

# C4

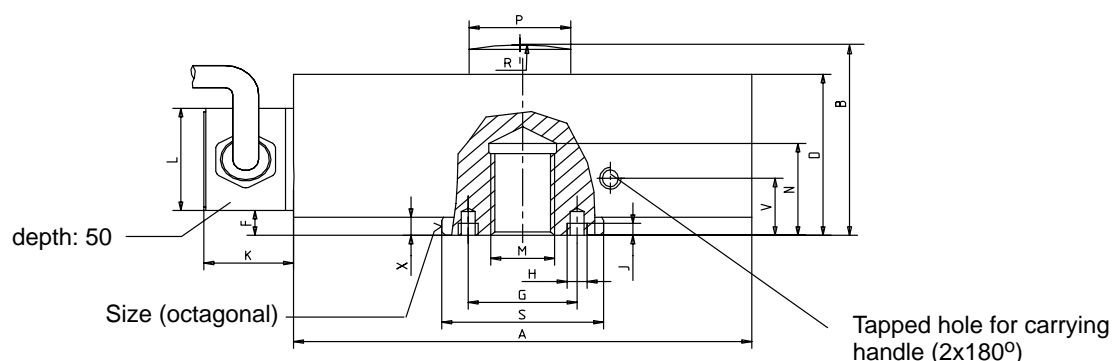
## Force Standards



### Special features

- Compression Force transducers with maximum accuracy for use as test standard
- Nominal forces 20 kN ... 500 kN
- Classification option by device classes with DKD calibration certificate according to EN10002-3
- Transfer standard in international force reference
- Good long-term stability

Dimensions (in mm; 1 mm= 0.03937 inches)



Type	∅ A	B	D	F	G	H	J	M	N	R	∅ S <sub>f7</sub>	V	X	a.f.	K	L	∅ P-0.1
C4/20 kN	115	54.5	47	7.3				M16	27	60	40		5.3	38			25
C4/50 kN	120	60.2	55	10.2	–	–	–	M20x1.5	28	160	48		8.2	45	22	30	26
C4/100 kN	146	74.2	69	12.2				M30x2	37	300	62		10.2	59			40
C4/200 kN	180	94.2	89	13.1	68	M6	6	M39x2	45	300	76		11.1	73			50
C4/500 kN	275	159	145	21	118	M8	8	M72x4	87	400	140	35	20	134	32	43	64

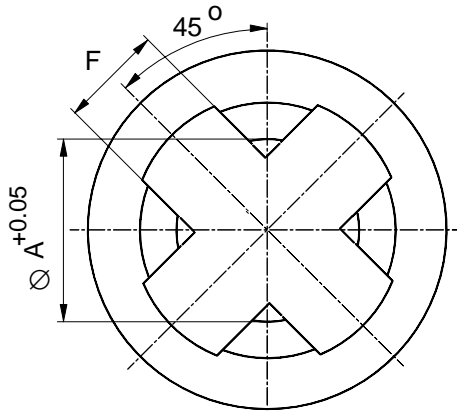
## Specifications

Type	C4						
Data according to VDI standards 2638							
Nominal force	$F_{nom}$	kN	20	50	100	200	500
possible classification according to EN 10002-3 in conjunction with DKD calibration certificate			0.5				1
Nominal sensitivity	$C_{nom}$	mV/V	2				
rel. sensitivity deviation	$d_c$	%	0.1				
zero signal tolerance	$d_{s,0}$	%	0.5				
rel. zero point compensation (zero signal return)	$f_0$	%	< $\pm 0.02$				
Rel. range (0.2 $F_{nom}$ to $F_{nom}$ ) at: unchanged mounting position, typically	$b_{rg}$	%	0.02				
different mounting positions, typically	$b_{rv}$	%	0.03				
Hysteresis (0.2 $F_{nom}$ to $F_{nom}$ )	$u$	%	0.1				0.3
Linearity deviation	$d_{lin}$	%	0.02				0.03
Effect of temperature on sensitivity/10 K by reference to nominal sensitivity	$TK_c$	%	0.01				
Effect of temperature on zero signal/10 K by reference to nominal sensitivity	$TK_0$	%	0.015				
Effect of transverse forces (Transverse forces 10 % $F_{nom}$ ) <sup>1)</sup>	$d_Q$	%	0.03				
Effect of eccentricity per mm	$d_E$	%	0.01	0.005			
Ambient pressure influence on zero signal per 10mBar	$p_{KQ}$	%	0.015	0.006	0.004	0.002	0.001
Rel. creep over 30 min	$d_{crF+E}$	%	0.02				
Input resistance	$R_e$	$\Omega$	>345				
Output resistance	$R_a$	$\Omega$	$356 \pm 0.3$				
Isolation resistance	$R_{is}$	$\Omega$	> $5 \cdot 10^9$				
Reference excitation voltage	$V_{ref}$	V	5				
Operating range of the excitation voltage	$B_{U,G}$	V	0.5 ... 12				
Nominal temperature range	$B_{t,nom}$	$^{\circ}C$	+10...+40				
Operating temperature range	$B_{t,G}$	$^{\circ}C$	-30...+85				
Storage temperature range	$B_{t,S}$	$^{\circ}C$	-50...+85				
Reference temperature	$t_{ref}$	$^{\circ}C$	+23				
Max. operational force	( $F_G$ )	%	150				
Limit force	( $F_L$ )	%	150				
Breaking force	( $F_B$ )	%	250				
Static lateral limit force	( $F_Q$ )	%	30				
Nominal displacement	$S_{nom}$	mm	0.2		0.25	0.28	0.45
Fundamental resonance frequency	$f_G$	kHz	4.1	4.5	3.4	3.6	2.5
Weight		kg	1.8	2.4	5.5	11.2	42
Rel. permissible vibrational stress	$F_{rb}$	%	70				50
Cable length, six-wire connection		m	6				
Degree of protection to DIN EN 60529			IP67				

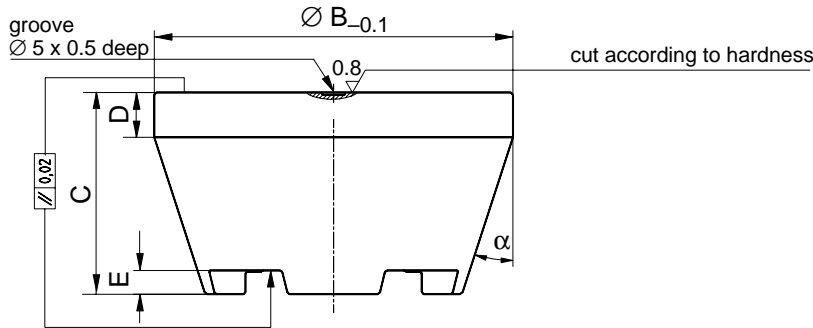
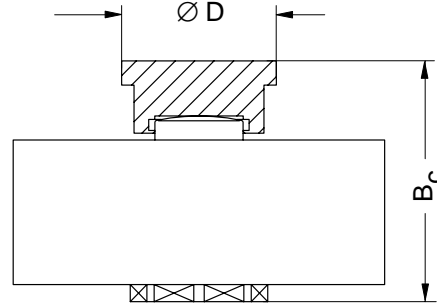
<sup>1)</sup> corresponds to load introduction point

## Accessories

**EDO3** for precision measurements, acc. to DIN EN10002-3 or ISO/FDIS 376



**EPO3** for standard measurements in industry



### EDO3 thrust piece

Type	Thrust piece	Weight [kg]	∅ A	∅ B	C	D	E	F	α
C4/20 kN	EDO3/20 kN	0.34	25.2	48	27	8	3	12	18°
C4/50 kN	EDO3/50 kN		26.2		3				
C4/100 kN	EDO3/100 kN	1.58	40.2	80	45	10	5	23	
C4/200 kN	EDO3/200 kN		50.2						
C4/500 kN	EDO3/500 kN	4.35	64.2	112	62	15	6	30	15°

### EPO3 thrust piece

Type	Thrust piece	Weight [kg]	B <sub>c</sub>	∅ D
C4/20 kN	EPO3/5 T	0.10	70	45
C4/50 kN	EPO4/50 kN	0.18	75	45
C4/100 kN	EPO4/100 kN	0.40	109.5	90
C4/200 kN	EPO4/200 kN	1.26	129	90
C4/500 kN	EPO3/100 T	5.80	214	90

## Pin assignment

### Six-wire connection



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### Hottinger Baldwin Messtechnik GmbH

Postfach 10 01 51, D-64201 Darmstadt  
Im Tiefen See 45, D-64293 Darmstadt  
Tel.: +49/61 51/ 8 03-0; Fax: +49/61 51/ 8039100  
E-mail: support@hbm.com www.hbm.com



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