

CERTIFICATE OF CALIBRATION

ISSUED BY EDINBURGH INSTRUMENTS LTD. t/a PRECISA UK

DATE OF ISSUE: 19/01/2023

Certificate Number: CC/62213



0428

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APPROVED SIGNATORY

Allan Mackenzie

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Craig Simmonds

Client: GJC Instruments Ltd

North West House
Chester Road
Tattenhall
Cheshire
CH3 9AH

Date of Calibration: 12/01/2023

Engineer: Craig Simmonds

The Calibration was carried out at the above address.

This certificate relates to the NAWI listed below only. If the NAWI is moved the results may not apply.

Description and Identification:

A single range electro-magnetic force compensation weighing machine.

Pan Type	Square
System	Electronic
Manufacturer	Precisa
Model	XT 920M
Serial Number	W47044
Capacity	920 g
Digital Interval	0.001 g
Location	Laboratory
Customer ID	N/A

Environmental Conditions:

Test Start Temperature 18.5°C

Test End Temperature 21°C

Weather Station: WSP/0111/19

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units of and/or to units of measurements realised at the National Physical Laboratory or other recognised metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

✓ checked
20/1/23
A day
GJC

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Measurements:

Prior to the test commencing the machine had been allowed to stabilise for a period of one hour. The weighing machine has been calibrated, after activation of the internal/external calibration cycle (where fitted), by applying weights to the load receptor using test weights from the following calibrated sets:

ID	Class	Calibration Date	Calibrated By	Cert No
4034	F1	26 July 2022 ✓	Hertfordshire Metrology Laboratory	10140
3978	F1	26 July 2022 ✓	Hertfordshire Metrology Laboratory	10139

Mass values are reported, not in terms of true mass, but on weight-in-air basis where the mass is that of a hypothetical weight of density 8000 kgm^{-3} , which it balances in air of density 1.2 kgm^{-3} at a temperature of 20 C .

Test A involved placing standard weights on the centre of the load receptor in ascending order

Test B involved placing the same weight, firstly in the centre of the load receptor, then at each mid-sideral point. ✓

Test C involved placing the same weight on the load receptor 5 or 10 times, removing it between each application.

Test D involved placing a calibrated weight centrally on the load receptor immediately after the internally operated calibration cycle had completed.

In Test A, the value given in the first column (Load Applied) is the actual mass applied to the load receptor as stated on the above calibration certificate, rounded to 1 decimal place greater than the resolution of the machine under test.

The mass given in the second column (Indicated Value) is the mass indicated by the indicator on the machine under test.

The Uncertainties of Measurement is shown at the end of the Table

✓ Checked
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TABLE

Test A - Linearity

Load Applied	As Found	Indicated Value
g	g	g
0.0000	0.000	0.000
0.5000	0.500	0.500
2.0000		1.999
5.0000	4.998	4.999
10.0000		9.999
20.0000	19.999	19.999
50.0000		49.999
100.0000		100.000
200.0000	199.999	200.000
500.0000		500.000
920.0000	919.999	920.001



A single range electro-magnetic force compensation weighing machine.

Capacity: 920g

Serial No: W47044 / N/A

Rev 84

Precisa UK is a division of
Edinburgh Instruments Ltd

PLU0117

Checked
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Test B - Eccentricity

Nominal Load

Applied:	Indicated Value
310g	g
Centre (E)	310.001
Rear Left (A)	310.002
Rear Right (B)	310.004
Front Left (C)	309.997
Front Right (D)	309.996
Centre (E)	310.001



Test C- Repeatability

Nominal Load Applied: 800.000g

Zero Point	Indicated Value
g	g
0.000	800.003
0.000	800.000
0.000	800.002
0.000	800.001
0.000	800.002
0.000	799.999
0.000	799.999
0.000	800.000
-0.001	800.000
0.000	799.999



Test D - Internal Calibration Weight

	Ind Value
500.000	500.000

Standard Deviation 0.001433721



The Uncertainty of Measurement for all tests is ± 0.0039 g

A single range electro-magnetic force compensation weighing machine.

Capacity: 920g
Serial No.: W47044 / N/A

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

✓ checked
20/1/23
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