

#### TECHNICAL SPECIFICATION FOR CLAMP-ON TYPE PORTABLE ULTRASONIC LIQUID FLOW METER

##### Meter Specification:

Measurement principle: Transit time principle

Sensor: Clamp on type flow transducers with firm fixtures

Measured value: Volume flow rate and totalized flow.

Flow Accuracy:  $\pm 2.0\%$  of flow rate or better

Repeatability:  $\pm 1.0\%$  of flow rate or better

Display: Digital Display (Back lit LCD) of flow with various engineering units

Data logging: Minimum 50000 point data logging.

Interface with PC: RS232 / Infrared with converter to RS232. Data transfer software and associated data cable for interface of flow meter with PC shall be supplied with each meter.

User software: User software based on English language shall be supplied with each meter.

License software (if required): Shall be supplied for each meter.

Degree of Protection: IP 65 or better for electronics console.

Certification: The meter shall be certified by bodies such as IEC / FM / UL / BASEEFA / CENELEC / CSA / DGMS / PTB / CMRI for use in Class I, Division I, Group D, T3 hazardous area.

Power: Internal rechargeable battery with minimum operating time of 8 hrs.

Battery charger: Required (Suitable for 100 to 240VAC)

Carry case: Hard, rugged and easily portable

Thickness gauge: Required (Ultrasonic type)

Detailed instruction/operating manual (hard copy) shall be supplied with each meter.

Bill of Material and recommended spare parts list with part nos. shall be submitted.

All flow transducers shall be supplied with standard Test/Calibration certificates approved by reputed TPI such as BV/ DNV/ LR/CEIL.

##### Service conditions:

Fluid: Treated water, produced water.

Flow range: 0 to 300 m<sup>3</sup>/hr

Operating temperature: 10 / 30 / 50 ° C (Min /Normal /Max)

Operating pressure: 1 / 150 / 200 Kg/cm<sup>2</sup> (Min / Normal / Max)

Pipe Size: 1" to 12"

Pipe thickness: 4.5 mm to 20.0 mm

Pipe Material: MS, SS, PVC, GRP, etc.