Compression Load Cells

FEATURES

- Capacity range:500, 1K, 2K, 3K, 5K, 10K, 20K, 50K, and 100K lb
  (227, 454, 907, 1.4K, 2.27K, 4.54K, 9K, 13.6K, 22.7K, and 45.4K kg)
- Environmentally sealed
- Operational: –30° to +175°F
- Low deflection
- Compact and rugged
- FM approved
- **Optional features**
  - Stainless Steel design
  - CSA approval

APPLICATIONS

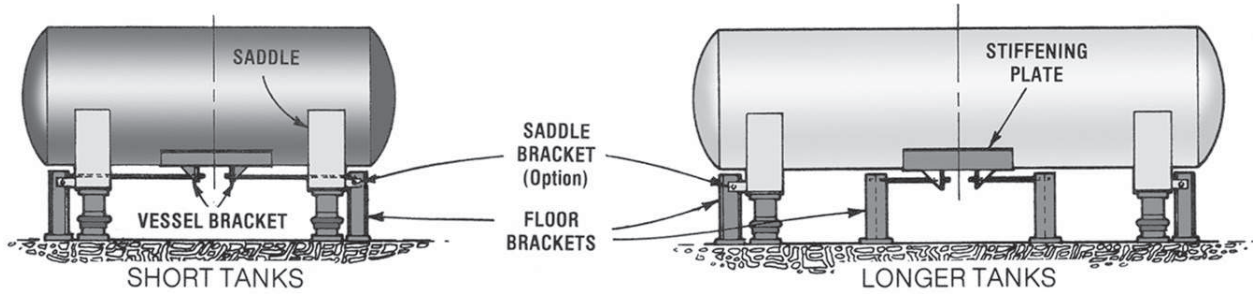
- Test and measurement
- Calibration standards
- Redundant weighing systems

DESCRIPTION

C3P1 and C3P2 cells are fabricated with high strength 'ring' type elements to provide an output signal of 3 mV/V at rated capacity. Each cell is designed for minimum deflection and 150% safe overload without damage. C3P2 cells contain a second bridge. The second bridge can be used simultaneously with the first bridge for dual output or be reserved as a backup in case of failure in the first bridge. Double diaphragm fabrication offers 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, C3P1/ C3P2 cells perform superbly in many environments where other transducers cannot.

CONFIGURATION



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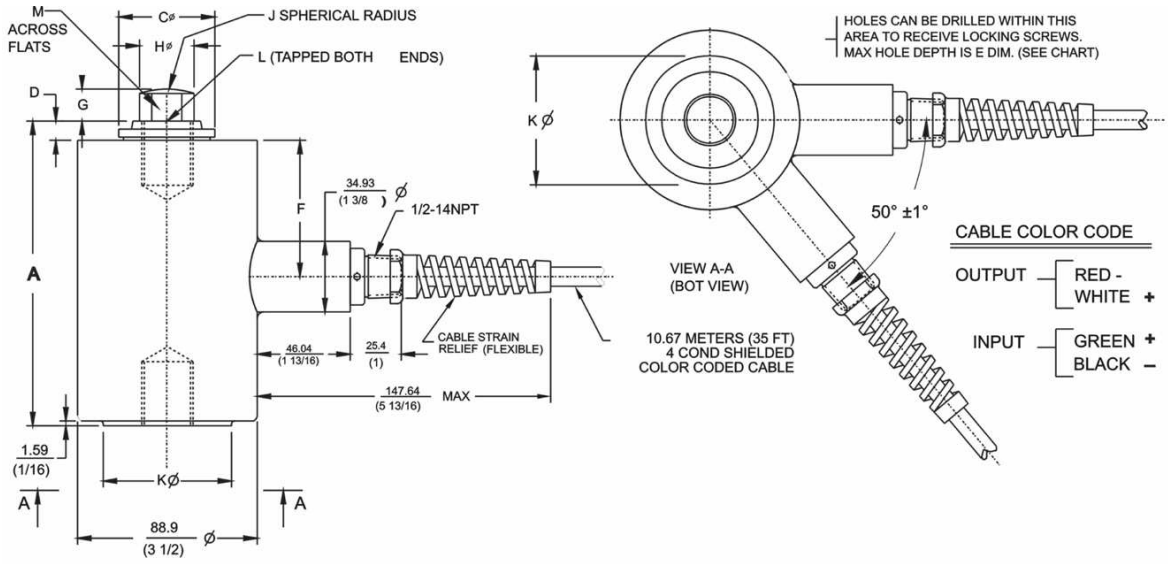
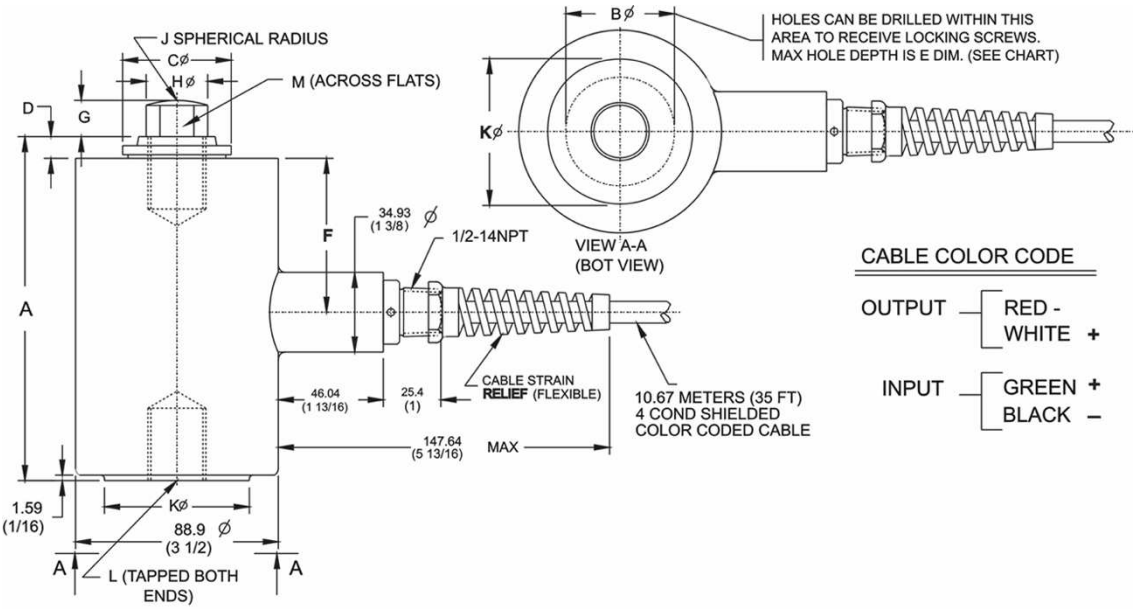
Compression Load Cells

OUTLINE DIMENSIONS—DOUBLE BRIDGE—500 TO 10K POUNDS



CAP. KILOGRAMS (POUNDS)	A	Bø	Cø	D	E	F	G	Hø	J	KO	L (TAPPED)	M
227 (500) THRU 1361 (3000)	115.89 (4 9/16)	—	26.99 (1 1/16)	6.35 (1/4)	—	57.15 (2 1/4)	9.53 (3/8)	16 (5/8)	50.8 (2)	31.75 (1 1/4)	1/2-20UNF-2B X 1/2 DP	9.53 (3/8)
2268 (5000) & 4536 (10000)	150.81 (5 15/16)	44.45 (1 3/4)	47.63 (1 7/8)	9.53 (3/8)	12.7 (1/2)	67.47 (2 21/32)	16 (5/8)	26.99 (1 1/16)	101.6 (4)	63.5 (2 1/2)	1-14UNS-2B X 1 1/4 DP	22.35 (7/8)

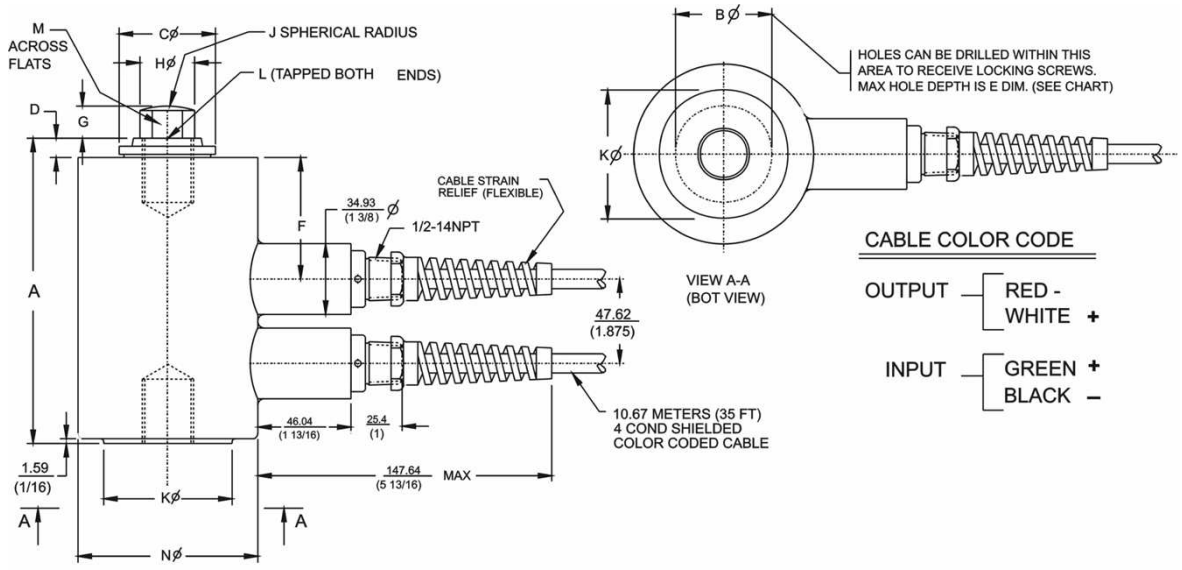
OUTLINE DIMENSIONS—SINGLE BRIDGE—500 TO 10K POUNDS



CAP. KILOGRAMS (POUNDS)	A	Bø	Cø	D	E	Fø	G	Hø	J	Kø	L (TAPPED)	M
227 (500) THRU 1361 (3000)	115.89 (4 9/16)	—	26.99 (1 1/16)	6.35 (1/4)	—	57.15 (2 1/4)	9.53 (3/8)	16 (5/8)	50.8 (2)	31.75 (1 1/4)	1/2-20UNF-2B X 1/2 DP	9.53 (3/8)
2268 (5000) & 4536 (10000)	150.81 (5 15/16)	44.45 (1 3/4)	47.63 (1 7/8)	9.53 (3/8)	12.7 (1/2)	67.47 (2 21/32)	16 (5/8)	26.99 (1 1/16)	101.6 (4)	63.5 (2 1/2)	1-14UNS-2B X 1 1/4 DP	22.35 (7/8)

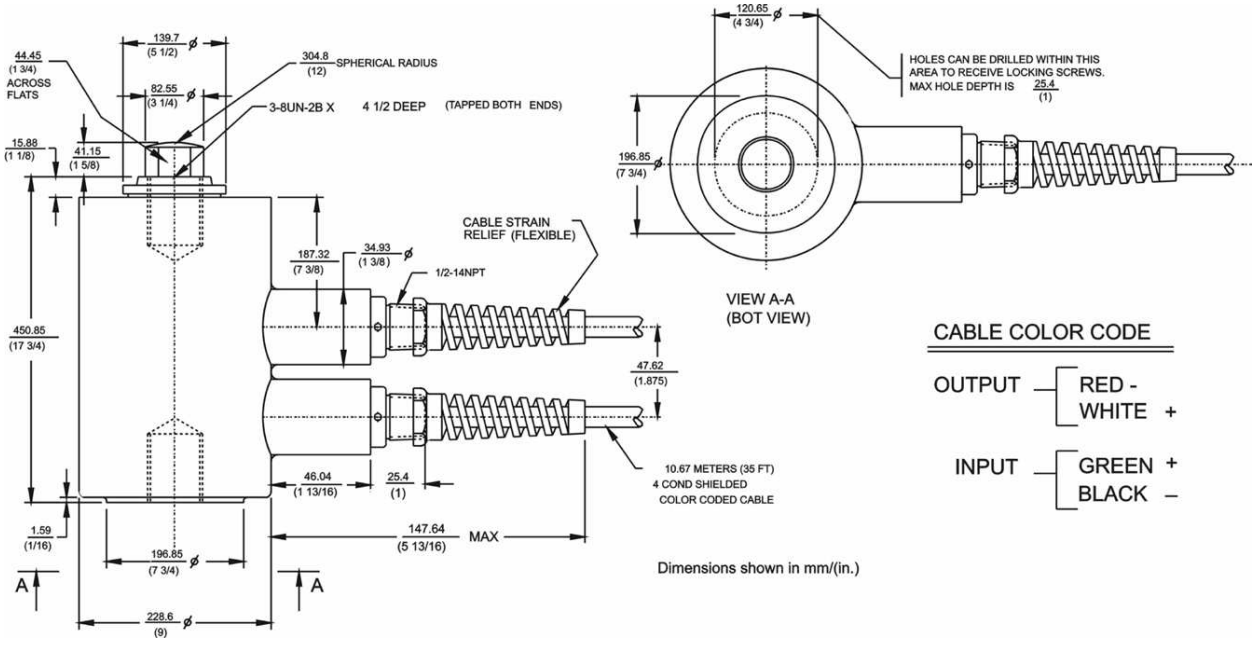
Compression Load Cells

OUTLINE DIMENSIONS - DOUBLE BRIDGE - 20K TO 50K POUNDS



CAP. KILOGRAMS (POUNDS)	A	BØ	CØ	D	E	F	G	HØ	J	KØ	L (TAPPED)	M	NØ
9072 (20,000) THRU 13608 (30,000)	215.9 (8 1/2)	66.68 (2 5/8)	69.85 (2 3/4)	12.7 (1/2)	25.4 (1)	86.52 (3 13/32)	25.00 (63/64)	41.28 (1 5/8)	203.2 (8)	101.6 (4)	1 1/2-12UNF-2B X 1 3/4 DEEP	31.75 (1 1/4)	127.0 (5)
22680 (50,000)	290.51 (11 7/16)	95.25 (3 3/4)	101.6 (4)	15.88 (5/8)	25.4 (1)	113.50 (4 15/32)	25.00 (63/64)	57.15 (2 1/4)	203.2 (8)	146.05 (5 3/4)	2-12UN-2B X 2 1/4 DEEP	44.45 (1 3/4)	165.1 (6 1/2)

OUTLINE DIMENSIONS - DOUBLE BRIDGE - 100K POUNDS



Compression Load Cells

SPECIFICATIONS

PARAMETER	VALUE	
PERFORMANCE		
Capacities	500, 1K, 2K, 3K, 5K, 10K, 20K, 50K, and 100K lb (227, 454, 907, 1.4K, 2.27K, 4.54K, 9K, 13.6K, 22.7K, and 45.4K kg)	
Rated output (RO)	3.0 mV/V (±0.10%)	
Repeatability	0.02% RO	
Combined error	0.10% RO (500 lb)	0.07% RO (1K–100K lb)
Zero balance	1.0% RO	
Creep (20 minutes)	0.03% RO	
Temperature effects on zero balance	0.0015% RO/°F	
Temperature effects on rated output	0.0008% Load/°F	
ELECTRICAL		
Recommended excitation	10 VAC-DC	
Input resistance	350 Ω (±3.5)	
Output resistance	350 Ω (±3.5)	
Cable length	35 ft cable	
Number of bridges	single or double	
TEMPERATURE		
Safe range	–30°F to +175°F	
Compensated range	+30°F to +130°F	

PARAMETER	VALUE
ADVERSE LOAD RATINGS	
Safe overload	150% rated capacity
Ultimate overload	300% rated capacity
MATERIAL	
Element	High grade tool steel or stainless 17-4 steel
Cannister	Low carbon steel, painted* or stainless steel
SEALING	
Environmental class	IP67
DEFLECTION	
500 lb	0.007 in
1K lb	0.006 in
2K, 3K lb	0.005 in
5K lb	0.007 in
10K lb	0.005 in
20K lb	0.007 in
50K lb	0.010 in
100K lb	0.013 in

* Single component, waterborne polyurethane copolymer—high gloss.

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