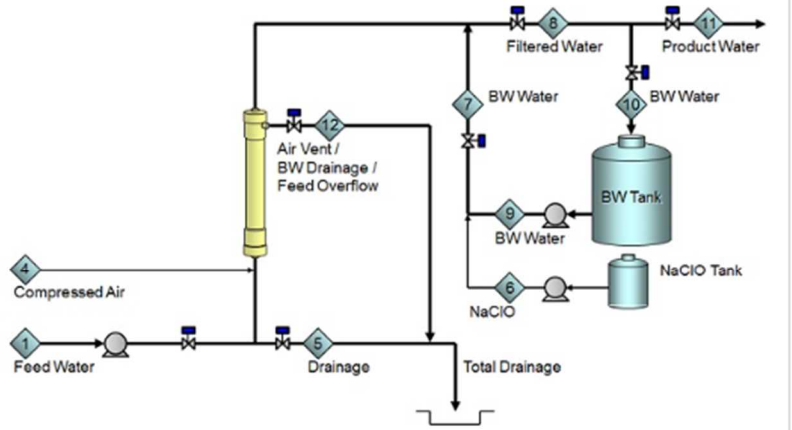
Operation Conditions

	Instantaneous Filtration Flux	$m^3/m^2/day$	1.291
	Filtration Flowrate per one Module	m^3/day	116.219
	Backwash Flux	$m^3/m^2/day$	1.420
	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	0.94
	Control Loss	min	0.75
	Total	min	33.44
	TMC Time	min	30.00
	TMC Pre-backwash	min	0.37
	TMC Backwash	min	1.07
	Filtration Cycle	cycles/day	42.16
	CIP Frequency	times/year	6

Flow Diagram



	8: Filtrated Water	m^3/day	1020.88
	7a: Backwash Water	m^3/day	18.72
	7b: TMC Water	m^3/day	2.16
	5: Drainage	m^3/day	28.23
	12: BW Drainage + Feed Overflow	m^3/day	24.67
	5+12: Total Drainage	m^3/day	52.90
	1: Feed Water	m^3/day	1052.90
	11: Product Water	m^3/day	1000.00
	Recovery	%	94.98

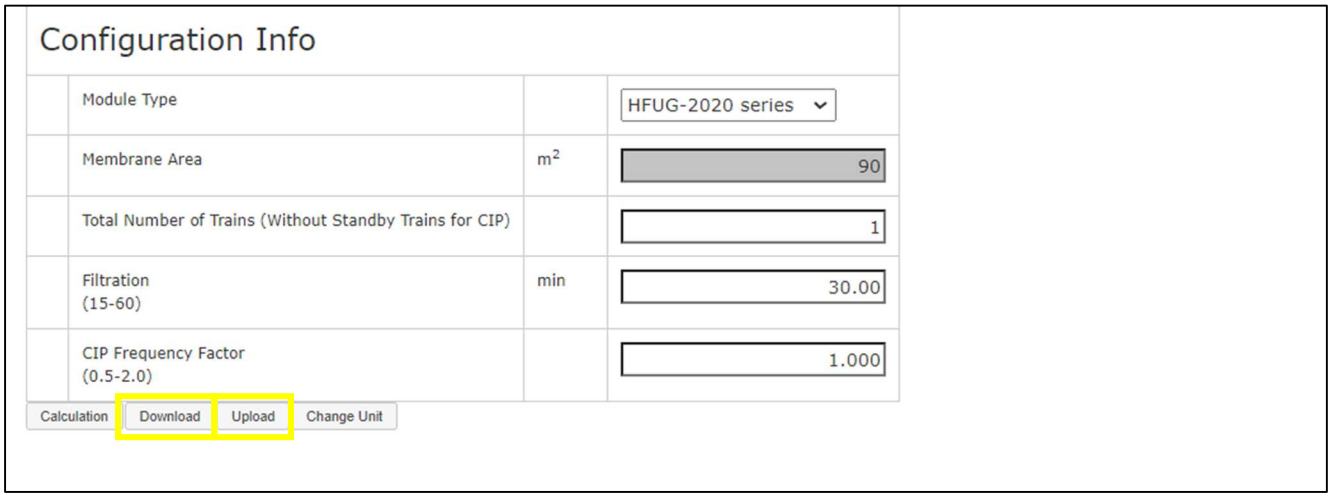
***<u>If you get the error message, please recheck input items. If input of feed water quality exceeds our design guideline, the calculation is not performed (See drawing below). Some water category has more strict quality limits. For more detail, please contact us.</u>**

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.



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