

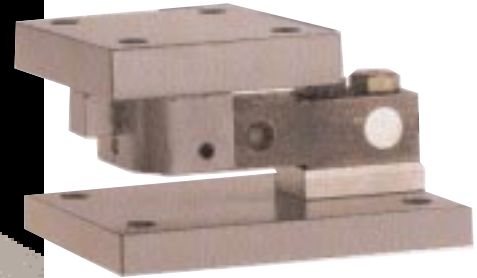
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CENTERLIGN™

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Weigh Modules

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- ✓ Accuracy
- ✓ Reliability
- ✓ Support
- ✓ International Approvals

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**For Dynamic or Static  
Weighing Applications**

**METTLER TOLEDO**



For all industries that use conveyors, processing vessels or existing mechanical platform scales

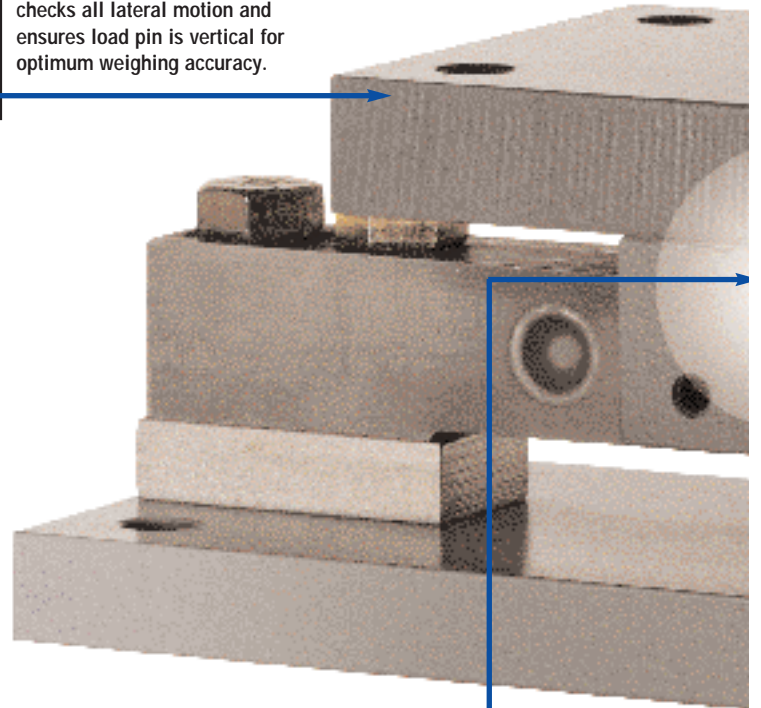
# When a Structure Needs to Be a Scale

- Self checking...no check rods to install
- Self-centering suspension for accurate, repeatable weights
- Hermetically sealed load cells survive harsh environments
- Flexible applications to convert existing structures
- Fast, easy installation saves time and labor

METTLER TOLEDO's exclusive CENTERLIGN Weigh Modules are for dynamic loading applications where the weighbridge is subject to high horizontal side forces. CENTERLIGN is a unique weigh module with features unlike any others. Ideal for applications that use structures with high horizontal forces such as conveyors, processing vessels or mechanical platform scales. CENTERLIGN provides the highest degree of precision and repeatability because of self-righting load pins and registered mounting.

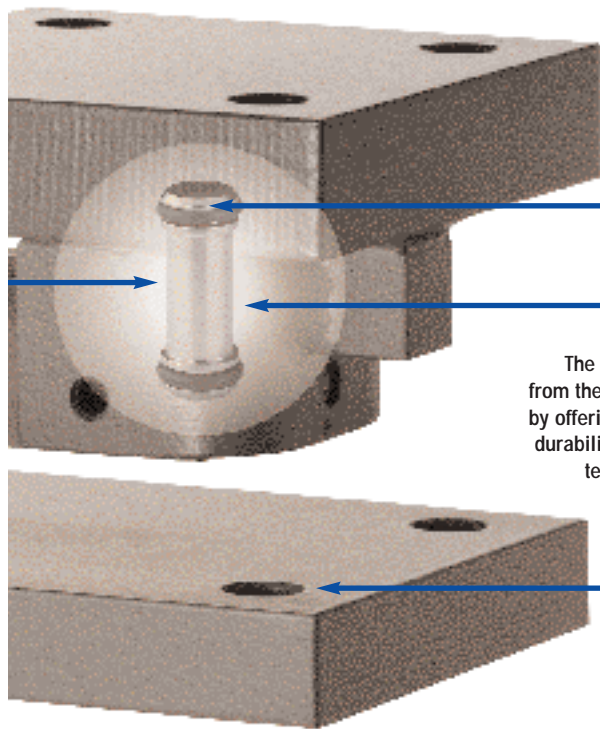


**TOP PLATE**  
checks all lateral motion and ensures load pin is vertical for optimum weighing accuracy.



**BLIND HOLE DESIGN**  
Controls weight application by concentrating all the vertical load at one point on the load cell.





**STAINLESS STEEL LOAD PIN**

The loading pin, constructed of 17-4PH heat treated stainless steel, makes point contact with the load cell for optimum accuracy.

**HERMETIC LOAD CELL**

The Model 743 and 745 load cells benefit from their 17-4PH stainless steel construction by offering excellent performance with rugged durability. The sensitive strain gages are protected by welded stainless steel covers.

**FLEXIBLE MOUNTING SCHEME**

Weigh Modules can be configured to many dimensions or shapes.

**Performs Beyond Accuracy Requirements**

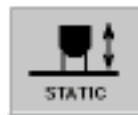
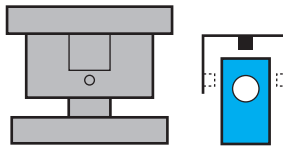
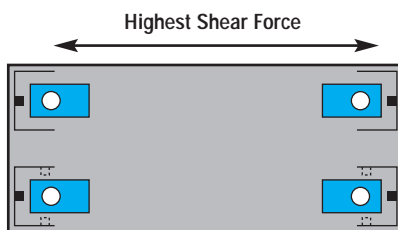
Why take the risk of letting weight measurement, which is a fraction of the total process cost, jeopardize your entire line? Our METTLER TOLEDO load cells meet or exceed accuracy requirements of U.S., Canadian and international regulatory agencies.

We manufacture all weigh module components in our own ISO 9001 certified plants. Plus our load cells can be used in hazardous areas when used with METTLER TOLEDO Intrinsicly Safe Instrumentation, meeting Factory Mutual, CSA, and international requirements.

**CENTERLIGN Mounting System**

In a CENTERLIGN Weigh Module, the load pin is not fixed in the load cell. The load pin is permitted to float when subjected to horizontal forces. Once the scale stabilizes, the load pin returns to a true vertical position to yield accurate, repeatable weight.

Horizontal movement of the scale is limited by adjustable bumpers built into the top mounting plate. In a typical installation, two of the modules have bumper bolts in every wall to form a three-way bumper unit, while the other two have end bumpers only. The units are oriented so that the major element of the horizontal shear strikes at the end of the load cell.



FLEXMOUNT



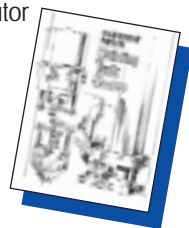
CENTERLIGN



TENSION

**METTLER TOLEDO Weigh Modules**

Call or write your authorized METTLER TOLEDO distributor for a copy of the "Do-It-Yourself Guide to Building Tank Scales." You'll become acquainted with the full line of METTLER TOLEDO Weigh Modules for all your static, dynamic and tension weighing applications.



**Approvals**

**NTEP** 500 lb through 45,000 lb load cells meet or exceed NIST Handbook 44 accuracy requirements for legal-for-trade application and have been issued an NTEP Certificate of Conformance

**OIML** 220 kg through 20,412 kg load cells meet or exceed OIML C3 R60 requirements

**CE** CENTERLIGN load cells meet European Standards and have been issued a CE Declaration of Conformance.

**FM** CENTERLIGN load cells are Factory Mutual Approved when used with Mettler Toledo Intrinsicly safe instrumentation in hazardous areas.

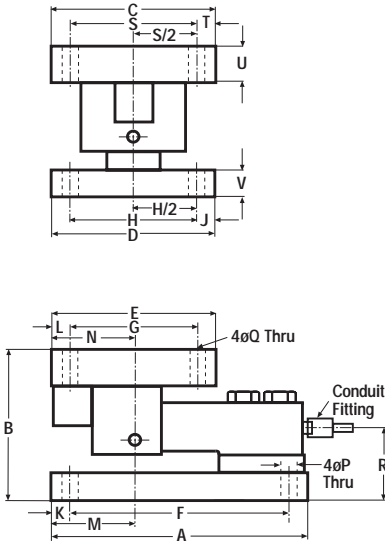
**EX** Model 743, 744 and 745 CENTERLIGN load cells (through 45,000 lb/20,412 kg) have European Approval for use in Hazardous Areas when used with Mettler Toledo Intrinsicly safe instrumentation.

METTLER TOLEDO Load Cell Specifications

	NIST H44 U.S. STANDARD MODULES (lb)								OIML STANDARD MODULES (kg)																									
	250	500	1250	2500	5000	10,000	20,000	30,000	45,000	220	550	1100	2200	4400	9072	13,608	20,412																	
Load cell capacity	250		500		1250		2500		5000		10,000		20,000		30,000		45,000		220		550		1100		2200		4400		9072		13,608		20,412	
Model number	744		745		745		743		743		745		743		743		745		743		743		745		743		743		745		743		743	
Excit. volt. (VDC or VAC rms)	15		15		15		15		15		15		15		15		15		15		15		15		15		15		15		15		15	
Rated output (mV/V)	2.0 ±0.002		2.0 ±0.002		2.0 ±0.002		2.0 ±0.005		2.0 ±0.005		1.94 ±0.002		2.0 ±0.005		2.0 ±0.005		2.0 ±0.005		2.0 ±0.005		2.0 ±0.005		1.94 ±0.002		2.0 ±0.005		2.0 ±0.005		2.0 ±0.005		2.0 ±0.005			
Input resistance (Ohms)	385 min		385 min		385 min		380 ±20		2200 ±100		385 min		380 ±20		2200 ±100		385 min		380 ±20		2200 ±100		385 min		380 ±20		2200 ±100		385 min		380 ±20		2200 ±100	
Output resistance (Ohms)	350 ±2		350 ±2		350 ±2		350 ±2		2000 ±20		350 ±2		2000 ±20		350 ±2		2000 ±20		350 ±2		2000 ±20		350 ±2		2000 ±20		350 ±2		2000 ±20		350 ±2		2000 ±20	
Zero balance (mV/V)	±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02		±0.02	
Combined error (% FSO)	<0.03		<0.03		<0.03		<0.02		<0.02		<0.017		<0.02		<0.02		<0.02		<0.02		<0.02		<0.017		<0.02		<0.02		<0.02		<0.02			
Non-repeatability (% FSO)	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01			
Creep in 20 min. (% FSO)	<0.03		<0.03		<0.03		<0.02		<0.02		<0.025		<0.02		<0.02		<0.02		<0.02		<0.02		<0.025		<0.02		<0.02		<0.02		<0.02			
Temp. comp. range	-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C		-10 to +40°C	
Safe operating range	-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C		-15 to +85°C	
Temp. effect - zero balance	0.10%/100°F		0.10%/100°F		0.10%/100°F		0.11%/100°F		0.16%/100°F		0.057%/40°C		0.093%/40°C		0.093%/40°C		0.093%/40°C		0.093%/40°C		0.093%/40°C		0.057%/40°C		0.093%/40°C		0.093%/40°C		0.093%/40°C		0.093%/40°C			
Deflection @rated capacity	0.01"		0.01"		0.01"		0.012"		0.012"		0.036"		0.065"		0.254 mm		0.91 mm		1.65 mm		0.036"		0.065"		0.254 mm		0.91 mm		1.65 mm		0.036"			
Standard cable length	15'		15'		15'		30'		30'		4.57 m		9.14 m		9.14 m		9.14 m		9.14 m		4.57 m		9.14 m		9.14 m		9.14 m		9.14 m		9.14 m			
Material	17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS		17-4 PH SS			
Wiring & gage cavity seal type	Environmentally protected		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed		Hermetically sealed			
Integral conduit fitting	1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT		1/4-18NPT			
Certificate number	Pending		92-108		92-108		92-108		88-008		TC2163/2		TC2977		TC2977		TC2977		TC2977		TC2163/2		TC2977		TC2977		TC2977		TC2977		TC2977			
Accuracy class	NA		III		III		III		III OR IIIIL		C3 R60		C3 R60		C3 R60		C3 R60		C3 R60		C3 R60		C3 R60		C3 R60		C3 R60		C3 R60		C3 R60			
Nmax single load cell	NA		3000d		3000d		3000d		3000d		3000d		3000d		3000d		3000d		3000d		3000d		3000d		3000d		3000d		3000d		3000d			
Nmax multiple load cell	NA		5000d		5000d		5000d		5000d III 10000d IIIIL		5000d		5000d		5000d		5000d		5000d		5000d		5000d		5000d		5000d		5000d		5000d			
Vmin	NA		0.07		0.175		0.35		0.70		1.40		2.80		4.20		6.40		0.022		0.056		0.113		0.226		0.440		1.5		2.27		3.4	
Min. dead load	0		0		0		200		200		0		50		75		100		0		50		75		100		100		100		100			
Safe overload (% FSO)	150		150		150		150		150		150		150		150		150		150		150		150		150		150		150		150			
Ultimate overload (% FSO)	300		300		300		300		300		300		300		300		300		300		300		300		300		300		300		300			
Safe side load (% FSO)	100		100		100		100		100		100		100		100		100		100		100		100		100		100		100		100			

Specifications subject to change without notice.

CENTERLIGN Dimensions



Capacity	NIST H44 U.S. STANDARD MODULES (lb)					OIML STANDARD MODULES (kg)				
	250-5000	10,000	20,000	30,000	45,000	550-2200	4400	9072	13,608	20,412
Unit of Measure	in	in	in	in	in	mm	mm	mm	mm	mm
A	7	9.25	14	16	177.8	235	355.6	406.4		
B	4.125	5.375	7.5	9	104.8	136.5	190.5	228.6		
C	4.5	6	8	9	114.3	152.4	203.2	228.6		
D	4.5	6	8	9	114.3	152.4	203.2	228.6		
E	4.5	6	8	9	114.3	152.4	203.2	228.6		
F	6	7.25	12	13.5	152.4	184.2	304.8	342.9		
G	3.5	4	6	6.5	88.9	101.6	152.4	165.1		
H	3.5	4	6	6.5	88.9	101.6	152.4	165.1		
J	0.5	1	1	1.25	12.7	25.4	25.4	31.75		
K	0.5	1	1	1.25	12.7	25.4	25.4	31.75		
L	0.5	1	1	1.25	12.7	25.4	25.4	31.75		
M	2.25	3	4	4.5	57.2	76.2	101.6	114.3		
N	2.25	3	4	4.5	57.2	76.2	101.6	114.3		
P	0.4375 dia.	0.6875 dia.	0.8125	1.125	11.1	17.5	20.64	28.58		
Q	0.4375 dia.	0.6875 dia.	0.8125	1.125	11.1	17.5	20.64	28.58		
R	2	2.5625	3.81	4.5	50.8	65.1	96.78	114.3		
S	3.5	4	6	6.5	88.9	101.6	152.4	165.1		
T	0.5	1	1	1.25	12.7	25.4	25.4	31.75		
U	0.75	1.25	1.75	2	19.1	31.8	44.45	50.8		
V	0.75	1	1.75	2	19.1	25.4	44.45	50.8		

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	TEL	FAX	TEL	FAX	Internet
<b>METTLER TOLEDO</b>	Australia (61-3) 9646 4551	(61-3) 9645 3935	Korea (82-2) 518-2004	(82-2) 518-0813	www.mt.com
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\*Ask for FAX.