

PACEline

CFT

Piezoelectric force transducer

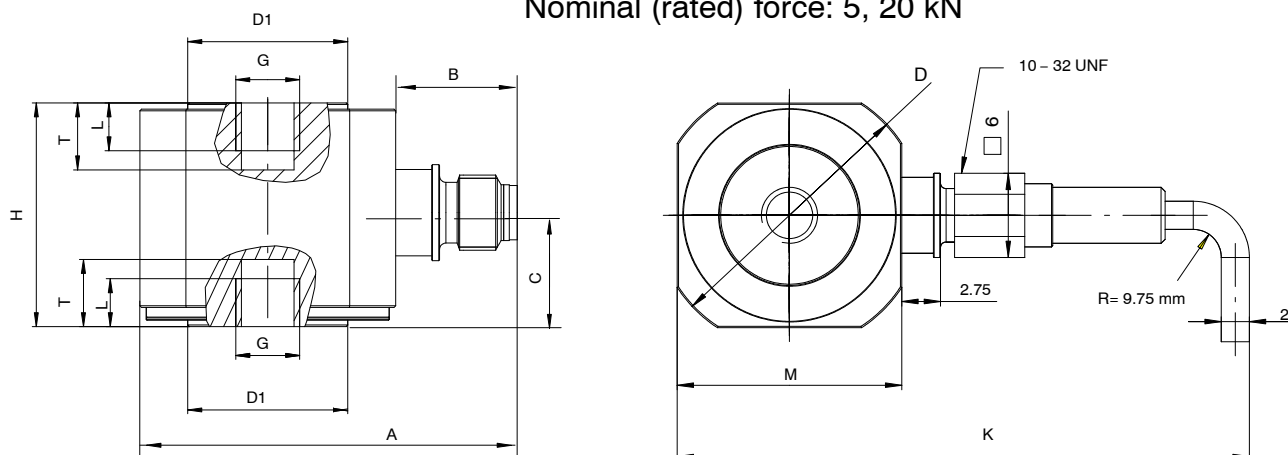


Special features

- Very compact force transducer for compressive force
- Nominal (rated) forces: 5, 20, 50, 70, 120 kN
- High stiffness, rugged design
- For press-fit and mounting applications with rapidly changing forces
- Stainless steel housing
- Easy integration through flange connection on both sides and central bore

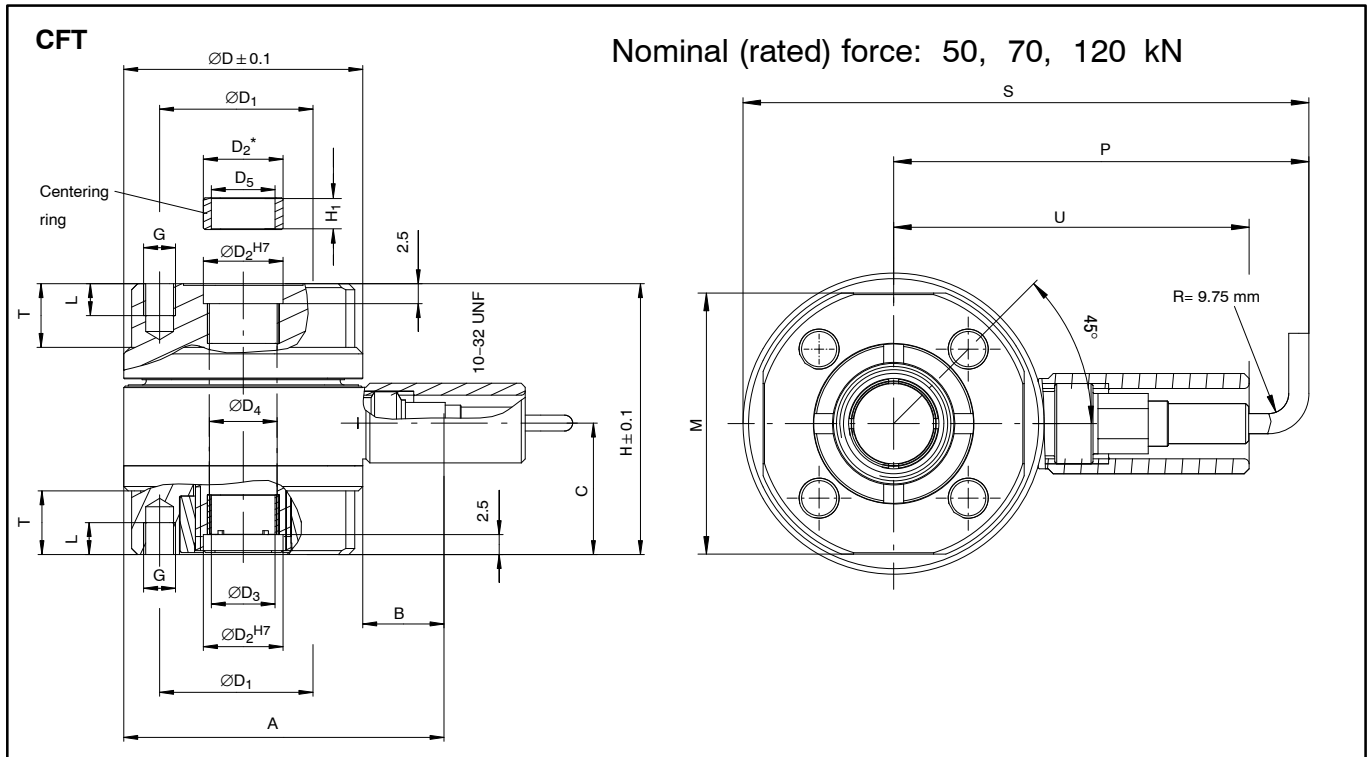
CFT dimensions

Nominal (rated) force: 5, 20 kN



Type	D	D1	M	H	B	G	T	L	K	A	C
CFT / 5 kN	13	5	11	10	7.45	M2.5	3.15	2.25	36	18.45	5.05
CFT / 20 kN	19	10	16	14	7.45	M4	4.35	3	41	23.45	7.13

Dimensions



Type	D	D ₁	D ₂	D ₂ *	D ₃	D ₄	D ₅	M	H	H ₁	B	G	T	L	A	C	S	P	U
CFT / 50 kN	30	21	10	10 _{f7}	8	8.5	8 +0.02	26	34	4	10.05	M4	8	4	40.05	16.5	56.35	41.35	35.4
CFT / 70 kN	36	26	14	14 _{f7}	11	12	11 +0.02	32	42	4	10.15	M5	9	5	46.15	21.5	62.35	44.35	38.4
CFT / 120 kN	54	40	21	21 _{f7}	17	18.5	17 +0.02	48	60	4	10.15	M8	13	8	64.15	32	80.35	53.35	47.4

Specifications (data per VDI/VDE 2638 standards)

Type	CFT/...					
Nominal (rated) force	kN	5	20	50	70	120
Sensitivity	pC/N	-7,7	-7,7	-4,1	-4,1	-4,0
Perm. lateral force¹⁾	% F _{nom}	0.5		3.5		4.8
Permissible lateral force bei F _z = 0%	N	80	160	1000	1800	5800
Max. operational force	kN	5.5	22	60	84	144
Permissible bending moment at F _z = 0%	Nm	2	4	75	150	650
at F _z = 100 %	Nm	0.5	2	20	20	250
Crosstalk from F _{x, y} to F _z	N/N	< 0.06	< 0.05	< 0.032	< 0.045	< 0.08
from M _{x, y} to F _z	N/Nm	-8	-6	< 0,3	< 0,3	< 0,25
Breaking force	kN	10	31	160	220	510
Natural frequency	kHz	40	36	54	46	31
Oscillation width	% F _{nom}	100 for compressive force				
Operating temperature	°C	-40 ... +120				
Relative reversibility error, 0.5 x F_{nom}	%	< 1 (typ. 0.5)				
Relative linearity error	%	< ± 1 (typ. 0.5)				
Effect of temperature on output span / 10K	%	< 0.5				
Nominal (rated) displacement (± 15 %)	µm	11	18	30	30	31
Insulation resistance	Ω	> 10 ¹³				
Degree of protection per DIN EN 60529		IP65				
Tightening torque for the connecting screws	N·m	0.5	1	2	4	21
Weight	g	8	22	137	240	720
Connection		10–32 UNF				

¹⁾ related to a point of contact on the force application surface

Scope of supply

Order number	
1-CFT / 5 kN	CFT/ 5 kN piezoelectric force transducer
1-CFT / 20 kN	CFT/ 20 kN piezoelectric force transducer
1-CFT / 50 kN	CFT / 50 kN piezoelectric force transducer
1-CFT / 70 kN	CFT / 70 kN piezoelectric force transducer
1-CFT / 120 kN	CFT / 120 kN piezoelectric force transducer

Accessories:

1-KAB143-3	Transducer connection cable (Material: PFTE), length 3 m; UNF10–32 connector on both sides
------------	--

Modifications reserved.

All details describe our products in general form only. They are not to be understood as a guarantee of quality or durability and do not constitute any liability whatsoever.

B2531-2.0 en

Hottinger Baldwin Messtechnik GmbH

Postfach 10 01 51, D-64201 Darmstadt, Germany
Im Tiefen See 45, D-64293 Darmstadt, Germany
Tel.: 061 51/ 8 03-0; Fax: 061 51/ 8039100
E-mail: support@hbm.com www.hbm.com



measurement with confidence