

Australian Government

Department of Industry, Innovation and Science

National Measurement Institute

Certificate of Approval NMI 6/4D/339

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 INS-100 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, Nonautomatic weighing instruments, Parts 1 and 2, dated July 2004.

This approval becomes subject to review on **1/07/21**, and then every 5 years thereafter.

Rev	Reason/Details	Date
0	Pattern & variants 1 & 2 approved – interim	18/06/08
	certificate issued	
1	Pattern & variants 1 to 3 approved – interim	26/09/08
	certificate issued	
2	Pattern & variants 1 to 3 reviewed & updated –	24/08/16
	certificate issued	

DOCUMENT HISTORY

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/339' 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 General Supplementary Certificates No S1/0/A or 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 6/4D/339

1. Description of Pattern

approved on 28/09/08

An Ishida model INS-100 single interval self-indicating price-computing weighing instrument (Figure 1) with a verification scale interval (*e*) of 0.002 kg and a maximum capacity of 6 kg.

The pattern has an operator keyboard and column-mounted operator and customer liquid crystal display (LCD) panels.

The maximum nominal size of the instrument platter is 297 mm × 224 mm.

Instruments have unit price to \$999.99/kg, price to \$9999.99, and may be fitted with output sockets (output interfacing capability) for the connection of peripheral and/or auxiliary devices.

Instruments are operated by the rechargeable battery or from mains AC supply which also recharges the battery.

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 and/or a keyboard-entered pre-set subtractive tare device, each of up to 3.998 kg capacity, may be fitted.

1.3 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.

1.4 Display Check

A display check is initiated whenever power is applied.

1.5 Verification Provision

Provision is made for the application of a verification mark.

1.6 Sealing Provision

The calibration parameters of the instrument can only be changed through the test mode of the software AND by pressing the memory button after changing each calibration parameter.

Provision is made for access to the calibration adjustments to be sealed by means of a sealing wire with lead over the screw that covers the memory button (located at the bottom of the instrument) and a sealing wire with lead across the screw and integral catch of the instrument cover (Figure 2).

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1.7 Descriptive Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full Name or mark of manufacturer's agent	Ishida Co Ltd Heat and Control Pty Ltd	
Indication of accuracy class		
Pattern approval mark for the instrument	NMI 6/4D/339	
Maximum capacity	<i>Max</i> g or kg #1	
Minimum capacity	<i>Min</i> g or kg #1	
Verification scale interval	e = g or kg #1	
Maximum subtractive tare	<i>T</i> = g or kg	
Serial number of the instrument		

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

2. Description of Variant 1

With a verification scale interval (*e*) of 0.005 kg and a maximum capacity of 15 kg. The maximum tare capacity is 9.995 kg.

3. Description of Variant 2

With a verification scale interval (*e*) of 0.010 kg and a maximum capacity of 30 kg. The maximum tare capacity is 19.99 kg.

3. Description of Variant 2

With the operator and customer displays within the instrument housing as shown in Figure 3.

TEST PROCEDURE

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 the *National Trade Measurement Regulations 2009*.

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FIGURE 6/4D/339-1



Ishida Model INS-100 Weighing Instrument (pattern)



FIGURE 6/4D/339-2



FIGURE 6/4D/339 - 3



With Integral Displays (Variant 3)

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