



**LABORATORY  
ACCREDITATION  
BUREAU** a division of A-S-B



# Certificate of Accreditation

ISO/IEC 17025:2005

Certificate Number L2253

**Antibus Scales & Systems, Inc.**

1919 Research Drive  
Fort Wayne IN 46808

has met the requirements set forth in L-A-B's policies and procedures, all requirements of ISO/IEC 17025:2005 "General Requirements for the competence of Testing and Calibration Laboratories" and ANSI/NCSL Z540-1:1994 (R2002).\*

The accredited lab has demonstrated technical competence to a defined "Scope of Accreditation" and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

Accreditation valid through: **May 11, 2017**

**R. Douglas Leonard, Jr., President, COO  
Laboratory Accreditation Bureau  
Presented the 3rd of May 2017**

\*See the laboratory's Scope of Accreditation for details of accredited parameters

\*\*Laboratory Accreditation Bureau is found to be in compliance with ISO/IEC 17011:2004 and recognized by ILAC (International Laboratory Accreditation Cooperation) and NACLA (National Cooperation for Laboratory Accreditation).  
Form 28.1.3 - Original 7/3/13

# Scope of Accreditation For Antibus Scales & Systems, Inc.

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

In recognition of a successful assessment to ISO/IEC 17025:2005 and ANSI/NCSL Z540-1:1994 (R2002) to the following Calibration and Measurement Capabilities, accreditation has been granted to **Antibus Scales & Systems, Inc.** for the following:

Accreditation granted through: **May 11, 2017**

## Calibration

### Electrical – Voltage

Calibration Parameter/Equipment <sup>1</sup>	Range	Expanded Uncertainty of Measurement (+/-)	Remarks
Electrical Simulation of Thermocouple Indicating Devices			
Type K	(-200 to 1 372) °C	0.69 °C	Fluke 741B
Type J	(-210 to 1 200) °C	0.64 °C	

### Length – Hand Tools and Precision Gages 1D

Calibration Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Remarks
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 – Force

Calibration Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Remarks
Force Gages			Class 6 Weights
(0.0005 lbf Resolution)	(0 to 5) lbf	0.000 6 lbf	
(0.0002 lbf Resolution)	(0 to 11) lbf	0.001 3 lbf	
(0.0005 lbf Resolution)	(0 to 22) lbf	0.003 lbf	
(0.01 lbf Resolution)	(0 to 110) lbf	0.072 lbf	
(0.1 lbf Resolution)	(0 to 300) lbf	0.15 lbf	
(0.1 lbf Resolution)	(0 to 1 000) lbf	0.18 lbf	
(0.5 lbf Resolution)	(0 to 3 000) lbf	0.79 lbf	

Calibration Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Remarks
Force – Tension and Compression (1 lbf resolution)	(0 to 10 000) lbf	1.9 lbf	Load Cells
(10 lbf resolution)	(0 to 10 000) lbf	18 lbf	
(10 lbf resolution)	(0 to 100 000) lbf	60 lbf	

**Mass – Mass Artifacts**

Calibration Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Remarks
Class F Mass Standards	20 lb	0.000 11 lb	Modified Substitution
	25 lb	0.000 37 lb	
	50 lb	0.000 5 lb	
	500 lb	0.011 lb	
	1 000 lb	0.015 lb	
	10 kg	0.19 g	
	20 kg	0.21 g	
	25 kg	0.21 g	

**Mass – Scale and Balances**

Calibration Parameter/Equipment <sup>1</sup>	Range	Expanded Uncertainty of Measurement (+/-)	Remarks
Lab Balance (0.000 1 g Resolution)	(0 to 310) g	0.9 mg	Class 1 Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems
(0.001 g Resolution)	(0 to 510) g	2.3 mg	
(0.01 g Resolution)	(0 to 1 000) g	19 mg	
(0.01 g Resolution)	(0 to 4 100) g	21 mg	
Lab Balance (0.01 g Resolution)	(0 to 6) kg	0.063 g	Class 2 & 3 Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems
(0.1 g Resolution)	(0 to 8.1) kg	0.18 g	
(0.1 g Resolution)	(0 to 24) kg	0.29 g	
Lab Balance (0.1 g Resolution)	(0 to 16) kg	1.1 g	Class F Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems
(2 g Resolution)	(0 to 20) kg	3.7 g	
High Resolution Unmarked Scales (0.000 1 kg resolution)	(0 to 40) kg	0.000 41 kg	Class 1 and Class 2 Weights with Substitution to Range of use
(0.000 1 kg resolution)	(40 to 150) kg	0.000 95 kg	
High Resolution Unmarked Scales <sup>2</sup> (0.000 02 lb Resolution)	(0 to 6) lb	0.000 6 lb	Class F Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems
(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	

Calibration Parameter/Equipment <sup>1</sup>	Range	Expanded Uncertainty of Measurement (+/-)	Remarks	
Industrial and Commercial Scales <sup>3</sup>				
(0.001 lb Resolution)	(0 to 10) lb	0.002 lb	Class F Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems	
(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		Class F Weights and NIST Handbook 44 utilized for the Calibration of Weighing Systems
(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 – Torque**

Calibration Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Remarks
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 – Thermodynamic Sources**

Calibration Parameter/Equipment <sup>1</sup>	Range	Expanded Uncertainty of Measurement (+/-)	Remarks
Temperature Chamber (ovens/freezers)	(-200 to 1 300) °C	1 °C	Fluke 741b

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and remarks. 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) Laboratory offers calibration services at the laboratory's own facilities and at the client or other agreed upon facilities.
- 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



Approved by:   
R. Douglas Leonard  
Chief Technical Officer

Date: May 3, 2017

Re-Issued: 5/9/14  
Revised: 6/28/16

Revised: 5/15/14  
Revised: 5/3/17

Revised: 10/15/14

Revised: 6/3/15

Revised: 3/11/16