



Australian Government  
Department of Industry,  
Innovation and Science

## National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

### Certificate of Approval NMI 6/10B/69

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.

AWS Model AWS 106 Weighing Instrument

submitted by           AWS (Aussie Weighbridge Systems) 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.

This approval becomes subject to review on **1/07/23**, and then every 5 years thereafter.

#### DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 4 approved – interim certificate issued	31/05/02
1	Pattern & variants 1 to 4 approved – certificate issued	24/07/02
2	Pattern & variants 1 to 4 reviewed – notification of change issued	16/10/07
3	Pattern & variants 1 to 4 amended (address), reviewed & updated, variant 5 approved – certificate issued	28/06/18

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI (or NSC) 6/10B/69' 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 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.

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  
Pattern Approval, Policy and  
Licensing Section

TECHNICAL SCHEDULE No 6/10B/69

**1. Description of Pattern** **approved on 31/05/02**

An AWS model AWS 106 class  $\text{\textcircled{III}}$  self-indicating weighing instrument of 60 000 kg maximum capacity and approved for use with up to 3000 verification scale intervals. May also be known as an Aussie Weighbridge Systems model AWS 106.

**1.1 Basework**

The model AWS 106 basework has the platform fully supported by 6 load cells.

**1.2 Load Cells**

Six HBM model C16AC3/30t load cells of 30 000 kg capacity are used.

The load cells are also described in the approval documentation of approval NMI No S370.

**1.3 Indicator**

A Ranger Instruments model 5000 digital indicator is used.

The indicator is also described in the approval documentation of NSC approval No S363.

**1.4 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.

**1.5 Verification Provision**

Provision is made for the application of a verification mark.

**1.6 Descriptive Markings and Notices**

Instruments carry the following markings:

Manufacturer's mark, or name written in full	.....
Indication of accuracy class	$\text{\textcircled{III}}$
Pattern approval mark for the instrument	NMI or NSC No 6/10B/69
Pattern approval mark for the indicator	NMI No S...
Pattern approval mark for the load cells	NMI No S...
Maximum capacity	<i>Max</i> ..... kg *
Minimum capacity	<i>Min</i> ..... kg *
Verification scale interval	<i>e</i> = ..... kg *
Serial number of the instrument	.....

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

**2. Description of Variant 1** **approved on 31/05/02**

AWS model AWS 107 instruments of in-ground construction with concrete deck.

**3. Description of Variant 2** **approved on 31/05/02**

AWS model AWS 108 instruments of in-ground construction with steel deck.

**4. Description of Variant 3** **approved on 31/05/02**

In capacities from 15 000 to 200 000 kg, with no less than 4 and with up to 10 NMI-approved load cells. 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.

**5. Description of Variant 4** **approved on 31/05/02**

AWS model AWS 109 instruments with the load receptor in the form of a hopper or silo in capacities from 15 000 to 200 000 kg.

Instruments are either:

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

Note: Instruments with more than 4 load cells may be acceptable if prior written agreement from NMI 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.

**6. Description of Variant 5** **approved on 28/06/18**

An AWS model AWS 111 single interval self-indicating non-automatic weighing instrument of up to 40 000 kg maximum capacity, and approved for use with up to 2000 verification scale intervals.

The system is intended for the determination of the net weight of the contents of a shipping container. A transaction will generally be the result of a weighing of the full container, with the result of the weighing of the empty container subtracted from this.

The instrument is only intended for use whilst the container is stationary and in horizontal position.

**6.1 Load Receptor**

The model AWS 111 load receptor comprises an A-WARD container tilting mechanism mounted the steel frame which is fully supported by four CAS model WBK-30t load cells as shown in Figure 1.

**6.2 Load Cells**

Four CAS model WBK-30t load cells of 30 000 kg maximum capacity are used.

The load cells are also described in the approval documentation of NMI approval No S442.

### **6.3 Indicator**

A Rinstrum model R420 digital indicator is used.

The indicator is also described in the approval documentation of NMI approval No S463.

#### **TEST PROCEDURE**

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 6/10B/69 – 1



AWS Model AWS 111 Weighing Instrument (Variant 5)

~ End of Document ~