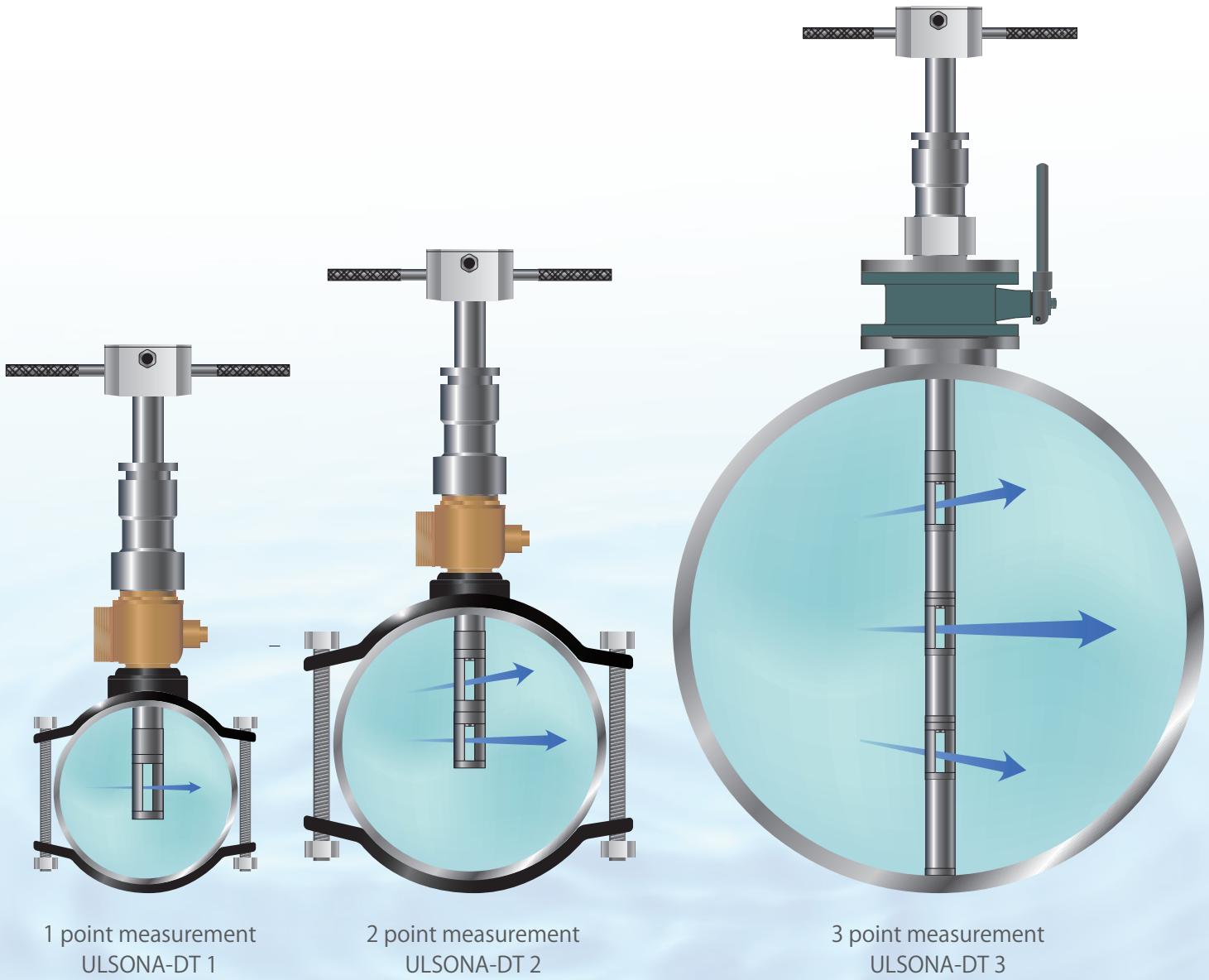


*Insertion Type*  
*Ultrahigh Accuracy Ultrasonic Flowmeter*

# ULSONA DT

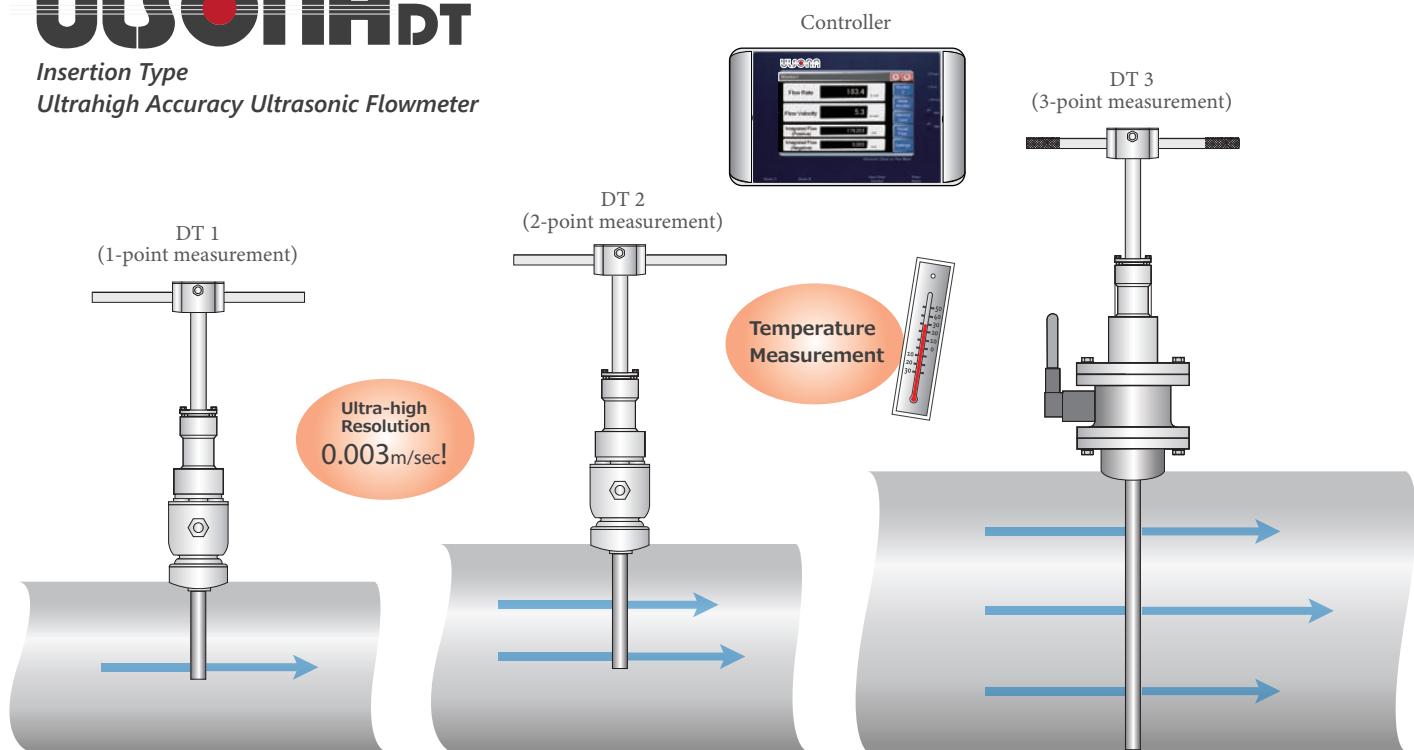
ULSONA DT Series

*The new Ulsona-DT series offers innovative measurement methods with improved user-friendly functions*





**Insertion Type**  
**Ultrahigh Accuracy Ultrasonic Flowmeter**



### Installation Cost is Extremely Low

#### Point 1

The **ULSONA** can be easily *installed onto a Ball valve* without construction.

There is **no need to stop water flow**.

### Fast and Easy Calibration

#### Point 2

*Adjustment* and *Calibration* is fully **automated**.

Start measuring, after just one push of the Calibration button.

### High Accuracy with Latest Ultrasonic Technology

#### Point 3

Transit-time measurement accuracy has improved greatly with the newest technology.

With a flow **resolution of 0.003m/sec**, the highest in the industry,  
**accurate** measurement of **micro flow** is also possible.

### Settings

#### Point 4

The Parameter settings necessary for measurement, can easily be set through an **interactive LCD screen**.

### Temperature Measurement

#### Point 5

The **ULSONA** can measure fluid temperature. With accuracy of  $\pm 1^\circ\text{C}$ ,  
continuous **monitoring of temperature** is possible. (standard function)

### Portability

#### Point 6

The **ULSONA** may be **battery operated** when portability is required.

Any battery that has appropriate voltages can be used.

The easily attachable and detachable **ULSONA**, can be productive as a  
**portable type** ultrasonic flowmeter.



### DT-2 and DT-3 Backup Function

#### Point 7

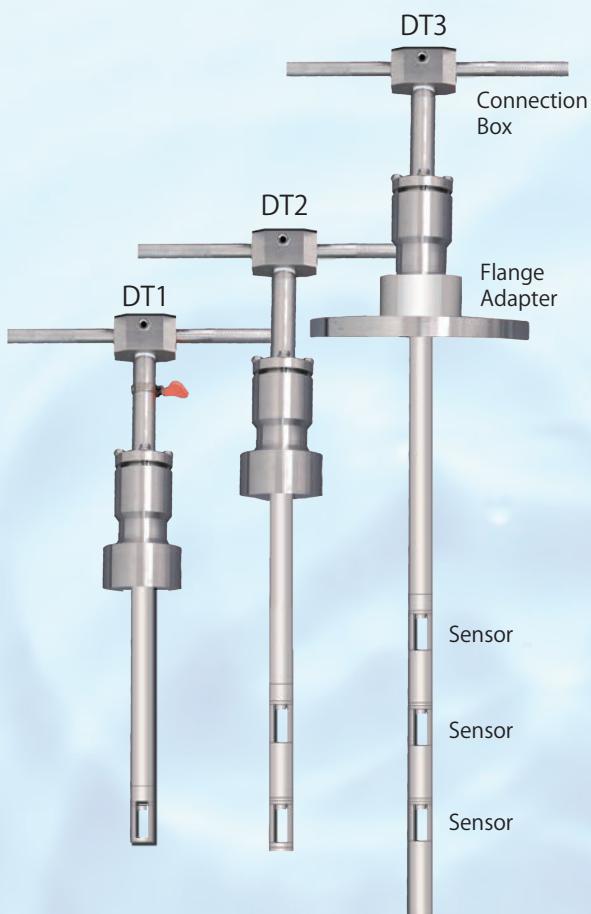
As long as one of the sensors are functioning properly, measurement can  
progress without interruption.

# 【Specifications】

## ■ Controller Display and Settings



## ■ Main Unit and Sensor



■ General Specifications	
Measurable Fluids	Water, Pure Water, Industrial Water, etc.
Measurement Method	Transit-time Method
Applicable Pipe Sizes	DT 1 DN80 ~ DN300 DT 2 DN350 ~ DN450 DT 3 DN500 ~ DN2000
Measurable Velocity	0.000 ~ $\pm 20.000$ [m/sec]
Velocity Resolution	0.003 [m/sec]
Measurement Accuracy	$\pm 0.5\%$ for RD (at a flow rate > 0.5 [m/sec])

■ Controller / Display and Settings Specifications	
Supply Voltage & Power Consumption	DC24V (DC9V-DC26V Battery Operational) < approx. 10W
Analog Output	Ch 1 Flowrate DC 4-20mA (DC0-24mA) (Resistance 500Ω)
	Ch 2 Temperature, Flow velocity, Negative flowrate (selectable) DC 1-5V
Digital Output	Ch 1 Positive Flowrate PhotoMOS Relay DC30V 500mA
	Ch 2 Negative Flowrate PhotoMOS Relay DC30V 500mA
	Ch 3 Measurement Error Non-voltage contact
Recording Medium	microSD Card (2GB MAX)
Communication	RS485 (Modbus RTU 9600~38400bps)
Calendar Clock	Built in Circuit board
Working Temperature	-5~50 °C (Controller)
Man-machine Interface	7" LCD Color Touch Panel
Indication	Current flow rate [L/sec] [L/min] [L/hour] [m³/sec] [m³/min] [m³/hr] Current flow velocity [m/s] Positive flow rate pulse 0 to 999999.999 [m³] Negative flow rate pulse 0 to 999999.999 [m³]
Waterproof Performance	Equivalent to IP65

■ Sensor / Main Unit Specifications	
Sensor	Ultrasonic Oscillator
Installation Method	Directly onto Ball Valve / Flange mounting
Material	AISI 316 (Insertion shaft) AISI 304 (Connection box, handle)
Weight	10Kg or more (depends on shaft length)
Waterproof Performance	IP68
Working Temperature	0~55 °C (Sensor)

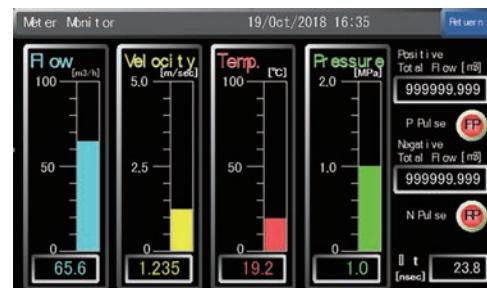


Insertion Type  
Ultrahigh Accuracy Ultrasonic Flowmeter

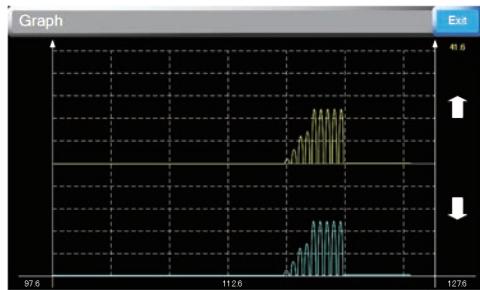
## Screen Examples



Data Display  
Digital



Data Display  
Meter



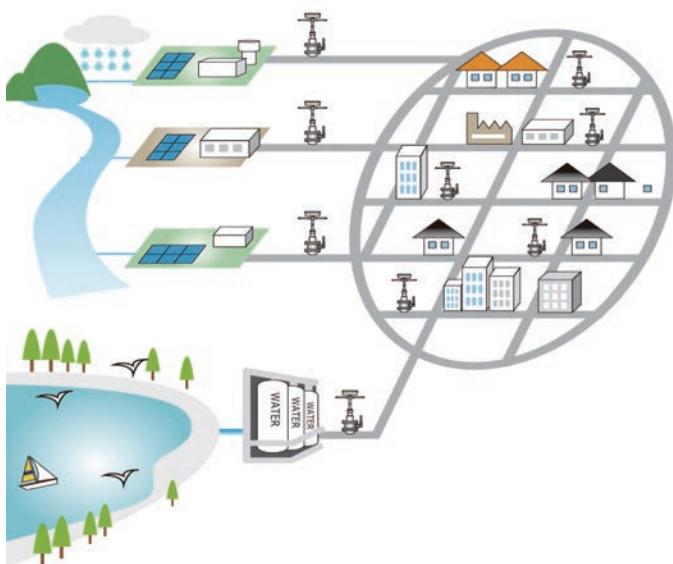
Graph Display of  
Echo Received

Displays ultrasound signal strength.  
Useful during setup and checking

Piping standard (Stainless) 1/2									
ND	OD.	Sch 5S	Sch 10S	Sch 20S	Sch 40S	Sch 80S			
mm	Inch	[mm]	THICK	ID.	THICK	ID.	THICK	ID.	THICK
6	1/8	10.5	1.0	8.5	1.2	8.1	1.5	7.5	1.7
8	1/4	13.8	1.2	11.4	1.65	10.5	2.0	9.8	2.2
10	3/8	17.3	1.65	17.0	1.65	14.0	2.0	13.3	2.3
15	1/2	21.7	1.65	18.4	2.1	17.5	2.5	16.7	2.8
20	3/4	27.2	1.65	23.9	2.1	23.0	2.5	22.2	2.9
25	1	34.0	1.65	30.7	2.8	28.4	3.0	28.0	3.5
32	1 1/4	42.7	1.65	29.4	2.8	37.1	3.0	36.7	3.6
40	1 1/2	48.6	1.65	45.3	2.8	43.0	3.0	42.6	3.7
50	2	60.5	1.65	57.2	2.8	54.9	3.5	53.5	3.9
65	2 1/2	76.3	2.1	72.1	3.0	70.3	3.5	69.3	5.2
		JIS G 3459 TPS							

Piping Standards  
Displays general piping standards.

## Application Example [Smart Water Grid]



## Other similar products



**Caloriena R2**®

Clamp-on Type  
Ultrasonic flow meter

