

Data sheet

Force Transducer

Serie KTN-P

(2,5 kN – 1200 kN)



Benefits/Application

- Class 0,5 according to ISO 376 in the range 5 % to 100 %
- Especially to calibrate testing machines
- Insensitive against parasitic forces and moments
- Little weight
- For static tensile and compressive forces
- Hermetically sealed
- Very small force application effect
- Popular connection dimensions

Options/Accessories

- Bending moment circuits
- Mounting parts for tension and compression
- Class 00 according to ISO 376 in the range 20 % to 100 %

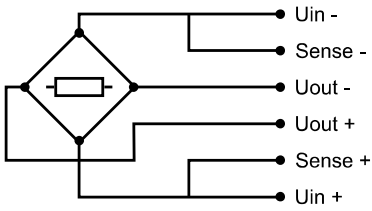
Technical data

Class 0,5

		F_{nom}	kN	2,5	5	10	20	50	100	250	600	1200
Metrological Data	Nominal force	F_{nom}	kN	2,5	5	10	20	50	100	250	600	1200
	Force measurement range		%	5 - 100								
	Interpolation error	f_c	%	0,045								
	Reversibility error	v	%	0,14								
	Repeatability error in unchanged mounting position	b'	%	0,045								
	Reproducibility error in different mounting positions	b	%	0,09								
	Zero error	f_0	%	0,02								
	Creep		%	0,03								
	Temperature effect on characteristic value per 10 K	TK_C	%/10 K	0,02								
	Temperature effect on zero signal per 10 K	TK_0	%/10 K	0,02								
Electrical Data	Rated characteristic value	C_{nom}	mV/V	2								2,4
	Input resistance	R_e	Ω	ca. 1100								
	Output resistance	R_a	Ω	ca. 1000								
	Insulation resistance	R_{is}	Ω	$> 10^9$								
	Operating range of excitation voltage	$B_{U,G}$	V	5 - 12								
	Protection (DIN EN 60529)			54								
Mechanical Data	Mass	m	kg	1,4	1,3	1,4	3	3,3	10	13,5	45	100
	Mass compression force transmission parts	m	kg	0,08				0,13	0,4	0,9	5,5	5,5
	Mass tension force transmission parts	m	kg	0,5	0,4		0,6	0,8	2,2	8	17	31
	Force limit		%	110								
	Breaking force		%	200								
	Rated temperature range	$B_{T,nom}$	$^{\circ}\text{C}$	17 - 27								
	Operating temperature range	$B_{T,G}$	$^{\circ}\text{C}$	10 - 35								

1) Data on request

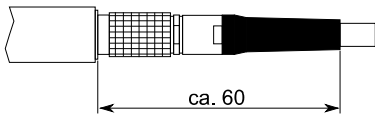
Cable connection



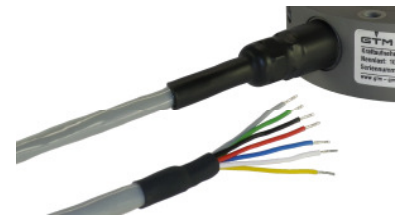
Connection pluggable ¹⁾²⁾		End not connected	
7-pin LEMO Series 0 Female: - Male:		Grey cable Ø 6,5 mm 6 x 0,25 mm ² Temperature range: -35 °C bis +90 °C	
Connection		Pin	Wire colour
Supply voltage (+)	U _{in+}	3	blue
Supply voltage (-)	U _{in-}	2	black
Measurement signal (+)	U _{out+}	1	white
Measurement signal (-)	U _{out-}	4	red
Sense (+)	Sense+	5	green
Sense (-)	Sense-	6	grey
Shielding		Housing	yellow

1) View too weldingside

2) Female LEMO S.A. Typ: EGG.1B.307.CLL; Male: FGG.1B.307.CLA.D72



Connection pluggable



End not connected (optional)

- Cable is not standard scope of supply
- Cable length 5 m. Other cable lengths on request
- Other connector types on cable end: D-Sub 9; D-Sub 15; M-S 7pol
- Configuration with customer defined connection is possible
- Optional fixed cable connection to transducers possible

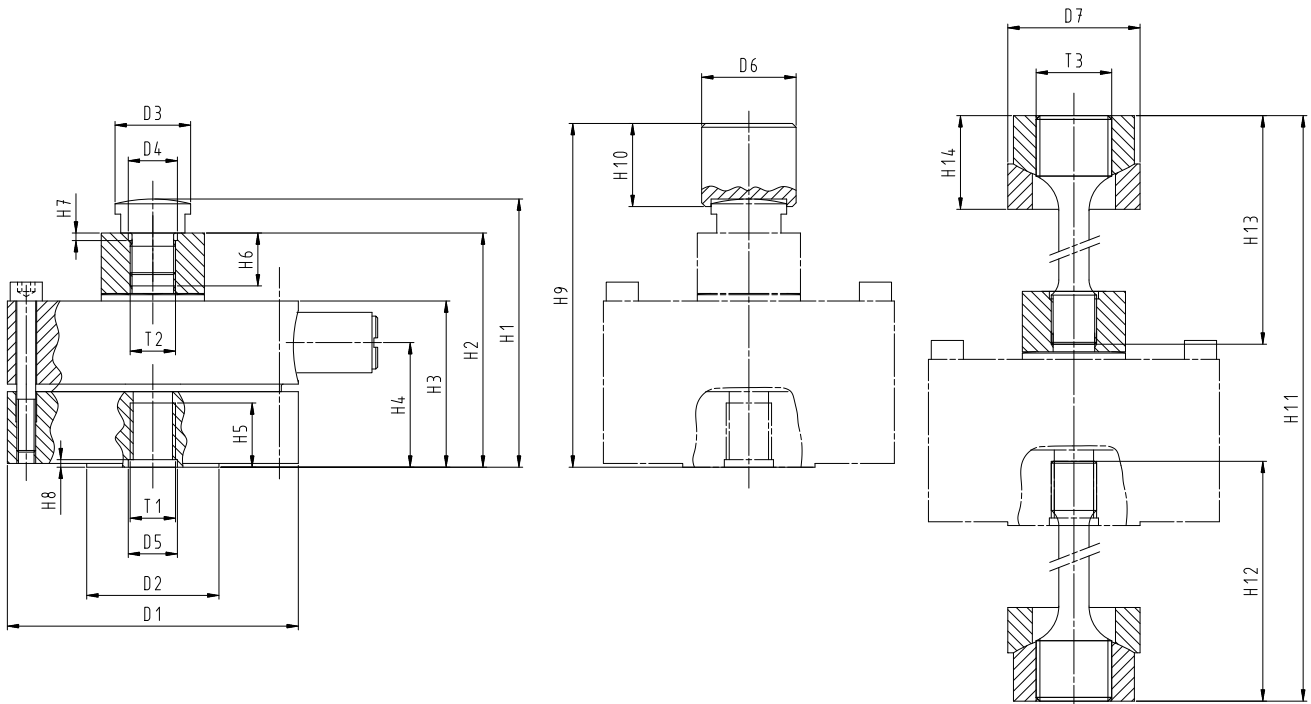
Option: Bending moment

- Transducer with bending moment circuits Mx and My on request available.

Mating dimensions

up to 100 kN

Typ: 2,5 kN - 10 kN

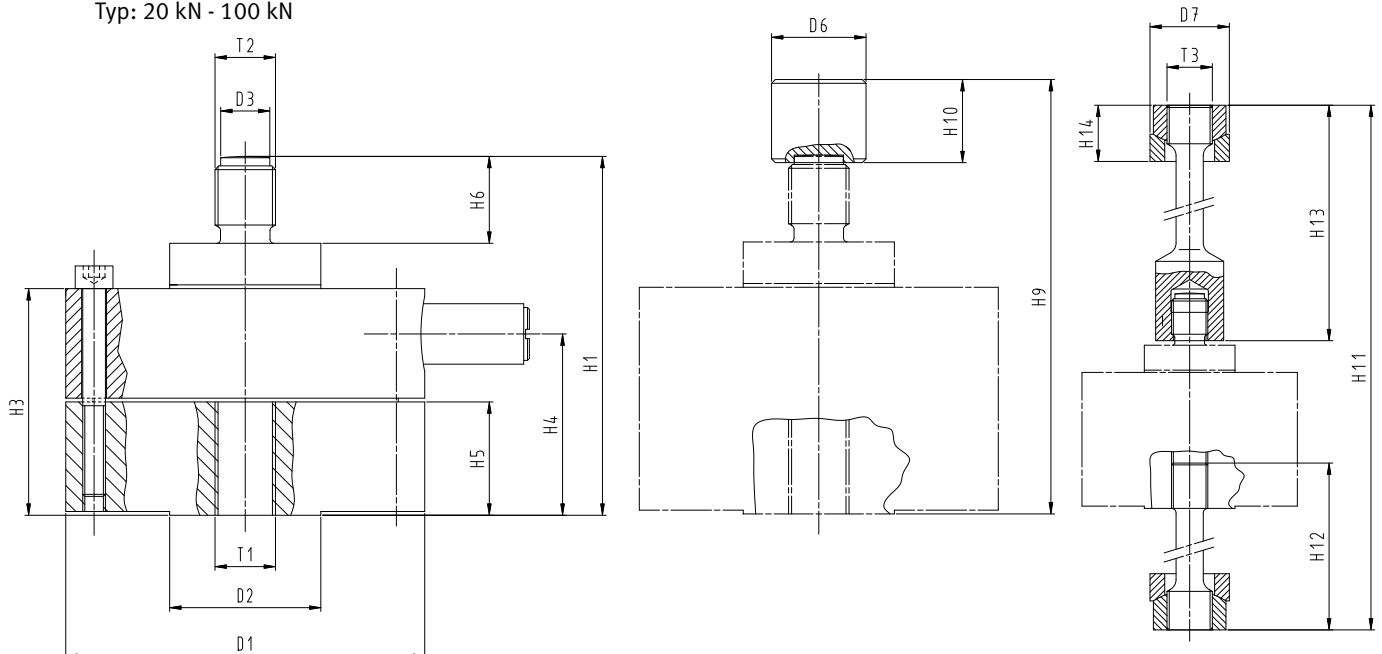


Standard scope of supply

Option: load button

Option: tension rod

Typ: 20 kN - 100 kN



Standard scope of supply

Option: load button

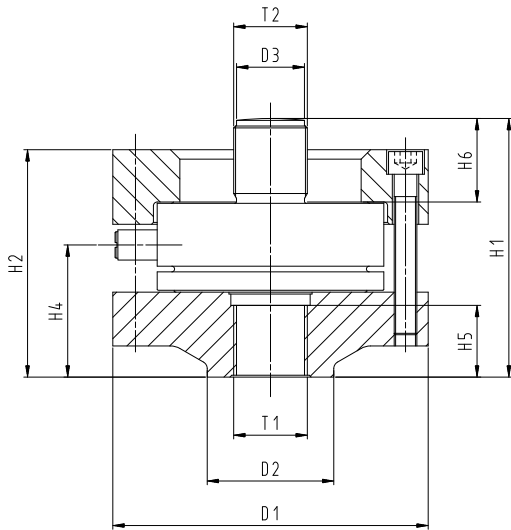
Option: tension rod



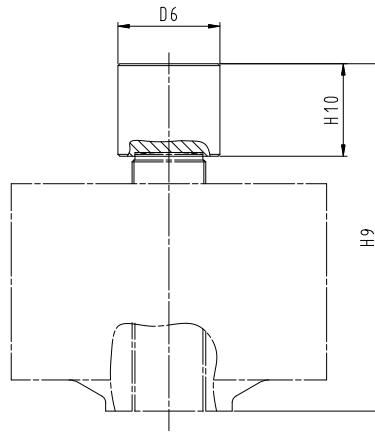
Mating dimensions

up to 1200 kN

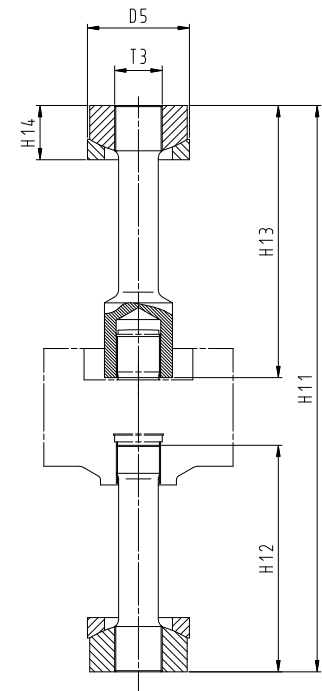
Typ: 250 kN



Standard scope of supply

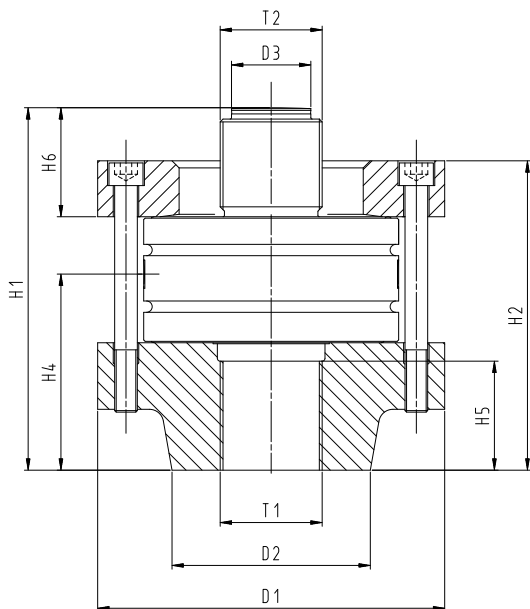


Option: load button

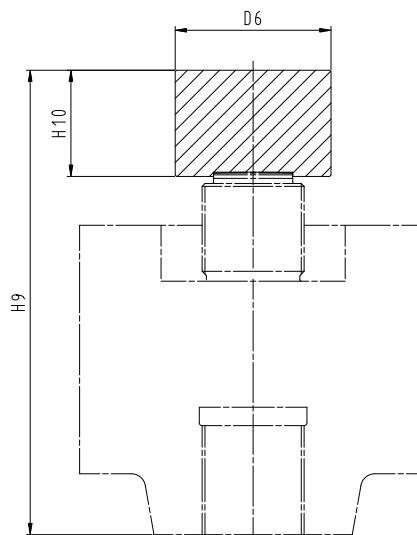


Option: tension rod

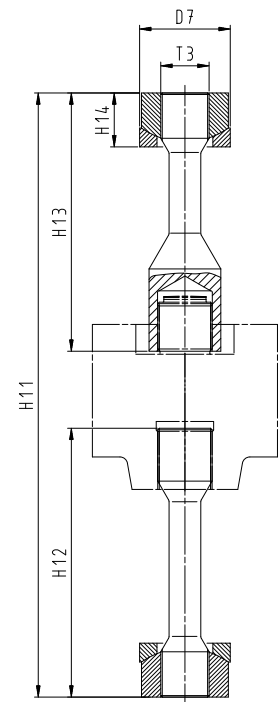
Typ: 600 kN – 1200 kN



Standard scope of supply



Option: load button



Option: tension rod

Mating dimensions

Nominal force compression/tension	$\pm F_{nom}$	kN	2,5	5	10	20	50	100	250	600	1200	
Diameter	$\varnothing D_1$	mm	77			95	101	148	167	245	335	
Diameter	$\varnothing D_2$	mm	35			40	50	60	67	140	120	
Diameter	$\varnothing D_3$	mm	20 _{-0,1}			12,95 _{-0,05}	17,95 _{-0,05}	26,95 _{-0,05}	35,95 _{-0,05}	56 _{-0,05/-0,1}	56 _{-0,05}	
Diameter	$\varnothing D_4$	mm	13 _{H8}	13 _{+0,05}		---						
Diameter	$\varnothing D_5$	mm	13 _{+0,05}		---							
Diameter	$\varnothing D_6$	mm	25				30	42	54	110	110	
Diameter	$\varnothing D_7$	mm	35 _{c11}				45 _{c11}	50 _{c11}	90 _{c11}	90 _{c11}	120 _{c11}	
Thread	T_1		M12			M16	M20x1,5	M30x2	M39x2	M72x4	M90x4	
Thread	T_2		M12			M16	M20x1,5	M30x2	M39x2	M72x4	M90x4	
Thread	T_3		M20x1,5					M24x2	M42x3	M56x4	M64x4	
Height	H_1	mm	75	71		95		140	137	256	298	
Height	H_2	mm	66	62		---			120	218,5	236,5	
Height	H_3	mm	43	44		60	59,5	88,5	---			
Height	H_4	mm	32,5	33		48		65	70	138,5	178	
Height	H_5	mm	17			30		40	38	77	76	
Height	H_6	mm	13,5	14		23		36	44	77		
Height	H_7	mm	2		---							
Height	H_8	mm	2		---							
Height	H_9	mm	95	91		115	118	177	184	328	370	
Height	H_{10}	mm	22				25	39	49	75		
Height	H_{11}	mm	338	331		354	355,5	517	500	800	840	
Height	H_{12}	mm	150					230	240	356	340	
Height	H_{13}	mm	150					219	200	342	370	
Height	H_{14}	mm	24,8			25,8	30,4	47,9	71,4			

Änderungen vorbehalten. Alle Angaben beschreiben unsere Produkte in allgemeiner Form. Sie stellen keine vereinbarte Beschaffenheit im Sinne des § 434 Abs. 1 BGB dar.



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