

Innovative & Advance Water Treatment Systems & Components



SAHARA INDUSTRY
Innovation Beyond Your Imagination



WATER

Purify. Empower. Thrive.





WATER: THE ELIXIR OF LIFE

Water, the essential elixir of life, is a remarkable chemical substance. Transparent, tasteless, odourless, and colourless, it is present throughout our planet, impacting every aspect of life. Encompassing 71% of the Earth's surface, water plays a crucial role in the cycles that support life.

Water is more than a necessity for human survival; it is both a social and economic asset. Beyond fulfilling our basic needs, it serves as a catalyst for economic activities. Water lies at the heart of commerce and industrial development, permeating the manufacturing of nearly every product we rely on. Its worth is evidenced by its inclusion in international commodity exchanges alongside gold and oil, heralding a future where water may surpass even the value of precious metals.

The oceans dominate, containing an astonishing 97% of Earth's water, all of which is saline. The remaining 3% exists in rivers and lakes, as icecaps and glaciers, as soil moisture, and in aquifers. These freshwater sources are crucial for sustaining life on earth. However, only a small portion of this precious freshwater is easily accessible for human use.

India's economic growth, rapid urbanization, and population expansion have led to an increased demand for water. However, the gap between demand and supply continues to widen, creating challenges for water utilities and industries. The scarcity of clean and sufficient water is spreading to larger areas, further aggravated by water pollution and deteriorating groundwater quality.

We must act urgently to address the pressing water challenges at hand. Water is not just a resource; it is the lifeblood of our planet and the foundation for sustainable development. Together, let us unite to protect and preserve this invaluable gift. Our goal is a future where clean water is available to all, nurturing all life and fostering progress.

The waste and misuse of Water stems primarily from the failure to acknowledge its intrinsic value.

MARKET DYNAMICS

WATER & WASTEWATER

The surging demand for high-quality water has reshaped the water landscape, leading to substantial growth in the global water and wastewater treatment market. By 2032, this market is projected to reach a value of **USD 956.48 billion**, with a compound annual growth rate (CAGR) of **5.4% from 2022 to 2032**.

India's water sector has also experienced significant evolution, propelled by advancing technology and growing demands, positioning it as one of the largest water markets globally. The water treatment market in India, valued at **USD 2.1 billion** in 2021, is projected to reach **USD 4.03 billion** by 2029, at a **CAGR of 8.5%** from 2022 to 2029.

As the volume of wastewater continues to escalate, the wastewater treatment market in India is also expanding. Valued at **USD 3.981 billion** in 2020, it is anticipated to grow at a **CAGR of 12.92%** over the forecast period, reaching a market size of **USD 9.320 billion** by 2027.

Globally, the water and wastewater treatment technologies market is forecasted to reach **USD 128.78 billion**, with a **CAGR of 5.4%** from 2022 to 2029. Similarly, the Indian water and wastewater treatment (WWT) technology market, valued at **USD 2.1 billion** in 2021, is expected to reach **USD 3.3 billion** registering a **CAGR of over 8%** from 2022 to 2027.

Furthermore, the global water and wastewater treatment chemicals market is anticipated to reach **USD 52.01 billion by 2029**, with a **CAGR of 4.7%** from 2022 to 2029. In India, the water and wastewater treatment chemicals market amounted to **USD 600 million** in 2020 is projected to achieve healthy growth, reaching **USD 986 million by 2026**.

Growth Potential

Global

- Water & wastewater treatment market - **\$956 Bn by 2032**
- Water & wastewater treatment
- Water & wastewater treatment chemicals market - **\$52 Bn by 2029**

India

- Water treatment market - **\$4 Bn by 2029**
- Wastewater treatment market - **\$9 Bn by 2029**
- Water & wastewater treatment technology market - **\$3.3 Bn by 2027**
- Water & wastewater treatment chemicals market - **\$986 Mn by 2026**



SAHARA INDUSTRY

Sahara Industry was established in 1989 with the idea of providing innovative solutions for water and wastewater treatment. The resolve of making water safe for drinking, industrial and institutional purposes has made the organization a leader in the segment.

In a legacy spread across two decades, it has contributed immensely by executing several hundred projects to provide clean drinking water, ultrapure water for industrial production and wastewater treatment for reuse in India and other countries. With an unmatched experience of executing projects of various capacities, it has employed technologically advanced machineries and manufacturing solutions combined with professional approach to achieve the rare feat of being an indigenously creator of advanced water and wastewater treatment solutions matching world standards.

The ISO 9001:2015 certified; it has carved a niche as one of the home grown brand becoming a leading and preferred water and wastewater treatment solution provider and manufacturer of highest quality equipment and filtration system. With market oriented approach driven by modern systems and processes, it has a long list of reputed clients. The technical expertise and in-depth understanding of the water sector, coupled with high quality products and excellent service standards, enabled it to offer the best integrated and strategic solutions to industrial and municipal water and wastewater treatment.

Our industry has shown remarkable growth over the years. This growth can be attributed to the company's commitment to quality products and services, customer satisfaction, and continuous innovation. Sahara Industry has also expanded its product line and reached out to new markets, resulting in increased sales and profits. With a dedicated team and a customer-focused approach, the company is poised for even greater success in the future.



LEADERSHIP

Mohammed Abdul Majeed

Founder & Chairman

He is a highly respected figure in the water treatment industry with over four decades of experience in manufacturing top-quality products for national and international clients. He is known for his exceptional design skills and his ability to creatively develop indigenous water treatment equipment and solutions at a cost-effective price. His innovative ideas and product line-ups have been widely accepted in the market, leading to significant growth for his companies. By incorporating modern business strategies, technology, and his dynamic leadership qualities, his group companies have achieved a turnover exceeding INR 1000 million. Today, he is recognized as an entrepreneurial titan who has made significant contributions to the water sector through innovation, technology, and his visionary approach, resulting in both admiration and wealth. He is highly regarded for the significant contributions to the water sector through his innovation and visionary approach.



Mohammed Abdul Rahman

Chief Executive Officer

He is at the forefront of company's initiatives related to water treatment equipment, chemicals, softeners, water vending machines, and other product categories. His innovative business approach and extensive knowledge position him as a leader in areas such as business planning and development, financial planning and policies, product development, and operational management.

He is responsible for establishing policies and procedures that ensure efficient resource utilization to drive growth and innovation within the company. He has been instrumental in successfully implementing modern business tools and digital technology, enabling the sales and marketing team to access relevant information in real-time and make prompt decisions.

With an MBA in marketing and finance, he possesses strong people management skills and has a clear vision for employee development within the organization. He leads the organization with a clear vision for managing and developing the team, ensuring that the company has the right talent and resources to thrive in a competitive environment.



VISION & MISSION



OUR MISSION

Our mission is to deliver affordable and environment-friendly water treatment solutions that consistently meet the highest quality and performance standards. We are dedicated to collaborating closely with clients, comprehending their unique needs and challenges, and providing tailored solutions that precisely address their requirements. We are committed to remaining at the cutting edge of water treatment technology and innovation, and actively promoting sustainable development through operations and practices. It also fosters a culture of teamwork, integrity, and continuous improvement to guarantee the success.



OUR VISION

We are dedicated to ensuring universal access to safe, clean, and affordable water for every individual, community and industry. This includes offering solutions for water and wastewater treatment and resource conservation. We strive to lead in innovation and technology, constantly enhancing the efficiency and effectiveness of water treatment processes. Our ultimate objective is to promote sustainable development and environmental protection by advocating responsible water usage. Through collaboration and partnerships, we aim to achieve universal access to safe water and sanitation while building resilient businesses capable of addressing the challenges posed by the scarcity and changing climate.





CEO's Message

Moahmmed Abdul Rahman

The world is experiencing significant water scarcity and pollution issues, and India is particularly affected. India has a severe shortage of freshwater, with more than 40% of its population lacking access to drinking water. Indeed, India is the largest consumer of groundwater globally, accounting for approximately one-fourth of the world's total groundwater extraction, being used for various purposes, including irrigation, industrial production, and drinking water supply.



This puts immense strain on water resources and increases salinity levels in available water. According to a new report, the global point-of-entry water treatment systems market is projected to reach \$13.53 billion by 2031, growing at a CAGR of 4.4% from 2022 to 2031. Additionally, the overall water and wastewater treatment market is expected to reach a value of \$956 billion by 2032, a CAGR of 5.4% during the forecast period of 2022-2032.

In India, the water and wastewater treatment industry has been a promising sector, growing at a healthy pace and the market size is pegged around INR 15,000 to 20,000 crores (approx. USD 2 to 3 billion). Sahara Industry, being a leading solution provider is very optimistic about its future growth.

Increased government expenditure on water supply and growing awareness of the importance of clean drinking water are expected to improve the sector outlook in coming years. The focus on better sanitation will also drive growth in the wastewater treatment market, as water contamination remains a significant concern.

Sahara Industry, being a prominent water treatment solution provider in India, aiming to take a leading role in addressing the country's water challenges. With a successful track record spanning over two decades, the company has earned strong reputation as a trusted partner for utilities, industries, and both domestic and international consumers. We strive to provide comprehensive solutions for water and wastewater treatment, tailored to meet the diverse needs of our valued clients. Our commitment to excellence and customer satisfaction has garnered recognition and praise in the industry.

We at Sahara Industry are steadfast in our commitment to sustainable practices, focusing on achieving greater results with fewer resources. As a responsible corporate citizen, the company is dedicated to tackling water challenges and actively working towards a better future.



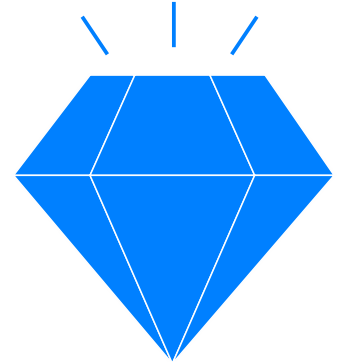
MILESTONE

And The Journey Continues

QUALITY & COMMITMENT

HIGHLIGHTS

- ISO 9001:2015, ISO 14001:2015 & ISO 45001-2018 certified company
- Part of over 10,000 successfully completed projects
- Completed 34 years of excellence in the market, innovative products in the portfolio
- International footprints of successfully completing projects
- Achieved the distinction of the fast growing organization
- All India presence with professional service networks
- Received prestigious awards for excellence in the products and project management
- Manufacturing & making NSF certified products



QUALITY, HEALTH & SAFETY

Sahara Industry is committed to following industry best practices and adhering to statutory health, safety, and environmental guidelines. With an unwavering commitment to quality, health, and safety, the company has achieved outstanding performance across its manufacturing, operations, and services. By upholding world-class standards, promoting product and operational safety, and fostering the active participation of every employee, Sahara Industry has established a benchmark for the quality of its products while maintaining a healthy work environment that enhances its overall business performance.





R&D

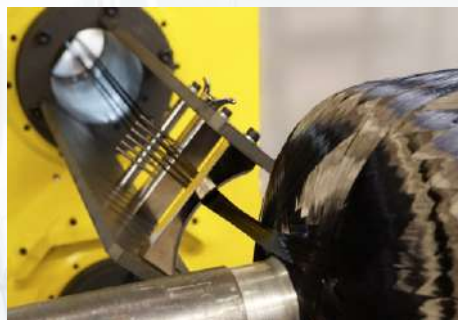
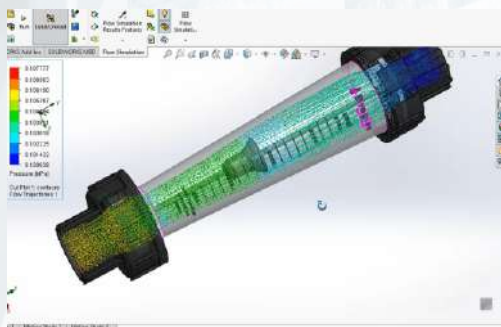
We invest in R&D

Our team consists of a talented and committed group of researchers, scientists, engineers, and water experts who collaborate closely with the company's founder. Together, we strive to develop innovative and revolutionary solutions for water and wastewater treatment.

As the world's leading manufacturer of water treatment components, our goal is to maintain and strengthen our position. Achieving this requires capitalizing on our innovative environment and long-term thinking. We constantly strive to enhance our products and solutions, leveraging digitalization as a key enabler, to deliver high-quality products at an affordable price point. We also prioritize evaluating our own manufacturing technologies and setting ambitious goals to foster a more sustainable and competitive business.

Investing over 30% of our sales revenue to research and development(R&D) to drive innovation and deliver valuable results to our customers.

We possess the courage and capability to take bold steps and pursue endeavours that others either cannot or do not dare to undertake. While technology remains central to our efforts, our driving force is creating value for the world and our customers by pioneering solutions throughout our entire value chain.



SOCIAL RESPONSIBILITY



Sahara Industry is committed to conducting purposeful business operations. As a responsible corporate citizen, it prioritizes the environment and embeds the concept of sustainability into its core business activities, especially in dealing with fragile natural resources like water. Even before it became mandatory under the Companies Act of 2013, Sahara Industry has been actively engaged in sustainability and corporate social responsibility initiatives. The company has successfully integrated social consciousness into its business model and strive to build strong relationships with the communities where it operates.

Sahara Industry is dedicated to socially responsible growth and has made investments in the development of communities surrounding company's plants and offices. The focus areas include healthcare and sanitation, education and skill development, as well as planting of trees with an aim at providing sustenance to humans and other living beings while addressing environmental concerns.



PRODUCT SHOWCASE



MEMBRANE HOUSING

Alfa ≈ Aerosol[®]
PRESSURE VESSELS



CERTIFIED TO
NSF/ANSI/CAN 61



End port



Side port



Double
Side port



Four
Side port

ALFA ≈ AEROSOL Pressure Vessels are the ideal solution for a wide range of applications including:

- Desalination
- Municipal Water Treatment
- Power Generation
- Food & Beverage
- Ultrapure water production
- Oil & Gas
- Refineries etc

ALFA ≈ AEROSOL Membrane Housing is manufactured over procession mandrels, using a superior resin that provides the ultimate glassy finish inside it. To fabricate **ALFA ≈ AEROSOL** Membrane Housing, Anu Advance Composite Products has carefully selects optimal grade raw materials, which provide strength, reliability, guarantee and unparalleled performance.

Our Membrane Housing is produced with 2.5" dia up to 2 elements, 4" dia up to 6 elements and 8" dia up to 7 elements with pressure rating from 300PSI to 1200 PSI. Side-port is available in 4" & 8" dia Membrane Housing.

ALFA ≈ AEROSOL Membrane Housing's each unit is tested in the factory at 1.5 times of its actual working pressure making it suitable to international standards of membranes. Life cycle test is also conducted on every batch of production for efficiency and longevity.

Quality Without Exception

ALFA ≈ AEROSOL is committed to producing safe, long-lasting products. We use only the highest grade materials and build our vessels to meet or exceed ASME Section X, Class 1. & NSF/ANSI/61, NSF/ANSI/372.

Every **ALFA ≈ AEROSOL** vessel is subjected to rigorous quality control and hydro-testing before it leaves our factory. This means surpassing ASME cycle and burst tests, meeting stringent internal standards, and are ISO 9001 certified. This ensures that the products you receive are absolutely reliable.

2.5" End Entry Membrane Housings

Model	Operating Pressure	Elements
2540	300psi/ 20.7 bar	1-2
2540	450psi/ 31 bar	1-2
2540	600psi/ 41.4 bar	1-2

4" End Entry Membrane Housings

Model	Operating Pressure	Elements
4040	300psi/ 20.7 bar	1-6
4040	450psi/ 31 bar	1-6
4040	600psi/ 41.4 bar	1-6
4040	1000psi/ 68.9 bar	1-6

4" Side Entry Membrane Housings

Model	Operating Pressure	Elements
4040SP	300psi/ 20.7 bar	1-6
4040SP	450psi/ 31 bar	1-6
4040SP	600psi/ 41.4 bar	1-6
4040SP	1000psi/ 68.9 bar	1-6

8" End Entry Membrane Housings

Model	Operating Pressure	Elements
8040	300psi/ 20.7 bar	1-7
8040	450psi/ 31 bar	1-7
8040	600psi/ 41.4 bar	1-7
8040	1000psi/ 68.9 bar	1-7
8040	1200psi/ 82.7 bar	1-7

8" Side Entry Membrane Housings

Model	Operating Pressure	Elements
8040SP	300psi/ 20.7 bar	1-7
8040SP	450psi/ 31 bar	1-7
8040SP	600psi/ 41.4 bar	1-7
8040SP	1000psi/ 68.9 bar	1-7
8040SP	1200psi/ 82.7 bar	1-7

Note: 3 Side Port and 4 Side Port are available on the order basis.



FRP PRESSURE VESSEL

Alfa ≈ Aerosol[®]
PRESSURE VESSELS



FIBRE REINFORCED PLASTIC COMPOSITE PRESSURE VESSELS

CERTIFIED TO
NSF/ANSI/CAN 61



FOR WATER FILTRATION OF RESIDENTIAL, COMMERCIAL AND INDUSTRIAL APPLICATIONS



ALFA ≈ AEROSOL provides exceptional benefits - easy to operate, user-friendly, and cost-efficient FRP Pressure Vessel / FRP Filter Tank for various applications across the water treatment chain. The innovative design helps it delivering safe, clean, and healthy water by effectively removing all biologically harmful contaminants.

ALFA ≈ AEROSOL FRP Pressure Vessel / Filter Tank is considered the most energy-efficient filtration systems available in the market which requires very low maintenance. The various capacities of vessels/tanks help in selecting the best suitable for any specific needs.

For excellent efficiency and longevity in harsh chemical conditions, our filter tanks reinforced with fiberglass design with polyethylene interior provides the best possible solution. It is non-intrusive, most economical water treatment and storage solution for commercial and industrial purposes. Each unit is properly checked for 100% pressure control along with consistency before dispatching from our modern manufacturing facility.

FEATURES & BENEFITS

- For Residential, Commercial and Industrial water treatment and storage.
- High resistance to chemicals with outstanding durability in harsh environments.
- 3 years manufacture warranty of vessel
- Free from rust and formation of algae in the vessel.
- Used for various applications like water softener, sand filter, carbon filter, iron removal filter etc.

OPERATING PARAMETERS

- Maximum operating pressure - 150PSI
- Maximum operating temperature - 120°F

MATERIAL OF CONSTRUCTION

- Polyethylene inner shell
- Fibre Reinforced Plastic Layer

ALFA AEROSOL DESIGN PARAMETERS

- Safety Factor - 4: 1
- Minimum Burst at 600PSI
- Tested to 2,50,000 Cycles without leakage

SIZE	MODEL	CAPACITY / VOLUME		OPENING		SPECIFICATIONS (mm)
		LITERS	GALLONS	TOP	BOTTOM	
635	TOP	14.5	3.8	2.5" NPSM	-	152 x 889
735	TOP	16	4.2	2.5" NPSM	-	180 x 875
825	TOP	17.5	4.6	2.5" NPSM	-	200 x 635
844	TOP	33	8.7	2.5" NPSM	-	200 X 1100
1054	TOP	62	16.4	2.5" NPSM	-	250 x 1350
1248	TOP	78	20.6	2.5" NPSM	-	300 x 1219
1354	TOP	103	27	2.5" NPSM	-	325 x 1350
1465	TOP	145	38	2.5" NPSM	-	350 x 1625
1465	TOP & BOTTOM	145	38	4" 8UN	4" 8UN	350 x 1625
1665	TOP	186	49	4" 8UN	-	400 x 1625
1665	TOP & BOTTOM	186	49	4" 8UN	4" 8UN	400 x 1625
1865	TOP & BOTTOM	236	62	4" 8UN	4" 8UN	450 x 1625
2162	TOP & BOTTOM	312	82.5	4" 8UN	4" 8UN	525 x 1500
2472	TOP & BOTTOM	450	119	4" 8UN	4" 8UN	600 x 1800
3072	TOP & BOTTOM	750	198	4" 8UN	4" 8UN	750 x 1800
3672	TOP & BOTTOM	1000	264	4" 8UN	4" 8UN	900 X 1800
4272	TOP & BOTTOM	1300	345	6" SNA	6" SNA	1050 X 1800
4872	TOP & BOTTOM	1800	475	6" SNA	6" SNA	1200 X 1800
6386	TOP & BOTTOM	3200	845	6" SNA	6" SNA	1600 X 2184

Note: Side manhole vessels are available on order basis.

FRP HIGH FLOW CARTRIDGE & BAG FILTER HOUSING



Sahara Industry is a leading manufacturer of FRP High Filtration Cartridge Housings in India. Such as Multi Cartridge Filter Housing, Bag Filter Housing, High Flow Cartridge Housing etc. and the pioneer in introducing FRP filter housing in the market. The NSF certified FRP High Flow Cartridge Filter Housings have excellent anti-corrosion properties, wide chemical compatibility, resistance to UV and atmospheric oxygen, and can withstand high pressures up to the level of 10kg/cm².

Compared to stainless steel products, the FRP housing offers advantages such as affordability, lightweight, and rust-free performance. It also has a higher operating pressure compared to uPVC filter housings. Sahara Industry has introduced the High Flow FRP filter housing with the highest flow rate and operating pressure of up to 10kg/cm². The filter housing made entirely from FRP material is an effective replacement for stainless steel housing. It can operate smoothly even in corrosive and harsh conditions.

10 Bar

Operating Pressure

15 bar

Hydrotest Pressure

FEATURES AND BENEFITS

- Wide Chemical Compatibility.
- FRP Construction offers longer life.
- Molded construction for product consistency.
- Quick lock plate closure.
- Equipped with bag hold down assembly to avoid bypass
- Maximum operating pressure
- maximum operating temperature is 60°C
- Easy installation and cartridge and bag filter change out.

APPLICATIONS

- Water Treatment Plants.
- Pharmaceutical, food, and other industries.
- In fine filtration and sterilization process.
- Water, oil, ink liquid purification.
- Textile, printing, and dyeing.
- Chemical industry.
- Reverse osmosis system.
- Ultra filtration system.
- Industrial filtration
- Solvent Filtration.



BAG FILTER

Single Bag System

Length	Size	Typical Flowrate	Filter Bag
16"	7" x 16"	18m ³ /hr	1 No.
32"	7" x 32"	35m ³ /hr	1 No.

Multi Bag System

Length	Size	Typical Flowrate	Filter Bag
32"	7" x 32"	105m ³ /hr	3 No.
32"	7" x 32"	175m ³ /hr	5 No.
32"	7" x 32"	245m ³ /hr	7 No.

MULTI CARTRIDGE FILTER

Model	Material	Filter Element Numbers	Fiber Element Sizes	Reference Flow
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Size: 20"X2.5"

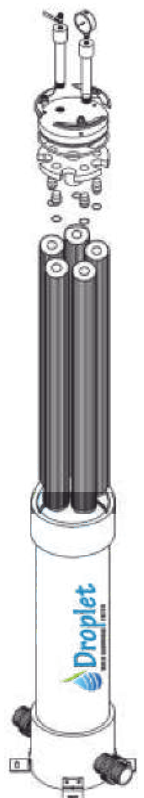
DROPLET 20X5	FRP	5	20"X2.5	8-10M ³ /hr
DROPLET 20X7	FRP	7	20"X2.5	13-14M ³ /hr
DROPLET 20X9	FRP	9	20"X2.5	17-18M ³ /hr

Size: 30"X2.5"

DROPLET 30X5	FRP	5	30"X2.5	13-15M ³ /hr
DROPLET 30X7	FRP	7	30"X2.5	18-21M ³ /hr
DROPLET 30X9	FRP	9	30"X2.5	24-27M ³ /hr

Size: 40"X2.5"

DROPLET 40X5	FRP	5	40"X2.5	18-20M ³ /hr
DROPLET 30X7	FRP	7	40"X2.5	26-28M ³ /hr
DROPLET 40X9	FRP	9	40"X2.5	34-36M ³ /hr



HIGH FLOW CARTRIDGE HOUSING

High-flow tubular filters are a boon for water treatment and large-scale liquid filtration processes in various industries. These filters are high-performance, cost-efficient, and address two major industry challenges: space and cost constraints. They are versatile, serving both pre-filtration and final filtration needs with substantial flow rates.

These filters excel in compactness, saving valuable space and offering cost-effectiveness. For example, they can achieve a remarkable 200 m³/hr filtration capacity within a mere 2 m² footprint, revolutionizing large-scale industrial processes. Unlike bulky filters, they require no heavy machinery like cranes for maintenance, ensuring convenience. Furthermore, the number of filter housings can be tailored to match flow rate and space availability, providing flexibility for end-users.



Exclusive Time & Labor-Saving Quick Change System

Droplet Housings feature a proprietary quick change system, enabling rapid access and replacement of cartridges in minutes - no nuts and bolts disassembly required. Changing a 150 gpm cartridge takes just 5 minutes compared to 30 minutes with standard housings. You can replace a single filter element while keeping the entire system online, eliminating the need for costly downtime.



A Tough Build & Economical Option

Droplet Liquid Cartridge Housings boast robust "fiber build for enduring use in industry. These 8-inch wide units offer a secure o-ring seal and come in a 60-inch size. Droplet provides better flow and is a budget-friendly substitute for steel options, saving 25% to 50% on costs compared to steel alternatives.

Rack System Maximizes Floor Space Efficiency

Droplet offers exceptional space-saving advantages. Its compact, stackable design optimizes total flow by vertically arranging housings, efficiently utilizing valuable floor space.

APPLICATIONS

- Chemical
- Cosmetic
- Electronics
- Food and Beverage
- Ink
- Magnetic Media
- Medical
- Pharmaceutical
- Photographic
- Pre-Filter for RO System
- Salt Water
- Bleach

Swimming Pool Filtration Tanks

Engineered for both reliability and efficiency, FRP Sand Filtration Systems are the cornerstone of maintaining sparkling swimming pools. Crafted from Fiber Reinforced Plastic (FRP), these systems boast exceptional durability, capable of withstanding the demanding conditions of pool environments. Their UV-resistant surface ensures longevity and performance, even under prolonged sun exposure. Designed to handle the higher flow rates typically required in swimming pools, these systems are as efficient as they are robust. Equipped with a versatile six-way multi-port valve, they allow for seamless control and optimization of filtration processes, ensuring your pool water remains crystal clear and inviting throughout the seasons.

- **Starting from 5M3/Hr to High flow of 52M3/HR.**
- **Top Mount and Side Mount FRP Pressure vessels available.**
- **6 Position Multi Port Valve with a user friendly handle provides maximum flow at a low pressure.**
- **Internal design ensures that water is exposed to maximum sand surface area.**
- **Combination water and sand drain for easy service.**
- **High Quality Industrial in and out FRP makes the vessel extra strong and safe.**





Alfa Aerosol FRP pool filters are crafted with the highest quality fiber glass and resin, ensuring exceptional durability and superior filtration performance. These heavy-duty pool filters incorporate cutting-edge filtration technology, making them the ideal choice for your pool.

Key Features:

Premium Construction: These pool filters are meticulously crafted using high-grade fiberglass and polyester resin with a Filament wound design, ensuring strength and longevity.

Even Water Distribution: The top diffuser feature guarantees an even distribution of water across the sand bed, optimizing filtration efficiency.

All-Weather Durability: Our pool filters are constructed from dependable, non-corrosive materials, making them suitable for use in all weather conditions, year-round.

User-Friendly Design: An easy-to-use water drain plug simplifies maintenance, ensuring hassle-free operation.

Versatile Operation: The multi-port valve provides the flexibility to select various filter settings with a straightforward lever action, making it effortless to customize your pool's filtration process.

Model	Type	Max Flow M3/Hr	Pipe Size (inch)	Sand Required (kg)
450	Top / Side Mount	7.5	1.5	80
550	Top / Side Mount	11	1.5	150
650	Top / Side Mount	15	1.5	220
750	Top / Side Mount	22	2.0	250
900	Top / Side Mount	31	2.0	440
1100	Top / Side Mount	40	2.0	900
1200	Top / Side Mount	46	2.0	1300
1600	Top / Side Mount	52	2.0	2000

DTRO MEMBRANE HOUSING



ALFA AEROSOL DTRO / STRO FRP housing for disc tube/spacer tube RO membrane module systems used for landfill leachate treatment, high-salt water treatment and difficult treatment water.

ALFA AEROSOL FRP DTRO membrane housing is a classification of DT membrane technology, also known as disc tube module technology. It is designed for separation of high-density waste solution by membrane components and makes up the defect that the conventional reverse osmosis membrane module is difficult to treat high-concentration sewage.

DTRO SPECIFICATIONS

Material	Fiberglass And Epoxy
Process	FRP Filamentwinding
Pressure Rate (Bar)	75 Bar, 90 Bar, 120 Bar, 150 Bar, 200 Bar Optional
Available Height	745mm, 1000mm, 1150mm, 1200mm, 1250mm or Customised
Operating Temperature	-7 C - 49 C
Color	Natural, Blue or customised
Certificates	ISO9001, ISO14001, CE, ANSI/CAN/NSF61



APPLICATIONS

- Treatment & re-use of leachate from landfills.
- Effluent and waste water treatment from API, formulation plant & combined effluent from pharmaceuticals industry.
- Effluent treatment from textile industry and dyeing unit.
- Picking and oily waste treatment in steel industry.
- Metal recovery waste recycling.
- Concentration of waste water.
- Common and combined effluent treatment.
- Recycling of spend wash and biomethanation waste water.
- Reject treatment from spiral RO Plants.
- High COD/BOD waste water treatment.
- Backwash recovery and recycling.
- DM Plant waste recycling.
- Hazardous chemical waste water recycling.
- Biological waste treatment.

ADVANTAGES

- Mirror inner wall surface
- No rusting, anti-oxidation & aging
- Uneasy to damage the membrane column element
- High compressive strength
- Excellent anti-pollution performance
- Easy to assemble, long service life

UV STERILIZER SYSTEMS

DROPLET UV Disinfection System

The Droplet UV Disinfection System, the optimal solution for non-chemical disinfection systems. This highly efficient system offers a superior level of protection by effectively eliminating 99.99% of microorganisms commonly encountered in water systems, including cysts, viruses, and bacteria. With a strong emphasis on energy efficiency, our advanced technology ensures a sustainable and environmentally friendly approach to water purification. Trust in the Droplet UV Disinfection System to provide unparalleled disinfection capabilities, safeguarding water quality and promoting a healthier environment for all. Experience the pinnacle of professional-grade disinfection technology.

Key Benefits

Enhanced Effectiveness: Our system boasts a reflective design that surpasses conventional UV systems, rendering it twice as efficient. It excels at obliterating over 99.99% of prevalent microorganisms commonly present in water.

Safety and Sustainability: UV disinfection is inherently safe, devoid of harmful byproducts or carcinogens, and non-corrosive to plumbing equipment. Embrace a sustainable solution that ensures both user safety and environmental responsibility.

Seamless Self-Monitoring: Our system's intelligent sensors diligently oversee lamp output, promptly notifying any issues with alarm notifications.

Simplicity and Efficiency: With its compact and energy-efficient construction, our system occupies minimal space and consumes minimal electricity. Equipped with user-friendly lamp change technology, it operates virtually maintenance-free.

OZONE GENERATORS



Droplet Ozone Generators are a powerful oxidizer that reduces the chemical oxygen demand (COD) and biochemical oxygen demand (BOD) of organic material. The unit is housed in a rugged stainless steel cabinet and all components in contact with oxygen and ozone are made of stainless steel, glass or PTFE tubing. The industrial ozone generator system uses a water-cooled corona discharge (CD) tube to generate ozone from various pressurized sources such as compressed air, bottled oxygen or oxygen generators. The result is a high ozone concentration with low energy requirements. We manufacture ozone generators from 1 gram to 200 grams

Reliable Ozone Generation

Our cutting-edge ozone generators are designed with precision, utilizing special steel ozone electrodes and meticulous machining techniques to guarantee exceptional and remarkable performance and unwavering reliability.

State-of-the-Art Power Supply

The Droplet Ozone Generators employ advanced high-frequency and high-voltage power supply technology, ensuring consistent and reliable operation over extended periods. Our patented ozone cell design enhances ozone generation efficiency, all while minimizing the overall footprint of the ozone generator.

Optimized Ozone Production

Our ozone generators are engineered to deliver maximum ozone production and dependability, provided that the recommended air flow and pressure are consistently maintained. This results in the generation of high-concentration ozone when paired with dry air.

Effortless Maintenance

Maintenance of our ozone generators is hassle-free. A single service door provides easy access to routine maintenance components. The cleaning of ozone electrodes is required only once a year, reducing downtime. Additionally, the modular design of our ozone generators simplifies both installation and maintenance, offering utmost convenience.

REVERSE OSMOSIS



Our reverse osmosis packages are designed to effectively treat up to 150,000 litres per hour (LPH) of product water, meeting the specific requirements of our end users and customers in terms of water quality. Sahara Industry specializes in manufacturing and supplying a wide range of reverse osmosis (RO) water treatment plants. With extensive experience in designing and manufacturing RO systems, we cater to various applications including desalination and water purification processes.

Our manufacturing facility enables us to customize and design industrial RO water plants based on individual requirements. Whether it's for normal drinking water or specific uses like pharmaceutical, food processing, or boiler and cooling tower feed, our industrial water plants are cost-effective, reliable, and capable of treating industrial-contaminated water with minimal water wastage.

Comprehensive range of industrial RO Water Plants and Services are sought after in sectors such as Pharmaceutical, Chemical, Textiles, and Food & Beverages industries.

Each plant is designed with a high level of automation to minimize user operation during normal service time, while the selection of materials and components ensures maximum plant lifespan. Our brackish water reverse osmosis plants typically include a filtration section tailored to the feed water analysis, a disinfection system with an Ultraviolet (UV) sterilizer, and a reverse osmosis section. Additional systems such as iron and manganese removal, softening, pH conditioning, storage tanks, and pumping stations can be included as per client requirements or to achieve specific performance targets.



SALIENT FEATURES

HIGH EFFICIENCY

RO plants are renowned for their exceptional efficiency in removing impurities from water. The fine pore size of the RO membrane allows only pure water molecules to pass through while rejecting dissolved impurities and contaminants.

LOW ENERGY CONSUMPTION:

One of the advantages of our RO plants is their low energy consumption compared to other water treatment methods. By utilizing high-quality pumps and membranes, our plants require less energy to generate high volume of water.

COMPACT SIZE:

Our in-house manufacturing facility enables us to design compact RO plants, making them ideal for installations in space-limited areas. This compact size also facilitates easy installation and maintenance.

AUTOMATIC OPERATIONS:

The fully automatic operations of our RO plants minimize the need for operator intervention. The plant is designed to start and stop automatically based on the water level in the storage tank.

HIGH DURABILITY:

We prioritize durability in the design of our RO plants, ensuring they can withstand harsh operating conditions. The membranes used in our plants are resistant to fouling and scaling, resulting in long-term reliability and low maintenance requirements.

VERSATILITY:

Our advanced manufacturing facility has the capacity to produce top-notch RO Treatment plants for brackish water, seawater, and industrial water. Leveraging state-of-the-art technology and a highly skilled workforce, we specialize in designing and manufacturing tailor-made RO Treatment plants that cater to the specific requirements of our clients. Our RO Treatment plants are renowned for their efficiency, durability, and energy efficiency. They are suitable for a diverse range of applications, ranging from residential and small commercial settings to large-scale industrial operations.



WATER SOFTENER

Hard water can have detrimental effects on the performance of boilers, cooling towers, and other equipment due to scaling issues. To address this problem, Droplet Industrial Water Softeners offers effective water treatment solutions. These systems are designed to treat hard water specifically for industrial use by removing the hardness through an ion exchange process using resin. Our industrial water softeners are versatile and can be operated manually or in fully automatic mode. They can be constructed as portable systems or skid-mounted pre-piped, pre-wired units, providing flexibility in installation options.



The ion exchange resin acts as an industrial hard water treatment, replacing the hardness in the water with salt (brine) during periodic regeneration. This process effectively eliminates harsh ions such as manganese, calcium, and magnesium from the incoming water supply. By utilizing Droplet Industrial water softeners, you can mitigate the adverse effects of hard water on your equipment, ensuring their optimal performance.

Sahara Industry offers a comprehensive range of standard and fully-customizable water softening systems and provides comprehensive maintenance services for industrial, commercial, or municipal water softener systems. Our production flow rates range from 1000 litres per hour (LPH) to 100,000 LPH, ensuring we can meet diverse capacity requirements.

HOW TO SIZE YOUR WATER SOFTENER SYSTEM

The Design of water softener depends upon two different parameters:



The amount of hardness is present in the water. The hardness allows us to calculate the quantity of resin to be used in water softener and flow of soft water between regenerations.



The Quantity of water to be delivered between regenerations. The flow of water between regeneration depends upon the hardness of water.

BENEFITS OF INDUSTRIAL WATER SOFTENER

- In House Manufacturing of Softener vessels and brine tank
- Reduced chemical consumption/cost
- Extend life of any industrial appliance
- Reduce energy usage
- Low repair & maintenance cost due to no scale formation
- More consistent water quality
- Pre installed piping, wiring & control valves
- Factory tested components for immediate installations.
- QA QC passed plants.
- Engineered design brine tank for easy soluble of salt.

Our skid-mounted industrial water softeners are designed for efficient on-site installation with pre-installed piping, wiring, and control valves. Our comprehensive factory testing procedures ensure that customised system is fully operational and ready for immediate installation upon delivery. These tests include pressure testing of all piping, cycle testing of valves, and operational simulation using the system control panel, among other rigorous checks that guarantee the functionality and reliability of the system.

APPLICATIONS OF WATER SOFTENER

- Food and beverages
- Manufacturing industries
- Medical industries
- Pharmaceutical industries
- Agriculture
- Commercial
- Heating systems
- Hospitals and healthcare
- Boiler feed water
- Cooling tower feed water
- Restaurants
- Humidification of air conditioning
- Oil and gas

WHAT WE OFFER:

- Water analysis
- Consultation with our engineers for design of water softener
- New water softener plants
- Tailor made technical specifications
- Installation and commission of water softener systems.
- Customizable small and large capacity of softener plants.
- Skid mounted or floor mounted softeners
- Existing plant repair
- AMC
- Training to plant operator
- Portable systems
- After sales service
- Online support

DE-MINERAL/ULTRAPURE SYSTEM

Demineralized water, also known as deionized water, is water that has had its mineral ions removed. These mineral ions include cations such as sodium, calcium, iron, copper, and anions such as chloride, sulphate, and nitrate, which are commonly found in water. Deionization is a physical process that utilizes specially manufactured ion exchange resins. These resins provide sites for ion exchange, replacing mineral salts in water with water molecules, forming H⁺ and OH⁻ ions. Since most impurities in water are dissolved salts, deionization results in high-purity water that is similar to distilled water. This process is quick and prevents scale buildup.

De-mineralization technology, based on ion exchange, degasification, and polishing, is a proven method for treating water. A demineralized water system is used in various applications, including steam, power, process, and cooling, where mineral-free water is required.



Process

Ion-exchange is a fast and reversible process used in water purification. It involves the replacement of impurity ions in water with ions released by an ion-exchange resin. The impurity ions are captured by the resin, which requires periodic regeneration to restore its original ionic form. An ion refers to an atom or a group of atoms carrying an electric charge. Cations, which are positively charged ions, are typically metals, while anions, which are negatively charged ions, are usually non-metals.

The following ions are widely found in raw water:

Cations

- Calcium (Ca²⁺)
- Magnesium (Mg²⁺)
- Sodium (Na⁺)
- Potassium (K⁺)

Anions

- Chloride (Cl⁻)
- Bicarbonate (HCO₃⁻)
- Nitrate (NO₃⁻)
- Carbonate (CO₃²⁻)

DEIONIZATION

For many laboratory and industrial applications, high-purity Water which is essentially free from ionic contaminants is required. Water of this quality can be produced by deionization.

The two most common types of deionization are :

- Two-bed deionization
- Mixed-bed deionization



TWO-BED DEIONIZATION

The two-bed deionizer comprises two vessels: one with cation exchange resin in the H⁺ form and the other with anion exchange resin in the OH⁻ form. Water passes through the cation column, where cations are replaced with hydrogen ions to maintain electrical balance. Monovalent cations like Na⁺ are exchanged for one hydrogen ion, while divalent cations like Ca²⁺ or Mg²⁺ are exchanged for two hydrogen ions. The same principle applies to anion exchange. The deionized water then flows through the anion column, where negatively charged ions are exchanged for hydroxide ions. These hydroxide ions combine with hydrogen ions to form water (H₂O).

MIXED-BED DEIONIZATION

Mixed-bed deionizers combine cation-exchange and anion-exchange resins in a single pressure vessel. The thorough mixing of these resins makes a mixed-bed deionizer comparable to a series of two-bed plants. As a result, the water quality from a mixed-bed deionizer is significantly higher than that from a two-bed plant. While mixed-bed plants are more efficient in purifying the incoming water, they are more sensitive to impurities in the water supply and involve a more complex regeneration process. Mixed-bed deionizers are commonly used to further enhance water purity after initial treatment by a two-bed deionizer or reverse osmosis unit.


ELECTRODEIONIZATION EDI

Electrodeionization (EDI) systems are used in combination with reverse osmosis (RO) and other purification devices to eliminate ions from water streams. Our top-notch deionization modules consistently generate ultrapure water with a conductivity of up to 18.2 MW/cm. EDI can be operated either continuously or intermittently.


OUR OFFERINGS

Sahara Industry manufactures high-quality Demineralization Plants using advanced technology. Our Demineralization Water Treatment Plant is always in high demand across various industries and municipal sectors. We are recognized as a reliable exporter of Demineralization Water Plants.

SEWAGE TREATMENT PLANT



A sewage treatment plant is a vital facility designed to manage and treat wastewater from various sources, ensuring the protection of public health and the environment. It plays a crucial role in removing contaminants and pollutants from sewage before it is released back into natural water bodies or reused for non-potable purposes. By employing a combination of physical, biological, and chemical processes, sewage treatment plants contribute to maintaining the ecological balance of our ecosystems while promoting the responsible use of water resources.



Sahara Industry is a leading expert in water treatment, offering advanced solutions for water and wastewater treatment. We specialize in designing, engineering, erecting, and commissioning sewage and effluent treatment plants. Our systems are tailored to meet your specific needs, using versatile physio-chemical, biological, membrane, and filtration processes to reduce BOD, COD, and TSS levels, ensuring compliance with pollution control regulations.

TECHNOLOGIES WE OFFER



Membrane Bio Reactor (MBR)

A Membrane Bioreactor (MBR) is an advanced wastewater treatment technology that combines biological treatment and membrane filtration in a single system. In an MBR, microorganisms break down organic matter in wastewater, converting it into harmless byproducts. What sets MBRs apart is the use of specialized membranes that act as barriers to separate treated water from sludge, ensuring a higher level of purification. This compact and efficient process produces high-quality treated water, making MBRs popular in various applications, from municipal sewage treatment to industrial processes. They offer advantages like smaller footprint, reduced sludge production, and improved effluent quality, making MBRs a promising solution for modern wastewater challenges.

MOVING BED BIOFILM REACTOR (MBBR)

The Moving Bed Biofilm Reactor (MBBR) technology is increasingly preferred for efficiently treating wastewater from industrial processes with high BOD, COD, and TSS levels. This modern approach outperforms traditional biological wastewater treatment methods and can achieve nearly complete nitrate/nitrite-nitrogen (NOX-N) reduction. Additionally, it reduces the footprint of water treatment plants by eliminating the need for multiple stages to filter BOD from biosolids. In essence, MBBR combines activated sludge and bio-filter processes, using small, lightweight polyethylene Biofilm carrier elements to encourage biofilm growth. These carriers, which are lighter than water, tend to float. To ensure optimal interaction with bio-solids, they must be kept in motion within the reactor tank basin. This agitation facilitates the attachment of biomass, biofilm, and bacteria onto the carriers, allowing for faster and more efficient biological treatment results.





SEQUENCE BATCH REACTORS (SBR)

Sequencing Batch Reactors (SBR) are industrial tanks used for wastewater treatment in batch cycles. They treat various wastewater types, including sewage and outputs from anaerobic digesters or biological treatment facilities. Oxygen is introduced to reduce biochemical and chemical oxygen demands, making the water suitable for discharge or land use. SBR systems typically consist of at least two tanks that alternate between settling and aerating/filling modes. Raw wastewater enters one tank while the other treats and settles, with a bio-selector aiding in initial mixing. This cyclic process efficiently removes contaminants from wastewater, offering a versatile solution for treatment.

In conclusion, MBBR (Moving Bed Biofilm Reactor), MBR (Membrane Bioreactor), and SBR (Sequence Batch Reactor) are all innovative wastewater treatment technologies, each with its unique advantages and applications.

- MBBR harnesses biofilm growth on suspended carriers to efficiently break down contaminants, offering flexibility and robustness in various treatment scenarios.
- MBR combines biological treatment with membrane filtration, producing high-quality effluent and compact system designs, but it requires higher energy consumption.
- SBR, operating in batch cycles, excels in precise control over treatment phases, making it suitable for diverse wastewater types.

The choice between these technologies depends on specific wastewater characteristics, treatment goals, space constraints, and regulatory requirements. Each system represents a vital contribution to modern wastewater treatment, enabling cleaner and safer water discharge for various industries and communities.

Technical Consultation and Services



CHANNEL PARTNERS

Sahara Industry manufactures and markets top-quality components for industrial water and wastewater treatment. It offers a wide range of products, including ultra-pure and RO systems, drinking water softeners, and domestic water treatment facilities across India through extensive sales network. In addition to industrial water solutions, Sahara Industry also provides quality products suitable for both industrial and residential water treatment purposes. The product includes NSF Certified FRP vessels, RO Plant, UV Plant, and Ultrafiltration systems as well as domestic multiple-stage purification systems etc.

PARTNERS



Dupont is the first company in the world to invent Reverse Osmosis Membranes and a market leader in all over the world. They manufacture quality efficient membranes for numerous type of water filtration like Brackish Water, Sea Water etc.



Chembond Chemicals Limited (BSE and NSE: CHEMBOND) is more than 45 year old known name in India, manufacturing a diverse range of specialty chemicals like water treatment, polymers, construction chemicals, high performance coatings, animal nutrition's and industrial biotech products.



Kalpaka is the exporter and global leader in the manufacturing and processing of Activated Carbon. Our activated carbon products are sourced from natural products such as coconut shell, coal, wood, etc. We manufacture quality activated carbon from the past 27 Years.



Runxin Research Institute of Water Supplying Treatment Systems, participated in drafting national and industry standards, developed into an international and professional manufacturer of control valve for water treatment systems, residential (commercial) application products and ceramic hard sealing ball valve. Wenzhou Leading Enterprise has more than 60 invention patents and utility model patents.

DIVERSITY AT WORK

Sahara Industry sets a remarkable example of embracing diversity in the workplace. Through a range of focused initiatives involving all segments of society, the company has continuously strived to enhance productivity. The combination of dedication, technology, innovation, and agility has been instrumental in fostering an inclusive work culture and achieve operational excellence.

Sahara Industry takes pride in its diverse workforce, comprising individuals from different cultural backgrounds and a balanced representation of both male and female employees. The company firmly believes in cultivating an environment of mutual respect and trust, recognizing that productivity and innovation thrive in an inclusive atmosphere.



WATER TREATMENT COMPONENTS



Multi Port Valves



Dosing Pumps



Flow Meters



Online TDS/pH Meter



Digital Flow Meters



Micron Cartridge Filters



Disk Filter



Ion Exchange Resins



Pebbles, Sand Media



Activated Carbon



Vacuum Breaker



Pressure Gauge



Distribution System



Brine Tank



Customized End Caps



Pressure Switches



Storage Tanks



**Stainless Steel
Storage Tanks**



Cartridge Housings



Salt Tablets



Micron Bag Filters



Membrane Connectors



Specialize Resins



Chemicals

My Experience with Sahara Industry was very much a positive one. Their professionalism was refreshing and I would welcome the opportunity to work with them again. Thank you for making the WTP procurement a pleasant experience.

— **Mr. Govind Shah / MD Scoops India**

We found Sahara Industry to be professional, prompt and customer oriented while dealing with us at various projects of water treatment plant. We execute industrial projects and happy with the solutions provided by the Sahara Industry.

— **Mr. Suresh Kumar Tyagi / MD CS Wires Pvt Ltd.**

We Don't consider Sahara Industry As our vendors. They are associates. Very trust worthy and transparent people to work with. We share Customer-vendor relationship both ways and even if we are in the same field, the concern of competition is ruled out due to ethical values.

— **Mr. Mohammed Rafeeq / Rochem India Ltd**

I was searching for the solution of rust problem on my MS pipe while production. Many came and provided the solution but non of them lasted. But Mr. Abdul Rahman has provided me with the best possible solution just by inspecting the material once. It has been 6 years and till now the plant is running perfectly.

— **Mr. Manish Futnani / Futnani Steels P Ltd**

Sahara Industry's RO plant has been a flawless investment for the past three years. The plant is working on high TDS of 2600ppm. Their sales team provided expert guidance, while their exceptional service ensured smooth installation. Highly recommended for outstanding quality and reliable customer support!

— **Mr. Hemath Kumar / Purnachand Packing Pvt Ltd.**

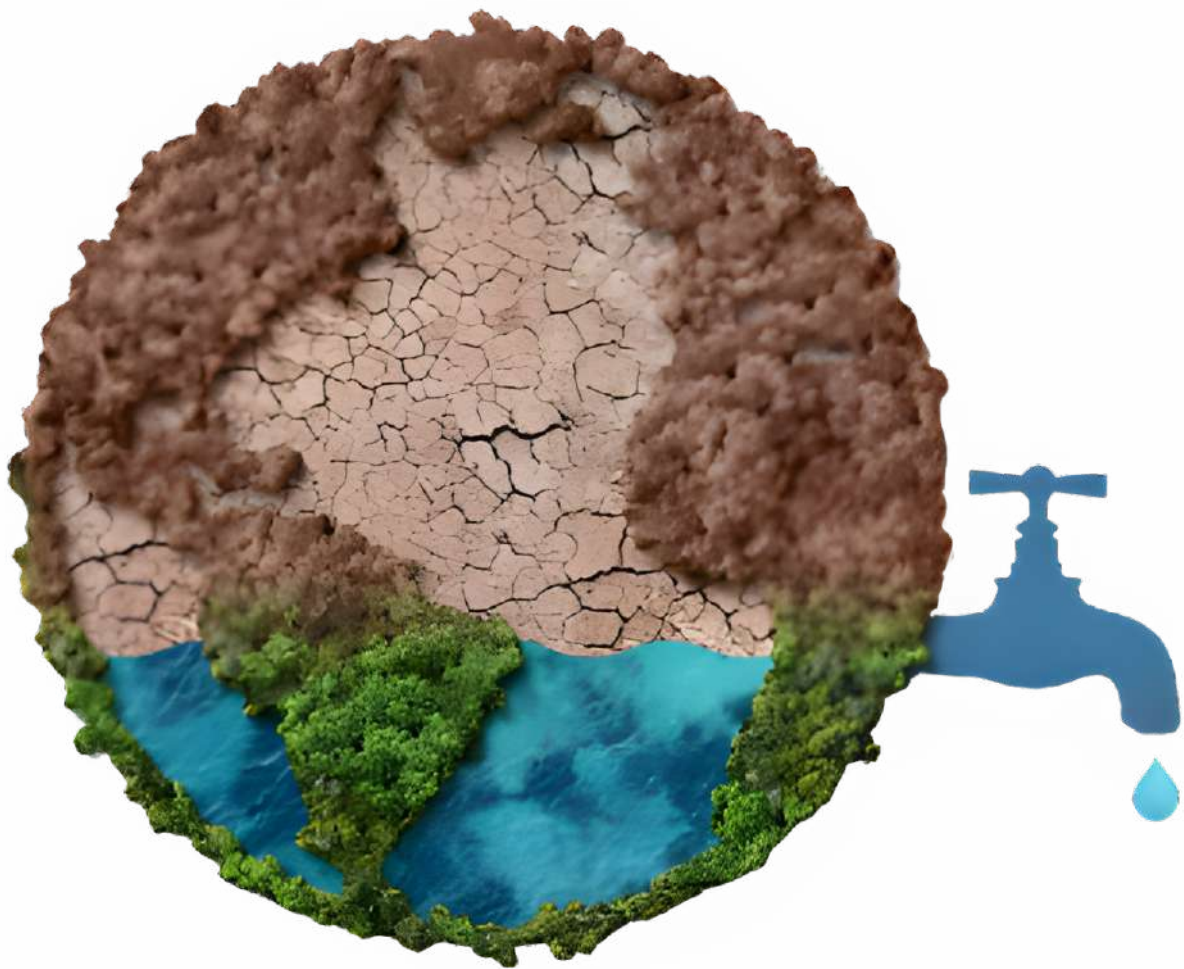
OUR GROWTH PARTNERS



And Many More..

Save **Water**

Save **Earth**



34
th
YEAR

**CELEBRATING 34 YEARS
IN WATER INDUSTRY**



SAHARA INDUSTRY
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SAHARA INDUSTRY

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