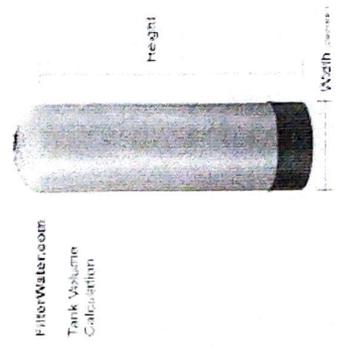
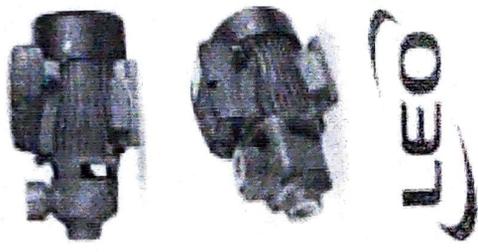


# ANNEXURE-II

## 500LPH RO PLANT -Equipment Technical Specifications

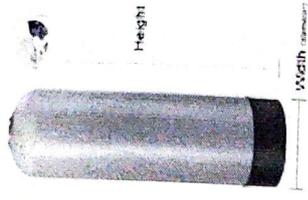
	250 LPH	500 LPH	1000 LPH
<b>Raw water Pump</b>			
Make	LEO/Equivalent	LEO/Equivalent	LEO/Equivalent
MOC	Cast Iron	Cast Iron	Cast Iron
Impeller	Stainless Steel, AISI 304	Stainless Steel, AISI 304	Stainless Steel, AISI 304
Max. Liquid Temp.	80 Degree Cel.	80 degrees cel.	80 degrees cel.
Max. Suction	4 Mtrs.	8 mtrs	8 mtrs
Type	Mono block	Mono block	Mono block
Model	LEO ACM equivalent	LEO ACM 37	LEO ACM 37
Thermal Protector	Built in	Built in	Built in
Protection Class	IPX4	IPX4	IPX4
Discharge	0.5 cum/hr.	1.1 cum/hr	1.1 cum/hr
Head	2.0 kg/cm2.	2.5 kg/cm2.	2.5 kg/cm2.
Motor	0.37 kw 1 Φ	0.37 kw 1 Φ	0.75 kw 1 Φ
Motor Winding	Copper	Copper	Copper
Voltage	200-240 V	200-240 V	200-240 V
frequency	50Hz	50Hz	50Hz
Suction / Delivery	19 mm.	25 mm	25 mm
Quantity	01 No. (1w)	01 No. (1w)	01 No. (1w)
<b>Pressure sand filter</b>			
Make	Alfa	Alfa	Alfa
Type	Down flow	Down flow	Down flow
Model	FD 30	FD 50	FD 50
Diameter	240 mm	300 mm	12 "
Height	1370 mm	1200 mm	48 "
MOC	FRP	FRP	FRP
Capacity	1.0 m3/hr.	1.0 m3/hr	1.0 m3/hr
Filtering media	40 kg 16/32	40 kg 16/32	40 kg 16/32
Type of Media	Graded Pebbles, sand	Graded Pebbles, sand	Graded Pebbles, sand
Valve	20 NB TM MPV F	20 NB TM MPV F	20 NB TM MPV F
Quantity	01 No.	01 No.	01 No.



**Activated carbon filter**

Type	Down flow	Down flow
Model	FC 50	FC 50
Diameter	240 mm	300 mm
Height	1370 mm	1200 mm
MOC	FRP	FRP
Capacity	1.1 m3/hr	1.1 m3/hr
Carbon	20 kg	20 kg
Type of Media	ACG 60 Grade Carbon	ACG 60 Grade Carbon
Media material	Coconut Shells	Coconut Shells
Valve	20 NB TM MPV F	20 NB TM MPV F
Quantity	01 No.	01 No.

FilterWater.com  
Tank Volume  
Calculation



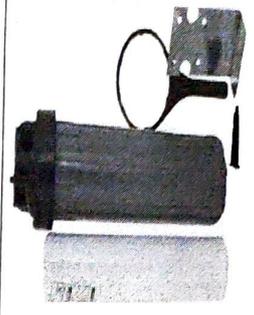
**Fully automatic multi port valve**

Maximum Flow Rate	3m3/Hr @ 0.5 Kg/cm2 Pressure Drop	4m3/Hr @ 0.5 Kg/cm2 Pressure Drop
End Connections	3/4" BSP (F) Flanged connection also available.	1" BSP
Pressure Gauge Sampling Points	1/4" BSP	1/4" BSP (F)
Maximum Operating Pressure	3 Kg/cm2	5 Kg/cm2
Riser Pipe Size (Top mount models only)	32 mm OD PVC Pipe	32 mm OD PVC Pipe
Drain	2" Hose Elbow	2" Hose Elbow
Valve Connection to Vessel (Top Mount Type Only)	2 1/2" NPT(M) or 4" NPT(M)	2 1/2" NPT(M) or 4" NPT(M)



**Micron cartridge filter**

Model	20" Blue	20" Blue
Specifications	5 micron, 20" long	5 micron, 20" long
Diameter	2.5"	4"
Capacity	1.0 m3/hr	1.0 m3/hr
MOC of housing	ABS	ABS
MOC of cartridge	PP Spun	PP Spun
Quantity	01 No.	01 No.



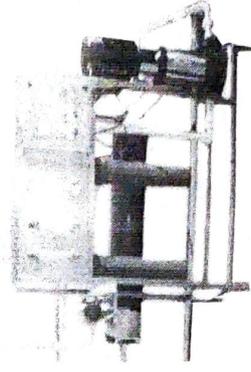
### High Pressure Pump

Make	LEO/Equivalent	LEO/Equivalent
Type	Vertical multistage	Vertical multistage
Model	LEO EVPM 2-9	LEO EVPM 2-9
Discharge	0.6 cum/hr.	1.1 cum/hr
Head	11 kg/cm2.	11 kg/cm2.
Motor	1.5 kw 3 Φ	2.0 kw 1 Φ
Max. Liquid Temp.	80 degrees cel/	80 degrees cel/
Max. Suction	4 mtrs	8 mtrs
Max Discharge	600 mtrs.	1200 mtrs
Max Pressure	8 BAR	12 BAR
Impeller stages	3	6
Motor Winding	Copper	Copper
Thermal Protector	Built in	Built in
Protection Class	IPX4	IPX4
Voltage	200-240 V	200-240 V
frequency	50Hz	50Hz
Suction	19 mm	25 mm
Delivery	19 mm	25 mm
Quantity	01 No. (1w)	01 No. (1w)



### Reverse Osmosis System

Capacity	250 LPH	500 LPH
Module type	Spiral wound	Spiral wound
Membrane specification	TFC Polyamide	TFC Polyamide
Make of membrane	Oltremare/ GE	Oltremare/ GE
No of membrane	1 no	2 nos
No of housing	1 no. (40-250-1)	2 nos. (40-250-1)
Quantity	01 set.	01 set.



### Electrical control panel

Model	GSM based – Real time data transfer to Web, Android App and two mobile phones.	GSM based – Real time data transfer to Web, Android App and two mobile phones.
Type	RO 13 with Conductivity display	RO 13 with Conductivity display

GSM based – Real time data transfer to Web, Android App and two mobile phones.

RO 13 with Conductivity display

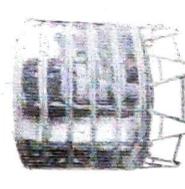
\* Auto Flushing Cycle setting

Make	Wave	Wave	Wave
Quantity	01 No.	01 No.	01 No.
	AC Low and High Voltage protection to prevent pumps damage.	AC Low and High Voltage protection to prevent pumps damage.	AC Low and High Voltage protection to prevent pumps damage.
	Low Pressure & High Pressure Switches.	Float for Raw Water Tank, Dosing Tank & Treated Water Tank given.	Float for Raw Water Tank, Dosing Tank & Treated Water Tank given.
	TDS & Conductivity display on screen.	Low Pressure & High Pressure Switches.	Low Pressure & High Pressure Switches.
		TDS & Conductivity display on screen.	TDS & Conductivity display on screen.
		LED Indications to show the Power ON, Raw water tank, Auto Flush, HPP, TWT, HPS, LPS & RWP	LED Indications to show the Power ON, Raw water tank, Auto Flush, HPP, TWT, HPS, LPS & RWP
		Product design should be as per international safety standards of IEC 60950.	Product design should be as per international safety standards of IEC 60950.
Description	4 line LCD - to show all plant information on the site.	4 line LCD - to show all plant information on the site.	4 line LCD - to show all plant information on the site.
	GSM based – Real time data transfer to Web, Android App and two mobile phones.	GSM based – Real time data transfer to Web, Android App and two mobile phones.	GSM based – Real time data transfer to Web, Android App and two mobile phones.
	Through App and Mobile phone, RO plant can be controlled for all its functions.	Through App and Mobile phone, RO plant can be controlled for all its functions.	Through App and Mobile phone, RO plant can be controlled for all its functions.
	If RO plant shutdown, the fault reason will be communicated through SMS to owner for immediate action.	If RO plant shutdown, the fault reason will be communicated through SMS to owner for immediate action.	If RO plant shutdown, the fault reason will be communicated through SMS to owner for immediate action.
	Two Flow sensors can be connected; it will show the Treated & Reject water flow in the display.	Two Flow sensors can be connected; it will show the Treated & Reject water flow in the display.	Two Flow sensors can be connected; it will show the Treated & Reject water flow in the display.
	Control Panel shows the RO plant total delivered water Qty from starting to till date.	Control Panel shows the RO plant total delivered water Qty from starting to till date.	Control Panel shows the RO plant total delivered water Qty from starting to till date.

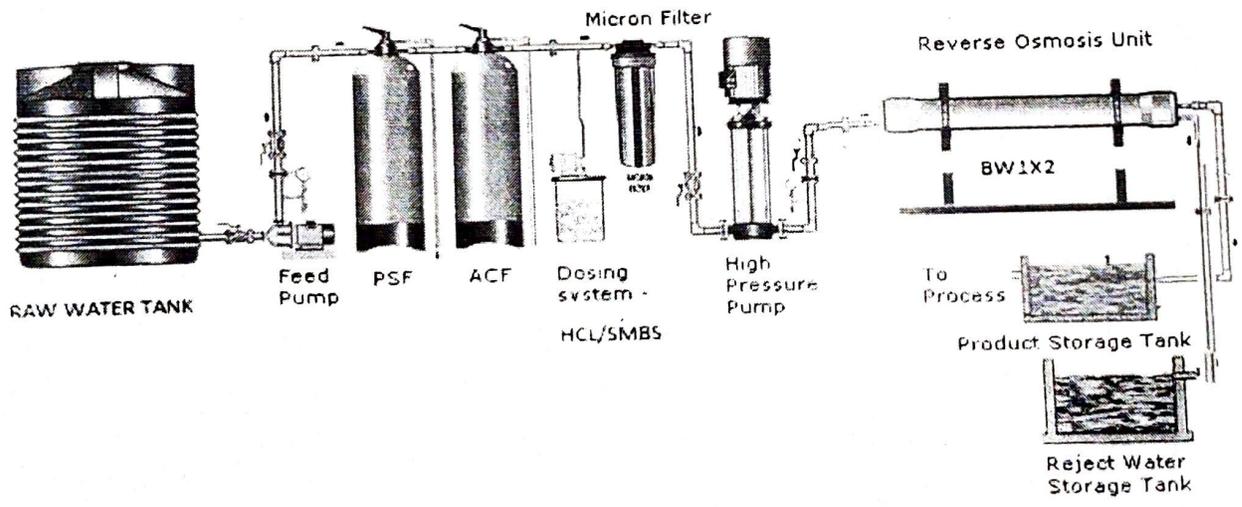
Auto setting of Raw Water & High Pressure Pump current.	All flow sensors automatically calibrate, based on RO plant capacity.	All flow sensors automatically calibrate, based on RO plant capacity.
Manual setting option also available for set the Raw Water & High Pressure Pump current.	Auto setting of Raw Water & High Pressure Pump current.	Auto setting of Raw Water & High Pressure Pump current.
AC Low and High Voltage protection to prevent pumps damage.	Manual setting option also available for set the Raw Water & High Pressure Pump current.	Manual setting option also available for set the Raw Water & High Pressure Pump current.
Auto Flushing / Flush Cycle setting.	AC Low and High Voltage protection to prevent pumps damage.	AC Low and High Voltage protection to prevent pumps damage.
Floaty for Raw Water Tank, Dosing Tank & Treated Water Tank.	Auto Flushing / Flush Cycle setting.	Auto Flushing / Flush Cycle setting.
Low Pressure & High Pressure Switches.	Floaty for Raw Water Tank, Dosing Tank & Treated Water Tank.	Floaty for Raw Water Tank, Dosing Tank & Treated Water Tank.
TDS & Conductivity.	Low Pressure & High Pressure Switches.	Low Pressure & High Pressure Switches.
All type / Mfr's of Auto Multi Port Valves can be connected.	TDS & Conductivity.	TDS & Conductivity.
RO panel provide supply and controls the UV, SV & Dosing Pumps.	All type / Mfr's of Auto Multi Port Valves can be connected.	All type / Mfr's of Auto Multi Port Valves can be connected.
User friendly - Average plant setting time is less than 10 minutes.	RO panel provide supply and controls the UV, SV & Dosing Pumps.	RO panel provide supply and controls the UV, SV & Dosing Pumps.
LED Indications to show the Power ON, Raw water tank, Auto Flush, HPP, TWT, HPS, LPS & RWP.	User friendly - Average plant setting time is less than 10 minutes.	User friendly - Average plant setting time is less than 10 minutes.
Control Panel can be supplied on your brand name.	LED Indications to show the Power ON, Raw water tank, Auto Flush, HPP, TWT, HPS, LPS & RWP.	LED Indications to show the Power ON, Raw water tank, Auto Flush, HPP, TWT, HPS, LPS & RWP.
	Control Panel can be supplied on your brand name.	Control Panel can be supplied on your brand name.
	Password protection to prevent un-authorized changes at plant level.	Password protection to prevent un-authorized changes at plant level.
RO panel having default factory settings option.	RO panel having default factory settings option.	RO panel having default factory settings option.

→ double

	<p>If any electronic PCB's failed in the control panel, still RO Plant runs in Manual mode.</p> <p>Product design followed as per international safety standards of IEC 60950.</p> <p>ISO 9001 certified company with state of the art manufacturing facility.</p>	<p>If any electronic PCB's failed in the control panel, still RO Plant runs in Manual mode.</p> <p>Product design followed as per international safety standards of IEC 60950.</p> <p>ISO 9001 certified company with state of the art manufacturing facility.</p>	<p>If any electronic PCB's failed in the control panel, still RO Plant runs in Manual mode.</p> <p>Product design followed as per international safety standards of IEC 60950.</p> <p>ISO 9001 certified company with state of the art manufacturing facility.</p>
<b>Ultra Violet System Description</b>			
MOC	SS 304	SS 304	SS 304
Flow rate	500 LPH	500 LPH	1000 LPH
Power rating	18W	36W	36W
Power supply	220V	220V	220V
UV Lamp Intensity	18w	18w	36w
Burning Hours	8000	8000	8000
Input water pressure	2kg/cm2	2kg/cm2	2kg/cm2
Lamp make	Phillips or equivalent	Phillips or equivalent	Phillips or equivalent
I/O	12.5mm	12.5mm	12.5mm
<b>Product water tank</b>			
Type	Vertical	Vertical	Vertical
MOC	SS 304	SS 304	SS 304
Capacity	500 liters	1000 liters	1000 liters
Thickness	1mm	1mm	1mm
I/O	25mm	25mm	25mm
Mounting	Stand mounted	Stand mounted	Stand mounted
<b>Raw water tank</b>			
Type	Three Layer	Vertical	Three Layer
MOC	HDPE	HDPE	HDPE
Capacity	500 Litres	1000 liters	2000 Litres
Thickness		Triple layer	25mm
I/O	25 mm	25mm	25mm
Mounting		Flour mounted	



Raw water pump	Sand filter	Carbon filter	Micron filters	High pressure pump	Membrane system
To pump the raw water into the system for	Turbidity including mud, sediment, sand etc can be removed by pressure sand filter.	This filter removes Color of water, Smell and Odor and free chlorine in feed water	for filtering the silt and escaped particles to the size up to 5 microns	This pump buildup high-pressures for filtering the dissolved solids minerals from raw water	The semi-permeable membrane separates pure water from concentrated water

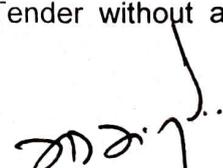


**ANNEXURE - III**  
**TERMS & CONDITIONS**

1. The bidder should submit technical bid, price bid, and AMC bid in separate forms and on each form the bid type should be clearly super scribed. All these three bids should be again put in a single large envelop before mailing it to the office of DWO, Nuapada.
2. The general scope of this tender includes supply and installation of RO Treatment Plant, storage tank, plant internal plumbing, and plant internal electrification.
3. The supplier shall quote price for RO Treatment Plant which shall include cost of RO Treatment Plant with all accessories, plumbing and electrical work from raw water storage tank and RO plant, plumbing work from RO plant to treated water storage tank and installation of the same.
4. Wherever it is inevitable, the window of the room shall be removed to install treated water storage tank and it shall be re-fixed by the bidder and the cost fixed by Office will reimburse to the bidder. The bidder should not quote any charges for this item in the Financial Bid.
5. The financial bids of only those bidders who technically qualify shall be opened on the day of opening the tender. The price bids of those bidders who do not technically qualify will not be opened at all.
6. The tender committee reserves the right to inspect the factory premises to know the output capacity and quality.
7. The bidder has to sign on all pages of the tender document as having accepted all the terms and conditions of the tender. Tenders, which are not signed on all the pages, will be summarily rejected.
8. The rate must be quoted on comprehensive basis (cost inclusive of all duties, cess and taxes including transportation charges to the destination, which covers all over the district of Nuapada strictly in the format given at Annexure II.
9. Any deviation will be considered as breach of contract and will be dealt accordingly.

10. The authority has every right to reject/accept any/all the tender(s) without assigning any reason.
11. The authority reserves the right to decide the quantity based on the availability of funds.
12. Applications received without complete documents/information shall not be considered.
13. The authority has every right to finalize the tender after negotiations with the lowest bidder regarding prices and other conditions.
14. The defective material/work if found shall be replaced/redone by the supplier free of cost.
15. The supplier has to undertake all repairs, replacements and maintenance during the 12 months period of warranty
16. The work in all respects should be completed within 30 days after receiving the Purchase Order.
17. The Reverse Osmosis Water Treatment Units have to be delivered, and commissioned at various locations of the district.
18. A photograph shall be taken at the time of installation and trial run and shall be enclosed to the invoice for arranging payment.
19. The Bidder should avoid over writings and corrections. However if such corrections and over writings become inescapable, these are to be properly and legibly corrected. Offers with correction/ over writing should be properly attested by the Bidder at every correction.
20. Representatives of Bidder desirous to attend the tender opening, can do so, on production of a proper letter of authority from the respective Bidder, failing which they may not be allowed to attend the tender opening. Authorized representatives of those bidders who have submitted the tender documents alone shall be allowed to attend the tender opening.

21. In all cases of dispute, the decision of the tender committee shall be final.
22. Any dispute or any matter arising out of contract or incidental there to under this enquiry shall be subject to jurisdiction of a competent court of law in Nuapada alone and not in any other place.
23. The authority is not responsible for deduction and payment of taxes to Government. It is the responsibility of the supplier to pay whatever taxes or cess to the appropriate head of account.
24. The paper cost should be submitted for the items for which tender is submitted. The cost of tender paper is not refundable.
25. The tender paper in sealed cover must be accompanied by required EMD in favour of the District Welfare Officer, Nuapada in shape of Bank Draft/Banker Cheque payable at SBI, Nuapada, which will be refunded immediately to the unsuccessful Tenderers after finalization of Tender and to the Successful Tenderers after full supply of procurement items.
26. The Tender paper is to be addressed to the District Welfare Officer, Nuapada and on the top of the cover should be super scribed "**Tender paper for supply and installation of RO Based Drinking Water Supply System in ST & SC Development Department Residential Schools of Nuapada District in the State of Odisha**".
27. The successful Bidder will have to deposit Security amount 5% of the total cost of articles, in shape of Bank Draft in favour of **District Welfare Officer, Nuapada, payable at SBI, Nuapada.**
28. If the supplier fails to supply the articles with in stipulated period, the order will stand automatically cancelled and the EMD & security money will be forfeited to Government.
29. The successful bidder should replace any damage materials or if arose any incorrect Specification of RO based drinking water supply system (RO Plant) should replace immediately to concerned H.Ms/H.Mrs.
30. During finalization of Tender by Dist. Purchase Committee to place of supply order to lowest Price quoted unit is not mandatory if, pointed out low quality of the system, the committee shall consider the next rate quoted unit observing quality of the Tender sample items.
31. The authority reserves the right to reject any or all Tender without assigning any reasons thereof.

  
**COLLECTOR & DM,  
NUAPADA**

**TENDER SCHEDULE FOR SUPPLY AND INSTALLATION RO BASED  
DRINKING WATER SUPPLY SYSTEM (RO PLANT) FOR SSD  
RESIDENTIAL SCHOOLS OF NUAPADA DISTRICT FOR THE YEAR,  
2020-21**

Sl.No	Item	Description of Specification	Rate quoted per Unit (inclusive of all Taxes.)
01	RO based drinking water supply system (RO Plant)		

N.B: Rate quoted should be inclusive of all taxes to School Points.

Signature of the supplier/authorized dealer/

Seal

**TENDER SCHEDULE FOR SUPPLY AND INSTALLATION RO BASED  
DRINKING WATER SUPPLY SYSTEM (RO PLANT) FOR SSD  
RESIDENTIAL SCHOOLS OF NUAPADA DISTRICT FOR THE YEAR,  
2020-21**

Sl.No	Item	Description	Rate quoted per Unit (inclusive of all Taxes.)
01	Charges for AMC per RO Plant		

**N.B:** Rate quoted should be inclusive of all taxes to School Points.

Signature of the supplier/authorized dealer/

Seal