

# **SPECIFICATIONS FOR PORTABLE SOLAR POWERED SMARTVEND CURBSIDE BULK WATER STATION**

## **PART 1 - GENERAL**

### **1.1 Work Included**

1.1.1 This section covers the design, manufacture, supply, and placing in operation the Curbside Bulk Water Truck Fill.

### **1.2 Manufacturer**

1.2.1 The Bulk Water Truck Fill System shall be as supplied by Johlin Measurement Ltd. 1-888-933-8979 or approved equal.

### **1.3 Submittals**

1.3.1 The contractor shall submit two (2) hard copies of shop drawings and information of the proposed system as follows:

1.3.1.1 General arrangement drawing

1.3.1.2 Component specification sheets

1.3.1.3 Installation details

1.3.2 Submit two (2) copies of operation and maintenance manuals.

### **1.4 Quality Assurance**

1.4.1 Manufacturer – The Bulk Water Truck Fill system shall be supplied by one manufacturer that shall assume total responsibility for the parts operating as a whole and shall be manufactured by Johlin Measurements Ltd.

1.4.2 Experience – The Bulk Water Truck Fill system shall be a standard product of the manufacturer who is actively engaged in the business of providing these systems. Upon request, the manufacturer shall provide the Utility with a list of previous installations.

## **PART 2 – PRODUCTS**

2.1 SmartKit Console Reload Hand Held

2.1.1 SmartKit Console shall utilize Smart Cad Technology and program a dollar value onto the card.

2.1.2 Console will be password protected from factory and may be changed by administration.

2.1.3 SmartKit Console will utilize a SmartKey Access Card to allow the utility to program individual Smart Cards. This prevent unauthorized usage in event programmer is stolen.

2.1.4 Balance limits may be set in SmartKit Console which cannot be exceeded on any card. Balance Limit is set by utility.

2.1.5 SmartKit Console may be utilized to debit a value on an existing card.

2.1.6 Display will provide beginning and ending balance after transaction.

2.1.7 SmartKit Console will store up to 780 transactions which may be downloaded in a text format to a PC. Connection cables to PC are provided with Hand Held.

## **2.2 SmartVend Smart Card Terminal**

- 2.2.1 SmartVend terminal shall be complete and functional, ready for field connection to devices, to provide the necessary control of components as specified.
- 2.2.2 Terminal to be housed in a steel enclosure suitable for mounting on exterior or exposed to elements. Steel enclosure shall have a handle.
- 2.2.3 Card reader shall be cast stainless steel. **Plastic will not be allowed.**
- 2.2.4 Key pad to be durable and suited to exterior operation.
- 2.2.5 Start Button to begin fill.
- 2.2.6 Stop Button provided for emergency shutoff.
- 2.2.7 SmartVend Terminal will allow for the field setting of pulses from the meter in # of Pulses per 10 liters or gallons. Price per 10 gallons (Liters) will be field programmable. .
- 2.2.8 Terminal may be programmed to shut down at a specified number of pulses prior to selected volume being reached. This will account for valves that are slow closing. User is charges for exact volume taken.
- 2.2.9 Pre-start volume setting to allow for filling of pipe stand for winter operation.
- 2.2.10 SmartVend Terminal may be ordered as option a memory chip. Memory can be downloaded to a special high capacity Smart Card and taken to office. Smart Card can be down loaded and exported into Excel and sorted.
- 2.2.11 SmartVend terminal shall be programmed with 16 digit I.D. Number.
- 2.2.12 SmartVend to operate on 12 VDC, with no internal heater.
- 2.2.13 SmartVend to be in Sleep Mode when not in use. When SmartCard is inserted the SmartVend will activate immediately.
- 2.2.14 Output to Valve shall be low wattage 12 VDC hydraulic On/Off Valve
- 2.2.15 Battery for operation shall be sufficiently sized for 2 hours continuous operation per day.
- 2.2.16 Battery shall be inside compartment and have a battery status indicator.
- 2.2.17 In the event of heavy usage, the Battery may be removed and charged externally or a second battery used.

## **2.3 Portable Curbside Bulk Water Truck Fill**

- 2.3.1 Station shall be mounted on Utility Trailer Frame. Frame Bed to be 50"L x 40" wide. Overall width of Trailer to be 52". Trailer includes heavy duty spring suspension, 12" Tires, DOT Approved Lighting rear and sides, License frame and ID Plate. Floor shall be drained
- 2.3.2 Trailer to have front Fold Up Stand and Stabilizer Legs on 4 corners. Capacity of Trailer to be 1400 lbs.
- 2.3.3 Aluminum Checkered Plate Box to be mounted on Trailer – Dimensions to be 50" x 40". Approximate height of box to be 30". Sufficient space to store Solar panel and hoses for moving and winter storage.
- 2.3.4 A lockable hinged door will be provided for service and access.
- 2.3.5 Solar panel to be mounted on a two piece pole approximately 8-10 feet in trailer. First section of the pole shall insert through the front section of the trailer and rest on the ground for support and stability in high winds. Assembly shall be able to store inside when mobile or in storage.

- 2.3.6 Wiring from panel shall be inside poles and enter the trainer compartment.
- 2.3.7 Internal components shall include a 2” Double Check Back Flow c/w Ball Valves, 2” Cast Iron Epoxy Coated Turbine Meter to 150 USGPM continuous and a 2” On / Off Valve.
- 2.3.8 Air Hammer suppression device to be fitted into line prior to valve.
- 2.3.9 Piping shall be Sch 10 Stainless Steel through wall of Portable Curbside.
- 2.3.10 Piping through wall of the wall shall terminate in a PVC Sch 40 Nipple for breakaway protection. Cam-Lok fittings will be supplied as specified by Utility.
- 2.3.11 Exterior connection to the hydrant shall be with standard hose with appropriate connections. Length to be @ 10 ft or less.
- 2.3.12 SmartVend terminal shall be mounted onto front section of the Portable Curbside in a steel enclosure with handle.

## **2.4 REMOTE TECHNICAL SUPPORT**

- 2.4.1 Manufacturer is to provide the User with one year free online technical support.

## **PART 3 – EXECUTION**

- 3.1 Product Handling, Storage and Delivery
  - 3.1.1 Equipment shall be suitably packaged to avoid damage during handling and shipment.
  - 3.1.2 Should it be necessary to store products prior to installation, the Utility shall place and store all products in storage areas protected from the elements, and in a manner to protect the equipment from moisture, dust, extreme temperatures, and impact.
- 3.2 Installation
  - 3.2.1 The Utility shall install the Bulk Water Truck Fill System in strict accordance with: (1) the manufacturer’s written instructions and recommendations and the manufacturer’s installation drawings; (2) the oral and written directions provided by the manufacturer’s technical representative; and (3) any additional requirements specified herein.
  - 3.2.2 The Utility shall take all precautions to ensure that the Terminals and other equipment are kept clean and free of any debris, dirt, or other foreign materials, such as iron filings, that may damage the equipment.
- 3.3 Start-up Services
  - 3.3.1 The manufacturer shall provide installation assistance as per contract arrangement.
  - 3.3.2 On-site training of the hardware shall be provided to the Owner’s representatives at the time of the Start-up Services. Training and start up provisions shall be specified by utility as per contract.