

Accurate, Reliable Weighing for Heavy-Capacity Tanks



Tank Weighing

Gagemount weigh modules offer the rugged construction needed for use with heavy-capacity tank scales. Available in capacities of 20t to 300t, they are designed to handle extremely heavy loads.



Load Cells

Model 0782 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.



Check Rods

Gagemount weigh modules are completely self-contained. Each weigh module has a built-in check rod that protects against side loads, while allowing for thermal expansion and contraction. An optional anti-uplift kit is available (20t-100t only).



Safety Support Block

Each weigh module is constructed with a built-in support block for added safety. In case an extreme overload causes catastrophic load cell failure, the block supports the weight of the scale to protect against further damage or injury (20t-100t only).



20t-100t



200t-300t

3390 Gagemount Weigh Module

Gagemount weigh modules enable you to convert a heavy-capacity tank, silo, or hopper into a scale. They can be adapted to a wide range of applications, including tanks used for filling, mixing, batching, and inventory management. Regardless of the application, these easy-to-install weigh modules can deliver accurate and repeatable performance in heavy-duty weighing environments.

- Hermetically sealed load cells.
- Stainless steel load cells (20t-200t only).
- Built-in check rods (20t-100t only).
- Safety support block (20t-100t only).
- Nickel-plated carbon steel (20t-300t) or electropolished stainless steel (20t-200t) mounting hardware.
- Global approvals standard on every load cell (20t-100t only).

3390 Weigh Module Specifications

Weigh Module Parameter	Unit of Measure	Specification	
Model No.		3390 Gagemount	
Rated Capacity (R.C.)	t (klb, nominal)	20 (44) 30 (66) 50 (110) 100 (220) 200 (441) 300 (661)	
Load Limit, Safe ⁹	%R.C.	125	
Restoring Force ⁵	%A.L./mm (.../in) ³	0.8 (19) 2 (51) 1.6 (40) 2.5 (63)	
Max. Horizontal Force	Transverse	kN (klb)	0 (0) ⁶ 0 (0) ¹⁰
	Longitudinal	kN (klb)	49 (11.0) ⁷ 98 (22.0) ⁷ 0 (0) ¹⁰
Max. Top Plate Travel	Transverse	± mm (in)	4 (0.16) 5 (0.20) 6 (0.24) ¹⁰
	Longitudinal	± mm (in)	0 (0) 6 (0.24) ¹⁰
Max. Uplift Force	kN (klb)	131 (29.5) ⁸ 262 (59) ⁸ 0 (0) ¹⁰	
Weight (including load cell), nominal	kg (lb)	25 (55) 110 (243) 55 (121) 125 (275)	
Material		Carbon steel / 304 stainless steel Carbon steel	
Finish		Nickel plated / electropolished Nickel plated	

Load Cell Parameter	Unit of Measure	Specification	
Model No.		0782	
Rated Capacity (R.C.)	t (klb, nominal)	20 (44) 30 (66) 50 (110) 100 (220) 200 (441) 300 (661)	
Rated Output	mV/V @ R.C.	2 ± 0.1%	
Combined Error ^{1, 2}	%R.C.	≤ 0.018 ≤ 0.05 ≤ 0.06	
Temperature Effect on	Min. Dead Load Output	%R.C./°C (.../°F)	≤ 0.002 (0.001)
	Sensitivity ²	%A.L./°C (.../°F)	≤ 0.0009 (0.0005) ≤ 0.002 (0.001)
Temperature Range	Compensated	°C (°F)	-10 to +40 (+14 to +104)
	Operating	°C (°F)	-30 to +65 (-22 to +150)
	Safe Storage	°C (°F)	-40 to +80 (-40 to +176)
OIML/European Approval ⁴	Class		C3
	n _{max}		3000
	Y		6666
NTEP Approval ⁴	Class		III L M
	n _{max}		10000
	V _{min}	kg (lb)	1.4 (3.0) 2.1 (4.5) 3.5 (7.5) 7.0 (15.0)
ATEX Approval ⁴	Rating		II 2 GD EEx ib IIC T4-T6 IP68 T60°C
			II 3 GD EEx nL IIC T6 T60°C IP68
			II 3 GD EEx nA II T6 T60°C IP68
			Weigh module hardware suitable for hazardous area
Factory Mutual Approval ⁴	Rating		IS/I, II, III/1/ABCDEF/G/T4 - ¹¹
Excitation Voltage	Recommended	V AC/DC	5~15
	Maximum	V AC/DC	20
Terminal Resistance	Excitation	Ω	1160 ± 10 1160 ± 15
	Output	Ω	1000 ± 3
Material	Spring Element		Stainless steel 4340
	Type		Welded
Protection	IP Rating		IP68
	NEMA Rating		NEMA 6/6P
Load Limit	Safe	%R.C.	125
	Ultimate	%R.C.	300
Deflection @ R.C., nominal	mm (in)		0.25 (0.010) 0.32 (0.013) 0.42 (0.017)
Weight, nominal	kg (lb)		2.8 (6.2) 3 (6.6) 3.3 (7.3) 4.5 (9.9) 12.5 (27.6) 21.7 (48)
Cable	Length	m (ft)	13 (42.5) 20 (66) 30 (98)
	Diameter	mm (in)	5.8 (0.23)

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 in a direction transverse to the longitudinal axis of the check rod.

⁷ Maximum horizontal force that can be applied to the top plate in a direction parallel to the longitudinal axis of the check rod.

⁸ Maximum vertical uplift force that can be applied to the top plate with the MT anti-uplift option correctly installed.

⁹ Maximum vertical downward force that can be applied to the top plate.

¹⁰ Horizontal restraint, down stop, and anti-uplift protection must be provided externally for the 200t and 300t weigh modules.

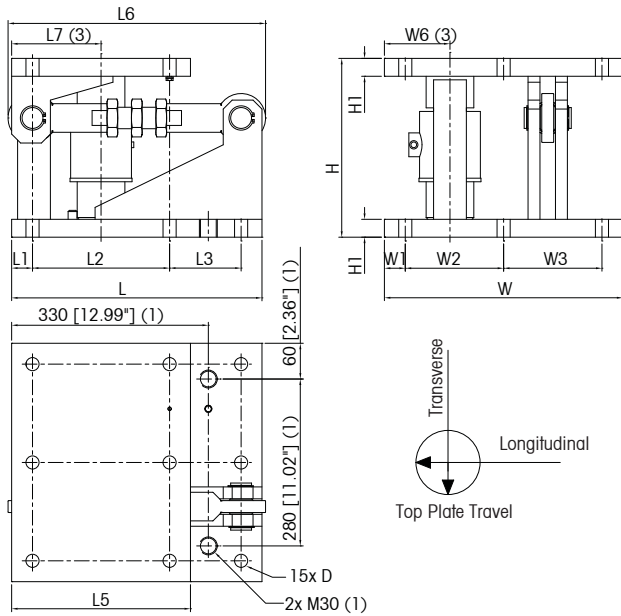
¹¹ Pending (consult factory).



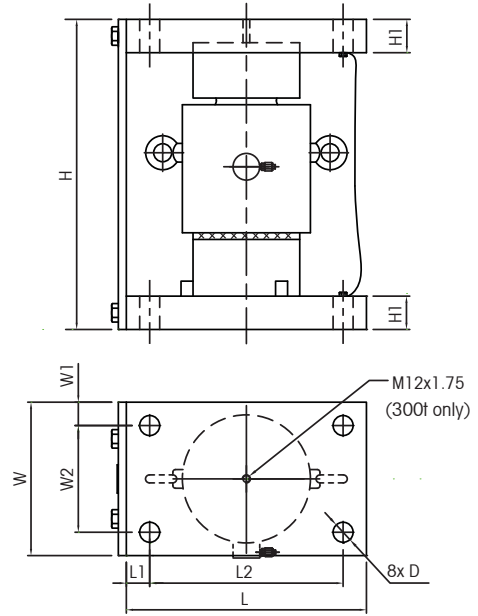
Produced in a facility that is



3390 Weigh Module Dimensions, 20t-100t



3390 Weigh Module Dimensions, 200t-300t



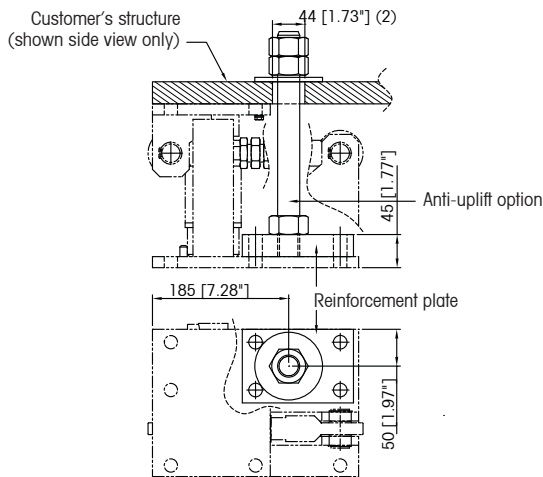
Notes:

- (1) M30 holes for attachment of anti-uplift options on 100t only (see below).
- (2) Each weigh module is supplied with a shipping/installation plate to keep the top and bottom plates rigidly aligned during shipping and installation.
- (3) Dimensions to center line of load cell.

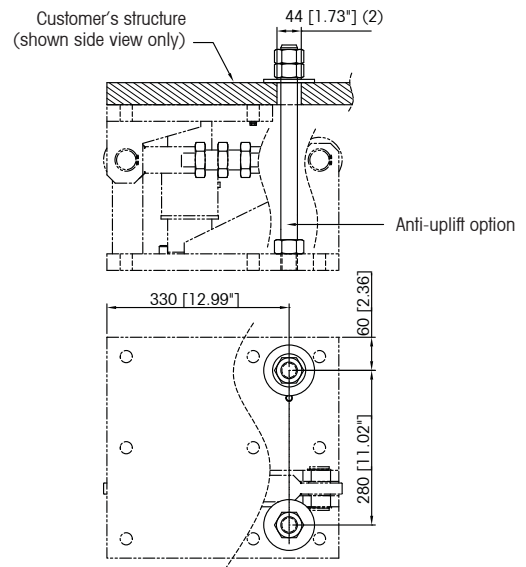
Capacity	D	H	H1	L	L1	L2	L3	L5	L6	L7 (3)	W	W1	W2	W3	W6 (3)	Top Plate Travel	
																Longitudinal	Transverse
20t-50t 44-110klb	18 [0.71]	222.5 [8.76]	15 [0.59]	280 [11.02]	25 [0.98]	115 [4.53]	115 [4.53]	160 [6.30]	292 [11.50]	82.5 [3.25]	200 [7.87]	17.5 [0.69]	65 [2.56]	102.5 [4.04]	50 [1.97]	NA NA	± 4 [± 0.16]
100t 220klb	22 [0.87]	300 [11.81]	30 [1.18]	420 [16.54]	35 [1.38]	230 [9.06]	120 [4.72]	300 [11.81]	432 [17.01]	150 [5.91]	400 [15.75]	35 [1.38]	165 [6.50]	165 [6.50]	110 [4.33]	NA NA	± 5 [± 0.20]
200t 441klb	24 [0.94]	355 [13.98]	40 [1.57]	220 [8.66]	17.5 [0.69]	185 [7.28]	NA NA	NA NA	NA NA	NA NA	180 [7.09]	22.5 [0.89]	135 [5.31]	NA NA	NA NA	± 6 [± 0.24]	± 6 [± 0.24]
300t 661klb	30 [1.18]	465 [18.31]	50 [1.97]	360 [14.17]	35 [1.38]	290 [11.42]	NA NA	NA NA	NA NA	NA NA	230 [9.06]	35 [1.38]	160 [6.30]	NA NA	NA NA	± 6 [± 0.24]	± 6 [± 0.24]

Dimensions in mm [inches].

3390 Anti-Uplift Option (72252505) for 20t-50t Gagemount



3390 Anti-Uplift Option (2x 72188827) for 100t Gagemount



Notes:

- (1) 20t-50t option supplied with reinforcement plate, which must be fastened by four of the base plate mounting screws.
- (2) Required hole diameter in customer's structure.
- (3) The upper end of the kit must be fastened to a plate supplied by the customer.

3390 Weigh Module Ordering Information

Description	Item No.
3390 Weigh Module (with load cell), 20t/44K Carbon Steel	71202681
3390 Weigh Module (with load cell), 30t/66K Carbon Steel	71202682
3390 Weigh Module (with load cell), 50t/110K Carbon Steel	71202683
3390 Weigh Module (with load cell), 100t/220K Carbon Steel	71202687
3390 Weigh Module (with load cell), 200t/441K Carbon Steel	71210092
3390 Weigh Module (with load cell), 300t/661K Carbon Steel	72197823
3390 Weigh Module (with load cell), 20t/44K Stainless Steel	71202688
3390 Weigh Module (with load cell), 30t/66K Stainless Steel	71202696
3390 Weigh Module (with load cell), 50t/110K Stainless Steel	71202697
3390 Weigh Module (with load cell), 100t/220K Stainless Steel	71202701
3390 Weigh Module (with load cell), 200t/441K Stainless Steel	71210170
3390 Weigh Module (without load cell), 20t-50t/44K-110K Carbon Steel	72186433
3390 Weigh Module (without load cell), 100t/220K Carbon Steel	72186435
3390 Weigh Module (without load cell), 20t-50t/44K-110K Stainless Steel	72186434
3390 Weigh Module (without load cell), 100t/220K Stainless Steel	72186436
0782 Load Cell, 20t/44K, 13m/42.5ft cable, C3/IIILM10	71201708
0782 Load Cell, 30t/66K, 13m/42.5ft cable, C3/IIILM10	71201709
0782 Load Cell, 50t/110K, 13m/42.5ft cable, C3/IIILM10	71201710
0782 Load Cell, 100t/220K, 13m/42.5ft cable, C3/IIILM10	71201711
0782 Load Cell, 200t/441K, 20m/66ft cable	71210093
0782 Load Cell, 300t/661K, 30m/98ft cable	71210169

Options	Item No.
Anti-Uplift Kit, SS, 20t-50t/44K-110K	72252505
Anti-Uplift Kit, SS, 100t/220K (100t/220K uses two)	72188827 ¹
Spacer Plate, SS, 20t-50t/44K-110K	72192265
Spacer Plate, SS, 100t/220K	72192266
Dummy 0782 Load Cell, 20t-50t/44K-110K	72188111
Dummy 0782 Load Cell, 100t/220K	72188112
Dead Stand, CS, 20t-50t/44K-110K	72194571
Dead Stand, CS, 100t/220K	72194572

¹ Two required for 100t.

Global Approvals

Model 0782 load cells have global certifications for metrological performance and hazardous area applications. There is no need for options or additional charges.

Full Connectivity

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

ServiceXXL[®] Tailored Services

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

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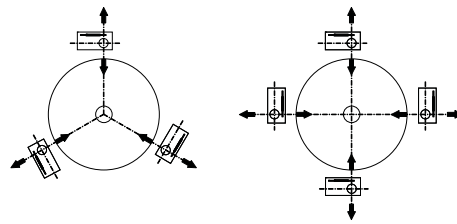
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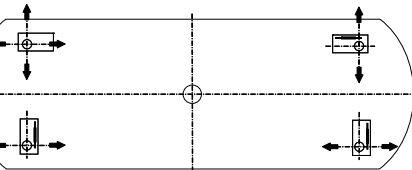
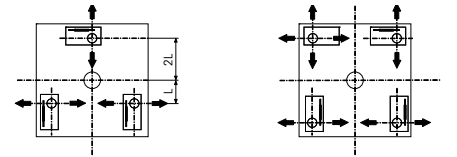
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11/2010
I06-TH03447.1E

3390 Mounting Arrangements, 20t-100t



Circular Mounting (Plan View)



Rectangular or Square Mounting (Plan View)

Note: Two of the rectangular and square mounting arrangements shown above use four weigh modules. For those installations, remove the check rod from one of the modules (as shown). Contact factory for 200t-300t mounting arrangements.

3390 Cable Colors

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



Weighing Electronics

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

www.mt.com/weighmodule

For more information