



Australian Government
**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4C/292

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

Ohaus Model Adventurer AX124AU Weighing Instrument

submitted by Ohaus Corporation
Unit 3, 220 Turner Street
Port Melbourne VIC 3207

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 76, *Non-automatic weighing instruments, Parts 1 and 2*, dated July 2004.

This approval becomes subject to review on 1/06/20, and then every 5 years thereafter.

DOCUMENT HISTORY

| Rev | Reason/Details | Date |
|------------|--|-------------|
| 0 | Pattern & variants 1 & 2 approved – certificate issued | 27/05/15 |
| | | |

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/292' and only by persons authorised by the submitter.

It is the submitter's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0B.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.



Dr A Rawlinson

TECHNICAL SCHEDULE No 6/4C/292

1. Description of Pattern

approved on 27/05/15

The Ohaus model Adventurer AX124AU special accuracy class $\text{\textcircled{D}}$ weighing instrument (Figure 1 and Table 1) of 120 g maximum capacity with a verification scale interval of 0.001 g.

The instruments are fitted with differentiated scale interval (d) of 0.0001 g.

The instruments have a LCD display for display of the weight value.

Instruments are approved for use over a temperature range of +10°C to +30°C, and are so marked.

Instruments are not for trading direct with the public, and are so marked, with the exception of instruments used for the weighing of precious metals and precious stones provided that instruments are located such that the instrument and its display are clearly visible to both parties to the transaction.

Some instruments may have a windshield provided over the load receptor.

Power is supplied by a PHIHONG Switching Power Supply model PSM11R-120 AC/DC mains adaptor (12 V DC, 0.84 A); the submitter should be consulted regarding the acceptability of alternatives.

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices.

1.1 Zero

A zero-tracking device may be fitted.

The initial zero-setting device has a nominal range of not more than 20% of the maximum capacity of the instrument.

The instrument has a semi-automatic zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument.

1.2 Tare

A semi-automatic subtractive tare device of up to the maximum tare capacity of the instrument may be fitted.

A separate display of tare values is provided.

1.3 Alternative Units

Instruments may be operated in a mode using metric carat units (1 metric carat = 0.2 g), and are so marked. This may either be instead of, or in addition to operation with units of kilogram (kg) or grams (g). The symbol 'ct' indicates when the units are metric carats.

1.4 Additional Features

Instruments may be fitted with a number of additional functions including checkweighing (under, accept, over), percentage weighing (%), parts counting (pcs), dynamic (animal) weighing, density determination, display hold, totalisation, and formulation, weigh below and capacity bar.

These functions and displays are not approved for trade use.

1.5 Internal Self-Calibration System

Instruments are fitted with an internal 'self-calibration' system. This comprises an internal calibration mass that may be applied to the instrument (in an automatic adjustment cycle), or manually by pressing a key, or a part of switch-on sequence, or according to predetermined criteria (time period and/ or temperature variation).

The instrument has facilities for advising an operator when this 'calibration' cycle should be utilised.

1.6 Display Check

A display check is initiated when the instruments are switched on.

1.7 Levelling

The instrument is provided with adjustable feet and adjacent to the level indicator is a notice advising that the instrument must be level when in use.

1.8 Interfaces

Instruments may be fitted with interfaces for the connection of auxiliary and/or peripheral devices. Any interfaces shall comply with clause 5.3.6 of document NMI R76 (the basic intent of which is that it shall not be possible to alter weighing results via the interfaces).

Any measurement data output from the instrument or its interfaces shall only be used for trade in compliance with Supplementary Certificate No S1/0/B (in particular in regard to the data and its format).

Instruments may be fitted with RS-232 and USB serial data interfaces.

1.9 Software

The software is designated Version 1.xx, where 'xx' refers to the identification of non-legally relevant software and represents a number between 00 and 99.

The software version and number can be seen in the switch-on display sequence (when the power is first applied to the instrument).

1.10 Verification Provision

Provision is made for the application of a verification mark.

1.11 Sealing Provision

Sealing of the calibration adjustments of special accuracy class ① instruments is not required. However there is provision for the calibration to be sealed by setting a security switch to a LOCK location and Approval Mode in the Balance Setup menu to ON, and then preventing unlocking by means of a destructible label placed over the security switch or lead and wire type seals using the holes in the security switch and the instrument housing as shown in Figure 2b.

Instruments are provided with an integral 'self-calibration system'; sealing of the instrument does not prevent operation of this system, however the system uses data regarding the value of internal mass, and alteration of that data is prevented.

1.12 Descriptive Markings and Notices

The instrument model number is shown on the instrument nameplate.

Instruments carry the following markings:

| | |
|--|---------------------------|
| Manufacturer's mark, or name written in full | Ohaus Corporation |
| Indication of accuracy class | Ⓛ |
| Pattern approval number for the instrument | NMI 6/4C/292 |
| Maximum capacity | <i>Max</i> g (ct) # |
| Minimum capacity | <i>Min</i> g (ct) # |
| Verification scale interval | <i>e</i> = g (ct) # |
| Actual scale interval | <i>d</i> = g # |
| Serial number of the instrument | |
| Special temperature limits | +10°C to +30°C |

These markings are also shown near the display of the result if they are not already located there.

In addition, instruments shall carry a notice stating NOT FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

2. Description of Variant 1 approved on 27/05/15

Certain other capacities of the Ohaus Adventurer AX series of class Ⓛ instruments as listed in Table 1 below (the pattern is shown in **bold**).

TABLE 1

| Model | Maximum Capacity (<i>Max</i>) | Minimum Capacity (<i>Min</i>) | Verification Scale Interval (<i>e</i>) | Differential Scale Interval (<i>d</i>) |
|----------------|------------------------------------|------------------------------------|---|---|
| AX124AU | 120 g (600 ct) | 0.01 g (0.5 ct) | 0.001 g (0.005 ct) | 0.0001 g |
| AX224AU | 220 g (1100 ct) | 0.01 g (0.5 ct) | 0.001 g (0.005 ct) | 0.0001 g |
| AX324AU | 320g (1600 ct) | 0.01 g (0.5 ct) | 0.001 g (0.005 ct) | 0.0001 g |

3. Description of Variant 2 approved on 27/05/15

Certain other capacities of the Ohaus Adventurer AX series of class Ⓛ instruments as listed in Table 2 below.

Note:

Use of units other than grams (g) or (kg) is not approved for trade use.

Instruments shall be sealed as indicated in clause **1.11 Sealing Provision**.

TABLE 2

| Model | Maximum Capacity (<i>Max</i>) | Minimum Capacity (<i>Min</i>) | Verification Scale Interval (<i>e</i>) | Differential Scale Interval (<i>d</i>) |
|----------|------------------------------------|------------------------------------|---|---|
| AX223AU | 220 g | 0.02 g | 0.01 g | 0.001 g |
| AX423AU | 420 g | 0.02 g | 0.01 g | 0.001 g |
| AX523AU | 520 g | 0.02 g | 0.01 g | 0.001 g |
| AX1502AU | 1500 g | 0.5 g | 0.1 g | 0.01 g |
| AX2202AU | 2200 g | 0.5 g | 0.1 g | 0.01 g |
| AX4202AU | 4200 g | 0.5 g | 0.1 g | 0.01 g |
| AX5202AU | 5200 g | 0.5 g | 0.1 g | 0.01 g |
| AX8201AU | 8200 g | 5 g | 1 g | 0.1 g |

TEST PROCEDURE No 6/4C/292

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

The instrument shall not be adjusted to anything other than as close as practical to zero error, even when these values are within the maximum permissible errors.

Maximum Permissible Errors

The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

FIGURE 6/4C/292 – 1

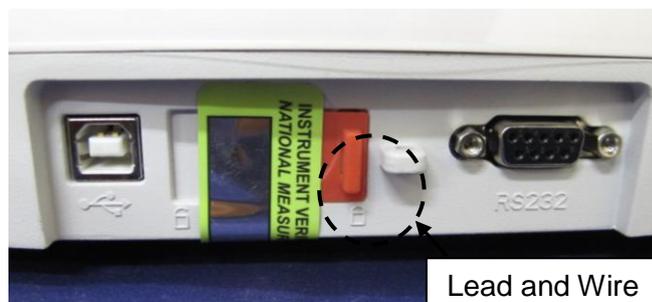


Typical Ohaus Adventurer AX Series Weighing Instruments

FIGURE 6/4C/292 – 2



(a) Security Switch in the Unlocked Position



(b) Showing Typical Sealing

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