

## GENERAL

**ALIATARGET** The ATF80 Series Smart Target Flowmeters revolutionizes the target deflection method of measuring flow. The target displacement is precisely measured by capacitance sensors. The resultant signal is then digitally processed via surface-mount, industrial signal processing to Produce a 4-20 mA output proportional to the volumetric flowrate. Smart Target Flowmeter are suitable for low-velocity & high-temp. Gas, steam flowrate. Re-ranging the meter is as simple as changing the target. There is no need to change the whole meter.

## FEATURES

- ❑ Measure low velocity less than 0.1 m/s
- ❑ Measure high-temp, low-pressure and low-velocity flare gas.
- ❑ 4-20 mA output HART communication
- ❑ Low Pressure drop
- ❑ The Max. temperature can be up to 450 °C
- ❑ Online calibration by Alia unique software
- ❑ Insertion Type or Hot-Tap Type available for large pipeline

## STANDARD SPECIFICATION

- Size : 15, 20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300... 6000 (mm)
- Measuring Range : Steam: 0.002-3400000 t/hr  
: Gas: 1-3280000 Nm<sup>3</sup>/hr  
: Liquid: 0.1-55800 m<sup>3</sup>/hr
- Material : Stainless Steel 304 / 316
- Accuracy  
Wafer / Flange Type : +/-0.75% of reading  
Insertion Type : +/-1.6% of reading
- Repeatability : +/-0.05% FS
- Multi Flow Range : 1-3 flow range
- Process Connection : Flange / Wafer / Insertion
- Flange Type : JIS 10K / JIS 20K / JIS 40K  
ANSI 150# / ANSI 300# / ANSI 600#  
PN10 / PN16 / PN25 / PN40
- Ambient Temperature : -25~70 °C
- Temperature Effect : ≤±1% per 50 °C
- Max. Pressure : 100 bar
- Working Temperature  
Flange / Wafer : -60~450 °C  
Insertion : -60~450 °C  
Hot Tap (Retractable) : -20~80 °C



- Local Display : 4 Lines LCD (with backlight)  
: 5 Digit flowrate  
: 8 Digit totalizer
- Current Output : 4-20 mA (2 wires)  
Load : Rohm= (VDC-10) \* 50
- Alarm Function : High / Low Alarm
- Turndown Ratio : 15:1
- Communication : HART signal (Compatible)
- Data Storage : Operation parameters and totalizer figures are stored by EEPROM for more than 10 years
- Housing Material : Aluminum Alloy
- Cable Entry : Standard: M20 Option: 1/2" NPTF
- Power Supply : 10-32 VDC
- Power Effect : ≤0.01% / V
- Keypad : 3 Internal keys for programming and display control
- Low Flow Cutoff : 0-20%
- Damping : 0-32 Seconds
- Protection Class : IP67  
: Intrinsically Safe, Eex ia IIC T4  
: Explosion Proof, Ex d IIC T6



**FLOW RANGE**

Unit : Am<sup>3</sup>/hr

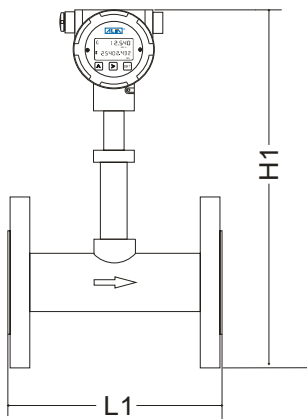
Normal Size		Flow Range											
mm	Inch	Water					Air						
		Min. Range			Max. Range		Min. Range			Max. Range			
		0.1 m/s	to	1.5 m/s	1 m/s	to	15 m/s		to				
15	1/2"	0.06	to	0.95	0.64	to	9.5	1.53	to	23.0	3.4	to	50.9
20	3/4"	0.11	to	1.7	1.1	to	17.0	1.40	to	21.0	6.0	to	90.5
25	1"	0.18	to	2.7	1.8	to	26.5	1.33	to	20.0	9.4	to	141
32	1-1/4"	0.29	to	4.3	2.9	to	43.4	1.27	to	19.0	15.3	to	232
40	1-1/2"	0.45	to	6.8	4.5	to	67.9	1.23	to	18.5	24.0	to	362
50	2"	0.71	to	10.6	7.1	to	106	1.20	to	18.0	37.5	to	565
65	2-1/2"	1.2	to	17.9	11.9	to	179	1.2	to	17.6	63.3	to	956
80	3"	1.8	to	27.1	18.1	to	271	1.8	to	27.1	95.9	to	1448
100	4"	2.8	to	42.4	28.3	to	424	2.8	to	42.4	150	to	2262
125	5"	4.4	to	66.3	44.2	to	663	4.4	to	66.3	234	to	3534
150	6"	6.4	to	95.4	63.6	to	954	6.4	to	95.4	337	to	5089
200	8"	11	to	170	113	to	1696	11	to	170	599	to	9048
250	10"	18	to	265	177	to	2651	18	to	265	937	to	14137
300	12"	25	to	382	254	to	3817	25	to	382	1349	to	20357
350	14"	35	to	520	346	to	5195	35	to	520	1836	to	27708
400	16"	45	to	679	452	to	6786	45	to	679	2398	to	36190
450	18"	57	to	859	573	to	8588	57	to	859	3034	to	45803
500	20"	71	to	1060	707	to	10603	71	to	1060	3746	to	56547

Unit : kg/hr

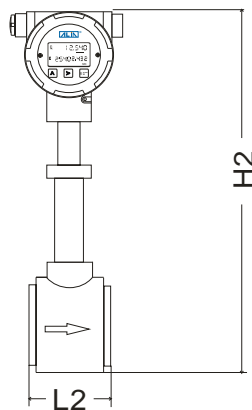
Normal Size		Saturated Steam											
mm	Inch	3 bar G					7 bar G						
		Min. Range			Max. Range		Min. Range			Max. Range			
			to			to		to		to			
15	1/2"	5.3	to	80.0	7.3	to	110	7.3	to	110	14.1	to	212
20	3/4"	4.7	to	71.0	13	to	196	6.5	to	97	25.0	to	377
25	1"	4.5	to	67.0	20	to	307	6.1	to	92	39.1	to	590
32	1-1/4"	4.3	to	65.0	33	to	503	5.8	to	87	64.0	to	966
40	1-1/2"	4.2	to	63.0	52	to	785	5.7	to	85	100	to	1509
50	2"	4.1	to	61.0	81	to	1227	5.5	to	83	156	to	2358
65	2-1/2"	4.0	to	60.0	137	to	2074	5.5	to	82	264	to	3985
80	3"	3.9	to	58.9	208	to	3141	7.5	to	113	400	to	6037
100	4"	6.1	to	92.0	325	to	4908	11.8	to	177	625	to	9432
125	5"	9.6	to	144	508	to	7669	18.4	to	276	976	to	14738
150	6"	13.8	to	207	732	to	11044	26.5	to	398	1406	to	21222
200	8"	24.5	to	368	1301	to	19633	47.2	to	707	2500	to	37728
250	10"	38.3	to	575	2032	to	30677	73.7	to	1105	3905	to	58951
300	12"	55.2	to	828	2927	to	44175	106	to	1592	5624	to	84889
350	14"	75.2	to	1127	3983	to	60127	144	to	2166	7655	to	115543
400	16"	98.2	to	1472	5203	to	78533	189	to	2830	9998	to	150914
450	18"	124	to	1864	6585	to	99394	239	to	3581	12654	to	191000
500	20"	153	to	2301	8129	to	122708	295	to	4421	15622	to	235803

**➤ DIMENSIONS**

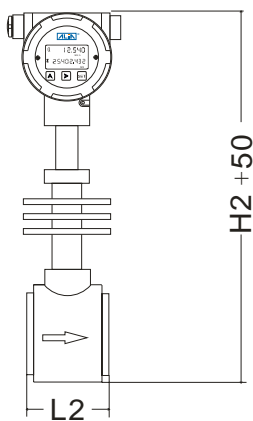
Normal Size		Unit : mm			
mm	Inch	L1	L2	H1	H2
15	1/2"	150	66	422	435
20	3/4"	150	66	429	440
25	1"	150	66	437	445
32	1-1/4"	150	66	445	452
40	1-1/2"	150	66	454	460
50	2"	150	66	471	470
65	2.6"	200	66	491	485
80	3"	200	66	505	500
100	4"	200	66	534	520
125	5"	200	66	560	545
150	6"	200	66	585	570
200	8"	200	66	641	620
250	10"	200	66	698	670
300	12"	200	66	761	720



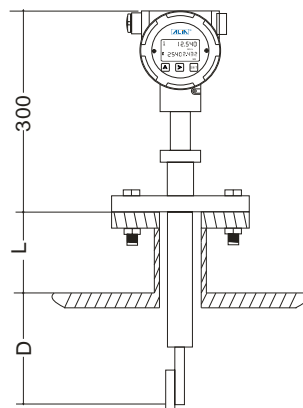
Flange Type



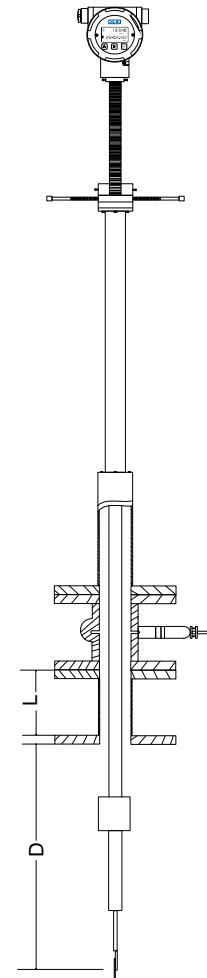
Wafer Type



High Temp. Type



Insertion Type



Hot Tap

**MODEL SELECTION GUIDE**

ATF80 Series											
Example: ATF80-F0150H-6A-H1NNN-HT											
ATF80-	X	XXXX	X	-X	X	-X	X	X	XX	-XX	Description
Type	W										Wafer Type (DN15-DN300)
	F										Flange Type (DN15-DN300)
	I										Insertion Type (DN100-DN6000)
Size	0015-6000										15-6000 mm (0.5"-240")
Installation	H										Horizontal Pipe
	V										Vertical Pipe
Material	-4										Stainless Steel 304
	-6										Stainless Steel 316
Process Connection	N										Wafer Type
	1										PN10
	2										PN16
	3										PN25
	4										PN40
	A										ANSI 150#
	B										ANSI 300#
	C										ANSI 600#
	J										JIS 10K
	K										JIS 20K
L										JIS 40K	
Z										Others	
Max. Temperature	-L										-20~150 °C (Wafer / Flange / Insertion)
	-M										-40~300 °C (Wafer / Flange / Insertion)
	-H										-60~450 °C (Wafer / Flange / Insertion)
	-R										-20~80 °C (Hot Tap)
Multi Flow Range Calibration	1-3										One Range / Two Range / Three Range (Standard is 1)
Protection Class	N										Intrinsically Safe, Eex ia IIC T4
	X										Explosion Proof, Ex d IIC T6
Installation & Cable Length	NN										Compact
	03-10										Remote Type with 3-10 Meter Cable
Option	-NN										None
	-HT										HART Signal (Compatible)
	-HO										Hot Tap (Retractable Probe Mounting)
	-BV										Ball Valve (For Insertion / Hot Tap Type)
	-PT										Cable Entry 1/2" NPTF
	-ZZ										Others

**For Insertion and Hot Tap Mounting the following information must be provided:**

- 1. Pipe Inside Diameter (ID)
- 2. Pipe Outside Diameter (OD)
- 3. Pipe Material
- 4. Flange Size
- 5. Extension Length (L)
- 6. Fluid Name
- 7. Op. Temperature
- 8. Op. Pressure
- 9. Flow Range

