



### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

#### Kanawha Scales and Systems, Inc.

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### CALIBRATION

Valid to: **March 27, 2020**

Certificate Number: **L1166.01-1**

#### Mass

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Precision Scales & Balances (0.000 001 g Resolution)	(0 to 5.1 g)	0.140 mg	ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for the calibration of the Weighing System
(0.000 01 g Resolution)	(0 to 210) g	0.640 mg	
(0.000 1 g Resolution)	(0 to 100) g	0.541 mg	
(0.000 1 g Resolution)	(0 to 210) g	0.931 mg	
(0.000 1 g Resolution)	(0 to 400) g	1.579 mg	
(0.001 g Resolution)	(0 to 100) g	0.000 9 g	
(0.002 g Resolution)	(0 to 200) g	0.001 7 g	
(0.005 g Resolution)	(0 to 500) g	0.004 3 g	
(0.01 g Resolution)	(0 to 1 000) g	0.009 g	
(0.02 g Resolution)	(0 to 2 000) g	0.017 g	
(0.05 g Resolution)	(0 to 5 000) g	0.043 g	
(0.1 g Resolution)	(0 to 10 000) g	0.09 g	

**Mass**

<b>Parameter / Equipment</b>	<b>Range</b>	<b>Expanded Uncertainty of Measurement (+/-)</b>	<b>Reference Standard, Method and/or Equipment</b>
Precision Scales & Balances			ASTM E617 Class 2 Weights and NIST Handbook 44 utilized for the calibration of the Weighing System
(0.2 g Resolution)	(0 to 20 000) g	0.17 g	
(0.5 g Resolution)	(0 to 50 000) g	0.5 g	
(1 g Resolution)	(0 to 100 000) g	0.9 g	
(2 g Resolution)	(0 to 150 000) g	1.5 g	
(5 g Resolution)	(0 to 150 000) g	3.3 g	
(10 g Resolution)	(0 to 150 000) g	6 g	
(20 g Resolution)	(0 to 150 000) g	13 g	
Industrial Vehicle Scales <sup>2</sup>			NIST Class F and/or ASTM E617 Class 6 Weights and NIST Handbook 44 utilized for the calibration of the Weighing System
(20 lb Resolution)	(0 to 200 000) lb	14 lb	
(50 lb Resolution)	(0 to 500 000) lb	36 lb	
(100 lb Resolution)	(0 to 500 000) lb	71 lb	
(200 lb Resolution)	(0 to 500 000) lb	141 lb	
Industrial Scales <sup>2</sup>			NIST Class F and/or ASTM E617 Class 6 Weights and NIST Handbook 44 utilized for the calibration of the Weighing System
(0.000 2 lb Resolution)	(0 to 2) lb	0.000 29 lb	
(0.000 5 lb Resolution)	(0 to 5) lb	0.000 71 lb	
(0.001 lb Resolution)	(0 to 10) lb	0.001 4 lb	
(0.002 lb Resolution)	(0 to 20) lb	0.002 8 lb	
(0.005 lb Resolution)	(0 to 50) lb	0.012 lb	
(0.01 lb Resolution)	(0 to 100) lb	0.014 lb	
(0.02 lb Resolution)	(0 to 200) lb	0.028 lb	
(0.05 lb Resolution)	(0 to 500) lb	0.059 lb	



Mass

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Industrial Scales <sup>2</sup>			NIST Class F and/or ASTM E617 Class 6 Weights and NIST Handbook 44 utilized for the calibration of the Weighing System
(0.1 lb Resolution)	(0 to 1 000) lb	0.12 lb	
(0.2 lb Resolution)	(0 to 2 000) lb	0.24 lb	
(0.5 lb Resolution)	(0 to 5 000) lb	0.5 lb	
(1 lb Resolution)	(0 to 10 000) lb	1 lb	
(2 lb Resolution)	(0 to 20 000) lb	2 lb	
(5 lb Resolution)	(0 to 50 000) lb	4.3 lb	
(10 lb Resolution)	(0 to 100 000) lb	9 lb	

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. Industrial Scales includes but not limited to lab balances, bench scales, floor scales, tank and hopper scales and vehicle scales
3. Laboratory offers custom (specific scale) uncertainty budget when requested by client
4. This scope is formatted as part of a single document including Certificate of Accreditation No. L1166.01-1.



Vice President

