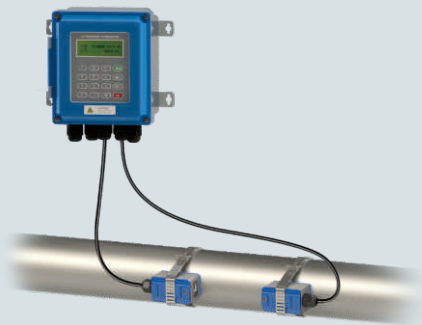


TUF-2000B SERIES

WALL MOUNTED ULTRASONIC FLOWMETER

IP67

Water & Dust Resistant



clamp on



Insertion



Pipe



| Features |

- Measurement accuracy 1%.
- Converter protection class IP67, transducer protection class IP68.
- Wide measurement range, pipe size from DN15mm to DN6000mm.
- Three types installation method: wall mounted, DIN-rail mounted, explosion-proof box mounted.
- Connect the temperature transducer can finish the heat/energy measurement.

IP67

TUF-2000B Wall Mounted Ultrasonic Flowmeter

| Introduction |

TUF-2000B flowmeter can be virtually applied to a wide range of in long-term online measurement. Converter protection class IP67, transducer protection class IP68. A variety of liquid applications can be accommodated: ultra-pure liquids, portable water, chemicals, raw sewage, reclaimed water, cooling water, river water, plant effluent.etc

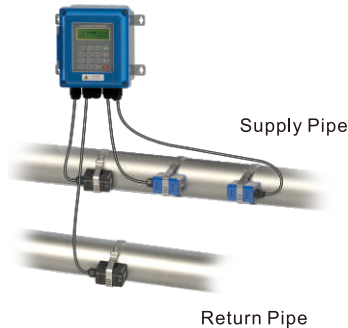
| Measuring Diagram |

Flow Measurement

Heat Measurement

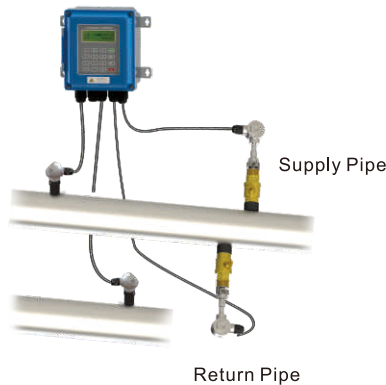
Features

Clamp on



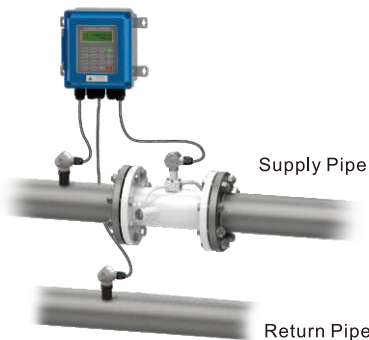
- No need to cut off water , no pressure loss.
- Connect clamp on temperature transducer,can finish the heat/energy measurement.
- Easy for installation.

Insertion



- No need to cut off water , no pressure loss.
- Stable and reliable for long term operation.
- Connect Pt100 temperature transducer, can finish the heat/energy measurement.

Pipe



- Need to cut off pipe
- With high accuracy and stability
- Connect Pt100 temperature transducer, can finish the heat/energy measurement

TUF-2000B Wall Mounted Ultrasonic Flowmeter

| Optional Transducers |

Please choose the suitable transducer, according to different liquid pipe condition and installation method, (please refer to the measuring diagram).

Types	Picture	Spec.	Model	Measurement Range	Temperature	Dimension	
Clamp on		Small Size	TS-2	DN25~DN100	-30~90℃	45×25×32mm	
		Medium Size	TM-1	DN50~DN700	-30~90℃	64×39×44mm	
		Large Size	TL-1	DN300~DN6000	-30~90℃	97×54×53mm	
High temp clamp on		Small Size	TS-2-HT	DN25~DN100	-30~160℃	45×25×32mm	
		Medium Size	TM-1-HT	DN50~DN700	-30~160℃	64×39×44mm	
		Large Size	TL-1-HT	DN300~DN6000	-30~160℃	97×54×53mm	
Insertion		Standard	TC-1	DN80~DN6000	-30~160℃	190×80×55mm	
		Lengthen	TC-2	DN80~DN6000	-30~160℃	335×80×55mm	
Pipe		π type	G1	DN15~DN32	-30~160℃	SUS304 thread connection	Please refer to detailed pipe dimensions
		Standard	G2	DN40~DN1000	-30~160℃	carbon steel thread connection	

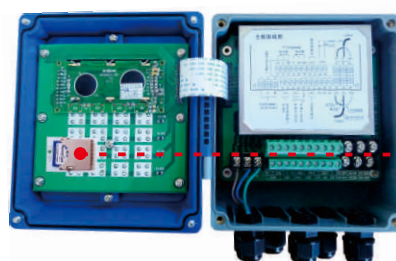
| Optional Temperature Transducers |

Connect the temperature transducer can finish the heat/energy measurement

Picture	Specification	Model	Meas. Range	Temperature	Cut of water	Accuracy
	Clamp on temperature Transducer Pt100	CT-1	≥DN50	-40~160℃	No	100℃ ± 0.8℃
	Insertion temperature Transducer Pt100	TCT-1	≥DN50	-40~160℃	Yes	
	Insertion Pt100 Installation with pressure	PCT-1	≥DN50	-40~160℃	No	
	Insertion Pt100 Small size pipe diameter	SCT-1	< DN50	-40~160℃	Yes	

| Optional SD card memory |

Convenience for long-term and large data storage. Available to do the data processing like tabulation, statistical, data analysis, printing reports and production flow curve by using data analysis software.



SD card optional

Optional Transducer for Ultrasonic Flow Meter

Optional Bracket Transducer

Mounting Bracket Clamp on		Small Size	HS	DN25~DN100	-30~90°C	318x59x85mm
		Medium Size	HM	DN50~DN300	-30~90°C	568x59x85mm
High Temperature Mounting Bracket Clamp on		Small Size	HS-HT	DN25~DN100	-30~160°C	318x59x110mm
		Medium Size	HM-HT	DN50~DN300	-30~160°C	568x59x110mm

Model of Pipe Transducer



G1 thread



G1 flange



G2 flange

Type	Picture	Spec.	Model	Measuring range	Temperature	Connect method	Dimension
Pipe		π-type	G1	DN15-32	-30~160°C	SUS304 thread connection	Please refer to detailed pipe dimensions
		Standard	G2	DN40-1000	-30~160°C	carbon steel flange connection	

Measuring Diagram



TUF-2000B Wall Mounted Ultrasonic Flowmeter

| Datasheet |

Items		Performance & Parameter
Converter	Principle	Transit-time ultrasonic flowmeter
	Accuracy	± 1%
	Display	2×20 character LCD with backlight, support the language of Chinese, English, Italy, Turkish
	Signal Output	1 way 4~20mA output, electric resistance 0~1K, accuracy 0.1%
		1 way OCT pulse output (Pulse width ~1000ms, default is 200ms)
		1 way Relay output
	Signal Input	3 way 4~20mA input, accuracy 0.1%, acquisition signal such as temperature, press and liquid level
		Connect the temperature transducer Pt100, can finish the heat/energy measurement
	Data Interface	Insulate Rs485 serial interface, upgrade the flowmeter software by computer, support the MODBUS
Special Cable	Twisted-pair cable, generally, the length under 50 meters; Select the RS485, transmission distance can over 1000m	
Pipe Installation Condition	Pipe Material	Steel, Stainless steel, Cast iron, Copper, Cement pipe, PVC, Aluminum, Glass steel product, liner is allowed
	Pipe Diameter	25~6000mm
	Straight Pipe	Transducer installation should be satisfied: upstream 10D, downstream 5D, 30D from the pump
Measuring Medium	Type of Liquid	Single liquid can transmit sound wave, such as Water (hot water, chilled water, city water, sea water, waste water, etc.); Sewage with small particle content; Oil (crude oil, lubricating oil, diesel oil, fuel oil, etc.); Chemicals (alcohol, etc.); Plant effluent; Beverage; Ultra-pure liquids, etc.
	Temperature	-30~160℃
	Turbidity	No more than 10000ppm and less bubble
	Flowrate	0~±7m/s
Working Environment	Temperature	Converter: -20~60℃; Flow Transducer: -30~160℃
	Humidity	Converter: 85% RH; Flow Transducer: can measure under water, water depth ≤2m (transducer sealed glue)
Power Supply	Dc8~36V or Ac85~264V (optional)	
Power Consumption	1.5W	
Dimension	132*150*85 mm (converter)	

| Ordering Code |

	Flow Transducer	Diameter	Pipe Material	Pressure	Cable Length	Temperature Transducer	SD card Memory
TUF-2000B	----- 	-DN mm	- 	-- MPa	- m	- 	-----
	TS-2		0 Carbon Steel			None	0 Yes
	TM-1		1 Stainless Steel			CT-1	1 No
	TL-1		2 Cast Iron			TCT-1	
	TS-2-HT		3 Glass Fiber reinforced			PCT-1	
	TM-1-HT		4 PVC			SCT-1	
	TL-1-HT		5 Cement				
	TC-1		6 Others				
	TC-2						
	G						

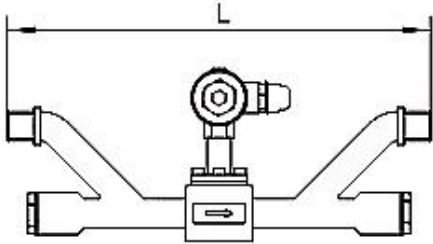
Example TUF-2000B+TM-1+DN300+0+1.6MPa+10m+PCT-1+0

PS: Standard configuration=TUF-2000B(converter)+TM-1+5M cable + Steel belt(DN200) + Couplant(1 pc)

Dimension

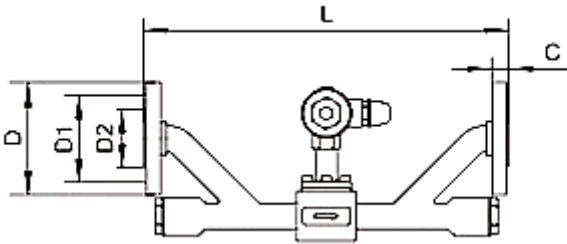
π-type pipe type transducer

- G1 thread



Nominal diameter (mm)	Pressure P	Length L	Connection Thread	Thread Effective length(mm)	Connection thread standard
DN15	2.5	320	G3/4B	18	GB/T7307-2001
DN20	2.5	360	G1BG1	15	
DN25	2.5	390	1/4BG1	16	
DN32	2.5	450	1/2B	22.5	

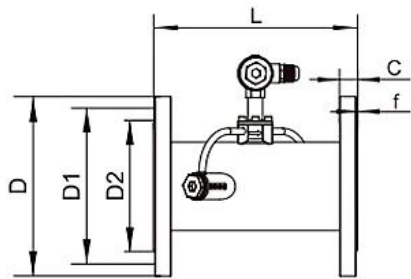
- G1 flange



Nominal diameter r (mm)	Pressure P	Length L	Flange size							Flange standa rd
			Outside diamet er D	Bolt hole center circle diameter D1	Bolt hole diameter x number Φ x n	Sealing surface diamet er D2	Flange thickness			
							C	f		
DN15	2.5	320	95	65	14x4	46	14	2	M12 x50	GB/T 9119- 2000
DN20	2.5	360	105	75	14x4	56	16	2	M12 x50	
DN25	2.5	390	115	85	14x4	65	16	2	M12 x50	
DN32	2.5	450	140	100	18x4	76	18	2	M12 x50	

Standard pipe type transducer

- G2 flange



Nominal diameter r (mm)	Pressure P	Length L	Flange size							Flange standard
			Outside diameter D	Bolt hole center circle diameter D1	Bolt hole diameter x number Φ x n	Sealing surface diameter D2	Flange thickness			
							C	f		
DN40	1.6	300	150	110	18x4	84	18	2	M16x60	
DN50	1.6	300	165	125	18x4	99	20	2	M16x70	
DN65	1.6	300	185	145	18x4	118	22	2	M16x70	
DN80	1.6	225	200	160	18x8	132	20	2	M16x70	GB/T 9119- 2000
DN100	1.6	250	220	180	18x8	156	22	2	M16x80	
DN125	1.6	275	250	210	18x8	184	22	2	M16x80	
DN150	1.6	300	285	240	22x8	211	24	2	M20x80	
DN200	1.6	350	340	295	22x12	266	26	2	M20x90	
DN250	1.6	450	405	355	26x12	319	28	2	M22x90	
DN300	1.6	500	460	410	26x12	370	32	2	M22x90	
DN350	1.0	550	500	460	23x16	428	28	4	M20x80	JB/T81- 94
DN400	1.0	600	560	515	25x16	482	30	4	M22x90	
DN450	1.0	700	615	565	25x20	532	30	4	M22x90	
DN500	1.0	800	670	620	25x20	585	32	4	M22x90	
DN600	1.0	1000	780	725	30x20	685	36	5	M27x110	
DN700	0.6	1100	860	810	25x24	775	32	5	M22x90	
DN800	0.6	1200	975	920	30x24	880	32	5	M27x100	
DN900	0.6	1300	1075	1020	30x24	980	34	5	M27x100	
DN1000	0.6	1400	1175	1120	30x28	1080	36	5	M27x100	