



Australian Government
**Department of Industry, Science,
Energy and Resources**

**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4C/314

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.

Wedderburn Model WS209 Weighing Instrument

submitted by W W Wedderburn Pty Ltd
101 Williamson Road
Ingleburn NSW 2565.

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 1/06/25, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 4 approved – certificate issued	22/05/20

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/314' 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.

This approval shall NOT be used in conjunction with General Certificate No 6B/0.

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



Darryl Hines
Manager
Policy and Regulatory
Services

TECHNICAL SCHEDULE No 6/4C/314

1. Description of Pattern

approved on 22/5/20

A Wedderburn model WS209 class III single interval self-indicating non-automatic weighing instrument (Figure 1) of 30 kg maximum capacity with a verification scale interval of 0.01 kg. The minimum capacity is 0.2 kg.

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 1).

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

1.1 Basework

The Wedderburn model WS209 instrument (Figure 1b) has the load receptor directly supported by a single load cell. The load receptor has a nominal dimension of 300 mm x 400 mm.

1.2 Load cell

A Hope Technologic (Xiamen) model Mavin NA2 C3 load cell of 60 kg maximum capacity is used.

1.3 Indicator

A Wedderburn model WS209 digital indicator having an ABS enclosure is used.

The indicator may be mounted on a column (Figures 1) or it may also be located remotely.

1.4 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.

1.5 Tare

A semi-automatic subtractive tare device and/or non-automatic keyboard-entered pre-set subtractive tare device, each of up to maximum capacity may be fitted.

1.6 Display Check

A display check is initiated whenever power is applied.

1.7 Power Supply

Power for the Wedderburn Model WS209 instruments may be supplied by:

- a 9 V AC/DC mains adaptor; and/or
- an internal 6 V sealed lead-acid rechargeable battery.

Note: The AC/DC mains adaptor supplied for the instrument was GoE model GS2S-006-090-B1 switch mode power supply (output 9 V DC, 0.66 A) – the submitter should be consulted regarding the acceptability of alternative power supply units.

1.8 Levelling

The instrument is provided with adjustable feet and a level indicator.

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

1.9 Additional Features

Instruments may be fitted with certain additional functions (e.g. check weighing (beep sound), counting and accumulation). The additional functions (other than the indications of measured mass, i.e. gross, tare, net, totals, displayed either on the indicator or on an auxiliary or peripheral device) are not approved for trade use.

Instruments may also be fitted with an ‘animal weighing’ function. This function shall not be used for trade use.

1.10 Interfaces

The indicator 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 General Supplementary Certificate No S1/0B (in particular in regard to the data and its format).

Indications other than the indications of measured mass (i.e. gross, tare, net, totals) displayed either on the indicator or on an auxiliary or peripheral device, are not for trade use.


Instruments may be fitted with RS-232 serial data interface.

1.11 Verification Provision

Provision is made for the application of a verification mark.

1.12 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer’s mark, or name written in full	WEDDERBURN
Indication of accuracy class	
Pattern approval number for the instrument	NMI 6/4C/314
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 = - g or kg #2
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 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).

Notes:

For multiple range instruments, the maximum capacity, minimum capacity and verification scale interval for each range shall be marked, with an indication of the range to which they apply, e.g.

Range	W1	W2
<i>Max</i> kg kg
<i>Min</i> kg kg
<i>e =</i> kg kg

1.13 Software

The legally relevant embedded software is designated CE00x, where x can be 1, 2 or 3.

The software version and number can be seen in the switch-on display sequence (when the power is first applied to the instrument).

1.14 Sealing Provision

Provision is made for the calibration to be sealed by setting a switch on the mainboard within the instrument to a PROTECTED position, and then preventing access within the instrument housing (Figure 3).

It is possible to determine that the link status is in the 'PROTECTED' position as follows (starting from the normal weighing mode):

- Press the 'ON/OFF' key to switch off the instrument.
- Hold down the 'TARE' key and then press the 'ON/OFF' key to switch on the instrument. The 'Fn1' is displayed.
- Press the 'MODE' key three time.
- If the link is in the 'PROTECTED' position, the instrument will not display 'Fn4'. In this case the instrument may be verified.
- Otherwise the instrument will display 'Fn4' in which case the instrument should not be verified until the switch has been correctly located in the 'PROTECTED' position.

Sealing to prevent access within the instrument housing may be achieved by mean of destructible adhesive labels placed over the opposite sides of a join in the instrument housing in Figure 3.

2. Description of Variant 1**approved on 22/05/20**

The Wedderburn model WS209 series instruments use a Hope Technologic (Xiamen) model Mavin NA1 C3 or Mavin NA2 C3 or Mavin NA3 C3 load cell (as shown in Figures 2a or 2b) in certain other single interval capacities as listed in Table 1 and as shown in Figure 1 (the pattern is shown in **bold**):

TABLE 1

Maximum Capacity (<i>Max</i>)	Minimum Capacity (<i>Min</i>)	Verification Scale Interval (<i>e</i>)	Platform Size	Hope Technologic (Xiamen) Load Cell Maximum Capacity (E_{max})
30 kg	0.2 kg	0.01 kg	300 × 400 mm	NA1 C3 50 kg
30 kg	0.2 kg	0.01 kg	300 × 400 mm	NA2 60 kg
60 kg	0.4 kg	0.02 kg	300 × 400 mm 400 × 500 mm	NA2 100 kg
150 kg	1 kg	0.05 kg	400 × 500 mm	NA2 C3 200 kg
300 kg	2 kg	0.1 kg	400 × 500 mm	NA3 C3 500 kg

3. Description of Variant 2**approved on 22/05/20**

The Wedderburn WS209 series instruments (Figure 3a) which are similar to the pattern and variant 1 but use a Hope Technologic (Xiamen) model Mavin NA1 C5 or Mavin NA2 C5 or Mavin NA3 C5 load cell in certain multiple range capacities as listed in Table 2.

3.1 Tare

A semi-automatic subtractive tare device and/or non-automatic keyboard-entered pre-set subtractive tare device, each of up to maximum capacity of the highest weighing range may be fitted.

TABLE 2

Maximum Capacity (Max_1/Max_2)	Minimum Capacity (Min_1/Min_2)	Verification Scale Interval (e_1/e_2)	Platform Size	Hope Technologic (Xiamen) Load Cell Maximum Capacity (E_{max})
15/30 kg	0.1/0.2 kg	0.005/0.01 kg	300 × 400 mm	NA1 C5 50 kg
15/30 kg	0.1/0.2 kg	0.005/0.01 kg	400 × 500 mm	NA3 C5 50 kg
30/60 kg	0.2/0.4 kg	0.01/0.02 kg	300 × 400 mm	NA1 C5 100 kg
30/60 kg	0.2/0.4 kg	0.01/0.02 kg	300 × 400 mm 400 × 500 mm	NA2 C5 100 kg
30/60 kg	0.2/0.4 kg	0.01/0.02 kg	400 × 500 mm	NA3 C5 100 kg

4. Description of Variant 3

approved on 22/05/20

The Wedderburn WS209 series instruments which are similar to the pattern but use a Zemic model L6E C3 or model L6E3 C3 load cell (as shown in Figures 2a or 2b) in certain single interval capacities as listed in Table 3.

TABLE 3

Maximum Capacity (<i>Max</i>)	Minimum Capacity (<i>Min</i>)	Verification Scale Interval (<i>e</i>)	Platform Size	Zemic Load Cell Maximum Capacity (<i>E_{max}</i>)
30 kg	0.2 kg	0.01 kg	300 × 400 mm	L6E C3 50 kg
30 kg	0.2 kg	0.01 kg	300 × 400 mm 400 × 500 mm	L6E3 C3 50 kg
30 kg	0.2 kg	0.01 kg	300 × 400 mm	L6E C3 60 kg
30 kg	0.2 kg	0.01 kg	300 × 400 mm 400 × 500 mm	L6E3 C3 60 kg
60 kg	0.4 kg	0.02 kg	300 × 400 mm	L6E C3 100 kg
60 kg	0.4 kg	0.02 kg	300 × 400 mm 400 × 500 mm	L6E3 C3 100 kg
150 kg	1 kg	0.05 kg	300 × 400 mm	L6E C3 200 kg
150 kg	1 kg	0.05 kg	300 × 400 mm 400 × 500 mm	L6E3 C3 200 kg

5. Description of Variant 4

approved on 22/05/20

The Wedderburn WS209 series instruments which are similar to variant 3 in certain multiple range capacities as listed in Table 4.

TABLE 4

Maximum Capacity (<i>Max₁/Max₂</i>)	Minimum Capacity (<i>Min₁/Min₂</i>)	Verification Scale Interval (<i>e₁/e₂</i>)	Platform Size	Zemic Load Cell Maximum Capacity (<i>E_{max}</i>)
15/30 kg	0.1/0.2 kg	0.005/0.01 kg	300 × 400 mm	L6E C3 50 kg
15/30 kg	0.1/0.2 kg	0.005/0.01 kg	300 × 400 mm 400 × 500 mm	L6E3 C3 50 kg
30/60 kg	0.2/0.4 kg	0.01/0.02 kg	300 × 400 mm	L6E C3 100 kg
30/60 kg	0.2/0.4 kg	0.01/0.02 kg	300 × 400 mm 400 × 500 mm	L6E3 C3 100 kg
60/150 kg	0.4/1 kg	0.02/0.05 kg	300 × 400 mm 400 × 500 mm	L6E C3 200 kg

TEST PROCEDURE No 6/4C/314

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 the *National Trade Measurement Regulations 2009*.

For multiple range 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.

FIGURE 6/4C/314 – 1

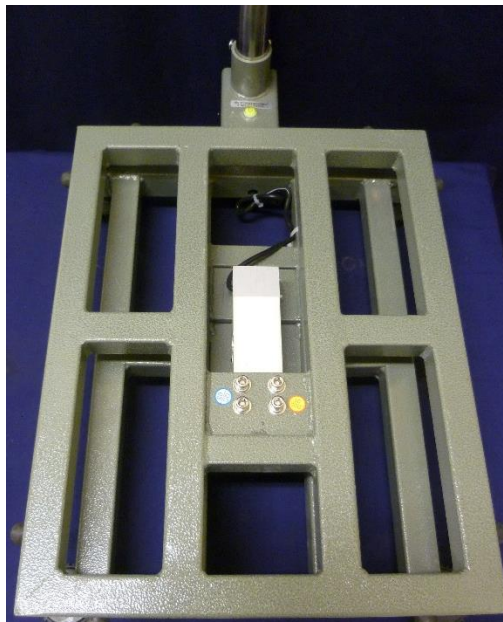


Wedderburn Model WS209 Weighing Instrument

FIGURE 6/4C/314 – 2



(a) Wedderburn Model WS209 Weighing Instrument Fitted with a Zemic L6E or Mavin NA1 or Mavin NA2 Load Cell



(b) Wedderburn Model WS209 Weighing Instrument Fitted with a Zemic L6E3 or Mavin NA3 Load Cell

FIGURE 6/4C/314 – 3



Sealing of Wedderburn Model WS209 Instrument

Typical Indicator Sealing

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