

CPA

Compression Load Cell

- Measurement ranges 0 ... 2 t to 0 ... 1000 t
- Compression
- Non-linearity 0.25 % RL
- Output nom. 1.5 mV/V, amplifier output optional
- Supply voltage 10 VDC, max. 15 VDC



The CPA series of Compression Load Cells are designed for general use and are suitable for use in laboratories or in permanent outdoor installations.

The CPA series are built to exacting standards and are suitable for use in exposed installations, with versions being available for full immersion in water. There are many special options, which have been previously supplied, including, domed top (supplied with or without loading cap), integral carry handles, mounting base integral connectors, and internal analogue/digital signal amplifiers. The standard product is constructed from stainless steel.

The CPA series can be supplied as shown in this datasheet or can be modified to meet a particular application requirement. We are always pleased to discuss any special requirements that can be accommodated. The CPA series can be supplied on its own or combined with our extensive range of instrumentation to provide a complete load monitoring system

■ More Features

- Stainless steel construction
- Environmentally sealed to IP67
- Many special design versions available
- Can be supplied with domed top and spherical loading cap
- Versions available for use as calibration standards
- Can be supplied with integral connector

■ Typical Applications

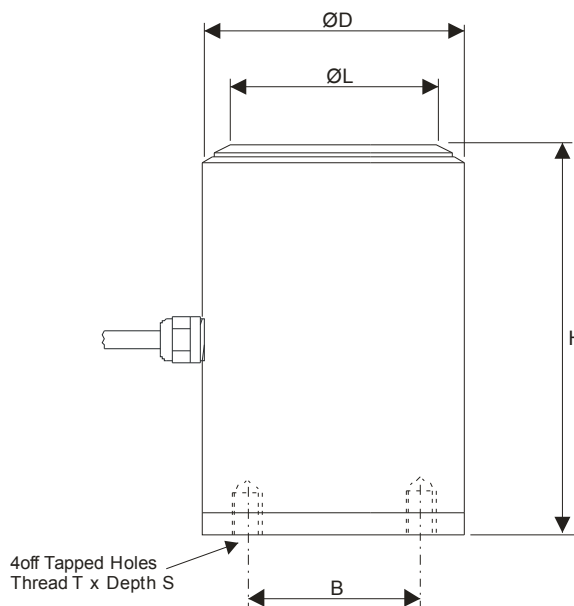
- Hydraulic Press Calibration
- Pile Force Measurement
- Structural Proof Testing
- Centre of Gravity (module) Weighing
- Jack Force Measurement

Specifications

Rated load (RL)	2 / 5 / 10 / 25 / 50 / 100 / 200 / 300 / 500 / 750 / 1000 t (approx. 20 kN to 10 MN)		
Proof load	150 % of RL		
Ultimate breaking load	>300 % of RL		
Output	1.5 mV/V at RL (nominal)		
Non-linearity:	<±0.25 % of RL (typically)		
Repeatability:	<±0.04 % of RL		
Supply voltage:	10 VDC recommended, 15 VDC max.		
Bridge resistance:	700 Ω (2 to 50 t) 1400 Ω (100 to 1000 t)		
Insulation resistance	>500 MΩ at 500 VDC		
Operating temperature range:	-20 °C ... +70 °C		
Compensated temperature range:	-10 °C ... +50 °C		
Temperature effect zero:	<±0.010 % of RL/K		
Temperature effect span:	<±0.010 % of RL/K		
Environmental sealing:	IP67		
Electrical connection:	5 m 4-core screened PUR cable		
Wiring Connections:	red: + supply voltage green: + signal	blue: - supply voltage yellow: - signal	
Available Options:	Special ranges and sizes available Special electrical connections Integral signal conditioning Submersible versions available Domed Top/Loading Cap option Verification Standard versions available Mounting Base		

Dimensions

Flat top version (standard)

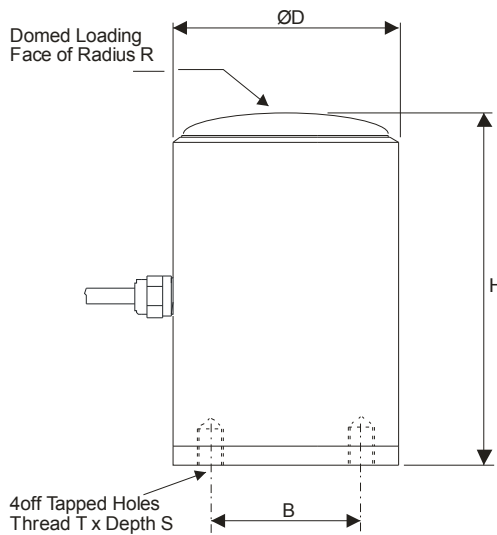


Model	Rated load	H	ØD	ØL	T	S	ØB	Weight (kg)
CPA2	2 t	40	31	20	M3	5	20	1
CPA5	5 t	40	31	20	M3	5	20	1
CPA10	10 t	75	50	35	M4	8	34	2.5
CPA25	25 t	75	50	35	M4	8	34	2.5
CPA50	50 t	100	88	70	M4	10	50	6.5
CPA100	100 t	150	100	80	M5	12	70	11
CPA200	200 t	180	125	106	M6	n/a	78	19
CPA300	300 t	185	138	117	n/a	n/a	n/a	21
CPA500	500 t	250	165	150	n/a	n/a	n/a	42
CPA750	750 t	350	198	176	n/a	n/a	n/a	85
CPA1000	1000 t	400	276	230	n/a	n/a	n/a	220

All dimensions in millimeters

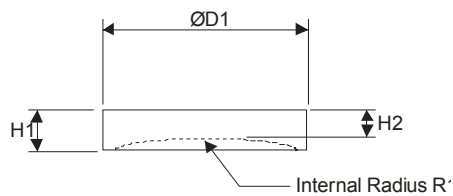
Drawings are for information only, for construction use ask for detailed CAD-drawing.

Domed top version (optional)



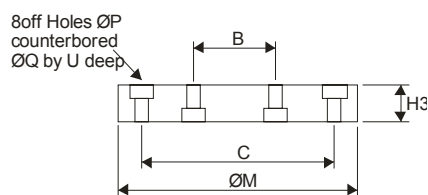
Model	Rated load	H	ØD	R	T	S	ØB	Weight (kg)
CPA2-D	2 t	41	31	29	M3	5	20	1
CPA5-D	5 t	41	31	29	M3	5	20	1
CPA10-D	10 t	75	50	75	M4	8	34	2.5
CPA25-D	25 t	75	50	75	M4	8	34	2.5
CPA50-D	50 t	103	88	158	M4	10	50	6.5
CPA100-D	100 t	153	100	150	M5	12	70	11
CPA200-D	200 t	180	125	100	M6	n/a	78	19
CPA300-D	300 t	185	138	180	n/a	n/a	n/a	21
CPA500-D	500 t	250	165	250	n/a	n/a	n/a	42
CPA750-D	750 t	350	198	350	n/a	n/a	n/a	85
CPA1000-D	1000 t	400	276	400	n/a	n/a	n/a	220

Spherical lod cap (optional)



Model	Rated load	H1	H2	ØD1	R1
CPA2	2 t	10	8	31	30
CPA5	5 t	10	8	31	30
CPA10	10 t	15	13	60	76
CPA25	25 t	15	13	60	76
CPA50	50 t	20	16	88	159
CPA100	100 t	30	28	101	151
CPA200	200 t	40	29	125	102
CPA300	300 t	45	38	165	182
CPA500	500 t	50	40	165	260
CPA750	750 t	80	70	198	360
CPA1000	1000 t	80	70	276	410

Mouting base (optional)



Model	Rated load	ØB	ØC	H3	ØM	ØP	ØQ	U
CPA2	2 t	20	40	10	50	3.2	6	4
CPA5	5 t	20	40	10	50	3.2	6	4
CPA10	10 t	34	64	10	80	4.5	10	6
CPA25	25 t	34	64	10	80	4.5	10	6
CPA50	50 t	50	100	10	120	4.5	10	6
CPA100	100 t	70	120	10	140	5.5	11	7

All dimensions in millimeters

Drawings are for information only, for construction use ask for detailed CAD-drawing.

Due to continual product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.