



## Instruction Handbook for Installation, Operation and Maintenance.



Sabse Shudh Paani

#### Mineral RO" TECHNOLOGY

Maintains essential minerals while reducing dissolved impurities with double purification

RO + UF + TDS Control

Reverse Osmosis Water Purifier + Ultra Filtration Purification + TDS Controller Mineral RO © 2005 - 2012 KENT RO SYSTEMS LTD, the process & purifier is patented vide patent no. 199716.



Dear Customer

Welcome to the world of KENT, leader 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 Elite-II water purifier will go a long way in serving you with purer and mineral enriched drinking water - thus keeping you and your family healthier. 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 familiarising you with the operation and maintenance of KENT Elite-II Before operating the unit, please read it thoroughly and retain it for future reference. To ensure that the warranty of your water purifier is effective, fill up the enclosed warranty card and send the installation report within 15 days of purchase. Should you need further assistance, do not hesitate to contact your nearest KENT dealer or branch.

**Best Wishes** 

KENT ROSYSTEMS LTD.



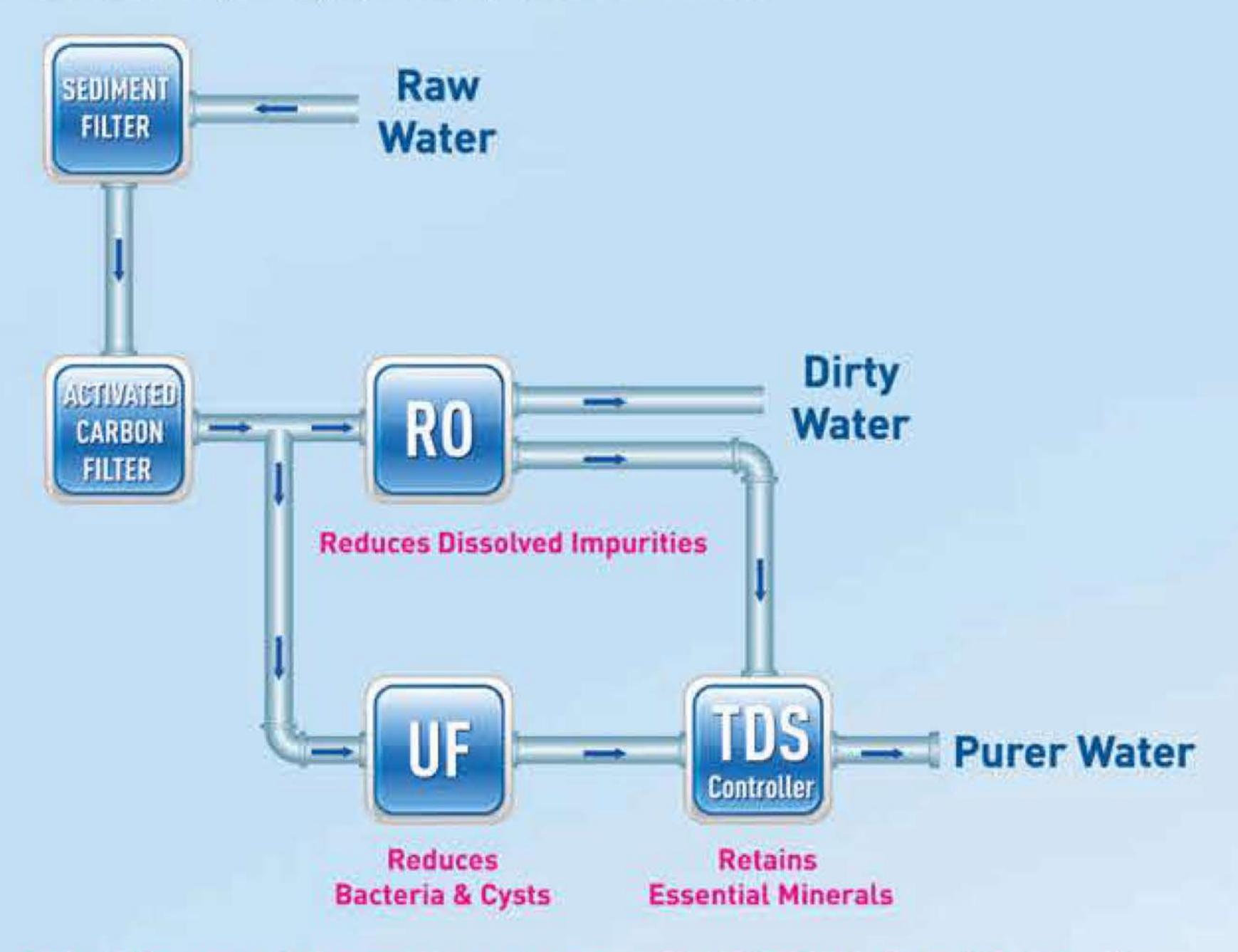
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### KENT Technology - A Breakthrough in Water Purification

Presenting the **KENT Elite-II** Water Purifier; it uses futuristic and state-of-the-art technology to provide purer & healthier drinking water.

The heart of **KENT Elite-II** 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 Elite-II** Water Purifier also allows user to control Total Dissolved Solids (TDS) level of purified water.



#### Salient Features of KENT Elite-II

- Suitable for attachment to water coolers
- Double Purification by RO and UF effectively filters out bacteria, viruses and cysts
- Adjustable TDS Control System facilitates
  TDS adjustment in purified water
- Auto Flushing System to help prevent scaling or fouling of the RO
- Fully automatic operation with auto-on and auto-off facility
- Tamper-proof RO/UF Membrane fused inside membrane housing
- Push-fit components for leak-proof & maintenance-free performance

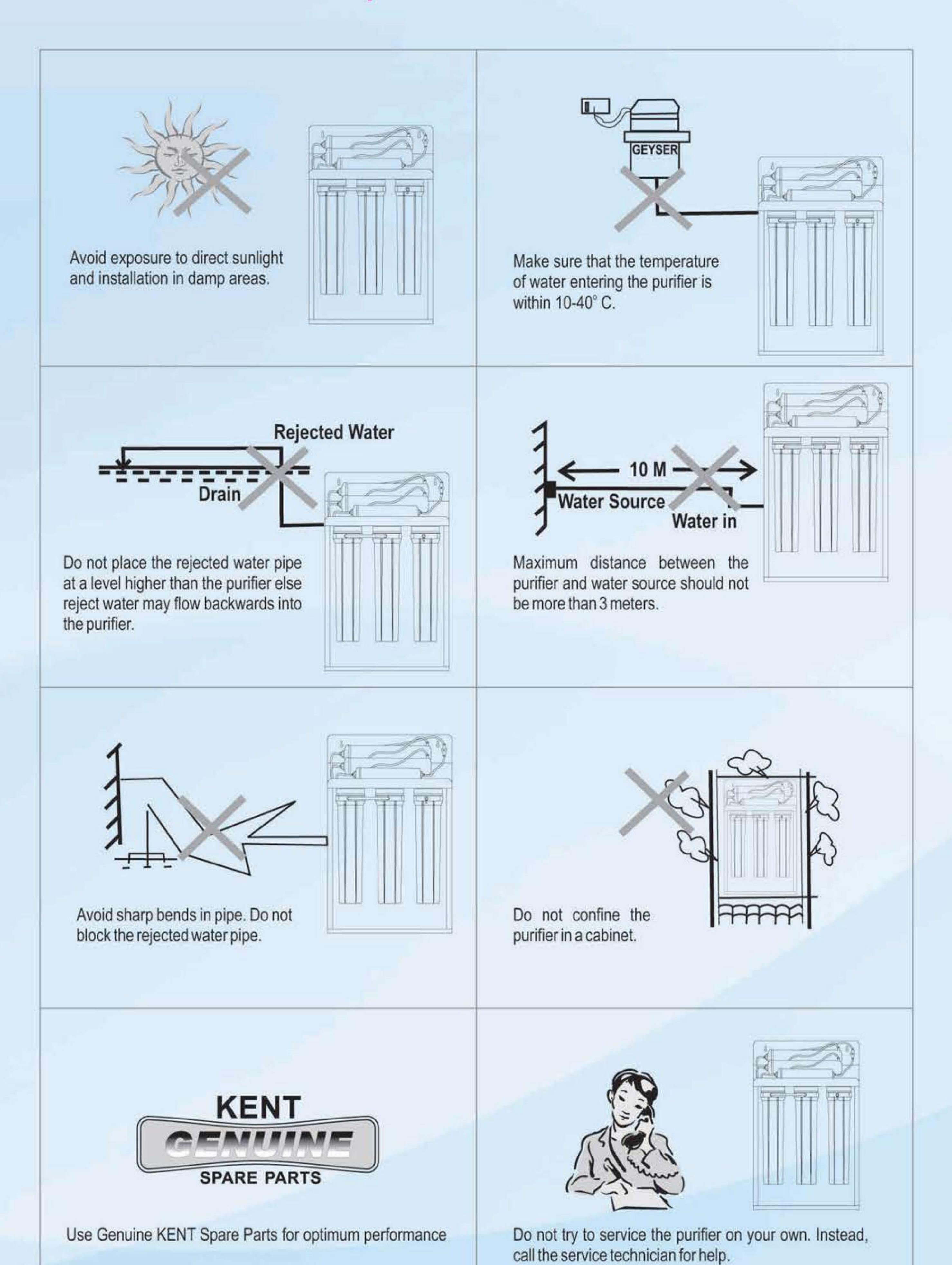
- Vertically mounted SMPS for over voltage protection
- Stainless steel construction for corrosionfree lifespan
- Suitable for purification of Brackish / Tap Water / Municipal Corporation Water
   Supply
- Filter change alarm to indicate filter replacement time
- Super high flow membrane
- High capacity of 80 L/hr.\*

#### Items in the Box

1.	KENT Elite-II Water Purifier	01 No.
2.	S.S. Ball Valve	01 No.
3.	Pipe (White & Blue 1/4 inch)	2.5 meters each
4.	Pipe (White 3/8 inch)	2.5 meters
5.	Cooler fitting	01 No.
6.	Union Connector	01 No.
7.	Instruction Manual	01 No.

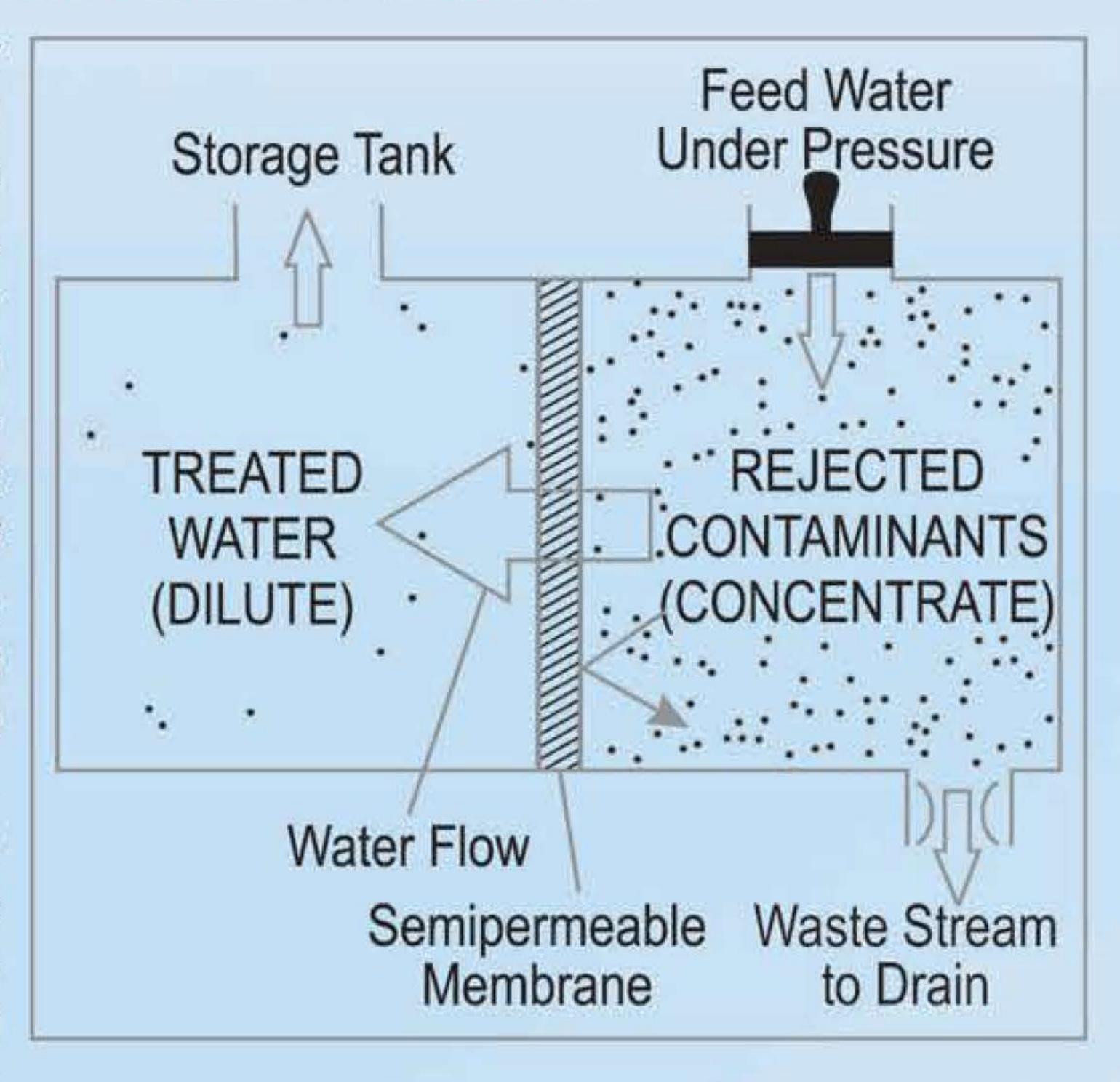
<sup>\*</sup> Treatment capacity tested for tap water having TDS level of 750 ppm at room temperature

#### Important Instructions



#### Reverse Osmosis Process

Reverse Osmosis process, also known as Hyper Filtration, is the finest filtration process known till date. The process ensures reduction of the particles as small as ions from a solution. Reverse Osmosis process uses a semipermeable membrane to reduce dissolved salts from potable / brackish water. In Reverse Osmosis, water pressure is applied to the inlet impure water resulting into the squeezing of purer water from concentrated end of membrane towards the diluted end. Dissolved salts present in water as 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 RO membrane. These rejected impurities suspended on the concentrated end of membrane are washed away in a stream of waste water, preventing the membrane from clogging.



#### **UF Process**

KENT Ultra-Filtration is a separation process that uses UF membrane with pore size of 0.1–0.01 micron. This UF membrane has the capacity to remove colloidal materials including bacteria, cysts and even viruses from drinking water. Low applied pressure is therefore sufficient to achieve high flux rates from an Ultra Filtration membrane.

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

#### Filter Change Alarm\*

KENT Elite-II Mineral RO<sup>™</sup> 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 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.

Acontinuous 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.

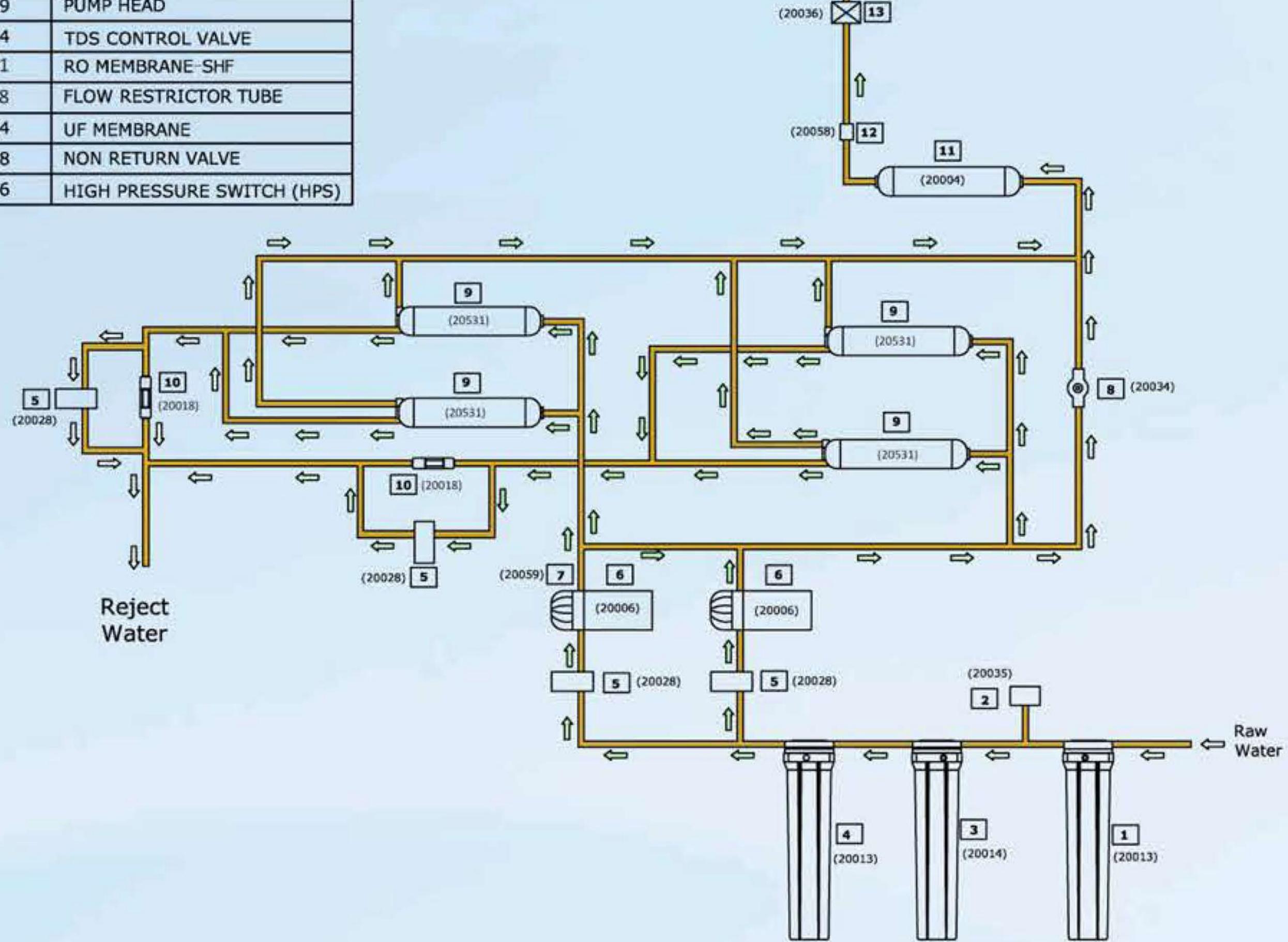
<sup>\*</sup> Tested & Certified by TUV-SUD South Asia (P) Ltd.

#### SPARE PART CODE ITEM DESCRIPTION SEDIMENT FILTER 20013 LOW PRESSURE SWITCH 20035 ACTIVATED CARBON FILTER 20014 SEDIMENT FILTER 20013 20028 SOLENOID VALVE BOOSTER PUMP 20006 6 PUMP HEAD 20059 20034 TDS CONTROL VALVE 20531 RO MEMBRANE-SHF 9 FLOW RESTRICTOR TUBE 20018 10 20004 UF MEMBRANE 12 NON RETURN VALVE 20058 13 20036 HIGH PRESSURE SWITCH (HPS)

#### Water Flow Diagram

RO

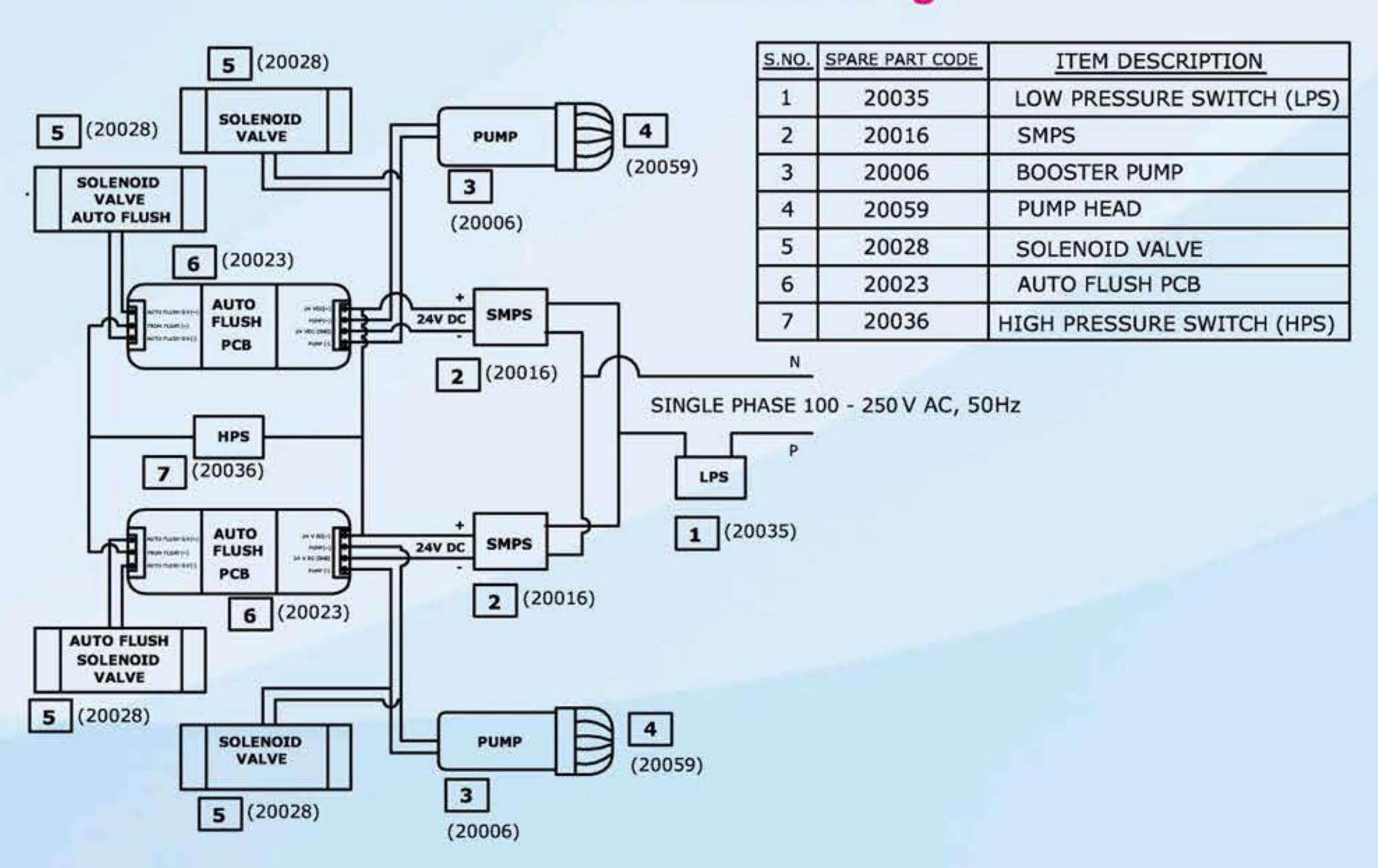
Water



(8)

The above specifications are subject to modification for improvement without notice

#### Electrical Circuit Diagram



# Installation Report

Product: KENI Elite-II	Invoice No.:
	Invoice Date:
Serial No.:	Installation Date:
Customer's Name:	Service Provider's Name:
Customer's Address:	Service Provider's Address:
Customer's Ph.:	Service Provider's Ph.:
TDS of Purified Water:	TDS of Raw Water:
Customer's Signature:	Service Provider's Stamp:

installation report, the customer hereby agrees to the terms & conditions of wa back side of the warranty card.

#### **Automatic Operation**

- The purifier automatically shuts off when the tank is full
- The purifier does not start when inlet water supply pressure falls below 0.3kg/cm²
- The purifier automatically restarts when the water level drops below the maximum level
- The purifier does not allow any water rejection in absence of electricity or when tank is full
- The purifier automatically flushes & cleans the RO membrane on periodic intervals

#### Installation Instructions

KENT Elite-II is designed to facilitate wall mounting as well as counter-top purification. It is easy and convenient to install.

#### Recommended Site Preparations:

- Single Phase 100-250 V AC, 50 Hz connection not more than 3m away from the point of installation of purifier
- Raw water supply with 1/2 inch nipple not more than 3m away
- Drain for reject water not more than 3m away
- Installation space as per the dimensions of the purifier
- For proper installation make sure that the purifier is mounted on a wall surface.
  Avoid installation on wooden and metallic stands
- For optimum inlet pressure, source water tank should be at least 10 ft above the purifier installed
- The system and installation must comply with state and local laws and regulations

#### Installation Procedure:

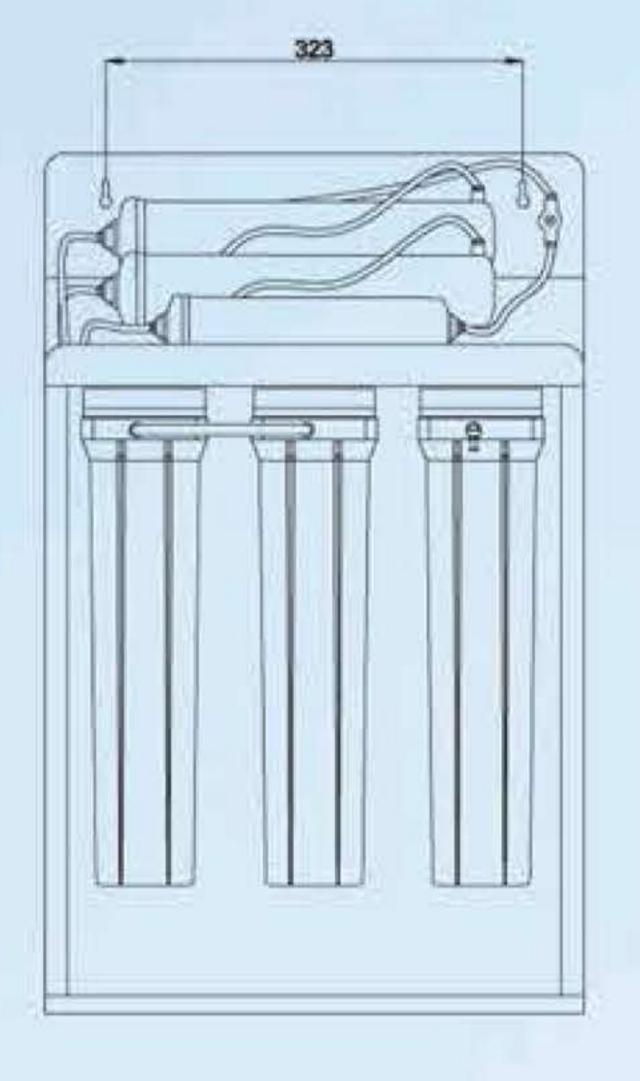
- 1. Fasten the SS ball valve to raw water supply.
- Now connect one end of white pipe to SS ball valve and the other end to lower elbow fitting connector labeled as WATERIN.

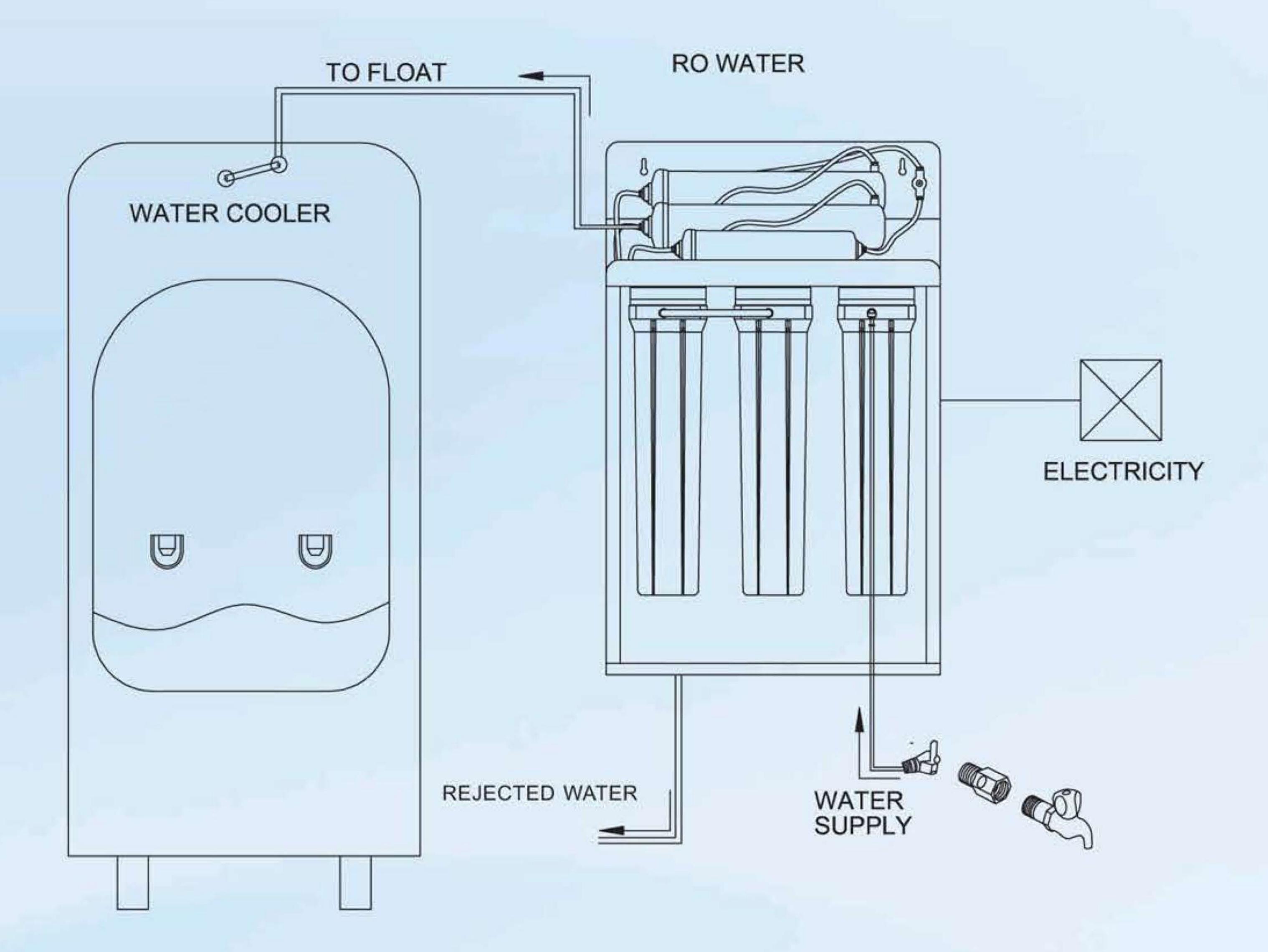
#### Use white pipe for raw water supply

 Connect one end of blue pipe to upper elbow fitting connector labeled as REJECT WATER and lead the other end to drain.

#### Use blue pipe for reject water

- 4. Connect the purified water pipe to water cooler.
- 5. Turn on the lever given on SS ball valve to initiate the water flow to purifier.
- 6. Allow the filters to pre-soak in water for 2-3 minutes.
- 7. Connect the power supply.
- 8. Installation is complete.





When the water cooler's storage tank gets filled up completely the float in the cooler will cut off the RO purified water supply from KENT Elite- II. This will further create a water pressure. In turn the high pressure sensor installed in the machine will cut off the electric supply to the machine. The purification of KENT Elite- II will automatically start again as soon as the water level drops.

#### 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 anticlockwise, results in an increased mineral content.
- Turning the screw of the valve clockwise, results in a decreased mineral content.



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

#### Starting-up the Purifier

- Switch on the power supply
- Allow water to fill to the maximum level
- Switch off the power supply
- Open the faucet and drain water to remove residual dust particles present in
- the pipes and tank
- Close the faucet and switch on the power supply
- Purifier is ready to use

#### 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. This rejected water usually goes down the drain but 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.

#### 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.

- Tank must be drained and cleaned once in every 15 days
- Replace RO membranes once in a year
- Replace the UF Membrane once in a year
- Replace sediment filter, activated carbon filter once in a year or earlier if they are clogged. It is recommended to change FRT along with the filters



Please note that the replacement time of consumables such as filters and membranes is dependent on the quality of raw water and the quantity of water consumed.

Replacement of spare parts are as under:-

-20013	SP Inline Sediment Filter 20"	
-20014	SP Inline Carbon Filter 20"	
-20531	SP ROMembrane-SHF	
-20018	SP FRT550/600	

#### Recommended Frequency for Filters / Membrane Change

For optimum performance we recommend the following frequency for replacement of cartridges:

Sediment/Activated Carbon

→ Once in a year or earlier if it gets clogged

RO/UF Membranes

→ Once in a year or earlier if it gets clogged

#### Technical Specifications

MODEL NAME	KENT ELITE-II
Model No.	11009
Applications	Suitable for Purification of Brackish/Tap Water
	Municipal Corporation Water
Installation	Suitable as attachment to water coolers
Body Material	Stainless Steel
Mounting	Floor Standing
Purification Production Rate	80 L/hr. or 1.66 L/min*
Max Duty Cycle	400 L/day
Filter Cartridge	Sediment, Activated Carbon, UF
Membrane Type	Thin Film Composite RO
UF Membrane	0.1 - 0.01 Micron
Auto Flushing System	Yes
Inlet Water Pressure/Temp (Min)	0.3 kg / cm² or 4.267psi / 10°C or 50°F
Inlet Water Pressure/Temp (Max)	3 kg / cm² or 42.67psi / 40°C or 104°F
Min./Max. Working Pressure	20/150psi
Min./Max. Operating pH	2-11
Booster Pump Voltage	24 V DC
Total Power Consumption	120 W
Input Power Supply	Single Phase 100 - 250 V AC, 50 Hz
Dimensions (mm)	L 445 x W 255 x H 840
Net Weight	25.00 kg















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

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