Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

Certificate of Approval
NMI 6/4D/345

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 ER-PLUS-U Weighing Instrument

submitted by CAS Corporation
#262, Geurugogae-ro, 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 **1/6/21**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – interim certificate issued	18/05/09
1	Pattern approved – certificate issued	9/10/09
2	Pattern **reviewed** & updated – certificate issued	2/05/17

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/345' 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 Certificates No S1/0/A or 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/345

1. Description of Pattern approved on 18/05/09

A CAS model ER PLUS-U class (III) non-automatic multi-interval self-indicating price-computing weighing instrument (Figure 1) with a verification scale interval (e_1) of 0.002 kg up to 6 kg and a verification scale interval (e_2) of 0.005 kg from 6 kg up to with a maximum capacity of 15 kg.

Instruments are fitted with the operator display integrated with the main body of the instrument and a customer display mounted on a column. The displays are liquid crystal display (LCD) type displays.

The platter size of the instrument is 304 mm × 220 mm.

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

Power for the ER PLUS-U instrument may be supplied by either:

- an AC/DC mains adaptor; or
- an internal rechargeable battery.

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

Instruments shall be connected to an external CAS model DEP-50, ESC/POS printer (Figure 2) for printing of labels or tickets. This printer is powered by an AC/DC mains adaptor (the AC/DC mains adaptor supplied was a CAS model SA150A-1240U-3, 12 V DC, 2500 mA adaptor – the submittor should be consulted regarding the acceptability of alternative power supply units).

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 -5.998 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 a level indicator.

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 by applying a lead and wire (or similar) seal through screws with drilled heads which secure a cover plate on the underside of the base (Figure 3) thereby preventing access to the calibration switch and also removal access within the instrument housing. Alternatively a destructible adhesive label (or labels) may be used to restrict access to the calibration switch and within the instrument housing (Figure 3).

1.7 Totalisation

The adding function and totalisation function shall be only operational when a printer is attached to the instrument and operating normally.

1.8 Descriptive Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full	CAS Corporation	
Indication of accuracy class	(III)	
Pattern approval number for the instrument	NMI 6/4D/345	
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 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 18/05/09

The CAS model ER PLUS-U as multi-interval instruments of certain capacities as listed below:

(i) A multi-interval instrument with a verification scale interval of 0.001 kg up to 3 kg and with a verification scale interval of 0.002 kg from 3 kg up to 6 kg, and with a maximum semi-automatic and pre-set tare capacity of 2.999 kg; and

(ii) A multi-interval instrument with a verification scale interval of 0.005 kg up to 15 kg and with a verification scale interval of 0.01 kg from 15 kg up to 30 kg, and with a maximum semi-automatic and pre-set tare capacity of 14.995 kg.

3. Description of Variant 2 approved on 18/05/09

The CAS model ER PLUS which is similar to the pattern, except that the customer display is integrated into the body of the instrument rather than column-mounted.

The model ER PLUS is available in the capacities described for the pattern and variant 1.

4. Description of Variant 3 approved on 18/05/09

CAS model ER JR-U (Figure 4) and model ER JR which are similar to the pattern (ER PLUS-U) and variant 2 (ER PLUS) respectively, but have fewer functions.

The model ER JR-U has a column-mounted customer display, whereas the ER JR has the customer integrated into the body of the instrument.

The platter size of the instrument is 290 mm × 209 mm.

The model ER JR-U and model ER JR are available in the capacities described for the pattern and variant 1.

5. Description of Variant 4 approved on 18/05/09

The pattern and variants having vacuum fluorescent type displays (VFD), or light emitting diode (LED) type displays rather than the LCD displays described for the pattern.

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 the *National Trade Measurement Regulations 2009*.

For multi-interval instruments with verification scale intervals of e_1, e_2 …, apply e_1 for zero adjustment, and maximum permissible errors apply e_1, e_2 …, as applicable for the load.

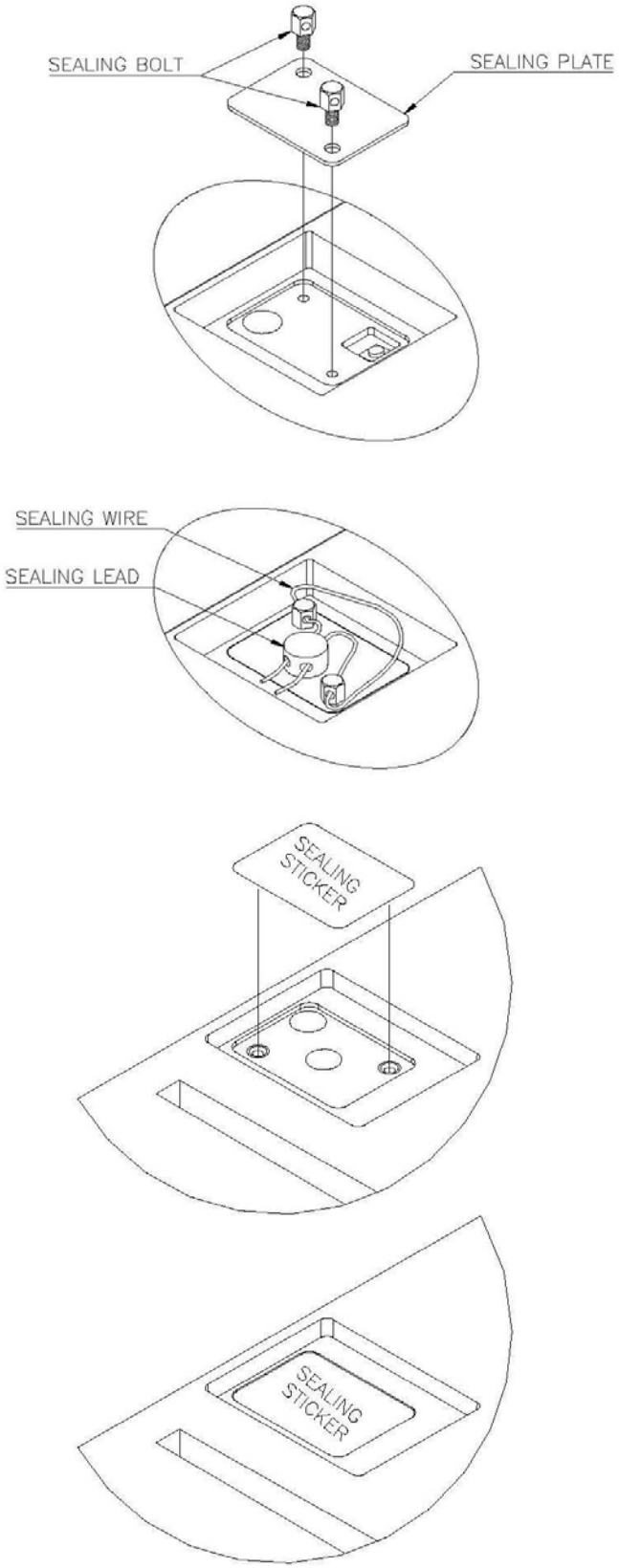
FIGURE 6/4D/345 – 1

CAS Model ER PLUS-U Weighing Instrument

FIGURE 6/4D/345 – 2

CAS Model DEP-50, ESC/POS Printer

FIGURE 6/4D/345 – 3



CAS ER Series Sealing Arrangements

FIGURE 6/4D/345 – 4

CAS Model ER JR-U Weighing Instrument

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