# Handheld Ultrasonic Flow Meter TUF-2000H

## **GENERAL**

TUF-2000H series is a protable transit-time ultrasonic flowmeter with clamp-on transducers for non-invasive liquid measurement. Our microprocessor based, user friendly, field programmable flow measurement technique allows no interruption of the process flow and has low installation costs.

#### **7 FEATURES**

- □ 4 line LCD display with flowrete, totalizer & signal condition.
- □ The flowmeter is designed for high accuracy +/-1.0%.
- □ Small sized (210 \* 90 \* 30mm) and light weight (500 g)
- Uvide range, Velocities (0.01 ~ +/- 32 m/s).
- □ Ni-MH Battery life for up to 12 hours continuous opeartion.
- Transducers for pipe sizes of 15 to 6000 mm.
- □ High accuracy of +/-0.5% of reading (or +/-0.2% of reading)
- Transducers include magnet devise, which can install on Metal pipe without mounting belt.
- Data logger which records flowrate, date, total flow, signal condition..Etc.
- Response time less than 1 second

## **7 SPECIFICATION**

Measuring Principle	:	Transit time	Ultrasonics
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Measuring Princip	ble : Transit time Ultrasonics	Keypad	: 18 Key with tactile action
<ul> <li>Transducers</li> </ul>	: TS-2 : 15 mm ~ 100 mm (1/2" ~ 4")	Response Time	: Less than 1 second
	: TM-1 : 50 mm ~ 700 mm (2" ~ 28")	Flow velocity	: 0.01 ~ +/- 32 m/s
	: TL-1 : 300 mm ~ 6000 mm (12" ~ 240")	Resolution	: 0.0001 m/s
	: TS-2-HT : 15 mm ~ 100 mm (1/2" ~ 4")	Ambient Temperature	: -20 ~ +50 °C
	: TM-1-HT : 50 mm ~ 1000 mm (2" ~ 40")	Ambient Humidity	: 90% RH or Less
Pipe Material	: Cast Iron, Stainless Steel, Ductle Iron	Built-in battery	: Ni-MH Battery
	Coppor, PVC, Aluminum, Asbestos		
	Fiberglass etc.	Charger	: 90 ~ 260Vac 50/60 Hz, 8-12 Hr charging
Liner Material	: Tar Epoxy, Rubber, Mortar, Polypropylene,	Data Storage	: Operation parameters and totalization
	Polystryal, Ploystryene, Polyester, Ebonite,		data are stored by EEPROM for more
	Polyethylene, Teflon etc.		than 10 years
<ul> <li>Display</li> </ul>	: 4 Line LCD with illumination.	Operation Time	: > 10 Hours
Flowra	ate: 5 digit with decimal point	Charger	: 90 ~ 260Vac 50/60 Hz, 8-12 Hour charging
Totali	zer : 8 digit, Forward, Reverse & Net values.	Data Logger	: 24 KB data include flowrate, totalizer,
Engineer U	Init : M3, Liter, US Gallon, Imperial Gallon,		time, date.
	Million Gallon, Cubic Feet, US Barrels,	Alarm	: High/Low with buzzer
	Imperial Barrels, Oil Barrel.	Power consumption	: Less than 2W
Time U	Init:Second, Minute, Hour, Day.	Dimension	:210 * 90 * 30 mm
Oth	ner : Velocity, Date, Time, Signal condition.	<ul> <li>Weight</li> </ul>	: 0.50 Kg
Accuracy	: +/- 1% ~ +/- 2% of reading(0.5 ~ 30 m/s)	Enclosure	
	: +/- 0.5% of reading (online calibration)	Converte	er : IP65
Repeatability	: +/-0.2% of reading	Senso	or: IP68 (Submersible)



## **7 TRANSDUCER SPECIFICATION**

### • Standard-Transducers

Fluid Temperature : -30 ~ +90 °C

Model	TS-2 (Small Size)	TM-1 (Medium Size)	TL-1 (Large Size)
Pipe Size	DN15-100mm	DN50-700mm	DN300-6000mm
A*B*C	45mm*23mm*25mm	64mm*32mm*35mm	98mm*45mm*49mm



## • High Temperature Transducers

Fluid Temperature : -30 ~ +160  $^{\circ}$ C

Model	TS-2-HT (Small)	TM-1-HT (Medium)
Pipe Size	DN 15-100mm	DN 50-1000mm



## ACCESSORY (standard package)



Aluminum Case

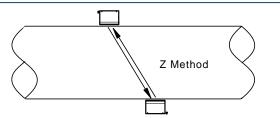
Cable 5M

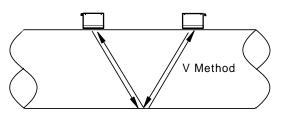
Silicone grease

Mounting Belt

Measuring Tape

**7 INSTALLATION** 





## **7 STRAIGHT RUN PIPING REQUIREMENT**

