SWB605 PowerMount™ EN1090

Right the First Time

Safe, Accurate, Service Friendly

Tank Weighing

SWB605 PowerMount™ weigh modules offer rugged construction and many features for easy installation and accurate and reliable tank weighing. Standard lift-off bolt copes with tipping forces while vertical safety down-stop provides additional safety.

Conveyors and Mixers

Weigh modules are also designed for dynamic-loading applications such as conveyors, mixers and blenders. SWB605 PowerMount™ provides 360° checking for ease of installation and maximum safety. The rocker pin restores the top plate to its ideal position to maintain accurate, repeatable weight.

Load Cell

POWERCELL® load cells have a rocker pin design that automatically aligns load forces for accurate weighing. These hermetically sealed load cells are rated IP68/IP69K and can be used in all environments. The load cells are easy to inspect or replace.

Predictive Maintenance

SWB605 PowerMount™ monitors single load cells for overload, zero drift, foundation problems, etc.; prompting action before system shuts down or measures incorrectly.

CERTIFIED DIN EN 1090

SWB605
PowerMount™

SWB605 PowerMount™ EN1090

Know What's Ahead

SWB605 PowerMount™ features ensure correct scale system installation, right from the start. Weigh modules do not compromise on safety – all safety features are built-in. The rocker pin design provides the highest level of weighing accuracy. Service features, including SafeLock™ provide easy and trouble free installation.

Features:

- Integrated lift-off protection
- Vertical safety down-stop
- Full 360° integrated checking
- Ground strap – welding protection
- SafeLock™ – Weigh module locked for installation
- SafeLock™ – Load cell protected for installation
- Dual stabilizer option
- All load cells with IP68/IP69K and fully stainless steel
- Global approvals standard on each load cell
- OIML C3/NTEP III M n:5, OIML C6/NTEP III M n:10 or C10
- AXTE/IECEx Zone1/21 & 2/22 approval ; FM Div1 & Div2 approval
- Zinc plated or stainless steel mounting hardware
- CalFree™ Plus: Precise calibration on a finger tip
- EN1090 conformity

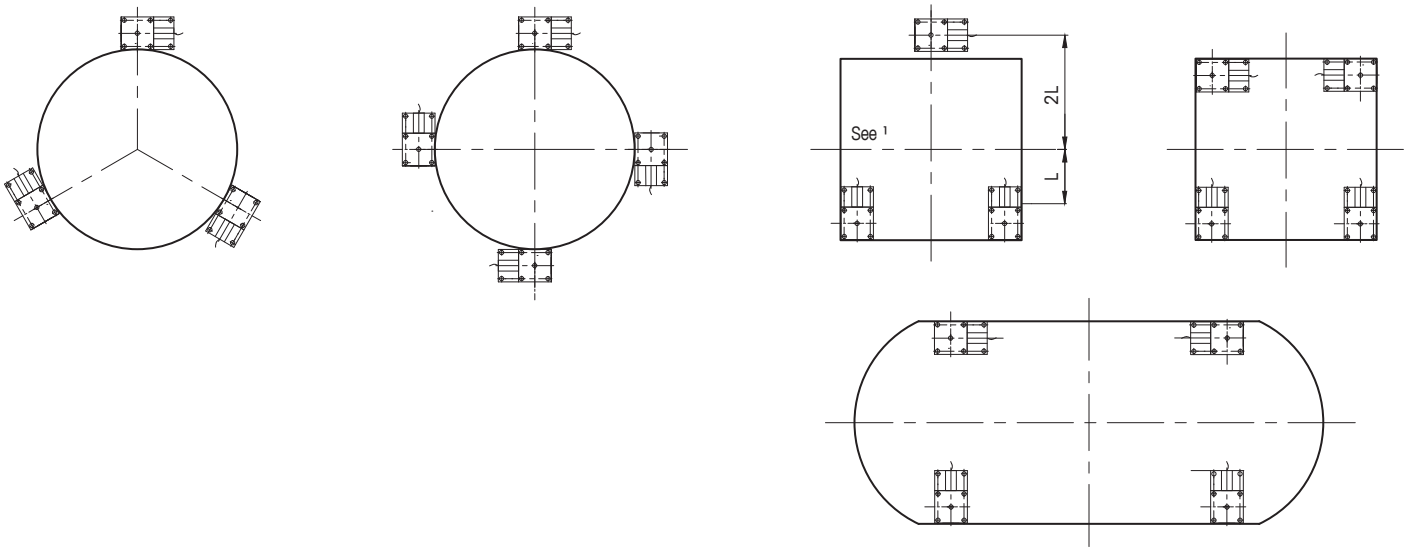
METTLER TOLEDO

SWB605 PowerMount™ EN1090 Specifications – Weigh Module

Weigh Module	unit of measure	Specification				
Model No.		SWB605 PowerMount™ EN1090				
Size		2				3
Rated Capacity (R.C.)	kg (lb, nominal)	220 (500)	550 (1250)	1100 (2500)	2200 (5000)	4400 (10000)
Max. Rated Forces [1]						
Max. Compressive Force, Rated	kN (lb)	2.2 (500)	5.4 (1250)	10.8 (2500)	21.6 (5000)	43.2 (10000)
Max. Horizontal Force, Rated (transverse / longitudinal)	kN (lb)	7.5 (1685)				15 (3370)
Max. Uplift Force, Rated	kN (lb)	16 (3600)				22.2 (5000)
Max. horizontal force (longitudinal) per stabilizer option, Rated [7]	kN (lb)	5 (1120)				7.4 (1660)
Max. Yield Forces [2] [4]						
Max. Compressiv Force, Yield	kN (lb)	3.2 (750)	8.1 (1875)	16.2 (3750)	23.3 (5120)	50 (11200)
Max. Horizontal Force, Yield (transverse / longitudinal)	kN (lb)	9.8 (2200)				22 (4950)
Max. Uplift Force, Yield	kN (lb)	22 (4950)				34 (7640)
Max. Ultimate Forces [3] [4]						
Max. Compressiv Force, Ultimate [5]	kN (lb)	90 (20000)				150 (33000)
Max. Horizontal Force, Ultimate (transverse / longitudinal)	kN (lb)	42 (9400)				48 (10750)
Max. Uplift Force, Ultimate	kN (lb)	50 (11200)				55 (12350)
Restoring Force	%A.L./mm (../in) [6]	4.4 (111)				5.5 (140)
Max. top plate travel (transverse / longitudinal [8])	± mm (in)	3 (0.12)				3.5 (0.14)
Weight (including load cell), nominal	kg (lb)	6.6 (14.5)			7 (15.4)	15.4 (34)
Material		carbon steel / 304 stainless steel / 316 stainless steel				
Finish		Zinc Plated / Electropolished / Electropolished				
EN1090 conformity		Yes, execution class EXC2				

[1] The weigh module is rated for these forces in normal operation, a Factor of Safety has been applied by Mettler Toledo.
[2] Warning: if loaded statically one time in excess of these forces, the weigh module may yield and need replacing. The Max. Yield Forces do not consider fatigue/cyclic loading and should be approached only in exceptional circumstances.
[3] Warning: if loaded statically one time in excess of these forces, the weigh module may break with potential for serious injury and/or property damage.
[4] Warning: apply a Factor of Safety appropriate to the application.
[5] The top plate will travel downwards by 5 mm (0.2 inches) before the down-stop engages and this ultimate force can be developed.
[6] % of Applied Load (A.L.) per mm (in) displacement of the top plate (transverse & longitudinal).
[7] 1 or 2 per weigh module. Max permissible longitudinal force per stabilizer.
[8] 0 with Stabilizer.

SWB605 PowerMount™ EN1090 Weigh Module Arrangements[2]



[1] provide equal distribution, but the stability of this arrangement must be assured
[2] Weigh modules may be orientated as desired only if stabilizers will not be used

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SWB605 PowerMount™ EN1090 Specifications – Load Cell

Load Cell		unit of measure	Specification													
Item No.			30450308	30450311	30450314	30450317	30450320	30450323	30450326	30450329	30450332	30450335	30450338	30539636	30450344	30450347
Model No.			SLB615D POWERCELL® [12] [13]													
Rated Capacity (R.C.)		kg (lb, nominal)	220 (500)			550 (1250)			1100 (2500)			2200 (5000)			4400 (10000)	
External resolution		Counts @ R.C.	220,000			550,000			1,100,000			2,200,000			440,000	
External resolution tolerance		%	± 0.04	± 0.02		± 0.04	± 0.02		± 0.04	± 0.02		± 0.04	± 0.02		± 0.04	± 0.02
Zero load Output		%R.C.	< 0.1													
Combined Error [9] [10]		%R.C.	C3/IIIM n:5: ≤ 0.018 / C6/IIIM n:10: ≤ 0.012 / C10: ≤ 0.007													
Temperature Effect on	Min. Dead load Output	%R.C./°C (../°F)	0.0014 (0.0008)	C3/IIIM n:5: ≤ 0.0011 (0.0006) / C6/IIIM n:10: ≤ 0.0007 (0.0004) / C10: ≤ 0.0007 (0.0004)												0.0009 (0.0005)
	Sensitivity [10]	%A.L./°C (../°F)	C3/IIIM n:5: ≤ 0.001 (0.0006) / C6/IIIM n:10: ≤ 0.0005 (0.0003) / C10: ≤ 0.0003 (0.0002)													
Temperature Range	Compensated	°C (°F)	-10 ~ +40 (+14 ~ +104)													
	Operating		-20 ~ +65 (-4 ~ +150)													
	Safe Storage		-40 ~ +80 (-40 ~ +176)													
OIML / European Approval [11]	Class		C3	C6	C10	C3	C6	C10	C3	C6	C10	C3	C6	C10	C3	C6
	nmax		3000	6000	10000	3000	6000	10000	3000	6000	10000	3000	6000	10000	3000	6000
	Vmin	g	20	10		37	25		70	50		150	100		290	250
NTEP Approval [11]	Class		III M n:5	III M n:10	–	III M n:5	III M n:10	–	III M n:5	III M n:10	–	III M n:5	III M n:10	–	III M n:5	III M n:10
	nmax		5000	10000	–	5000	10000	–	5000	10000	–	5000	10000	–	5000	10000
	Vmin	lb	0.05	0.025	–	0.095	0.065	–	0.19	0.13	–	0.38	0.26	–	0.76	0.65
ATEX Approval [11]	Rating		II 2 G Ex ib IIB T4 Gb / II 2 D Ex ib IIIC T130C Db / -40°C ≤ Ta ≤ +55°C / II 3 G Ex nA IIC T6 Gc / II 3 D Ex tc IIIC T85°C Dc													
IECEx Approval [11]	Rating		Ex ib IIB T4 Gb / Ex ib IIIC T130°C Db / Ex nA IIC T6 Gc / Ex ec IIC T6 Gc / Ex tc IIIC T85°C Dc													
Factory Mutual Approval [11]	Rating, USA		IS / I, II, III / 1 / CDEFG / T4 Ta = -40°C to 55°C ; I / 1 / AEx ib / IIB / T4 Ta = -40°C to 55°C / Gb ; 21 / AEx ib / IIIC / T130°C Ta = -40°C to 55°C / Db NI / I, II, III / 2 / ABCDFG / T6 -40°C ≤ Ta ≤ 55°C													
	Rating, Canada		IS / I, II, III / 1 / CDEFG / T4 Ta = -40°C to 55°C ; I / 1 / AEx ib / IIB / T4 Ta = -40°C to 55°C / Gb ; 21 / AEx ib / IIIC / T130°C Ta = -40°C to 55°C / Db NI / I, II, III / 2 / ABCDFG / T6 -40°C ≤ Ta ≤ 55°C													
Supply Voltage Non-regulated	Range (nominal)	V DC	10 ~ 26													
Overvoltage Protection	Max. Tested (IEEE4-95)	A	2000 (no outdoor lightning conditions)													
Effective System Update Rate (4 load cells)		Hz	100													
Material	Spring Element		stainless steel													
Protection	Type		welded													
	IP Rating		IP68, IP69K													
	NEMA Rating		NEMA 6/6P													
Deflection @ R.C., nominal		mm (in)	0.16 (0.006)			0.25 (0.01)			0.32 (0.013)			0.43 (0.017)			0.72 (0.028)	
Weight, nominal		kg (lb)	1 (2.2)									1.3 (2.9)			2.2 (4.8)	

[9] Error due to the combined effect of non-linearity and hysteresis.
[10] 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.
[11] See certificate for complete information.
[12] Max. 14 load cells / terminal
[13] Max. total cable length 90-300m depending on no. of LC and Terminal

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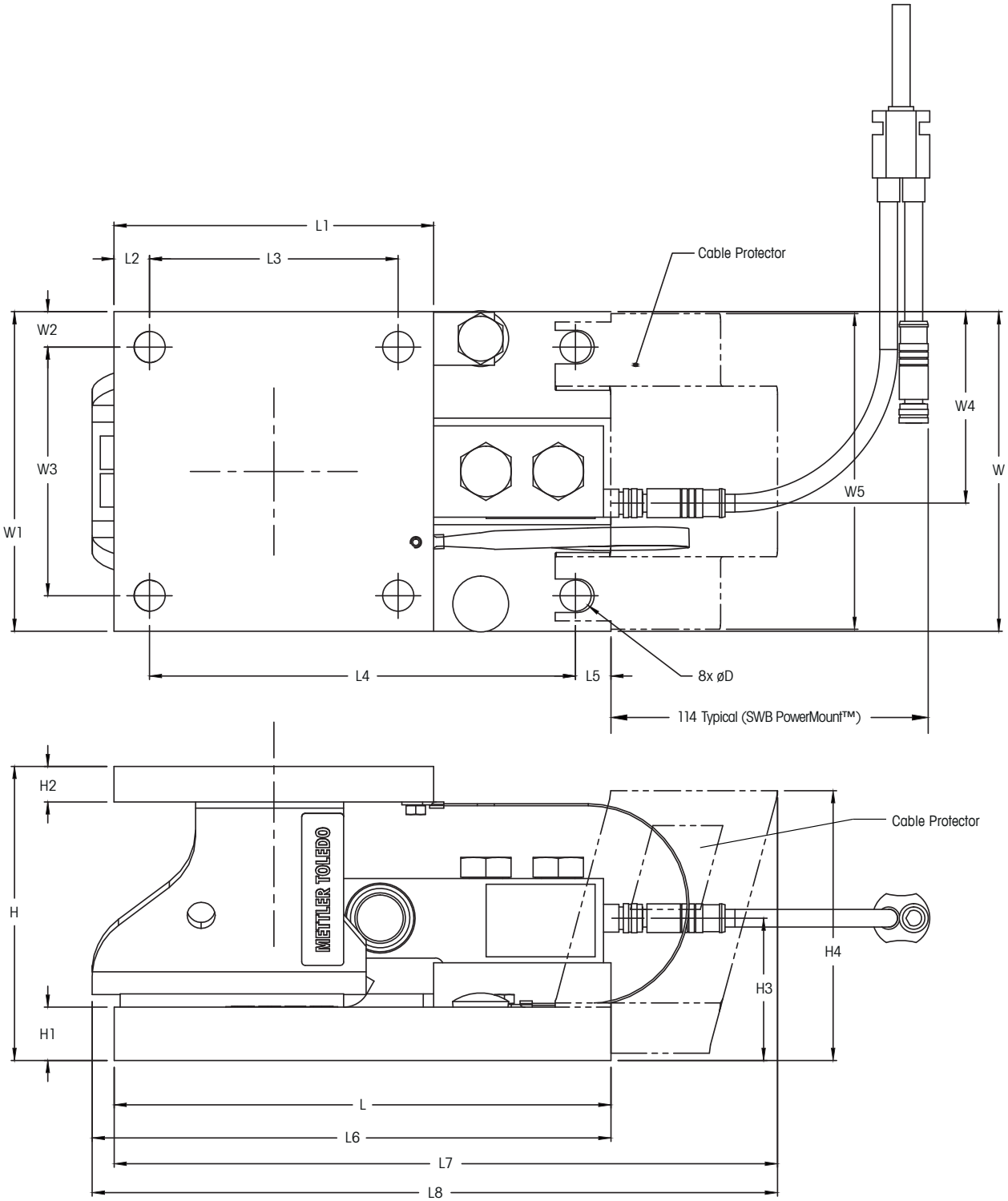
SWB605 PowerMount™EN1090 Weigh Module with optional Cable Protector Dimensions mm [in]



Size	Capacity	Locations and Dimensions																					
		D	H	H1	H2	H3	H4	L	L1	L2	L3	L4	L5	L6	L7	L8	W	W1	W2	W3	W4	W5
2	220kg – 1.1t (500lb – 2.5klb)	11.2 (0.44)	105.2 (4.14)	19.1 (0.75)	12.7 (0.50)	50.9 (2.00)	96.6 (3.80)	177.8 (7.00)	114.4 (4.50)	12.7 (0.50)	89.0 (3.5)	152.4 (6.00)	12.7 (0.50)	185.6 (7.31)	–	244.6 (9.63)	114.4 (4.50)	114.4 (4.50)	12.7 (0.50)	89.0 (3.5)	68.6 (2.70)	113.0 (4.45)
	2.2t (5klb)					51.3 (2.02)															70.6 (2.78)	
3	4.4t (10klb)	17.5 (0.69)	136.6 (5.38)	25.4 (1.00)	19.1 (0.75)	70.3 (2.77)	132.9 (5.23)	235.0 (9.25)	152.4 (6.00)	25.4 (1.00)	101.6 (4.00)	184.2 (7.25)	25.4 (1.00)	–	298.0 (11.73)	–	152.4 (6.00)	152.4 (6.00)	25.4 (1.00)	101.6 (4.00)	92.6 (3.65)	143.0 (5.63)

[1] Height when using thermal isolation pad or shock/vibration pad

Order Information SWB605 PowerMount™ EN1090 – Weigh Module including Load Cell

Order Information, Weigh Module Assembly				Item No.		
				Material, Weigh Module		
Size	Rated Capacity	Description	Class	CS	304	316
2	220kg / 500lb	Weigh Module Assembly	C3 / III M n:5	**30263340**	**30263341**	**30263342**
			C6 / III M n:10	**30263355**	**30263356**	**30263357**
			C10	**30263370**	**30263371**	**30263372**
	550kg / 1,250lb		C3 / III M n:5	**30263343**	**30263344**	**30263345**
			C6 / III M n:10	**30263358**	**30263359**	**30263360**
			C10	**30263373**	**30263374**	**30263375**
	1100kg / 2,500lb		C3 / III M n:5	**30263346**	**30263347**	**30263348**
			C6 / III M n:10	**30263361**	**30263362**	**30263363**
			C10	**30263376**	**30263377**	**30263378**
	2200kg / 5,000lb		C3 / III M n:5	**30263349**	**30263350**	**30263351**
			C6 / III M n:10	**30263364**	**30263365**	**30263366**
			C10	**30263379**	**30263380**	**30263381**
	220-2200kg / 500-5,000lb	Stabilizer [1]	–	**61046399**	**61046400**	**61046401**
		Dead Stand		**61010624**	**61046402**	**61946403**
		Shock/Vibration Pad		**61005965**		
		Thermal Isolation Pad 80°C		**61010620**		
		Thermal Isolation Pad 170°C		**61024642**		
		Cable Protector		**30315554**		
3	4400kg / 10000lb	Weigh Module Assembly	C3 / III M n:5	**30263352**	**30263353**	**30263354**
			C6 / III M n:10	**30263367**	**30263368**	**30263369**
	4400kg / 10000lb	Stabilizer [1]	–	**61046404**	**61046405**	**61046406**
		Dead Stand		**61010625**	**61046407**	**61046408**
		Shock/Vibration Pad		**61005938**		
		Thermal Isolation Pad 80°C		**61010621**		
		Thermal Isolation Pad 170°C		**61037510**		
		Cable Protector		**30315555**		

Bolded entries are stocked

[1] 1 or 2 per weigh module.

Order Information, Cables

Description	Item No.								
	Cable, material / length								
	PU / 2.5m (8.2ft)	PU / 5m (16.4ft)	PU / 10m (32.8ft)	PU / 15m (49.2ft)	PU / 20m (65.6ft)	PU / 30m (98.4ft)	PU / 50m (164ft)	PU / 100m (328ft)	PU / 200m (656ft)
Cable kit, 3 load cells	30382994	**30382990**	**30382991**	-	-	-	-	-	-
Cable kit, 4 load cells	30382995	**30382992**	**30382993**	-	-	-	-	-	-
Load cell Y-Cable	30382975	**30382976**	**30382977**	-	-	-	-	-	-
Home run cable	-	**30382980**	**30382981**	**30382982**	**30382983**	**30382984**	**30382985**	**30382986**	**30423113**
Extension cable	-	**30382987**	**30382988**	-	-	-	-	-	-
CAN termination	**30382989**								
Blind plug	**30417485**								
Cable gland for home run cable with IND780PDX	**30095639**								

Bold entries are stocked

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Order Information SWB605 PowerMount™ EN1090– Weigh Module without Load Cell

– SafeLock™ allows to install weigh module hardware without load cell to avoid sensor damage

– Use weigh module with dummy load cell for level detection systems

Order Information, Weigh Module Kit		Item No.			Suitable Load Cells			
					Item No.			
					Class			Dummy Load Cell
Size	Rated Capacity	Material, Weigh Module						
		CS	304	316	C3 / III M n:5	C6 / III M n:10	C10	
2	220kg / 500lb	**30263235**	**30263236**	**30263237**	**30450308**	**30450311**	**30450314**	**68000714**
	550kg / 1250lb				**30450317**	**30450320**	**30450323**	
	1100kg / 2500lb				**30450326**	**30450329**	**30450332**	
	2200kg / 5000lb	**30263238**	**30263239**	**30263240**	**30450335**	**30450338**	**30539636**	**61005963**
3	4400kg / 10000lb	**30263241**	**30263242**	**30263243**	**30450344**	**30450347**	-	**61005964**

Bolded entries are stocked

Home Run Cable
POWERCELL® SLB615D

Colour	Function
Yellow	Shield
Blue	CAN_L
White	CAN_H
Red	V +
Black	V -

Full Connectivity

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

EtherNet/IP DeviceNet ControlNet PROFIBUS ENCOMPASS ENABLED ModConnect

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.

ISO 9001 registered ISO 14001 registered

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