BIMEX

Inspiring

WATER SOLUTIONS

FOR A SUSTAINABLE FUTURE

MBBR/IFAS BIOMEDIA
PRODUCT CATALGOUE

www.BIMEXindustry.com

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BIMEX is a major industrial company specialized mainly in water valves and hydrants, anti-water hammer protection systems, wastewater treatment, pipes, fittings, and pressure vessels.

Since its foundation, it has been a powerhouse in manufacturing, and it stands out as one of the major companies that changes the shape of the water and wastewater industry by dedication and providing cutting-edge solutions and innovations.

Our primary goals are customer satisfaction and meeting all of their needs. Hence, **BIMEX** is at the forefront of market technology and practices. During its life span, **BIMEX**'s volume of work has exceeded borders, with a portfolio of projects in international markets spanning the MENA region and Africa.

Currently, **BIMEX** has three locations in Egypt: the Cairo headquarters, Obour City Factory, and Suez Factory. It also has a mega factory and head office in Dammam, Saudi Arabia.

Salem Nashwan

FOUNDER & CHAIRMAN

BIMEX Quality Guarantee ISO 9001 ISO 14001 ISO 45001 ISO 50001 NSF UL FM APPROVED WRAS APPROVED PRODUCT ASME U R

Our History

BIMEX (Al Andalus for Engineering Industries), founded in Cairo by Eng. Salem Nashwan, aims to manufacture world-class valves and water solutions. Starting with its first major project in Al Rehab City in 1997, the company has become a regional leader in water, wastewater, and fire protection systems over nearly three decades. It exported its first valves to Lebanon in 2000 and supplied surge protection systems to Saudi Arabia in 2008. A landmark moment came in 2010 with the production of a DN2500 butterfly valve, one of the largest in the region.

By 2013, **BIMEX** had launched its first wastewater treatment unit, and in 2018, exported its first MBBR unit to Saudi Arabia. In 2023, the company expanded internationally with the opening of a new factory in Dammam, KSA, followed by further growth into Kuwait in 2024, supplying surge vessels and valve systems for key industrial projects. Today, **BIMEX** proudly contributes to iconic developments like Madinaty, Noor, and SouthMed Cities in Egypt, while continuing to serve growing markets across the Gulf region.

30+ Years of Innovations

>1996

BIMEX first project was Al Rehab City, Cairo in 1997, marking the start of a legacy.

>2000

BIMEX made its first export of valves to Lebanon.

>2008

BIMEX made its first export of water hammer protection system to Saudi Arabia.

>2010

A significant milestone with BIMEX successfully supplied, tested and supervised the installation of 29 DN2500 double eccentric butterfly valves, which was the largest of its kind in Egypt at that time.

>2013

BIMEX lunched MBBR/IFAS Bio Media production line to be the first in Egypt. Also, this year, BIMEX made its 1st supply of MBBR Compact Wastewater Treatment Unit.

>2018

The 1st Export of MBBR Wastewater Treatment Compact Unit to Saudi Arabia to the Saudi Irrigation Organization (SIO).

>2022

BIMEX had a new visual identity that reflects its significant growth across a wide array of product categories. This updated branding represents the company's ongoing expansion and highlights its commitment to innovation and excellence.

>2023

BIMEX constructed its new mega factory in Dammam, Saudi Arabia. BIMEX got the approval from the NSF and WRAS.

>2024

BIMEX Fire protection product became UL Listed and FM Approved. Also this year, BIMEX was accredited by ASME for pressure vessels manufacture.

>2025

BIMEX made its first move into Kuwait by exporting surge protection systems, fire protection hydrants and valves, flow control, air release and butterfly valves.

Our Vision

BIMEX's Vision is to aspire to expand our presence globally, establishing ourselves as a trusted partner in providing cutting-edge solutions to our clients' needs. Through dedication to excellence and customer satisfaction, we strive to be at the forefront of technological advancements, driving progress and sustainability in the industries we serve.

Our Mission

Our Mission at **BIMEX** is to relentlessly pursue excellence in the development and delivery of sustainable water solutions. We are dedicated to innovating eco-friendly products and services that optimize water usage, enhance environmental stewardship, and ensure customer satisfaction. Through a culture of continuous improvement, collaboration, and environmental responsibility. We strive to make a positive impact on the world, one drop at a time.

Our Values

01 **Excellence in work**: We strive for mastery in every task we undertake, ensuring the highest quality and precision.

02 **Team spirit**: We foster a collaborative environment where individuals unite their strengths to achieve common goals and support one another.

03 **Mutual respect**: We uphold a culture of mutual respect, valuing each individual's contributions, ideas, and perspectives.

04 **Honesty**: We prioritize transparency and integrity in all our interactions, maintaining honesty and sincerity in our communication and actions.

05 **Humility**: We embrace humility as a cornerstone of our character, remaining open to learning, acknowledging our limitations.

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Our **Sustainability**

Egypt, like many countries **in the MENA region,** faces scarcity in its water resources. Yet, crucial problems of water loss are also on the rise. **BIMEX** offers a wide range of reliable products that ensure and contribute **tothe efficient operation of water supply networks, sanitation, and water recovery facilities.**

Our products form essential components of the **water supply** and **wastewater treatment infrastructure.** Collectively, our products contribute **to the UN sustainable development goals by ensuring clean water and sanitation,** by reducing water loss, **reducing CO_2 emissions,** and by treating and turning **wastewater into valuable water for reuse.**

Our **Product Ranges**

Water & Wastewater Valves

BIMEX has an extensive line of valves suited for water, and wastewater. The range includes gate valves & much more.

Fire Protection Valves & Hydrant

BIMEX top-tier UL & FM approved valves and hydrants are also available. We are the first manufacturer in Egypt whose product are UL-listed and FM approved.

Surge Protection

BIMEX surge (water hammer) protection systems are fully designed and manufactured in-house. Different ranges of solutions are available.

Wastewater Treatment

BIMEX designs and manufactures compact wastewater treatment plants for domestic and industrial wastewater.

MBBR/IFAS Biomedia

BIMEX presents a variety of "BIMEX Bio media" to enhance wastewater treatment as for the applications of MBBR & IFAS systems.

Pressure Vessels

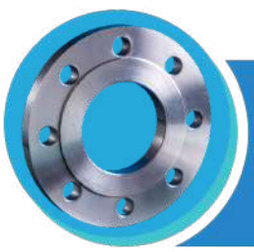
BIMEX manufactures all types of metallic tanks and pressure vessels. Our tanks and vessels production lines include technologically advanced CNC dishing presses and fully automatic SAW welding machines.

Metallic Filters

BIMEX designs, manufactures, and supplies filtration systems for river, process, and effluent waters.

Dish End

BIMEX dish ends are manufactured through a cold forming process with diameters of up to 5,000 mm.



Flanges

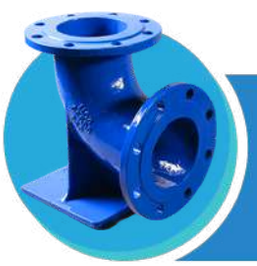
BIMEX is your premier destination for flanges that adhere to the highest industry standards ANSI, ASME, EN, ISO & EN.

Steel Pipes & Fitting

BIMEX steel pipes and fittings crafted to the exacting standards set by the ISO, DIN, EN, ASME or AWWA.

Hydro Mechanical Equipment

BIMEX's range of water and wastewater treatment plant equipment, including penstocks and basket screens, is broadly employed in the market for its durability.



Ductile Iron Pipe Fittings

BIMEX's range of water and wastewater ductile Iron pipe fittings includes pipes, tees, elbows, etc.

OUR PRODUCTS

Our **Quality and Accreditations**

Market standards are our starting point, not our destination. We constantly innovate, pushing the boundaries of what's possible. Our products don't just meet expectations; they redefine them.

BIMEX manufacturing is no ordinary feat. It involves a meticulous sequence of steps, from design to assembly. Our skilled engineers meticulously craft each product, ensuring it meets stringent quality benchmarks.

Whether it's a valve, surge protection system, or a treatment plant, **our commitment to excellence** remains unwavering.

Rigorous testing ensures that every product leaving our production line meets and often exceeds industry standards. We don't just meet expectations; we redefine them.

Obtaining certifications from the most widely recognized international authorities, such as **ASME, NSF, WRAS, UL,** and **FM,** is a testament to our unwavering commitment to quality and safety.

By holding these certifications, we assure our customers that **BIMEX** products consistently surpass market standards.

Quality and safety are not mere buzzwords; they're ingrained in every product we produce.

BIMEX MBBR Biomedia: Advanced Carrier Technology for High-Rate Biological Treatment

BIMEX presents a variety of filters media "BIMEX Bio media" which is suitable for broad applications of aeration and biological treatment plants. The unique engineered designs of BIMEX Bio media increase their surface area thus allowing the increase in efficiency of effluent and treatment process.

The spherical and tube designs of BIMEX Bio media ease the treatment process by speeding up the aerobic reaction. Also, the high-voidage designs prevent blocking unlike the conventional filters' media.

The diversity in BIMEX Bio media size presents them as the ideal alternative to the conventional media for improved performance in new wastewater treatment plants (WWTPs). Furthermore, they are the perfect solution to overcome the operational problems in existing WWTPs operating by conventional and extended aeration and trickling filters. Replacing whole or part of conventional media in old WWTPs with BIMEX media improved treatment efficiency, allowing more influent to be received with the least modifications.

MBBR biomedia provides a robust, flexible, and high-rate biological treatment platform that meets the demands of modern municipal and industrial wastewater applications. Its proven performance, operational simplicity, and adaptability make it a preferred solution for engineers seeking reliable, energy-efficient process optimization.

Advantages

BIMEX Bio media provides a lot of advantages for treating biological and industrial wastewater as follows:

- Light weight
- Least clogging
- High voidage
- Non-toxic
- High surface area
- Acid resistance
- High BOD5 reduction and nitrification
- Cost-effective solution
- Durable
- Eco-friendly

Where to use?

BIMEX Bio media can be used for a broad variety of wastewater treatment applications. The design and shape of the media heavily affects its surface area and voids thus its ideal application. BIMEX Bio media can be used for:

- MBBR and IFAS
- Trickling filter
- Upgrading existing WWTPs
- Organic removal
- Nitrification and Denitrification
- Detoxification

The geometry of MBBR biomedia—typically featuring internal fins, cross-flow channels, and protected cavities—supports the formation of a dense, active biofilm layer while maintaining efficient oxygen and nutrient transfer. This configuration enhances the biodegradation of BOD, COD, ammonia, and total nitrogen, enabling high volumetric removal rates even under variable loading conditions.

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Why to choose BIMEX?

• Local Made

MBBR biomedia is locally produced in Saudi Arabia, meeting regional quality and industrial standards. This domestic production provides immediate availability, eliminates international shipping delays, and ensures faster project execution, reduced lead times, and reliable on-demand delivery for treatment applications.

Saudi MADE

• Advanced Engineering

At **BIMEX**, our in-house process and environmental engineers utilize advanced design tools and biological modeling software to deliver optimized MBBR system solutions that enhance treatment efficiency and reactor performance. With technical precision and deep application expertise, we ensure that every treatment line operates with maximum stability, reliability, and biological effectiveness.

Properly selecting, sizing, and configuring MBBR biomedia is essential for achieving high removal rates and long-term operational performance. BIMEX excels in providing custom-engineered media solutions, tailored filling ratios, and process configurations that match the unique requirements of each wastewater application. A comprehensive technical report is delivered to our clients, including recommended media specifications, reactor loading parameters, and performance expectations to ensure seamless integration and optimal results.

• Approved Product

BIMEX MBBR solution are approved products at several companies and agencies.

• Expertise Backed by Experience

With a wealth of knowhow and years of industry experience, **BIMEX** delivers innovative and reliable solutions. From initial concept to final product, **BIMEX** maintains complete control over the design and manufacturing process, ensuring the highest standards of quality and performance and making us a trusted partner in engineering excellence.

• Manufacturing Powerhouse

BIMEX's 25,000 sqm in three factories teamed with professional engineers and technicians can handle large production capacity. **BIMEX** production lines include in-house testing facilities.

ISO 9001 ISO 14001 ISO 45001 ISO 50001

• After Sales and Grantee

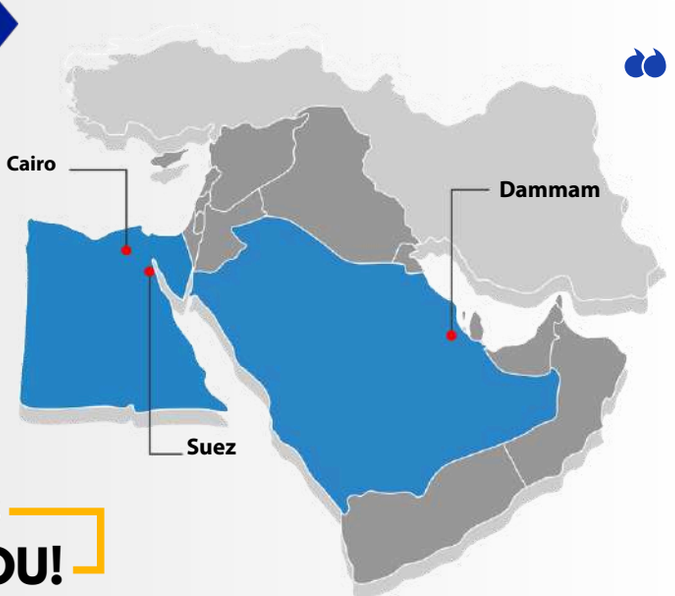
BIMEX not only provide surge vessels but also offer support to our clients during the commissioning process, no matter where they are located. Our fully trained personnel can provide aftersales services and on-site technical assistance till successful delivery.

Our Production

★★★★★

BIMEX production facilities are strategically positioned to enhance efficiency, streamline logistics, and ensure superior customer service.

Our locations secure support of rapid manufacturing, quality assurance, and seamless distribution to both local and international markets.



BIMEX is NEAR YOU!

Product Variant No. MBBR850

BIMEX Biomedia MBBR850

MBBR 850

BIMEX MBBR 850 offers an optimal balance between performance and operational reliability, making it the ideal choice for municipal and industrial wastewater treatment applications requiring high efficiency and long-term stability.

APPLICATION

BIMEX MBBR 850 bio media is designed for use in biological wastewater treatment systems utilizing the Moving Bed Biofilm Reactor (MBBR) and Integrated Fixed-Film Activated Sludge (IFAS) technologies. Typical applications include:

- Municipal wastewater treatment plants (WWTP)
- Industrial wastewater treatment (food, beverage, petrochemical, fish, etc.)
- Biological oxidation (BOD/COD removal)
- Nitrification and ammonia removal
- Plant upgrades and capacity expansion
- Retrofit of conventional activated sludge systems

DESIGN FEATURES

High Specific Surface Area

- Provides ≥ 850 m^2/m^3, enabling efficient biofilm growth and enhanced biological treatment performance.

Lightweight Design

- Manufactured from low-density HDPE, ensuring easy suspension, uniform distribution, and reduced energy consumption.

Anti-Clogging Design

- Open structure and controlled void ratio minimize clogging risk and maintain long-term performance

High Void Ratio (Porosity)

- Ensures excellent water flow, oxygen transfer, and effective contact between biomass and wastewater.

Optimized Geometry

- Wheel-type carrier with multiple internal chambers to maximize protected surface area and biofilm retention.

Enhanced Biofilm Protection

- Internal structure shields biomass from shear forces, improving process stability and performance.

Excellent Mixing Behavior

- Near-neutral density ensures uniform suspension and efficient contact with wastewater and oxygen.

High Mechanical Strength

- Robust construction suitable for continuous aeration and long operational life.

Long Service Life

- Manufactured from high-quality polymers resistant to chemicals, UV, and biological degradation.

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TECHNICAL CHARACTERISTICS

No	Description	Material
1	Manufacturer	Al Andalus BIMEX
2	Origin	Egypt / Saudi Arabia
3	Material	VIRGIN HDPE (UV STABILIZED)
4	Material Origin	Sidpec (Egypt), Sabic (KSA), or equal
5	Color	White
6	Shape	Cylindrical with External Fins
7	Size	Ø25 × 10 mm
8	Specific Surface Area	850 m^2/m^3
9	Specific Gravity	0.94 – 0.97
10	Void Ratio	>85%
11	No of Rooms	19
12	Applicable Water Temp.	0 - 80 °C
13	Service Life	> 20 Years
14	Flow Direction	Nonspecific
15	Resistance to Hydrocarbons	Excellent
16	Resistance to Alkalis	Excellent
17	Hazardous Reaction	None
18	Transport	Non-Hazardous Goods
19	Technical Protective Measures	No special measures required. Handle accordance with good industrial and safety practice
20	Toxicity	Harmless to health if handled in correct manner
21	Ecological Effect	Harmless to environment with appropriate disposal
22	Packing	Woven Bag, size 0.1 m^3 or 1 m^3
23	Quality Control and Testing	According to ISO 1183-1:2019 and BS ISO 20457:2018

DESIGN & OPERATION GUIDELINES

- Recommended filling ratio: 40–70% of reactor volume
- Suitable for both aerobic and anoxic processes
- Requires proper screening and aeration system design
- Compatible with fine and coarse bubble aeration systems

Product Variant No. MBBR1200

BIMEX Biomedia MBBR1200

MBBR .

BIMEX MBBR 1200 offers a very high surface area, making it the ideal choice for heavy loaded municipal and industrial wastewater treatment applications requiring high efficiency and long-term stability.

APPLICATION

BIMEX MBBR 1200 bio media is designed for use in biological wastewater treatment systems utilizing the Moving Bed Biofilm Reactor (MBBR) and Integrated Fixed-Film Activated Sludge (IFAS) technologies. Typical applications include:

- Municipal wastewater treatment plants (WWTP)
- Industrial wastewater treatment (food, beverage, petrochemical, fish, etc.)
- Biological oxidation (BOD/COD removal)
- Nitrification and ammonia removal
- Plant upgrades and capacity expansion
- Retrofit of conventional activated sludge systems

DESIGN FEATURES

High Specific Surface Area

- Provides ≥ 1200 m^2/m^3, enabling efficient biofilm growth and enhanced biological treatment performance.

Lightweight Design

- Manufactured from low-density HDPE, ensuring easy suspension, uniform distribution, and reduced energy consumption.

Anti-Clogging Design

- Open structure and controlled void ratio minimize clogging risk and maintain long-term performance

High Void Ratio (Porosity)

- Ensures excellent water flow, oxygen transfer, and effective contact between biomass and wastewater.

Optimized Geometry

- Wheel-type carrier with multiple internal chambers to maximize protected surface area and biofilm retention.

Enhanced Biofilm Protection

- Internal structure shields biomass from shear forces, improving process stability and performance.

Excellent Mixing Behavior

- Near-neutral density ensures uniform suspension and efficient contact with wastewater and oxygen.

High Mechanical Strength

- Robust construction suitable for continuous aeration and long operational life.

Long Service Life

- Manufactured from high-quality polymers resistant to chemicals, UV, and biological degradation.

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TECHNICAL CHARACTERISTICS

No	Description	Material
1	Manufacturer	Al Andalus BIMEX
2	Origin	Egypt / Saudi Arabia
3	Material	VIRGIN HDPE (UV STABILIZED)
4	Material Origin	Sidpec (Egypt), Sabic (KSA), or equal
5	Color	White
6	Shape	Cylindrical with External Fins
7	Size	Ø25 × 10 mm
8	Specific Surface Area	>1200 m^2/m^3
9	Specific Gravity	0.94 – 0.97
10	Void Ratio	>85%
11	No of Rooms	37
12	Applicable Water Temp.	0 - 80 °C
13	Service Life	> 20 Years
14	Flow Direction	Nonspecific
15	Resistance to Hydrocarbons	Excellent
16	Resistance to Alkalis	Excellent
17	Hazardous Reaction	None
18	Transport	Non-Hazardous Goods
19	Technical Protective Measures	No special measures required. Handle accordance with good industrial and safety practice
20	Toxicity	Harmless to health if handled in correct manner
21	Ecological Effect	Harmless to environment with appropriate disposal
22	Packing	Woven Bag, size 0.1 m^3 or 1 m^3
23	Quality Control and Testing	According to ISO 1183-1:2019 and BS ISO 20457:2018

DESIGN & OPERATION GUIDELINES

- Recommended filling ratio: 40–70% of reactor volume
- Suitable for both aerobic and anoxic processes
- Requires proper screening and aeration system design
- Compatible with fine and coarse bubble aeration systems

Product Variant No. MBBR1200-1

BIMEX Biomedia MBBR1200

MBBR 1200

BIMEX MBBR 1200 offers a very high surface area, making it the ideal choice for heavy loaded municipal and industrial wastewater treatment applications requiring high efficiency and long-term stability.

APPLICATION

BIMEX MBBR 1200 bio media is designed for use in biological wastewater treatment systems utilizing the Moving Bed Biofilm Reactor (MBBR) and Integrated Fixed-Film Activated Sludge (IFAS) technologies. Typical applications include:

- Municipal wastewater treatment plants (WWTP)
- Industrial wastewater treatment (food, beverage, petrochemical, fish, etc.)
- Biological oxidation (BOD/COD removal)
- Nitrification and ammonia removal
- Plant upgrades and capacity expansion
- Retrofit of conventional activated sludge systems

DESIGN FEATURES

High Specific Surface Area

- Provides ≥ 1200 m^2/m^3, enabling efficient biofilm growth and enhanced biological treatment performance.

Lightweight Design

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Anti-Clogging Design

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3	Material	VIRGIN HDPE (UV STABILIZED)
4	Material Origin	Sidpec (Egypt), Sabic (KSA), or equal
5	Color	White
6	Shape	Cylindrical with External Fins
7	Size	Ø25 × 4 mm
8	Specific Surface Area	>1200 m^2/m^3
9	Specific Gravity	0.94 – 0.97
10	Void Ratio	>85%
11	No of Rooms	64
12	Applicable Water Temp.	0 - 80 °C
13	Service Life	> 20 Years
14	Flow Direction	Nonspecific
15	Resistance to Hydrocarbons	Excellent
16	Resistance to Alkalis	Excellent
17	Hazardous Reaction	None
18	Transport	Non-Hazardous Goods
19	Technical Protective Measures	No special measures required. Handle accordance with good industrial and safety practice
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BIMEX

Several Product Ranges, One Company

- Water and Wastewater Valves
- Fire Protection Valves and Hydrants
- Surge (Water Hammer) Protection Systems
- Wastewater Treatment Compact Units
- Steel/DI Pipes and Fittings
- Media Filters
- MBBR/IFAS Biomedia
- Penstocks and Screens
- Dish End/Head
- Flanges

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