



# SageCom™ Validation and Configuration Software

## SageCom™ Validation and Configuration Software Included Free of Charge with Every Paramount Thermal Mass Flow Meter

SageCom™ is a powerful, yet easy to use software program which gives the user testing, diagnostics, performance verification and local configuration capabilities for our family of Sage Thermal Mass Flow Meters. This new software permits the user to easily perform a variety of diagnostic tests, offering reassurance that the Sage Flow Meter is performing per the original specifications.

### Software Reconfigurability

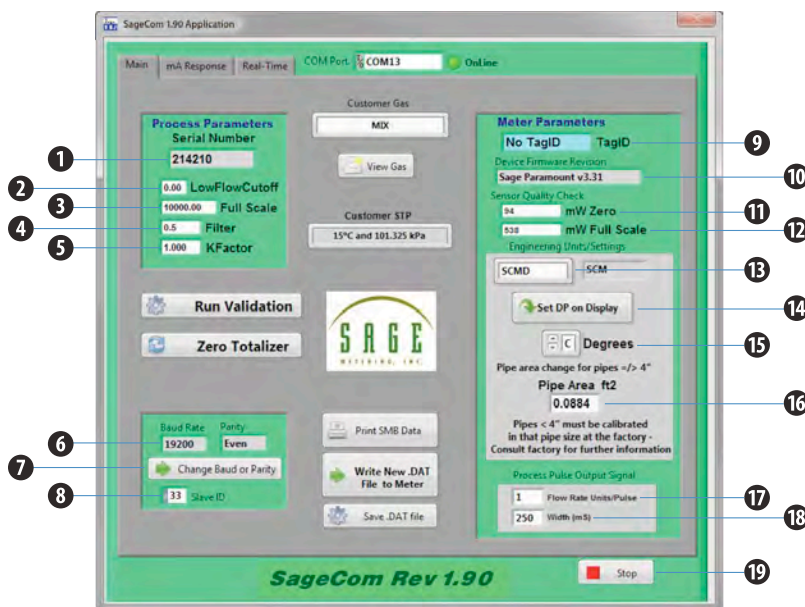
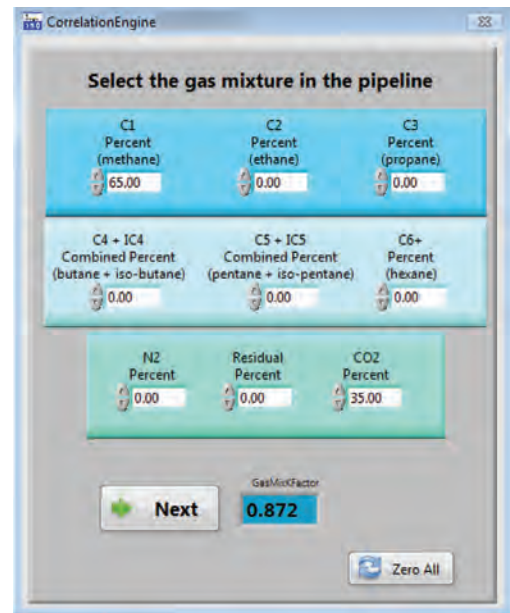
- Check or change the configuration of the instrument, such as changing Full Scale, pipe size (4" or up), engineering units or decimal points

### Software Diagnostics

- Multiple validation checks
- Generates linearization table with flow and mA
- Verifies sensor integrity
- Conducts In-Situ calibration verification
- Verifies that the meter hasn't drifted, shifted or changed since the original NIST calibration
- Reports a fault if contamination is present on the sensor
- Prints a Validation Report of diagnostic results

### Change Gas Mix in the Field

- Enter an entirely new set of gas mix constituents (from the list below) versus the original calibrated mix, and the meter will automatically correct its readings to the new mix

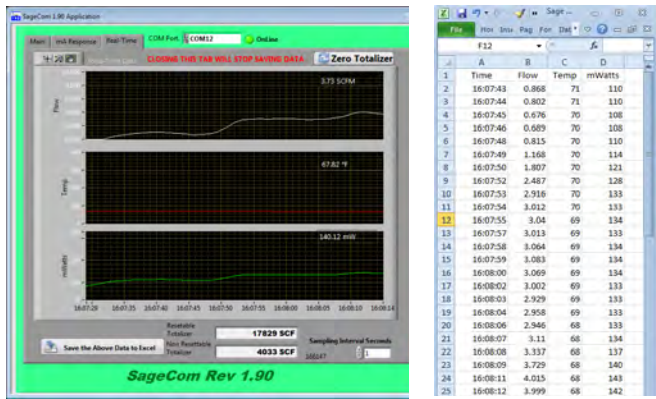


SageCom™ Main Tab Showing Descriptions of Each Field

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1 Label: Serial Number<br/>What It Is: Flow Meter Serial Number<br/>Changeable: No—Factory Embedded</li> <li>2 Label: Low Flow Cutoff<br/>What It Is: Forces Meter Output to Read Zero at this Point or Lower.<br/>Changeable: Yes<br/>Range: 0—Full Scale</li> <li>3 Label: Full Scale<br/>What It Is: Maximum Flow Reading<br/>Changeable: Yes<br/>Range: 0—1.25 of Calibrated Full Scale</li> <li>4 Label: Filter<br/>What It Is: Changes Output Response<br/>Changeable: Yes<br/>Range: .0001 (Highest Filter); .999 (Lowest Filter)</li> <li>5 Label: KFactor<br/>What It Is: Bias Factor<br/>Changeable: Yes<br/>Range: .01—10</li> <li>6 Label: Baud Rate or Parity<br/>What It Is: Serial Communication Rate<br/>Changeable: Yes<br/>Range: 9600 or 19,200</li> <li>7 Label: Change Baud or Parity<br/>What It Is: Serial Communication Pairing<br/>Changeable: Yes<br/>Range: Odd, Even, None</li> <li>8 Label: Slave ID<br/>What It Is: Modbus Communications Address<br/>Changeable: Yes<br/>Range: 1—247</li> <li>9 Label: Tag ID<br/>What It Is: Customer Meter ID<br/>Changeable: Yes<br/>Range: 0—8 Characters</li> <li>10 Label: Device Firmware Revision<br/>What It Is: Meter Code Revision<br/>Changeable: No—Factory Embedded</li> </ol> | <ol style="list-style-type: none"> <li>11 Label: mW Zero<br/>What It Is: Zero Flow Milliwatt Value<br/>Changeable: Yes<br/>Range: Value Should be the Same as Seen on the Meter Display at Zero Flow</li> <li>12 Label: mW Full Scale<br/>What It Is: Milliwatt Value at Full Scale<br/>Changeable: Yes<br/>Range: Value Should be the Same as Seen on the Meter Display at Full Scale Flow</li> <li>13 Label: Engineering Units<br/>What It Is: Relates a Unit of Measure to a Measurement of Time<br/>Changeable: Yes<br/>Range: Select from Drop Down Menu</li> <li>14 Label: Set DP on Display<br/>What It Is: Allows Number of Decimal Points on Display to Be Set<br/>Changeable: Yes<br/>Range: 0—3</li> <li>15 Label: Degrees<br/>What It Is: Temperature Units<br/>Changeable: Yes<br/>Range: C (Celsius) or F (Fahrenheit)</li> <li>16 Label: Pipe Area ft<sup>2</sup><br/>What It Is: Cross-Sectional Area of Pipe in ft<sup>2</sup><br/>Changeable: Yes<br/>Range: Any Size ≥ .0884 ft<sup>2</sup> (i.e. ≥ 4" Pipe Only)</li> <li>17 Label: Flow Rate Units/Pulse<br/>What It Is: Totalizer Units Per Pulse<br/>Changeable: Yes<br/>Range: 1—1,000,000</li> <li>18 Label: Width (m S)<br/>What It Is: Pulse Width in Mill-Seconds<br/>Changeable: Yes<br/>Range: 1—1000</li> <li>19 Label: Stop<br/>What It Is: Ends Program<br/>Changeable: No</li> </ol> |
|---|--|

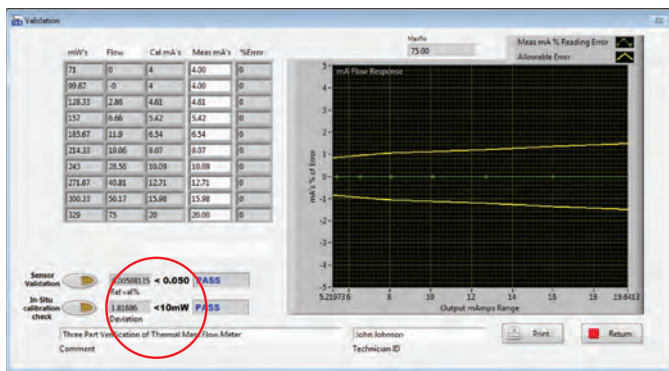
## Log Real-Time Data

- Real-Time tab logs data which is easily exported to Excel



## Test Performed to Verify Calibration Includes:

- Power off sensor validation test where **SageCom™** compares the electrical values of the two RTD sensors to ensure that they are within the original specifications.
- In-situ calibration verification under a no flow condition. This proven test verifies that the zero flow signal obtained during the test matches the zero flow signal obtained during calibration under the same operating conditions. When this occurs, the user can be



Pass-Fail Tests

confident that the entire calibration curve of the Sage Flow Meter has not shifted, drifted or changed.

When the flow meter passes both these tests, the user can be assured that the flow meter is performing per the original calibration, and also verifies that the sensors are clean. The test results provide a quantitative value along with a pass/fail.

Once the test is completed, the user can print a validation report (as shown below) to document the results.

Flow Units: SCFM	SageCom Report	10/4/2021
Total Units: SCF	Meter Serial# 202511	4:01 PM
Temp = 64.9 F	Sage	Tag ID# Bldg D4
Three Part Verification of Thermal Mass Flow Meter	Paramount v3.31	
Work performed by: John Johnson		

mW's	Flow	Cal mA's	Meas mA's	%Error
71.00	0.00	4.00	4.00	0.00
99.67	-0.00	4.00	4.00	0.00
128.33	2.86	4.61	4.61	0.00
157.00	6.66	5.42	5.42	0.00
185.67	11.90	6.54	6.54	0.00
214.33	19.06	8.07	8.07	0.00
243.00	28.56	10.09	10.09	0.00
271.67	40.81	12.71	12.71	0.00
300.33	56.17	15.98	15.98	0.00
329.00	75.00	20.00	20.00	0.00

Min Flow = 0.000  
 Max Flow = 75.000  
 mW Zero = 71  
 mW Max = 329  
 Filtering = 0.990  
 K Factor = 1.000  
 Cal Val = 99.257  
 Cal Gas = MIX

\*\*\*\*\* VALIDATION RESULTS \*\*\*\*\*

Sensor Relative Variance = 0.006% (< 0.050) SCORE = PASS <--

\*\*\*\*\* IN-SITU RESULTS \*\*\*\*\*

Sensor mW Deviation = 1.817 (< 10.000) INDICATION = PASS <--  
 WITHIN SPECIFICATIONS

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Validation Report

## Configuration Changes

Changes in the process conditions may necessitate changes in the configuration of the Sage Metering flow meter. Such items as different operating range, K factor, pipe size, units of measurement, re-range the Full Scale, can all easily be changed with **SageCom™**.

Context sensitive help screens assist the user in understanding the functionality of the various entries.

All newly purchased Sage Paramount (401 or 402) Thermal Mass Flow Meters come complete and are fully compatible with **SageCom™**. Also, a mini USB cable is provided for normal connectivity between the Sage Paramount and the laptop with its' **SageCom™** software.

**Also, coming soon is Bluetooth connectivity between the laptop and the meter providing wireless communication.**

Any Sage compatible Paramount Flow Meter will be recognized, and if multiple meters are within range, they will each automatically be assigned a unique COM port.

The new wireless feature will be optionally selectable (at no additional charge) on all compatible Paramount Thermal Mass Flow Meters, and will provide greater flexibility if reconfiguring of the

meter is desired. No longer will a technician need to climb a ladder to connect the USB cable to the meter to make the parameter change.

Although the **SageCom™** software is fully compatible with current versions of Sage Paramount flow meters, earlier versions may have some feature limitations. Contact the Service Department (service@sagemetering.com) for assistance, if needed.

In addition, the Sage Prime Series (SIP, SRP) also is compatible with **SageCom™**. However, it has limited functionality (such as changing Full Scale or conducting the diagnostics routine with **SageCom™**). **SageCom™** can be downloaded off of the Sage website and will communicate with the Prime via an RS485 adaptor. Contact the Service Department for the SAGECOM-2 Software and Adaptor (\$295).



Scan for Sage Paramount  
Industrial Thermal Mass  
Flow Meter

**NOTE:** **SageCom™** requires Windows 7 or higher, and the flow meter must be provided with MODBUS communication capabilities.