Bill of Quantities

Schedule-A

S. No.	Est. Qty	Item	Rate in Rupees	Unit	Amount in Rupees
1	2	3	4	5	6
I(A)	4830 Units	A)Drinking water system for schools with TDS reduction required to 150- 400 ppm from source water having 400-3000 ppm: Type- I Supplying and fixing of Drinking water system with the set Design, Drawing and Specifications, Cost includes loading, Transportation, supply, unloading charges etc., Erection, Commissioning, Testing including TDS range of the Purified water at the school premises, and all incidental charges, including GST etc., all other taxes and charges for complete finished item of work, with a warranty period of 05(five) years and further extendable AMC for a period of 05(five) years on mutually agreed terms and conditions. Tank overall dimensions: 643.8mmx529.4mmx 1612.2mm (including top cover and leg) A] Top water tanks: Raw water tank (40 liters capacity): Clear size: 224.4mmx475mmx420mm Outer size: 226.4 mm x 477.4 mm x 421.2mm Openable top cover with strong Hinge: 228.4mmx479.4mmx50mm Floa: 1 No.(Brass/ SS steel) Inlet:SS nipple of 25 mm dia. Outlet:SS nipple of 12 mm dia. Drain pipe:SS nipple of 12mm dia Tank made up of 1.20mm thick Stainless-steel sheet 304 grade, openable Top Lid with hinge made up of 1.20mm thick SS sheet 304 grade, Make viz.: Jindal / TATA / Vizag	Rs.70,200/-(Rupees Seventy thousand Two Hundred only)	01 (one System)	

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Director.

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Managing Director
APEWIDC, Vijayawada

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(2) Pure water tank (60 liters capacity):

: 336mmx475mmx420mm Clear size Outer size : 338.4 mmx 477.4 mm x

421.2mm mm Openable Top cover with Hinge:

340.4mmx479.4mmx50mm

Float : 1 No.(Brass/ SS steel) Inlet SS nipple of 25 mm dia. SS nipple of 12 mm dia. outlet : SS nipple of 12 mm dia. Drain pipe

Tank made up of 1.20mm thick Stainless-steel sheet 304 grade Openable Top / Upper Lid with strong Hinge and holder made up of 1.20mm thick SS sheet

304 grade

Make viz.: Jindal / TATA / Vizag Steel / Salem SAIL

Note: When the water tanks are running out, the pump should sense and start filling tanks automatically.

(3) Tank Frame:

The overall Tank frame shall be made with stainless steel tube of size 25 mm x 25 mm x 1.6 mm thickness with all verticals and horizontals and also stiffeners at bottom of raw water tank & pure water tank including bottom supporting sheet of 3 mm thick.

Openable Top cover of 01mm thickness with strong hinge: Top dimension size of tank SS 304 grade (643.8 mm x 529.4mmx37mm)

Locking system for Lid: With SS hinges and pad lock for 01mm thick, SS 304 grade top cover of the above water

The entire body except back door made up of 01 mm thick SS 304 grade

Embossing letters on Tank: "Nadu -Nedu2020" Tube made up of Stainless steel 304 grade. Make viz.: Jindal / TATA / Vizag Steel / Salem SAIL.

For InFirmative Aqua Systems Pvt. Ltd.,

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novative Aqua Systems PVL Ltd.,

(B) Sink:

- 4 Nos. of heavy-duty taps connected to stainless steel flexible pipes from pure water tank to foot pedestal and foot pedestal to taps, or better method as approved by the APEWIDC to ensure better water flow pattern.02 nos of taps on front side and 01 tap each on other two sides. There will not be any tap on the back side of tank as shown in figure.
- Sink all three possible sides shall be closed with perforated (05mm dia. holes) stainless steel 304 grade sheet of 1.0 mm thick
- Taps shall be fixed at height of 380mm from bottom
- Sink bottom shall be made with two layers i.e., one shall be fixed and another one is open able for easy maintenance.
- Drainage outlet pipes shall be provided with 25 mm dia. stainless steel 304 grade nipple.

(C) Tank Rear side door:

Back Door shall be provided in single sheet 304 grade sheet of 1.20mm thickness to the full height of tank with required stiffeners, hinges and locking arrangements.

(D) Electrical Input

Electrical input with Lock & Key/Socket and pin type joint or other better mode as approved by the APEWIDC. No wires, pipes shall be allowed to hang on to this unit. A separate electrical cord connecting water tank unit with wall mount electrical board.

(E) Inlet & Outlet Pipes:

Inlet water couple point shall be made to connect from outer source as couple end joint type as to easily removable mode or any other detachable mode, no pipe should be allowed to hang on to the unit and this pipe outlet should reach the unit and have perfect coupling, so that no water leakage can be expected during the raw water tank fill.

Firm For Innovative Aqua Systems Pvt. Ltd.,

Managing Director 27/11/2020.

APEWIDC Vijavawada

(F)Water Treatment unit with membrane filter(pore size 0.001 microns)UV System (with all necessary connections) shall Fitted in a cabin of the unit. Provision to add filters in future as per requirement to reduce the

- UV system with 100 LPH (Make: ALFA / Sukruth / Nexus)
- DC Pump 12 24W

turbidity TDS to make it potable.

- booster pump 100-150 GPD or appropriate rating for TDS membrane filter
- VOLTAGE-24VDC; AMPS-1.4 t0 2.1A;
- OPEN FLOW-2.0 to 2.5LPM;
- WORKING PRESSURE-75 PSI; SUCTION HEIGHT-2M
- TDS Membrane filters(Green Membrane Technology with membrane pore size of 0.001 microns):01(one)number of Membranes are to be used in series.
- 1) 100 gpd size 2112-15 LPH or equal (02)two in number
- Average purified drinking water output of 20-25 liters per hour at TDS of 150 to 400 ppm, based on feed water TDS from 400-2000 ppm and for range having 2000-3000ppm, the Company shall have to utilize suitable alternate Filtration to Bring down the TDS atleast to 500 ppm.
- Micron (Mud) filter-01. (Make: MMP / Pratham/Ionflow/Global absorbent)
- Socket 01 No.
- Battery-12V-7ah [two(02) in number with all CHARGEBLE ACEESSORIES | or optimum rating...
- Dual Medial Filter(Activated Carbon Filter) (Make: ACG / Aqua)
- One TDS meter.
- The entire tank should be covered with stainless steel sheet of 1.0 mm thick of 304 grade, all-round 03 sides of tank unit including off-sets etc., and the Back door shall be made up of 1.20mm thick SS 304 grade complete with

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		steel sheets shall be of approved brands viz., Jindal / Salem SAIL. (H) 4 Nos. of 150mm height legs should be provided. (I) The dimensions shown are indicative, however the tolerance limits are ±05% for all dimensions mentioned in figure. (J) Pedal push heavy duty taps as shown in figure shall be provided. (I) The above design is tested through third party fabricator; the intended bidder should understand, prepare a PROTO type, successfully Test for results and participate to ensure above quality parameters. (m) All the pipes used are SS 304 Except the Drain pipe from dispenser, which can be UPVC of 40mm dia. n) COMPRESSIVE WARRANTY: of the entire water purifying system that includes maintenance, repair or replacement of Micron filter and activated Corban filter on Certain Designed/Defined periodicals, even if they are functioning and to replace or repair the UV, Battery, Pumps and Adopters etc. as and when they are not working during the period of five years warranty period and after completion of 05(five) years warranty period, the company have to execute an extendable AMC for a further period of (05) five years on mutual Agreed Terms and Conditions. Further it is appropriate to use battery management system for getting optimum peak power, if possible.			
I(B)	2070 units	<u>water TDS below 400 ppm : Type- I</u> Supplying and fixing of Drinking water system with the set Design, Drawing and Specifications, Cost includes loading, Transportation, supply, unloading charges etc., Erection, Commissioning, Testing including TDS range of the Purified water at the school premises, and all incidental charges, including GST etc., all other taxes and charges for complete	Rs.68,400/-(Rupees Sixty Eight thousand Four Hundred Only)	0	

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Director.

Managing Director APEWIDC, Vijayawada 27/11/2020

finished item of work, with a warranty period of 05 (five) years and further extendable AMC for a period of 05(five) years on mutually agreed terms and conditions.

Tank overall dimensions: 643.8mmx529.4mmx 1612.2mm (including top cover and leg)

A] Top water tanks:

1) Raw water tank (40 liters capacity):

Clear size: 224mmx475mmx420mm

Outer size : 226.4 mm x 477.4 mm x 421.2mm

Openable top cover with strong Hinge: 228.4mmx479.4mmx50mm

Float : 1 No.(Brass/ SS steel)
Inlet : SS nipple of 25 mm dia.
outlet : SS nipple of 12 mm dia.
Drain pipe: SS nipple of 12 mm dia

Tank made up of 1.20mm thick Stainless-steel sheet 304 grade, openable Top Lid with hinge made up of 1.20mm thick SS sheet 304 grade, Make viz. : Jindal / TATA / Vizag Steel / Salem SAIL.

(2) Pure water tank (60 liters capacity):

Clear size : 336mmx475mmx420mm

Outer size : 338.4 mmx 477.4 mm x 421.2mm

Openable Top cover with Hinge: 340.4mmx479.4mmx50mm

Float : 1 No.(Brass/ SS steel)
Inlet : SS nipple of 25 mm dia.
outlet : SS nipple of 12 mm dia.
Drain pipe : SS nipple of 12 mm dia.

Drain pipe : SS nipple of 12 mm dia. Tank made up of 1.20mm thick Stainless-steel sheet 304

grade

Openable Top / Upper Lid with strong Hinge and holder made up of 1.20mm thick SS sheet 304 grade

Make viz.: Jindal / TATA / Vizag Steel / Salem SAIL **Note:** When the water tanks are running out, the pump should sense and start filling tanks automatically.

(3) Tank Frame:

The overall Tank frame shall be made with stainless steel tube of size 25 mm x 25 mm x 1.6 mm thickness

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Director.

with all verticals and horizontals and also stiffeners at bottom of raw water tank & pure water tank including bottom supporting sheet of 3 mm thick.

Openable Top cover of 01mm thickness with strong hinge :Top dimension size of tank SS 304 grade (643.8 mm x 529.4mmx37mm)

Locking system for Lid: With SS hinges and pad lock for 01mm thick, SS 304 grade top cover of the above water tank

The entire body except back door made up of 01 mm thick SS 304 grade

- Embossing letters on Tank: "Nadu -Nedu2020"
- Tube made up of Stainless steel 304 grade.
- Make viz. : Jindal / TATA / Vizag Steel / Salem SAIL.

(B) Sink:

- 4 Nos. of heavy-duty taps connected to stainless steel flexible pipes from pure water tank to foot pedestal and foot pedestal to taps, or better method as approved by the APEWIDC to ensure better water flow pattern. 02 nos of taps on front side and 01 tap each on other two sides. There will not be any tap on the back side of tank as shown in figure.
- Sink all three possible sides shall be closed with perforated (05mm dia. holes) stainless steel 304 grade sheet of 1.0 mm thick
- Taps shall be fixed at height of 380mm from bottom sink.
- Sink bottom shall be made with two layers i.e., one shall be fixed and another one is open able for easy maintenance.
- Drainage outlet pipes shall be provided with 25 mm dia. stainless steel 304 grade nipple.

c)Tank Rear side door:

Back Door shall be provided in single sheet 304 grade sheet of 1.20mm thickness to the full height of tank with required stiffeners, hinges and locking arrangements.

For Innovative Aqua Systems Pvt. Ltd.,

Managing Director

APEWIDC, Vijayawada

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(D) Electrical Input

Electrical input with Lock & Key/Socket and pin type joint or other better mode as approved by the APEWIDC. No wires, pipes shall be allowed to hang on to this unit. A separate electrical cord connecting water tank unit with wall mount electrical board.

(E) Inlet & Outlet Pipes:

Inlet water couple point shall be made to connect from outer source as couple end joint type as to easily removable mode or any other detachable mode, no pipe should be allowed to hang on to the unit and this pipe outlet should reach the unit and have perfect coupling, so that no water leakage

can be expected during the raw water tank fill.

- (F) Water Treatment unit with UV System (with all necessary connections) shall Fitted in a cabin of the unit. Provision to add filters in future as per requirement to reduce the turbidity TDS to make it potable.
- UV system with 100 LPH (Make: ALFA / Sukruth / Nexus)
- **Dual Media Filter**
- (Mud) Micron filter-01. (Make: MMP / Pratham Ionflow/Global absorbent)
- DC Pump 12 24W
- booster pump 0.5 hp
- Socket 01 No.
- Battery-12V-7ah [one(01)- in number with
- CHARGEBLE ACEESSORIES loptimum rating. all
- One TDS meter.
- The entire tank should be covered with stainless steel sheet of 1.0 mm thick of 304 grade, all-round 03 sides of tank unit including off-sets etc., and the Back door shall be made up of 1.20mm thick SS 304 grade complete with stiffeners of 12mm x 12mm x 1.5mm thickness. Top and Back panel shall be openable with locking system. Stainless steel sheets shall be of approved brands viz., Jindal / Salem SAIL.

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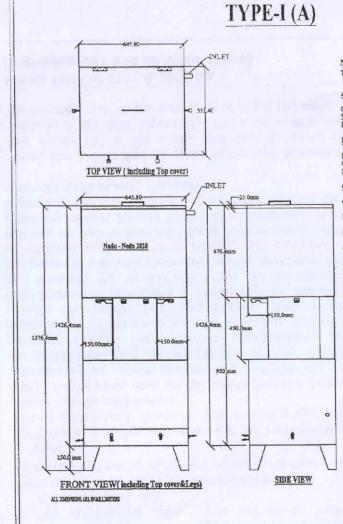
Firmer Innovative Aqua Systems Pvt. Ltd.,

(I) Pedal push heavy duty taps as shown in figure shall be provided. (I) The above design is tested; but the intended bidder should understand, fabricate, test and participate to ensure above quality parameters. (m) All the pipes used are SS 304 Except the Drain pipe from dispenser, which can be UPVC of 40mm dia. n) COMPRESSIVE WARRANTY: of the entire water purifying system that includes maintenance, repair or replacement of Micron filter and activated Corban filter on Certain Designed/Defined periodicals, even if they are functioning and to replace or repair the UV, Battery, Pumps and Adopters etc. as and when they are not working during the period of five years warranty period and after completion of 05(five) years warranty period, the company have to execute an extendable AMC for a further period of (05) five years on mutual Agreed Terms and Conditions. Further it is appropriate to use battery management system for getting optimum peak power, if possible. Note: the bidder has to quote lump sum amount for both the above (A) & (B) units, and also to quote rates for each(A) & (B) units separately. The lump sum amount shall be exactly equal to the sum total of (A) & (B) units		Grand Total of 1(A) & 1(B) Rs. (Including GST and all other Taxes)	48,06,54,000/
provided. (I) The above design is tested; but the intended bidder should understand, fabricate, test and participate to ensure above quality parameters. (m) All the pipes used are SS 304 Except the Drain pipe from dispenser, which can be UPVC of 40mm dia. n) COMPRESSIVE WARRANTY: of the entire water purifying system that includes maintenance, repair or replacement of Micron filter and activated Corban filter on Certain Designed/Defined periodicals, even if they are functioning and to replace or repair the UV, Battery, Pumps and Adopters etc. as and when they are not working during the period of five years warranty period and after completion of 05(five) years warranty period, the company have to execute an extendable AMC for a further period of (05) five years on mutual Agreed Terms and Conditions. Further it is appropriate to use battery management system for getting		optimum peak power, if possible. Note: the bidder has to quote lump sum amount for both the above (A) & (B) units, and also to quote rates for each(A) & (B) units separately. The lump sum amount shall	
provided. (I) The above design is tested; but the intended bidder should understand, fabricate, test and participate to ensure above quality parameters. (m) All the pipes used are SS 304 Except the Drain pipe from dispenser, which can be UPVC of 40mm dia. n) COMPRESSIVE WARRANTY: of the entire water purifying system that includes maintenance, repair or replacement of Micron filter and activated Corban filter on Certain Designed/Defined periodicals, even if they are		and Adopters etc. as and when they are not working during the period of five years warranty period and after completion of 05(five) years warranty period, the company have to execute an extendable AMC for a further period of (05) five years on mutual Agreed Terms and Conditions. Further it is appropriate to use battery management system for getting	
provided. (I) The above design is tested; but the intended bidder should understand, fabricate, test and participate to ensure above quality parameters. (m) All the pipes used are SS 304 Except the Drain pipe from dispenser, which can be UPVC of 40mm dia.	要	purifying system that includes maintenance, repair or replacement of Micron filter and activated Corban filter on Certain Designed/Defined periodicals, even if they are	
provided. (I) The above design is tested; but the intended bidder should understand, fabricate, test and participate to ensure above quality parameters.	6	from dispenser , which can be UPVC of 40mm dia.	
	19	should understand, fabricate, test and participate to ensure above quality parameters.	
	43.	(J) Pedal push heavy duty taps as shown in figure shall be provided.	
(H) 4 Nos. of 150mm height legs should be provided. (I) The dimensions shown are indicative, however the tolerance limits are ±05% for all dimensions mentioned in figure.		(I) The dimensions shown are indicative, however the tolerance limits are	

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For Innovative Aqua Systems Pvt. Ltd.,

Managing Director 27/11/2020. APEWIDC, Vijayawada



Final Assembly-Fig.1

Tank Overall Dimensions: 645.80mm Width X 531.40mm Depth X 1576.4mm Height with Leg & Top cover.

A - Top Cover :

Grade SS304, Thickness 1.0mm. SS Hinges Required Pad Lock Required

B - Back Door :

Back door shall be provided in single sheet full height of tank with required stiffeners. Dorade SS304, Thickness 1.20mm.

SS Hinges and locking arrangement required.

C - Top & Bottom and Middle Closing Cover:

Grade SS304, Thickness 1.0mm.

Embossing Letters required on Top Closing Cover.

D - Sink

4 No's of Heavy Duty Taps.

Perforated Sheet Grade SS304, Thickness 1.0mm. Perforated Sheet @ 5mm Bok Raquired

Taps Shall be fixed at beight of 380mm from perforated to Tap center. Sink bottom shall be made two layers.

Drayage outlet pipe shall be provided with 9 25m Pipe Crafe \$83%.

Pure Water Tank: 60 Liters Capacity

Clear Size: 336mm x 475mm x 420mm Grade SS304, Thickness 1.20mm. Top Cover Required. Float Wall Required, (Grade SS/Brass) Inlet: SS Nipple Ø 25 mm Om let: SS Nipple Ø 12 mm Drain Pipe: SS Nipple Ø 12 mm

Raw Water Tank: 40 Liters Capacity

Clear Size: 224mm x 475mm x 420mm Grade SS304, Thickness 1.20mm. Grade SSSO4, Thekhess 120mm.
Top Cover Required.
Float Wall Required. (Grade SS/Brass)
Inlet: SS Nipple Ø 25 mm
Out let: SS Nipple Ø 12 mm
Drain Pipe: SS Nipple Ø 12 mm

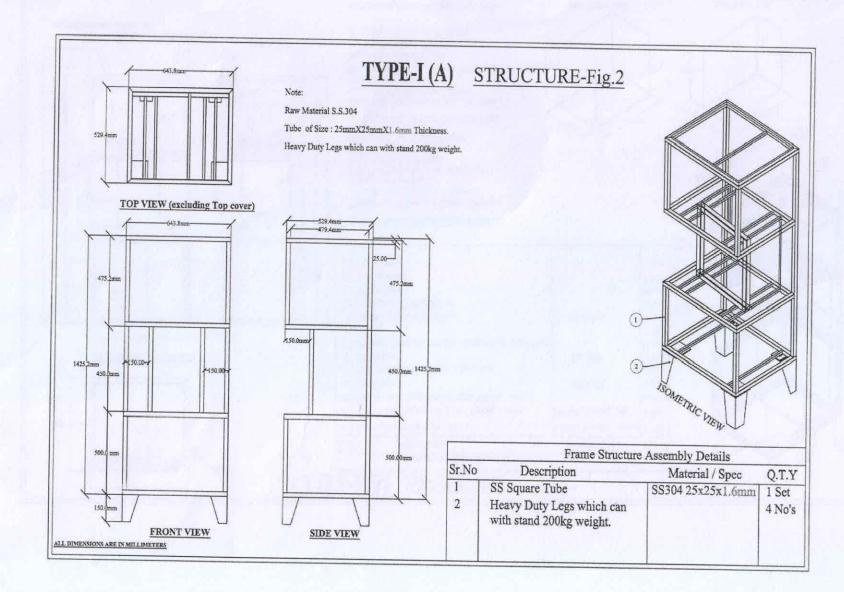
Embossing Letter Required : Nadu - Nedu 2020

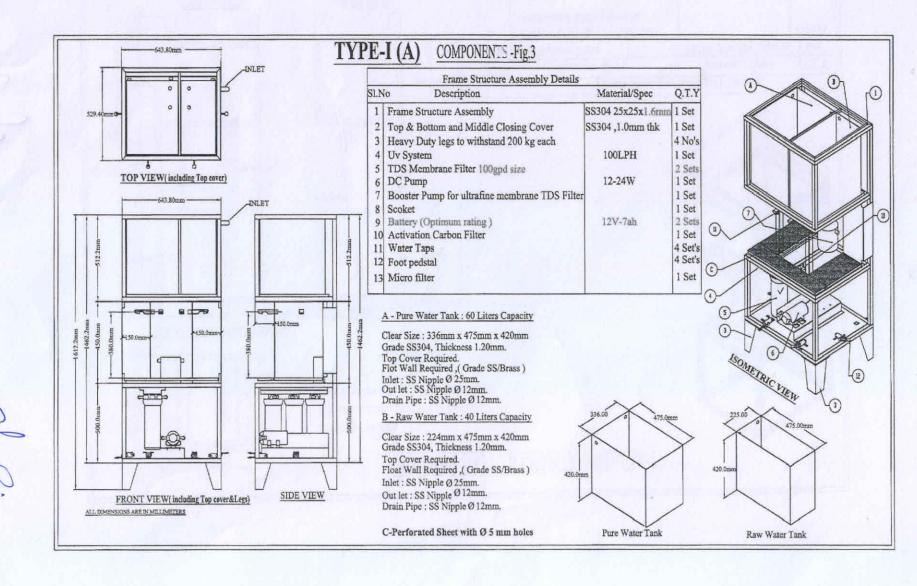
Sr.1	Frame Structure Assembly Details No Description	Material/Spec	Q.T.Y
1	Frame Structure Assembly	SS304 25x25x3mm	1 Set
2	Top & Bottom and Middle Closing Cover	SS304 ,1.0mm thk	1 Set
3	Heavy Duty legs to withstand 200 kg each		4 No's
4	Uv System	100LPH	1 Set
5	TDS Membrane Filter & Micron Filter		1 Set
6	DC Pump	12-24W	1 Set
7	Booster Pump for ultrafine membrane TDS Filter		1 Set
8	Scoket	The same of the sa	1 Set
9	Battery	12V-7ah	1 Set
10	Activation Carbon		1 Set
11	Water Taps		4 Set
12	Foot pedstal		4 Set

Handle

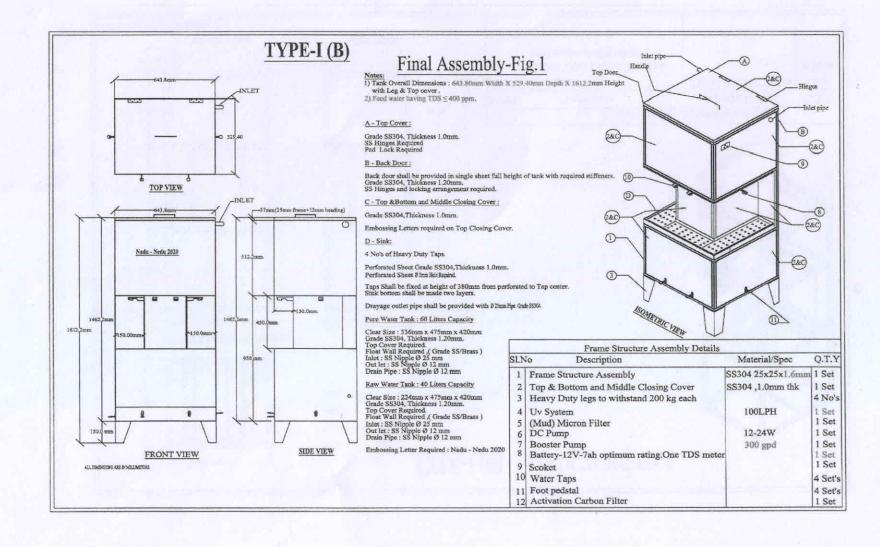
Top Door

_Hinges





Managing Director APEWIDC Vijayawada

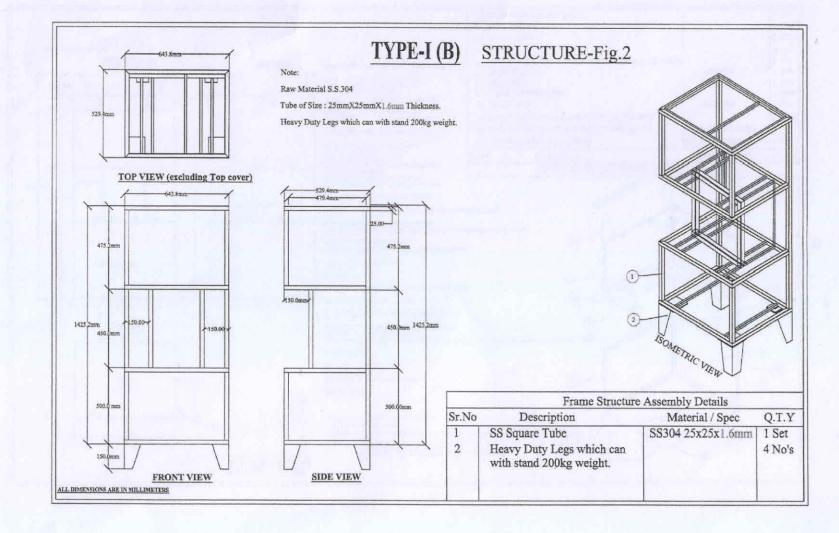


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For Innovative Aqua Systems Pvt. Ltd.,

Director.

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For Innovative Aqua Systems Pvt. Ltd.,

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TYPE-I (B) COMPONENTS -Fig.3 Frame Structure Assembly Details Material/Spec Q.T.Y Sl.No Description SS304 25x25x1.6m n I Set 1 Frame Structure Assembly SS304,1.0mm thk 1 Set 2 Top & Bottom and Middle Closing Cover -643.80mm 4 No's 3 Heavy Duty legs to withstand 200 kg each 100LPH 1 Set 4 Uv System 1 Set 5 (Mud) Micron Filter 1 Set 12-24W 6 DC Pump 529,40m 1 Set 7 Booster Pump 300 gpd 8 Battery-12V-7ah optimum rating. One TDS meter 1 Set 1 Set 9 Scoket 4 Set's 10 Water Taps TOP VIEW (including Top cover) 11 Foot pedstal 4 Set's 12 Activation Carbon Filter Set A - Pure Water Tank: 60 Liters Capacity Clear Size: 336mm x 475mm x 420mm Grade SS304, Thickness 1.20mm. Top Cover Required.
Flot Wall Required (Grade SS/Brass)
Inlet: SS Nipple Ø 25mm.
Out let: SS Nipple Ø 12mm.
Drain Pipe: SS Nipple Ø 12mm. -150.0mm B - Raw Water Tank: 40 Liters Capacity 1612.2m Clear Size: 224mm x 475mm x 420mm Grade SS304, Thickness 1.20mm. Top Cover Required. Float Wall Required ,(Grade SS/Brass) Inlet: SS Nipple Ø 25mm. Out let: SS Nipple Ø 12mm. Drain Pipe: SS Nipple Ø 12mm. C-Perforated Sheet with Ø 5 mm holes 420.0tm SIDE VIEW FRONT VIEW(including Top cover&Legs) Pure Water Tank Raw Water Tank ALL DIMENSIONS ARE IN MILLIMETERS