

Australian Government

National Measurement Institute Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

No S381

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

Mettler Toledo Model MTX Load Cell

submitted by	Mettler Toledo Li	mited	
	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 60 Metrological Regulation for Load Cells, dated July 2004.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 November 2015, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NSC S381' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NSC S381' in addition to the approval number of the instrument.

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.

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The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

Special:

These load cells shall only be used with a Mettler Toledo indicator which is NMIapproved for use with Mettler Toledo 'DigiTol', 'Powercell' or 'MTX' digital load cells.

Special: (for variant 2)

Model MTX load cells may be used to replace some or all approved model 0760 ('DigiTol') load cells (as described in approval NSC S252A) in existing instruments.

DESCRIPTIVE ADVICE

Pattern: approved 27 October 2000

• A Mettler Toledo model MTX digital load cell of 25 000 kg maximum capacity.

Variant: approved 27 October 2000

1. Other capacities and classifications as listed in Table 1.

Technical Schedule No S381 describes the pattern and variant 1.

Variant: approved 13 July 2011

2. Used to replace some or all model 0760 ('DigiTol') load cells in existing instruments.

Technical Schedule No S381 Variation No 1 describes variant 2.

FILING ADVICE

Supplementary Certificate of Approval No S381 dated 15 January 2001 is superseded this Certificate, and may be destroyed. The documentation for this approval now comprises:

Supplementary Certificate of Approval No S381 dated 14 July 2011 Technical Schedule No S381 dated 15 January 2001 (incl. Table 1) Technical Schedule No S381 Variation No 1 dated 14 July 2011 Notification of Change No 1 dated 16 March 2006 Notification of Change No 2 dated 8 April 2011 Figures 1 and 2 dated 15 January 2001

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

TECHNICAL SCHEDULE No S381

Pattern: Mettler Toledo Model MTX Load Cell.

Submittor: Mettler Toledo Ltd 525 Graham Street Port Melbourne VIC

1. Description of Pattern

A Mettler Toledo model MTX digital load cell of 25 000 kg maximum capacity (Figure 1 and Table 1).

3207.

These load cells shall only be used with a Mettler Toledo indicator which is Commissionapproved for use with Mettler Toledo 'DigiTol', 'Powercell', or 'MTX' digital load cells.

1.1 Method of Mounting

Mounting is to be in accordance with the manufacturer's instructions and as shown in Figure 2.

1.2 Markings

Each load cell is marked with the following:

Manufacturer's mark, or name written in full	Mettler-Toledo Inc., USA
Model number	
Serial number	
Pattern approval mark	NSC No S381
Maximum capacity E _{max}	kg or t (refer to Table 1)
Classification	

1.3 Table of Specifications

Specifications for the pattern are given in Table 1.

2. Description of Variant 1

Other capacities and classifications as listed in Table 1.

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Technical Schedule No S381

		TABLE	1		
Type: Mettler Toledo MTX S	Series				
Maximum capacity, $E_{_{max}}$	kg	25 000	25 000	45 000	45 000
Accuracy class - Classificati	on	C3	C4	C3	C4
Maximum number of verifica intervals	ition	3000	4000	3000	4000
Minimum value of verificatio interval, v _{min}	n kg	5.0	2.0	5.0	4.0
Minimum dead load output return value (DR)	kg	4.16	3.12	7.5	5.6
Output rating (resolution)		<mark>100 000</mark> c	ounts at m	aximum ca	pacity, <i>E_{max}</i>
Supply voltage (DC)	V	7.5 - 30			
Cable length (±0.1 m)	m	up to 275	m (*)		
Communication		RS485			
Junction box		Mettler Toledo model CMOS			
Digital indicator		Mettler Toledo indicator which is Commission- approved for use with Mettler Toledo 'DigiTol', 'Powercell' or 'MTX' digital load cells			

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(*) The load cell is provided with a six-pin socket to which a cable up to 275 m in length may be fitted to connect to the junction box or indicator.

TECHNICAL SCHEDULE No S381

VARIATION No 1

Pattern: Mettler Toledo Model MTX Load Cell

Submittor: Mettler Toledo Limited Unit 3, 220 Turner Street Port Melbourne VIC 3207.

1. Description of Variant 2

One or more model MTX load cells may be used in the same instrument as a number of model 0760 ('DigiTol') load cells (which are described in approval NSC S252A. Note that approval S252A is no longer valid for NEW instruments, however the model MTX cells may be used to replace model 0760 cells in existing instruments.) Refer to the Special Condition of Approval for this variant.

This includes the use of a combination of MTX and 0760 load cells in the same instrument, however:

- only MTX load cells of 25 000 kg maximum capacity may be used to replace model 0760 load cells of 22 700 kg maximum capacity.
- only MTX load cells of 45 000 kg maximum capacity may be used to replace model 0760 load cells of 45 000 kg maximum capacity.

In addition, use of the model MTX load cells as described above is only acceptable where calculations in accordance with General Certificate 6B/0 are satisfied with respect to load cell maximum capacity, number of verification intervals, minimum value of verification interval and minimum dead load output return (the latter being required only for multi-range instruments).

For such calculations, the parameters to be used shall be the 'worst case' parameter of the load cells used (i.e. the 'worst case' of the model 0760 parameters taken from approval NSC S252A, and the model MTX parameters taken from this certificate).

The 'worst case' is:

For load cell maximum capacity:	the lower capacity
For maximum number of verification scale intervals:	the lower value
For minimum value of verification scale interval:	the larger value
For minimum dead load output return:	the larger value

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Australian Government

National Measurement Institute

12 Lyonpark Road, North Ryde NSW 2113

Notification of Change Supplementary Certificate of Approval No S381 Change No 1

Issued by the Chief Metrologist under Regulation 60 of the National Measurement Regulations 1999

The following changes are made to the approval documentation for the

Mettler Toledo Model MTX Load Cell

- submitted by Mettler Toledo Ltd 525 Graham Street Port Melbourne VIC 3207.
- A. In Supplementary Certificate of Approval No S381 dated 15 January 2001;
- (i) the Condition of Approval referring to the review of the approval should be amended to read:

"This approval becomes subject to review on 1 November 2010, and then every 5 years thereafter."

- (ii) the FILING ADVICE should be amended by adding the following:"Notification of Change No 1 dated 16 March 2006"
- B. In Supplementary Certificate of Approval No S381 and its Technical Schedule both dated 15 January 2001;
- (i) the references to the submittor should be amended to read:

"Mettler Toledo Lii	mited	
220 Turner Stree	t	
Port Melbourne	VIC	3207."

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



Australian Government

National Measurement Institute Bradfield Road, West Lindfield NSW 2070

Notification of Change Supplementary Certificate of Approval No S381 Change No 2

Issued by the Chief Metrologist under Regulation 60 of the National Measurement Regulations 1999

The following changes are made to the approval documentation for the

Mettler Toledo Model MTX Load Cell

submitted by	Mettler Toledo Lir	mited	
	Unit 3, 220 Turner Street		
	Port Melbourne	VIC	3207.

- A. In Supplementary Certificate of Approval No S381 dated 15 January 2001;
- 1. The Condition of Approval referring to the review of the approval should be amended to read:

"This approval becomes subject to review on 1 November **2015**, and then every 5 years thereafter."

- Note: The review date was previously amended by Notification of Change No 1 dated 16 March 2006.
- 2. The FILING ADVICE should be amended by adding the following: "Notification of Change No 2 dated 8 April 2011"
- B. In Technical Schedule dated 15 January 2001, the Output Rating (resolution) value given in Table 1 should be amended to read:

"111 111 counts at maximum capacity, *E_{max}*."

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

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FIGURE S381 - 1



Typical Mettler Toledo MTX Series Load Cell

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FIGURE S381 - 2
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Mounting Method