

**INNOVATIONS IN
ADVANCED MEMBRANE
TECHNOLOGIES**



QUAGROUP.COM

RIGHT THE FIRST TIME ... EVERYTIME

Your company needs the **right equipment** designed by the **specialists** who understand water purification better than everyone.

QUA is the leader in advanced membrane technologies providing solutions for the most **demanding water purification** requirements. We manufacture the highest quality membrane products for water treatment plants all over the world.

Our **experienced** water treatment engineers design, engineer and construct filtration equipment that is **easy to install, operate and maintain** with your unique challenges in mind.

A RELATIONSHIP DRIVEN SOLUTION

We provide more than membrane products, we work to ensure you receive a **complete solution** that fits your exact needs. We **carefully tailor** our solutions by working closely with you to create an **efficient system** for your application **that will last**.

We support your team through the entire process, from equipment selection and proposal to commissioning and future technical support. **We help you do what you do best** by partnering with your company every step of the way.

QUA SPECIALIZES IN PROVIDING SOLUTIONS FOR

- INDUSTRIAL PROCESS WATER • SEAWATER DESALINATION
- POTABLE WATER PURIFICATION • WASTEWATER TREATMENT
- RECYCLE OF INDUSTRIAL OR MUNICIPAL WASTEWATER
- HIGH PURITY WATER FOR POWER, PHARMACEUTICAL AND SEMICONDUCTORS



**A SOLUTION
FOR EVERY
SITUATION**



CLIENT SUPPORT

We create **long-term relationships** with our customers and strategic partners around the world. With offices located around the world, we have the personnel and **logistical capability** to offer **complete service** and support to our customers and partners through pilot testing support, field service and training. We pride ourselves on working with our clients every step of the way.



RESEARCH & DEVELOPMENT

QUA's R&D group includes scientists with post graduate and doctorate qualifications with an average **experience of 20 years**, as well as a team of engineers with average experience of 15 years. Our 20,000 sq. ft. R&D facility contains the necessary infrastructure to **develop, prototype and pilot** test new products. The facility is also equipped to simulate various challenging water conditions to assist in the development process. Qua has developed an **extensive patent portfolio** and is committed to developing solutions that add value to the water treatment process.



INNOVATION

We are **committed** to ongoing innovation. We are constantly adopting new technologies, materials and standards in order to ensure our products exceed your expectations. We manage the **entire lifecycle** and manufacturing chain of our products from the initial concept to manufacturing. We strive to innovate based on **real world usability** and our decades of experience to create products that make a difference to your project.

QUALITY MANUFACTURING

QUA's operations include a 30,000 sq. ft. dedicated, **state-of-the-art** membrane manufacturing facility supported by a quality control laboratory. This facility features custom designed equipment and dedicated product testing to meet the **highest quality standards**.

QUA has earned **ISO 9001:2008 Certification** for the manufacturing, supply, and after sales service of its products.



LOW PRESSURE MEMBRANES

Q-SEP is a robust Hollow Fiber Ultrafiltration (UF) membrane that is able to remove suspended solids, colloidal matter, high molecular weight substances, bacteria and viruses from a wide range of feed water sources.

Q-SEP SEAWATER DESALINATION SOLUTION
HINUDJA POWER PLANT, VIZAG, INDIA

LEARN MORE @ QUAGROUP.COM/QSEP

Q-SEP[®]

Taking UF to a different level



Q-SEP UF MEMBRANES

Q-SEP inside-out UF modules contain an advanced PES fiber, prepared by an innovative **patented** Cloud Point Precipitation method. This ensures a uniform pore size distribution, ultrathin separation membrane layer, and high pore density in the membrane. Q-SEP's product water quality is superior to conventional UF modules at a very low transmembrane pressure.

Q-SEP outside-in UF modules contain PVDF membranes manufactured with QUA's innovative modified thermally-induced phase separation (TIPS) method. The membrane has high mechanical strength, high chemical and chlorine tolerance, and the ability to handle high feed turbidity for a wide range of applications.

APPLICATIONS OF Q-SEP UF TECHNOLOGY

- PRETREATMENT TO REVERSE OSMOSIS (BRACKISH AND SEAWATER APPLICATIONS)
- PURIFICATION OF SURFACE AND WELL WATER FOR POTABLE APPLICATIONS
- FILTRATION OF INDUSTRIAL WATER

HIGH PURITY WATER

Steam generation, semiconductor and other high end manufacturing plants require water with very strict quality specifications to prevent costly equipment maintenance and product contamination.

FEDI HIGH PURITY INSTALLATION
SABINE PASS LIQUEFACTION FACILITY, LOUISIANA, USA

LEARN MORE @ [QUAGROUP.COM/FEDI](https://www.quagroup.com/fedi)



FEDI FRACTIONAL ELECTRODEIONIZATION

The Electrodeionization (EDI) process is a continuous, chemical-free method that removes ionized and ionizable impurities from feed water. EDI is most commonly used to treat Reverse Osmosis (RO) permeate and replace Mixed Bed (MB) ion exchange, producing high purity water of up to 18 M Ω .cm.

QUA's Fractional Electrodeionization (FEDI) process is an advancement of EDI and was developed by taking into account the limitations of conventional EDI. The **patented** dual voltage process allows for a higher flexibility and tolerance to inlet water, thus lowering the risk of scaling, and improving the plant's design economics and reliability.

APPLICATIONS OF FEDI TECHNOLOGY

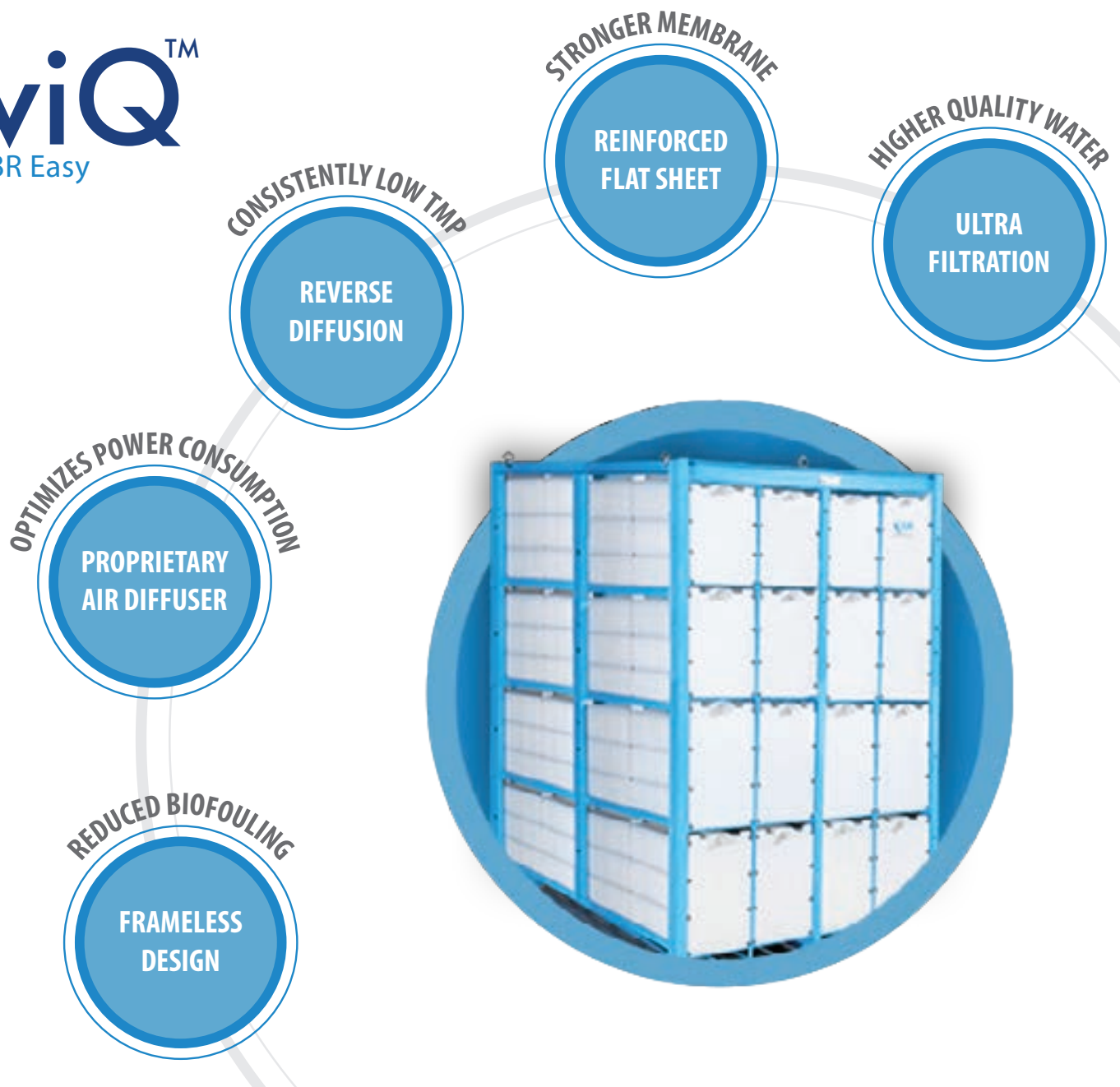
- FINAL POLISHING OF HIGH PURITY WATER
- REPLACEMENT OF MIXED BED POLISHING
- ALSO OFFERED IN FEDI RX FOR THE PHARMACEUTICALS INDUSTRY

WASTEWATER REUSE

Biological wastewater treatment has unique challenges and needs a durable, low maintenance solution to provide high quality reusable water.

**ENVIQ MBR PROVIDES MODULAR
MEMBRANE CASSETTE DESIGN FOR FLEXIBILITY**

LEARN MORE @ [QUAGROUP.COM/ENVIQ](https://www.quagroup.com/enviq)



EnviQ SUBMERGED MEMBRANE BIOREACTOR

MBR combines conventional activated sludge technology with membrane filtration. **QUA's EnviQ** membranes have been specially developed to improve the ease of operation and maintenance of MBR facilities. The **patented** innovative EnviQ design offers **ultrafiltration quality product water with a stronger and more rugged PVDF flat sheet membrane**. EnviQ's unique features such as a frameless membrane design, reverse diffusion and specially designed air diffusers maximize scrubbing efficiency, resulting in reduced cleaning.

APPLICATIONS FOR EnviQ TECHNOLOGY

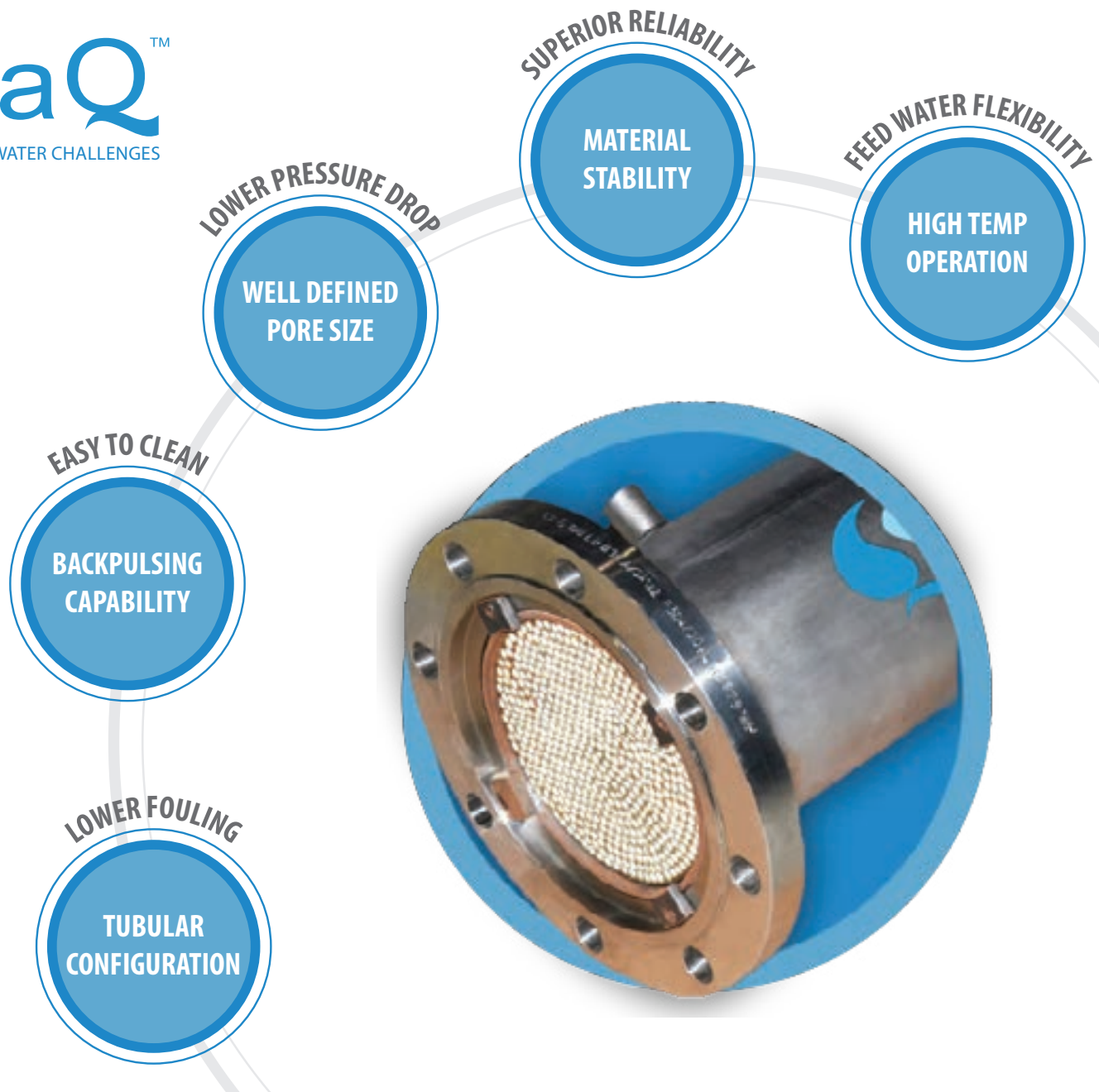
- BIOLOGICAL
WASTEWATER
TREATMENT

ROBUST FILTRATION

Elevated water temperature, oils and high suspended solids levels are conditions that make filtration with conventional polymeric membranes difficult and require innovative membrane materials.

CeraQ CERAMIC MEMBRANES PROVIDE
STRONG SOLUTIONS FOR CHALLENGING WATER

LEARN MORE @ [QUAGROUP.COM/CERAQ](https://www.quagroup.com/ceraq)



CeraQ CERAMIC MEMBRANES

Ceramic membranes are ideal for treating very difficult to treat water and wastewater, or where high temperature operation is involved

QUA's CeraQ ceramic membranes are designed for challenging water and wastewater applications. CeraQ ultrafiltration membranes are capable of removing viruses, bacteria, colloidal matter, submicron or micron sized suspended particles, oil, and organics from a wide range of fluids, including drinking water and industrial wastewater.

APPLICATIONS FOR CeraQ TECHNOLOGY

- DRINKING WATER FILTRATION
- INDUSTRIAL PROCESS WATER PRETREATMENT AND FILTRATION
- FOOD & BEVERAGE PROCESSING
- OILY WASTEWATER TREATMENT
- HIGH TEMPERATURE WATER TREATMENT

PRODUCTS IN ACTION



Ethydco Refinery - Alexandria, Egypt

Ethydco's petrochemical plant needed a flexible solution for a mix of treated effluent and Nile River water. QUA's FED1 was chosen due to its capability to handle variable feed conditions with its patented two-stage design.

[Find out more @ quagroup.com/ethydco](http://quagroup.com/ethydco)



Mumbai International Airport - Mumbai, India

Mumbai International Airport needed a wastewater recycle plant that was constrained to a limited footprint. QUA's Q-SEP modules successfully fit the requirements due to their large surface area and high operating efficiency.

[Find out more @ quagroup.com/mumbai](http://quagroup.com/mumbai)



Serum Institute - Pune, India

The Serum Institute needed a solution to treat contaminated river water with high organic content for pharmaceutical manufacturing. QUA supplied an Envi-Q MBR system that provided consistently high quality process water.

[Find out more @ quagroup.com/serum](http://quagroup.com/serum)



Automotive Parts Company - Abruzzo, Italy

An automotive parts manufacturing needed to remove >95% of the oil from their wastewater for plant reuse. QUA's Cera-Q was chosen to replace polymeric membranes for a much longer lifespan and lower operating costs.

[Find out more @ quagroup.com/abruzzo](http://quagroup.com/abruzzo)





QUA[®]

PURE TECHNOLOGY



QUA Group LLC
One Four Coins Drive
Canonsburg, PA 15317
USA
Tel: +1 877 782 7558
sales@quagroup.com

QUA Group-China
15 Floor, Huilong
54-56 Zhongzhou 2 Road
Guangzhou 510080
China
Mobile: +86 13917516227
sales@quagroup.com

QUA Water Technologies Pvt. Ltd.
Plot No. 35,T-Block, MIDC
Bhosari, Pune 411026
India
Mobile: +91 8806661037
Mobile: +91 9823042075
sales@quagroup.com

QUA Group-Europe
Tel: +1 877 782 7558
sales@quagroup.com

The information provided in this brochure are the general characteristics of QUA products. QUA believes that this information is updated and accurate; however, the content of might be subject to changes with further developments of the product line. Make sure that QUA products are operated according to the latest version of their respective Operation and Maintenance/Technical Manual guidelines. Contact QUA for assistance in the selection of products specifically designed for your system and application.