



GSA-250 Series

Ultrasonic Flow meter with
Superstable Performance

■ FEATURE

- Capable of measuring a variety of fluids including water, oil, and chemicals
- Application of ceramic sensor resistant to corrosion and high temperature.
- Flange type or clamp type can be selected
- Capable of measuring fluids with low flow rate and low flow speed
- Low failure rate and no pressure loss thanks to no driving parts present
- Low failure rate due to no moving parts and no pressure loss
- Capable of providing outputs of varied signals outward
- Capable of measuring small to large flow rate

■ APPLICATIONS

- ▶ General industry
 - Nonconductive or viscous liquids and conductive liquids
- ▶ Nuclear Power Industry
 - Cooling water
 - Condensate and boiler feed water
- ▶ Water industry
 - Extraction water inflow & outflow, District Heating, Desalination Facilities, Leak Detection
- ▶ Chemistry and Other process industries
 - All chemical processes (including viscous fluids)

GSA-250 General Specifications

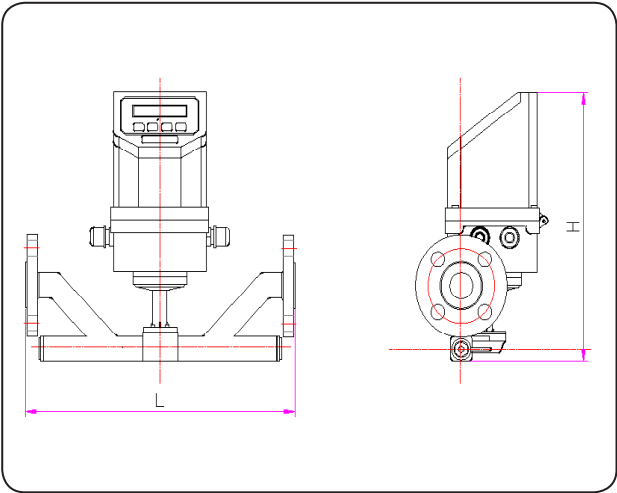
Size	15A (1/2") - 1000A (40")
Process Connection	Flange type - Standard JIS10K RF (Option. KS, ANSI 150#, DIN 16 bar)
Fluid	Most of Liquid
Measuring Range	0.063 m³/h – 28260.0 m³/h
Flow Velocity	0.1 m/s – 10 m/s
Accuracy	±1.0 % F.S (Option ±0.5 % F.S)
Fluid Temperature	-40 °C ~ 160 °C
Ambient Temperature	-40 °C ~ 80 °C
Max. Pressure	10 kgf/cm².G
Power Supply	DC 24 V
Display	LCD Display (Flowrate, Totalizer, Battery Level etc.)
Output	DC 4-20 mA, NEG/POS/NET Totalizer Pulse Two OCT Output, RS-485

STANDARD MATERIAL

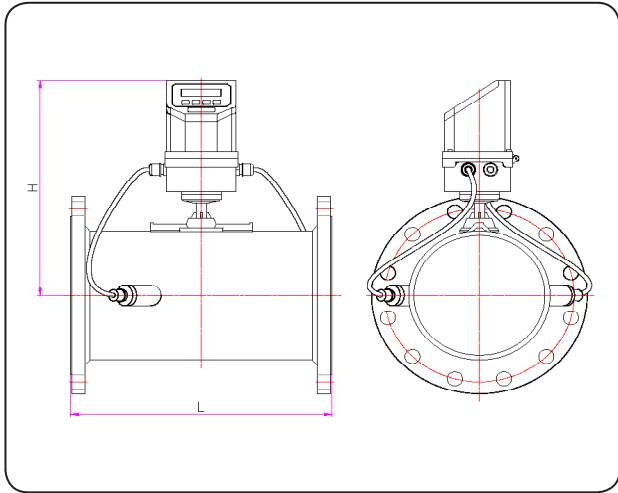
No.	1	2	3	4	5
Description	Body	Flange	Bolt, Nut	Sensor	Indicator
Material	304SS	304SS	304SS	Ceramics	ABS

STRUCTURAL DRAWING

* CONNECTION SIZE (15 ~ 32A)



* CONNECTION SIZE (40 ~ 1000A)



■ FLOW RANGES & DIMENSIONS

Size		Flow Range		Dimensions (mm)	
		Flow rate (m ³ /h)	Flow rate (m ³ /h)	L	H
15A	1/2B	0.063	6.358	320	285
20A	3/4B	0.113	11.304	360	285
25A	1B	0.176	17.662	440	292
32A	1-1/4B	0.289	28.938	450	292
40A	1-1/2B	0.452	45.216	300	275
50A	2B	0.706	70.650	320	281
65A	2-1/2B	1.194	119.398	360	289
80A	3B	1.808	180.864	280	295
100A	4B	2.82	282.60	280	308
125A	5B	4.41	441.56	320	320
150A	6B	6.35	635.85	320	333
200A	8B	11.30	1130.40	380	359
250A	10B	17.66	1766.25	420	384
300A	12B	25.43	2543.40	460	410
350A	14B	34.61	3461.85	500	428
400A	16B	45.21	4521.60	550	454
450A	18B	57.22	5722.65	600	479
500A	20B	70.6	7065.0	650	504
600A	24B	101.7	10173.6	750	555
700A	28B	138.4	13847.4	850	606
800A	32B	180.8	18086.4	950	657
900A	36B	228.9	22890.6	1050	708
1000A	40B	282.6	28260.0	1150	758



GSA-250 Series

Ultrasonic Flow meter for
Advanced Sanitation Facilities

■ FEATURE

- Capable of measuring a variety of fluids including water, oil, and chemicals
- Application of ceramic sensor resistant to corrosion and high temperature.
- Flange type or clamp type can be selected
- Capable of measuring fluids with low flow rate and low flow speed
- Low failure rate and no pressure loss thanks to no driving parts present
- Low failure rate due to no moving parts and no pressure loss
- Capable of providing outputs of varied signals outward
- Capable of measuring small to large flow rate

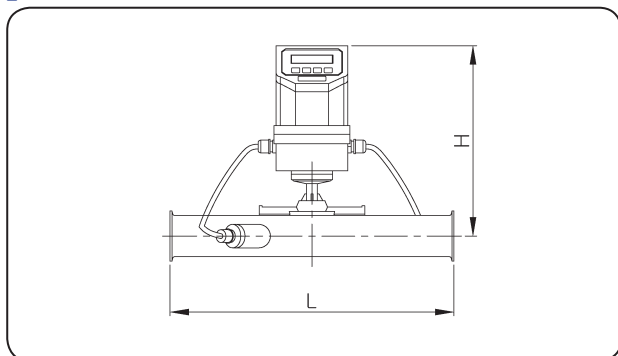
■ APPLICATIONS

- ▶ General application industry
 - Advanced Hygiene Facilities
- ▶ Food and Beverage
 - Precise mixing, dosing and dispensing (Batching)
 - Beverages (soft drinks, beer, wine, fruit juice, etc.)
 - Products with solids content
 - Milk and other dairy products
 - Demi Water ($\geq 20\mu\text{S}/\text{cm}$)
- ▶ Pharmaceutical Industry
 - Processes of drugs, caustic soda, acids, proteins, antibiotics, etc.

■ GSA-250 General Specifications

Size	15A (0.5 S) - 80A (3 S)
Process Connection	Tri- Clamp Ferrule
Fluid	Most of Liquid
Measuring Range	0.005 m ³ /h – 180.0 m ³ /h
Flow Velocity	0.1 m/s – 10 m/s
Accuracy	±1.0 % F.S (Option ±0.5 % F.S)
Fluid Temperature	-40 °C ~ 160 °C
Ambient Temperature	-40 °C ~ 80 °C
Max. Pressure	10 kgf/cm ² .G
Power Supply	DC 24 V
Display	LCD Display (Flowrate, Totalizer, Battery Level etc.)
Output	DC 4-20 mA, NEG/POS/NET Totalizer Pulse Two OCT Output, RS-485

■ STRUCTURAL DRAWING



■ STANDARD MATERIAL

No.	Description	Material
1	Body	304SS
2	Flange	304SS
3	Bolt, Nut	304SS
4	Sensor	Ceramics
5	Indicator	ABS

■ FLOW RANGES & DIMENSIONS

Size		Flow Range		Dimensions (mm)	
		Flow rate (m ³ /h)	Flow rate (m ³ /h)	L	H
15A	1S 1-1/2S	0.063	6.358	200	275
20A		0.113	11.304	200	278
25A		0.176	17.662	250	281
32A	1S 1-1/2S	0.289	28.938	250	284
40A		0.452	45.216	300	287
50A	2S	0.706	70.650	300	290
65A	3S	1.194	119.398	350	300
80A		1.808	180.864	400	310



GSA-500 Series

Ultrasonic Flow meter
Portable Clamp-on type

■ FEATURE

- Capable of measuring a variety of fluids including water, oil, and chemicals
- Application of ceramic sensor resistant to corrosion and high temperature.
- No piping cut required
- Capable of measuring fluids with low flow rate and low flow speed
- Low failure rate and no pressure loss thanks to no driving parts present
- Provides superb stability and accuracy for a long time
- Capable of providing outputs of varied signals outward
- Capable of measuring small to large flow rate

■ APPLICATIONS

- ▶ General application industry
 - Solving common flow-related problems
 - Verify and verify the flow rate of existing flowmeters
 - Troubleshooting and temporary replacement of existing meter problems
 - Process flow field validation
- ▶ Water industry
 - Leak control
 - Pump verification
 - Groundwater expedition check
- ▶ Nuclear Power Generation Industry
 - Cooling water
 - Water supplied to the boiler

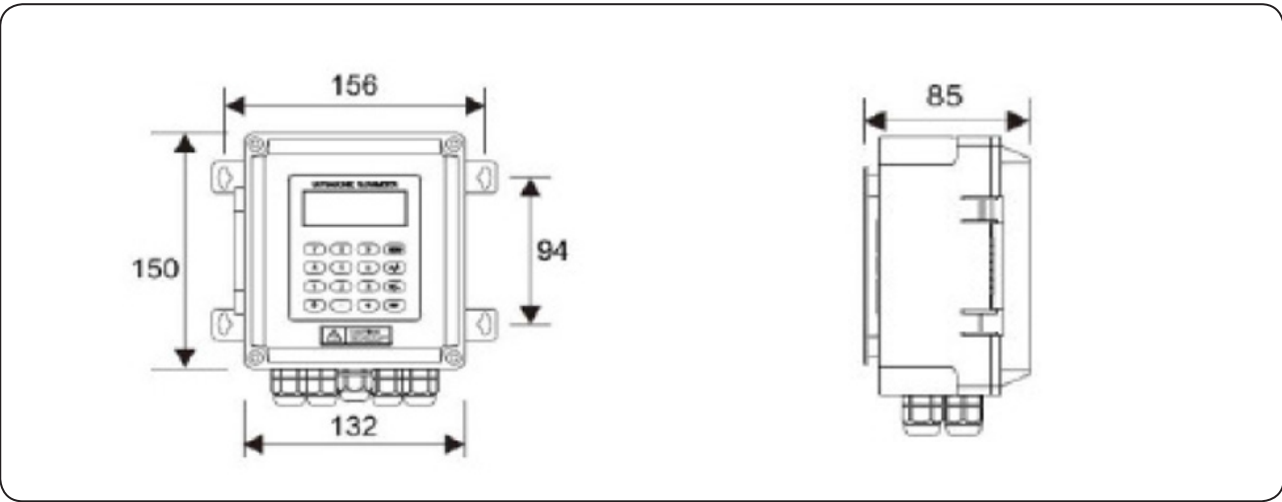
GSA-500 General Specifications

Size	15A - 6000A
Repeatability	≤0.2 %
Fluid	Most of Liquid
Accuracy	±1.0 % F.S
Fluid Temperature	-40 °C ~ 160 °C
Ambient Temperature	-40 °C ~ 80 °C
Max. Pressure	10 kgf/cm².G
Power Supply	AC 220 V / DC 24 V
Display	LCD Display (Flowrate, Totalizer, Flow Velocity, Total Time etc.)
Output	DC 4-20 mA, OCT Output, Relay

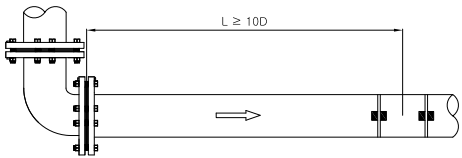
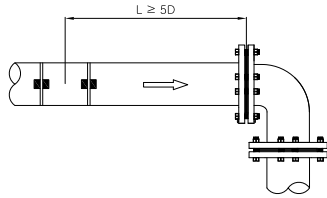
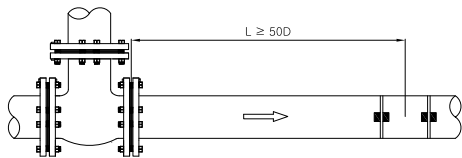
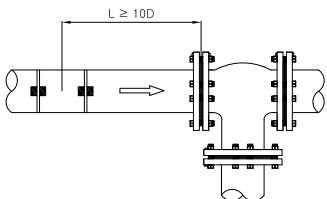
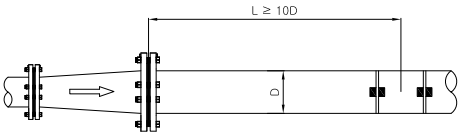
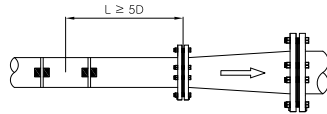
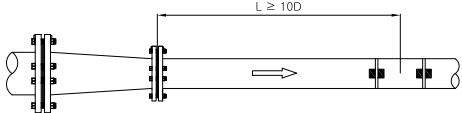
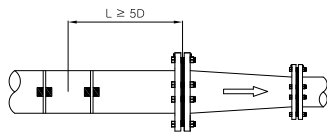
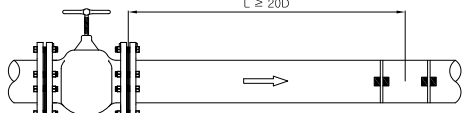
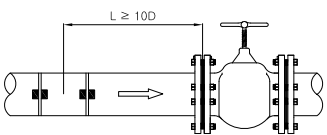
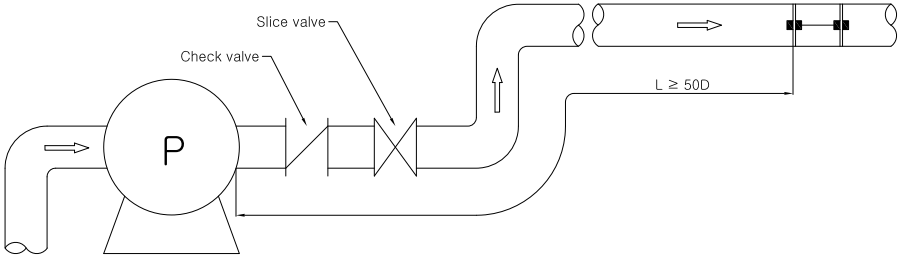
MODEL CODE

G S A - 5 0 0	-	□	Specification
		ST	Small pipe / 15A ~ 100A
		MT	Medium Piping / 50A ~ 1000A
		LT	Large piping / 300A ~ 6000A

STRUCTURAL DRAWING



PIPING CONFIGURATION AND TRANSDUCER POSITION

Classification	Required upstream length	Required downstream straight length
90° bend		
Tee		
Expansion pipe		
Reducer		
Valve		
Pump		

* D : Diameter of pipe



GSA-500P Series

Ultrasonic Flow meter
Panel-mounted Clamp-on type

■ FEATURE

- Capable of measuring a variety of fluids including water, oil, and chemicals
- Application of ceramic sensor resistant to corrosion and high temperature.
- No piping cut required
- Capable of measuring fluids with low flow rate and low flow speed
- Low failure rate and no pressure loss thanks to no driving parts present
- Provides superb stability and accuracy for a long time
- Capable of providing outputs of varied signals outward
- Capable of measuring small to large flow rate

■ APPLICATIONS

- ▶ General application industry
 - Solving common flow-related problems
 - Verify and verify the flow rate of existing flowmeters
 - Troubleshooting and temporary replacement of existing meter problems
 - Process flow field validation
- ▶ Water industry
 - Leak control
 - Pump verification
 - Groundwater expedition check
- ▶ Nuclear Power Generation Industry
 - Cooling water
 - Water supplied to the boiler

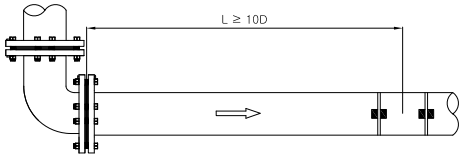
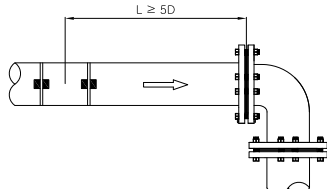
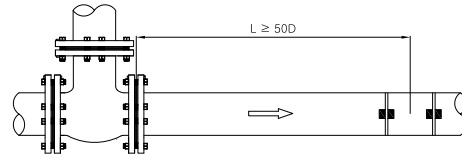
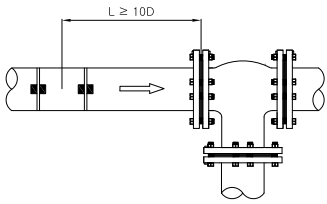
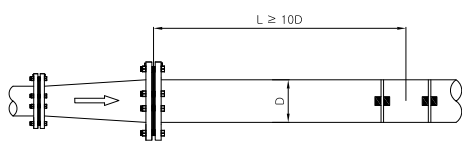
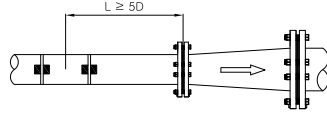
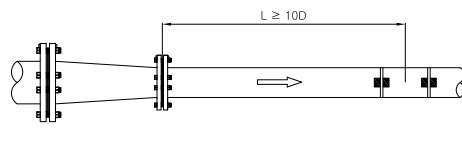
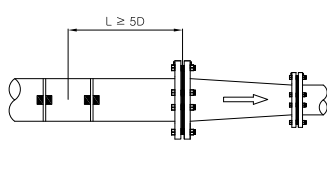
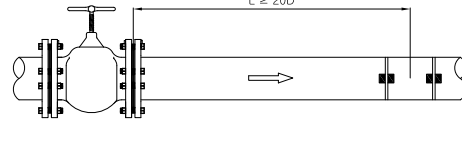
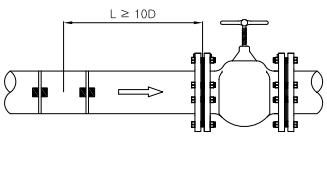
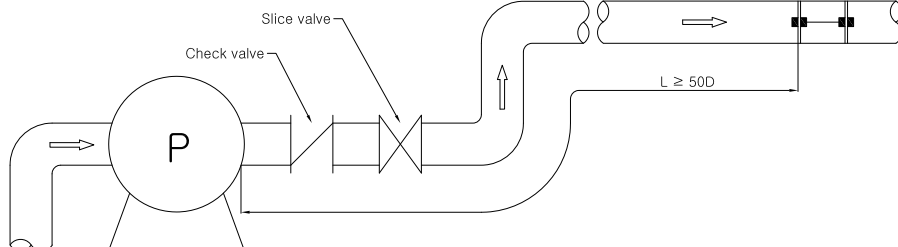
■ GSA-500P General Specifications

Size	15A - 6000A
Repeatability	≤0.2 %
Fluid	Most of Liquid
Accuracy	±1.0 % F.S
Fluid Temperature	-40 °C ~ 160 °C
Ambient Temperature	-40 °C ~ 80 °C
Max. Pressure	10 kgf/cm ² .G
Power Supply	AC 220 V / DC 24 V
Display	LCD Display (Flowrate, Totalizer, Flow Velocity, Total Time etc.)
Output	DC 4-20 mA, OCT Output, Relay

■ MODEL CODE

G S A - 5 0 0 P	-	□	Specification
		ST	Small pipe / 15A ~ 100A
		MT	Medium Piping / 50A ~ 1000A
		LT	Large piping / 300A ~ 6000A

PIPING CONFIGURATION AND TRANSDUCER POSITION

Classification	Required upstream length	Required downstream straight length
90° bend		
Tee		
Expansion pipe		
Reducer		
Valve		
Pump		

* D : Diameter of pipe



GSA-100P Series

Ultrasonic Flow meter
Portable Clamp-on type

■ FEATURE

- Capable of measuring a variety of fluids including water, oil, and chemicals
- Application of ceramic sensor resistant to corrosion and high temperature.
- No piping cut required
- Capable of measuring fluids with low flow rate and low flow speed
- Low failure rate and no pressure loss thanks to no driving parts present
- Provides superb stability and accuracy for a long time
- Capable of providing outputs of varied signals outward
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■ APPLICATIONS

- ▶ General application industry
 - Solving common flow-related problems
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 - Process flow field validation
- ▶ Water industry
 - Leak control
 - Pump verification
 - Groundwater expedition check
- ▶ Nuclear Power Generation Industry
 - Cooling water
 - Water supplied to the boiler

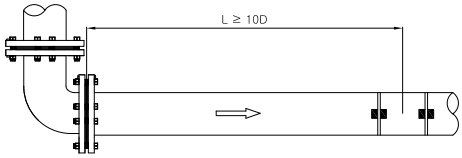
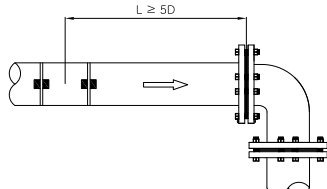
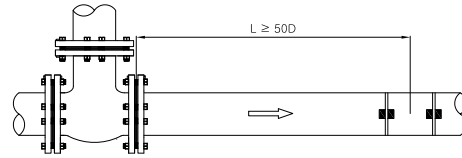
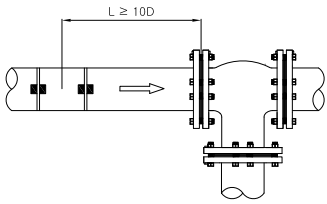
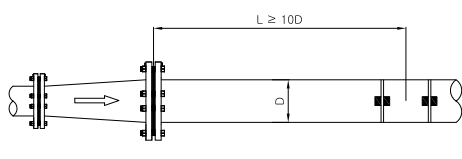
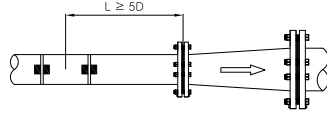
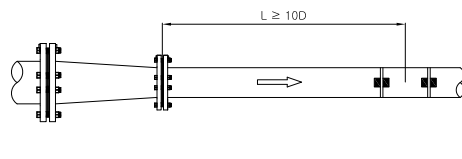
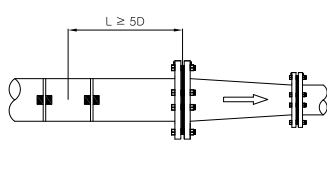
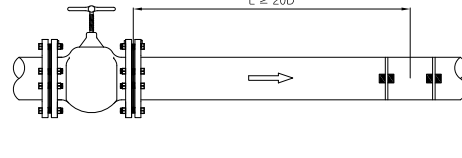
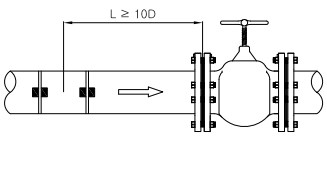
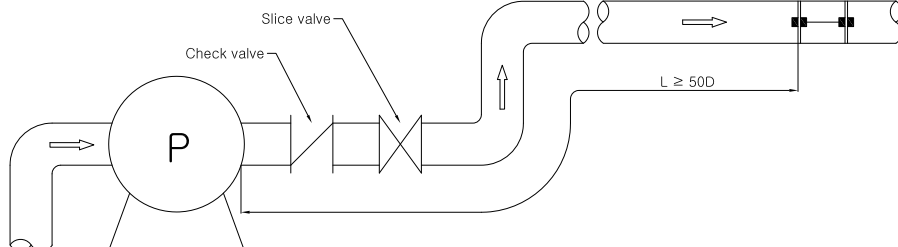
■ GSA-100P General Specifications

Size	15A - 6000A
Repeatability	≤0.2 %
Fluid	Most of Liquid
Accuracy	±1.0 % F.S
Flow Velocity	0.3 m/s ~ 30 m/s
Working Temperature	-25 °C ~ 60 °C
Power Supply	Built in rechargeable Ni-MH battery
Charge	Intelligent charging with AC 220 V
Display	LCD Display (Flowrate, Totalizer, Flow Velocity) / With Backlight
Output	RS-485

■ MODEL CODE

G S A - 1 0 0 P	-	□	Specification
		ST	Small pipe / 15A ~ 100A
		MT	Medium Piping / 50A ~ 1000A
		LT	Large piping / 300A ~ 6000A

PIPING CONFIGURATION AND TRANSDUCER POSITION

Classification	Required upstream length	Required downstream straight length
90° bend		
Tee		
Expansion pipe		
Reducer		
Valve		
Pump		

* D : Diameter of pipe