



Running Contract Details	
Equipment Name	RO Plant 2000 L
Running Contract Valid Till	02-08-2021
Tender Ref No	KMSCL/EP/T328/284C/2019
Tendered Quantity	30
Supplier Name	M/s COSMOS PURIFICATION SYSTEMS PVT LTD
GST No	33AAFCC8711N1ZH
Installation & Delivery Period	8 Week(s)
Up-time / PM vist	95% & 4 Visits per year
Warranty period	3 Years

Supplier`s Details		
Address	Contact Details	
No.65 Montieth Court 1st Floor Montieth Road Egmore 600008	Contact Person	Adithya Ravindranath
	Phone	4442013093
	Mobile No	9962922811
	Email	adithya@cosmosindia.co.in

Item-wise Price Details				
#	Item Details	Unit Rate (Incl.all taxes & charges)	Service Charges (Through KMSCL)	Grand Total
1	RO Plant 2000 L <i>Model & Make : Cosmo RO/ Cosmos Purification Systems Pvt Ltd</i>	586999.99 Incl.GST :18%	41090	628089.99
		586999.99	41090	628089.99

Annual / Comprehensive Maintenance Charges (Exl.Tax)							
Rate	4 th Year	5 th Year	6 th Year	7 th Year	8 th Year	9 th Year	10 th Year
RO Plant 2000 L							
Labour	6,780.00	6,780.00	6,780.00	6,780.00	6,780.00	6,780.00	6,780.00
Comprehensive	35,593.00	35,593.00	35,593.00	35,593.00	35,593.00	35,593.00	35,593.00

Other terms & conditions

1. The supplier shall execute an agreement with the purchaser as per tender conditions (agreement format is given in the tender document).
2. The supplier shall submit performance security amounting to 5% of the value of the supply order.
3. The labour & comprehensive charges of equipment after the completion of warranty period is finalized by KMSCL as mentioned above.
4. Since discount rate is not applicable for equipment under Running Contract of KMSCL, purchase/supply order can be issued directly to supplier at the given rate with tax & other charges (exclusive of KMSCL service charges).
5. If purchase/supply order is issued directly to the supplier, KMSCL service charge need not be paid. But the copy of the said order may be forwarded to KMSCL for information.

Technical Specification

Equipment :RO Plant 2000 L

I. RO Plant – 2000 ltrs.

- a. Sand Filter – Capacity – 4000 lph, Media – Sand / Pebbles, MOC – FRP / Composite, Backwash : Automatic, Multiport valve : Timer based with 3 cycle backwash sequence, Pressure gauge and fittings – 1 set.
- b. Activa Activa Activa Activated Carbon Filter ted Carbon Filter ted Carbon Filter ted Carbon Filter – Capacity : 4000 lph, Media : Carbon ID 900, MOC : FRP / Composite, Make: Pentair / equal, Backwash : Automatic, Multiport valve : Timer based with 3 cycle backwash sequence, Pressure gauge and settings : 1 set
- 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 NOT NECESSARY
- d. MEMBRANE ELEMENTS – Sufficient quantity and arrays to satisfy the output condition of 2000 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. (appropriate for a RO Plant of 200 LPH)
- f. UV Lamp with SS 304 Housing with quartz reflectors. Flow rate 2000 LPH
- g. The vessel size shall be at least 13” x 54”

II. WATER STORAGE TANK

- a. Raw water storage tank sintex capacity 4000 Litres.
- b. Softened water tank sintex or equivalent, capacity 2000 Litres.
- c. RO Water storage tank should be stainless steel SS304 – 1000 Litres – 2nos

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 : 2000LPH, Concentrate Rate : 2000 – 2200LPH
- 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 supply Test kit for Checking hardness of water / portable TDS Meter.

jj. 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.

kk. 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 in the CAMC rates.