

**KENT SUPER+**  
FOR MOUNTING ON KITCHEN WALL

**KENT**  
**Mineral RO™**  
Water Purifiers

HOUSE of PURITY

## Instruction Handbook for Installation, Operation and Maintenance

**KENT**  
**Mineral RO™**  
Water Purifiers

HOUSE of PURITY



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Made in India

**KENT® TECHNOLOGY**  
Removes Dissolved Impurities  
Retains Essential Minerals  
Multiple Purification with Purity in Every Drop  
RO + UF + TDS Control

*Kent Deta Hai*  
**Sabse  
Shudh Paani**

Reverse Osmosis Water Purifier + Ultra Violet + Ultra Filtration Purification + TDS Controller  
Mineral RO™ © 2005 KENT RO SYSTEMS LTD, the process & purifier is patented vide patent no. 199716



HOUSE of PURITY

## Welcome to KENT

Dear Customer

Welcome to the world of KENT, leaders of water purification industry in India. With a KENT product you have all the reasons to smile, since at KENT we take pride in the quality and laboratory-tested performance of our products.

We are confident that your decision to own **KENT Super Plus Mineral RO™ Water Purifier** will go a long way in serving you with purer and mineral enriched drinking water, thus keeping you and your family in good health. We assure you, that you will be satisfied with its trouble-free performance and quality which comes without any compromise.

This manual is an effort towards familiarizing you with the operation and maintenance of KENT Super Plus Mineral RO™. Before operating the unit, please read it thoroughly and retain it for future reference.

Best Wishes

KENT RO SYSTEMS LTD.

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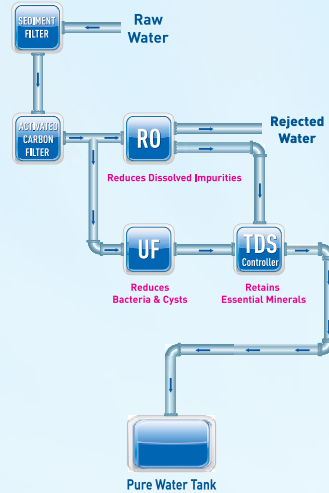
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## KENT TECHNOLOGY A Breakthrough in Water Purification

KENT proudly presents **KENT Super Plus Mineral RO™** Water Purifier - its new and advanced domestic water purifier which provides purer & healthier drinking water.

The futuristic **KENT Super Plus Mineral RO™** Water Purifier, developed at KENT laboratory broadly comprises of a state-of-the-art RO+UF+TDS Control System. The initial purification by RO membrane with porosity as fine as 0.0001 microns reduces even dissolved impurities (hard salts, heavy metals etc.). Double purification by UF membrane gives additional protection from deadly harmful micro-organisms.

Moreover, the patented TDS Control System intelligently retains essential natural minerals in the purified water, thus, taking total care of your health and wellbeing.



### Salient Features

- Wall mounted design-best suited for domestic purpose
- Compact design-needs lesser space for installation
- Double purification by RO+ UF process
- TDS Control System allows adjustment of TDS level of purified water
- 8 L storage capacity
- Suitable for Purification of Brackish/Tap Water/Municipal water Supply
- Storage tank with water level indicator
- Vertically mounted SMPS for protection
- We are not using any preservative and chemical in membrane.
- RO and UF Membranes fused inside membrane housing to prevent tampering
- Push-fit components for leak-proof & maintenance-free performance
- Fully automatic operation with auto-on and auto-off function
- ABS construction for corrosion-free life span

### Items in the Box

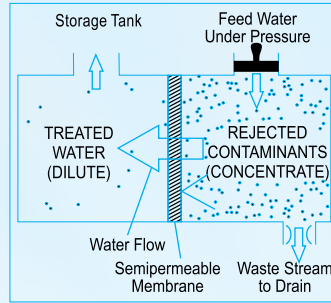
- |   |         |
|---|---------|
| 1. KENT Super Plus Mineral RO™ Water Purifier | : 1 N   |
| 2. 3-Way Connector                            | : 1 N   |
| 3. S.S. Ball Valve                            | : 1 N   |
| 4. Food Grade Pipe 0.952 Cm (Blue)            | : 2.5 m |
| 5. Food Grade Pipe 0.635 Cm (White)           | : 2.5 m |
| 6. Screws & Plastic Inserts                   | : 2 N   |
| 7. Sticker Center Drill                       | : 1 N   |
| 8. TDS Meter                                  | : 1 N   |
| 9. Warranty Card                              | : 1 N   |

## 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 between 10-40°C.</p>
<p>Reject Water Drain</p> <p>Make sure that the reject water pipe is not placed at a level higher than the system, otherwise it may flow backwards into the purifier.</p>	<p>10 M Water Source Water in</p> <p>Maximum distance between the water source and purifier should not be more than 3 meters.</p>
<p>Avoid sharp bends in the pipe fitting. 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>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 the reduction of particles as small as ions from a solution. The Reverse Osmosis process uses a semi-permeable membrane to reduce salts from potable/brackish water. In Reverse Osmosis, water pressure is applied to the impure water inlet resulting in the squeezing of purer water from concentrated end of the membrane towards the diluted end. Dissolved salts present in the water in the form of charged ions get repelled by the RO membrane and are not allowed to pass through. Similarly, bacteria and germs are also blocked by the ultra fine pores of the RO membrane. These rejected impurities, suspended on the concentrated end of the membrane, are then washed away as a stream of waste water, thus preventing the membrane from clogging.



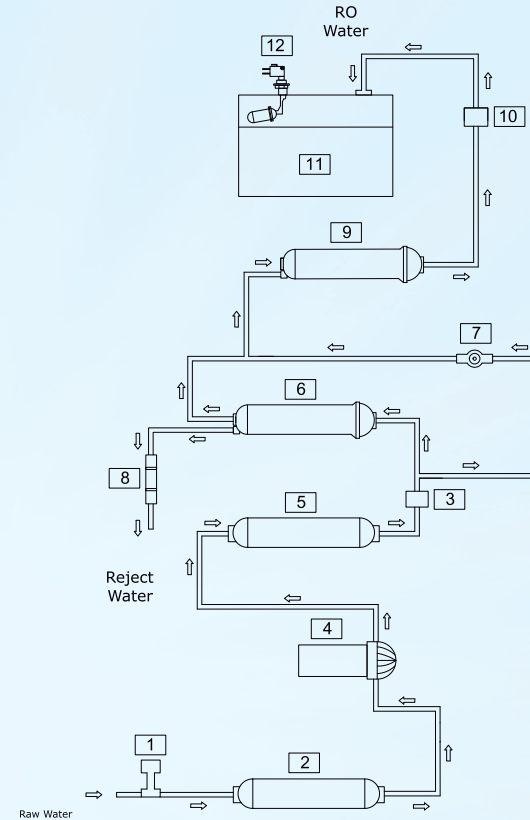
## UF Process

Ultra Filtration is a separation process that uses membranes with pore size in the range of 0.1 to 0.01 micron. UF membrane removes high molecular-weight substances, colloidal materials and organic/inorganic polymeric molecules including bacteria and viruses. Low applied pressure is therefore sufficient to achieve high flux rates from an Ultra Filtration membrane.

## Automatic Operation

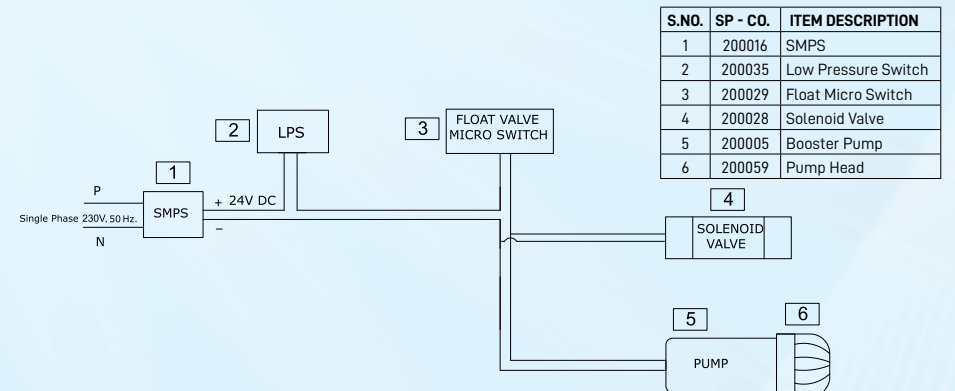
- The purifier automatically shuts off when the storage tank is full.
- The purifier does not start when inlet water supply pressure drops below 0.0344 MPa
- The purifier automatically restarts when water level drops below the maximum.
- The purifier does not allow any water rejection in absence of electricity/when tank is full.

## Water Flow Diagram



S.NO.	SP - CO.	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	200529	RO Membrane
7	200034	TDS Control Valve
8	202202	FRT-350
9	200004	UF Membrane
10	200058	Non Return Valve
11	200148	Water Storage Tank
12	200029	Float Micro Switch

## Electrical Circuit Diagram



S.NO.	SP - CO.	ITEM DESCRIPTION
1	200016	SMPS
2	200035	Low Pressure Switch
3	200029	Float Micro Switch
4	200028	Solenoid Valve
5	200005	Booster Pump
6	200059	Pump Head

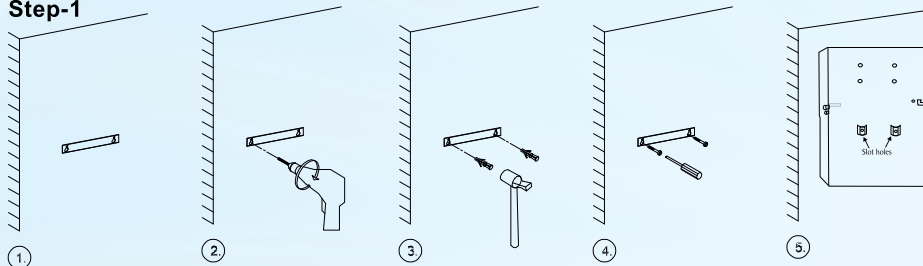
## Installation Instructions

KENT Super Plus Mineral RO wall mounting model. Water Purifier is a convenient and easy-to-install

### Recommended Site Preparations:

- Single Phase 230V AC, 50 Hz. not more than 3m away from the point of installation
- Raw water supply with inch nipple not more than 3m away
- Drain for the reject water not more than 3m away
- Installation space as per the dimensions of the purifier
- Wall/plane surface for mounting screws and
- holding the machine. Avoid installation on wooden and metallic stands
- For optimum inlet pressure the source water tank should be at least 10 ft. above the purifier installed
- Install the purifier near a sink for easy availability of inlet and reject water lines
- The system and installation must comply with state and local laws and regulations

### Step-1

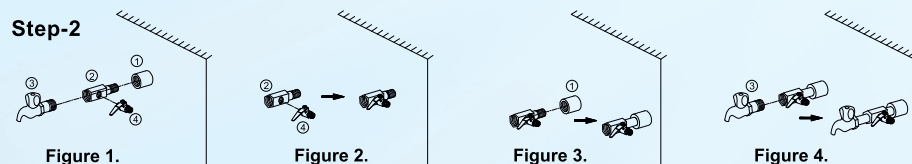


1. Paste the central drill sticker on wall at (3.6 Feet to 4.0 Feet from the ground) as per your convenience.
2. Ensure that sticker is pasted straight on the wall, then drill holes as per the space provided on sticker.
3. Now, insert the puff up with the help of a hammer.
4. Screw in two 10X50 self-taping screws, 5.4 inches (138 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.

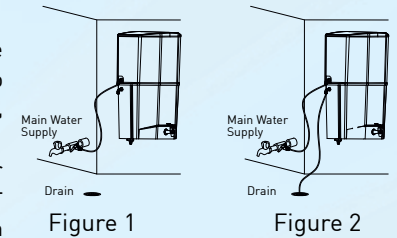
### Step-2



1. First fix the SS ball valve (marked as no. 4) to the 1/4 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

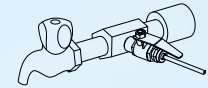
1. Now connect one end of the white pipe to SS ball valve and another end to the upper push-fit elbow fitting to the left hand side of the purifier labelled as WATER IN, as shown in fig 1.
2. Similarly, connect one end of the white pipe to the lower elbow fitting connector in tank labelled as REJECT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

1. Connect the power supply.
2. Installation is complete.

## TDS Adjustment

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

- Turning the screw of the valve anti-clockwise results in increased mineral content
- Turning the screw of the valve clockwise results in decreased mineral content

1. Firstly, remove the protective cap from the TDS
2. Clean the cap and fill it with water. Turn on the TDS meter and dip the head of the TDS meter to test TDS level of water. Alternatively, you can also do the same procedure in any clean container to test the TDS of the water.
3. Carefully immerse the meter into the water or solution up to the maximum immersion level, which is 2 inches. Allow the display to stabilize; this takes 10 to 30 seconds. The TDS meter will automatically compensate for any temperature variations once the reading has stabilized. Now, press the hold button to save the stabilized reading.
4. After using the meter, ensure to shake off any meter, excess water or gently wipe it with a tissue to keep it clean and dry.

☞ We recommend keeping the TDS at lowest possible level but below 50mg/l.

## Starting-up the Purifier

- Switch on the power supply completely. This would remove the residual dust particles present in different pipes and storage tank
- Allow the storage tank to fill to its maximum capacity
- Switch off the power supply
- Open the drain plug present at the bottom of the storage tank and drain the tank
- Plug back the drain plug
- Switch on the power supply
- The purifier is now ready to use

## Recommended Usage of Rejected Water

Although the rejected water has high purposes. The high concentration of salts, it is absolutely clean and free from impurities such as chlorine, dirt, sand, etc. This rejected water usually goes down the drain but can be used for gardening Purposes. The high concentration of salts and minerals accelerates the plant growth. Rejected water can also be used for cleaning

## 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 the sediments, activated carbon & post carbon when the filter changes alarm is audible or after every 12 month. It is recommended to change the FRT when the filters are replaced
- Replace the RO membrane once every 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
- 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 solid and that product water shall be tested periodically to verify that the system is performing properly

☞ The replacement time of consumables such as filters and membrane is dependant on the quality of raw water and the quantity of purified water consumed.

☞ Use genuine KENTspares for optimum performance.

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

### Replacement of spare parts are as under:-

-200010	SP Inline Sediment Filter 8"
-200009	SP Inline Carbon Filter 8"
-200529	SP RO Membrane Welded 8" Housing
-200004	SP UF Membrane Welded 8" Housing
-202202	SP FRT 350

Tested & certified flushing time 24 hrs.

#### Note:

1. 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 treatment capacity of the RO membrane will reduce with time due to clogging of pores of membranes.
2. 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.

## Technical Specifications

Product	KENT Super Plus
Product Code	111005
Product Generic Name	RO Water Purifier
Colour	White
Applications	Suitable for Purification of Brackish/Tap Water Municipal Corporation Water
Weight	7.35 kg
Purification Production Rate	20 L/hr.*
Body Material	ABS Food Grade Plastic
Mounting	Wall-mounting/Counter-top
Dimensions(mm)	380 (L) × 270 (W) × 505 [H]
Recovery Rating (Min.)	40%
Reject Water Generation (Max.)	60%
Maximum Operatable Feed Water TDS	1500 mg/liter
Filter Cartridge	Sediment, Carbon Filter and UF
UV LED Wattage	0.7 W
Life of UV Lamp	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 230V AC, 50 Hz ☑
IP Rating	IPX1

\*Purification capacity tested on tap having TDS level of 1500 ppm at room temperature.

## 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 as listed below.