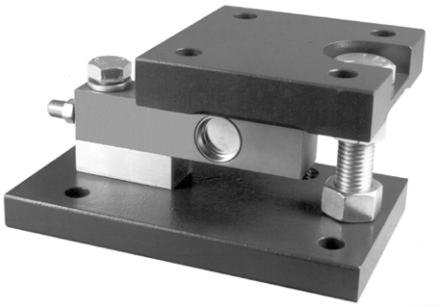
Load Cell Weigh Modules



FEATURES

- Capacity range: 500, 1.25K, 2.5K, 5K, and 10K lb (227, 567, 1.13K, 2.27K, and 4.5K kg)
- High-grade, welded, stainless-steel load beams (1.25K to 10K lb)
- Sealed to IP67 standards for washdown service
- Fixed, full-floating, and semi-floating mounting
- NTEP Certificate of Conformance
- FM and CSA approved

DESCRIPTION

BLH EconoMount Weigh Modules are well suited for general industrial applications that require retrofitting an existing structure or hopper into a scale. The EconoMount System uses a stainless steel beam transducer coupled with fixed, full-floating, or semi-floating mounting hardware. The combination of all three types, under a structure, results in a checkless system that also can accommodate moderate degrees of thermal expansion and contraction.

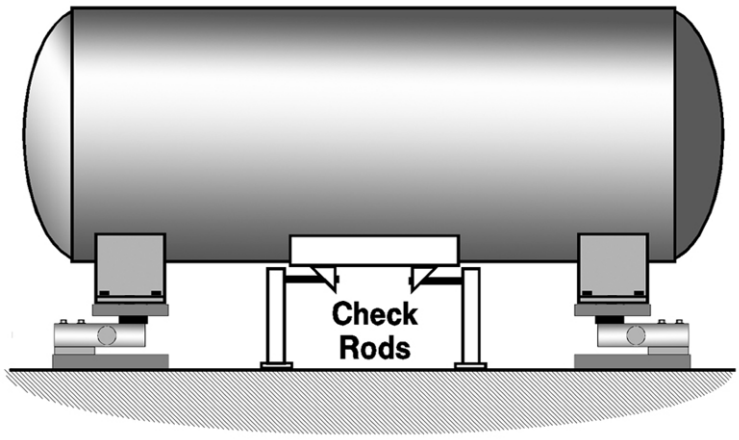
EconoMount units come in standard capacity ranges of 500, 1.25K, 2.5K, 5K, and 10K pounds with either painted alloy (standard) or stainless steel (optional) mounting hardware. Load beam sealing meets NEMA 4 and IP67 requirements.

EconoMount 1.25K through 10K pound modules are NTEP Certified for Class III and IIIL scale systems.

APPLICATIONS

- Storage tank weighing
- Bin/hopper scale conversion
- Level system measurement
- Platform scales

CONFIGURATION



MODULE CONFIGURATION ADVANTAGES

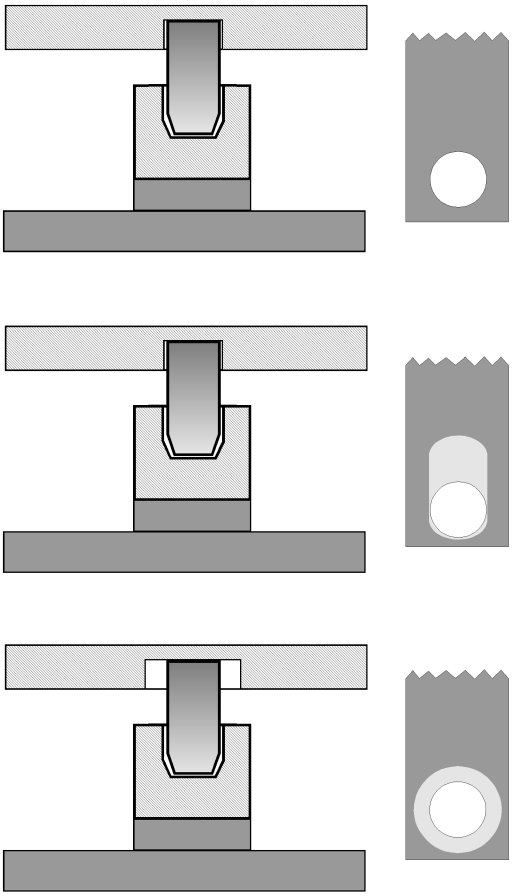
The BLH EconoMount System consists of three types of module mounting hardware. Each three or four support weigh system consists of a combination of fixed, semi-floating, and full-floating mounting hardware types. The full combination results in a checkless weigh system that accommodates moderate amounts of thermal expansion and contraction.

Fixed Mounting Modules
The fixed type mounting module design restricts movement in both horizontal directions while allowing a moderate degree of mounting plate angular movement to accommodate construction variances. This module type is installed on only one support to provide a fixed system 'anchor'.

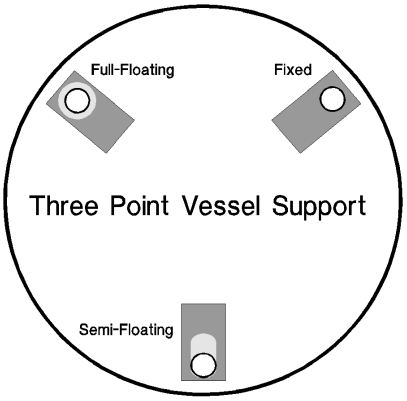
Semi-Floating Modules
The semi-floating module design restricts lateral horizontal movement, but allows radial horizontal movement and a moderate degree of mounting plate angular movement to accommodate construction variances. This module type is installed at one support only to provide a guide for thermal expansion and contraction.

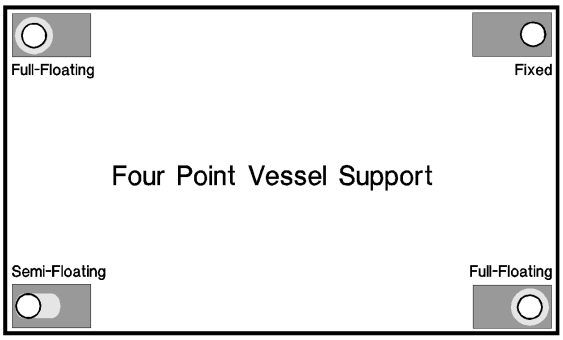
Full-Floating Modules
The full-floating module allows movement in both horizontal directions and angular movement of the mounting plate. At least one, full-floating module is needed in each system to accommodate thermal expansion and contraction in all directions.

All three module types use the same load beams, base plates, and assembly bolts. All types also conform to the same outline dimensions and performance specifications.



RECOMMENDED MOUNTING ARRANGEMENTS





LEVEL SYSTEM APPLICATIONS

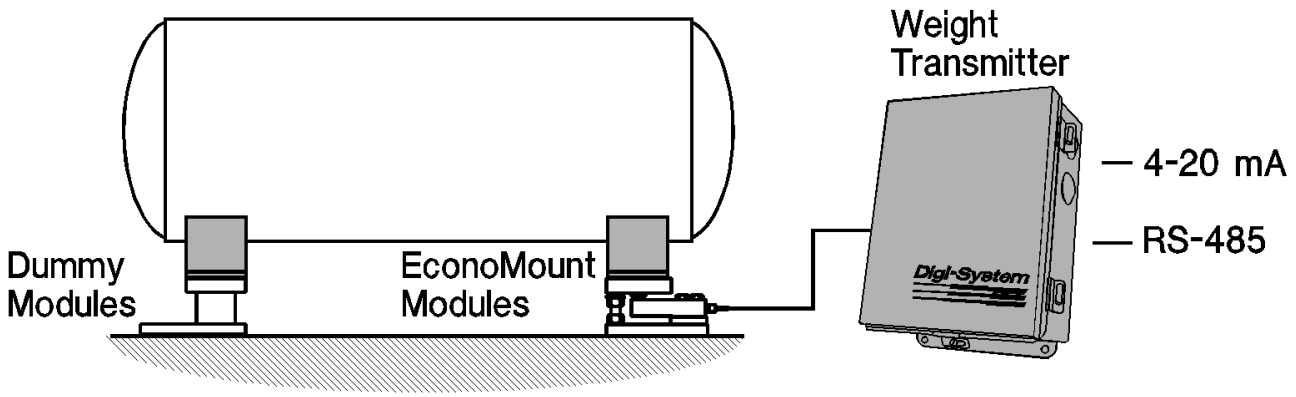
Installing a load cell under only one or two supports of a vessel results in an inexpensive, non-intrusive, highly reliable method of measuring level. Weight or mass is an inherently more accurate means of measuring vessel contents because it is independent of the vessel shape, temperature, and specific gravity of the contents. The non-contact nature of the measurement and proven reliability of a strain gage based transducer results in significantly lower maintenance costs as compared to other level measurement technologies.

EconoMount Weigh Modules are a good choice for partially supported weigh systems for level measurement applications. The full-floating and semi-floating hardware accommodate moderate degrees of vessel thermal expansion and contraction without error while dummy (or simulated) modules are available for feed installation at non-instrumented vessel supports.

Symmetrical, level vessels with self-leveling liquids or solids and minimal connected piping can achieve accuracies of better than 0.5%.

On three point support systems, we recommend the use of a single, full-floating module and two dummy modules. On four point support systems, one full-floating, one semi-floating, and two dummy modules are recommended.

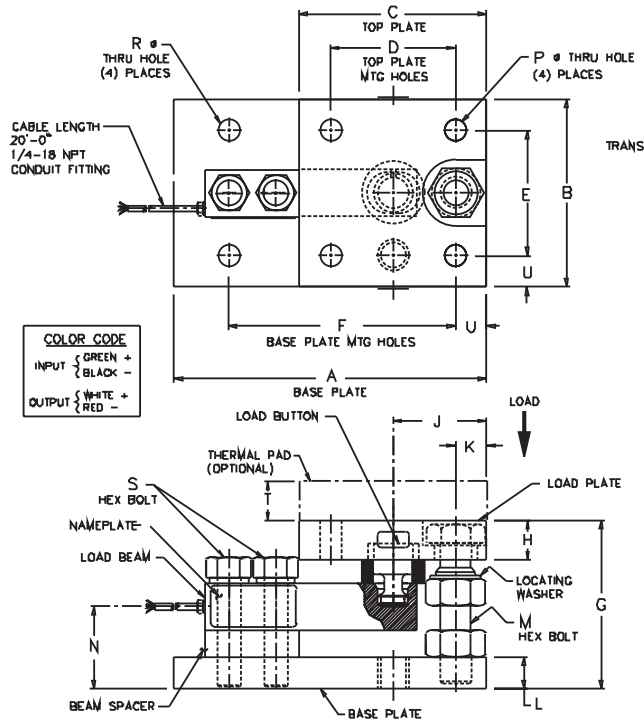
EconoMount Weigh Modules are a good choice for partially supported weigh systems for level measurement applications. The full-floating and semi-floating hardware accommodate moderate degrees of vessel thermal expansion and contraction without error while dummy (or simulated) modules are available for feed installation at non-instrumented vessel supports.

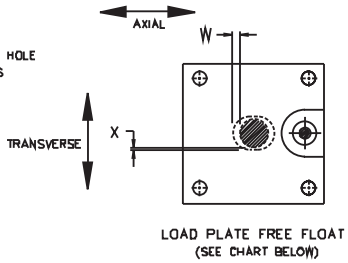


ORDERING CODES

EconoMount Three Support Tank Sets Consisting Of: 1- Full Floating Module, 1-Semi-Floating Module, 1- Fixed Module						
Model Number	**Cell Capacity**	**System Capacity**	**Painted Steel PN**	**Stainless Steel PN**	**Painted Dummy PN**	**Stainless Dummy PN**
EM-P/S-3L-500	500 lb	1.5K lb	469282	469338	469364	472798
EM-P/S-3L-1.25K	1.25K lb	3.75K lb	469283	469339	469364	472798
EM-P/S-3L-2.5K	2.5K lb	7.5K lb	469284	469340	469364	472798
EM-P/S-3L-5K	5K lb	15K lb	469285	469341	469364	472798
EM-P/S-3L-10K	10K lb	30K lb	469893	469897	472765	472799
EconoMount Four Support Tank Sets Consisting Of: 2- Full Floating Modules, 1-Semi-Floating Module, 1- Fixed Module						
EM-P/S-4L-500	500 lb	2K lb	469288	469344	469364	472798
EM-P/S-4L-1.25K	1.25K lb	5K lb	469289	469345	469364	472798
EM-P/S-4L-2.5K	2.5K lb	10K lb	469290	469346	469364	472798
EM-P/S-4L-5K	5K lb	20K lb	469291	469347	469364	472798
EM-P/S-4L-10K	10K lb	40K lb	469895	469889	472765	472799

OUTLINE DIMENSIONS





LOAD PLATE FREE FLOAT			
CAPACITY (lbs)		W AXIAL	X TRANSVERSE
500 THRU 5,000	FIXED	±0	±0
	SEMI	±1/8	±1/32
	FULL	±1/8	±1/8
10,000	FIXED	±0	±0
	SEMI	±3/16	±3/16
	FULL	±3/16	±3/16

CAPACITY, lb	FULL SCALE DEFLECTION, in.
500	.008
1,250	.008
2,500	.011
5,000	.017
10,000	.017

MATERIAL		
COMPONENT	LOAD CELL	
	PAINTED	STAINLESS STEEL
BEAM SPACER	304 STAINLESS STL	304 STAINLESS STL
LOCATING WASHER		
LOAD BUTTON	17-4 PH STAINLESS STL	17-4 PH STAINLESS STL
LOAD BEAM		
LOAD PLATE	PAINTED 1018 STEEL	CL 304 STAINLESS STL
BASE PLATE		
HEX BOLTS (M)	ZINC PLATE	18-8 STAINLESS STL
HEX BOLTS (S)	ZINC PLATE SAE GRADE 5	410 STAINLESS STL ASTM A193 GRADE B6

CAPACITY (lbs)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	WEIGHT APPROX (lbs)
500–5000	8	4 1/2	4 1/2	3 1/2	3 1/2	6	4 1/8	1.0	2 1/4	5/8	3/4	5/8–11	1.8	7/16	7/16	1/2–20	1.0	1/2	16
10,000	10	6	6	4	4	7.25	5 3/8	1 1/4	3.0	1.0	1.0	1–8	2 5/8	11/16	11/16	3/4–10		1.0	RES

SPECIFICATIONS

Performance	
Capacities	500, 1.25K, 2.5K, 5K, 10K lb (227, 567, 1.13K, 2.27K, 4.5K kg)
Rated Output (RO)	2.0 mV/V (±0.25%)
Repeatability	0.01% RO
Combined Error	0.02% RO (beam only) 0.10% module assembly
Zero Balance	1.0% RO
Creep (30 minutes)	0.024% RO
Temperature Effects:	
On Zero Balance	0.0012% RO/°F
On Rated Output	0.0008%Load/°F
Electrical	
Recommended Excitation	10 Vdc (15 Vdc max)
Input Resistance	350 Ohms (±7)
Output Resistance	350 Ohms (±5)
Cable Length	20 foot, 4-conductor cable
Temperature	
Safe Temperature	-58 to +149°F
Compensated Range	+14 to +104°F
Adverse Load Ratings	
Safe Overload	150% rated capacity
Safe Sideload	100% rated capacity
Ultimate Overload	300% rated capacity

Material	**Painted**	**Stainless**
Load Beam	17-4 PH ss*	17-4 PH ss
Load Button	17-4 PH ss	17-4 PH ss
Bases and Load Plates	painted steel**	high grade ss
Beam Spacer	304 ss	304 ss
Locating Washer	304 ss	304 ss

Sealing	
Load Beam	NEMA 4 and IP67
Deflection	
500 lb	0.013 inches
1.25 to 5K lb	0.017 - 0.025 inches
10K lb	0.025 - 0.035 inches
Approvals	
FM/CSA Intrinsically Safe	Class I, II, III; Div 1, 2; Groups A-G
FM/CSA Nonincendive	Class I; Div 2, Groups A-D
NTEP (1.25 - 10K lb)	Class III-5000; Class IIIL-10000

NOTE:

* 500 lb beam -alloy tool steel, electroless nickel plated

** single component, waterborne polyurethane copolymer - high gloss

BLH is continually seeking to improve product quality and performance. Specifications may change accordingly.

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