



# CERTIFICATE OF ACCREDITATION

## The ANSI National Accreditation Board

Hereby attests that

**Ashland Scale Company, Inc.**  
2210 Rocky Lane  
Ashland, OH 44805

Fulfills the requirements of

**ISO/IEC 17025:2017**

In the field of

**CALIBRATION**

This certificate is valid only when accompanied by a current scope of accreditation document.  
The current scope of accreditation can be verified at [www.anab.org](http://www.anab.org).

A handwritten signature in black ink, appearing to be 'Jason Stine', is positioned above a horizontal line.

Jason Stine, Vice President

Expiry Date: 18 March 2026

Certificate Number: L2114-1



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.  
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 17025:2017**

**Ashland Scale Company, Inc.**

2210 Rocky Lane  
Ashland, OH 44805  
Brian Fisher  
419-289-2235

**CALIBRATION**

Valid to: **March 18, 2026**

Certificate Number: **L2114-1**

**Electrical – DC/Low Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature Indicators, Controllers, and Chart Recorders <sup>1</sup>  Type E	(-20 to -0) °C (-4 to -32) °F	1.1 °C 1.98 °F	Temperature Calibrator
	(0 to 350) °C (32 to 662) °F	0.93 °C 1.67 °F	
	(350 to 600) °C (662 to 1 112) °F	0.84 °C 1.51 °F	
	(600 to 950) °C (1 112 to 1 742) °F	0.83 °C 1.49 °F	
	(-20 to 0) °C (-4 to -32) °F	1.2 °C 2.16 °F	
Type J	(0 to 400) °C (32 to 752) °F	0.84 °C 1.51 °F	
	(400 to 750) °C (752 to 1 382) °F	0.84 °C 1.51 °F	
Type K	(-20 to 0) °C (4 to 32) °F	1.4 °C 2.52 °F	
	(0 to 750) °C (32 to 1 382) °F	0.97 °C 1.75 °F	
	(750 to 1 100) °C (1 382 to 2 012) °F	1.0 °C 1.8 °F	

**Electrical – DC/Low Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Type R	(0 to 250) °C (32 to 482) °F	2.3 °C 4.14 °F	Temperature Calibrator
	(250 to 1 100) °C (4823 to 2 012) °F	1.80 °C 3.24 °F	
Type T	(-20 to 0) °C (-4 to 32) °F	1.5 °C 2.70 °F	
	(0 to 400) °C (32 to 752) °F	0.95 °C 1.71 °F	
Type S	(0 to 250) °C (32 to 482) ° F	2.2 °C 3.96 °F	
	(250 to 1 100) °C (482 to 2 012) °F	1.9°C 3.42 °F	

**Length – Dimensional Metrology**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Rules and Tapes <sup>1</sup>	(0 to 360) in	0.036 in	Linear Standards
Calipers <sup>1</sup>	Up to 6 in (6 to 12) in (12 to 24) in (24 to 36) in	320 μin 360 μin 370 μin 680 μin	Gage Blocks, and End Standards, and Ring Gages
Height Gages <sup>1</sup>	(Up to 2) in (>2 to 6) in (>6 to 12) in (>12 to 18) in (>18 to 24) in (>24 to 36) in	120 μin 150 μin 160 μin 150 μin 260 μin 350 μin	Gage Blocks and End Standards

**Length – Dimensional Metrology**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Outside Micrometers <sup>1</sup>	(Up to 1) in (>1 to 4) in (>4 to 12) in (>12 to 24) in (>24 to 36) in	35 µin 140 µin 150 µin 260 µin 430 µin	Gage Blocks and End Standards
Indicators <sup>1</sup>	(0 to 2) in	170 µin	Gage Blocks
Feeler Gages <sup>1</sup>	Up to 0.5 in	35 µin	Micrometer
Indicating Snap Gages <sup>1</sup>	(Up to 2) in (>2 to 4) in (>4 to 6) in (>6 to 12) in (>12 to 24) in (>24 to 36) in	170 µin 200 µin 200 µin 180 µin 280 µin 460 µin	Gage Blocks and End Standards
Optical Comparators <sup>1</sup> Linear Accuracy Magnification	(0 to 12) in (10,20,50,62.5,100,200) X	350 µin 590 µin	Glass Scale, rule and Steel Balls, lens scope
Angle	(0 to 180) °	1.3 °	

**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Liquid Flow <sup>1</sup>	(0 to 100) gpm	2.6 gpm	Gravimetric
Tension and Compression <sup>1</sup>	(0 to 1 000) lbf	0.55 lbf	Class F Masses
	(0 to 20 000) lbf (20 000 to 40 000) lbf	2.7 lbf 6.5 lbf	Load Cells
Rockwell Hardness Testers <sup>1</sup>	HRBw Low Middle High	1.4 HRBw 1.3 HRBw 1.3 HRBw	ASTM E18 Indirect Verification
	HRC Low Middle High	1.2 HRC 1.1 HRC 1.1 HRC	

**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Rockwell Superficial Hardness Testers <sup>1</sup>	HR15Tw Low Middle High	0.43 HR15TW 0.33 HR15TW 0.46 HR15TW	ASTM E18 Indirect Verification
	HR30TW Low Middle High	0.52 HR30TW 0.32 HR30TW 0.28 HR30TW	
	HR15N Low Middle High	0.4 HR15N 0.3 HR15N 0.32 HR15N	
	HR30N Low Middle High	0.32 HR30N 0.49 HR30N 0.26 HR30N	
Durometers			
Force			
Type A, B, E, & O			
Type C, D, & DO	(0 to 100) Duro	0.84 Duro	Balance and Masses
Type OO, & OOO			
Indenter			
Length/Diameter	(0.05 to 0.150) in	1 200 µin	Gage Blocks / Optical Comparator
Radius	(0.005 to 0.01) in	180 µin	Optical Comparator
Angle	(25 to 45) °	210 “	Optical Comparator

**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Mass Standards (lb) NIST Class F	0.25 oz	0.54 mg	Modified Substitution per NIST SOP 8 using ASTM E617 Class 3 Masses
	0.5 oz	0.8 mg	
Mass Standards NIST Class F ASTM E617 Classes 6, 7	0.02 lb	0.17 mg	Modified Substitution per NIST SOP 8 using ASTM E617 Class 3 Masses
	0.05 lb	0.87 mg	
	0.1 lb	1.3 mg	
	2 oz	1.4 mg	
	0.2 lb	1.8 mg	
	0.25 lb (4 oz)	1.9 mg	
	0.5 lb (8 oz)	3.4 mg	
	1 lb	13 mg	
	2 lb	16 mg	
	3 lb	20 mg	
	5 lb	29 mg	
	10 lb	54 mg	
	20 lb	160 mg	
	25 lb	190 mg	
	50 lb	290 mg	
	1 g	0.2 mg	
	2 g	0.22 mg	
	3 g	0.24 mg	
5 g	0.26 mg		
10 g	0.33 mg		

**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Mass Standards NIST Class F ASTM E617 Classes 6, 7	20 g	0.44 mg	Modified Substitution per NIST SOP 8 using ASTM E617 Class 3 Masses
	30 g	0.54 mg	
	50 g	0.71 mg	
	100 g	1.2 mg	
	129.64 g	2.3 mg	
	200 g	2.3 mg	
	259.18 g	3.7 mg	
	300 g	12 mg	
	500 g	13 mg	
	648 g	14 mg	
	1 kg	16 mg	
	1 296 g	19 mg	
	1 500 g	21 mg	
	2 kg	26 mg	
	3 kg	37 mg	
	3 240 g	40 mg	
	4 kg	48 mg	
	5 kg	59 mg	
	6 480 g	140 mg	
	10 kg	160 mg	
20 kg	260 mg		
25 kg	310 mg		

**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Pressure Gages	(0.01 to 300) psi (300 to 5 000) psi	0.64 psi 2.3 psi	Druck DPI 601
Laboratory Balances <sup>1, 2, 3</sup> (0.000 1 g Resolution)	(0 to 61) g	0.74 mg	ASTM E617 Class 1 Masses and Handbook 44 utilized for the calibration of the Weighing System
(0.001 g Resolution)	(0 to 210) g	83 mg	
(0.01 g Resolution)	(0 to 6 100) g	0.017 g	
Laboratory Balances <sup>1, 2, 3</sup> (0.01 g Resolution)	(0 to 6 100) g	0.058 g	ASTM E617 Class 3 Masses and Handbook 44 utilized for the calibration of the Weighing System
Industrial Scales <sup>1, 3</sup> (0.000 1 lb Resolution)	(0 to 2) lb	0.000 24 lb	NIST 105-1 Class F Masses and Handbook 44 utilized for the calibration of the Weighing System
(0.000 2 lb Resolution)	(0 to 2) lb	0.000 26 lb	
(0.000 5 lb Resolution)	(0 to 5) lb (0 to 30) lb (0 to 45) lb	0.000 65 lb 0.002 9 lb 0.004 7 lb	
(0.001 lb Resolution)	(0 to 2) lb (0 to 5) lb (0 to 10) lb (0 to 20) lb (0 to 25) lb (0 to 70) lb	0.000 97 lb 0.001 4 lb 0.001 7 lb 0.002 6 lb 0.003 1 lb 0.006 2 lb	NIST 105-1 Class F Masses and Handbook 44 utilized for the calibration of the Weighing System
(0.002 lb Resolution)	(0 to 6) lb (0 to 12) lb (0 to 15) lb (0 to 20) lb (0 to 25) lb (0 to 30) lb (0 to 60) lb	0.001 5 lb 0.001 8 lb 0.002 2 lb 0.002 8 lb 0.003 2 lb 0.003 7 lb 0.006 1 lb	
(0.005 lb Resolution)	(0 to 5) lb (0 to 12) lb (0 to 15) lb (0 to 25) lb (0 to 30) lb (0 to 50) lb (0 to 60) lb (0 to 100) lb	0.002 9 lb 0.003 1 lb 0.003 4 lb 0.004 lb 0.004 lb 0.007 lb 0.008 lb 0.012 lb	



**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Industrial Scales <sup>1,3</sup> (0.01 lb Resolution)	(0 to 10) lb	0.005 9 lb	NIST 105-1 Class F Masses and Handbook 44 utilized for the calibration of the Weighing System
	(0 to 20) lb	0.006 3 lb	
	(0 to 30) lb	0.01 lb	
	(0 to 50) lb	0.012 lb	
	(0 to 60) lb	0.012 lb	
	(0 to 100) lb	0.015 lb	
	(0 to 125) lb	0.017 lb	
	(0 to 130) lb	0.018 lb	
(0 to 300) lb	0.036 lb		
(0.02 lb Resolution)	(0 to 60) lb	0.019 lb	
	(0 to 100) lb	0.018 lb	
	(0 to 150) lb	0.027 lb	
	(0 to 200) lb	0.03 lb	
(0.05 lb Resolution)	(0 to 60) lb	0.03 lb	
	(0 to 100) lb	0.036 lb	
	(0 to 120) lb	0.037 lb	
	(0 to 150) lb	0.038 lb	
	(0 to 200) lb	0.052 lb	
(0.1 lb Resolution)	(0 to 500) lb	0.08 lb	
	(0 to 5) lb	0.058 lb	
	(0 to 60) lb	0.058 lb	
	(0 to 100) lb	0.13 lb	
	(0 to 200) lb	0.17 lb	
	(0 to 300) lb	0.14 lb	
	(0 to 400) lb	0.13 lb	
	(0 to 500) lb	0.13 lb	
(0 to 1 000) lb	0.2 lb		
(0.2 lb Resolution)	(0 to 5 000) lb	0.2 lb	
	(0 to 100) lb	0.14 lb	
	(0 to 150) lb	0.14 lb	
	(0 to 400) lb	0.18 lb	
(0.25 lb Resolution)	(0 to 2 000) lb	0.3 lb	
	(0 to 5) lb	0.29 lb	
(0.5 lb Resolution)	(0 to 220) lb	0.34 lb	
	(0 to 800) lb	0.29 lb	
	(0 to 1 000) lb	0.29 lb	
	(0 to 5 000) lb	0.41 lb	

**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Industrial Scales <sup>1,3</sup> (1 lb Resolution)	(0 to 400) lb	0.68 lb	NIST 105-1 Class F Masses and Handbook 44 utilized for the calibration of the Weighing System
	(0 to 750) lb	0.69 lb	
	(0 to 1 000) lb	0.69 lb	
	(0 to 2 000) lb	0.78 lb	
	(0 to 4 000) lb	0.78 lb	
	(0 to 5 000) lb	0.69 lb	
	(0 to 6 250) lb	0.77 lb	
(0 to 10 000) lb	0.78 lb		
(2 lb Resolution)	(0 to 4 500) lb	1.5 lb	
	(0 to 5 000) lb	1.5 lb	
	(0 to 6 500) lb	1.5 lb	
	(0 to 20 000) lb	1.5 lb	
	(0 to 24 000) lb	2.6 lb	
(5 lb Resolution)	(0 to 2 000) lb	3.8 lb	
	(0 to 7 000) lb	3.8 lb	
	(0 to 10 000) lb	3 lb	
(10 lb Resolution)	(0 to 40 000) lb	5.8 lb	
	(0 to 70 000) lb	5.8 lb	
(0.000 1 g Resolution)	(0 to 80) g	0.018 g	
	(0 to 100) g	0.023 g	
	(0 to 120) g	0.023 g	
	(0 to 160) g	0.023 g	
	(0 to 200) g	0.046 g	
	(0 to 300) g	0.069 g	
(0 to 450) g	0.092 g		
(0.000 2 g Resolution)	(0 to 120) g	0.028 g	
(0.000 5 g Resolution)	(0 to 4 000) g	0.46 g	
(0.001 g Resolution)	(0 to 45) g	7 mg	
	(0 to 100) g	0.023 g	
	(0 to 200) g	0.046 g	
	(0 to 210) g	0.046 g	
	(0 to 260) g	0.023 g	
	(0 to 300) g	0.069 g	
	(0 to 410) g	0.092 g	
	(0 to 500) g	0.081 g	
	(0 to 610) g	0.1 g	
	(0 to 620) g	0.081 g	
	(0 to 1 100) g	0.14 g	
	(0 to 6 000) g	0.58 g	

**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Industrial Scales <sup>1,3</sup> (0.002 g Resolution)	(0 to 6 000) g	0.69 g	NIST 105-1 Class F Masses and Handbook 44 utilized for the calibration of the Weighing System
(0.005 g Resolution)	(0 to 400) g	0.092 g	
(0.01 g Resolution)	(0 to 100) g	0.026 g	
	(0 to 200) g	0.047 g	
	(0 to 300) g	0.07 g	
	(0 to 1 210) g	0.16 g	
	(0 to 3 000) g	0.23 g	
	(0 to 3 100) g	0.37 g	
	(0 to 4 000) g	0.46 g	
	(0 to 5 000) g	0.58 g	
(0.02 g Resolution)	(0 to 60) g	0.02 g	
	(0 to 200) g	0.048 g	
(0.05 g Resolution)	(0 to 5 000) g	0.58 g	
(0.1 g Resolution)	(0 to 1200) g	0.14 g	
(1 g Resolution)	(0 to 1 360) g	0.59 g	
	(0 to 2 000) g	0.62 g	
	(0 to 3 000) g	0.77 g	
	(0 to 4 000) g	0.62 g	
	(0 to 5 000) g	0.89 g	
	(0 to 6 000) g	0.89 g	
	(0 to 6 800) g	0.89 g	
	(0 to 12 000) g	1.3 g	
(0 to 30 000) g	2.9 g		
(2 g Resolution)	(0 to 2 200) g	1.2 g	
(0.02 kg Resolution)	(0 to 500) kg	5.8 g	
(0.05 kg Resolution)	(0 to 500) kg	0.064 lb	
Vehicle Scales <sup>1</sup> (20 lb Resolution)	(0 to 20 000) lb	160 lb	
	(0 to 40 000) lb	120 lb	
	(0 to 120 000) lb	160 lb	
(50 lb Resolution)	(0 to 50 000) lb	290 lb	
	(0 to 400 000) lb	390 lb	
	(0 to 500 000) lb	390 lb	

**Thermodynamic**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Infrared Thermometers	50 °C (122 °F) 100 °C (212 °F) 150 °C (302 °F)	2.1 °C 3.6 °F	Blackbody Source (flat plate) $\epsilon = 0.95, \lambda = (8 \text{ to } 14) \mu\text{m}$
Relative Humidity – Measure	(10 to 95) %RH	2.9 % RH	Digital RH meter
Freezers <sup>1</sup>	(-45 to 0) °C (-49 to 32) °F	0.61 °C 1.09 °F	Process Calibrator with PRT Probe
Ovens & Furnaces <sup>1</sup>	(0 to 1 200) °C (32 to 2 192) °F	0.97 °C 1.75 °F	Process Calibrator with Type K Thermocouple
RTD and Thermocouple Probes	(-20 to 0) °C (-4 to 32) °F	0.61 °C 1.10 °F	Dry ice / alcohol bath with an PRT
	0 °C 32 °F	0.02 °C 0.04 °F	Ice Bath with PRT
RTD and Thermocouple Probes	(0 to 400) °C (32 to 752) °F	0.62 °C 1.12 °F	Dry Block calibrator with an PRT
	(400 to 800) °C (752 to 1 472) °F	0.64 °C 1.15 °F	
Thermometers	(-20 to 0) °C (-4 to 32) °F	0.61 °C 1.10 °F	
	0 °C 32 °F	0.02 °C 0.04 °F	
Thermometers	(0 to 400) °C (32 to 752) °C	0.62 °C 1.12 °F	
	(400 to 800) °C (752 to 1 472) °F	0.64 °C 1.10 °F	

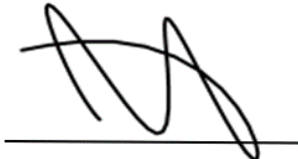
**Time and Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Timers and Stopwatches	15 s to 24 hr	0.12 % of reading	Reference Stopwatch
Digital / Mechanical Tachometer <sup>5</sup>	(20 to 5000) rpm (5000 to 29900) rpm	0.3 rpm 4.7 rpm	Direct reflective pickup tachometer

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. Class F Weights used on site.
3. Industrial Scales include Bench Scales, Floor Scales, Tank and Hopper Scales, Crane Scales.
4. Ashland Scale Company, Inc. has resident technicians in Cleveland, OH; Toledo, OH; and Columbus, OH
5. rpm also reported as fpm (flashes per minute)
6. This scope is formatted as part of a single document including Certificate of Accreditation No. L2114-1.



Jason Stine, Vice President