



Australian Government
Department of Industry,
Innovation and Science

**National
Measurement
Institute**

Certificate of Approval

No 6/4D/358

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.

Avery Berkel Model XT 400 Weighing Instrument

submitted by Avery Berkel (a Division of ITW Limited)
Foundry Lane
Smethwick
West Midlands B66 2LP
UK.

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 **1/04/22**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 6 approved – interim certificate issued	31/05/11
1	Pattern & variants 1 to 6 approved – certificate issued	24/06/11
2	Pattern & variants 1 to 6 reviewed & updated (new format) – certificate issued	5/04/17

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/358' 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 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.

Special

Certain aspects of this instrument (in particular transaction record printing formats) are able to be configured by the user. Whilst NMI believes that acceptable formats can be achieved for typical basic sales modes, it is also possible for the instrument to be configured to produce unacceptable formats, and use of some formats may be inappropriate for different sales modes. It is the responsibility of the user to ensure that acceptable and appropriate formats are used in any particular situation.

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 6/4D/358

1. Description of Pattern

approved on 31/05/11

An Avery Berkel model XT 400 class III non-automatic self-indicating price-computing multi-interval weighing instrument (Figure 1a) with a verification scale interval (e_1) of 0.002 kg up to 6 kg and a verification scale interval (e_2) of 0.005 kg from 6 kg up to the maximum capacity of 15 kg.

Instruments are fitted with a column-mounted TFT colour touchscreen operator display/keyboard and a column-mounted TFT colour customer display (Figure 1a). The operator touchscreen consists of displays for presentation of tare, weight, unit price and price information, zero, 'net' indicators and functions relating to product look up (PLU) items.

Instruments are fitted with an integral printer, for printing of labels or tickets.

Instruments have unit price to \$9999.99/kg, price to \$9999.99, and a product look up (PLU) facility.

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices; this may include wireless networking capabilities.

The instrument operates from mains AC power (240 V AC, 50 Hz).

The label and/or receipt formats should comply with the requirements of General Supplementary Certificates No S1/0/A or No S1/0B.

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

1.1 Zero

A zero-tracking device may be fitted.

The initial zero-setting device of the pattern has a nominal range of approximately 20% of the maximum capacity of the instrument.

The instrument has automatic and semi-automatic zero-setting devices with a nominal range of not more than 4% of the maximum capacity of the instrument.

The automatic zero-setting device operates only when the instrument has been stable below zero for at least 5 seconds.

1.2 Tare

A semi-automatic subtractive tare device, up to the maximum capacity, may be fitted. A semi-automatic pre-set tare device with a maximum capacity equal to the first partial weigh range, may be fitted.

Pre-set tare values may be associated with product look up (PLU) items.

A display of tare values is provided.

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 Networking

A number of XT series instruments may be connected in a network to share common PLU data, and to accumulate and retrieve management information.

In addition, the instrument may be interfaced with a computer for the collection of management data and the downloading of PLU data.

Note: The weighing and price computing functions of each weighing instrument in the network are independent, and the removal, repair or replacement of a particular weighing instrument does not necessitate re-verification of any other weighing instrument in the network.

1.5 Levelling

The instrument is provided with adjustable feet and an automatic tilt sensor/compensation device that automatically compensates for out of level conditions up to $\pm 5^\circ$ in longitudinal or transverse directions. If this value is exceeded then the weight indications are replaced by a series of diagonal bars and the price-to-pay indications are inhibited.

1.6 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Avery Berkel
Name or mark of manufacturer's agent
Indication of accuracy class	Ⓜ
Pattern approval mark for the instrument	NMI 6/4D/358
Maximum capacity	<i>Max</i>/..... g or kg #1
Minimum capacity	<i>Min</i> g or kg #1
Verification scale interval	<i>e</i> =/..... g or kg #1
Maximum subtractive tare	<i>T</i> = - g or kg #2
Special temperature limits	0°C to +40°C
Serial number of the instrument

For single interval instruments (see variants) there is only one range therefore only one value of maximum capacity and verification scale interval to be marked.

- #1 These markings are also shown near the display of the result if they are not already located there.
- #2 This marking is required if *T* is not equal to *Max*.

1.7 Verification Provision

Provision is made for the application of a verification mark.

1.8 Sealing Provision

Provision is made for the configuration parameters and calibration adjustments to be sealed by means of a destructible adhesive label placed over the securing screw of the load cell cover and the service mode switch access hole on the load cell cover, as shown in Figure 2.

The seal can be viewed through a transparent cover, which may be removed for sealing purposes, located in the centre of the top housing on the left hand side of the instrument, when viewed from the vendor side, after removal of the load receptor (Figure 2).

2. Description of Variant 1 **approved on 31/05/11**

Certain other capacities of the Avery Berkel model XT 400 multi-interval instruments as listed below:

- (i) With a verification scale interval (e_1) of 0.001 kg up to 3 kg and with a verification scale interval of (e_2) of 0.002 kg from 3 kg up to the maximum capacity of 6 kg; and
- (ii) With a verification scale interval (e_1) of 0.005 kg up to 15 kg and with a verification scale interval of (e_2) of 0.010 kg from 15 kg up to the maximum capacity of 30 kg.

3. Description of Variant 2 **approved on 31/05/11**

Certain capacities of the Avery Berkel model XT 400 single interval instruments as listed below:

- (i) With a maximum capacity of 6 kg and a verification scale interval of 0.001 kg;
- (ii) With a maximum capacity of 15 kg and a verification scale interval of 0.005 kg;
- (iii) With a maximum capacity of 30 kg and a verification scale interval of 0.010 kg; and
- (iv) With a maximum capacity of 30 kg and a verification scale interval of 0.005 kg.

Instruments are marked in accordance with clause **1.6 Descriptive Markings and Notices** except that there is only one value of maximum capacity and verification scale interval.

4. Description of Variant 3 **approved on 31/05/11**

The Avery Berkel model XT 300 single or multi-interval instruments which are similar to the pattern but which do not have a customer display and are arranged as self-service instruments. The self-service touch screen display is mounted on a column (Figure 1b).

In this self-service arrangement, stored tare values may be associated with product look up (PLU) keys. However, the use of stored tare values associated with PLU keys shall be at the discretion of the applicable trade measurement authority, who may require various operational instructions and notes regarding the appropriate container for each product. Other tare facilities and operator keys shall be disabled, other than the 'PRINT' key.

The model XT 300 instruments may be in any capacity listed for the model XT 400 (the pattern and variants 1 & 2).

5. Description of Variant 4 **approved on 31/05/11**

The Avery Berkel model XT 200 single or multi-interval instruments which are similar to the pattern but the operator display/keyboard is attached to the main instrument housing rather than mounted on the column (Figure 3a).

The model XT 200 instruments may be in any capacity listed for the model XT 400 (the pattern and variants 1 & 2).

6. Description of Variant 5

approved on 31/05/11

The Avery Berkel model XT 100 single or multi-interval instruments as 'bench' style instruments which are similar to the pattern but in which the customer and vendor displays are incorporated within the main instrument housing (Figure 3b).

The model XT 100 instruments may be in any capacity listed for the model XT 400 (the pattern and variants 1 & 2).

7. Description of Variant 6

approved on 31/05/11

The Avery Berkel model XT 101 single or multi-interval instruments which are similar to the XT 100 (Variant 4) but which do not have a customer display and are arranged as a self-service instruments.

In this self-service arrangement, stored tare values may be associated with product look up (PLU) keys. However, the use of stored tare values associated with PLU keys shall be at the discretion of the applicable trade measurement authority, who may require various operational instructions and notes regarding the appropriate container for each product.

Other tare facilities and operator keys shall be disabled, other than the 'PRINT' key.

The model XT 101 instruments may be in any capacity listed for the model XT 400 (the pattern and variants 1 & 2).

TEST PROCEDURE

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*.

Tests

For multi-interval and multiple range instruments with verification scale intervals of $e_1, e_2 \dots$, apply e_1 for zero adjustment, and maximum permissible errors apply $e_1, e_2 \dots$, as applicable for the load.

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

FIGURE 6/4D/358 – 1



(a) Avery Berkel Model XT 400 Weighing Instrument



(b) Avery Berkel Model XT 300 Weighing Instrument

FIGURE 6/4D/358 – 2



Position of Seal Label - Viewed through Protective Cover



Sealing of Calibration Switch Access Hole and Security Screw
(Shown with protective cover removed)

Typical Sealing of XT Series

FIGURE 6/4D/358 – 3



(a) Avery Berkel Model XT 200 Weighing Instrument



(b) Avery Berkel Model XT 100 Weighing Instrument

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