



Australian Government
Department of Industry,
Innovation and Science

National Measurement Institute

Certificate of Approval

NMI 6/4C/301

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 ML204T Weighing Instrument

submitted by Mettler-Toledo Limited
Unit 3, 220 Turner 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 becomes subject to review on 1/04/21, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 5 approved – interim certificate issued	30/03/16
1	Pattern & variants 1 to 5 approved – certificate issued	30/06/16

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/301' 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 Certificate 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/301

1. Description of Pattern

approved on 30/03/16

The METTLER TOLEDO model ML204T special accuracy class ① weighing instrument (Figure 1 and Table 1) of 220 g maximum capacity with a verification scale interval of 0.001 g.

The instruments are fitted with differentiated scale interval (d) of 0.0001 g.

The instruments have a small colour LCD touchscreen display for display of the weight value and have a die-cast metal base and reinforced plastic top housing.

Instruments are approved for use over a temperature range of +10°C to +30°C, and are so marked.

Instruments are not for trading direct with the public, and are so marked, with the exception of instruments used for the weighing of precious metals and precious stones provided that instruments are located such that the instrument and its display are clearly visible to both parties to the transaction.

Some instruments may have a windshield provided over the load receptor.

Power is supplied by a PHIHONG Switching Power Supply model PSM11R-120 AC/DC mains adaptor (12 V DC, 0.84 A); the submitter should be consulted regarding the acceptability of alternatives.

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 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.

1.2 Tare

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

1.3 Alternative Units

Use of units other than kilogram (kg) or gram (g) or milligram (mg) is not approved for trade use.

1.4 Additional Features

Instruments may be fitted with a number of additional functions including checkweighing, percentage weighing (%), parts counting (pcs), dynamic (animal) weighing, factor weighing, totalisation and formulation.

These functions and displays are not approved for trade use.

1.5 Internal Self-Calibration System

Instruments are fitted with an internal 'self-calibration' system. This comprises an internal adjustment mass that may be applied to the instrument (in an automatic adjustment cycle), or manually by pressing a key, or as part of the switch-on sequence, or according to predetermined criteria (time period and/ or temperature variation). The display of the instrument provides an indication when this adjustment cycle is about to start.

1.6 Levelling

The instrument is provided with a level indicator and adjustable feet. If the instrument is not levelled, a warning sign appears in the display.

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 R76 (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 S1/0B (in particular in regard to the data and its format).

Instruments may be fitted with RS-232C and USB serial data interfaces.

1.8 Software

The software is designated Version 3.xx, where 'xx' refers to the identification of non-legally relevant software.

The software version and number can be seen by pressing the 'i' button in the display.

1.9 Verification Provision

Provision is made for the application of a verification mark.

1.10 Sealing Provision

Sealing of the calibration adjustments of special accuracy class ① instruments is not required. However there is provision for the calibration to be sealed by the use of destructible adhesive labels on the rear of the instrument to prevent access to the calibration switch, and to prevent separation of the casing of the instrument (Figure 2).

Instruments are provided with an integral 'self-calibration system'; Sealing of the instrument does not prevent operation of this system, however the system uses data regarding the value of internal mass, and alteration of that data is prevented.

1.11 Descriptive Markings and Notices

The instrument model number is shown on the instrument nameplate.

Instruments carry the following markings:

Manufacturer's mark, or name written in full	METTLER TOLEDO
Indication of accuracy class	Ⓛ or Ⓜ
Pattern approval number for the instrument	NMI 6/4C/301
Maximum capacity	<i>Max</i> mg, g, kg #
Minimum capacity	<i>Min</i> mg, g, kg #
Verification scale interval	<i>e</i> = mg, g, kg #
Actual scale interval	<i>d</i> = mg, g, kg #
Serial number of the instrument
Special temperature limits	+10°C to +30°C

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

In addition, instruments shall carry a notice stating NOT FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

2. Description of Variant 1

approved on 30/03/16

Certain other models/capacities of the METTLER TOLEDO ML...T series of class Ⓛ instruments (Figure 1) as listed in Table 1 below (the pattern is shown in **bold**).

TABLE 1

Model	Maximum Capacity (<i>Max</i>)	Minimum Capacity (<i>Min</i>)	Verification Scale Interval (<i>e</i>)	Differential Scale Interval (<i>d</i>)
ML54T	52 g	0.01 g	0.001 g	0.0001 g
ML104T	120 g	0.01 g	0.001 g	0.0001 g
ML204T	220 g	0.01 g	0.001 g	0.0001 g
ML304T	320 g	0.01 g	0.001 g	0.0001 g

3. Description of Variant 2

approved on 30/03/16

Certain models/capacities of the METTLER TOLEDO ML...T series of class II instruments (Figure 1) as listed in Table 2 below.

TABLE 2

Model	Maximum Capacity (Max)	Minimum Capacity (Min)	Verification Scale Interval (e)	Differential Scale Interval (d)
ML203T	220 g	0.02 g	0.01 g	0.001 g
ML303T	320 g	0.02 g	0.01 g	0.001 g
ML503T	520 g	0.02 g	0.01 g	0.001 g
ML802T	820 g	0.5 g	0.1 g	0.01 g
ML1602T	1620 g	0.5 g	0.1 g	0.01 g
ML3002T	3200 g	0.5 g	0.1 g	0.01 g
ML4002T	4200 g	0.5 g	0.1 g	0.01 g
ML6002T	6200 g	0.5 g	0.1 g	0.01 g
ML3001T	3200 g	5 g	0.1 g	0.1 g
ML6001T	6200 g	5 g	1 g	0.1 g

4. Description of Variant 3

approved on 30/03/16

The METTLER TOLEDO MS...TS series of class I instruments (Figure 3) as listed in Table 3 below are similar to the pattern but have a full metal housing and a larger LCD colour touchscreen display.

TABLE 3

Model	Maximum Capacity (Max)	Minimum Capacity (Min)	Verification Scale Interval (e)	Differential Scale Interval (d)
MS104TS	120 g	0.01 g	0.001 g	0.0001 g
MS204TS	220 g	0.01 g	0.001 g	0.0001 g
MS304TS	320 g	0.01 g	0.001 g	0.0001 g

5. Description of Variant 4

approved on 30/03/16



Certain other capacities of the METTLER TOLEDO MS...TS series of class  instruments (Figure 3) as listed in Table 4 below.

TABLE 4

Model	Maximum Capacity (Max)	Minimum Capacity (Min)	Verification Scale Interval (e)	Differential Scale Interval (d)
MS303TS	320 g	0.02 g	0.01 g	0.001 g
MS403TS	420 g	0.02 g	0.01 g	0.001 g
MS603TS	620 g	0.02 g	0.01 g	0.001 g
ML1003TS	1020 g	0.5 g	0.1 g	0.01 g
MS1602TS	1620 g	0.5 g	0.1 g	0.01 g
MS3002TS	3200 g	0.5 g	0.1 g	0.01 g
MS4002TS	4200 g	0.5 g	0.1 g	0.01 g
MS6002TS	6200 g	0.5 g	0.1 g	0.01 g
MS12002TS	12 200 g	1 g	0.1 g	0.01 g
MS8001TS	8200 g	5 g	1 g	0.1 g

6. Description of Variant 5

approved on 30/03/16

Certain other capacities of the METTLER TOLEDO MS...TS of class  instruments (Figure 3) as listed in Table 5 below.

The instruments are fitted with a movable auxiliary indicating device (known as 'DeltaRange' indicated by the 'DR' suffix) over a range of approximately 20% of maximum capacity, and in which a differentiated scale interval (d) operates within this range of current zero or tare position. Above the range the differentiated scale interval does not appear.

TABLE 5

Model	Maximum Capacity (Max)	Minimum Capacity (Min)	Verification Scale Interval (e)	Differential Scale Interval (d)
MS4002TSDR	820 g	0.5 g	0.1 g	0.01 g
	4200 g		0.1 g	0.1 g
MS6002TSDR	1220 g	0.5 g	0.1 g	0.01 g
	6200 g		0.1 g	0.1 g

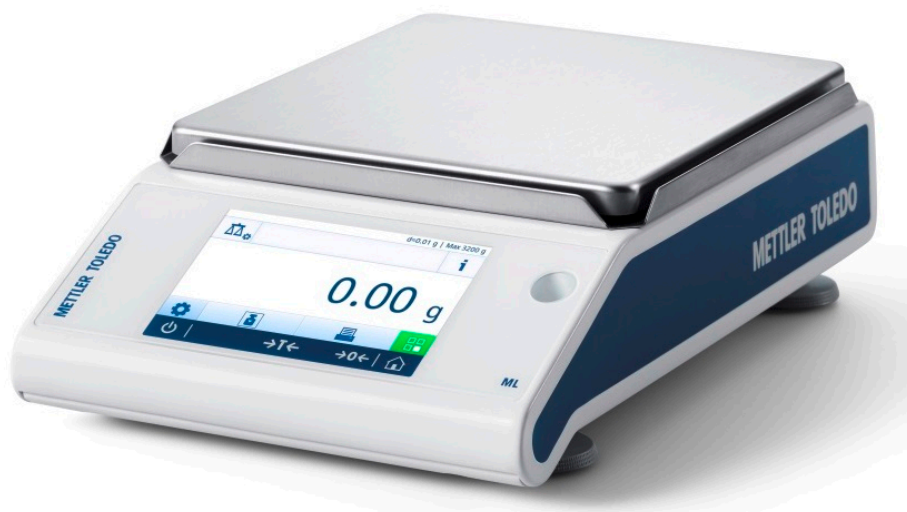
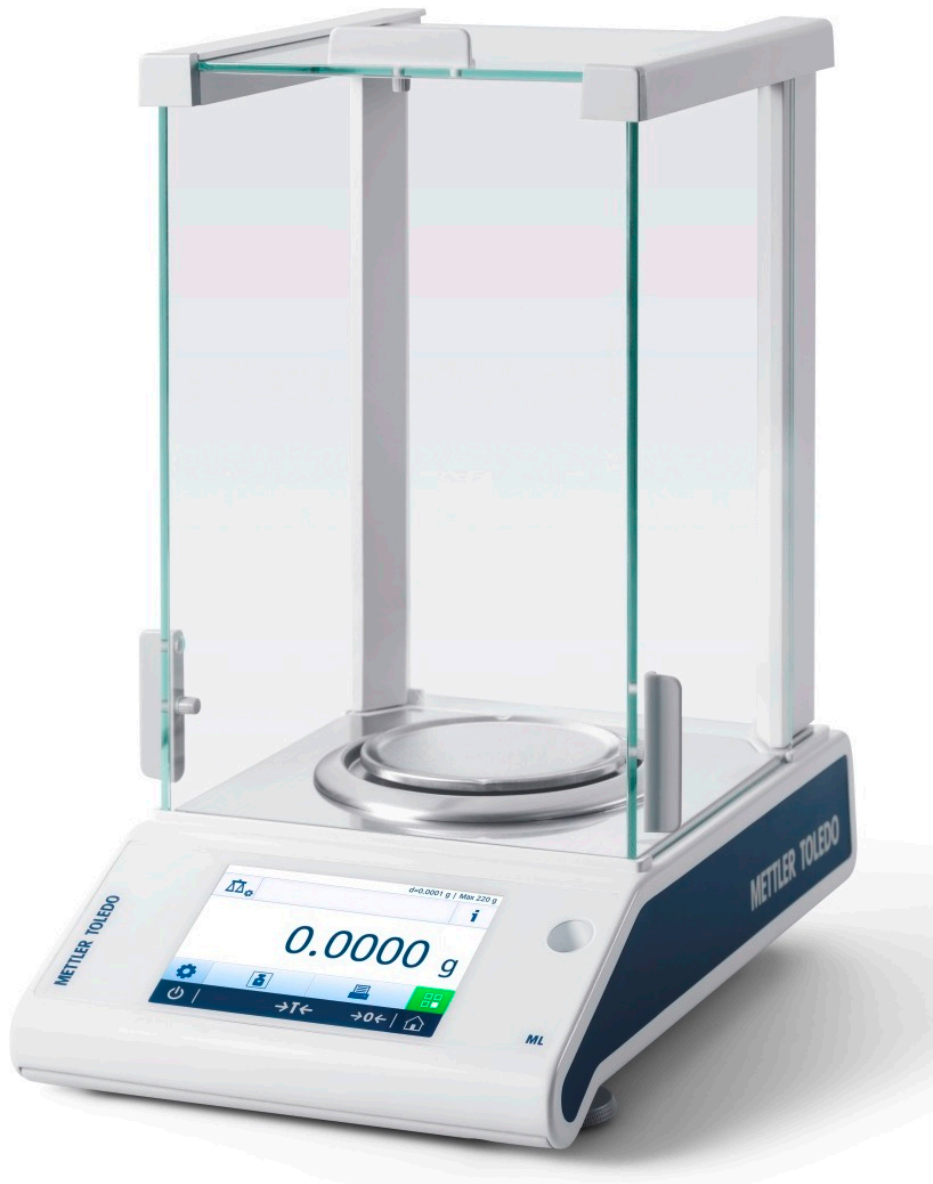
TEST PROCEDURE No 6/4C/301

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

Maximum Permissible Errors

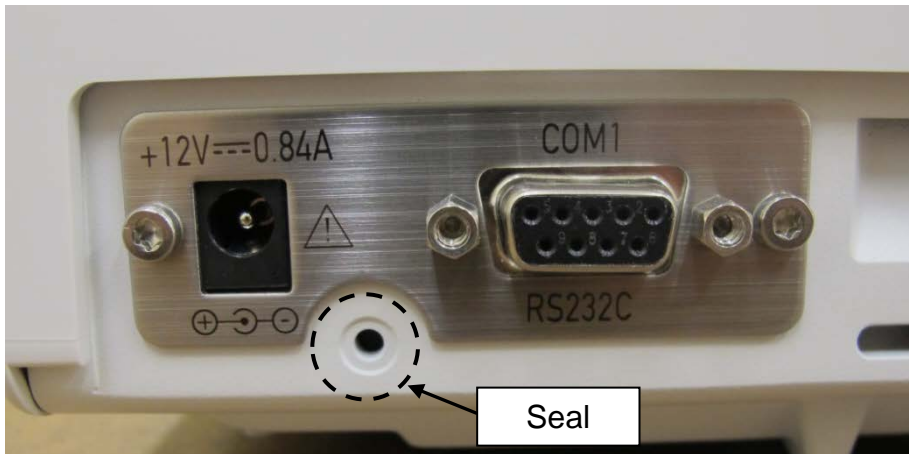
The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

FIGURE 6/4C/301 – 1

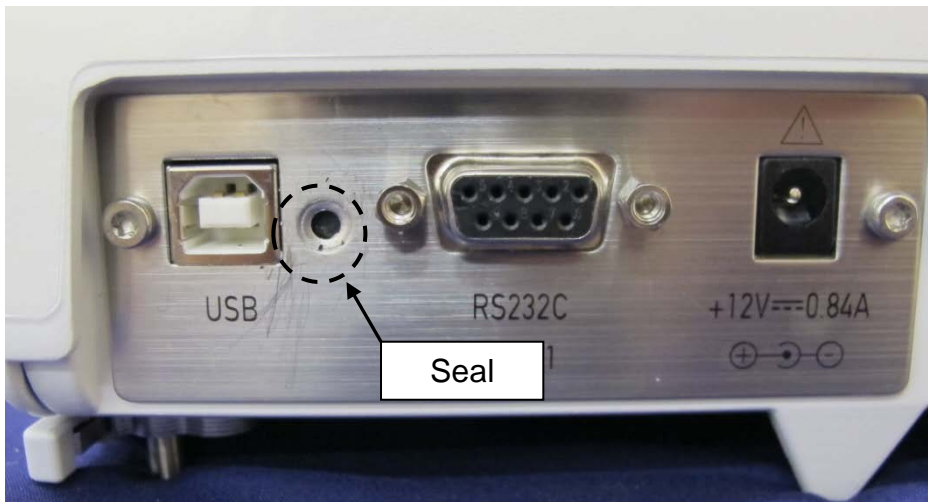


Typical METTLER TOLEDO ML...T Series Weighing Instruments

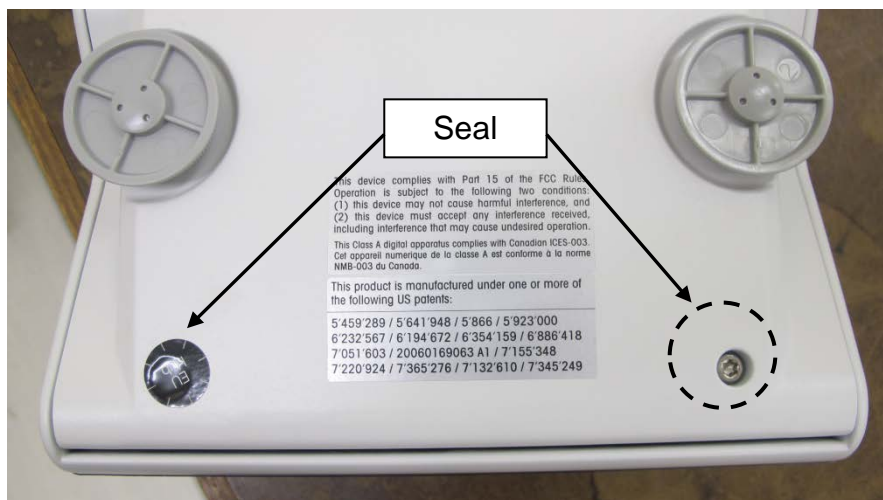
FIGURE 6/4C/301 – 2



(a) ML...T Series Calibration Switch



(b) MS...TS Series Calibration Switch



(c) Sealing of Casing

Typical Sealing

FIGURE 6/4C/301 – 3



Typical METTLER TOLEDO MS...TS Series Weighing Instruments