Water Icon is committed to solving Africa’s water and associated environmental challenges in a cost effective manner. We are in the process of establishing South Africa’s first manufacturing facility capable of producing water treatment products. This is part of our investment in local skills development and to provide improved access to water treatment resources for the continent.

Water Icon is a South African based water treatment company providing a full range of water treatment services for the industrial, municipal and residential sectors.

We offer everything from emergency water supply and conventional water treatment processes to wastewater re-use systems.

In addition to our full range of expert water treatment services, we stock a large selection of high quality water systems, water purification products, water faucets and fittings and provide a one-stop source for filters and accessories.

Our turnkey solutions are available for both small and large scale projects and range from customised packaged plants and modular units to full scale design and build projects including installation, maintenance and operations management.

Based in Johannesburg, Water Icon’s reach extends throughout Africa and we have successfully completed several turnkey projects on the continent. Water Icon is geared to provide our full range of services to this market.

Water Icon has in accordance with the latest international standards, committed ourselves to a Quality Assurance Programme to be awarded the ISO 9002 status.

**OUR TEAM**

Water Icon’s team consists of a skilled and experienced selection of top qualified engineers and professional tradespeople. They will work with you to custom a solution for your needs, whether these are to reduce operating costs, comply with environmental standards or to increase efficiencies.

**OUR CAPABILITIES**

Excellent project delivery, guarantee on quality and safety of equipment, and delivery of the best solution possible with a tight control on price and timing.

**DESIGN & BUILD:**

Water Icon provides turnkey solutions for industrial, municipal and residential applications.

We are specialists in the design and implementation of custom engineered water treatment plants to meet our client’s requirements.

Our specialist knowledge is in the conceptual design of a water treatment plant and equipment, often saving the client large percentages of his initial estimate by reducing engineering costs, pumping costs and total capital investment.

**SERVICE & MAINTENANCE**

As part of Water Icon’s turnkey solutions, we provide full maintenance and operations services on an on-going or project basis to service and maintain water and wastewater treatment plants of all sizes. In addition we ensure all safety, health and quality controls.

Our team of specialists train and develop the client’s staff to effectively manage the day-to-day running of the plant. Our technical services are always available should queries arise.

**PACKAGED PLANTS & EQUIPMENT**

Temporary, self-contained, movable units.

Water Icon supplies and installs package plants capable of treating water up to 1200 m³/day. We also design and assemble larger package plant units as more permanent structures of up to 4800 m³/day.

Water Icon’s package plants have a short delivery time, are pre-assembled and transported to site or assembled on site. They are ‘plug in and play’ by nature and designed for ease of service and maintenance.

We rapidly deploy package plants to meet demand for treated water in situations where this is not readily available or where there is a temporary need: construction and excavation sites, mining projects or crisis situations.

Package plants are also used more and more to meet the water demands of rural or isolated communities where the construction of a conventional treatment plant would not be feasible. Water Icon’s package plants are ideal for deployment in African communities and rural villages.
SERVICES

Water Icon offers a wide range of services across a number of industries and sectors. In all sectors that we cover, we have vast experience, knowledge and can offer quality solutions and services.

MUNICIPAL WATER TREATMENT

Water Icon undertakes small to large scale municipal projects to service community water requirements. We work closely with water authorities and councils to deliver high quality drinking water, a drought proof water supply, and recycled water that is safe for use. In addition we provide advance wastewater treatment to protect the environment.

POTABLE WATER: Water Icon makes water safe to drink for our communities on both a small and large scale.

SMALL-SCALE MUNICIPAL POTABLE WATER TREATMENT: Our small scale municipal water treatment solutions are perfect for new housing developments, golf estates, schools, and construction and exploration sites. We offer module potable water treatment packages to turn brackish water into clean water, safe for drinking and household use. Water Icon customises assembles and installs our modular units as part of a complete end-to-end solution to fit a client’s needs.

LARGE-SCALE MUNICIPAL POTABLE WATER TREATMENT: For large scale municipal projects, Water Icon designs and builds, maintains, and operates potable water treatment solutions across southern Africa. We can construct new turnkey plants or refurbish existing potable water treatment plants.

MUNICIPAL WASTEWATER: Wastewater or water that has been contaminated by human influence through domestic, commercial, industrial or agricultural use must be turned from a raw waste stream to an environmentally-safe fluid stream before it can be discharged. Water re-use and recycling forms a vital part of each project and is a major economic benefit for clients.

SMALL-SCALE MUNICIPAL WASTEWATER SOLUTIONS: Our small scale wastewater treatment solutions are perfect for rural communities, holiday resorts, factories and smaller municipal projects. We provide and install custom made package plants, containerised systems and modular units depending on a client’s specifications. Our designs are easily upgradable to meet growing capacity and can accommodate location-specific demands.

LARGE-SCALE MUNICIPAL WASTEWATER SOLUTIONS: Water Icon designs and builds, maintains, and operates large scale municipal wastewater treatment solutions across southern Africa to make water safe for discharge into the environment or for re-use.

RESIDENTIAL AND DOMESTIC WATER TREATMENT

Water Icon provides water treatment solutions to environmental and golfing estates, retirement villages, hotels and holiday resorts, and individual homes. Water Icon provides our full range of turnkey solutions for residential water systems from household reverse osmosis systems to pre-packaged modular units and large scale design and build projects.

INDUSTRIAL SWIMMING POOL FILTRATION: Water Icon has pioneered the introduction of European standards to South African swimming pools by using corrosion free materials and non-metal pipe work. We have done a range of industrial sized pools which include hotel pools, gym pools (Virgin Active) and various other municipal swimming pools.

LARGE SCALE WATER FEATURES: Modern architecture demands that water features soften the large corporate structures that are being erected. Water Icon has been involved in some of the major water features built in southern Africa. We offer a full range of water feature services including: hydraulic design, nozzle placement, lighting and electrical controls, design of overflow edges, waterfalls and weirs, and ensuring clear circulating water.

AQUATIC LIFE SUPPORT SYSTEMS: Water Icon provides world class filtration equipment for the maintenance of water in aquatic systems and was the first to introduce the concept of dual media filtration into the world of marine life. With this technology and our unique bio-filters, Water Icon is capable of tackling the design of any aquarium in the world. Our solutions sustain the life-support system and improve water quality.

INDUSTRIES

Water Icon provides consulting services, design and build solutions, equipment and consumables for water treatment to a variety of industries. We have experience across the industrial platform and over 30 years in industrial water treatment.

AGRICULTURE AUTOMOTIVE FOOD & BEVERAGE HEALTHCARE MINING OIL & GAS PHARMACEUTICAL POWER PULP & PAPER STEEL
TECHNOLOGY

Water Icon has experience in and uses a wide range of technologies that will best solve all water treatment needs both industrial and domestic.

MEMBRANE SEPARATION TECHNOLOGY

Water Icon has a complete range of membranes for different applications across all industries. Water Icon draws on its range of membrane separation products with configurations for different uses and is able to design, implement and maintain any water treatment systems using the below processes:

- Reverse osmosis
- Microfiltration
- Nanofiltration
- Ultrafiltration

FILTRATION TECHNOLOGY

Filtration occurs after clarification to remove any remaining suspended particles, organic and micro-pollutants and heavy metals that are not removed by the clarification process.

Water Icon is able to source and supply all types of Activated Carbon to anywhere in Africa. Our range of carbon's include granular activated and powdered in the following base materials:

- Coal
- Lignite
- Wood
- Peat
- Coconut char
- Olive stones

DESALINATION TECHNOLOGY

With over one quarter of the world’s population living within less than 25 kilometres of the coast, seawater desalination is a vital technology for water treatment. The development of desalination technologies over the last ten years has reduced capital, operating costs and especially the energy consumed.

ULTRAVIOLET (UV) TECHNOLOGY

UV water purification systems and water treatment is used as a pre-treatment or polishing step to sterilise and disinfect water, particularly water supply that is considered biologically unsafe (lake or well water).

Water Icon’s ultraviolet water purification systems are simple to install and require little supervision, maintenance or space.

ION EXCHANGE TECHNOLOGY

Ion exchangers are used to remove salts from the water. It consists of a resin containing acidic and basic molecules. These exchange with the anions and cations that form the salt, effectively removing them from the water.

Water Icon provides a comprehensive range of ion exchange solutions and services including ion exchanger valves and spare parts, a selection of high grade resins, and pre-packaged ion exchange units.

BIOLOGICAL PROCESSES TECHNOLOGY

Biological processes are used to treat wastewater through anaerobic and aerobic digestion processes of micro-organisms. These naturally break down and absorb the organic matter carried in wastewater to produce bio-gas, heat and compost.

Biological processes are used to treat sewage, sludge, municipal and industrial wastewater. Water Icon also uses biological process to treat aquariums and fish ponds.

CLARIFICATION TECHNOLOGY

Clarification is the removal of suspended solids and particulate matter including sediments, oil, natural organic matter and colour from the water to make it clear. Clarification occurs in combination with coagulants and flocculants to improve settling.

Water Icon specialises in Dissolved Air Flotation (DAF) techniques to clarify wastewater.

PRE-TREATMENT TECHNOLOGY

Pre-treatment processes are done to preserve the lifespan of systems and enhance the effectiveness of reverse osmosis and nanofiltration by minimising bio fouling, scaling and membrane plugging. Without a proper pre-treatment process, a system overload may occur with the parts needing much more cleaning to restore productivity.

Benefits of Pre-treatment:
- Reduces cleaning costs
- Improves system performance
- Cuts downtime
- Improves longevity of the systems

For the right pre-treatment process to be performed, Water Icon performs a complete and exact water analysis to determine type and size of treatment.
PRODUCTS

We offer a wide range of both industrial and domestic products and treatment systems.

FILTER MEDIA
We utilize a range of filter media in our processes. As a company we are able to source and distribute any one of the below media right through Africa.
- Activated Carbon
- Maddox
- Manganese green sand
- Anthracite
- Sylphos
- Sand
- Zeolite
- Limestone
- Birm
- Calcite

FILTER MEDIA CARTRIDGES
Water Icon stocks one of the largest ranges of filter cartridges in southern Africa.
- Absolute cartridges
- Polypropylene melt blown high flow cartridges
- Stainless steel cartridges
- String wound cartridges
- Granular activated cartridges
- Carbon block cartridges
- Melted spray sediment cartridges
- Pleated sediment cartridges
- Paper carbon cartridges
- Activated carbon and string wound

REVERSE OSMOSIS SYSTEMS INDUSTRIAL
We stock industrial 60 LPH standard & portable systems right through to 5000 LPH. Water Icon is capable of designing, building and installing any sized RO system or plant to meet your requirement.

Systems can be custom built and designed. Solar power source is an option.

ION EXCHANGE & SOFTENERS
- Mixed bed resin
- Softening resin
- Anion resin
- Cation resin

UV (ULTRAVIOLET) SYSTEMS
We stock a range of UV treatment systems from 226 Lt/Hr right the way to 45 000 Lt/Hr; let us know your requirements and we will suggest the system to cater for your application and flow rate.

UV systems that we stock:
- Wonder UV E Series
- Wonder UV ET series
- Wonder EB 200
- Wonder FGD

UV SPARES & ACCESSORIES
- Quartz sleeves
- Replacement lamps
- Transformers

UF (ULTRAFILTRATION) SYSTEMS
- UF membranes
- UF unit - 1500 LPH
- UF unit - 3000 LPH

Brands we carry:
- Norit, Toray, Lentech, Yarn Home

Systems can be custom built and designed.

VESSELS / TANKS & VALVES
- Fiber glass vessels
- Brine tanks & dosing tanks
- Manual / Automatic water purification & softening valves
- Adaptors
- Brominators
- Riser pipes and strainers

INDUSTRIAL PUMPS
- Dosing pumps
- CDL / CDLF vertical industrial pumps

DOsing SYSTEMS
- Dosing tanks & dosing pumps
- Chlorinators

Dosing systems can be custom designed, built and installed.

INDUSTRIAL HOUSINGS
- Stainless steel high flow filter housing
- Standard filter & stainless steel filter housing
- Big Blue filter housing
- Stainless steel big blue filter housing
- Stainless steel & fibre glass membrane housing
- Stainless steel 7 - rounder filter housing (Holds 7 filter cartridges)
- Stainless steel 5 - rounder filter housing (Holds 5 filter cartridges)
- Stainless steel bag filter housing

MEMBRANES
- 50 GPD, 75 GPD & 100 GPD domestic range
- 2521 & 2540
- 4021 & 4040
- 8040 & 8080

Brands we carry:
- Toray, Dow, Filmtec, Yarn Home & Hydronautics

FILTRATION SYSTEMS
- Counter top filtration units
- Water dispenser units
- RO units
- UF units
- Whole house filtration units

CHEMICALS
- Flocculation
- Coagulation
- Anti-scalant
- Oxygen scavengers
- Anti-foam

BOTTLING PLANTS
Moving water offers a range of packages for various sized bottling plants. Our bottling plants can run on any water source, borehole, river, stream or municipal. We offer installation and maintenance plans for the bottling plants.

Bottling plants are a great way to encourage entrepreneurship in countries and can easily be linked up with government development funding to help create jobs and enable people to start, manage and succeed in running their own businesses.

BOTTLING PLANT SIZES & EQUIPMENT
- Fully automatic bottling plants
- Semi-automatic bottling plants
- All automatic bottling plants
- Labeling machines
- Bottle producers
- All accessories and equipment
- Range from 250LPH up to 10 000LPH filling capacity

Bottling plants can be customer built to any size and requirement
With mounting global concern over the environment, industries and municipalities are under increasing pressure to manage their environmental impact. Untreated effluent water poses a risk to the surrounding environment and becomes a legal and financial burden.

**ZERO LIQUID DISCHARGE**

Zero Liquid Discharge means that no effluent water is discharged into the environment because it gets re-used and recycled providing huge economic potential. Water Icon’s ZLD systems employ the most advanced wastewater treatment technologies to purify and recycle virtually all of the wastewater produced, providing large cost saving benefits for our clients.

Other advantages include:
- Optimising the industrial water cycle
- Consistency of water supply and quality
- Reducing dependence and use of municipal water sources
- Compliance with stringent legislative and environmental regulations
- Sustainability
Cooling waters are essential in the steel industry and wastewater is inevitably contaminated with products such as ammonia and cyanide.

Water Icon helps the steel industry produce higher grade final products and reduce environmental impact. We design and build, install, and manage comprehensive steel water treatment systems to provide solutions for this industry.

Reducing costs
KEY TECHNOLOGIES:
- Clarification
- Media filtration
- Reverse osmosis
- Evaporation
- ZLD (Zero liquid discharge)

Our local team offers design, install, commission and service solutions and technologies covering the complete water and wastewater treatment cycle for the metals industry all the way through Africa which include:
- Makeup water pre-treatment
- Process water treatment
- Non-contact cooling sidestream treatment
- Cooling tower blowdown
- Contact cooling tower
- Process solution and service
- Wastewater treatment

SERVICES OFFERED:
- Reduced raw water intake
- Supply safe water for discharge
- Prepare water for use in production processes
- Supply water for re-use within a plant
- Ensure wastewater will not contaminate the environment

Manufacturing quality products
The paper manufacturing process requires pulp as a raw material and wastewater from pulp production needs to be treated.

Paper recycling processes also generate wastewater that needs specific treatment before being reused or discharged.
SERVICES OFFERED:
- Water re-use
- Recovery and recycling of wastewater, minimising environmental damage
- Supply of high grade process water for better products at reduced costs
- Help manufacturers achieve improved efficiencies

KEY TECHNOLOGIES:
- Clarification
- Reverse osmosis
- Micro filtration
- Physical-chemical, biological
- Zero Liquid Discharge (ZLD)

Our local team offers design, install, commission and service solutions and technologies covering the complete water and wastewater treatment cycle for the pulp & paper industry all the way through Africa.
The power industry is competitive and with environmental regulations becoming more stringent, power generators need smart solutions.

Power plant water treatment minimises corrosive deposits and extends the lifespan of plants, while also improving efficiency and reducing waste.
SERVICES OFFERED:
- Ensure water quality requirements are met
- Provide a consistent source of water for power generators
- Treatment of boiler feedwater
- Pre-treatment solutions
- Condensate polishing
- Treatment of cooling tower water
- Reduce waste and eliminates environmental discharge
- Water chemical conditioning and chemical supply
- Flue gas desulfurisation
- Boiler feedwater treatment
- Cooling tower water treatment systems

KEY TECHNOLOGIES:
- Clarification
- Media Filtration
- Membrane/Ultrafiltration
- Ion Exchange- softening
- Ion Exchange – demineralization
- Reverse Osmosis
- De-aeration

Our local team offers design, install, commission and service solutions and technologies covering the complete water and wastewater treatment cycle for the power industry all the way through Africa.
Water of absolute purity is required for this industry to produce medicines and as a raw material in chemical products. Strict purity regulations have to be passed by manufacturers working in this industry.

Water Icon designs and builds, installs, and manages water treatment systems to help manufacturers of medical products reach higher levels of efficiency at reduced cost.

All these solutions have passed strict industry regulations including:

- cGMP requirements
- GAMP validation control systems
- FDA requirements
- ISPE Engineering Guide
- CE marking
- IPPC environmental requirements
- the latest USP and Ph. European standards

Reducing costs
SERVICES OFFERED:
- Purified water
- Highly purified water
- Pyrogen free water
- Water for injection (WFI)

Manufacturing quality products

KEY TECHNOLOGIES:
- Multimedia filters
- Activated carbon filters
- Softening
- Reverse osmosis (RO)
- Continuous de-ionising

Improving your environmental record

Our local team offers design, install, commission and service solutions and technologies covering the complete water and wastewater treatment cycle for the pharmaceutical industry all the way through Africa.
The petroleum industry is one of the largest users of water during manufacturing processes. It is important for this industry to find an alternative supply of water such as grey water or wastewater that can provide a cost effective and ecologically friendly option.

Water Icon designs and builds, installs, and manages petrochemical water treatment systems to help manufacturing become more efficient and sustainable.
SERVICES OFFERED:
- Water re-use to reduce raw water intake
- Supply water safe for discharge
- Prepare water for use in production processes
- Enable manufacturers to reduce costs and increase efficiencies

Manufacturing of quality products

KEY TECHNOLOGIES:
- Primary oil/water separation
- Secondary oil/water separation
- Biological treatment
- Dissolved air flotation (DAF)
- Tertiary treatment
- Zero liquid discharge (ZLD)
- Sludge treatment and disposal
- Raw water treatment
- Wastewater treatment
- Groundwater remediation

Our local team offers design, install, commission and service solutions and technologies covering the complete water and wastewater treatment cycle for the oil & gas sector all the way through Africa.
This is a crucial sector to most economies and is highly dependent on water treatment technologies. Mining operations rely on large water quantities and an uninterrupted water supply.

Water re-use can significantly reduce costs and the mining sector faces strict legislation to minimise environmental degradation.

**ACID MINE WATER:** Acid mine water, containing toxic and sometimes radioactive chemicals, continues to be a problem in communities and is a serious compliance challenge for the mining industry. Water Icon draws on its world class reverse osmosis and membrane separation products and technologies to treat acid mine water before it is discharged into the environment and we have successfully produced quality potable water from acid mine water. This does not only help mines comply with strict environmental regulations, but reduces their costs by providing them with a safe source of water for re-use and recycling.
SERVICES OFFERED:
- Water treatment for all mining processes
- Acid mine water treatment and drainage
- Wastewater management to minimise environmental impact
- Water re-use
- Sludge stream treatment
- Sewage water treatment and potable water supply for mine camps
- Tailings pond water treatment for reuse or discharge
- Gold / Silver cyanide solution treatment
- Treatment of contaminated pit and underground mine water
- Re-use of mine water for irrigation
- Heavy metals removal / metal recovery
- Biological nitrification / de-nitrification
- Brackish and sea water desalination with associated pipelines
- Sulfate reduction

Recovery of quality products

KEY TECHNOLOGIES:
- Microfiltration & ultrafiltration
- Desalination
- Pre-packaged plants
- Mineral processing solutions
- Activated carbons

Our local team offers design, install, commission and service solutions and technologies covering the complete water and wastewater treatment cycle for the mining industry all the way through Africa.
Hospitals are largely dependent on the highest quality water supply for cleaning processes, drinking water, sterilisers, humidifiers, and to run medical procedures such as dialysis. It is essential for this water supply to remain free of water-borne microbes and infectious diseases.

Wastewater from hospitals is highly contaminated and needs to be treated for safe discharge.
Our local team offers design, install, commission and service solutions and technologies covering the complete water and wastewater treatment cycle for the healthcare industry all the way through Africa.
The food & beverage industry has strict purification and disinfectant requirements and requires the purest of water for use as an ingredient.

Even recycled water for cleaning purposes has to be of the highest quality to meet the World Wide Food Grade industry standards. In addition, the water volume requirements of food and beverage plants are significant, requiring a cost effective water supply and a large amount of wastewater that needs to be treated.

Water Icon has strong expertise in all Food & Beverage sub-sectors such as:

- Food: aquaculture, dairies, meat & fish processing plants, oils, fruit & vegetable processing canneries.
- Beverage: breweries, soft drinks, water bottling plants, distilleries, wineries, fruit juice.

With a vast amount of knowledge and experience, Water Icon’s engineering department has worked on projects with some of the world's biggest companies in the food and beverage industry including:

- Coca Cola
- SAB
- Continental beverages
- H2o
- Oasis Water
- Eish2o
- Distel
- Various wine farms
**SERVICES OFFERED:**
- Re-usable water of a high quality, reducing overall raw water intake
- High grade potable water for quality final products
- Managing the recovery and re-use of wastewater, minimising environmental damage
- Boiler feedwater treatment
- Cooling tower water treatment systems

**KEY TECHNOLOGIES:**
- Clarification
- Membrane filtration
- Softening
- Reverse osmosis
- Disinfectant with chemicals
- Zero Liquid Discharge (ZLD)
- UV treatment

Our local team offers design, install, commission and service solutions and technologies covering the complete water and wastewater treatment cycle for the food & beverage industry all the way through Africa which include:

- Water as a food ingredient: process water
- Water for industrial use: utility feed water
- Wastewater treatment
- Grease, sludge and by-products treatment
- Water recovery, recycling and reuse
Water is indispensible for processes in the automotive industry. Local and international environmental regulations and rising water costs means that this industry has to manage its water resources very carefully.

With a vast amount of knowledge and experience, Water Icon’s engineering department has worked on projects with some of the world’s premium car manufactures including:

- Toyota
- Volkswagen
- Ford
- BMW
INDUSTRIAL WATER TREATMENT SOLUTIONS

Improving your environmental record

KEY TECHNOLOGIES:
- Microfiltration
- Reverse osmosis
- Ultrafiltration
- Zero Liquid Discharge (ZLD)
- Flocculation and coagulation

Our local team offers design, install, commission and service solutions and technologies covering the complete water and wastewater treatment cycle for the automotive industry all the way through Africa which include:
- Pretreatment & process water systems
- Wastewater treatment
- Recycling and reuse
- Sludge treatment
- Industrial and drinking water
- Demineralised and osmosed water
- Cooling towers
- Water and wastewater networks

SERVICES OFFERED:
- Uninterrupted supply of high-purity water for e-coat and assembly paint lines
- Re-usable water, reducing dependence on municipal sources
- Manages the recovery and re-use of wastewater, minimising environmental damage
- Batch treatment processes for paints

Manufacturing quality products

Improving your environmental record
Agriculture is a water intensive industry requiring a constant, pollutant-free water supply to ensure maximum yields and healthy livestock.

South Africa is a dry country and a consistent source of rain water cannot be counted upon. Water Icon works with farmers to ensure a year round, efficient and pure water supply.

Agricultural wastewater treatment is essential to minimise soil pollution and degradation of farmlands. Wastewater treatment can also be used to capture the soil’s nitrogen.

With a vast amount of knowledge and experience, Water Icon’s engineering department has worked on projects with companies in the agricultural industry such as:

- Green Gem Nursery and Hydroponics (Botswana)
- Hewletts
- Illovo
- Sugar Mills Mauritius
- Sappi

Reducing costs
SERVICES OFFERED:
- Reduce raw water intake
- Prepare pump and ground water for irrigation
- Ensure wastewater safe for discharge
- Clean water for re-use
- Recovery of sludge for compost and animal feed

Farming & producing quality products

KEY TECHNOLOGIES:
- Biological processes
- (RO) and membrane separation technologies
- Filtration
- Evaporation
- Ion-exchange

Our local team offers design, install, commission and service solutions and technologies covering the complete water and wastewater treatment cycle for the agricultural industry all the way through Africa.