

## Globally Approved for Accuracy and Safety



### Process Weighing

Due to the hermetically sealed design, MTB is ideal for harsh environments in process or food applications. The full set of approvals makes it the right choice for your application.



### Tank Weighing

The capacity range from 5kg to 500kg makes the weighing of small vessels possible. The stainless steel design, hermetic sealing and IP68 protection provides the best reliability in these applications.



### ULTRAMOUNT Module

With the optional stainless steel ULTRAMOUNT weigh module METTLER TOLEDO provides a complete solution for vessel weighing in harsh environments.



### MTB Load Cell

The MTB load cell features:

- OIML C3 and NTEP IIIM 5,000d and IIIS 3,000d approvals
- ATEX Zone1/2 and 21/22 approvals
- FM Class I,II,III Div 1&2 approvals
- Stainless steel
- Hermetically sealed design
- IP68 protection class

The MTB is approved for use in various applications in Europe, Asia, America and almost everywhere else in the world. If an approval is required, the MTB probably already complies.

Even if needed for to hazardous areas later, the MTB is already prepared.

# MTB Load Cell Specifications

Parameter		unit of measure	Specification							
Model No:			MTB							
Rated Capacity (R.C.)		kg (lb, nominal)	5 (11)	10 (22)	20 (44)	50 (110)	100 (220)	200 (441)	300 (661)	500 (1102)
Rated Output		mV/V @R.C.	2 ± 0.1%							
Zero load Output		%R.C.	≤ 1							
Combined Error <sup>1), 2)</sup>		%R.C.	≤ 0.018							
Repeatability Error		%A.L. <sup>3)</sup>	≤ 0.01							
Creep, 30 minute		%A.L.	≤0.05 <sup>5)</sup>	≤ 0.0167						
Min. Dead Load Output Return (DR), 30 min		%A.L.	-	≤ 0.0167						
Temperature Effect on	Min Dead load Output	%R.C./°C (./°F)	≤ 0.001 (0.0006)							
	Sensitivity <sup>2)</sup>	%A.L./°C (./°F)	≤ 0.0009 (0.0005)							
Temperature Range	Compensated	°C (°F)	-10 ~ +40 (+14 ~ +104)							
	Operating	°C (°F)	-20 ~ +65 (-4 ~ +150)							
	Safe Storage	°C (°F)	-40 ~ +80 (-40 ~ +176)							
OIML / European Approval <sup>4)</sup>	OIML Cert. No.		-	R60/2000-NL 1-05.18						
	European Cert. No.		-	NMI TC6035						
	Class		-	C3						
	n <sub>max</sub>		-	3000						
	Y		-	12000						
	PLC		-	0.7						
	Humidity Symbol		-	none						
NTEP Approval <sup>4)</sup>	Min. dead load	kg (lb)	-	0 (0)						
	Number			06-045						
	Class			IIS / III M						
	n <sub>max</sub>			3000 / 5000						
	V <sub>min</sub>	kg (lb)		R.C. / 12000						
	Min. dead load	kg (lb)		0 (0)						
	Number, Cat 2			KEMA 05ATEX1178 X						
ATEX Approval <sup>4)</sup>	Number, Cat 3			KEMA 05ATEX1179						
	Rating			II 2 GD EEx ia IIC T4 T135°C II 3 GD EEx nL IIC T4 T135°C II 3 GD EEx nA II T4 T135°C IP65						
	Entity Parameters			Ui=25V, Ii=600mA, Pi=1.25W, Ci=5nF, Li=30µH						
	Number, USA			3005885						
	Number, Canada			3025753C						
	Rating			IS / I,II,III / 1 / ABCDEFG / T4 NI / I / 2 / ABCD / T6 S / II,III / 2 / FG / T6						
	Entity Parameters			Vmax=25V, Imax=600mA, Pi=1.25W, Ci=0, Li=0						
Factory Mutual Approval <sup>4)</sup>	System Drawing No,USA			72184367						
	System Drawing No,			72189337						
	Excitation Voltage	Recommended	V AC/DC	5-15						
Terminal Resistance	Excitation	Ω	≥ 383							
	Output	Ω	350 ± 1							
Insulation Resistance @50VDC		MΩ	> 5000							
Breakdown Voltage		V AC	> 500							
Material	Spring Element		stainless steel							
	Enclosure		316 stainless steel							
	Cable entry fitting		304 stainless steel							
	Cable		PVC							
Protection	Type		welded							
	IP Rating		IP 68							
	NEMA Rating		NEMA 6/6P							
Load Limit	Safe	%R.C.	150							
	Ultimate	%R.C.	300							
Safe Dynamic Load		%R.C.	70							
Fatigue Life		cycles @R.C.	>1,000,000							
Direction of Loading			beam							
Deflection @ R.C., nominal		mm (in)	0.30 (0.012)	0.40 (0.016)	0.5 (0.020)	0.75 (0.030)	1.12 (0.044)			
Weight, nominal		kg (lb)	0.6 (1.3)							
Cable Length		m (ft)	3 (9.8)							
Barometric Pressure Effect on Zero Load Output		kg/kPa (lb/in.Hg)	none							
Safe Side Load		%R.C.	100							
Mounting Screw	Grade		8.8 (grade 5)							
	Size/thread	mm (in)	M8x1.25 (5/16-18 UNC)						M10x1.5 (3/8-16 UNC)	
	Engaged Length	mm (in)	-							
Torque, nominal		N.m (ft-lb)	15 (13)						20 (23)	

<sup>1)</sup> Error due to the combined effect of non-linearity and hysteresis

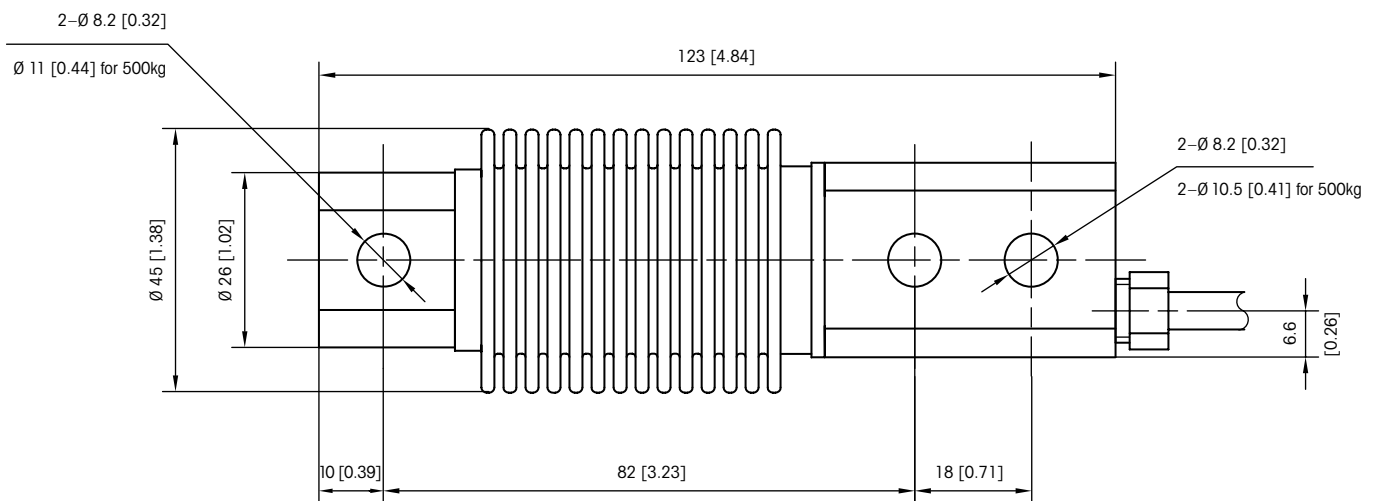
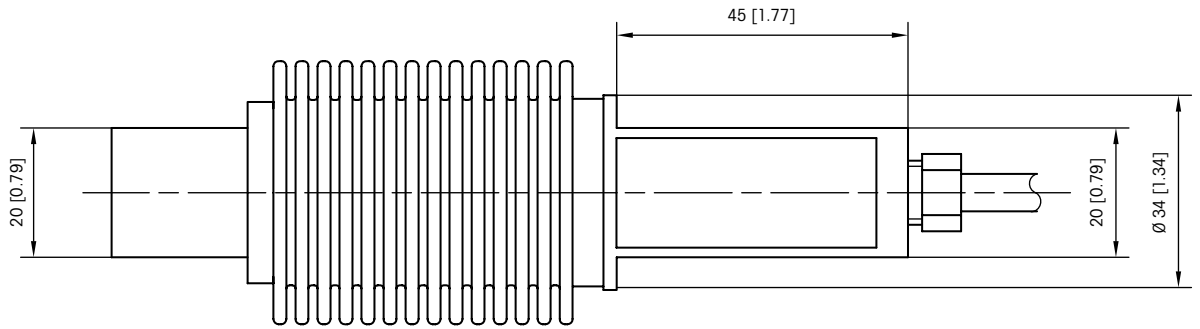
<sup>2)</sup> Typical values only. The sum of errors due to Combined Error and Temperature Effect on Sensitivity comply with the requirements of OIML R60 and NIST HB44.

<sup>3)</sup> A.L. = Applied Load

<sup>4)</sup> See certificate for complete information.

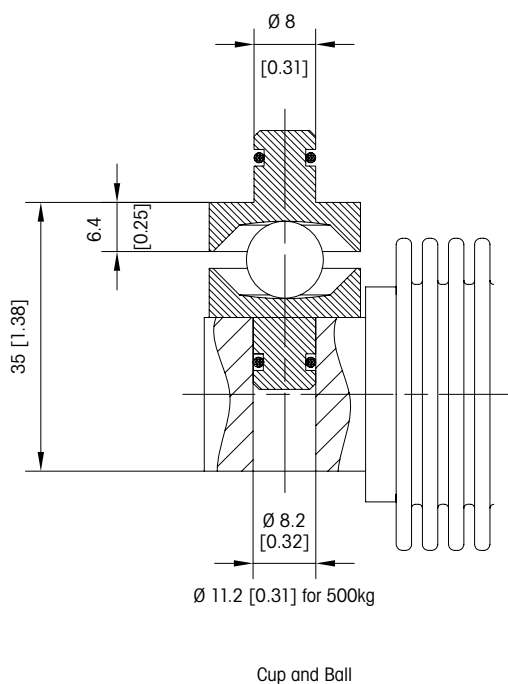
<sup>5)</sup> 60 minutes

## MTB Load Cell Dimensional Drawings mm [inch]

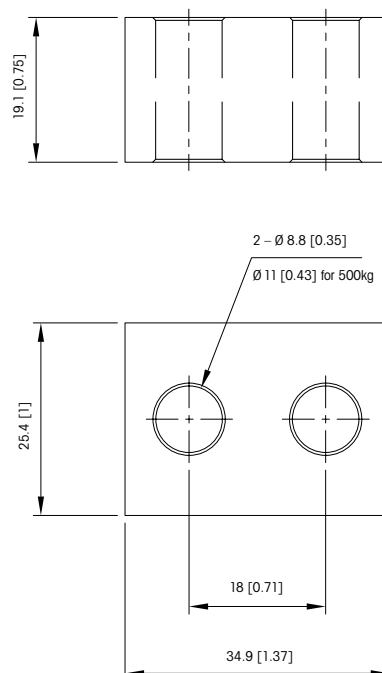


MTB 5, 10, 20, 30, 50, 100, 200, 300, 500

## MTB Ball/Cup Load Introduction mm [inch]



## MTB Spacer mm [inch]



## MTB Load Cell Order Information

Description	Item No.
LOAD CELL MTB 5KG, 3M	71209934
LOAD CELL MTB 10KG, 3M	71209642
LOAD CELL MTB 20KG, 3M	71201556
LOAD CELL MTB 50KG, 3M	71201557
LOAD CELL MTB 100KG, 3M	71201558
LOAD CELL MTB 200KG, 3M	71201559
LOAD CELL MTB 300KG, 3M	71201560
LOAD CELL MTB 500KG, 3M	71209472
BALL/CUP MTB 5-300KG	72191495
SPACER MTB 5-300KG	72191496
BALL/CUP MTB 500KG	72191497
SPACER MTB 500KG	72191498

## MTB Load Cell Cable Colours

Colour	Function
Green	+ Excitation
Black	- Excitation
White	+ Signal
Red	- Signal
Yellow	+ Sense
Blue	- Sense
Yellow (Long)	Shield

## Full Connectivity

Our sensors and instruments are professional communicators. METTLER TOLEDO supplies you with various data communication interfaces that allow you to communicate with your PLCs, MES or ERP systems.



## Global Approvals

The MTB is provided with all listed approvals. No need to think about options and additional charges. Simplifies the conduct of global business, order processing and service-part stocking.



**ServiceXXL**  
Tailored Services

## Worldwide Services

Use METTLER TOLEDO service including fast parts availability from our local supply or one of our logistics centers in Europe, Asia and America. Trained technicians can assist in professional service, installation and approval worldwide.

## Weighing Electronics

METTLER TOLEDO offers a complete family of electronics from simple weighing to application solutions for filling, stock control, batching, formulation, counting, checkweighing.

**nefton**  
Ζύγιση  
Σήμανση  
Συμμόρφωση

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