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KENT **Sterling Star**

Under-the-counter RO Water Purifier
RO+UV+UF+Alkaline+Copper+TDS Control
Digital Display of Minerals and Purity



Meets
IS 16240:
2023



Built-in Hydrostatic Tank

SINGLE CABINET

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 Sterling Star 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 familiarize yourself with its operation and maintenance.

Best Wishes,

KENT RO SYSTEMS LTD.

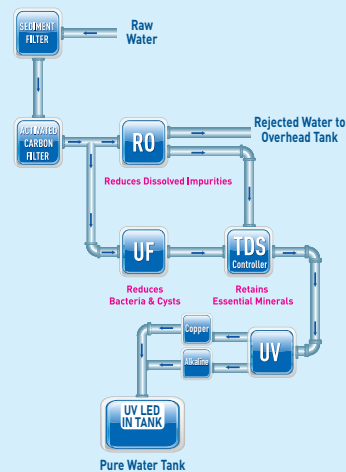
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KENT TECHNOLOGY - A Break Through in Water Purification

KENT proudly presents **KENT Sterling Star Mineral RO™** Water Purifier - a new and advanced domestic water purifier which provides pure & healthy drinking water.

The futuristic **KENT Sterling Star Mineral RO™** Water Purifier, developed at KENT Laboratory broadly comprises of state-of-the-art RO+UV+UF+Alkaline+Copper+TDS Control of minerals and purity Control System. The initial purification by RO membrane having porosity as fine as 0.0001 microns reduces even the dissolved impurities (hard salts, heavy metals, etc.). Double purification by UV membrane gives additional protection from deadly harmful micro-organisms. Moreover, the patented TDS Control System intelligently retains essential natural minerals in purified water, thus taking total care of your health and wellbeing.



Salient Features



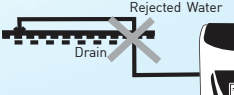
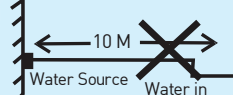
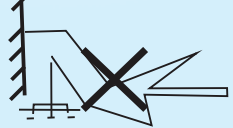


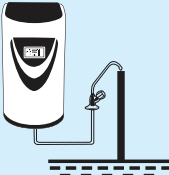


- Compact single cabinet design for under-the-counter placement.
- Purification by RO+UV+UF+Alkaline+Copper+TDS Control
- Retains essential natural minerals in water with TDS Control Valve.
- Real time monitoring and display of purity on a digital screen.
- 6 litres inbuilt hydrostatic storage tank makes purified water available on demand.
- Fully automatic operation with auto-on/off.
- We are not using any preservative in RO Membrane.
- Suitable for purification of blackish/tap water/municipal corporation water supply.
- Tamper-proof RO Purifier.
- Membrane fused inside membrane housing.
- Ideal for under-the-counter as well as side-by-side placement adjacent to refrigerator.
- Computer controlled operations for enhanced purity and long life.
- Very High Purification capacity of 20l/hr.



Items in the Box

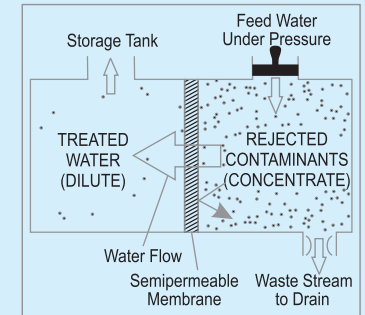
- | | | |
|--|---|-------|
| 1. KENT Sterling Star Mineral RO™ Water Purifier | : | 1 N |
| 2. 3-Way Connector | : | 1 N |
| 3. S.S. Ball Valve | : | 1 N |
| 4. Faucet | : | 1 N |
| 5. Food Grade Pipe - 1/4 "(Blue) | : | 2.5 m |
| 6. Food Grade Pipe - 1/4 "(White) | : | 2.5 m |
| 7. Food Grade Pipe - 3/8 "(White) | : | 2.5 m |
| 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 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 than 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 pipes.</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 out 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 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.

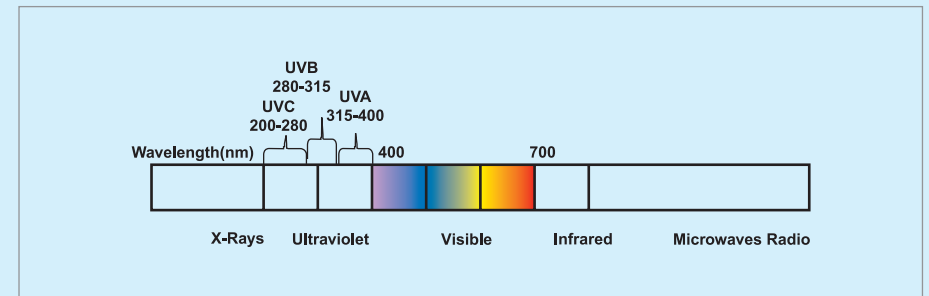


UV Process

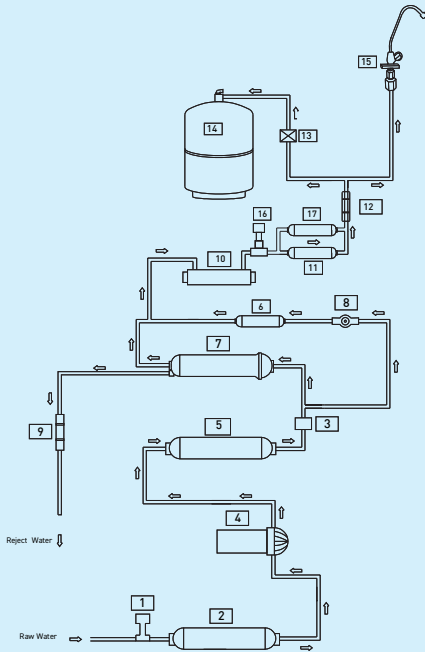
The UV light has shorter wavelength (higher energy) than the visible light. It is called ultra-violet because it is just beyond violet light in the light spectrum. Technically, the ultra-violet light is defined to be any wavelength of light, which is shorter than 400 nanometer.

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.

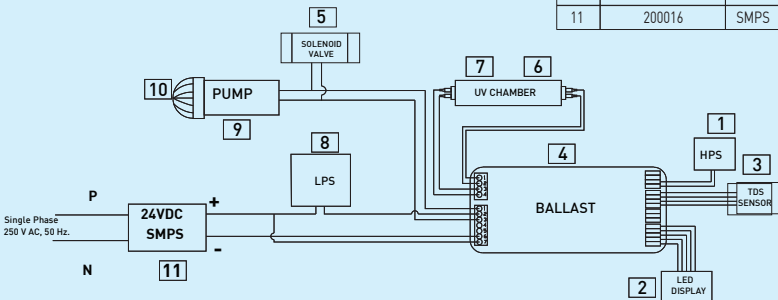


Water Flow Diagram



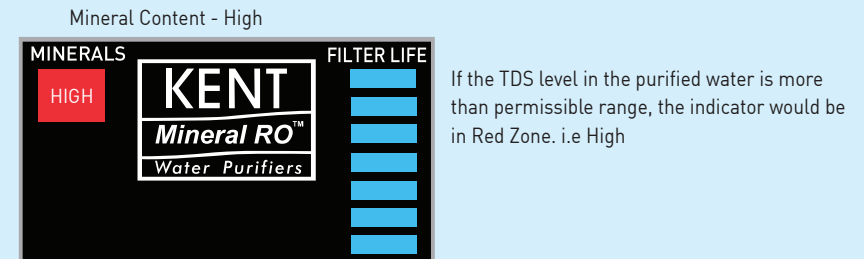
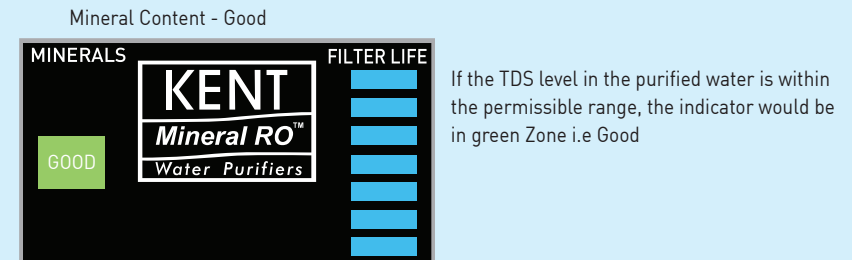
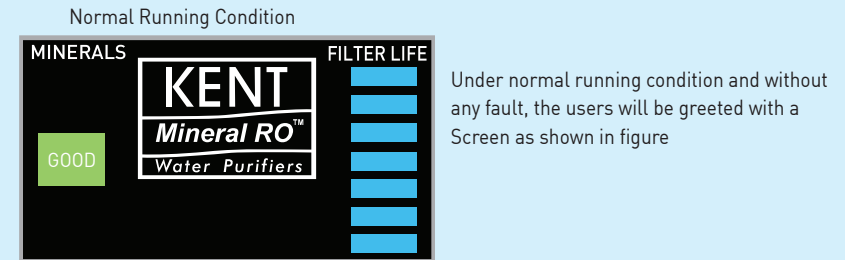
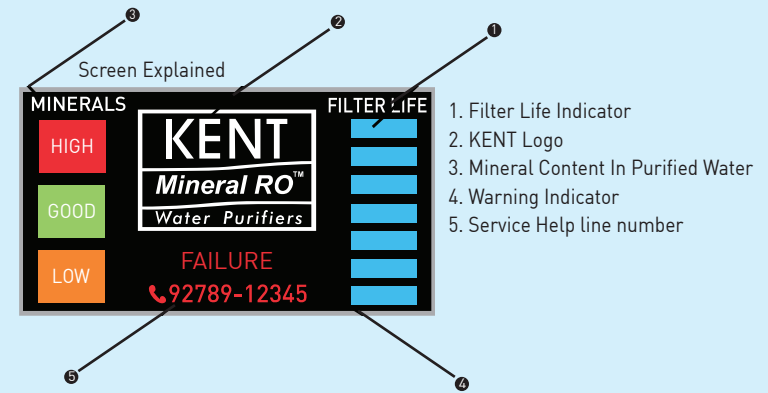
S.NO	SPARE PART CODE	ITEM DESCRIPTION
1	200035	LOW PRESSURE SWITCH
2	200010	SEDIMENT FILTER
3	200028	SOLENOID VALVE
4	200005	BOOSTER PUMP
5	200009	ACTIVATED CARBON FILTER
6	200003	UF FILTER
7	200529	RO MEMBRANE SHF
8	200034	TDS CONTROL VALVE
9	202202	FLOW RESTRICTOR TUBE
10	200541	UV CHAMBER
11	200575	POST CARBON+ALKALINE
12	200058	NON RETURN VALVE
13	200036	HIGH PRESSURE SWITCH
14	200386	HYDROSTATIC STORAGE TANK
15	200183	FAUCET
16	200441	TDS SENSOR
17	201878	POST CARBON+COPPER

Electrical Circuit Diagram



S.NO	SPARE PART CODE	ITEM DESCRIPTION
1	200036	HIGH PRESSURE SWITCH
2	201869	LED DISPLAY
3	200441	TDS SENSOR
4	201870	COMPUTER CONTROL BALLAST
5	200028	SOLENOID VALVE
6	200541	UV CHAMBER
7	200540	UV LAMP
8	200035	LOW PRESSURE SWITCH (LPS)
9	200005	BOOSTER PUMP
10	200059	PUMP HEAD
11	200016	SMPS

Sterling Star Operations



[NOTE: The above specifications are subject to modifications for improvement without notice].

Mineral Content - Low



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

UV tube/ Inlet SV or RO Pump/ Auto Flush SV Fault



Failure and Call Service Icon will be ON Continuously.

UV Fault:

Buzzer will beep continuously @ 50mSec ON, 1.5Sec OFF rate.

Inlet SV or RO Pump Fault:

Buzzer will beep continuously @ 50mSec ON, 1Sec OFF rate.

AF SV Fault:

Buzzer will beep continuously @ 50mSec ON, 0.5Sec OFF rate

No Input Water1



In case of no water input, Kent logo will be Blinking, that means no water input

Filter Replacement Pre Indication



Service call number will be continuous ON. Filter Life last bar will be blinking

Buzzer will beep for 4 times at an interval of 2 Seconds once for 30 seconds. This will repeat in Every 2 Hrs

Call service engineer for help

TDS Sensor Fault



HIGH, GOOD & LOW TDS bands will be blinking Service call number will be continuous ON. No Buzzer Sound for TDS Sensor Fault

End of Filter Life Lock



Service call number will be continuous ON. Filter Life all bars will be blinking

If Product is in standby mode then Buzzer will Turn ON continuous

Call service engineer for help

UV Lamp Open/ Not present



Failure and Call Service Icon will be ON Continuous. Buzzer will beep twice at an interval of 9 Secs for 50 cycles. After 50 cycles buzzer Will go OFF

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 allow any water rejection in absence of electricity / when tank is full
- The purifier does not start when inlet water supply pressure falls below 0.0344 Mpa

Installation Instructions

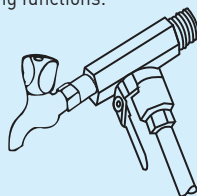
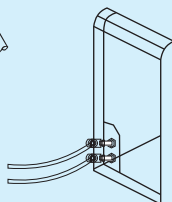
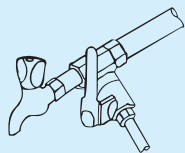
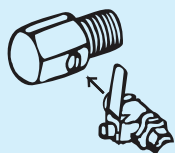
KENT Sterling Star Mineral RO™ Water Purifier is a convenient and User-friendly under-the-counter model.

Recommended Site Preparations:

- Single Phase 100-250 V AC, 50-60 Hz. supply, not more than 3 m away from the point of installation
- Raw water supply with ½ inch nipple not more than 3 m away
- Drain for reject water not more than 3 m away
- Installation space as per the dimensions of the purifier
- For optimum inlet pressure, source water tank should be at Least 10 ft above the installed purifier
- Install the purifier near a sink for easy availability of inlet and reject water lines
- The system and installation need to comply with state and local laws and regulations

Installation Procedure:

- Fix the SS ball valve to the ¼ inch port of the 3-way connector as shown in the figure
- Connect the 3-way connector to the raw water supply as shown in the figure. The threaded end of the 3-way connector is fit in-line with the raw water supply. The other end can be connected to a tap or plugged off, if not required
- Now connect one end of the white pipe 3/8" to the SS ball valve and other end to the lower push-fit elbow fitting on the back side of the purifier labeled as 'Water In'
- Similarly, connect one end of the blue pipe to the fitting connector labeled as 'Reject Water' and leave the other end in the drain
- Install the faucet on the kitchen sink or the slab. Connect one end of the white pipe ¼" to the faucet and the other end to the fitting connector labeled as 'Faucet'
- 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

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

- Turning the screw of the valve anti-clockwise, results in an increased mineral content
- Turning the screw of the valve clockwise, results in a decreased mineral content
- TDS Meter Calibration certificate frequency is yearly.

1. Firstly, remove the protective cap from the TDS
2. Clean the cap and fill it the 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 the 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.

Starting up the Purifier

- Switch on the power supply
- Wait approximately for half an Hour so that the storage tank is full
- Switch off the power supply
- Drain off the storage tank by Opening the faucet to remove any Dust particles from the pipe and Storage tank
- Close the faucet & switch on the Power supply
- The purifier is ready to use

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 300/450

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 Sterling Star Alkaline Copper
Product Code	111139
Product Generic Name	RO Water Purifier
Colour	White
Applications	Suitable for Purification of Brackish/Tap Water Municipal Corporation Water
Weight	12.1 kg
Purification Production Rate	20 L/hr.
Body Material	ABS Food Grade Plastic
Mounting	Under the counter
Dimensions (mm)	455 (L) x 245 (W) x 420 (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
UV Lamp Wattage	11 W
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	6 L
Maximum Duty Cycle	125 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.