

Compression Load Cells

FEATURES

- Capacity range:
20k, 50k, 100k, 200k, 300k, and 500k lb
(9k, 13.6k, 22.7k, 45.4k, 90.7k, 136k, and 227k kg)
- Compact and rugged
- Operational: -30° to +175°F
- Low deflection
- Environmentally sealed
- NTEP Certificate of Conformance for Class III L scale applications (20k to 200k)
- FM and CSA approved
- **Optional features**
 - Capacities greater than 500k lbs. (227k kg)—consult factory



APPLICATIONS

- Coal silos
- Rail car weighing
- Truck scales
- Force measurement

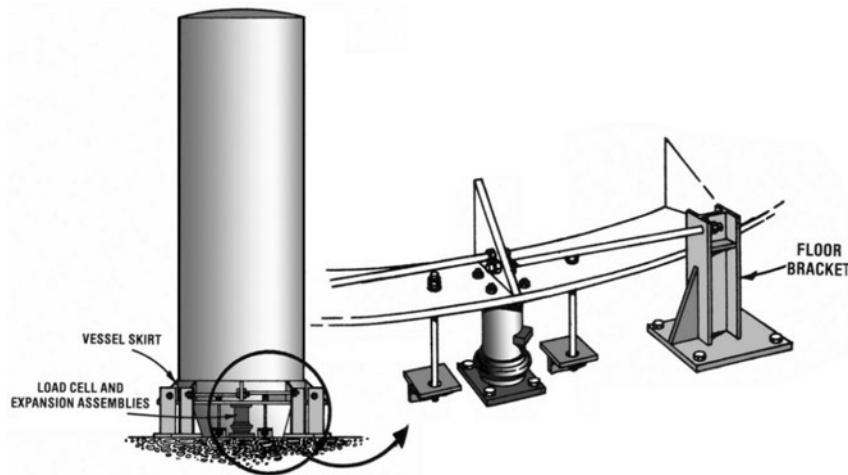


DESCRIPTION

C2P1 load cells are designed for various types of weighing and force measurement. Construction of C2P1 load cells utilizes all of the advantages of SR-4® strain gages. C2P1 load cells meet or exceed NIST Handbook 44 requirements and are Factory Mutual approved. Also, the National Type Evaluation Program (NTEP) has issued Certificate of Conformance number 87-060 for C2P1 20k to 200k pound capacities.

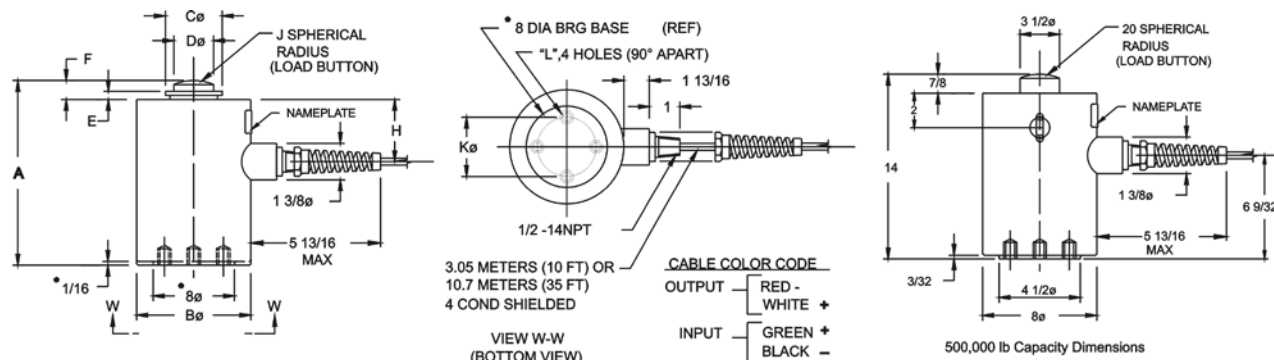
Double diaphragm fabrication and gage linearizing combine to offer precision performance and long-term reliability. Low deflection and superior sealing guarantee trouble-free operation. Relatively low mass and small deflection under load produce excellent frequency response. Overall, C2P1 cells perform superbly in many services where other transducers cannot.

CONFIGURATION



Compression Load Cells

OUTLINE DIMENSIONS



* Configuration and dimensions (*) are for 136077 kg (300,000 lb) capacity only

CAPACITY KG (LB)	A	B ϕ	C ϕ	D ϕ	E	F	H	J	K ϕ B.C.	L (TAPPED)
9072-22,680 (20,000-50,000)	190.50 (7-1/2)	114.30 (4-1/2)	57.15 (2-1/4)	31.75 (1-1/4)	12.70 (1/2)	19.05 (3/4)	63.50 (2-1/2)	152.40 (6)	60.33 (2-3/8)	3/8-24UNF-2B x 3.8 DP
45359 (100,000)	231.78 (9-1/8)	152.40 (6)	79.38 (3-1/8)	44.45 (1-3/4)	15.88 (5/8)	26.98 (1-1/16)	64.29 (2-17/32)	304.80 (12)	101.60 (4)	1/2-20UNF-2B x 3/4 DP
90718 (200,000)	295.28 (11-5/8)	203.20 (8)	114.30 (4-1/2)	63.50 (2-1/2)			89.69 (3-17/32)		139.70 (5-1/2)	5/8-18UNF-2B x 1 DP
136077 (300,000)	355.60 (14)	254 (10)	127 (5)	76.2 (3)	19.05 (3/4)	33.34 (1-5/16)	109.54 (4-5/16)	381 (15)	5-1/2	3/4-16UNF-2B x 1-1/4 DP
500,000									3-1/2	1/2-20UNF-2B x 3/4 DP

20K-200K lb capacities have NTEP CoC

* Single component, waterborne polyurethane copolymer—high gloss.

Compression Load Cells

SPECIFICATIONS				
PARAMETER		VALUE		
PERFORMANCE				
Capacities	20k, 50k, 100k, 200k, 300k, and 500k lb (9k, 13.6k, 22.7k, 45.4k, 90.7k, 136k, and 227k kg)			
Rated output (RO)	20k–300k lb	2.0 mV/V (±0.1%)	500k lb	2.0 mV/V (±0.25%)
Repeatability		0.01% RO		0.02% RO
Combined error		0.05% RO		0.08% RO
Zero balance		1.0% RO		1.0% RO
Creep (20 minutes)		0.02% RO		0.03% RO
Temperature effects on zero balance	0.0015% RO/°F all capacities			
Temperature effects on rated output	0.0008% load/°F all capacities			
ELECTRICAL				
Recommended excitation	10 VAC-DC			
Input resistance	350 Ω (±3.5)			
Output resistance	350 Ω (±3.5)			
Cable length	10 or 35 ft cable			
TEMPERATURE				
Safe range	–30°F to +175°F			
Compensated range	+30°F to +130°F			
ADVERSE LOAD RATINGS				
Safe overload	150% rated capacity			
Ultimate overload	300% rated capacity			
MATERIAL				
Element	High grade tool steel			
Cannister	Low carbon steel, painted*			
SEALING				
Environmental protection	IP67			
DEFLECTION				
20k lb	0.0075 in			
50k lb	0.0065 in			
100k lb	0.0075 in			
200k lb	0.007 in			
300k lb	0.012 in			
500k lb	0.020 in			
APPROVALS				
FM, CSA and NTEP certified.				

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



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