

# FMU300 SERIES

## ULTRASONIC FLOW METER FOR SMALL PIPE

### FEATURES

- ⊙ Contactless clamp-on installation
- ⊙ Integrated or split type options
- ⊙ Works with multiple pipe materials
- ⊙ Media temperature up to 120°C
- ⊙ Clamp-on installation for quick setup
- ⊙ Optional Teflon anti-corrosion type



### INTRODUCTION

The FMU300 Series Small Pipe Ultrasonic Flow Meter offers precise, non-invasive flow measurement for pipes from small diameters upwards. Available in integrated and split types, it is compatible with a wide range of pipe materials including stainless steel, copper, carbon steel, PVDF, PVC/CPVC, PPR, PPH, PFA/PU, and HDPE. Designed for clean liquids such as water, chemicals, organic liquids, oils, and alcohols with stable flow speed, this meter ensures reliable performance without process interruption.

### SPECIFICATIONS

|                 |                                                                                                                                                                           |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flow speed      | 0.1m/s~5.0m/s                                                                                                                                                             |
| Pipe diameter   | DN6-DN200(ø9.53-ø220)                                                                                                                                                     |
| Power supply    | 24VDC                                                                                                                                                                     |
| Output signal   | 4-20mA(Maximum load 600Ω), RS485(MODBUS,RTU)                                                                                                                              |
| Accuracy        | 2.0%                                                                                                                                                                      |
| Alarm           | OCT up and low limitation output(Optional)                                                                                                                                |
| Display unit    | m³/h(Default), LPM, ml/min, GPM, LPH                                                                                                                                      |
| Display data    | Instantaneous flow rate, instantaneous flow velocity, net cumulative amount, single cumulative amount, daily maximum value, daily minimum value, annual cumulative amount |
| Measuring media | Water, chemicals, organic liquids (impurity content ≤4%)                                                                                                                  |
| Cumulative data | 7 digits flow accumulator                                                                                                                                                 |
| Medium temp.    | Integrated type:0~50°C, Split type: 0~70°C, Split high temp.: 70~120°C                                                                                                    |
| Suitable pipe   | stainless steel, copper, carbon steel, plastic                                                                                                                            |
| Cable length    | 2 meters (up to20m)                                                                                                                                                       |

## PRODUCT TYPES



Integrated type



Split type



Anti-corrosion type



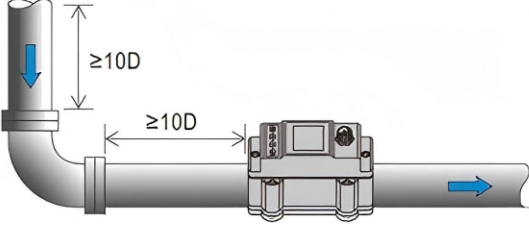
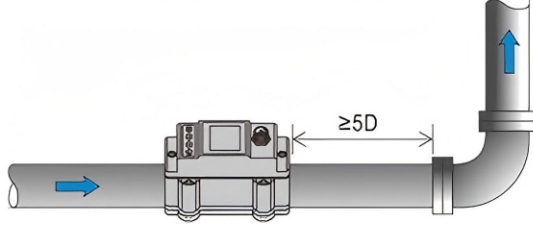
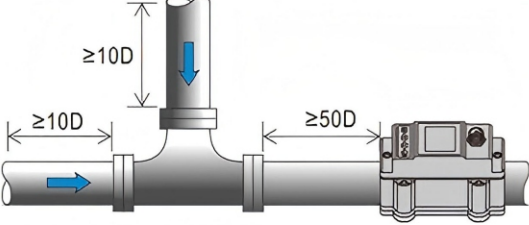
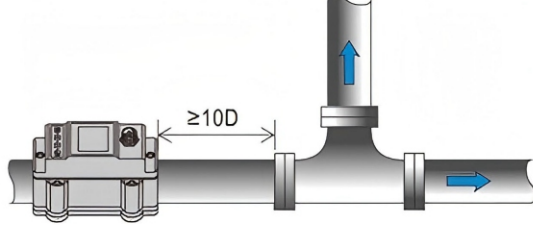
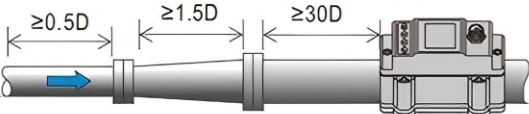
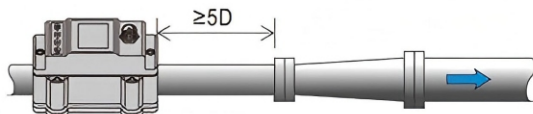
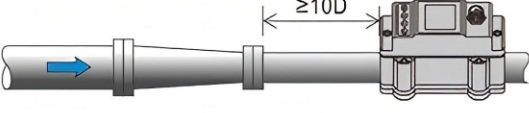
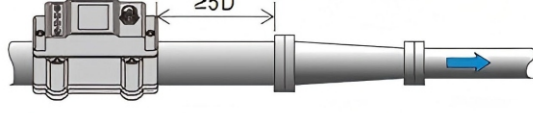
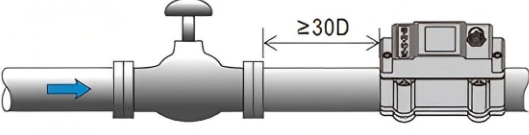
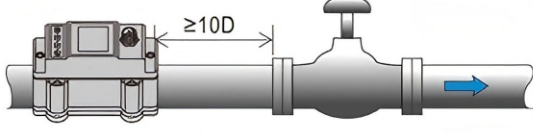
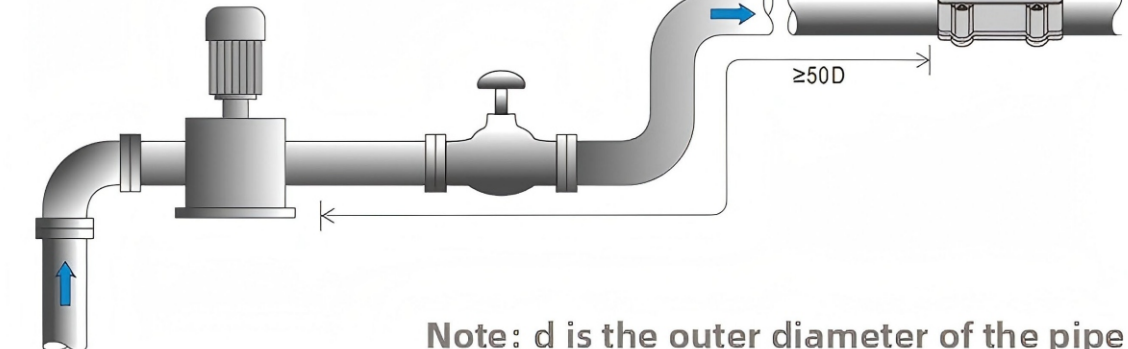
High Temperature type

## PIPE SIZE REFERENCE

| Size | Pipe diameter | Outer diameter range(mm) | Inner diameter (mm) | Thickness (mm) | Flow range        |            |
|------|---------------|--------------------------|---------------------|----------------|-------------------|------------|
|      |               |                          |                     |                | m <sup>3</sup> /h | (L/Kg)/min |
| 1/8" | φ9.53 (DN6)   | 9.53-12.7                | 6                   | 1.5            | 0.01-0.1          | 0.2-20     |
| 1/4" | φ12.7(DN8)    | 12.7—14                  | 8                   | 1.5            | 0.03-2            | 0.44-30    |
| 3/8" | φ15 (DN10)    | 14-17                    | 10                  | 1.5            | 0.03-3            | 0.57-50    |
| 1/2" | φ20 (DN15)    | 17-20                    | 15                  | 2              | 0.06-4            | 0.92-70    |
| 3/4  | φ25 (DN20)    | 22-30                    | 20                  | 2              | 0.08-10           | 1.36-150   |
| 1"   | φ32 (DN25)    | 30-35                    | 25                  | 2              | 0.16-15           | 2.71-200   |
| 1.2" | φ40 (DN32)    | 38-45                    | 32                  | 2              | 0.25-20           | 4.24-330   |
| 1.5" | φ50 (DN40)    | 48-54                    | 40                  | 2              | 0.41-30           | 6.8-460    |
| 2"   | φ63 (DN50)    | 58-68                    | 50                  | 2              | 0.57-50           | 9.54-700   |
| 2.5" | φ75 (DN65)    | 68-78                    | 65                  | 3              | 0.89-60           | 14.8-1030  |
| 3"   | φ90 (DN80)    | 88-96                    | 80                  | 3              | 1.31-80           | 21.8-1360  |
| 4"   | φ110 (DN100)  | 108-116                  | 100                 | 4              | 2.19-130          | 36.5-2170  |
| 5"   | φ140 (DN125)  | 132-142                  | 125                 | 4              | 3.87-230          | 64.5-3800  |
| 6"   | φ160 (DN150)  | 158-168                  | 150                 | 5              | 5.78-330          | 96.4-5520  |
| 8"   | φ220 (DN200)  | 218-228                  | 200                 | 6              | 11.7-640          | 194-10690  |

## INSTALLATION

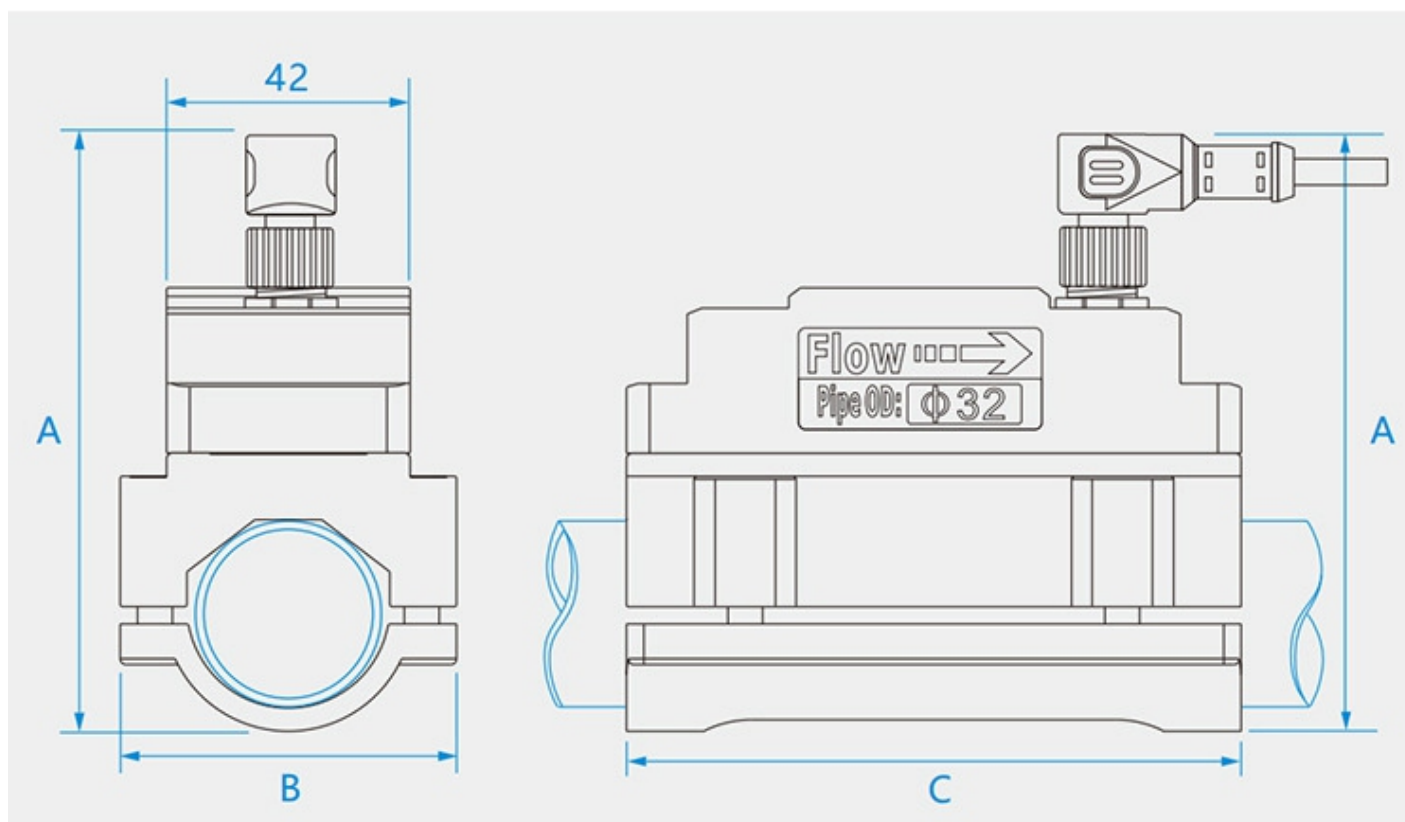
Select a section of pipeline that is always filled with liquid, such as a vertically upward-flowing pipe or a horizontally flowing pipe. Ensure the pipe surface temperature at the measuring point is within the sensor's temperature range. Carefully assess the internal condition of the pipe. If possible, choose a section where there is no excessive corrosion or scaling inside.

| Installation point | Straight pipe sections before installation                                           | Straight pipe section after installation point                                       |
|--------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Elbow              |     |    |
| Branch connection  |    |   |
| Expander           |   |  |
| Reducer            |   |  |
| Value              |   |  |
| Pump               |  |                                                                                      |

Note: d is the outer diameter of the pipe

## DIMENSION

### Integrated type



| Pipe Size | Diameter | Size | OD Range(mm) | A(mm) | B(mm) | C(mm) Max |
|-----------|----------|------|--------------|-------|-------|-----------|
| -φ9.53    | DN6      | 1/8" | 9.53-12.7    | 97    | 58    | 106       |
| -φ12.7    | DN8      | 1/4" | 12.7-14      | 97    | 58    | 106       |
| -φ15      | DN10     | 3/8" | 14-17        | 97    | 58    | 106       |
| -φ20      | DN15     | 1/2" | 17-20        | 103   | 58    | 106       |
| -φ25      | DN20     | 3/4" | 22-30        | 103   | 58    | 106       |
| -φ32      | DN25     | 1"   | 30-35        | 108   | 58    | 106       |
| -φ40      | DN32     | 1.2" | 38-45        | 118   | 68    | 106       |
| -φ50      | DN40     | 1.5" | 48-54        | 127   | 78    | 106       |
| -φ63      | DN50     | 2"   | 58-68        | 143   | 91    | 130       |
| -φ75      | DN65     | 2.5" | 68-78        | 156   | 105   | 136       |
| -φ90      | DN80     | 3"   | 88-96        | 171   | 119   | 150       |
| -φ110     | DN100    | 4"   | 108-116      | 194   | 143   | 174       |

