

We remove everything from Water

Except – "Hydrogen & Oxygen"



We Treat Water - "Differently"



"HELPING CREATE A LIVEABLE PLANET"

SIMPLE, FLEXIBLE, RELIABLE, ROBUST, EFFICIENT, INNOVATIVE, DISRUPTIVE, QUALITTY BY DESIGN, ENVIRONMENT FRIENDLY WATER AND WASTE WATER TREATMENT SOLUTIONS

Water! There is no alternative to this! What you don't know about water can cost you plenty. What you learn about water can save you lots! Many have predicted that water will be the oil of the future as clean/usable water becomes more valuable and scarcer and the next world war will be for Water. Dispute over water resources are increasing day by day. Water treatment is the piece of the puzzle as it relates to properly managing and using this everimportant scarce resource. Water treatment is like a chain. Every link should be strong enough to give you uninterrupted supply of enough treated water of right quality when you need it and at lowest "Life Cycle Cost".

Water treatment is a complex subject. Water treatment is not taught in schools and colleges as a regular subject. Many companies treat water as Ionic does. But we treat water – "Differently". Water is a utility and like electricity and gas, the more efficiently it is used, the more money is saved. Why is water many times ignored? Water is assumed to be cheap and available in plenty. But if you know the true cost of water, you will realize that it is not cheap! Water's true cost is more than what shows up on the water and sewer bills received each month. The true value of water includes Cost of raw water -Cost of water treatment -Cost of waste water treatment-sCost of capital equipment Cost of energy lost through water -Cost of productivity lost through water, cost of maintenance, cost of labour, cost of consumables, power, chemicals etc.

I-DOSE SMART DIGITAL CHEMICAL DOSING SYSTEM

IONIC offers Skid mounted "I-DOSE" Smart Digital Chemical Dosing Systems. Intelligent smart digital dosing pumps the heart of the system ensures accurate dosing of process chemicals ensuring process safety, equipment safety and operator safety. Pumps and accessories are available in PVC, PP, PVDF and stainless steel.

- Dosing skids in PP-H
- Dosing tanks in LDPE, SS,PP, PVC, FRP etc.
- Dosing pumps from 0.01-200 lph
- Tank low level switch
- Foot valve, injection valves, tubing
- Control cables for automation



I-DOSE-CT- EASY COOL CONTROL

SMART DIGITAL DOSING SYSTEM FOR COOLING TOWER CHEMICAL DOSING AND CONTROL

IONIC offers Skid mounted "I-DOSE" IoT enabled Smart Digital Chemical Dosing Systems of various capacities and material of construction for cooling tower water treatment. Application specific IoT enabled process controller with Real Time Remote Access cloud platform is integrated with dosing pumps to implement chemical dosing and control protocol.

Intelligent smart digital dosing pumps the heart of the system ensures accurate dosing of sacle and corrosion inhibitors, biocides, deposit control polymers and other process chemicals ensuring process safety, equipment safety and operator safety. Pumps and accessories are available in PVC,



CHLORINE & CHLORINE DIOXIDE DOSING SYSTEM

Set it, Get it and Forget it!

IONIC offers Skid mounted pre-engineered "I-DOSE" Smart Digital Chlorine & Chlorine Dioxide Dosing Systems. Intelligent smart digital dosing pumps the heart of the system ensures accurate dosing of process chemicals ensuring process safety, equipment safety and operator safety.

- Dosing skids in PP-H
- Dosing tanks in SS,PP, PVC, FRP etc.
- Working and Standby Dosing pumps from 0.01-200 lph
- Tank low level switch
- Foot valve, injection valves, tubing
- Control cables for process automation
- Online Free/Total Chlorine and Chlroine Dioxide analyser with PID control output
- Optional IoT enabled real time remote access



GENOX Smart Digital Chlorine Dioxide generators

What you can't say from it's name. IONIC realized disinfecting water properly is as important as treating water and is offering a unique and cost effective solution for water disinfection.

We manufacture fully automatic Chlorine Dioxide generators for water disinfection. CLO₂ is 2.5 times more powerful than conventional Chlorine and is very effective in wide pH. ClO₂ also oxidises heavy metals like Iron, Manganese and widely used for cooling water microbial control, paper making, food and beverage and pharma water treatment systems.

Traditional generators for small capacities up to 500 gms/h and under water submerged generators for medium and large capacities (0.5-10 Kgs/h) are available.



Raw and Waste Water Clarification

Small in size- Big In performance

All water treatment starts with Total suspended solids and turbidity. TSS removal from raw water and waste water lonic offers various type of clarifiers, clari flocullators, reactivator clarifiers, Tube settlers and Lamella inclined Plate clarifier technology

Clarification technology is selected and sized based on project specific requirement.



TURBILOC ® ACTIVE MULTIMEDIA FILTER

Is a direct replacement for sand filter, doubling the performance of sand filters without the need of additional investments in infrastructure. TURBILOC ** resists biofouling, bio-coagulation and transient wormhole channeling of unfiltered water and never needs to be recharged or replaced. Turbiloc filter and Turbiloc Plus filters are highly engineered systems in which the media, system design engineering, media retention system, back wash procedure, process control and monitoring work in tandem with each other to provide unparalleled filtration performance. Each system is tailored to meet a particular feed water characteristics and to give desired filtration performance. Can handle up to 400 ppm TSS. TSS and Turbidity < 5 ppm/NTU is easily achieved. Fully automatic and semi automatic models are available.



"NEXT GENERATION" MULTIGRADE SAND & ACTIVATED CARBON FILTER

Filter uses carefully selected and mixed grade of filter media for effective filtration of water having turbidity up to 25 NTU. The filter unlike conventional pressure sand filters uses "VARY VOID" principle for depth filtration and operates at higher specific velocity and needs back wash once a day. They also consume less amount of water during backwash operation. Automatic and manual versions are available. Various sizes are available to meet low flow and high flow requirements.



"QUICK CYCLE" WATER SOFTENERS WITH "SALT SAVING TECHNOLOGY"

For producing soft water having very low level of residual hardness. Unlike competitive conventional softeners our units consumes 30% lower salt during regeneration and thus giving our customers a green solution for softening water. Quick Cycle softeners utilize 5th generation premium resin technology combined with innovative engineering design to get full benefits. Advanced Multiport valves are supplied for trouble free performance.



Quick Cycle fully automatic demineralizers

Small in Size- Big in Performance

IONIC offers its unique skid mounted compact, pre-engineered Fully automatic PLC controlled "Quick Cycle" demineralisers with "Chemical saving technology" for producing demineralised water having conductivity < 1.0 $\mu S/cm$. All components are carefully selected to give long term reliable performance. Advanced safety features have been incorporated for reliable operation 24 hrs. and 365 days a year. Over 30 different capacities from 2 m3/h to 60 m3/h to choose.



- Pre engineered
- Fully automated
- High quality Tier one components
- Reliable
- <35 minutes regeneration time
- Small foot print
- 2.0-60.0 m3/h
- Less chemical consumption
- Less waste water generation
- Self neutralizing waste water

Pl. request for specific brochure for this system to know more about its performance, capabilities and benefits. Standardized pre engineered system and quick delivery.



ADVANCED REVERSE OSMOSIS SYSTEMS

WITH "MATRIX" ECG REAL TIME REMOTE ACCESS PERFORMANCE MONITORING

IONIC offers its unique skid mounted compact, preengineered "Matrix" series systems. Fully automatic PLC controlled Advanced Reverse Osmosis systems with "Easy Control" and "Real Time Monitoring" technology for producing purified water required in process, boiler feed, drinking etc. All components are carefully selected to give long term reliable performance. Advanced safety features have been incorporated for reliable operation 24 hrs. and 365 days a year.

The unique "Real Time" monitoring system developed by us for the first time in India is capable of providing normalized values for flow, salt rejection, salt passage, pressure drop continuously and has a very unique "ADP Indicator" (Allowable Decline in Performance) to tell the customer in plain English text what is the condition of the membranes since start up. Reference values are stored internally and automatically compared with the present normalized values to provide the customer on the spot decision making inputs for safe and long term reliable operation of the system. In a way, this system protects the membranes from irreparable damage due to excessive fouling which if not detected at the right time may lead to costly downtime and membrane replacement.

The unique ADP indicator supports membrane cleaning decision making too! When to clean the membranes? Or Whether membrane cleaning is successful, partially successful or failure can be easily determined even by a layman.

All the above comes with affordable cost of ownership to our customers and backed by quality after sales service.

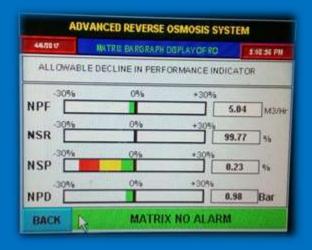
Our R.O plants are easier to configure and use than your cell phones! You have the option of having our Real Time Remote Monitoring system.

- Appropriate automated pretreatment to suit individual raw water characteristics
- Heavy duty nanosized corrosion resistant aluminium skid
- Side port membrane pressure tubes
- A range of high quality premium membranes
- Membranes selected based on raw water characteristics
- PLC based control with colour HMI
- Digital dosing system
- Digital flow sensors
- Digital pressure sensors
- Digital conditicvity sensors
- Premium quality Tier 1 components
- Process and equipment safety interlocks



| 5/31/2017 | ROI | PARAMETE | R-2 | 4:43:19 PH |
|-----------------------|-------|----------|-------|------------|
| PARAMET | ER | STARTUR | NOW | UNIT |
| Norm.Permeate Flow | | 5.12 | 4.86 | M3/Hz |
| Norm.Pressure Drop | | 1.00 | 1.09 | Bar |
| Norm.Salt.Rejection | | 99.70 | 99.70 | 56 |
| Norm.Salt Passage | | 0.30 | 0.30 | - % |
| Act Recovery | 70.35 | SSP | 0.30 | 16 |
| Sys.Recovery | 46.53 | SSR | 99.70 | 16 |
| Permeate Total Volume | | | 413.4 | M3 |
| revious Alarm Alarm | | rm TREN | nc RO | MAR |





Pharmaceutical

USP Purified Water Systems

"Sometimes lack of growth is essential". With IONIC the "BUG" stops in the raw water tank. Our systems carefully engineered and hence do not promote or support biological growth!

IONIC offers its unique skid mounted compact, preengineered Fully automatic PLC controlled, ultramodern, 100% Sanitary Purified water generation system to meet USP, EP, JP, BP, IP with IIoT enabled "Real Time Monitoring" technology for producing purified water required for pharmaceutical applications. All components are carefully selected to give long term reliable performance. Advanced safety features have been incorporated for reliable operation 24 hrs a day, 7 days a week and 365 days a year.

lonic's involvement in the project starts from raw water source to the point of use. With our over 33 years of experience we are confident to meet current and future water quality requirements.

The system uses a range of technologies like Turbiloc Active Multi Media Filter, Capacitive Electro Desalination, Ultra filtration, Ion exchange, UV, RO, CEDI etc. The most critical microbiological quality attribute is met easily with our properly designed and engineered systems. We do not put, unlike our competitors, any unreasonable conditions for meeting the final purified water quality commitments.

System process design and engineering is done with modern licensed softwares.

Our solutions are unique and are backed by proper documentation for DQ, IQ, OQ, SOPs for operation, maintenance and sanitisation. Detailed operation and maintenance manual is provided to the customer.

Our systems are energy, chemical and water saving too! They consume less power, less chemicals and discharge lower quantity of water while USP producing purified water thus reducing our customers manufacturing cost.

Advanced instrumentation and control with user friendly features makes the operation easier and reliable.

When you talk to us you will find that purified water systems are not just having few vessels, piping, valves, membranes, tank etc.

ULTRAVIOLET SYSTEM

IONIC offers Ultraviolet system with 254 nm and 185 nm wave length for disinfection and TOC reduction. Sanitary design with SS 316 L externally electropolished and externally mirror polished housing. Online Wavelength specific UV intensity monitor and control system continuously checks the system health. Validation documents are provided.









ULTRAFILTRATION SYSTEM

IONIC offers its unique Fully automatic PLC controlled Ultra filtration system for removing Colloidal particles, Colloidal Silica, bacteria etc.

Ultra filtration is beneficial when the high purity water is required and as part of pretreatment for Reverse Osmosis based systems. Hollow fiber membranes used are robust and the system is engineered for continuous trouble free operation. Graphical back lit MMI with digital sensors for flow, pressure etc. facilitate easy monitoring and control.

Inside-out and outside-in membranes from leading suppliers are available.

Intelligent automation ensures reliable trouble free operation.



IONIC offers fully automatic chemical free deionisation system for producing high purity water for engineering, semi conductor and pharmaceutical companies. The system consists of pretreatment system followed by R.O and EDI (Electro deionisation system) and produces purified water having resistivity up to $18.2 \, \text{M}\Omega/\text{cm}$.

Various capacities starting from 100 lph is available thus meeting the requirement of even very small volume requirements. Ideal for small pharmaceutical companies and a better alternative to conventional demineralisers when chemical free deionization of water is required.

CAPACITIVE ELECTRO DESALINATION

NON CHEMICAL ELECTRICAL DRIVEN PROCESS

lonic offers Capacitive Electro desalination(CED) Unique water treatment system to produce potable and process water from brackish water up 3000 ppm TDS. The technology is based on Capacitance principle and is simple and easy to use and consumes low power.

Ideal for producing drinking water and process water that does not require complete removal of salts.

Since it consumes low energy it can be coupled to solar / wind based power systems.







NEXTED ELECTRO CHEMICAL DESALINATION

NON CHEMICAL ELECTRICAL DRIVEN PROCESS

Ionic offers Nexted Electro Chemical desalination(EDR) Unique water treatment system to produce potable and process water from brackish water up 7000 ppm TDS. The technology is based on Electro Dialysis Reversal principle and is simple and easy to use and consumes low power.

Ideal for producing drinking water and process water that does not require complete removal of salts.

Various capacities are available



SEWAGE TREATMENT SYSTEM

IONIC offers packaged prefabricated and customized Sewage Treatment systems with CAS/MBBR/SBR/MBR technologies. Designed with latest process modeling software. They are very compact with limited civil work, Simple in design but at the same time better performance and low life cycle cost. Various sizes available from 1 KLD to 1000 KLD available.

With Automation based on real Time Remote monitoring control system you have 24 x 7 control over the system.



"EASY DRAIN" SLUDGE DEWATERING SYSTEM

Fully automatic "EASY DRAIN" Sludge dewatering system is simple, compact and easy to sue all weather sludge dewatering system suitable handling biological and non biological chemical sludge. The sludge dewatering is based on special water repellant coated hydrophobic poly propylene nonwoven disposable bags. Very easy to use compared to conventional dewatering process like sludge drying beds, filter press etc. 2 models are available to handle 20 and 40 m3/day of sludge.

For large systems we offer alternate technologies like belt press, screw press, centrifuge etc.

Features

- Fully automatic PLC controlled
- SS 304 cabinet with transparent door
- Sludg feed pump
- Sludge conditioner dosing pump
- Bentonite clay dosing pump
- Static mixer
- Trolley for sludge bag removal and transporatation





POLYMIX – BETTER MIX

POLY ELECTROLYTE PREPARATION SYSTEM

Fully automatic liquid and solid poly electrolyte preparation system with PLC control. Batch system, continuous 2 compartment and 3 compartment system complete with PP mixing, dilution and maturation tanks, dosing system, level controls, screw feeder for solid poly electrolytes and metering pumps for liquid emulsion poly electrolyte.

SMART DIGITAL WATER QUALITY ANALYSERS

Advanced sensors for monitoring water, waste water quality with IoT enabled Real Time Remote Access. IoT enabled Industry 4.0 and water 4.0 ready!

Features

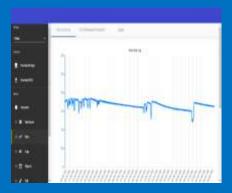
- Smart Digital Multi-Channel Multi parameters
- Configuration customised for each application
- Flexible and field upgradable
- Expandable
- Process control outputs
- Special application specific software
- Digital 2 way communication interface
- Multi level Password protection
- Email alerts
- SMS text alerts
- SCADA/DCS connectivity
- Security
- Report generation
- Automatic data logging and trending

Parameters

- pH
- ORP
- Conductivity
- Chlorine
- Chlorine dioxide
- Organics
- Colour
- Ozone
- Dissolved Oxygen
- Turbidity
- Suspedned solids
- Particles
- Streaming potential for Coagulation control
- Charge
- Fluoride
- Peracetic acid
- Flow
- Any analogue and digital signals









Waste water treatment - Your choice is clear!

As a corporate commitment to protect environment IONIC offers effluent treatment systems for various types of industries. Our experience in dealing with diverse industries makes it possible to offer technoeconomically optimum solution for treating industrial waste water. Major industries we serve include automobile, engineering, chemical etc.

In consultation with carefully selected technological partners we are in a position to offer the latest in treatment technologies to protect our environment. Some of the solutions we have provided to our customers are unique and one of the kind in the industry.

We can provide a range of technologies involving physio-chemical treatment to advanced waste water treatment systems comprising electro chemical oxidation , membranes for recovery, recycling etc.

Waste water technologies we provide

- Primary Physio chemical treatment
- Secondary Biological treatment using ASP,MBBR,MBR,SBR,MBR
- Tertiary treatment
- Dissolved air floatation
- Oil water separators
- Oil skimmers and Oil absorbents
- Colour removal
- TDS removal
- Electro Coagulation
- Electrox electro chemical oxidation
- Catox catalytic oxidation
- Chemical oxidation
- Photo chemical oxidation
- Zero Liquid Discharge systems
- MVC and MEE Evaporators
- Eutectic Freeze Crystalisation
- Sludge dewatering system
- Turnkey projects

Get to know about us

Ionic Engineering Technology Pvt. Ltd. is a professionally managed ISO-9001/2015 company by people with over 33 years of hardcore experience in water and waste water treatment. Ionic is dedicated to the design, engineering, manufacture, supply, service and maintenance of water and wastewater treatment plant and equipment. We provide a one-stop shop for integrated water and wastewater treatment needs, and focus on providing the optimum solution for every client's need.

Now it is 15 years since Ionic Engineering Technology Pvt. Ltd. started operations with the main focus on technology, quality and performance related to water and waste water treatment solutions. The single purpose was to "Remove Everything from Water – Except "Hydrogen & Oxygen" and give customers "Peace of Mind" and not a "Piece of Equipment". We wanted to make a difference to the way you treat water and waste water and hence we state "We Treat water – Differently"

When we started, we did not want to be known just as another vendor or supplier and rather as a business partner and solutions provider who is interested in understanding correctly the end user requirement and offer a techno-economical value engineered right solution. In this, we have a selfish interest too! – Only in the customers well-being we can flourish!

Our vision – help create a livable planet

To Supply and implement solutions which meets and exceeds the needs and expectations of our clients by continuously providing them the solutions to reduce their water foot print and life cycle cost of water and waste water treatment by research and development(R&D) on new processes, technologies and products. To help customer understand the True Cost of Water and help them take an informed decision to reach their sustainable goals.

Our mission - mission - to Treat water "differently"

IONIC will be a performance oriented and customer centric company to present globally. Increasing our footprint and market share Year On Year (YOY) in the markets we operate. Be one of the best solutions provider with innovative solutions which will be different, stimulating and productive, and one that can significantly reduce technical risks and costs, ensuring maximum returns to our customers and shareholders. Provide cutting edge disruptive water and waste water treatment technologies that will be unique, cost effective and provide value for money!

Water Efficiency

Water is the most valuable resource on our planet. That's why efficiency and quality are top priorities for the water industry. These goals are becoming increasingly difficult to achieve as the expense of providing clean water grows in many regions, while at the same time operations have to be as efficient and economical as possible. The consistent, end-to-end digitalization of plants and processes helps the water and waste water industry meet these challenges. Industry 4.0 encompasses a promise of a new industrial revolution—one that marries advanced manufacturing techniques with the Internet of Things to create manufacturing systems that are not only interconnected, but communicate, analyze, and use information to drive further intelligent action back in the physical world. Ionic will focus on IIoT enabled system with real time remote monitoring which will help our customers meet present and future manufacturing challenges and be more efficient!

With the ever increasing scarcity of water and stringent waste water discharge norms, many of us consider this as a serious problem and not as a good opportunity to clean up our act! Most of us talk about 3R's - "Reduce, Recycle and Reuse" but do not know how and where to reduce, how and what to recycle and how and where to reuse! To get a solution to the above, isolated approaches does not help. What one has to adopt is an integrated step by step approach. Many a times we have seen non availability of water and waste water treatment disposable problems hampering the industrial operation including a threat of closure and hurdle for expansion. Non availability of potable water will lead to migration of human population as well as affect agriculture and industrial growth! If water is available it may be available at considerable cost and of poor quality requiring expensive and complicated treatment. Water is a utility like electricity and fuel, the more efficiently it is used, the more money is saved.

To mitigate the problem of water scarcity IONIC offers innovative solutions with which industries can reduce their "Water Foot print".

Water and waste water treatment is important. But more important is how efficiently water and waste water is being treated. The right question to ask is "What is the True Cost of Water? Water and waste water treatment is often taken for granted and technology, quality, performance, monitoring, operation and maintenance is ignored resulting in poor performance, repeated failures, high power consumption, high chemical cost, high maintenance and cleaning cost, wastage of water etc. Most of the time the management is not aware their pot is full of holes and their money is leaking like water! Unfortunately, the management does not understand their profitability depends on efficient manufacturing operations and does not ask questions as to how efficient and sustainable their manufacturing process is.

We are different!

- In Expertise we provide
- In Business ethics we follow
- In Technology we offer
- In Quality we design
- In User friendly products
- In Value for money you get
- In Peace of mind you get
- In Experience we have

Technology- The past, present and future - Be future Ready with Cleaner and better production

There are many water and waste water challenges still to be overcome! Though there is constant upgradation of traditional technologies new disruptive technologies are getting introduced slowly to meet present and future challenges. Some technologies even though good is not commercially viable. Further development has to take place to make it techno commercially viable. Traditional technologies which are inefficient and consume more chemicals, water, power and labour should be avoided and more environment friendly electrical driven non chemical process technologies to be welcomed. Ionic will work with its customer to adopt new technologies that will make water and waste treatment simple, effective, reliable and flexible and reduce the total cost of ownership. Industries need to focus on quality and deliverables than initial cost and need to be more efficient in manufacturing. The decision making process must change to consider the long term impact on manufacturing cost. The decision maker should understand that he is creating an invaluable asset to his company and his understanding of his decision whether good or bad will affect the final cost of product! Those who change and reorient their decision making process will be winners and those follow the traditional way will loose out!

Our commitment

We are dedicated to using our professional expertise accumulated over many years, to providing the solution you want, when you want it. We also take great pride in ensuring that every client is satisfied with the operating efficiency of the systems we design and the overall level of service that we provide, whether during the initial contract phase or later, throughout the life of the plant.

- Providing expert advice, tailored to meet your requirements
- Supplying high quality, good value-for-money systems and equipment
- Supporting all our clients for the lifetime of their water & wastewater treatment systems
- Developing and deploying the best, most economic solutions for your needs
- Listen to our customers as well as our suppliers on products and technologies feedback and updates.
- Continuous improvement in all that we do

Our customers

We have a long list of clients that have put their stated satisfaction with our performance by giving us repeat orders. These "Repeat Orders" are our best references; they tell potential new clients that we really do mean what we say. Not only do we supply well engineered, high quality equipment, but we then provide "cradle to grave" support to those clients. We have clients to whom we still provide regular support and service several years after they bought their systems from us. We believe it is reasonable to assume this means they are still happy with what we provide. Over this time, we have also learned that beyond the technical benefits, what really concerns our customers is "Peace of Mind" - knowing that newly installed equipment will be absolutely dependable over time. Proving it to be more than that just a slogan, our customers acknowledge time and time again that lonic Engineering Technology Pvt. Ltd. truly provides them with a "Peace of Mind". Whether you require a new plant, refurbishment of an existing one, technical support, service and maintenance or spare parts, our aim is to provide you with excellent value and create a long-term working relationship based on trust and satisfaction. We provide a very wide range of equipment, systems and services across many industrial sectors. Therefore, we hope this brochure will give you a "flavour" of our capabilities. If you require additional information please just contact us, and we will be pleased to assist you.

You deserve some "Peace of Mind" Ionic gives just that!

Over this time, we have also learned that beyond the technical benefits, what really concerns our customers is "Peace of Mind" - knowing that newly installed equipment will be absolutely dependable over time. Proving it to be more than that just a slogan, our customers acknowledge time and time again that Ionic Engineering Technology Pvt. Ltd. truly provides them with a "Peace of Mind".

Contact us today:- for "Peace of Mind"



S.No. 1,5,12 "B" Wing, Mahalaxmi Heights

Mumbai Pune Road, Pimpri

Pune-411018, Maharashtra State, India

e-mail - contact@ionic.co.in

Phone - 020-27475272/27475273/8275486263

Web: www.ionic.co.in

Disclamier: We have a policy of continual improvement and we keep improving our technologies, products and solutions from time to time. We reserve the right to make changes in the product specifications as may be required to further improve. The information provided is correct to the best of our current knowledge and no liability is accepted since the end use of the product is out of our control.