



# CERTIFICATE OF NIST TRACEABLE CALIBRATION

## Calibration Certificate No: 88151

### Customer Information

Customer: Intertek  
Address : 8431 Murphy Drive  
Middleton WI 53562



Customer PO #: Verbal - Christine Schultze

### Calibration Procedure Information

Procedure ID: GTP TMASS-LAM

Revision #: 11

Revision Date: 6/18/2019

### Calibration Standards Information


<u>Graftel ID</u>	<u>Manufacturer</u>	<u>Model #</u>	<u>Description</u>	<u>CAL Due</u>
10125	Graftel	N/A	LFE-C System	6/1/2021
10125-T	Graftel	9202	Temperature Sensor	8/17/2021
10126	Graftel	N/A	LFE-D System	6/1/2021
10126-T	Graftel	9202	Temperature Sensor	8/17/2021
10127	Furness	352	Delta P	6/1/2021
51202	Paroscientific	760-100A	Pressure, 100 Psia	7/14/2021
10201	Hobo	UX100-011	Environment Monitor	4/15/2021
50864	Paroscientific	760-100A	Pressure	5/21/2021

### Sensor Information

Manufacturer: Sierra      Description: Mass Flow Meter      Method Used: Laminar  
Model #: M50L-AL-DD-2-PV2-V1-5PC      Rated Accuracy:  $\pm 1$  % of Full Scale      Accuracy Specified By: Sierra  
Instrument ID#: 001519      Range: 0 to 10 slpm      Condition: Functional  
Serial #: 231326

Comments: Calibration Date: 02-22-2021 \*Adjusted meter prior to taking 'As Left' data  
Calibration Due: 08-22-2021 | Rev.1,3-2-21:Due date corrected.

*The calibrations within the certificate/report are traceable through NIST or another National Metrology Institute to the International System of Units (SI). The reported calibration uncertainty has a confidence level of 95% (k=2). A calibration uncertainty ratio of 4:1 was maintained unless required uncertainty is supported by analysis. Graftel Quality Assurance System complies with applicable requirements of ISO/IEC-17025-2017, ANSI/NC SL Z540-I-1994 and ISO 9001: 2008. All results contained within this certificate relate only to item(s) calibrated. This certificate shall not be reproduced except in full and with the written consent of Graftel. Acceptance Criteria per Simple Acceptance Rule: Measurement Uncertainty is not applied to the measured value when in/out of tolerance statement is made.*

Performed By:   
David Stocks  
Calibration Technician

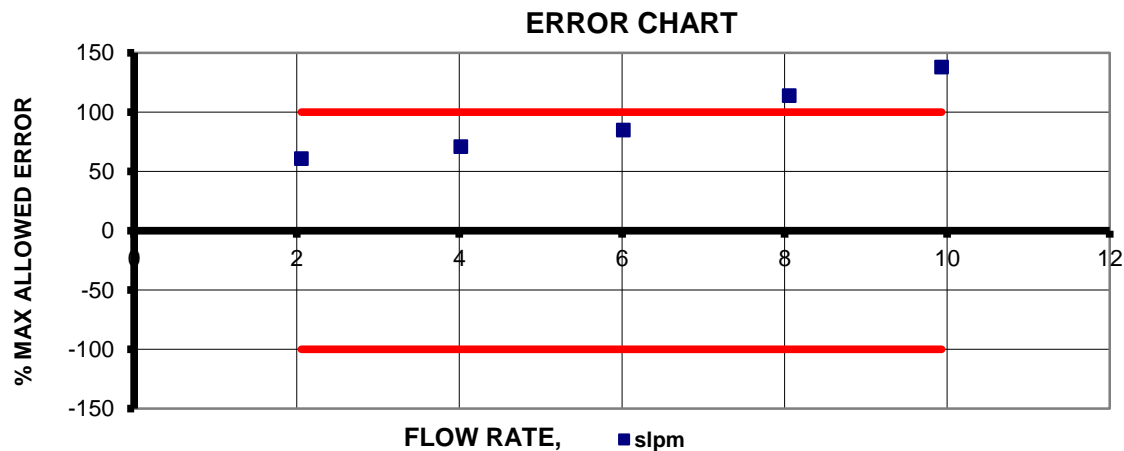
Date: 3/2/2021

Approved By:   
Scott Pickett  
Vice President, Lab Services

Date: 3/2/2021

**ATTACHMENT TO CALIBRATION CERTIFICATE 88151**  
**AS FOUND DATA**  
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Reading From Standard, slpm	Lower Limit of Meter Reading, slpm	Measured Reading From Meter, slpm	Upper Limit of Meter Reading, slpm	Error, slpm	Measurement Uncertainty (k=2) slpm	CMC (k=2) slpm	STATUS
2.057	1.957	2.118	2.157	0.061	0.010	0.010	Pass
4.017	3.917	4.088	4.117	0.071	0.020	0.020	Pass
6.018	5.918	6.103	6.118	0.085	0.030	0.030	Pass
8.056	7.956	8.170	8.156	0.114	0.040	0.040	Fail
9.932	9.832	10.070	10.032	0.138	0.050	0.050	Fail



**Graph Notes:** 10 psig inlet pressure

**Instrument Specifications**

Meter's Calibrated Fluid:	Air	
Test Fluid:	Air	
Meter's Standard Pressure:	14.7	psia
Meter's Standard Temperature:	70	°F
Lower Range:	0	slpm
Upper Range:	10	slpm
Resolution:	0.001	
Rated Accuracy:	1	% of Full Scale

**Laboratory Ambient Conditions**

Pressure:	14.44	psia
Humidity:	14.80	%RH
Temperature:	69.13	°F



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FLOW - TEMPERATURE - HUMIDITY - PRESSURE - DESIGN - CONSULTING - ENGINEERING

**NIST Traceable Calibration Data Sheet**

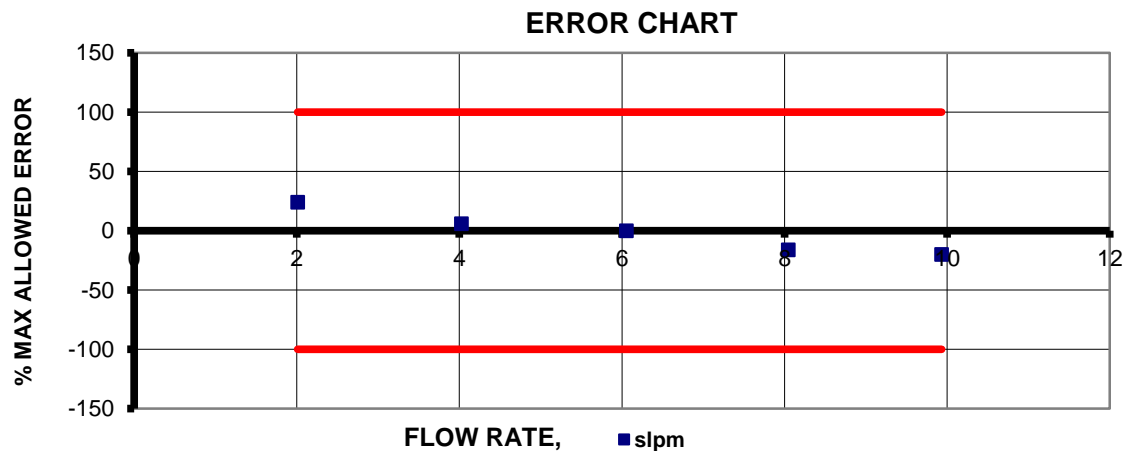
95 Chancellor Dr., Roselle, IL 60172

Phone: 847-364-2600

Fax: 847-364-3899

**ATTACHMENT TO CALIBRATION CERTIFICATE 88151**  
**AS LEFT DATA**  
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Reading From Standard, slpm	Lower Limit of Meter Reading, slpm	Measured Reading From Meter, slpm	Upper Limit of Meter Reading, slpm	Error, slpm	Measurement Uncertainty (k=2) slpm	CMC (k=2) slpm	STATUS
2.011	1.911	2.035	2.111	0.024	0.010	0.010	Pass
4.024	3.924	4.030	4.124	0.006	0.020	0.020	Pass
6.053	5.953	6.053	6.153	0.000	0.030	0.030	Pass
8.046	7.946	8.030	8.146	-0.016	0.040	0.040	Pass
9.932	9.832	9.912	10.032	-0.020	0.050	0.050	Pass



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**NIST Traceable Calibration Data Sheet**

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