



**Australian Government**  
**National Measurement  
Institute**

Bradfield Road, West Lindfield NSW 2070

**Cancellation**  
**Certificate of Approval No 6/4C/221**

Issued by the Chief Metrologist under Regulation 60  
of the  
*National Measurement Regulations 1999*

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

Shenko Denshi Vibra AF Series Weighing Instruments

submitted by        W W Wedderburn Pty Ltd  
                          now of 101 Williamson Road  
                          Ingleburn    NSW    2565

has been cancelled in respect of new instruments as from 1 December 2013.

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

A handwritten signature in black ink, appearing to read 'A Rawlinson', with a horizontal line underneath.

Dr A Rawlinson



# Australian Government

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## National Standards Commission

12 Lyonpark Road, North Ryde NSW 1670 Australia

### Certificate of Approval

**No 6/4C/221**

Issued 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

Shinko Denshi Vibra AF Series Weighing Instruments

submitted by W W Wedderburn Pty Ltd  
90 Parramatta Road  
Summer Hill NSW 2130.

**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 September 2008, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No 6/4C/221 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 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 NSC P 106.

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

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

### DESCRIPTIVE ADVICE

**Patterns:** approved 26 August 2003

- The Shinko Denshi Vibra AF series of special accuracy class ① weighing instruments of 220 g maximum capacity.

Technical Schedule No 6/4C/221 describes the patterns.

### FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 6/4C/221 dated 26 September 2003

Technical Schedule No 6/4C/221 dated 26 September 2003 (incl. Table 1 and Test Procedure)

Figure 1 dated 26 September 2003

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.



## TECHNICAL SCHEDULE No 6/4C/221

**Patterns:** Shinko Denshi Vibra AF Series Weighing Instruments

**Submittor:** W W Wedderburn Pty Ltd  
90 Parramatta Road  
Summer Hill NSW 2130

### 1. Description of Patterns

The Shinko Denshi Vibra AF series of special accuracy class ① weighing instruments (Figure 1 and Table 1) of 220 g maximum capacity.

The instruments use electromagnetic force compensation technology and have a liquid crystal display (LCD).

Instruments are approved for use over a temperature range of +15°C to +25°C, and are so marked. Instruments are not for trading direct with the public, and are so marked.

Instruments have a windshield provided over the load receptor.

Power is supplied by a Wedderburn model 9VDC500 (9 V DC, 500 mA) mains adaptor; the submittor should be consulted regarding the acceptability of alternatives.

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

#### 1.1 Zero and Tare

Instruments have an initial zero-setting device with a nominal range of not more than 20% of the maximum capacity of the instrument.

Instruments have a combined semi-automatic zero-setting and subtractive tare balancing device (operated by the '→0/T←' key). Operation of this device zeroes the instrument if the load is within the zero-setting range (up to 4% of the maximum capacity of the instrument), otherwise the instrument is tared ('→T←' appears). The subtractive taring device operates up to the maximum capacity of the instrument.

A zero-tracking device may also operate to automatically correct to within  $\pm 0.25e$  (or  $\pm 0.5d$  where  $d < e$ ) whenever the instrument comes to rest with the display indicating zero (including net zero).

#### 1.2 Alternative Units

##### (i) Metric Carats

Instruments may be operated in a mode using units of metric carats (1 metric carat = 0.2 g). This may either be instead of, or in addition to operation with units of grams (g). The symbol 'ct' indicates when the units are metric carats.

Table 1 shows parameters for the AF series instruments when used in units of metric carats. An instrument that can be operated in the metric carat mode shall carry markings in metric carats (in addition to markings in grams if gram units are also available).

## (ii) Milligrams

Instruments may be operated displaying milligrams (mg) rather than grams (g).

Parameters are as for grams operation, and it is not necessary for markings to be provided in milligrams.

## 1.3 Management Functions

Instruments may be fitted with a number of additional functions which display values that are not weighing results (e.g. counting, percentage or totals). The displays of such values are identified by the symbols 'pcs', '%' or 'Σ'. In addition instruments have a facility for setting of target ranges and providing HI / OK / LO indications.

These functions and displays are not approved for trade use.

## 1.4 Display Check

A display check is initiated when the instruments are switched on.

## 1.5 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.

## 1.6 Internal Self-Calibration System

Some instruments are fitted with an internal 'calibration' system (refer to Table 1). This comprises an internal calibration mass that may be applied to the instrument in an automatic adjustment cycle that is initiated manually by pressing a key. The instrument has facilities for advising an operator when this 'calibration' cycle should be utilised.

## 1.7 Descriptive Markings and Notices

The instrument model number is shown on the instrument nameplate.

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Shinko Denshi Co. Ltd
Name or mark of manufacturer's agent	W W Wedderburn Pty Ltd
Indication of accuracy class	Ⓛ
Pattern approval mark for the instrument	NSC No 6/4C/221
Maximum capacity	<i>Max</i> ..... g or ct *
Minimum capacity	<i>Min</i> ..... g or ct *
Verification scale interval	<i>e</i> = ..... g or ct *
Actual scale interval	<i>d</i> = ..... g or ct *
Serial number of the instrument	.....
Special temperature limits	+15°C to +25°C

\* These markings shall also be shown near the display of the result if they are not already located there.

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

### 1.8 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

### 1.9 Sealing Provision

Sealing of the calibration adjustments of special accuracy class instruments is not required. However there is provision for sealing of the calibration adjustment if necessary by use of a destructible adhesive label over access to the calibration switch located on the bottom of the instrument at the front right.

Where instruments are provided with an internal 'calibration' system, sealing of the instrument does not prevent operation of this system. However the system uses data regarding the value of the internal mass, and alteration of that data is prevented.

### 1.10 Approved Instruments

Approved instruments of the AF series are listed in Table 1.

Instruments have an auxiliary indicating device (a differentiated scale division which is shown in brackets in the display) with a value as shown in the 'd' column of Table 1.

The instruments marked 'Y' under 'SC' in Table 1 have the internal 'self-calibration' system.

TABLE 1

Model Number	Maximum Capacity (Max)	Minimum Capacity (Min)	Verification Scale Interval (e)	Scale Interval (d)	SC
AF-120CE	120 g	0.01 g	0.001 g	0.0001 g	
AF-R120CE	120 g	0.01 g	0.001 g	0.0001 g	Y
AF-220CE	220 g	0.01 g	0.001 g	0.0001 g	
AF-R220CE	220 g	0.01 g	0.001 g	0.0001 g	Y
AF-120CE	600 ct	0.01 ct	0.01 ct	0.001 ct	
AF-R120CE	600 ct	0.01 ct	0.01 ct	0.001 ct	Y
AF-220CE	1100 ct	0.01 ct	0.01 ct	0.001 ct	
AF-R220CE	1100 ct	0.01 ct	0.01 ct	0.001 ct	Y

Approved Models of the AF Series

## TEST PROCEDURE

Instruments should be tested in accordance with any relevant tests specified in the Uniform Test Procedures.

### **Maximum Permissible Errors at Verification/Certification**

For special accuracy class  $\textcircled{1}$  instruments, the maximum permissible errors for increasing and decreasing loads on initial verification/certification for loads,  $m$ , expressed in verification scale intervals,  $e$ , are:

- $\pm 0.5 e$  for loads  $0 \leq m \leq 50\,000$ ;
- $\pm 1.0 e$  for loads  $50\,000 < m \leq 200\,000$ ; and
- $\pm 1.5 e$  for loads  $200\,000 < m$ .

### **For instruments with an internal self-calibration facility**

Prior to verification/certification ensure that the instrument has been adjusted by the internal self-calibration system by pressing the 'CAL' key until 'Auto Cal' appears, and then allow the calibration procedure to proceed to completion (with no load on the platter).



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**Notification of Change**  
**Certificate of Approval No 6/4C/221**  
**Change No 1**

Issued by the Chief Metrologist under Regulation 60  
of the  
*National Measurement Regulations 1999*

The following changes are made to the approval documentation for the

Shenko Denshi Vibra AF Series Weighing Instruments

submitted by W W Wedderburn Pty Ltd  
90 Parramatta Road  
Summer Hill NSW 2130.

In Certificate of Approval 6/4C/221 dated 26 September 2003;

1. The Condition of Approval referring to the review of the approval should be amended to read:  
"This approval becomes subject to review on 1 September **2013**, and then every 5 years thereafter."
2. The FILING ADVICE should be amended by adding the following:  
"Notification of Change No 1 dated 9 October 2008"

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, appearing to be 'J. G. T.', is located in the bottom right corner of the page.



FIGURE 6/4C/221 – 1



Typical Shinko Denshi Vibra AF Series Weighing Instrument