Technical Specifications

I. RO Plant – 1000 ltrs.


c. **Water softner** – Capacity : 2000 lph, Media : Ion exchange resins ( ion exchange / thermax or equivalent), Regeneration: Automatic, Multiport valve : Timer based with 3 cycle backwash/regeneration sequence, Pressure gauge and settings : 1 set

d. **MEMBRANE ELEMENTS** – Sufficient quantity and arrays to satisfy the output condition of 1000 LPH at 50-75% rejection for the given water quality.

e. **Antiscalent dosing system** : Capacity : 3 lph, MOC : PP, Dosing tank : 50 ltrs, Level switch and fittings – 1 set.

f. **UV Lamp** with SS 304 Housing with quartz reflectors. Flow rate 1000 LPH

II. WATER STORAGE TANK


b. Softened water tank sintex or equivalent, capacity 1000 Litres.


III. PUMP.

a. Raw water pump – 1 HP (1+1) – Crompton / Grundfos or equivalent.

b. Softened water booster pump – 1 HP (1+1) – Crompton / Grundfos or equivalent.

c. SS RO Distribution Pump – 1 HP (1+1) – Crompton / Grundfos or equivalent.

IV. OTHERS

a. Should have 1 Micron pre-filter, 20 inch height and 4” diameter.

b. Should have automatic inlet shut-off valve

c. Should have Permeate and Concentrate flow meters.

d. Should have Digital display of critical parameters through range of sensors.

e. Should have User friendly RO controller and ensure automatic trouble free operations.

f. RO controller should have automatic and manual mode.

g. Should have automated pre treatment for RO.

h. Should have Salt rejection around 96 – 98%.

i. RO recovery range shall be 50-75%
j. Permeate Rate : 1.0(4.5) m³/h (gpm), Concentrate Rate : 1-0.3 (4.5-1.5) m³/h (gpm)
k. Should have P.E flexible tubing used to collect permeate into RO tank.
l. Should have Thermal motor protection.
m. Should have Pre-filter, post filter, primary and final pressure gauges.
n. Should have Flow control centre including concentrate and recycle valves.
o. Should have Auto flush valve in reject line.
p. Should have Low inlet pressure switch before HPP
q. 3 way Solenoid valve in feed before HPP
r. Inlet shutoff solenoid valve in smaller system 250 to 1000lph.
s. Glycerin filled SS pressure gauges at feed / high pressure / reject lines.
t. Panel mounted Rotameter in reject / re-circulate and permeate lines.
u. Ball check valve in recirculation line, Spring check valve in permeate line & Conductivity meter in permeate line & Globe / needle valves in re-circulate and reject lines.
v. Should have 5 micron cartridge filters big blue in feed line.
w. Should have Digital conductivity meter with programmable relay
x. Should have Alarms for Low Inlet pressure & Motor starter overload.
y. Frame shall be made of stainless steel – 304 grade
z. Membrane housing shall be made of stainless steel 304 grade or FRP.
aa. Inlet plumbing shall be Sch 80 PVC.
bb. High pressure plumbing shall be Reinforced rubber hose.
cc. Permeate / concentrate tubing shall be Polyethylen / NSF approved wet parts.
dd. PEX Piping with SS push pull connectors.
ee. Should operate on mains 400-420Vac, 50 Hz three phase power supply.
ff. All wetted parts should be INERT, SS or compatible to Haemodialysis procedure.
 gg. Control enclosures should be NEMA 1 & Motor starters should be NEMA 4 X
hh. The outlet of the RO system must conform to AAMI standards both in terms of chemical contamination and bacterial contamination. The endotoxin limit for the RO water is 1 Eu/ml and the limit of bacterial growth shall be not more than 200 CFU/ml. Copy of Certificate / test report should be produced along with the technical bid
ii. Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.
jj. Should supply Test kit for Checking hardness of water / portable TDS Meter.
kk. Replacement of all necessary filters including 1 micron & 5 micron, Replacement of Sand / Pebbles / Carbon, UV Lamps, Antiscalent chemical, and Acetic acid cleaning whenever requires should be done free of cost during the warranty period and also in the CMC period.
ll. RO Membrane shall be replaced at free of cost during the warranty period whenever required. The replacement charge for RO Membrane replacement during CMC period shall be included separately in price bid form.