VeriCal™

FCI FLUID COMPONENTS INTERNATIONAL LLC

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Please note: new area code for FCI "442" effective January 1, 2009
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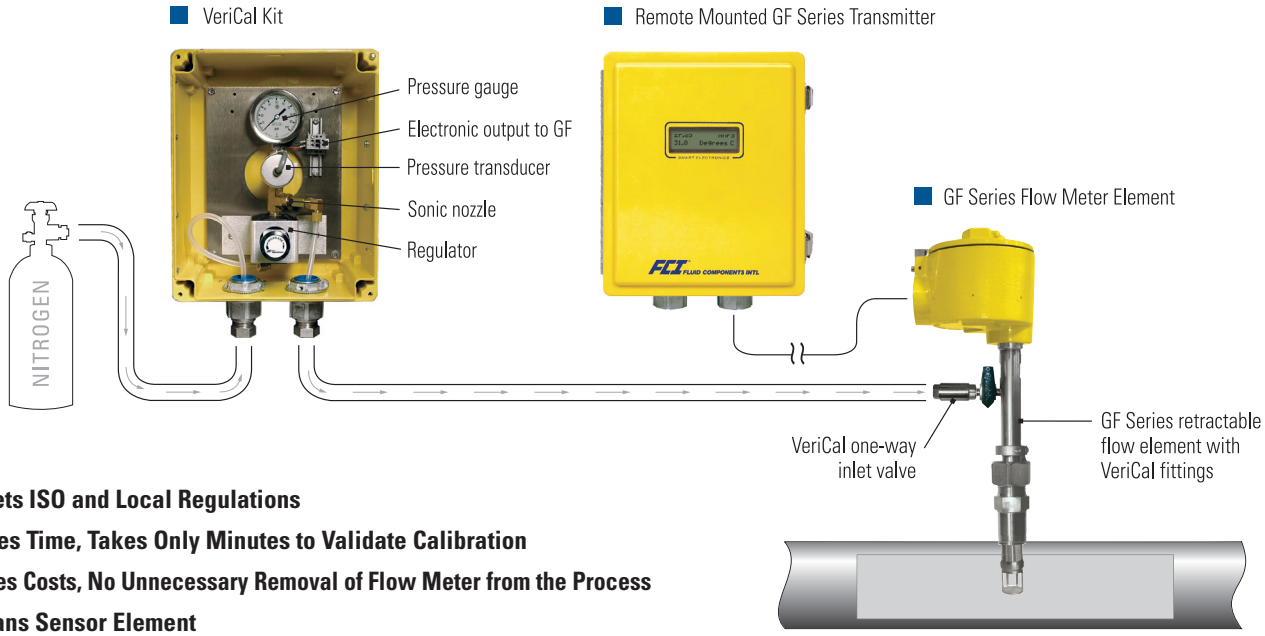
In-Situ Calibration Verification Option for Model GF90 and GF03 Gas Flow Meters



- **Meets ISO and Local Regulations**
- **Saves Time, Takes Only Minutes to Validate Calibration**
- **Saves Costs, No Unnecessary Removal of Flow Meter from the Process**
- **Cleans Sensor Element**

Validate Flow Meter Performance In The Installation

FCI's GF90 and GF03 gas flow meter models can be optionally provided with a unique and FCI-patented* in-situ calibration verification system. The VeriCal option provides periodic field validation and verification of the flow meter's measuring performance and calibration, all without extracting the flow meter from the pipe or process. In gas flow processes with procedures or regulations requiring periodic calibration verifications, the GF90 or GF03, outfitted with the VeriCal option, provide the most convenient and lowest cost solution.

A secondary benefit of the VeriCal system is that sensor elements are cleaned by the nitrogen gas, which helps ensure performance and reduce routine maintenance.

The VeriCal option is comprised of three components:

- A specially modified and fitted GF flow element. This special flow element includes a welded and sealed inlet valve, internal tubing, and an exit port near the flow sensors, plus additional calibration steps and documentation. After the GF90 or GF03 system has been precision calibrated in FCI's NIST traceable flow laboratory, the lab also flows nitrogen to obtain five (5) base line measurement points across the flow range to which all field checks using the VeriCal system can be compared. With each VeriCal outfitted GF90 or GF03 element, FCI provides a printed document showing the five base line flow readings for use by your field technicians.
- A VeriCal kit with fixtures and fittings to meter and control a precise flow of nitrogen** across the GF flow element. The VeriCal kit provides a specially designed 100 psig [6.9 bar (g)] pressure regulator, a high accuracy pressure transducer with a 4-20mA output, a sonic nozzle, and pressure gauge packaged in a NEMA 4 (IP66) rated enclosure. The kit is fully portable, or can be permanently mounted. The VeriCal kit also includes a 25 foot [7,6 m] air hose with quick disconnect fittings to connect the kit to the GF flow element, and a 25 foot [7,6 m] 2-conductor cable to connect the kit's electronic output to the GF transmitter's auxiliary input terminals *(order part number 020849-01).* In applications where an electronic output to the GF's transmitter is not desired or cannot be implemented, and less accuracy is acceptable, a VeriCal kit without the pressure transducer and output cable is available† *(order part number 020849-02).*
- A user-supplied nitrogen source with a hose, regulated 125 to 150 psig [8,6 to 10,3 bar(g)], either from an installed plant line or a portable supply tank. Typical test requires approximately 40 ft^3 [1,1 m^3] of nitrogen. *Consult your local FCI representative about available refillable nitrogen supply options.*

How It Works

With the VeriCal kit attached to the GF90/GF03 flow meter and to the nitrogen** source, a positive pressure nitrogen injection is introduced. The GF90/GF03 digital display provides a precise readout of the pressure from the pressure transducer's output†, the flow rate, and temperature. With the GF90/GF03 flow element fully retracted from the actual flow stream, and the GF operating in the VeriCal mode, the user adjusts the pressure to inject small controlled doses of nitrogen at a specified pressure. The nitrogen flow passes directly by the GF90/GF03 flow element at highly repeatable rates and the measured flow readings on the GF90/GF03 display are compared to the base line readings in the document provided by FCI. This procedure can be performed as often as desired.

* *VeriCal is manufactured in accordance with U.S. Patent Number 7,201,033B2*

** *Other gases may be used; Contact FCI for specification information*

† *In VeriCal kit without the pressure transducer, no digital readout of pressure is displayed, and the user adjusts pressure based on the analog dial of the gauge in the kit.*

VeriCal Specifications

Pressure Range: 0 to 100 psig [0 to 6.9 bar (g)]

Process Temperature Range: Procedure is conducted at ambient temperature.

Agency Approvals: FM, CSA, ATEX pending for VeriCal system. Contact FCI for availability.

GF Flow Element:

Material of Construction: 316L Stainless steel
Process Connection: Retractable packing gland
Process Temperature: 350°F [177°C] maximum

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