



HOUSE of PURITY

KENT GRAND+
FOR MOUNTING ON KITCHEN WALL
ISI Marked

KENT
Mineral RO™
Water Purifiers
HOUSE of PURITY

Instruction Handbook for Installation, Operation and Maintenance.

Kent Deta Hai
**Sabse
Shudh Paani**



System Tested and Certified
by NSF International against
NSF/ANSI Standard 58 for
the reduction of TDS



System Tested and Certified
by WQA to NSF/ANSI 58 for
the reduction of Barium, Fluoride,
Lead, Nitrate, Nitrite, Pentavalent
Arsenic (<300ppb) and TDS.



Water
Quality
ASSOCIATION
GOLD MEMBER



CML:0004872178



For customer complaints, contact customer care officer at:
E-6, 7 & 8, Sector-59, Noida, UP-201 309, India. Call : 092-789-12345
E-mail: service@kent.co.in or Visit us at www.kent.co.in

Marketed by:
KENT RO SYSTEMS LTD.
E-6, 7 & 8, Sector-59, Noida, U.P.-201 309, India
Ph.: +91-120-3075075
E-mail: sales@kent.co.in Website: www.kent.co.in



Manufactured by:
KENT RO SYSTEMS LTD.
Khasra No. 93, Village-Bantakhedi, Tehsil-Roorkee,
District-Haridwar, Uttarakhand-247 668, India

Standard IS 14724 is applicable for water purifiers with ultra violet disinfection.



System Tested and Certified
by NSF International against
NSF/ANSI Standard 58 for
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PATENT NO. 199716



CML:0004872178



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by WQA to NSF/ANSI 58 for
the reduction of Barium, Fluoride,
Lead, Nitrate, Nitrite, Pentavalent
Arsenic (<300ppb) and TDS.

KENT RO TECHNOLOGY
Maintains minerals while reducing dissolved
impurities with double purification
RO + UF + UV + TDS Control

Mineral RO™ © 2005 - 2012 KENT RO SYSTEMS LTD, the process & purifier is patented vide patent no. 199716.
KENT Grand+ 's design is registered vide registration no. 219309

Standard IS 14724 is applicable for water purifiers with ultra violet disinfection.

January, 2015



Welcome to KENT

Dear Customer,

At the outset, allow us to thank you for your trust in **KENT** water purifiers. We take pride in our reputation for product quality and industry proven performance. We are certain that your decision to own a **KENT Grand+ 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 safer and cleaner 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 / branch.

BestWishes

KENTRO SYSTEMS LTD.

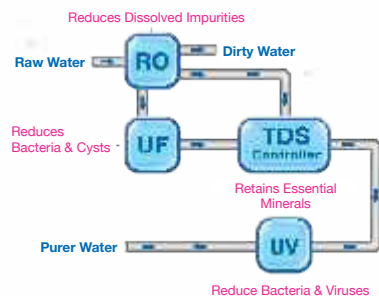
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KENT TECHNOLOGY - A Breakthrough in Water Purification*

Presenting the **KENT Grand+ Mineral RO™** Water Purifier. It uses futuristic, state-of-the-art technology to provide purer & healthier drinking water.

At the heart of **KENT Grand+ Mineral RO™** Water Purifier is a Reverse Osmosis membrane having capillaries as small as 0.0001 microns that reduces dissolved impurities (salts and heavy metals) and converts hard water to sweet and purer drinking water. **KENT Grand+ Mineral RO™** Water Purifier also allows user to control Total Dissolved Solids (TDS) level of purified water.



Salient Features of KENT Grand+ Mineral RO™ Water Purifier



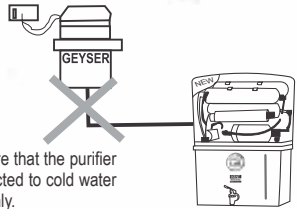
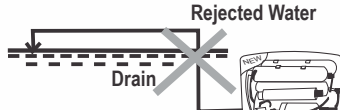
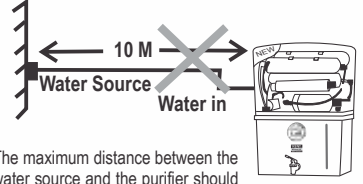

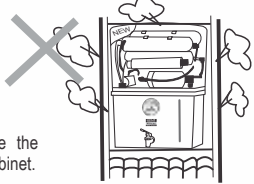

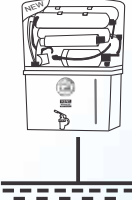


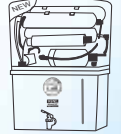
- Double treatment by RO + UV* processes
- Inbuilt TDS Controller that allows adjustment of TDS level of purified water
- Suitable for purification of Brackish / Tap Water / Municipal Corporation Water Supply.
- Wall mounted design; best suited for Indian homes and offices
- 8 ltrs. storage tank with water level indicator
- Fully automatic operation, with auto-on and auto-off function
- Computer controlled operations 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
- Vertically mounted SMPS for protection from water
- Use of push-fit fittings for leakage and maintenance free performance
- An eye appealing design
- ABS construction for corrosion free use

Items in the Box

- | | | |
|---|---|--------------|
| 1. KENT Grand+ Mineral RO™ Water Purifier | : | 01 No. |
| 2. 3-Way Connector | : | 01 No. |
| 3. S.S. Ball Valve | : | 01 No. |
| 4. Food Grade Pipe ¼ inch (Blue) | : | 2.5 Meters |
| 5. Food Grade Pipe ⅜ inch (White) | : | 2.5 Meters |
| 5. Instruction Manual | : | 01 No. |
| 6. Screws & Plastic Inserts | : | 02 Nos. each |
| 7. Sticker Center Drill | : | 01 No. |

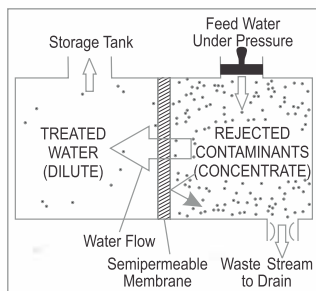
* Tested & Certified by TUV-SUD South Asia (P) Ltd.

Important Instructions

 <p>Avoid exposure to direct sunlight and installation in damp areas.</p> 	 <p>Make sure that the purifier is connected to cold water supply only.</p>
 <p>Make sure that the rejected water pipe is not placed at a level higher from the purifier, 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. 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>
<div style="text-align: center;">  <p>Use Genuine Kent spares for optimum performance</p> </div> <div style="display: flex; justify-content: space-between; align-items: center;">   </div> <p>Do not try to service the purifier on your own. Instead, call service technician for help.</p>	

Reverse Osmosis Process

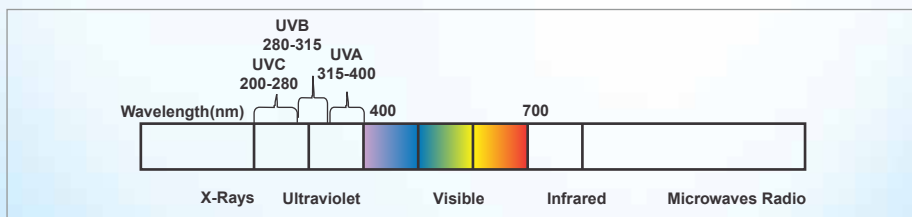
The Reverse Osmosis process, also known as hyper filtration, is the finest filtration process known till date. The process ensures reduction of particles as small as ions from a solution. Reverse Osmosis uses a semi-permeable membrane to reduce salts from potable / brackish water. In Reverse Osmosis, 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

(For Sale through Dealer)



Product : **KENT GRAND⁺ MINERAL RO™ WATER PURIFIER**

Serial No. :

Customer Details:

Customer's Name: _____

Customer's Address: _____

Customer's Ph. No.: _____

Warranty Details:

Invoice Date: _____ Invoice No.: _____

Date of Installation: _____ Stamp of Service Provider

For Service Contact:

Service Provider's Name: _____

Service Provider's Address: _____

Ph. No.: _____

Marketed by: **KENT RO SYSTEMS LTD.**

E-6, 7 & 8, Sector-59, Noida, U.P.-201 301, India

Ph.: +91-120-3075075

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

Customer care: 092-789-12345

Terms & Conditions of Warranty

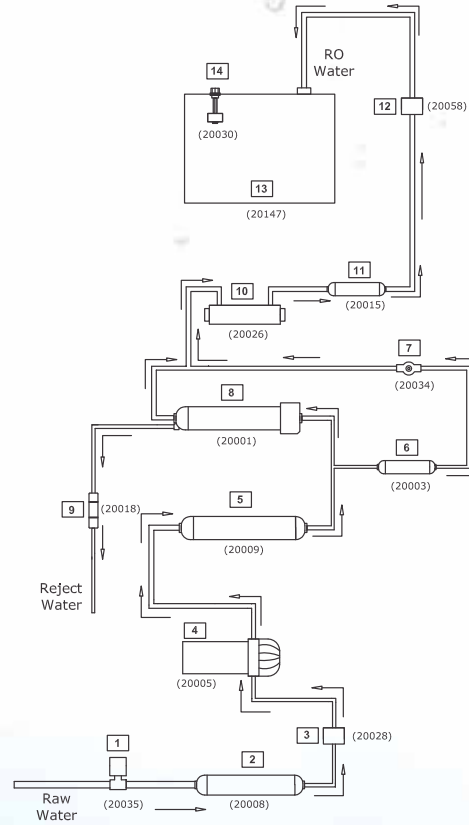
KENT warrants all new products manufactured by it to be free from defects in material and workmanship under normal usage and service from the date of purchase as under:

1. 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.
2. The product's plastic body is not covered under Warranty and hence, it must be handled with care to guard against breakage.
3. 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.
4. 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.
5. Product returned to KENT Purifiers or its ASP for Warranty examination must be shipped freight prepaid.
6. KENT Purifiers or its ASP shall not be held liable for claims exceeding the cost of repair of the defects in workmanship.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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 Purifiers or its ASP does not authorize any person or representative to assume for them any other obligations on the sale of this water purifier.
15. Under no circumstances, the liability of KENT Purifiers or its ASP shall exceed the value of the product.
16. Under no circumstances are the terms mentioned above negotiable and no employee of KENT Purifiers or its ASP has the authority to supersede them.

Affix
Stamp
here

To,
KENT RO SYSTEMS LTD.
E-6, 7 & 8, Sector-59, Noida, U.P.-201 301, India
Ph.: +91-120-3075075
E-mail: service@kent.co.in Website: www.kent.co.in
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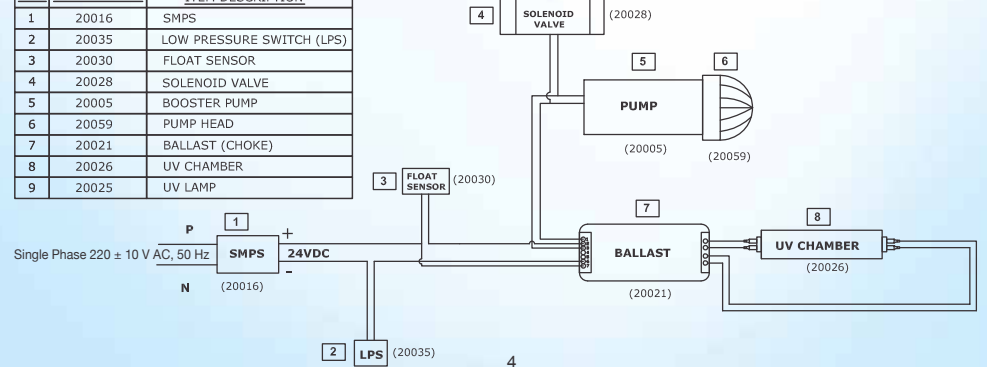
Water Flow Diagram



S.NO.	SPARE PART CODE	ITEM DESCRIPTION
1	20035	LOW PRESSURE SWITCH
2	20008	SEDIMENT FILTER
3	20028	SOLENOID VALVE
4	20005	BOOSTER PUMP
5	20009	ACTIVATED CARBON FILTER
6	20003	UF FILTER
7	20034	TDS CONTROL VALVE
8	20001	RO MEMBRANE
9	20018	FLOW RESTRICTOR TUBE
10	20026	UV CHAMBER
11	20015	POST CARBON FILTER
12	20058	NON RETURN VALVE
13	20147	WATER STORAGE TANK
14	20030	FLOAT SENSOR

Electrical Circuit Diagram

S.NO.	SPARE PART CODE	ITEM DESCRIPTION
1	20016	SMPS
2	20035	LOW PRESSURE SWITCH (LPS)
3	20030	FLOAT SENSOR
4	20028	SOLENOID VALVE
5	20005	BOOSTER PUMP
6	20059	PUMP HEAD
7	20021	BALLAST (CHOKE)
8	20026	UV CHAMBER
9	20025	UV LAMP



Installation Report

Product : **KENT GRAND+ MINERAL RO™**
WATER PURIFIER

Serial No. :

Customer's Name :

Customer's Address :

Customer's Ph. :

TDS of Purified Water :

Customer's Signature :

Invoice No.:

Invoice Date:

Installation Date:

Service Provider's Name:

Service Provider's Address:

Service Provider's Ph.:

TDS of Raw Water :

Service Provider's Stamp:

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.

UV Fail Alarm*

KENT Grand+ Mineral RO™ Water Purifier has an in-built feature that sounds an audible alarm if the UV lamp malfunctions. This feature is provided to ensure purity. This 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 Grand+ Mineral RO has an in-built feature that sounds an audible alarm to indicate replacement time for 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 like 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 Stabilization 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 is below 0.3 kg/cm²
- The purifier does not allow any water rejection in absence of electricity or when tank is full

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

Installation Instructions

The **KENT Grand+** Mineral RO™ 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:

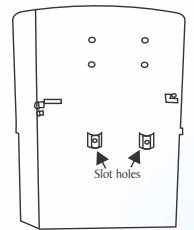
- Single Phase 220 ± 10 V AC, 50 Hz connection not more than 3m away from the point of installation of purifier
- Raw water supply with ½ inch nipple not more than 3m away
- Drain for rejected water not more than 3m away
- Space as per dimensions of the purifier
- Wall/plane surface for mounting two screws and holding the machine
- The system and installation must comply with state and local laws and regulations

Specific Instructions:

- **KENT Grand+** Mineral RO™ Water Purifier is a wall mountable 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 inlet and reject water lines are easily available

Installation Procedure :

1. Screw in the two 16x25 self tapping screws (supplied with the package) on a same horizontal level at a distance of 5.4 inches (138mm) from each other in the wall.

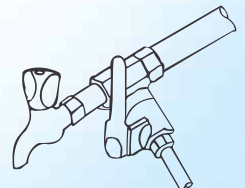


2. Carefully hang the purifier on the wall with the help of wall mounting slot holes present on the back side of the purifier as shown in the figure below.

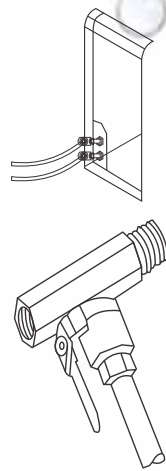
3. Fix the SS ball valve to the ¼ inch port of the 3-way connector as shown in the figure.



4. Connect the 3-way connector to the raw water supply as shown in the figure. 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.



5. Now connect one end of the white pipe to the SS ball valve and other end to the lower pushfit elbow fitting on the left hand side of the purifier labeled as WATERIN. (Note: White pipe is for raw water supply)
6. Similarly, connect one end of the blue pipe to the upper elbow fitting connector labeled as REJECT WATER and leave the other end in the drain. (Note: Blue pipe is for reject water)
7. Before connecting the power supply, it is important that you perform the following functions:
 - (i) Open the SS ball valve (Handle parallel to the ball valve) to start the flow of water into the purifier.
 - (ii) Wait for 2-3 minutes to ensure that the filters are soaked in water.



TDS Adjustment*

A unique feature in **KENT Grand+ Mineral RO™** Water Purifier is the TDS control valve, which is not available in any other domestic water purifier till date. This feature allows the user to control the content of natural minerals (TDS) in purified water. To increase the TDS level, the user can turn the screw of the valve anticlockwise; it will result in more

mineral content in treated water. To reduce the TDS level, user can turn the screw valve clockwise, it will result in less mineral content in treated water. We recommend the TDS of the purifier to be kept at lowest but not below 50 mg/l.

Starting Up the Purifier

- Switch on the power supply
- Wait till the storage tank fully fills up**
- Switch off the power supply
- Drain the storage tank by opening the drain plug present at the bottom of the storage tank so
- as to remove any dust particles present in the pipes and storage tank
- Close the drain plug & switch on the power supply
- The purifier is ready to use

Recommended Uses of Rejected Water

Although the rejected water has high concentration of salts. 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 accelerate plant growth. Rejected water can also be used for cleaning purposes, i.e. utensils cleaning, 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 treated water.

- Storage tank must be drained once in 2 weeks. To do so, switch off the power supply, open the drain plug at the bottom of the tank & allow the water to drain. Then screw back the plug and switch on the power supply
- Replace sediment, activated carbon & post

carbon when the filter change alarm is audible OR after every 12 months. It is recommended to change the FRT when the filters are replaced

- Replace the RO membrane once in a year
- Replace the UV Lamp once in a year
- If you are not going to use the purifier for a long time (in case you are on a holiday, tour or out of home), make sure that you disconnect the power supply, turn off the raw water supply and drain the storage tank

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:-

-20008	SP Inline Sediment Filter 10"
-20009	SP Inline Carbon Filter 8"
-20001	SP RO Membrane Welded 10" Housing
-20015	SP Post Carbon Filter (Blue)
-20003	SP Hollow Fibre Membrane (RO)
-20018	SP FRT 550

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/repared/replaced free of cost. Changing the filters and system inspection is available on call. The treatment capacity of RO membrane will reduce with time due to clogging of pores of membranes.


"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."

Recommendation for optional Pre-filter installation



For best results must use only KENT's Genuine Pre-filter

Technical Specifications

MODEL NAME	KENT GRAND ⁺
Model No.	11001
Product	Water Purifier With Ultra Violet Disinfection
Applications	Suitable for Purification of Brackish / Tap Water / Municipal Corporation Water
Purification Production Rate	15 L/hr. or 0.25 L/min*
Body Material	ABS Food Grade Plastic
Mounting	Wall Mounted
Dimensions(mm)	L 410 W 260 H 520
Inlet Water Pressure/Temp (Min)	0.3Kg / cm ² or 4.267psi / 10°C
Inlet Water Pressure/Temp (Max)	3Kg / cm ² or 42.67psi / 35°C
Filter Cartridge	Sediment, Carbon Block Filter, UF and Post Carbon
UV Lamp Wattage	11 W
Life of UV Lamp	1 Year
Weight	9.400 kg.
Storage Capacity	8 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 220 ± 10 V AC, 50 Hz 

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