ALVAMT

VA METAL TUBE Flowmeter

Model ALVAMT

GENERAL

ALVAMT rugged metal tube variable area meters (rotameters) are ideal for high pressure, high temperature and other demanding flow applications where safety is a concern. Features include globally-recognized approvals for use in hazardous environments, integral needle valve for flow control, multiple connection options for easy installation, several material options for corrosion resistance & metering of aggressive fluids, and HART or 4-20mA outputs for remote flow monitoring and control. The ALMVT's excellent repeatability makes it a good choice for batching applications. For versions without electial output, no power supply is required. The ALVAMT's low-pressure drop provides additional value by allowing for economical pump selection.

FEATURES

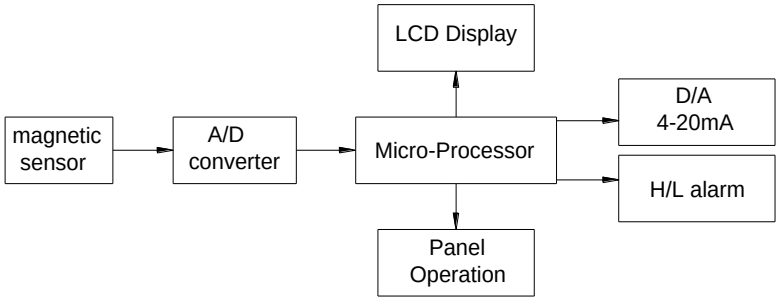
- ☐ Excellent low-flow performance
- ☐ Versitile design may be used for gas, steam and liqiuds
- ☐ Low pressure loss for gas and steam applications
- ☐ Suitable for high pressure and high temperature applications
- ☐ Wide turn-down ratio of 20:1
- ☐ Local indication and intelligent remote LCD display
- ☐ Easy-to-read pointer style indicator
- ☐ Intrinsically safe & explosion proof for hazardous area applications

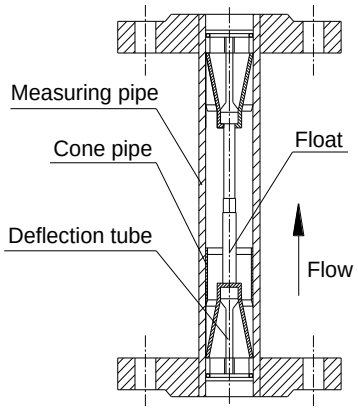
SPECIFICATION

- Sizes : ½", ¾", 1", 1½", 2", 2½", 3", 4", 5", 6", 8"
- Measuring Range
  - Water (70 °F) 0.004-880 GPM (1-200,000 lph)
  - Air (70 °F, 14.7 psia) 0.02-2350 SCFM(0.03~4000m^3/h)
- Temperature
  - Standard (E) -112~392 °F (-80 ~ 200℃)
  - PTFE: 32~185 °F (0 ~ 85)
  - High temperature (H): -112 ~ 572 °F (-80 ~ 300)
- Pressure Loss 1-10 psi (7 ~ 70 Kpa)
- Pressure
  - P1: 232 psi (1.6MPa) → 3" - 8" (DN80 - DN200)
  - P2: 580 psi (4.0MPa) → ½" - 2" (DN15 - DN50)
  - P3: 2320 psi (16MPa) → 3"-8" (DN80 - DN200)
  - P4: 3625 psi (25MPa) → ½"-2" (DN15 - DN50)
- Viscosity
  - ½" ~ ¾" (15mm ~ 20 mm) - < 30 cP
  - 1" ~ 1½" (25mm ~ 40 mm) - < 250 CP
  - 2" - 8" (50mm ~ 200mm) - < 300 CP
  - Top enter、Top exit
- Material
  - 316SS, 304SS
  - Tantilum (flow tube)
  - PTEE (flow tube)
  - lining PTFE
- Flange
  - Carbon Steel or Stainless steel
  - ANSI, JIS and DIN avaialble
- Accuracy
  - ±1.5%(Standard)
  - ±1.0%(Optional)
- Repeatability : ±0.5% of reading
- Signal Output
  - 4-20mA
  - Pulse output (minimum interval 50 ms)
  - HART, ProfiBus
- Local Display : Mechanical Indicator(standard)
- Digit Display : Rate 0 ~ 50000
  - Total: 0 ~ 99999999 (with decimal)
- Power Supply
  - : 85~265V_{AC} 50/60Hz
  - : 24V_{DC} two wires 4 - 20mA
  - 3.6V@7.5AH lithium
  - battery up to three years
- Approvals
  - Isolate: Exd Ⅱ BT6
  - Intrinsical: Exia Ⅱ C
- Alarms
  - High / Low limit alarm
  - maximum 100mA@30VDC
  - impedance 100Ω
- Relay output
  - 1A@30V_{DC} or 0.25A@250V_{AC}
  - or 0.5A@125V_{AC}
- Data Storage EEPROM (up to 10 years)
- Flow Orientation
  - Top enter/top exit,
  - Bottom enter/Top exit crossly
  - Right enter/Left exit
  - Left enter/Right exit
- Protection IP 65
- Housing Material : Aluminum Alloy
- Cable Connector: M20x1.5

10437 Innovation Drive, Suite 315, Milwaukee, WI 53226, USA
URL: http://www.smartmeasurement.com
TEL+1- 866-404-5415 FAX+1-414-433-1606
E-mail: sales@smartmeasurement.com

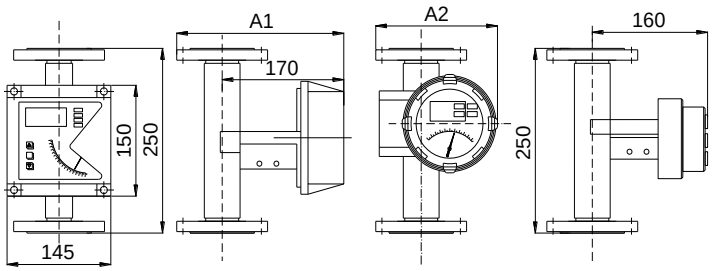
Flow range for various fluids



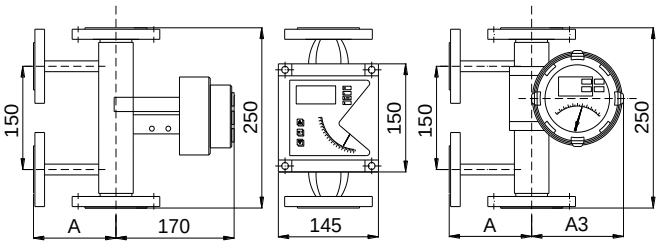


Meter	Float	Water - GPM		Air
Bore Size	Model code	Material of measuring Tube Ro、 R1、 R2、 R4、 Ti 、RL	Material of Measuring Tube PTFE	in SCFM
½" Nominal (DN15)	KV15.0	0.25 - 2.5		0.017 - 0.17
	KV15.1	0.4 - 4		0.03 - 0.3
	KV15.2	0.6 - 6.6	0.4 - 4	0.06 - 0.65
	KV15.3	1 - 10	0.6 - 6.6	0.1 - 1.0
	KV15.4	1.6 - 16	1 - 10	0.15 - 1.6
	KV15.5	2.5 - 25	1.6 - 16	0.25 - 2.25
	KV15.6	4 - 42	2.5 - 25	0.4 - 4
	KV15.7	6.6 - 66	4 - 42	0.5 - 6
	KV15.8	10 -100	6.6 - 66	1 - 9.5
	KV15.9	16 - 166	10 -100	1.75 - 17.5
1" Nominal (DN25)	KV25.0	16 - 166		
	KV25.1	25 - 265	16 - 166	2.5 - 25
	KV25.2	40 - 420	25 - 265	
	KV25.3	50 - 525		4 - 40
	KV25.4	65 - 660	40 - 1600	
	KV25.5	85 - 850		
	KV25.6	100 - 1000	50 - 525	
	KV25.7	130 - 1300	65 - 660	10 - 100
	KV25.8	160 - 1600	85 - 850	15 - 150
2" Nominal (DN50)	KV50.0	130 - 1300		25 - 225
	KV50.1	160 - 1600	100 - 1000	
	KV50.2	260 - 2600	160 - 1600	
	KV50.3	420 - 4200	260 - 2600	
	KV50.4	525 - 5300	420 - 4200	35 - 370
	KV50.5	660 - 6600		
3" Nominal (DN80)	KV80.0	420 - 4200		
	KV80.1	525 - 5300		40 - 400
	KV80.2	660 - 6600	420 - 4200	70 - 700
	KV80.3	1000 - 10500	660 - 6600	100 - 1000
	KV80.4	1650 - 16600	1000 - 10500	
4" Nominal (DN100)	KV100.0	1000 - 10500		100 - 1000
	KV100.1	1650 - 16600	1000 - 10500	
	KV100.2	2000 - 21000	1600 - 16000	170 - 1700
	KV100.3	2600 - 26000	2000 - 21000	
6" Nominal (DN150)	KV150.0	2000 - 21000		170 - 1700
	KV150.1	2600 - 26000	2000 - 21000	
	KV150.2	4000 - 40000		
	KV150.3	5300 - 53000		
8" Nominal (DN200)	KV200.0	4000 - 40000		
	KV200.1	5300 - 53000		

Top enter and bottom exist (FA type)

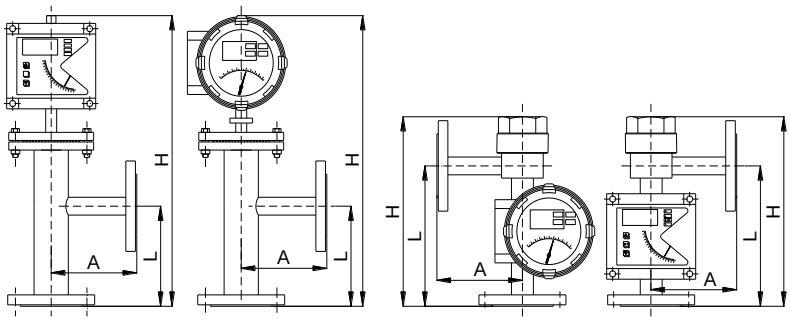


Meter Size	FA series			△P
	A1	A2	G (kg)	(KPa)
½"	8.66	9.49	8.16	2.03
1"	9.06	10.24	11.47	2.76
2"	10.04	11.81	19.18	3.34
3"	10.63	12.99	31.31	4.79
4"	11.02	13.78	33.52	6.09
6"	12.60	15.94	74.31	8.70
8"	13.78	18.11	107.39	10.15



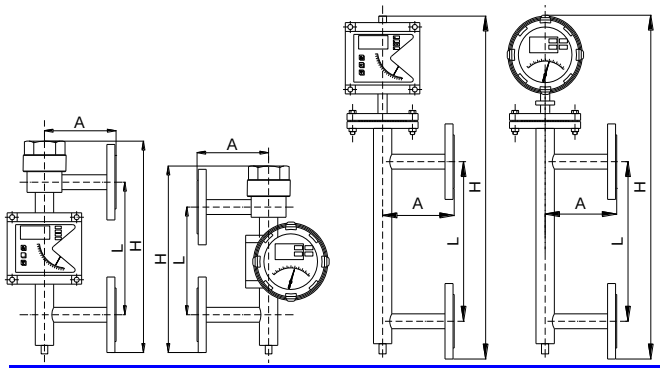
Meter Size	FA/T Jacket Series		
	A3	A	G (kg)
½"	5.31	3.94	14.33
1"	6.10	4.33	23.15
2"	7.68	4.72	30.87
3"	8.86	5.51	44.10
4"	9.84	5.91	46.31

Bottom enter and side exist (FB type)



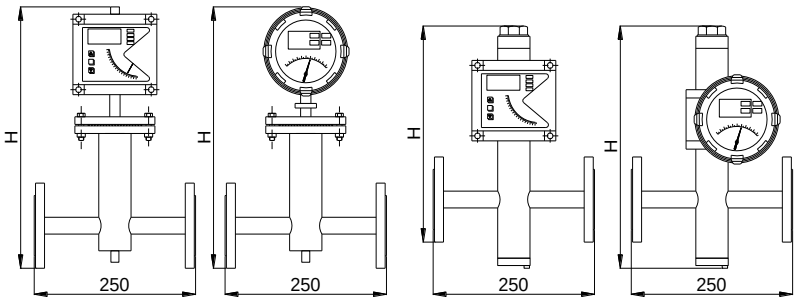
Meter Size	FB Series				△P
	H	L	A	G (kg)	(KPa)
½"	19.69	9.84	4.72	11.03	2.90
1"	19.69	9.84	4.72	17.64	4.06
2"	25.59	9.84	4.72	30.87	5.22
3"	31.50	11.81	5.91	68.36	6.53
4"	31.50	11.81	5.91	110.25	8.41
6"	33.46	13.78	7.09	147.74	9.14
8"	34.65	15.75	7.87	178.61	10.15

Side enter and Side exist vertical (FC type)



Meter Size	FC Series				△P
	H	L	A	G (Kg)	(KPa)
½"	13.78	9.84	4.72	15.44	2.61
1"	13.78	9.84	4.72	17.64	3.19
2"	23.62	9.84	4.72	33.08	4.06
3"	27.56	9.84	5.91	55.13	5.08
4"	27.56	9.84	5.91	63.95	6.53
6"	29.92	11.81	7.09	116.87	8.41
8"	31.50	13.78	7.87	134.51	10.15

Side enter and Side exist - horizontal (FC type)



Meter Size	FD Series		△P
	H	G (Kg)	(KPa)
½"	0.26	66.15	4.35
1"	0.41	77.18	5.08
2"	0.83	88.20	5.80

**** Please contact your local SMC application engineer**

You also need to provide the following information:

Type of Fluid	Please provide the name of your fluid, including operating density and viscosity
Full Scale Flow	Maximum and minimum flow rates, units must be m^3/hr, LPM or GPM
Line Size	we need to know your pipe size as well connection type (flange, threaded, etc..)
Pressure and Temperature	We will calibrate your flowmeter as close to your operating conditions as possible

Model Selection Guide

ALVAMT Series

Eaxmple: ALVAMT-100-FA-R0-T-KV100.2-1.6-E-M1-111-001

ALVAMT-	**-	**-	**-	**-	**-	**-	**-	**-	**	**	**-	**	**	**		Description
code ** = DN**	**															Size
Bottom entry, Top exit		FA														Meter Structure
Bottom entry, Top exit horizontal		FB T														
Bottom entry horizontal, Top exit horizontal		FC Z														
Right entry, Left exit		FDR														
Left entry, Right exit		FD														
0Cr18Ni12Mo2Ti			R0													Material of wetted tube
ICr18Ni9Ti (321)			R1													
ICr18Ni9Ti (302)			R2													
0Cr18Ni9 (304)			R4													
00Cr17Ni14Mo2 (316L)			RL													
PTEE			RP													
Titanium			Ti													
Non				O												Special Type
Damping				Z												
Float Number					KV*.*											Float Number
232 psi (1.6 Mpa) for 2½"-8" (DN65-DN200)						1.6										Nominal Pressure
580 psi (4.0 Mpa) for ½" - 2" (DN15-DN50)						4.0										
2320 psi (16 Mpa) for 2½"-8" (D65-DN200)						16										
3625 psi (25 Mpa) for ½"-2" (DN15-DN50)						25										
-112 - 302 °F (-80 - 150 °C) - remote style							E									Operating Temperature
-112 - 570 °F (-80 - 300 °C) - integral style							H									
Local indicator, square housing								M1								Indicator
Intelligent indicator, square housing								M2								
Intelligent indicator, circular housing								M3								
None									0							Signal Output
4-20mA									1							
Pulse output									2							
Without										0						Matching Flange
CS										1						
SS										2						
220V_{AC}											0					Power Supply
24V_{DC}											1					
3.6V Battery											2					
Without												0				Protection Grade
Exd II BT6												1				
Exia II CT5												2				
HG 20594													0			Flange Standard
HG 20595													1			
Other flange standard													2			
None														0		Extra Device
With lining														1		
With lining PTFE														2		