



## RK TECHNOLOGIES

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# RK-TUF-2000-H-TM-1

Handheld Ultrasonic Flow Meter

◆ NON-CONTACT | CLAMP-ON | HIGH ACCURACY



## PRODUCT OVERVIEW

The RK-TUF-2000-H-TM-1 Handheld Ultrasonic Flow Meter is a professional, non-contacting clamp-on instrument for measuring liquid flow velocity in closed conduits. Using transit-time ultrasonic technology, it measures without interrupting the pipeline — no cutting, no leakage, no pressure drop.

Ideal for water, chemicals, cooling water, sewage, petroleum products and virtually all liquids in pipes from 15 mm to 6000 mm diameter. The built-in rechargeable battery provides 12+ hours of continuous operation, making it ideal for field survey and portable flow audits.



Carrying Case (Included)

## KEY FEATURES

Measurement & Performance	Connectivity & Operation
<ul style="list-style-type: none"><li>◆ Transit-time ultrasonic technology — no pipe cutting</li><li>◆ Accuracy <math>\pm 1\%</math> of reading at velocity <math>&gt; 0.2</math> m/s</li><li>◆ Velocity range: <math>\pm 32</math> m/s</li><li>◆ Pipe size: 15 mm – 6000 mm</li><li>◆ Supports V, Z, W and N transducer mounting methods</li><li>◆ Signal strength 000–999, quality Q-value display</li><li>◆ Standard transducers rated to 110°C</li></ul>	<ul style="list-style-type: none"><li>◆ Large LCD display — 4×16 English characters</li><li>◆ RS-232 serial communication (75 to 57600 baud)</li><li>◆ Built-in data logger: stores 2000+ records</li><li>◆ 7-digit totalizers (POS, NEG, NET)</li><li>◆ Rechargeable Ni-MH battery — 12+ hours runtime</li><li>◆ Alarm outputs: buzzer + OCT open-collector</li><li>◆ 4-20 mA / 0-20 mA current loop &amp; frequency output</li></ul>



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## TECHNICAL SPECIFICATIONS

Parameter	Specification
<b>Accuracy &amp; Measurement</b>	
Linearity	0.5%
Repeatability	0.2%
Accuracy	±1% of reading at flow rates > 0.2 m/s
Velocity Range	±32 m/s (bidirectional)
Response Time	0 – 999 seconds (user-configurable)
<b>Pipe &amp; Liquid Compatibility</b>	
Pipe Diameter	15 mm – 6000 mm
Pipe Materials	Carbon steel, stainless steel, cast iron, ductile iron, copper, PVC, aluminium, asbestos, fibreglass
Liquid Types	Water, sea water, kerosene, gasoline, diesel, crude oil, alcohol, glycol, cooling water, chemicals, sewage, and virtually all liquids
Transducer Temperature	Standard: up to 110°C (higher temperature on request)
<b>Transducer &amp; Installation</b>	
Transducer Type	Clamp-on (non-contacting); Standard M1 included (3 sets: TM-1, TM-2, TM-3 sizes)
Mounting Methods	V-method (15–400 mm), Z-method (>200 mm), W-method (15–50 mm, plastic pipes), N-method
Cable Length	Standard: 5 m × 2   Optional: 10 m × 2
<b>Outputs &amp; Communication</b>	
Analogue Output	4–20 mA / 0–20 mA current loop (accuracy < 0.1%)
Frequency Output	0 – 9999 Hz (user-configurable)
Alarm Output	Buzzer + OCT (open-collector transistor) — 2 alarm channels
Serial Communication	RS-232 (75 – 57600 baud)   FUJI-compatible protocol   Network IDN support
<b>Power &amp; Physical</b>	
Power Supply	Built-in Ni-MH rechargeable battery (12+ hours)   100–240 V AC external charger
Display	Large LCD — 4×16 English / 4×8 Chinese characters
Totalizer	7-digit for positive, negative and net flow; multiplier 0.001–10000
Data Logger	Built-in; stores 2000+ data lines with timestamp
Housing	ABS plastic, IP54 equivalent   210 × 90 × 30 mm   500 g (with batteries)
Security	Password-protected parameter lockout; non-volatile flash memory (100-year retention)



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### STANDARD PACKING LIST

Item	Qty	Remarks
Main Unit — RK-TUF-2000-H-TM-1 Handheld Flowmeter	1 pc	
Medium Transducers (Clamp-on, M1 type)	2 pcs (1 pair)	TM-1 size included
Ultrasonic Signal Cable	2 pcs	Standard 5 m each
Data Communication Cable (RS-232)	1 pc	
AC Power Adapter / Battery Charger	1 pc	100–240 V AC
Ultrasonic Coupling Agent (Couplant)	1 tube	TCA-1 grade
Pipe Mounting Chain / Belt Stretcher	2 pcs	For pipe clamping
Measuring Tape	1 pc	3 m
User Manual	1 pc	English
Aluminium Carrying Case	1 pc	Foam-lined

### TYPICAL APPLICATIONS

Water & Utilities	Industrial Process	Oil & Chemical
<ul style="list-style-type: none"><li>◆ Municipal water networks</li><li>◆ Cooling tower flow</li><li>◆ Chilled water HVAC</li><li>◆ Irrigation water audit</li></ul>	<ul style="list-style-type: none"><li>◆ Boiler feed water</li><li>◆ Plant effluent monitoring</li><li>◆ Reclaimed / recycled water</li><li>◆ Fire-fighting system check</li></ul>	<ul style="list-style-type: none"><li>◆ Diesel / fuel oil flow</li><li>◆ Chemical dosing lines</li><li>◆ Petroleum pipeline survey</li><li>◆ Non-invasive leak detection</li></ul>

### ORDERING INFORMATION

Model Code	Description
<b>RK-TUF-2000-H-TM-1</b>	Handheld Ultrasonic Flow Meter — Standard package with TM-1 transducers, cables, couplant, tape, charger and carrying case
Optional: TM-2 Transducers	Medium-large pipe transducers (for larger diameter pipes, consult RK Technologies)
Optional: 10 m Cables	Extended 10 m signal cables (instead of standard 5 m)
Optional: RS-485 Interface	RS-485 / Modbus communication for SCADA integration

#### Contact RK Technologies for Pricing, Demo & Support

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