

# Gas Turbine Flow Meter

GT-E series



GT-D1 & D2 series



GT-D4 series



## Operating Principle

The operation of the International Gas Turbine Meter is based on the measurement of the velocity of gas. The flowing gas is accelerated and conditioned by the meters straightening section. The straightening vanes prepare the gas flow profile by removing undesired swirl, turbulence and asymmetry before the gas flows to the turbine wheel. The dynamic forces of the flowing fluid cause the rotor to rotate.

The turbine wheel is mounted on the main shaft, with special high precision, low friction ball bearings. The turbine wheel has helical blades that have a known angle relative to the gas flow. The conditioned and accelerated gas drives the turbine wheel with an angular velocity that is proportional with the gas velocity.

## Technical Data

<b>Output (Depending on Converter Model)</b>	Pulse 4~20mA
<b>Accuracy</b>	± 1.0% of Rate ± 1.5% of Rate
<b>Operating Temperature</b>	-20...+60°C
<b>Fluid Temperature</b>	-20...+80°C
<b>Body Material</b>	SS 304 SS 316 Cast Aluminum Cast Steel( D4:DN50-DN200)
<b>Rotor Material</b>	Aluminum alloy Plastic ABS
<b>Bearing Material</b>	SS304

## Description

The Gas turbine flow meter in the series GT are specially designed for use in natural gas, compressed, air and other fluid measurement. And the volume and mass flow rate are available.

- DN 25- DN400
- Temp. & Press. compensation
- Communication: RS485
- Connection: Thread / Flange
- Ten units are optional

## Flow Range

Diameter (mm)	Standard Flow Range		Extended Flow Range	
	Code	m <sup>3</sup> /h	Code	m <sup>3</sup> /h
25	S	2.5-25	W	4-40
40	S	5-50	W	6-60
	S1	6-65	W1	5-70
50	S2	10-100	W2	8-100
	S	15-200	W	10-200
65	S1	15-300	W	10-160
	S2	20-400	W	13-250
80	S1	20-400	W	20-800
	S2	32-650	W	80-1600
100	S1	32-650	W	80-1600
	S2	50-1000	W	50-1000
125	S1	80-1600	W	80-1600
	S2	130-2500	W	130-2500
150	S1	130-2500	W1	130-2500
	S2	200-4000	W2	320-6500
200	S	200-4000	W	260-8000
	S	400-8000	W	260-8000

## Model Selection

Model	Suffix Code								Description
GT-	1	2	3	4	5	6	7	8	Gas Turbine Flowmeter
Diameter	XXX								Stand for diameter 020: DN20; 050: DN50 100: DN100; 400: DN400
Converter Type	E1								Battery power supply; No output; Ex; Digital display
	E2								24V DC; 2-wire 4-20mA output; Ex; Digital display
	E3								24V DC; Pulse output; Local display; Ex; Digital display
	E4								24V DC; 0-20mA output; Local display; Ex; Digital display
	E5								24V DC; 3-wire 4-20mA / Pulse output; EX; Digital display
	FE								Fluidwell E series converter ( Refer to page 23)
	FF								Fluidwell F series converter( Refer to page 24)
	D1								24V DC; 2-wire 4-20mA output; Digital display; Temperature & Pressure Compensation
	D2								24V DC; 3-wire 4-20mA output; Digital display; Temperature & Pressure Compensation
	D4								24V DC; 4-20mA output; Modbus RS485; Digital display Temperature & Pressure Compensation
Notice:								1) Modbus RS485 is optional for E2, E3, E4, E5, D1, D4 2) Battery Power( 24V DC + Battery) is optional for E2, E3, E4, E5, D1, D2, D4 3) D4 converter only configures with cast steel body sensor	
Accuracy		10							± 1.0% of rate
		15							± 1.5% of rate
Flow Range			S						Standard Range
			E						Extended Range
Body Material				S4					SS304
				S6					SS316
				CA					Cast Aluminum
				CS					Cast Steel (Only for D4 type)
Rotor Material						AB			ABS Plastic
						AA			Aluminum Alloy
Explosion Proof							BT		Exd II BT6
							CT		Exia II CT4
							NA		None
Connection							THM		Male Thread; Available from DN4...DN50
							THF		Female Thread; Available from DN4...DN50
							DXX		DN16: DIN PN16 Flange; D25: DIN PN25 Flange...
							AXX		A15: ANSI 150# Flange; A30: ANSI 300# Flange...
						JXX		J10: JIS 10K Flange; J20: JIS 20K Flange...	

