

General-Purpose Weighing for Tanks, Hoppers, OEM Machinery



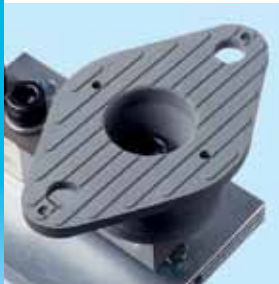
Static Loading

VLM2 weigh modules are suitable for general-purpose weighing in static-loading applications that have minimal horizontal shear or thermally induced movement.



Load Cells

The cantilever-bending-beam load cells are made of stainless steel for use in all environments. Capacities of 500, 1,000, and 2,500 lb are hermetically sealed for IP68 protection. Other capacities are environmentally sealed.



Compression Mounts

VLM2 weigh modules have upper compression mounts made of neoprene elastomeric to isolate the load cells from vibration and shock. Cold-rolled steel inserts strengthen the compression mounts.



Rigid Suspension

The upper compression mount is bolted to the load cell, providing anti-uplift protection. A built-in overload stop bolt protects the load cell from overload damage.



VLM2 Weigh Module

VLM2 weigh modules offer good value for general-purpose weighing of OEM machinery, conveyors, and tanks or hoppers with flexible inlets and outlets. They use cantilever-bending-beam load cells to deliver accurate and repeatable weighing. The design is suitable for static loading in applications that have minimal lateral movement. Mounting hardware is available in zinc-plated carbon steel and stainless steel to stand up to a variety of environments.

- Capacity range: 250 - 2,500 lb (113 - 1,134 kg)
- Carbon steel or stainless steel mounting hardware
- Uplift protection
- NTEP and FM approvals standard

VLM2 Weigh Module Specifications

Weigh Module Parameter		Unit of Measure	Specification				
Model No.			VLM2				
Rated Capacity (R.C.)		kg, nominal (lb)	113 (250)	227 (500)	454 (1000)	907 (2000)	1134 (2500)
Load Limit, Safe ¹		%R.C.	150				
Max. Horizontal Force	Transverse ²	kN (lb)	0.6 (140)	1.2 (275)	1.7 (375)	4.4 (1000)	4.4 (1000)
	Longitudinal ³	kN (lb)	0.6 (140)	1.2 (275)	1.7 (375)	4.4 (1000)	4.4 (1000)
Max. Uplift Force ⁴		kN (lb)	1.1 (250)	2.2 (500)	3.3 (750)	8.9 (2000)	8.9 (2000)
Weight (including load cell), nominal		kg (lb)	2.4 (5.2)	2.8 (6.2)	3.4 (7.5)	3.5 (7.8)	3.5 (7.8)
Material	Base Mounting Plate		carbon steel / stainless steel				
	Compression Mount		neoprene elastomeric over steel insert				
Finish	Base Mounting Plate		zinc plated / electropolished				

Load Cell Parameter		Unit of Measure	Specification				
Model No.			713	793		713	793
Rated Capacity (R.C.)		kg, nominal (lb)	113 (250)	227 (500)	454 (1000)	907 (2000)	1134 (2500)
Rated Output		mV/V @ R.C.	3 ± 0.27%				
Zero Load Output		%R.C.	≤ 1.0				
Combined Error ^{5, 6}		%R.C.	≤ 0.03				
Repeatability Error		%A.L. ⁷	≤ 0.02				
Creep, 30 Minute		%A.L.	≤ 0.01				
Temperature Effect on	Min. Dead Load Output	%R.C./10°C(50°F)	≤ 0.02				
	Sensitivity ⁶	%R.C./10°C(50°F)	≤ 0.027				
Temperature Range	Compensated	°C (°F)	-10 ~ +40 (+14 ~ +104)				
	Operating	°C (°F)	-35 ~ +65 (-31 ~ +149)				
	Safe Storage	°C (°F)	-54 ~ +82 (-65 ~ +180)				
NTEP Approval ⁸	Class		-	III M			
	nmax		-	5000			
	Vmin	kg (lb)	-	0.022 (0.05)	0.045 (0.10)	0.90 (0.20)	0.11 (0.25)
Factory Mutual Approval ⁸	Rating		IS/I,II,III/1/ABCDEFG/T4; NI/I/2/ABCD/T4; S/II,III/2/FG/T4				
	Entropy Parameters		Vmax = 25V; Imax = 600 mA; Pi = 1.25W; Ci = 0 nF, Li = 0 μH				
Excitation Voltage	Recommended	V AC/DC	5 ~ 15				
	Maximum	V AC/DC	15				
Terminal Resistance	Excitation	Ω	≥ 350				
	Output	Ω	350 ± 3				
Insulation Resistance @ 50VDC		MΩ	> 5000				
Material	Spring Element		17-4 PH Stainless Steel				
	Cable		Polyurethane				
	Type (713/793)		Potted / Welded				
Protection	IP Rating (713/793)		IP67 / IP68				
	NEMA Rating (713/793)		6 / 6P				
Load Limit	Safe	%R.C.	150				
	Ultimate	%R.C.	300				
Deflection @ R.C., nominal		mm (in)	0.5 (0.02)				
Weight, nominal		kg (lb)	0.9 (1.9)				
Cable	Length	m (ft)	6.1 (20)				

¹ Maximum vertical downward force that can be applied to the top plate.

² Maximum horizontal force that can be applied to the top plate in a direction transverse to the longitudinal axis of the load cell.

³ Maximum horizontal force that can be applied to the top plate in a direction parallel to the longitudinal axis of the load cell.

⁴ Maximum vertical uplift force that can be applied to the top plate.

⁵ Error due to the combined effect of non-linearity and hysteresis.

⁶ 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.

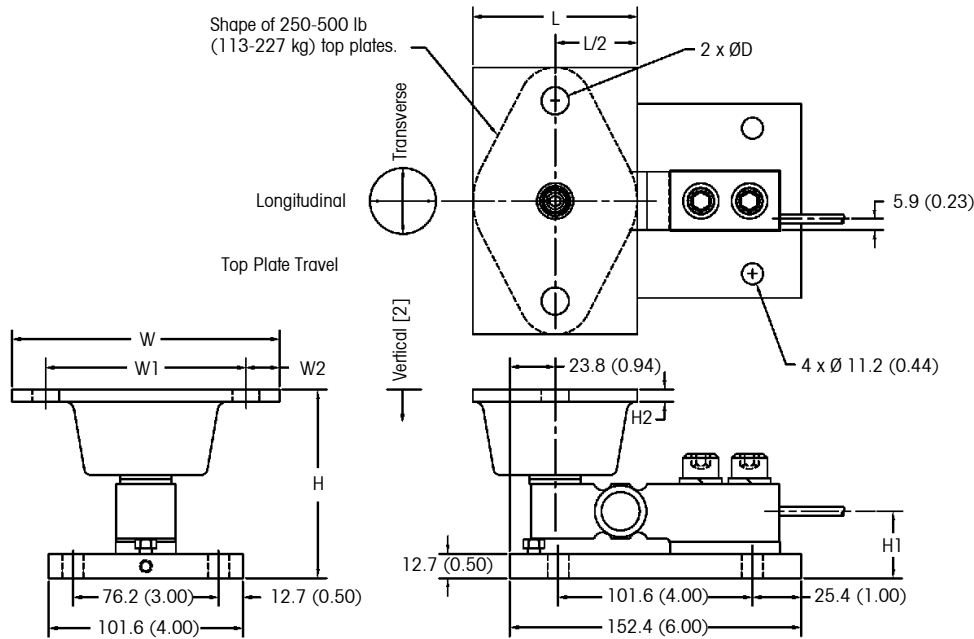
⁷ A.L. = Applied Load.

⁸ See certificate for complete information.

Produced in a facility that is



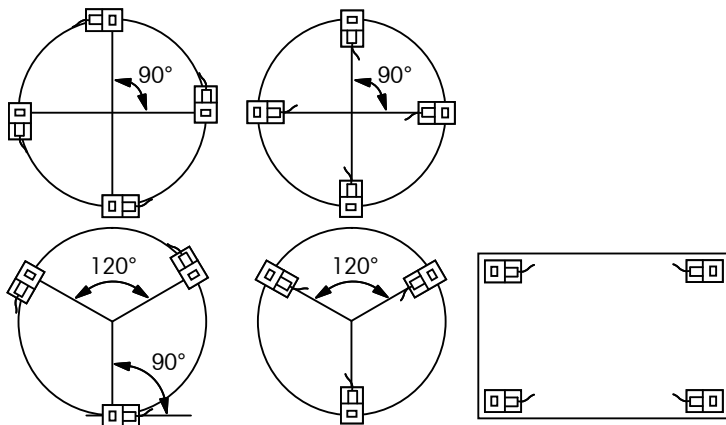
VLM2 Weigh Module Dimensions



¹ Dimensions are in mm (inches).
² Vertical deflection at capacity.

Capacity	D	H	H1	H2	L	W	W1	W2	Top Plate Travel		
									Longitudinal	Transverse	Vertical ²
113 kg (250 lb)	8.6 (0.34)	79.3 (3.12)	30.2 (1.19)	5.6 (0.22)	60.5 (2.38)	98.6 (3.88)	76.2 (3.00)	11.2 (0.44)	± 0.7 (± 0.03)	± 0.7 (± 0.03)	2.8 (0.11)
227 kg (500 lb)	14.2 (0.56)	98.6 (3.88)	35.1 (1.38)	6.4 (0.25)	85.9 (3.38)	139.7 (5.50)	104.7 (4.12)	17.5 (0.69)	± 0.7 (± 0.03)	± 0.7 (± 0.03)	2.8 (0.11)
454 kg (1,000 lb)	11.2 (0.44)	101.6 (4.00)	35.1 (1.38)	6.4 (0.25)	76.2 (3.00)	130.1 (5.12)	104.7 (4.12)	12.7 (0.50)	± 0.7 (± 0.03)	± 0.7 (± 0.03)	2.8 (0.11)
907 kg (2,000 lb)	14.2 (0.56)	101.6 (4.00)	35.1 (1.38)	9.7 (0.38)	117.4 (4.62)	158.8 (6.25)	128.6 (5.06)	15.1 (0.59)	± 0.7 (± 0.03)	± 0.7 (± 0.03)	2.8 (0.11)
1,134 kg (2,500 lb)	14.2 (0.56)	101.6 (4.00)	35.1 (1.38)	9.7 (0.38)	117.4 (4.62)	158.8 (6.25)	128.6 (5.06)	15.1 (0.59)	± 0.7 (± 0.03)	± 0.7 (± 0.03)	3.3 (0.13)

VLM2 Mounting Arrangements



Tangential Mounting
(Plan View)

Radial Mounting
(Plan View)

Rectangular or Square Mounting
(Plan View)

VLM2 Cable Colors

Color (Model 713)	Color (Model 793)	Function
Red	Green	+ Excitation
Black	Black	- Excitation
Green	White	+ Signal
White	Red	- Signal
Yellow	Yellow	Shield

VLM2 Ordering Information

Description	Item No.	Trade Name
VLM2 CS WMA (with load cell), 250 lb	61010697	VLM2C102
VLM2 CS WMA (with load cell), 500 lb	61037414	VLM2C105H
VLM2 CS WMA (with load cell), 1000 lb	61037415	VLM2C110H
VLM2 CS WMA (with load cell), 2000 lb	61010700	VLM2C120
VLM2 CS WMA (with load cell), 2500 lb	61037416	VLM2C125H
VLM2 SS WMA (with load cell), 250 lb	61041450	VLM2S102
VLM2 SS WMA (with load cell), 500 lb	61041386	VLM2S105H
VLM2 SS WMA (with load cell), 1000 lb	61041451	VLM2S110H
VLM2 SS WMA (with load cell), 2000 lb	61041452	VLM2S120
VLM2 SS WMA (with load cell), 2500 lb	61041453	VLM2S125H

Note: VLM2 weigh modules can be ordered as systems containing more than one assembly. Consult factory.

Load Cell Ordering Information

Description	Item No.	Trade Name
713 Load Cell, 250 lb	68002108	TB600829-020
793 Load Cell, 500 lb	61037237	TB601019-020
793 Load Cell, 1000 lb	61037530	TB601015-020
713 Load Cell, 2000 lb	68002117	TB600832-020
793 Load Cell, 2500 lb	61038121	TB601016-020



METTLER TOLEDO Service

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

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.

www.mt.com/weighmodule

For more information

Mettler-Toledo, LLC

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

Specifications subject to change without notice.

© 2014 Mettler-Toledo, LLC
03/2014
30130014