

# C18

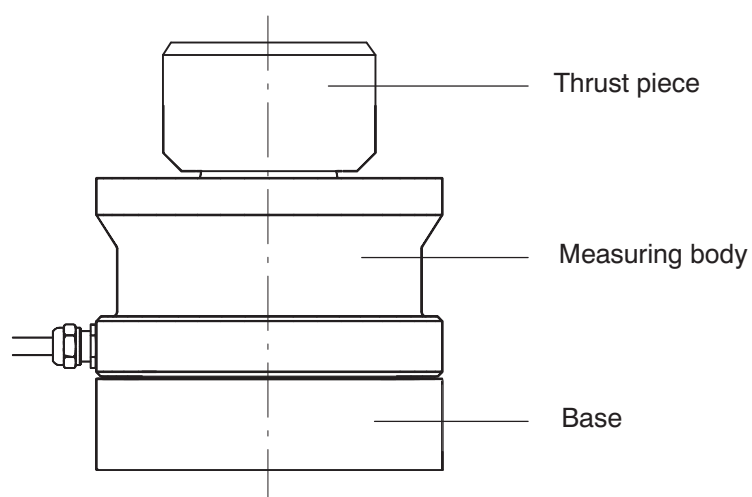
## Force Transducer

### Special features

- Compressive force transducer
- Nominal (rated) forces 10 kN, 20 kN, 50 kN, 100 kN, 200 kN, 300 kN, 500 kN, 1 MN, 2 MN, 3 MN, 4,5 MN
- Compact size
- Low weight
- Force introduction parts also included
- Possible classification with DKD calibration certificate acc. to ISO376: Class 0.5



### Schematic diagram C18 force transducer



# Specifications

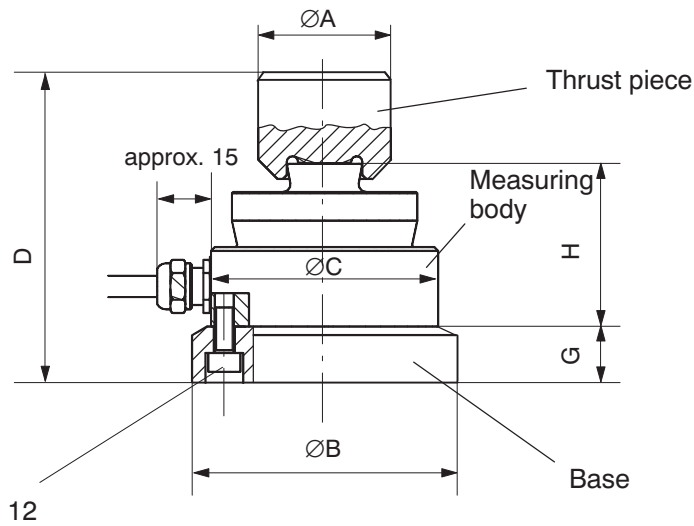
Type	C18					
Data according to VDI 2638 standards						
Nominal (rated) force	F <sub>nom</sub>	kN	10 – 200	300	500 – 1000	2000 – 4500
Class according to ISO 376 (0.2F <sub>nom</sub> to F <sub>nom</sub> )			0.5			
Nominal (rated) sensitivity	C <sub>nom</sub>	mV/V	2			
Rel. sensitivity deviation	d <sub>C</sub>	%	0.1			
Rel. zero signal deviation (zero signal tolerance)	d <sub>s,o</sub>	%	1			
Rel. zero error <sup>1)</sup>	f <sub>o</sub>	%	0.012	0.024		
Rel. range (0.2F <sub>nom</sub> to F <sub>nom</sub> ) at: unchanged mounting position <sup>1)</sup> various mounting positions <sup>1)</sup>	b <sub>rg</sub>	%	0.04			
	b <sub>brv</sub>	%	0.08			
Relative reversibility error (0.2F <sub>nom</sub> to F <sub>nom</sub> ) <sup>1)</sup>	u	%	0.08			
Linearity deviation	d <sub>lin</sub>	%	0.05			
Effect of temperature on sensitivity/10 K rel. to sensitivity	TK <sub>C</sub>	%	0.01			
Effect of temperature on zero signal/10 K rel. to sensitivity	TK <sub>0</sub>	%	0.01			
Effect of lateral forces (lateral force 10 % F <sub>nom</sub> ) <sup>2)</sup>	d <sub>Q</sub>	%	0.035	0.1	0.15	
Effect of eccentricity/mm	d <sub>E</sub>	%	0.02			
Rel. creep over 30 mins	d <sub>cr,F+E</sub>	%	0.03			
Input resistance	R <sub>e</sub>	Ω	4450 ± 100			
Output resistance	R <sub>a</sub>	Ω	4010 ± 2			
Isolation resistance	R <sub>is</sub>	Ω	> 50x10 <sup>9</sup>			
Reference excitation voltage	U <sub>ref</sub>	V	5			
Operating range of the excitation voltage	B <sub>U,G</sub>	V	5 to 30			
Carrier frequency of the excitation voltage		Hz	≤ 600			
Nominal (rated) temperature range	B <sub>t,nom</sub>	°C	+10 to +40			
Operating temperature range	B <sub>t,G</sub>	°C	-30 ... +80			
Storage temperature range	B <sub>t,S</sub>	°C	-50 ... +85			
Reference temperature	t <sub>ref</sub>	°C	+22			
Max. operating force	(F <sub>G</sub> )	%	170			150
Limit force	(F <sub>L</sub> )	%	170			150
Breaking force	(F <sub>B</sub> )	%	400			320
Static lateral limit force	(F <sub>Q</sub> )	%	0.3·F <sub>nom</sub> ; (to F <sub>Z</sub> ≤ 0.5F <sub>nom</sub> ) 0.5·(F <sub>nom</sub> -0.8·F <sub>Z</sub> ); (for F <sub>Z</sub> > 0.5F <sub>nom</sub> ) (F <sub>Z</sub> = force in direction of measurement)			

<sup>1)</sup> Class 0.5 according to ISO 376, classification guaranteed only in conjunction with a DKD calibration certificate.

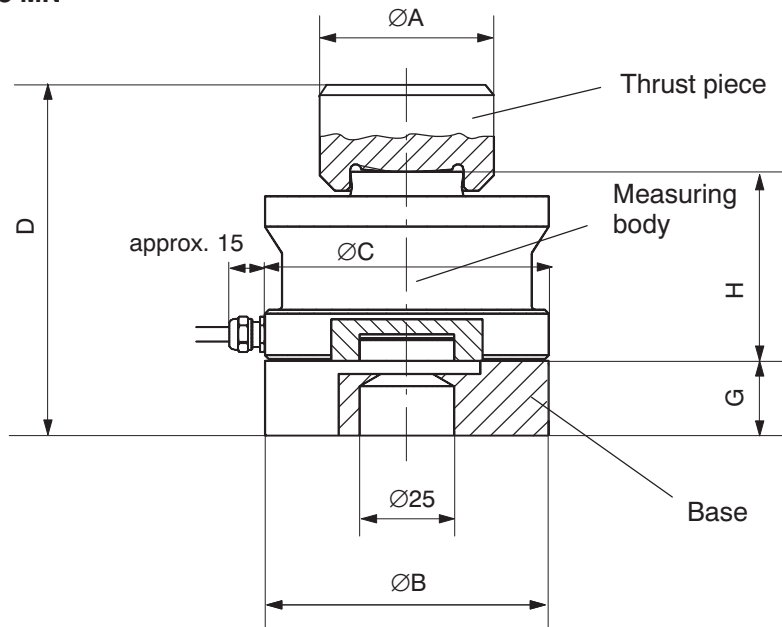
<sup>2)</sup> relative to a force introduction point on the force-introduction surface of the measuring body

Nominal (rated) force	F <sub>nom</sub>	kN	10	20	50	100	200	300	500	1000	2000	3000	4500
Nominal (rated) displacement	S <sub>nom</sub>	mm	0.13	0.11	0.13	0.17	0.19	0.23	0.26	0.45	0.62	0.79	0.98
Total weight		kg	1.2	1.2	1.2	2.3	2.3	3.9	10.4	15.3	45.6	52.6	90.4
Rel. permissible vibrational stress	F <sub>rb</sub>	%	70										
Degree of protection acc. to DIN EN 60529			IP68 (test conditions 100 h at 1 m water column)										
Cable length, four-wire connection		m	5										
Measuring body material			stainless steel										

10 kN – 50 kN

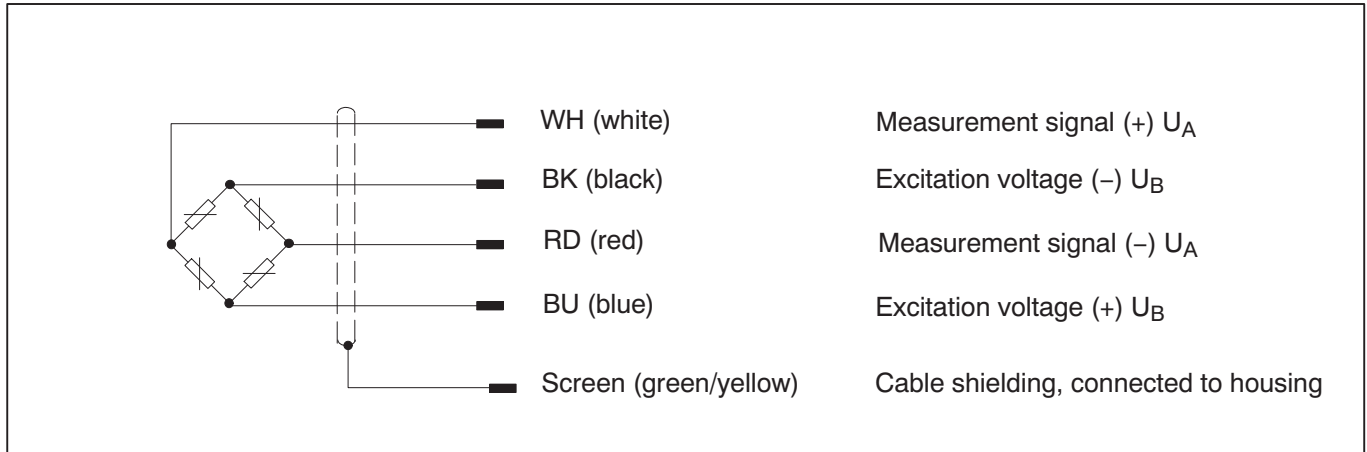


100 kN – 4.5 MN



Type	Ø A	Ø B	Ø C	D	G	H
C18 / 10kN ... 50kN	35	70	60	72	15	43
C18 / 100kN ... 200 kN	45	75	75	89	20	50
C18 / 300kN	58	95	95	112	20	65
C18 / 500kN	85	130	130	157	37	85
C18 / 1MN	100	150	150	171	40	90
C18 / 2MN	135	230	225	239	50	130
C18 / 3MN	135	230	225	254	50	145
C18 / 4.5MN	160	275	270	303	60	170

## Pin assignment



## Scope of supply:

- C18 measuring body
- Thrust piece
- Base

### Regional Distributor



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