



# HFUM Handheld Ultrasonic Flow Meter

Flow-HFUM

[www.eyc-tech.com](http://www.eyc-tech.com)

## | Features |

- High accuracy, better than 1%
- Wide measuring range
- Support data storage
- Convenience for routing inspection

## | Introduction |

HFUM handheld ultrasonic flow meter is designed to work with clamp-on sensors to measure the liquid flow within a closed pipe without any insertion mechanical parts. Mainly be used for routing inspection or pipe monitoring, very convenience for use. It is controlled by a micro-processor system which contains a wide range of data that enables it to be used with pipes with an outside diameter ranging from 15 mm up to 6000 mm (Depending on model) and constructed of almost any material.

## | Applications |

Piping systems / Energy-saving monitoring / Water-saving management / Industrial use / Semiconductor manufacturing / Food manufacturing industry / Cooling tower / Power plant

## | Specification |

### Input

Velocity range 0 ...  $\pm 10$  m/s

### Output

Output signal 1 channel OCT pulse output, pulse width 6 ... 1000 ms (Default is 200 ms)

Accuracy  $\pm 1\%$

Communication Isolation of 232 communication interface, can upgrade flow meter through PC

Power supply Three internal 1.2 V, 2000 mAH rechargeable Ni-MH battery can work 12 hours fully charged. Can achieve continuous measurement with AC 100 ... 240 V power adapter.

Power consumption 1.5 W

Data storage 32 K BIT built-in data storage, can store two thousand rows of data

Installation Upstream 10D, downstream 5D, 30D away from the pump outlet (D for diameter)

### Environmental

Liquid type Water, sea water, waste water, alcohol, beer, various kinds of oil etc which can conduct ultrasound single uniform liquid

Temperature Main unit : -20 ... 60°C

Sensor : -30 ... 160°C

Liquid temperature -30 ... 160°C

IP rating IP65

### Material

Pipe material Steel, stainless steel, cast iron, copper, PVC, aluminum, FRP, etc.

Pipe size DN15 ... DN6000 mm

Cable 5 m(Standard set, 2 cable)

Standard type clip box



Bracket type box



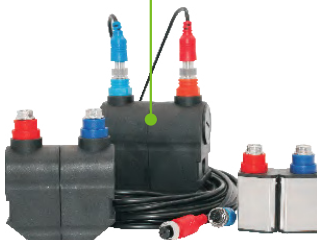
## | Handheld Ultrasonic Flow Meter Components |



Ultrasonic  
flowmeter host



External  
clamp sensor



Couplant



Connection cable  
( Downstream )



Clamp



Connection cable  
( Downstream )



Charger



Tape



Rs232 cable



## | The Main Components Feature |


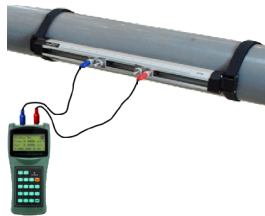


Clamp on transducer



Clamp on transducer with bracket

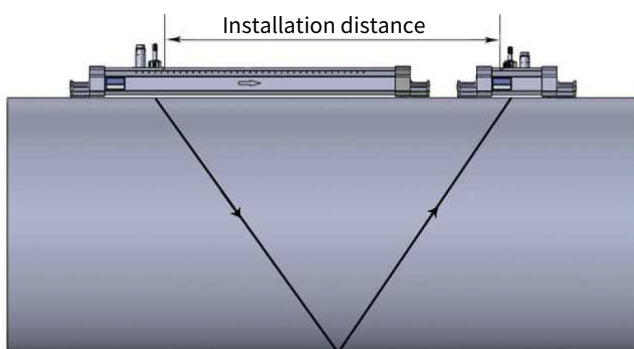
## | Choose Installation Optional |

Schematic diagram	Installation
	<p><b>Clamp on transducer</b></p> <p>Easy to install and no need to cut off the flow, no pressure loss.</p> <p>Different transducer from DN15 ... DN6000.</p> <p>Different transducer for temperautre -30 ... 160°C.</p>
	<p><b>Bracket mounting</b></p> <p>Reduces installation time, improve installation accuracy.</p> <p>Easy installation no need cut the flow, no pressure loss.</p> <p>Different transducer from DN15 ... DN700.</p> <p>Different transducer for temperautre -30 ... 160°C.</p>

## | How to Use the Extension Bracket |

### V-method Installation

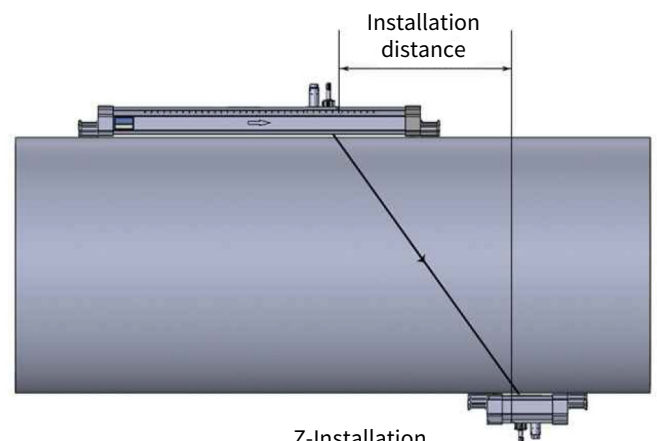
V-method installation is the moswidely used mode for daily measurement with pipe inner diameters ranging from 15 millimeter to 200 millimeter. It is also called reflective mode or method.



V-Installation













### Z-method Installation

Z-method is commonly used when the pipe diameter is between 300 millimeters and 500 millimeters.



Z-Installation

## | Optional Transducer |

Type	Picture	Size	Model	Measuring range	Temp.	Dimension (mm)
Standard clamp on type		Small	CS	DN15 ... DN100	-30 ... 90°C	45x25x32
		Medium	CM	DN50 ... DN700	-30 ... 90°C	64x39x44
		Large	CL	DN300 ... DN6000	-30 ... 90°C	97x54x53
Standard bracket type		Small	BS	DN15 ... DN100	-30 ... 90°C	318x59x85
		Medium	BM	DN50 ... DN300	-30 ... 90°C	568x59x85
		Extension	BE	DN300 ... DN700	-30 ... 90°C	188x59x49
High Temperature Clamp on Type		Small	HCS	DN15 ... DN100	-30 ... 160°C	45x25x32
		Medium	HCM	DN50 ... DN700	-30 ... 160°C	64x39x44
		Large	HCL	DN300 ... DN6000	-30 ... 160°C	97x54x53
High Temperature bracket type		Small	HBS	DN15 ... DN100	-30 ... 160°C	318x59x85
		Medium	HBM	DN50 ... DN300	-30 ... 160°C	568x59x85
		Extension	HBL	DN300 ... DN700	-30 ... 160°C	188x59x49



## | Ordering Guide |

NO1. Sensor	NO2. Sensor	NO3. Sensor
HFUM— <b>CS</b>	— <b>CM</b>	— <b>N</b>
CS : Small standard clamp (DN15 ... DN100 mm)	CS : Small standard clamp (DN15 ... DN100 mm)	CS : Small standard clamp (DN15 ... DN100 mm)
CM : Medium standard clamp (DN50 ... DN700 mm)	CM : Medium standard clamp (DN50 ... DN700 mm)	CM : Medium standard clamp (DN50 ... DN700 mm)
CL : Large standard clamp (DN300 ... DN6000 mm)	CL : Large standard clamp (DN300 ... DN6000 mm)	CL : Large standard clamp (DN300 ... DN6000 mm)
BS : Small standard bracket (DN15 ... DN100 mm)	BS : Small standard bracket (DN15 ... DN100 mm)	BS : Small standard bracket (DN15 ... DN100 mm)
BM : Medium standard bracket (DN50 ... DN300 mm)	BM : Medium standard bracket (DN50 ... DN300 mm)	BM : Medium standard bracket (DN50 ... DN300 mm)
HCS : High Temp. small clamp (DN15 ... DN100 mm)	BE : Extension bracket (Max : DN700 mm, without sensor, need to match medium bracket BM)	BE : Extension bracket (Max : DN700 mm, without sensor, need to match medium bracket BM)
HCM : High Temp. medium clamp (DN50 ... DN700 mm)	HCS : High Temp. small clamp (DN15 ... DN100 mm)	HCS : High Temp. small clamp (DN15 ... DN100 mm)
HCL : High Temp. large clamp (DN300 ... DN6000 mm)	HCM : High Temp. medium clamp (DN50 ... DN700 mm)	HCM : High Temp. medium clamp (DN50 ... DN700 mm)
HBS : High Temp. small bracket (DN15 ... DN100 mm)	HCL : High Temp. large clamp (DN300 ... DN6000 mm)	HCL : High Temp. large clamp (DN300 ... DN6000 mm)
HBM : High Temp. medium bracket (DN50 ... DN300 mm)	HBS : High Temp. small bracket (DN15 ... DN100 mm)	HBS : High Temp. small bracket (DN15 ... DN100 mm)
	HBM : High Temp. medium bracket (DN50 ... DN300 mm)	HBM : High Temp. medium bracket (DN50 ... DN300 mm)
	HBL : High Temp. extension bracket (Max : DN700 mm, without sensor, need to match medium bracket)	HBL : High Temp. extension bracket (Max : DN700 mm, without sensor, need to match medium bracket)

## | Additional Option Test Report |

For more detailed information please contact us.

### ■ ILAC / TAF

YUDEN-TECH CO.,LTD. Calibration Laboratory - ( ILAC / TAF ) Test report.

(TAF accreditation : 3032, complying with ISO / IEC 17025 ) TAF has mutual recognition arrangement with ILAC MRA

Project	Measurand level or range
Flow transmitter	Water flow rate : 2.54 m <sup>3</sup> /h ...30 m <sup>3</sup> /h (42.3 L/min ... 500.0 L/min)
	Water flow velocity : 0.2 m/s ... 3 m/s

### ■ ISO 9001

Project	Measurand level or range
Air velocity / Air volume	Air velocity : ≤ 120 m/s
	Air volume : 0.5 m <sup>3</sup> /h ... 1000 m <sup>3</sup> /h

\* Calibration Condition : Measuring tube DN40 (1.5"), DN80 (3")