

Linc Energy Systems 12450 W. Cedar Dr. Lakewood, CO 80228

Learn more at <u>LincEnergySystems.com/</u> <u>linc-energy-blog/entry/selecting-gas-flow-</u> meter-technology

# Tom's Gas Meter Selection Guide



## Need a gas meter? Gather the following...

What is its purpose?

What do you need the meter for? *Custody transfer*, submetering, monitoring, industrial process gas? Do you need *mass flow or volumetric flow*? What is your budget?

What is the gas?

Single gas or mixture? What is the operating flow range, accuracy requirement, process temperature, and pressure?

#### **Custody Transfer Meters**

- Differential pressure meters
- Turbine meters
- Positive displacement meters
- · Coriolis flow meters
- Ultrasonic meters
- Vortex flow meters

Natural gas flow meter options on reverse.

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Where is the meter being installed?

What are the environmental conditions? Is there sufficient straight run? Regulations? Noise or vibration?

What do you need from the meter?

Do you need a totalizer? A local display? What are your calibration expectations? Do you need to be able to upgrade the meter to advanced electronics? What are you maintenance requirements?

#### **Mass Flow Meters**

- · Coriolis flow meters
- Thermal mass flow meters

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Accurate gas measurement begins with being informed	
Flow Meter Technologies	<b>&gt;</b>

## Natural Gas Characteristics

#### Flow Meter Considerations

Flow Meter Technologies		dry /clean	wet gas	Corrosive	dirty	pressure loss	relative accuracy	rangeability	Temp	upstream straight run	relative \$
Differential Pressure (Orifice Plates, Venturi)	9	<u></u>	<u></u>			med-high	fair	3:1	-20-+120 F	5-30 D	\$-\$\$
Turbine		<b></b>	8		8	high	high	10:1	-20-+120 F	5-10 D	\$\$
Positive Displacement (Diaphragm, Rotary)		<u></u>				high	high	10:1-80:1	-20-+120 F	none	\$
Rotameter		<u></u>	<u></u>			med	fair	10:1	-20-+120 F	10 D	\$
Coriolis		<u></u>			<u> </u>	low	high	20:1	-20-+120 F	0- 20 D	\$\$\$
Ultrasonic	Q Sorie	<u></u>				low	very high	50:1	-20-+120 F	10 D	\$\$\$
Vortex		0				med	med	10:1-38:1	-20-+120 F	10-20 D	\$\$\$
Thermal Mass Flow Meter	0	<u></u>				low	med	100:1- 1000:1	-20-+450 F	25 D-40 D	\$\$

Traditional Gas Technology

New Gas Technology

Good choice!						
Proceed with caution; contact the manufacturer to discuss limitations						
Stop!						

