



CCDDT Column Type Compression Dome Top Load Cell

Key Features

- Capacities 2 tonnes to 1000 tonnes
- Sealed to IP67
- Output: 1.5mV/V at rated load
- Stainless Steel Construction
- Submersible Versions Available
- Can be Supplied with Loading Cap & Mounting Base
- Optional Amplifier Output & Integral Connector
- Versions Available for use as Calibration Standards
- Special Versions Available
- 3 Year Warranty



Column type dome top compression load/force cell

The CCDDT series of dome top column compression load cells are designed for general use and are suitable for use in laboratories or in permanent outdoor installations. The standard CCDDT comes with an IP67 protection rating with the option to increase it to IP68 for fully submersible applications (please speak to sales).

Special options available include: a loading cap, integral carry handles, mounting base, integral connectors and internal/digital signal amplifiers. The CCDDT can be modified to meet customer specific requirements to suit the exact application.

Options

- Submersible Versions
- Other Ranges and Sizes Available on Request
- Mounting Base
- Special Electrical Connections
- Integral Signal Conditioning
- Loading Cap Option
- Verification Standard Versions Available
- TEDS Functionality (Transducer Electronic Data Sheet storing the parameters of the load cell to IEEE 1451.4 standard)
- USB Version (Via DSC-USB digitiser)

Applications

- Hydraulic Press Calibration
- Pile Force Measurement
- Jack Force Measurement
- Centre of Gravity (CoG) Measurement Systems
- Permanent Outdoor Installations
- Laboratories
- Structural Proof testing



Specification

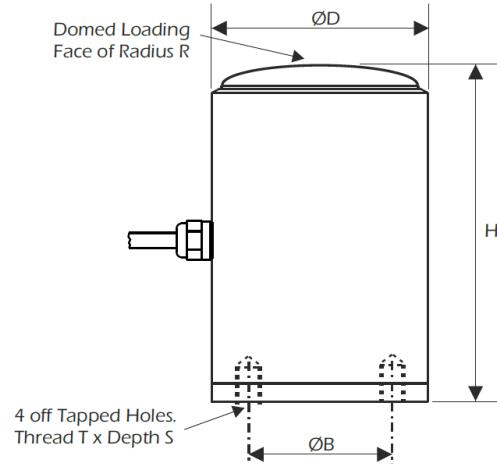
| | | |
|--------------------------------------|--------------------|--|
| Rated Capacity (RC) | tonnes | 2, 5, 10, 25, 50, 100, 200, 300, 500, 750, 1000 |
| Sensitivity (RO) | mV/V | 1.5 |
| Zero Balance/Offset | ±%/Rated Output | <1 typical |
| Non-Linearity | ±%/Rated Load | <0.25 typical |
| Hysteresis | ±%/Rated Output | <0.25 typical |
| Non-Repeatability | ±%/Rated Load | <0.05 |
| Temperature Effect on Zero | ±%/Rated Load / °C | <0.01 |
| Temperature Effect on Span | ±%/Rated load/ °C | <0.01 |
| Bridge Resistance | Ohms | 700 (2 - 50te) 1400 (100 - 1000te) |
| Insulation Resistance | Megohms @ 500Vdc | >500 |
| Excitation Voltage | Volts AC or DC | 10 recommended (2-15 acceptable) |
| Operating Temperature Range | °C | -20 to +70 |
| Compensated Temperature Range | °C | -10 to +50 |
| Storage Temperature Range | °C | -20 to +70 |
| Safe Overload | % of Rated Load | 150 |
| Ultimate Overload | % of Rated Load | 300 |
| Deflection @ Rated Capacity | mm | See dimension table |
| IP Rating (Environmental Protection) | | IP67 |
| Weight (excluding cable) | | See dimension table |
| Fatigue Life | Full-range cycles | 10 ⁸ |
| Cable Length (as standard) | metres | 5 |
| Cable Type | | 4-core screen, PUR sheath, |
| Construction Material | | Stainless Steel |
| Resolution | | 1 part in 250,000 (with appropriate instrumentation) |

Wiring Diagram

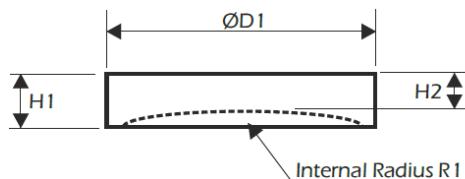
| Wire | Designation |
|--------|---|
| Red | +ve excitation |
| Blue | -ve excitation |
| Green | +ve signal |
| Yellow | -ve signal |
| Screen | To ground – not connected to load cell body |

Dimensions (mm)

| Capacity (t) | H | ØD | T | S | ØB | Weight (kg) | Resolution | Deflection at RC (mm, nominal) |
|--------------|-----|-----|-----|-----|-----|-------------|------------|--------------------------------|
| 2 | 41 | 31 | M3 | 5 | 20 | 1 | 0.002 | 0.05 |
| 5 | 41 | 31 | M3 | 5 | 20 | 1 | 0.005 | 0.05 |
| 10 | 75 | 50 | M4 | 8 | 34 | 2.5 | 0.01 | 0.10 |
| 25 | 75 | 50 | M4 | 8 | 34 | 2.5 | 0.02 | 0.10 |
| 50 | 103 | 88 | M4 | 10 | 50 | 6.5 | 0.05 | 0.12 |
| 100 | 153 | 100 | M5 | 12 | 70 | 11 | 0.1 | 0.18 |
| 200 | 180 | 125 | M6 | n/a | 78 | 19 | 0.2 | 0.21 |
| 300 | 185 | 138 | n/a | n/a | n/a | 21 | 0.5 | 0.21 |
| 500 | 250 | 165 | n/a | n/a | n/a | 42 | 0.5 | 0.30 |
| 750 | 350 | 198 | n/a | n/a | n/a | 85 | 1 | 0.41 |
| 1000 | 400 | 276 | n/a | n/a | n/a | 220 | 1 | 0.46 |

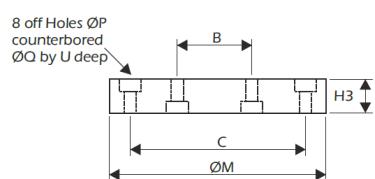


Spherical Load Cap (optional)



| Capacity (t) | H1 | H2 | ØD1 | R |
|--------------|----|----|-----|-----|
| 2 | 10 | 8 | 31 | 30 |
| 5 | 10 | 8 | 31 | 30 |
| 10 | 15 | 13 | 60 | 76 |
| 25 | 15 | 13 | 60 | 76 |
| 50 | 20 | 16 | 88 | 159 |
| 100 | 30 | 28 | 101 | 151 |
| 200 | 40 | 29 | 125 | 102 |
| 300 | 45 | 38 | 165 | 182 |
| 500 | 50 | 40 | 165 | 260 |
| 750 | 80 | 70 | 198 | 360 |
| 1000 | 80 | 70 | 276 | 410 |

Mounting Base (optional)



| Capacity (t) | ØB | ØC | H3 | ØM | ØP | ØQ | U |
|--------------|----|-----|----|-----|-----|----|---|
| 2 | 20 | 40 | 10 | 50 | 3.2 | 6 | 4 |
| 5 | 20 | 40 | 10 | 50 | 3.2 | 6 | 4 |
| 10 | 34 | 64 | 10 | 80 | 4.5 | 10 | 6 |
| 25 | 34 | 64 | 10 | 80 | 4.5 | 10 | 6 |
| 50 | 50 | 100 | 10 | 120 | 4.5 | 10 | 6 |
| 100 | 70 | 120 | 10 | 140 | 5.5 | 11 | 7 |

Ordering Codes

| Core Product | Capacity + Engineering Units | Cable Length (m) | Specials Code | Example Result |
|--|------------------------------|------------------|---------------|------------------|
| CCDDT | 2t | 005 | 000 | CCDDT-2t-005-000 |
| Note: 000 = Standard Product as-per datasheet. Additional codes will be issued by sales as appropriate. | | | | |



Associated Products



TR150 Handheld Indicator



T24 Wireless Telemetry Range



Intuitive2-L Panel-Mount Indicator



DSC-USB USB Signal Digitiser



ICA Miniature Strain Gauge



SGA Signal Conditioner/Amplifier