

# GASES

## SPONSLER PRECISION TURBINE GAS FLOWMETERS

are designed to measure actual cubic feet or actual volume passing through the meter. Before sizing a flowmeter it is necessary to convert flow units (i.e. SCFM, LPM, etc.) to actual units. To convert to actual measured volume (ACFM) from standard volume (SCFM) use the following formula.

$$\text{ACFM} = \text{SCFM} \times 14.7 / P_a \times T_a / 530$$

### Where:

ACFM = Actual cubic feet per minute measured gas flow

SCFM = Standard cubic feet per minute gas flow

$P_a$  = Operating pressure in (PSIA)  
= PSIG + 14.7

$T_a$  = Temperature in degrees Rankine =  $F + 460$

NOTE: For specific examples, consult factory

### Specifications

- Linearity: +/- 1.0% over full range
- Repeatability +/- .25%
- Temperature range -450°F to +450°F STD (+1000°F optional)

### Typical Applications For Gases

Argon  
Nitrogen  
Oxygen  
Air  
Ammonia  
CO2  
Ethylene  
Helium  
Hydrogen  
Methane  
Methylchloride  
Nitric Oxide  
Nitrous Oxide  
Steam (Consult Factory)  
Acetylene  
Sulfur Dioxide

## Gas Sizing Chart

METER SIZE	FLOW RANGE (ACFM) (MAGNETIC PICKUP)		EXTENDED FLOW RANGE (ACFM) (MC PICKUP WITH AMP)*		APPROX. METER WT.
	MIN. LINEAR	MAX. LINEAR	MIN. LINEAR	MAX. LINEAR	LBS/Kg
1/4	0.35	3.5	.2	3.5	2 / 1
3/8	0.75	5.0	.5	10.0	2 / 1
1/2	1	10.0	.8	12.0	2 / 1
5/8	2.0	20.0	1.5	20.0	2 / 1
3/4	2.5	28.0	2.0	30.0	4 / 2
1	4	60.0	2.8	60.0	5 / 2.5
1 1/4	6	100.0	2.0	100.0	7 / 3
1 1/2	8	130.0	2.0	150.0	8 / 3.5
2	15	250.0	4.0	250.0	13 / 6
2 1/2	25	450.0	5.0	500.0	18 / 8
3	40	650.0	---	---	19 / 8.5
4	75	1200.0	---	---	36 / 16
5	150	1800.0	---	---	47 / 21
6	250	2900.0	---	---	58 / 26
8	330	5000.0	---	---	119 / 4
10	650	7500.0	---	---	226 / 103
12	900	12000.0	---	---	345 / 157

\* SP717 Amplifier