



CE Certificate



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Manufactured by:
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For customer complaints, contact our Customer Care Officer at:
E-6, 7 & 8, Sector-59, Noida, U.P.-201 309, India. Call: 92-789-12345
E-mail: service@kent.co.in or visit us at www.kent.co.in

Instructions Handbook



Mineral RO™ TECHNOLOGY
Removes Dissolved Impurities
Retains Essential Minerals
Multiple Purification

RO + UV + UF + TDS Control

Kent Deta Hai
Sabse
Shudh Paani

Reverse Osmosis Water Purifier with UV Sterilisation & TDS Controller
Mineral RO © 2005 - 2019 KENT RO SYSTEMS LTD, the process & purifier is patented vide patent no. 199716.



Welcome to KENT

Dear Customer,

At the outset, allow us to thank you for your trust in KENT water purifier. We take pride in our reputation for product quality and industry proven performance. We are certain that your decision to own a KENT Excell+ Mineral RO™ Water Purifier will go a long way towards keeping you and your family in good health. We are confident that you will be satisfied with its performance and that it will serve your need for safe and clean drinking water without any compromise.

This guide will help you in getting the best out of your water purifier. Please go through this booklet to familiarise yourself with its operation and maintenance.

You can look forward to years of trouble free service. To ensure that the warranty of your water purifier is effective, it is important that you fill up the enclosed warranty card and mail us the installation report within 15 days of purchase. In case you need any further information, contact your nearest KENT dealer or branch.

Best Wishes,

KENTRO SYSTEMS LTD.

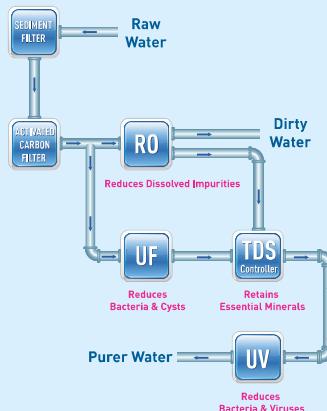
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KENT TECHNOLOGY- A Breakthrough in Water Purification*

Presenting the KENT Excell⁺ Mineral ROTM Water Purifier based on state-of-the-art KENT Technology, for purer and healthier water.

KENT Excell⁺ Mineral ROTM Water Purifier is a Reverse Osmosis membrane having capillaries as small as 0.0001 microns that reduce even dissolved impurities (salts and heavy metals) as well as harmful micro-organisms (bacteria, viruses, etc.) and even converts hard water into sweet and purer drinking water. It also incorporates a UV sterilisation process to give double protection from harmful micro-organisms. KENT Excell⁺ Mineral ROTM Water Purifier also allows the user to control the Total Dissolved Solids (TDS) level of purified water.



Salient Features of KENT Excell⁺ Mineral ROTM Water Purifier

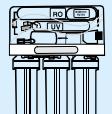
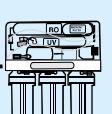
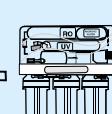
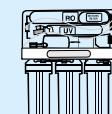
- Double purification by RO + UV* processes
- In-built TDS Controller that allows adjustment of TDS level of purified water
- Suitable for purification of Brackish/Tap Water / Municipal Corporation Water Supply
- 7 L optional storage tank that makes purified water available on demand
- Fully automatic operation, with auto-on and auto-off function
- Computer-controlled operation for enhanced purity and long life
- Filter Change Alarm to indicate filter replacement time
- UV Fail Alarm* to indicate failure in UV system
- RO Membrane fused inside membrane housing to prevent tampering
- Use of push-fit fittings for leakage free and maintenance free performance

Items in the Box

1. KENT Excell⁺ Mineral ROTM Water Purifier : 01 No.
2. 3-Way Connector : 01 No.
3. S.S. Ball Valve : 01 No.
4. Food Grade Pipe 1/4 inch (Blue) : 2.5 m
5. Food Grade Pipe 1/4 inch (White) : 2.5 m
6. Food Grade Pipe 3/8 inch (White) : 2.5 m
7. Instruction Manual : 01 No.
8. Screws & Plastic Inserts : 02 Nos. each
9. Sticker Center Drill : 01 No.
10. Faucet : 01 Set
11. Hydrostatic Storage Tank : Optional

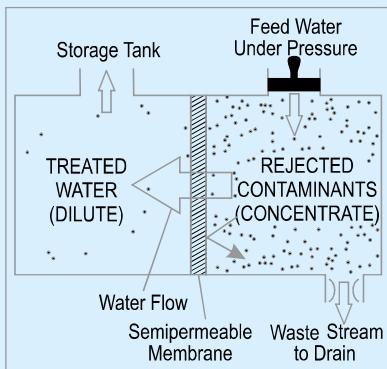
* Tested & Certified by TUV-SUD South Asia (P) Ltd.

Important Instructions

| | |
|---|---|
|  <p>Avoid exposure to direct sunlight and installation in damp areas.</p> |  <p>Make sure that the temperature of water entering the purifier is within 10-40°C.</p> |
|  <p>Make sure that the rejected water pipe is not placed at a level higher from the system, otherwise rejected water may flow backwards into the purifier.</p> |  <p>The maximum distance between the water source and the purifier should not be more than 3 meters.</p> |
|  <p>Avoid sharp bends in the pipe fittings. Do not bend or block the reject water pipe.</p> |  <p>Do not confine the purifier in a cabinet.</p> |
|  <p>In case of not using the purifier for more than two days, kindly switch off the power supply and drain the storage tank.</p> |  <p>To keep the storage tank clean, it should be drained once in 15 days.</p> |
| <p>KENT GENUINE SPARE PARTS</p> <p>Use Genuine KENT spares for optimum performance.</p> |  <p>Do not try to service the purifier on your own. Instead, call service technician for help.</p> |

Reverse Osmosis Process

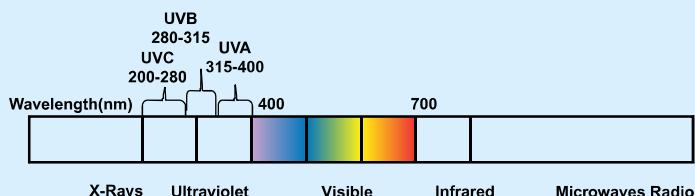
The Reverse Osmosis process, also known as hyper filtration, is the finest filtration process known till date. The process ensures reduction of particles as small as ions from a solution. Reverse Osmosis uses a semi-permeable membrane to reduce salts from potable / brackish water. In Reverse Osmosis, water pressure applied to the concentrated side forces the process of osmosis into reverse. Under enough pressure, treated water is "squeezed" through the membrane from the concentrated side to the diluted side. Salts dissolved in water as charged ions are repelled by the RO membrane. The rejected impurities on the concentrated side of the membrane are washed away in a stream of waste water and thus do not get accumulated as in a traditional filter.



UV Process

The UV light has shorter wavelength (higher energy) than the visible light. It is called ultra-violet because it is just beyond violet light in the light spectrum. Technically, the ultra-violet light is defined to be any wavelength of light, which is shorter than 400 nanometer.

UV rays, which penetrate into the micro-organisms, are absorbed by the DNA of the pathogen in the water. The DNA is altered in such a way that the pathogen cannot reproduce itself. Thus, it is essentially killed and cannot cause infection. This process of DNA modification is called inactivation.



Warranty Card

Product: KENT Excell+

Product Code: 11003

It is certified that KENT RO Water Purifier purchased as under carries 1 Year Warranty + 3 Years of Free Service*.
(Visit/Service charges will not be charged, however parts if replaced shall be charged)



Serial No.

Purchase Date Installation Date

Service Provider's Name & Address with Stamp

*To avail this scheme of 3 Years of Free Service, customer must download the KENT Service App at the time of installation. Also future service request must be raised via KENT Service App to avail free service.

Terms & Conditions applicable are mentioned overleaf.



Terms & Conditions of Warranty

KENT warrants all new products manufactured by it to be free from defects in material and workmanship under normal usage and service from the date of purchase as under:

1. It is essential for the customer to download the KENT Service App either on Android or iOS and the customer should lodge a service request via App only.
2. In case of emergency during the warranty period, the customer may lodge a service request at our Call Centre Ph. 92-789-12345.
3. The warranty period commences from the date of installation by the first end-user. During this warranty period of one year, KENT Purifiers or its Authorised Service Provider (ASP) will replace or repair any part of KENT Purifiers, that in the opinion of KENT Purifiers or its ASP, would be defective in operation due to faulty material or workmanship (i.e. manufacturing defects) with the exception of consumables such as Sediment Filter, Carbon Filter and RO/UF Membrane. However, if the RO/UF Membrane gets clogged within first one year and/or if the filters get clogged within first six months, they shall be cleaned / repaired / replaced at no extra charge.
4. In addition to this, KENT will also provide free service for a period of next 3 years, wherein Visit/Service charges will not be charged, however parts if replaced shall be charged.
5. Visit/Service charges will not be charged only for customers residing within 25kms of municipal limits, for other areas additional charges shall be applicable.
6. The product's plastic body is not covered under warranty and hence, it must be handled with care to guard against breakage.
7. The original purchaser of the unit can avail services under warranty at the point of sale, by producing the damaged part(s) along with the original invoice.
8. This warranty is void if the unit is not operated under normal municipal water or well water conditions or is subjected to the temperature above 40°C.
9. Product returned to KENT Purifiers or its ASP for warranty examination must be shipped freight prepaid.
10. KENT Purifiers or its ASP shall not be held liable for claims exceeding the cost of repair of the defects in workmanship.
11. This warranty agreement shall not be interpreted to render KENT Purifiers or its ASP liable for injuries or damages of any kind-direct, consequential or contingent to persons or property.
12. KENT Purifiers or its ASP shall not be held responsible by representative or buyer for failure to abide by any of the obligations of this warranty agreement if such failures are the result of circumstances of Forces Majeures: such as, but not limited to, floods, earthquakes, transportation strikes, labour disputes with outside suppliers or any other conditions beyond the control of KENT Purifiers or its ASP.
13. KENT Purifiers or its ASP shall not be held liable for repair or alterations made without prior written approval; for products clogged by suspended matter, precipitates or biological growth; or for failures resulting from the lack of proper maintenance.
14. KENT Purifiers or its ASP cannot and shall not be held liable for any sickness or illness due to the consumption of drinking water from any water purifier supplied by KENT Purifiers, since KENT Purifiers or its ASP does not have any control over the maintenance and usage of water purifier.
15. This warranty agreement excludes all products/ component parts or damage to any part of this water purifier which, in the opinion of KENT Purifiers or its ASP, have been subjected to misuse; misapplication; negligence; alteration; accident or operation contrary to our instructions, incompatibility with accessories not installed by KENT Purifiers or its ASP, or that have been repaired with component parts other than those manufactured by or obtained from KENT Purifiers or its ASP. Damage caused by freezing, flood, fire or Act of God is not covered by this warranty. In all such cases regular charges will apply. This limited warranty does not include service to diagnose a claimed malfunction in this unit.
16. KENT Purifiers reserves the right to alter or improve design and specifications at any time, without any contingent obligations to prospective buyers or owners of the products previously sold.
17. Any disagreements and obligations based upon the purchase of KENT Purifiers products and thereby imposed on KENT Purifiers or its ASP shall be governed by and construed according to the laws of INDIA and subject to the jurisdiction of Delhi Courts only.
18. KENT Purifiers or its ASP assumes no warranty liability in connection with this water purifier other than that specified herein. This warranty is in lieu of all other warranties, expressed or implied, including warranties of fitness for a particular purpose. KENT or its ASP does not authorise any person or representative to assume for them any other obligations on the sale of this water purifier.
19. Under no circumstances, the liability of KENT Purifiers or its ASP shall exceed the value of the product.
20. Under no circumstances are the terms mentioned above negotiable and no employee of KENT Purifiers or its ASP has the authority to supersede them.

Why is it essential to download the KENT Service Application?

1. Customer can lodge a service request/complaint anytime (24x7).
2. The customer can track/monitor the progress of service request/complaint.
3. Complete case history of the services done can be viewed.
4. Regular feedback & offer details on the App.



To download the App
scan the QR code

Affix
Stamp
here

To, **KENT RO SYSTEMS LTD.**

E-6, 7 & 8, Sector-59, Noida, U.P.-201 309, India.

Ph.: 92-789-12345

E-mail: service@kent.co.in | Website: www.kent.co.in

Installation Report

Product : **KENT EXCELL⁺ MINERAL RO™**

Invoice No.: _____

Invoice Date: _____

Installation Date: _____

Customer's Name: _____

Customer's Address: _____

Service Provider's Name: _____

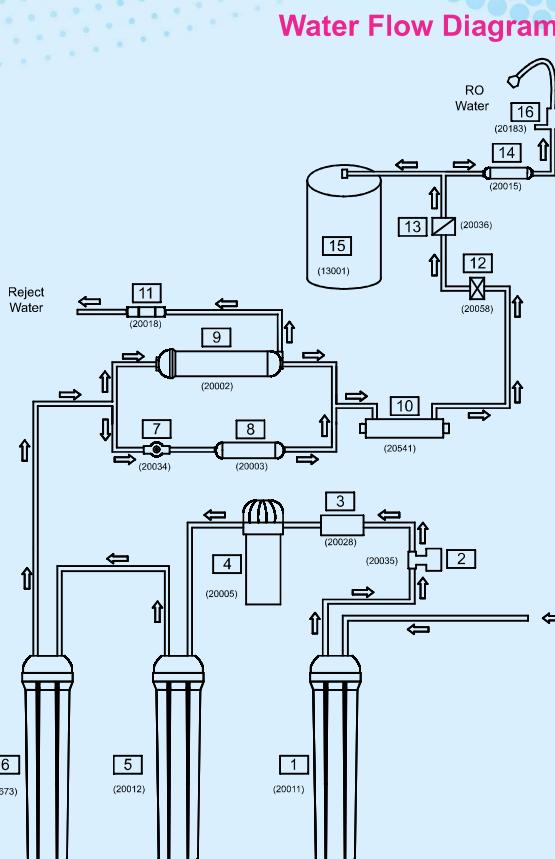
Service Provider's Address: _____

Customer's Ph.: _____

TDS of Purified Water: _____

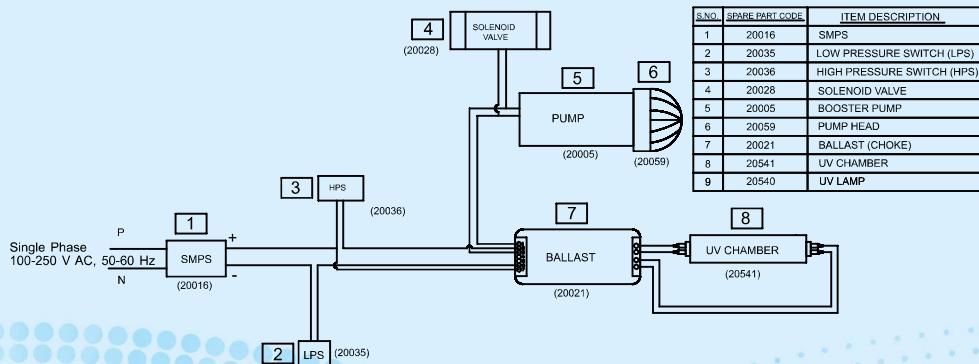
Customer's Signature: _____

By signing on this installation report, the customer hereby agrees to the terms & conditions of warranty mentioned on the back side of the warranty card.



| S.NO. | SP - CO | ITEM DESCRIPTION |
|-------|---------|-------------------------|
| 1 | 20011 | SEDIMENT FILTER |
| 2 | 20035 | LOW PRESSURE SWITCH |
| 3 | 20028 | SOLENOID VALVE |
| 4 | 20005 | BOOSTER PUMP |
| 5 | 20012 | ACTIVATED CARBON FILTER |
| 6 | 200673 | CARBON BLOCK FILTER |
| 7 | 20034 | HIGH PRESSURE SWITCH |
| 8 | 20003 | UF FILTER |
| 9 | 20002 | RO MEMBRANE |
| 10 | 20541 | UV CHAMBER |
| 11 | 20018 | FLOW RESTRICTOR TUBE |
| 12 | 20058 | NON RETURN VALVE |
| 13 | 20036 | HIGH PRESSURE SWITCH |
| 14 | 20015 | POST CARBON FILTER |
| 15 | 13001 | HYDROSTATIC TANK |
| 16 | 20183 | FAUCET |

Electrical Circuit Diagram

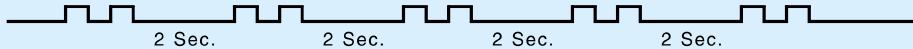


| S.NO. | SPARE PART CODE | ITEM DESCRIPTION |
|-------|-----------------|----------------------------|
| 1 | 20016 | SMPS |
| 2 | 20035 | LOW PRESSURE SWITCH (LPS) |
| 3 | 20034 | HIGH PRESSURE SWITCH (HPS) |
| 4 | 20028 | SOLENOID VALVE |
| 5 | 20005 | BOOSTER PUMP |
| 6 | 20059 | PUMP HEAD |
| 7 | 20021 | BALLAST (CHOKE) |
| 8 | 20541 | UV CHAMBER |
| 9 | 20540 | UV LAMP |

UV Fail Alarm*

KENT Excell⁺ Mineral ROTM Water Purifier has an in-built feature of an audible alarm if the UV lamp malfunctions. This feature is provided to ensure purity. The UV Fail Alarm will sound as following:

Two short beeps after every two seconds.



In case such an alarm is audible, kindly switch off the purifier and call the service technician for help. The purifier will stop its purification process in such a circumstance.

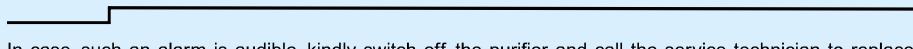
Filter Change Alarm

KENT Excell⁺ Mineral ROTM Water Purifier has an in-built feature of an audible alarm to indicate replacement time filters. This alarm will be audible after 700 hrs of use since the last filter change (or since the time of installation).The Filter Change Alarm will sound as following:

4 short beeps after every two seconds; for 30 seconds. The alarm will repeat after every 2 hours of use.



In case such an alarm is audible,please call the service technician and request him to change the filters of the purifier. However, if the filters are not changed within the next 60 hours of operation, the purifier will stop functioning to ensure purity and hygiene. The following alarm will be audible after 60 Hrs. A continuous beep for an infinite time.



In case, such an alarm is audible, kindly switch off the purifier and call the service technician to replace the filters. In such a circumstance, the purifier will not function unless the filters are changed.

Computer Controlled Operation*

To ensure delivery of purer and healthier water, a micro-processor is installed in the purifier that performs the following functions:-

UV Stabilisation Delay: To ensure that the UV lamp is pre-heated and is working at its optimum level before it starts disinfecting water, the controller provides a two seconds delay to UV lamp when the purifier is switched on. During this period, only the UV lamp is switched on and other electrical devices of the purifier are switched off.

Purification Delay: To ensure that the idle water lying in the internal pipes and in the UV chamber is disinfected before being passed into the storage tank, the system provides 5 second delay when the purifier is switched on. During this time, the UV lamp kills all micro-organisms that may be in the water inside UV chamber. After this delay, all other electrical devices such as booster pump and solenoid valve are switched on to start normal purification process.

Audible Alarm: The controller also controls the timing of UV Fail Alarm and the Filter Change Alarm.

Automatic Operation

- The purifier automatically shuts off when the storage tank is full
- The purifier automatically restarts when water level drops below the maximum
- The purifier does not start when inlet water supply pressure falls below 0.3 kg/cm²
- The purifier does not allow any water rejection in absence of electricity or when tank is full

Installation Instructions

The KENT Excell⁺ Mineral ROTM Water Purifier is a product of advanced technology which ensures safe and clean drinking water. The purifier is easy and convenient to install.

Recommended Site Preparations:

- Single Phase 100-250V AC, 50-60 Hz. connection not more than 3m away from the point of installation of purifier
- Raw water supply with 1/2 inch nipple not more than 3m away
- Drain for rejected water not more than 3m away
- Space as per dimensions of the purifier
- Wall/plane surface for mounting two screws and holding the machine
- The system and installation needs to comply with state and local laws and regulations

Specific Instructions:

- KENT Excell⁺ Mineral ROTM Water Purifier is an under-the-counter RO water purifier. Make sure that it is only mounted on a wall. Avoid installation on wooden and metallic stands
- For optimum performance and minimum inlet pressure required,ensure that the raw water supply tank is at least 10 ft above the level at which the purifier is installed
- It is preferable to install the purifier near a sink so that faucet can be mounted on the sink and the inlet and reject water lines are easily available

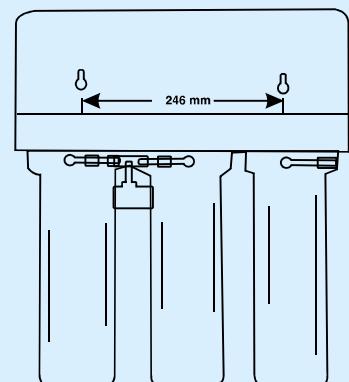


Figure 1

Installation Instructions:

- Screw in the two 10x50 self taping screws at the same horizontal level at a distance of 246 mm from each other in the wall.This can be preferably done under the kitchen sink
- Carefully hang the purifier on the wall with the help of wall mounting slot holes present on the back side of the purifier, as shown in the figure 1
- Fix the SS ball valve to the 1/4 inch port of the 3-way connector
- Connect the 3-way connector to the raw water supply as shown in the figure 2. The threaded end of the 3-way connector is fitted in line with the raw water supply.The other end can be connected to a tap or can be plugged off if not required
- Now connect one end of the white pipe to the SS ball valve and other end to the inlet of the right most sediment filter (labeled as No.1 in the system flow diagram) (Note:white pipe is for raw water supply)
- Similarly, connect one end of the blue pipe to the outlet of the flow restrictor tube (labeled as No. 11 in the system flow diagram) and leave the other end of the pipe in the drain. (Note: Blue pipe is for reject water)
- Make a drill of 11 mm on the top of the sink or kitchen bed where the faucet (labeled as No. 16 in the system flow chart) can be installed conveniently as per drawing. Secure the faucet to the sink, by tightening the brass nut washer
- Tighten the 90 degree ball valve to the tank and connect it to the outlet of the purifier as shown in the drawing

* Tested & Certified by TUV-SUD South Asia (P) Ltd.

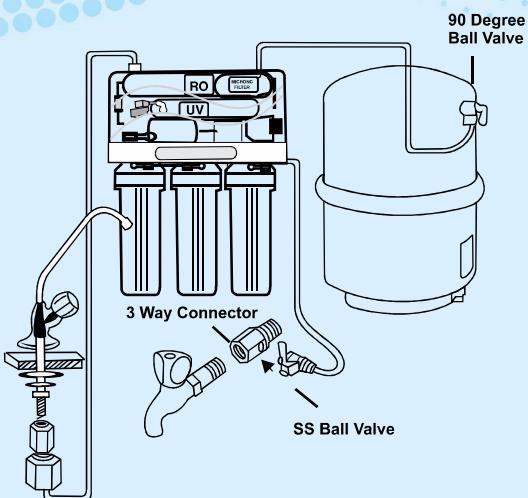


Figure 2

TDS Adjustment*

The unique TDS Controller enables customers to retain the contents of natural minerals in purified water as per their requirement.

- Turning the screw of the valve anticlockwise results in an increased mineral content
- Turning the screw of the valve clockwise results in a decreased mineral content

Starting-up the Purifier

- Switch on the power supply
- Drain off the storage tank by opening the faucet to remove any dust particles from the pipe and storage tank
- Close the faucet & switch on the power supply
- The purifier is ready to use
- Wait approximately for half an hour so that the storage tank fully fills up**
- Switch off the power supply

Recommended Usage of Rejected Water

Although the rejected water has high concentration of salts, it is absolutely clean and free of impurities like chlorine, dirt, sand, etc. which are present in raw water. This rejected water usually goes down the drain but if required, can be used for gardening

purposes. It has high concentration of salts and minerals which accelerates plant growth. Rejected water can also be used for cleaning purposes, i.e. cleaning utensils, mopping, etc.

* Tested & Certified by TUV-SUD South Asia (P) Ltd.

** Tested or certified flushing time - 24hrs.

Maintenance

To ensure that the purifier operates at its optimum level, a routine maintenance must be performed. The frequency of the maintenance will greatly depend upon the raw water quality and consumption of purified water.

- Replace sediment, activated carbon block and UF filter when the filter change alarm is audible OR after every 12 months. It is recommended to change the FRT when the filters are replaced

Note: Filters and membrane are consumables. Their replacement time is dependent on the quality of raw water and water consumption. They are not covered under the warranty. However, if a filter chokes within six months and a membrane within a year, it will be cleaned/repaired/replaced free of cost. Changing the filters and system inspection is available on call. The purification capacity of RO membrane will reduce with time due to clogging of pores of membranes.

The reverse osmosis system contains a replaceable treatment component critical for the effective reduction of total dissolved solids and that product water shall be tested periodically to verify that the system is performing properly.

Replacement of spare parts are as under:-

| | |
|--------|----------------------------------|
| -20011 | SP Sediment Filter 10" |
| -20012 | SP Activated Carbon Filter 10" |
| -20002 | SP RO Membrane Welded 8" Housing |
| -20015 | SP Post Carbon Filter (Blue) |
| -20003 | SP Hollow Fibre Membrane (RO) |
| -20018 | SP FRT 550/600 |
| -20673 | SP Carbon Block 10" Excell |

"This reverse osmosis system contains a replaceable component critical to the efficiency of the system. Replacement of the reverse osmosis component should be with one of identical specifications as defined by the manufacturer, to ensure the same efficiency and contaminant reduction performance."

Important Safety Instructions

- If the supply cord is damaged, it must be replaced by the original part in order to avoid hazard
- Children should be supervised to ensure that they do not play with the appliance
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety

Warning

- Do not operate the UV-C emitter when it is removed from the appliance enclosure
- Read the maintenance instructions before opening the appliance
- The appliance must be disconnected from the supply before replacing the UV-C emitter

Technical Specifications

| Product | KENT EXCELL ⁺ Without Tank |
|-----------------------------------|--|
| Product Code | 11003 |
| Product Generic Name | Water Purifier |
| Product Colour | White |
| Applications | Suitable for Purification of Brackish/Tap Water/ Municipal Corporation Water. |
| Purification Production Rate | 15 L/hr.* |
| Body Material | ABS Food Grade Plastic/Stainless Steel |
| Mounting | Wall-mounting/Under-the-Counter/Cooler Installation |
| Dimensions (mm) | 390 (L) X 200 (W) X 520 (H) |
| Inlet Water Pressure/Temp. (Min.) | 0.3 kg/cm ² /10°C |
| Inlet Water Pressure/Temp. (Max.) | 4 kg/cm ² /40°C |
| Min./Max. Operating pH | 6.5-8.0 |
| Filter Cartridge | Sediment, Activated Carbon, UF and Post Carbon. |
| UV Lamp Wattage | 11 W |
| Life of UV Lamp | 5000 hrs. of operation |
| Net Weight | 10.7 kg |
| Storage Capacity | 7 L |
| Maximum Duty Cycle | 75 L/day |
| Membrane Type | Thin Film Composite RO |
| Booster Pump Voltage | 24 V DC |
| Total Power Consumption | 60 W |
| Input Power Supply | Single Phase 100-250V AC, 50-60 Hz. <input checked="" type="checkbox"/> |
| IP Rating | IPX1 |

* Treatment capacity tested for tap water having TDS level of 750 ppm at room temperature.

Testing Information

The System has been tested according to IS 10500:2012 (Standards for drinking water as per Bureau of Indian Standards) for reduction of the hazardous substances as listed below.

Performance Data Sheet-KENT Excell⁺ Mineral ROTM Water Purifier

"This system has been tested according to NSF/ANSI 58 for reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 58".

| Substance | Influent challenge concentration mg/L | Maximum permissible product water concentration mg/L | Minimum % reduction |
|------------------------|---------------------------------------|--|---------------------|
| Total Dissolved Solids | 750 ± 40 mg/L | 187 | 86.8% |
| Arsenic (+5) | 0.30 ± 10% | 0.010 | 98.7 |
| Barium | 10.0 ± 10% | 2.0 | 97.7 |
| Fluoride | 8.0 ± 10% | 1.5 | 96.3 |
| Lead | 0.15 ± 10% | 0.010 | 99.3 |
| Nitrate / Nitrite | 30 ± 10% | 10 | 68.5 |

 Arsenic, Barium, Fluoride, Lead, Nitrate/Nitrite contents as tested & certified by WQA as per standards NSF/ANSI 58.

"Do not use with water that is microbiologically unsafe or of unknown quality w/o adequate disinfection before or after the system".

Efficiency rating means the percentage of the influent water that is available to the user as reverse osmosis treated water under operating condition that approximate typical daily usage.

The system conform to NSF/ANSI 58 for the specific performance claims as verified and substantiated by test data. While testing was performed under standard laboratory conditions, actual performance may vary.

The influent water to the system shall include no organic solvents, Chlorine <2 mg/L, pH 7-8, Iron <2mg/L, Turbidity <1 NTU and hardness <1000mg/L.

"This system is acceptable for treatment of influent concentrations of no more than 27 mg/L Nitrate and 3 mg/L Nitrite (in combination measured as N), and is certified for nitrate/nitrite reduction only for water supplies with pressure of 140 kpa (20 psi) or greater".

This system has been tested for the treatment of water containing pentavalent arsenic (also known as As (V), As (+5), or arsenate) at concentrations of 0.30 mg/L or less. This system reduces pentavalent arsenic but may not remove other forms of arsenic. This system is to be used on water supplies containing detectable free chlorine residual or on water supplies that have been demonstrated to contain only pentavalent arsenic. Treatment with chloramines (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic. Please see the Arsenic Facts section of the performance data sheet for further information.

Arsenic Facts

Arsenic (As) is a naturally occurring contaminant found in many ground waters. It generally occurs in two forms (valences or oxidation states): pentavalent arsenic (also known as As(V), As(+5), or arsenate) and trivalent arsenic (also known as As(III), As(+3), or arsenite). In natural ground water, arsenic may exist as trivalent arsenic, pentavalent arsenic, or a combination of both. Although both forms of arsenic are potentially harmful to human health, trivalent arsenic is considered more harmful than pentavalent arsenic. More information about arsenic and its toxicity can be found on the U.S. Environmental Protection Agency website at <http://www.epa.gov/safewater/arsenic.html>.

This system is designed to remove only pentavalent arsenic. This treatment system does not provide a feature for conversion of trivalent arsenic to pentavalent arsenic. The system may remove some trivalent arsenic, however, it has not been evaluated for its ability to remove trivalent arsenic.

Trivalent arsenic is generally more difficult to remove from drinking water than pentavalent arsenic. Trivalent arsenic can be converted to pentavalent arsenic in the presence of an effective oxidant such as free chlorine. The arsenic in water containing detectable free chlorine or that has been treated with another effective oxidant will be in the pentavalent arsenic form.4 Treatment with chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic.

Consumers using public water supplies can contact their utility to verify whether free chlorine treatment chemicals are being used. Private water supplies and waters that do not have detectable free chlorine residuals should be analyzed to determine the form(s) of arsenic present and the potential need for oxidation of trivalent arsenic to pentavalent arsenic.

Arsenic does not generally impart color, taste, or smell to water, therefore, it can only be detected by a chemical analytical test. Public water supplies are required to monitor treated water for total arsenic (trivalent arsenic plus pentavalent arsenic) and the results are available to the public from the utility. Consumers using private water sources will need to make arrangements for testing. A total arsenic test usually costs about \$15-\$30 and it is recommended the test be conducted by a certified laboratory. Local health departments or environmental protection agencies can help provide consumers with a list of certified laboratories. Some laboratories may also be able to analyze specifically for (speciate) the form(s) of arsenic present in a water sample if requested.

This treatment system was tested under laboratory conditions as defined in NSF/ANSI 58 Drinking Water Treatment Units – Health Effects and was found to reduce 0.30 mg/L of pentavalent arsenic in the test water to less than 0.010 mg/L under standard testing conditions. Actual performance of the system may vary depending on specific water quality conditions at the consumer's installation. Following installation of this system, the consumer should have the treated water tested for total arsenic to verify arsenic reduction is being achieved and the system is functioning properly.

The arsenic removal component of this system must be replaced at the end of its useful life of 1-2 years. The replacement component, 20011 SP Inline Sediment Filter 10", 20012 SP Inline Carbon Filter 10", 20002 SP RO Membrane Welded 8" Housing, 20015 SP Post Carbon Filter (Blue), 20003 SP Hollow Fibre Membrane (RO), 20018 SP FRT 550/600, 20673 SP Carbon Block 10" Excell can be purchased directly from the manufacturer KENTRO Systems Ltd.