

MBR MEMBRANE MANUFACTURER IN THE UAE



" Within the vast expanse of our observable universe, Earth itself is a miracle that we should all cherish dearly."



At ALMASA We Strive for Environmental Harmony...

About us

- 💧 ALMASA sustainable technology innovations started in the UAE in 2006.
- 💧 The First Manufacturer for MBR membranes in the Middle East .
- 💧 UAE Patent Holder for Acid-Free and CCUS technology.
- 💧 With a market share of 95% in the wastewater treatment domain for cement-based products, such as ready-mix concrete and precast.
- 💧 Over 600 sustainable projects installation throughout the Gulf region.
- 💧 With more than 200 employees.

Our Mission

To drive sustainability in the UAE by localizing production and services, lower the barriers for adopting new technologies and reduce the green premium.

Our Vision

To revolutionize water treatment in the Middle East by leveraging our locally produced, cost-effective MBR membrane products.



"Almasa's MBR: Revolutionizing Water Treatment."

THE FIRST MANUFACTURER OF MBR MEMBRANE IN THE UAE

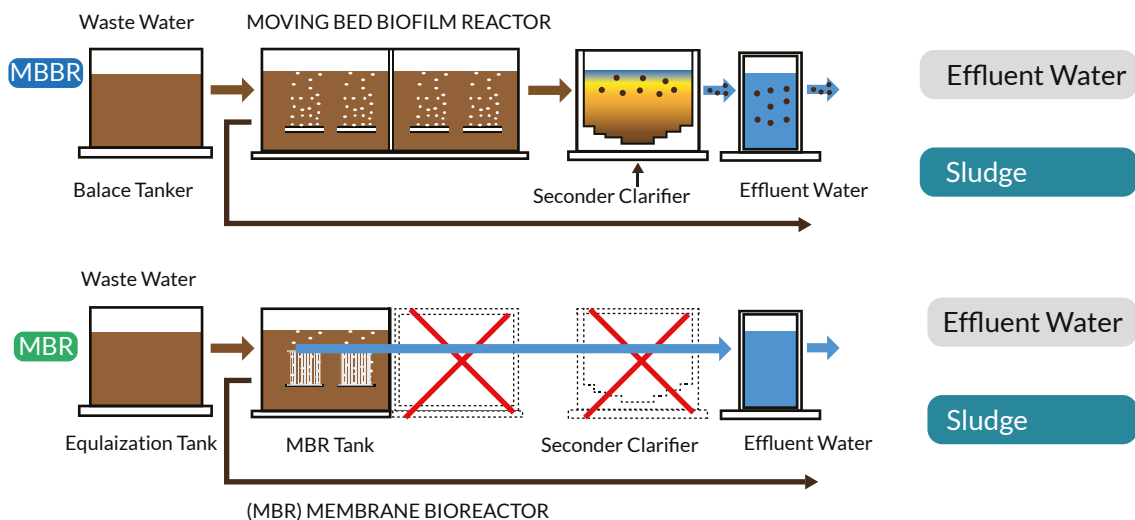


"Localized Manufacturing and Affordability Broaden the Adoption of New Technologies."

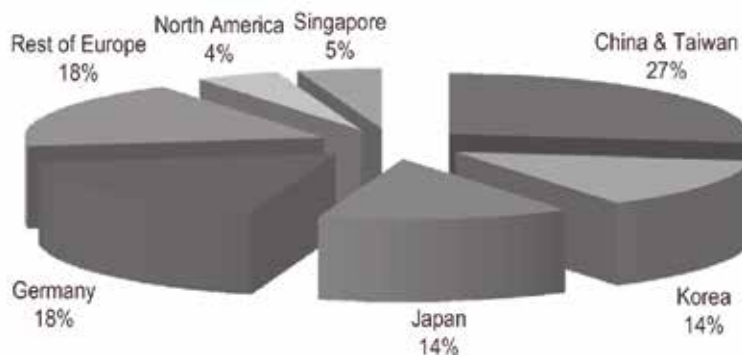
Traditonal Water Treatment VS MBR Technology

MBR technology surpasses MBBR in wastewater treatment with its superior water quality, compact footprint, reduced sludge production, lower chemical usage, and enhanced pathogen removal. MBR systems offer process stability, and their treated water is suitable for reuse, making them a versatile and advanced choice for various applications.

MBR is a revolutionary technology in the water treatment industry as an extremely high efficiency bioprocess combined with an ultra-filtration system. But It is not widely used in wastewater treatment in the middle east due to its high cost. However, Monyin hollow fiber membrane made in UAE made it possible to produce high-quality MBR at an affordable and economical cost.



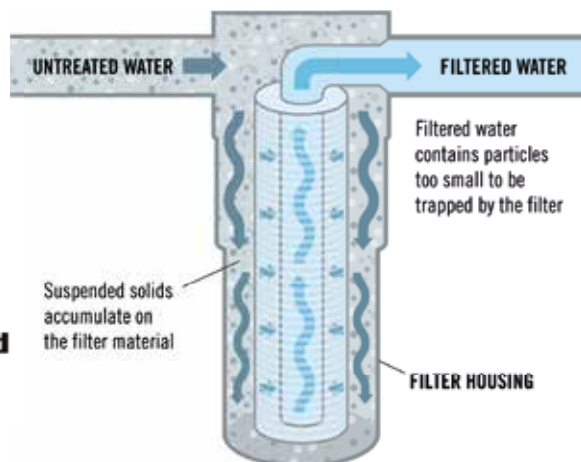
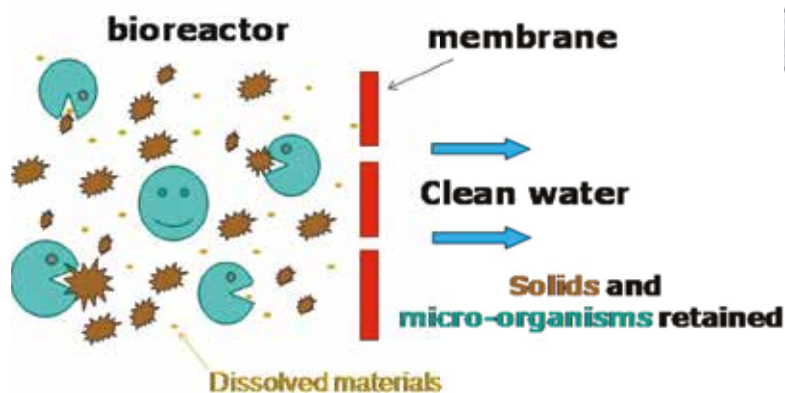
Worldwide Producers of MBR



Now We Made it in the UAE



MBR Working Principal

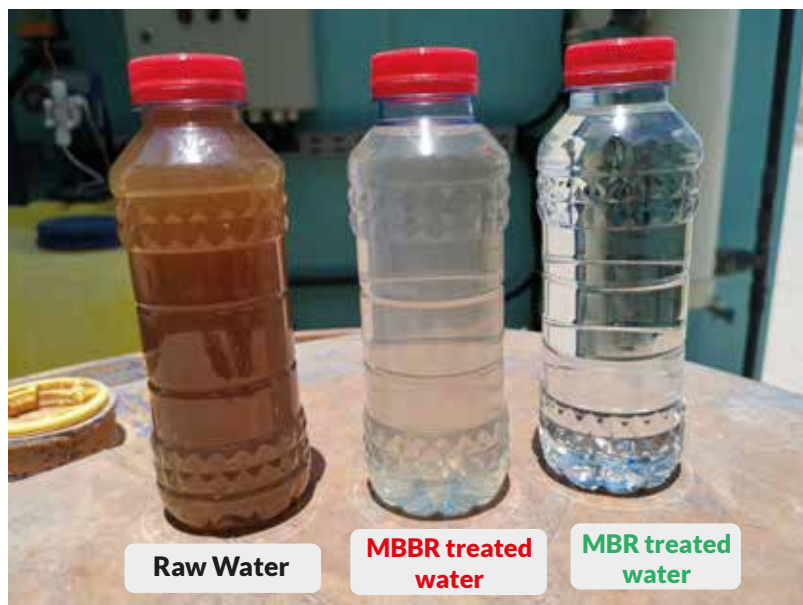


A Membrane Bioreactor (MBR) works like a high-tech filter for cleaning water. Imagine a combination of microscopic organisms and a special filter. These tiny organisms eat up impurities in the water, like bacteria and other pollutants. Then, the filter, which is like a fine mesh, catches the cleaned water while keeping the organisms and larger particles behind. This process makes the water incredibly clean and safe to use. It's like having a team of natural cleaners and a super-fine strainer working together to purify.



MBR Filtration Accuracy is
500 times more than Traditional Filter

Treated Water Quality

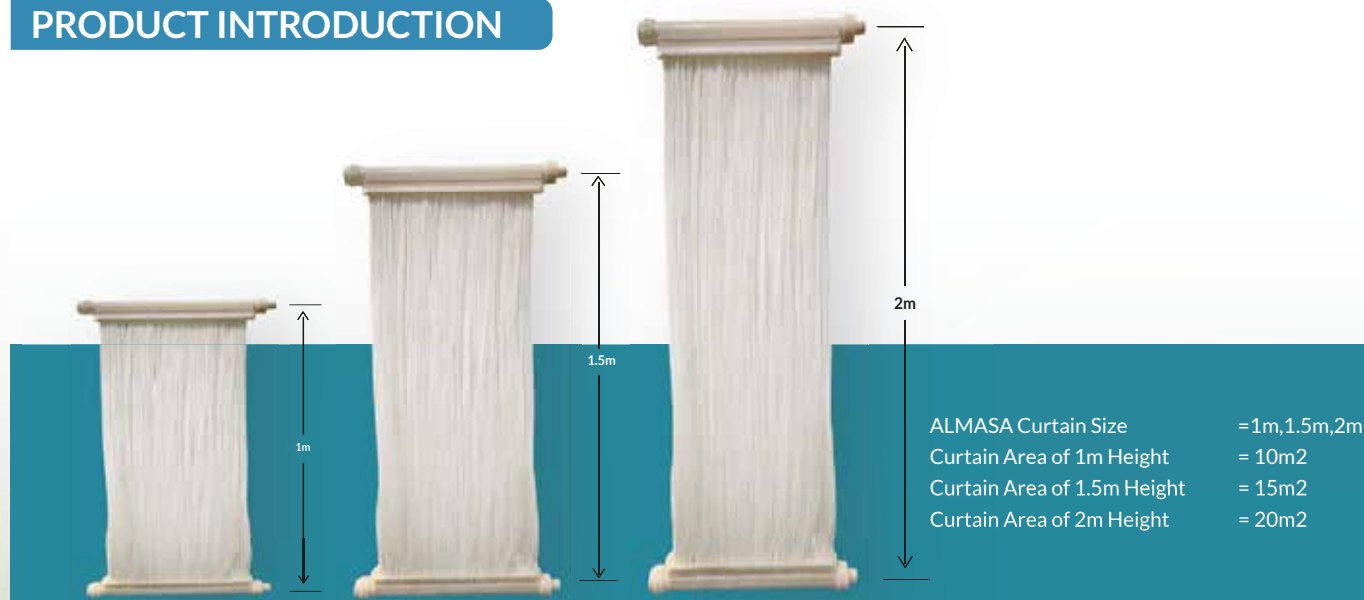


TECHNICAL DATA SHEET



Project		ENV-10	AM-40	AM-160
Module Parameters	Membrane material	PVDF		
	Tensile strength	≥200		
	Effective membrane area(m ²) of curtain	10	15	20
	Intercept aperture(um)	0.03		
	ID/OD of membrane(mm)	2.0/2.1		
Curtain Size	L*W*H(mm)	534*46*1000	534*46*1500	534*46*2000
	Connector Specification	DN32 Socket interface		
Module Size	W*H*L	70*140*110*	70*175*110x	70*240*110x
Curtain weight	Moist Curtain(kg)	10	13	15
Operation Condition	Filtration Mode	Cross flow filtration of suction type/Dead end filtration of suction type		
	Flux (LMH)	08~20		
	Pressure TMP(KPa)	<500 mbar suction, <2000 mbar backwash		
	Module uniform aeration rate(Nm ³ /h)	2~6		
	Application Temperature Range(C)	5~55		
	Applicable sludge Concentration(mg/L)	<12000		
Cleaning Conditions	pH range	2~12		
	Maximum tolerance concentration of NaClO (ppm)	5000		
Produced Water performance	Produced Water Turbidity (NTU)	<1		
	TSS	<2 mg/L		

PRODUCT INTRODUCTION











Area=Diameter* 3.14*H

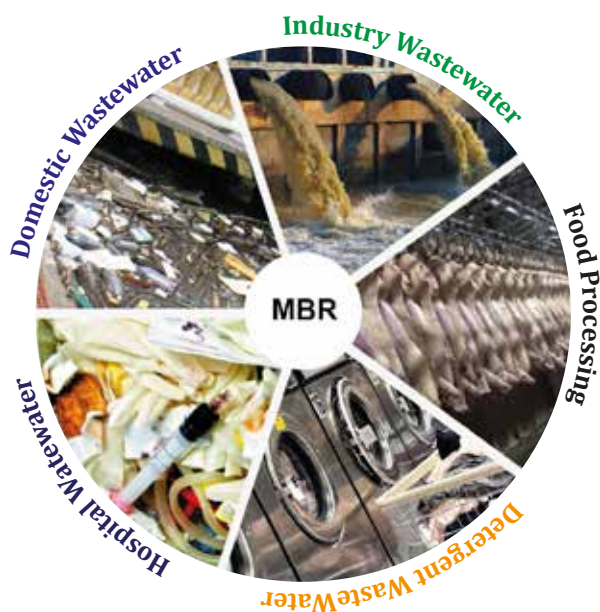
0.002 *3.14*1.5 = 0.00942m² = 15m² =1592 pc's Hollowfiber membranes

0.00942*1,592 =15m²

ADVANTAGES OF MONYIN MEMBRANE

-  Vastly improved output water quality.
BOD ≤5 ppm COD ≤10 ppm , TSS ≤2 ppm.
-  70% Reduction of chemical consumption.
-  Ease of operation, maintenance and startup.
-  65% Reduction of sludge content.
-  Modification and Retrofitting, compatible.
-  20% Reduction of power consumption.
-  30% Reduction of operating cost.
-  60% Reduction of Footprint.

MBR APPLICATIONS

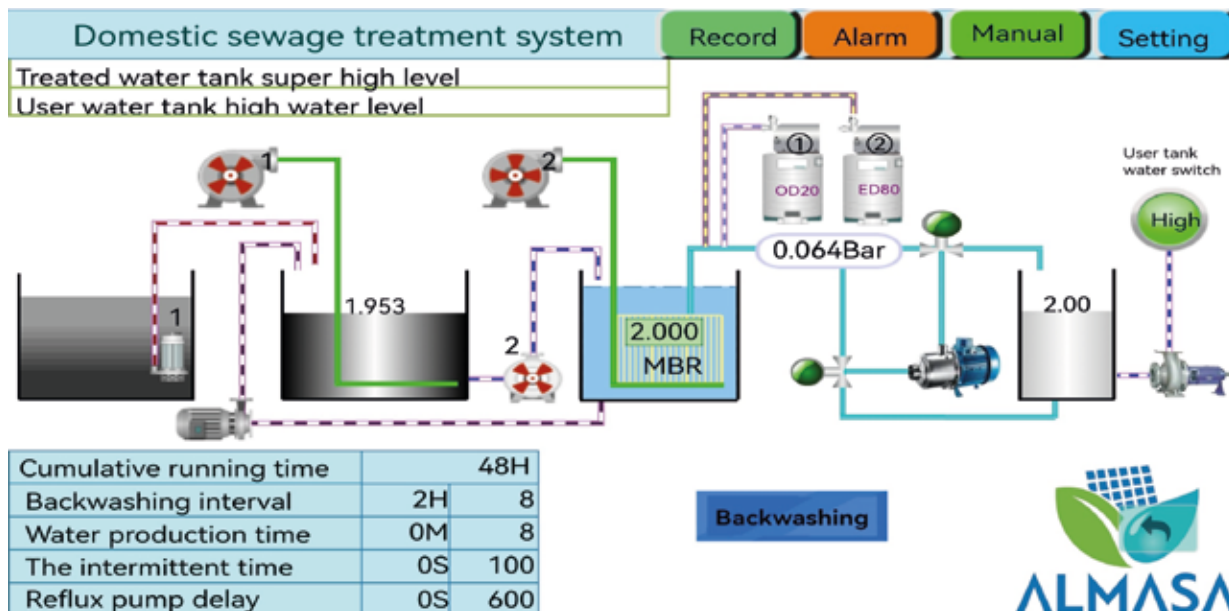


Applications

- 💧 Domestic wastewater treatment.
- 💧 Greywater treatment.
- 💧 Residential and small-scale systems.
- 💧 Slaughter House .
- 💧 Food Processing Industry.
- 💧 Dairy Farms.
- 💧 Poultry Farms.
- 💧 Textile Industry.
- 💧 Oil and gas industry.

USING SCADA FOR MONITORING

Almasa MBR plant electrical control system is equipped with PLC and SCADA (Supervisory Control and Data Acquisition). SCADA will give you access to monitor and operate remotely the MBR plants through your smart mobile or any online computers in office.



PACKAGE SEWAGE TREATMENT PLANT



- Residential
- Industrial
- Commercials
- Camps
- Institutional



Stop Tanker Disposal
Start Recycling

GOVERNMENT
DISPOSAL SITE



CHOOSE THE ENVIRONMENTAL
FRIENDLY SOLUTIONS



CONSTRUCTION



CLEANING



TOILET FLUSH



LANDSCAPING

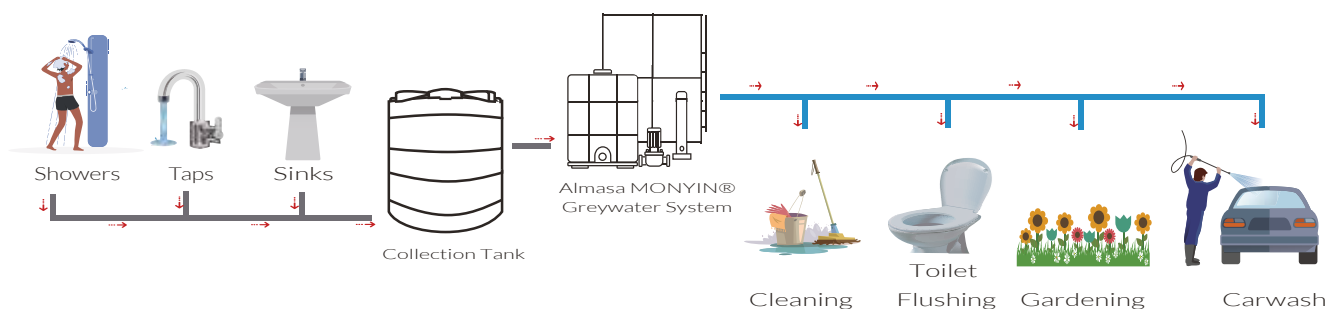
OPERATION SPECIFICATION

- Treatment capacity from 4m³ up to 3000m³ per day
- Treated water quality meets U.A.E Municipality Irrigation Standards
- Zero Investment and Monthly Rental is Optional

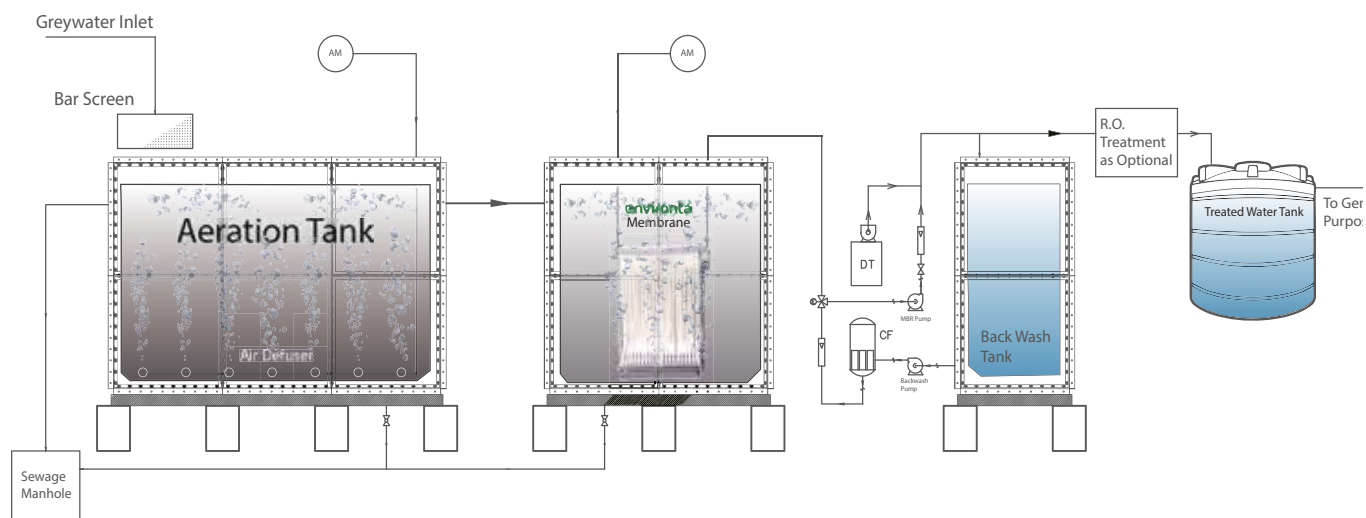
ALMASA MBR STP SPECIFICATIONS

Type Size	Treatment Capacity (G/D)	Membrane Height (M)	Membrane Area (M ²)	Total Installed Power (Kw)	Operating Power (Kw)	Occupy Area (M ²)	Tank Size (M)
ENV10	2000	1.0	40	2.05	1.05	2.88	2.4x1.2x2.0
ENV40	10000	1.5	210	6.3	4.44	18.0	6.0x2.4x2.4
ENV80	20000	1.5	405	8.05	6.44	28.8	12x2.4x2.4
ENV160	40000	2.0	810	16.1	12.8	28.8	12x2.4x3.4
ENV240	60000	2.0	1200	22.5	17.2	72.0	2x12x2.4x3.4
ENV400	100000	2.0	2000	30	24.5	108	3x12x2.4x3.4

GREYWATER TREATMENT SYSTEM



Greywater is used water collected from showers, laundry, washing sinks and baths that can be treated and used for toilet flushing, cleaning, irrigation, dust control, etc.



Advantages

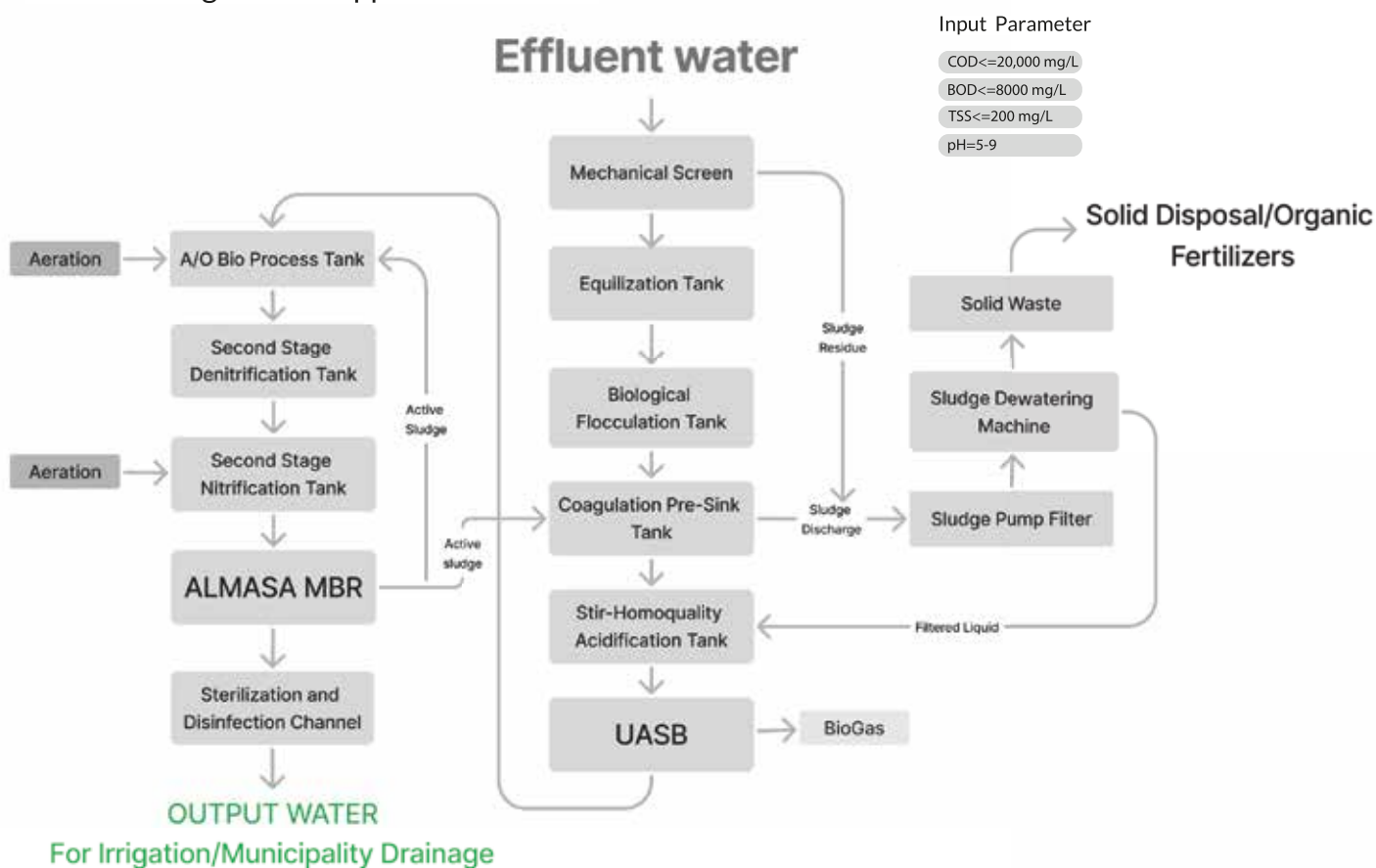
- 💧 Excellent water quality output
- 💧 75% Reduce usage of chemical
- 💧 Reduce maintenance cost
- 💧 15 - 80% Saving Water bill
- 💧 Environmental friendly
- 💧 Zero Investment, Monthly Rental
- 💧 Free Irrigation Water



EFFLUENT TREATMENT PLANT

Effluent wastewater treatment through Membrane Bioreactors (MBRs) integrates biological processes to significantly reduce high Chemical Oxygen Demand (COD) and Biological Oxygen Demand (BOD) levels, producing clarified, low-COD, and low-BOD water suitable for discharge or reuse while minimizing the environmental impact. MBRs provide efficient and compact solutions for tackling elevated organic content in wastewater.

The Following Are the Applications of ETP



EFFLUENT TREATMENT PLANT



Food Processing



Poultry Farms



Slaughter House



Dairy Farms

WE ARE PATENTED OF ACID FREE CONCRETE WASTEWATER TREATMENT



GAS System

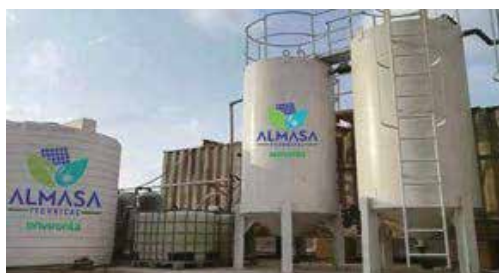
EW-12

EW-15

PH = 12.3

PH = 7.5

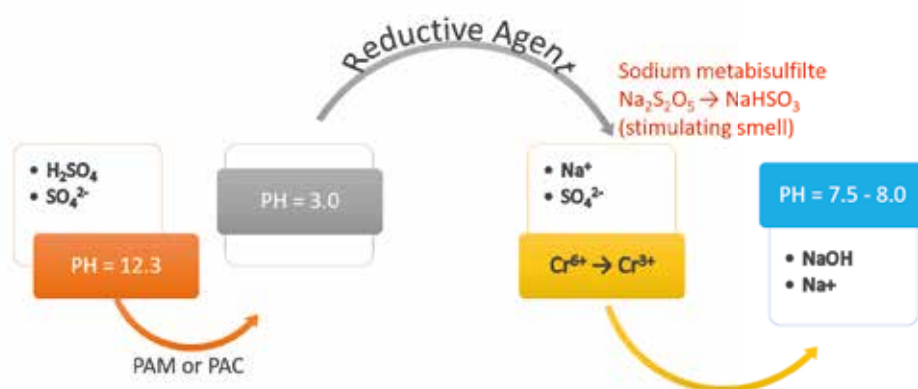
Cr⁶⁺ → Cr³⁺



Characteristics of Concrete Wastewater

Hazard of Cement Products Waste Water	DM discharge permit
pH=12.1-12.7	pH=6.0-8.0
Cr ⁶⁺ =1.3-12.0ppm	Cr ⁶⁺ ≤1.0ppm
TDS = 1200-8000ppm	TDS≤ 3000ppm
SO ₄ ²⁻ =300-2200ppm	SO ₄ ²⁻ ≤500ppm

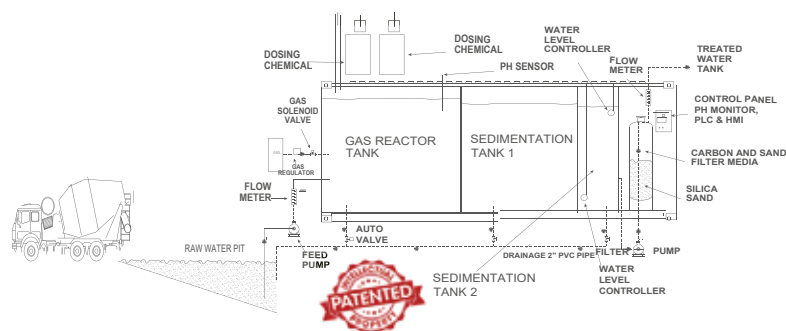
TECHNOLOGY PRINCIPLE OF TRADITIONAL PLANT



Drawbacks of Traditional Technology

- ⊖ Hazardous Chemical Usage
- ⊖ Source of Secondary Pollution
- ⊖ pH jumping (Not Stable)
- ⊖ RO is Mandatory
- ⊖ TDS increases

ACID-FREE TECHNOLOGY FOR ALKALINE WASTEWATER

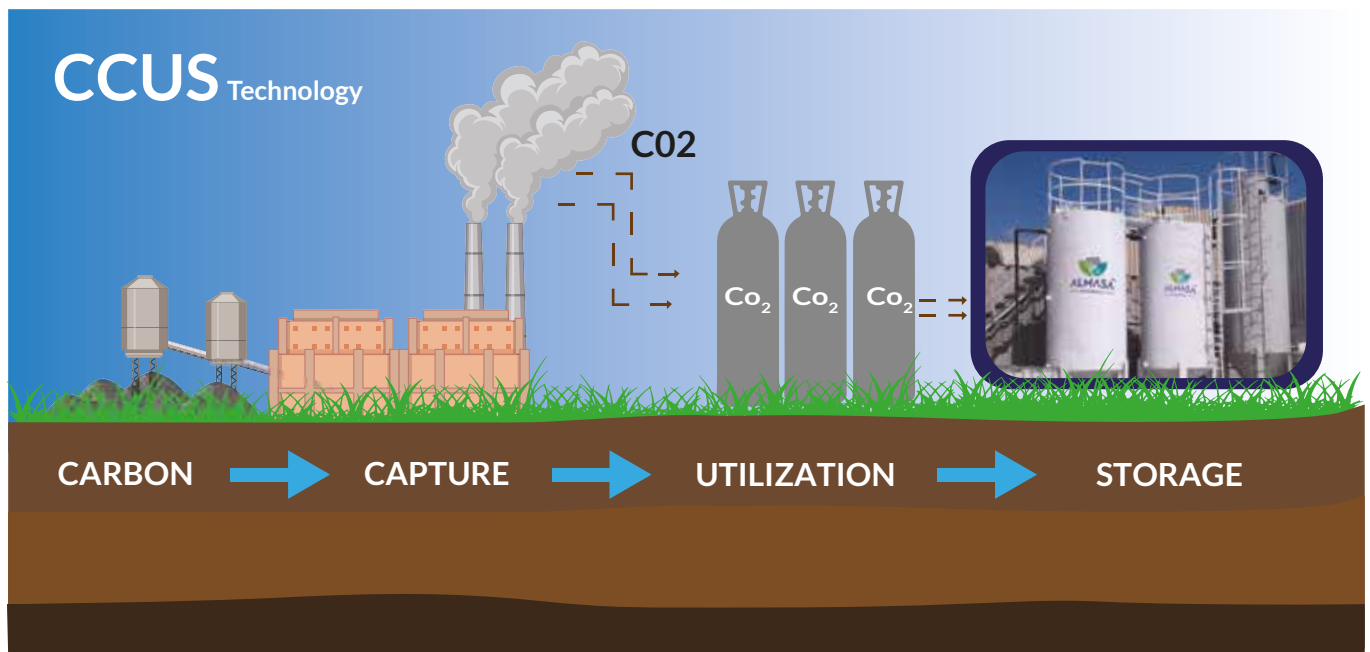


Advantages of Acid-Free Technology

- 💧 GCC Patented Technology
- 💧 Acid Free, No Hazardous Chemical
- 💧 Reducing TDS without R.O. Process
- 💧 pH Level Stable in 6.0 - 8.0
- 💧 CCUS Technology (Carbon Capture Utilization and Storage)
- 💧 40 % Low Operation Cost
- 💧 Treated water can be reused for production

CARBON CAPTURE, UTILIZATION & STORAGE TECHNOLOGY

Almasa has developed an innovative method called Acid-Free Concrete Wastewater Treatment with carbon capture, utilization, and storage (CCUS). This sustainable approach effectively treats concrete wastewater without the use of harmful chemicals. Almasa's treatment process involves capturing CO₂ gas and utilizing it in the treatment of concrete waste water. By eliminating the need for acid-based chemicals, this CCUS-based method reduces environmental impact, improves water quality, and safeguards ecosystems.



Advantages

- 💧 Significant Reduction of Greenhouse Gas Emissions.
- 💧 Repurpose CO₂ for Valuable Applications.
- 💧 Safe and Long-Term Underground Storage.
- 💧 Reduce Emission in Hard-to- Abate Industries.
- 💧 Balance Economics and Environmenatal Goals.
- 💧 Potential for Technological Advancements.



OUR PROJECTS



OUR PROJECTS



OUR CLIENTS



APPRECIATION LETTERS

Ready Mix Beton  مؤسسه تخصصی بتن

06th November 2017

Easy Life General Trading L.L.C.
Damas Tower, P.O. Box 130490
Sharjah, United Arab Emirates

Attention: Mr. Khalid Wang, Sales Engineer

Dear Mr. Khalid,

We would like to thank you for the effort you have provided to Ready Mix Beton to modify our water treatment plant to meet the Municipality requirement for safe draining the treated water into the sewage.

The most important part of the plant modification was replacing the chemical dosage from toxic acid to gas injection system.

The treatment plant has become 100% free from acid and the treated water is reuse without harm to human body.

Once again, many thanks for your generous support. We are exceedingly grateful.

Yours sincerely,


ADEL TAYBAN
Plants & Works Manager

"The most important part of the plant modification was replacing the chemical dosage from toxic acid into gas injection system."

The treatment plant has become 100% free from acid and the treated water is reused without harm to human body"

- Ready Mix Beton

http://www.readymixbeton.com - 03377509555 (تلفون) - 03377509555 (فاكس) - 03377509555 (هاتف) - 03377509555 (هاتف)
P.O. Box 3610 - Abu Dhabi - U.A.E. - Tel: 6337509555/552506 - Fax: 63377518 - E-mail: rmb.a@readymixbeton.com

 **Al Naboodah**
شركة النابودة للخرسانة الجاهزة (الركونة) ش.ذ.م.م
AL NABOODAH READY MIX CONCRETE (ARCON) LLC

Ref. No. ARCON/JQ/504/17/118 NOVEMBER 20, 2017.

Easy Life General Trading L.L.C.
Damas Tower,
P.O. Box 130490
Sharjah, United Arab Emirates

ATTENTION : **MR. KHALID WANG**
Sales Engineer

SUBJECT : **APPRECIATION LETTER**

Al Naboodah Ready Mix Concrete would like to record a letter of good service regarding the installation and operation of our installed water treatment plants at our facilities in Dubai. With the addition of the Reverse Osmosis plant and variable water treatment systems it has given us the ability to treat and dispose of our waste water in a manner that is safe, sustainable and abides by the set specific standard of the Dubai Municipality.

The most advantageous specific of our installation was the application and commissioning of the new system into our existing works whilst still retaining part of our existing treatment infrastructure, which in turn gave us an economic and flexible solution.

Many thanks for the ongoing technical support and service.


Regards,
For **AL NABOODAH READY MIX CONCRETE**.


Jason Gregory
Operations Manager

"The most advantageous specific in our installation was the application the commissioning of the new system to our existing works whilst still retaining part of our existing treatment infrastructure, which in turn gave us an economical and flexible solution."

- Al Naboodah

Part of Al Naboodah Group Companies PRESERVING OUR HERITAGE & WORKING FOR A SUSTAINABLE FUTURE

 **SYNAXIS**
Ready Mix

SYNAXIS READY MIX
M18, Mussafah, Abu Dhabi U.A.E
P.O. Box 51240, Abu Dhabi U.A.E
TEL: +9712 5511307
FAX: +9712 5511309

Ref No: SRM/HR/0140-18
Date : 24.07.2018

Easy Life General Trading LLC
1346 Damas Tower, Burj 2000,
P.O. Box 130490
Sharjah, United Arab Emirates

SUBJECT: **APPRECIATION LETTER**

Dear Mr. Khalid Wang,

We are writing this letter to extend our appreciation towards for successful completion of Easy Life "Acid Free- Gas System" technology (Concrete Waste Water Treatment Plant) on time. The fact and figures presented by you in the completion of this project is truly commendable. The installation of the waste water treatment plant has given us the ability to treat and reused our waste water in a safe manner, conforming with the Municipality Environment Department regulations. It has also reduced our operational and waste removing costs from the time of using your plant.

We, once again would like to thank you and congratulate you for your patented revolutionary technology and after sales services provided. We wish that you continue your spirit in the upcoming projects also.

Wishing you all the best and good luck ahead.

"The installation of the wastewater treatment plant has given us the ability to treat and reuse our wastewater in a safe manner, conforming with the Municipality and Environment Department regulations."

"We would like to thank you and congratulate you for your patented revolutionary technology."

- Synaxis Ready Mix

P.O. Box 35312, Abu Dhabi U.A.E.

 **AL KHALEEJ SUGAR**
شركة الخاليج للسكر
P.O. Box 130450, C-1046, Burj 2000, Sharjah, U.A.E
Tel. No.: 06-524-6020
E-mail: info@almasa-environmenta.com

10th April 2022

ALMASA ENVIRONMENTAL SOLUTIONS LLC
P.O. Box: 130450, C-1046, Burj 2000, Sharjah, U.A.E
Tel. No.: 06-524-6020
E-mail: info@almasa-environmenta.com

APPRECIATION / RECOMMENDATION LETTER

Dear Almasa Team,

We submit this letter to express our appreciation and recognition for the modification made to our existing Sewage Treatment Plant with your MBR Technology.

Not only did ALMASA offer competitive rates but also supplied quality materials and workmanship that allowed the project to be completed and commissioned within the agreed time frame. We are satisfied with your company's technology that ensures we are able to treat and manage our Sewage Treatment Plant in accordance with the STP requirements.

Working with your Team in order to complete this project was conducted in a professional manner, with healthy interaction with our employees which resulted in successful completing.

We are therefore comfortable and confident in vouching for ALMASA as a company that delivers as per agreement on time and in a professional manner.

Accordingly, we look forward to a mutually profitable and successful business relationship in our mutual quest to protect the environment and the community in the future.


Wishing you every success for a bright and prosperous future

For **AL KHALEEJ SUGAR CO. LLC**

"To express our appreciation and recognition for the modification made to our existing sewage treatment plant with your MBR Technology"

"We are therefore comfortable and confident in vouching ALMASA as a company that delivers as per agreement on time and in a professional manner."

- Al Khaleej Sugar

MODERN EST. FOR READY MIX NBH المؤسسة الجيدة للإعمال الخرسانية

1/4/2020

Appreciation Letter

Dear Al Masa Technical Gen. Trading

We started our water treatment system which looks performing perfectly, thanks to your genius ideas and great thanks and appreciation to you qualified technical team who modified, assembled and run the old existing treatment plant with professionalism.

Maintenance Manager

Eng. Tariq A. Aziz

"Thanks to your Genius Idea and great thanks and appreciation to your qualified technical team who modified, assembled and run the old existing treatment plant with professionalism"
- NBH

تلفون : ٠٢- ٧١٧٧٧٧٧ - فاكس : ٠٣- ٧٢١٧٣٣٣ - ب.ص. : ٨٠٨١٧ - العين - أبوظبي - الإمارات العربية المتحدة
Tel : 03- 7217333 - Fax : 03- 7210333 - P.O.Box : 80817 - Al Ain - Abu Dhabi - United Arab Emirates
E-mail : modernmix@emirates.net.ae E-mail : modernmix@gmail.com



Wastewater Is Not A Waste Until It's Wasted

With Almasa MBR, Wastewater Treatment Is Made Easier

Almasa Environmental Solutions L.L.C

Office No. C-1046 Damas Burj 2000 Building Sharjah, UAE

PO Box No. 130490 | Tel: +971 6 5244020

www.almasa-uae.com



Contact Us



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Ms. Maggy : +971 55 197 7577

info@almasa-environmenta.com

ABU DHABI

DUBAI

SHARJAH

UMM AL QUWAIN