



Australian Government
**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

No 6/9C/275

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

Aussie Weighbridge Systems Model AWS 110 Weighing Instrument

submitted by AWS (Aussie Weighbridge Systems) Pty Ltd
 (formerly Accuweigh AWS Pty Ltd)
 Now of Unit 9/160 Hartley Road
 Smeaton Grange NSW 2567.

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.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 June **2013**, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 6/9C/275' 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.

The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0/A.

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

The values of the performance criteria (maximum number of scale intervals etc.) applicable to the instrument shall be within the limits specified herein and in any approval documentation for the components where they are approved separately.

DESCRIPTIVE ADVICE

Pattern: approved 9 May 2003

- An Aussie Weighbridge Systems model AWS 110 self-indicating class $\text{\textcircled{III}}$ non-automatic weighing instrument of 1500 kg maximum capacity.

Variants: approved 9 May 2003

1. AWS 110 series in capacities from 100 kg up to 14 999 kg.
2. With the load receptor in the form of a hopper or bag.
3. Hopper weighing instruments with the load receptor in the form of a cylinder or tank.

Technical Schedule No 6/9C/275 describes the pattern and variants 1 to 3.

Variant: approved 7 December 2010

4. With the load receptor in the form of a suspended cattle crush.

Technical Schedule No 6/9C/275 Variation No 1 describes variant 4.

FILING ADVICE

Certificate of Approval No 6/9C/275 dated 17 October 2003 is superseded by this Certificate, and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 6/9C/275 dated 9 December 2010
Technical Schedule No 6/9C/275 dated 17 October 2003 (incl. Test Procedure)
Technical Schedule No 6/9C/275 Variation No 1 dated 9 December 2010 (incl. Note and Notification of Change)
Figures 1 and 2 dated 17 October 2003
Figures 3 and 4 dated 9 December 2010

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



TECHNICAL SCHEDULE No 6/9C/275

Pattern: Aussie Weighbridge Systems Model AWS 110 Weighing Instrument

Submittor: Accuweigh AWS Pty Ltd
Unit 4/36 Holbeche Road
Arndell Park NSW 2148



1. Description of Pattern

An Aussie Weighbridge Systems model AWS 110 self-indicating weighing instrument of 1500 kg maximum capacity and approved for use with up to 3000 verification scale intervals.

1.1 Basework

The model AWS 110 basework (Figure 1) has the load receptor directly supported by load cells fitted with self-aligning supporting feet.

If approach ramps are provided care shall be taken to ensure that these do not interfere with the platform.

1.2 Load Cells

Four Kelba model KA1000 C3 load cells of 1000 kg capacity are used mounted as shown in Figure 1. The load cells are described in the documentation of NSC approval No S155B.

1.3 Indicator

A Ranger model 2100 digital indicator is used. The indicator is described in the documentation of NSC approval No S403.

1.4 Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Accuweigh AWS Pty Ltd
Indication of accuracy class	Ⓜ
Maximum capacity	<i>Max</i> kg *
Minimum capacity	<i>Min</i> kg *
Verification scale interval	<i>e</i> = kg *
Tare capacity (if less then <i>Max</i>)	<i>T</i> = - kg
Serial number of the instrument
Pattern approval mark for the instrument	NSC No 6/9C/275
Pattern approval mark for the load cells	NSC No ...
Pattern approval mark for the indicator	NSC No ...

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

1.5 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

1.6 Sealing Provision

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

1.7 Levelling

Where instruments are liable to be tilted (i.e. they are not installed in a permanently fixed location) they are provided with adjustable feet and a level indicator. Adjacent to the level indicator is a notice stating 'instrument must be level when in use', or similar wording.

2. Description of Variants

2.1 Variant 1

The AWS 110 series in capacities as listed below:

- from 100 kg up to 1499 kg; and
- from 1500 kg up to 14 999 kg.

2.2 Variant 2

With the load receptor in the form of a hopper or bag suspended from the base frame (Figure 2) in capacities from 100 kg up to 14 999 kg. Instruments are then known as the AWS ... series.

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.

2.3 Variant 3

Hopper weighing instruments in capacities from 1500 kg to 14 999 kg. Instruments are then known as the AWS ... series.

Instruments are either:

- (a) fitted with 3, 4 or 5 Commission-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 Commission-approved load cells where the hopper is a nonvertical cylindrical, or other hopper-type load receptor.

Note: Instruments with more than 4 load cells may be acceptable if prior written agreement from the Commission is obtained.

In addition 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.

TEST PROCEDURE

Instruments should be tested in accordance with any relevant tests specified in the Uniform Test Procedures.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors for increasing and decreasing loads on initial verification/certification for loads, m , expressed in verification scale intervals, e , are:

- $\pm 0.5 e$ for loads $0 \leq m \leq 500$;
- $\pm 1.0 e$ for loads $500 < m \leq 2\,000$; and
- $\pm 1.5 e$ for loads $2\,000 < m \leq 10\,000$.

TECHNICAL SCHEDULE No 6/9C/275

VARIATION No 1

Pattern: Aussie Weighbridge Systems Model AWS 110 Weighing Instrument

Submittor: AWS (Aussie Weighbridge Systems) Pty Ltd
Unit 9/160 Hartley Road
Smeaton Grange NSW 2567

1. Description of Variant 4

The Aussie Weighbridge Systems model AWS 110 weighing instrument approved for use with up to 1500 verification scale intervals fitted with a suspended cattle crush load receptor (Figure 3).

The load cells are fixed to an elevated frame (Figure 4) and the cattle crush load receptor is suspended from these load cells.

Note: The cattle crush may have mechanisms such as hydraulic actuators for operation of the doors – it shall be ensured that these mechanisms do not adversely affect the weighing result.

NOTE: The date at which this approval becomes due for review has been amended following completion of a review.

NOTIFICATION OF CHANGE

In Technical Schedule 6/9C/275 dated 17 October 2003, the reference to the name and address of the submitter should be amended to read:

“AWS (Aussie Weighbridge Systems) Pty Ltd
Unit 9/160 Hartley Road
Smeaton Grange NSW 2567.”

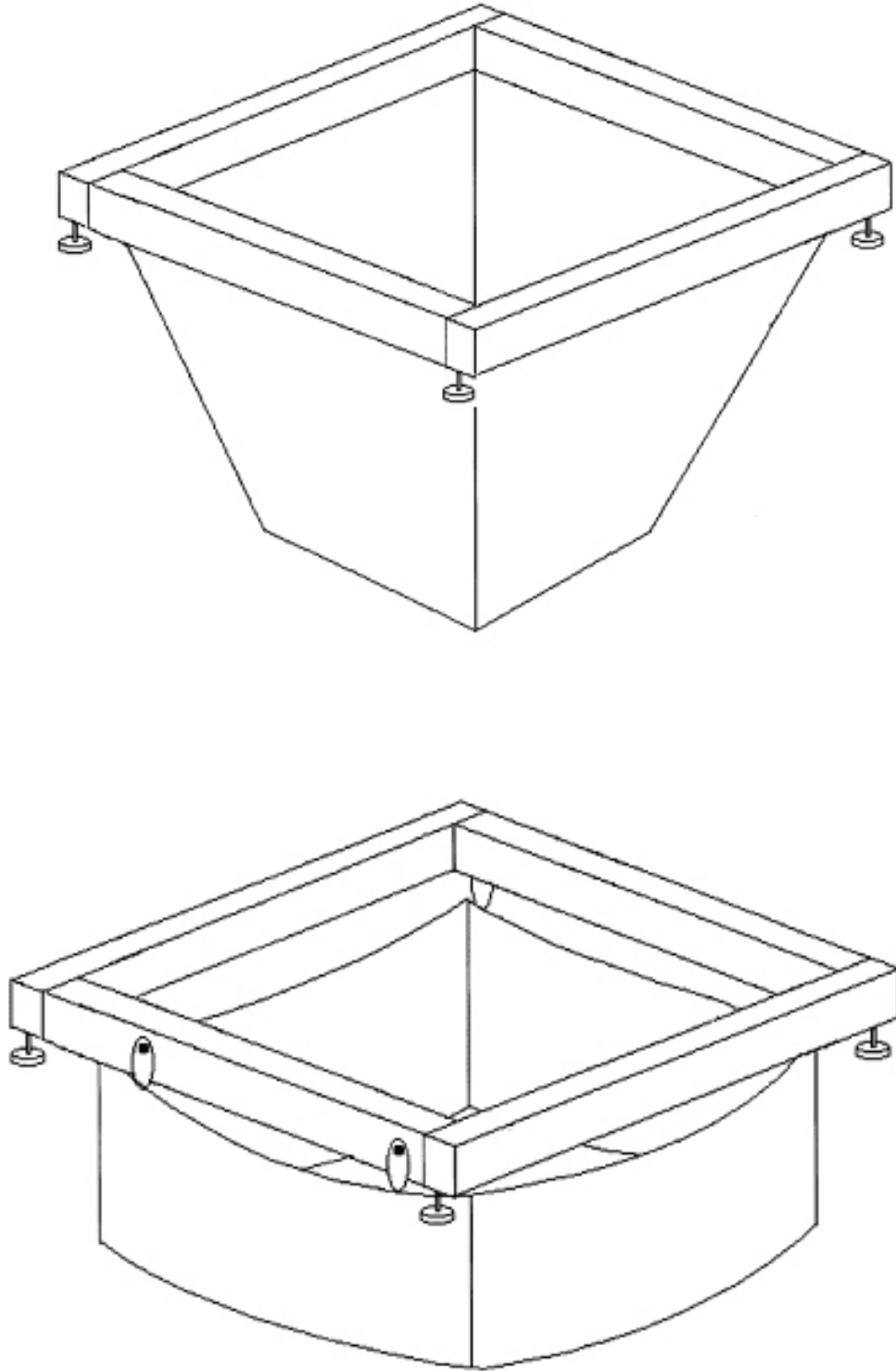
FIGURE 6/9C/275 – 1



Aussie Weighbridge Systems Model AWS 110 Weighing Instrument
and Load Cell Mounting

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FIGURE 6/9C/275 – 2



Typical AWS Hopper and Suspended Bag Configurations

FIGURE 6/9C/275 – 3



Typical Cattle Crush Load Receptor (Variant 4)

FIGURE 6/9C/275 – 4



Cattle Crush Load Cell Mounting (Variant 4)