



TESCON™
WATER TREATMENT

D.No. 16-709 Plot No. C-15, GVMC Layout
Srikanth Nagar, Anlova, Visakhapatnam - 530 041.
Cell : 9949232731, 9533232731
Email : tesconwatertech@yahoo.com
Website : www.tesconwatertreatment.com

No 18

INSTALLATION / SERVICE BILL

Date 9/12/2023

CUSTOMER ADDRESS	M/S Avanthi Institute Engineering & Technology Tamararam(V) Mahavarapalem(M). Analaipalla Dist
CUSTOMER'S ORDER NO.	OV MAY-583
WORKING TIME	

WORK DESCRIPTION	No. of Days / Units	RATE / DAY	TOTAL
500 CPH R.O. SYSTEM with all accessories	1 set		1,20,000/-
			1,20,000/-

Rupees (one lakh twenty thousand only.)

Handwritten signature

For TESCON WATER TREATMENT

Principal
Avanthi Institute of Engg. & Technology
Tamararam, Mahavarapalem (M)
Visakhapatnam District, Pin-531113

Handwritten signature

Authorised Signatory

THE DETAILED TERMS AND CONDITIONS OF THE CONTRACT:

Our price for the supply of the R.O.Plants models


500 LPH R.O System is Rs.1,45,000(Rupees One Lakhs Forty FiveThousand only)

- F.O.R. : Ex-Our office, H.B. Colony, Visakhapatnam.
Frieght : Extra
Taxes : GST @ 18% Extra
Payment : 80% as advance, 20% against delivery and installation.
Delivery : One Week from the date of receipt of P.O. with advance
Installation Charges :Included (Providing Lodging & Boarding)
Warranty : We shall give warranty of the equipment for a period of 06 months from the date of commissioning of the plant.

Thanking you and assuring you of our best attention and services at all times.
Yours sincerely,
for **TESCON WATER TREATMENT,**


(N.MRANGA)
Proprietor

Fixed for
Rs. 1,20,000/-
including GST.


Principal
Avanhi Institute of Engg. & Technology
Tamaram, Makavarapalem Md
Visakhapatnam District, Pin-531113



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✓ Water & Waste Water Treatment Plants & Chemicals ✓ Water Harvesting Recharge Proj
✓ Pumps ✓ Solar Systems ✓ Security Systems ✓ Electrical Infra Structures

Our Ref: TWT/VSP/199

Date;09/11/2023

TO

Avanthi Institute engineering & Technology
Tamaram Makavarapalem Anakapalli Dist.

Sub: Techno Commercial Proposal for 500 LPH for Reverse Osmosis system
(SS) for Drinking water Usage – Reg.

Dear Sir,

We acknowledge with thanks the receipt of your enquiry for the requirement of Reverse Osmosis System. Based on enquiry, we are pleased to submit our Techno-Commercial Proposal for the same.

OPERATION PHILOSOPHY

At TWT we take utmost care to design any Water Treatment system to give required output at all the times. At each stage of design we are taking minute details into consideration, which can optimize the system.

REVERSE OSMOSIS DESIGN SECTION:

The scheme proposed in this section is as follows:

FEED PUMP → SAND FILTER → CARBON FILTER → ANTISCALANT DOSING →
CARTRIDGE FILTER → HIGH PRESSURE PUMP → RO SKID → POST CARTRIDGE
FILTER → UV SYSTEM .

BASIS OF DESIGN:

The system being proposed by us is designed based on the raw water analysis report (Source : Borewell) – Parameters Assumed.

Total Dissolved Solids: 1500 ppm (Parts Per Million)
Hardness : 400 ppm

TREATED WATER QUALITY:

The TDS of water should be the treated water quality expected in RO as per ISI standards.

TDS	...	Between 30-50 ppm
Hardness	...	Between 20-40 ppm

PROCESS DESCRIPTION

The raw water is fed in the inlet of the sand filter for removing of Suspended Solids and Turbidity from the water.

After Sand filter, Activated Carbon filter is provided to reduce colour, odor, smell & etc., Then anti Scalant Dosing have been provided to prevent the membranes scaling due to Calcium carbonate and Calcium sulphate salts.

Then softened water is passed through the cartridge filter to reduce the SDI below acceptable limits for RO membranes i.e. 4. The cartridge filter also takes care of any foreign particle and prevents it from going to high-pressure pump to prevent the damage of high-pressure pump.

Then water is pumped at high pressure through RO block, wherein, the major quantity of dissolved salts are rejected in the reject stream and almost the pure water or permeate comes as a separate stream.

Then water is fed in to the Post micron filter and then through Ultra Violet System for killing biological contents like Bacteria, Virus, etc. Thus 100% pure water is ready.

SCOPE OF SUPPLY

1.	Feed Pump	..	1 No.
2.	Sand Filter	..	1 No.
3.	Activated Carbon filter	..	1 No.
4.	Anti scalant Dosing System	..	1 No.
5.	Cartridge Filters	..	1 No.
6.	High Pressure Pump	..	1 No.
7.	R.O. Block	..	1 No.
a)	4"Membranes	..	2No.
b)	4" pressure tubes(300psi)	..	1/2 No.
8.	<u>Instrumentation</u>		
	a) Pressure Gauges	..	3 Nos.
	b) Flow Indicators	..	2 Nos.
9.	Interconnecting piping	..	1 Lot.
10.	Elec. control Panel (Stainless Steel)	..	1 No.
11.	UV System	..	1 No.

TECHNICAL SPECIFICATIONS:

FEED PUMP:

Numbers offered	:	<u>500 LPH</u> One
Max. flow	:	2000 Liters per hour
H.P	:	1
Make	:	CRI/Leo/Cnp

SAND FILTER

Numbers Offered	:	One
Dia (mm)	:	325
H.O.S.	:	1254
Material of Construction	:	FRP (Pentair)
Service Flow Rate(ltrs/hr)	:	2000
Media	:	Sand, Pebbles
Accessories	:	Top mounted multiport valve.

CARBON FILTER

Numbers Offered	:	One
Dia (mm)	:	325
H.O.S.	:	1254
Material of Construction	:	FRP(Pentair)
Service Flow Rate(ltrs/hr)	:	2000
Media	:	Activated Cabon
Accessories	:	Top mounted multiport valve.

ANTI SCALENT DOSING:

Numbers offered	:	One
Dosing pump capacity	:	6 lph
Make	:	e-dose/Ftps
Storage tank	:	80 Liters

CATRIDGE FILTER

Numbers Offered	:	One
M o C of housing	:	PP
Cartridge Rating	:	5 Microns
Cartridge Type	:	Polypropylene, Wound
Service Flow (m3/hr)	:	2

HIGH PRESSURE PUMP

Numbers Offered	:	One
Type	:	Multistage centrifugal pump
Service Flow (ltrs/hr)	:	2000
Material of Construction	:	SS
Make	:	CRI/Cnp/Leo
Power	:	Single.

R.O. SYSTEM

No. of Blocks offered	:	One
Product Flow Rate (ltrs/hr)	:	500
Membrane type	:	4
No. of Membranes offered	:	2
Make	:	Rio/polymax/ Suez

PRESSURE TUBES

Nos. Offered	:	1
Material of Construction	:	FRP
Electrical panel board	:	Stainless Steel

Instrumentation:

Pressure gauges	:	3 Nos.
Flow indicators	:	2 Nos.

Post Micron Filter

Numbers Offered	:	One
M O C of housing	:	PP
Cartridge Rating	:	1
Cartridge Type	:	Polypropylene,Wound
Service Flow (m3/hr)	:	1

U.V. System

Numbers Offered	:	One
MOC	:	Stainless Steel
Service Flow	:	500 Liters per Hour
Electrical Panel	:	One

SCHEDULE OF EXCLUSIONS (CUSTOMER SCOPE):

1. All types of Civil Works like foundations, drain Line Provision.
2. The raw water supply at the inlet with raw water feed pump.
3. Electrical supply to our instrument panel Box and earthing provision.
4. Handling and safe storage of the material at site.
5. All consumables and chemicals required during commissioning of the plant.

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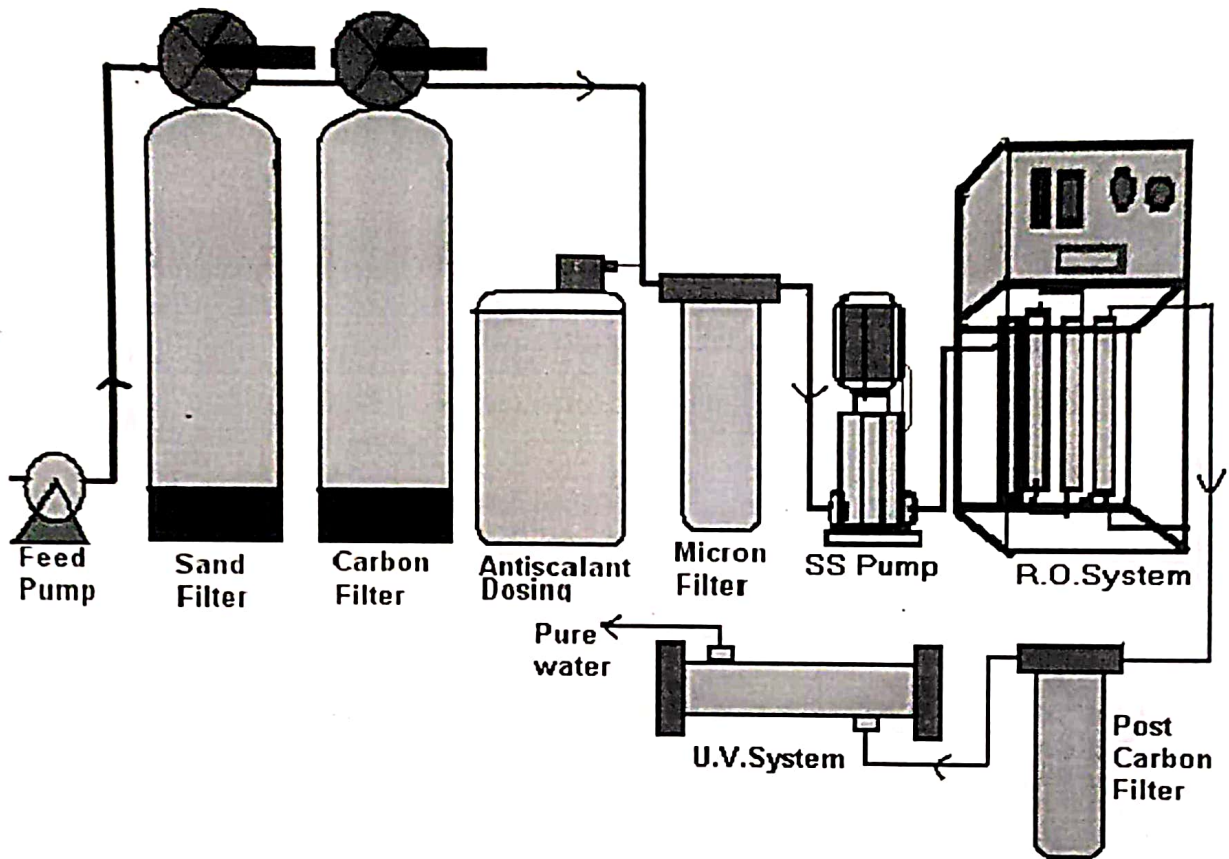
(N.MRANGA)
Proprietor

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SCHEMATIC DIAGRAM OF R.O. PLANT WITH PRE & POST TREATMENT



APPLICATIONS

SAND FILTER: To reduce physical impurities like mud and dirt.

CARBON FILTER: To remove colour, odour, smell, organic matter.

ANTISCALANT: To save the membranes from scaling of Calcium & Magnesium salts.

MICRON FILTER: To reduce suspended solids upto 5 micron.

HIGH PRESSURE PUMP: To feed water with high pressure into membranes.

R.O. SYSTEM: To reduce dissolved solids upto 90% (like Fluoride, Silica, etc.)