



CERTIFICATE OF NIST TRACEABLE CALIBRATION

Calibration Certificate No: 88149

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: ± 1 % of Full Scale Accuracy Specified By: Sierra
Instrument ID#: 1414 Range: 0 to 10 slpm Condition: Functional
Serial #: 189157

Comments: Calibration Date: 02-22-2021 *Optimized meter prior to taking 'As Left' data
Calibration Due: 08-22-2021

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

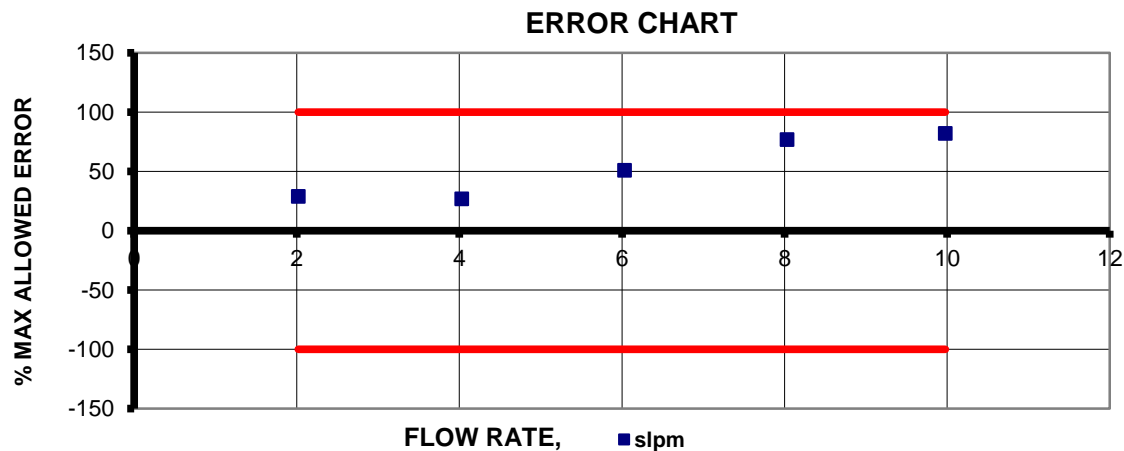
Date: 2/22/2021

Approved By: 
Scott Pickett
Vice President, Lab Services

Date: 2/23/2021

ATTACHMENT TO CALIBRATION CERTIFICATE 88149
AS FOUND DATA
Page 2 of 3

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
2.019	1.919	2.048	2.119	0.029	0.010	0.010	Pass
4.029	3.929	4.056	4.129	0.027	0.020	0.020	Pass
6.031	5.931	6.082	6.131	0.051	0.030	0.030	Pass
8.030	7.930	8.107	8.130	0.077	0.040	0.040	Pass
9.978	9.878	10.060	10.078	0.082	0.050	0.050	Pass



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

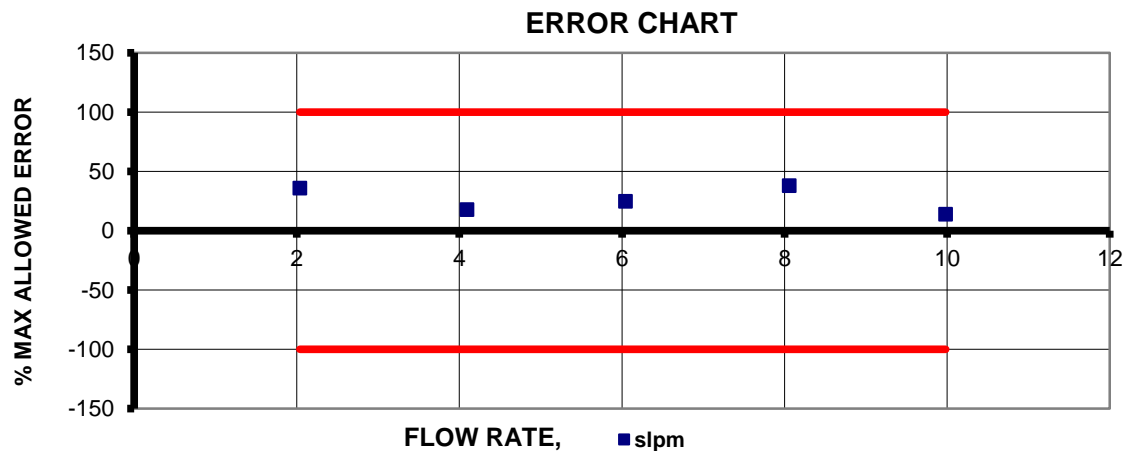
Fax: 847-364-3899

ATTACHMENT TO CALIBRATION CERTIFICATE 88149

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
2.038	1.938	2.074	2.138	0.036	0.010	0.010	Pass
4.094	3.994	4.112	4.194	0.018	0.020	0.020	Pass
6.042	5.942	6.067	6.142	0.025	0.030	0.030	Pass
8.057	7.957	8.095	8.157	0.038	0.040	0.040	Pass
9.982	9.882	9.996	10.082	0.014	0.050	0.050	Pass



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