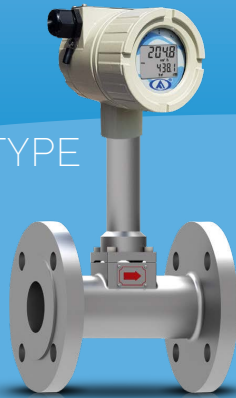


FLANGE TYPE
AFBFP-F



WAFER TYPE
AFBVP-W



AYVAZ FLOW METER

GENERAL FEATURES

The AYVAZ Flow Meter utilizing “Karman Vortex” theory which can meet the requirement of measuring the flow rate various fluids such as gas, steam, liquids.

The Flow Meter uses the DS-DSP transmitter technology, which provides with the excellent signal processing capability and enhance the vortex metering technology to a new level, which means it has lower measuring limit, better stability and accuracy.

The unique dual-sensor design and special signal processing method has also ensured a better anti-vibration by eliminating the vibration signals to provide more reliable performance and lower measurement limit.

The platform is also an open platform, which means we can keep on upgrading it is function according to customer's unique requirement, and make the product a highly custom-orientation product.

1) System Efficiency

Starting with how much the efficiency decreases due to different reasons; unit, section, operating, boiler yields can be monitored and the efficiency can be increased.

2) Energy Efficiency

Flow meters control the degree of benefit of all applications for energy recovery.

3) Process Control

Flow meters provide the desired amount of steam to the process and control the temperature and pressure of the supplied steam.

4) Steam Cost

The steam meter is used to determine the unit product steam cost of the entire plant or various units within the plant or even of any machine in the unit.

Features

- Volumetric or mass flow monitoring of most liquids, gases, and steam
- Multivariable meter delivers mass flow, temperature, pressure, and density readings from a single installed device and reduces initial cost, installation cost and cost-of ownership over the lifetime of the instrument
- Mass flow equations – real gas, ideal gas, AGA 8, API 2540
- Compensated mass flow reading of liquids, gases, and steam
- Energy Monitoring—ability to compute and output energy use
- Easy to install and commission
- Reliable—no moving parts, no fluid to sensor contact
- High accuracy with rangeability up to 40:1
- Temperature up to 350°C
- Pressure up to 100 barg
- Inline configuration for pipes from DN25 to DN 300
- Field configurable ranges, outputs and displays
- Remote electronics option available for use in harsh environments or locations with limited access
- 4–20mA loop—powered Mass Meter design saves on energy costs
- HART protocol communications – Standard
- Modbus communications available

AFM-10 AYVAZ FLOW METER

TECHNICAL SPECIFICATIONS

Measuring Range - Liquid	0,3...7 m ³ /sn
Measuring Range - Gas	2...70 m ³ /sn
Connection	DN25 ... DN300
Wet Parts	AISI304, ops. AISI316
Temperature	250°C max. ops. 350°C
Pressure	16 bar max. ops 40 bar or 100 bar
Sensitivity	≤±0,75% O.D. ve ± 1 % O.D.
Protection	IP67 opt. Ex d IIC T3 Gb
Feed	24V DC opt. 230 VAC
Output	4-20 mA, Pulse
Connection	RS485-MODBUS, HART
Display	Instant and Total LCD
Application	Liquid, Gases and Steam

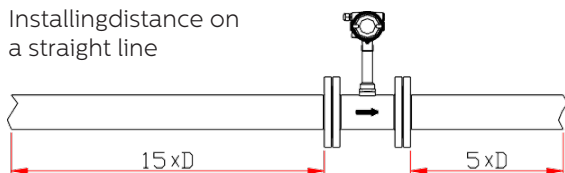
ADVANTAGES

- Heavy Duty Resistant Robust Design
- Ideal for high temperatures
- Long Life
- Optional Temperature And Pressure Compensation
- Ideal for dirty and particulate liquids
- Indicators, Wall Mounted on request

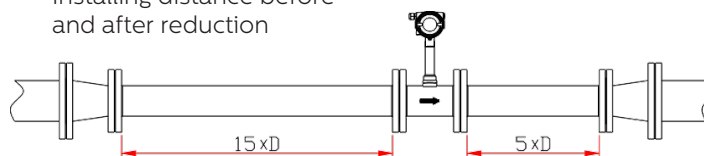
INSTALLATION

Flow Meter Application

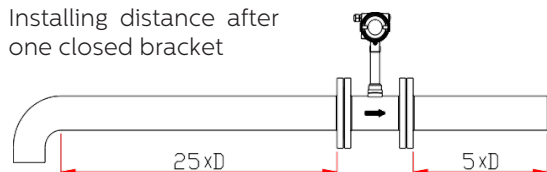
Installing distance on a straight line



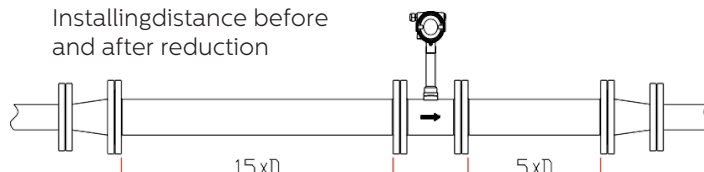
Installing distance before and after reduction



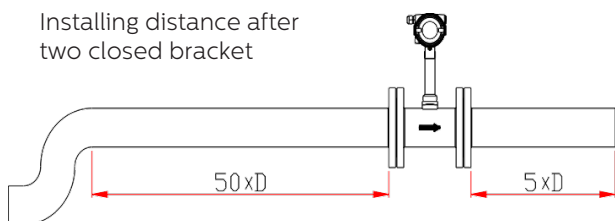
Installing distance after one closed bracket



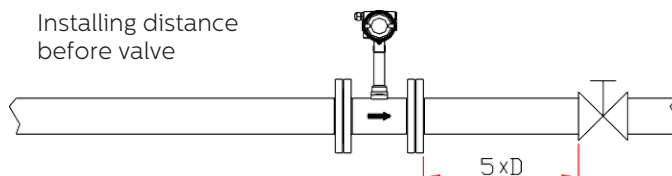
Installing distance before and after reduction



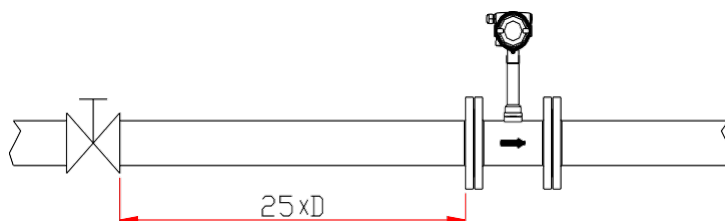
Installing distance after two closed bracket



Installing distance before valve



Installing distance after valve



AFM-10 AYVAZ FLOW METER

FLOW METER SELECTION TABLE

FLUID = SATURATED STEAM

Pressure(Bar)	3	4	5	6	7	8	9	10	12	15	
DN25 Lower Limit	22,8	30,6	37,7	44,8	51,8	58,8	65,9	72,7	86,5	107,4	Kg/h
DN25 Upper Limit	199,6	267,3	329,9	391,8	453,2	514,4	576,5	636,1	757,2	939,5	Kg/h
DN32 Lower Limit	18,7	25	30,9	36,7	42,4	48,2	54	59,6	70,9	88	Kg/h
DN32 Upper Limit	327	438	540,4	641,9	742,5	842,7	944,6	1.042	1.240	1.539	Kg/h
DN40 Lower Limit	14,6	19,6	24,1	28,7	33,1	37,6	42,2	46,5	55,4	68,7	Kg/h
DN40 Upper Limit	511	684,3	844,4	1.002	1.160	1.316	1.475	1.628	1.938	2.405	Kg/h
DN50 Lower Limit	22,8	30,6	37,7	44,8	51,8	58,8	65,9	72,7	86,5	107,4	Kg/h
DN50 Upper Limit	798,4	1.069	1.319	1.567	1.812	2.057	2.306	2.544	3.028	3.758	Kg/h
DN65 Lower Limit	38,6	51,6	63,7	75,7	87,5	99,3	111,4	122,9	146,3	181,5	Kg/h
DN65 Upper Limit	1.349	1.807	2.229	2.648	3.063	3.477	3.897	4.300	5.118	6.351	Kg/h
DN80 Lower Limit	58,4	78,2	96,5	114,6	132,6	150,5	168,7	186,1	221,5	274,9	Kg/h
DN80 Upper Limit	2.043	2.737	3.377	4.011	4.640	5.267	5.903	6.513	7.753	9.620	Kg/h
DN100 Lower Limit	91,2	122,2	150,8	179,1	207,2	235,1	263	290	346,2	429,5	Kg/h
DN100 Upper Limit	3.193	4.277	5.277	6.268	7.251	8.229	9.224	10.177	12.115	15.032	Kg/h
DN125 Lower Limit	142,6	190,9	235,6	279,8	323,7	367,4	411	454	540	671,1	Kg/h
DN125 Upper Limit	4.989	6.683	8.246	9.794	11.329	12.859	14.413	15.902	18.930	23.487	Kg/h
DN150 Lower Limit	205,3	275	339,3	403	466,1	529,1	593	654	778,9	966	Kg/h
DN150 Upper Limit	7.185	9.623	11.874	14.103	16.315	18.517	20.755	22.899	27.260	33.822	Kg/h
DN200 Lower Limit	365	488,8	603,2	716,4	828,7	940,6	1.054	1.163	1.384	1.718	Kg/h
DN200 Upper Limit	12.774	17.108	21.110	25.073	29.004	32.919	36.989	40.710	48.462	60.128	Kg/h
DN250 Lower Limit	570,3	763,8	942,4	1.119	1.294	1.469	1.647	1.817	2.163	2.684	Kg/h
DN250 Upper Limit	19.959	26.732	32.985	39.177	45.319	51.437	57.653	63.610	75.722	93.951	Kg/h
DN300 Lower Limit	821,2	1.099	1.357	1.611	1.864	2.116	2.372	2.617	3.115	3.865	Kg/h
DN300 Upper Limit	28.741	38.494	47.499	56.415	65.260	74.069	83.021	91.599	109.039	135.289	Kg/h

FLOW = AIR

Nominal Dia.(mm)	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
Min. Flow (m³/h)	14	12	9	14	24	36	56	88	127	226	353	508
Max. Flow (m³/h)	105	174	271	424	716	1.085	1.695	2.648	3.813	6.780	10.593	15.254

FLOW = LIQUID

Nominal Dia.(mm)	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
Min. Flow (m³/h)	0,5	0,9	1,4	2,1	3,6	5,4	8,5	13,2	19,1	33,9	53	76
Max. Flow (m³/h)	12,4	20,2	31,6	49,4	83,5	127	198	309	445	791	1.236	1.780

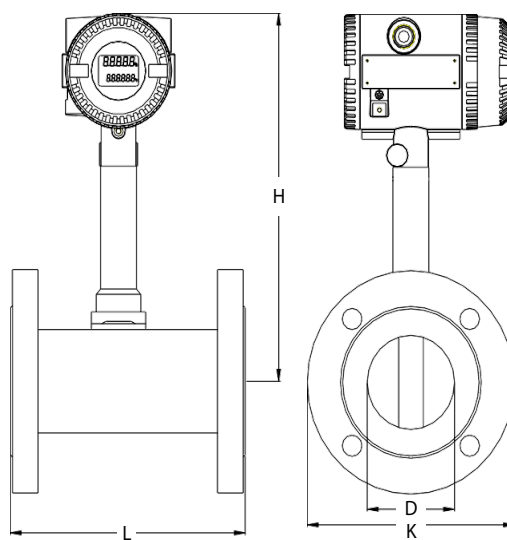
AFM-10 AYVAZ FLOW METER

PORTABLE FLOW CONTROLLER (COMPUTER)

Selectional Input 1	: 4-20 mA, 0-10VDC, 0-5VDC, Darbe (PNP, NPN, Push-Pull, Reed)
Selectional Input 2	: 4-20 mA or PT100 (for pressure or temperature input)
Selectional Output	: 4-20 mA, 0-10VDC and impact
Analog Input Resolution	: 10 bit
Digital Input Speed	: 10 KHz, max.
Digital Output Speed	: 50 Hz
Screen	: 4.3 "480x272 Pixel resistant touch screen
Humidity	: % 10 ... 85 without condensing
Power	: 24 VDC, $\pm$ % 10
Power Consumption	: 3 W
Dimension	: 144 x 144 mm (front), 134 x 134 mm (back), depth 100 mm
Protection	: IP65 (front)



FLANGED TYPE DIMENSIONS *Dimension for ANSI RF150 Flanged*

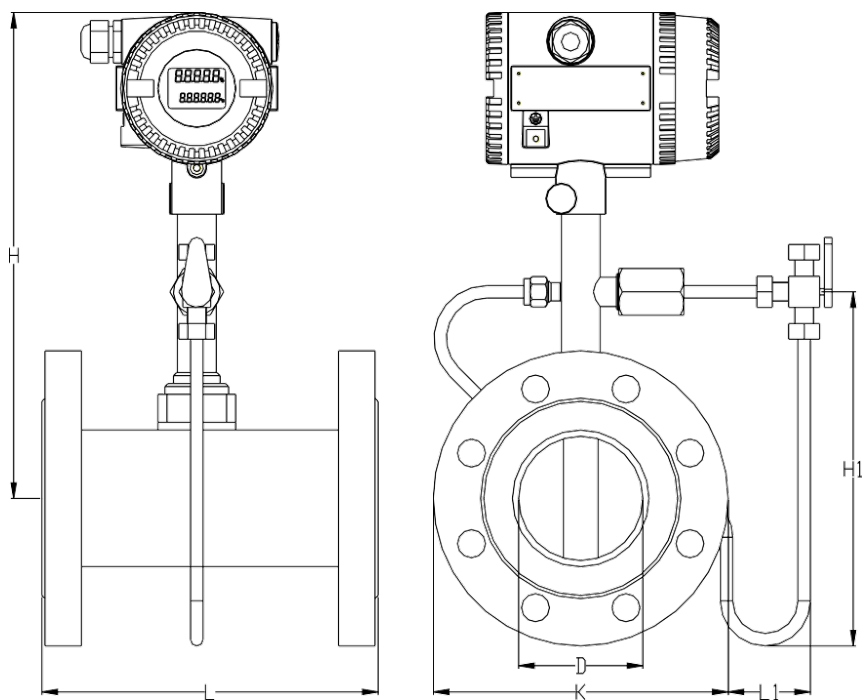


Dia. (mm)	K	L	W (Flange Between Hole Centers)	C (Flange Thickness)	MxN (Hole diameter and number)	H
15	90	180	60.3	11.6	16X4	301.5
20	100	180	69.9	13.2	16X4	299
25	110	180	79.4	14.7	16X4	295.5
32	115	180	88.9	16.3	16X4	300.5
40	125	180	98.4	17.9	16X4	302.5
50	150	180	120.7	19.5	19X4	307
65	180	200	139.7	22.7	19X4	314
80	190	200	152.4	24.3	19X4	326
100	230	200	190.5	24.3	19X8	336
125	255	220	215.9	24.3	22X8	345
150	280	220	241.3	25.9	22X8	360
200	345	220	298.5	29	22X8	385
250	405	250	362	30.6	25X12	412.7
300	485	300	431.8	32.2	25X12	445.4

AFM-10 AYVAZ FLOW METER

FLANGED TYPE DIMENSIONS

Flanged multi-variable type (ANSI RF150)

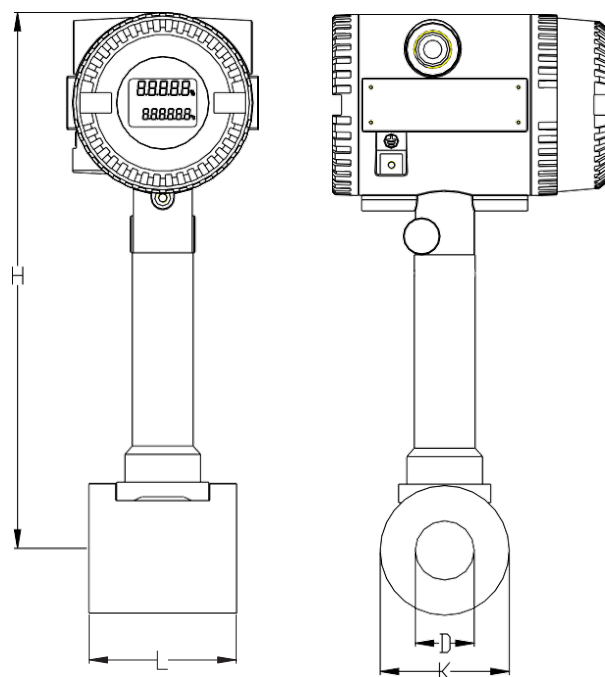


Dia. (mm)	K	L	W (Flange Between Hole Centers)	C (Flange Thickness)	MxN (Hole diameter and number)	H	H1	L1
15	90	180	60.3	11.6	16X4	301.5	166.5	140
20	100	180	69.9	13.2	16X4	299	169	137
25	110	180	79.4	14.7	16X4	295.5	170.5	136
32	115	180	88.9	16.3	16X4	300.5	178	133
40	125	180	98.4	17.9	16X4	302.5	185	129
50	150	180	120.7	19.5	19X4	307	202	124
65	180	200	139.7	22.7	19X4	314	224	116.5
80	190	200	152.4	24.3	19X4	326	241	109
100	230	200	190.5	24.3	19X8	336	271	99
125	255	220	215.9	24.3	22X8	345	292.5	99
150	280	220	241.3	25.9	22X8	360	320	99
200	345	220	298.5	29	22X8	385	377.5	99
250	405	250	362	30.6	25X12	412.7	435.2	99
300	485	300	431.8	32.2	25X12	445.4	507.9	99

AFM-10 AYVAZ FLOW METER

WAFER TYPE DIMENSIONS

Wafer

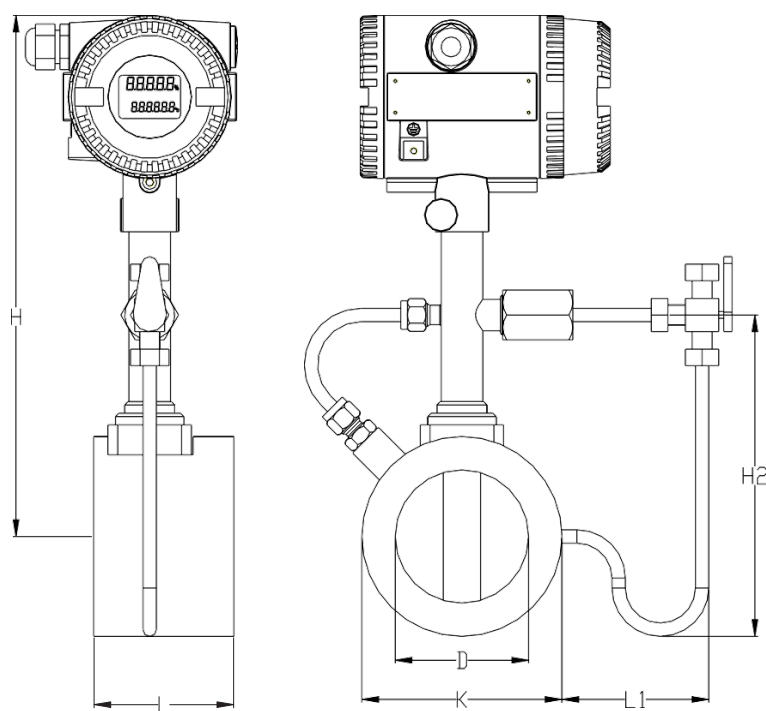


Dia. (mm)	K	L	W (Flange Between Hole Centers)	C (Flange Thickness)	MxN (Hole diameter and number)	H
15	91	65	100	18	13x4	293.5
20	91	65	100	18	13x4	291
25	91	65	100	18	13x4	288.5
32	80	65	120	20	13x4	292.8
40	84	65	120	20	13x4	295.8
50	94	65	132	22	17X4	301
65	105	65	144	24	17X6	308.5
80	120	65	160	24	17X6	316
100	140	90	190	24	17X8	327
125	165	65	210	26	17X8	340.5
150	190	65	240	28	21X8	353
200	240	85	296	28	21X12	378
250	290	100	354	28	21X12	404
300	340	120	412	30	21X12	429

AFM-10 AYVAZ FLOW METER

WAFER TYPE DIMENSIONS

Wafer multi-variable type



Dia. (mm)	K	L	W (Flange Between Hole Centers)	C (Flange Thickness)	MxN (Hole diameter and number)	H	H1	L1
15	91	65	100	18	13x4	293.5	151	140
20	91	65	100	18	13x4	291	148.5	137
25	91	65	100	18	13x4	288.5	146	136
32	80	65	120	20	13x4	292.8	152.8	133
40	84	65	120	20	13x4	295.8	157.8	129
50	94	65	132	22	17X4	301	168	116.5
65	105	65	144	24	17X6	308.5	181	109
80	120	65	160	24	17X6	316	206	99
100	140	90	190	24	17X8	327	217	99
125	165	65	210	26	17X8	340.5	243	99
150	190	65	240	28	21X8	353	268	99
200	240	85	296	28	21X12	378	318	99
250	290	100	354	28	21X12	404	369	99
300	340	120	412	30	21X12	429	419	99

AFM-10 AYVAZ FLOW METER



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