Australian Government
Department of Industry and Science

National Measurement Institute

Certificate of Approval

NMI 6/4D/379

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 XS 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 1/09/20, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 6 approved – certificate issued	18/08/15

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/379' 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 Certificate No S1/0B.

Special Conditions of Approval:

Certain aspects of this instrument (in particular label and ticket formats) are able to be configured by the user. Whilst NMI believes that acceptable label and ticket 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/379

1. Description of Pattern approved on 18/08/15

An Avery Berkel model XS class (III) non-automatic self-indicating price-computing multi-interval weighing instrument (Figure 1 and Table 1) 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.

The instrument has a column-mounted LCD screen display and keyboard for the operator. An LCD screen display is provided for the customer and is also mounted on the column. Both displays are used for the presentation of tare, weight, unit price and price information, zero, net indications and functions relating to product look up (PLU) items.

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

Instruments display unit price to $9999.99/kg, total price to $9999.99, and have 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.

1.1 Zero

A zero-tracking device may be fitted.

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.

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 of up to maximum capacity and/or non-automatic keyboard-entered pre-set subtractive tare device of up to the first partial weighing range Max_1, may be fitted.

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

A separate display of tare values is provided.

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 Power Supply

The instrument is powered by an AC/DC mains adaptor which is mounted underneath the instrument.

Note: The AC/DC mains adaptor supplied was a Power For Your Product model EA10633B-240 (output 24 V DC, 2.7 A) – the submittor should be consulted regarding the acceptability of alternative power supply units.

1.5 Networking

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

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

1.6 Levelling

The instrument is provided with adjustable feet and a level indicator, and adjacent to the level indicator is a notice advising that the instrument must be level when in use or similar wording.

1.7 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 R 76 (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 S1/0/B (in particular in regard to the data and its format).

Instruments may be fitted with Ethernet (wired or integral WiFi), USB and cash drawer interfaces.

1.8 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Avery Berkel	
Indication of accuracy class	(III)	
Pattern approval mark for the instrument	NMI 6/4D/379	
Maximum capacity	*Max* ...../..... g or kg	#1
Minimum capacity	*Min* .... g or kg	#1
Verification scale interval	*e* = .../..... g or kg	#1
Maximum subtractive tare	*T* = - …….. kg	#2
Serial number of the instrument	…….	

#1 These markings are shown near the display of the result.

#2 This marking is required if *T* is not equal to *Max*.

Note: For single interval instruments the markings shall be as above, with the exception that the 'Maximum capacity' and 'Verification scale interval' shall be marked for the single values only.

1.9 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of a cover plate and destructible adhesive label placed over an access hole to the calibration switch and the housing securing screw underneath the weighing platform as shown in Figure 2.

1.10 Verification Provision

Provision is made for the application of a verification mark.

1.11 Software

The software version numbers are designated ABR30-000402 BOOT v4.x.x.xx and ABR30-000403 APP v4.x.x.xx with Validation Library ABR30-000407 v1.x.x.xx and Legally Relevant Library v1.x.x.xx where x.x.xx refers to the identification of non-legally relevant software and/or minor software updates.

The software version numbers and legally relevant libraries are shown on the 'Test Report' printout which may be obtained by double pressing the Test/Power button.

The method audit trail records each change to the legally relevant software updates and device specific parameters. Access to the audit trail may be obtained by pressing the Test/Power button followed by the →0← key. The complete audit log is printed.

2. Description of Variant 1 approved on 18/08/15

Certain other capacities of the Avery Berkel model XS multi-interval instruments as listed in Table 1 below (the pattern is shown in **bold**).

TABLE 1 – Approved XS series multi-interval instruments

Maximum Capacity (*Max*)	Verification Scale Interval (*e*)	Load Cell Maximum Capacity (#)
3/6 kg	0.001/0.002 kg	6 (8) kg
6/15 kg	**0.002/0.005 kg**	**15 (19) kg**

(#) The 1st value is as marked on the cell while the 2nd value (in brackets) is the actual maximum capacity, E_{max}.

3. Description of Variant 2 approved on 18/08/15

The Avery Berkel model XS single interval instruments in certain capacities as listed in Table 2 below.

A semi-automatic subtractive tare device and/or a keyboard-entered pre-set subtractive tare device, each of up to the maximum tare capacity shown in the Table 2, may be fitted.

TABLE 2 – Approved XS series single interval instruments

Maximum Capacity (*Max*)	Verification Scale Interval (*e*)	Load Cell Maximum Capacity (#)
6 kg	0.001 kg	6 (8) kg
15 kg	0.005 kg	15 (19) kg
25 kg	0.005 kg	30 (36) kg

(#) The 1st value is as marked on the cell while the 2nd value (in brackets) is the actual maximum capacity, $E_{max.}$

4. Description of Variant 3 approved on 18/08/15

An Avery Berkel model XS similar to the pattern and variants 1 & 2, but having the display and keyboard for the operator attached to the instrument (Figure 3).

5. Description of Variant 4 approved on 18/08/15

An Avery Berkel model XS bench type version similar to the pattern and variants 1 & 2, but having the customer display integrated within the instrument housing and the display and keyboard for the operator attached to the instrument (Figure 4).

6. Description of Variant 5 approved on 18/08/15

The pattern or variants without a customer display in which case instruments are either:

(a) NOT FOR TRADING DIRECT WITH THE PUBLIC in which case instruments carry a notice to this effect; or

(b) Used in a self-service arrangement which provides a remote column-mounted customer self-service keyboard (Figure 5), as well as providing mass, unit price, price displays.

7. Description of Variant 6 approved on 18/08/15

The pattern and variants may be connected in a network with compatible approved Avery Berkel instruments, to share common PLU data, for totalisation across instruments ('floating system'), and to accumulate and retrieve management information.

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

Note 1: 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 reverification of any other weighing instrument in the network.

Note 2: The use of a totalisation across instruments ('floating system') arrangement in this variant is not approved for use in a self-service arrangement.

TEST PROCEDURE No 6/4D/379

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

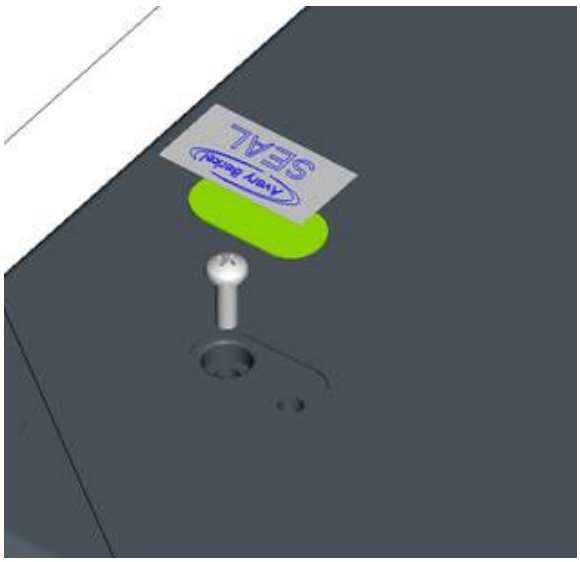
The maximum permissible errors are specified in the *National Trade Measurement Regulations 2009*.

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 6/4D/379 – 1

Avery Berkel Model XS Weighing Instrument (Pattern)

FIGURE 6/4D/379 – 2



Typical Calibration Switch Sealing Method – XS Series (Pattern & variants)

FIGURE 6/4D/379 – 3

Avery Berkel Model XS Weighing Instrument (Variant 3)

FIGURE 6/4D/379 – 4

Avery Berkel Model XS Bench Type Weighing Instrument (Variant 4)

FIGURE 6/4D/379 – 5

Avery Berkel XS Self Service Type Weighing Instrument (Variant 5)

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