

Ultrasonic Flowmeter**GTUX-100****Mounting on external pipe**

- **Easy Setup:** Clamp-on; No pipe changes.
- **Simple Use:** No expertise needed; Manual-based.
- **No Downtime:** Zero pressure loss; Install while running.

GTC Global Co., Ltd.

Tel: 82.53.762.6668 Fax: 82.53.355.7295
E-mail: gtcinfo99@gmail.com
Add.: 121-3, Yutongdanji-ro 8-gil, Buk-gu, Daegu, Korea 41515

1. Overview

- **This Ultrasonic flowmeter** uses the world's most advanced time measurement chip (time resolution reached is a new generation of stable performance 50ps) external card flow watch.
- **The GTX's** structural design is very unique. It uses circular magnetic steel to achieve automatic engagement during installation. It only takes 2-3 minutes from installation to measurement; it also uses the current popular OLED display in low-light environments. Easy to read.
- **The GTX** is widely used in production process flow measurement and monitoring.
- While the application of the product continuously and accurately controls the flow of the fluid, it improves the yield of the product, and even saves personnel investment, bringing benefits to the production enterprise.

2. Application

GTUX-100 Ultrasonic flowmeter can be used in many industries, the meter used in the cleaning equipment industry, it is easy to install and operate, as well as stable measurement, and many industries are mainly used at semiconductors, food, medicine, beverages, detergents, printing and dyeing, chemicals, etc.



Many applications, many kinds of liquids, different viscosities.

With the field test method, the customer can always find a measurement solution, which makes the application more and more widespread.

3. Applicable fluid

Product measurement medium requirements: single medium, no bubbles, no impurities.

Main applications: tap water, pure water, ultrapure water, metering and control, due to the continuous promotion of the application industry, for all kinds of acids, alkalis, organic liquids, chemical solvents, alcohol, beverage water, etc.



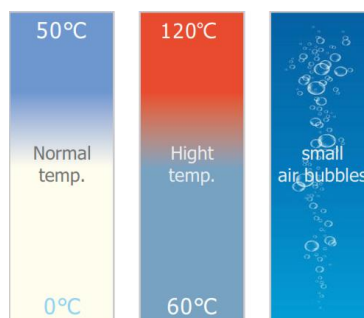
User feedback on measured media:

- dilute sulfuric acid
- White wine
- Hydrocarbon
- Alcohol
- Sodium chlorate
- Sodium carbonate
- Triethyl amyl alcohol
- Ethylenediamine
- Propylene oxide, etc.

As the market expands, we will also find that more and more media will be measured, and we hope that users will share more applications so that we can continue to enrich our products and improve them.

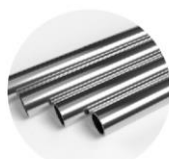
Determination of the measurable medium:

- Medium flow rate in the pipeline is stable
 - Pressure is maintained at 0.3 Mpa
 - No air bubbles (or cavitation) due to flow.
- There are many other media that have been measured, so please feel free to inquire.

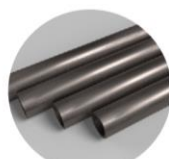


Measurable Pipe Materials

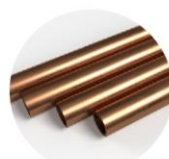
● Steel pipe



Stainless steel pipe



Carbon steel pipe

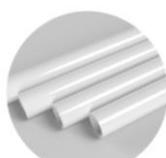


Copper pipe

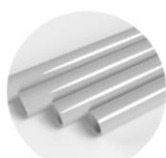
● Plastic pip



PVDF



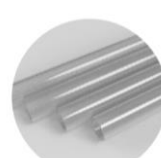
PVC/CPVC



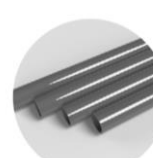
PPR



PPH

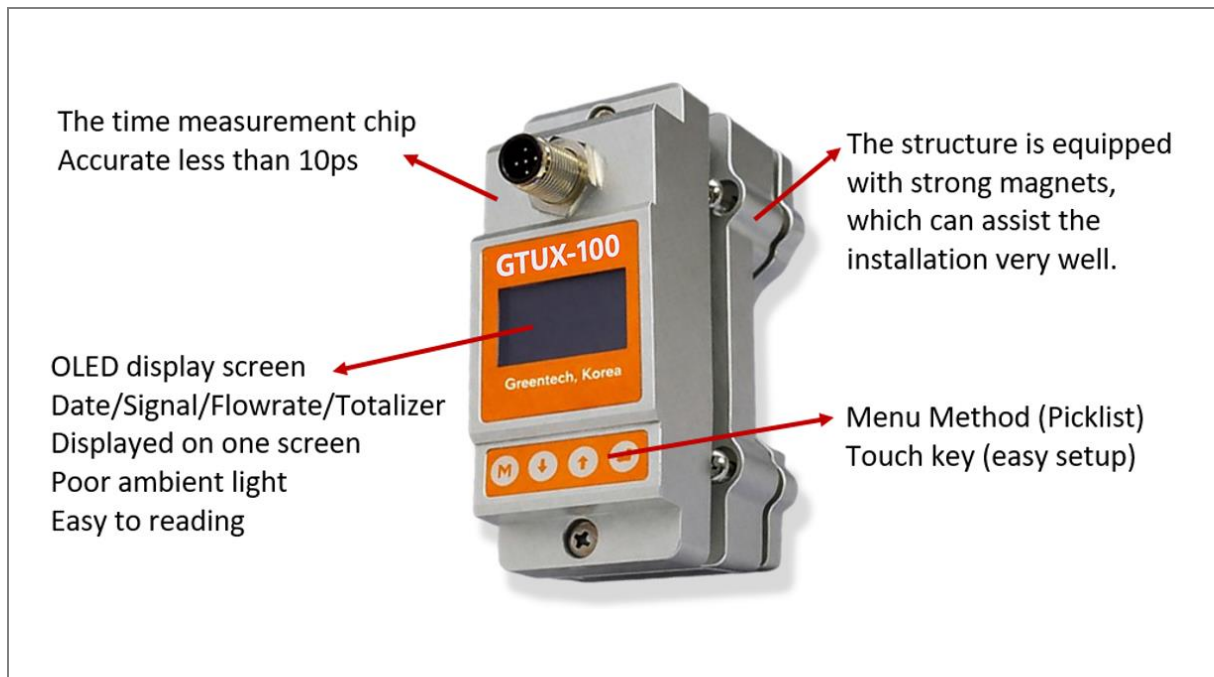


PFA/PU



HDPE

4. Meter introduction



5. Composition of each type

1) Diredct general version / 0~50°C

(DS)



Measuring unit



Base bracket



Signal Cable

2) Direct anti version for corrosive/ The whole is coated by PTFE

(DA)



Measuring unit



Base bracket



Signal Cable



3) Serperate general version/ 0~70°C

(SS)



Measuring unit



Base bracket



Signal Cable



Sensor

4) Serperate Anti version for corrosive/ Coated by PTFE / 0~70°C

(SA)



Measuring unit



Base bracket



Signal Cable



Sensor

5) Serperate high temperature version/ 0~120°C

(ST)



Measuring unit



Base bracket



Signal Cable



Sensor

**6) Serperate high temperature and anti version for corrosive/
Coated by PTFE/ 0~120°C**

(STA)



Measuring unit



Base bracket



Signal Cable



Sensor

6. Specifications

Product	Clamp On Type Ultrasonic Flow Meter
Accuracy	±2.0% (at 0.3m/s to 5.0m/s)
Flow range	0.1m/s~5.0m/s
Linearity	±2.0% (at 0.3m/s to 5.0m/s)
Repeatability	0.8%
Response	500ms
Display screen	1.3" 128*64 OLED can 180 spins (easy to read)
Language	English
Display unit	Metric and English units are available, m³/h, LPM, GPM, LPH Default unit setting: m³/h
Display data	Flow rate, Flow velocity, net totalizer, single totalizer, day-month-year totalizer
Number of displays	Display 7 digits
Data storage	10 years, 64 months, 64 days
Keypad	4 touch key
Calendar battery	CR1220
Power supply	24VDC@3W
Analog output	4 ~ 20mA, Maximum load: 600Ω
Communication	RS485, support Modbus RTU protocol
Alarm output	OCT, Upper and lower limit alarm function (option)
Relay output	30VDC@1A, switching frequency less than 2Hz (Option)
Medium	Water, Chemical solvents etc (inclusions less 4%)
IP Grade	IP54/ IP65
Installation	● Compact type: upper and down bracket ● Separate type: upper and down bracket and measure unit tightened by screws
Pipe range	OD9.53~OD110 (DN6~DN100)
Housing material	Aluminum alloy
Medium temp.	● Compact type : -10°C~50°C ● Separate type : -10°C~70°C ● Separate type (Hi-temp./Anti) : -10°C~120°C
Environment temp.	-10°C~50°C
Environment humidity	0~95% relative humidity, without condensation
Viscosity	<300CST (mm²/s)
Cable length	Standard length: 2m (Max. 20m.)

7. Measuring range and pipe size.

This product can measure steel pipes and plastic pipes, but the outer diameter of pipes is different for different standards.

We have taken these factors into account in the design, and the structure can be compatible Minimum and maximum outer diameters, when ordering, please pay attention to whether the minimum outer diameter and the maximum outer diameter are on-site pipe diameters.

Size	Model	GTUX-100-6	GTUX-100-8	GTUX-100-15	GTUX-100-20
	Unit	-9.53	-12.7	-15	-20
OD	mm	Ø9.53	Ø12.7	Ø15	Ø20
DN	DN	DN6	DN8	DN10	DN15
NB	NPS	1/8"	1/4"	3/8"	1/2"
Range of OD	mm	9~15	9~15	15~21	15~21
Flow range	L/min	0.17~8.48	0.30~15	0.47~24	1.06~53
Flow range	m³/h	0.01~0.51	0.02~0.90	0.03~1.41	0.06~3.18

Size	Model	GTUX-100-20	GTUX-100-25	GTUX-100-32	GTUX-100-40
	Unit	-25	-32	-40	-50
OD	mm	Ø25	Ø32	Ø40	Ø50
DN	DN	DN20	DN25	DN32	DN40
NB	NPS	3/4"	1"	1 1/4"	1 1/2"
Range of OD	mm	21~28	28~36	36~44	44~52
Flow range	L/min	1.88~94	2.95~147	4.83~241	7.54~377
Flow range	m³/h	0.11~5.68	0.18~8.84	0.29~14.5	0.45~22.6

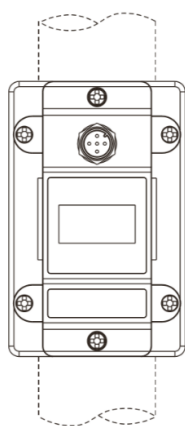
Size	Model	GTUX-100-50	GTUX-100-65	GTUX-100-80	GTUX-100-100
	Unit	-63	-75	-90	-110
OD	mm	Ø63	Ø75	Ø90	Ø110
DN	DN	DN50	DN65	DN80	DN100
NB	NPS	2"	2 1/2"	3"	4"
Range of OD	mm	52~66	66~80	80~95	100~115
Flow range	L/min	11.8~589	19.9~995	30.2~1508	47.1~2356
Flow range	m³/h	0.71~35.3	1.19~59.7	1.81~90.5	2.83~141

*The measurable flow range is (0.1m/s~5.0m/s), and the accuracy flow range is (0.3m/s~5.0m/s).

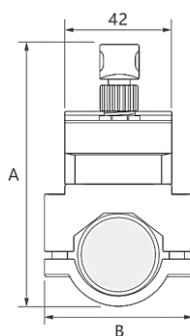
8. Dimension/ Model code

● Compact type

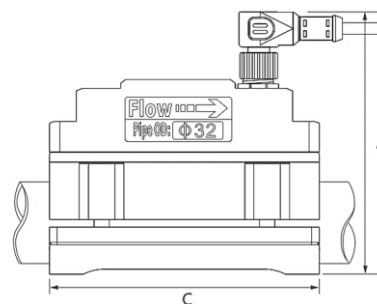
Model	DN	NB	OD (mm)	A max (mm)	B (mm)	C (mm)
GTUX-100-6	DN6	1/8"	9-15	98	54	106
GTUX-100-8	DN8	1/4"	9-15	98	54	106
GTUX-100-10	DN10	3/8"	15-21	95	54	106
GTUX-100-15	DN15	1/2"	15-21	95	54	106
GTUX-100-20	DN20	3/4"	21-28	103	54	106
GTUX-100-25	DN25	1"	28-36	111	62	106
GTUX-100-32	DN32	1 1/4"	36-44	119	70	106
GTUX-100-40	DN40	1 1/2"	44-52	127	78	106
GTUX-100-50	DN50	2"	52-66	144	92	130
GTUX-100-65	DN65	2 1/2"	66-80	158	106	136
GTUX-100-80	DN80	3"	80-95	173	121	150
GTUX-100-100	DN100	4"	100-115	193	141	174



Front view



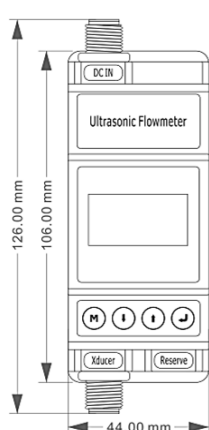
End view



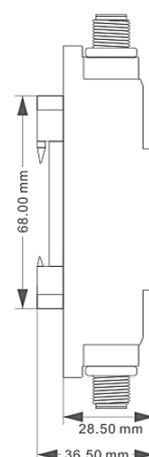
Side view

● **Separate type**

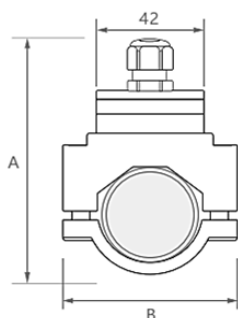
Model	DN	NB	OD (mm)	A max (mm)	B (mm)	C (mm)
GTUX-100-6	DN6	1/8"	9.53~12.7	75	58	106
GTUX-100-8	DN8	1/4"	12.7~14	75	58	106
GTUX-100-10	DN10	3/8"	14~17	75	58	106
GTUX-100-15	DN15	1/2"	17~20	81	58	106
GTUX-100-20	DN20	3/4"	22~30	81	58	106
GTUX-100-25	DN25	1"	30~35	86	58	106
GTUX-100-32	DN32	1 1/4"	38~45	96	68	106
GTUX-100-40	DN40	1 1/2"	48~54	105	78	106
GTUX-100-50	DN50	2"	58~68	121	91	130
GTUX-100-65	DN65	2 1/2"	68~78	134	105	136
GTUX-100-80	DN80	3"	88~96	149	119	150
GTUX-100-100	DN100	4"	108~116	172	143	174



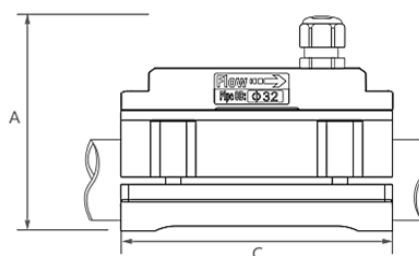
Front view



Side view



End view



Side view

9. Pipe design and installation

When selecting a measurement site, it is important to select an area where the fluid flow profile is fully developed to guarantee highly accurate measurement. Please follow these guidelines for selecting a proper measurement installation site:

Choose a section of pipe which is always full of liquid, such as a vertical pipe with flow in the upward direction or a full horizontal pipe.

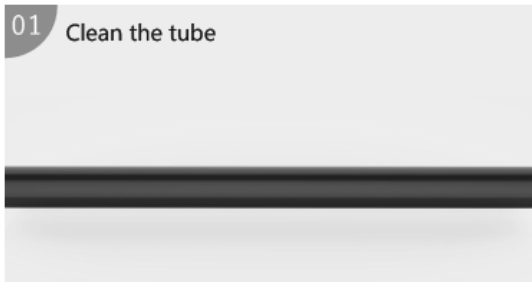
Make sure that the pipe surface temperature at the measuring point is within the transducer temperature limits. Consider the inside condition of the pipe carefully. If possible, select a section of pipe where the inside is free of excessive corrosion or scaling.

Examples acceptable measurement site selection are shown in the figure below.

Site	Installation point front straight section	Straight pipe section after installation point
Elbow		
Tee		
Expanded pipes		
Reducing pipe		
Valve		
Pump		
Note: D is the outer diameter of the pipe		

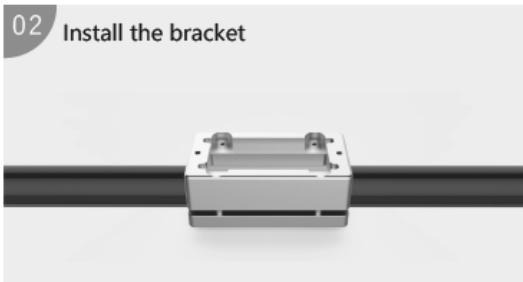
10. Installation

01 Clean the tube



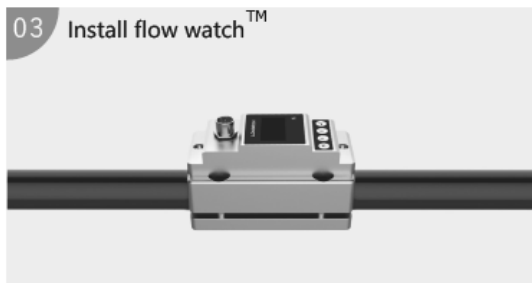
Make sure no dirt, paint, or other stains on the surface of the tube.

02 Install the bracket



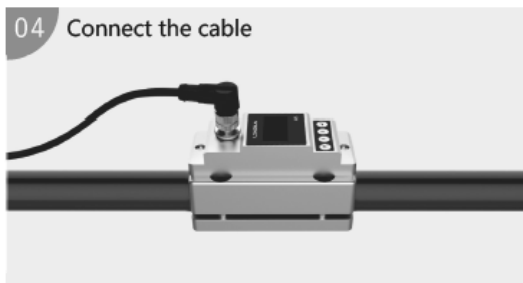
Align flow meter to the pipe position, Install screw on top part of the bracket, the bottom part of the bracket will automatically connect with the top part. tighten the four M4 screws.

03 Install flow watch™



Take the cover off the sensor, put the flow meter into Upper bracket, and tighten two M4 screws.

04 Connect the cable



Take out the cable, connect it to the socket, and tighten up.

05 Run the flow watch™

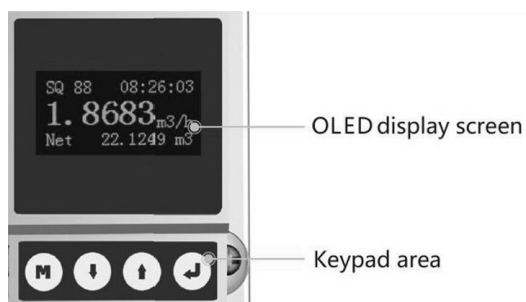


Please refer to the manual for cable connection; Power on and see if the $SQ \geq 50$ which indicates that the measurement has been stable.

11. Setting parameter

The products are calibrated in standard piping with the water before leaving the factory, all product achieves the Nominal accuracy (+/-2.0% accuracy).

There may be differences between the site piping and the standard piping, media, etc., the first installation needs to confirm the data, the operation is as follows:



press **M** To switch between setting and display modes, when setting modes press **M** To return to the upper- level menu; **Up** and **Down** Up and down Scroll display interface, set the mode, press **Down** For moving to the next digit, press **Up** To select a number, loop from 0 to 9 in the end press **Enter** notarize. **Enter**

Setup operation

19-07-10 08:25
1.057 m/s
Net 5897.3 m3

Setup menu
0. Pipe parameter
1. System setting
2. Calibration

Main screen press **M** ,into setup menu.

Pipe Setting
0. Outer diameter
1. Wall thickness
2. Material

Outer diameter
48.00 mm

Press **Enter** , into 0.pipe setting.
Press **Enter** , into 0.outer diameter.
Press **Down** shift, press **Up** adjusted value , press **Enter** confirm.

Pipe Setting
0. Outer diameter
1. Wall thickness
2. Material

Wall thickness
3.50 mm

Press **M** , return to 0.Pipe Setting.
Press **Down** and **Enter** , into 1.Wall thickness.
Press **Down** shift , press **Up** adjusted value , press **Enter** confirm.

Pipe Setting
0. Outer diameter
1. Wall thickness
2. Material

Material
2. Steel

Press **M** , return to 0.Pipe Setting.
Press **Down** and **Enter** , into 2.Material.
Press **Enter** select , PVC\Steel\Copper... etc, press **Enter** confirm.

Pipe Setting
1. Wall thickness
2. Material
3. Fluid type

Fluid type
0. Water

Press **M** , return to 0.Pipe Setting.
Press **Down** and **Enter** , into 3.Fluid type.
Press **Enter** select , Water, Oil... etc, press **Enter** confirm.

12. Ordering code

GTX series Clamp On Type Ultrasonic Flow Meter		
Model & Size	GTUX-100-6	Please select one.
	GTUX-100-8	
	GTUX-100-10	
	GTUX-100-15	
	GTUX-100-20	
	GTUX-100-25	
	GTUX-100-32	
	GTUX-100-40	
	GTUX-100-50	
	GTUX-100-65	
	GTUX-100-80	
	GTUX-100-100	
Meter type	DS	Diredct general version / 0~50°C
	DA	Direct anti version for corrosive/ 0~50°C.
	SS	Serparate general version/ 0~70°C
	SA	Serparate anti version for corrosive/ 0~70°C.
	ST	Serperate high temperature version/ 0~120°C
	STA	Serperate high temperature and anti version for corrosive/ 0~120°C

In addition to the whole series of products, there are also Separate type, Separate high-temp type, anti- corrosion type, PP material to choose from, if you are interested, please contact us.