



Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4D/378

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.

Ishida Model UNI-3 L2EV Weighing Instrument

submitted by Heat and Control Pty Ltd
407 Creek Road
Mt Gravatt QLD 4122

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 1/04/20, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 8 approved – certificate issued	9/03/15

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/378' 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.

Special Conditions of Approval:

Certain aspects of this instrument (in particular label and ticket formats) are able to be configured by the user. Whilst NMI believes that acceptable label and ticket formats can be achieved for typical basic sales modes, it is also possible for the instrument to be configured to produce unacceptable formats, and use of some formats may be inappropriate for different sales modes. It is the responsibility of the user to ensure that acceptable and appropriate formats are used in any particular situation.

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

A handwritten signature in black ink, appearing to be 'Dr A Rawlinson', with a horizontal line underneath.

Dr A Rawlinson

TECHNICAL SCHEDULE No 6/4D/378

1. Description of Pattern

approved on 9/03/15

An Ishida model UNI-3 L2EV class Ⅲ non-automatic self-indicating price-computing multi-interval weighing instrument (Figure 1 and Table 1) with a verification scale interval (e_1) of 0.002 kg up to 6 kg and a verification scale interval (e_2) of 0.005 kg from 6 kg up to the maximum capacity of 15 kg.

The instrument has a column-mounted LCD screen display and keyboard for the operator. An LCD screen display is provided for the customer and is also mounted on the column. Both displays are used for the presentation of tare, weight, unit price and price information, zero, net indications and functions relating to product look up (PLU) items.

Instruments are fitted with an integral printer, for printing of tickets or labels.

Instruments display unit price to \$999.99/kg, total price to \$9999.99, and have a product look up (PLU) facility.

Instruments are approved for use over a temperature range of -5°C to +40°C, and are so marked.

The instrument operates from mains AC power (240 V AC, 50 Hz).

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 of the pattern 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 and/or non-automatic keyboard-entered pre-set subtractive tare device, each of up to 5.998 kg, may be fitted.

Pre-set tare values may be associated with product look up (PLU) items.

A separate display of tare values is provided.

1.3 Networking

A number of instruments may be connected in a network to share common PLU data, for totalisation across instruments, and to accumulate and retrieve management information.

In addition, the instrument may be interfaced with a computer for the collection of management data, the downloading of PLU data.

Note: The weighing and price computing functions of each weighing instrument in the network are independent, and the removal, repair or replacement of a particular weighing instrument does not necessitate re-verification of any other weighing instrument in the network.

1.4 Display Check

A display check is initiated whenever power is applied.

1.5 Levelling

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

1.6 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 Ethernet, USB and cash drawer interfaces.

1.7 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Ishida Co. Ltd
Mark or name of manufacturer's agent	Heat & Control Pty Ltd
Indication of accuracy class	Ⓜ
Pattern approval number for the instrument	NMI 6/4D/378
Maximum capacity	<i>Max</i> g or kg #1
Minimum capacity	<i>Min</i> g or kg #1
Verification scale interval	<i>e</i> = g or kg #1
Maximum subtractive tare	<i>T</i> = - kg #2
Serial number of the instrument
Special temperature limits	-5°C to +40°C

#1 These markings are shown near the display of the result.

#2 This marking is required if *T* is not equal to *Max*.

1.8 Software

The legally relevant software is identified by scale rom version number B-0726 and updater rom version number B-0727.

The instructions for accessing the legally relevant version are as follows (starting from the normal weighing mode):

- Key in 4000 and press the 'Mode' key.
- Press the '↓' key to display 'C05' and then the 'Enter' key.
- Press the '↓' key to display 'C05-06'. The scale rom version number is displayed.
- Press the '↓' key to display 'C05-07'. The updater rom version number is displayed.
- Press the 'Mode' key to return to the normal weighing mode.

1.9 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of destructible adhesive labels placed over an access hole to the calibration saving switch as shown in Figure 2a and the housing securing screws on the cover plate underneath the instrument as shown in Figure 2b.

1.10 Verification Provision

Provision is made for the application of a verification mark.

2. Description of Variant 1

approved on 9/03/15

Certain other capacities of the Ishida model UNI-3 L2EV instruments as listed in Table 1 below (the pattern is shown in **bold**).

TABLE 1

Maximum Capacity (<i>Max</i>)	Verification Scale Interval (<i>e</i>)	Maximum Subtractive Tare Capacity (<i>T</i> = - ...)	Load Cells Used
6/15 kg	0.002/0.005 kg	5.998 kg	Minebea C2G1- 25K 25 kg
15/30 kg	0.005/0.01 kg	14.995 kg	Minebea C2G1- 50K 50 kg

3. Description of Variant 2

approved on 9/03/15

The Ishida model UNI-3 L2EV single interval instrument in certain capacities as listed in Table 2 below.

A semi-automatic subtractive tare device and/or a keyboard-entered pre-set subtractive tare device, each of up to the maximum tare capacity shown in the Table 2, may be fitted.

TABLE 2

Maximum Capacity (<i>Max</i>)	Verification Scale Interval (<i>e</i>)	Maximum Subtractive Tare Capacity (<i>T</i> = - ...)	Load Cells Used
15 kg	0.005 kg	5.995 kg	Minebea C2G1- 25K 25 kg
30 kg	0.01 kg	14.99 kg	Minebea C2G1- 50K 50 kg

4. Description of Variant 3 **approved on 9/03/15**

An Ishida model UNI-3 L2 ('pole' type) (Figure 3), which is similar to the pattern and variants 1 & 2, but has the customer display mounted on a column, the display and keyboard for the operator attached to the instrument.

5. Description of Variant 4 **approved on 9/03/15**

An Ishida model UNI-3 L2 ('bench' type) (Figure 4), which is similar to the pattern and variant 1 & 2, but having the customer display integrated within the instrument housing, the display and keyboard for the operator attached to the instrument.

6. Description of Variant 5 **approved on 9/03/15**

An Ishida model UNI-3 L1 ('pole' type) (Figure 5), which is similar to variant 3, but having single line screen displays.

7. Description of Variant 6 **approved on 9/03/15**

An Ishida model UNI-3 L1 ('bench' type) (Figure 6), which is similar to variant 4, but having single line screen displays.

8. Description of Variant 7 **approved on 9/03/15**

An Ishida model UNI-3 L2H (Figure 7) which is a 'hanging' style version of the instrument, having a suspended load receptor in certain capacities as listed in Tables 1 & 2.

The instrument is a single or multi-interval instrument with verification scale intervals as listed in Tables 1 & 2.

The instrument is firmly mounted to a mounting rod and in a fixed position.

Provision is made for the calibration adjustments to be sealed by means of a destructible adhesive label placed over the cover plate and over an access hole to the calibration saving switch under the cover plate as shown in Figure 7.

9. Description of Variant 8 **approved on 9/03/15**

The pattern and variants may be connected in a network with compatible approved Ishida instruments, to share common PLU data, for totalisation across instruments ('floating system'), and to accumulate and retrieve management information.

In addition, the network may be interfaced with a computer for the collection of management data, or the downloading of PLU data.

Note 1: The weighing and price-computing functions of each weighing instrument in the network are independent, and the removal, repair or replacement of a particular weighing instrument does not necessitate reverification of any other weighing instrument in the network.

Note 2: The use of a totalisation across instruments ('floating system') arrangement in this variant is not approved for use in self-service arrangement.

TEST PROCEDURE No 6/4D/378

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

Maximum Permissible Errors

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

For multi-interval instruments with verification scale intervals of $e_1, e_2 \dots$, apply e_1 for zero adjustment, and maximum permissible errors apply $e_1, e_2 \dots$, as applicable for the load.

Tests

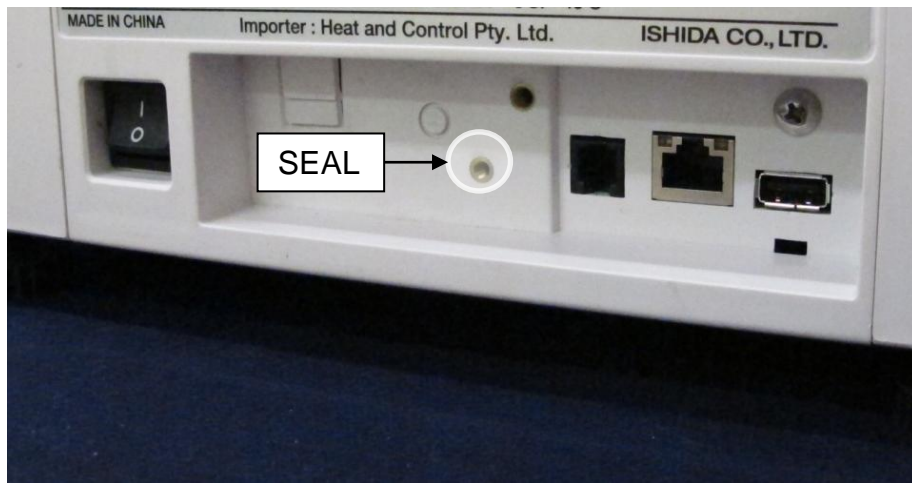
Ensure that instruments are only being used within the special temperature limits stated elsewhere in this Technical Schedule.

FIGURE 6/4D/378 – 1

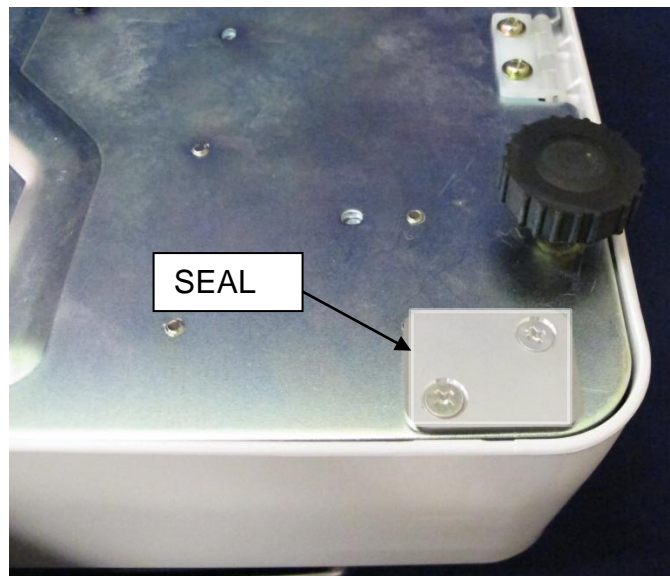


Ishida Model UNI-3 L2EV Weighing Instrument (Pattern)

FIGURE 6/4D/378 – 2



(a) Typical Calibration Saving Switch Sealing Method – Models UNI-3 L1/L2



(b) Typical Instrument Housing Sealing Arrangements – Models UNI-3 L1/L2

FIGURE 6/4D/378 – 3



Ishida Model UNI-3 L2 ('Pole' Type) Weighing Instrument (Variant 3)

FIGURE 6/4D/378 – 4



Ishida Model UNI-3 L2 ('Bench' Type) Weighing Instrument (Variant 4)

FIGURE 6/4D/378 – 5



Ishida Model UNI-3 L1 ('Pole' Type) Weighing Instrument (Variant 5)

FIGURE 6/4D/378 – 6



Ishida Model UNI-3 L1 ('Bench' Type) Weighing Instrument (Variant 6)

FIGURE 6/4D/378 – 7



Ishida Model UNI-3 L2H Weighing Instrument Model UNI-3 L2H (Variant 7)
Incl. Typical Sealing

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