

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.



MultiMount Module

With the optional MultiMount weigh module METTLER TOLEDO provides a complete solution for vessel weighing in harsh environments. MultiMount is available in zinc plated and stainless steel version.



MTB Load Cell

The MTB load cell features:

- OIML C3, NTEP IIIM 5,000d and IIS 3,000d approvals
- ATEX Zone1/2 and 21/22 approvals
- FM Class I,II,III Div 1&2 approvals for USA & Canada
- Stainless steel
- Hermetically sealed design
- IP68 protection class
- All approvals standard on every Load Cell

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.

If ever needed for 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 ^{1), 2)}		%R.C.	≤ 0.018							
Repeatability Error		%A.L. ³⁾	≤ 0.01							
Creep, 30 minute		%A.L.	≤ 0.05 ⁵⁾	≤ 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 ²⁾	%A.L./°C (./°F)	≤ 0.0009 (0.0005)							
Temperature Range	Compensated	°C (°F)	-10 ~ +40 (+14 ~ +104)							
	Operating	°C (°F)	-40 ~ +65 (-40 ~ +150)							
	Safe Storage	°C (°F)	-40 ~ +80 (-40 ~ +176)							
OIML / European Approval ⁴⁾	OIML Cert. No.		-	R60/2000-NL 1-05.18						
	European Cert. No.		-	NMI TC6035						
	Class		-	C3						
	n _{max}		-	3000						
	Y		-	12000						
	PLC		-	0.7						
	Humidity Symbol		-	none						
NTEP Approval ⁴⁾	Min. dead load	kg (lb)	-	0 (0)						
	Number			06-045						
	Class			IIIS / III M						
	n _{max}			3000 / 5000						
	V _{min}	kg (lb)		R.C. / 12000						
ATEX Approval ⁴⁾	Min. dead load	kg (lb)		0 (0)						
	Number, Cat 2			KEMA 05ATEX1178 X (-40°C ~ +50°C)						
	Number, Cat 3			KEMA 05ATEX1179 (-40°C ~ +50°C)						
	Rating			II 2 G Ex ib IIC T4						
				II 2 D Ex ibD 21 IP6X T135°C						
			II 3 G Ex nA II T4							
Factory Mutual Approval ⁴⁾			II 3 G Ex nL IIC T4							
			II 3 D Ex iD A22 IP6X T135°C							
	Entity Parameters		Ui=25V, li=600mA, Pi=1.25W, Ci=5nF, Li=30µH							
	Number, USA		3005885							
	Number, Canada		3025753C							
Material	Rating		IS / I,II,III / 1 / ABCDEFG / T4							
			NI / 1 / 2 / ABCD / T6							
			S / II,III / 2 / FG / T6							
	Entity Parameters		Vmax=25V, Imax=600mA, Pi=1.25W, Ci=0, Li=0							
Excitation Voltage	System Drawing No, USA		72184367							
	System Drawing No, CDN		72189337							
Terminal Resistance	Recommended	V AC/DC	5-15							
	Maximum	V AC/DC	20							
Insulation Resistance @50VDC	Excitation	Ω	≥ 383							
	Output	Ω	350 ± 1							
Breakdown Voltage		MΩ	> 5000							
		V AC	> 500							
Protection	Spring Element		stainless steel							
	Enclosure		316 stainless steel							
	Cable entry fitting		304 stainless steel							
	Cable		PVC							
Load Limit	Type		welded							
	IP Rating		IP 68							
	NEMA Rating		NEMA 6/6P							
Safe Dynamic Load	Safe	%R.C.	150							
	Ultimate	%R.C.	300							
Fatigue Life		%R.C.	70							
		cycles @R.C.	>1,000,000							
Deflection @ R.C., nominal	Direction of Loading		beam							
		mm (in)	0.30 (0.012)	0.40 (0.016)	0.5 (0.020)	0.75 (0.030)	1.12 (0.044)			
Cable Length	Weight, nominal	kg (lb)	0.6 (1.3)							
		m (ft)	3 (10); 5 (16.6)							
Safe Side Load	Barometric Pressure Effect on Zero Load Output	kg/kPa (lb/in.Hg)	none							
		%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 (11)						20 (14.5)	

¹⁾ Error due to the combined effect of non-linearity and hysteresis

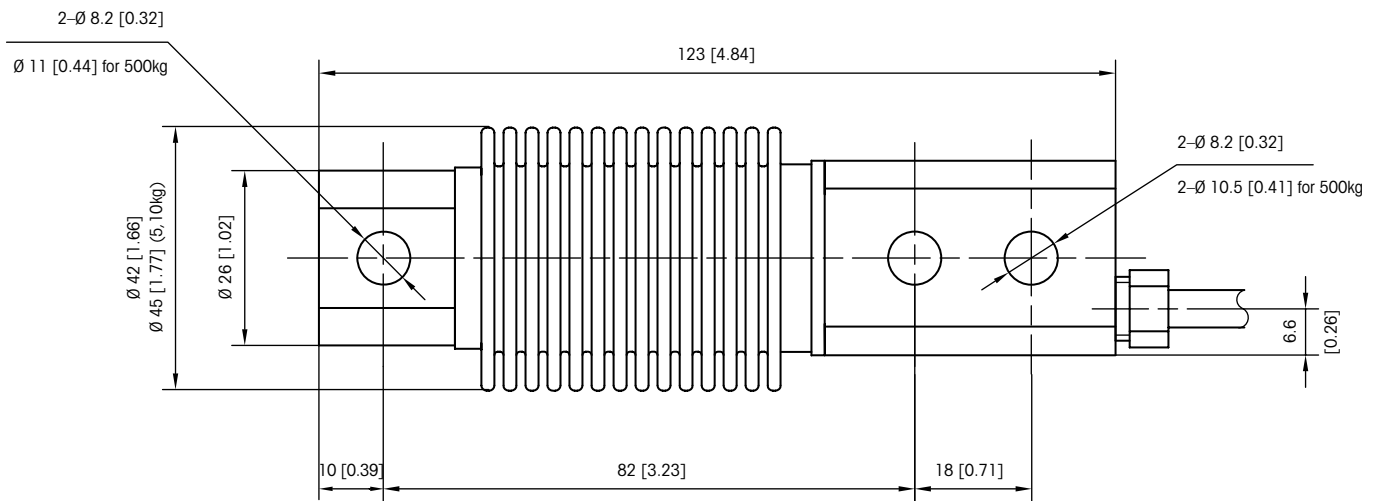
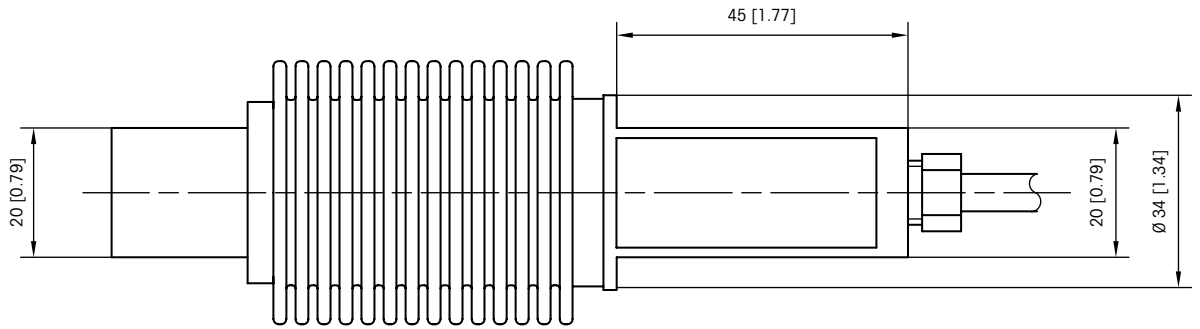
²⁾ Typical values only. The sum of errors due to Combined Error and Temperature Effect on Sensitivity comply with the requirements of OIML R60 and NIST HB44.

³⁾ A.L. = Applied Load

⁴⁾ See certificate for complete information.

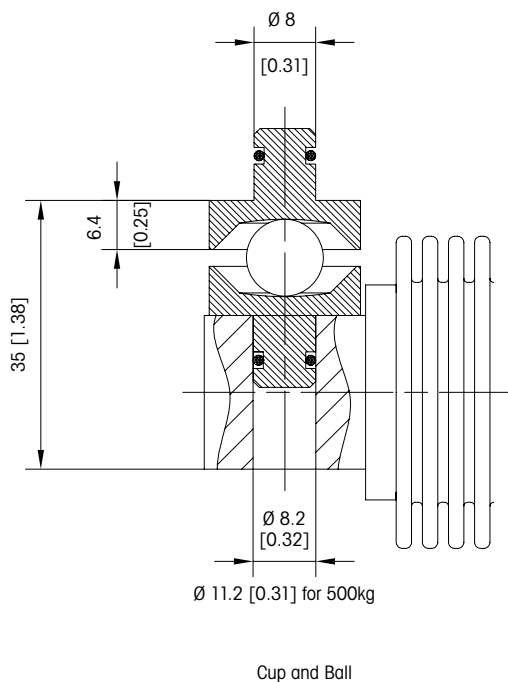
⁵⁾ 60 minutes

MTB Load Cell Dimensional Drawings mm [inch]

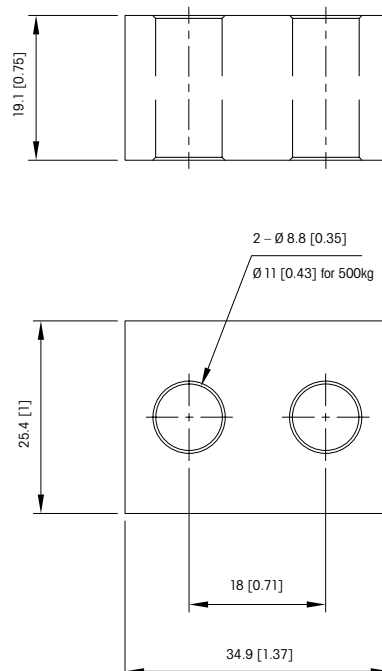


MTB 5, 10, 20, 50, 100, 200, 300, 500

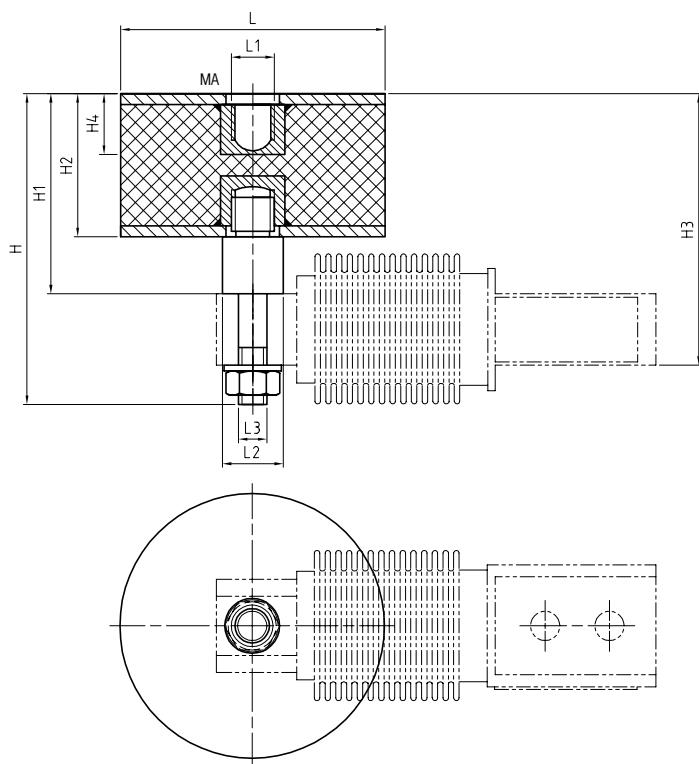
MTB Ball/Cup Load Introduction mm [inch]



MTB Spacer mm [inch]



MTB Expansion + Vibration Kit EVK mm [inch]

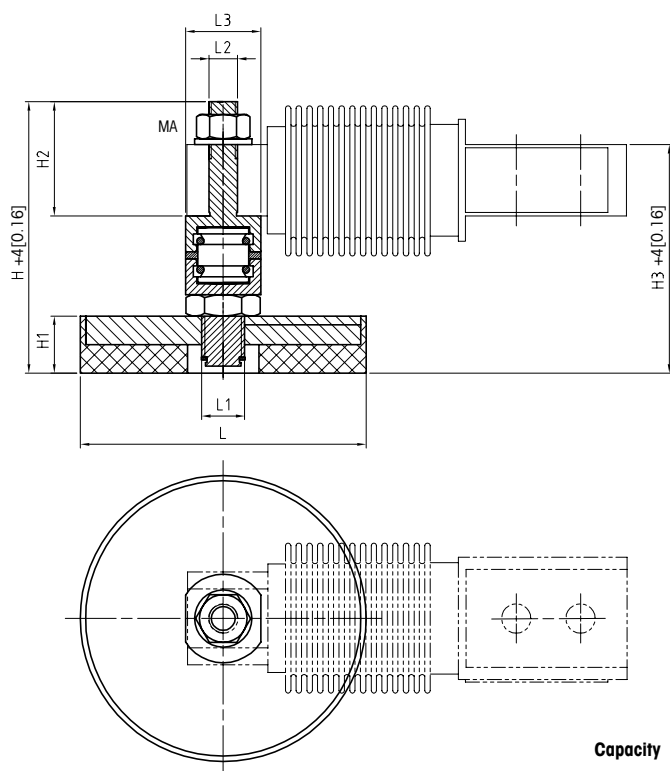


Materials: Stainless steel, NBR 70

Capacity	Dimensions and Locations													
	L	L1	L2	L3	H	H1	H2	H3	H4	Smax ¹	Fs max ²	Ft ³	MA	
5-300 kg	ø74 [ø2.91]	M12	17 [0.67]	M8	87 [3.43]	56 [2.20]	40 [1.57]	76 [2.99]	14 [0.55]	±3 [±0.12]	450 N	500 N	20 Nm [14.5 lb-ft]	
500 kg	ø74 [ø2.91]	M12	17 [0.67]	M8	87 [3.43]	56 [2.20]	40 [1.57]	76 [2.99]	14 [0.55]	±3 [±0.12]	450 N	500 N	20 Nm [14.5 lb-ft]	

1) Max lateral displacement 2) Max lateral force of Smax 3) Max Tension Force

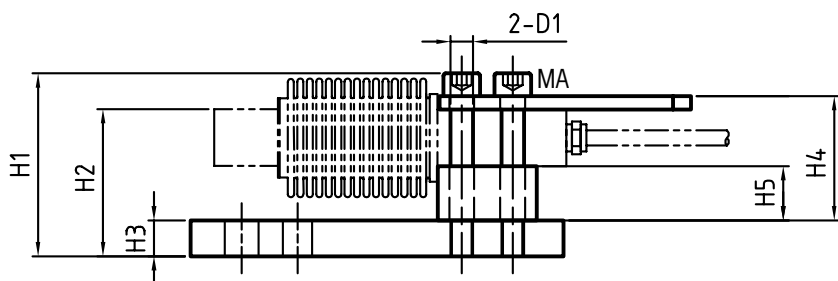
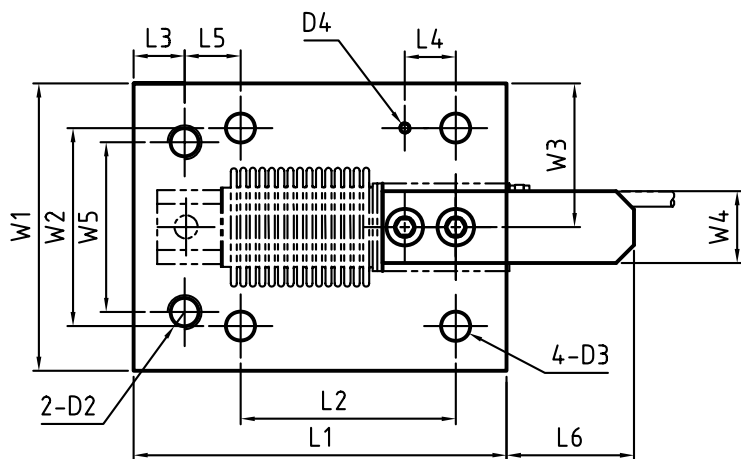
MTB Foot Kit FTK mm [inch]



Materials: Stainless steel, NBR 70

Capacity	Dimensions and Locations									
	L	L1	L2	L3	H	H1	H2	H3	MA	
5-300 kg	ø80 [ø3.15]	M12	M8	21 [0.83]	76 [2.99]	16 [0.63]	32 [1.26]	64 [2.52]	20 Nm [14.5 lb-ft]	
500 kg	ø80 [ø3.15]	M12	M10	21 [0.83]	76 [2.99]	16 [0.63]	32 [1.26]	64 [2.52]	20 Nm [14.5 lb-ft]	

MTB Base Plate Kit BPK mm [inch]



Materials: Stainless steel

Capacity	Dimensions and Locations									
	L1	L2	L3	L4	L5	L6	W1	W2	W3	W4
5-300 kg	131.8 [5.19]	76 [2.99]	18 [0.70]	18 [0.70]	24 [0.94]	45 [1.77]	101.6 [4]	70 [2.75]	50.8 [2]	25.4 [1]
500 kg	131.8 [5.19]	76 [2.99]	18 [0.70]	18 [0.70]	24 [0.94]	45 [1.77]	101.6 [4]	70 [2.75]	50.8 [2]	25.4 [1]

Capacity	Dimensions and Locations										
	W5	H1	H2	H3	H4	H5	D1	D2	D3	D4	MA
5-300 kg	60 [2.36]	64.6 [2.54]	51.9 [2.04]	12.7 [0.50]	43.9 [1.72]	19.1 [0.75]	M8	M12	∅10.3 [∅0.40]	M4	15 Nm [11 ft-lb]
500 kg	60 [2.36]	66.6 [2.62]	51.9 [2.04]	12.7 [0.50]	43.9 [1.72]	19.1 [0.75]	M10	M12	∅10.3 [∅0.40]	M4	20 Nm [14.5 ft-lb]

MTB Load Cell Order Information

Description	Item No.
LOAD CELL MTB 5 KG, 3 M	71209934
LOAD CELL MTB 10 KG, 3 M	71209642
LOAD CELL MTB 20 KG, 3 M	71201556
LOAD CELL MTB 50 KG, 3 M	71201557
LOAD CELL MTB 100 KG, 3 M	71201558
LOAD CELL MTB 200 KG, 3 M	71201559
LOAD CELL MTB 300 KG, 3 M	71201560
LOAD CELL MTB 500 KG, 3 M	71209472
LOAD CELL MTB 5 KG, 5 M	72208033
LOAD CELL MTB 10 KG, 5 M	72208034
LOAD CELL MTB 20 KG, 5 M	72208035
LOAD CELL MTB 50 KG, 5 M	72208036
LOAD CELL MTB 100 KG, 5 M	72208037
LOAD CELL MTB 200 KG, 5 M	72208038
LOAD CELL MTB 300 KG, 5 M	72208039
LOAD CELL MTB 500 KG, 5 M	72208040
BALL/CUP MTB 5-300 KG	72191495
SPACER MTB 5-300 KG	72191496
BALL/CUP MTB 500 KG	72191497
SPACER MTB 500 KG	72191498
BASE PLATE KIT BPK SS MTB 5-300 KG	72208676
BASE PLATE KIT BPK SS MTB 500 KG	72208677
EXPANSION + VIBR. KIT EVK MTB 5-300 KG	72208678
EXPANSION + VIBR. KIT EVK MTB 500 KG	72208679
FOOT KIT FTK SS MTB 5-300 KG	72208680
FOOT KIT FTK SS MTB 500 KG	72208681

Bolded entries are stocked

MTB Load Cell Cable Colours

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

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.



METTLER TOLEDO Service

Our extensive service network is among the best in the world and ensures maximum availability and service life of your product.

Weighing Electronics

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



Quality certificate ISO 9001
Environment certificate ISO 14001

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