



we  
**Promise**  
we  
**Deliver**

# General Catalogue



**CHEMICAL KINETICS**

[www.ChemicalKinetics.co](http://www.ChemicalKinetics.co)



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**CHEMICAL KINETICS**  
www.chemicalkinetics.co

**CHEMICAL KINETICS** PAKISTAN  [www.chemicalkinetics.co](http://www.chemicalkinetics.co)

All Around the Pakistan



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EXPERTS IN WATER TREATMENT TECHNOLOGY



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[www.etatron.com](http://www.etatron.com)



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[www.blue-white.com](http://www.blue-white.com)



**OUR VALUABLE CUSTOMERS**

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**CHEMICAL KINETICS**  
www.ChemicalKinetics.co

OUR WATER  
OUR  
FUTURE

## CHEMICAL KINETICS

All Around the Pakistan

**CHEMICAL KINETICS** is leading company, providing complete Water Treatment Solutions - Equipments, Chemicals & Application services.

We are also providing World proved Chemistries for Pulp & Paper, Sugar and Alcohol/Ethanol Distilleries Industries.

### The difference .. ? **COMMITMENT**

A commitment to finding new and better Techno-Commercial Solutions to apply chemistries. **We take after sales / application service as a science because our goal is our customers satisfaction.**

With Multinational Resources strategically located in all major industrial cities of Pakistan, Followings are major highlights of company:

- ♦ **Established in 2002:** owned and managed by specialized & experienced engineers who have more than 20 years' experience.
- ♦ **Located in all major cities** i.e. Lahore, Karachi, Rawalpindi, Multan and Faisalabad.
- ♦ **More than 55 experienced engineer,** technician and application staff for after sales services.
- ♦ Currently, **More than 400 industrial customers.**
- ♦ **More than 150 Industrial Reverse Osmosis Plants** has been installed.

www.chemicalkinetics.co



Better Living through >  
Right Technology



## COMPANY DIRECTORS



**Abdul Sattar Chaudhry**  
BSc. Chemical Engineer  
*Managing Director*

Started his career in the fertilizer plant. Worked as plant manager in chemical process industry. More than 25 years working experience in the filed of Water & Waste Water Treatment.



**Muhammad Sarfraz Chughtai**  
MSc. Environmental Engineer  
BSc. Chemical Engineer  
*Director Technical*

Started his career in the field of Process Water Treatment. More than 25 years working experience in the field of Plant Designing like DM Plant, Reverse Osmosis & Waste Water Treatment Plants.

## Partners With Us

Relationships built on cooperation, trust and mutual success.

We are representing world's well-known companies and manufacturers for their chemical & equipments in Pakistan. Our major international business partners are following:

**METITO**  
UAE



**KOLON**  
Korea



**AMAZON PAPYRUS**  
Hong Kong



**ETATRON D.S.**  
Italy



**CANPURE**  
China / Italy



**SAER**  
Italy



**DUPONT**  
USA



**BLUE-WHITE**  
United States



# WATER TREATMENT CHEMISTRY

**METITO** UAE

**EXPERTS IN WATER TREATMENT TECHNOLOGY**



[www.metito.com](http://www.metito.com)

**METITO** is the leader and provider of choice for total intelligent water management solutions.

**METITO** is at the forefront of the water and waste water industry with a current global project portfolio in excess of US\$ 1 billion and over 2500 employees across its worldwide operations. With over fifty years of operational experience, the group provides customized, comprehensive and advanced solutions across the full spectrum of its industry, from clean to dirty water.

**METITO** offers specialized chemicals that have been developed to support a number of specific industry sectors where product performance is critical. These sectors include oil, gas, petrochemical, marine, mining, automotive, industrial cleaning, food and leisure.

- Cooling water treatment for open evaporative and closed systems
- Boiler water treatment      ■ Refinery treatment programs
- Fertilizer and Chemical Process industries      ■ Power generation
- Treatment programme for Steel and Metal Process Industry
- Treatment programme for Pharmaceutical and Food Industry
- Potable water treatment      ■ On-line & Off-line chemical cleaning
- Reverse Osmosis anti-scalants, chemical cleaning and bio-control agents
- Pre-treatment and Waste Water Treatment      ■ Swimming pool      ■ Other desalination processes

**m-Series**



## COOLING WATER TREATMENT

**METITO** cooling water treatment products and technologies include:

A comprehensive range of pre-commission cleaning, flushing and passivating agents Inhibitors to control scale corrosion and fouling.

A wide range of oxidizing and non-oxidizing biocides, biodispersants and microbiological control systems that can protect the wet and warm surfaces which normally attract microorganisms. If uncontrolled, the resulting bio-films can result in microbiologically influenced corrosion and system efficiency issues

Computer simulation programs to optimise the system with respect to saturation indices, retention times, half life, cycles of concentration and choice of treatment. Selection of water treatment programmes is made on technical and cost merits, which in turn requires specialist knowledge of our sales engineers and technical centre.



## BOILER WATER TREATMENT

At Metito we provide a complete range of products suitable for every type of boiler from low pressure steam generators to high pressure water tube systems, including:

- Volatile and non volatile oxygen scavengers
- Phosphate residual programs
- All polymer programs
- Alkalinity builders
- Defoamers
- Sludge conditioners
- Condensate treatments
- A comprehensive range of filming, neutralising and combined amines for condensate treatment and pH correction boilers of a high evaporative rate and heat flux.



## REVERSE OSMOSIS PLANT CHEMICALS

**METITO** offers a full line of RO chemicals that are compatible with all types of membranes, with approvals and accreditations from market leading membrane manufacturers as well as the NSF Standard 60 certification. The chemicals **METITO** offer are highly effective at low dose rates in a wide range of feedwater types (brackish, seawater, fresh), and across the whole pH spectrum. The chemicals are also compatible with polyelectrolytes. **METITO** also offers, green chemistries with full biodegradation, but zero biofouling potential.



Certified to  
NSF/ANSI 60



# WASTE WATER CHEMISTRY

[www.ikolon.com](http://www.ikolon.com)

SPECIALITY CHEMICALS BY  
**KOLON INDUSTRIES INC.** KOREA



KOLON INDUSTRIES, INC. established in 1957. For the past 50 years, the company has been engaged in ongoing research & development to ensure that it remains the industry leader for many years to come. Due to the increasing environmental regulations, global economic development and the need to minimize wastes, Specialty Chemicals is fast-growing business of the KOLON INDUSTRIES and will be a core business in the near future.

## PRODUCT RANGE

BESFLOC Series by KOLON INDUSTRIES are high efficiency polyelectrolyte. This series includes:

- Polyelectrolyte / Flocculants for all industrial waste water clarification
- Polyelectrolyte / Flocculants for canal water clarification
- Polyelectrolyte / Flocculants for primary & secondary sedimentation
- Polyelectrolyte / Flocculants for sludge-thickening
- Polyelectrolyte / Flocculants for sludge-dewatering on belt press filter process, centrifuges & vacuum filters
- Decolorizer / Flocculants for dyeing industry's waste water treatment plants (Activated sludge process)



# Waste Water Treatment Plants

[www.ChemicalKinetics.co](http://www.ChemicalKinetics.co)

**CHEMICAL KINETICS** PAKISTAN 

Chemical Kinetics is specialized in Industrial waste water treatment plants, rehabilitation of existing systems and for back up services. We provide Professional approach to all aspects of consultation, design, Engineering installation, commissioning, operator training, effluent analysis, chemical supply, ongoing maintenance and project management, we have the flexibility to deal with a wide range of waste water management challenges.

We help our clients to maximise efficiency at all stages of the treatment process. This is achieved by making best use of existing plant, adapting existing systems to accommodate new plant, reducing effluent discharge and chemical requirements.

We are providing Waste water treatment solution to a wide range of industry which includes;

- ◆ Textile industry
- ◆ Chemical Processing industry
- ◆ Fruit and vegetable processing
- ◆ Sugar industry
- ◆ Food and Beverages
- ◆ Dairies
- ◆ Cement Plant
- ◆ Leather and Tanneries
- ◆ Paper and Pulp Industry

## PRIMARY TREATMENT

- ▶ Screening
- ▶ Equalization
- ▶ Grit Removal
- ▶ Sedimentation
- ▶ Primary Clarifier
- ▶ DAF System
- ▶ Oil & Grease Separation

## SECONDARY TREATMENT

- ▶ Activated sludge process
- ▶ SBR
- ▶ Anaerobic Digestion
- ▶ Oxidation ditches
- ▶ MBR (Membrane Bio Reactor)
- ▶ MBBR (Moving Bed Bio Reactor)
- ▶ Secondary Clarifier

## TERTIARY TREATMENT

- ▶ Disinfection
- ▶ UF
- ▶ Sand filters
- ▶ RO Plant





# PULP & PAPER CHEMISTRY

[www.amazon-papyrus.com](http://www.amazon-papyrus.com)

**AMAZON PYPYRUS HONG KONG**



## The complete specialty Chemical Package for the Pulp and Paper Industry

Amazon Papyrus is leading supplier to the Pulp and Paper Industry in Asia. We supply Process Solutions to many of the world class mills in the region. When you choose us as your Specialty Chemical supplier, you get much more than the chemicals. The complete package includes quality service to ensure that the best products are added in the right areas to your system at the optimum dose rates. You get 'state-of-the-art' equipment systems designed for reliability, safety and ease-of-use. Most importantly, you get world class technical support and service from the most experienced people in your industry.

## PRODUCTS

### PULP & DIP

- Defoamer/Washing Aid
- Digester Cooking Aid
- Effluent Sludge Thickener
- Felt Cleaner/Conditioner
- Green Liquor Polymer
- Lime Mud Dewatering Agent
- Pitch Dispersant
- Pulp Dryer Drainage Aid
- System Boilout Chemicals

### PRINTING & WRITING

- Antifoam
- Antiscale
- Boilout
- Drier Fabric Cleaning
- Felt Conditioning
- Microbiological Control
- Pitch Control
- Retention Aid
- Roll Release
- Wed/dry Strength
- Wire Passivation

### PACKAGING & BOARD

- Antifoam
- Antiscale
- Boilout
- Drier Fabric Cleaning
- Felt Conditioning
- Microbiological Control
- Pitch Control
- Retention Aid
- Roll Release
- Stickies Control
- Wed/dry Strength
- Wire Passivatio

### TISSUE

- Antidusting
- Antifoam
- Antiscale
- Boilout
- Converting Adhesives
- Creping & Release
- Felt Conditioning
- Fragrances
- Lotions & Balms
- Microbiological Control
- Pitch Control
- Softeners
- Stickies Control
- Wed/dry Strength

# SUGAR & DISTILLERY SOLUTIONS

[www.ChemicalKinetics.co](http://www.ChemicalKinetics.co)

**CHEMICAL KINETICS** PAKISTAN



Pakistan is the sixth largest sugar producer in the world & the sugar is second biggest agro-based industry in the country. Other hand: ethanol production through molasses also increasing every year. Chemical Kinetics feels pleasure to become partner of Sugar & Distillery industry in the country and providing the complete range of sugar process chemicals and distillay manufacturing chemicals solutions.

## SUGAR PROCESSING CHEMICALS

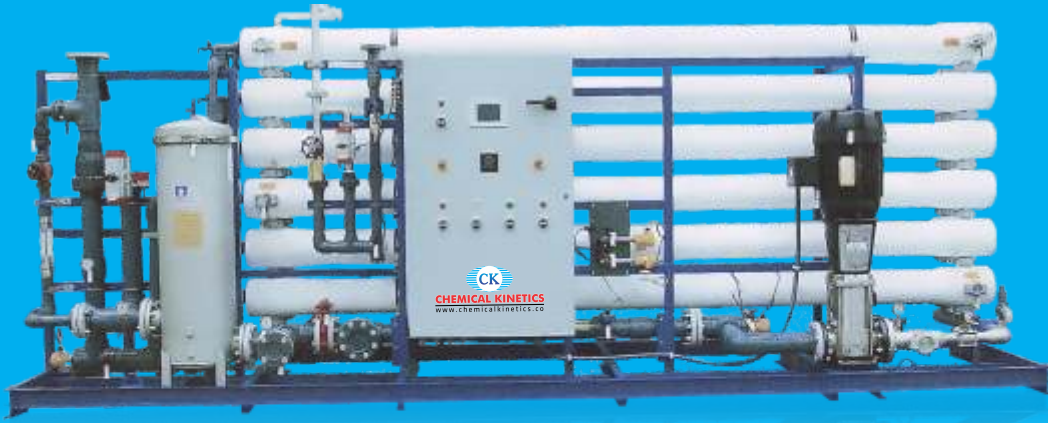
- Polyelectrolyte/ Flocculants for juice clarification
- Polyelectrolyte/ Flocculants for floatation aid
- Decolorizing agent
- Biocides
- Defoamer
- Antiscalant
- Enzymes (Improve profitability through process efficiency)



## MOLASSES DISTILLERY SOLUTIONS

- Enzymes for fermentation
- Antifoam (Food Grade)
- Antiscalant
- Antibiotic





# ENGINEERING BUSINESS

**CHEMICAL KINETICS** PAKISTAN



## REVERSE OSMOSIS SYSTEMS

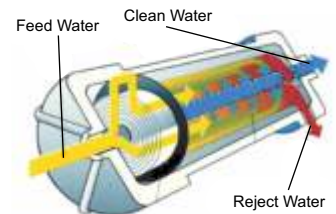
Manufacturing of Reverse Osmosis Systems is a fast growing business of Chemical Kinetics. Hundreds of R.O. plants, with capacity upto 150 m<sup>3</sup>/hr, have been successfully installed in many industries all over Pakistan. In recent years company has achieved many milestones in this field. Chemical Kinetics has best team of professionals for all aspects of plants from designing to commissioning.

- Sea & brackish water reverse osmosis systems
- High quality R.O. Components from USA / Europe
- High quality corrosion resistant material of construction
- High pressure pumps by USA / Europe
- Suitable for continuous and heavy duty operations
- Low capital and operational costs
- Compact space-saving construction
- Production of high quality drinking water for villas, restaurants & bottling plants
- Complete automation of the operating systems
- Completely portable units in containers available on request



### Chemical Kinetics also deals in:

- Membrane Cleaning (CIP) Chemicals
- Antiscale and biocide for R.O. plants
- Chlorination and dechlorination Chemicals



## WATER SOFTENING PLANTS

Water Softening Plant is an equipment that removes hardness/scale causing salts from hard water. It is achieved by ion-exchange technique. Normally, strong Cation Exchange resins are used in water softening plants. These resins remove all Calcium ( $\text{Ca}^{++}$ ) & Magnesium ( $\text{Mg}^{++}$ ) salts that cause scale in water systems.

- Suitable solution for low TDS Water
- Complete removal of calcium and magnesium
- Suitable for low-pressure boilers
- Suitable for cooling towers
- Very cost-effective and simple in operation
- With manual and automatic operation (Optional)
- With metallic or FRP vessels (Optional)
- With high quality cation resin
- With quality parts from Europe / USA

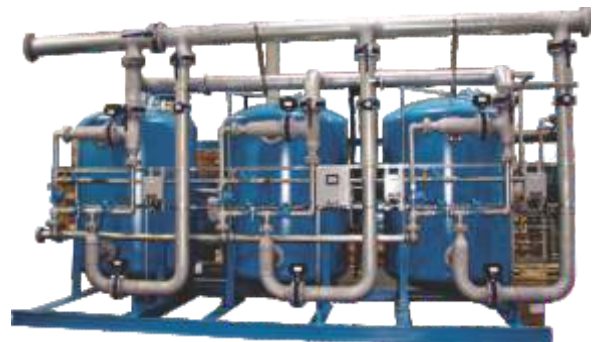


## DEMINERALIZATION PLANTS

D.M. plants remove all salts by ion exchange technique. This is achieved by using two columns of ion exchangers simultaneously i.e., cation & anion beds. Some special plants may have both (i.e., cation & anion) resins in one column as mixed bed column.

Chemical Kinetics has designed, installed and commissioned a number of Water Softening Plants and D.M. Plants, with capacity up to  $150 \text{ m}^3/\text{hr}$ , in last few years. The performance of these water treatment plants has been proven excellent.

- Suitable for high pressure boilers
- Can achieve water quality of  $0.01 \mu\text{S}/\text{cm}$
- With manual and automatic operation (optional)
- With metallic or FRP vessels (Optional)
- With high quality anion and cation resin
- With quality parts from Europe / USA



## EFFLUENT TREATMENT PLANTS

Chemical Kinetics is also involved in designing, installation and commissioning of Effluent Treatment Plants (ETP) in the last few years. The performance of these water treatment plants has been proven excellent.

Chemical Kinetics also has a complete range of treatment chemicals for effluent treatment plants.





 **ETATRON D.S.**

# DOSING SYSTEMS, CONTROL INSTRUMENTS

CHEMICAL DOSING PUMPS BY  
**ETATRON D.S.** ITALY



[www.etatrons.com](http://www.etatrons.com)

Etatron D.S. the leader of the leaders, acknowledge as International leading Company with a demonstrated thirty years primary position in the manufacturing and trading of dosing systems. Well-recognized ambitious goals and sound visibility have been achieved in more than Sixty Two countries all over the world. A relevant share of manufactured products, equal to the 70% at present, is delivered to the global market out of Italy.

## PRODUCT RANGE

Etatron D.S. develops and manufactures a comprehensive range of dosing devices, solenoid dosing pumps, electro-mechanic dosing pumps, peristaltic pumps and more.... Chemical-physical parameters controllers, a wide range of probes and complete systems aimed to fulfill any kind of liquid dosing requirements are available.



## 1. COMPLETE RANGE OF DOSING PUMPS

Chemical dosing pumps are divided into 03 main categories solenoid driven, Motor-driven and peristaltic metering pumps. These pumps provide proper control for specific applications and multiple needs.

### a) Solenoid Driven Pumps

Solenoid driven pumps provide accurate output with more advanced controls. These have the ability to accept a contacting-head water meter signal to treat based on flow. The contacting-head water meter sends a signal to the pump when a defined volume of fluid passes through it. This causes the pump to actuate and feed a predetermined volume of chemical. Pump can be connected to a level wand to shut down when chemical tank is low or feed proportionally via a 4-20 mA electronic signal.

These pumps are further sub divided in 04 categories depending on features & prices.

#### PKX Series

This range of solenoid dosing pumps distinguishes itself from competitors due to its simplicity of use, high reliability, quality & compact design. The PKX range gives versatility & its ideal pump for the dosing of chemical products in many applications such as swimming pools, car washing, water treatment, wash ware etc.

#### DLX Series

This range of solenoid dosing pumps covers complete industrial applications from manual dosing to proportional mode controlled by mA signal. This series also has an added advantage of digital display.

#### eONE Series

This new range of Etatron DS dosing pumps represents an important step forward. Technical characteristics deliver a reliable & effective solution for those business & customers involved in chemical dosing & water treatment.

#### BT Series

The Etatron BT Series is a range of microprocessor-based multi-function pumps suitable for wall-mounted installations. They carry with them all the advantages of digital electronics - reliability, versatility and accuracy.



### b) Motor Driven Pumps

The mechanical (motor) driven diaphragm-metering pump has been around the longest and is used for its simplicity. This pump provides consistent output with simple controls, typically a single output adjustment knob. These pumps can come with manual stroke length adjustment, motor with integral inverter to accept 4÷20 mA signal, Pressure relief & safety valves are also available.

These pumps are further divided in 02 categories :

**Piston Type Pumps** are suitable when high pressures are required. Pumped liquid is not abrasive & does not contain suspended solid particles.

**Diaphragm Type Pumps** are suitable when pumped liquid is abrasive or contains suspended solid particles. When zero leakage is essential.



### c) Peristaltic Dosing Pumps

The peristaltic pump differs from the mechanical and electromagnetic pumps by using a tube instead of a diaphragm to introduce chemicals into the system. It provides a consistent feed without the problem of losing prime. The peristaltic is a good choice for applications where loss of prime is a problem.



## 2. CONTROL INSTRUMENTS

**Etatron** control instruments combine consistent performance and sophisticated control functions with user-friendly features. High-tech microprocessor-based Controllers are designed to measure and control pH value, Rx (Redox Potential), Chlorine concentration, as well as a wide range of other electrochemical parameters, such as Hydrogen Peroxide, Peracetic Acid and Chlorine Dioxide.

Controllers are available in wall & panel mounted designs. They can control 1-2-3 parameters (i.e pH, Redox & chlorine) according to the type.

These controllers are highly flexible and can be configured to measure any of the above mentioned parameters, by means of one of Etatron wide range of ion-selective sensors for pH, RX & chlorine. pH & Rx sensors are available in plastic as well as in glass body.

### ACCESSORIES

In order to support the above controllers & sensors Etatron offers a wide range of accessories that are helpful in its installation & functioning. Accessories include from single to triple probe holders, inline electrode holders, proximity switches, coaxial cables for screw connector electrodes, buffer solutions etc.



## 3. CONTROL & REGULATION INSTRUMENTS

**Etatron** also offers dosing pump & pH, RX (ORP) or conductivity controller built into one compact unit. It has provision of measuring 1-2-3 parameters & can be designed by keeping in view the clients requirement.



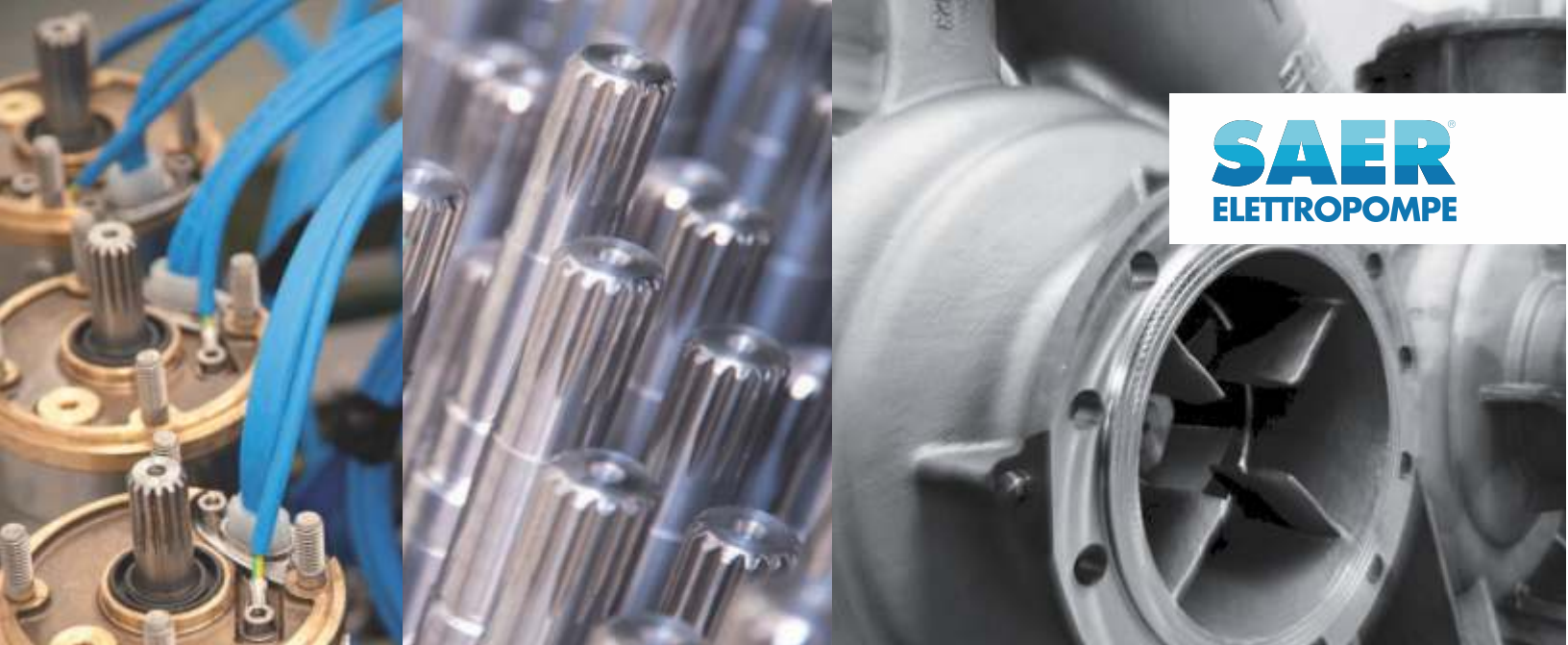
## 4. WATER METERS, MIXERS & CHEMICAL TANKS

**Etatron** offers water meters for cold as well as for hot water. They can read impulse transmitters. These water meters are available in threaded & flanged type Electromagnetic flow meter or simply mag meters are also available for sizes from DN15 to DN 600.

Mixers for vessel upto 1000 liters capacity with shaft in PP, SS316 with motors from 0.18 kw to 1.5 kw & from 70 to 140 RPM are available.

**Etatron** also offers chemical holding tanks from capacities from 60 litre to 1040 litre. MOC of these graduated tanks is polyethylene with UV stabilized & are suitable for food industry.





## SAER ELETTROPOMPE ITALY

# SAER ELETTROPOMPE EFFICIENT SOLUTIONS

Since 1951 SAER ELETTROPOMPE S.p.A. offers innovative solutions in the clear water field, with a complete range of surface and submersible motors and pumps entirely made in Italy, for applications in civil, industrial, marine, firefighting, water supply, mining, heating and cooling, municipal, Oil & Gas, reverse osmosis, residential, agriculture, irrigation and many others. Flexibility, research and development, know-how of over 60 years of experience, full automation of the production processes and collaboration of highly qualified staff are the key elements of SAER success, which is still a family owned Company.



## SAER A COMPLETE RANGE FOR ANY NEED

### Back pull-out design for easy maintenance.

#### Close-coupled pumps.

**Applications:** recycling plants, heating and cooling, plants of water supply, pressurizing units and fire-fighting systems.



IR SERIES

#### Centrifugal pumps with stub shaft.

**Applications:** recycling plants, heating and cooling, plants of water supply, pressurizing units and fire-fighting systems.



MG SERIES

#### End suction pumps according to EN 733.

**Applications:** recycling plants, heating and cooling, plants of water supply, pressurizing units and fire-fighting systems.



NCB SERIES

#### End suction pumps with dimensions exceeding EN 733.

**Applications:** recycling plants, heating and cooling, plants of water supply, pressurizing units and fire-fighting systems.



NCBK SERIES



# Wherever high pressure or large flow is required.

## Multistage horizontal pumps.

**Applications:** residential use, gardening, irrigation, water supply, water automatic distribution using middle pressure tanks, pressurization units.



OP SERIES

## Vertical multistage pumps.

**Applications:** lifting plants with or without tank, irrigation systems and wherever high pressure is required.



MK SERIES

## Multistage vertical and horizontal pumps.

**Applications:** irrigation, water supply, high pressure lifting, refrigeration, heating and cooling, snowmaking plants, reverse osmosis.



TM SERIES

## Split casing pumps.

**Applications:** recirculating systems, heating, air conditioning, heat recovery, plants of water supply, fire-fighting, irrigation, water treatment.



SKD SERIES

## Innovative Solutions

### Booster sets with 2 or more pumps.

**Applications:** Pressurization and distribution of water in civil, agricultural and industrial plants, heating plants, cooling, air-conditioning and irrigation systems.



TB SERIES

### Residential pumps.

**Applications:** threaded centrifugal pumps, centrifugal peripheral electric pumps, self priming pumps, double impellers pumps, gear pumps, swimming pool pumps, drainage pumps.



RESIDENTIAL SERIES

### Single stage L-Series In Line pumps.

**Applications:** Hot or cold water circulation with in-line nozzles. Suitable for heating or cooling in civil and industrial plants. Hot water for sanitary use and other civil and industrial applications.



SINGLE STAGE L SERIES

### Control panels & VFD (inverters).

**SAER** range of control panels compatibles to different starting methods: DOL, star-delta, impedance starting, soft-starting and with inverter for the control of surface and submersible electric pump both available in single and three phase.



CONTROL PANELS & VFD

## Under water reliability

### Oil filled submersible motors.

4" and 6" completely rewindable motors. Single phase or three phase version.



CL SERIES

### Water filled submersible motors.

6", 8", 10", 12" fully rewindable motors. PVC or PE+PA winding.



MS SERIES

### Semi-axial submersible pumps.

**Applications:** lifting, pressurizing and distribution in civil and industrial installations, autoclave and cistern inlets, washing plants, irrigation systems, mining and off shore.



S SERIES

### Radial submersible pumps.

**Applications:** lifting, pressurizing and distribution in civil and industrial installations, autoclave and cistern inlets, washing plants, irrigation systems.



FS, NS, NR SERIES

# CP Series EDI MODULES

**CANPURE** CHINA / ITALY  
Membranes for Better Lives



[www.canpure.com](http://www.canpure.com)

## Product Profile

Based on the traditional EDI technology, revolutionary innovation is carried out to the internal structure of Canpure EDI Module with counter-current full-packing technique adopted, which broadens the water supply requirements of EDI, features simple operation and results in low operating costs.

## Product Features

### No Salt Injection

Canpure EDI does not consume salt and recycle the concentrate in operation, which saves much expense and makes the system much simpler.

### Counter Current

Concentrate and electrolyte stream are flowing into EDI in opposite directions to feed water can avoid fouling effectively, then it broadens the feed water limit adequately.

### Low Energy Consumption

Canpure EDI filled with resin reduces the EDI module resistivity significantly, which reduces the energy consumption largely.

### High Quality Materials & Components

High quality ion-exchange membrane and appropriate degree of resin compaction make the EDI work effectively.

### Simple Arrangement, Installation, Operation & Electricity Safety

Easier to array modules side-by-side on a skid. The power connector of Canpure EDI is waterproof.

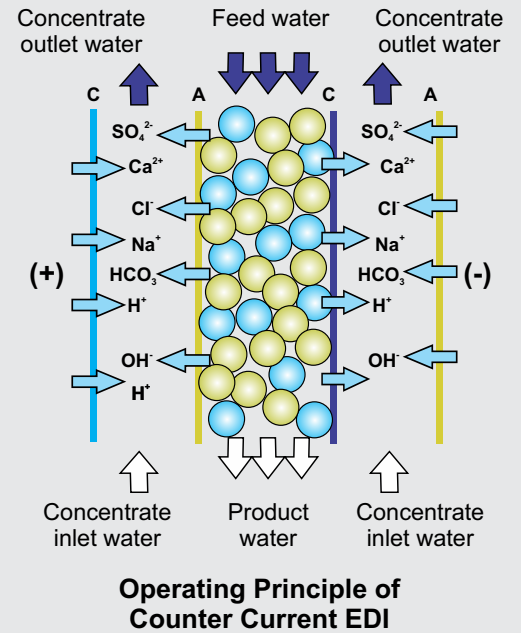


## Electrical Specification

- The requirements of DC power used in EDI systems, including ripple and current control, are quite unique. To meet these requirements, Canpure has specially designed DC power units for EDI using IGBT technology.
- Digital display
- High frequency, high efficiency, high PF (power factor), high reliability.
- Low ripple, low noise and small foot print.
- Individually controlled.

## Applications

- Advanced boiler feed water desalination
- Purified water for petrochemical and chemical purposes
- Purified water for biochemical and pharmaceutical purposes
- Purified water for electronic industry
- Purified water for laboratories



## Technical Parameters of CP Series EDI Modules

Module Parameter					
Modules	CP-5800S	CP-4500S	CP-3600S	CP-2000S	CP-1000S
Size (mm)	616x296x810	616x296x615	616x296x515	616x296x405	616x296x315
Weight (kg)	160	130	110	80	68
Product Flow (m <sup>3</sup> /h)	5.0 ~ 6.5	4.0 ~ 5.1	3.0 ~ 3.8	2.0 ~ 2.6	1.0 ~ 1.5
Concentrate Flow (m <sup>3</sup> /h)	0.5 ~ 0.65	0.4 ~ 0.51	0.3 ~ 0.38	0.2 ~ 0.26	0.1 ~ 0.15
Electrolyte Flow (m <sup>3</sup> /h)	0.06				
DC Power	CB- 500	CB- 500	CA- 350	CA- 350	CA- 350
Operation Voltage (V)	100 ~ 450	80 ~ 300	50 ~ 240	50 ~ 160	20 ~ 100
Operation Current (A)			0.5 ~ 5.5		
Feed Water Requirements					
TEA (Total Exchanged Anion)	Maximum 35 ppm				
Applied Feed Pressure	Maximum 0.4 MPa (60 psi)				
Feed-Product Pressure Drop*	0.15 ± 0.02 MPa (22 ± 3 psi)				
Concentrate Pressure Drop*	0.1 ± 0.02 MPa (15 ± 3 psi)				
Hardness (as CaCO <sub>3</sub> )	Maximum 1 ppm				
Organics (as TOC)	Maximum 0.5 ppm				
Oxidizers (Cl <sub>2</sub> /O <sub>2</sub> )	Not detectable				
Metals (Fe, Mn, etc.)	Maximum 0.01 ppm				
SiO <sub>2</sub>	Maximum 0.5 ppm				
SDI <sub>15</sub>	< 1.0				
Conductivity	Maximum 60 ns/cm (as NaCl)				
Operating Temperature	5 - 35 °C (41 - 95 °F)				
Operating pH Range	7.0 - 9.0				



# MEMBRANES & RESINS

[www.dupont.com](http://www.dupont.com)

## THE DUPONT COMPANY USA

### ◀DUPONT▶ FILMTEC MEMBRANES FOR REVERSE OSMOSIS SYSTEMS

FilmTec Corporation is a subsidiary of DuPont™. DuPont™ makes high-quality FILMTEC™ reverse osmosis and nanofiltration elements for a wide variety of industrial, municipal, commercial and home drinking water applications.

DuPont™ customers are primarily original equipment manufacturers of water treatment systems, engineering companies that specialize in the design and installation of water treatment systems, water service companies that operate water treatment systems for industrial and other water end users, and public and private water utilities. Our customers serve a wide range of end users including power generation and semiconductor plants, chemical and process industries, municipalities, and other commercial and consumer customers.



### ◀DUPONT▶ ROHM & HAAS ION EXCHANGE RESINS

Ion exchange is the reversible interchange of ions between a solid (the ion exchange resin) and a liquid. Since they act as "chemical sponges", ion exchange resins are ideally suited for effective removal of contaminants from water and other liquids. This technology offers a number of advantages in industrial water demineralization and softening, wastewater recycling and other water treatment processes-including high water recovery, low volume of waste and operational flexibility. Ion exchange resins are also used in a variety of specialized applications such as chemical processing, pharmaceuticals, mining, and food and beverage processing. AMBERLITE™ and AMBERJET™ resins (formerly brand of Rohm & Haas) are among the world's leading brands of ion exchange resin technology.



# FLOW METERS & ROTA METERS

[www.blue-white.com](http://www.blue-white.com)

## BLUE-WHITE INDUSTRIES LTD. USA

### **Blue-White** Industries, Ltd. FLOW METERS

Flowmeters encompass a wide range of flow options. With the capability to be installed both vertically and horizontally, flowmeters is versatile in installations where new or preexisting piping structures can be tight or inconvenient.

The remote mount display allows for panel, wall or pipe mounting, to easily view the digital LCD screen.

Flowmeters are easy to install and operate, resulting in a very low overall cost of ownership. Relatively low cost paddlewheel style electronic flowmeters are proof that high cost doesn't always mean better value.

### **Blue-White** Industries, Ltd. ROTA METERS

The rotameter is comprised of a vertically tapered tube through which the fluid to be measured is passed, from the smaller end of the taper and up to the larger end. As the fluid flows through the tube, it forces an indicator (float) upward. The clearance space between the float and tube increases as the float moves towards the top of the meter. This increasing area requires a larger amount of fluid to force the float higher. By varying the taper of the tube, the mass of the float, and the length of the tube, different flow ranges can be calibrated. The proper installation of the variable area rotameter, as with all flow instruments, is critical to performance. It must be plumbed into a piping system correctly: that is, with the narrow part of the taper at the bottom.



# Our Valuable Customers



Sitara Chemical Industries Ltd.



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THATTA CEMENT COMPANY LIMITED



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