

SGW GAS TURBINE FLOW METER

Overview

SGW gas turbine flow meter which assimilates the advanced technology of flow meters from home and abroad with optimum design, is a new generation of gas flow meter with high precision and reliability based on the theory of pneumatics, hydromechanics ,electro-magnetic etc. It has excellent performance under both low and high pressure, various ways of signal output and low sensitivity to the fluid turbulence. Thus it is widely applied to the measurement of gas flow, such as natural gas, coal gas, LPG ,light hydrocarbon gas and so on.



Features

- High accuracy, standard accuracy: $\pm 1.5\%R$, option $\pm 1.0\%R$
- New design sensor, low flow start, low pressure loss, good shock resistance and anti-fluctuation, long life time.
- Premium rectifier, not hard demand on straight pipes in down and up stream.
- Good Turn down ratio, 30:1-10:1
- The instrument K factor can be linear corrected by max 8 points to improve the flow meter calculation accuracy.
- The flow meter display can be rotated by 180 degree and easy for installation.
- Good repeatability, it can be 0.05R-0.2R in short time, so it is good choice for trade purpose measurement.
- Independent electronics, can be easily replaced and convenient maintenance

Technical Specification

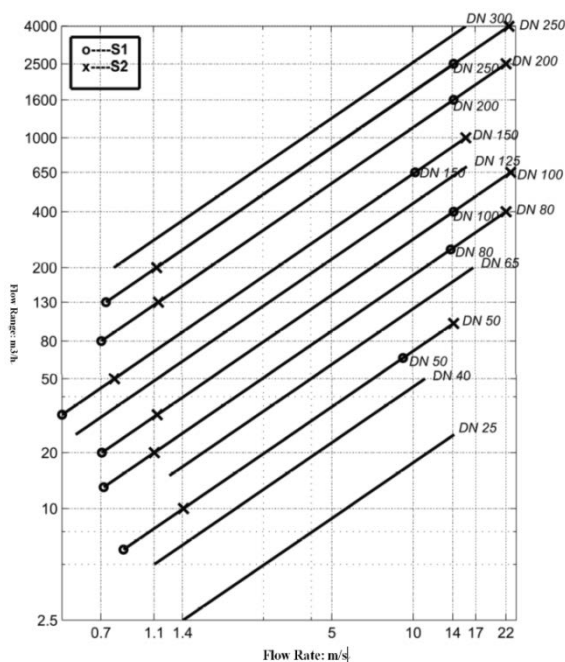
Table 1

Medium	Clean gas with low to medium velocity		
Standard	Gas measurement in closed pipe-Turbine flow sensor(GB/T18940-2003)		
Size & connection	Flange type	Stainless steel housing	DN25-DN300
		Aluminum housing	DN25,50,80,100
		Carbon steel	DN350,400
	Thread type	Stainless steel(non compensation)	DN25,40,50

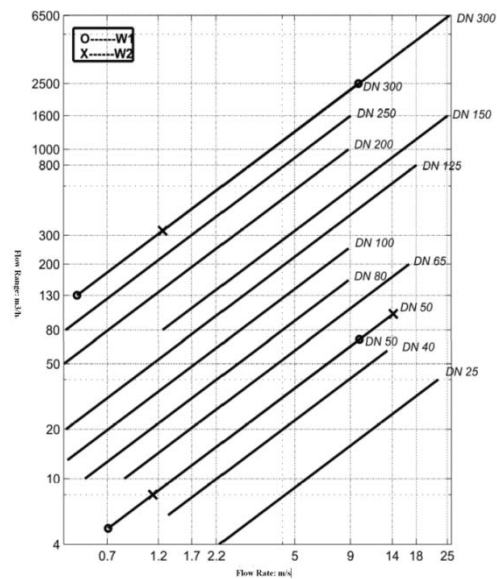
		Stainless steel(compensation)	DN25, 40,
Flange	Standard	GB/T9113.1-2000	
	Others	DIN,ANSI,JIS	
Thread	Standard	BSPP(male)	
	Others	BSPP(Female),NPT.,etc.	
Accuracy & Repeatability	Accuracy	$\pm 1.5\%R$	$\pm 1.0\%R$ (Option)
	Repeatability	$\leq 0.5\%$	$\leq 0.15\%$
Turn down ratio	30:1-10:1		
Calibration	Facility	1. Master Meter calibration facility 2. Sonic nozzle gas flow calibration facility 3. Bell prover gas calibration facility	
	Environment	Temperature: 20°C Relative Humidity: 75%	
Working Condition	Medium temperature: -20 ~80°C Atmospheric pressure: 86Kpa-106Kpa Environment temperature:-20 ~60°C Relative Humidity5% -90%		
Typical Error Curve			

Flow Range & Pressure Rating

Size-Flow-Flow rate



Standard Flow Range



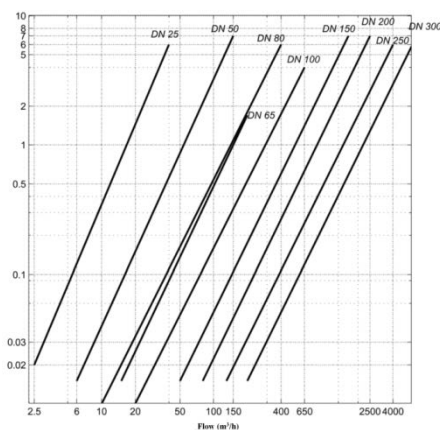
Extended Flow Range

Flow Range & Pressure Rating




Table 2

Size (mm)	Standard (m ³ /h)		Extended (m ³ /h)		Standard Pressure	Special Pressure
DN20	S	2-20	W	4-40	1.6Mpa	Thread ≤ 4.0Mpa, Flange ≤ 6.3Mpa
DN25	S	2.5-25	W	4-40		Thread ≤ 4.0Mpa, Flange ≤ 6.3Mpa
DN32	S	4-40	W	6-60		Thread ≤ 4.0Mpa, Flange ≤ 6.3Mpa
DN40	S	5-50	W	6-60		Thread ≤ 4.0Mpa, Flange ≤ 6.3Mpa
DN50	S1	6-65	W1	5-70		Thread ≤ 4.0Mpa, Flange ≤ 6.3Mpa
	S2	10-100	W2	8-100		
DN65	S	15-200	W	10-200		Flange ≤ 6.3Mpa
DN80	S1	13-250	W	10-160		Flange ≤ 6.3Mpa
	S2	20-400				
DN100	S1	20-400	W	13-250		Flange ≤ 6.3Mpa
	S2	32-650				
DN125	S	25-700	W	20-800		Flange ≤ 6.3Mpa
DN150	S1	32-650	W	80-1600		Flange ≤ 6.3Mpa
	S2	50-1000				
DN200	S1	80-1600	W	50-1000		Flange ≤ 4.0Mpa
	S2	130-2500				
DN250	S1	130-2500	W	80-1600		Flange ≤ 2.5Mpa
	S2	200-4000				
DN300	S	200-4000	W1	130-2500	Flange ≤ 2.5Mpa	
			W2	320-6500		
DN350	S	400-8000	W1	150-4500	-----	
			W2	300-9000		
DN400	S	500-10000	W1	300-9000	-----	
			W2	500-10000		

Flow meter Pressure Loss Curve



Product Classification

Model	SGW-N	SGW-A	SGW-B	SGW-C	SGW-D
Picture					
Display	No Digital Display No temperature and pressure compensation		Digital Display Instant & Totalized Flow No temperature and pressure compensation		Digital Display Instant & Totalized Flow Temperature and pressure compensation
Diameter	DN20-DN400				
Output	Pulse	4-20mA	No	4-20mA/Pulse	4-20mA/Pulse
Power	24VDC ± 15%		Battery*1	24VDC ± 15%	24VDC ± 15% & Battery
Flow Range	Standard	Standard or Extended Flow range			
RS485	No			RS485 Option	
Power consumption < 0.5W					
Protection level: IP65					

*1 Battery life time is around 56 months

Model Selection

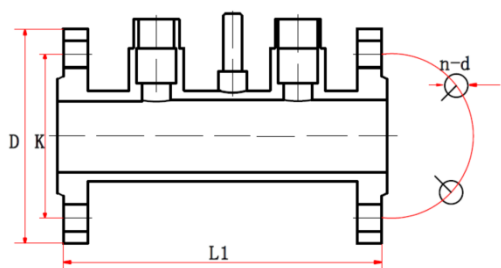
Table 4

Item	Code	Description
General	SGW	Silver Gas turbine flow meter
Type	N	Without display, pulse output, 24VDC power supply
	A	Without display, 4-20mA output, 24VDC power supply
	B	With display, Battery powered, without output
	C	With display, 4-20mA output, 24VDC power supply
	C3	With display, pulse output, 24VDC power supply
	C1	With display, 4-20mA output, RS485, 24V DC power supply
	D	Display, temperature and pressure compensation, 4-20mA
	D1	Display, T & P compensation, 4-20mA, RS485
Nominal Diameter	20-400	DN20-DN400
Flow range	W(x)	Refer to table 2
	S(x)	Refer to table 2
Sensor Material	S	Stainless steel housing (DN25-DN300)
	L	Aluminum housing (DN25, 50, 80, 100)

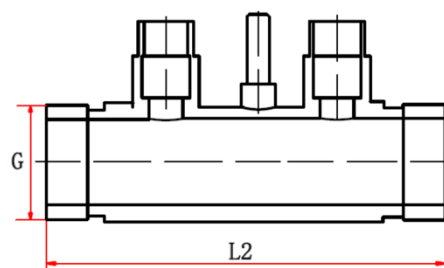
	C	Carbon steel(DN350,DN400)
Rotar, bearing Material	S	Corrosion Resistance ABS
	L	Aluminium-Alloy
Structure	N	Standard Structure
	A	For Oxygen Only (O2 Only)
Accuracy	10	± 1.0% of reading
	15	± 1.5% of reading
Explosion Proof	N	Non explosion proof
	E	ExdIIBT6
Pressure Rating	N	Standard, (refer to table2)
	H(x)	Customized,(refer to table2)
Installation	FL	Flange connection
	LW	Thread Connection *1

*1 Specify Thread standard when ordering, Thread connection available on DN20-DN50

Dimensions



DN25-DN300 Flange connection Dimensions



DN25-DN50 Thread Connection Dimensions

Table 5

Nominal Diameter (mm)	Flange connection						Thread Connection		
	L1	D	K	d	n	Bolts	L2		G
							T&P	Normal	(male)
20	170	105	75	14		M12*50	170	170	G2
25	170	115	85	14	4	M12*50	170	170	G2
32	200	140	100	18		M16*70	200	140	G2
40	200	150	110	18	4	M16*70	200	140	G2
50	200	165	125	18	4	M16*70	-	220	G5/2
65	240	185	145	18	4	M16*70			
80	240	200	160	18	8	M16*70			
100	300	220	180	18	8	M16*70			
125	340	250	210	18	8	M16*70			
150	450	285	240	22	8	M20*90			
200	500	340	295	22	12	M20*90			
250	500	405	335	26	12	M24*110			

300	300	460	410	26	12	M24*110		
350	350	520	470	26	16			
400	400	580	520	30	16			