



Australian Government
Department of Industry,
Science and Resources

**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4C/299

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.

Mettler Toledo Model BC-30 Weighing Instrument

submitted by Mettler-Toledo Limited
Level 1, 191 Salmon Street
Port Melbourne VIC 3207

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 October 2015.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – interim certificate issued	24/11/15
1	Pattern amended (temperature limit) and variants 1 to 3 approved – certificate issued	22/05/24

CONDITIONS OF APPROVAL

General

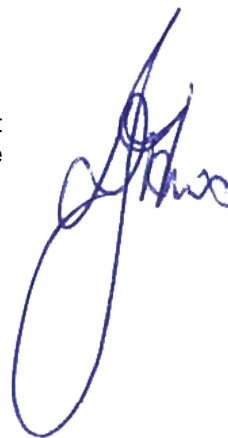
Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/299' and only by persons authorised by the submitter.

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 of Approval No S1/0B.

This approval shall NOT be used in conjunction with General Certificate of Approval No 6B/0.

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

**Darryl Hines**


Manager

Policy and Regulatory Services

TECHNICAL SCHEDULE No 6/4C/299

1. Description of Pattern

**approved on 24/11/15
amended on 22/05/24**

A Mettler Toledo model BC-30 class  non-automatic weighing instrument, having a maximum capacity of 30 kg with a verification scale interval (e) of 0.01 kg. The instrument platter may be metal (Figure 1) or plastic.

The minimum capacity of the instrument is 0.2 kg unless the instrument is marked 'FOR POSTAL USE ONLY' in which case the minimum capacity is 0.05 kg.

Instruments are fitted with a single display or dual displays may be provided. Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC' (or similar wording) unless the maximum capacity of the instrument is greater than 100 kg (i.e. as may be the case for variant 2) or 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 are approved for use over a temperature range of 0 °C to +40 °C, and must be so marked.

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

1.1 Basework

The basework of the Mettler Toledo model BC-30 has the load receptor directly supported by a single load cell. The load receptor has a nominal dimension of 312 mm x 353 mm.

1.2 Load cell

A Mettler Toledo model 0785 load cell of 50 kg maximum capacity is used.

1.3 Indicator

A single or dual Mettler Toledo model 0271 display is used.

The indicator may be mounted on a column or attached to the platform, or it may also be located remotely.

1.4 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.

1.5 Tare

A semi-automatic subtractive tare device of up to maximum capacity may be fitted.

1.6 Power Supply

Power for the Mettler Toledo Model BC-30 instrument is supplied by a 5 V DC power supply (e.g., a USB power supply, or external 5 V DC power adaptor).

1.7 Additional Features

The instrument also has certain additional functions (e.g., to facilitate postal / freight applications). The additional functions (other than the indications of measured mass, i.e. gross, tare, net, totals, displayed either on the indicator or on an auxiliary or peripheral device) are not approved for trade use.

1.8 Interfaces

The indicator 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 NMI General Supplementary Certificate of Approval No S1/0B (in particular in regard to the data and its format).

Indications other than the indications of measured mass (i.e. gross, tare, net, totals) displayed either on the indicator or on an auxiliary or peripheral device, are not for trade use.

Instruments may be fitted with data interfaces such as USB, RS232, Ethernet or Bluetooth.

1.9 Levelling

The instrument is provided with adjustable feet, and a level indicator which is visible to the user.

The instrument is to be used in a level condition as indicated by the level indicator.


1.10 Software

The software identification is 30099478 Version 0.00.0002.

The software identification can be seen in the switch-on display sequence (when the power is first applied to the instrument).

1.11 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	METTLER TOLEDO
Indication of accuracy class	
Pattern approval number for the instrument	NMI 6/4C/299
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
Serial number of the instrument
Special temperature limits	0 °C to 40 °C #3

#1 These markings are shown in the electronic markings field above the display of the result.

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

#3 This marking is required except instruments fitted with an AMI load cell (see variants 2 and 3).

In addition, instruments may be required to carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording (see 1. *Description of Pattern*). A marking of FOR POSTAL USE ONLY may also be necessary, dependent on the minimum capacity value (see 1. *Description of Pattern*).

1.12 Verification Provision

Provision is made for the application of a verification mark.

1.13 Sealing Provision

Provision is made for access to the calibration switch within the instrument to be sealed by using lead and wire type seals (Figure 2).

2. Variant 1

approved on 22/05/24

The Mettler Toledo BC series instruments as single range instruments of certain other capacities as listed in Table 1 below (the pattern is shown in **bold**). The numeric number after “BC” represents the maximum capacity of the instrument.

Table 1

Model	Maximum Capacity (<i>Max</i>) (kg)	Minimum Capacity (<i>Min</i>) (kg)	Verification Scale Interval (<i>e</i>) (kg)	Load Cell Model	Platform Size (mm)	Load Cell, Maximum Capacity <i>E_{max}</i> (kg)
BC-15 (#)	15	0.1	0.005	AMI	269 x 292	22
BC-30	30	0.2	0.01	MT0785	312 x 353	50
BC-60	60	0.4	0.02	MT0785	312 x 353	100
BC-150	150	1.0	0.05	0795	406 x 508	200

Note: If the instrument is used as a postal weighing instrument, the minimum capacity is reduced to 5 verification scale intervals, and is marked ‘FOR POSTAL USE ONLY’ or similar.

(#) BC-15 instruments are approved with operating temperature range from -10 °C to +40 °C. The marking for special temperature limits is not required.

3. Variant 2

approved on 22/05/24

The pattern and variant 1 as multiple range instruments of certain capacities as listed in Table 2 below.

The instrument shall comply with the descriptive marking requirements in the clause 1.11 of this certificate, except the maximum capacity, minimum capacity and verification scale interval for each range shall be marked, with an indication of the range to which they apply, e.g. (as shown in Figure 3)

W1 *Max* 15 kg *Min* 100 g *e* = 5 g

W2 *Max* 30 kg *Min* 200 g *e* = 10 g

Table 2

Model	Maximum Capacity (Max_1/Max_2) (kg)	Minimum Capacity (Min_1/Min_2) (kg)	Verification Scale Interval (e_1/e_2) (kg)	Load Cell Model	Platform Size (mm)	Load Cell, Maximum Capacity E_{max} (kg)
BC-15 (#)	6/15	0.04/0.1	0.002/0.005	AMI	269 x 292	22
BC-30	15/30	0.1/0.2	0.005/0.01	MT0785	312 x 353	50
BC-60	30/60	0.2/0.4	0.01/0.02	MT0785	312 x 353	100
BC-150	60/150	0.4/1.0	0.02/0.05	0795	406 x 508	200

Note: If the instrument is used as a postal weighing instrument, the minimum capacity of each range is reduced to 5 verification scale intervals, and is marked 'FOR POSTAL USE ONLY' or similar.

(#) BC-15 instruments are approved with operating temperature range from -10 °C to +40 °C. The marking for special temperature limits is not required.

4. Variant 3

approved on 22/05/24

The pattern or variants may be fitted with the software that it has the software identification number 30233384 Ver 1.00.xxx where "xxx" can be a number between 004 and 999 which represents non metrological relevant changes by the manufacturer.

The software identification can be accessed by pressing the up arrow on the keypad for 5 seconds. On the 'Home' screen which appears, use the right arrow to scroll to 'Info' and press enter. On the SCALE INFORMA screen which appears, use the right arrow to scroll to 'SW Ver' and press enter. On the SOFTWARE VERSION screen, software number and version are displayed.

TEST PROCEDURE 6/4C/299

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*.

For multi-interval and multiple range 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 6/4C/299 – 1

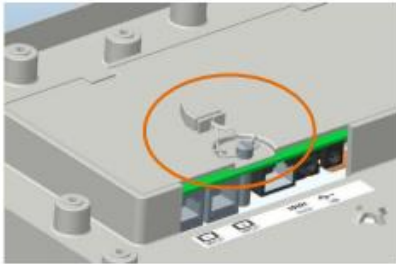


Mettler Toledo Model BC Instrument (Metal Platter)

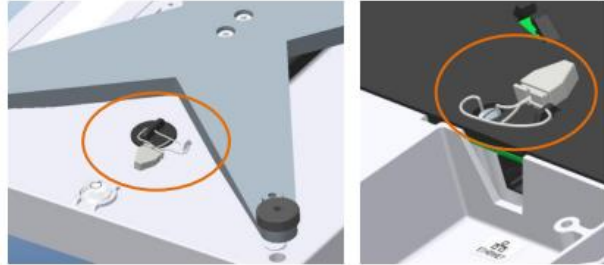


Mettler Toledo Model BC Instrument (Plastic Platter)

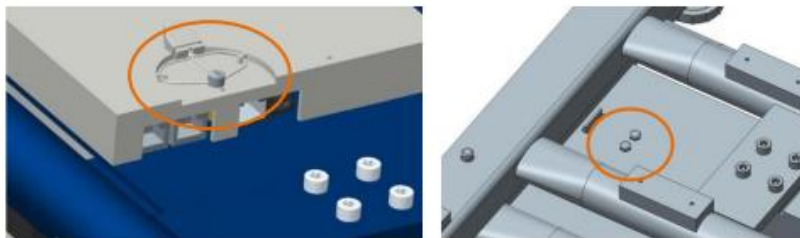
FIGURE 6/4C/299 – 2



BC-15 Sealing



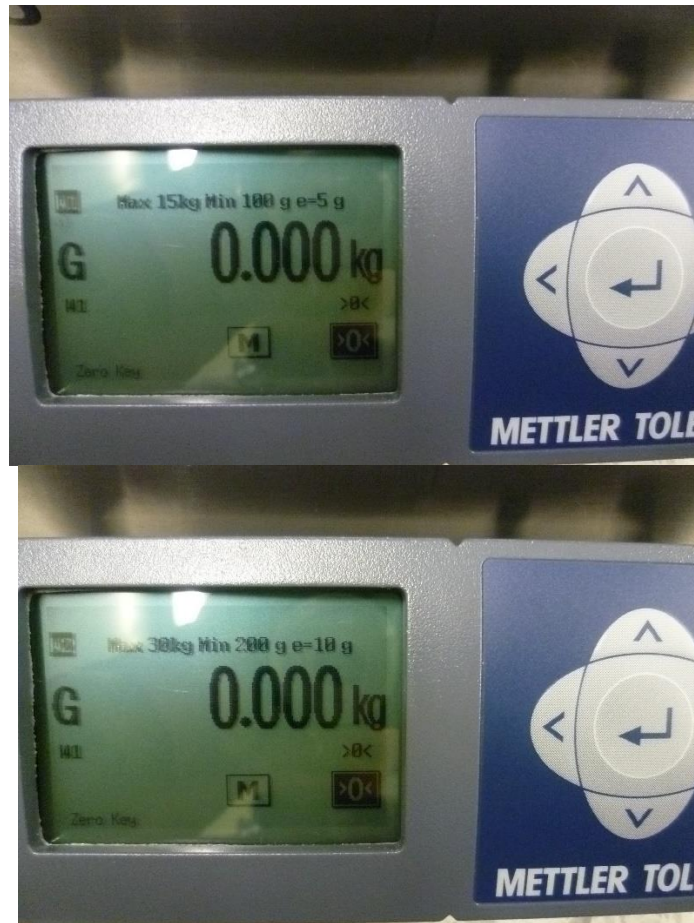
BC-30 and BC-60 Sealing



BC-150 Sealing

Typical Sealing Methods

FIGURE 6/4C/299 – 3



Typical Electronic Markings of Multiple Range Instrument
(Maximum Capacity, Minimum Capacity, Verification Scale Interval)

~ End of Document ~