



Australian Government

National Measurement
Institute

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4C/250

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 & D Model FS-30Ki Weighing Instrument

submitted by A & D Australasia Pty Ltd
 32 Dew Street
 Thebarton SA 5031

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 – interim certificate issued | 16/05/07 |
| 1 | Pattern & variant 1 approved – certificate issued | 30/07/07 |
| 2 | Variant 2 approved – certificate issued | 3/08/10 |
| 3 | Pattern & variants 1 & 2 reviewed & updated – certificate issued | 13/09/13 |
| | | |

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/250' 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 6/4C/250

1. Description of Pattern

approved on 16/05/07

The A & D model FS-30Ki single interval class  self-indicating non-automatic weighing instrument (Figure 1 and Table 1) with a verification scale interval of 0.01 kg and a maximum capacity of 30 kg.

The model FS-30Ki has the load receptor directly supported by a single load cell model LC157-30K of 30 kg maximum capacity. The load receptor has maximum nominal dimensions of 380 × 300 mm.

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

Power supply may be either supplied by mains AC power or an internal rechargeable 6 V DC sealed lead-acid battery.

Instruments are not for trading direct with the public, and are so marked.

1.1 Zero

Zero is automatically corrected to within $\pm 0.25e$ whenever the instrument comes to rest within $0.5e$ of zero.

The instrument has a semi-automatic zero-setting device (to set the instrument to within $\pm 0.25e$ of zero) 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.

1.2 Tare

A semi-automatic subtractive tare device and/or a pre-set tare device, each of up to maximum capacity, may be fitted.

1.3 Management Functions

Instruments may be fitted with a number of management functions including 'Limit weighing', 'Target weighing' and 'Comparator'. These functions and displays are not approved for trade use.

1.4 Display Check

A display check is initiated whenever power is applied.

1.5 Verification Provision

Provision is made for the application of a verification mark.

1.6 Sealing Provision

Provision is made for the instrument to be sealed by the application of one or more mechanical seals (Figure 2).

In addition, the password security restricting access to the SETUP menu must always be enabled. Refer to the Test Procedure.

1.7 Levelling

Instruments are provided with adjustable feet and a level indicator, adjacent to which is a level notice stating 'Instrument must be level when in use', or similar wording.

1.8 Descriptive Markings and Notices

The instrument model number is shown on the instrument nameplate.

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 6/4C/250 |
| Maximum capacity | <i>Max</i> kg #1 |
| Minimum capacity | <i>Min</i> kg #1 |
| Verification scale interval | <i>e</i> = kg #1 |
| Maximum subtractive tare | <i>T</i> = - 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*.

Instruments are not for trading direct with the public, and are so marked.

2. Description of Variant 1 approved on 13/09/13

Certain other models of the FS-*i* series of single interval non-automatic weighing instruments as listed in Table 1. The pattern, model FS-30K*i*, is shown in **bold** type.

The load receptor has maximum nominal dimensions of 250 × 250 mm.

TABLE 1

| Model | Maximum Capacity <i>Max</i> | Verification Scale Interval <i>e</i> | Minimum Capacity <i>Min</i> | Load Cell Model and E_{max} |
|-----------------------|--------------------------------|---|--------------------------------|-------------------------------|
| FS-6K <i>i</i> | 6 kg | 0.002 kg | 0.04 kg | LC 156-6 K, 6 kg |
| FS-15K <i>i</i> | 15 kg | 0.005 kg | 0.1 kg | LC 156-15 K, 15 kg |
| FS-30K<i>i</i> | 30 kg | 0.01 kg | 0.2 kg? | LC 156-30 K, 30 kg? |

3. Description of Variant 2 approved on 3/08/10

The model FS-15K*i* of 15 kg maximum capacity as described in variant 1 but now with a larger 380 × 300 mm platform (Figure 3).

TEST PROCEDURE No 6/4C/250

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 6/4C/250 – 1



A & D Model FS-30Ki Weighing Instrument (The Pattern)

FIGURE 6/4C/250 – 2



Showing Typical Sealing

FIGURE 6/4C/250 – 3



Model FS-15Ki With a Large Platform (Variant 2)

~ End of Document ~