

METTER



**Professional Manufacturer Of
Smart Heat Meters**

METTER

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About Us

Meter Instruments Co., Ltd. (referred to as Meter Instruments) , which was established in 2006, specializes in R&D, production and sales of smart ultrasonic water meters and heat meters. Meter Instruments also provides solutions for smart water and energy-saving heating systems by integrating software and hardware together.

As an advocate and leader in ultrasonic water meter industry, Meter Instruments has focused on ultrasonic flow measurement technology for 20 years, and is the earliest supplier to mass produce and supply residential ultrasonic water meters in China. Up to now, Meter Instruments has provided services to more than 1000 customers and supplied more than 10,000,000 nos of ultrasonic meters

Meter Instruments has obtained EU MID and CE certification, owned a wholly-owned software subsidiary which focuses on smart water platforms for more than 14 years, and established four R&D centers, one accredited ISO17025 competence of testing and calibration laboratory, and three production bases which covers a total area of 140000 m².

Meter Instruments also possesses advanced process, production and testing equipment, which includes but not limited to full servo processing machines, CNC machine tools, multi-axis welding robots, SMT, automatic production lines, 106 sets of flow test bench for residential ultrasonic meters, and flow test tower which is able to test sizes up to DN2400 etc.

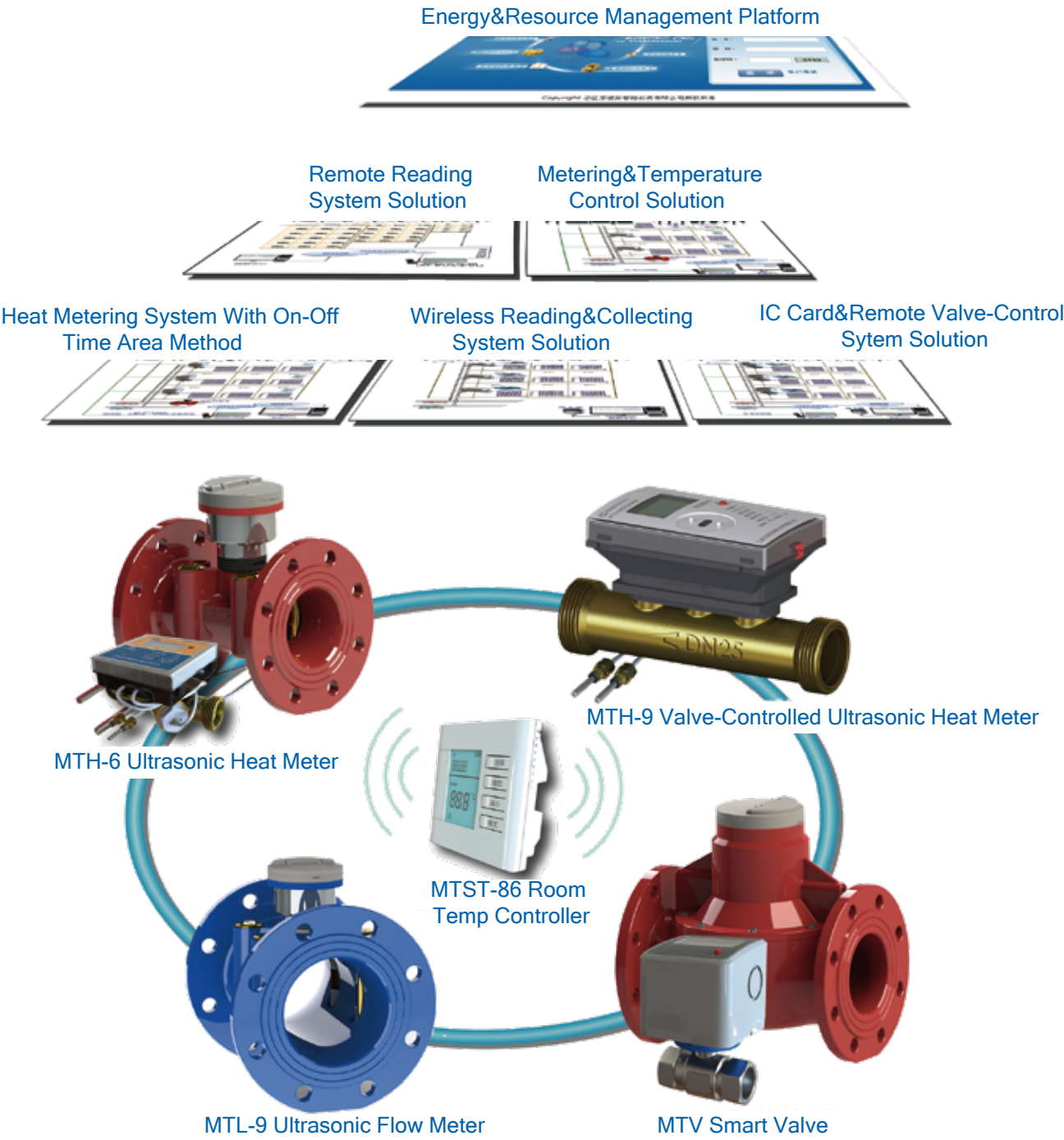
Smart metering, smarter METTER. Meter Instruments takes quality as its foundation and creativity as its root, and empowers for the digitization and intelligence of public utilities.

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Energy&Resource Management Platform

About the Platform

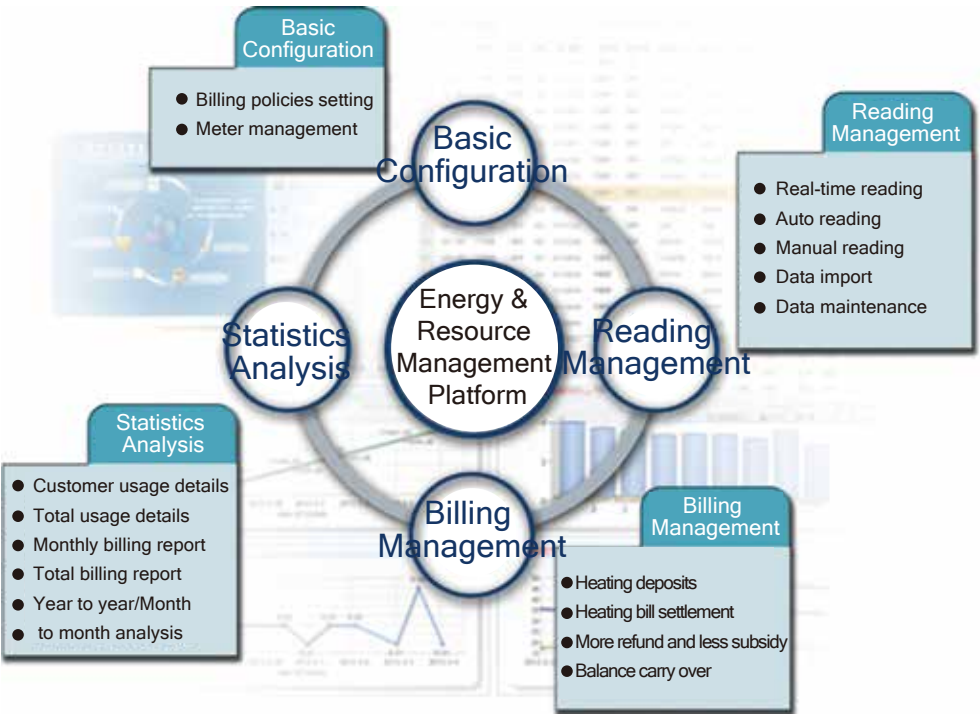
With the rapid development of economy all over the world, and as the global urban population continues to rise as a result of increases in rural to urban migration, the issue between the growing demand for energy and the energy scarcity is one of the main challenge facing governments, cities and utility companies. How to solve this increasing serious issue properly and efficiently , and at the same time to maintain and improve energy-saving efficiency,become a urgent issue for the society to deal with.

Energy&Resource Management Platform is an integrated platform with energy resource monitor, energy billing check, energy-saving potentiality analysis, energy-saving efficiency verification, energy consumption limit setting and overall management.

With B/S structure, the platform is equipped with powerful data reading and storage, data collection and analysis, monitoring and management functions. With remote reading system, it can provide a valid basis for billing purpose for energy management departments.

Platform Features

- ◆ With B/S +C/S structures, it is allowed to read, search and analyse the data within the two structures;
- ◆ With Content Management System(CMS):Support C/S and B/S mode to remotely transmit data. With the storage process visualization technology, the data processing speed is up to 100 million/s;
- ◆ With multiple routes reading, it can set the routes number dynamically based on the network transmission speed so as to reduce the operating time.



Wireless Metering Management Solution

About the Solution

The wireless metering management solution consists of ultrasonic heat meters(or other ultrasonic meters), wireless concentrator and data center. The solution is easy for installation and maintenance, and there is no need to install or connect wires so as to adapt to various installation environments.

Solution Features

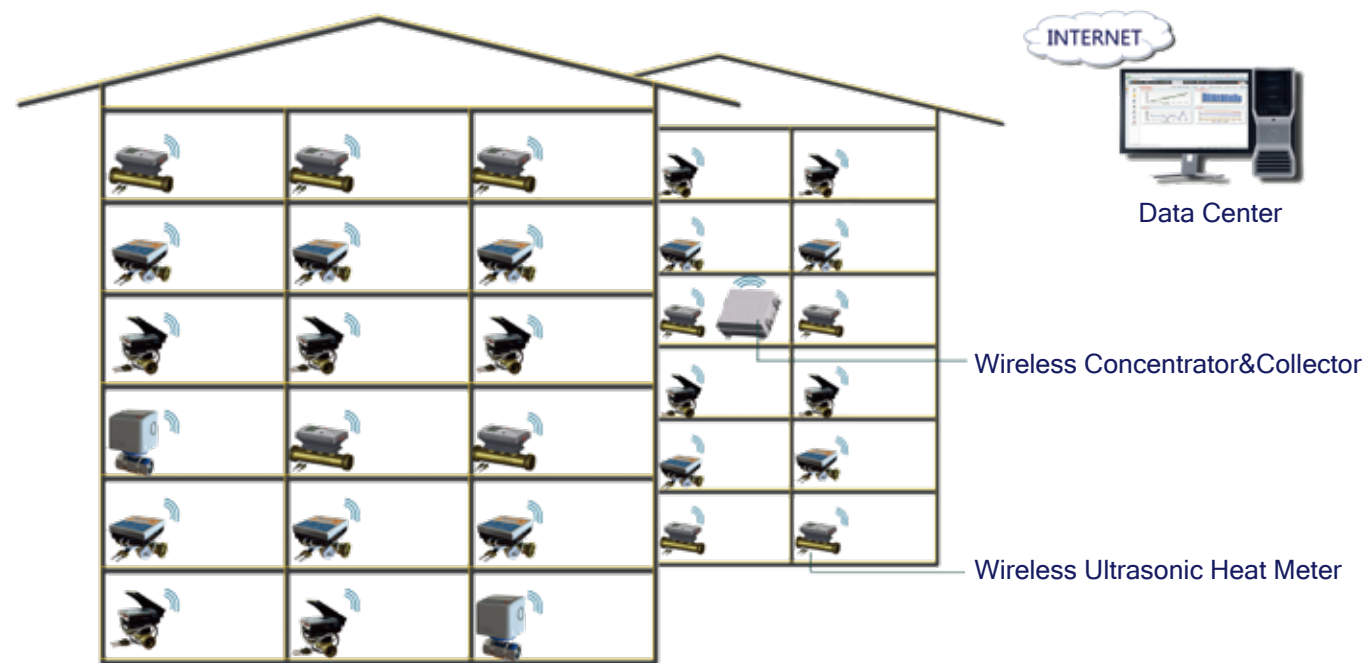
- ◆ Wireless data transmission and communication, no need to install or connect wires;
- ◆ With built-in data logger;
- ◆ Simple system structure, it only needs to set the users' information via software of the concentrator;
- ◆ With LORA technology, the data can be transmitted and communicated at longer distance with higher reliability.

Solution Requirements

End user meter: Meters with built-in wireless module, such as ultrasonic heat meter, valve-controlled ultrasonic heat meter, smart valve and network/ commercial&Industrial ultrasonic heat meter.

Wireless concentrator: With its downlink to communicate with the built-in LORA module in the ultrasonic heat meter, and with GPRS at the uplink to transmit the data to the data center and transit command from data center to the heat meter.

Data center:The server, which has installed reading and data management software, has a fixed IP.



MBUS Heat Metering Management Solution

About the Solution

The MBUS heat metering management solution utilizes MBUS communication method to ensure a two-way communication between the energy supply utility and its users. With the data center, the heat supply company is able to read and check the real-time data of the meters and send command to the meters when necessary.

Solution Features

- ◆ With high transmission speed, long transmission distance, large capacity, stable data transmission and large capacity ---the concentrator is able to manage 256 meters;
- ◆ Conform with applicable international standards.

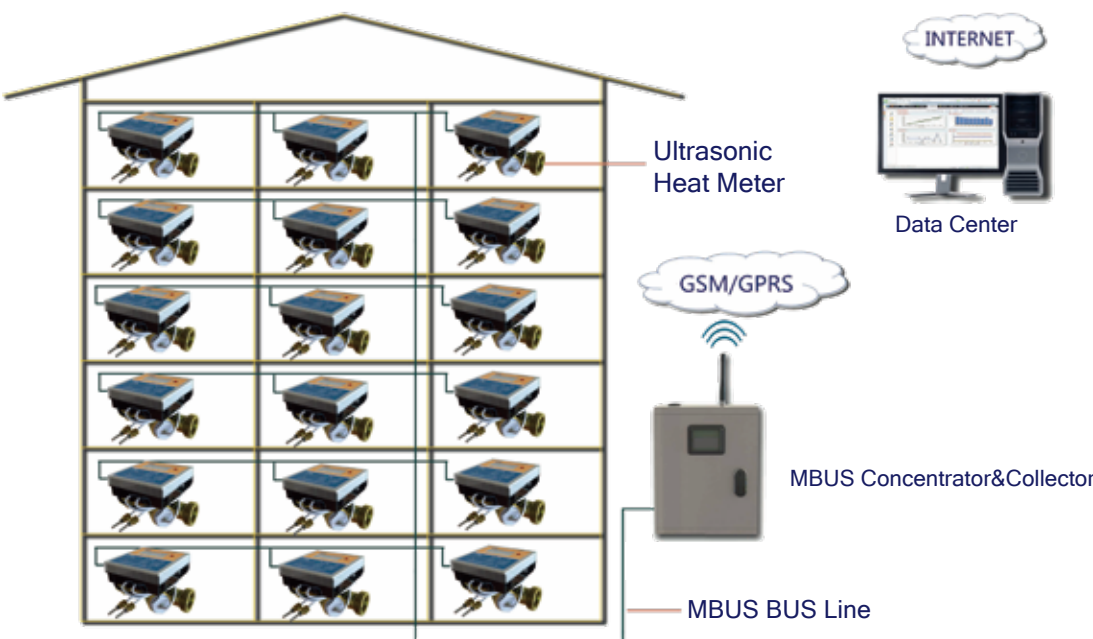
Solution Requirements

End user meter: Wired MBUS meters, such as ultrasonic heat meter and valve-controlled ultrasonic heat meter, smart valve and network/ commercial & industrial ultrasonic heat meter;

MBUS Bus Line: Two core wires, no polarity requirements;

MBUS concentrator: With its' downlink to read and communicate with the built-in MBUS module in the ultrasonic heat meter through MBUS bus line; with GPRS at the uplink to transmit the data to the data center and Send the command from the data center to the meter;

Data center: The server, which has installed reading and data management software, has a fixed IP.



Wireless Temperature Collection Solution

About the Solution

The wireless temperature collection solution consists of wireless temperature collector, ultrasonic heat meter, wireless concentrator, constant flow valve and data center.

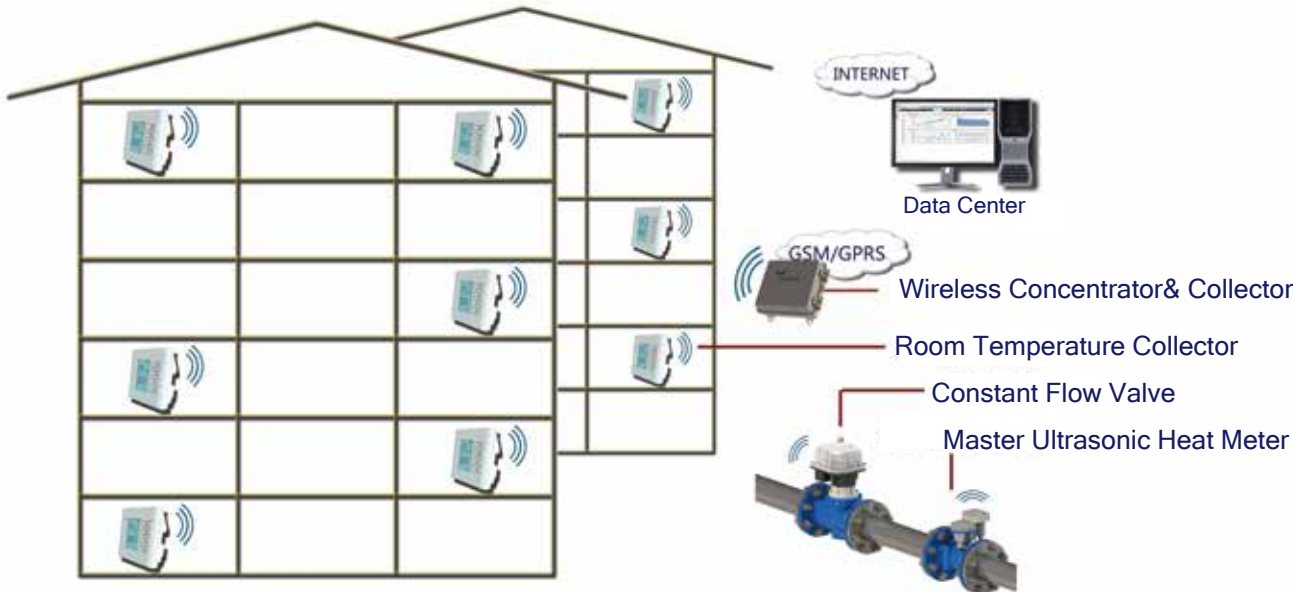
With the wireless temperature collector, the temperature data at each point collected is transmitted to the data center via LORA. Along with the data collected from the ultrasonic heat meter, the heat supply department is able to analyse the heat consumption and improve efficiency.

Solution Features

- ◆ Wireless transmission and communication, no need to install or connect wires. Easy for installation and maintenance;
- ◆ The wireless concentrator with built-in data logger;
- ◆ Simple system structure, easy to set the users' information via software of the concentrator.;
- ◆ With LORA technology, the data can be transmitted and communicated at longer distance with higher reliability.

Solution Requirements

- ◆ **End user meter:** Wireless temperature collector, which utilize wireless LORA remote transmission technology, battery/external power supply optional;
- ◆ **Wireless concentrator:** The wireless concentrator integrates LORA and GPRS modules into one, with its downlink to communicate with the built-in LORA module in the wireless temperature collector via wireless LORA, and with its uplink to communicate with the data center via GSM/GPRS module.
- ◆ **Data center:** the server, which has installed reading and data management software, has a fixed IP.



Temperature Control&Flow Measurement Solution

About the Solution

The temperature control& flow measurement solution is Meter Instruments' own R&D system which aims to measure and save heat energy.

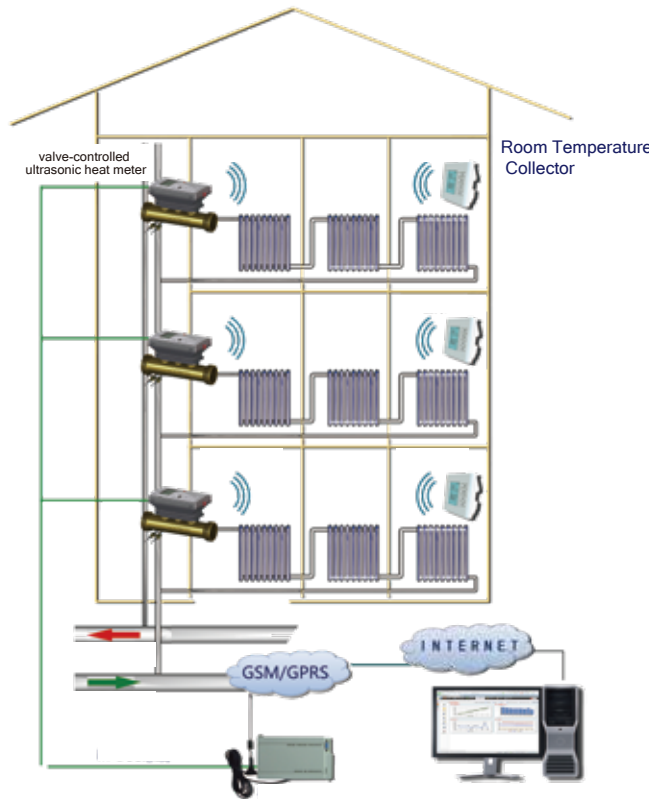
With this solution, the heat supply company is able to real-time check and control the users' room temperature from the data center. Through the data collected, the management department is able to make more reasonable and suitable plans for energy saving and allocation.

Solution Features

- ◆ Integrates measurement and temperature control into one. The user is able to set the room temperature on the temperature controller to control the on/off status of the valve of the ultrasonic heat meter, it can save energy in the most reasonable and efficient way.
- ◆ With the data center to real-time check the working status of each heat meter, and control the on/off status of the valve in the heat meter to optimize energy saving, and guide the user to pay the energy bill, close or cancel the user's account.
- ◆ It is compatible with Energy&Resource Management Platform seamlessly

Solution Requirements

- ◆ **Temperature Controller:**
To record the real-time room temperature, the temperature can be set according to different time period, and transit the temperature data to the corresponding ultrasonic heat meter via wireless LORA;
- ◆ **Valve-Controlled Ultrasonic Heat Meter:**
Integrates both valve and heat meter into one, it is able to communicate with the room temperature controller via wireless LORA, and with MBUS bus line to connect with the concentrator;
- ◆ **MBUS bus line:**
Two core bus line, no polarity requirements; it can power the ultrasonic heat meter.
- ◆ **MBUS Concentrator:**
With its downlink to communicate with the heat meter through MBS bus line, and with its uplink to communicate with the data center (communication interfaces: GPRS, RS232, Netport optional). At the same time, the concentrator is able to power the heat meter via bus line.
- ◆ **Data Center:**
The server, which has installed reading and data management software, has a fixed IP.



MBUS Concentrator&Collector

General Description

The concentrator&collector is designed to communicate with the meters(such as ultrasonic heat meter, smart valve) and the data center. With the built-in data logger, the concentrator is able to store the data from meters collectively. With its uplink to communicate with the data center and transmit command from data center to the meters via GPRS, the heat company is able to real-time check and monitor the heat supply network.

Product Features

- ◆ Compatible with Energy&Resource Management Platform, is able to remotely read the data of the ultrasonic heat meter;
- ◆ With built-in data logger;
- ◆ LCD display, easy for visual checking
- ◆ Unique data reading mode, 100% data reading rate
- ◆ Multiple communication interfaces optional: RS232(default), GPRS, Relay, serial port etc.

Technical Specifications

item	MBUS Concentrator
Length	400mm
Width	300mm
Height	126mm
Power Supply	36VDC
Power Current	1A
Installation Environment	Indoor
Relative Humidity	RH5%~85%
Ambient Temp	-25°C--- +55°C
Load Capacity	256 meters
Max Overload Current	1A
Protective Current	1A, 3S
GPRS Antenna Length	5m
GPRS Antenna Height	210mm



MBUS concentrator --Default communication port RS232(36VDC + MBUS master), for other communication port, Please refer to the below:

Communication Port	Configuration					
	Power Supply-36VDC	MBUS Master	Relay Module	M72 Module (with antenna)	Wireless 433 Module (With antenna)	Netport Module
RS232	√	√	—	—	—	—
GPRS	√	√	—	√	—	—
Relay	√	√	—	—	—	—
Wireless 433	√	√	—	—	√	—
Serial port server	√	√	√	—	—	√

For example: If you need GPRS at the Uplink, you just need to add an M72 module(36VDC + MBUS master +M72 module)

Wireless Concentrator&Collector

General Description

The wireless concentrator&collector is capable of real-time 2-way communication between the meters and the data center. With its downlink to communicate with the built-in LORA module in the meters , and with its uplink to communicate with the data center via GPRS. It is suitable for the areas where installing wires is very difficult and costly.

Product Features

- ◆ No need to install wires, easy for installation, system configuration and future maintenance;
- ◆ With built-in data logger, large storage capacity;
- ◆ LCD display, easy for visual checking
- ◆ With LORA technology, the data can be transmitted and communicated at longer distance with higher reliability

Technical Specifications

Wireless Concentrator&Collector(for residential ultrasonic water meters)

Item	Wireless Concentrator& Collector
Power Supply	220VAC/ Solar- powered
Installation Environment	Indoor, > 1m above the ground
Ambient Temp	-25°C— +55°C
Relative Humidity	RH5%-85%
Data Logger	Flash logging, 12000 data in total
Central Processing Unit(CPU)	32 bits ARM PU
Communication Interfaces	Uplink: GPRS; Downlink:Lora470
Transmission Distance	3km(on open ground)
Protection Class	IP54
Enclosure	Stainless Steel Enclosure optional, IP68

GPRS Data Collection Terminal(for network/commercial&industrial ultrasonic water meters)

Item	GPRS Data Collection Terminal
Power Supply	3.6VDC(Replaceable lithium battery)
Installation Environment	Indoor, > 1m above the ground
Ambient Temp	-25°C— +55°C
Relative Humidity	RH5%-85%
Data Logger	Flash logging, 12000 data in total
Central Processing Unit(CPU)	32 bits ARM PU
Communication Interfaces	Uplink: GPRS; Downlink:RS 485/ MBUS/ TTL optional
Protection Class	IP68



Ultrasonic Heat Meter

General Description

MTH series ultrasonic heat meter, also called BTU meter, offers the most advanced heating/cooling energy measurement by using the cutting edge ultrasonic flow measurement technology. The heat meter doesn't have any moving parts to wear or tear, thus makes the meter maintenance-free. It utilizes the transit-time difference principle to measure the heat energy released and absorbed based on the flow rate and the temp difference between the supply and the return pipeline.

All technical specifications of the MTH series meet the standards for both residential and commercial heating/cooling metering.

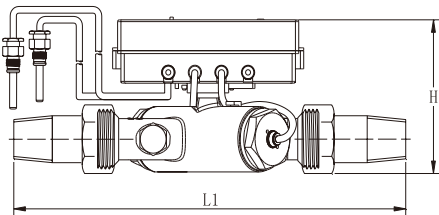
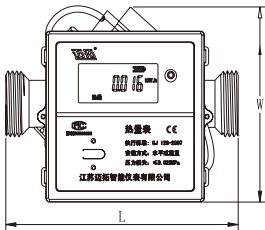
Product Features

- ◆ Communication Interfaces: LORA, MBUS, RS485, Pulse optional;
- ◆ Compatible with GPRS Remote Reading System Solution;
- ◆ Heat energy/cool energy can be displayed in GJ and KWH;
- ◆ Data logger with 2 years of daily totals and 24 monthly totals;
- ◆ Patented water-proof technology, ensure longevity even if the heat meter is installed in the humid environment.



Technical Specifications

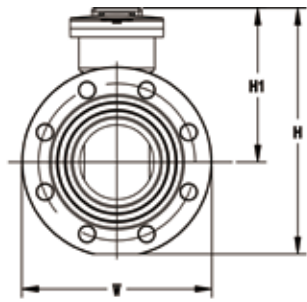
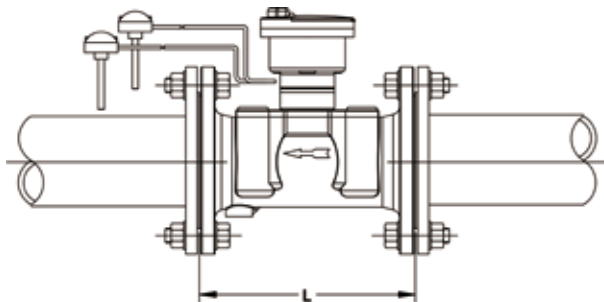
◆ For DN15-DN40



Size		DN15	DN20	DN25	DN32	DN40
Dimension	L (mm)	110	130	160	180	200
	L1 (mm)	206	236	282	306	331
	W (mm)	120	120	121	125	130
	H (mm)	90	90	95	110	115
Pipe Joint -Flow Sensor		G3/4"	G1"	G1 1/4"	G1 1/2"	G 2"
Pipe Joint- Tail Pieces		R1/2"	R3/4"	R1"	R1 1/4"	R1 1/2"
Qmax	m³/h	3.0	5.0	7.0	12.0	20.0
	GPM	13.2	22	30.8	52.8	88
Qp	m³/h	1.5	2.5	3.5	6.0	10.0
	GPM	6.6	11	15.4	26.4	44
Qmin	m³/h	0.03	0.05	0.07	0.12	0.20
	GPM	0.13	0.22	0.31	0.53	0.88

Size	DN15	DN20	DN25	DN32	DN40
Permissible Temp Range	(2~95) °C				
Permissible Temp Difference	(3~70) K				
Installation Method	V/H				
Installation Position	For both supply and return pipeline				
Temp Sensor Cable (m)	1.5 (Other length upon request)				
Flow Sensor Cable (m)	1.2 (Other length upon request)				
Pressure Loss	≤0.025MPa (Qp)				
Working Pressure	≤1.6MPa				
Measuring Medium	Water				
Accuracy Class	Class 2				
Environmental Class	Class B				

◆ For DN50-DN300



Size		DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
Dimension	L (mm)	200	200	225	250	250	300	350	450	500
	L1(mm)	165	185	200	220	250	285	340	405	460
	W(mm)	167	175	192	198	216	234	263	289	337
	H (mm)	252	265	281	304	337	372	427	469	567
Qmax	m³/h	30	50	80	120	200	300	500	800	1200
	GPM	132	220.17	352.3	528.4	880.7	1321	2201.7	3522.7	5284
Qp	m³/h	15	25	40	60	100	150	250	400	600
	GPM	66	110	176.1	264.2	440.3	660.5	1100.8	1761.3	2642
Qmin	m³/h	0.6	1.0	1.6	2.4	4.0	6.0	10	16	24
	GPM	2.64	4.4	7	10.6	17.6	26.4	44	70.5	105.7
Flow Sensor Cable (m)		1.2		3(other length upon request)						
Channels		Four Channels								
End Connection		Flange								
Permissible Temp Range		(2~95) °C								
Permissible Temp Difference		(3~70) K								
Installation Method		V/H								
Working Pressure		≤1.6MPa								
Measuring Medium		Water								
Accuracy Class		For both supply and return pipeline								
Accuracy Class		Class 2								
Environmental Class		Class B								
Pressure Loss		≤0.025MPa (Qp)								

Ultrasonic Heat Meter
(Straight-Through Type)

General Description

The ultrasonic heat meter utilizes the transit-time difference principle to measure the heat energy released and absorbed based on the flow rate and the temp difference between the supply and the return pipeline.

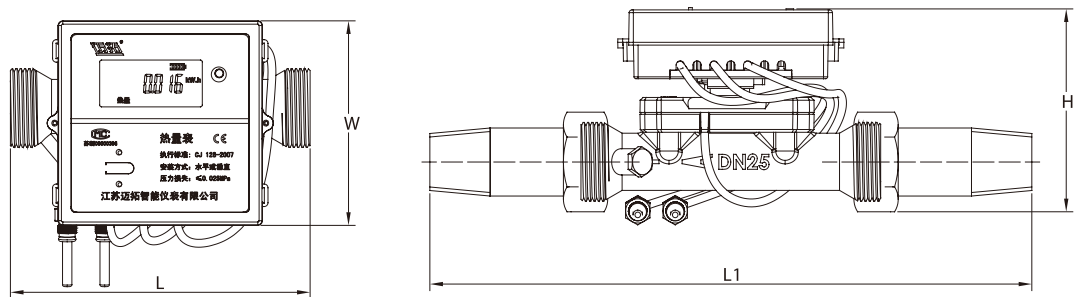
The flow sensor is straight-through type(with low pressure loss), so the heat meter can be used in various areas no matter what the water quality might be.

Product Features

- ◆ Communication Interfaces: LORA, MBUS, RS485, Pulse optional
- ◆ Compatible with GPRS Remote Reading System Solution;
- ◆ Heat energy/ cool energy can be displayed in GJ and KWH;
- ◆ Data logger with 2 years of daily totals and 24 monthly totals;
- ◆ Patented water-proof technology, ensure longevity even if the heat meter is installed in the humid environment.



Technical Specifications



DN Size		DN20	DN25	DN32	DN40
L (mm)		130	160	180	200
L1(mm)		236	282	306	331
W(mm)		110	110	110	110
H(mm)		115	115	120	125
Pipe Joint- Flow Sensor		G1"	G1 1/4"	G1 1/2"	G 2"
Pipe Joint- Tail Pieces		R3/4"	R1"	R1 1/4"	R1 1/2"
Qmax	m³/h	5.0	7.0	12.0	20.0
	GPM	22	30.8	52.8	88
Qp	m³/h	2.5	3.5	6.0	10.0
	GPM	11	15.4	26.4	44
Qmin	m³/h	0.05	0.07	0.12	0.20
	GPM	0.22	0.31	0.53	0.88
Permissible Temp Range		(2~95) °C		Pressure Loss	≤0.025MPa (Qp)
Permissible Temp Difference		(3~70) K		Working Pressure	≤1.6MPa
Installation Method		V/H		Measuring Medium	Water
Installation Position		For both supply and return pipeline		Accuracy Class	Class 2
Temp Sensor Cable (m)		1.5 (Other length upon request)		Environmental Class	Class B
Flow Sensor Cable (m)		1.2 (Other length upon request)			

Valve-Controlled Ultrasonic Heat Meter

General Description

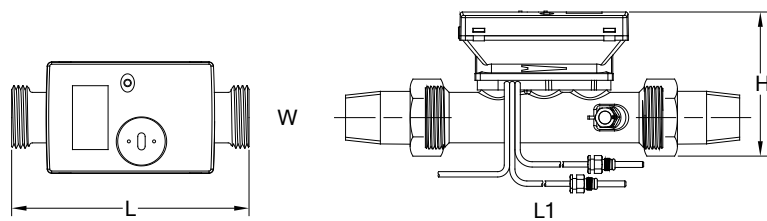
The valve-controlled ultrasonic heat meter, size:DN20-DN25, with built-in ball valve in the flow cell, is used for measuring the heat energy consumption. The user is able to control the on/off status of the valve in the heat meter to regulate the flow.

Product Features

- ◆ Communication Interfaces: LORA, MBUS, RS485, Pulse optional;
- ◆ Compatible with Temperature Control&Flow Measurement Solution to remotely communicate with the data center to control the on/off status of the valve;
- ◆ Compatible with RF IC card to control the heat energy consumption;
- ◆ Heat energy/cool energy can be displayed in GJ and KWH;
- ◆ Data logger with 2 years of daily totals and 24 monthly totals;
- ◆ Patented water-proof technology, ensure longevity even if the heat meter is installed in the humid environment.



Technical Specifications



DN Size	DN20		DN25	
L (mm)	130		160	
L1(mm)	230		280	
W(mm)	75		75	
H(mm)	87		90	
Pipe Joint- Flow Sensor	G1 B		G1 1/4B	
Pipe Joint- Tail Pieces	R3/4		R1	
Qmax	3.0		7.0	
Qp	1.5		3.5	
Qmin	0.03		0.07	
Power Supply	ER18505, 3.6VDC, replaceable lithium battery		Battery Life	≥6 years
Max Pressure	≤1.6MPa		Max Valve Pressure	≤1.0MPa
Valve On/Off Time	≤15s		Valve On/Off	>10000 times
Accuracy Class	Class2		Protection Class	IP65
Temp Range	(2~95) °C		Temp Difference Range	(3~70) K
Temp Sensor Cable	1.5m(other length upon request)		Environmental Class	Class B
Installation Location	For both supply and return pipeline			

MTV Smart Valve(DN15-DN32)

General Description

The smart valve, size:DN15-DN32, is used for receiving the command from the data center or the IC card provided by the heat supply company. With the on/off status of the valve, it is able to supply/stop the supply of the heat energy within certain area. It is also a part of the prepaid heating solution.

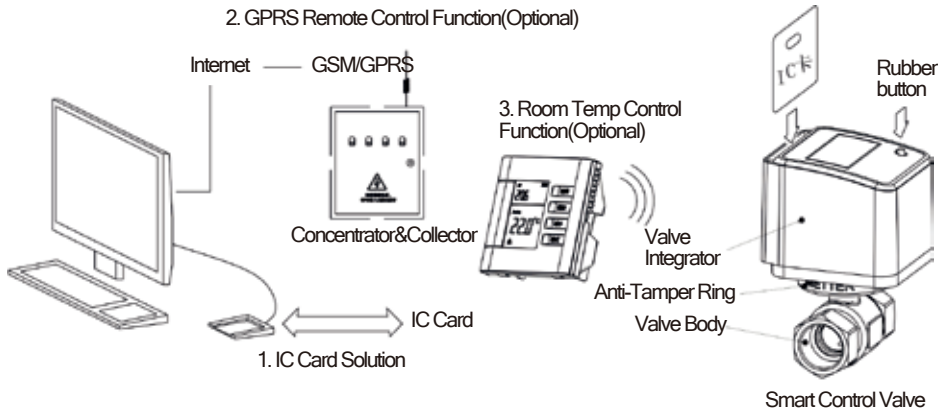
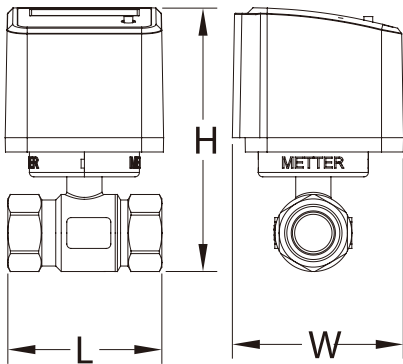
Product Features

- ◆ With non-contact mode IC card to control the valve;
- ◆ It is hermetically-sealed;
- ◆ Auto scale removal mechanism of the valve;
- ◆ Low power consumption design, and large capacity lithium battery, ensure at least 6 years longevity;
- ◆ LCD display, easy for operation;
- ◆ Optional wired/wireless remote control and temperature control functions.



Technical Specifications

DN Size	DN15	DN20	DN25	DN32
L(mm)	64	70	70	81
W(mm)	78	78	78	78
H(mm)	114	118	121	132
Pipe Joint	R1/2	R3/4	R1	R1 1/4
Weight(Kg)	0.45	0.52	0.61	0.84
Power Supply	3.6VDC			
Static Current	≤10μA			
Valve On/Off	>20000 times			
Max Pressure	≤1.0MPa			
Protection Class	IP65			
Measuring Medium	Water			
Water Temperature	(2-95)°C			
Ambient Temperature	(0-55°C)			



Smart Control Valve
Pilot Valve Series (DN32-DN300)

General Description

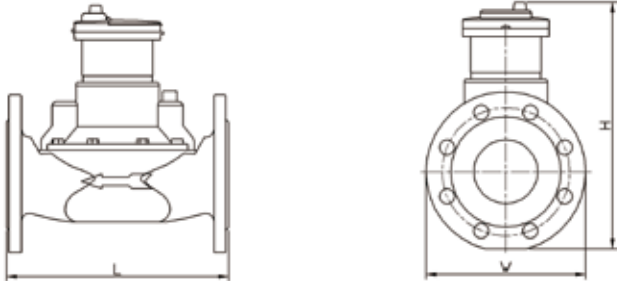
Pilot Valve Series smart control valve offers an easy way to remotely open and close valve to control water supply within distribution network. It provides various communication interfaces, such as LORA, GPRS/4G, NB-IoT, CAT1, CAT M1, MBUS, RS485 etc, together with ultrasonic water meters, they offer advanced utility management capabilities to increase revenue and save water and energy resources.

Features

- ◆ Compatible with RF IC Card(non-contact mode) to control valve;
- ◆ Seamlessly integrated into DMA metering system to open/close valve to control water distribution in the district;
- ◆ With built-in battery, no need external power supply;
- ◆ Along with ultrasonic water meters and GPRS data collector, it is able to provide a solution to accurately measure meter data, remotely read, transmit, control and provide valid basis for billing purpose.

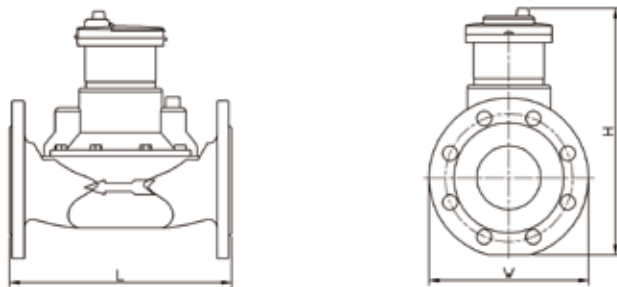


Technical Specifications



The image contains two technical drawings of a valve. The left drawing is a side view showing the valve's profile with a horizontal dimension line labeled 'L' indicating its length. The right drawing is a front view showing the circular flange with eight bolt holes, with a vertical dimension line labeled 'H' for height and a horizontal dimension line labeled 'W' for width.

DN Size	DN32	DN40	DN50	DN80	DN100	DN150	DN200	DN300
L(mm)	170	170	250	280	300	350	400	610
W(mm)	120	120	165	200	220	285	340	460
H(mm)	204	204	249	289	310	359	416	538
Pipe Joint	G1 1/4	G1 1/2	Flange(PN16 or upon request)					
Water Temp	≤70°C							
Ambient Temp	-25°C ~ +55°C							
Working Pressure	≤1.0MPa							
Protection Class	IP68							
Power Supply	3.6VDC, 8.5Ah,Lithium battery							
Static Current	≤10μA							
Communication Interfaces	LORA, GPRS/4G, NB-IoT, CAT1, CAT M1, MBUS, RS485 etc optional							
Valve On/Off	>10000 times							
Battery Life	>6 years							



Smart Constant Flow Meter(DN40-DN300)

General Description

The smart constant flow meter, which is a new type of remote-controlled device used to regulate the dynamic flow, consists of a constant flow valve, ultrasonic heat meter and GPRS data collection terminal. The constant flow valve is used to stabilize and regulate flow; the ultrasonic heat meter is used to measure the flow, heat and pressure; the GPRS data collection terminal is used to communicate with the data center and the heat meter.

The heat supply company is able to check the data collected from the constant flow meter on the data center, and remotely control the open angle of the valve to obtain the constant flow needed. It in a way eliminates interference factors within the distribution network to enable the meters to operate in an energy-saving manner.

Applications: central heating network and central air conditioner water circulation systems.

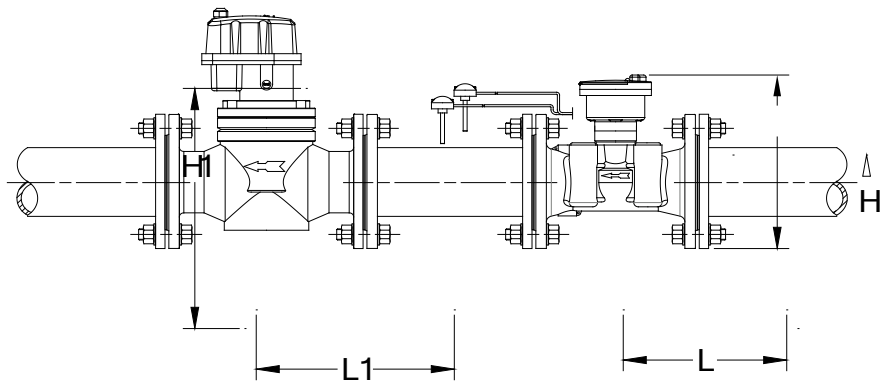


Product Features

- ◆ Compatible with Energy&Resource Management Platform, remotely control the balance of the heat and water supply network;
- ◆ Data logger with 2 years daily totals and 24 monthly totals to ensure data traceability;
- ◆ With built-in large capacity lithium battery, no need external power supply;
- ◆ IP68 protection class, ready to work in the humid environment.



Technical Specifications



DN Size	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
H(mm)	180	200	200	225	250	250	300	350	450	500
L(mm)	138	235	265	264	287	337	355	410	469	567
H1(mm)	220	235	286	310	340	425	435	500	600	700
L1(mm)	346	376	436	456	496	546	626	642	768	934
Flow Regulate Range(m³/h)	0.7-8	1.1-12	1.9-16	3-27	4-35	6.3- 50	10-80	16-160	30-300	45-460
Pressure Loss	≤0.025MPa(Qp)									
Working Pressure	≤1.0MPa									
Protection Class	IP68									
Power supply	3.6VDC, 19Ah, Lithium battery									
Static Current	≤10μA(Valve); ≤20μA(heat meter)									
Communication Interfaces	MBUS, RS485, GPRS, 4-20mA, Pulse optional									
Valve On/Off	>20000 times									
Valve On/Off Battery Life	4000 times									
Measuring Interval	Once per second									
Valve Working Pressure Difference	0.03-0.35									

Ultrasonic Flow Meter(DN15-DN500)

General Description

The ultrasonic flow meter, DN size:DN15-DN500, utilizes transit-time difference principle to measure, memo-rize and display the flow passing through the flow sensor.

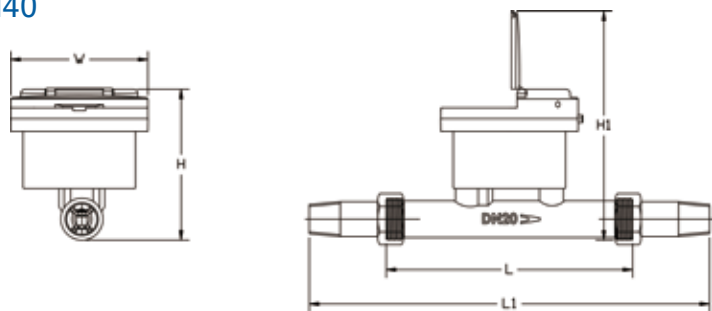
Applications: Municipal, commercial and distribution applications, including reclaim and irrigation water requirements; Commercial buildings, including campus, malls, hospitals and airport facilities; Industrial water, including waste water treatment etc.

Product Features

- ◆ Communication interfaces: LORA, MBUS, RS485, Pulse etc optional;
- ◆ Compatible with GPRS remote reading system solution, the meter is able to remotely communicate with the data center;
- ◆ Data logger with 24 monthly totals and 2 years daily totals;
- ◆ Patented waterproof technology, ready to work in humid environment.

Technical Specifications

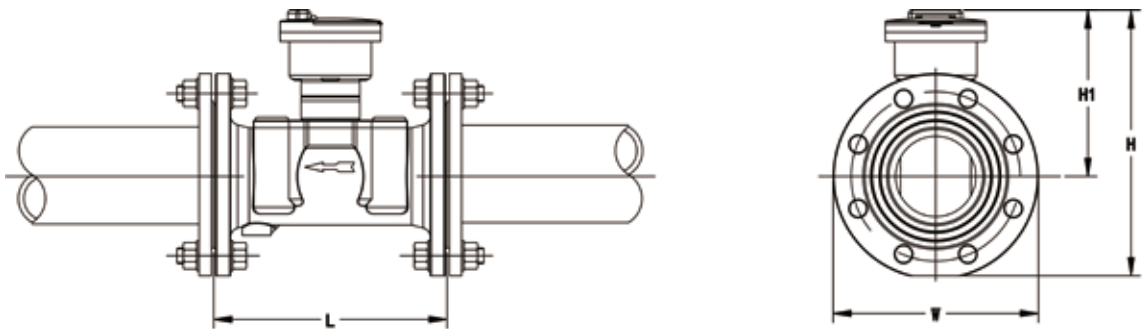
◆ For DN15-DN40



DN Size		DN15	DN20	DN25	DN32	DN40
Dimension	L (mm)	165	195	225/260	230/260	245/300
	L1 (mm)	261	301	347/382	356/386	376/431
	W (mm)	110	110	110	110	110
	H1 (mm)	167	172	177	186	197
	H(mm)	102	107	112	121	132
Pipe Joint -Flow Cell		G3/4"	G1"	G1 1/4"	G1 1/2"	G 2"
Pipe Joint- Tail Pieces		G1/2"	G3/4"	G1"	G1 1/4"	G1 1/2"
Qmax		m³/h	3.0	5.0	7.0	10.0
0.4Qmax		m³/h	1.2	2	2.8	4
Qt		m³/h	0.2	0.33	0.5	0.75
Qmin		m³/h	0.12	0.2	0.3	0.5
Water Temp		(0.1 - 30) °C				
Ambient Temp		(0.1-50)°C				
Installation Method		V/H				
Working Pressure		≤1.0MPa				
Measuring Medium		Water				
Accuracy Class		Class 2,Class1.5, Class1 optional				

Technical Specifications

For DN50-DN500



DN Size	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300	DN350	DN400	DN450	DN500
L (mm)	200	200	225	250	250	300	350	450	500	500	500	500	500
W (mm)	165	185	200	220	250	285	340	405	460	550	580	640	715
H1 (mm)	150	158	175	181	199	217	246	272	320	470	475	510	560
H (mm)	235	248	264	287	320	355	410	452	550	640	670	730	805
Qmax (m³/h)	25	40	60	100	150	200	300	500	800	1000	1500	2000	3000
0.4Qmax (m³/h)	10	16	24	40	60	80	120	200	320	400	600	800	1200
Qt (m³/h)	2.0	3.5	5.0	8.0	13	19	30	50	75	100	135	200	300
Qmin (m³/h)	1.0	2.0	3.0	5.0	7.5	10	18	30	40	55	75	100	150
End Connection		Flange											
Communication Interfaces		MBUS, RS485, GPRS, 4-20mA, Pulse etc optional											
Installation Method		H/V											
Measuring Medium		Water											
Working Pressure		≤1.6MPa											
Water Temp		(0.1-30)°C											
Ambient Temp		(0.1-50)°C											
Accuracy Class		Class2, Class1.5, Class1 optional											