



**UNICHEM WATER  
ENGINEERING CO.**



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# PRODUCT COMPENDIUM



Unichem Water Engineering is an established name in the field of Industrial & Domestic water treatment in Eastern India. It was established in the year 2002 with mission to take water treatment industry to new heights. Unichem Water Engineering Co. is backed by very committed young talented management expertise. UWECO is an industry reliable supplier of high quality & latest technologies of water treatment plants & Chemicals for industrial & domestic use.

We have good track records to keep our customers satisfied with our quality products and regular services. Customer Care is our biggest asset and their problems is given utmost care. Our customers are assured on time delivery with the least quality available. Our laboratory has modern testing equipment's and feature standard processes with strict conformance system.









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### ION EXCHANGE RESIN

#### FEATURES

- ◆ Ranks among the world's leading brands of ion exchange resin technology.
- ◆ More than 3 decades of manufacturing experience.
- ◆ WQA Gold Seal certified softening resins.
- ◆ Resins with consistently great performance and long life.
- ◆ Technical support by expert staff.

#### MATERIAL

- ◆ Polystyrene D-vinyl Benzene
- ◆ Polyacrylic Di-vinyl Benzene
- ◆ Gel (Microporous )
- ◆ Microporous
- ◆ Acrylic
- ◆ Inert

#### RANGE

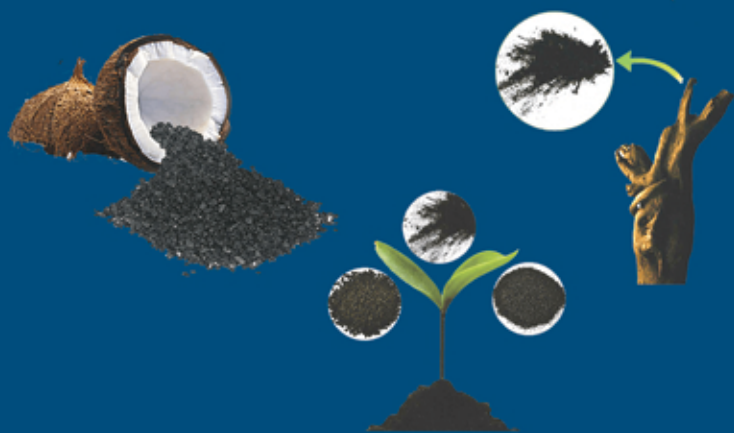
- ◆ Uniform Particle Size
- ◆ Food Grade
- ◆ Selective ION Removal resins
- ◆ Mixed Bed resins
- ◆ Chelating resins
- ◆ Black Cation resins

#### APPLICATION

- ◆ Removal of Radioactive Isotopes from Aqueous Solution
- ◆ Domestic & Industrial Water Softening
- ◆ Ultrapure - Semiconductor Industry
- ◆ Nitrate, Arsenic & Boron Removal
- ◆ Industrial Demineralisation
- ◆ Condensate Polishing
- ◆ Organic Scavenger
- ◆ Brine Purification



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### ACTIVATED CARBON

#### FEATURES

- ◆ Ideal Pore Structure with high surface area.
- ◆ High Adsorption Capacity.
- ◆ Low Ash Content.
- ◆ Consistent Quality.
- ◆ Superior Physical Stability.
- ◆ Optimum mesh size.
- ◆ Excellent Chlorine and organic removal capacity.
- ◆ All product Confirm to AWWA B604-96 Standard 61.

#### MATERIAL

- ◆ Virgin Coconut Shell
- ◆ Charcoal based
- ◆ Wood based

#### RANGE

- ◆ Iodine number: 600-1200
- ◆ Mesh Size: 4 X 8 to 80 X 325 (4 mesh to 200 mesh)
- ◆ Powder carbon with mesh size: below 325 mesh
- ◆ Water Washed Grade
- ◆ Acid Washed Grade
- ◆ Silver Impregnated

#### APPLICATION

- ◆ Color Removal in Bottled Water, Brewery, Juice & Soft Drink Industries.
- ◆ Bacteriostatic (Bacteria Removal)
- ◆ Effluent Water Treatment
- ◆ Color & odor Removal
- ◆ Gas Treatment
- ◆ Gold Recovery
- ◆ Dechlorination





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### PROFESSIONAL INDUSTRIAL CARTIDGE & BAG FILTER

#### FEATURES

- ◆ 100 % Virgin material.
- ◆ Double O-ring.
- ◆ Zero leak performance.
- ◆ Filter with air release valve.
- ◆ Back-washable filter with Polyster washable cartridge of 60 micron (included).
- ◆ Filter equipped with wall bracket.
- ◆ Can be fitted with standards cartridge.

#### MATERIAL

- ◆ Housing: Polypropylene
- ◆ O-ring: NBR/Silicon
- ◆ Backwashable filter: SAN material
- ◆ Head and ring made of Polypropylene

#### RANGE

- ◆ 10" x 2.5" Green Apple standards filter
- ◆ 20" x 2.5" Green Apple standard filter
- ◆ 10" x 4" Big Apple filter
- ◆ 20" x 4" Big Apple filter
- ◆ 10" x 4" Big Apple bag filter with/ without pressure gauge
- ◆ 20" x 4" Big Apple bag filter with / without pressure gauge
- ◆ Backwashable & bypass back washable filter

#### APPLICATION

- ◆ Water treatment plants.
- ◆ Reverse Osmosis System
- ◆ Ultra Filtration System
- ◆ Liquid Filtration
- ◆ Industrial Filtration



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### INDUSTRIAL FILTRATION SYSTEM

#### FEATURES

- ◆ Corrosion resistant FRP material which is superior to SS products.
- ◆ Housing for 5 Nos. 2.5" Dia cartridge.
- ◆ 20", 30" & 40" Cartridge length
- ◆ Suitable for 5 Nos. 2.5" Dia cartridge
- ◆ Connection size: 1 1/2" NPT thread

#### MATERIAL

- ◆ Housing : Polypropylene
- ◆ O-ring: NBR / Silicon
- ◆ End cap: PVC

#### RANGE

- ◆ Flow capacity upto 12m<sup>3</sup>/hr
- ◆ 20" x 2.5" Dia Cartridge Housing
- ◆ 30" x 2.5" Dia Cartridge Housing
- ◆ 40" x 2.5" Dia cartridge Housing

#### APPLICATION

- ◆ Water treatment plants
- ◆ Reverse Osmosis System
- ◆ Ultra Filtration System
- ◆ Industrial Filtration





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## LARGE LOW LIQUID FILTRATION SYSTEM

### FEATURES

- ◆ Mode design
- ◆ Non corrosive solution
- ◆ Smaller footprint
- ◆ Lesser or virtually no shutdown time
- ◆ High flow, High dirt holding capacity multilayer Polypropylene pleated cartridge.
- ◆ Easy cartridge replacement
- ◆ Leak less performance
- ◆ Ideal solution for sea water & highly brackish water application

### MATERIAL

- ◆ Housing: Glass Reinforced Plastic (Fibre Glass )
- ◆ Polypropylene Pleated filter cartridge
- ◆ Nylon washable filter cartridge
- ◆ O-ring: EPDM / NBR

### RANGE

- ◆ Flow capacity: 20m<sup>3</sup>/hr to infinity (∞)
- ◆ Housing: 20", 40" & 60" long
- ◆ Cartridge: 20", 40" & 60" Nominal & Absolute
- ◆ Filter precision: 1 / 3 / 5 / 10 / 20 / 50 / 70 / 100
- ◆ Maximum differential pressure: 2.5 Bar
- ◆ Operating pressure: 10 bar
- ◆ Test pressure: 15 bar

### APPLICATION

- ◆ Sea Water Desalination plant
- ◆ Water treatment system
- ◆ Sewage & Effluent treatment plants
- ◆ Ultra filtration systems
- ◆ Industrial filtration



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### SMART ELECTROMAGNETIC FLOWMETER

#### FEATURES

- ◆ Display low Rates as well as totalized flow
- ◆ Accuracy +/- 0.5% - 1% RS
- ◆ Compact & remote installation
- ◆ Communication through RS 485 or HART protocol
- ◆ GSM/GPRS remote transmitting, data analysis & logging etc.
- ◆ Protection IP 65 or IP 67

#### MATERIAL

- ◆ Body : Cl/ SS304 / SS316
- ◆ Liner : PTFE/PFA/PU/Rubber
- ◆ Electrocode : SS316L/ HC / TI / TA / Pt

#### RANGE

- ◆ Flowrate : Up to 100, 000 m<sup>3</sup>/hr
- ◆ Working Pressure : 0.6 to 1.6 MPa (Based on diameter)
- ◆ Line Size : Up to 2000 mm
- ◆ Temperature : up to 150°C
- ◆ Medium Conductivity : >5μ S/Cm

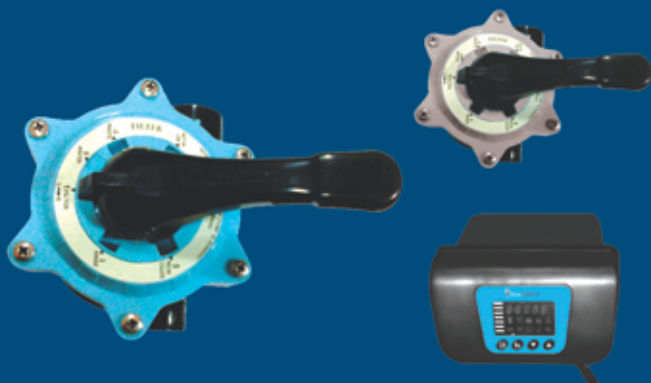
#### APPLICATION

- ◆ Water treatment industry
- ◆ Pharmaceutical industry
- ◆ Chemical industry





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### ROBUST MULTIPORT VALVES

#### FEATURES

- ◆ High-Impact and UV-Stabilized plastics for extended life
- ◆ Accurate Lift-and-Rotate handle mechanism avoids interport leakages
- ◆ Transparent and Clear-view Bottle at Drain Port monitors back-wash water quality monitoring
- ◆ Built-in injectors for softener ensure uniform suction of regenerants
- ◆ Options of Piping layout as Left-In / Left-Out (L-L), Right-In / Left-Out (R-L) & Left-In / Right-Out (L-R)

#### MATERIAL

- ◆ Body : ABS
- ◆ O-ring : NBR

#### RANGE

- ◆ Manual & Auto multiport valves
- ◆ Filter: ¼", 1" & 1.5"
- ◆ Softner. ¼", 1" & 1.5"
- ◆ Pressure : 4 bar
- ◆ Mounting : Top or side
- ◆ Port : BSP (F) thread

#### APPLICATION

- ◆ Multigrade filters
- ◆ Active carbon filters
- ◆ DM Plants & Mixed bed filter
- ◆ Swimming Pool Filtration plant



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### GLASS FIBER MEMBRANE PRESSURE VESSEL

#### FEATURES

- ◆ Manufactured as per ASME specifications
- ◆ Side port, End port & Multiport design
- ◆ Test pressure 1.5 times of operating pressure
- ◆ Burst pressure 6 times of operating pressure
- ◆ Supplied with straps and saddles as standards
- ◆ Aesthetic finishing internal as well as external

#### MATERIAL

- ◆ Fiber reinforced Plastic (FRP)
- ◆ Ports: SS 316/ Duplex 2205

#### RANGE

- ◆ Sizes: 2.5", 4" and 8"
- ◆ 1 to 8 elements
- ◆ Working pressure: 250, 300, 450, 600, 800, 1000, 1200 Psi
- ◆ Colors : Black or White

#### APPLICATION

- ◆ Reverse Osmosis plant
- ◆ Desalination Plant
- ◆ Nano-filtration
- ◆ Ultra-filtration





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## STAINLESS STEEL MEMBRANE PRESSURE VESSEL

### FEATURES

- ◆ Mirror polished surface
- ◆ Seamless tubes only
- ◆ Side port & end port available

### MATERIAL

- ◆ SS 304
- ◆ SS 316 L

### RANGE

- ◆ Size 2.5" : up to 2 element
- ◆ Size 4" : up to 4 element
- ◆ Size 8" : up to 6 element
- ◆ Operating pressure : 300 PSI

### APPLICATION

- ◆ High purity water treatment plant
- ◆ Dairy processing
- ◆ Pharmaceutical industry
- ◆ Food & Beverage Industry



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### BUTTERFLY & DUAL PLATE CHECK VALVES

#### FEATURES

- ◆ Vast range in size & material
- ◆ Rubber seated will give ANSI class VI shut off
- ◆ Investment casting
- ◆ Surface treatment to give superior finish
- ◆ Water design
- ◆ Top flange in BFV as per ISO 5211 to fit Lever , Gear , Pneumatic & Electric actuator

#### MATERIAL

- ◆ Body : Cast iron / Ductile Iron / Stainless Steel
- ◆ Disc : Nylon Coated DI / SS 304 / SS 316 / Duplex / Super Duplex
- ◆ Seat : EPDM / NBR / Viton / PTFE / Metal
- ◆ Steam : SS 416 / SS 304 / SS 316

#### RANGE

- ◆ BFV size : 40 mm to 2000 mm
- ◆ Dual plate check valve size : 40 mm to 600 mm
- ◆ Standards : ANSI/DIN/BS/ISO
- ◆ Class: 150/300/600
- ◆ Temperature range up to 800°C

#### APPLICATION

- ◆ Water transfer system
- ◆ Municipal Water system
- ◆ Chemical industry
- ◆ Pharmaceutical industry
- ◆ Air Conditioning



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### RIGID PIPES, FITTINGS & VALVES

#### FEATURES

- ◆ NSF approved
- ◆ UV Resistive
- ◆ Non corrosive
- ◆ Longer life up to 25 years
- ◆ Low pressure drop
- ◆ Standards DIN / ANSI / JIS

#### MATERIAL

- ◆ UPVC
- ◆ CPVC
- ◆ PPH
- ◆ PVDF

#### RANGE

- ◆ Size ½" to 14"
- ◆ Ball Valves : Lever, Pneumatic & Electric acuator
- ◆ Butterfly Valves : Lever, Pneumatic & Electric acuator
- ◆ Non Return Valves
- ◆ Diaphragm Valve

#### APPLICATION

- ◆ Water & Waste Water industries
- ◆ Swimming Pools
- ◆ Chemical industries
- ◆ Electroplating plants
- ◆ Semiconductor indutry
- ◆ Cholar-alkali industry
- ◆ Solvent-pharmaceuticals industry



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### PRESSURE VESSEL

#### FEATURES

- ◆ NSF approved vessels
- ◆ Manufactured with state of art mechnieries
- ◆ 100,000 cycle test with out leakage
- ◆ Rugged & long lasting.

#### MATERIAL

- ◆ PE Lined Vessels
- ◆ FRP lined vessels

#### RANGE

- ◆ Diameter. 8" to 80"
- ◆ Max Operating pressure : 150 PSI
- ◆ Max Test Pressure 175 PSI
- ◆ Max. Temperature : 40°C
- ◆ Color : Green

#### APPLICATION

- ◆ Media Filters
- ◆ Carbon Filter
- ◆ Softners
- ◆ DM plant





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### COUPLING

#### FEATURES

- ◆ Superior finish
- ◆ Investment casting
- ◆ Tested at 1.5 times of operating pressure
- ◆ Heavy duty nuts confirming of ASTM F-593
- ◆ Guaranteed performance

#### MATERIAL

- ◆ Coupling housing : Ductile Iron, Nlon, SS 304, SS 316, Duplex , Super duplex
- ◆ Gasket : EPDM
- ◆ Bolt & Nut : SS 304/ SS 316

#### RANGE

- ◆ Sizes : ¾" to 12"
- ◆ Operating Pressure : 350 psi, 600 psi, 900 psi, 1200 psi

#### APPLICATION

- ◆ Reverse Osmosis plants
- ◆ Ultra Filtration plants
- ◆ Nano Filtration plants
- ◆ Desalination Plants



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## ROTAMETERS

### FEATURES

- ◆ Accuracy  $\pm 4\%$
- ◆ Square or conical design
- ◆ Panel mounted and Online design
- ◆ Engraved marking of range

### MATERIAL

- ◆ Body : Acrylic or Polycarbonate
- ◆ Float : ABS, Stainless Steel
- ◆ Connectors : ABS

### RANGE

- ◆ Flow : Up to 300 LPM
- ◆ Working pressure : 150 psi
- ◆ Temperature : 70°C

### APPLICATION

- ◆ Water Treatment Plant, DM Plan, UF etc.
- ◆ Pharmaceutical industry
- ◆ Chemical Industry



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### DISC & TUBULAR TYPE DIFFUSER

#### FEATURES

- ◆ Fine bubble ( 1-1.25 ) diffuser
- ◆ Coarse bubble (4-5 mm ) diffuser
- ◆ High standards oxygen transfer efficiency
- ◆ Membrane material with anti fouling microbial surface
- ◆ Tubular diffuser with two grooved design
- ◆ Disc diffuser with NRV (optional)
- ◆ Low head loss

#### MATERIAL

- ◆ Tube & Tube Head : PP with 30 % GF
- ◆ Disc : PP with 30 % GF
- ◆ Membrane : EPDM, Silicon rubber or Poly-Urethane (PU)

#### RANGE

- ◆ Disc diffuser : 9" to 12"
- ◆ Tubular Length : 1000mm , 750mm & 500mm
- ◆ Tubular Diameter : 63mm & 90 mm
- ◆ Coarse bubble diffuser diameter : 105mm

#### APPLICATION

- ◆ Sewage treatment plants
- ◆ Effluent treatment plants



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### DEMINERLISATION

Reverse osmosis is the finest filtration known. This process will allow the removal of particles as small as ions from a solution. Reverse osmosis is used to purify water and remove salts and other impurities in order to improve the color, taste or properties of the fluid.





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### **REVERSE OSMOSIS PLANTS**

A Simple and Straight forward Water Filtration Process. Reverse Osmosis is a process in which dissolved inorganic solids (such as salts) are removed from a solution (such as water). This is accomplished by household water pressure pushing the tap water through a semipermeable membrane.



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### IRON FILTER

Chlorination and filtration can remove high concentrations of iron, iron bacteria, and hydrogen sulfide gas. The iron is oxidized by the chlorine. A sediment filter is used to remove the rust particles and an activated carbon filter is used to remove excess chlorine. The pH of the water must be above seven.



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### **SOFT WATER TREATMENT PLANT**

Water softening is the reduction of the concentration of calcium, magnesium, and other ions in hard water. Conventional water-softening appliances intended for household use depend on an ion-exchange resin in which hardness ions are exchanged for sodium ions.



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### **DUAL MEDIA FILTER**

Dual Media Filter in water supply system: Filtration. Most modern water-treatment plants now use rapid dual-media filters following coagulation and sedimentation. A dual-media filter consists of a layer of anthracite coal above a layer of fine sand.





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#### **PRESSURE SAND FILTER**

The Pressure Sand Filter consists of a multiple layer of sand with a variety in size and specific gravity. These Filters are designed to remove turbidity and suspended particles present in the feed water with minimum pressure drop. These Filters are custom designed to suit the process requirement.



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#### **DRINKING WATER PLANT**

We are supplier of a complete range of Drinking bottle water plant. We are supplier for a complete scheme of Drinking bottle Water Plant, Packaged Drinking Water system, Drinking Water Bottling Plant on Turn-Key basis. High output RO System which includes following equipment: Filter Assembly (Sand/Carbon/Cartridge/Bag Filter), High Pressure Pump, Membrane with housings.



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#### **ACTIVATED CARBON FILTER**

Carbon filtering is a method of filtering that uses a bed of activated carbon to remove contaminants and impurities, using chemical absorption. Each particle/granule of carbon provides a large surface area/pore structure, allowing contaminants the maximum possible exposure to the active sites within the filter media.



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### **ULTRA FILTRATION SYSTEM**

Ultrafiltration (UF) is a variety of membrane filtration in which forces like pressure or concentration gradients lead to a separation through a semipermeable membrane. Ultrafiltration membranes are defined by the molecular weight cut-off (MWCO) of the membrane used.



## COOLING WATER TREATMENT CHEMICALS

Generally, there are three troubles such as corrosion, scale & slime in cooling water system. These troubles bring about the following problems in all plants - shortening of facilities' life span, falling - off in excessive efficiency of operation, leakage of products and treatment expenses.

According to the use of cooling water, the quality of industrial treatment chemicals depend. So, the troubles can be prevented for best results of water & the condition of cooling tower, it must be in use of suitable water in advance.

Our special chemicals could prevent the corrosion and scale at the time. And it also has taken many business results with the efficient treatment programmes.

### PRODUCTS

- ◆ Pre- Treatment Chemicals  
Initial treatment chemicals
- ◆ Corrosion & Scale Inhibitor  
Open type  
Closed type
- ◆ Corrosion Inhibitor Aid
- ◆ Slimecide  
Open Type  
Closed Type
- ◆ Scale Dispersant & Slime Controller  
Slime Dispersant  
Slime Controller



## BOILER WATER TREATMENT CHEMICALS

Scale, corrosion & carry over are the most part of troubles in boiler water system. The lowering of thermal efficiency by these troubles bring about the enormous waste of energy in boiler system. Further more, it could cause difficulties in production of products due to the expansion or bursting of tube. We analyze the characteristics of boiler water system such as use, water quality, operating conditions, components etc. From these results we offer the most appropriate water treatment program. It enables our clients of efficient use of energy and stable operations through the extension of boiler's life span.

Especially we developed the multipurpose boiler chemicals that could prevent the above three troubles at the same time. From the development of boiler compounds for food, non-hydrazine deoxidizer & corrosion inhibitor for feed water & condensate water, we have contributed to the increase of boiler's efficiency and stable & economic operation too.

### PRODUCTS

- ◆ Multi-Purpose Boiler Chemicals  
High Pressure  
Medium Low Pressure  
Food Process  
Once Through
- ◆ Boiler Compound  
General Use
- ◆ Oxygen Scavenger  
General Use  
Food Process
- ◆ pH Controller for Condensate  
General Use
- ◆ Sludge Dispersant  
General Use





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**PRODUCT  
COMPENDIUM**



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Regd. Office: Block A1 Room No- 28, Prasad  
Nagar Complex 27 B.T Road,  
Kamarhati, Kolkata-700058

Factory: 88/1, Malpara Ghat Road,  
New Phool Bagan,  
Kolkata- 700 058

Telefax : (033) 2583 3302

Mobile : 98301 62049 / 9331275334

e-Mail : [info@uweco.co.in](mailto:info@uweco.co.in)  
[unichemwater@gmail.com](mailto:unichemwater@gmail.com)



[www.uweco.co.in](http://www.uweco.co.in)