



National Standards Commission

12 Lyonpark Road, North Ryde NSW

Cancellation Certificate of Approval No 6/9C/215A

This is to certify that the approval for use for trade granted in respect of the

A & D Mercury Model FV-60KA1 Weighing Instrument

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

has been cancelled in respect of new instruments as from 1 October 2000.

Instruments which were verified/certified before that date may, with the concurrence of the relevant verifying authority, be submitted for reverification.

Signed by a person authorised under Regulation 63 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.



National Standards Commission



Certificate of Approval

No 6/9C/215A

Issued under Regulation 9
of the
National Measurement (Patterns of Measuring Instruments) Regulations

This is to certify that an approval for use for trade has been granted in respect of the

A & D Mercury Model FV-60KA1 Weighing Instrument

submitted by 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.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 December 1999, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No 6/9C/215A and only by persons authorised by the submittor.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0/A.

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 Commission 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 the Commission's Document 106.

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

DESCRIPTIVE ADVICE

Pattern: approved 30 November 1994

- An A & D Mercury model FV-60KA1 self-indicating weighing instrument of 60 kg maximum capacity.

Variants: approved 30 November 1994

1. Model FV-150KA1 of 150 kg maximum capacity.
2. Model FW-300KA4 of 300 kg maximum capacity.

Technical Schedule No 6/9C/215A describes the pattern and variants 1 & 2.

Variant: approved 18 February 1997

3. Any basework of this approval with a compatible Commission-approved indicator.

Technical Schedule No 6/9C/215A Variation No 1 describes variant 3.

FILING ADVICE

Certificate of Approval No 6/9C/215A dated 3 April 1995 is superseded by this Certificate, and may be destroyed.

The documentation for this approval now comprises:

Certificate of Approval No 6/9C/215A dated 16 May 1997

Technical Schedule No 6/9C/215A dated 3 April 1995 (incl. Test
Procedure)

Technical Schedule No 6/9C/215A Variation No 1 dated 16 May 1997
(incl. Table 1)

Figures 1 and 2 dated 3 April 1995

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.



National Standards Commission

TECHNICAL SCHEDULE No 6/9C/215A

Pattern: A & D Mercury Model FV-60KA1 Weighing Instrument.

Submittor: A & D Mercury Pty Ltd
32 Dew Street
Thebarton SA 5031.

1. Description of Pattern

An A & D Mercury model FV-60KA1 self-indicating weighing instrument (Figure 1) of 60 kg maximum capacity with a verification scale interval of 0.02 kg.

1.1 Basework

The model FV-60KA1 basework (Figure 1) has the platform directly supported by a single load cell. The basework may also be known as a model HV-60KA1.

1.2 Load Cell

An A & D model LC4103-K060 load cell of 60 kg capacity is used and mounted as shown in Figure 2.

1.3 Indicator

An A & D model FV digital indicator is used.

1.3.1 Zero

Zero is automatically set to within $\pm 0.25e$ whenever the instrument comes to rest within $\pm 0.5e$. If the instrument comes to rest outside that range but within the zero setting range, zero may be set by pressing the zero button.

The initial zero-setting device has a range of not more than $\pm 20\%$ of the maximum capacity of the instrument.

1.3.2 Display Check

A display check is initiated whenever power is applied.

1.3.3 Tare

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

1.3.4 Management Functions

Instruments may be fitted with a number of management functions which are not approved for trade use, including set point and counting.

1.4 Markings

Instruments are marked with the following data, together in one location:

Manufacturer's name or mark	
Serial number	
NSC approval number	NSC No 6/9C/215A
Accuracy class	III
Maximum capacity	Max kg *
Minimum capacity	Min kg *
Verification scale interval	e = kg *

* These are repeated adjacent to each reading face.

1.5 Verification/Certification Provision

Provision is made for a verification/certification mark to be applied.

1.6 Sealing Provision

Provision is made for the calibration adjustments to be sealed.

2. Description of Variants

2.1 Variant 1

A model FV-150KA1 self-indicating weighing instrument of 150 kg maximum capacity with a verification scale interval of 0.05 kg.

The basework is known as a model FV-150KA1 or HV-150KA1.

An A & D model LC4103-K150 load cell of 150 kg capacity is used and mounted as shown in Figure 2.

An A & D model FV digital indicator is used.

2.2 Variant 2

A model FW-300KA4 self-indicating weighing instrument of 300 kg maximum capacity with a verification scale interval of 0.1 kg.

The basework is known as a model FV-300KA1 or HV-300KA1.

An A & D model LC4204-K300 load cell of 300 kg capacity is used and mounted as shown in Figure 2.

An A & D model FW digital indicator is used. This has the same functions as the model FV indicator described for the pattern.

TEST PROCEDURE

Instruments should be tested in conjunction with any tests specified in the approval documentation for the indicator used, and in accordance with any relevant tests specified in the Inspector's Handbook.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors for increasing and decreasing loads, expressed in terms of verification scale interval (e), with the instrument adjusted to zero within $\pm 0.25e$ at no load, are:

- $\pm 0.5e$ for loads from 0 to 500e;
- $\pm 1.0e$ for loads over 500e up to 2000e; and
- $\pm 1.5e$ for loads over 2000e.

National Standards Commission

TECHNICAL SCHEDULE No 6/9C/215A

VARIATION No 1

Pattern: A & D Mercury Model FV-60KA1 Weighing Instrument.

Submitter: A & D Mercury Pty Ltd
32 Dew Street
Thebarton SA 5031.

1. Description of Variant 3

Any basework of this approval, as listed in Table 1, connected to a compatible Commission-approved single-interval indicator provided that a satisfactory analysis report (using the calculations included in clauses 6.3 to 6.6 of General Certificate of Approval No 6B/0 dated 13 March 1992) is completed.

The limiting characteristics of the baseworks are given in Table 1.

TABLE 1

Model: (*)	FV-30KB2	FV-60KB1	FV-150KB1	FW-300KB4
Maximum capacity	30 kg	60 kg	150 kg	300 kg
Maximum number of verification scale intervals	3000	3000	3000	3000
Minimum value of verification scale interval	0.01 kg	0.02 kg	0.05 kg	0.1 kg
Maximum load receptor (mm)	326x420	390x530	390x530	600x700
Load Cell:				
Number of load cells	1	1	1	1
Output rating (nominal)	1 mV/V	1 mV/V	1 mV/V	1.5 mV/V
Input impedance (nominal)	400 Ω	400 Ω	400 Ω	400 Ω
Supply voltage (AC or DC)	12 V	12 V	12 V	12 V
Cable length (± 0.1 m)	1.5 m	2 m	2 m	5 m
Number of leads (plus shield)	4	4	4	4

(*) Baseworks may also be known as model HV-##### or HW-##### as appropriate.

Approved Models and Capacities of Baseworks

National Standards Commission



NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/9C/215A

CHANGE No 1

The following change is made to the approval documentation for the

A & D Mercury Model FV-60KA1 Weighing Instrument

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

In Technical Schedule No 6/9C/215A dated 3 April 1995, clause 1.4 **Markings** should be amended by adding the following note:

Note: In addition, instruments of 100 kg capacity or less shall carry a notice stating NOT FOR RETAIL COUNTER USE, or NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar.

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.

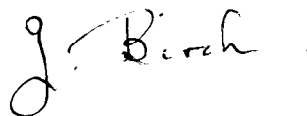
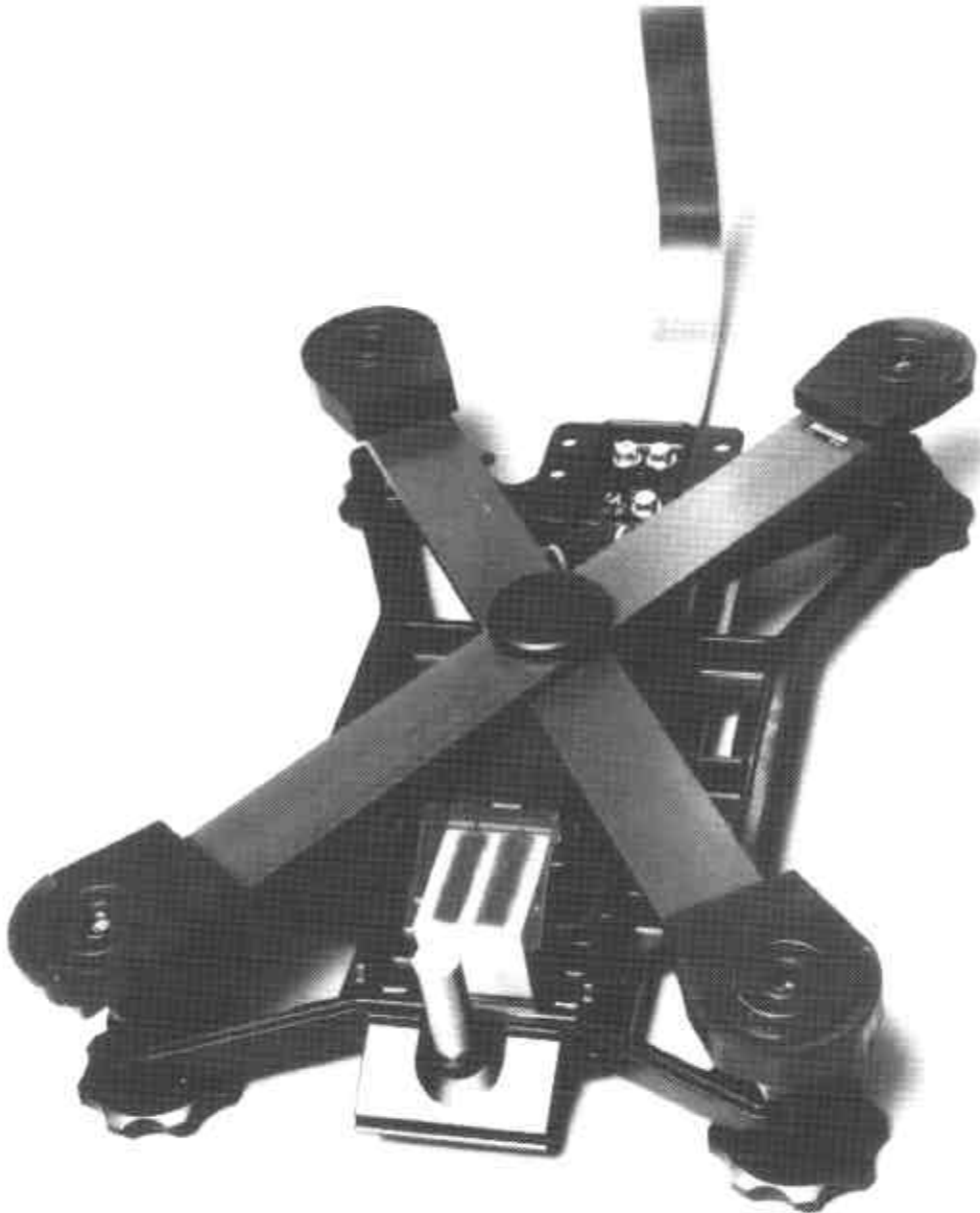


FIGURE 6/9C/215A - 1



A & D Mercury Model FV-60KA1 Weighing Instrument

FIGURE 6/9C/215A - 2



Typical FV/HV Series Basework