

# pFlow

Ultrasonic Portable Series

## Clamp-on Ultrasonic Flow Meter P117



Gentos Measurement & Control Co., Ltd.

# ABOUT P117

## FEATURES AND CASES

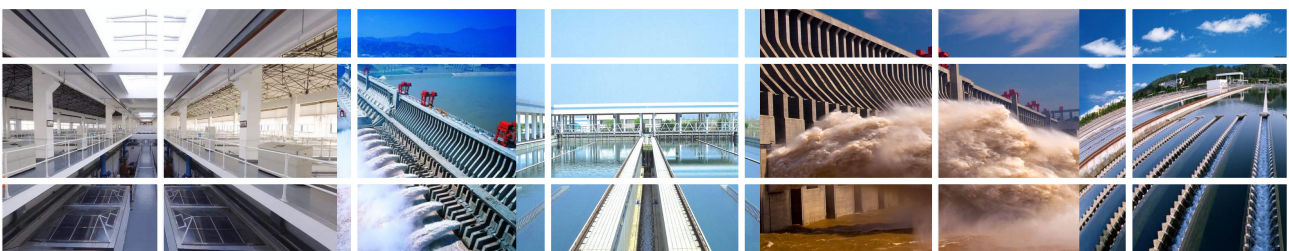


P117 Portable Ultrasonic Flowmeter enables the user to do flow measurement checks at many points in a flow process without the need for a permanent installation.

This universal transit-time meter features a dual-function push button interface, ergonomic handheld design and a beautiful 3.5in TFT backlit digital display that significantly simplifies setup and data collection.

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:

TVT 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, while the output of totalize pulse and frequency output are transmitted via relay and open collector.



# ABOUT P117 SPECIFICATION

## PERFORMANCE SPECIFICATIONS

|               |  |
|---------------|--|
| Flow range    | $\pm 0.03 \sim \pm 20$ ft/s ( $\pm 0.01 \sim \pm 6$ m/s) |
| Accuracy      | $\pm 1\%$  |
| Repeatability | 0.3%   |
| Linearity     | $\pm 1\%$  |
| Pipe Size     | Clamp-on: 1" ~ 48" in (25mm ~ 1200mm)                    |

## FUNCTION SPECIFICATIONS

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

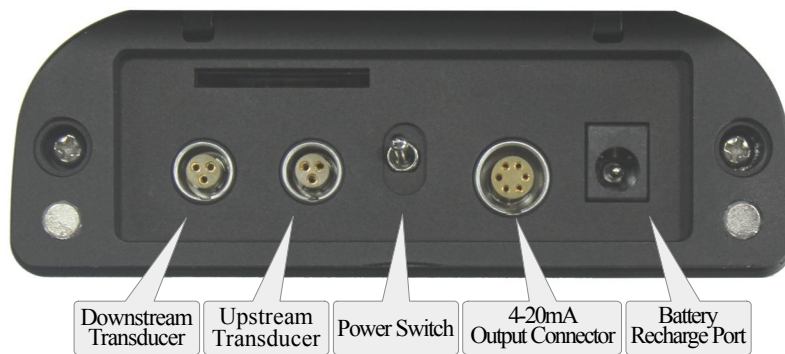
## PHYSICAL SPECIFICATIONS

|   |   |   |   |   |
|---|---|---|---|---|
| Transmitter   | NEMA13 ( IP54 ).  |   |   |   |
| Transducer  | Encapsulated design, IP68;<br>Standard cable length: 5m.                            |   |   |   |
| Weight  | Transmitter: approximately 1.0kg.   |   |   |   |
|  |  |  |  |  |
| Suitcase  | Transmitter and Transducer  | Pipe strips   | Coupling compound   | Card reader and SD card   |

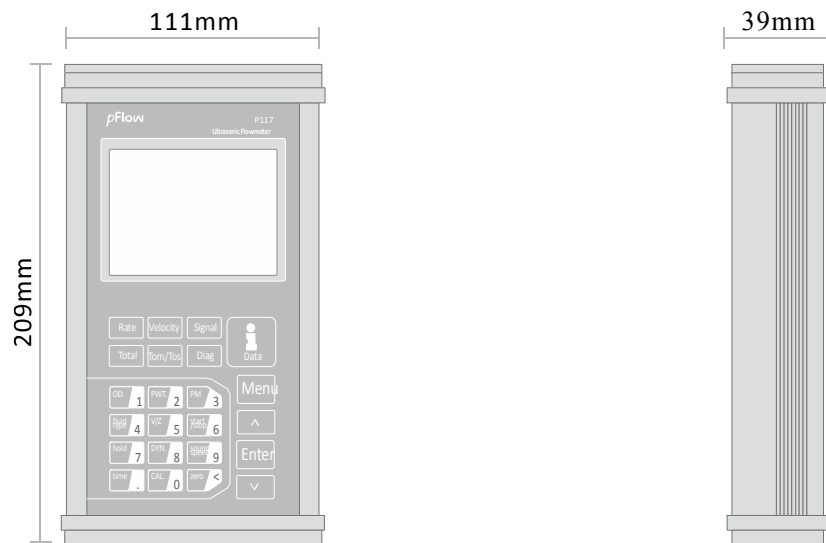
BOUT

## ABOUT P117 INTERFACE AND SIZE

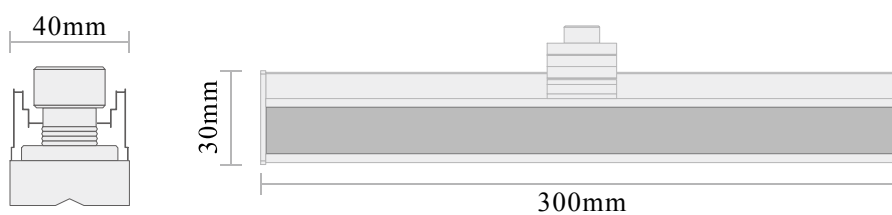
### WIRING DIAGRAM



### TRANSMITTER DIMENSIONS



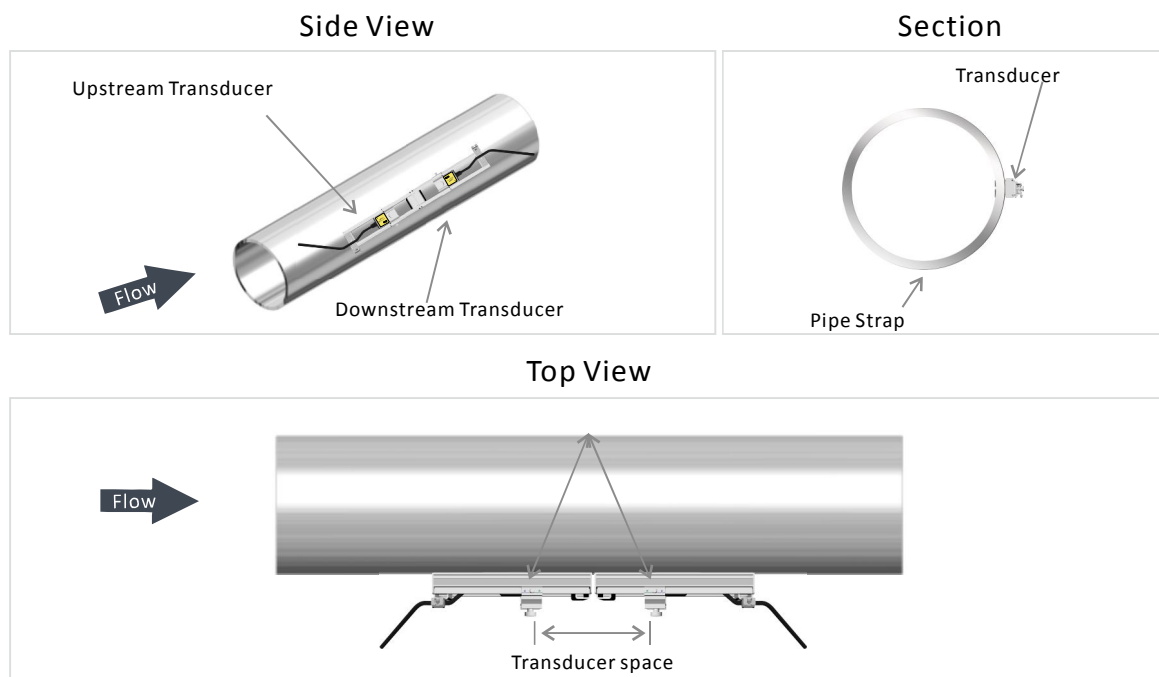
### TRANSDUCER



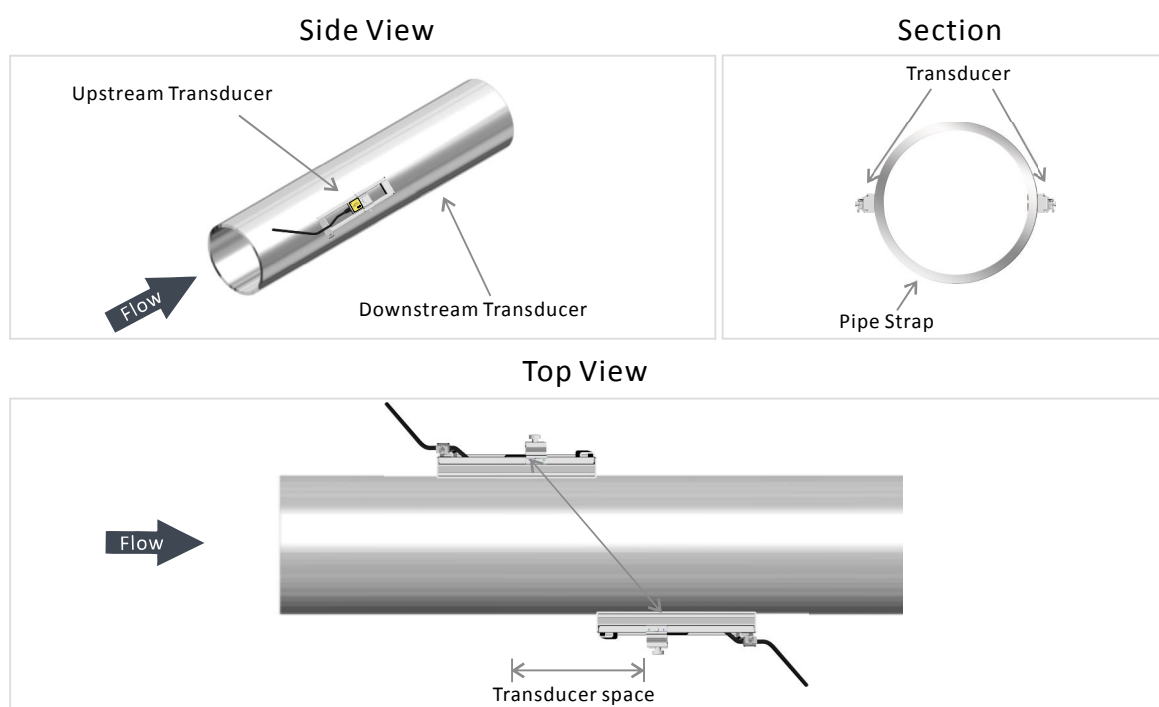


# ABOUT P117 TRANSDUCER INSTALLATION METHODS

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



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



# ABOUT P117 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.

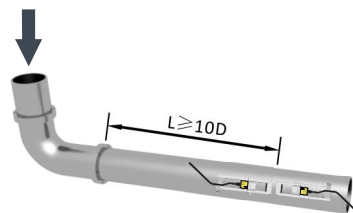
Ensure enough straight pipe length at least equal to the figure shown below for the upstream and downstream transducers installation.

Ensure that the pipe surface temperature at the measuring point is within the transducer temperature limits.

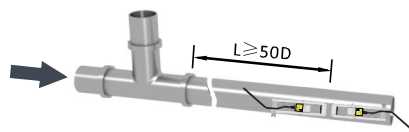
Consider the inside condition of the pipe carefully. If possible, select a section of pipe where the inside is free of excessive corrosion or scaling.

## STRAIGHT LENGTH OF UPSTREAM PIPING

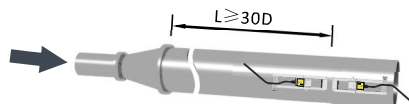
90° Bend



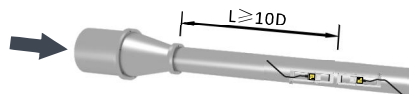
Tee



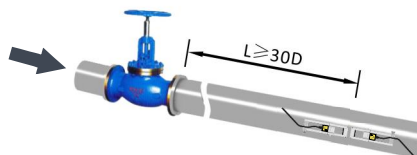
Diffuser



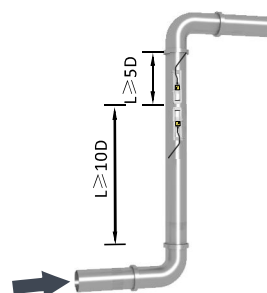
Reduce



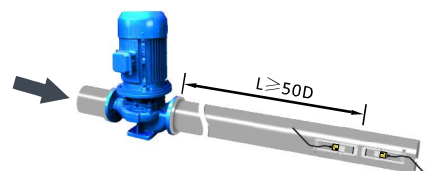
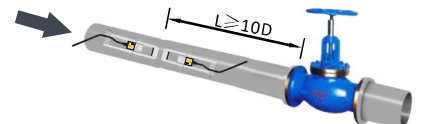
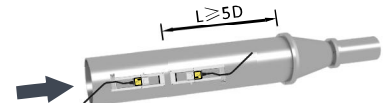
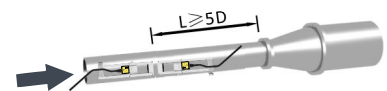
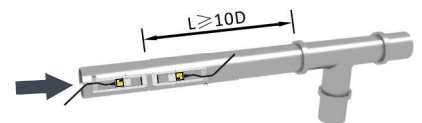
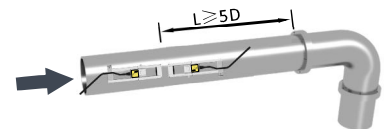
Valve



Vertical



## STRAIGHT LENGTH OF DOWNSTREAM PIPING



# ABOUT P117

## ORDERING INFORMATION

### MODEL

### DESCRIPTION

|      |   |
|------|---|
| P117 | Portable Ultrasonic Flowmeter<br>Installation method: Handheld<br>8G SD card high memory data logging,<br>maximum memorize 512 files data.<br>Flow Range: $\pm 0.03$ ft/s ~ $\pm 20$ ft/s ( $\pm 0.01$ m/s ~ $\pm 6$ m/s)<br>Accuracy: $\pm 1\%$<br>Repeatability: 0.3%<br>Output: 4-20mA<br>Internal lithium power supply: 10hours<br>Pipe size range: 1"~48" (25mm~1200mm)<br>Transducer: IP54, CP magnet portable transducer, 5m cable |
|------|---|

### CODE

### OUTPUT

|   |              |
|---|--------------|
| 1 | 4-20mA/RS485 |
|---|--------------|

### CODE

### TYPE OF TRANSDUCERS

|      |   |
|------|---|
| P011 | P type magnet portable transducer<br>Operating temperature: 40°F~176°F (-40°C~80°C) |
|------|---|

### CODE

### TRANSDUCER CABLE LENGTH

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

Standard Model: P117-P011-016

Description: Portable P117 with P011 transducers, 4-20mA/RS485, 5m cable.