



Australian Government
Department of Industry,
Innovation and Science

National Measurement Institute

Certificate of Approval

NMI 6/10B/30D

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 5451 Weighing Instrument

submitted by Avery Weigh-Tronix
(formerly Avery Weigh-Tronix Ltd)
Foundry Lane
Smethwick
West Midlands B662LP
UNITED KINGDOM

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 **1/3/22**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern and variants 1 and 2 approved – certificate issued	27/10/03
1	Pattern and variants 1 and 2 reviewed & amended – notification of change issued	4/08/06
2	Pattern and variants 1 and 2 amended – notification of change issued	30/07/08
3	Pattern and variants 1 and 2 reviewed & updated – variant 3 approved – certificate issued	10/02/12
4	Pattern & variants amended (submitor name) & reviewed – certificate issued	14/02/17

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI (or NSC) 6/10B/30D' 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.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to the instrument shall be within the limits specified herein and in any approval documentation for the components where they are approved separately.

The pattern as approved herein or with substitute approved load cells and/or approved indicators and in other capacities, or with different platform sizes, shall comply with General Certificate of Approval No 6B/0.

Note: New instruments manufactured under this approval shall only use load cells and/or indicators with current Supplementary Certificates of Approval.

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



Dr Phillip Mitchell

TECHNICAL SCHEDULE No 6/10B/30D

1. Description of Pattern **approved on 27/10/03**

An Avery Berkel model 5451 self-indicating class III platform weighing instrument of 150 000 kg maximum capacity and approved for use with up to 3000 verification scale intervals. May also be known as Avery Weigh-Tronix instruments of the same model.

1.1 Basework

The model 5451 basework has the platform directly supported by up to ten (10) load cells. The basework may vary depending on the installation requirements and may then be known as a model 5452, 5453, 5454, 5455, or 5456.

1.2 Load Cells

Avery Weigh-Tronix model T302x load cells of 45 000 kg capacity are used. The load cells are also described in the approval documentation of approval NMI No S535 and are mounted in accordance with that approval.

1.3 Indicator

An Avery Weigh-Tronix model E1210 digital indicator is used. The indicator is described in the documentation of NMI approval S458.

1.4 Sealing Provision

Provision is made for the calibration adjustments in the indicator to be sealed as described in the approval documentation for the indicator used.

1.5 Descriptive Markings

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	Avery Weigh-Tronix
Name or mark of manufacturer's agent
Indication of accuracy class	III
Maximum capacity	<i>Max</i> kg or t *
Minimum capacity	<i>Min</i> kg or t *
Verification scale interval	<i>e</i> = kg or t *
Tare capacity (if less than <i>Max</i>)	<i>T</i> = - kg or t
Serial number of the instrument
Pattern approval mark for the instrument	NMI 6/10B/30D
Pattern approval mark for the load cells	S...
Pattern approval mark for the indicator	S...

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

1.6 Verification Provision

Provision is made for the application of a verification mark.

2. Description of Variant 1 **approved on 27/10/03**

Avery Berkel (or Avery Weigh-Tronix) model 5451 instruments in capacities from 15 000 to 200 000 kg, with no less than 4 and with up to 10 approved load cells. Instruments are approved for use with up to 4000 verification scale intervals (subject to the approval parameters of the load cells and indicator).

Instruments used with more than 3000 verification scale intervals shall be provided with wind protection in accordance with clause **4. Wind Effects** of General Certificate of Approval No 6B/0.

3. Description of Variant 2 **approved on 27/10/03**

Avery Berkel (or Avery Weigh-Tronix) model 5451 instruments with the load receptor in the form of a hopper (Figure 1), tank or silo in capacities from 15 000 to 250 000 kg. Instruments are either:

- (a) fitted with 3, 4 or 5 approved load cells (arranged symmetrically to ensure even loading of each cell) where the hopper is a vertical cylindrical or tank-type load receptor directly supported by the load cells; or
- (b) fitted with 4 approved load cells where the hopper is a non-vertical cylindrical, or other hopper-type load receptor.

Note: Instruments with more than 4 load cells may be acceptable if prior written agreement from the National Measurement Institute is obtained.

Suitable provision must be made for the application of suitable verified masses to the instrument as required for verification purposes. It may be necessary for such masses to be incorporated within the design of the instrument.

4. Description of Variant 3 **approved on 10/02/12**

Certain other models of Avery Berkel (or Avery Weigh-Tronix) weighing instruments, namely models BMC, BMS, BMST and Bridgemont instruments.

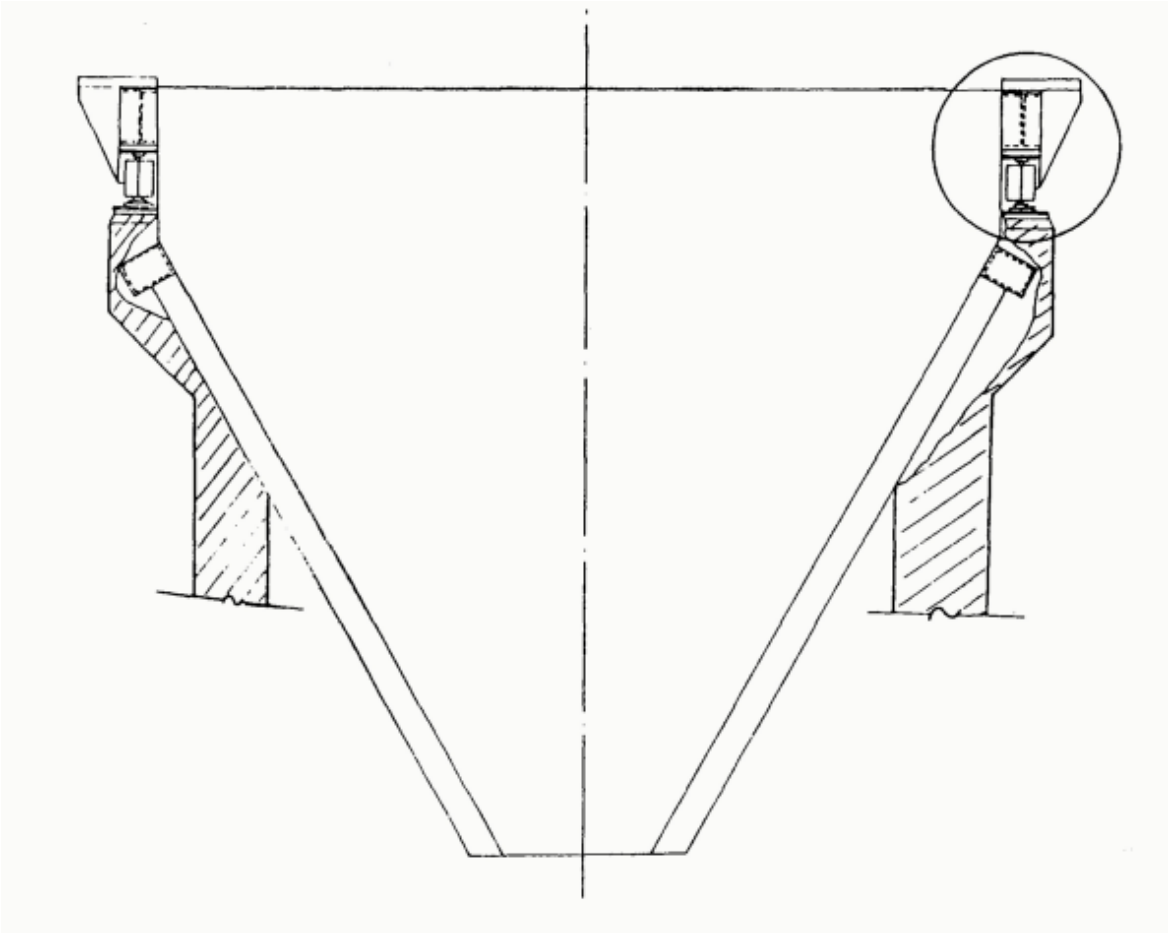
TEST PROCEDURE No 6/10B/30D

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

Maximum Permissible Errors

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

FIGURE 6/10B/30D – 1



Typical Hopper Arrangement – Variant 2

~ End of Document ~