

Technology	Advantages	Limitations
Ultrasonic Meter	<ul style="list-style-type: none"> • High accuracy and turndown (+/-0.3% accuracy up to 140:1 turndown) • Cost effective in large line sizes • Low pressure loss (but consider flow conditioner) • Multiple health diagnostics • Available as clamp-on (although accuracy degrades) • Recognized by standards organizations worldwide - API, AGA, ISO, MID, etc. • Bi-directional 	<ul style="list-style-type: none"> • Medium to high capital cost • Typically not available in very small line sizes • Flow profile sensitive (requires flow conditioning or straight run) • Requires pressure and temperature compensation for standard volume • Noise interference from flow and pressure control valves • High temperature limitations >212°F (100°C)
Coriolis Meter	<ul style="list-style-type: none"> • High accuracy and turndown (up to +/-0.25% with >30:1 turndown) • Direct mass flow (no need for pressure and temperature compensation) • Multiple health diagnostics • Recognized by standards organizations worldwide - API, AGA ISO, MID, etc. • Gas calibration not required on some designs • Bi-directional 	<ul style="list-style-type: none"> • Typically high capital cost • Pressure loss can be medium to high • Typically not suitable for line sizes larger than 16 inches • Not preferred for steam applications • Limited materials of construction
Vortex Meter	<ul style="list-style-type: none"> • Good accuracy and turndown (+/-1.0% gas with > 30:1 turndown) • Low pressure drop • No moving parts or impulse lines • Low installed costs / lifecycle cost • Loop powered / 2-wire device 	<ul style="list-style-type: none"> • Reynold's number, velocity and back pressure limitations • Not typically used for custody transfer, but API is introducing a standard for vortex soon • Requires straight run or flow conditioning (10D up / 5D down) • Typically not suitable for line sizes larger than 16 inches • Designs with gaskets can have leaks • Potential plugging for designs with crevices
dP Meter	<ul style="list-style-type: none"> • Well known and understood technology • Recognized by standards organizations worldwide - APA, AGA, ASME, ANSI, ISO, BS, etc. • Low to medium capital cost • Not limited by line size • Simple to use • Wide range of primary elements for application flexibility • Improved accuracy with multivariable transmitters (+/- 0.75% of rate up to 14:1 turndown) • Loop powered / 2-wire device 	<ul style="list-style-type: none"> • Requires significant straight runs or flow conditioning • Traditional meters can have long impulse lines with multiple leak points and potential for freezing/plugging • Typically low turndown • Medium to high pressure loss • Accuracy degraded by potential plate wear • Improper field assembly of meter components may degrade performance