



CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

Antibus Scales & Systems, Inc.

1919 Research Drive

Fort Wayne, IN 46808

has been assessed by ANAB
and meets the requirements of international standard

ISO/IEC 17025:2005

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

while demonstrating technical competence in the field of

CALIBRATION

Refer to the accompanying Scope of Accreditation for information regarding the types of calibrations to which this accreditation applies.

L2253

Certificate Number


ANAB Approval

Certificate Valid: 04/18/2018-05/11/2020
Version No. 002 Issued: 04/18/2018



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005 AND
ANSI/NCSL Z540-1-1994 (R2002)**

Antibus Scales & Systems, Inc.

1919 Research Drive
Fort Wayne, IN 46808
Lynn Billiard
260-432-3591

CALIBRATION

Valid to: **May 11, 2020**

Certificate Number: **L2253**

Electrical – DC/Low Frequency

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Electrical Simulation of Thermocouple Indicating Devices	Type K (-200 to 1 372) °C	0.69 °C	Fluke 741B Process Calibrator
	Type J (-210 to 1 200) °C	0.64 °C	

Length – Dimensional Metrology

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Calipers	(0 to 6) in	290 µin	Gage Blocks
Micrometer	(0 to 6) in	570 µin	Gage Blocks
Height Gage	(0 to 12) in	60 µin	Gage Blocks



Mass

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Force Gages (0.000 5 lbf Resolution) (0.000 2 lbf Resolution) (0.000 5 lbf Resolution) (0.01 lbf Resolution) (0.1 lbf Resolution) (0.1 lbf Resolution) (0.5 lbf Resolution)	(0 to 5) lbf (0 to 11) lbf (0 to 22) lbf (0 to 110) lbf (0 to 300) lbf (0 to 1 000) lbf (0 to 3 000) lbf	0.000 6 lbf 0.001 3 lbf 0.003 lbf 0.072 lbf 0.15 lbf 0.18 lbf 0.79 lbf	Class 6 Weights
Force – Tension and Compression (1 lbf resolution) (10 lbf resolution) (10 lbf resolution)	(0 to 10 000) lbf (0 to 10 000) lbf (0 to 100 000) lbf	1.9 lbf 18 lbf 60 lbf	Load Cells
Class F Mass Standards	20 lb 25 lb 50 lb 500 lb 1 000 lb 10 kg 20 kg 25 kg	0.000 11 lb 0.000 37 lb 0.000 5 lb 0.011 lb 0.015 lb 0.19 g 0.21 g 0.21 g	Modified Substitution
Lab Balance (0.000 1 g Resolution) (0.001 g Resolution) (0.01 g Resolution) (0.01 g Resolution)	(0 to 310) g (0 to 510) g (0 to 1 000) g (0 to 4 100) g	0.9 mg 2.3 mg 19 mg 21 mg	Class 1 Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems
Lab Balance (0.01 g Resolution) (0.1 g Resolution) (0.1 g Resolution)	(0 to 6) kg (0 to 8.1) kg (0 to 24) kg	0.063 g 0.18 g 0.29 g	Class 2 & 3 Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems
Lab Balance (0.1 g Resolution) (2 g Resolution)	(0 to 16) kg (0 to 20) kg	1.1 g 3.7 g	Class F Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems
High Resolution Unmarked Scales (0.000 1 kg resolution) (0.000 1 kg resolution)	(0 to 40) kg (40 to 150) kg	0.000 41 kg 0.000 95 kg	Class 1 and Class 2 Weights with Substitution to Range of use



Mass

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
High Resolution Unmarked Scales ²			Class F Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems
(0.000 02 lb Resolution)	(0 to 6) lb	0.000 6 lb	
(0.000 05 lb Resolution)	(0 to 12) lb	0.001 2 lb	
(0.000 1 lb Resolution)	(0 to 30) lb	0.003 1 lb	
(0.000 2 lb Resolution)	(0 to 70) lb	0.004 4 lb	
(0.000 5 lb Resolution)	(0 to 120) lb	0.008 6 lb	
(0.001 lb Resolution)	(0 to 200) lb	0.012 lb	
(0.002 lb Resolution)	(0 to 300) lb	0.015 lb	
(0.005 lb Resolution)	(0 to 600) lb	0.022 lb	
Industrial and Commercial Scales ³			Class F Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems
(0.001 lb Resolution)	(0 to 10) lb	0.002 lb	
(0.002 lb Resolution)	(0 to 20) lb	0.004 lb	
(0.005 lb Resolution)	(0 to 50) lb	0.01 lb	
(0.01 lb Resolution)	(0 to 100) lb	0.02 lb	
(0.02 lb Resolution)	(0 to 200) lb	0.04 lb	
(0.05 lb Resolution)	(0 to 500) lb	0.1 lb	
(0.1 lb Resolution)	(0 to 1 000) lb	0.2 lb	
(0.2 lb Resolution)	(0 to 2 000) lb	0.4 lb	
(0.25 lb Resolution)	(0 to 100) lb	0.4 lb	
(0.5 lb Resolution)	(0 to 5 000) lb	0.9 lb	
(1 lb Resolution)	(0 to 10 000) lb	2 lb	
(2 lb Resolution)	(0 to 20 000) lb	3 lb	
(5 lb Resolution)	(0 to 50 000) lb	9 lb	
(10 lb Resolution)	(0 to 100 000) lb	20 lb	
(20 lb Resolution)	(0 to 200 000) lb	39 lb	
(0.005 kg Resolution)	(0 to 30) kg	0.008 kg	
(0.002 kg Resolution)	(0 to 30) kg	0.004 kg	
(0.001 kg Resolution)	(0 to 30) kg	0.002 kg	
(0.05 kg Resolution)	(0 to 30) kg	0.084 kg	
(0.02 kg Resolution)	(0 to 30) kg	0.033 kg	
(0.01 kg Resolution)	(0 to 30) kg	0.17 kg	
(0.5 kg Resolution)	(0 to 30) kg	0.84 kg	
(0.2 kg Resolution)	(0 to 30) kg	0.33 kg	
(0.1 kg Resolution)	(0 to 30) kg	0.17 kg	

Mass

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Torque Analyzers – Fixed Points	(5 to 50) ozf·in	0.091 % of reading	Torque Arm and Class 6 Weights
	(5 to 50) lbf·in	0.049 % of reading	
	(25 to 250) lbf·in	0.049 % of reading	
	(100 to 1 000) lbf·in	0.024 % of reading	
	(25 to 250) lbf·ft	0.022 % of reading	
	(60 to 600) lbf·ft	0.049 % of reading	
Torque Wrench	(200 to 2 000) lbf·ft	0.048 % of reading	Torque Analyzer
	(5 to 50) ozf·in	2.9 % of reading	
	(5 to 50) lbf·in	2.3 % of reading	
	(25 to 250) lbf·in	2.3 % of reading	
	(100 to 1 000) lbf·in	2.3 % of reading	
	(25 to 250) lbf·ft	2.3 % of reading	
(60 to 600) lbf·ft	2.4 % of reading		
(200 to 2 000) lbf·ft	2.6 % of reading		

Thermodynamic

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Temperature Chamber (ovens/freezers)	(-200 to 1 300) °C	1 °C	Fluke 741B Process Calibrator

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. High Resolution Unmarked Scales include high resolution scales not complying with the accuracy class parameters of Table 3 of NIST Handbook 44.
3. Industrial Scales include but are not limited to lab balances, bench scales, floor scales, tank and hopper scales, and vehicle scales.
4. Antibus Scales & Systems, Inc has resident technicians located in Perrysburg, OH.
5. This scope is formatted as part of a single document including Certificate of Accreditation No. L2253.



Vice President