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CXL TITON ELECTRONICS PVT. LTD.

GUPTA ARCADE, PLOT NO. -14, MAYA PURI INDL. AREA PH-II
(OPP. C.N.G. GAS STATION), NEW DELHI - 110064
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WORLD CLASS RO SYSTEMS AND HOME APPLIANCES

AN ISO 9001 : 2008 CO.
GSTIN : 07AADCC7573J1ZC
CIN NO. U74999DL2009PTC193210

Brief Write-up

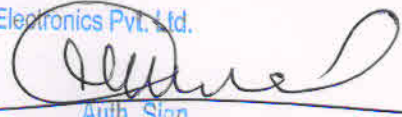
In reference to the NIT NO 36/APMC/ED(C)/2017-2018 and name of work "Supply, Installation, Testing and Commissioning of 06 nos. R.O. System of Capacity 500 LPH each with 09 nos. Chilling units of capacity 3 TR to produce portable treated water for drinking purpose in existing Piao structures including operation at Delhi Agricultural Marketing Board APMC, Azadpur, Delhi", please find below the brief write up of the machine as per the requirement of the tender.

Detailed technical specification of the R.O. System with all other parts and accessories have been enclosed with the technical bid as Detail of general arrangement(GA) layout and hydraulic drawing of plant. Furthermore, we would like to submit the following key highlights of our smart RO System with chilling plant water machine.

S. No.	Particulars	Comment
1	Machine Composition	Plant which consist of a chiller and a R.O. System
2	Chiller	Chiller will have storage capacity of 1000 liters.
2(A)	Chiller	The Capacity of chilling Unit is 3 TR
3	R.O. System Capacity	R.O. System of capacity of 500 LPH parallel to water chiller of the plant.
4	Outer Body	The outer body will be of SS 304 tamper proof material (with lock facility)
5	Electrical Panel	The R.O. System will be fully automatic machine with an electrical panel which will low and high pressure switch.
6	Technical Specification	Data Sheet is enclosed herewith

Should your office require any clarification or have any query, please feel free to contact us.

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CXL TITON®
A WATER SOLUTION CO.

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Quotation For RO 500LPH/HR With Technical Specification

1- PLANT INTRODUCTION:- This Water Treatment Plant is designed to produce product water at the flow rate of **500LPH** based on **R O B O T I C** approach. This System is work continuously for 8-9 Hrs per day leaving aside 0.5 – 1 Hrs for the recommended Backwashing of the Filtration system.

2- RAW WATER ANALYSIS:- We have designed the proposed Water Treatment Plant based on Water Test Report Analysis-

Sr.No.	Parameter	Water Analysis
1	Total Dissolved Solids	2500ppm
2	Turbidity	1 NTU
3	SDI	4
4	Heavy metals	NIL
5	Organics And Bacteria	NIL
6	Oil And Grease	NIL
7	Residual Chlorine	NIL
8	Temperature (°C)	< 40.
9	Color	Color Less
10	Odor	Very less odor
11	Total Hardness	1000 mg/l

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3- END WATER QUALITY:-

Sr.No.	Parameter	Results
1	TDS	<250 ppm
2	pH	7.0 +/- 0.2
3	Turbidity	NIL
4	Color	Color less
5	Hardness	<150 PPM

4- OPERATING CONDITION OF RO PLANT:-

Sr.No.	Parameter	Values
1	Feed Flow Rate.	800-1000ltrs
2	Product Flow Rate	500 ltr.
3	Reject Flow Rate.	300-500 ltr.
4	Recovery	50-70 %

5- TREATMENT PROCESS:-

Sr.No.	Description
1	Raw Water Storage Tank
2	Raw Water Transfer Pump
3	Dual-Media Filter
4	Anti-scalent Dosing System
5	Micron Filter (20 Micron & 5 Micron)
6	High Pressure Pump
7	RO Module(Membrane & Membrane Housing)
8	Flushing /Cleaning System
9	Product (Pure) Water Storage Tank
10	Dosing Chemical

Notes-

1. Feed quality is same as specified in your enquiry. In case of any change in the quality of raw water, the same may have an implication on the operating parameters and End-water quality of the system.
2. Feed limiting condition mentioned in our offer is strictly maintained.

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3. Operation of Water treatment plant is strictly followed in totality as per our operating manual & instructions

6- TECHNICAL DATA SPECIFICATION

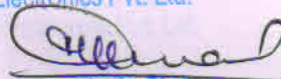
6A- RAW WATER PUMP

Quantity	One Nos.
Make	Kriloskar/Crompton
Power	1 HP
Flow Rate	1200 LPH
Discharge Pressure	1 M ³ /Hr/2.5 kg/cm ²
Purpose	To transfer the raw water at required pressure to pressure sand filter.

6B- PRESSURE SAND FILTER

Quantity	One Nos.
Type	Vertical Pressure Vessel
Size	12" x 48" (D x H)
Vessel Make	Pentair
Vessel M.O.C.	FRP
Filter Media	Quartz Sand, Cores & Chips.
Multi Port Valve	Size 1" Top Mounted
Make	Initiative/Midas
Service Cycle	Whenever pressure drop across unit exceeds 0.8 kg/cm ² .
Backwash Duration	15-20 Mins
Application	To remove total suspended solids dirt, iron. Manganese and reduce silt density index so as to prevent fouling of membrane. Equipped with 1.5" top mounted multi port valve, media and allied fixtures and fittings pipe line of UPVC

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6C- ACTIVATED CARBON FILTER

Quantity	One Nos.
Type	Vertical Pressure Vessel
Size	12" x 48" (D x H)
Vessel Make	Pentair
Vessel M.O.C.	FRP
Filter Media	Activated Carbon
Multi Port Valve	Size 1" Top Mounted
Make	Initiative
Service Cycle	Whenever pressure drop across unit exceeds 0.8 kg/cm ² .
Backwash Duration	10 Minutes
Application	To prevent the water from odour and make it crystal clear

6D- ANTISCALE DOSING SYSTEM

Quantity	One Nos.
Pump Capacity	0-6 LPH
Dosing Pump	Electronic Diaphragm Type
Make	E-dose
Operating Pressure	1.5 kg/cm ²
HDPE Tank	100 Liters
Application	To ensure non-adherence of scale causing salts on the membrane surface by adhering to the crystals of scale causing salts. Not much Change in pH value

6E- MICRON CARTRIDGE FILTER

Quantity	One Nos.
Type	Replaceable Cartridge
MOC of Cartridge	Spun/Thread

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MOC of Housing	P.P.
Micron Rating	5 Microns
Size of Cartridge	4" x 20" (w x l)
Flow Rate	1200lph
Operating Pressure	1.0 m ³ /hr 2.5 kg/cm ²
Frequency of Changes	1 Month or 45 Days.
Application	To protect the high pressure pump & membrane from suspended particles.

6F- HIGH PRESSURE PUMP

Quantity	One Nos.
Type	Vertical, Multistage, Centrifugal
Discharged Pressure	12kg/cm ²
Make/Model	CNP /CRI
Power	1.5 HP/ 1.100 Kw
MOC	S.S.
Type of Drive	1 Phase/50 Hz/220 Volts
Purpose	To transfer pre-treated water from RO Module at required pressure.

6G- RO MEMBRANE

Quantity	Two
Dimension	4" x 40"
Working Pressure	10 Kg/cm ² /180 psi
Element	Thin Film Composite Polyamide Spirally
Make & Model	FILMTECH DOW / CSM

6H- RO MODULE/ HOUSING

Item	RO Module with FRP Pressure tubes & R.O. Membrane
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Type of Membrane	Thin Film Composite Polyamide Spirally Wounded
MOC of Membrane	Polyamide
Operating Pressure	10Kg/cm ²
Make of M/H	ECOLINE
Size of Membrane	4" x 40" (D x L)
Element Capacity	Two 4" x 80
MOC of Membrane Housing	FRP/4" X 40" /Two/ 250 psi (working Pressure)
Application of Membrane	To reduce dissolved salts present in water

6I- CONTROL INSTRUMENT

(I) Rota meter

Quantity	Two Nos.
Type	Glass tube type
Make	MMP/Equivalent
Location	1) RO Product Flow 2) RO Reject Flow

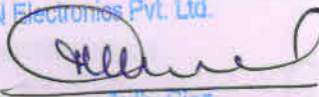
(II) Pressure Gauge (Glycerin Filled)

Quantity	Two Nos.
Type	Back Entry Bourdon Tube Type Online
Range	0- 21 kg/cm ² ,
Make	Waree / Equivalent

(III) Pressure Gauge (Glycerin Filled)

Quantity	Two Nos.
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Type	Bottom Entry Bourdon Tube Type Online
Range	0-7 kg/cm ²
Make	Waree / Equivalent

(IV) Low Pressure Switch (LPS)

Quantity	One Nos.
Make	Indfoss /Danfoss

(V) High Pressure Switch (HPS)

Quantity	One Nos.
Make	Indfoss /Danfoss

(VI) Conductivity Met

Quantity	Two Nos.
Make	Aster
Display	Digital On-line Monitor

(VII) Automatic Control Panel

Quantity	One Nos.
Make	SNG / CXL

7- SCOPE OF SUPPLY

Sr.No.	Component	Quantity
1	Raw Water Pump	One Nos.
2	Pressure Sand Filter	One Nos.

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	<ul style="list-style-type: none"> - FRP Pressure Vessels with Multiport Valve - Initial Charge of Media i.e. Silica Quartz Sans & Chips - Frontal UPVC Pipe-work and necessary valves 	
3	Activated Carbon Filter <ul style="list-style-type: none"> - FRP Pressure Vessels with Multiport Valve - Activated Carbon & Chips - Frontal UPVC Pipe- Work and necessary valves. 	One Nos.
4	Anti scalene Dosing Pump+ Antiscalent dosing chemical+ 100 Ltrs Tank	One Nos.
5	Micron Cartridge Filter [5 μ] with M.C.F. Housing SS304	One Nos.
6	High Pressure Pump with motor.	One Nos.
7	RO Module incorporating RO Membranes RO Pressure tubes RO Skid-SS Interconnecting UPVC pipe-work and fittings	One Lot
8	UV SYSTEM & PH BOOSTER SYSTEM	
9	INSTRUMENTS	
a	Rota Meter	Two Nos.
b	Pressure Gauge	Five Nos.
c	Pressure Switch	Two Nos.
d	Control Panel	One Nos.

8- CHiller system

Chiller Body	S S 304
Storage capacity	1000ltr Tank
Cooling capacity	3 TR
Insulation thickness	40MM
PUF Density	40kg/m3
Booster pump chilled water	1/2 H.P monoblock pump
Cooling gas	R 22
Warranty	For Pumps One Year Plus three free service of Plant.

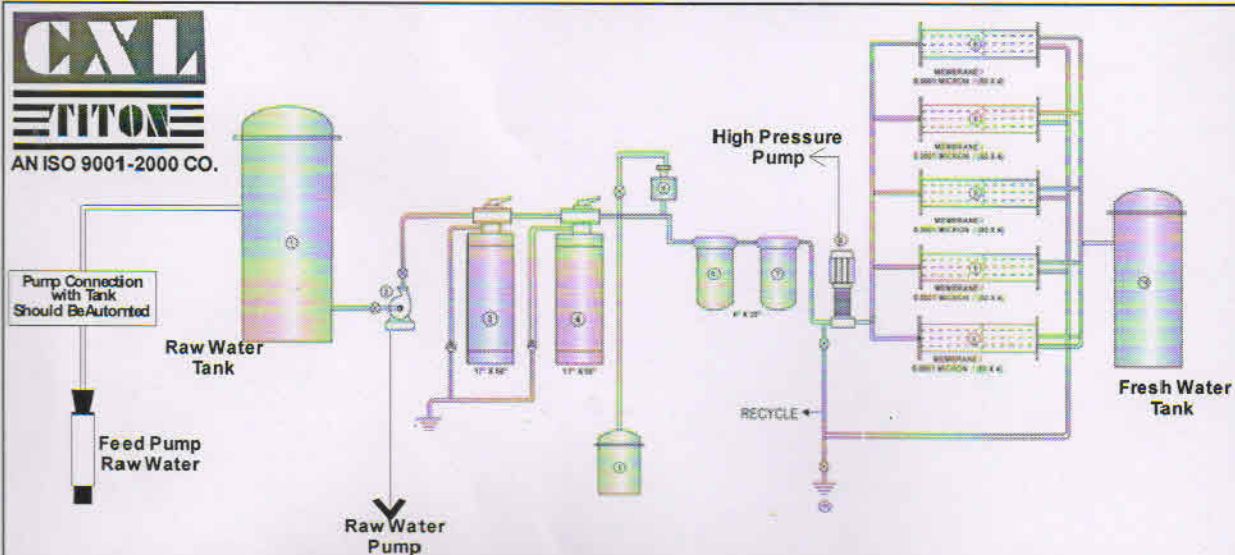
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**Raw/ Fresh Water Tanks required as per capacity of RO System**

- For 100 LPH Ro System Fresh Water Tank 200 liters & Raw water Tank 500 liters (Automatic)
- For 250 LPH Ro System Fresh Water Tank 500 liters & Raw water Tank 1000 liters (Automatic)
- For 500 LPH Ro System Fresh Water Tank 1000 liters & Raw water Tank 2000 liters (Automatic)
- For 1000 LPH Ro System Fresh Water Tank 2000 liters & Raw water Tank 4000 liters (Automatic)
- For 2000 LPH Ro System Fresh Water Tank 4000 liters & Raw water Tank 8000 liters (Automatic)
- For 3000 LPH Ro System Fresh Water Tank 6000 liters & Raw water Tank 12000 liters (Automatic)
- For 4000 LPH Ro System Fresh Water Tank 8000 liters & Raw water Tank 16000 liters (Automatic)
- For 6000 LPH Ro System Fresh Water Tank 12 000 liters & Raw water Tank 24000 liters (Automatic)
- For 10000 LPH Ro System Fresh Water Tank 20000 liters & Raw water Tank 48000 liters (Automatic)

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