Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

Certificate of Approval
NMI 6/4C/251

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.

NCR Model 7878-2000 Weighing Instrument

submitted by NCR Corporation
2651 Satellite Blvd
Duluth Georgia 30096
USA

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 1/06/18, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – certificate issued	30/05/07
1	Variant 1 approved – certificate issued	13/01/11
2	Variant 2 approved – certificate issued	25/11/11
3	Pattern & variants 1 & 2 reviewed & updated – certificate issued	22/03/13
4	Variant 3 approved – interim certificate issued	22/12/15
5	Variant 3 approved – certificate issued	16/06/16

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/251' 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 Certificates No S1/0/A or 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*.

Dr A Rawlinson

TECHNICAL SCHEDULE No 6/4C/251

1. Description of Pattern approved on 30/05/07

An NCR model 7878-2000 (#1) class (III) non-automatic self-indicating single interval weighing instrument (Figures 1 to 3) of 15 kg maximum capacity with a verification scale interval of 0.005 kg.

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

Instruments are fitted with one or two model 7825 (#2) displays mounted on a column (Figure 2). Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC' (or similar wording) unless two displays are present or unless the single display is located such that all primary indications are clearly and simultaneously displayed to both the vendor and the customer.

Instruments may be fitted with an extended (vertical) weighing platform attachment ('produce guard'), which is part of the 'live' weight receptor, as shown in Figure 4.

Instruments are approved for use over a temperature range of 0°C to +40°C and must be so marked.

Instruments use an AcBel model API2AD13 power supply; the submittor should be consulted regarding the acceptability of alternatives.

(#1) The last three digits of the model number (7878-2***) may be numerals other than '0', and an additional suffix (e.g. -9090) may be added, but these represent features which are not metrologically significant.

(#2) May also be marked as 'Class 7825'.

1.1 Zero

Zero is automatically corrected to within ±0.25e whenever power is applied and whenever the instrument comes to rest within 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.

Note: The light beside the zero setting device button is not a zero indicating device. The instrument does not require a zero indicating device.

1.2 Display Check

A display check is initiated whenever power is applied.

1.3 Scanner

Instruments are provided with an integral laser scanner for reading bar codes.

1.4 Levelling

The instrument is intended to be installed in a fixed position and hence is not fitted with a level indicator or levelling device.

1.5 Verification Provision

Provision is made for the application of a verification mark.

1.6 Sealing Provision

Provision is made for the calibration adjustments to be sealed.

This may be by sealing of the metal cover over the calibration adjustment switch which is located beneath the load receptor, and below a plastic cover in the plastic debris protection panel. The metal cover may be sealed by means of a lead and wire (or similar) type seal through the holes provided. A destructible adhesive label may alternatively be used – however to access a suitable area for application of the destructible adhesive label, it may be necessary to remove the plastic debris protection panel (Figure 5).

As an alternative to the above methods of physical sealing, sealing may be achieved by recording the values of the Calibration and Parameter Counters on a destructible adhesive label and affixing this to the instrument at the time of verification/certification. The Calibration and Parameter Counters are accessed by holding down the zero-setting button for approximately ten seconds – the counters will appear alternately as a number followed by either CAL or PAR (e.g. 7. CAL & 7.PAR; an additional counter FLS may also appear but it is not necessary to record this).

By checking that these counters are the same as those recorded at verification/certification it may be confirmed that alteration of calibration and instrument parameters has not occurred.

1.7 Descriptive Markings and Notices

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's mark, or name written in full	…….
Name or mark of manufacturer's agent	…….
Indication of accuracy class	(III)
Pattern approval number for the instrument	NMI 6/4C/251
Maximum capacity	*Max* ..... g or kg #1
Minimum capacity	*Min* ..... g or kg #1
Verification scale interval	*e* = ... g or kg #1
Special temperature limits	0°C to +40°C
Serial number of the instrument	…….

#1 These markings are also shown near the display of the result if they are not already located there.

2. Description of Variant 1 **approved on 13/01/11**

With one or two model 7825 (#) displays as described for the pattern now incorporated into (or mounted on) equipment or furniture forming part of the checkout or point of sale installation. An example of a typical arrangement is shown in Figure 6.

Note: Modification of the weighing instrument to re-mount the display/s as described above will require the instrument to be verified.

(#) May also be marked as 'Class 7825'.

3. Description of Variant 2 approved on 25/11/11

With the load receptor top plate secured by a bracket to allow the front of the plate to be lifted (Figure 7), for example to check sealing, but it can only be removed by authorised personnel.

4. Description of Variant 3 approved on 22/12/15

The model 7878-5000 (#) which is similar to the pattern except that it has a shorter, 292 mm × 406 mm, scale platter (Figure 8).

(#) The last three digits of the model number (7878-5***) may be numerals other than ‘0’, and an additional suffix (e.g. -9090) may be added, but these represent features which are not metrologically significant.

Sealing is similar to that described for the pattern.

TEST PROCEDURE No 6/4C/251

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

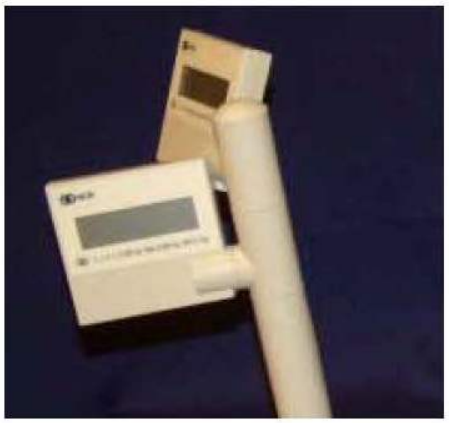
The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

Ensure that instruments are only being used within the special temperature limits stated elsewhere in this Technical Schedule.

FIGURE 6/4C/251 – 1

NCR Model 7878-2000 Weighing Instrument (Pattern)

FIGURE 6/4C/251 – 2

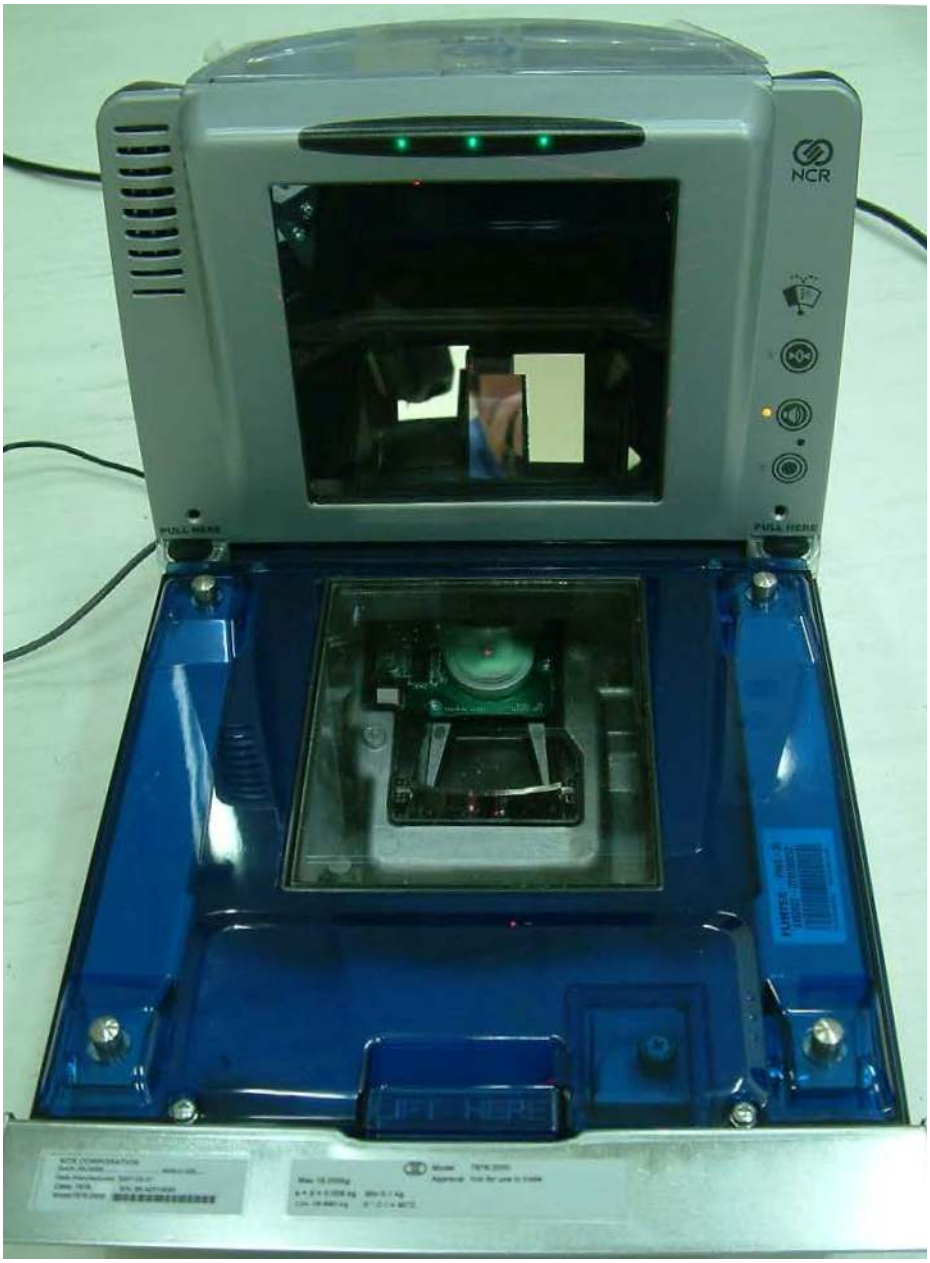


(a) Two NCR Model 7825 displays mounted on a single column

(b) Single Model 7825 display

(c) Alternative version of NCR Model 7825 display

FIGURE 6/4C/251 – 3

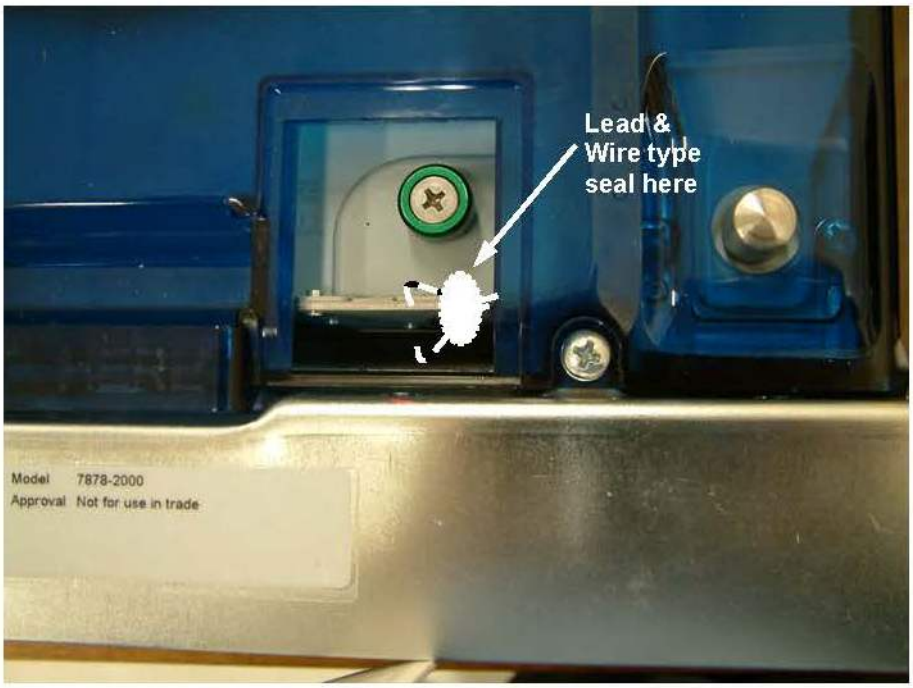


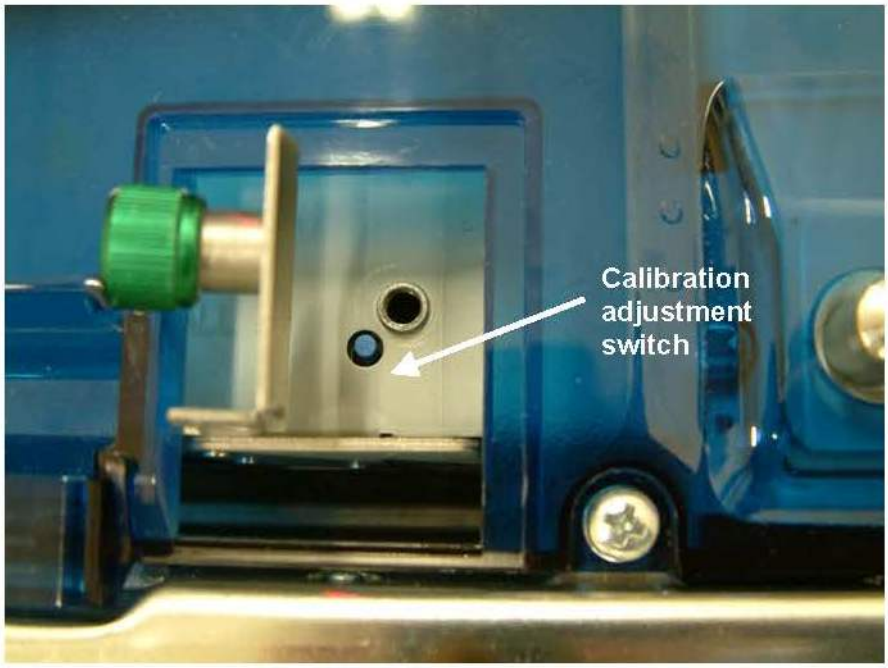
NCR Model 7878-2000 Weighing Instrument
With Load Receptor Plate Removed (Pattern)

FIGURE 6/4C/251 – 4

With ‘Produce Guard’ (Pattern & variants)

FIGURE 6/4C/251 – 5



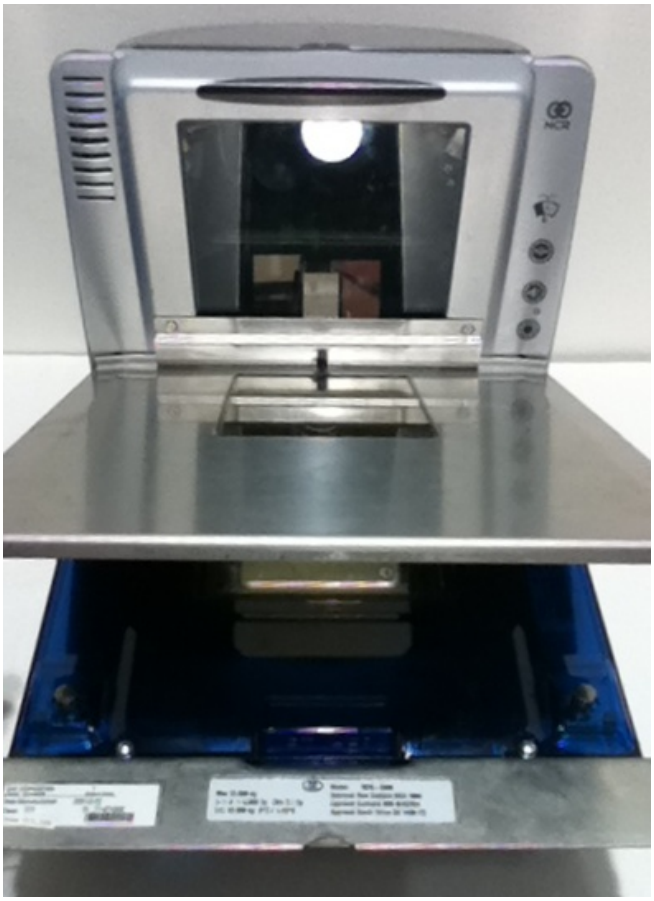


Showing Typical Sealing (Pattern & variants)

FIGURE 6/4C/251 – 6

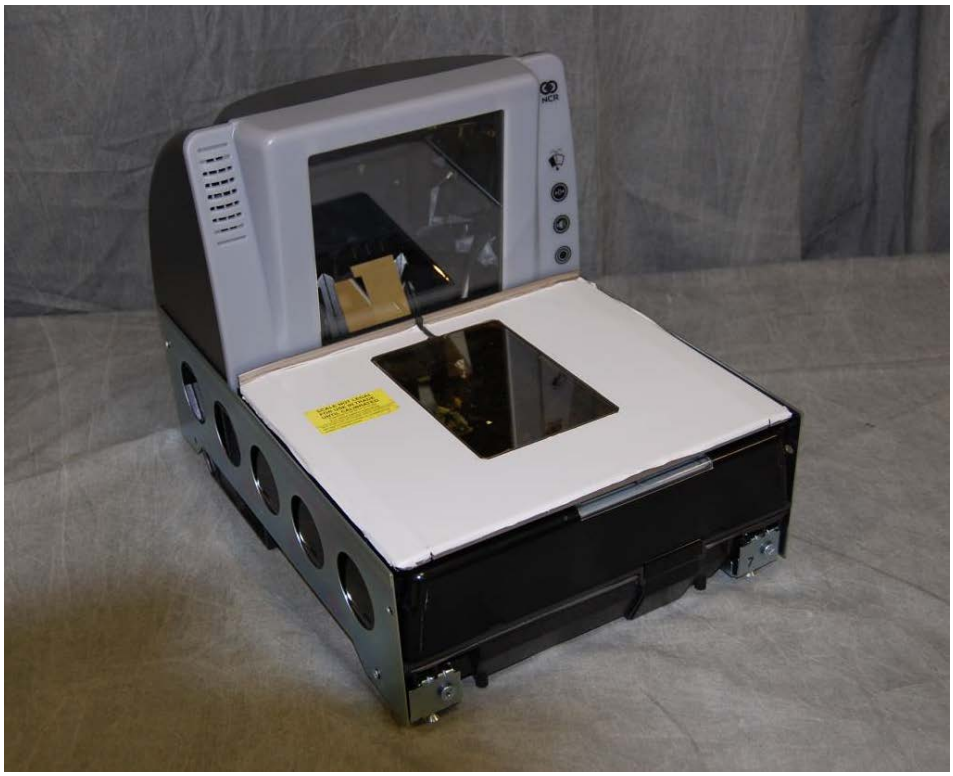
Remounted Model 7825 Display (Variant 1)

FIGURE 6/4C/251 – 7



With The Load Receptor Top Plate Secured By a Bracket (Variant 2)

FIGURE 6/4C/251 – 8



Model 7878-5000 (Variant 3)

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