



Australian Government
Department of Industry,
Innovation and Science

National Measurement Institute

Certificate of Approval NMI 6/10B/80

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.

Nuweigh Model IH-60-20 Weighing Instrument

submitted by Newcastle Weighing Services Pty Ltd
104-114 Hannell Street
Wickham NSW 2293

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 **1/05/22**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 & 2 approved – certificate issued	3/05/07
1	Pattern & variants 1 & 2 reviewed , amended (test procedure) & updated – certificate issued	4/04/17
2	Variant 3 approved – certificate issued	05/12/17

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/10B/80' 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 Certificates No S1/0/A or No S1/0B.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

The pattern as approved herein or with substitute NMI-approved load cells and/or indicators, and in other capacities, or with different platform sizes, shall comply with General Certificate No 6B/0.

Note: New instruments manufactured under this approval shall only use load cells and/or indicators with current NMI supplementary certificates.

Special condition of approval (Variant 3): This variant is only approved for the weighbridge has Nuweigh JAC8000 "double end" shear beam load cells or same type of NMI approved load cells.

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



Mr Darryl Hines

TECHNICAL SCHEDULE No 6/10B/80

1. Description of Pattern **approved on 3/05/07**

A Nuweigh model IH-60-20 class III self-indicating non-automatic weighing instrument of 60 000 kg maximum capacity and approved for use with up to 3000 verification scale intervals.

1.1 Basework

The model IH-60-20 basework has the platform fully supported by 6 load cells.

1.2 Load Cells

Six Nuweigh model JAC9000-C3-30t-15B load cells of 30 000 kg capacity are used. The load cells are also described in the documentation of approval NMI S481.

1.3 Indicator

A Nuweigh model 320 digital indicator is used.

The indicator is also described in the approval documentation of approval NMI S433.

1.4 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Newcastle Weighing Services
Indication of accuracy class	III
Maximum capacity	<i>Max</i> kg or t *
Minimum capacity	<i>Min</i> kg or t *
Verification scale interval	<i>e</i> = kg or t *
Serial number of the instrument
Pattern approval number for the instrument	NMI 6/10B/80
Pattern approval number for the load cells	NMI S...
Pattern approval number for the indicator	NMI S...

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

1.5 Sealing Provision

Provision is made for the calibration adjustments in the indicator to be sealed as described in the approval documentation for the indicator used.

1.6 Verification Provision

Provision is made for the application of a verification mark.

2. Description of Variant 1 **approved on 3/05/07**

Nuweigh IH-xxx-yy series instruments, where xxx represents the instrument capacity (in tonnes) and yy indicates the platform length (in metres). The platform is fully supported by no less than 4 and with up to 16 approved load cells. Instruments may be in capacities of:

- 1500 up to 14 999 kg;

- 15 000 kg up to 149 999 kg; and
- 150 000 kg and above;

using approved load cells and an approved digital indicator (in accordance with General Certificate of Approval No 6B/0).

Instruments are approved for use with up to 4000 verification scale intervals (subject to the approval parameters of the load cells and indicator).

Instruments used with more than 3000 verification scale intervals shall be provided with wind protection in accordance with clause **4. Wind Effects** of General Certificate of Approval No 6B/0.

Note: The model naming may include additional characters, e.g. IH-M-xxx-yy indicates that the weighbridge is one of a number of weighbridges located adjacent to each other.

3. Description of Variant 2 **approved on 3/05/07**

Nuweigh IH-H-xxx series instruments (where xxx represents the instrument capacity) with the load receptor in the form of a hopper, tank, silo or suspended-bag (Figure 1) fully supported by approved load cells. Instruments may be in capacities of:

- 100 kg up to 1499 kg;
- 1500 kg up to 14 999 kg;
- 15 000 kg up to 149 999 kg; and
- 150 000 kg and above,

using approved load cells and an approved digital indicator (in accordance with General Certificate of Approval No 6B/0).

Instruments are approved for use with up to 4000 verification scale intervals (subject to the approval parameters of the load cells and indicator).

Instruments used with more than 3000 verification scale intervals shall be provided with wind protection in accordance with clause **4. Wind Effects** of General Certificate of Approval No 6B/0.

Instruments are either:

- (a) fitted with 3, 4 or 5 approved load cells (arranged symmetrically to ensure even loading of each cell) where the hopper is a vertical cylindrical or tank type load receptor directly supported by the load cells; or
- (b) fitted with 4 approved load cells where the hopper is a non-vertical cylindrical, or other hopper-type load receptor.

Note: Instruments with more than the number of load cells mentioned above may be acceptable if prior written agreement from the National Measurement Institute is obtained.

Suitable provision must be made for the application of suitable verified masses to the instrument as required for verification and certification purposes. It may be necessary for such masses to be incorporated within the design of the instrument.

4. Description of Variant 3 **approved on 05/12/17**

Nuweigh IH-xxx-yy (where xxx represents the instrument capacity in tonnes and yy indicates the platform length in metres) **non-level instrument** (Figure 2) is a class 3,

self-indicating non-automatic weighing instrument with up to 3000 verification scale intervals.

The instrument has similar specifications and functions as pattern and variant 1.

4.1 The Weighbridge Platform

The weighbridge platform is fully supported by no less than 4 and up to 16 load cells. The platform may be installed at a slope of up to 1.3 degree from horizontal.

4.2 The Load Cell

Nuweigh JAC8000 “double end” shear beam load cells of 30000 kg maximum capacity are used.

The load cell requirements are also described in the NMI S612 approval document.

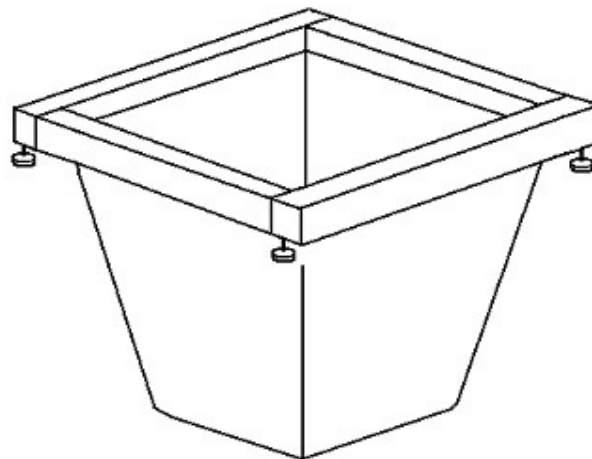
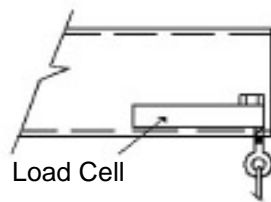
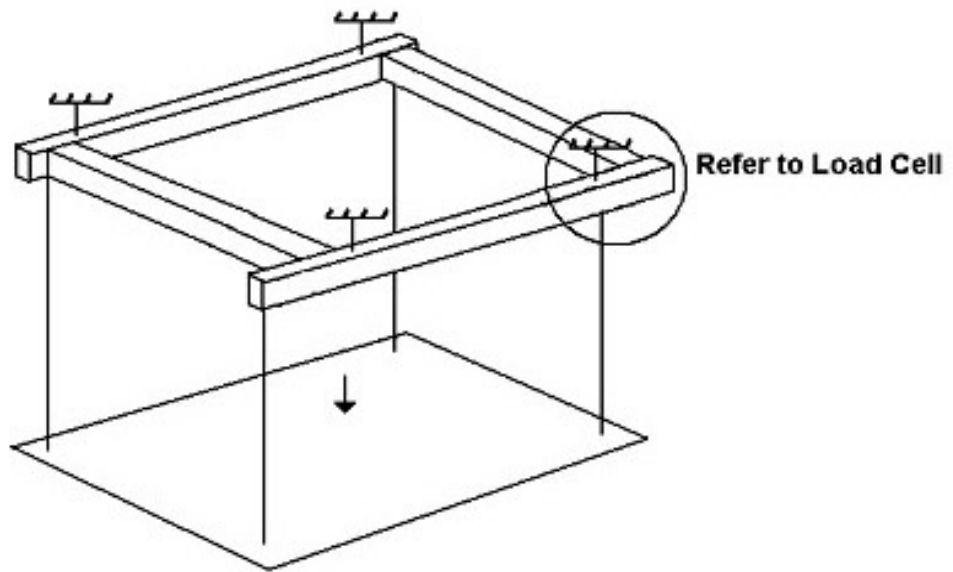
TEST PROCEDURE

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*.

FIGURE 6/10B/80 – 1



Typical Nuweigh IH-H-xxx Series Weighing Instruments

FIGURE 6/10B/80 – 2



Typical Nuweigh IH-60-20 Non-Level Weighing Instrument

~ End of Document ~