

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 scale applications (20K to 200K)
- FM and CSA approved

OPTIONAL FEATURES

- Capacities greater than 500K lb (227K kg) - consult factory

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.

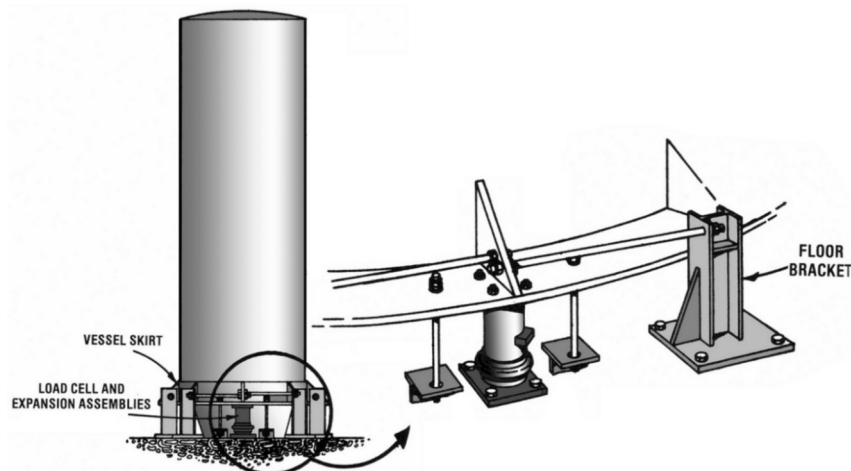
Double diaphragm fabrication and gage linearizing combine to offer precision performance and long term reliability. Low

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.

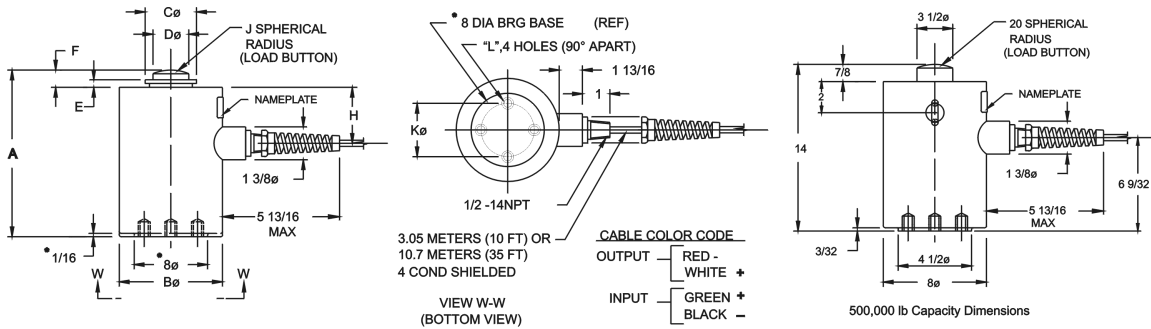
APPLICATIONS

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

CONFIGURATION



DIMENSIONS



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

NOTE: CONFIGURATION & DIMS () ARE FOR 136077 Kg/(300,000 LB) CAP. ONLY 20K - 200K lb capacities have NTEP CoC

SPECIFICATIONS

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) 0.25%) | 20K - 300K | 500K |
| 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 | |
| On Rated Output | 0.0008%Load/°F all capacities | |

Electrical

| | |
|------------------------|---------------------|
| Recommended Excitation | 10 Vac-dc |
| Input Resistance | 350 ohms (+/-3.5) |
| Output Resistance | 350 ohms (+/-3.5) |
| Cable Length | 10 or 35 foot cable |

Temperature

| | |
|-------------------|---------------|
| Safe Range | -30 to +175°F |
| Compensated Range | +30 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 Class | IP67 |
|---------------------|------|

Deflection

| | |
|---------|---------------|
| 20K lb | 0.0075 inches |
| 50K lb | 0.0065 inches |
| 100K lb | 0.0075 inches |
| 200K lb | 0.007 inches |
| 300K lb | 0.012 inches |
| 500K lb | 0.020 inches |

Approvals

| | |
|---------------------------|--|
| NTEP | Class III L, 4,500 divisions |
| FM/CSA Intrinsically Safe | Class I, II, III; Division 1, Groups A-G |
| FM/CSA Nonincendive | Class I, Division 2, Groups A-D |

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

*single component, waterborne polyurethane copolymer - high gloss.

Disclaimer

All product specifications and data are subject to change without notice.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay Precision Group"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay Precision Group disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay Precision Group's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay Precision Group.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay Precision Group products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay Precision Group for any damages arising or resulting from such use or sale. Please contact authorized Vishay Precision Group personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.