



KENT
House of Purity

KENT PEARL IoT

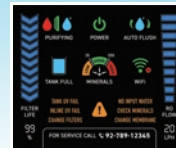
IoT Enabled RO Water Purifier

Makes Water 100% Pure

RO+UV+UF+Alkaline+Copper+TDS Control

Meets
IS 16240:
2023

KENT
House of Purity



Digital Display of
Purity & Minerals



*T&C Apply.



Kent Deta Hai
**Sabse
Shudh Paani**

Real-time display of water quality and filter life.
Automatic service call registration in case of major
faults & timely notifications of filter/membrane life.
Service and parts replacement history available.

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

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 **KENT Pearl IoT** 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 familiarize yourself with its operation and maintenance.

Best Wishes,

KENT RO SYSTEMS LTD.

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KENT IoT TECHNOLOGY - A Break Through in Water Purification

Presenting the **KENT Pearl IoT Mineral RO™ Water Purifier**—engineered with futuristic, **IoT enabled smart monitoring**, a state-of-the-art technology to deliver purer, healthier drinking water for Modern homes.

At its core lies an advanced **Reverse Osmosis (RO) membrane** with ultra-fine capillaries as small as 0.0001 microns, effectively reducing dissolved impurities such as salts and heavy metals. The result: hard water is transformed into sweet, clean, and safe drinking water.

Equipped with a **patented Mineral Retention System**, the purifier intelligently preserves essential minerals while allowing users to customize the **Total Dissolved Solids (TDS)** level to suit their preference.

Powered by cutting-edge **IoT technology**, the KENT Sapphire delivers unmatched convenience and control by offering a real-time display of water quality and filter life, automatically registering service calls in case of any faults, sending timely alerts for filter and membrane replacement, and maintaining a complete history of service and parts replacement for seamless and hassle-free maintenance.

Experience a new standard of intelligent water purification—where innovation meets health and convenience.





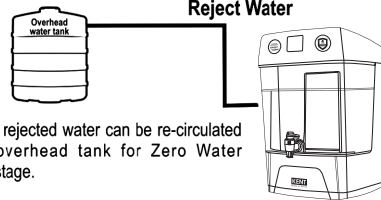
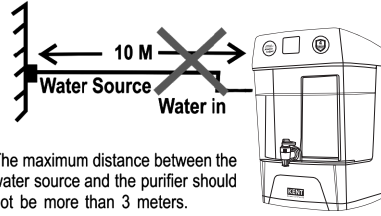
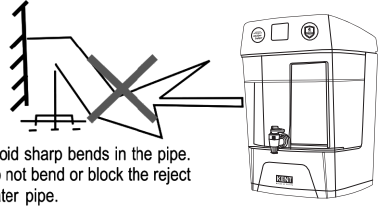
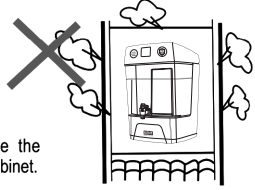




Items in the Box

1. KENT Pearl IoT Mineral RO™ Water Purifier	:	1 N
2. 3-Way Connector	:	1 N
3. S.S. Ball Valve	:	1 N
4. Food Grade Pipe 0.635 cm (White)	:	2.5 Meters
5. Food Grade Pipe 0.952 cm (White)	:	2.5 Meters
6. Warranty Card	:	1 N
7. TDS Meter	:	1 N

Salient Features

- Multiple purification by RO+UF+UV+Alkaline+Copper +TDS Control+UV in Tank makes water 100% pure
- **IoT Intelligence:**
 - Experience next gen convenience with built in IoT intelligence
 - Real time display of water quality and filter life through the mobile app
 - Automatic service call registration in case of any fault
 - Timely notifications before filter/ membrane life runs out
 - Complete service and parts replacement history available at a glance
 - Automatic service call registration in case of any fault
 - Timely notifications before filter/ membrane life runs out
 - Complete service and parts replacement history available at a glance
- Digital display of purity & minerals
- Makes Alkaline water (8.0+ ph) infused with goodness of Copper
- 11 L storage capacity
- Suitable for purification of brackish, tap water & Municipal Corporation Water Supply
- Wall mounted design, best suited for Indian homes and offices
- Detachable storage tank for hassle free cleaning.
- Fully automatic operation, with auto-on and auto-off function
- 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
- ABS construction for corrosion free use
- Inbuilt Auto-flushing system
- High purification capacity of 20 L/hr.

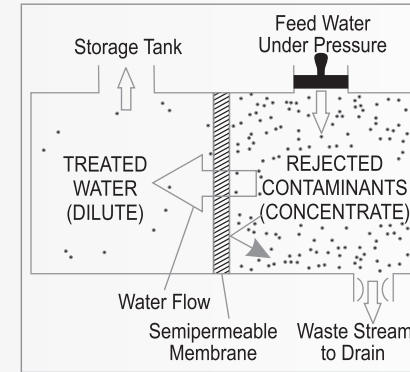
Important Instructions

 <p>Avoid exposure to direct sunlight and installation in damp areas.</p>	 <p>Make sure that the temperature of the water entering the purifier is within 10° C - 40° C.</p>
 <p>Reject Water</p> <p>The rejected water can be re-circulated to overhead tank for Zero Water Wastage.</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 every 15 days.</p>
 <p>Use genuine KENT spares for optimum performance.</p>	 <p>Do not try to service the purifier on your own. Instead, call a 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 the 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.

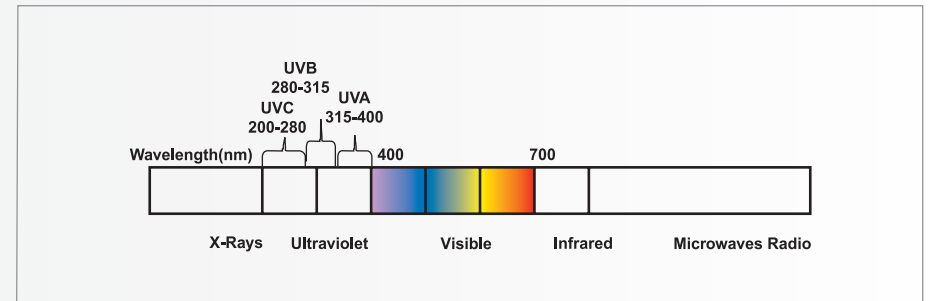
The rejected impurities on the concentrated side of the membrane are washed away in a stream of waste water, and thus do not get accumulated as in a traditional filter.



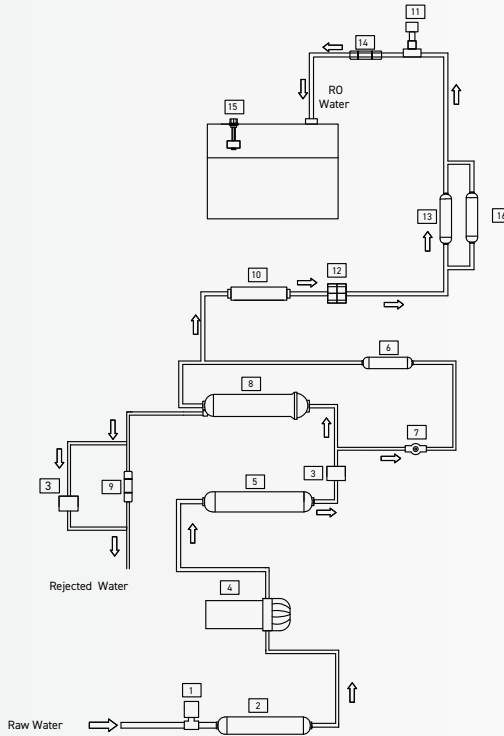
UV Process

The UV light has shorter wavelength (higher energy) than the visible light. It is called ultra-violet because it is just beyond the 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. Thus, they are essentially killed and cannot cause infection. This process of DNA modification is called inactivation.

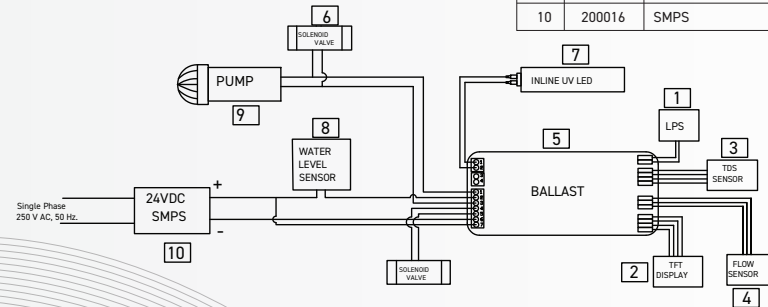


Water Flow Diagram



S.NO.	SPARE PART CODE	ITEM DESCRIPTION
1	200035	LOW PRESSURE SWITCH
2	200010	SEDIMENT FILTER
3	200028	SOLENOID VALVE
4	200005	BOOSTER PUMP
5	200009	ACTIVATED CARBON FILTER
6	200003	UF FILTER
7	200034	TDS CONTROL VALVE
8	200529	RO MEMBRANE
9	200020	FLOW RESTRICTOR TUBE
10	605452	RO-INLINE UV
11	200441	TDS SENSOR
12	200442	FLOW SENSOR
13	200575	POST CARBON+ALKALINE
14	200058	NON RETURN VALVE
15	200030	WATER LEVEL SENSOR
16	201878	POST CARBON+COPPER

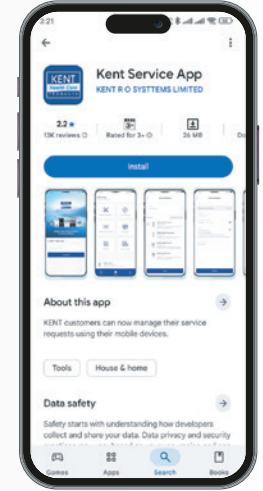
Electrical Circuit Diagram



S.NO.	SPARE PART CODE	ITEM DESCRIPTION
1	200035	LOW PRESSURE SWITCH (LPS)
2	202671	DIGITAL DISPLAY IOT
3	200442	TDS SENSOR
4	200441	FLOW SENSOR
5	202670	E BLAST DIGITAL DISPLAY W IOT
6	200028	SOLENOID VALVE
7	202582	RO-INLINE UV
8	200030	WATER LEVEL SENSOR
9	200005	BOOSTER PUMP
10	200016	SMPS

Connecting to the KENT Service App

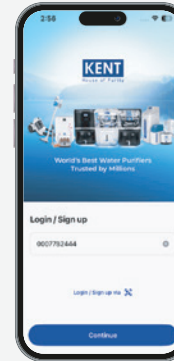
Download the 'KENT Service App' by scanning the QR code.



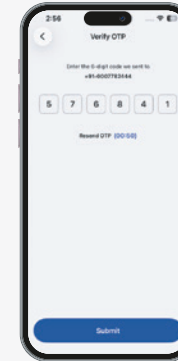
Onboarding Process

Step 1

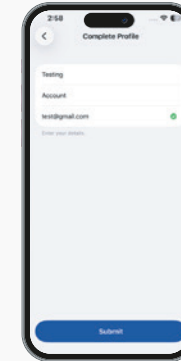
Sign up to create an account.



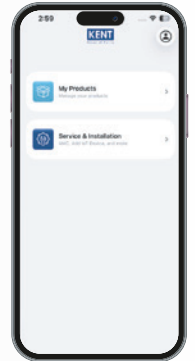
Enter your phone number.



Enter the OTP received on your phone.



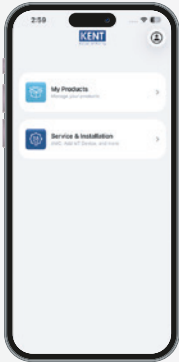
Complete your profile details.



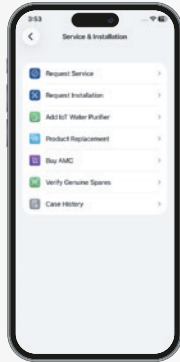
The dashboard will open.

Step 2

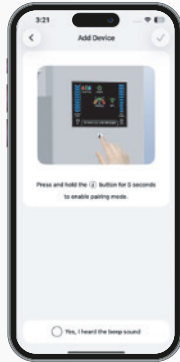
Add your KENT IoT Water Purifier to the app.



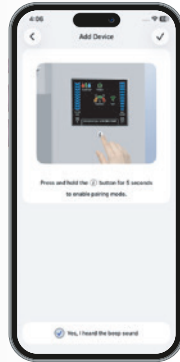
Tap "Service & Installation"



Select 'Add IoT Water Purifier'



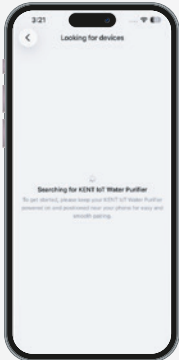
On the purifier, press and hold the "i" button for 5 seconds.



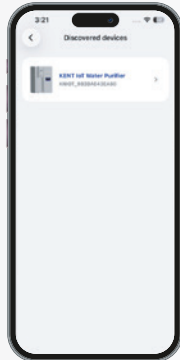
After hearing the beep sound, tick the checkbox "Yes, I heard the beep"

Step 2 (Continue)

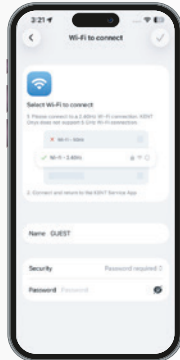
Add IoT water purifier to the app



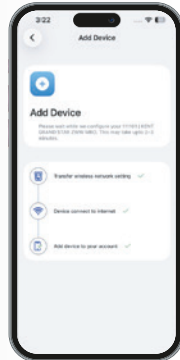
Wait until the device is found.



Once the device is found, tap to proceed.



Enter your Wi-Fi credentials.



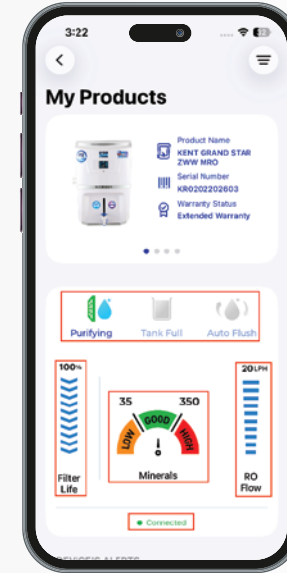
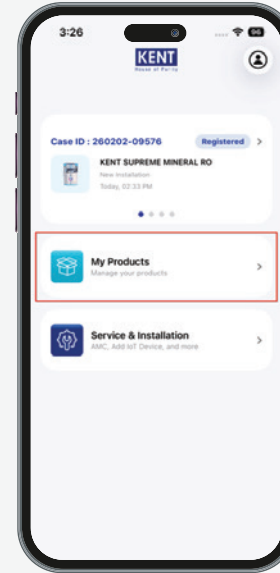
Wait until your device connects.

View Device Details

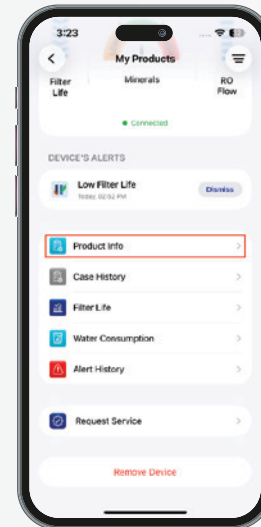
After on-boarding, you can view real-time device information such as:

- Current Working Status of RO (Purifying, Auto Flush or Tank Full)
- Remaining Filter Life
- Level of Water Mineral (TDS)
- Current water pressure

Device internet status



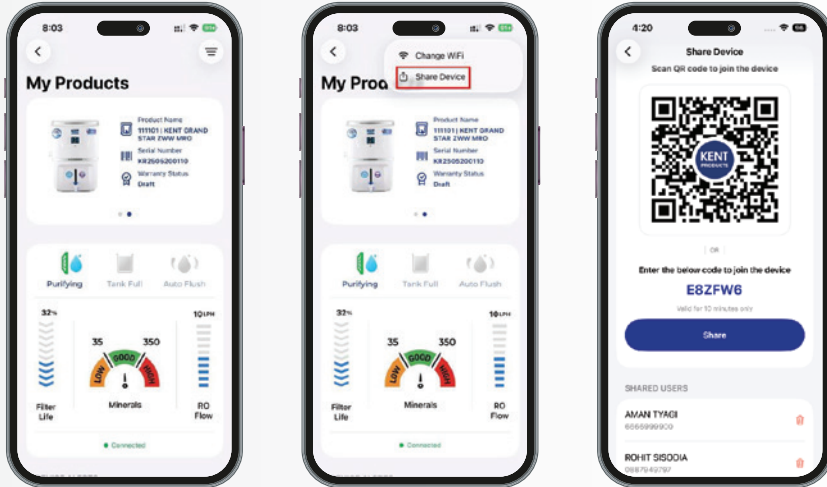
Stay updated with the current alerts of your device displayed on this screen



- View all product-related details under the **Product Info** tab
- **Case History** gives you a complete overview of all the cases reported for this product.
- Filter and membrane health can be monitored under the **'Filter Life'** tab. Tap to view the replacement history and details.
- Track your RO water consumption under the **'Water Consumption'** tab, which displays Total Consumption and Consumption Since Last Reset separately.
- All alerts will be shown in the **Alert History** tab.

Device Sharing

To share your device with another user, go to Share Device and provide them with the joining code or QR code.



The user can then enter the code or scan the QR code from the **Join IoT Device** option in their profile.



Change Wi-Fi

To change the Wi-Fi of the device, follow the below steps:

- Click on the **Change Wi-Fi** of the device.
- Make sure the RO device is powered ON.
- Press "i" button for 5 sec to enable the pairing mode.
- Once you hear the beep sound, tick the checkbox "Yes, I heard the beep sound" to confirm.
- Tap 'Continue' and wait while the app searches for your device.
- Once the device is discovered, select it to proceed.
- Enter your Wi-Fi credentials and wait for the device to connect.
- Once successfully connected, device Wi-Fi has been changed.

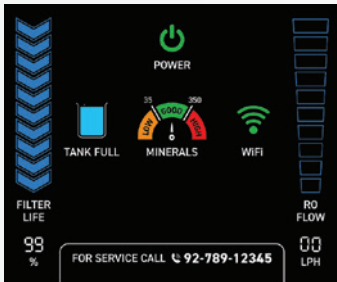
KENT Pearl IoT Operations

Screen Explained



1. Filter Life Indicator
2. RO Flow Indicator
3. Power On/Off
4. Purification Process
5. Tank Full
6. Auto Flushing On
7. Mineral Content in Purified Water
8. Warning Signs
9. Wi-Fi status

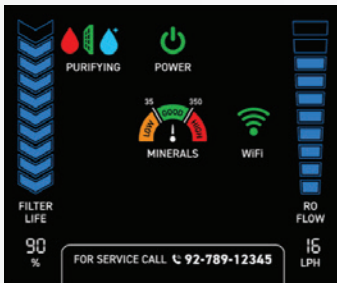
Normal Running Condition



Under Normal running condition and without any fault, the users would be greeted with a screen as shown in the figure, with Power, Tank Full Life and Water Quality Indicator On

Since the tank is full, the RO flow rate would not be displayed

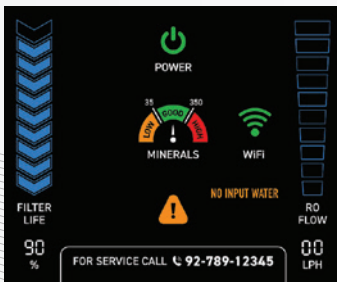
Emptying of Tank



When water is drawn from the tank, the water tank icon would turn Off, and RO Flow, Purification and Mineral Quality would turn On

Depending upon the mineral contents in the water, the indicator would display Low, Good or High

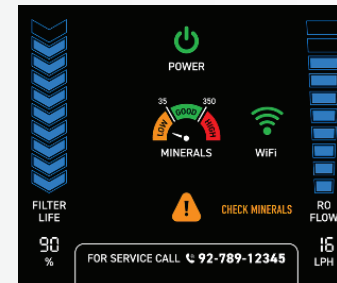
No Water Input



In case of No Water Input, the warning would be displayed, as shown in the figure.

The water purifier would automatically shut off and will remain off till regular water supply is not restored

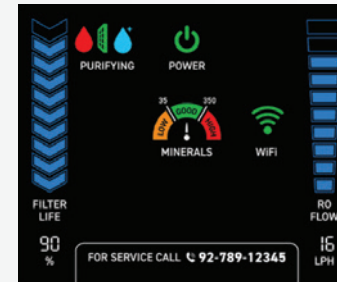
Mineral Content - Low



If the TDS level in the purified water is less than the permissible range, the indicator would be in Orange zone i.e Low

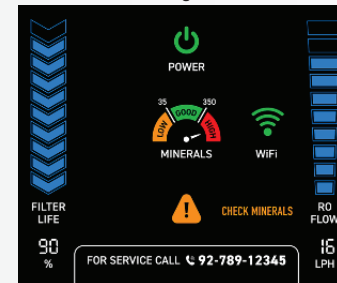
The warning sign would be displayed as shown in the figure

Mineral Content - Good



If the TDS level in the purified water is within the permissible range, the indicator would be in Green zone i.e Good

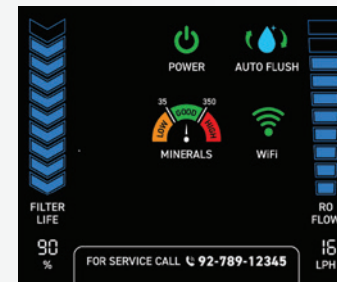
Mineral Content - High



If the TDS level in the purified water is more permissible range, the indicator would be in Red zone i.e High

The warning sign would be displayed as shown in the figure

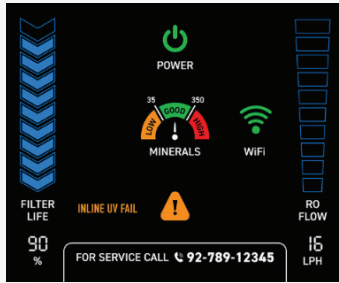
Auto-flushing



Auto Flush icon as show in the display indicates that RO Membrane is getting flushed automatically

Once Auto-flushing is complete, the auto flush icon would turn off

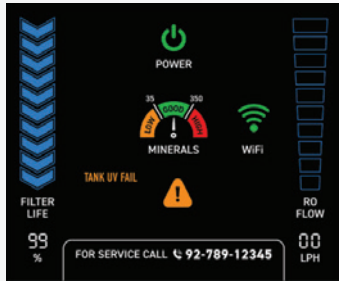
Inline UV LED Failure



If Inline UV fails, machine will display a warning signal of Inline UV fail and an alarm with a continues beep will be audible. The purifier would stop purifying water till the Inline UV is replaced.

If the interface shows a Inline UV failure message, switch off the purifier and call a service technician for help

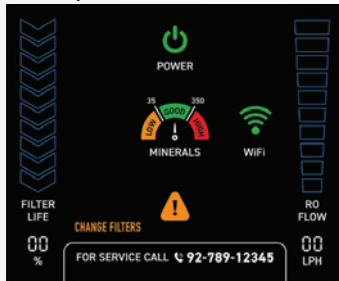
Tank UV LED Failure



If Tank UV LED fail, machine will display a blinking warning signal of Tank UV fail and an alarm with long beep will be audible.

If the interface shows a Tank UV fail message, switch off the purifier and call a service technician for help

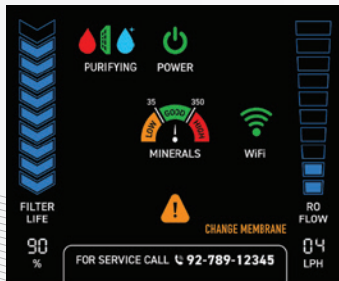
Filter Replacement



On exhaustion of filter life, 'Change Filters message' will be displayed on screen with a continuous buzzer and the purifier will stop purifying water till filters are not replaced

If the interface shows 'Change Filters Message' switch off the purifier and call a service technician for help

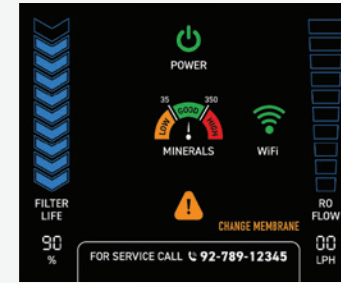
Low RO Flow



Change Membrane and LPH warning sign indicates reduced capacity of RO membrane

Although the water purifier will continue working till the membrane life, it is recommended to call the KENT Customer Care and ask for Membrane Replacement

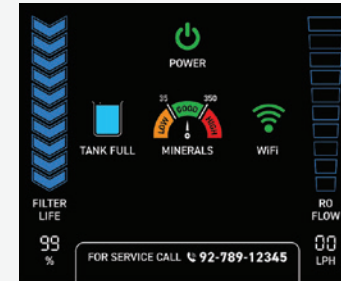
Membrane Replacement



On exhaustion of Membrane life, 'Change Membrane message' will be displayed on screen with a continuous buzzer and the purifier will stop purifying water till filters are not replaced

If the interface shows 'Change Membrane message' switch off the purifier and call a service technician for help

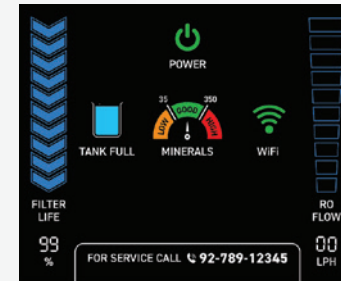
IOT connection



The Wi-Fi icon shows the Wi-Fi connectivity and signal strength.

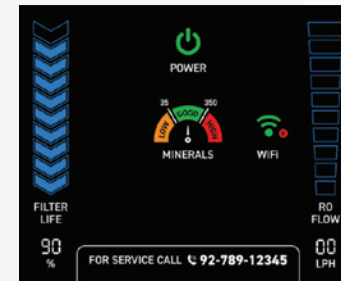
If the Wi-Fi icon red sign (🔴) remains continuously ON, it indicates a Wi-Fi is not connected.

Wi-Fi Provisioning mode



Press and hold the standby switch on the display for 5 seconds. Wi-Fi indication bars will start blinking, indicating that the product has entered provisioning mode, then open the Kent mobile app for Provisioning procedure.

Server connection



If the Wi-Fi icon red sign (🔴) is blinking, it indicates the product is attempting to connect to the server

If the Wi-Fi icon red sign (🔴) remains continuously OFF, it indicates the server is connected.

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 cleaned once in 2 weeks.
- Replace the 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
- Replace the RO membrane once in a year
- Replace the UV Lamp once in a year
- In the event of not using 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
- Cleaning and disinfection of the storage tank by halogenated solution (usually Chlorine) or any other equivalent disinfecting method in every three months.

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 space parts are as under:

-200010	SP	Inline Sediment Filter 8"
-200009	SP	Inline Carbon Filter 8"
-200529	SP	RO Membrane
-200015	SP	Post Carbon Filter (Blue)
-200003	SP	Hollow Fibre Membrane (RO)
-202202	SP	FRT 350

Note: Filters and membranes are consumables. Their replacement time depends upon 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 membranes is available on call. The treatment capacity of RO membrane will reduce with time due to clogging of pores of membrane.

"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 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

Technical Specifications

Product	KENT Pearl IoT Alkaline+Copper
Product Code	111175
Product Generic Name	RO Water Purifier
Colour	Black
Applications	Suitable for Purification of Brackish/Tap Water Municipal Corporation Water
Weight	9.80 kg
Purification Production Rate	20 L/hr.
Body Material	ABS Food Grade Plastic
Mounting	Wall Mounting
Dimensions (mm)	380 (L) × 330 (W) × 500 (H)
Recovery Rating (Min.)	40%
Reject Water Generation (Max.)	60%
Maximum Operatable Feed Water TDS	1500 mg/liter
Filter Cartridge	Sediment, Activated Carbon, UF, Post Carbon, Alkaline Filter, Copper Filter
Inline UV Wattage	≤2.5 W
Life of Inline UV	5000 hrs. of Operation
Operating Pressure (Min./Max.)	0.0344 MPa - 0.3792 MPa
Min./Max. Operating pH	6.5-8.0
Storage Capacity	11 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	Single Phase 250 V AC, 50 Hz ☐
IP Rating	IPX1

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

Testing Information

The System has been tested according to IS 16240:2023 (Standards for drinking water as per Bureau of Indian Standards) for reduction of the hazardous substances.