

# 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 O782 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 or electropolished stainless steel 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 <sup>9</sup>		%R.C.	125					
Restoring Force <sup>5</sup>		%A.L./mm (.../in) <sup>3</sup>	0.8 (19)		2 (51)		1.6 (40)	2.5 (63)
Max. Horizontal Force	Transverse	kN (klb)	0 (0) <sup>6</sup>			0 (0) <sup>10</sup>		
	Longitudinal	kN (klb)	49 (11) <sup>7</sup>		98 (22) <sup>7</sup>		0 (0) <sup>10</sup>	
Max. Top Plate Travel	Transverse	± mm (in)	4 (0.16)		5 (0.20)		6 (0.24) <sup>10</sup>	
	Longitudinal	± mm (in)	0 (0)			6 (0.24) <sup>10</sup>		
Max. Uplift Force		kN (klb)	131 (29.5) <sup>8</sup>		262 (59) <sup>8</sup>		0 (0) <sup>10</sup>	
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 <sup>1, 2</sup>		%R.C.	≤ 0.018			≤ 0.05	≤ 0.06	
Temperature Effect on	Min. Dead Load Output	%R.C./°C (.../°F)	≤ 0.002 (0.001)					
	Sensitivity <sup>2</sup>	%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 <sup>4</sup>	Class		C3				-	
	n <sub>max</sub>		3000					
	Y		6666					
NTEP Approval <sup>4</sup>	Class		III L M				-	
	n <sub>max</sub>		10000					
	V <sub>min</sub>	kg (lb)	1.4 (3.0)	2.1 (4.5)	3.5 (7.5)	7.0 (15.0)		
ATEX Approval <sup>4</sup>		Rating	II 2 GD EEx ib IIB T4 T50°C				- <sup>11</sup>	
Factory Mutual Approval <sup>4</sup>		Rating	IS/I,II,III/1/ABCDEF/T4					
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					
	Safe	%R.C.	125					
Load Limit	Ultimate	%R.C.	300					
	Deflection @ R.C., nominal		mm (in)	0.25 (0.010)				
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)					

<sup>1</sup> Error due to the combined effect of non-linearity and hysteresis.

<sup>2</sup> 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.

<sup>3</sup> A.L. = Applied Load.

<sup>4</sup> See certificate for complete information.

<sup>5</sup> % of Applied Load (A.L.) per mm (in) displacement of the top plate (transverse and longitudinal).

<sup>6</sup> Maximum horizontal force that can be applied to the top plate in a direction transverse to the longitudinal axis of the check rod.

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

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

<sup>9</sup> Maximum vertical downward force that can be applied to the top plate.

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

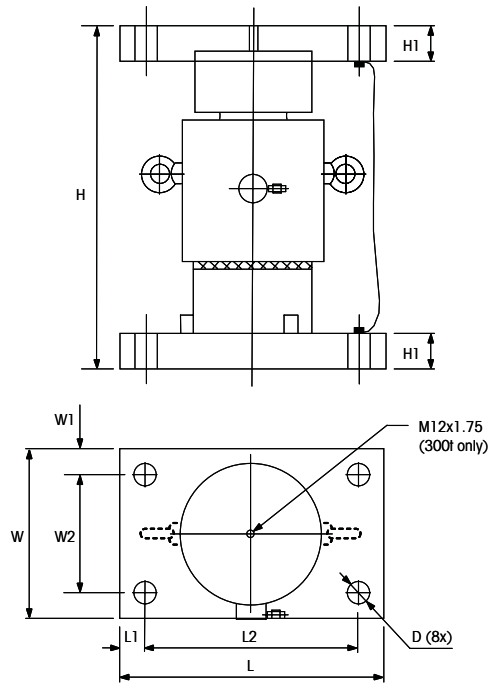
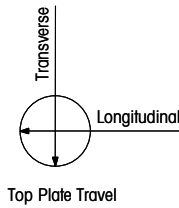
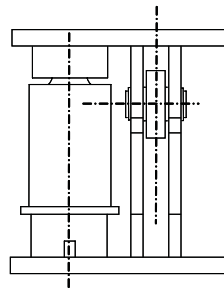
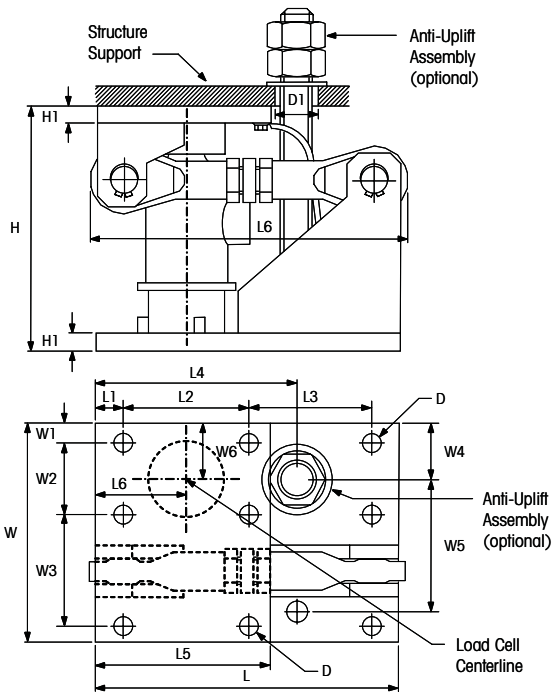
<sup>11</sup> Pending (consult factory).

Produced in a facility that is



### 3390 Weigh Module Dimensions, 20t-100t

### 3390 Weigh Module Dimensions, 200t-300t



Note: Each weigh module is supplied with a shipping/installation plate to keep the top and bottom plates rigidly aligned during shipping and installation.

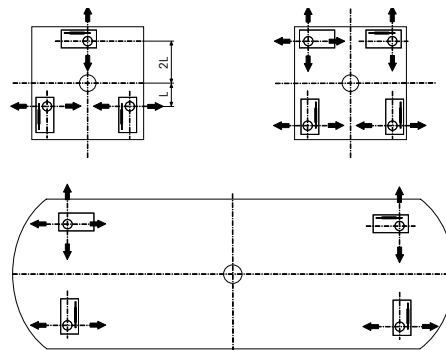
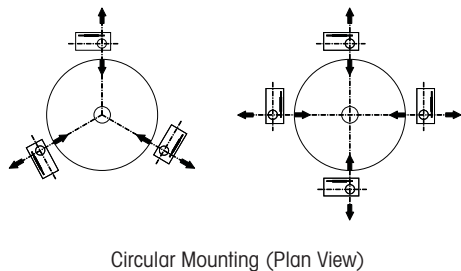
Capacity	D	D1	H	H1	L	L1	L2	L3	L4	L5	L6
20t-50t 44-110K lb	18 mm 0.71 in.	44 mm 1.75 in.	222.5 mm 8.76 in.	15 mm 0.59 in.	280 mm 11.02 in.	25 mm 0.98 in.	115 mm 4.53 in.	115 mm 4.53 in.	185 mm 7.28 in.	160 mm 6.30 in.	82.5 mm 3.25 in.
100t 220K lb	22 mm 0.87 in.	44 mm 1.75 in.	300 mm 11.81 in.	30 mm 1.18 in.	420 mm 16.54 in.	35 mm 1.38 in.	230 mm 9.06 in.	120 mm 4.72 in.	330 mm 12.99 in.	300 mm 11.81 in.	150 mm 5.91 in.
200t 441K lb	24 mm 0.94 in.	NA	355 mm 13.98 in.	40 mm 1.57 in.	220 mm 8.66 in.	17.5 mm 0.69 in.	185 mm 7.28 in.	NA	NA	NA	NA
300t 661K lb	30 mm 1.18 in.	NA	465 mm 18.31 in.	50 mm 1.97 in.	360 mm 14.17 in.	35 mm 1.38 in.	290 mm 11.42 in.	NA	NA	NA	NA

#### Top Plate Travel

Capacity	L6	W	W1	W2	W3	W4	W5*	W6	Longitudinal	Transverse
20t-50t 44-110K lb	292 mm 11.50 in.	200 mm 7.87 in.	17.5 mm 0.69 in.	65 mm 2.56 in.	102.5 mm 4.04 in.	50 mm 1.97 in.	NA	50 mm 1.97 in.	NA	± 4 mm ± 0.16 in.
100t 220K lb	432 mm 17.01 in.	400 mm 15.75 in.	35 mm 1.38 in.	165 mm 6.50 in.	165 mm 6.50 in.	60 mm 2.36 in.	280 mm 11.02 in.	110 mm 4.33 in.	NA	± 5 mm ± 0.20 in.
200t 441K lb	NA	180 mm 7.09 in.	22.5 mm 0.89 in.	135 mm 5.31 in.	NA	NA	NA	NA	NA	± 6 mm ± 0.24 in.
300t 661K lb	NA	230 mm 9.06 in.	35 mm 1.38 in.	160 mm 6.30 in.	NA	NA	NA	NA	NA	± 6 mm ± 0.24 in.

\* W5 is the dimension between the M30x3.5 tapped holes for the optional anti-uptift kit (P/N 72188827). The upper end of the kit must be fastened to a plate supplied by the customer. One tapped hole is provided in 20t-50t/44K-110K weigh modules. Two tapped holes are provided in 100t/220K weigh modules.

### 3390 Mounting Arrangements, 20t-100t



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.

Rectangular or Square Mounting (Plan View)

### 3390 Cable Colors

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

## 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 (100t/220K uses two)	72188827 <sup>1</sup>
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

<sup>1</sup> Two required for 100t.



### 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.

### Full Connectivity

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

### 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.

### ServiceXXL<sup>®</sup>

Tailored Services

#### Tailored Services

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

#### Mettler-Toledo, Inc.

1900 Polaris Parkway  
Columbus, Ohio 43240  
Tel. (800) 786-0038  
(614) 438-4511  
Fax (614) 438-4900

Specifications subject to change without notice.

© 2007 Mettler-Toledo, Inc.

METTLER TOLEDO® is a trademark of Mettler-Toledo, Inc.

2M307  
I06-TH03447.0E

[www.mt.com](http://www.mt.com)

For more information

**nefton**  
Ζύγιση  
Σήμανση  
Συμμόρφωση

Νεύτων Τεχνολογίες ΑΒΕΕ

Γέρακα 113, Τ.Θ. 67934

15344 Γέρακας

Τηλ: 210 6654544

Fax: 210 6654545

marketing@nefton.gr

www.nefton.gr