

Compressive Cylinder Load Cell

Type 4570A...



1. Application

Small dimensions characterize compressive cylinder load cells Type 4570A... (10 1110) even in the high measurement ranges.

Load cells of this type are specially designed for rough industrial use as well as for laboratory applications.

Some areas of applications

- Measuring of press-in forces at mounting lines
- Compression force measurements at toggle lever press
- Weighing technology

2. Description

The cylindrical sensor body is equipped with an axially arranged central throughout hole. This sensor body carries strain gauges which are connected together in a full bridge circuit.

This temperature compensated strain gauge full bridge changes the measurement force directly to a proportional output voltage, which is amplified to a standardized output signal by the corresponding signal amplifiers (see product group 4).

The force introduction at the sensor surface has to be effected plane parallel. The measurement force must be applied centrally and without any transverse vectors.

To achieve optimal accuracy, we recommend to use the load application cup.

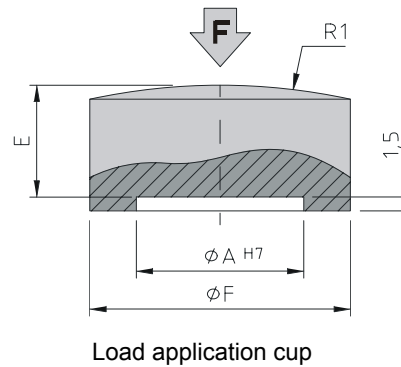
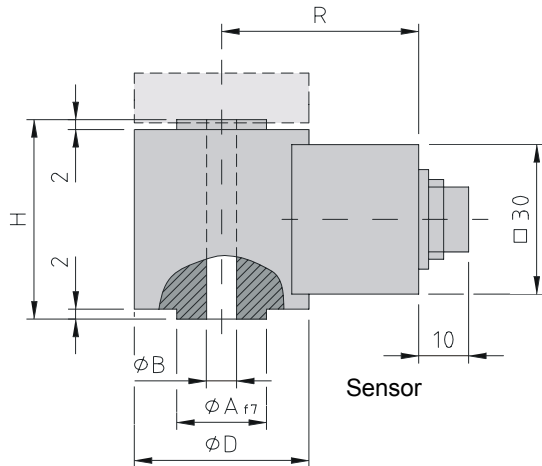
Ensure that the sensor is mounted on tools with accurately performed contact surfaces only.

3. Special Features

- **Measurement ranges from 0 ... 5 kN up to 0 ... 200 kN**
- **Robust cylindrical construction**
- **Small dimensions at high measurement ranges**
- **Standardized output signal**
- **Accuracy $\leq 0,4\%$ F.S.**

4. Dimensions

Measuring range	Article No (sensor)	Sensor dimensions [mm]					Article-No (cup)	Cup dimensions [mm]			
		Ø Af7	Ø B	Ø D	H	R		Ø AH7	E	Ø F	R1
0 ... 5 kN	5500	18	6	35	40	39,5	8406	18	11,5	28	100
0 ... 10 kN	5501	18	8	35	40	39,5	8406	18	11,5	28	100
0 ... 20 kN	5502	21	11	40	40	39,5	8407	21	13,6	30	100
0 ... 50 kN	5503	23	14	40	40	42	8408	23	15,7	32	105
0 ... 100 kN	5504	35	20	55	40	49,5	8409	35	18,6	47	130
0 ... 200 kN	5505	42	25	60	60	52	8410	42	20,7	54	170



5. Technical Data

5.1 Electrical specifications:

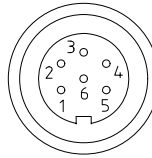
Bridge resistance :		
Foil SG, full bridge	350Ω, nominal	(deviations are possible)
Excitation:	max. 12 V DC	
Output:	1 mV/V	

5.4 Electrical connection:

Built-in plug, 6-poles, in acc. with DIN 45322

Pin connection:

Pin	Signal
1	excitation –
2	excitation +
3	shield
4	signal output +
5	signal input –
6	100% control input



Top view
built-in plug

5.2 Environmental conditions:

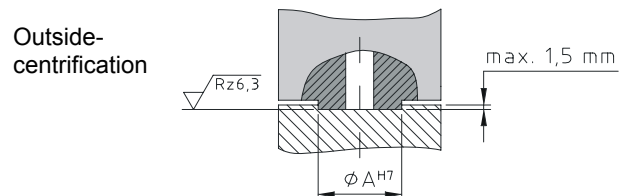
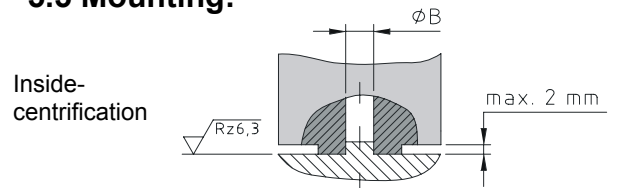
Operating temperature range: -10°C ... +90°C
 Nominal temperature range: +5°C ... +60°C
 Temperature influence:

on zero signal:	0,01 % F.S./K
on the characteristic:	0,02 % Rdg./K

5.3 Mechanical specifications:

Non-linearity:	±0,2 % F.S.
Hysteresis:	±0,1 % F.S.
Relative span with un- changed mounting position:	±0,1 % F.S.
Overload:	150% of capacity
Material:	1.2826
Weight (acc. to meas. range)	approx. 200 ... 700 g
Protection class in acc. with DIN 40050:	IP 40

5.5 Mounting:



6. Order Information

e.g. Cylinder load cell, 0 ...5 kN with cup

101110 - 5 kN - 5500 - 8406
 Data sheet Meas. range Art.-no(Sensor) Art.-no(Kalotte)

For signal amplifiers and display units please refer to the data sheets of product group 4.