

## Global Usage

### Fully Approved for Accuracy and Safety



#### Floor Scales

Use the SLB515 load cell in platform and floor scales. Due to the hermetic welded design the SLB515 is ideal for harsh environments in process and food applications. The full set of approvals provides maximum applicability and safety in these applications.



#### Tank Weighing

The capacity range from 110kg to 4.4t allows the weighing of tanks and silos. The stainless steel design, hermetic sealing and IP68/IP69K protection provides the best reliability in tank and hopper weighing applications in harsh environments in process and food applications.



#### Hermetically Sealed

SLB515 load cells are made from stainless steel and hermetically sealed by laser welding. This protects the load cell from damp for the best stability and measuring performance.



#### Accessories

The optional accessories for proper load introduction guarantee the optimal performance in conjunction with thermal expansion and vibration.



#### SLB515 Beam Load Cell

##### Fully Approved

The SLB515 is approved for use in various applications in Europe, Asia, America and almost everywhere else in the world. If an approval is required, the SLB515 probably already complies. Even if needed for hazardous areas later, the SLB515 is already prepared.

SLB515 beam load cell features:

- Threaded load introduction
- OIML C3 and NTEP III M 5K approval
- ATEX Zone1/2 and 21/22 approvals
- IECEx approval
- FM Class I,II,III Div 1&2 approvals for USA & Canada
- Stainless steel
- Hermetically sealed design
- IP68, IP69K protection class

# SLB515 Load Cell Specifications

Parameter		Unit of Measure	Specification					
Model No.			SLB515					
Rated capacity (R.C.)		kg (lb)	110 (250)	220 (500)	550 (1250)	1100 (2500)	2200 (5000)	4400 (10000)
Rated output		mVV @R.C.-kg	0.970 ± 0.2%		1.940 ± 0.1%			
		mVV @R.C.-lb	1.000 ± 0.2%		2.000 ± 0.1%			
Zero load output		%R.C.	≤ 2		≤ 1			
Combined error <sup>1)2)</sup>		%R.C.	≤ 0.03		≤ 0.018		≤ 0.026	
Repeatability error		%A.L. <sup>3)</sup>			≤ 0.01		≤ 0.02	
Creep, 30 minute		%A.L.	≤ 0.017					
Min. dead load output return (DR), 30 min		%A.L.	≤ 0.017					
Temperature effect on	Min. dead load output	%R.C./°C (./°F)	≤ 0.0032 (0.0018)	≤ 0.0016 (0.0009)	≤ 0.0013 (0.0007)		≤ 0.0016 (0.0009)	
	Sensitivity <sup>2)</sup>	%A.L./°C (./°F)	≤ 0.001 (0.0006)					≤ 0.002 (0.0001)
Temperature range	Compensated		-10 to +40 (+14 to +104)					
	Operating	°C (°F)	-40 to +65 (-40 to +150)					
	Safe storage		-40 to +80 (-40 to +176)					
OIML / European approval <sup>4)</sup>	Number, OIML Cert. No.		TBD / TC8758					
	Class		C3			C1		
	nmax		3000			1000		
	Vmin	g	25	50	100	250	500	
	PLC		0.7					
	Humidity symbol		CH					
	Min. dead load		kg	0				
	Z			3000			1000	
	Barometric Pressure Effect			none				
	NTEP approval <sup>4)</sup>	Number		15-052				
Class		III M						
nmax		5000			1600			
Vmin		lb	0.05	0.1	0.25	0.5	1	
Min. dead load		lb	0					
ATEX approval <sup>4)</sup>	Number, cat. 2 / cat. 3		DEKRA 13ATEX0081 / DEKRA 13ATEX0082					
	Rating, cat. 2		II 2 G Ex ia IIC T4 Gb / II 2 D Ex ib IIIC T100 °C Db					
	Rating, cat. 3		II 3 G Ex ic IIC T4 Gc / II 3 G Ex nA IIC T4 Gc / II 3 D Ex tc IIIC T100 °C Dc					
Entity parameters		Ui/Un = 20V, Ii = 600mA, Pi = 1.25W, Ci = 0.2nF/m (5), Li = 1µH/m (5)						
IECEx Approval <sup>4)</sup>	Number		IECEx DEK 20.0086X					
	Rating		Ex ia IIC T4 Gb; Ex ic IIC T4 Gc; Ex ec IIC T4 Gc Ex ib IIIC T100 °C Db; Ex tc IIIC T100 °C Dc					
	Entity Parameters		Ui=20V, Ii=600mA, Pi=1.25W, Ci=1.2nF, Li=6µH; Urated = 20V, Irated = 55mA					
Factory Mutual Approval, USA / Canada <sup>4)</sup>	Number, USA/Canada		FM18US0025 / FM18CA0032					
	Rating, USA		IS / I, II, III / 1 / ABCDEFG / T4 Entity NI / I / 2 / ABCD / T6 NIFW; S / II, III / 2 / FG / T6					
	Rating, Canada		IS / I, II, III / 1 / ABCDEFG / T4 Entity NI / I / 2 / ABCD / T6 NIFW; DIP / II, III / 2 / FG / T6					
	Entity parameters		Vmax=20V, Imax=600mA, Pi=1.25W, Ci=0, Li=0; NIFW: Vmax=20V, Imax=600mA, Ci= 0, Li=0					
	System drawing No, USA		30136756					
Excitation voltage	Recommended	V AC/DC	5 ~ 15					
	Max.		20					
Terminal resistance	Excitation	Ω	382 ± 4					
	Output		350 ± 1					
Insulation resistance @50VDC		MΩ	> 5000					
Breakdown voltage		V AC	> 500					
Material	Spring element		Stainless steel					
	Enclosure		304 Stainless steel					
	Cable entry fitting		304 Stainless steel					
	Cable		Polyurethane (PU)					
Protection	Type		Welded					
	IP Rating		IP68, IP69K					
	NEMA rating		NEMA 6/6P					
Overload protection			Yes			No		
Load limit	Safe	%R.C.	150					
	Ultimate		300					
Safe side load		%R.C.	100					
Safe dynamic load		%R.C.	70					
Fatigue life		cycles @R.C.	>1,000,000					
Direction of loading			Beam					
Deflection @ R.C., nominal		mm (in)	0.14 (0.005)	0.23 (0.009)	0.26 (0.01)	0.37 (0.015)	0.6 (0.024)	
Weight, nominal		kg (lb)	1 (2.2)		1.4 (3.1)		2.4 (5.3)	
Cable	Length	m (ft)	3 (9.8), 5 (16.4), 10 (32.8)					
	Diameter	mm (in)	5.2 (0.20)					

Parameter	Unit of Measure		Specification	
Mounting screw	Grade		10.9 (Grade 8)	
	Size/thread	mm (in)	M12 (1/2-13 UNC)	M20 (3/4-10 UNC)
	Torque, nominal	Nm (ft-lb)	98 (81)	330 (190)
Drawing No.	Dimensions		30136761	
	To-Scale		30136762	

<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.

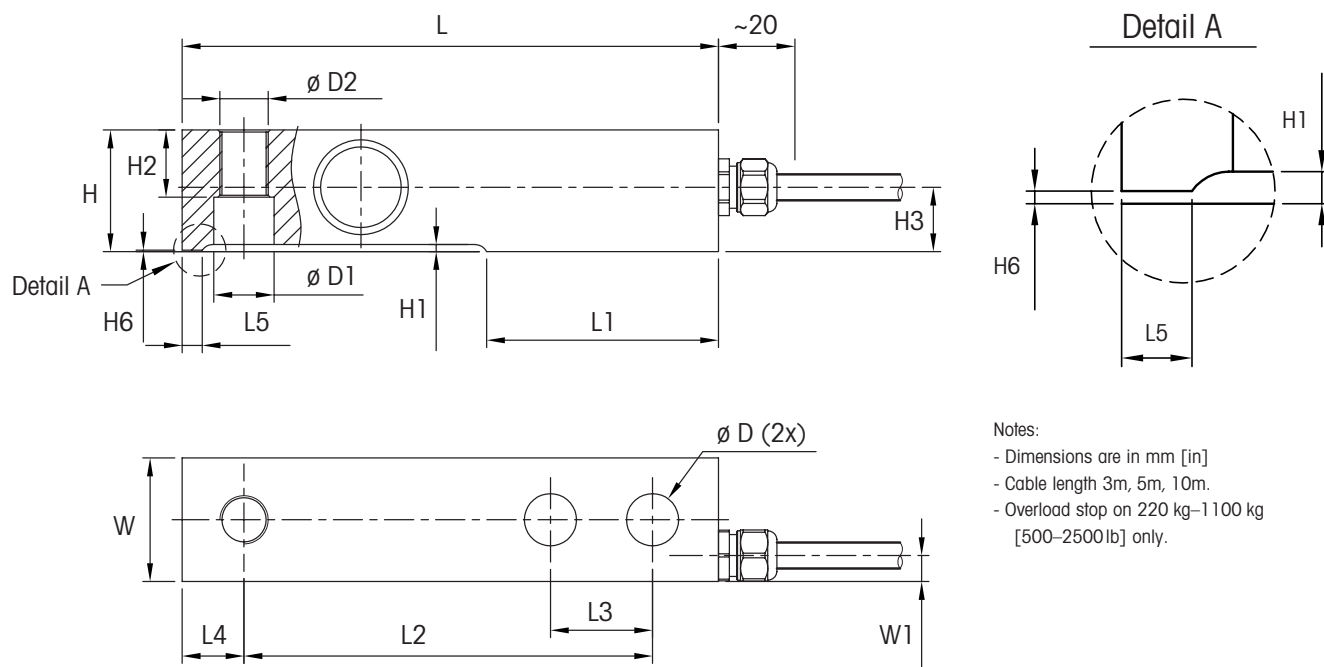
<sup>3)</sup> A.L. = Applied Load

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

<sup>5)</sup> (5)/m Load Cell Cable



## SLB515 Load Cell Dimensional Drawings mm [in]



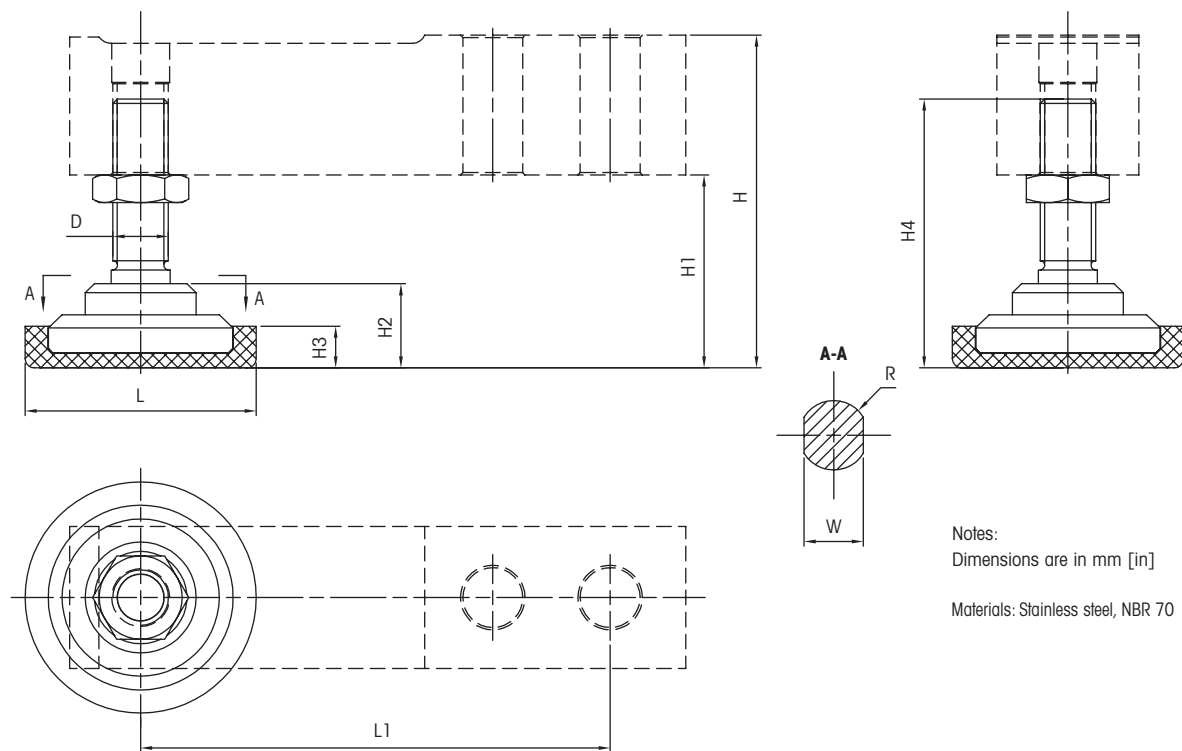
### Notes:

- Dimensions are in mm [in]
- Cable length 3m, 5m, 10m.
- Overload stop on 220 kg–1100 kg [500–2500lb] only.

### Dimensions and locations

Model	Capacity	D (2x)	D1	D2	H	H1	H2	H3	H6	L	L1	L2	L3	L4	L5	W	W1
SLB515	220–1100 kg [500–2500 lb]	13.0 [0.51]	12.5 [0.49]	M12	30.2 [1.19]	1.8 [0.07]	20 [0.79]	16.0 [0.63]	0.48 [0.02]	133.4 [5.25]	56.5 [2.22]	101.6 [4.00]	25.4 [1.00]	15.4 [0.61]	6.4 [0.25]	30.7 [1.21]	6.5 [0.26]
	2200 kg [5000 lb]	13.0 [0.51]	12.5 [0.49]	M12	36.6 [1.44]	2.6 [0.10]	20 [0.79]	19.6 [0.77]	2.6 [0.10]	136.7 [5.38]	55.6 [2.19]	101.6 [4.00]	25.4 [1.00]	18.4 [0.72]	-	36.8 [1.45]	6.0 [0.24]
	4400 kg	20.5	22.2	M20	42.9	2.5	20	22.7	2.5	171.5	73.8	133.4	38.1	21.4	-	42.9	6.0
	[10000 lb]	[0.81]	[0.87]		[1.69]	[0.10]	[0.79]	[0.89]	[0.10]	[6.75]	[2.91]	[5.25]	[1.50]	[0.84]		[1.69]	[0.24]

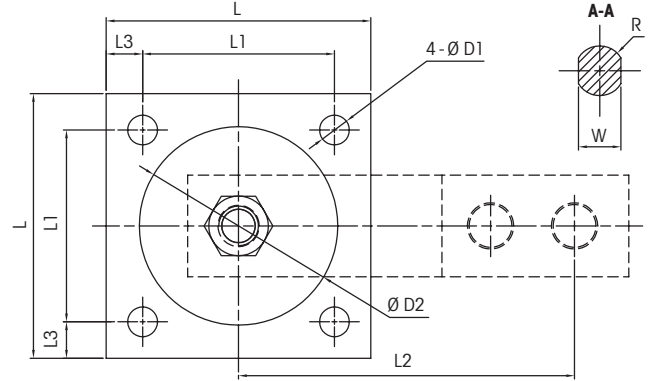
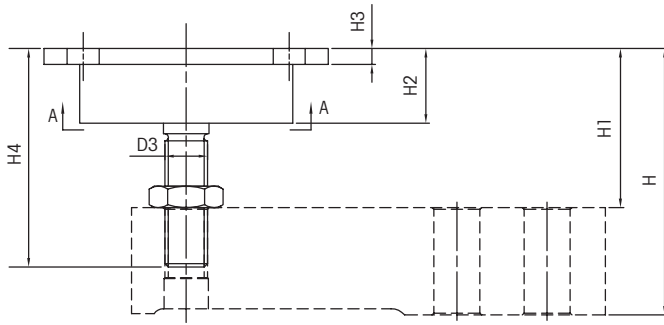
# SLB515 Foot Kit FTK mm [in]



Notes:  
 Dimensions are in mm [in]  
 Materials: Stainless steel, NBR 70

Model	Capacity	Dimensions and locations											
		L	L1	D	H		H1		H2	H3	H4	R	W
					min	max	min	max					
FTKT	220–1100 kg	Ø50	101.6	M12	60	72	29.8	41.8	18.2	9	58.2	7.5	12.8
	[500–2500 lb]	[Ø1.97]	[4.00]		[2.36]	[2.84]	[1.17]	[1.65]	[0.72]	[0.35]	[2.29]	[0.30]	[0.50]
FTKT	2200 kg	Ø50	101.6	M12	66.4	78.4	29.8	41.8	18.2	9	58.2	7.5	12.8
	[5000 lb]	[Ø1.97]	[4.00]		[2.61]	[3.09]	[1.17]	[1.65]	[0.72]	[0.35]	[2.29]	[0.30]	[0.50]
FTKT	4400 kg	Ø70	133.4	M20	91	110	48.1	67.1	29.5	17	87.5	10	20.8
	[10 000 lb]	[Ø2.76]	[5.25]		[3.58]	[4.33]	[1.89]	[2.64]	[1.16]	[0.67]	[3.44]	[0.39]	[0.82]

# SLB515 Expansion and Vibration Kit EVK mm [in]



Notes:

Dimensions are in mm [in]

Materials: Stainless steel, NBR 70

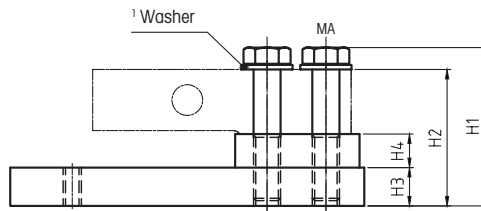
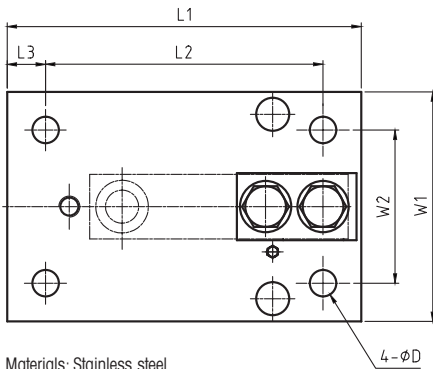
Dimensions and locations

Model	Capacity	D1	D2	D3	H		H1		H2	H3	H4	L	L1	L2	L3	R	W	SH <sub>max</sub> *	SV <sub>max</sub> **	Max. side load ratings
					min	max	min	max												
EVKT	220–1100 kg [500–2500 lb]	Ø9 [Ø0.35]	Ø60 [Ø2.36]	M12	63 [2.48]	75 [2.95]	32.8 [1.29]	44.8 [1.76]	21.5 [0.85]	4.5 [0.18]	61.5 [2.42]	80 [3.15]	58 [2.28]	101.6 [4.00]	11 [0.43]	7.5 [0.30]	12.8 [0.50]	±3 [±0.12]	1 [0.04]	2100N
EVKT	2200 kg [5000 lb]	Ø9 [Ø0.35]	Ø60 [Ø2.36]	M12	69.4 [2.73]	81.4 [3.21]	32.8 [1.29]	44.8 [1.76]	21.5 [0.85]	4.5 [0.18]	61.5 [2.42]	80 [3.15]	58 [2.28]	101.6 [4.00]	11 [0.43]	7.5 [0.30]	12.8 [0.50]	±3 [±0.12]	1.6 [0.07]	2400N
EVKT	4400 kg [10 000 lb]	Ø11 [Ø0.43]	Ø72 [Ø2.83]	M20	91 [3.58]	110 [4.33]	48.1 [1.89]	67.1 [2.64]	29.5 [1.16]	9.5 [0.37]	87.5 [3.44]	100 [3.94]	76 [2.99]	133.4 [5.25]	12 [0.47]	10 [0.39]	20.8 [0.82]	±3 [±0.12]	2.2 [0.09]	2800N

\* Max Lateral displacement

\*\* Max vertical displacement incl. load cell

# SLB515 Base Plate Kit BPK mm [in]



Materials: Stainless steel

Capacity	Dimensions and locations												D	²MA <sub>cs</sub>	³MA <sub>ss</sub>
	L1	L2	L3	W1	W2	H1	H2	H3	H4	D	²MA <sub>cs</sub>	³MA <sub>ss</sub>			
110 kg–1.1 t [250–2500 lb]	177.9 [7.00]	152.4 [6.00]	12.7 [0.50]	114.4 [4.50]	89.0 [3.50]	72.6 [2.86]	65.1 [2.56]	19.1 [0.75]	15.88 [0.625]	11.2 [0.44]	98Nm [72lb-ft]	98Nm [72lb-ft]			
2.2 t [5000 lb]	235.0 [9.25]	184.2 [7.25]	25.4 [1.00]	152.4 [6.00]	101.6 [4.00]	105.0 [4.13]	90.5 [3.56]	25.4 [1.00]	12.7 [0.5]	17.5 [0.69]	270Nm [200lb-ft]	270Nm [200lb-ft]			

¹ Two washers only for 4.4t

² Torque carbon steel version

³ Torque stainless steel version

## SLB515 Load Cell Order Information

Order information		Item No., load cell			Item No., options		
Rated capacity	Class	Cable, material / length			Base Plate Kit BPK, 304	Expansion+ Vibr Kit EVKT	Foot Kit FTKT
		PU / 3 m (9.8 ft)	PU / 5 m (16.4 ft)	PU / 10 m 32.8 ft)			
110kg / 250lb	0.03%	30101610	30101611	30101612	30265370	30076302	30076304
220kg / 500lb	C3/III M n:5	30101616	30101617	30101618			
550kg / 1250lb	C3/III M n:5	30101622	30101623	30101624			
1100kg / 2500lb	C3/III M n:5	30101628	30101629	30101630			
2200kg / 5000lb	C3/III M n:5	30101634	30101635	30101636	30265372	30076303	30076305
4400kg / 10000lb	C1/III M n:1.6	30101640	30101641	30101642	30265374		

## SLB515 Load Cell Cable Colours

Colour	Function
Green	+ Excitation
Black	- Excitation
White	+ Signal
Red	- Signal
Yellow	Shield*

\*Connected to spring element

## Full Connectivity

METTLER TOLEDO supplies various data communication interfaces that enable our sensors and instruments to communicate with your PLC, MES, or ERP systems.



## Weighing Electronics

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



## METTLER TOLEDO Service

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

### METTLER TOLEDO Group

Industrial Division  
Local contact: [www.mt.com/contacts](http://www.mt.com/contacts)

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For more information

