



DESALINATION

ADVANCED FILTRATION FOR
DESALINATION APPLICATIONS

50-9,000 m³/h
Max. Flow Rate

10-6,000 µm
Filtration Degree

100%
Screen Cleaning

As Low As 1.6 bar
Min. Operating
Pressure

2,500-180,000 cm²
Screen Area in a
Single Filter

Vertical and
Horizontal
Configuration

ENGINEERED FILTRATION.

Filtersafe

ABOUT FILTERSAFE®

Our Story

Filtersafe started with the goal of creating a seawater filter for the marine industry that was both efficient for shipowners and safer for the aquatic environment. Since 2004, Filtersafe has grown to be a world leader in seawater filtration and our filters are installed in over 3,500 installations around the world, with filtration down to 10 microns.



UF Protection Desalination Plant in Oman



UF Pre-Treatment Desalination Project

Filtersafe® Advantages



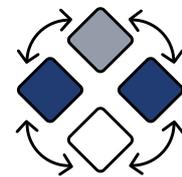
RELIABLE FILTERS

The dependable filter choice with near-zero maintenance filter options.



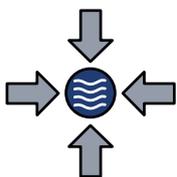
REAL ENERGY SAVINGS

Lower operating pressure capability (down to 1.6 bar) means lower ongoing energy costs.



MODULAR DESIGN

Horizontal and vertical installation options that can fit your configuration.



HIGH FLOW / SMALL FOOTPRINT

Just one unit can filter up to 5,000 m³/hr, while taking up minimal space.



SUPERIOR PROTECTION

Our first-class filtration protects your system from unplanned maintenance and, when relevant, reduces the amount of secondary treatment required.

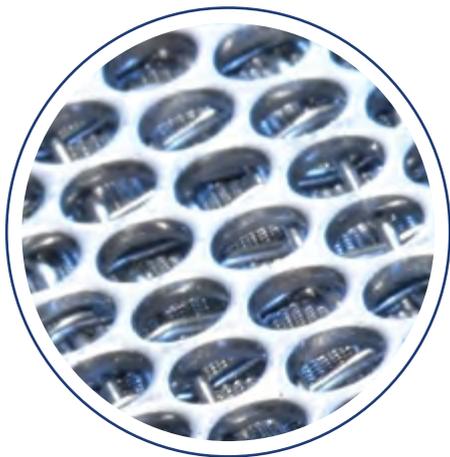


GLOBAL PRESENCE

With manufacturing facilities, offices, and support personnel located across the globe, we're there when you need us.

FILTERSAFE® TECHNOLOGY

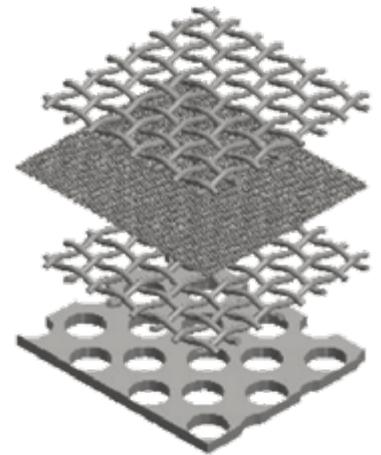
Filtersafe's automatic screen filters utilize unique, patented and cutting edge technologies to ensure the high performance demands of the market are met. Our filters utilize our own market-proven **smartweave™** filter screens and **nozzlex®** proximity suction nozzles:



smartweave™

high performance
filtration screens:

- Multi-layered sintered structure
- Enhanced strength & durability
- Filters from 10-500 microns
- Available in 316L, 904L, SMO254



nozzlex®

self-cleaning cycle for maximum
removal efficiency:

- Self balancing cleaning nozzle
- High Efficiency clean
- Zero screen wear + reduced nozzle wear
- Low pressure operation



Together they are:

EVERCLEAR™

An unparalleled automatic
filtration cycle.

WE ENGINEER FILTRATION SOLUTIONS

Engineered for challenging conditions with various upgrades available to meet your needs.

Tailored Filtration Solutions

Engineered to be the only filter your installation needs.

- Large primary filter
- Fine filtration perfect down to 10µm
- Near zero maintenance filters
- Plug & Play filters

Modular Design

We offer filters with a modular design that allows for numerous configuration options and is adaptable for any installation.



International Engineering Standards

Filtersafe can offer filters that are compliant to any international specifications or requirements, such as classification societies, or design appraisals (ASME, PED, NR13, AD2000, etc.).

Engineered for Ease of Maintenance

- Simple access to Primary & main screens
- Internal design optimized for screen removal
- External screen service stand for easy maintenance (optional)

turbo™ & superturbo™

for High Sediment Loads

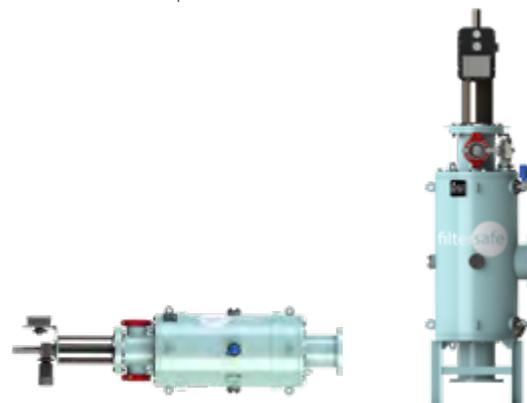
All Filtersafe® automatic screen filters can be equipped with our unique **turbo™** technology which increases the filter's capability to operate in high dirt-load situations. This unique feature gives our filters a distinct market advantage in challenging sediment-rich environments.

Custom Pressure Vessel Design & Explosion Proof Prepared

Filtersafe offers filters explosion proof prepared (Ex d or Ex ia) for up to Zone 0 hazardous area installations.

Horizontal & Vertical Configurations

Our filters can be rotated to fit your configuration needs, either for Horizontal installation to ease service & accessibility, or for Vertical installation for minimal footprint.



Horizontal Configuration

Vertical Configuration

FILTERSAFE DESALINATION PRODUCT APPLICATIONS

Coarse Filtration

(500 microns and up)

- Protection of Down Stream Pumps, Break Tanks, etc. From Large Debris.



Fine Filtration

(10 - 500 microns)

- UF Protection
- Media Filter Load Reduction



Blue Water Technology Fine Filtration

(20 microns)

- Disposable Cartridge Replacement With Automatic Self-Cleaning Filters.



Coarse Filtration LEVIATHAN

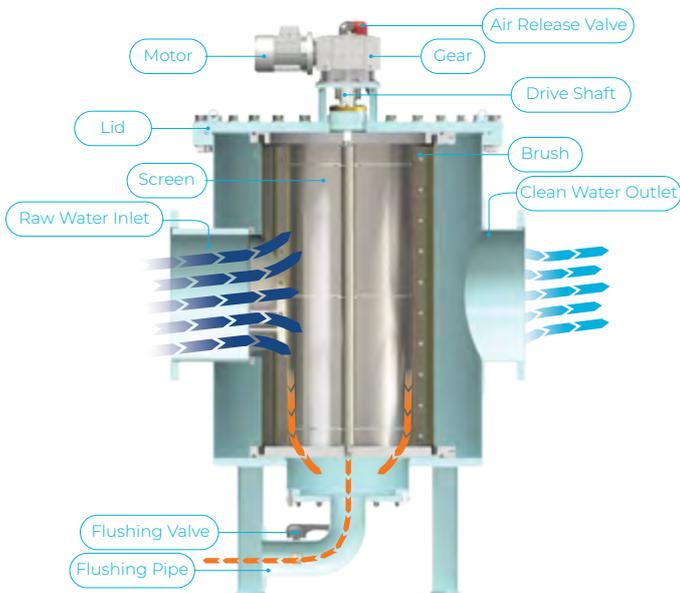
AUTOMATIC STRAINER FILTER WITH BRUSH CLEANING TECHNOLOGY

- ✓ Multi-Purpose Filtration Solution. Optimized for industrial, municipal and agricultural applications.
- ✓ Huge filtration area in small footprint.
- ✓ Minimal line pressure needed for operation.
- ✓ Continual operation - No down time when flushing.
- ✓ Robust design with a single moving part means minimal maintenance.

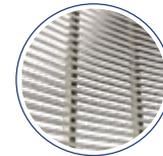
- ✓ Highly effective cleaning with over 99.2% Recovery Rate and full screen recovery.
- ✓ Rubber lining on request!



Up to 8,000 m³/h Max. Flow Rate	200-6,000 µm Filtration Degree	100% Screen Cleaning	Less than 1% Backwash Water Consumption
1 bar Min. Operating Pressure	Up to 80,000 cm² Filter Area	AD 2000 PV Design Code	Max. Temp 60°C



Brush Filter Cleaning



Wedgewire Screen



Perforated Screen



Durable Screen Design



A Single Moving Part



Lower Chamber Traps Heavy Particles

LEVIATHAN Series | Technical Specifications:

Model	Leviathan 120 #LEV0120	Leviathan 200 #LEV0200	Leviathan 300 #LEV0300	Leviathan 400 #LEV0400	Leviathan 500 #LEV0500	Leviathan 600 #LEV0600	Leviathan 700 #LEV0700	Leviathan 800 #LEV0800
Inlet \ Outlet*	6"-14"	20"	24"	28"	32"	36"	By request	By request
Screen Area	12,000 cm ²	20,000 cm ²	30,000 cm ²	40,000 cm ²	50,000 cm ²	60,000 cm ²	70,000 cm ²	80,000 cm ²
Max Capacity**	1,080 m ³ /hr.	1,800 m ³ /hr.	2,700 m ³ /hr.	3,600 m ³ /hr.	4,500 m ³ /hr.	5,400 m ³ /hr.	6,300 m ³ /hr.	7,200 m ³ /hr.

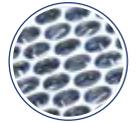
* Available in DIN PN10/16. For additional standards contact us.

** Dependent on filtration degree, water quality and inlet size. Contact us for more information.

Fine Filtration TITAN

AUTOMATIC SELF-CLEANING SCREEN FILTER

- ✓ Largest Screen Area in a Horizontal Filter
- ✓ Easy Maintenance - No Need for Walkways and Lifting Cranes
- ✓ Safe & Speedy 1 Person Screen Maintenance
- ✓ Designed for High TSS Applications
- ✓ Full 316 Stainless Steel Construction
- ✓ Optional NSF61 Drinking Water Certified Model Available
- ✓ Cleans While In Operation



smartweave™



nozzlex®



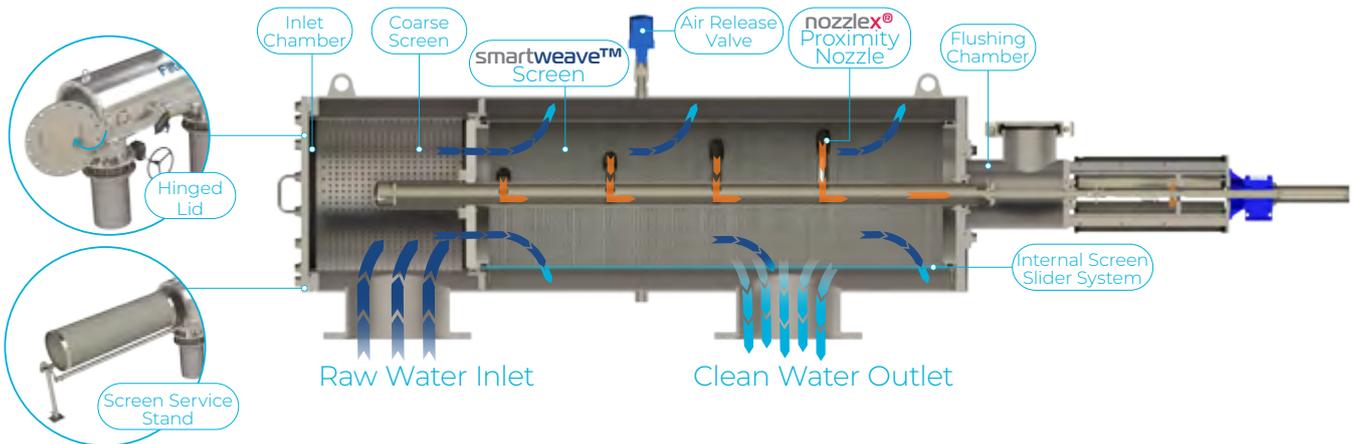
EVERCLEAR™



turbo™



Up to 2,800 m³/h High Flow Rate	10-500 µm Filtration Degree	10 & 16 bar Max. Operating Pressure	Low Flush Flow
2 bar Min. Operating Pressure	7,000-40,000 cm² Screen Area	AD 2000 Design Code	Max. Operating Temp 60°C



TITAN Series | Technical Specifications:

Model	TITAN 7K #TTN0070	TITAN 10K #TTN0100	TITAN 20K #TTN0200	TITAN 30K #TTN0300	TITAN 40K #TTN0400	TITAN 50K #TTN0500
Inlet \ Outlet*	4"-8"	6"-12"	8"-16"	16"-24"	16"-24"	20"-28"
Screen Area	7,000 cm ²	10,000 cm ²	20,000 cm ²	30,000 cm ²	40,000 cm ²	50,000 cm ²
Max Capacity**	350 m ³ /hr.	500 m ³ /hr.	800 m ³ /hr.	1,000 m ³ /hr.	1,600 m ³ /hr.	2,000 m ³ /hr.

* Available in DIN PN10/16, British standard BSTD/E, ANSI B16.5 150PSI. For additional standards contact us.
 ** Dependent on filtration degree, water quality and inlet size. Contact us for more information.

CARTRIDGE REPLACEMENT | OPEX SAVINGS IN RO DESALINATION PLANTS

Comparative OPEX Analysis for New Desalination Plant in Israel

This chart shows the various OPEX savings Filtersafe filters provide a new desalination plant when installed in place of cartridges for RO protection.

RO Pre-treatment nominal capacity 32,000 m³/h. 140 MMY plant-sized.

	Annual Cost 32,000 m ³ /h RO Pretreatment (USD / year)		Specific Cost Per 1m ³ of Desalinated Product (USD-Cent / m ³ desalinated)		Potential Savings by Filtersafe's Technology	
	Automatic 20µm Screen	Disposable Cartridge Filters	Automatic 20µm Screen	Disposable 20µm Screen	USD / year	%
Energy Bill	49,000	490,000	0.035	0.35	\$441,000	90%
Consumables / Spare parts	185,000	574,000	0.13	0.21	\$389,000	68%
Manpower	38,000	53,000	0.03	0.04	\$15,000	28%
Total	272,000	1,117,000	0.195	0.6	\$845,000	76%

Absolute Filtration

Filtersafe's unique weave-wire screens provide guaranteed filtration down to 20 microns, which is the required level for protecting membranes.

Automatic Trigger

The filter traps particles, which form a layer on the screen. Sensors detect pressure differences inside and outside the screen. When a pre-set pressure difference is reached, the filter self-cleans automatically.

Self-Cleaning

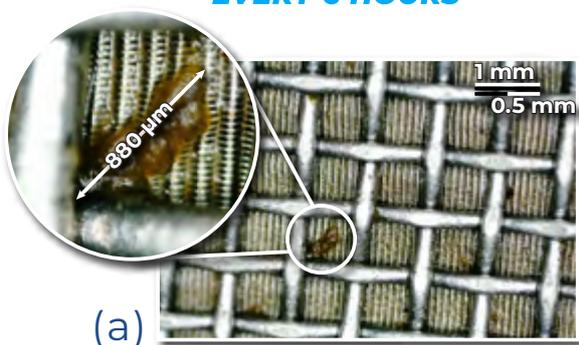
Filtersafe's self-cleaning solution stands out from industry standards as it eliminates the need for human intervention. This automated process ensures a clean screen with minimal pressure drop, resulting in significant OPEX savings.

Particle Removal

Filtersafe's smartweave screen removes particles up to the chosen micron rating, including organic material that can cause biofouling and harm the RO membrane. With 100% screen cleaning in every cycle, the filter prevents bacterial growth, biofouling downstream, and rogue particles.

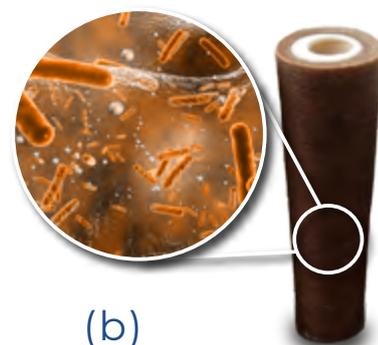
SCREEN FILTER:

REJECTS ANY BIOFILM FROM ACCUMULATING ON THE SYSTEM AS IT'S AUTOMATICALLY FLUSHED EVERY 6 HOURS



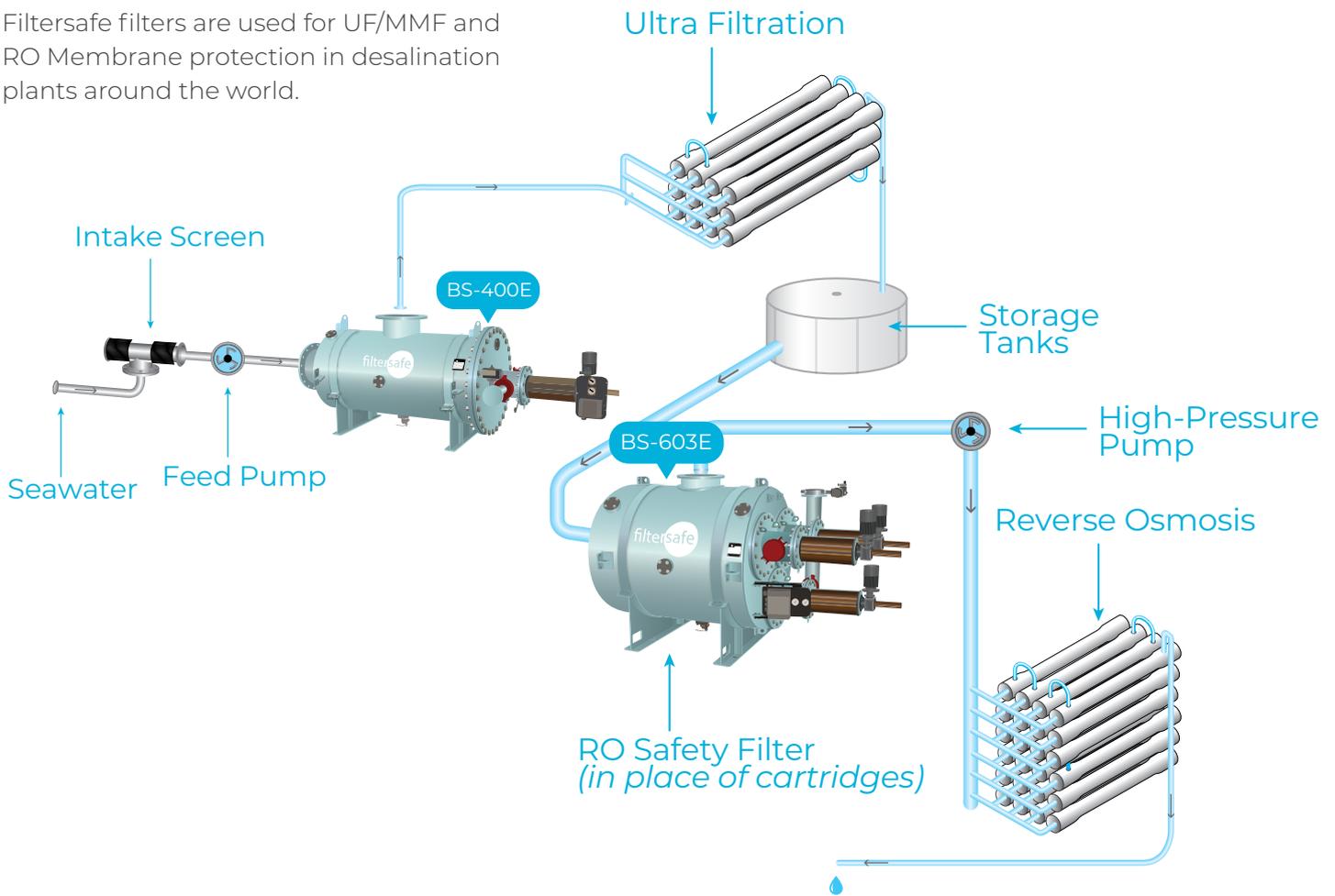
CARTRIDGE FILTERS:

Biofilm grows on the filter for weeks, fouling the RO membrane downstream



TRUSTED IN DESALINATION PLANTS WORLD WIDE

Filtersafe filters are used for UF/MMF and RO Membrane protection in desalination plants around the world.



Certifications & Trusted Partners

Sea Water Filtration Validation



Design & Quality Appraisals



Engineers & Installers



Filtersafe FS-Series

MULTI-SCREEN AUTOMATIC FILTERS

- ✓ For Large Flow Rates in Single Pressure Vessel
- ✓ Multiple Screen in Single Pressure Vessel
- ✓ Modular Design with Vertical & Horizontal Configurations
- ✓ Unique Twin-Screen Assembly Reduces Service Space Required
- ✓ Epoxy Coated Carbon Steel Construction
- ✓ Cleans While in Operation
- ✓ Upgradeable Cleaning Capacity for High Dirt Loads



9,000 m³/h Max. Flow Rate	10-500 µm Filtration Degree	100% Screen Cleaning
Down to 1.6 bar Min. Operating Pressure	Up to 180,000 cm² Filter Area	Max. Working Temp 50°C



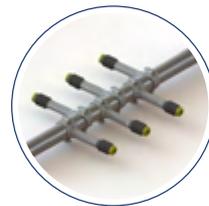
smartweave™



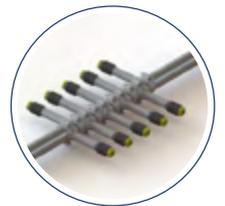
nozzlex®



EVERCLEAR™



turbo™



superturbo™

Multi Screen Series | Technical Specifications:

Model	Multi Screen Filters					
	FS0603 #FS-603E	FS0804 #FS-804E	FS1004 #FS-1004E	FS1204 #FS-1204E	FS1406 #FS-1406E	FS1806 #FS-1806E
Inlet \ Outlet*	10"-28"	10"-30"	12"-32"	12"-32"	14"-36"	20"-36"
Screen Area	60,000 cm ²	80,000 cm ²	100,000 cm ²	120,000 cm ²	140,000 cm ²	180,000 cm ²
Max Capacity**	2,300 m ³ /hr.	3,000 m ³ /hr.	3,800 m ³ /hr.	4,500 m ³ /hr.	5,200 m ³ /hr.	9,000 m ³ /hr.

* Available in DIN PN10/16. For additional standards contact us.

** 200 µm max. flow rates. Dependent on filtration degree, water quality and inlet size. Contact us for more information.

OUR FILTRATION SOLUTIONS CAN BE FOUND IN DESALINATION INSTALLATIONS ACROSS THE GLOBE.

DOOSAN

"Filtersafe auto strainers have been installed in the Sharqiyah Desalination Plant in Oman for UF protection since 2019. The reason for choosing Filtersafe product is due to its compactness and horizontal configuration which is much easier to maintain and service. The product is also equipped with its patented technology which has proven reliable and performs efficiently to the expectation and demands of the plant."



RO Membrane Protection Project



RO Membrane Protection Project

APT Water

PUMPING & BEYOND

"APT Water are very proud to be partnered with Filtersafe Automatic Screen Filtration to work on projects such as the one at Willie Creek Pearl Farm. Throughout the last year the water quality varied significantly in the tidal creek that also experienced cyclone conditions resulting in very high total suspended solids. Evidence that the Filtersafe Everclear cleaning system is a market leading design".



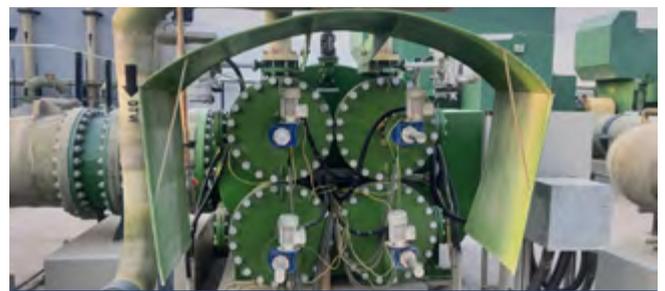
UF Pre-Treatment Desalination Project



UF Membrane Protection Project



Bio Safety Aquaculture System Project

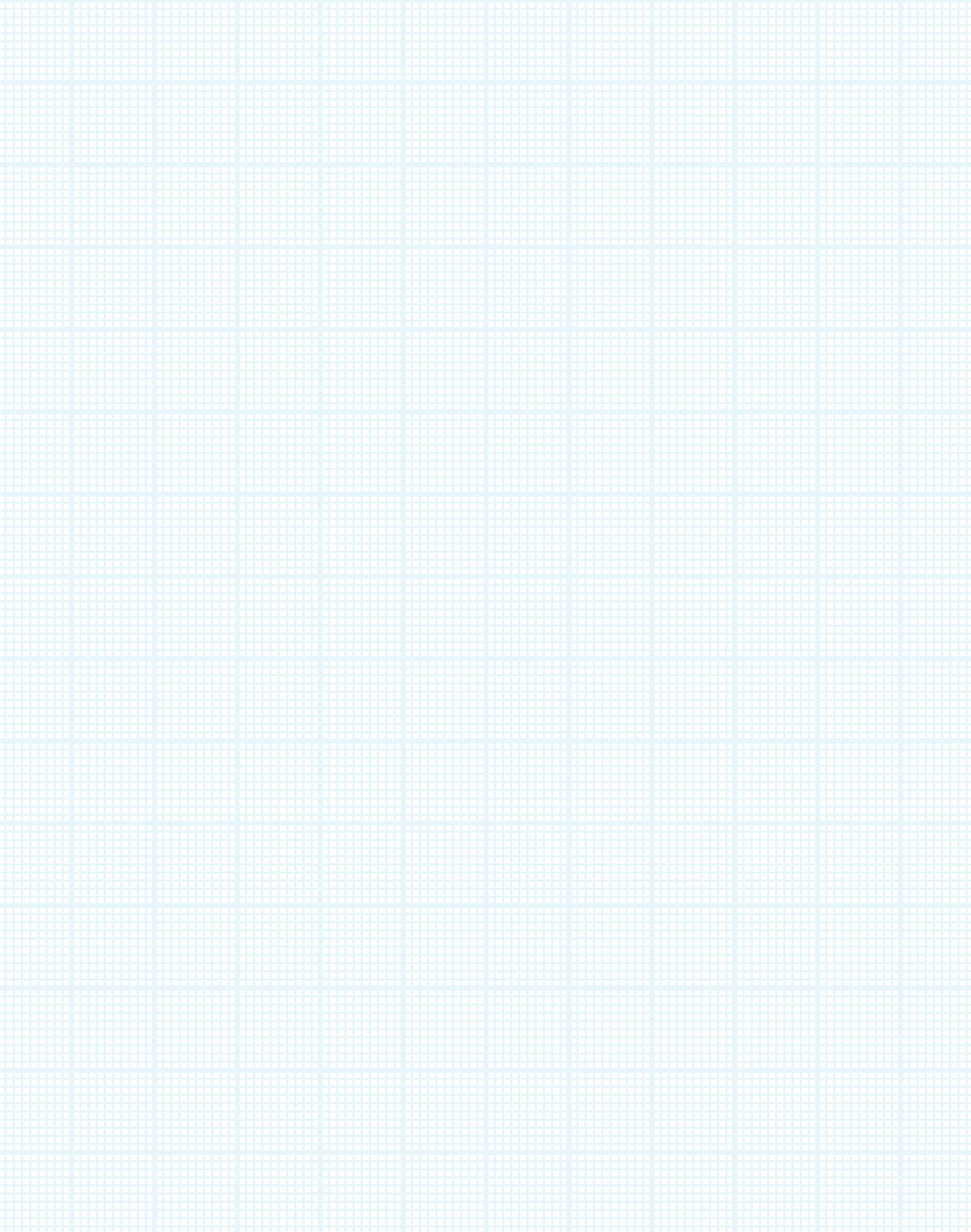


UF Protection Desalination Plant in Oman

USER NOTES

A large grid of graph paper for user notes, consisting of a 20x20 grid of squares. Each square is further divided into a 5x5 sub-grid of smaller squares, creating a fine grid pattern for writing.

USER NOTES



USER NOTES

A large grid of graph paper for user notes, consisting of a 20x20 grid of squares. Each square is further divided into a 5x5 sub-grid of smaller squares, creating a fine grid pattern for writing.



OUR HEADQUARTERS

Our flagship factory. The 4,000 m² building contains our regional sales offices, R&D facilities and manufacturing and assembly plant. The facility is capable of handling very large volumes of production with an incredibly fast lead time.

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- Filtersafe Offices
- Filtersafe Manufacturing Facilities



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