
pFlow

Ultrasonic Portable Series

# Clamp-on Ultrasonic Flow Meter P118i

Gentos Measurement & Control Co., Ltd.

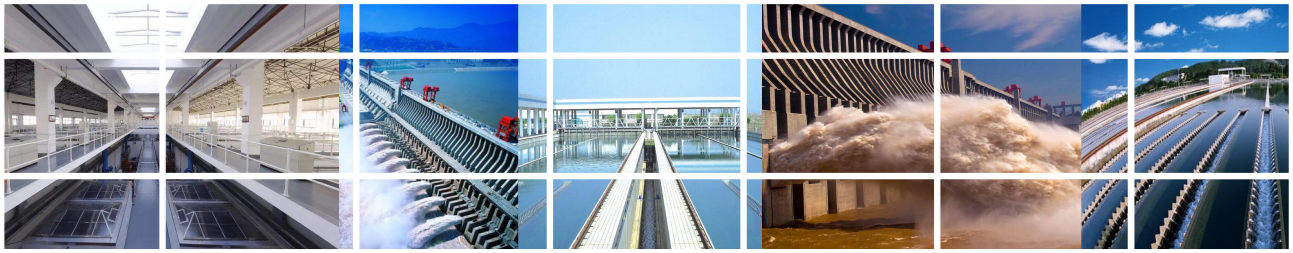
# ABOUT P118i
# FEATURES AND CASES


P118i Portable Ultrasonic Flowmeter enables the user to do flow measurement checks at many points in a flowprocess without the need for a permanent installation.

This ultrasonic flowmeter adopts Gentos unique PICOFLY time measurement technology, which could make the resolution reach to 10 picoseconds (0.01 nanosecond). It realizes the high respondence and high accuracy ultrasonic measurement technology and application.

Comparing with other traditional flowmeter or ultrasonic flowmeter, it has distinctive features such as high precision, high reliability, high capability and low cost, the flowmeter features other advantages:

PICOFLY technology designed. Less hardware components, low voltage broadband pulse transmission, low consumption power. Clear, user-friendly menu selections make flowmeter simple and convenient to use. Daily, monthly and yearly totalized flow. Parallel operation of positive, negative and net flow totalizes with scale factor (span) and 7 digit display.



# ABOUT P118i SPECIFICATION

## PERFORMANCE SPECIFICATIONS

| | |
|---|---|
| Flow range | ±0.03 ~ ±40 ft/s (±0.01~ ±12 m/s) |
| Accuracy | ±0.5% of measured value |
| Repeatability | 0.15%. |
| Linearity | ±0.5%. |
| Pipe Size | Clamp-on:0.6″~ 240″ (15mm~6000mm) |

## FUNCTION SPECIFICATIONS

| | |
|---|---|
| Outputs | Analog output: 4~20mA, Max 750 Ω. |
| SD card | Storage: 8GB;<br>Max: 512 files;<br>Interval: 1 ~ 60 seconds. |
| Power supply | Rechargeable Lithium Battery Power<br>( continuous operation of mainbattery 10 hours ). |
| Keypad | Tactile Keys. |
| Display | 3.5 inch TFT screen( 320 × 240 ),<br>backlit LCD. |
| Temperature | Transmitter:14℉~122℉(-10℃~50℃)<br>Transducer:40℉~176℉(-40℃~80℃) |
| Humidity | 0 to 99% RH,non-condensing |

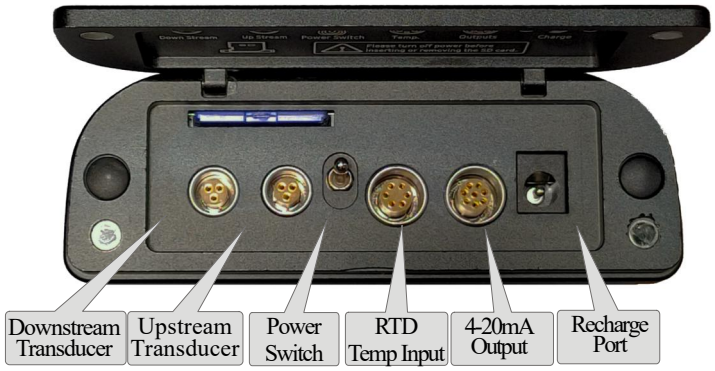
## PHYSICAL SPECIFICATIONS

| | |
|---|---|
| Transmitter | NEMA13 ( IP54 ). |
| Transducer | Encapsulated design, IP68;<br>Standard cable length: 5m. |
| Weight | Transmitter:approximately1.0kg. |

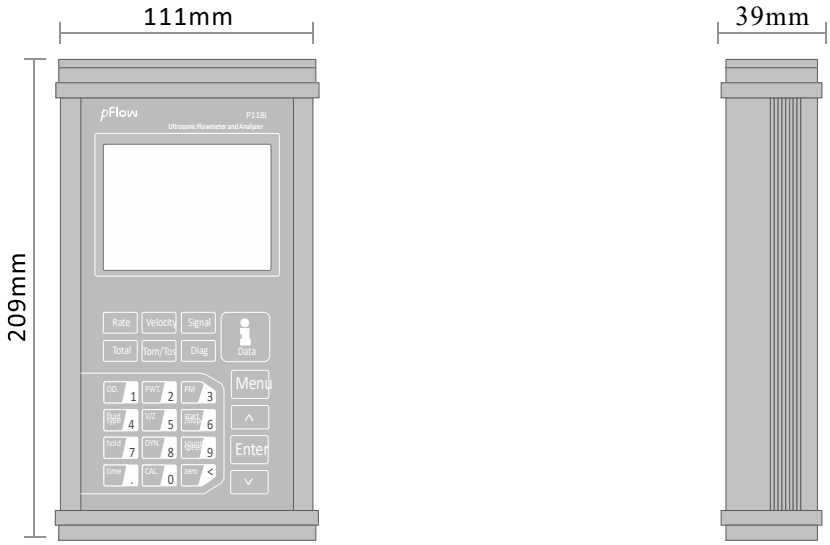
| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Suitcase | Transmitter and Transducer | Pipe strips | Coupling compound | Tape Measure |

# ABOUT P118i
# INTERFACE AND SIZE

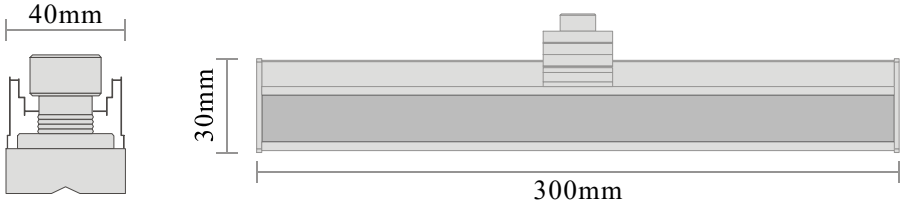
## WIRING DIAGRAM




## Transmitter Dimensions



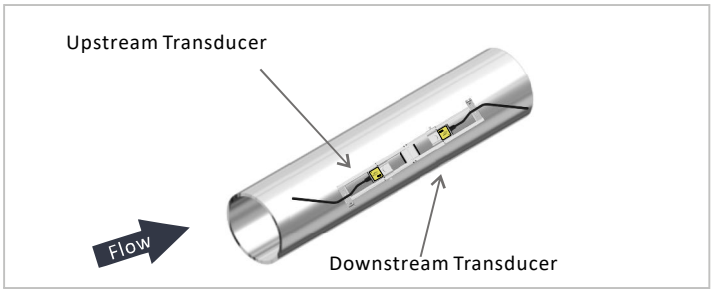

## Transducer



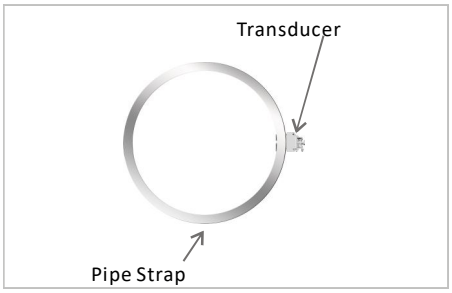
# ABOUT P118i TRANSDUCER INSTALLATION METHODS

## V method measuring pipe size : 50mm-400mm

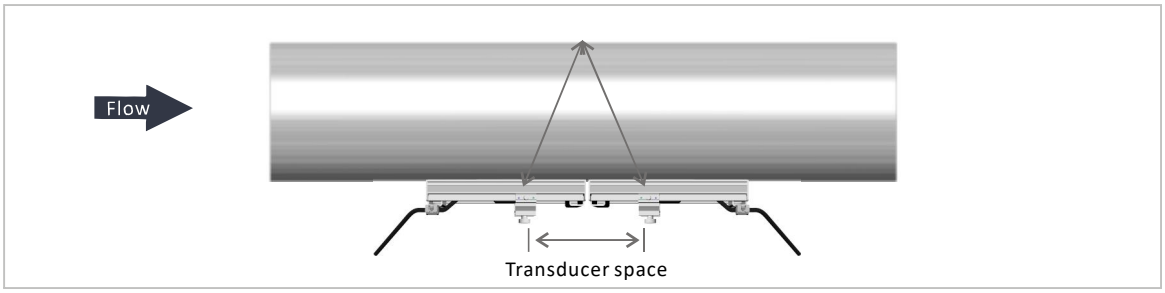
Side View




Section

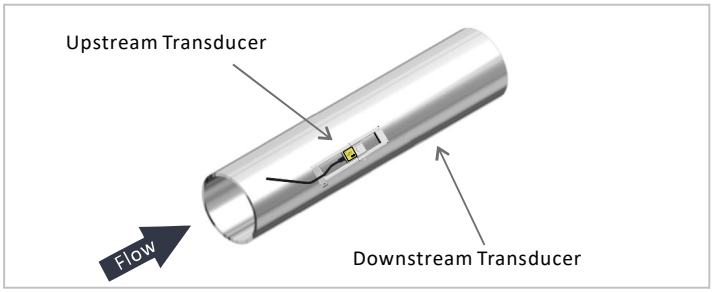



Top View

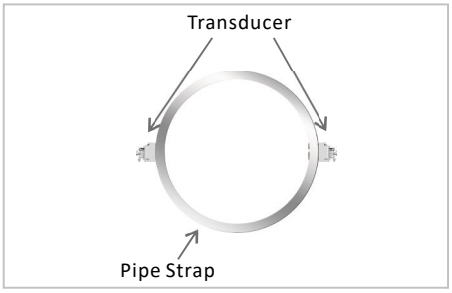



## Z method measuring pipe size: 25mm-1200mm

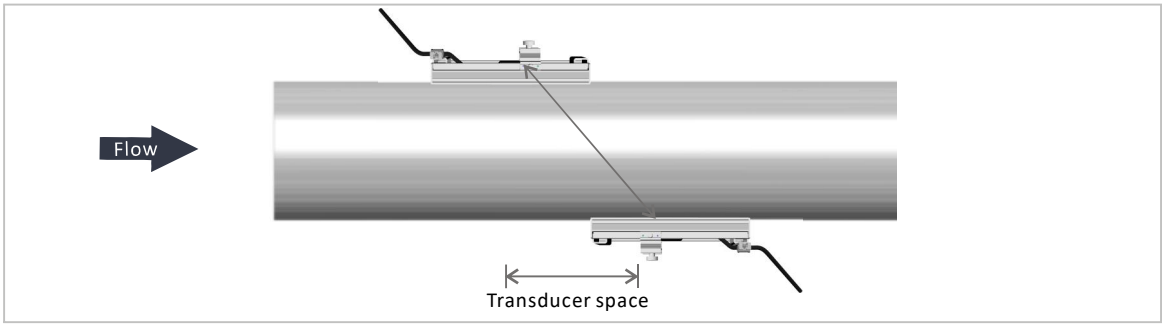
Side View




Section




Top View



# ABOUT P118i INSTALLATION SITE SELECTION

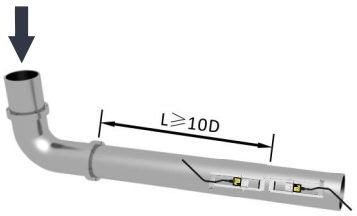
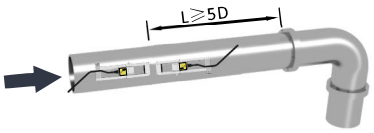
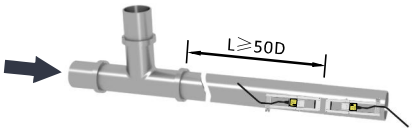
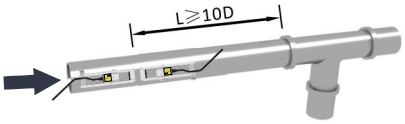
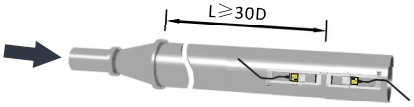
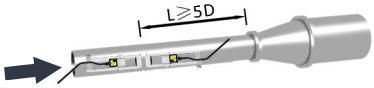
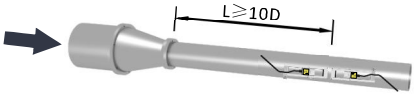
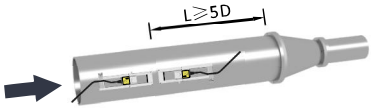
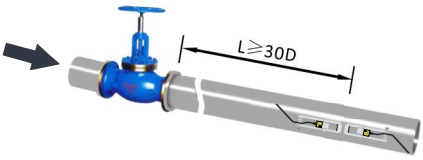
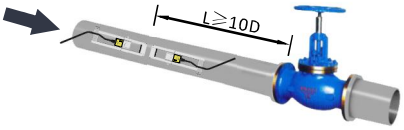
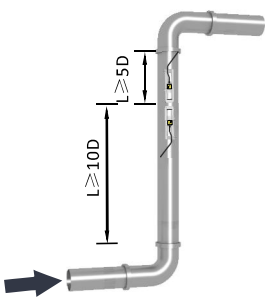
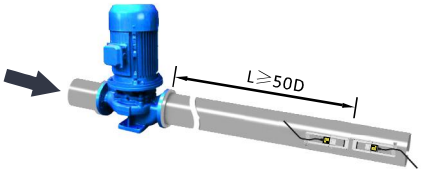
When selecting a measurement site, it is important to select an area where the fluid flow profile is fully developed to guarantee a highly accurate measurement. Use the following guidelines to select a proper installation site:

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

Ensure enough straight pipe length at least equal to the figure shown below for the upstream and downstream transducers installation.

Ensure 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.

| | STRAIGHT LENGTH OF UPSTREAM PIPING | STRAIGHT LENGTH OF DOWNSTREAM PIPING |
|---|---|---|
| 90° Bend |  |  |
| Tee |  |  |
| Diffuser |  |  |
| Reduce |  |  |
| Valve |  |  |
| Vertical |  |  |

# ABOUT P118i
# ORDERING INFORMATION

| MODEL | DESCRIPTION |
|---|---|
| P118i | Portable Ultrasonic Flowmeter<br>Installation method: Handheld<br>8G SD card high memory data logging,<br>maximum memorize 512 days data.<br>Flow Range: ±0.03 ft/s ~ ±40 ft/s (±0.01 m/s~ ±12 m/s)<br>Accuracy: ±0.5%<br>Repeatability: 0.1%<br>Output: 4-20mA<br>Internal lithium power supply: 10hours<br>Pipe size range: 0.6″~48″(15mm~6000mm)<br>Transducer: IP54, CP magnet portable transducer, 5m cable |

| CODE | OUTPUT |
|---|---|
| 1 | 4-20mA/RS485/OCT Pulse/Relay |
| 2(optional) | 4-20mA/RS485/OCT Pulse/Relay,<br>RTD Temp.input,Temperature: 32℉~+140℉(0℃~ +100℃) |

| CODE | TYPE OF TRANSDUCERS |
|---|---|
| P010 | P type magnet portable transducer<br>Operating temperature:40℉~176℉(-40℃~80℃) |
| PH020 (optional) | PH type High temperature Clamp on transducer, 10ft (3m)cable<br>Installation: Clamp on<br>Outer Shell: stainless steel<br>Measurement range: 1″ ~ 48″ (25mm ~ 1200mm)<br>Temperature: -40℉ ~ +302℉(-40℃ ~ +150℃) |

| CODE | TRANSDUCER CABLE LENGTH |
|---|---|
| 016 | P type of cable Standard 16ft (5m) |
| xx | Maximum lengthen to 305m, per 5m is a lengthen unit. |

| CODE | TRANSDUCER CABLE LENGTH |
|---|---|
| 010 | PH type of cable ,Standard 10ft (3m) |

| CODE | TYPE OF TEMPERATURE SENSOR |
|---|---|
| PT1000(optional) | PT1000 Temperature sensor (0℃~ +100℃) |

Standard Model: P118i-P010-016
Description: Portable P118i with P010 transducers, 4-20mA/RS485/OCT Pulse/Relay, 5m cable.

**Gentos Measurement & Control Co., Ltd.**

12/F, Block A5. Nanshan Ipark, No.1001 College Rd.
Nanshan District. Shenzhen, China

UAE -Support
E-mail: Sales@measurmart.com

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