



Australian Government
Department of Industry,
Innovation and Science

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4D/372

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-9 EV 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 1/10/19, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 7 approved – interim certificate issued	26/06/14
1	Variants 8 to 10 approved – certificate issued (pattern & variants 1 to 10)	24/09/14
2	Variants 11 & 12 approved – interim certificate issued	12/09/16
3	Variants 11 & 12 approved – certificate issued	8/02/17
4	Variant 11 amended (additional capacity) – certificate issued	20/09/18

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/372' 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.



Phillip Mitchell

Acting Manager
Pattern Approval, Policy and
Licensing Section

TECHNICAL SCHEDULE No 6/4D/372

1. Description of Pattern

approved on 26/06/14

An Ishida model UNI-9 EV 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 touch 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 \$9999.99/kg, total price to \$999999.99, and have a product look up (PLU) facility.

Instruments are approved for use over a temperature range of 0°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 Display Check

A display check is initiated whenever power is applied.

1.4 Levelling

The instrument is provided with adjustable feet and a level indicator visible through a window in the platter of the instrument. A notice stating 'Instrument must be level when in use', or similar shall be provided in a location clearly visible to the operator and adjacent to the level indicator.

1.5 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.

1.6 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 (RJ-45 and wireless), USB, cash drawer and SD card 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 mark for the instrument	NMI 6/4D/372
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	0°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*.

Note:

For multi-interval instruments the markings shall be as above, with the exception that the 'Maximum capacity' and 'Verification scale interval' shall be marked for both interval ranges, e.g. as follows:

Maximum capacity	<i>Max</i>/..... g or kg
Verification scale interval	<i>e</i> =/..... g or kg

1.8 Verification Provision

Provision is made for the application of a verification mark.

1.9 Sealing Provision

Provision is made for access to the 'calibration save' switch to be sealed by means of a destructible adhesive label placed over the securing screw on the cover plate underneath the load receptor as shown in (Figure 8).

2. Description of Variant 1

approved on 26/06/14

Certain other capacities of the Ishida model UNI-9 EV instruments as listed in Table 1 below (the pattern is shown in **bold**).

TABLE 1

Maximum Capacity (Max)	Verification Scale Interval (e)	Maximum Subtractive Tare Capacity (T = - ...)	Load Cells used	Working Temperature
3/6 kg	0.001/0.002 kg	2.999 kg	Ishida ULC-10L / NMB CLC-10N / Ishida CLC-10L 10 kg	0°C to +40°C
6/15 kg	0.002/0.005 kg	5.998 kg	Ishida ULC-25L / NMB CLC-25N / Ishida CLC-25L 25 kg	

3. Description of Variant 2

approved on 26/06/14

The Ishida model UNI-9 EV as single interval instruments 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 (Max)	Verification Scale Interval (e)	Maximum Subtractive Tare Capacity (T = - ...)	Load Cells used	Working Temperature
15 kg	0.005 kg	5.995 kg	Ishida ULC-25L / NMB CLC-25N / Ishida CLC-25L 25 kg	0°C to +40°C

4. Description of Variant 3 **approved on 26/06/14**

An Ishida model UNI-9 P (Figure 2), which is similar to the pattern and variant 1 & 2, but has the customer display mounted on a column, with the display and keyboard for the operator attached to the instrument.

5. Description of Variant 4 **approved on 26/06/14**

An Ishida model UNI-9 B (Figure 3), which is a 'bench' style instrument similar to the pattern and variant 1 & 2, but having the customer display integrated within the instrument housing, with the display and keyboard for the operator attached to the instrument.

6. Description of Variant 5 **approved on 26/06/14**

An Ishida model UNI-9 BP (Figure 3) which is similar to variant 4 but without a customer display (available in capacities as for the pattern and variant 1 & 2).

Instruments are not approved for trading direct with the public and are so marked.

7. Description of Variant 6 **approved on 26/06/14**

An Ishida model UNI-9 SS (Figure 4) which is similar to the pattern and variant 1 & 2 without a customer display but used in a self-service arrangement which provides a product look up keyboard(s), as well as providing tare, weight, unit price and price displays. A display of tare values (which may be stored against PLU items) is also provided.

The instruments may have any capacities as listed in Table 1 and 2.

Note 1: It is not required that access to the zero setting facility be available to customers in a self-service arrangement. However access to the zero setting facility shall be available to staff of the particular store, and it is expected that measures will be in place to ensure that the zero condition of the instrument is checked regularly.

Note 2: When used in a self-service arrangement, all keys on the touch screen keyboard, other than the REZERO key, may be disabled or removed. The TARE key is not functional with this arrangement. The use of totalisation across instruments ('floating system') arrangement is not approved for use in self-service arrangement.

8. Description of Variant 7 **approved on 26/06/14**

An Ishida model UNI-9 XL (Figure 5a & 5b) which is similar to the variant 4 without a customer display and fitted with an external basework (the integral basework of variant 4 is either not provided or is disabled).

Instruments are not approved for trading direct with the public and are so marked.

Provision is made for the calibration adjustments to be sealed by means of destructible adhesive labels placed over the 'calibration save' switch access, and opposite sides of a join in the remote basework casing or by use of a lead and wire or similar type seal (Figure 10a & 10b).

TABLE 3

Maximum Capacity (Max)	Verification Scale Interval (e)	Maximum Subtractive Tare Capacity (T = - ...)	Load Cells used	Working Temperature
6 kg	0.002 kg	2.998 kg	Ishida ULC-10L	0°C to +40°C
15 kg	0.005 kg	5.995 kg	Ishida ULC-25L / NMB CLC-25N / Ishida CLC-25L 25 kg	
30 kg	0.005 kg	29.995 kg	Ishida ZLC-60L 60 kg	0°C to +35°C

9. Description of Variant 8

approved on 24/09/14

An Ishida model UNI-9 H (Figure 6) which is a 'hanging' style version of the instrument, having a suspended load receptor in any capacities as listed in Table 1 and 2.

The instrument is firmly mounted to a mounting rod and is provided with a level indicator; adjacent to the level indicator is a notice advising that the instrument must be level when in use.

Provision is made for the calibration adjustments to be sealed by means of a destructible adhesive label placed over two securing screws on top of the instrument as shown in Figure 9, to prevent access to the 'calibration save' switch.

10. Description of Variant 9

approved on 24/09/14

The pattern and variant 1 to 7 is fitted with an external slim basework (Figure 7a to 7c) when the integral basework is either disabled or removed.

TABLE 4

Maximum Capacity (Max)	Verification Scale Interval (e)	Maximum Subtractive Tare Capacity (T = - ...)	Load Cells used	Working Temperature
6 kg	0.002 kg	2.998 kg	Ishida ULC-10L	0 °C to +40 °C
15 kg	0.005 kg	5.995 kg	Ishida ULC-25L	

11. Description of Variant 10

approved on 24/09/14

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 re-verification 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.

12. Description of Variant 11

**approved on 12/09/16
amended on 20/09/18**

An Ishida model IP-AI weighing instrument (Figure 11) which is designed as a weigh/labelling instrument for pre-packaging purposes. The instrument is not approved for trading direct with the public and a notice indicating this is fixed to the display module. This variant has certain maximum capacities in multi-interval as listed in Table 5.

Instruments are fitted with an LCD touchscreen on a unit containing the instrument electronics, keyboard and an integral printer.

The load receptor is 254 mm × 400 mm.

Instruments are provided with a level indicator (bubble) visible through a window in the platter of the instrument.

Instruments are approved for use over a temperature range of 0°C to +40°C, and are so marked.

The instrument operates from mains AC power (200-240 V AC, 50/60 Hz).

12.1 Sealing Provision

Provision is made for the calibration adjustments to be sealed by use of lead & wire type or destructible adhesive labels to restrict access to the calibration saving switch which is located below a cover beneath the platter (Figure 12).

12.2 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 an Ethernet and four USB interfaces.

12.3 Software

The legally relevant software is identified by Scale Software version number J0776x, Scale Driver version number J0834 and Updater version number J0835, where 'x' refers to the identification of non-legally relevant software.

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


- o Press the  button on the screen and the MENU screen is displayed.
- Press the 'ADJUST' button and then the 'FIRMWARE DETAILS' button.
The software version numbers are displayed.

TABLE 5

Maximum Capacity (<i>Max</i>)	Verification Scale Interval (<i>e</i>)	Maximum Subtractive Tare Capacity (<i>T</i> = - ...)	Load Cells used
3/6 kg	0.001/0.002 kg	2.999 kg	NMB CLC-10N / Ishida CLC-10L 10 kg
6/15 kg	0.002/0.005 kg	5.998 kg	NMB CLC-25N / Ishida CLC-25L 25 kg
15/30 kg	0.005/0.01 kg	14.995 kg	NMB CLC-50N / Ishida CLC-50L 50 kg

13. Description of Variant 12

approved on 12/09/16

An Ishida model WM-AI (Figures 13-15) weighing instrument which is similar to the variant 7 but is designed as a weigh/wrap/labeller for pre-package operation, i.e. it is not approved for trading direct with the public and a notice indicating this is fixed to the display module.

Instruments may be fitted with up to three label printers.

Instruments are non-automatic weighing instruments (they require the presence of an operator), and are approved for static weighing only.

Note that the maximum weight of packages that can be wrapped may be less than the maximum weighing capacity.

Provision is made for the calibration adjustments to be sealed by use of destructible adhesive labels to restrict access to the calibration saving switch which is located below a cover beneath the platter (Figure 16).

TEST PROCEDURE No 6/4D/372

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/372 – 1



Ishida Model UNI-9 EV Weighing Instrument (pattern)

FIGURE 6/4D/372 – 2



Ishida Model UNI-9 P Weighing Instrument (variant 2)

FIGURE 6/4D/372 – 3



Ishida Model UNI-9 B / BP Weighing Instrument (variants 4 & 5)

FIGURE 6/4D/372 – 4



Ishida Model UNI-9 SS Weighing Instrument (variant 6)

FIGURE 6/4D/372 – 5



(a) Ishida Model UNI-9 XL Weighing Instrument Using
Model S3-Z60 30 kg Remote Basework (variant 7)



(b)

Ishida Model UNI-9 XL Weighing Instrument Using
6 kg and 15 kg Remote Basework (variant 7)

FIGURE 6/4D/372 – 6



Ishida Model UNI-9 H Weighing Instrument (variant 8)

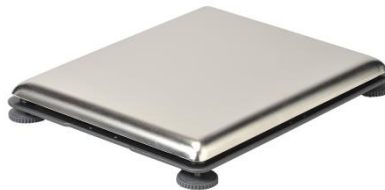
FIGURE 6/4D/372 – 7



(a) Ishida Model UNI-9 Using a Slim Remote Basework (variant 9)

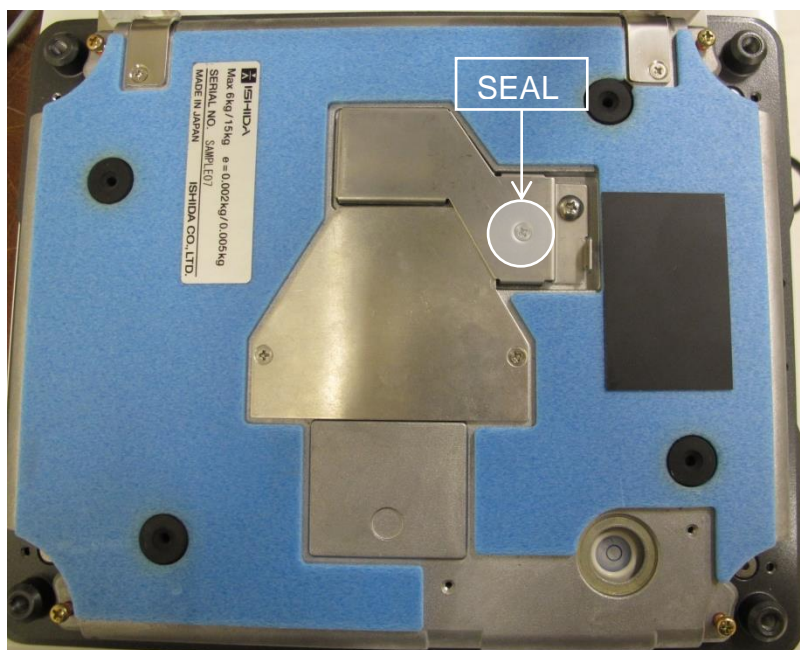


(b) Ishida Slim Remote Basework (Large) (variant 9)



(c) Ishida Slim Remote Basework (Small) (variant 9)

FIGURE 6/4D/372 – 8



Typical Sealing Method (pattern & variants 1 to 6)

FIGURE 6/4D/372 – 9

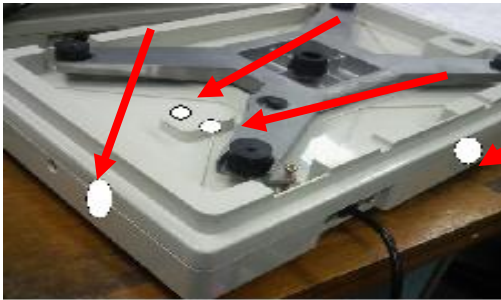


Typical Sealing Arrangements – Model UNI-9 H (variant 7)

FIGURE 6/4D/372 – 10



(a) Sealing Arrangements – Model S3-Z60 30 kg Remote Basework (variant 7)



Securing of the 'calibration save' switch and platter opening for 15 kg XL remote basework.



Alternative securing of the 'calibration save' switch and platter opening for 15 kg XL remote basework.



Securing of the 'calibration save' switch and platter opening for 6kg XL remote basework.

(b) Sealing Arrangements – 6 and 15 kg Remote Baseworks (variant 7)

Typical Sealing Arrangements – Model UNI-9 XL (variant 7)

FIGURE 6/4D/372 – 11



Ishida Model IP-AI (variant 11)

FIGURE 6/4D/372 – 12



Securing of the 'calibration save' switch and platter opening for 15 kg remote basework



Alternative securing of the 'calibration save' switch and platter opening for 15 kg remote basework



Securing of the 'calibration save' switch and platter opening for 6kg remote basework

Sealing Arrangements - 6 kg and 15 kg Remote Baseworks (variant 11)

Typical Sealing Arrangements - Model IP-AI (variant 11)

FIGURE 6/4D/372 – 13



Ishida Model WM-AI (variant 12)

FIGURE 6/4D/372 – 14



Ishida Model WM-AI – Manual Label Application (variant 12)

FIGURE 6/4D/372 – 15



Ishida Model WM-AI – Fitted With In-feed Conveyor (variant 12)

FIGURE 6/4D/372 – 16



Securing of the 'calibration save'
switch and platter opening for 6kg and
15kg

Sealing Arrangements – Model WM-AI – 6 kg and 15 kg (variant 12)

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