



**3B Water Engineering
& Services (Pvt) Ltd.**



Water is the
Driving Force
of All Nature

www.3bwater.com

**In the Name of Allah,
the Most Beneficent,
the most merciful**

Indeed we have sent Our Messengers with clear proofs, and revealed with them the scripture and the balance (justice) that mankind may keep up justice. And we brought forth iron wherein is mighty power (in matters of war), as well as many benefits for mankind, that Allah may test who it is that will help him (his religion), and his Messengers in the unseen. Verily, Allah is All-Strong, All-Mighty.

**Al-Quran
Chapter 57 Verse 25**

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CEO Message



I am full of pride to introduce 3B Water Engineering & Services (Pvt) Ltd. as a company that perpetually delivers engineering and water treatment solutions to industrial utility and public projects. It serves its clients with quality excellence that eventually leads to project success. Indeed, this has been made possible by May competent team. Our business philosophy revolves around high professional and ethical standard, total quality management and customer satisfaction. No matter what the project challenges are 3B Water Engineering & Services (Pvt) Ltd. meets them diligently and intelligently. Thus, we do not just conclude projects we fulfill commitments and offer solutions. 3B Water Engineering & Services (Pvt) Ltd. is thus nonpareil in its appeal. Maybe other companies are also able to build similar projects but 3B Water Engineering & Services (Pvt) Ltd. better. 3B Water Engineering & Services (Pvt) Ltd. is growing because it is run by a team comprising knowledgeable individuals navigated with commitment, dedication and drive. 3B Water Engineering & Services (Pvt) Ltd. will continue its journey to excellence as long as our customers keep on reposing trust in us. Thus customers are our most reverent corps for whom we will continue our journey to excellence.

Ch. Muhammad Aslam Pervaiz
Director Technical
(0302 / 0322) 8477866



Company Profile

3B Water Engineering & Services (Pvt) Ltd. is a water treatment company that seeks to offer and provided value added chemical solutions and services in critical market applications. The collective experience is over 15 years in market such as oil & Gas, Textile, Sugar, Cement, Captive Power Plants, IPP's as well as many industrial applications.

3B Water Engineering & Services (Pvt) Ltd. has the best sales & after sales technical services in order to provide the most cost effective water treatment chemical solution to clients by combining excellent products with years to technical expertise and exceptional service ethic, **3B Water Engineering & Services (Pvt) Ltd.** seeks to become your first choice for water treatment and services.



OUR TEAM

Each and every one of our employees represents the spirit of our company, driven, committed, and aware of his responsibilities. We go to great lengths to identify self-star with diverse experience and skill sets to produce not just an effective workforce, but a well-rounded, talented and complementary team.



OUR MISSION

Excellent results and low costs leading to saving.

- ⇒ We deliver environmentally responsible and cost effective water treatment solutions
- ⇒ We improve customer efficiency by conserving energy and water
- ⇒ We make sure the use and applications of our products are done correctly
- ⇒ We build long-lasting relationship with our customers

3B Water Engineering & Services (Pvt) Ltd.

Services that Make a Difference

The services available under our water treatment programs include:

- ⇒ Regular site service visits with field test and reports
- ⇒ Immediate and correct interpretations, of the test results and field recommendation
- ⇒ Routine monitoring of pretreatment and application equipment
- ⇒ Inventory management
- ⇒ Equipment inspections
- ⇒ Management meeting to communicate program results
- ⇒ Experienced technical support
- ⇒ Effective Training programs
- ⇒ Full range of advanced water treatment equipments
- ⇒ Energy and water management
- ⇒ Specialized Mechanical Services



CUSTOMER SERVICE

Our total water management capability and comprehensive range of services supported by a highly trained experienced team of service engineers deliver the customer benefit and convenience of total solutions with single-point responsibility.

Spanning diverse industries in different countries, and varying plant condition, our single-window services offer a complete package of benefits and a wealth of experience at work for our customers. Library

- ⇒ BOO/T Projects
- ⇒ Operator Training
- ⇒ Servicing
- ⇒ Supply of Treated Water
- ⇒ Supply of Fabricated Components & consumable
- ⇒ Staff Training
- ⇒ Extensive Knowledge Resource and Technical Library



Our integrated service support includes:

- ⇒ Consultancy
- ⇒ Water Management Surveys
- ⇒ Feasibility & Pilot Plant Studies
- ⇒ Design & Engineering
- ⇒ Project Management
- ⇒ Inspection
- ⇒ Erection & commissioning
- ⇒ Operation & Maintenance

Water Treatment

Our focus on water derives from the commitment to our customers to work with the physical attributes of application environments of your world. In This overview you will find examples which allow you to examine some of our core process competencies. We believe we have intimate knowledge and significant insight into the application environments that traverse the broad spectrum of water chemistry and water treatment. We can collaborate with you in the real physic of reverse osmosis, ion exchange, boiler chemistry, cooling water chemistry and high purity water where we can share our

experience in complete control of water chemistry.

We can assist you in determining the most effective water treatment architecture to help you see and assess what is happening in your plant. Every member of our company listens to your daily application language. The inherent expertise we offer at 3B Water Engineering & Services (Pvt) Ltd. exists to make your life simpler. 3B Water Engineering & Services (Pvt) Ltd. offers you unlimited modularity in your water world.





▶ Filtration

Our range of filter includes Multimedia pressure and gravity filter, auto & continuous sand filter, activated carbon filter for raw filter, Side stream sand filter for cooling tower water.

▶ Ultra-Filtration

Advanced membrane separation process include systems based on micro filtration, ultra filtration, Nano filtration and reverse osmosis for sea water and brackish water desalination, industrial process water treatment and waste water recycle.

Use a combination of membrane processes and/or Electrodeionisation, we offer ultrapure water systems to produce 10-18 Meg.ohm cm specific resistance water, catering to the needs of the pharmaceutical, electronics and semi-conductor industries.



Reverse Osmosis (RO) Plants

Reverse Osmosis (RO) is a membrane based process technology to purify water for drinking purpose as well as by separating the dissolved solids from feed stream resulting in permeate and reject stream for a wide range of applications in domestic as well as industrial applications. It is seen from literature review that RO technology is used to remove dissolved solids, colour, organic contaminants, and nitrate from feed stream. Hence RO technology used in the treatment of water and hazardous waste, separation processes in the food, beverage and paper industry, as well as recovery of

organic and inorganic materials from chemical processes as an alternative method. This paper intends to provide an overall vision of RO technology as an alternative method for treating wastewater in different Industrial applications. The present short review shows applicability of RO system for treating effluents from beverage industry, distillery spent wash, ground water treatment, recovery of phenol compounds, and reclamation of wastewater and sea water reverse osmosis (SWRO) treatment indicating efficiency and applicability of RO technology.



Advantages of RO Process

1. RO systems are simple to design and operate, have low maintenance requirements, and are modular in nature, making expansion of the systems easy;
2. Both inorganic and organic pollutants can be removed simultaneously by RO membrane processes;
3. RO systems allow recovery/recycle of waste process streams with no effect on the material being recovered;
4. RO systems require less energy as compared to other technology; and
5. RO processes can considerably reduce the volume of waste streams so that these can be treated more efficiently and cost effectively by other processes such as incineration
6. The RO plant is normally operated at ambient temperature which reduces the scale formation and corrosion problems, because of antiscalent and biocides use, which will reduce maintenance cost.
7. The modular structure of the RO process increases flexibility in building desalination plants within a wide range of capacities.



Drinking Mineral Water

A unique Natural Drinking Water produced under expert's supervision and strict hygienic conditions from a balanced blend of FDA approved USP food grade minerals. Excellent in taste, quality and helps in digestion, fights against fatigue, teeth plaque and renal stones formation. Water Source from Deep ground in the city of Gardens and processed with international hydRO-7, system to meet the Govt. of Pakistan PSQCA Standards.



Water Softener

The process is called ion exchange. The heart of a water softener is a mineral tank. Water softeners have a separate brine tank that uses common salt to create this brine solution. In normal operation, hard water moves into the mineral tank and the calcium and magnesium ions move to the beads, replacing sodium ions. Water softening is a technique that serves the removal of the ions that cause the water to be hard, in most cases calcium and magnesium ions. Iron ions may also be removed during softening. A water softener is a unit that is used to soften water, by removing the minerals that cause the water to be hard.



Mix Bed Polisher

A mixed-bed polisher unit will be required if the product water specification is below that achievable from the demineralization plant alone or if a higher degree of safety is required to ensure water quality. The Condensate Polisher system is also used to polish returned condensate for reuse in closed loop steam generation for power plant and oil & gases industries. 3B optimize the combination of ion exchange unit and membrane systems to deliver customized demineralization systems that meet the needs of our clients.

This process differs essentially from the separate bed system in that the two strong ion exchange resins, Cation and the Anion, are homogenous mixed in a single vessel. Organo Asia's MBP can deliver high purity of water with resistivity more than 10.0 MΩ.cm at 25°C, ionic silica less than 20 ppb and its quality remains constant throughout the cycle.

Mineral Water Filling Machine

Looking for suppliers of Mineral Water Filling Machine? You are on right door. 3B Water Engineering & Services is a leading manufacturers and suppliers of Mineral Water Filling Machine in Pakistan. With years of experience, expertise and knowledge, we have built broad client base across the globe. This machine is manufactured by us with very high quality material and as per the international industry standards to meet the changing needs of mineral water industry.

Mineral Water Filling Machine manufactured by us has been tested at various levels and it requires very low maintenance. As we have customized this machine as per

client's requirements, in compliance with various industrial standards it is user friendly – very easy to operate and has long durability.

·Water Filling Machines by 3B Water Engineering & Services can be used for filling water into various packing such as pet bottles, Plastic Jars, Plastic Cups. We have the capacity of manufacturing the machines giving the following output for bottles :- 24 BPM - 40 BPM - 60 BPM - 90 BPM

19Ltr. Washing Machine



19Ltr. Automatic Washing & Filling Machine



Washing & Filling Machine (Semi-Auto)



1.5Ltr. & 600ml Automatic Filling Machine

Cooling Towers

COOLING WATER TREATMENT

Most industrial production processes need cooling water for efficient proper operation. Refineries, steel mills, petrochemical plants, manufacturing facilities, food plants, large building, chemical processing plants, and electrical utilities all rely on the cooling water system to do its job. Cooling water systems control temperatures and pressure by transferring heat from hot process fluids into the cooling water, which carries the heat away it works like a huge wet scrubber and subjected to scaling, **corrosion, fouling and biological growth**. So the chemical aspect is to protect the cooling water system and maintain efficiency with cost effective measures. Our products range is wide such as:

Organo phosphorous, poly Phosphate, Zn based antiscalant and corrosion inhibitors to protect the cooling water system and Heat exchange surfaces against scaling and corrosion and to increase heat exchange efficiency with a minimum down time.

Polymer based Dispersants to keep the particulate matter in circulating water in dispersed form and avoid deposition and fouling.

Non Oxidizing Biocides with broad spectrum to minimize and control the growth of microorganisms.



Our main range of products falls in four categories including cooling water treatment chemicals, Acid inhibitors, Cleaning and Maintenance Chemicals

▶ Boiler

BOILER WATER TREATMENT

Corrosion in boiler water system can result energy inefficiencies and/or costly down time. All too often plant managers learn this pain full lesson when they can least afford to. Boiler metal corrosion is the conversion of steel in to rust. Oxygen pitting and low PH are two forms of boiler water system corrosion. Scaling along with corrosion is also equally detrimental to boiler over all efficiency. Our main products for boiler are based on:



- ⇒ Poly phosphate, phosphonate based along with chelating agents to protect Boiler against scaling and corrosion.
- ⇒ Oxygen scavengers to remove oxygen from Boiler feed water and boiler water to avoid oxygen pitting.
- ⇒ State of the art blending mixture of neutralizing Amines to protect condensate line against low PH induced corrosion.
- ⇒ Filming Amine to protect condensate water line.

Waste Water

Treatment Plants (ETP)

It's a Journey to treatment and return to environment 3B Water Engineering & Services (Pvt) Ltd. specializes in development, engineering, construction & operation of enhanced waste water treatment plants. Waste Water Treatment Plants do just as they say They treat the water that goes down our drains before releasing it back into the environment.



Chemicals Products

3B Water Engineering & Services Pvt Ltd

PRODUCT CODE	APPLICATION
FOR COOLING TOWER/OPEN WATER CHEMISTRY	
3BWET-101	Polyphosphate base Antiscalant & corrosion Inhibitor for Cooling tower water
3BWET-102	Dispersant for open and cooling tower water
3BWET-103	Zinc + phosphate base Corrosion inhibitor & Antiscalant
3BWET-104	Non oxidizing Biocide & Dispersant
3BWET-105	Strong Non Oxidizing Biocide & Biodispersant
3BWET-106	Antifoulant, Biocide & Biodispersant
FOR BOILER WATER CHEMISTRY	
3BWEB-201	Antiscalant & corrosion Inhibitor for low & high pressure boiler
3BWEB-202	Liquid Sulphite base Oxygen scavenger
3BWEB-203	Solid Crystallized Sulphite base Oxygen scavenger
3BWEB-204 H	Hydrazine base oxygen scavenger for High pressure boiler
3BWEB-205	Polyamine for condensate Treatment
3BWEB-206	Online low pressure boiler descaler
3BWEB-207	Boiler Passivator
3BWEB-208	pH booster for boiler feed Water
3BWEB-209	DEHA base Oxygen scavenger
FOR REVERSE OSMOSIS (RO PLANT) WATER CHEMISTRY	
3BWER-301	Antiscalant
3BWER-302	Antiscalant& Antifoulant for iron, silica
3BWER-303	High pH Antiscalant
3BWER-304	Non oxidizing biocide & dispersant
3BWER-305	Membrane Passivator
3BWER-306	Low pH membrane Cleaner
3BWER-307	High pH membrane Cleaner
FOR CLOSE LOOP WATER CHEMISTRY	
3BWEC-401	Nitrite base Corrosion inhibitor for chilled water circuit
3BWEC-402	Nitrite base Corrosion inhibitor for Hot water circuit
3BWEC-403	Corrosion inhibitor and antifreezing agent
3BWEC-404	Phosphate base corrosion inhibitor
MAINTENANCE CHEMICAL	
3BWEM-501	Core, charger cooler, cleaner - Carbon, oil Remover
3BWEM-502	Inhabited Acid for descaling
3BWEM-503	Alkaline Cleaner
3BWEM-504	Metal Passivator
3BWEM-505	Organic acids for descaling
3BWEM-506	Acid Inhibitor

Control and Automation

The field of water treatment demands superior instrument performance and networkability. Our versatile systems highlight our continuous customer-oriented innovation and are developed to simplify any water treatment situation, which in turn will save you time.

An otherwise unattainable synergy of hardworking valve elements, process actuation, sensors and networked communication provides a true single source of remarkably attractive systems. Peace of mind, process safety and ease of use in a world where application knowledge, reliability and quality are paramount.

Components are designed according to global norms and standards for your critical water application. Proven reliability, superior accuracy and virtually maintenance-free service ensure 3B Water Engineering & Services systems deliver unsurpassed total performance in the form of complete control loop systems.

- ⇒ Chemical dosing system for cooling tower & boiler
- ⇒ PLC operator, Skid Mounted chemical dosing & Automatic parameter control system with HMI and Ethernet facility
- ⇒ Online PH ,TDS conductivity ORP, Temperature, Pressure, Flow & Level sensor, Transmitters & controller
- ⇒ Chemical dosing pumps (Metering Pumps)
- ⇒ Bench & Pen Type PH & TDS meter
- ⇒ Electric panel (DP)



WE TREAT / SUPPLY

Membrane Processes

- ⇒ Brackish /Canal/ Sea water Reverse Osmosis
- ⇒ Nanofiltration
- ⇒ Ultrafiltration
- ⇒ Two-Pass RO systems
- ⇒ Microfiltration

Ion Exchange Systems

- ⇒ Cation and Anion Units
- ⇒ Automatic Mixed Beds
- ⇒ Automatic Softeners
- ⇒ Condensate Polishers

Filtration and pretreatment Equipment

- ⇒ Multi-Media, Activated Carbon, Iron Removal
- ⇒ Cartridge Filter
- ⇒ Bag Filters
- ⇒ Ultraviolet and Ozonation
- ⇒ Chlorination and Disinfection

High Purity Water Systems

- ⇒ Pharmaceutical Systems
- ⇒ Semiconductor Systems
- ⇒ Boiler Feed

Others

- ⇒ Water treatment products, components, parts, accessories, membranes, chemicals, resins etc.
- ⇒ Laboratory equipment, products, reagents and microbiological items.
- ⇒ All industrial, commercials, special and general order supplies.

CHEMICAL DOSING PUMPS



PH CONTROLLER



TDS METER





Nitto Denko Japan

- ⇒ Double-Coated Adhesive Tapes
- ⇒ Masking Tapes
- ⇒ Electronic Components Products
- ⇒ Semiconductor Manufacturing Process Products
- ⇒ Medical Products
- ⇒ Fluoroplastic Products
- ⇒ Others



R.O. / UF Membranes

- ⇒ Hydranautics
 - 4 & 8 inch Models
 - CPA3/CPA3-LD/CPA5-LD
 - ESPA1/ESPA2/ESPA2-LD
 - LFC3-LD/ESNA1-LF/SWC
 - Minis (smaller than 4040)
 - ESPA-1812/ESPA-4021
 - Hydracore & Sulfate Removal
 - HydraCoRe 10/50/70
 - Nano-BW-4040
 - Ultrafiltration
 - HYDRAcap 40/60LD



Filtration Media

- ⇒ Clack Corporation
- ⇒ Inversand Corporation
- ⇒ Norit Americas
- ⇒ Carbon Activated Corporation
- ⇒ Imerys France
- ⇒ World Minerals
- ⇒ EZ Technology
- ⇒ Others



R.O. Pressure Vessels

- ⇒ Codeline
- ⇒ Wavecyber
- ⇒ ROPV
- ⇒ ROKD
- ⇒ Others



R.O. Chemicals

- ⇒ BWA - Flocon Brands
- ⇒ BWA - Bellacide Brands
- ⇒ Avista Technology
- ⇒ King Lee Technology
- ⇒ EZ Technology
- ⇒ Genesys North America
- ⇒ Others



Control Valves

- ⇒ Fleck
- ⇒ Siata
- ⇒ Rinxin
- ⇒ Canature
- ⇒ Astral
- ⇒ Others

Our Product



Filters / Housings

- ⇒ EZ Tech USA
- ⇒ Harmsco
- ⇒ Deltapure
- ⇒ Cune
- ⇒ Eaton
- ⇒ Pall
- ⇒ Mul
- ⇒ Donaldson
- ⇒ Others



Pumps

- ⇒ CNP
- ⇒ Grundfos
- ⇒ Lawara
- ⇒ KSB
- ⇒ Astral
- ⇒ Fluid-o-Tech
- ⇒ Fedco
- ⇒ Pump Engg.
- ⇒ Afton Pumps
- ⇒ Others



UV / Ozone / Lab

- ⇒ Wonder
- ⇒ Atlantic
- ⇒ Ozomax
- ⇒ Terriss
- ⇒ Create
- ⇒ Bluewhite
- ⇒ Pall
- ⇒ Millipore
- ⇒ Others



FRP Tanks

- ⇒ Structural
- ⇒ Park
- ⇒ Pentair
- ⇒ Wave Cyber
- ⇒ EZ Technology
- ⇒ HST
- ⇒ Others



Resins

- ⇒ EZ Tech USA
- ⇒ Bayer/Lanxess Germany
- ⇒ Purolite USA
- ⇒ Rohm & Haas France
- ⇒ Others



Pipe & Fittings

- ⇒ Hydroseal Canada
- ⇒ + GF +
- ⇒ Sanking
- ⇒ Kitz
- ⇒ EZ Technology
- ⇒ Others

Electrical Panels

Low Voltage Switchgear (LVS)

The Low Voltage Panels are used after the power transformer for distribution of electrical power to the whole electrical installations. These panels are different capacity and sizes.

3B Water Engineering & Services (Pvt) Ltd. manufactures complete range of low voltage switchgear for industrial and commercial use both indoor and outdoor type.



Automatic Power Factor Improvement (PFI) Panel

Our clients can also benefit from our extensive range of APFC panels that expedite the automatic power factor control panel. These panels are fabricated and designed to ensure the preservation of maximum energy and power.

We design and manufacture PFI panel, fully automatic in operation and can achieve desired power factor under fluctuating load conditions.



Motor Control Center (MCC) Panel



Lighting and Power Distribution Boards

Programmable Logical Control (PLC) Panel

We offer precision made PLC (Programmable Logic Control) panels. These PLC panels are largely used for industrial automation and process automation. They are programmed through SCADA software and logic which is download as per the process requirements

Different variables are controlled according to the logic and different tag numbers are given too different motors, valves, sensors etc it is provided with a monitor which displays the process and instrument diagram, and also the live status of process parameters. The PLC systems are different types of micro logic 1200, 1500 and SLC 500.



AMF/ATS/Synchronizing Panel

This system consists and alternator standard control panel with MCM (Micro-processor Control unit) and a change-over system housed in separate wall mounted or floor standing panel.

Automatic transfer switches are used to automatically change-over from the main electrical supply to stand-by generators or generate on failure of the main supply.

When the main supply is restored, the system automatically changes back and stops the generator. The stand-by generator will eventually be shut down after a short cooling down period. These panels are provided with mechanically or electrically interlocked pole contactors or MCCB.

Synchronization Panels are mainly designed and used to meet power system requirements. These panels function both manually and with an automatic synchronizing function for one or more generators or breakers.



Cable Tray Management





**Come and see
water purification process yourself!**





HYGIENIC DRINKING WATER

Pure Water Runs Life!



19 Liters, 6 Liters, 1.5 Liters & 600 ml

Mineral Content (mg/l)

Magnesium	4 - 15
Calcium	25 - 80
Potassium	0.5 - 5.0
Sodium	10 - 45
Sulphate	12 - 50
Chloride	40 - 120
pH	6.5 - 8.5
TDS	130 - 300

Jami Water Branches

Township Lahore Branch

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T: [042] 35119998
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Wapda Town Lahore Branch

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Wapda Town, Lahore, Pakistan.
T: [042] 35219733
C: 0343 4050040

Pakpattan Branch

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0337 0481830

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3B Water Engineering & Services (Pvt) Ltd.

SPECIALTY FOR: Reverse Osmosis (RO) Plants, Drinking Mineral Water Plants, Filtration & Ultra Filtration, Softeners, DM, Mix Bed Polisher, Chemical Dosing Pumps & Controllers, Chemicals for RO, Cooling Tower, Boiler, HVAC, Waste Water treatment Plant & Maintenance, Polyelectrolyte & Maintenance Chemicals, Engineering Works Mineral Water Filling Machine
 PLC & PLC Control Panels, Beverage, Pharmaceutical, Power, Sugar, Paper, Textile Leather, Paint Industries etc.

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