Australian Government
Department of Industry, Science and Resources
National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4C/337

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.

Tscale model BWS-SPB4050-150M Weighing Instrument

submitted by GaP Solutions Pty Ltd
26 Woodlands Terrace
Edwardstown SA 5039

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 approved – certificate issued	23/01/25

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/337' 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 Certificate of Approval No S1/0B.

This approval shall NOT be used in conjunction with General Certificate of Approval 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/337

1. Description of Pattern approved on 23/01/25

A Tscale model BWS-SPB4050-150M class (III) single interval self-indicating non-automatic weighing instrument (Figure 1) of 150 kg maximum capacity with a verification scale interval of 0.05 kg, and with a minimum capacity of 1 kg.

1.1 Basework

The basework of the instrument has the load receptor directly supported by a single load cell. The load receptor has a nominal dimension of 400 mm × 500 mm.

1.2 Load cell

A ZEMIC model BM6G-C3-200 kg-3.4B6-S1-D01 load cell of 200 kg maximum capacity is used.

1.3 Indicator

A Tscale model BWS digital indicator is used.

The indicator has a stainless steel enclosure with a 7 segment LCD display for display of the weight value.

The indicator is mounted on a column attached to the base.

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 may be fitted. The maximum tare capacity is 149.95 kg.

1.6 Display Check

A display check is initiated whenever power is applied.

1.7 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.

1.8 Power Supply

Power for the TScale BWS-SPB4050-150M instrument may be supplied by either:

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

Note: The AC/DC mains adaptor supplied for the instrument was FLYPOWER model PS06H120K0500AD power supply (output 12 V DC, 0.5 A) – the submittor should be consulted regarding the acceptability of alternative power supply units.

1.9 Additional Features

Instruments may be fitted with certain additional functions including counting, check weighing and totalization. These 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.

The instrument may be fitted with 'animal weighing' function. This function is not approved for trade use.

1.10 Interfaces

The instrument 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 of Approval 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 RS232, analog output, and Bluetooth.

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	Tscale Electronics MFG (Kunshan) Co Ltd	
Manufacturer's agent	GaP Solutions Pty Ltd	
Indication of accuracy class	(III)	
Pattern approval number for the instrument	NMI 6/4C/337	
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 shown near the display of the result.

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

1.13 Sealing Provision

Provision is made for the calibration to be sealed by applying a calibration jumper at 'K2' on the main board of the instrument, and then seal the enclosure of the instrument with a lead and wire type seal through two seal screws as shown in Figure 2.

Following the steps below to check the instrument configuration and calibration seal status without opening the instrument enclosure:

- Press 

during the initial power-on process.
- Press 

, 

, and 

. The instrument will display 

.
- Press 

, twice. The instrument will display 

.
- Press 

to check if the instrument is sealed. If the 

does not change, then the instrument is sealed. Otherwise, the instrument is unsealed, and the 'K2' jumper needs to be open.

1.14 Software

The legally relevant software is designated 1.10 and could be displayed / checked. by pressing the 'M+' key during the power up sequence.

The application software version is 1.xx, where 'xx' can be from 01 to 99 and it is displayed during the power up sequence.

2. Variant 1 approved on 23/01/25

The pattern may be fitted with different main board, AD module and new legally relevant software version 2.00.

The legally relevant software could be displayed / checked during the power up sequence.

The application software version is 2.xx, where 'xx' can be from 01 to 99 and it is displayed by pressing 'M+' key during the power up sequence.

Provision is made for the calibration to be sealed by applying a seal screw over the calibration button and with a lead and wire type seal through the two seal screws as shown in Figure 3.

TEST PROCEDURE No 6/4C/337

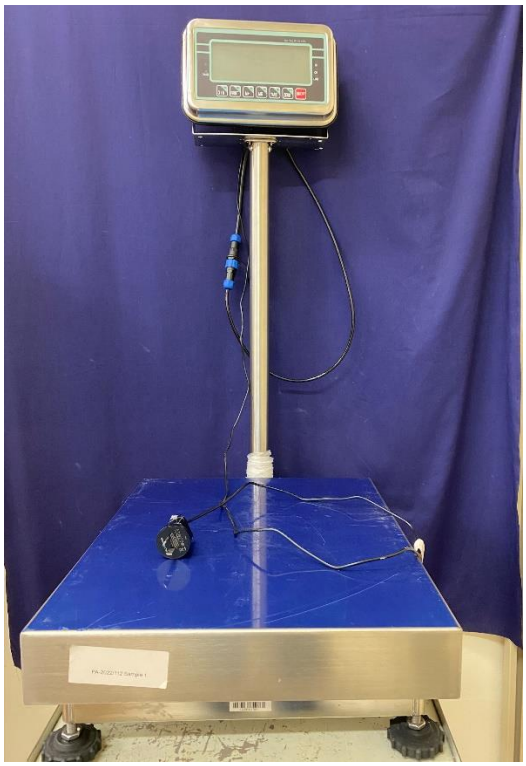
Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

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

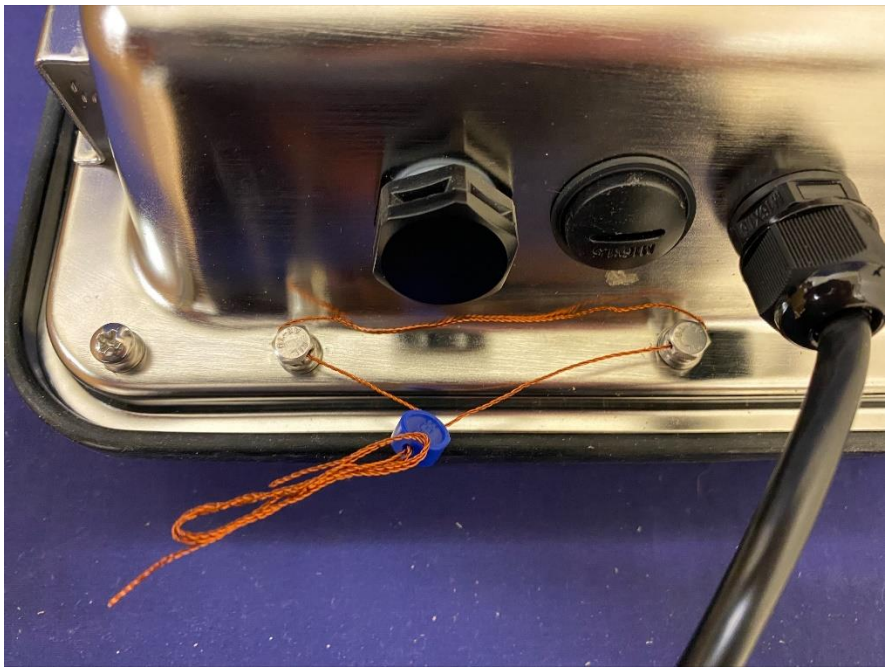
The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

FIGURE 6/4C/337 – 1



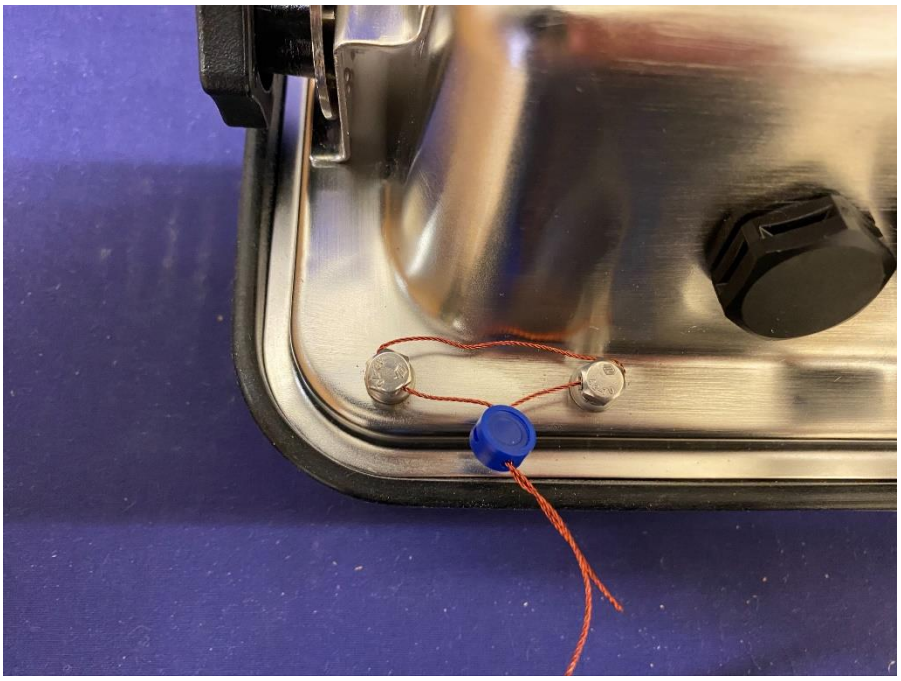
Tscale model BWS-SPB4050-150M Weighing instrument (Pattern)

FIGURE 6/4C/337 – 2



Typical Seal Method (Pattern)

FIGURE 6/4C/337 – 3



Typical Seal Method (Variant 1)

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