

# FlowT



**FT221 Ultrasonic Flow Meter (Portable)**

## Introduction

**F**T221 is a full function handle transfer time ultrasonic flow meter. No matter you want to quickly verify the flow reading of another meter or to data log flow system values over an extended time period, the FlōwT' s FT221 is the suitable tool. The FT221 portable meter has the clamp on transducers no tapping or cutting is required, just clamp outside of the pipe. The meter can be easily moved and installed in different pipe and convenient to carry site to site. Its portability makes it an excellent choice for measuring flows throughout the plumbing infrastructure to verify sensor, pump and valve performance.



## Feature



1. Easy to install, reduced installation time and cost.
2. No pressure head loss, No moving parts to maintain or replace.
3. BTU function is an option. FT221 could be used as a portable ultrasonic energy meter.
4. Powerful data storage and also support the data sheet analysis software.

## Application

FT221 ultrasonic flowmeter widely application in oil industry, water treatment, pure water, chemical and etc.



## Specification

### Performance specifications

Flow range	$\pm 0.03$ ft/s ~ $\pm 40$ ft/s ( $\pm 0.01$ m/s ~ $\pm 12$ m/s)
Accuracy	$\pm 1\%$ of measured value
Pipe size	Clamp-on: 1" ~ 48" (25mm ~ 1200mm)
Fluid	Single medium liquid
Pipe material	Carbon steel, stainless steel, PVC and other compact material pipe

### Function specifications

Outputs	Analog output: 4~20mA, Max 750 $\Omega$ . Modbus: RS485
SD card	16G
Interval	1 ~ 99999seconds
Key board	Digital keys
Display	240*128 back lit LCD
Power supply	Rechargeable Lithium Battery Power , 3000mAh (Continuous operation of main battery 16 hours).
Temperature	Transmitter: $-40^{\circ}\text{C} \sim 60^{\circ}\text{C}$ Transducer: $-40^{\circ}\text{C} \sim 80^{\circ}\text{C}$ ( $-40^{\circ}\text{C} \sim 80^{\circ}\text{C}$ is standard; $-40^{\circ}\text{C} \sim 130^{\circ}\text{C}$ is an option)
Humidity	Up to 99% RH, non-condensing

### Physical specifications

Transmitter	NEMA13, IP54.
Transducer	Encapsulated design, IP68
Transducer cable	Standard cable length: 5m (16ft).

Product photo



**Accessories**

- 1. Carrying Case\*1pc.
- 2. Transmitter (Electronic)\*1pc.
- 3. Transducer (Sensor) \*1 pair.
- 4. Mounting track\*1 set, ST or DT
- 5. Pipe straps \*2 pairs.
- 6. Coupling compound (Grease)\*1 pc, Battery charge\*1pc, Output cable\*1pc and Tapeline\*1



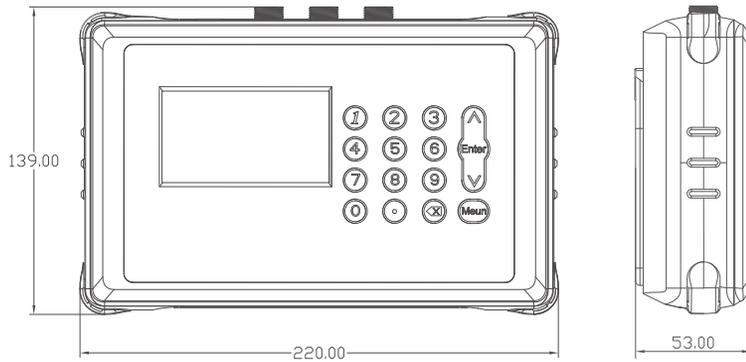
Single guide mounting type bracket ( Code ST )



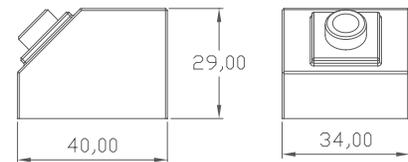
Dual guides mounting type bracket ( Code DT )

## Size

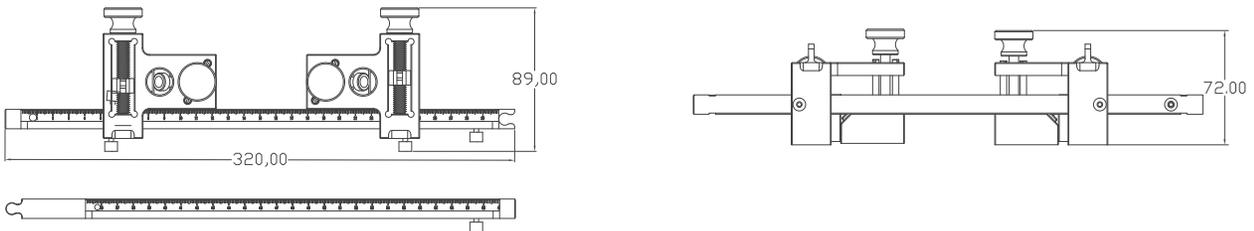
Transmitter size



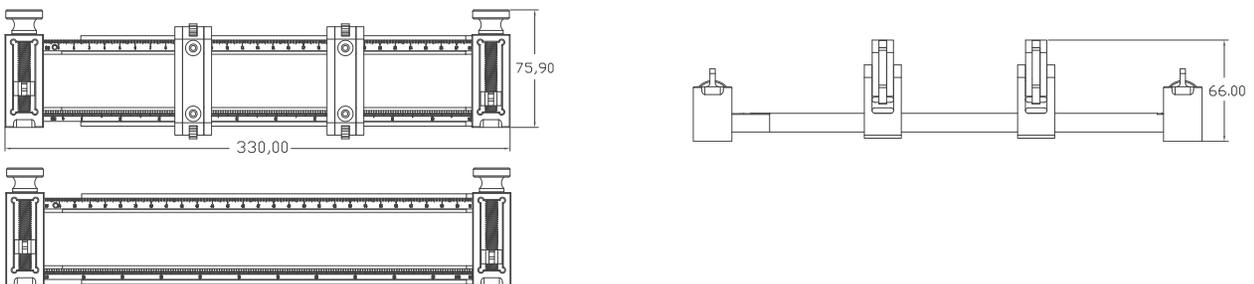
transducer size



ST mounting kit size

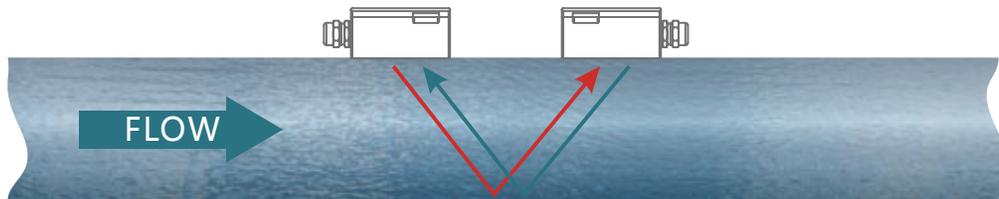


DT mounting kit size



## Measuring principle

Transfer time technical means the ultrasonic signal from the transducer is transmitted and received through the moving liquid, there will be a difference between the upstream and downstream transit time, which can be used to calculate flow and velocity.

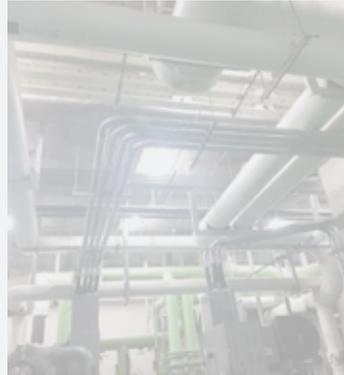


An ultrasonic meter equipped with heat flow capabilities measures the rate and quantity of heat delivered or removed from devices such as heat exchangers. By measuring the volumetric flow rate of the heat exchanger liquid, the temperature at the inlet pipe and the temperature at the outlet pipe, the energy usage can be calculated.

## Ordering code

Model	Description
FT221	Portable Ultrasonic Flow Meter Installation method: Handheld Flow Range: $\pm 0.03$ ft/s ~ $\pm 40$ ft/s ( $\pm 0.01$ m/s ~ $\pm 12$ m/s) Accuracy: $\pm 1\%$ of measured value Repeatability: 0.2% Output: 4-20mA, RS485 Internal lithium power supply: 3000mAh Pipe size range: 1" ~ 48" (25mm ~ 1200mm) Transducer: IP68, D series transducer, 5m cable with mounting kits.

<b>Code</b>	<b>Type of Transmitter</b>
1	Ultrasonic Flow Meter
2	Ultrasonic Energy/Btu Meter function( RTD)
<b>Code</b>	<b>Type of transducers</b>
D1	Clamp-on, IP68. Operating temperature: -40°F ~ +176°F(-40°C ~ +80°C)
D1U	Clamp-on, IP68. Operating temperature: -40°F ~ +266°F(-40°C ~ +130°C)
W1	Insertion, IP68. Operating temperature: -40°F ~ +266°F(-40°C ~ +130°C)
<b>Code</b>	<b>Type of mounting track</b>
ST	Single guide mounting type bracket
DT	Dual guides mounting type bracket
<b>Code</b>	<b>Transducers cable length</b>
P5	D series type of cable Standard 5m (16ft) with mounting track.
PXX	XX is the length you need for cables, Maximum lengthen to 30m.
<b>Code</b>	<b>Temperature sensor</b>
PT1000	A pair of clamp on PT1000 sensor 9m
<p>Flow meter model (example):            FT221-1-D1-ST-P5            Portable Ultrasonic Flow Meter FT221, D1 type transducer 5m cables with single guide mounting track.</p> <p>Energy/ Btu meter model(example):            FT221-2-D1-ST-P5-PT1000            Portable Ultrasonic Energy/Btu Meter FT221, D1 type transducer 5m cables with single guide typemounting track. A pair of PT1000 clamp on temperature sensor, 9m cables.</p> <p><b>*You could choose the mounting track as the application need and your use habit.</b></p>	



# FlowT

Phone : 86-755-88366465、88367005

E-mail : [business@flowt.com.cn](mailto:business@flowt.com.cn)

Web : [www.flowt.com.cn](http://www.flowt.com.cn)