Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/9C/317

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 HV-15KCP 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 October 2015.

This approval becomes subject to review on 1/05/23, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 - 2 approved – certificate issued	10/04/18

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 6/9C/317' 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.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.

Darryl Hines
Manager - Pattern Approval, Policy and Licensing Section

TECHNICAL SCHEDULE No 6/9C/317

1. Description of Pattern approved on 10/04/18

The A&D model HV-15KCP class (III) non-automatic multi-interval self-indicating weighing instrument (Figure 1 and Table 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 and then a verification scale interval e_3 of 0.005 kg from 6 kg up to 15 kg.

The instrument is fitted with one LCD display for display of the weight value.

The instrument is fitted with an integral printer.

The instrument operates from an AND TB-278 model SMI36-9 AC/DC mains adaptor (9 V DC, 3.34 A) – the submittor should be consulted regarding the acceptability of alternative power supply units.

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).

1.1 Zero

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.

A zero-tracking device may be fitted.

1.2 Tare

A semi-automatic subtractive tare device of up to maximum capacity may be fitted.

A non-automatic keyboard-entered preset tare device of up to 3 kg may be fitted.

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 Levelling

Instruments are provided with adjustable feet and a level indicator.

Instruments are to be used in a level condition as indicated by the level indicator.

1.5 Additional Features

Instruments may be fitted with a number of additional functions including comparator (LO, OK and HI) and counting ('pcs'). The additional functions (other than the indications of measured mass, i.e. gross, tare, net, totals, displayed either on the indicator or on an auxiliary or peripheral device) are not approved for trade use.

1.6 Verification Provision

Provision is made for the application of a verification mark.

1.7 Sealing Provision

Provision is made for access to the calibration switch within the indicator unit to be sealed by means of lead and wire type seals with drilled screws as shown in Figure 2a or with destructible adhesive labels placed over the switch cover as shown in Figure 2b.

1.8 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	A & D Co. Limited
Name or mark of manufacturer's agent	A & D Australasia Pty Ltd
Indication of accuracy class	(III)
Pattern approval mark for the instrument	NMI 6/9C/317
Maximum capacity	*Max* ...../...../…. g or kg #
Minimum capacity	*Min* ..... g or kg #
Verification scale interval	*e* = .../...../..... g or kg #
Serial number of the instrument	……..

These markings are shown near the display of the result.

In addition, instruments may be required to carry a notice stating NOT FOR TRADING DIRECT WITH THE PUBLIC, or similar wording (see ***1. Description of Pattern*** above).

1.9 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 R76 (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 Supplementary Certificate No S1/0B (in particular in regard to the data and its format).

Instruments may be fitted with one USB serial data interface.

1.10 Software

The software version is designated P-1.xx where xx = 00 to 99 represents the non-legally relevant software.

The software version and number can be checked by following steps:

- Switch off the instrument.
- Press and hold the [ZERO] key and [TARE] key, then press the [ON/OFF] key.
- Before a display check is initiated, hold the [TARE] key and press the [ZERO] key twice.
- The software version number is displayed.

2. Description of Variant 1 **approved on 10/04/18**

Certain A&D HV-CP models (Figure 3a and 3b) which are similar to the pattern but having other capacities as listed in Table 1 (the pattern is shown in **bold**).

TABLE 1

	HV-15KCP	HV-60KCP	HV-200KCP
Max. Capacity (kg)	**3/6/15**	15/30/60	60/150/220
Min. Capacity (kg)	**0.02**	0.1	0.4
Verification Scale Interval, e (kg)	**0.001/0.002/0.005**	0.005/0.01/0.02	0.02/0.05/0.1
Max. Tare (kg)	**15**	60	220
Preset Tare (kg)	**3**	15	60
Weighing pan size (mm)	**250 x 250**	330 x 424	390 x 530

3. Description of Variant 2 approved on 10/04/18

The A&D HV-C models (Figure 4a, 4b and 4c) which are similar to the pattern and variant 1 but having no integral printer.

Power for the A&D HV-C model instruments may be supplied by:

- an AC/DC mains adapter; and/or
- 4 x D size dry batteries (with display backlight and LED comparator lights OFF).

TEST PROCEDURE No 6/9C/317

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

Maximum Permissible Errors

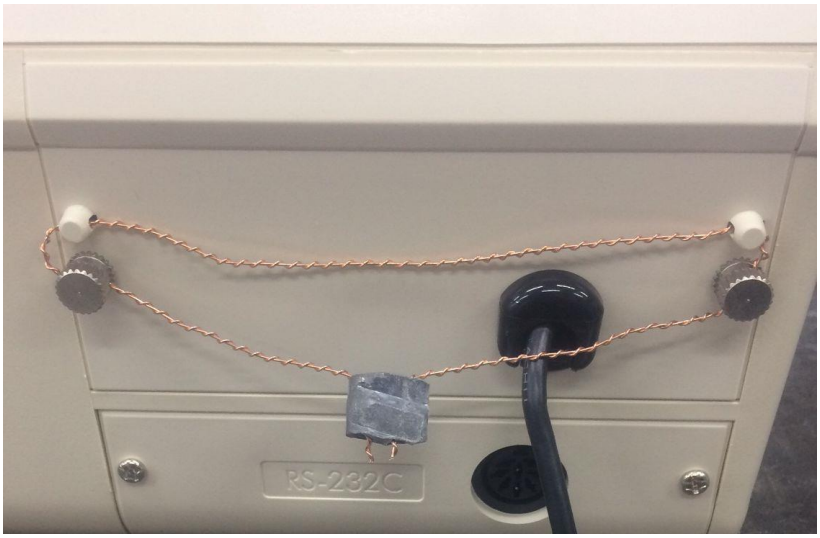
The maximum permissible errors are specified in Schedule 1 of the National Trade Measurement Regulations 2009.

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 6/9C/317 – 1

A&D Model HV-15KCP Weighing Instrument (Pattern)

FIGURE 6/9C/317 – 2



(a) Lead and Wire Type Sealing Arrangement

(b) Destructible Adhesive Labels Sealing Arrangement

Typical Sealing Methods

FIGURE 6/9C/317 – 3

(a) A&D Model HV-60KCP Weighing Instrument

(b) A&D Model HV-200KCP Weighing Instrument

FIGURE 6/9C/317 – 4

(a) A&D Model HV-15KC Weighing Instrument

(b) A&D Model HV-60KC Weighing Instrument

(c) A&D Model HV-200KC Weighing Instrument

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