Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval
NMI 6/4D/404

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 IP-AI 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 October 2015.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 4 approved – certificate issued	02/06/26

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/404' and only by persons authorised by the submittor.

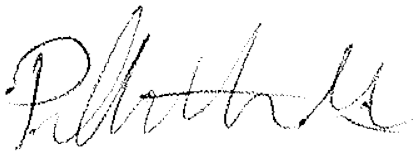
It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this 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 NMI General Supplementary Certificate of Approval 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
A/g Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No 6/4D/404

1. Description of Pattern approved on 02/06/26

An Ishida model IP-AI 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, and with a minimum capacity of 0.02 kg.

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

Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC' (or similar wording) unless the maximum capacity of the instrument is greater than 100 kg (i.e. as may be the case for variant 2).

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

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

Note: Ishida model IP-AI instruments have been previously approved in NMI 6/4D/372 (variant 11).

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.

The instrument is to be used in a level condition as indicated by the level indicator.

1.5 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 R 76 (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 NMI Supplementary Certificate No S1/0/B (in particular in regard to the data and its format).

Instruments may be fitted with Ethernet and USB interfaces.

1.6 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	(III)	
Pattern approval mark for the instrument	NMI 6/4D/404	
Maximum capacity	*Max* ..... g or kg	#1
Minimum capacity	*Min* ..... g or kg	#1
Verification scale interval	*e* = ... g or kg	#1
Maximum subtractive tare	*T* = − ..... 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*.

In addition, instruments shall carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording (see 1. *Description of Pattern* above).

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	*Max* ...../..... g or kg
Verification scale interval	*e* = .../..... g or kg

1.7 Verification Provision

Provision is made for the application of a verification mark.

1.8 Sealing Provision

Provision is made for the calibration adjustments to be sealed by use of destructible adhesive labels to restrict access to the calibration saving switch and to prevent housing opening as shown in Figure 7.

1.9 Software

The legally relevant software is identified by Scale Software version number J0776x, Scale Driver version number J0834x and Updater version number J0835x, 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):

- 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**.**

2. Description of Variant 1 approved on 02/06/26

Certain other multi-interval capacities of the Ishida model IP-AI instruments as listed in Table 1 below (the pattern is shown in **bold**).

TABLE 1

Maximum Capacity *(Max$_1$/ Max$_2$)*	Minimum Capacity *(Min)*	Verification Scale Interval *(e_1 / e_2)*	Maximum Subtractive Tare Capacity (*T* = − …)	Load Cells used
3/6 kg	0.02 kg	0.001/0.002 kg	2.999 kg	NMB CLC-10N / Ishida CLC-10L 10 kg
6/15 kg	**0.04 kg**	**0.002/0.005 kg**	**5.998 kg**	**NMB CLC-25N / Ishida CLC-25L 25 kg**

3. Description of Variant 2 approved on 02/06/26

The Ishida model IP-AI instruments with a Type S load receptor (Figure 2) as single interval instruments in certain capacities as listed in Table 2 below.

Instruments are approved for use over a temperature range of 0 °C to +35 °C, and are so marked.

TABLE 2

Maximum Capacity (*Max*)	Minimum Capacity *(Min)*	Verification Scale Interval (*e*)	Maximum Subtractive Tare Capacity (*T* = − …)	Load Cells used
30 kg	0.1 kg	0.005 kg	29.995 kg	Ishida ZLC-60L 60 kg
60 kg	0.2 kg	0.01 kg	59.99 kg	Ishida ZLC-150L 150 kg
120 kg	0.4 kg	0.02 kg	119.98 kg	Ishida ZLC-300L 300 kg

3.1 Sealing Provision

Provision is made for the calibration adjustments to be sealed by use of destructible adhesive labels to restrict access to the calibration saving switch and to prevent housing opening (Figure 9).

4. Description of Variant 3 approved on 02/06/26

An Ishida model WM-AI (Figures 3 to 5) weighing instrument which is similar to the pattern and variant 1 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.

Note: Ishida model WM-AI instruments have been previously approved in NMI 6/4D/372 (variant 12).

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.

Instruments are approved for use over a temperature range of +5 °C to +35 °C, and are so marked.

4.1 Levelling

The instrument is provided with adjustable feet and a level indicator. The level indicator (bubble) is located on the basework underneath the weighing platter. A notice indicating the location of the level indicator (e.g. “Level indicator provided under platter” or similar) shall be provided in a location clearly visible to the operator.

The instrument is to be used in a level condition as indicated by the level indicator.

4.2 Sealing Provision

Provision is made for the calibration adjustments to be sealed by use of destructible adhesive labels to restrict access to the calibration saving switch and to prevent housing opening (Figure 8).

5. Description of Variant 4 approved on 02/06/26

An Ishida model WM-MICRO (Figure 6) weighing instrument which is similar to the pattern but is designed as a benchtop 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 are approved for use over a temperature range of 0 °C to +40 °C or +5 °C to +35 °C, and are so marked.

5.1 Levelling

The instrument is provided with adjustable feet and a level indicator. The level indicator (bubble) is located on the basework underneath the weighing platter. A notice indicating the location of the level indicator (e.g. ‘Level indicator provided under weighing platter’ or similar) shall be provided in a location clearly visible to the operator.

The instrument is to be used in a level condition as indicated by the level indicator.

5.2 Sealing Provision

Provision is made for the calibration adjustments to be sealed by use of a destructible adhesive label to restrict access to the calibration saving switch and

use of destructible adhesive labels placed over opposite sides of a join in the basework housing or a lead and wire or similar type seal to prevent housing opening (Figure 10).

TEST PROCEDURE No 6/4D/404

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 …, apply e_1 for zero adjustment, and maximum permissible errors apply e_1, e_2 …, 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/404 – 1

Ishida Model IP-AI Weighing Instrument (Pattern)

FIGURE 6/4D/404 – 2

Ishida Type S Load Receptor (Variant 2)

FIGURE 6/4D/404 – 3

Ishida Model WM-AI Weighing Instrument (Variant 3)

FIGURE 6/4D/404 – 4

Ishida Model WM-AI – Manual Label Application (Variant 3)

FIGURE 6/4D/404 – 5

Ishida Model WM-AI – Fitted With In-feed Conveyor (Variant 3)

FIGURE 6/4D/404 – 6

Ishida Model WM-Micro Weighing Instrument (Variant 4)

FIGURE 6/4D/404 – 7

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

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

Sealing Arrangements - 6 kg and 15 kg Baseworks

Typical Sealing Arrangements - Models IP-AI (Pattern)

FIGURE 6/4D/404 – 8

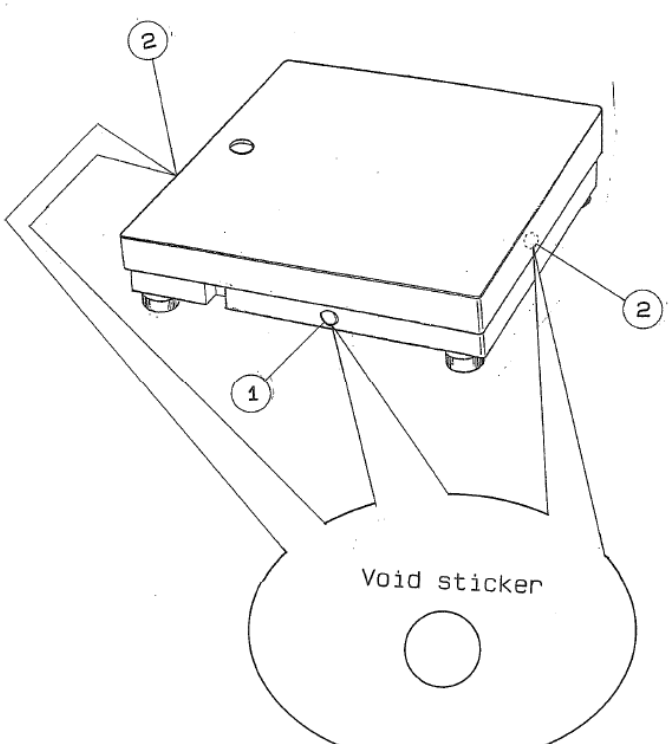
Securing of the 'calibration save' switch and housing opening for 6kg and 15 kg baseworks

Sealing Arrangements - 6 kg and 15 kg Baseworks

Typical Sealing Arrangements - Model WM-AI (Variant 3)

FIGURE 6/4D/404 – 9

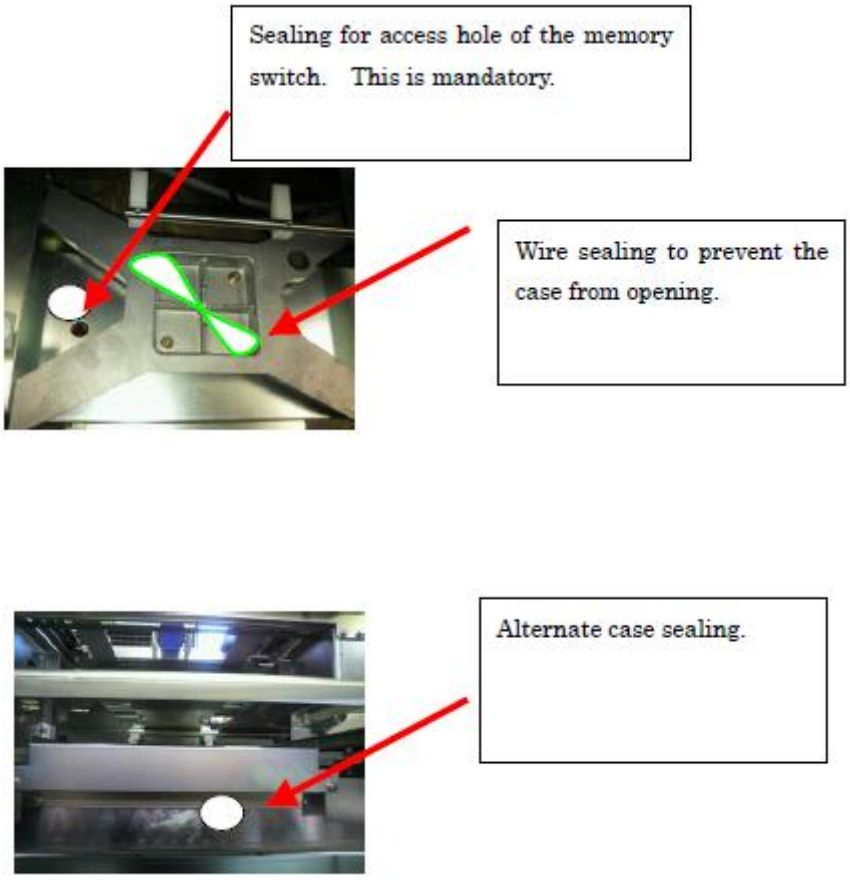
(a) Sealing Arrangements – Type S 30 kg Basework



(b) Sealing Arrangements – Type S 60 kg and 120 kg Baseworks

Typical Sealing Arrangements – Type S Load Receptors (Variant 2)

FIGURE 6/4D/404 – 10



Typical Sealing Arrangements - Model WM-MICRO

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