

Accurate, Reliable Weighing for Static and Dynamic Loading



Tank Weighing

SWC515 weigh modules are designed for accurate and reliable tank weighing. They combine rugged construction with built-in safety features: Two hold-down bolts for uplift protection and two vertical stops to limit lateral movement.



Conveyors and Mixers

SWC515 weigh modules are also designed for dynamic-loading applications such as conveyors, mixers, and blenders. They provide 360° checking for maximum safety. The rocker pin restores the top plate to its ideal position for accurate, repeatable weighing.



Shown with two optional stabilizers



Load Cells

Model SLC610 analog load cells have a rocker-column design that automatically aligns load forces for accurate weighing. These hermetically sealed load cells are rated IP68 and can be used in all environments. Because there are no bolted connections, the load cells are easy to inspect or replace.



Stabilizers

Up to two optional stabilizers can be added to limit the movement of the tank or structure. The robust stabilizers can handle even strong mixer torque or vibration, while allowing for thermal expansion and contraction.

SWC515 Weigh Module

SWC515 weigh modules provide excellent performance in both static- and dynamic-loading applications. They offer a single solution for converting a wide variety of structures for weighing. All safety features are redundant, providing an extraordinarily high level of safety.

- Dual integrated uplift protection
- Dual vertical safety stop
- Full 360° integrated checking
- Dual stabilizer option
- Capacity range: 7.5-22.5t (16,535-49,604 lb)
- Global approvals standard on every load cell
- Zinc-plated or stainless steel mounting hardware

SWC515 Weigh Module Specifications

Weigh Module Parameter	Unit of Measure	Specification		
Model No.		SWC515 PINMOUNT		
Rated Capacity (R.C.)	t (klb, nominal)	7.5 (16.5)	15 (33)	22.5 (49.6)
Load Limit, Safe ⁸	with load cell	%R.C. 150		
	in shipping mode	%R.C. 100		
Restoring Force ⁵	%A.L./mm (.../in) ³	2.4 (61)		3.4 (87)
Max. Horizontal Force ⁶	Transverse	kN (klb) 74 (16.5)		
	Longitudinal	kN (klb) 74 (16.5)		
Max. Horizontal Force (longitudinal) per stabilizer option ⁹	kN (klb)	22 (5)		
Max. Top Plate Travel	Transverse	± mm (in) 5 (0.2)		
	Longitudinal	± mm (in) 5 (0.2)		
Max. Uplift Force ⁷	kN (klb)	74 (16.5)		
Weight (including load cell), nominal	kg (lb)	20 (44)		
Material		carbon steel / 304 stainless steel		
Finish		zinc plated / glass-bead blasted		

Load Cell Parameter	Unit of Measure	Specification		
Model No.		SLC610		
Rated Capacity (R.C.)	t (klb, nominal)	7.5 (16.5)	15 (33)	22.5 (49.6)
Rated Output	mV/V @ R.C.	2 ± 0.1%		
Combined Error ^{1, 2}	%R.C.	≤ 0.018		
Temperature Effect on	Min. Dead Load Output	%R.C./°C (.../°F) ≤ 0.0009 (0.0005)		
	Sensitivity ²	%A.L./°C (.../°F) ≤ 0.0009 (0.0005)		
Temperature Range	Compensated	°C (°F) -10 ~ +40 (+14 ~ +104)		
	Operating	°C (°F) -40 ~ +80 (-40 ~ +176)		
	Safe Storage	°C (°F) -40 ~ +80 (-40 ~ +176)		
OIML/European Approval ⁴	Class	C3		
	nmax	3000		
	Y	15000		
NTEP Approval ⁴	Class	III M		
	nmax	6000		
	Vmin	kg (lb)	0.6 (1.3)	1.3 (2.9) 1.9 (4.2)
ATEX Approval ⁴	Rating	II 2 G EEx ia IIC T6/T5/T4 & II 2 D IP65 T130°C		
Factory Mutual Approval ⁴	Rating	IS/I,II,III/1/ABCDEFGH/T4		
Excitation Voltage	Recommended	V AC/DC 5 ~ 15		
	Maximum	V AC/DC 20		
Terminal Resistance	Excitation	Ω 1150 ± 50		
	Output	Ω 1000 ± 2		
Material	Spring Element	Stainless steel		
	Type	Glass-to-metal seal		
Protection	IP Rating	IP68		
	NEMA Rating	NEMA 6/6P		
Load Limit	Safe	%R.C. 200		
	Ultimate	%R.C. 300		
Weight, nominal	kg (lb)	1 (2.2)		
Cable	Length	m (ft) 12 (39)		
	Diameter	mm (in) 5 (0.20)		

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

⁶ Maximum horizontal force that can be applied to the top plate.

⁷ Maximum vertical uplift force that can be applied to the top plate.

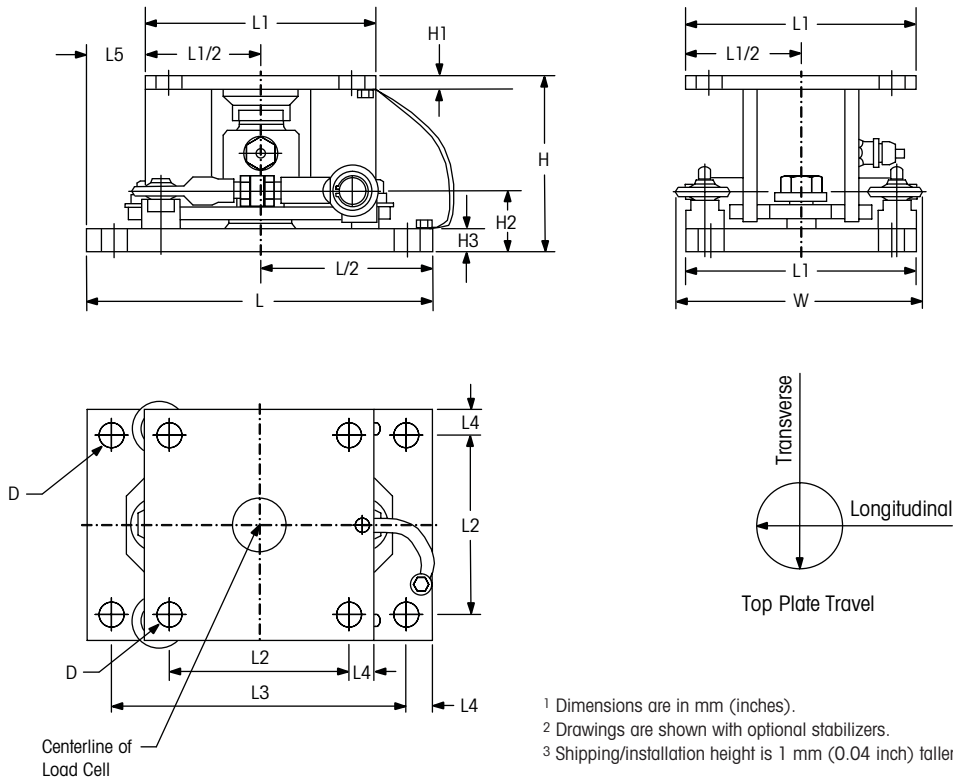
⁸ Maximum vertical downward force that can be applied to the top plate.

⁹ One or two stabilizers per weigh module. Maximum permissible longitudinal force is 22kN (5klb) per stabilizer.

Produced in a facility that is



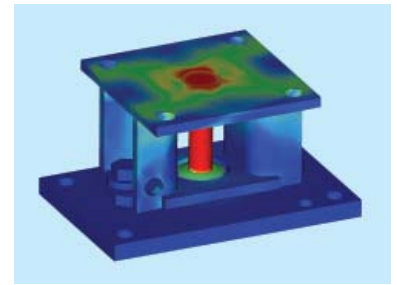
SWC515 Weigh Module Dimensions



- 1 Dimensions are in mm (inches).
- 2 Drawings are shown with optional stabilizers.
- 3 Shipping/installation height is 1 mm (0.04 inch) taller.

SLC610 Load Cell Cable Colors

Color	Function
Green	+ Excitation
Black	- Excitation
White	+ Signal
Red	- Signal
Yellow	Shield



FEA Analysis

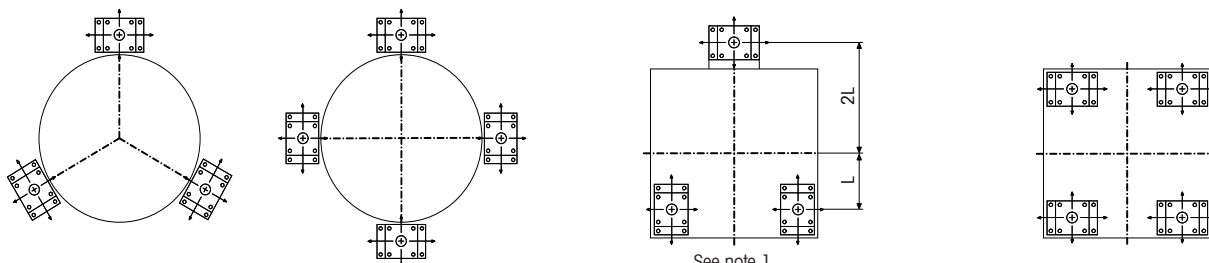
The SWC515 design has been optimized with the latest Finite-Element Analysis (FEA) techniques to provide an exceptionally safe weigh module.

Capacity	D	H ³	H1	H2	H3	L	L1	L2	L3	L4	L5	W
7.5-22.5t (16.5-49.6 klb)	22 mm (0.87 in.)	152 mm (5.98 in.)	12 mm (0.47 in.)	53 mm (2.09 in.)	20 mm (0.79 in.)	300 mm (11.8 in.)	200 mm (7.87 in.)	155 mm (6.1 in.)	255 mm (10.04 in.)	22.5 mm (0.89 in.)	50 mm (1.97 in.)	210 mm (8.27 in.)

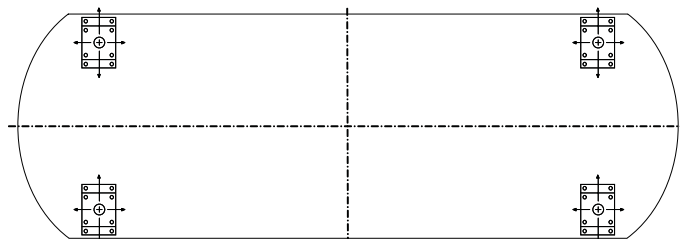
Top Plate Travel

Capacity	Without Stabilizer(s)		With Stabilizer(s)	
	Longitudinal	Transverse	Longitudinal	Transverse
7.5-22.5t (16.5-49.6 klb)	± 5 mm (± 0.2 in.)	± 5 mm (± 0.2 in.)	0 (0)	± 5 mm (± 0.2 in.)

SWC515 Mounting Arrangements



¹ This arrangement provides equal load distribution, but its stability must be assured.



SWC515 Ordering Information

Description	Item No.
SWC515 Weigh Module (with load cell), 7.5t carbon steel	72205446
SWC515 Weigh Module (with load cell), 15t carbon steel	72205447
SWC515 Weigh Module (with load cell), 22.5t carbon steel	72205448
SWC515 Weigh Module (with load cell), 7.5t stainless steel	72205449
SWC515 Weigh Module (with load cell), 15t stainless steel	72205450
SWC515 Weigh Module (with load cell), 22.5t stainless steel	72205451
SWC515 Weigh Module (without load cell), 7.5t-22.5t carbon steel	72205442
SWC515 Weigh Module (without load cell), 7.5t-22.5t stainless steel	72205443
SLC610 Load Cell, 7.5t (16.5klb), 12m (39ft) cable, C3 / IIIM 6Kd	72205433
SLC610 Load Cell, 15t (33klb), 12m (39ft) cable, C3 / IIIM 6Kd	72205434
SLC610 Load Cell, 22.5t (49.6klb), 12m (39ft) cable, C3 / IIIM 6Kd	72205435

Options	Item No.
Stabilizer Option, carbon steel*	72205444
Stabilizer Option, stainless steel*	72205445
Dummy Load Cell, SLC610, 0-22.5t stainless steel	72206152
Spacer Plate, SWC515, 0-22.5t stainless steel	72206153
Dead Stand, SWC515, 0-22.5t carbon steel	72206154
Dead Stand, SWC515, 0-22.5t stainless steel	72206155
Fabreeka Pad Kit, SWC515 (includes spacer plate 72206153)	72207262
Acetal Thermal Isolation Pad Kit, SWC515 (includes spacer plate 72206153)	72207263
PEI Thermal Isolation Pad Kit, SWC515 (includes spacer plate 72206153)	72207264

* One or two stabilizers per weigh module. Maximum permissible longitudinal force is 22kN (5klb) per stabilizer.



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Weigh-Connect-Control-Comply

METTLER TOLEDO embeds intelligence into weighing applications. Our industry leading scale electronics enable users to integrate their gravimetric measurement with applications running on PCs, PLCs, or DCS systems. Our products are designed specifically for industries subject to regulatory controls, such as pharmaceutical, chemical, food and beverage, and has been confirmed by multiple global agency standards including UL, CE, NTEP, and OIML.

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