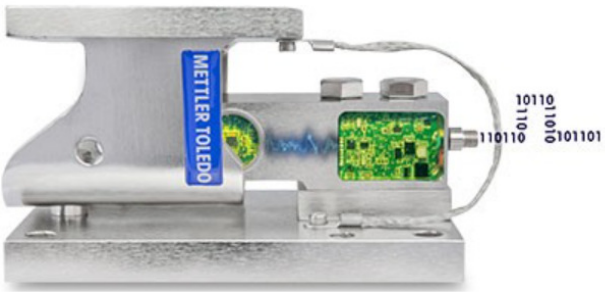
# SWB605/SWC615 PowerMount Weigh Modules

PowerMount compression weigh modules for conversion of tanks, hoppers and conveyors into a scale.


## Load Cell Diagnostics

To avoid bad batches and provide maximum uptime PowerMount weigh modules monitor individual load cells "real time" and provide alarms in case of a failure. Load cell overload, drift and system symmetry are constantly monitored and logged.



## Highest Accuracy

For the highest product quality with minimum waste PowerMount Weigh Module PowerCells are available up to OIML 10000e, C10 accuracy level; three times more accurate than typical industrial load cells. The built-in microprocessor compensates temperature, creep and linearity effects continuously - far beyond what analog load cells can achieve.

## The product features

- Capacity range 110kg .. 300t (220lb .. 660klb)
- Materials: Zinc Plated, 304, 316 stainless steel
- Accuracy: OIML C3, C6, C10 NTEP 5.000d, 10.000d
- Hazardous Approvals: ATEX, IECEx, FM, cFM, Nepsi
- ATEX/IECEx Zone1&21 ; FM Div1 approval
- IP68/IP69K Protection Class

## Tank Scale Calibration Services

Discover various tank scale calibration services from METTLER TOLEDO. Compare different methods based on tank size, and learn the pros and cons of each. See how our globally available services help ensure the proper performance of tank scales.

## CalFree Plus - Weightless Calibration

PowerMount Weigh Modules support CalFree Plus, weightless calibration on a fingertip. Compared to analog CalFree this method is more accurate with no risk of human calculation error . CalFree Plus even compensates for local gravity effects. The PowerMount system has no junction boxes or cable effects to negatively impact accuracy.


## Built-in Safety Features

All safety features like Lift-off Protection, 360° Checking, and Safety-Downstops are integrated. Therefore it does not matter, for the safety of the system, how the weigh modules are orientated. Even if a load cell breaks due to extreme overload from excessive wind, earthquakes or other external cause; the vertical Downstops provide a secondary support system.

## Installation Made Easy

SafeLock(TM) locks the Weigh Module during shipment and installation. This feature protects the load cell from overload and maintains proper mounting plate alignment during installation. No need to purchase expensive dummy blocks. The Weigh Module can even be installed without the load cell to totally rule out the risk of load cell damage during installation.

# Accessories

## The Right Accessory for each Application

Weigh Modules can be adapted to applications by using specific accessories:

- Stabilizers to stabilize signal on tanks with aggressive mixers
- Thermal Pads to isolate load cells from conducted heat
- Shock/Vibration Pads to isolate load cells from shock/vibration
- Spacer Plates allow Weigh Module servicing without lifting tank
- Tools such as a jacking device to ease load cell installation
- Dummy Load Cells, passive WM for level control applications

## SWB605/SWC615 PowerMount Weigh Modules

METTLER TOLEDO weigh modules enable the quick and safe conversion of a tank, vessel, silo, hopper, conveyor or structural systems into a scale. Built-in side-load and anti-lift protection ensure that safety, performance and precision are maintained. METTLER TOLEDO weigh modules are used in food, pharmaceutical and chemical applications. They are available in various versions depending on the application and environment to meet requirements of OEM machine manufacturers, system integrators and end-users. Weigh modules incorporate SafeLock for fast and safe installation. The weigh module is locked and acts as a solid block protecting the load cell from overload during installation. No need to buy expensive dummy weigh modules. A wide range of accessories are available for weigh modules including stabilizers for use with aggressive mixers and agitators, thermal pads to isolate from conducted heat and shock-vibration pads to dampen shock and vibration. Dead stands for level-control applications are also available.

METTLER TOLEDO offers a wide range of weigh modules from 5kg up to 300t capacity. Weigh modules are available in painted steel, zinc plated steel, 304 (1.4301) stainless steel and 316 (1.4401) stainless steel electro-polished. They are available in various legal-for-trade accuracy levels according to OIML R60 and NTEP HB44 starting from OIML 3000e (OIML C3), NTEP 5000d, OIML 6000e (OIML C6), NTEP 10000d to finally OIML 10000e (OIML C10). Weigh modules are available for hazardous area application and are approved according to ATEX, FM (Factory Mutual), cFM (Canada), IECEx and NEPSI. They meet protection classes IP67, IP68 or even IP69K. Weigh modules are available in EN1090 versions made in specially controlled and documented manufacturing process for high safety requirements. Weigh modules support the weightless calibration CalFree or even CalFree Plus allowing for tank calibration on a fingertip.

PowerMount weigh modules allow for diagnostics down to the load cell level, alarm the user in case of a failure and enable quick fix of problems. RunFlat allows simulation of failed load cell to continue production for minimal downtime.

Please refer to the following pages for more details on MT SWB605 and SWC615

SWB605 PowerMount™

# 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.


SWB605
PowerMount™

## SWB605 PowerMount™
### 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
- ATEX/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

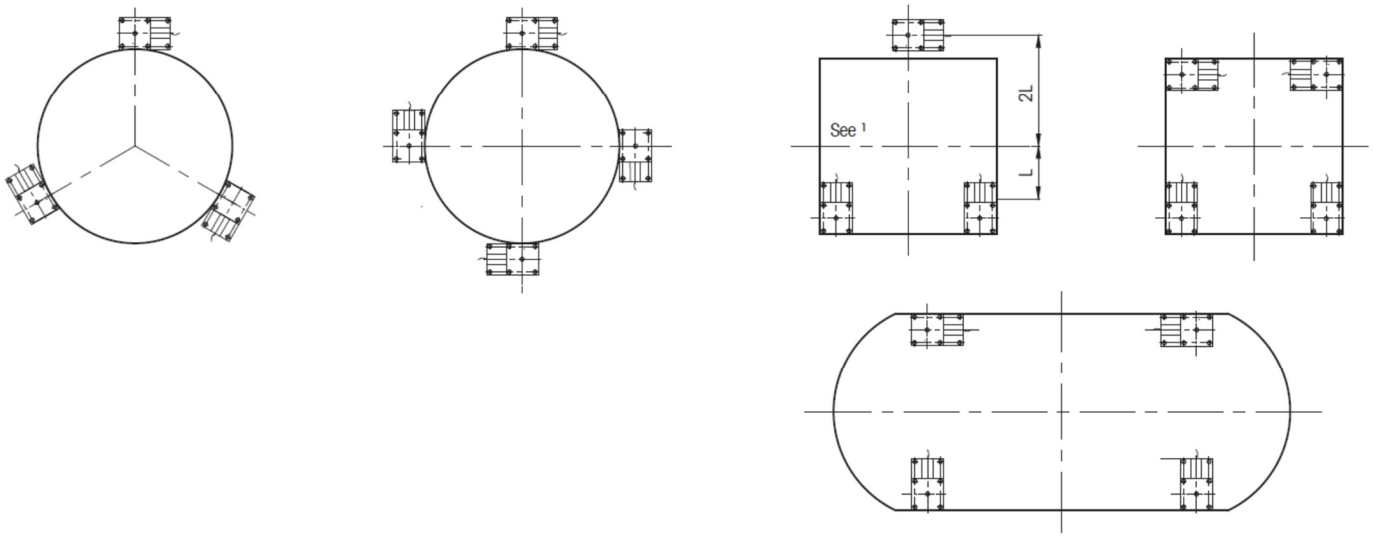
METTLER TOLEDO

# SWB605 PowerMount™ Specifications – Weigh Module

| Weigh Module | Unit of measure | Specification | | | | |
|---|---|---|---|---|---|---|
| Model No. | | SWB605 PowerMount™ | | | | |
| 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 | | | | |

[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 and longitudinal).
[7] 1 or 2 per weigh module. Max permissible longitudinal force per stabilizer.
[8] 0 with stabilizer.

# SWB605 PowerMount™ Weigh Module Arrangements[2]



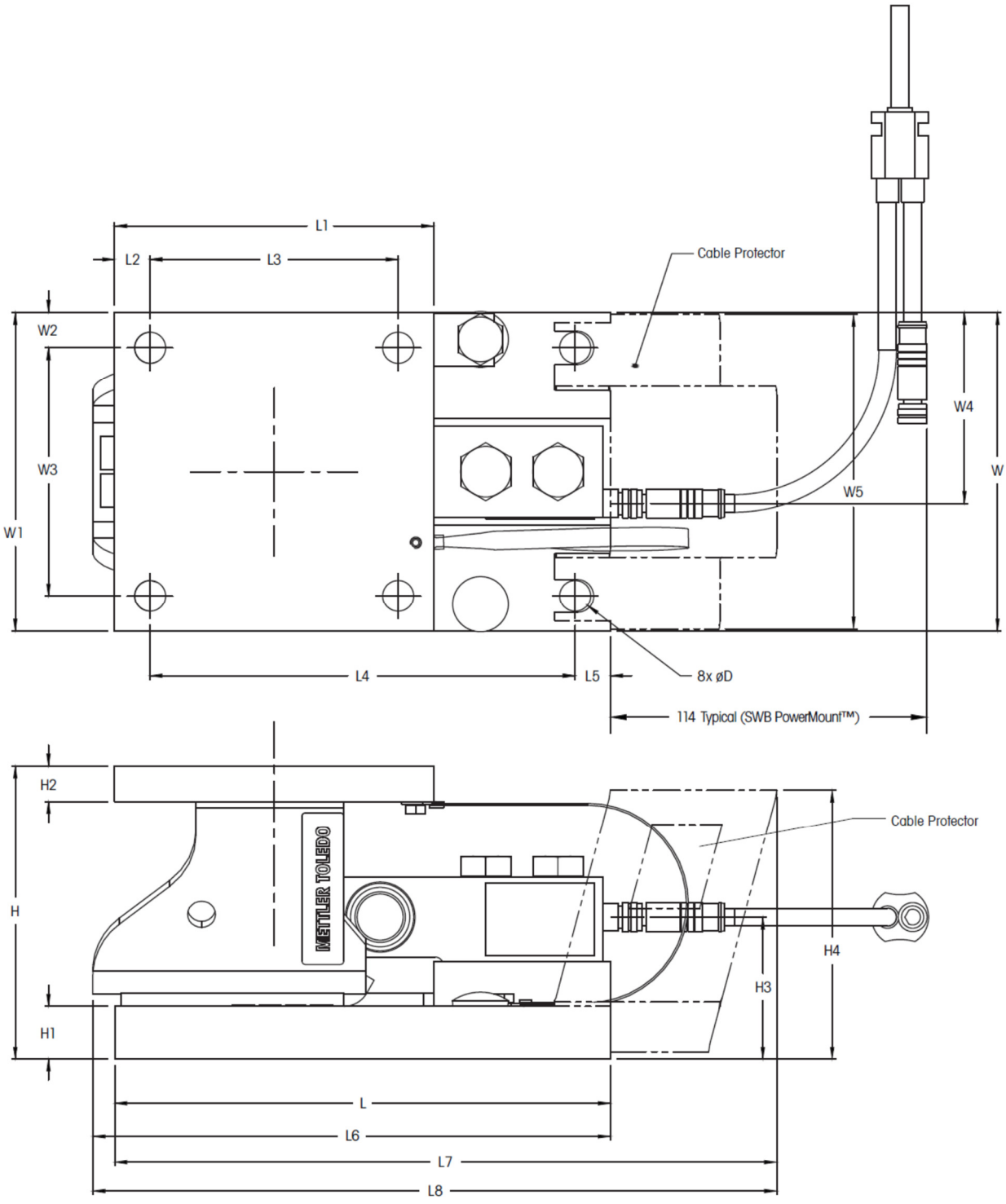

[1] provide equal distribution, but the stability of this arrangement must be assured
[2] Weigh modules may be orientated as desired only if stabilizers will not be used

# SWB605 PowerMount™ Specifications – Weigh Module

| 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) | |
| Min. increment size, typical [14] | | g (lb) | 4.4 (0.01) | | | 11 (0.025) | | | 22 (0.05) | | | 44 (0.1) | | | 88 (0.2) | |
| 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) | | | | | | | | | | | | |
| | 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<br>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<br>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
[14] Calculate the scale's minimum increment size by multiplying this value by the square root of the number of load cells. For non Legal-For-Trade Applications

# SWB605 PowerMount™ 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™ – 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 | **30090741** | **30090742** | **30090743** |
| | | | C6 / III M n:10 | **30090753** | **30090754** | **30090755** |
| | | | C10 | **30096881** | **30096882** | **30096883** |
| | 550kg / 1,250lb | | C3 / III M n:5 | **30090744** | **30090745** | **30090746** |
| | | | C6 / III M n:10 | **30090756** | **30090757** | **30090758** |
| | | | C10 | **30096884** | **30096885** | **30096886** |
| | 1100kg / 2,500lb | | C3 / III M n:5 | **30090747** | **30090748** | **30090749** |
| | | | C6 / III M n:10 | **30090759** | **30090760** | **30090761** |
| | | | C10 | **30096887** | **30096888** | **30096889** |
| | 2200kg / 5,000lb | | C3 / III M n:5 | **30090750** | **30090751** | **30090752** |
| | | | C6 / III M n:10 | **30090762** | **30090763** | **30090764** |
| | | | C10 | **30096890** | **30096891** | **30096892** |
| | 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 | **30090765** | **30090766** | **30090767** |
| | | | C6 / III M n:10 | **30090768** | **30090769** | **30090770** |
| | 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.

| | Item No. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Cable, material / length | | | | | | | | |
| Description | 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** | | | | | | | | |

**Bolded entries are stocked**

## Order Information SWB605 PowerMount™ – 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 | 61043213 | 61043222 | 61046397 | 30450308 | 30450311 | 30450314 | 68000714 |
| | 550kg / 1250lb | | | | 30450317 | 30450320 | 30450323 | |
| | 1100kg / 2500lb | | | | 30450326 | 30450329 | 30450332 | |
| | 2200kg / 5000lb | 61046636 | 61046637 | 61046638 | 30450335 | 30450338 | 30539636 | 61005963 |
| 3 | 4400kg / 10000lb | 61043214 | 61043223 | 61046398 | 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® ROCKWELL AUTOMATION ENCOMPASS GLOBAL PARTNER ENABLED BY ALLEN-BRADLEY TECHNOLOGY 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.

SWC615 PowerMount™

# Right the First Time

## Safe, Accurate, Service Friendly

### Tank Weighing

SWC615 PowerMount™ weigh modules offer rugged construction and many features for easy installation and accurate and reliable tank weighing. Included as standard are 360° stops and two lift-off bolts to cope with wind forces, while two vertical down-stops provide additional safety.

### Conveyors and Mixers

SWC615 PowerMount™ weigh modules are also designed for dynamic-loading applications such as conveyors, mixers, and blenders. They provide 360° checking for ease of installation and maximum safety. The rocker pin load cell restores the top plate to its ideal position to maintain accurate, repeatable weight.


### Load Cells

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 Diagnostics PDX®

Monitor individual load cells for overload, temperature extremes, zero drift, etc. Breach detection warns if the load cell's hermetic seal has been broken. This enables reaction before the system weighs incorrectly or shuts down completely.


SWC615 PowerMount™

### Right the First Time

Know What's Ahead

SWC615 PowerMount™ features ensure correct scale system installation, right from the start. PowerMount 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.

PowerMount 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
- Dual stabilizer option
- Capacity range: 7.5 t – 90 t
- POWERCELL® load cell
- All load cells with IP68/IP69K and fully stainless steel
- Global approvals standard on each load cell
- Zinc plated or stainless steel mounting hardware
- CalFree™ Plus: Calibration w/o test weights at your finger tip

METTLER TOLEDO

# SWC615 PowerMount™ Specifications – POWERCELL®

| Weigh module | Unit of measure | Specification | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Model No. | | SWC615 PowerMount™ | | | | | | |
| Size | | 1 | | | 2 | | | 3A |
| Rated capacity (R.C.) | t (klb, nominal) | 7.5 (16.5) | 15 (33) | 22.5 (49.6) | 20 (44) | 30 (66) | 50 (110) | 90 (198) |
| Max. rated forces [1] | | | | | | | | |
| Max. compressive force, rated | kN (klb) | 74 (16.5) | 145 (33) | 220 (50) | 195 (44) | 290 (65) | 490(110) | 880 (198) |
| Max. horizontal force, rated transverse / longitudinal | kN (klb) | 74 (16.5) | | | 100 (22) | | | |
| Max. uplift force, rated | kN (klb) | 62 (14) | | | 150 (33) | | | 190 (43) |
| Max. horizontal force (longitudinal) per stabilizer option, rated [6] | kN (klb) | 22 (5) | | | 35 (7.7) | | | 50 (11.2) |
| Max. yield forces [2] [4] | | | | | | | | |
| Max. compressive force, yield | kN (klb) | 145 (33) | 294 (67) | 440 (97) | 390 (87) | 580 (130) | 980 (215) | 1756 (388) |
| Max. horizontal force, yield transverse / longitudinal | kN (klb) | 105 (24) | | | 135 (30) | | | 140 (31) |
| Max. uplift force, yield | kN (klb) | 85 (19) | | | 200 (45) | | | 265 (60) |
| Max. ultimate forces [3] [4] | | | | | | | | |
| Max. compressive force, ultimate | kN (klb) | 220 (50) | 420 (94) | 660 (147) | 580 (130) | 883 (194) | 1470 (323) | 2648 (582) |
| Max. horizontal force, ultimate transverse / longitudinal | kN (klb) | 210 (47) | | | 360 (80) | | | 400 (88) |
| Max. uplift force, ultimate | kN (klb) | 200 (45) | | | 390 (88) | | | 485 (109) |
| Restoring force | %A.L./ mm (../in) [5] | 2.4 (61) | | 3.4 (87) | 1.8 (46) | | | 1.6 (41) |
| Max. top plate travel transverse | ± mm (in) | ± 5 (0.2) | | | | | | |
| Max. top plate travel longitudinal [7] | ± mm (in) | ± 5 (0.2) | | | | | | |
| Weight (including load cell), nominal | kg (lb) | 20 (44) | | | 55 (120) | | | 110 (242) |
| Material | | Carbon steel / 304 stainless steel / 316 stainless steel | | | Carbon steel / 304 stainless steel | | | |
| Finish | | Zinc plated / electropolished / electropolished | | | Zinc plated / electropolished | | | |

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

METTLER TOLEDO

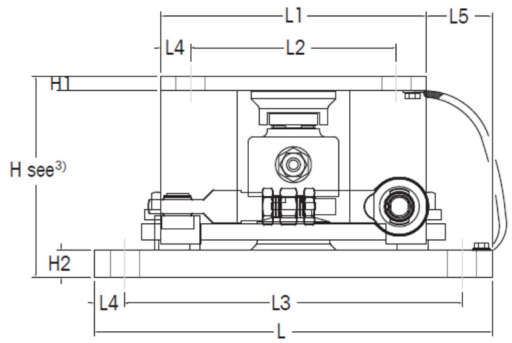
# SLC611D POWERCELL® LOAD CELL Specifications

| Load cell | | Unit of measure | Specification | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Item No. | | | 30092515 | 30092516 | 30092517 | 42904882 | 42904883 | 42904884 | 42904891 | 42904892 | 72238150 | 72238147 |
| Model No. | | | POWERCELL® SLC611D | | | POWERCELL® PDX® SLC820 | | | | | | |
| Rated capacity (R.C.) | | t (klb, nominal) | 7.5 (17) | 15 (33) | 22.5 (50) | 20 (44) | 30 (66) | | 50 (110) | | 90 (198) | |
| Min. increment size, typical [11] | | kg (lb) | 0.15 (0.33) | 0.3 (0.66) | 0.45 (1) | 0.4 (0.88) | 0.6 (1.3) | | 1 (2.2) | | 1.8 (4) | |
| Zero load output | | %R.C. | ≤ 0.5 | | | ≤ 0.1 | | | | | | |
| Combined error [8] [9] | | %R.C. | ≤ 0.018 | | | ≤ 0.018 | | ≤ 0.015 | ≤ 0.018 | ≤ 0.015 | ≤ 0.018 | ≤ 0.015 |
| Repeatability error | | %A.L. | ≤ 0.010 | | | ≤ 0.010 | | ≤ 0.008 | ≤ 0.010 | ≤ 0.008 | ≤ 0.010 | ≤ 0.008 |
| Creep, 30 minute | | %A.L. | ≤ 0.015 | | | ≤ 0.015 | | ≤ 0.0125 | ≤ 0.015 | ≤ 0.0125 | ≤ 0.015 | ≤ 0.0125 |
| Min. dead load output return (DR), 30 min | | %A.L. | ≤ 0.015 | | | ≤ 0.015 | | ≤ 0.0125 | ≤ 0.015 | ≤ 0.0125 | ≤ 0.015 | ≤ 0.0125 |
| Temperature effect on | Min. dead load output | %R.C./°C (../°F) | 0.0014 (0.0008) | | | ≤ 0.0028 (0.0016) | ≤ 0.0025 (0.0014) | ≤ 0.0013 (0.0007) | ≤ 0.0018 (0.001) | ≤ 0.0013 (0.0007) | ≤ 0.0014 (0.0008) | ≤ 0.001 (0.0006) |
| | Sensitivity [9] | %A.L./°C (../°F) | ≤ 0.001 (0.0006) | | | ≤ 0.001 (0.0006) | | ≤ 0.0008 (0.0004) | ≤ 0.001 (0.0006) | ≤ 0.0008 (0.0004) | ≤ 0.001 (0.0006) | ≤ 0.0008 (0.0004) |
| Temperature range | Compensated | °C (°F) | -10 ~ +40 (-14 ~ +104) | | | -10 ~ +40 (-14 ~ +104) | | | | | | |
| | Operating | | -40 ~ +55 (-40 ~ +131) | | | -30 ~ +55 (-22 ~ +131) | | | | | | |
| | Safe storage | | -40 ~ +80 (-40 ~ +176) | | | -40 ~ +80 (-40 ~ +176) | | | | | | |
| OIML / European approval [10] | Class | | C3 | | | C3 | C3 | C4 | C3 | C4 | C3 | C4 |
| | nmax | | 3000 | | | 3000 | 3000 | 4000 | 3000 | 4000 | 3000 | 4000 |
| | Vmin | kg (lb) | 0.83 | 1.67 | 2.5 | 3.5 | 4.7 | 2.4 | 5.7 | 4 | 8.1 | 6.3 |
| NTEP approval [10] | Class | | IIIL M n:5 | | | IIIL M | IIIL M | – | IIIL M | – | IIIL M | – |
| | nmax | | 5000 | | | 10000 | 10000 | – | 10000 | – | 10000 | – |
| | Vmin | kg (lb) | 2.2 | 4.2 | 6.3 | 2.9 | 4 | – | 4.9 | – | 7.1 | – |
| ATEX approval [10] Rating | | Cat 2 | II 2 G Ex ib IIB T4 Gb / II 2 D Ex ib IIIC T130° C Db | | | | | | | | | |
| | | Cat 3 | II 3 G Ex ec IIC T6 Gc; II 3 G Ex nA IIC T6 Gc; II 3 D Ex tc IIIC T85°C Dc | | | II 3 G Ex nA nC IIC T6 Gc / II 3 G Ex ec nC IIC T6 Gc / II 3 D Ex tc IIIC T85°C Dc | | | | | | |
| IECEx approval [10] | | | Ex ib IIB T4 Gb / Ex ib IIIC T130°C Db<br>Ex ec IIC T6 Gc / Ex nA IIC T6 Gc / Ex tc IIIC T85°C | | | Ex ib IIB T4 Gb / Ex ib IIIC T130°C Db<br>Ex nA nC IIC T6 Gc / Ex ec nC IIC T6 Gc / Ex tc IIIC T85°C Dc | | | | | | |
| FM approval [10] | Div. 1 US | | IS / I, II, III / 1 / CDEFG ; I / 1 / AEx ib / IIB / T4 / Gb ;<br>21 / AEx ib / IIIC / T130°C / Db | | | | | | | | | |
| | Div. 1 Canada | | IS / I, II, III / 1 / CDEFG / T4 ; 1 / Ex ib / IIB / T4 ; Gb ;<br>21 / Ex ib / IIIC / T130°C ; Db | | | | | | | | | |
| | Div. 2 US | | NI / I,II,III / 2 / CDFG/T6 Ta= -40°C to +55°C<br>NI / I, II,III Division 2, Groups A, B, C, D, F G; T6 Ta = -40°C to +55°C | | | - | | | | | | |
| | Div.2 Canada | | NNI / I,II,III / 2 / CDFG/T6 Ta= -40°C to +55°C ;<br>NI / I,II,III / 2 / ABCDFG/T6 Ta= -40°C to +55°C | | | - | | | | | | |
| UL /cUL approval [10] | Rating | | – | | | I, II, III, Division 2, Groups C, D, F, G, T6 | | | | | | |
| Supply voltage non-regulated | Typical | V DC | 12-24 (external supply) | | | 12-24 (external supply) | | | | | | |
| Overvoltage protection | | A | 2500 | | | > 80000 | | | | | | |
| Effective system update rate | | Hz | 100 (with 4 cells) | | | 83 (with 4 cells), 50 (with 6 cells), 25 (with 14 cells), 15 (with 24 cells) | | | | | | |
| Material | Spring element | | Stainless steel | | | Stainless steel | | | | | | |
| Protection | Type | | welded | | | Welded | | | | | | |
| | IP rating | | IP68/IP69K | | | IP68/IP69K | | | | | | |
| | NEMA rating | | NEMA 6/6P | | | NEMA 6/6P | | | | | | |
| Deflection @ R.C., nominal | | mm (in) | 0.2 (0.008) | 0.37 (0.015) | 0.49 (0.019) | 0.36 (0.014) | 0.51 (0.02) | | 0.71 (0.028) | | 1.02 (0.04) | |
| Weight, nominal | | kg (lb) | 1.2 (2.6) | | | 3.0 (6.6) | | | 3.2 (7.0) | | 7.5 (16.6) | |

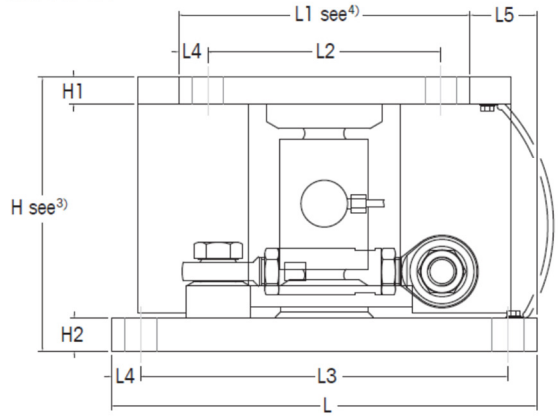
[8] Error due to the combined effect of non-linearity and hysteresis.
[9] Typical values only. The sum of errors due to combined error and temperature effect on sensitivity comply with the requirements of OIML R60 and NIST HB44.
[10] See certificate for complete information.
[11] Calculate the scale's minimum increment size by multiplying this value by the square root of the number of load cells. For non legal-for-trade applications.

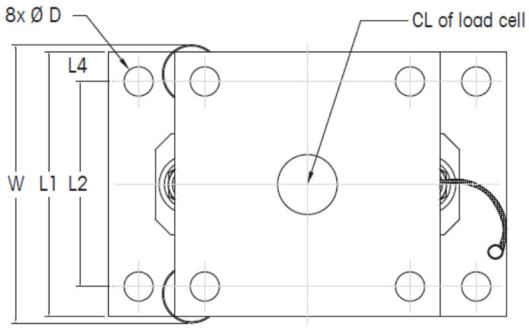
# SWC615 PowerMount™ Weigh Module Dimensions mm [in]

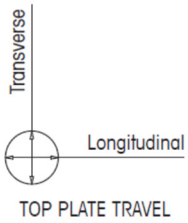
Size 1

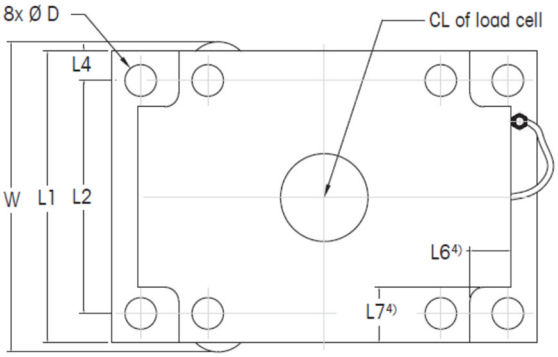



Size 2 / 3A




| | | Dimensions and locations | | | | | | | | | | | | | | | Tank leg plate | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Size** | **Capacity** | **D** | **H** | **HS**[2] | **HP**[1] | **H1** | **H2** | **L**[4] | **L1** | **L2** | **L3** | **L4** | **L5** | **L6**[4] | **L7**[4] | **W** | **Thickness** | **Dimensions** |
| 1 | 7.5, 15, 22.5t | 22 | 152 | 167 | 192.4 | 12 | 20 | 300 | 200 | 155 | 255 | 22.5 | 50 | – | – | 210 | min 25 | 200 x 200 |
| | [16.5, 33, 49.6klb] | [0.87] | [5.98] | [6.57] | [7.57] | [0.47] | [0.79] | [11.8] | [7.87] | [6.1] | [10.04] | [0.89] | [1.97] | | | [8.27] | [1] | [7.87 x 7.87] |
| 2 | 20, 30, 50t | 26 | 235 | 268 | 293.4 | 23 | 28 | 365 | 250 | 200 | 315 | 25 | 57.5 | 35 | 47.5 | 273 | min 50 | 250 x 250 |
| | [44, 66, 110klb] | [1.02] | [9.25] | [10.55] | [11.55] | [0.91] | [1.1] | [14.37] | [9.84] | [7.87] | [12.4] | [0.98] | [2.26] | [1.38] | [1.87] | [10.75] | [2] | [9.84 x 9.84] |
| 3A | 90t | 32 | 329.5 | 367.5 | 392.9 | 30 | 33 | 440 | 300 | 235 | 375 | 32.5 | 70 | 40 | 52.5 | 321 | min 60 | 300 x 300 |
| | [198klb] | [1.26] | [12.97] | [14.47] | [15.47] | [1.18] | [1.30] | [17.32] | [11.81] | [9.25] | [14.76] | [1.28] | [2.76] | [1.57] | [2.07] | [12.63] | [2.4] | [11.81 x 11.81] |

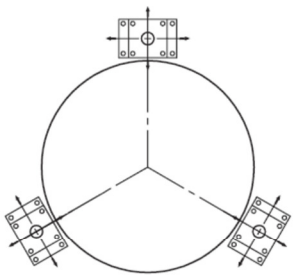
[1] Height when using thermal isolation pad or shock/vibration pad

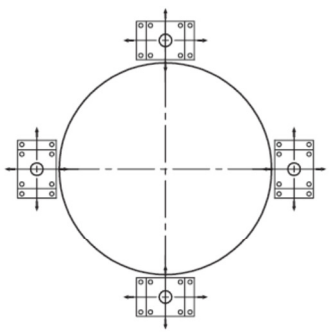
[2] Height when using spacer plate

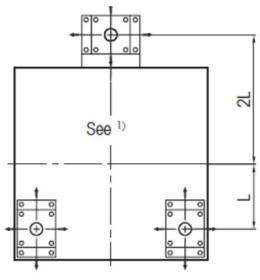
[3] Shipping/Installation height is 2 mm [0.08 inches] taller

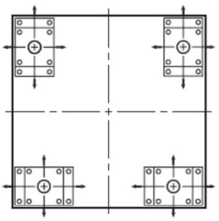
[4] Designed for square tank leg plate above top plate

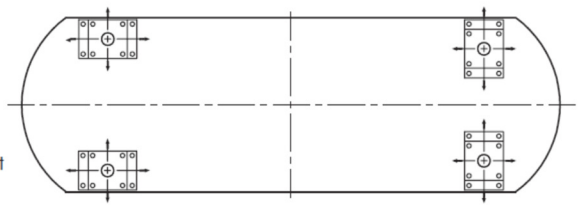
# SWC615 PowerMount™ Weigh Module Arrangements









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

# Order Information SWC615 PowerMount™ – Weight Module including Load Cell

| Order information, weigh module assembly | | | | Item No. | | |
|---|---|---|---|---|---|---|
| **Size** | **Rated capacity** | **Description** | **Class** | **Material, weigh module** | | |
| | | | | **Zinc plated** | **304** | **316** |
| 1 | 7.5 t / 17 klb | Weigh module assembly | C3 / III M n:5 | **30256336** | **30256337** | 30256338 |
| | 15 t / 33 klb | | | **30256339** | **30256340** | 30256341 |
| | 22.5 t / 50 klb | | | **30256342** | **30256343** | 30256344 |
| | 7.5 - 22.5 t / 17 - 50 klb | Stabilizer [1] | – | **72205444** | **72205445** | **72205445** |
| | | Spacer plate | | **72245532** | **72206153** | 72247333 |
| | | Dead stand | | **72206154** | **72206155** | – |
| | | Shock/Vibration pad [2] | | **72246646** | **72207262** | 72247334 |
| | | Thermal isolation pad 80 °C [2] | | **72246647** | **72207263** | 72247335 |
| | | Thermal isolation pad 170 °C [2] | | **72246648** | **72207264** | 72247336 |
| 2 | 20 t / 44 klb | Weigh module assembly | C3 / IIIL M n:10 | **72262440** | **72262441** | – |
| | 30 t / 66 klb | | | **72255118** | **72255120** | |
| | 50 t / 110 klb | | | **72255119** | **72255121** | |
| | 20 - 50 t / 44 - 110 klb | Stabilizer [1] | – | **72248968** | **72248969** | |
| | | Spacer plate | | **72249203** | **72249206** | |
| | | Dead stand | | 72249173 | 72249174 | |
| | | Shock/Vibration pad [2] | | 72255072 | 72255075 | |
| | | Thermal isolation pad 80 °C [2] | | 72255073 | 72255076 | |
| | | Thermal isolation pad 170 °C [2] | | 72255074 | 72255077 | |
| 3A | 90 t / 198 klb | Weigh module assembly | C3 / IIIL M n:10 | **30057238** | **30057237** | |
| | 90 t / 198 klb | Stabilizer | – | **72248970** | **72248971** | |
| | | Spacer plate [1] | | **72249213** | **72249214** | |
| | | Dead stand | | 72249175 | 72249176 | |
| | | Shock/Vibration pad [2] | | 72255078 | 72255081 | |
| | | Thermal isolation pad 80 °C [2] | | 72255079 | 72255082 | |
| | | Thermal isolation Pad 170 °C [2] | | 72255080 | 72255083 | |

**Bolded entries are stocked**

[1] 1 or 2 per weigh module.

[2] Includes spacer plate

# Order Information SWC615 PowerMount™ Cables

| Order information, cables | Item No. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Description** | **Cable, material / length** | | | | | | | |
| | **PU / 3 m (10 ft)** | **PU / 5 m (16.4 ft)** | **PU / 10 m (32.8 ft)** | **PU / 20 m (65.5 ft)** | **PU / 30 m (100 ft)** | **PU / 50 m (166 ft)** | **PU / 100 m (333 ft)** | **PU / 150 m (500 ft)** |
| Cable kit, 3 load cells | **30302750** | **30302751** | **30302752** | **30302753** | – | – | – | – |
| Cable kit, 4 load cells | **30302754** | **30302755** | **30302756** | **30302757** | – | – | – | – |
| Load cell – load cell cable | **30302766** | **30302767** | **30302768** | **30302769** | – | – | – | – |
| Home run cable | – | **30302758** | **30302759** | **30302760** | **30302761** | **30302762** | **30302763** | **30302764** |
| Braided cable kit, 3 load cells | – | **61045291** | **61045292** | – | – | – | – | – |
| Braided cable kit, 4 load cells | – | **61045293** | **61045294** | – | – | – | – | – |
| Braided home run cable | – | – | **61044730** | **61044731** | **61044732** | **610444734** | **61044739** | **61044749** |
| Cable extension adapter | **30220628** | | | | | | | |
| CAN termination load cell | **30302770** | | | | | | | |
| Blind cap connector load cell | **30302771** | | | | | | | |
| Cable gland for home rund cable with IND780PDX | **30095639** | | | | | | | |

**Bolded entries are stocked**

## Order Information SWC615 PowerMount™ – Weigh Module without Load Cell

– SafeLock™ allows installation of weigh module hardware without load cell to avoid sensor damage
– Combine weigh module with other load cells (with C4, special cable lengths, etc.)
– Use weigh module with dummy load cell for level detection systems

| Order information, weigh module kit | | Item No. | | | Suitable load cells | | |
|---|---|---|---|---|---|---|---|
| | | | | | Item No. | | |
| | | | | | Class | | |
| Size | Rated capacity | Material, weigh module | | | | | Dummy load cell |
| | | Zinc Plated | 304 | 316 | C3 / IIIL M n:10 | C4 | |
| 1 | 7.5 t / 17 klb | **30131985** | **30131986** | 30131987 | **30092515** | – | 30238196 |
| | 15 t / 33 klb | | | | **30092516** | – | |
| | 22.5 t / 50 klb | | | | **30092517** | – | |
| 2 | 20 t / 44 klb | **72255116** | **72255117** | – | **42904882** | – | 72255084 |
| | 30 t / 66 klb | | | | **42904883** | **42904884** | |
| | 50 t / 110 klb | | | | **42904891** | **42904892** | |
| 3A | 90 t / 198 klb | **30069755** | **30069754** | – | **72238150** | 72238147 | 30085236 |

**Bolded entries are stocked**

### 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 · ROCKWELL AUTOMATION ENCOMPASS GLOBAL PARTNER · ENABLED BY ALLEN-BRADLEY TECHNOLOGY · 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.