

Cleaning Equipment and Supplies ,UNSPSC CODE:-47										
Water and wastewater treatment supply and disposal ,UNSPSC CODE:-4710										
Water treatment and supply equipment ,UNSPSC CODE:-471015										
Drinking Water ATM / Water Vending Machine, UNSPSC CODE:-47101598										
Sl. No	Parameters	Group Type	Group Category	LOV					Unit	Remark
<b>COIN / CARD ACCEPTOR / Quantity of Dispensing Water</b>										
1	Number of Dispensing points	Numeric	Golden	1	2	3	4			
2	Water Dispensing using coin acceptor	Boolean	Golden	Yes	No					
3	Coins accepted for payment	Enumerable	Golden	Rs.1	Rs. 2	Rs. 5	Rs.10	NA		Multi Select
4	Water Dispensing using RFID/NFC card	Boolean	Golden	Yes	No					
5	Mobile Wallet accepted for payment	Boolean	Golden	Yes	No					
6	Quantity of Dispensing Water	Enumerable	Mandatory	Configurable as Per Customer Requirement						
<b>CAPACITY / TYPE / WATER SOURCE / OUTLET WATER QUALITY</b>										
1	Purification Capacity of Water ATM	Enumerable	Golden	100 LPH	200 LPH	250 LPH	300 LPH	500 LPH		
2	Type of Operation	Enumerable	Golden	Manual	Semi-Automatic	Automatic with Multi-Processor Integrated Control System and remotely controlled web based Server system				
3	Water Source	Enumerable	Golden	Municipal Tap water	Surface Water		Borewell Water			
4	Quality of outlet water from each dispenser of the Water ATM	Enumerable	Mandatory	Conforms to IS: 10500 (latest)						
<b>TECHNOLOGY</b>										
1	Technology	Enumerable	Golden	Reverse Osmosis (RO)	Ultra Filtration (UF)	Nano Filtration (NF)	UF+RO			
2	UV Disinfection	Boolean	Golden	Yes	No					
3	Filters deployed in the system (Select whichever are applicable)	Enumerable	Golden	Pressure Sand Filter; Activated Carbon Filter; 10 Micron Filter; 5 micron Filter; Ultra Filtration; Nano Filtration; Multi Grade Filter (MGF); Thin- Film Composite Membrane						Multi select
4	Anti scalant dosing pump	Boolean	Golden	Yes	No					
5	p <sup>H</sup> Correction Dosing Pump	Boolean	Golden	Yes	No					
<b>LIMITING CHARACTERISTICS OF INLET / FEED WATER</b>										
1	TDS of inlet/feed water (ppm)	Enumerable	Golden	Upto 500 ppm	501-3000 ppm		3001-5000 ppm			
2	Turbidity of inlet/feed water	Enumerable	Golden	Upto 1 NTU	Upto 5 NTU	Upto 10 NTU	Above 10 NTU			
3	Hardness of inlet/feed water	Measurable	Golden	Upto 200 ppm	Upto 500 ppm		Upto 1000 ppm		ppm	

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4	p <sup>H</sup> of inlet/feed water	Enumerable	Golden	6.5 to 8.5	5 to 10					
5	Iron content of inlet/feed water	Enumerable	Golden	Upto 1 ppm	Upto 10 ppm	Upto 20 ppm				
6	Arsenic content of inlet/feed water	Enumerable	Golden	Upto 0.01 ppm	Upto 1 ppm	Upto 2 ppm				
7	Fluoride content of inlet/feed water	Enumerable	Golden	Upto 1 ppm	Upto 4 ppm	Upto 7 ppm				
<b>CONSTRUCTIONAL</b>										
1	Raw water Storage capacity (May indicate '0' for direct connection to continuous Tap Water source)	Measurable	Golden	0	500	1000	2000	3000	Liters	
2	Raw water Storage Tank Material of Construction	Enumerable	Golden	Concrete	Mild Steel	Stainless Steel	FRP	HDPE		
3	Location of the Raw Water Storage Tank	Enumerable	Golden	Inside the ATM Enclosure	Under Ground	Outside the ATM Enclosure		NA for Tap Water		
4	Treated water Storage capacity	Measurable	Golden	225,300,500,700,1000					Liters	
5	Treated water Storage Tank Material of Construction	Enumerable	Golden	Stainless Steel, 316 Gr	PP	HDPE	Stainless Steel, 304 Gr			
6	Equipped with an in-built chiller unit for providing continuous cold water of temperature around 15 degree Celcius	Boolean	Golden	Yes	No					
7	In-built Chiller Tank Capacity (May indicate '0' if Not Applicable)	Enumerable	Golden	0,60,100,220,250,500,1000					Liters	
8	Chiller Tank Material of Construction	Enumerable	Golden	Stainless Steel, 316 Gr		Stainless Steel, 304 Gr		NA		
9	ATM Installation Type	Enumerable	Golden	Floor mounted						
10	Number of Filtration steps	Numeric	Golden	5	7	9				
11	Minimum Water Recovery Percentage @27 degree ambient temperature (%)	Enumerable	Golden	20-30; 31-40; 41-50; 51-60; 61-70; 95% for Muncipal Tap Water (Ultra Filtration)						
12	Provided with suitable vending place for filling container of 20 liters capacity	Boolean	Golden	Yes	No					
13	Agreed to STC of the product category	Enumerable	Mandatory	Yes						
<b>DISPLAY</b>										
1	Display of water purity parameters	Enumerable	Mandatory	Yes	No					
2	Display Type	Enumerable	Golden	LED	LCD	TFT	NA			
3	Backlit Display	Boolean	Golden	Yes	No					
4	Touch Screen Display	Boolean	Golden	Yes	No					
5	Display Size (Characters x Lines)	Enumerable	Golden	4 x 2	8 x 2	16 x 2	20 x 2	NA		

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6	Display of outlet water TDS level	Enumerable	Golden	Yes	No				
7	Display of outlet water p <sup>H</sup> level	Enumerable	Golden	Yes	No				
8	Display of outlet water Hardness	Enumerable	Golden	Yes	No				
9	Display of outlet water Temperature	Enumerable	Golden	Yes	No				
<b>Inlet / Feed Pump to feed water from raw water storage tank to filter</b>									
1	Inlet / Feed Pump Type	Enumerable	Golden	Horizontal Centrifugal	Vertical Centrifugal	NA			
2	Number of Inlet / Feed Pumps (May indicate '0' if Not Applicable)	Numeric	Mandatory / Filter	0	1	2			
3	Rated Head (May indicate '0' if Not Applicable)	Measurable	Mandatory / Filter	Range: 0-40				meters	
4	Pump Motor Rating (HP) (May indicate '0' if Not Applicable)	Measurable	Mandatory / Filter	Range: 0-5					
5	Inlet / Feed Pump Capacity (LPH) at rated head hint:- 1 Cubic meter Per hour equals 1000 LPH)	Measurable	Mandatory / Filter	Range: 0-5000					
<b>Multi Media Filter Vessels for First stage filtration for suspended particles</b>									
1	Type of Multi Media Filter Vessels	Enumerable	Mandatory / Filter	Vertical Multi Media Filter		Tank in Tank			
2	Material Of Construction for Multi Media Filter Vessels	Enumerable	Golden	FRP	Steel	PP			
3	Number of Multi Media Filter Vessels	Numeric	Mandatory / Filter	1	2				
4	Size of Multi Media Filter Vessels	Text	Mandatory						AKBNV
<b>Multi-Port Valve to control filtration and backwash for media filter having sand &amp; carbon</b>									
1	Type of Multi-Port Valve	Enumerable	Golden	Manual	Automatic	NA			
2	Multi-Port Valve Material of Construction	Enumerable	Golden	ABS	PP	NA			
3	Number of Multi-Port Valves (May indicate '0' if Not Applicable)	Numeric	Mandatory / Filter	0	1	2			
4	Nominal Bore (Size) of Multi-Port Valve	Measurable	Mandatory / Filter	Range:0 -63				mm	
<b>Anti scalent Dosing Pump to inhibit scaling of hardness salt and silica on RO Membranes, doze pH and Cl as per water quality</b>									
1	Type of Anti scalent Dosing Pump	Enumerable	Golden	Electronic diaphragm		NA			
2	Material Of Construction for Anti scalent Dosing Pump	Enumerable	Golden	PP	ABS	NA			
3	Number of Anti scalent Dosing Pumps (May indicate '0' if Not Applicable)	Numeric	Mandatory / Filter	0	1	2			
4	Capacity of Anti scalent Dosing Pump (LPH)	Enumerable	Mandatory / Filter	Range:0-10					

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<b>p<sup>H</sup> Correction Dosing Pump &amp; Dosing Tank to dilute water with dosing chemicals</b>									
1	Type of p <sup>H</sup> Correction Pump	Enumerable	Golden	Electronic diaphragm		NA			
2	Material Of Construction for pH Correction Dosing Pump	Enumerable	Golden	PP	ABS	NA			
3	Number of pH Correction Dosing Pumps (May indicate '0' if Not Applicable)	Enumerable	Mandatory / Filter	0	1	2	3		
4	Capacity of pH Correction Dosing Pump (LPH)	Enumerable	Mandatory / Filter	Range:0 -10					
5	Dosing Tank Material of Construction	Enumerable	Golden	LLDPE	HDPE	NA			
6	Dosing Tank Capacity (LPH) (May indicate '0' if Not Applicable)	Numeric	Mandatory / Filter	Range: 0 - 50					
<b>High Pressure Pump to develop required pressure for Reverse Osmosis on RO Membranes</b>									
1	Type of High Pressure Pump	Enumerable	Golden	Vertical Centrifugal Pump		NA			
2	Material Of Construction for High Pressure Pump	Enumerable	Mandatory / Filter	PP	SS	NA			
3	Number of High Pressure Pumps (May indicate '0' if Not Applicable)	Enumerable	Mandatory / Filter	0	1	2	3	4	
4	Low pressure switch for Protection of HP pump from burn-out	Enumerable	Golden	Yes	NA				
<b>RO Pressure Vessel</b>									
1	Type of RO Pressure Vessel	Enumerable	Golden	Membrane housing mounted on skid - End port type		NA			
2	Material Of Construction for RO Pressure Vessel	Enumerable	Mandatory / Filter	FRP	SS	NA			
3	Number of RO Pressure Vessels (May indicate '0' if Not Applicable)	Enumerable	Mandatory / Filter	0	1	2	3	4	
<b>Ultra Violet (UV) System to disinfect water, kill bacteria and micro-organisms</b>									
1	Material Of Construction for UV System	Enumerable	Golden	SS	ABS	NA			
2	Number of UV Systems	Enumerable	Mandatory / Filter	0	1	2			
3	Number of UV Lights	Numeric	Mandatory / Filter	0, 1, 2, 3, 4, 5, 6					
4	Total UV Power	Enumerable	Golden	12 Watts	16 Watts	48 Watts	NA		
<b>CIP (Clean-In-Place) Tank to mix / Dilute chemicals for membrane cleaning and permeate back wash</b>									
1	Cip Tank	Boolean	Golden	Yes	No				
2	CIP Tank Material of Construction	Enumerable	Golden	HDPE	FRP	LLDPE	NA		
3	Number of CIP Tanks (May indicate '0' if Not Applicable)	Enumerable	Mandatory / Filter	0	1	2			
4	Capacity of CIP Tank (May indicate '0' if Not Applicable)	Enumerable	Mandatory / Filter	Range:0-100				Liters	

Sl. No	Parameters	Group Type	Group Category	LOV			Unit	Remark
<b>Piping</b>								
1	Material of Construction for Piping from storage tank to Raw water inlet, total internal piping HPP side / Low Pressure side, plant to product tank & through UV distribution system	Enumerable	Mandatory / Filter	ISI Marked U-PVC	ISI Marked C-PVC			Multi Select
<b>Power Source</b>								
1	Power Source	Enumerable	Mandatory	Water ATM shall be able to work on AC Power. Water Dispensing section shall also be able to work on DC Power supply from a battery. Battery is inclusive in the scope of supply.				
2	Power Supply	Enumerable	Golden	230 ±10 V AC	415 ±10 V AC			
3	Battery Voltage	Enumerable	Mandatory / Filter	6 V	12 V			
4	Battery Chemistry	Enumerable	Mandatory / Filter	Lead Acid	SMF			
5	Battery Capacity (AH)	Numeric	Mandatory / Filter	Range: 0-200				
6	Battery back-up time	Measurable	Golden	Range: 6-24			Hour	
<b>EMBEDDED DEVICES FOR AUTOMATION</b>								
1	Quantitative Monitoring (Select whichever are applicable)	Enumerable	Golden	Number of Glasses of water dispensed in a day; Number of Bottles of water dispensed in a day; NA;				Multi Select
2	Outlet Water Quality Monitoring (Select whichever are applicable)	Enumerable	Golden	TDS level of water; Temperature of water; Hardness of water; pH values of water; NA;				Multi Select
3	Multi-Processor Integrated Control System with Interface cables/ connectors for integration (Select whichever are applicable)	Enumerable	Golden	NA; GPRS based TCP/ IP connectivity with web based Server system; GPS location system; Flash based transaction data Logging; Relay Unit for controlling water dispensing nozzles as per the location requirements; Enabling / disabling of System operation from server; Dispense quantities re-configurable from server; Operator Log-in and log-out feature; System to operate after successful operator login only; All card Recharge transactions to be uploaded to server; All water dispensing transactions to be uploaded to server; All Water refill transactions to be uploaded to server; Each dispensing unit can be independently manageable from the server for coin or card operation of any value; Media Controller For HDMI based display Monitor; Ability to backup data for 48 hours in-case of server/connectivity outage; LED display on controller panel box to indicate System Status; Uploading of Transactions and Water parameters data to Server over TCP/IP using GPRS; Fall back to SMS in case GPRS connectivity to server is lost temporarily				Multi Select
4	OTHER FEATURES (Select whichever are applicable)	Enumerable	Golden	NA; Interface for connecting coin-acceptors; Interface for Card Reader; Interface for Card Balance / Recharging; LED signage showing Authority's details; Paper glass dispenser; Password protected locking system; Able to check daily waterdispense volume / total accounted amount of dispensed water / recharge amount by using GSM Sim card				Multi Select
5	Additional features, if any (50 Ch)	Text	Mandatory					AKBNV

Sl. No	Parameters	Group Type	Group Category	LOV				Unit	Remark
<b>Water ATM - Enclosure</b>									
1	Structure	Enumerable	Golden	Rigid structure, made of MS frame		Rigid structure, made of SS frame			
2	Thickness of the frame of structure	Measurable	Golden	2	2.5			mm	
3	Material of Construction of Side Panels of Water ATM	Enumerable	Golden	Stainless Steel sheet		Galvanized Steel sheet			
4	Side Panel Sheet Thickness	Measurable	Golden	0.6	0.8	1.0	1.2	mm	
5	PUF insulation of Side Panels of Water ATM	Enumerable	Golden	With	Without				
6	PUF insulation of the door of Water ATM	Enumerable	Golden	With	Without				
7	Provision for in-built litter space	Boolean	Golden	Yes	No				
8	Covered area of treatment plant enclosure	Enumerable	Mandatory / Filter	Range:10-120				Sq feet	
9	Shape of the Water ATM housing	Enumerable	Golden	Cubical	Cuboidal	Hexagonal	Cylindrical		
10	Top Canopy of the Water ATM housing	Enumerable	Golden	Flat	Sloped	Dome			
11	Floor area around the unit covered with vitrified / anti-skid tiles. (Specify area of the tiles)	Enumerable	Mandatory / Filter	Range:10-25				Sq feet	
12	Headroom for the Water ATM enclosure	Enumerable	Mandatory / Filter	Range: 7-10				Feet	
13	Internal / External finish on Steel panels	Enumerable	Mandatory	As per Buyer requirements					
14	Floor area around the Water ATM enclosure covered with anti-skid tiles	Boolean	Golden	Yes	No				
15	Water ATM enclosure protected with enclosed MS grill / mesh	Boolean	Golden	Yes	No				
<b>Installation &amp; Commissioning / Warranty</b>									
1	Installation and Commissioning inclusive in the scope of Supply	Enumerable	Golden	Yes					
2	Trial Run and Training provided (inclusive in the Scope of Supply)	Enumerable	Golden	5 Days	10 Days				
3	Warranty for storage Tanks	Measurable	Golden	1	2	3		Year	
4	Warranty for electrical motors	Measurable	Golden	1	2	3		Year	
5	Warranty for the filters	Measurable	Golden	1	2	3		Year	
6	Warranty for the system	Measurable	Golden	1	2	3		Year	

**AKBV: Allow Key But Not Value**

**Creator (s)**

**TA-Jitender**

**Modifier  
AD-GRK**

**Moderator  
DCEO-SKJ**

**Approvers  
ACEO-HRS / ACEO-PS**

## **STC for Drinking Water ATM / Water Vending Machine:-**

In addition to General Terms and Conditions of the GeM, following Special T&C shall be applicable for Water ATM / Water Vending Machine:

### **Details of General Technical Requirements and scope of installation and Commissioning:**

#### **A. General Technical Requirements**

- 1) The Water ATM / Water Vending Machine shall be fully enclosed and easy to relocate.
- 2) The structure of the enclosure shall be rigid, made of MS / SS frame of minimum thickness as specified in the contract. MS frame shall be with duly anti rust treatment, painted / galvanized for rust protection.  
  
The structure shall be appropriate to protect the entire treatment plant system, including its equipment and accessories in all weather conditions and it shall be able to withstand the extreme climatic variations.
- 3) All the side panels shall be made of stainless steel / galvanized steel, with / without PUF insulation as specified in the contract.  
  
Side panels with insulation, if specified in the contract, shall have stainless steel / galvanized steel sheets on both sides with PUF insulation in between. PUF insulation shall be of 50 mm thick and 40kg/m<sup>3</sup> density.
- 4) Single door of adequate size with good quality locking arrangement shall be provided to restrict access to the unit. The door shall be made of steel with matching colours with adequate protection against breakage.
- 5) The raw water storage tank, if provided, shall have provision to be attached to piped water supply as well as fitting of external nozzle which provides the option for sourcing raw water from tankers and functioning as a standalone unit in case piped water supply is not available.
- 6) Adequate space shall be provided for storing materials / consumables required for the Water ATM / Water Vending Machine, inside the enclosure itself.
- 7) A chiller unit of suitable storage capacity, if specified in the contract, shall be provided inside the unit. Proper ventilation facility must be provided for the removal of chiller unit heat.

- 8) Easily washable stainless steel / FRP counters for dispensing drinking water must be provided on the external panels of the housing structure. Each counter shall be capable of dispensing water and each must have latching system for switching ON with push button
- 9) The top canopy protecting the enclosure shall be made with materials like PP reinforced UV stabilized Poly Vinyl / FRP covering so as to cover the entire equipment and accessories in the enclosure and to protect them from heating and external weather conditions.
- 10) Each Water ATM / Water Vending Machine shall have provision for float valve for overflow control.
- 11) After installation at site, all components, equipment shall be field tested to prove satisfactory performance of outlet water quality and/or fulfilment of functional requirements without showing any sign of defect as individual equipment and as well as a system.
- 12) User Manual for safe operation of the unit along with instructions for preventive maintenance, frequency for back wash, treatment of waste water, if required, etc shall be supplied along with each Water ATM / Water Vending Machine.
- 13) All the materials which are in direct contact with treated water inside the machine shall be of food grade quality.
- 14) Water ATM / Water Vending Machine shall be able to work on AC Power (230  $\pm$ 10 V AC or 415  $\pm$ 10 V AC). Water dispensing section shall be able to work on DC Power supply from a battery having back-up capacity of minimum hours as specified in the contract. Battery is inclusive in the scope of supply.

**B. The Scope of installation and Commissioning for Water ATM shall be as under:**

**Following are the responsibilities of Seller:**

- 1) Design, Supply, construction / installation of Water ATMs / Water Vending Machines along with water storage tanks, necessary filters and all other equipment and accessories necessary for satisfactory operation of the unit shall be the responsibility of the Seller.
- 2) Supply / changing of necessary filters during the warranty period shall be the responsibility of the Seller.



- 3) Unloading and placement of Water ATM / Water Vending Machine at the time of delivery at sellers cost is inclusive in the scope of supply. The consignee shall ensure that the site is located along a motorable road.
- 4) Necessary foundation for RO+UV system and required platforms for specified category of treatment plant system shall be provided with plinth depth of 150 mm above ground level, wherever applicable. Civil Work to the extent necessary for satisfactory installation of the equipment shall be the responsibility of the Seller.
- 5) Supply of bolts, nuts, washers, etc., and all other material necessary for satisfactory installation and commissioning of the equipment shall be the responsibility of the Seller.
- 6) Supply, laying & installation of necessary Electrical cables, electrical fittings from the power connecting point / Energy meter to the Water ATM / Water Vending Machine shall be the responsibility of the Seller.
- 7) Supply, laying & installation of all inter connecting Pipes from the water source to the discharge out let of the equipment including waste water connection to nearby sewerage system shall be the responsibility of the Seller.
- 8) Supply of suitable Pre filters, RO Plant, UV System, Control Valves, Dosing Pumps, Vessels, Pressure Gauges, Flow meters, etc, wherever required shall be the responsibility of the Seller.
- 9) Trial Run of the equipment for the period specified in the contract shall be the responsibility of the Seller. All components, equipment shall be tested during trial run to prove satisfactory performance and /or fulfilment of functional requirements without showing any sign of defect as individual equipment and as well as a system.
- 10) Providing Training to the buyer's representatives after successful installation & Commissioning of the equipment, during Trial Run shall be the responsibility of the Seller.

- 11) Seller shall co-ordinate with the Consignee / User regarding exact place / location where the Water ATM / Water Vending Machine has to be installed, Quantity of Dispensing Water, Internal / External finish on Steel panels etc.

**C. Following are the responsibilities of Consignee / User:**

- 1) Providing necessary Space, Water source, Electricity, Security, Sewerage, Water quality monitoring / testing shall be the responsibility of the buyer / consignee.
- 2) Providing Water source, Power meter and Sewerage, within 20 meters from the place where Water ATM / Water Vending Machine has to be installed shall be the responsibility of the buyer/ consignee.
- 3) Providing Single phase or three phase power supply as required including installation of Electric Energy meters/Legal connection for Water ATM's shall be the responsibility of the buyer / consignee.
- 4) Consignee / User shall co-ordinate with the Seller regarding exact place / location where the Water ATM / Water Vending Machine has to be installed, Quantity of Dispensing Water, Internal / External finish on Steel panels etc.
- 5) Necessary approvals, if any, shall be obtained by the consignee.
- 6) Consignee shall ensure readiness of the site within to 10 days of receipt of stores.
- 7) Revenue from the water ATM / Water Vending Machine, if any, shall be collected by the consignee or his authorized representative.