



Australian Government  
Department of Industry,  
Innovation and Science

## National Measurement Institute

### Certificate of Approval NMI 6/9C/308

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.

A CAS model PB class self-indicating multi-interval non-automatic weighing instrument of 30 kg maximum capacity.

submitted by CAS Corporation  
#262 Geurugogae-Ro, Gwangjeok-Myeon  
Yangju-Si, Gyeonggi-Do 482-842  
Republic of Korea.

**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 May 2021, and then every 5 years thereafter.

#### DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern and variant 1 approved – certificate issued	28/04/10
1	Pattern & variant 1 amended, reviewed & updated – certificate issued	14/11/16

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 6/9C/308' 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.

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 Certificates No S1/0/A or 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*.



**Dr A Rawlinson**

TECHNICAL SCHEDULE No 6/9C/308

**1. Description of Pattern**

**approved on 28/04/10**

A CAS model PB class Ⅲ multi-interval self-indicating non-automatic weighing instrument (Figures 1 and 2, and Table 1) with a verification scale interval  $e_1$  of 0.005 kg up to 15 kg and with a verification scale interval  $e_2$  of 0.01 kg from 15 kg up to 30 kg.

The instrument is fitted with an LCD display for display of the weight value. The display may be attached directly to the basework (Figure 1a) or remotely (Figure 1b).

The instrument has the load receptor directly supported by a single load cell. The load receptor has maximum nominal dimensions of 355 × 443 mm.

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

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), or unless the display of the instrument is located such that all primary indications are clearly and simultaneously displayed to both the vendor and the customer.

**1.1 Load Cell**

A CAS model BCS load cell of 50 kg maximum capacity is used.

**1.2 Zero**

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.

The instrument has an initial zero-setting device with a nominal range of not more than 20% of the maximum capacity of the instrument.

A zero-tracking device may be fitted.

**1.3 Tare**

A semi-automatic subtractive tare device up to 14.995 kg capacity may be fitted.

**1.4 Interfaces**

The indicator may be fitted with interfaces for the connection of auxiliary and/or peripheral devices. The interfaces shall comply with clause 5.3.6 of NMI R76 (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 S1/0/A or S1/0B (in particular in regard to the data and its format).

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

**1.5 Display Check**

A display check is initiated whenever power is applied.

## 1.6 Power Supply

Power for the model PB instrument may be supplied by:

- an AC/DC mains adaptor; and/or
- an internal 6 V rechargeable battery or 4 × C size dry cell battery.

Note: The AC/DC mains adaptor supplied for the instrument was a CAS model SW15-1CAC (12 V DC, 1.25 A) – the submitter should be consulted regarding the acceptability of alternative power supply units.

## 1.7 Levelling

The instrument is provided with adjustable feet and adjacent to the level indicator is a notice stating 'Instrument must be level when in use'.

## 1.8 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	CAS Corp Korea
Indication of accuracy class	Ⓜ
Maximum capacity	<i>Max</i> ..... kg #
Minimum capacity	<i>Min</i> ..... kg #
Verification scale interval	<i>e</i> = ..... kg #
Maximum subtractive tare	<i>T</i> = - ..... kg
Serial number of the instrument	.....
Pattern approval mark for the instrument	NMI 6/9C/308

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

In addition, instruments may be required to carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording (see **1. Description of Pattern** above).

## 1.9 Verification Provision

Provision is made for a verification mark to be applied.

## 1.10 Sealing Provision

Provision is made for sealing access to the calibration button. The sealing location is located within the battery compartment of the instrument which is user accessible via a latch. Refer to Figure 2.

## 2. Description of Variant 1

approved on 28/04/10

Certain CAS PB series multi-interval non-automatic weighing instruments which are similar to the pattern but having other capacities as listed in Table 1.

TABLE 1

Note: The bold letters indicate the specifications of the pattern.

Maximum Capacity <i>Max</i>	Verification Scale Interval <i>e<sub>1</sub>/e<sub>2</sub></i>	Minimum Capacity <i>Min</i>	Subtractive Tare Capacity <i>T</i>	CAS BCS Load Cell Capacity <i>E<sub>max</sub></i>
<b>15/30 kg</b>	<b>0.005/0.01 kg</b>	<b>0.1 kg</b>	<b>-14.995 kg</b>	<b>50 kg</b>
30/60 kg	0.01/0.02 kg	0.2 kg	-29.99 kg	100 kg
60/150 kg	0.02/0.05 kg	0.4 kg	-59.98 kg	250 kg
100/200 kg	0.05/0.1 kg	1 kg	-99.95 kg	250 kg

### TEST PROCEDURE

Instruments shall be tested in accordance with any relevant tests specified in the national inspection test procedures.

#### Maximum Permissible Errors

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

FIGURE 6/9C/308 – 1

(a)



(b)



CAS Model PB Weighing Instrument

FIGURE 6/9C/308 – 2



Typical Sealing Provision

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