

Vermont Weights and Measures Metrology Laboratory  
Test Report

Issued To:

Advanced Scale  
13 Delta Drive Unit 6  
Londonderry, NH 03053-2372  
603-626-0242Date of Receipt: October 27, 2023  
Vermont Test Number: VT23-285  
Date of Test: October 30, 2023  
Report of Test for Item (Make/Model/Serial Number(s)/#Pieces):

Various/Cast Field Standards/See Chart/18 - 1000 lb

The mass standards described above have been compared to the standards of the State of Vermont, by NISTIR 6969, SOP 8 (2019), and have been found at time of test, or been adjusted, to meet the maximum permissible errors stated in ASTM E617-18 Standard Specification for Laboratory Weights and Precision Mass Standards. Standards of the State of Vermont are traceable to the SI and National Institute of Standards and Technology (NIST). The Vermont Laboratory is recognized by NIST, under the Laboratory Metrology Program at Mass Echelon III. The mass standards described above were found to have a mass value at the time of test as indicated in the following tabulation. Weights are considered within the MPE when the absolute value of the conventional mass correction plus the uncertainty is less than or equal to the specified MPE. Weights received with a conventional mass outside the MPE show a value in the "before adjustment" column.

The uncertainties shown are expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic uncertainties relative to the reference standard and procedure used, and (2) Type A, random uncertainties determined by the standard deviation of the measurement process. Type A and Type B uncertainties are combined by the root sum squared method and multiplied by a coverage factor of k (in chart) for an approximate 95 % confidence interval.

Environmental conditions at time of test:

Temperature: 21.8 °C to 22.0 °C  
Relative Humidity: 46.9 % to 48.5 %  
Barometric Pressure: 758.00 mmHg to 759.00 mmHg  
Mass Comparator: MT XP604KM  
Technician: Scott Dolan

Nominal & Marking	Conventional Mass Correction Before Adjustment	Conventional Mass Correction As Left	Uncertainty	ASTM Class 6 MPE	Units	<i>k</i> Factor
1000 lb 1NJG		0.9	7.2	45	g	2.02
1000 lb 1NJN		21.8	7.2	45	g	2.02
1000 lb 1NJP		17.6	7.2	45	g	2.02
1000 lb 1388		-11.7	7.2	45	g	2.02
1000 lb 1NJE		21.8	7.2	45	g	2.02
1000 lb 1NJJ		11.4	7.2	45	g	2.02
1000 lb 1NJL		4.3	7.2	45	g	2.02
1000 lb 9		-3.5	7.2	45	g	2.02
1000 lb 10		2.6	7.2	45	g	2.02
1000 lb 1NJC		-4.4	7.2	45	g	2.02
1000 lb 1NJO		-5.6	7.2	45	g	2.02
1000 lb 1NJF		2.9	7.2	45	g	2.02
1000 lb 13880		26.3	7.2	45	g	2.02
1000 lb 1NJI		-11.4	7.2	45	g	2.02
1000 lb 1NJH		1.2	7.2	45	g	2.02
1000 lb 1NJM		-4.6	7.2	45	g	2.02
1000 lb 1NJK		-8.7	7.2	45	g	2.02
1000 lb 1NJD		15.9	7.2	45	g	2.02

MPE: Maximum Permissible Error

In addition to meeting ASTM E617-18 Class 6 MPE, all standard also meet NIST Class F Tolerance requirements.

The following weights were adjusted:     None

Calibration Performed at:  
163 Admin Drive  
Randolph Center, VT 05061

Additional documentation material available on request.

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Scott Dolan/Vermont Agency of Agriculture  
Consumer Protection Section/Metrologist  
Weights & Measures Specialist

End of Report