

# 4 Natural Gas Flow Meter Types



## #1 Direct Mass Flow Meters

Coriolis  
Thermal Mass Flow Meter

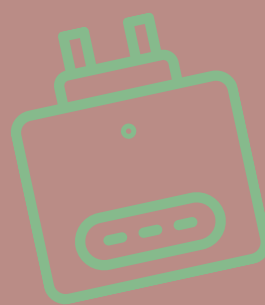
A mass flow meter determines the gas mass flow rate directly.



## #2 Positive Displacement (PD) Meters

A positive displacement meter requires fluid to displace components mechanically and measure volumetric flow at the operating temperature and pressure.

Diaphragm  
Rotary vane  
Reciprocating or oscillating piston  
Gear  
Nutating disk

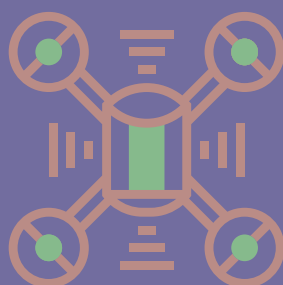
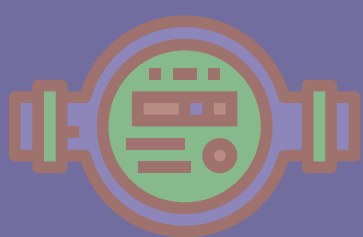


## #3 Velocity Meters

TURBINE METER

ULTRASONIC

VORTEX



In a velocity meter the medium passing through the meter determines the measurement.



## #4 Differential Pressure (Meters)

A differential meter ( $\Delta P$ ) calculates flow by measuring the pressure drop over an obstruction inserted in the flow path.

ORIFICE PLATES



FLOW NOZZLES



VENTURI TUBES



AVERAGING  
PITOT TUBES