



CALIBRATION CERTIFICATE

Tiffin 5000 lb Weight Cart, S/N W65787

Customer:

Koenig Scale Co, Inc.
4779 E. Margaret Dr
Terre Haute, IN 47803
Kevin Koenig
Quality Manager

Certificate Number: 2024-0872

Date Received: 7/15/2024

Date Calibrated: 7/16/2024

Condition of Artifacts: Acceptable

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Methods and Traceability:

The weight cart described above has been compared with standards of the State of Ohio, which are traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST). The weight cart is compliant with specifications and tolerances from NIST Handbook 105-8 (2019). The uncertainty of the measurement is considered when making this statement of compliance. There are many variables in the calibration of weight carts (hydraulic fluid, engine oil, battery, etc.). Therefore, care must be taken to ensure that fluid levels are kept at relatively the same point as the time of calibration, and all necessary part replacements are monitored for weight differential. SI Conversion: 1 lb = 0.45359237 kg ** The laboratory calculates measurement uncertainties in accordance with NIST Standard Operating Procedure 29 (2019); ISO Guide to the Expression of Uncertainty in Measurement (GUM) (JCGM 100:2008, GUM 1995 with minor corrections, 2008); and ISO/IEC GUIDE 98-3:2008, Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995). The combined standard uncertainty is the result of the root-sum-square of the Type A and Type B components specified in the SOP listed below. The combined standard uncertainty is multiplied by an appropriate coverage factor (k) to provide an expanded uncertainty which defines an interval having a level of confidence of approximately 95 percent. The effects of magnetism have not been considered in the measurement uncertainty. ** Conventional mass correction values are reported. These are based on the mass in air with reference conditions of air density 0.0012 g/cm³, mass density of 8 g/cm³, and a reference temperature of 20 °C. The correction is the weight's error from its nominal value. As Received values indicate the error of the items as submitted, before adjustment.

The following Standard Operating Procedure (S.O.P.) was used:

- 33 NIST Standard Operating Procedure for Calibration of Weight Carts. (May 2019)

Notes:

[Handwritten signature of Keith Crider]

Weights & Measures Technologist Keith Crider

7/23/2024

Issue Date



NVLAP CODE: 200420

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07/30/24

OHIO DEPARTMENT OF AGRICULTURE
DIVISION OF WEIGHTS AND MEASURES METROLOGY LABORATORY

SUBMITTED BY:	Koenig Scale Co, Inc.		CLASS:	N/A	Page	2	
CERTIFICATE NUMBER:	2024-0872		TEMP:	20.58	°C		
DATE:	7/16/2024		PRESS:	731.065	mm Hg		
MANUFACTURER, S/N	Tiffin, W65787		HUMD:	56.39	%		
Nominal Value	Units	Tolerance ±	Units	As Received (lb)	As Left (lb)	Uncertainty ± (lb)	k value
5000	lb	1.74	lb	-8.07	-0.11	0.22	2.015

Chris D Crawford

07/30/24