



Australian Government
**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

No 6/4D/370

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.

CAS Model AP Plus-EC Weighing Instrument

submitted by CAS Corporation
482-841, 19 Ganap-Ri, Gwangjoek-myeon
Yangju-si, Gyeonggi-do
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 1/06/18, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variant 1 approved – certificate issued	15/05/13
1	Pattern & variant 1 amended (Table 1) – certificate issued	22/05/13

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/370' 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.

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 6/4D/370

1. Description of Pattern

approved on 15/05/13

A CAS model AP Plus-EC class III non-automatic multi-interval self-indicating price-computing weighing instrument (Figure 1) with a verification scale interval e_1 of 0.001 kg up to 3 kg and with a verification scale interval e_2 of 0.002 kg from 3 kg to 6 kg.

Instruments are fitted with the operator display and a customer display mounted on a column. The displays are VFD type displays.

The platter size of the instrument is 340 mm x 222 mm.

Instruments have unit price to \$9999.99/kg, price to \$99999.99, and a product look up (PLU) facility.

Power for the AP Plus-EC instrument is supplied by 240 VAC power source.

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

1.1 Zero

A zero-tracking device may be fitted. The initial zero-setting device 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.

1.2 Tare

A semi-automatic subtractive tare device of up to -2.999 kg may be fitted.

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 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'.

1.5 Verification Provision

Provision is made for the application of a verification mark.

1.6 Sealing Provision

Provision is made for the calibration adjustments to be sealed by applying two destructible sealing labels as shown in Figure 2, for preventing access to the calibration switch and opening the instrument housing.

To check that the instrument is not in calibration mode, turn on the instrument and if the instrument does NOT carry out the initial display check then it is in calibration mode, and instrument specifications are not secured. Instruments must NOT be verified and used for trade if they are in calibration mode.

1.7 Descriptive Markings and Notices

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's mark, or name written in full
Indication of accuracy class	Ⓜ
Pattern approval number for the instrument	NMI 6/4D/370
Maximum capacity	<i>Max</i>/..... g or kg #1
Minimum capacity	<i>Min</i> g or kg #1
Verification scale interval	<i>e</i> =/..... g or kg #1
Maximum subtractive tare	<i>T</i> = - g or kg #2
Serial number of the instrument

For single interval instruments there is only one range therefore only one value of maximum capacity and verification scale interval to be marked.

- #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*.

2. Description of Variant 1

approved on 15/05/13

The CAS model AP Plus-EC as single range or multi-interval instruments of certain capacities as listed in Table 1 below:

TABLE 1

Maximum capacity, <i>Max</i> (kg)	3/6	6	6/15	15	15/30	30
Minimum capacity, <i>Min</i> (g)	20	40	40	100	100	200
Verification scale interval, <i>e</i> (g)	1/2	2	2/5	5	5/10	10
Maximum tare, <i>T</i> (kg)	-2.999	-6	-5.998	-15	-14.995	-30

Note: The specifications of the pattern are in **BOLD** font.

TEST PROCEDURE No 6/4D/370

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*.

For multi-interval 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 6/4D/370 – 1



CAS Model AP Plus-EC Weighing Instrument

FIGURE 6/4D/370 – 2



Typical Mechanical Sealing

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