

## Ultra-High Pressure Digital Gas Mass Flow Meters & Controllers

### FEATURES

- Ideal for pilot plants, hydrogeneration reactors, and chemical processes
- Measure and control gas mass flow rates over an ultra-pressure range of 1000 to 10000 psig (24.3 to 241 barg)
- Flow ranges from 100 scms to 10 slpm
- High accuracy of 1.0% of full scale, repeatability of 0.2% of full scale
- Wide differential pressure range from 4.000 bar (58 psi) to 100 bar (1450 psi)
- Innovative new "buffer" control valve design for precision control over a wide range of pressures and flow rates
- Built by a world leader in flow control (100 year 100 bar), depending on flow
- Inert, carbon reinforced polyimide valve seat increases valve durability and precision
- Super-high pressure valve seats maximize gas permeability
- All Sierra's Control™ valves are built with ultra-precise or control high-pressure materials and advanced processes without the expense of 303 or 316 systems
- Proven high pressure calibration facility, directly traceable to NIST
- 100% digital pressure reduces installation cost and complexity
- Unique "for Mobile" mounted in hard-hat box for ease and change critical control functions
- Choose from multiple analog or digital signals
- Supports Modbus, Profibus, CAN, Foundation Fieldbus
- CE approved



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# SmartTrak 100HP



### DESCRIPTION

**P**recision flow measurement and control at very high gas pressures is among the most challenging applications in the flow industry today, gas behavioral changes, and expanded valve seats control use all tend to reduce performance.

Designed to overcome these challenges, the 100HP combines the high performance of the SmartTrak™ with variable stem relief flow body, all welded carbon steel, an innovative new valve design called "buffer", and carbon of fiber seat high pressure calibration facility. The result is an instrument with increased application flexibility and accuracy in high pressure gas flow control applications.

To increase valve performance and accuracy under high pressure, Sierra's proprietary "buffer" valve seat technology uses a flexible, high impact, carbon reinforced polyimide valve seat material to ensure smooth closure that seals the valve after. The result is precision control over a wide range of flows from 100 scms to 10 slpm with an industry leading leak by weight per 1 cubic cm (1000 psi) (10 bar), dependent on the valve seat.

Because traditional valve seat materials like steel, titanium and Inconel™ wear and deform under high pressure, the 100HP uses fiber seat valve seats to increase gas permeability.

To ensure the 100HP delivers precise, high pressure measurement and control, each unit is calibrated on our proprietary NIST traceable high pressure calibration facility using a gas transfer high pressure excitation valve, and expanded pressure pressure gauges, pulling highly accurate solid and solid pressure to match the customer's application needs.

An instrument designed with purpose, the 100HP is a versatile solution for the most challenging high-pressure gas flow control applications.