

Model C2P1 Load Cell**Applications:**

**Rail Car Weighing
Truck Scales
Force Measurement**



- Capacity Range 20,000 to 500,000 Pounds
- Compact - Rugged
- Operational: -30° to +175°F
- Low Deflection
- Environmentally Sealed
- NTEP Certificate of Conformance
- FM and CSA Approved

**Product 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 20,000 to 200,000 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.

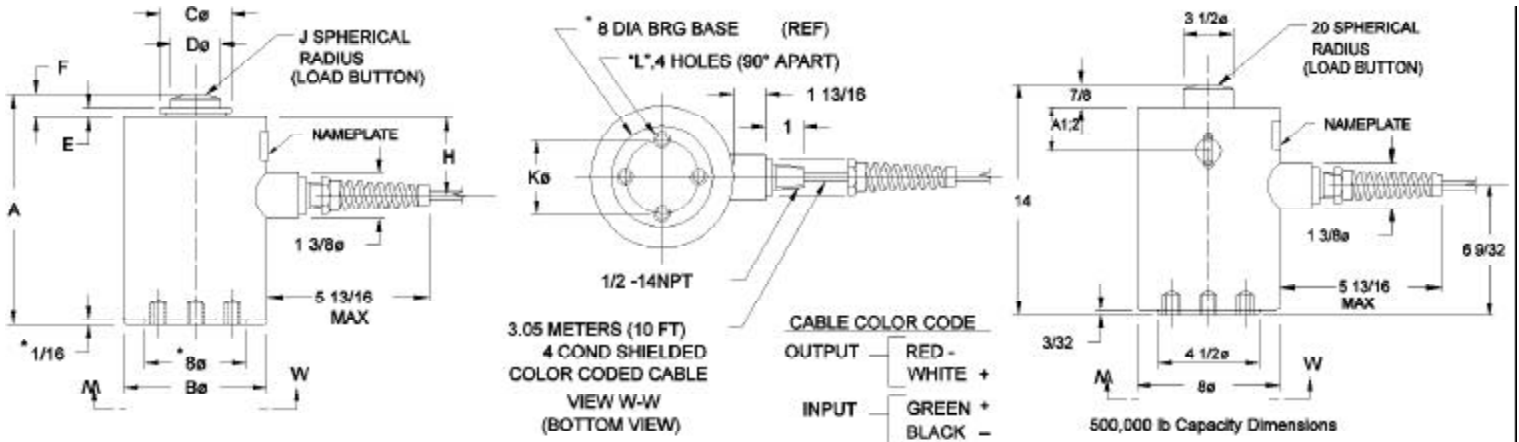
Mechanical Data

Capacity (lb)	20,000	50,000	100 K	200 K	300 K	500 K
Weight (lb)	20	20	40	95	150	140
Deflection - inches	0.0075	0.0065	0.0075	0.0070	0.012	0.020
Deflection - mm	0.919	0.165	0.191	0.178	0.304	0.508
Nat Freq. (Hz)	3100	3000	3200	2300	3600	----
at EFF.WT (lb)	3	8	13	52	----	----
Dead Load min (lb)	25	25	25	25	----	----

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Product Specifications and Outline Dimensions

Performance		Electrical		
Capacity	20-300K	500K	Excitation	10V ac-dc recommended
Rated Output (RO)	2mV/V +/-0.1%	2mV/V +/-0.25%	Excitation	20V ac-dc maximum
Nonlinearity	0.03% RO	0.05% RO	Zero Balance	1% RO
Hysteresis	0.02% RO	0.03% RO	Input Resistance	350 +/-3.5 ohms
Repeatability	0.01% RO	0.02% RO	Output Resistance	350 +/-3.5 ohms
Creep (20 minutes)	0.02% RO	0.05% RO	Number of Bridges	single
Temperature		Adverse Load Ratings		
Safe Range	-30° to +175°F	Safe Overload	150% Rated Capacity	
Compensated Range	+15° to +115°F	Ultimate Overload	300% Rated Capacity	
Effect on Zero Balance	0.0015%/RO/°F			
Effect on Rated Output	0.008% Load/°F			



CAP.	KILOGRAMS (POUNDS)	A	Bø	Cø	Dø	E	F	H	J	Kø B.C.	L (TAPPED)
9072 (20,000)	22,680 (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)			3/4 - 16UNF - 2B X 1 1/4 DP
500,000										3 1/2	1/2 - 20UNF - 2B X 3/4 DP

* NOTE: CONFIGURATION & DIM'S (*) ARE FOR 136077 Kg/(300,000 LB) CAP. ONLY 20,000 - 200,000 lb capacities are NTEP Approved

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

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