



Australian Government

**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

NMI S562

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 CBH 171 Digital Indicator

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 1/10/17, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern and variants 1 & 2 approved – certificate issued	4/09/12

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S562' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S562' in addition to the approval number of the instrument, 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 his powers under Regulation 60 of the *National Measurement Regulations 1999*.

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke at the bottom.

TECHNICAL SCHEDULE No S562

1. Description of Pattern

approved on 4/09/12

A NUWEIGH model CBH 171 digital mass indicator (Figure 1 and Table 1) which may be configured to form part of:

- A weighing instrument with a single weighing range of up to 6000 verification scale intervals; or
- A multi-interval instrument with two partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 3000 verification scale intervals per partial weighing range; or
- A multiple range weighing instrument with two weighing ranges, in which case it is approved for use with up to 3000 verification scale intervals per weighing range.

The changeover between weighing ranges is automatic.

The instrument has a liquid crystal display including provision for display of the weight value.

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices (see clause **1.7 Interfaces** below).

TABLE 1 – Specifications

Maximum number of verification scale intervals	6000/3000	(class Ⅲ)
	1000	(class Ⅳ)
Minimum sensitivity	1 μ V / scale interval	
Excitation voltage	5 V DC	
Maximum excitation current	14.28 mA	#
Fraction of maximum permissible error	$p_i = 0.5$	
Minimum load cell impedance	350 Ω	
Maximum load cell impedance	1200 Ω	
Measuring range minimum voltage	0 mV	
Measuring range maximum voltage	15 mV	
Maximum tare range	-100% Max	
Operating temperature range	-10°C to +40°C	
Load cell connection	6-wire shielded	

This approval does not include the use of the indicator as an automatic weighing instrument, unless specifically mentioned in a certificate of approval for such an instrument.

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 of up to the maximum capacity of the instrument may be fitted.

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 Linearisation Facility

Instruments are fitted with a linearisation correction facility having up to five correction points (including zero and maximum capacity points).

1.5 Power Supply

The instrument may be powered Power Supply model YS01 – 120050A 12 V DC power supply, or a 7.2 V DC Ni MH rechargeable battery pack. The submitter should be consulted regarding the acceptability of alternative power supply units.

1.6 Additional Features

The indicator also has certain additional functions, e.g. check weighing, peak hold function, animal weighting function, and accumulation function. The additional functions are not approved for trade use.

When a printer is used with the indicator, the format of printout shall comply with General Supplementary Certificates No S1/0/A or No S1/0B.

1.7 Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Nuweigh
Indication of accuracy class	Ⓜ or ⓂⓂ
Maximum capacity (for each range)	<i>Max</i> kg #1
Minimum capacity (for each range)	<i>Min</i> kg #1
Verification scale interval (for each range)	<i>e</i> = kg #1
Maximum subtractive tare	<i>T</i> = - kg #2
Serial number of the instrument
Pattern approval mark for the indicator	NMI S562
Pattern approval mark for other components #3

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

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

#3 May be located separately from the other markings.

In addition, instruments not greater than 100 kg capacity carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording

1.8 Verification Provision

Provision is made for the application of a verification mark.

1.9 Sealing Provision

The weight calibration parameter is protected when the calibration inhibit jumper on the main board is opened. To determine whether or not the weight calibration parameter is in the protected mode, switch on the power of the instrument, then press and hold the PRINT button and UNIT button at same time. Press TARE continuous until the display shows 'ProG', then press the ZERO button and the display will show 'P in'. Enter the password, then the display will show 'P1 rEF'.

If the calibration inhibit jumper is open (calibration parameters are protected), then the access to 'P1 rEF' and 'P2 Rod' parameters shall be prohibited. Otherwise, the calibration parameters are not secured and a verification mark should not be stamped.

Once the weight calibration parameter is protected, calibration adjustments may be sealed by using a destructible label over the assembly screw as shown on Figure 2.

2. Description of Variant 1

approved on 4/09/12

A NUWEIGH model CBH 181 indicator (Figure 3) which has the same functionalities and specifications as the pattern, but the enclosure is suitable for desk top applications.

3. Description of Variant 2

approved on 4/09/12

A NUWEIGH model CBH 191 indicator (Figure 4) which has the same functionalities and specifications as pattern, but the enclosure is stainless steel which is suitable for wet/wash down applications.

TEST PROCEDURE No S562

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

Maximum Permissible Errors

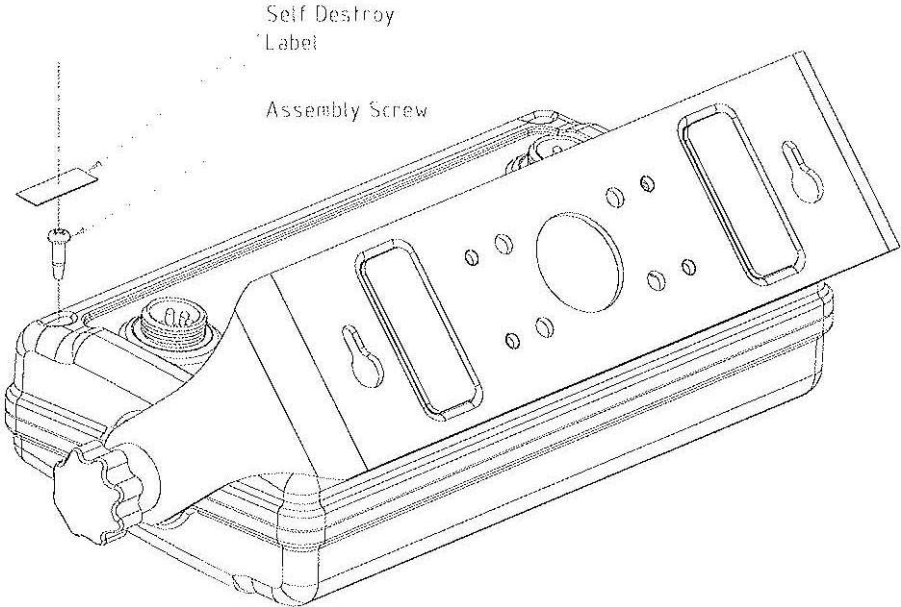
The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

FIGURE S562 – 1



NUWEIGH Model CBH 171 Digital Indicator

FIGURE S562 – 2



Showing Typical Mechanical Sealing

FIGURE S562 – 3



NUWEIGH Model CBH-181 Digital Indicator

FIGURE S562 – 4



NUWEIGH Model CBH-191 Digital Indicator