Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4C/342

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.

Adam Equipment Model GGF 60M Weighing Instrument

submitted by Adam Equipment (S.E. Asia) Pty Ltd
70 Miguel Road
Bibra Lake WA 6163

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 October 2015.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 and 2 approved – certificate issued	10/03/26
1	Variant 1 amended (Table 1) – certificate issued	19/03/26

CONDITIONS OF APPROVAL

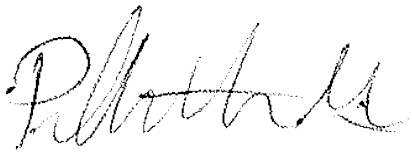
General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/342' 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 Certificate of Approval 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*.



Phillip Mitchell
A/g Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No 6/4C/342

1. Description of Pattern approved on 10/03/26

An Adam Equipment Model GGF 60M class (III) single interval self-indicating non-automatic weighing instrument (Figure 1) of 60 kg maximum capacity with a verification scale interval of 0.02 kg, and with a minimum capacity of 0.4 kg.

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).

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

1.1 Basework

The Adam Equipment Model GGF 60M basework (Figure 2) has the load receptor directly supported by a single load cell. The load receptor has a nominal dimension of 400 mm × 500 mm, and typically uses a stainless steel type construction.

1.2 Load cell

A Xiamen Loadcell Technology (LCT) model LAD-100kg load cell of 100 kg maximum capacity is used.

1.3 Indicator

An Adam Equipment model AE-403M digital indicator (Figure 3) is used. The indicator is described in the documentation of approval NMI S883.

The indicator has a stainless steel enclosure with an LCD display for display of the weight value.

The indicator may be mounted on a column attached to the base.

1.4 Zero

A zero-tracking device may be fitted.

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.

1.5 Tare

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

1.6 Display Check

A display check is initiated whenever power is applied.

1.7 Levelling

The instrument is provided with adjustable feet and a level indicator.

The instrument is to be used in a level condition as indicated by the level indicator.

1.8 Power Supply

Power for Adam Equipment Model GGF 60M instrument may be supplied either by:

- AC mains power (230 V AC, 50/60Hz) or
- An internal 6 V DC rechargeable sealed lead acid battery.

1.9 Additional Features

The indicator may have certain additional functions (e.g. holding/peak, parts count, accumulated total, percent weighing, check weighing backlight colours and/or alarm). The additional functions (other than the indications of measured mass, i.e. gross, tare, net, displayed either on the indicator or on an auxiliary or peripheral device), are not approved for trade use.

Instruments may also be fitted with animal weighing function. This function shall not be used for trade use.

1.10 Interfaces

Instruments may be fitted with interfaces for the connection of auxiliary and/or peripheral devices. Any interfaces shall comply with clause 5.3.6 of document NMI R 76 (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 General Supplementary Certificate of Approval No S1/0/B (in particular in regard to data and its format).

Instruments may be fitted with RS 232 and relay interfaces.

1.10 Verification Provision

Provision is made for the application of a verification mark.

1.11 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Adam Equipment
Indication of accuracy class	(III)
Pattern approval number for the instrument	NMI 6/4C/342
Maximum capacity	*Max* ..... kg or g #1
Minimum capacity	*Min* ..... kg or g #1
Verification scale interval	*e* = ... kg or g #1
Serial number of the instrument	……..

#1 These markings are shown near the display of the result.

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

1.12 Sealing Provision

Provision is made for the calibration to be sealed by setting two pins on the motherboard within the instrument to an OPEN status, and then preventing access within the instrument housing either by the use of destructible adhesive labels

placed on the side of the instrument housing as shown in Figure 4 or by use a 'lead and wire' with drilled screws as shown in Figure 5.

It is possible to determine that the pin status is in the OPEN status as follows (starting from the normal weighing mode):

- Press and hold the ⏻ key to switch off the instrument
- Press and hold the ⏻ key to switch on the instrument
- Press the ↵ key during the self-test sequence.
- If the pins are in the OPEN status, the instrument will return to the normal weighing mode. In this case the instrument may be verified.
- Otherwise the instrument will display "P " for passcode. In this case the calibration pins are in the CLOSED status. The instrument shall not be verified until the pins are in the OPEN status.

Alternatively the instrument is sealed by recording the count number on verification. Access to allow changing of set-up parameters including calibration parameters must be protected by a passcode.

The instrument automatically increments a configuration and/or calibration value (count number) each time the instrument is re-configured and/or calibrated. The value of the counters can be seen in the switch-on display sequence (when power is first applied to the indicator).

The value(s) of these counters may be recorded on a destructible adhesive label attached to instrument (e.g. as CALCnt xxx, ParCnt yyy).

Any subsequent alternation to the calibration or configuration will be evident as the recorded values and the current counter values will differ.

1.13 Software

The legally relevant software is designated v1.xx, where 'xx' refers to the identification of non-legally relevant software.

The software version and number can be seen in the switch-on display sequence (when the power is first applied to the instrument).

2. Description of Variant 1 — **approved on 10/03/26, amended on 19/03/26**

The Adam equipment models GGS and GGB and GGF and GGL series single interval instruments which are similar to the pattern and have a stainless steel type construction basework which has the load receptor directly supported by a ZEMIC model L6E or LCT model LAB or LCT model LAE or LCT model LAD load cell in certain other capacities as listed in Table 1 (the pattern is shown in **bold**) and as shown in Figures 1 and 6 to 8.

3. Description of Variant 2 — **approved on 10/03/26**

The Adam equipment model AGB and AGF series single interval instruments which are similar to the pattern but having a painted mild steel type construction basework which has the load receptor directly supported by a ZEMIC model L6N or LCT model LAE or LCT model LAD load cell in certain capacities as listed in Table 2 and as shown in Figures 9 to 10.

TABLE 1

Model No.	Maximum Capacity (*Max*) (kg)	Minimum Capacity (*Min*) (kg)	Verification Scale Interval (*e*) (kg)	Pan Size (mm x mm)	Load Cell
GGS 6M	6	0.04	0.002	250 x 250	LCT LAB-10kg B3-C3-2.0-C200
GGS 15M	15	0.1	0.005	250 x 250	LCT LAB-20kg B3-C3-2.0-C200
GGS 30M	30	0.2	0.01	250 x 250	LCT LAB-40kg B3-C3-2.0-C200
GGB 30M	30	0.2	0.01	300 x 400	ZEMIC L6E-C3-60kg-2B Y=15000
GGB 60M	60	0.4	0.02	300 x 400	LCT LAE-100kg A-C3-2.0-C200
GGF 60M	**60**	**0.4**	**0.02**	**400 x 500**	**LCT LAD-100kg A-C3-2.0-C200**
GGF 150M	150	1	0.05	400 x 500	LCT LAD-200kg A-C3-2.0-C200
GGL 150M	150	1	0.05	450 x 600	LCT LAD-200kg A-C3-2.0-C200
GGL 300M	300	2	0.1	450 x 600	LCT LAD-500kg A-C3-2.0-C200

TABLE 2

Model No.	Maximum Capacity (*Max*) (kg)	Minimum Capacity (*Min*) (kg)	Verification Scale Interval (*e*) (kg)	Pan Size (mm x mm)	Load Cell
AGB 6M	6	0.04	0.002	300 x 400	ZEMIC L6N-C3-10kg
AGB 15M	15	0.1	0.005	300 x 400	LCT LAE-25kg A-C3-2.0-C200
AGB 30M	30	0.2	0.01	300 x 400	LCT LAE-40kg A-C3-2.0-C200
AGB 60M	60	0.4	0.02	300 x 400	LCT LAE-100kg A-C3-2.0-C200
AGF 60M	60	0.4	0.02	400 x 500	LCT LAD-100kg A-C3-2.0-C200
AGF 150M	150	1	0.05	400 x 500	LCT LAD-200kg A-C3-2.0-C200
AGF 300M	300	2	0.1	400 x 500	LCT LAD-500kg A-C3-2.0-C200

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.

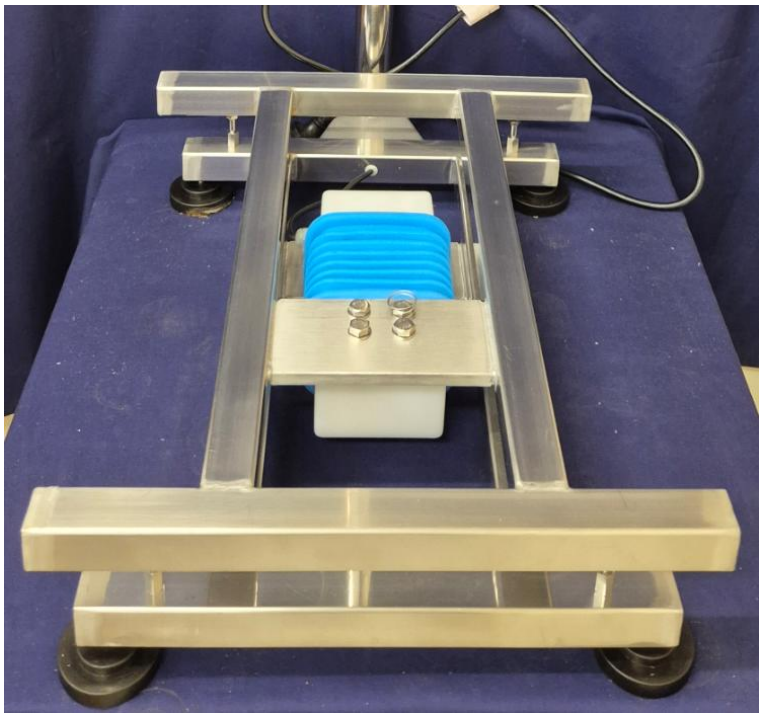
Maximum Permissible Errors

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

FIGURE 6/4C/342 – 1

Adam Equipment Model GGF Weighing Instrument

FIGURE 6/4C/342 – 2

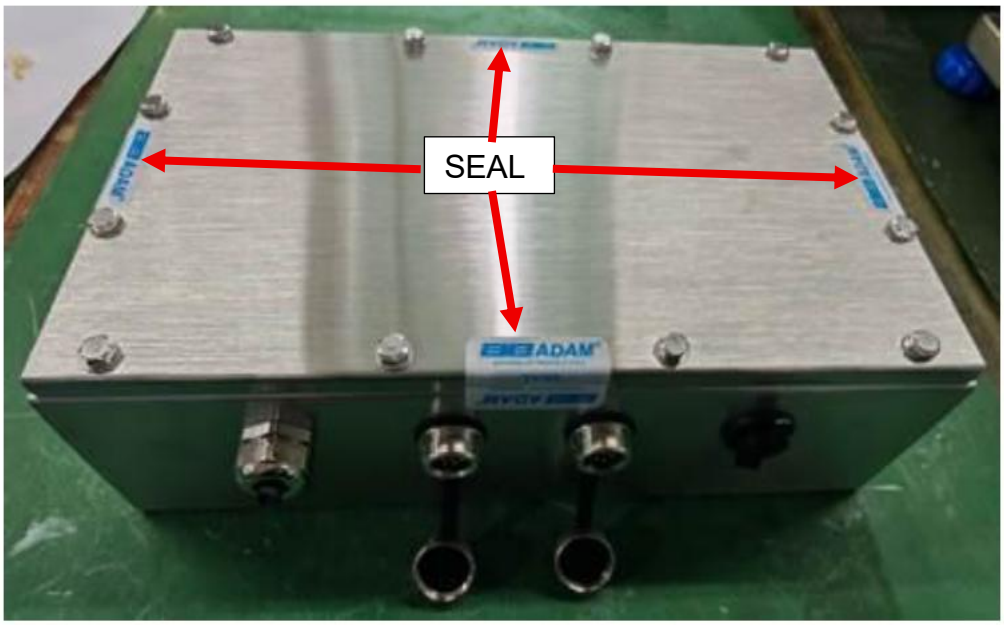


Adam Equipment Model GGF Basework

FIGURE 6/4C/342 – 3

Adam equipment Model AE 403M Digital Indicator

FIGURE 6/4C/342 – 4

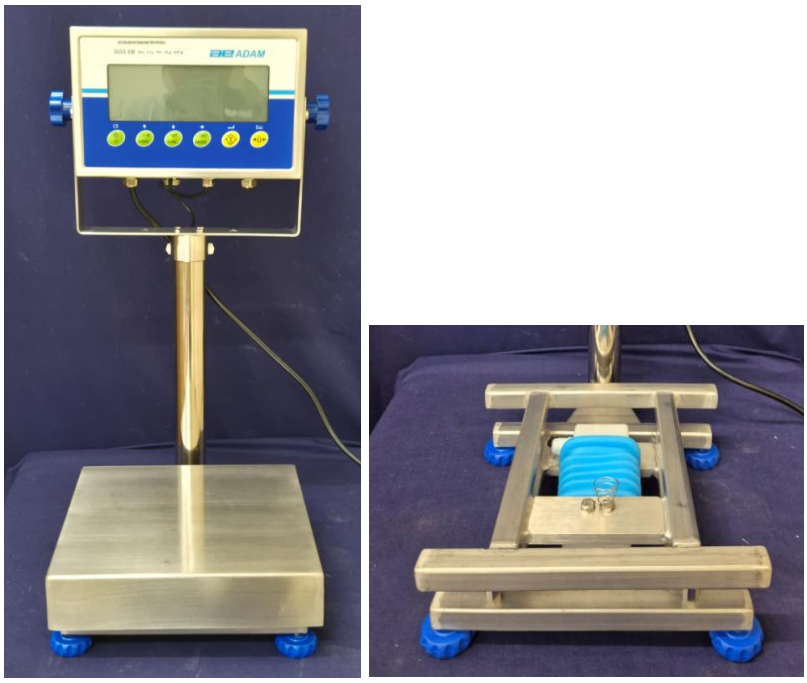


Sealing of Digital Indicator (Destructible Adhesive Labels)

FIGURE 6/4C/342 – 5

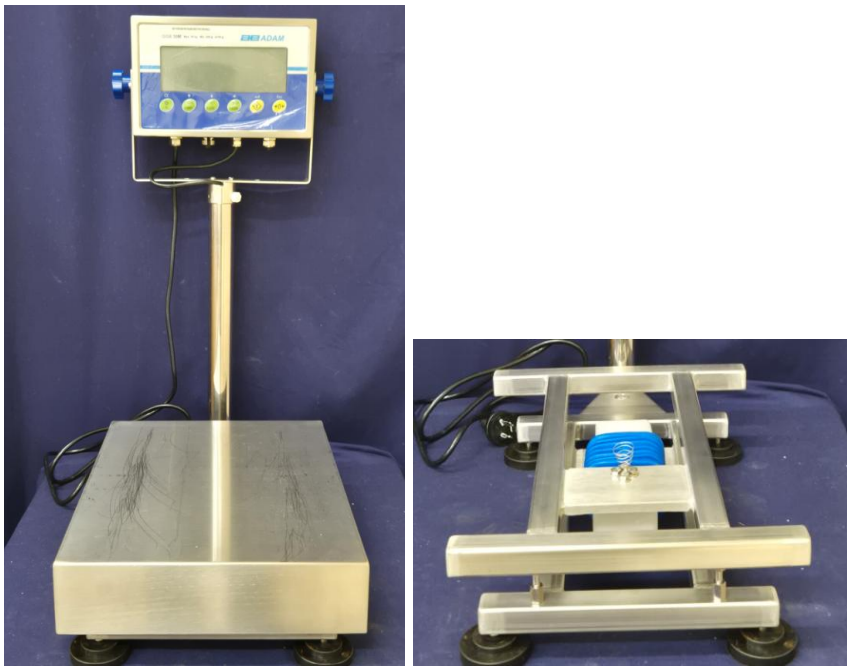
Sealing of Digital Indicator (Lead and Wire Type)

FIGURE 6/4C/342 – 6



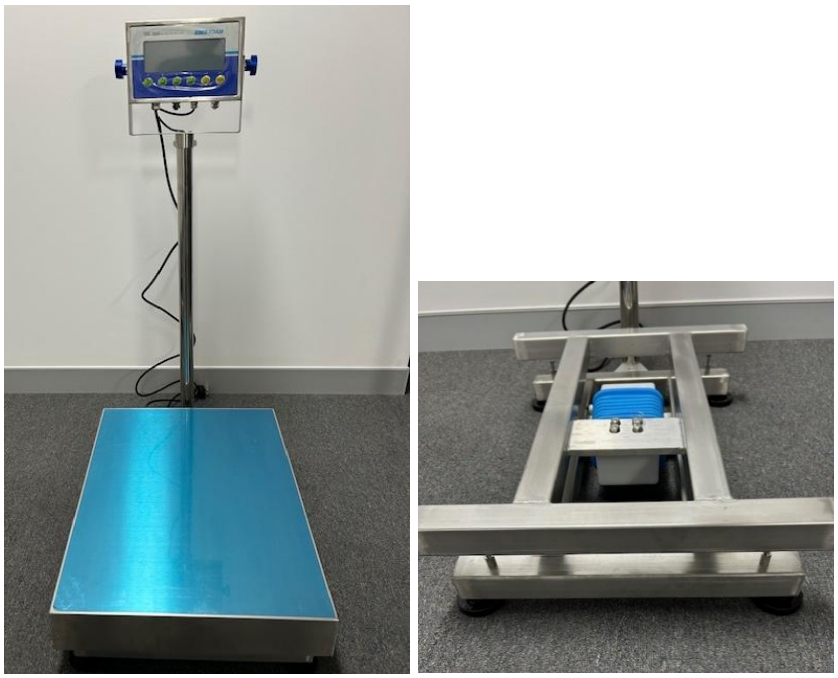
Adam Equipment Model GGS Series Weighing Instrument

FIGURE 6/4C/342 – 7



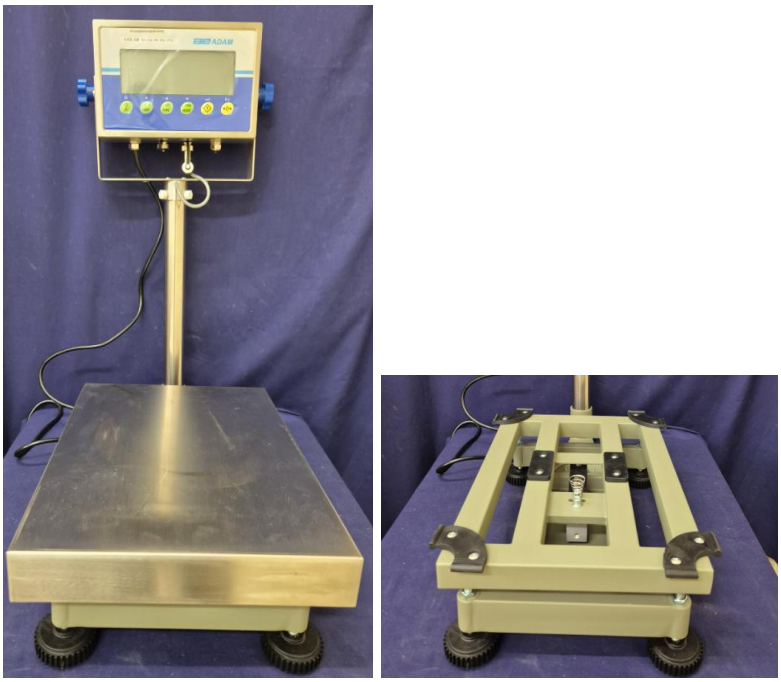
Adam Equipment Model GGB Series Weighing Instrument

FIGURE 6/4C/342 – 8



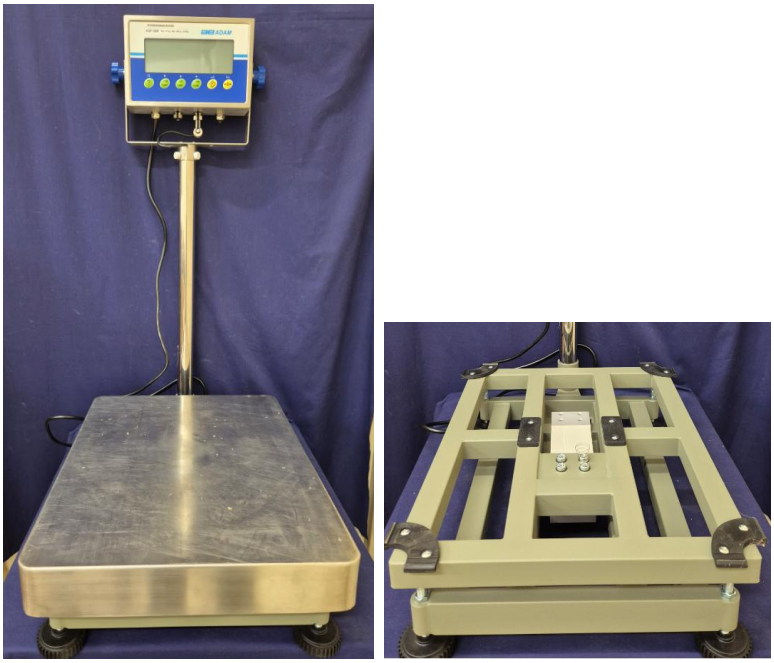
Adam Equipment Model GGL Series Weighing Instrument

FIGURE 6/4C/342 – 9



Adam Equipment Model AGB Series Weighing Instrument

FIGURE 6/4C/342 – 10



Adam Equipment Model AGF Series Weighing Instrument

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