

CO₂ Flow Meter Supports Carbon Capture Tax Credits and Emissions Reduction

Accurate, No Maintenance, Long-Life Flow Meter Pays for Itself

San Marcos, CA — Oil/gas production, refinery and chemical engineers will find the [ST100A Series Thermal Flow Meters](#) from [Fluid Components International \(FCI\)](#) can virtually pay for themselves in CO₂ capture, storage, and utilization applications that now qualify for carbon tax credits while at the same time reducing their owners corporate greenhouse gas footprint to improve air quality and also helping to protect the environment.



The U.S. federal government recently announced new green, clean air tax credits designed to incentivize and support further the capture of CO₂ in oil/gas operations, petrochemical production and refineries. Several major petroleum industry companies, as well as smaller operators who specialize in CO₂ capture and facilities that are producing low-carbon hydrogen H₂ fuel have in response announced investments in major additional programs devoted to CO₂ storage or re-use.

These efforts all have one thing in common: They require accurate CO₂ gas flow measurement. Such CO₂ flow meters will commonly be installed in all-weather exposed, outdoor, Div1/Zone1 type, Hazard-Ex locations that require flow meters with rugged-duty transmitters and full agency approvals for Ex environments, and minimal maintenance to ensure uninterrupted service in difficult to access locations.

FCI's ST100A Series Thermal Gas Flow Meters provide direct mass flow measurement of CO₂ in a most rugged NEMA4X/IP67 instrument with global agency Div1/Zone1 approvals of the entire instrument, and a no-moving parts technology that requires no routine maintenance to achieve maximum service life. The industry proven FCI ST100 Thermal Flow Meters have been in use for well over a decade throughout multiple oil/gas production and refining applications, including enhanced oil recovery (EOR) applications, nitrogen blanketing, boiler air and fuel gas control, flare and waste gas monitoring, and more. This flow meter also has been independently verified as a SIL 1 instrument.

The ST100A Flow Meters are precision, laboratory calibrated to measure CO₂ gas and dozens of other gases at the actual installation plant's required flow rates, process temperatures and pressure conditions. Featuring FCI's patented AST™ thermal dispersion flow measurement technology, the ST100A Meters achieve the widest flow range with the lowest energy cost.

The ST100A Series Flow Meter measures air/gas flow from 0.25 SFPS to 1000 SFPS (0.07 NMPS to 305 NMPS) with accuracy of ± 0.75 percent of reading, ± 0.5 percent of full scale. It is available with an extensive choices of process connections include compression fittings, fixed NPT, flanges, and packing glands. They are suitable for flow measurement is pipe sizes from 1 up to 99 inches [25mm to 2500 mm]. FCI thermal flow meters are also multi-parameter and capable of measuring both the flow and temperature of the process fluid.

When selecting the ST100A Meter, users have extensive communication options capabilities. Triple 4-20 mA analog outputs, frequency/pulse, and HART and Modbus RS485 digital bus communications are standard. Optionally, FOUNDATION Fieldbus or PROFIBUS digital I/O's can be added.

The ST100A's optional graphical, multivariable backlit LCD display brings new meaning to the term "process information". This sophisticated readout continuously displays all process measurements, alarm status and diagnostics events for easy on-site viewing by technicians. Its "through-the-glass" activated keypad allows for set-up, instrument service diagnostics and in-situ calibration checks without removing the instrument from the process.

ST100A Meters are third party, independently tested and safety agency approved for hazardous environment installations. FCI products undergo rigorous agency testing and validation on the entire instrument, not just the enclosure. Approvals available for the ST100 Flow Meter include FM, FMc, ATEX, IECEx, EAC/TR CU, NEPSI, Inmetro, EQM/ECA, and is CE and UKCA Approved.

FCI solves flow and level measurement applications with advanced thermal dispersion technologies. With 50+ years' experience and the largest installed base of thermal flow meters, flow switches and level switches, count on FCI to know your application and have the solutions.