

KENT
Mineral RO™
Water Purifiers
HOUSE of PURITY



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

Manufactured by:
KENT RO SYSTEMS LTD.
1) Khasra No. 93, Village-Bantakhedi, Tehsil-Roorkee,
District-Haridwar, Uttarakhand-247 668, India.
2) A-6, Sector-87, Noida-201305, U.P., India.

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

October, 2018 (Version: 101803)

KENT PRISTINE
Wall-mounted/Counter-top
Detachable Tank
RO Water Purifier



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 Sterilization & TDS Controller

Mineral RO™ © 2005 KENT RO SYSTEMS LTD, the process & purifier is patented vide patent no. 199716.
KENT PRISTINE design is registered vide registration no. 274316

Welcome to KENT

Dear Customer,

At the outset, allow us to thank you for your trust in **KENT** RO Water Purifier. We take pride in our reputation for product quality and industry proven performance. We are certain that your decision to own **KENT** Pristine 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.

Best Wishes,

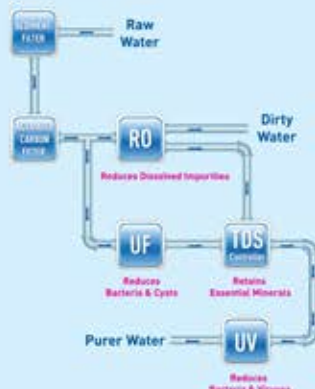
KENT RO SYSTEMS LTD.

Table of Contents

1. KENT TECHNOLOGY - A Breakthrough in Water Purification	1
2. Salient Features	1
3. Items in the Box	1
4. Important Instructions	2
5. Reverse Osmosis Process	3
6. UV Process	3
7. Auto-flushing System	3
8. Water Flow Diagram	4
9. Electrical Circuit Diagram	4
10. UV Fail Alarm	5
11. Filter Change Alarm	5
12. Computer Controlled Operation	5
13. Automatic Operation	5
14. Installation Instructions	6
15. Recommended Usage of Rejected Water	8
16. TDS Adjustment	9
17. Starting-up the Purifier	9
18. Maintenance	9
19. Important Safety Instructions	10
20. Warning	10
21. Technical Specifications	11
22. Testing Information	11

KENT TECHNOLOGY - A Breakthrough in Water Purification*

KENT proudly presents KENT PRISTINE Mineral RO™ Water Purifier-a new and advanced domestic water purifier based on the patented KENT Technology. The ground-breaking KENT Technology, developed at KENT laboratory broadly comprises of state-of-the-art RO+UF+UV with TDS Control. The initial purification by RO membrane having porosity as fine as 0.0001 microns reduces even dissolved impurities (hard salts, heavy metals, etc.). Double purification by UV process ensures complete protection against bacteria and viruses. Moreover, the patented TDS Control System intelligently retains essential natural minerals in purified water, thus taking total care of your health and well-being.



KENT is pleased to introduce Save Water Technology™ that helps you save and store water from KENT RO Purifiers as well as from other RO purifiers. As a part of Save Water Technology, KENT introduces RO Reject Water Storage Tank, which can be purchased separately and then installed and connected to your KENT RO Purifier. This tank stores the rejected water from the purifier, which can be used for washing utensils and mopping the floor. This unique technology helps you recover more than 50% water, thus reducing wastage.

Salient Features of KENT Pristine Mineral RO™ Water Purifier



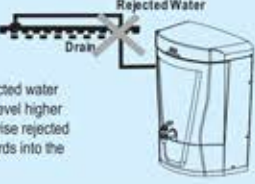
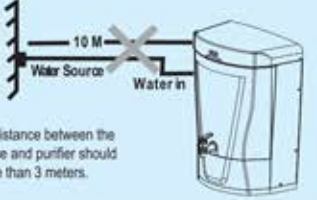





- Suitable for Wall-mounting or Counter-top installation
- High purification capacity of 20 L/hr.
- Inbuilt auto-flushing system
- Membrane with high flow
- Purification by RO+UF+UV with TDS Control
- Detachable tank for easy on-site cleaning on regular basis
- LED indicator for power and purification display
- Computer-controlled operation with Filter Change Alarm* and UV Fail Alarm*
- Adjustable TDS Control System to allow TDS adjustment of purified water
- 8 L storage capacity
- RO Membrane fused inside membrane housing to prevent tampering
- Vertically mounted SMPS for protection
- Push-fit components for leak-proof & maintenance-free performance
- Fully automatic operation with auto-on and auto-off function
- ABS construction for corrosion-free lifespan
- Suitable for purification of brackish/ tap water/ municipal corporation water

Items in the Box

- | | |
|---|----------------|
| 1. KENT Pristine Mineral RO™ Water Purifier | : 01 No. |
| 2. 3-way Connector | : 01 No. |
| 3. S.S. Ball Valve | : 01 No. |
| 4. Food Grade Pipe (White) - 1/4 inch. | : 2.5 m |
| 5. Food Grade Pipe (White) - 3/8 inch. | : 2.5 m |
| 6. Screws & Plastic Inserts | : 02 Nos. each |
| 7. Warranty Card | : 01 No. |
| 8. Sticker Center Drill | : 01 No. |

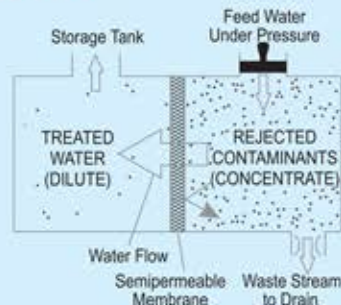
* Tested & Certified by TUV-SUD South Asia (P) Ltd. ** Recovery more than 50% is based on the standard testing conditions.

Important Instructions

 <p>Avoid exposure to direct sunlight and installation in damp areas.</p>	 <p>Make sure that the purifier is connected to normal temperature 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>Maximum distance between the water source and purifier should not be more than 3 meters.</p>
 <p>Avoid sharp bends in pipe. Do not block the reject water pipe.</p>	 <p>Do not confine the purifier in a cabinet.</p>
 <p>In case the purifier is not to be used 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 removed, cleaned and wiped dry, once in 15 days.</p>
<p style="text-align: center;">KENT</p> <p style="text-align: center;">GENUINE</p> <p style="text-align: center;">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 the service technician for help.</p>

Reverse Osmosis Process

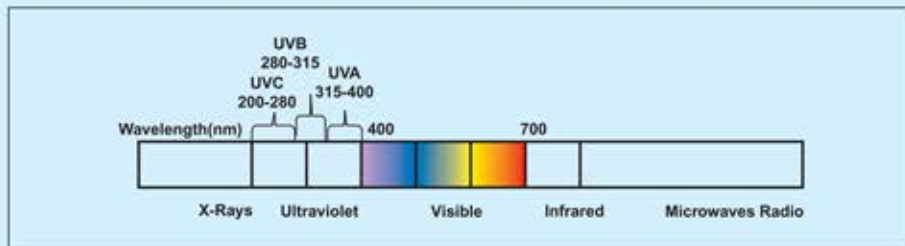
The Reverse Osmosis Process, also known as hyper filtration, is the finest filtration process known till date. The process ensures reduction in particles as small as ions from a solution. Reverse Osmosis uses a semi-permeable membrane to reduce salts from potable/brackish water. In Reverse Osmosis, water pressure applied to the concentrated side forces the process of osmosis into reverse. Under enough pressure, purer 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, unlike 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.

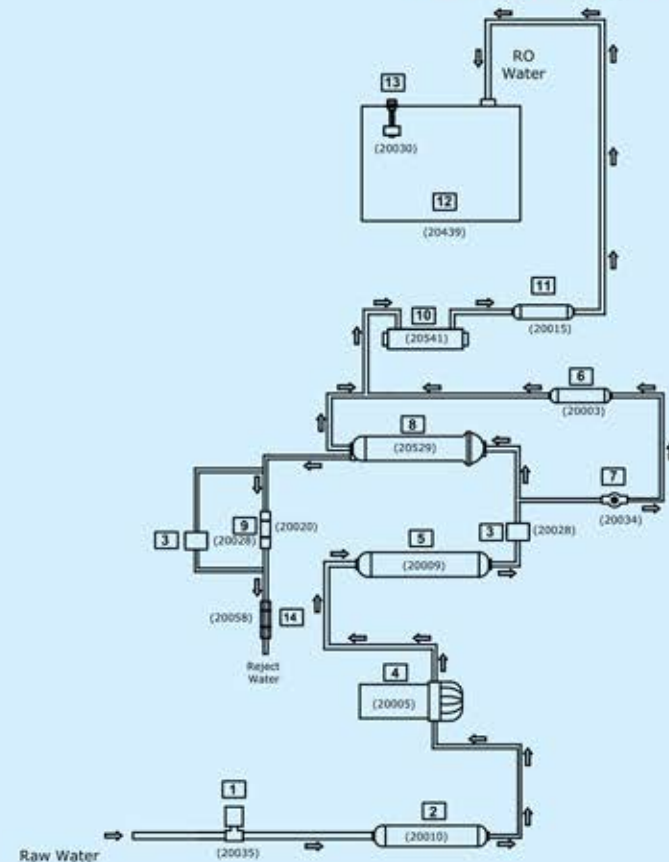


Auto-flushing System

The purpose of the Auto-flushing system is to help prevent scaling or fouling of the RO membrane by providing a rapid rinse which washes away impurities from the membrane's surface and keeps the membrane clean. It offers following benefits:

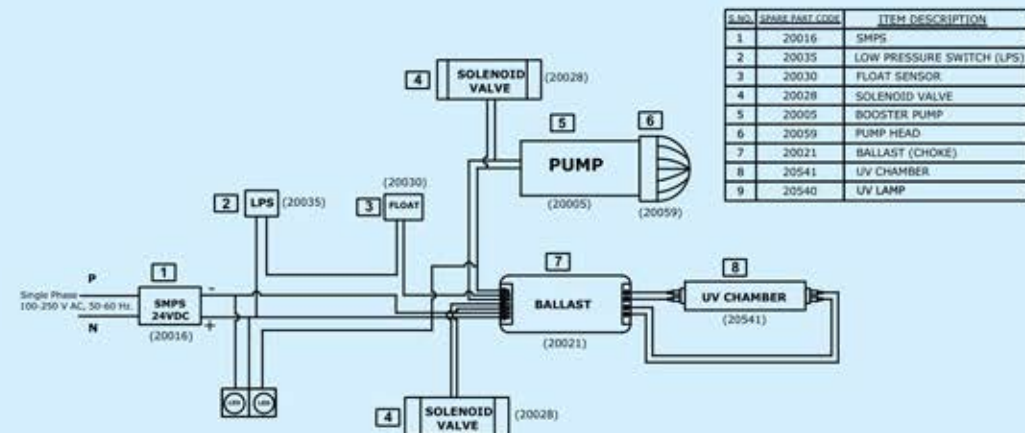
- Lowers rejected water outflow
- Improves "TDS" rejection rate i.e increases RO membrane efficiency
- Extends life of RO membrane

Water Flow Diagram



S.NO.	SPARE PART CODE	ITEM DESCRIPTION
1	20035	LOW PRESSURE SWITCH
2	20010	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	20529	RO MEMBRANE
9	20020	FLOW RESTRICTOR TUBE
10	20541	UV CHAMBER
11	20015	POST CARBON FILTER
12	20439	WATER STORAGE TANK
13	20030	FLOAT SENSOR
14	20058	NON RETURN VALVE

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	20541	UV CHAMBER
9	20540	UV LAMP

UV Fail Alarm*

KENT Pristine Mineral RO™ Water Purifier has an in-built feature that produces an audible alarm if the UV lamp malfunctions. This feature is provided to ensure purer water. This UV Fail Alarm will sound as following:

One short beep 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 Pristine Mineral RO™ Water Purifier has an in-built feature that produces an audible alarm to indicate the 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 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

- | | |
|--|---|
| 1. The purifier automatically shuts off when the storage tank is full. | 3. The purifier automatically restarts when water level drops below the maximum. |
| 2. The purifier does not start when inlet water supply pressure falls below 0.3 kg/cm ² . | 4. The purifier does not allow any water rejection in absence of electricity/when tank is full. |

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

Installation Instructions

KENT Pristine Mineral RO™ Water Purifier is designed to facilitate both wall-mounting as well as counter-top usage. The purifier is easy and convenient to install.

Recommended Site Preparations:

1. Single Phase 100-250 VAC, 50-60 Hz supply not more than 3m away from the point of installation.
2. Raw water supply with ½ inch nipple not more than 3m away.
3. Drain for reject water not more than 3m away.
4. Installation space as per dimensions of the purifier.
5. For wall-mounting installation, make sure that purifier is mounted on a wall. Avoid installation on wooden and metallic stands.
6. For optimum inlet pressure, source water tank should be at least 10 ft above the purifier installed.
7. Install the purifier near a sink for easy availability of inlet and reject water lines.
8. The system and installation must comply with state and local laws and regulations.

Installation Procedure:

Step-1

Wall Hanging Diagram

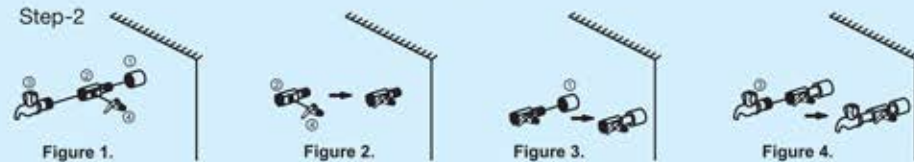


1. Paste the central drill sticker on wall at (3.6 Feet to 4.0 Feet from the ground) as per your convenience.
2. Ensure that sticker is pasted straight on the wall, then drill holes as per the space provided on sticker.
3. Now, insert the puff up with the help of a hammer.
4. Screw in two 10X50 self-taping screws, 5.7 inches (150 mm) apart horizontally.
5. Carefully hang the purifier on the wall with the help of wall-mounting slot holes provided on back side of the purifier.

Note:

1. If the wall is not straight or the screws are not properly drilled in an even position, it will damage your purifier.
2. Keep the device away from heat or direct sunlight.

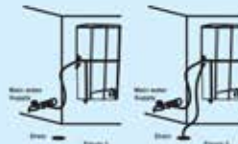
Step-2



1. First fix the SS ball valve (marked as no. 4) to the ¼ inch port of the 3-way connector (marked as no. 2) as shown in figure 2.
2. Connect the 3-way connector to the raw water supply (marked as no. 1) as shown in the figure 3. The 3-way connector is fitted in line with the raw water supply.
3. The other end of the 3-way connector can be connected to a tap (marked as no.3) as shown in figure 4, or can be plugged off if not required.

Step-3

1. Now connect one end of the white pipe to SS ball valve and another end to the upper push-fit elbow fitting to the left hand side of the purifier labelled as WATER IN, as shown in fig 1.
2. Similarly, connect one end of the white pipe to the lower elbow fitting connector in tank labelled as REJECT WATER and leave the other end in the drain, as shown in fig 2.



Step-4

Before connecting the power supply, it is important that you perform the following functions:

1. Open the SS ball valve (Handle parallel to the ball valve) to start the flow of water into the purifier, as shown in the figure.
2. Wait for 2-3 minutes to ensure that the filters are soaked in water.



Step-5

Connect the power supply.

Installation is complete.

RO Reject Water Storage Tank (Optional Purchase)

The ideal place for installation is above the sink because rejected water is ideally used for cleaning utensils or for mopping floors. Every house has used utensils, which can be cleaned first with this water & subsequently from clean water. If you still have extra water left, we recommend you to use for mopping/ cleaning the floor.

Installation Instructions

A. Assembly of tank

Step 01: Open the box and take the storage tank out.	
Step 02: Unscrew and remove the top cover.	
Step 03: Using silicon washer, fix the tap on to the tank.	
Step 04: Attach the fittings on to the holes provided on the side of the tank.	
Step 05: Place the lid back and see to it that it is placed properly.	

Step 06: Screw the lid properly.



Step 07: The storage tank is ready for installation.



B. Wall hanging procedure

Step 01: Paste the center drill sticker on the wall preferably at 3.6 to 4 feet from the ground or as per convenience.

Step 02: Ensure that the sticker is pasted straight on the wall. Drill holes as per the markings provided on the sticker.

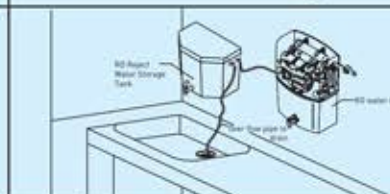
Step 03: Using a hammer, insert the puff-up in the wall.

Step 04: Screw two, '10 x 50' sized self-taping screws, 5.5 inches (140 mm) apart horizontally.

Step 05: Using screw install the tank on the wall.



Step 06: Connect the pipes as shown in the image. Connect $\frac{1}{4}$ inch reject water pipe from the RO to the smaller fitting and $\frac{3}{8}$ inch pipe to the bigger fitting and put the open end into the drain.



Installation is complete.

Note:

1. Keep the tank away from direct sunlight or heat.
2. If mounted on an uneven wall surface or the screws are not properly drilled, it could damage the tank.

Recommended Usage of Rejected Water

Although the rejected water has high concentration of salts, it is absolutely clean and free from impurities like chlorine, dirt, sand, etc. So do not flush down the rejected water as it can be used for gardening purpose.

The high concentration of salts and minerals accelerate the plant growth. Rejected water can also be used for cleaning utensils, mopping, etc.

TDS Adjustment*

The unique TDS Control System enables customers to retain the contents of natural minerals (TDS) in purified water, as per their requirement.

1. Turning the screw of the valve anti-clockwise, results in an increased mineral content.
2. Turning the screw of the valve clockwise, results in a decreased mineral content.

 We recommend keeping the TDS level at lowest but not below 50mg/l.

Starting-up the Purifier


1. Switch on the power supply.
2. Allow the storage tank to fill to the maximum level**.
3. Switch off the power supply.
4. Open the upper cover. Lift and drain the storage tank so as to remove residual dust.
5. Place back the storage tank and close the upper cover.
6. Switch on the power supply.
7. Purifier is ready to use.

 The glowing Red LED indicates power is on. The glowing Green LED indicates the purification is on.

Maintenance

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

1. Storage tank must be cleaned once in 2 weeks (Refer Cleaning of Water Tank).
2. Replace sediment filter, activated carbon filter & post carbon filter once in 12 months or whenever the filter change alarm activates. It is recommended to change FRT along with the filters.
3. Replace RO membrane once in a year.
4. Replace UV Lamp once in a year.
5. In the event of not using the purifier for a long time (while going for a holiday, tour, etc.), make sure that you disconnect the power supply, turn off the raw water supply and drain the storage tank.

 The replacement time of consumables such as filters and membrane is dependent on the quality of raw water and water consumed.

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

** Tested or certified flushing time - 24hrs.

Cleaning of Water 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:

-20010	SP Inline Sediment Filter 8"
-20009	SP Inline Carbon Filter 8"
-20529	SP RO Membrane HF
-20015	SP Post Carbon Filter (Blue)
-20003	SP Hollow Fibre Membrane (RO)
-20020	SP FRT 300/450

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 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 PRISTINE
Product Code	11038
Product Generic Name	Water Purifier-RO with UV Disinfection
Product Colour	White
Applications	Suitable for Purification of Brackish/Tap Water Municipal Corporation Water
Body Material	ABS Food Grade Plastic
Installation	Wall-mounting/Counter-top
Dimensions(mm)	410 (L) x 300 (W) x 510 (H)
Purification Production Rate	20 L/hr.*
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, Post Carbon
UV Lamp Wattage	11 W
Life of UV Lamp	5000 hrs. of operation
Weight	9.80 kg
Storage Capacity	8 L
Maximum Duty Cycle	100 L/day
Membrane Type	Thin Film Composite RO
Booster Pump Voltage	24 V DC
Total Power Consumption	60 W
Input Power Supply	Single Phase 100-250 V AC, 50-60 Hz. 
IP Rating	IPX1

* Purification capacity tested for raw 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.