

Hydraulic Compression Force Transducer Clamping Force - Version

Forces from 320 N up to 500 kN

F1119 – ND 20

F6136 – ND 80



Description

Compact hydraulic compression force transducer to measure and display force in parallel clamps in an easy way for a reasonable price.

Hydraulic force measurement is an easy way to measure and display force in various applications. The flattened housing enables a stable measuring in parallel clamps.

The force measurement utilizes the hydraulic principle: The force applied to a piston generates a hydraulic pressure, which is displayed with an indicating device. The scale of the indicating device can show various units e.g. N, kN, kg, t.

Applications for the hydraulic force transducers can be found in apparatus engineering, mining, test and measurement equipment and special mechanical engineering.

The Leakproofness Guarantee is prolonged to five years*. In the unlikely event of a leakage the transducers will be repaired free of charge. Therewith we underline the quality of our products and the trust in our technology.

Features

- Stainless steel housing and piston
- Flattened housing for stable measuring
- Accuracy $\pm 0,5\%$ F.S. with digital pressure gauge P3962 or pressure sensor P3276
- Accuracy $\pm 1,0\%$ - $1,6\%$ F.S. with pressure gauge
- Operates without power supply
- Piston movement $\leq 0,5$ mm
- 5 Years Leak-Proofness Guarantee*

Measuring range

- 0 ... 320 N up to 0 ... 500 kN

Applications

- Force measurement in parallel clamps
- Apparatus engineering
- Test and measurement equipment
- Special mechanical engineering

*Precondition for the prolonged guarantee to five years is that the hydraulic force transducer is only used within the intended using conditions.

Model: F1119, F1136

Selection - Dimension - Sheet: Hydraulic Compression Force Transducer – Clamping Force - Version

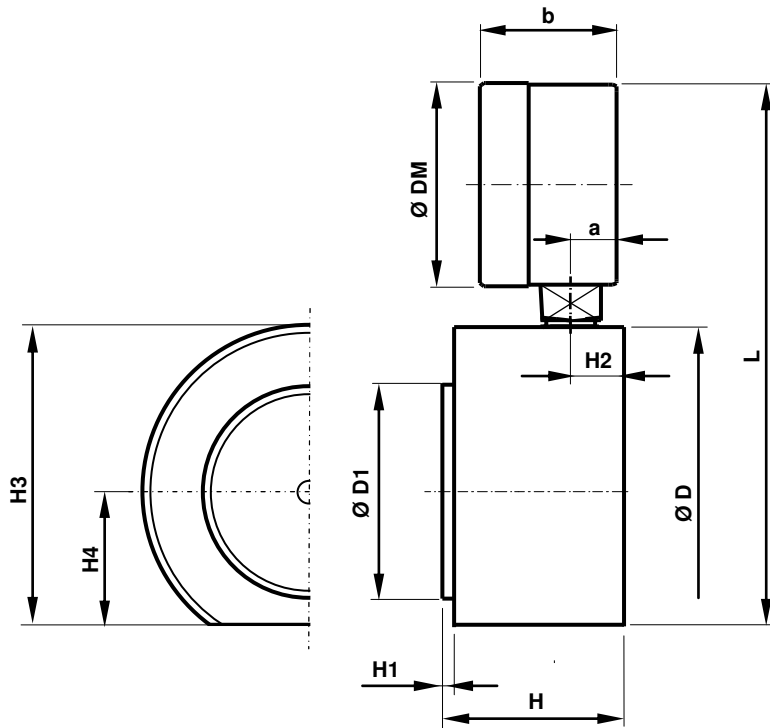
Model	F1119 / F1136		Options
Nominal diameter	ND 20 / ND 80		
Nominal load F_{nom}	0 ... 320 N up to 0 ... 500 kN		
Version	Analog Display	Digital Display	
Accuracy class	$\leq \pm 1,6\%$ F.S. at +21°C	$\leq \pm 0,5\%$ F.S. at +21°C	
Limit load	$100\% F_{nom}$ (dependent on measuring range)		
Breaking load	$> 130\% F_{nom}$ (dependent on measuring range)		
Piston movement	$< 0,5$ mm		
Nominal temperature range	$-10 \dots +50^\circ\text{C}$		
Protection type acc. EN60529/IEC529	IP 65		
Housing	Stainless steel		
Piston	Stainless steel		
Connection type	direct		- Adapter - Capillary tube - Measuring tube for "leak free separation"
Display	Pressure gauge P1515 (NG63)	Digital pressure gauge P3962	- Drag pointer - Pressure gauge P2032 (ND63) - Pressure gauge P2324 (ND100) optionally with contacts - Pressure sensor P3276
Filling liquid	Glycerin/Water 70%		

Version					Display		Options		Dimensions											
Model	ND [cm]	Nominal load	Resolution	bar	P1515	P3962	Meas. tube DN2 [max. L 1]	Capillary tube [max. L 1]	\varnothing D	\varnothing D1	H	H1	H2	H3	H4	DM	a	b	ca. L	Weight [ca. kg]
							[m]	[m]						[mm]						
F1119	20	320 N	10 N	1,6	■	-	---	---	90	50	38	3	14	75	30	63 (P1515)	12,5 (P1515)	34 (P1515)	150 (P1515)	1,8 (P1515)
F1119	20	500 N	10 N	2,5	■	-	---	---												
F1119	20	800 N	20 N	4	■	-	---	1,0												
F1119	20	1,2 kN	50 N	6	■	-	0,5	1,0								83,5 (P3962)	15,8 (P3962)	43,1 (P3962)	160 (P3962)	2,0 (P3962)
F1119	20	2 kN	100 N	10	■	-	1,0	2,0												
F1119	20	3,2 kN	100 N	16	■	-	1,0	2,0												
F1119	20	4 kN	-	20	-	■*	1,5	2,0												
F1119	20	5 kN	100 N	25	■	-	1,5	2,0												
F1119	20	8 kN	200 N	40	■	-	1,5	2,0												
F1119	20	10 kN	-	50	-	■	2,0	2,0												
F1119	20	12 kN	400 N	60	■	-	2,0	2,0												
F1119	20	20 kN	1 kN	100	■	■	2,0	2,0												
F1119	20	32 kN	1 kN	160	■	■	2,0	4,0												
F1119	20	50 kN	2 kN	250	■	■	3,2	4,0												
F1119	20	60 kN	2 kN	315	■	-	3,2	4,0												
F1119	20	80 kN	2 kN	400	■	■	3,2	6,0												
F1119	20	120 kN	5 kN	600	■	■	3,2	6,0												
F1136	80	1,2 kN	50 N	1,6	■	-	---	---	138	100	41	3	22,5	124	55	63 (P1515)	12,5 (P1515)	34 (P1515)	200 (P1515)	4,3 (P1515)
F1136	80	2 kN	100 N	2,5	■	-	---	---												
F1136	80	3,2 kN	100 N	4	■	-	---	1,0												
F1136	80	5 kN	100 N	6	■	-	0,5	1,0								83,5 (P3962)	15,8 (P3962)	43,1 (P3962)	210 (P3962)	4,5 (P3962)
F1136	80	8 kN	200 N	10	■	-	1,0	2,0												
F1136	80	12 kN	400 N	16	■	-	1,0	2,0												
F1136	80	16 kN	-	20	-	■*	1,5	2,0												
F1136	80	20 kN	1 kN	25	■	-	1,5	2,0												
F1136	80	32 kN	1 kN	40	■	-	1,5	2,0												
F1136	80	40 kN	-	50	-	■	2,0	2,0												
F1136	80	50 kN	2 kN	60	■	-	2,0	2,0												
F1136	80	80 kN	2 kN	100	■	■	2,0	2,0												
F1136	80	120 kN	5 kN	160	■	■	2,0	4,0												
F1136	80	200 kN	10 kN	250	■	■	3,2	4,0												
F1136	80	250 kN	10 kN	315	■	-	3,2	4,0												
F1136	80	320 kN	10 kN	400	■	■	3,2	6,0												
F1136	80	500 kN	20 kN	600	■	■	3,2	6,0												

*Accuracy class: $\leq \pm 1,0\%$ v.E.

Selection - Dimension - Sheet: Hydraulic Compression Force Transducer – Compact - Version

Model: F1119 / F1136



Remark: Couplings of the hydraulic force transducer must not be disconnected!
In case of violation there will be no guarantee and no measuring function.