



Australian Government
**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/9C/289

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 FG-30KBM Weighing Instrument

submitted by A & D Australasia Pty Ltd
 (formerly A & D Mercury 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 **1/08/16**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variant 1 approved – interim certificate issued	6/07/06
1	Pattern & variant 1 – certificate issued	2/11/06
2	Pattern & variant 1 reviewed & updated – certificate issued	18/10/11

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 6/9C/289' 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 values of the performance criteria (maximum number of scale intervals etc.) applicable to the instrument shall be within the limits specified herein and in any approval documentation for the components where they are approved separately.

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 his powers under Regulation 60 of the *National Measurement Regulations 1999*.

A handwritten signature in black ink, consisting of a series of loops and flourishes, positioned to the right of the signature text.

TECHNICAL SCHEDULE No 6/9C/289

1. Description of Pattern

approved on 6/07/06

An A & D model FG-30KBM self-indicating single interval weighing instrument (Figure 1) of 30 kg maximum capacity and a verification scale interval of 0.010 kg.

Power is supplied by batteries or by an A & D model TB: 200 (9 V, 700 mA) mains adaptor; the submitter should be consulted regarding the acceptability of alternative power supplies.

1.1 Basework

The model FG-30KBM basework (Figure 1) has the load receptor directly supported by a single load cell. The load receptor has maximum nominal dimensions of 300 × 380 mm.

1.2 Load Cell

An A & D model LC+150-30K class C3 load cell of 48 kg maximum capacity is used.

1.3 Indicator

The indicator has a liquid crystal display (LCD), may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices, and may be remote from the basework.

1.3.1 Zero

Instruments have a zero indicator which indicates whenever zero is correct within $\pm 0.25e$.

The zero-tracking device automatically corrects zero to within $\pm 0.25e$ whenever the instrument comes to rest within $\pm 0.5e$ of zero.

The initial zero-setting device of the pattern 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.

1.3.2 Tare

A semi-automatic subtractive taring device of up to the maximum capacity of the instrument may be fitted.

1.3.3 Display Check

A display check is initiated whenever power is applied.

1.3.3 Additional Features

Instruments may be fitted with a counting function, and a facility for 'HI', 'LO' and 'OK' values to be entered to indicate a target range, for a visual indication of when the target is reached, and for switching of outputs relating to the target range.

Indications other than the indications of measured mass (i.e. gross, or net) displayed either on the indicator or on an auxiliary or peripheral device, are not for trade use.

1.4 Levelling

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

1.5 Verification Provision

Provision is made for the application of a verification mark.

1.6 Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full	A & D Company Limited
Name or mark of manufacturer's agent
Indication of accuracy class	Ⓜ
Maximum capacity	<i>Max</i> kg (#)
Minimum capacity	<i>Min</i> kg (#)
Verification scale interval	<i>e</i> = kg (#)
Tare capacity (if less than <i>Max</i>)	<i>T</i> = - kg
Serial number of the instrument
Pattern approval mark for the instrument	6/9C/289

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

Instruments of less than 100 kg maximum capacity are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC' (or similar wording).

1.7 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of two lead and wire seals, or destructible labels sealing the load cell cable access cover and the housing halves, provided on the rear panel (Figure 2).

2. Description of Variant 1

approved on 6/07/06

Certain other models (and capacities) of the FG series as listed in Table 1. The suffixes (KAL, KAM and KBM) indicate the platform size and whether or not the indicator is column-mounted (Figure 3).

TABLE 1

Model Number	Maximum Capacity	VSI (*) (e)	Load Receptor	Load Cell Model	Load Cell Capacity
FG-30KAM	30 kg	0.01 kg	300x380	LC+150-30K	48 kg
FG-30KBM	30 kg	0.01 kg	300x380	LC+150-30K	48 kg
FG-60KAL	60 kg	0.02 kg	390x530	LC+150-60K	96 kg
FG-60KAM	60 kg	0.02 kg	300x380	LC+150-60K	96 kg
FG-60KBM	60 kg	0.02 kg	300x380	LC+150-60K	96 kg
FG-150KAL	150 kg	0.05 kg	390x530	LC+150-150K	240 kg
FG-150KAM	150 kg	0.05 kg	300x380	LC+150-150K	240 kg
FG-150KBM	150 kg	0.05 kg	300x380	LC+150-150K	240 kg

(*) VSI – verification scale interval (e)

TEST PROCEDURE No 6/9C/289

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

Maximum Permissible Errors

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

FIGURE 6/9C/289 – 1



A & D Model FG-30KBM Weighing Instrument

FIGURE 6/9C/289 – 2



Typical Sealing

FIGURE 6/9C/289 – 3



Typical FG-****KA*** Weighing Instrument (With Column-mounted Indicator)

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