

Right-the-First-Time Integration

Safe, Accurate, Service-Friendly



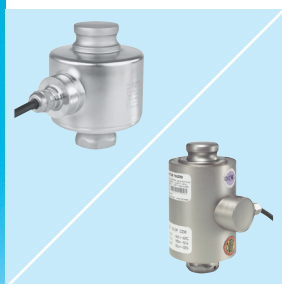
Tank Weighing

SWC515 PinMount™ weigh modules offer rugged construction and many features for easy installation and accurate and reliable tank weighing. Standard features include 360° checking and two lift-off bolts to cope with wind forces, while two vertical down-stops provide additional safety.



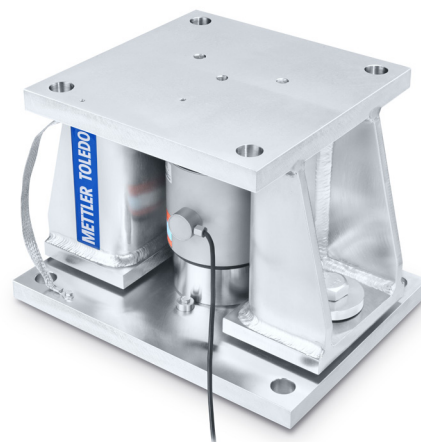
Easy Maintenance

For high capacity tank/silo installation and maintenance. The SWC515 PinMount™ 200t and 300t weigh modules allow load cell replacement without lifting the tank. A dedicated cut-out for standard hydraulic cylinders supports the installation process.



Load Cells

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



SWC515 PinMount™

100t, 200t and 300t Capacities

SWC515 PinMount™ features ensure correct scale system installation, right from the start. PinMount does not compromise on safety – all safety features are provided as standard. The rocker-pin design provides the highest level of weighing accuracy. Installation features including SafeLock™ ensure easy and trouble-free installation.

SWC515 PinMount™ features:

- Dual integrated lift-off protection
- Dual vertical safety down-stop
- Full 360° integrated checking
- Ground strap – welding protection
- SafeLock™ – Weigh module locked for installation
- SafeLock™ – Load cell protected for installation
- All load cells with IP68 and IP69K and fully stainless steel
- Global approvals standard on each load cell
- Zinc plated or stainless steel mounting hardware
- CalFree™: Calibration without test weights

Technical Specifications

SWC515 PinMount™ Weigh Module

Weigh module	Unit of measure	Specification		
Model No.		SWC515 PinMount™		
Size		3	4	5
Rated capacity (R.C.)	† (klb, nominal)	100 (220)	200 (440)	300 (660)
Max. rated forces ¹⁾				
Max. compressive force, rated	kN (klb)	980 (220)	1960 (423)	2940 (635)
Max. horizontal force, rated	transverse	130 (28)	260 (56)	300 (65)
	longitudinal			
Max. uplift force, rated	kN (klb)	190 (43)	255 (55)	400 (86)
Max. horizontal force (longitudinal) per stabilizer option, rated	kN (klb)	60 (13.4)	n/a	
Max. yield forces ^{2) 4)}				
Max. compressive force, yield	kN (klb)	1715 (385)	3430 (740)	5150 (1543)
Max. horizontal force, yield	transverse	190 (43)	360 (78)	420 (91)
	longitudinal			
Max. uplift force, yield	kN (klb)	265 (60)	355 (77)	560 (120)
Max. ultimate forces ^{3) 4)}				
Max. compressive force, ultimate	kN (klb)	2940 (647)	5885 (1270)	8830 (1908)
Max. horizontal force, ultimate	transverse	430 (96)	815 (175)	895 (193)
	longitudinal			
Max. uplift force, ultimate	kN (klb)	485 (109)	710 (153)	950 (205)
Restoring force	%A.L./mm (./ in) ⁵⁾	2 (51)	1.6 (40)	2.5 (63)
Max. top plate travel	transverse	± 5 (0.2)	± 6 (0.24)	± 6 (0.24)
	longitudinal			
Weight (including load cell), nominal	kg (lb)	75 (165)	152 (335)	232 (511)
Material		Carbon steel / 304 stainless steel	Carbon steel	
Finish		Zinc Plated / Electropolished	Zinc plated	
Shipping dimensions (L x W x H) cm (in)		48.8 x 36.8 x 42.4 (19.2 x 14.5 x 16.7)	54.4 x 42.4 x 52.6 (21.4 x 16.7 x 20.7)	60.4 x 46.4 x 63.1 (23.8 x 18.3 x 24.8)
Shipping weight		75 (165)	168 (370)	255 (562)

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) % of Applied Load (A.L.) per mm (in) displacement of the top plate (transverse & longitudinal).

6) 1 or 2 per weigh module. Max permissible longitudinal force per stabilizer. 7) 0 with Stabilizer

0782 Cable Colour

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

Technical Specifications

0782 Load Cells

Load Cell		Unit of measure	Specification		
Item No.			71201711	71210093	71210169
Model No.			0782		
Rated capacity (R.C.)		† (klb, nomial)	100 (220)	200(440)	300 (660)
Rated output		mV/V @R.C.	2 ± 0.1 %		
Combined error ^{8) 9)}		%R.C.	≤ 0.018	≤ 0.05	≤ 0.06
Temperature effect on	Min. dead load output	%R.C./°C (./°F)	≤ 0.0021 (0.0011)		
	Sensitivity ⁹⁾	%A.L./°C (./°F)	≤ 0.001 (0.0006)		
Temperature range	Compensated	°C (°F)	-10 ~ +40 (-14 ~ +104)		
	Operating		-40 ~ +65 (-40 ~ +149)		
	Safe storage		-40 ~ +80 (-40 ~ +176)		
OIML / European approval ¹⁰⁾	Class		C3	n/a	
	nmax		3000		
	Y		6666		
NTEP approval ¹⁰⁾	Class		III L M		
	nmax		10000		
	Vmin	kg (lb)	7.0 (15.0)		
ATEX approval ¹⁰⁾	Rating		II 2 G Ex ib IIC T4 ... T6 / II 2 D Ex ibD 21 IP68 T60°C		
			II 3 G Ex nL IIC T6 / II 3 D Ex tD A22 IP 68 T60°C / II 3 D Ex tD A22 IP 68 T60°C		
IECEx approval	Rating		Ex ib IIC T6 ...T4 Gb / Ex ib IIIC T55°C ... T60°C Db		
			Ex ic IIC T6 ... T4 Gc / Ex nA IIC T6 Gc / Ex tc IIIC T60°C Dc		
Factory mutual approval ¹⁰⁾	Rating, USA		IS / I, II, III / 1 / ABCDEFG / T4		
			S / I, II, III / 1 / ABCDEFG / T4		
	Rating, Canada	cFM	IS/I,II,III/1/ABCDEFG/T4		
		CSA	IS/I,II,III/1/ABCDEFG/T4		
Excitation voltage	Recommended	V AC/DC	5 ~ 15		
	Max.		20		
Terminal resistance	Excitation	Ω	1150 ± 25		
	Output		1000 ± 3		
Material	Spring element		stainless steel		
	Type		welded		
Protection	IP rating		IP68, IP69K		
	NEMA rating		NEMA 6/6P		
Weight, nominal		kg (lb)	4.5 (9.9)	12.5 (27.5)	21.7 (48)
Cable	Length	m (ft)	13 (42.5)	20 (66)	30 (98)
	Diameter	mm (in)	5.8 (0.23)		

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

(9) 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.

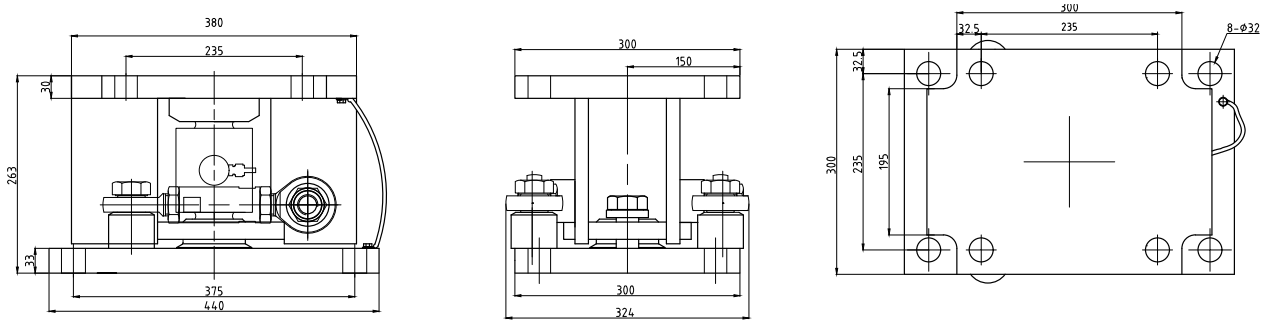
(10) See certificate for complete information.



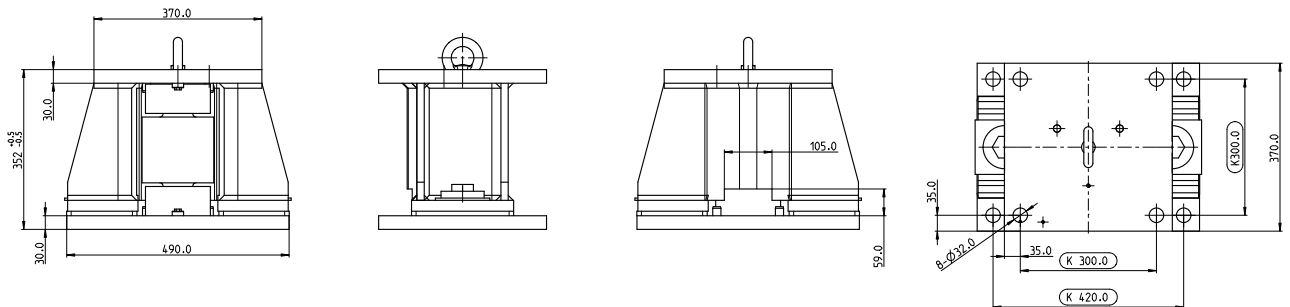
Weigh Module Dimensions mm [in]

SWC515 PinMount™

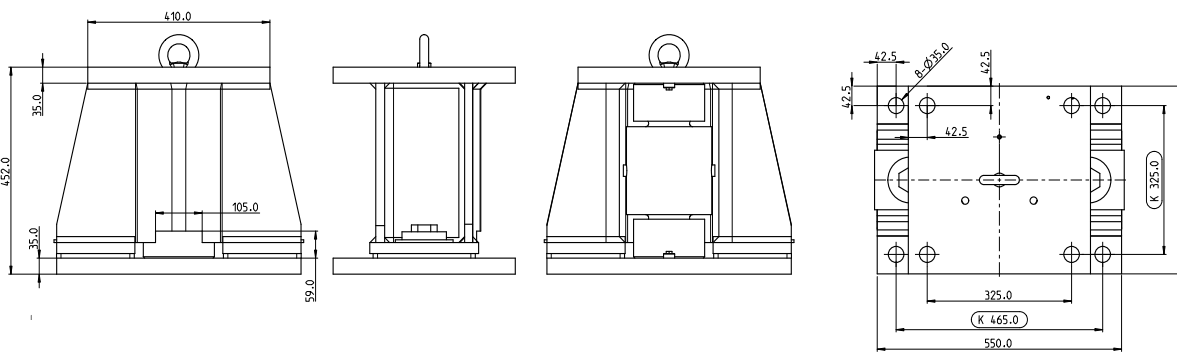
100t - Size 3



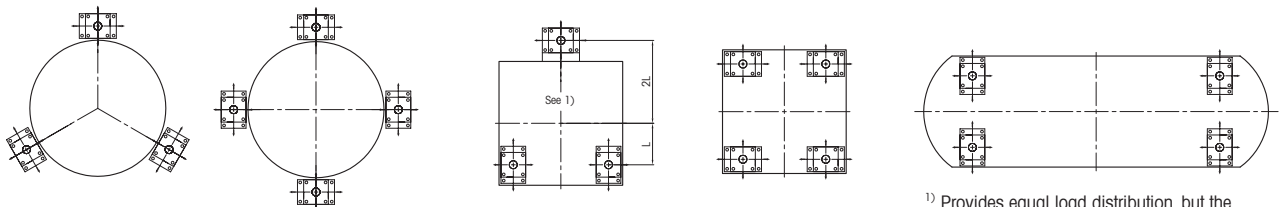
200t - Size 4



300t - Size 5



SWC515 PinMount™ Weigh Module Arrangements



1) Provides equal load distribution, but the stability of this arrangement must be assured.

For more information:



SWC515 PinMount™
Download page, including 2D/3D drawings:
▶ www.mt.com/ind-downloads-pinmount



0782 load cell download page:
▶ www.mt.com/ind-downloads-0782

Order Information SWC515 PinMount™- Weigh Module including Load Cell

Order Information, Weigh Module Assembly					Item No.	
Size	Rated Capacity	Description	Class	Cable, Material / Length	Material, Weigh Module	
					Zinc Plated	304
3	100 t / 220 klb	Weigh Module Assembly	C3/III M n:10	PVC / 13 m (42.5ft)	72249171	72249172
		Weigh Module Assembly EN1090			30263210	30263211
4	200t / 440klb	Weigh Module Assembly	0.05%	PU / 20 m (66ft)	30459514	-
	200t / 440klb	Weigh Module Assembly EN1090			30459516	-
5	300t / 660klb	Weigh Module Assembly	0.06%	PU / 30 m (98ft)	30459515	-
		Weigh Module Assembly EN1090			30459517	-

Bolded entries are stocked

Order Information SWC515 PinMount™ – Weigh Module without Load Cell

- SafeLock™ allows installation of weigh module hardware without load cell to avoid sensor damage
- Combine weigh module with special cable length and cable material
- Use weigh module with dummy load cell for level-detection systems

Order information, weigh module kit

Size	Rated capacity	Description	Item No.							
			Material, Weigh Module			Region	Class	Cable, Material length		
			Zinc Plated	304				PU / 20 m (66 ft)	PU / 30 m (98 ft)	PVC / 13m (42.5ft)
3	100 t / 220 klb	Weigh Module Kit	72248966	72248967	All regions	C3/III M n:10	-	-	71201711	
		Weigh Module Kit EN1090	30263191	30263192						
4	200t / 400klb	Weigh Module Kit	30459462	-	All regions	0.05%	71210093	-	-	
		Weigh Module Kit EN1090	30459512	-	Europe only				-	
5	300t / 660 klb	Weigh Module Kit	30459471	-	All regions	0.06%	-	71210169	-	
		Weigh Module Kit EN1090	30459513	-	Europe only				-	

Bolded entries are stocked

Weigh Module Accessories

SWC515 PinMount™ Weigh Module

METTLER TOLEDO offers an extensive range of accessories for weigh modules and load cells. These help to ensure proper installation and minimize the risk of downtime due to environmental influences.

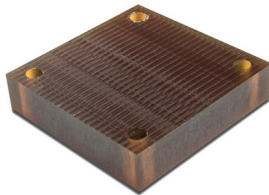


Stabilizers

Stabilizers are used to stabilize a scale subject to heavy vibration, high torque, or in-motion weighing. Each 100-ton weigh module can host one or two stabilizers. With stabilizers installed, thermal expansion is still possible, so that you can achieve the best weighing performance. Stabilizers (and weigh modules) shall be installed perpendicular to the direction of thermal expansion/contraction. For details see the Installation Guide on the product download page, linked on page 4 of this datasheet.

Rated Capacity	Item Nr.	
	-	Zinc Plated
100 t / 220 klb	72248970	72248971

* **Bolded entries are stocked**

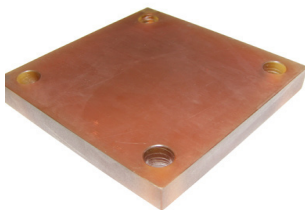


Shock/vibration pad

These pads are used to protect weigh modules from shock loading of the scale and to dampen vibrations that might be transmitted from scale to weigh module.

Rated Capacity	Item Nr.	
	-	Zinc Plated
100 t / 220 klb	72255078	72255081

* **Bolded entries are stocked**



Thermal pads

Thermal pads are used in the case of hot tanks. They protect the load cell from temperature load caused by convection, thereby increasing accuracy and the lifespan of the system. The thermal pads are delivered with an additional steel spacer plate.

Rated Capacity	Item Nr.	
	80°C	Zinc Plated
100 t / 220 klb	72255079	72255082
170°C	Zinc Plated	304
100 t / 220 klb	72255080	72255083

* **Bolded entries are stocked**

Related Products

Precision Junction Boxes

Precision junction boxes connect the load cells and transfer the signal to the weighing indicator or transmitter.



Junction Box:

▶ www.ind-downloads-precision-junctionbox



Weighing Indicators and Transmitters

METTLER TOLEDO offers a complete family of weighing indicators, controllers and transmitters for applications from simple weighing to filling, stock control, batching, formulation, counting, or checkweighing.



ACT350 Weight Transmitter:

▶ www.mt.com/ind-act350



IND360 Automation Indicator:

▶ www.mt.com/ind360



IND570 Industrial Indicator:

▶ www.mt.com/ind570



IND780 Industrial Indicator:

▶ www.mt.com/ind780



METTLER TOLEDO Service

Our extensive service network is among the best in the world and ensures maximum uptime and optimized performance of your weighing solution. RapidCal™ from METTLER TOLEDO offers an economical tank scale calibration method that is traceable and achieved without using test weights or purified liquids.



Learn more about RapidCal™:

▶ www.mt.com/ind-rapidcal



METTLER TOLEDO Service

Weigh Module Knowledge Base



Weigh Module Proven Safety Video

Watch the video to understand how force ratings are tested and how mechanical safety of weigh modules are ensured.

► <https://www.youtube.com/watch?v=jmOzLrB9HdA>



Weigh Module Buying Guide

Ensure that you make the proper weigh module selection with the support of our free Weigh Module Buying Guide.

► www.mt.com/ind-wm-buying-guide



Dos and Don'ts

Discover best practices for weigh module installation and integration in custom scales with straightforward, real-world examples..

► www.mt.com/ind-wm-dos-donts



Tank Scale Calibration Methods

In this document, we discuss the six common methods to calibrate tank scales and then illustrate each method with practical use cases.

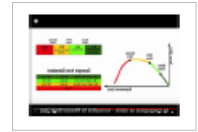
► www.mt.com/ind-tankscalecalibration



PinMount/PowerMount installation video

Watch the short how-to video for a weigh module installation overview. Details of the SafeLock™ plates and optional stabilizers for the 90t/100t capacity weigh modules are also explained.

► <https://www.youtube.com/watch?v=SczV-KZQ0aY>



Further Readings

Safety-Related Force Ratings:

www.mt.com/ind-wp-safety

Weighing Accuracy in Tank Scales:

www.mt.com/ind-weighing-accuracy-brochure

Analog and PowerMount™ Weigh Modules:

www.mt.com/ind-modern-weigh-modules-WP

Weigh Module Systems Handbook:

www.mt.com/ind-system-handbook

Weightless Tank Scale Calibration:

www.mt.com/ind-weightless-tank-scale-calibration-WP

RapidCal™ Tank Scale Calibration:

www.mt.com/ind-rapidcal

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For more information



Subject to technical changes

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