Hydraulic Compression Force Transducer

Compact - Version

Forces from 320 N up to 120 kN

F1115 – ND 20
F6116 – ND 20-ring

Description

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

Hydraulic force measurement is an easy way to measure and display force in various applications.

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
- Accuracy ± 0,5% F.S. with digital pressure gauge P3962 or pressure sensor P3276
- Accuracy ± 1,0% - 1,6% F.S. with pressure gauge
- Operates without power supply
- Piston movement ≤ 0,5 mm
- 5 Years Leak-Proofness Guarantee*

Measuring range

- 0 ... 320 N up to 0 ... 120 kN

Applications

- 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: F1115, F6116

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

Model	**F1115 / F6116**		**Options**
Nominal diameter	ND 20 / ND 20-ring		
Nominal load F_{nom}	0 ... 320 N up to 0 ... 120 kN		
Version	**Analog Display**	**Digital Display**	
Accuracy class	≤ ±1,6% F.S. at +21°C	≤ ±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 … +50°C		
Protection type acc. EN60529/IEC529	IP 65		
Housing	Stainless steel		- Distance plate
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%		
Mounting	threaded holes in the housing bottom		

Version					**Display**		**Options**		**Dimensions**													
Model	ND [cm²]	Nominal load	Resolution	bar	P1515	P3962	Meas. tube DN2 [max. L 1]	Capillary tube [max. L 1]	Ø D	Ø D1	Ø D2	Ø D3	Ø D4	Ø C	H	H1	H2	DM	a	b	ca. L	Weight
							[m]		[mm]													[ca. kg]
F1115	20	**320** N	10 N	1,6	■	-	---	---														
F1115	20	**500** N	10 N	2,5	■	-	---	---	90	50	---	M10	---	61	38	3	14	63 (P1515)	12,5 (P1515)	34 (P1515)	165 (P1515)	2,1 (P1515)
F1115	20	**800** N	20 N	4	■	-	---	**1,0**														
F1115	20	**1,2** kN	50 N	6	■	-	**0,5**	**1,0**										83,5 (P3962)	15,8 (P3962)	43,1 (P3962)	175 (P3962)	2,3 (P3962)
F1115	20	**2** kN	100 N	10	■	-	**1,0**	**2,0**														
F1115	20	**3,2** kN	100 N	16	■	-	**1,0**	**2,0**														
F1115	20	**4** kN	-	20	-	■*	**1,5**	**2,0**														
F1115	20	**5** kN	100 N	25	■	-	**1,5**	**2,0**														
F1115	20	**8** kN	200 N	40	■	-	**1,5**	**2,0**														
F1115	20	**10** kN	-	50	-	■	**2,0**	**2,0**														
F1115	20	**12** kN	400 N	60	■	-	**2,0**	**2,0**														
F1115	20	**20** kN	1 kN	100	■	■	**2,0**	**2,0**														
F1115	20	**32** kN	1 kN	160	■	■	**2,0**	**4,0**														
F1115	20	**50** kN	2 kN	250	■	■	**3,2**	**4,0**														
F1115	20	**60** kN	2 kN	315	■	-	**3,2**	**4,0**														
F1115	20	**80** kN	2 kN	400	■	■	**3,2**	**6,0**														
F1115	20	**120** kN	5 kN	600	■	■	**3,2**	**6,0**														
F6116	20	**320** N	10 N	1,6	■	-	---	---														
F6116	20	**500** N	10 N	2,5	■	-	---	---	90	50	20	M5	36	70	38	3	14	63 (P1515)	12,5 (P1515)	34 (P1515)	165 (P1515)	2,1 (P1515)
F6116	20	**800** N	20 N	4	■	-	---	**1,0**														
F6116	20	**1,2** kN	50 N	6	■	-	**0,5**	**1,0**										83,5 (P3962)	15,8 (P3962)	43,1 (P3962)	175 (P3962)	2,3 (P3962)
F6116	20	**2** kN	100 N	10	■	-	**1,0**	**2,0**														
F6116	20	**3,2** kN	100 N	16	■	-	**1,0**	**2,0**														
F6116	20	**4** kN	-	20	-	■*	**1,5**	**2,0**														
F6116	20	**5** kN	100 N	25	■	-	**1,5**	**2,0**														
F6116	20	**8** kN	200 N	40	■	-	**1,5**	**2,0**														
F6116	20	**10** kN	-	50	-	■	**2,0**	**2,0**														
F6116	20	**12** kN	400 N	60	■	-	**2,0**	**2,0**														
F6116	20	**20** kN	1 kN	100	■	■	**2,0**	**2,0**														
F6116	20	**32** kN	1 kN	160	■	■	**2,0**	**4,0**														
F6116	20	**50** kN	2 kN	250	■	■	**3,2**	**4,0**														
F6116	20	**60** kN	2 kN	315	■	-	**3,2**	**4,0**														
F6116	20	**80** kN	2 kN	400	■	■	**3,2**	**6,0**														
F6116	20	**120** kN	5 kN	600	■	■	**3,2**	**6,0**														

10mm deep; 2x180°; 90° right rotated

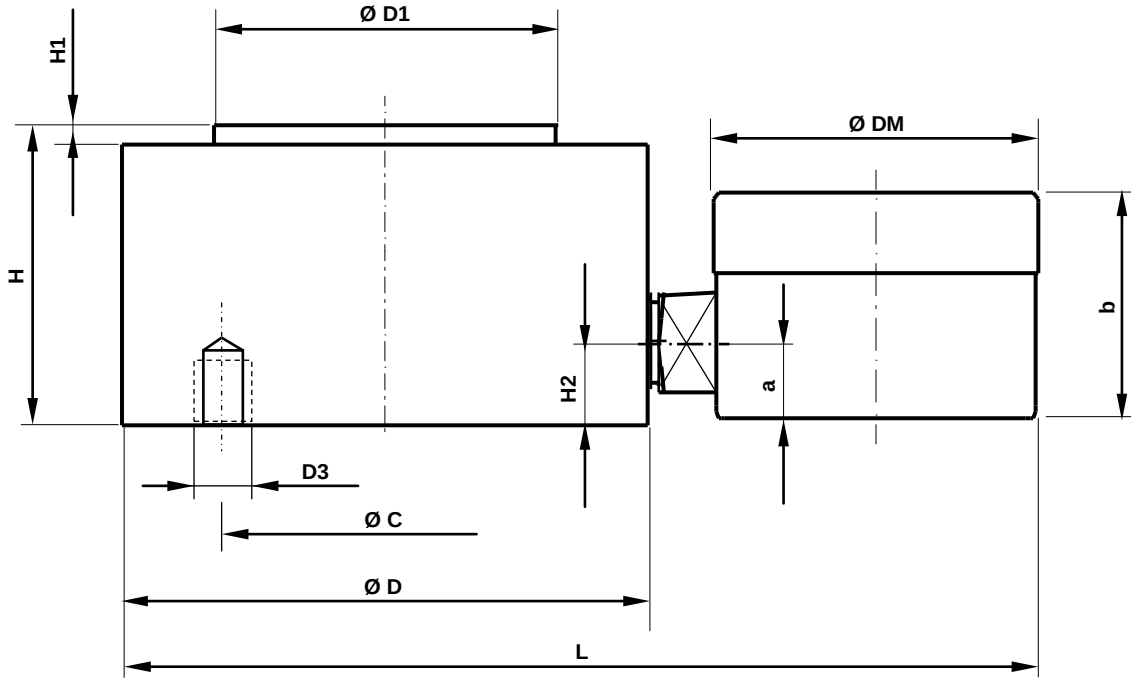
6 mm deep; 3x 120°; 60° right rotated

Other nominal loads and versions on request

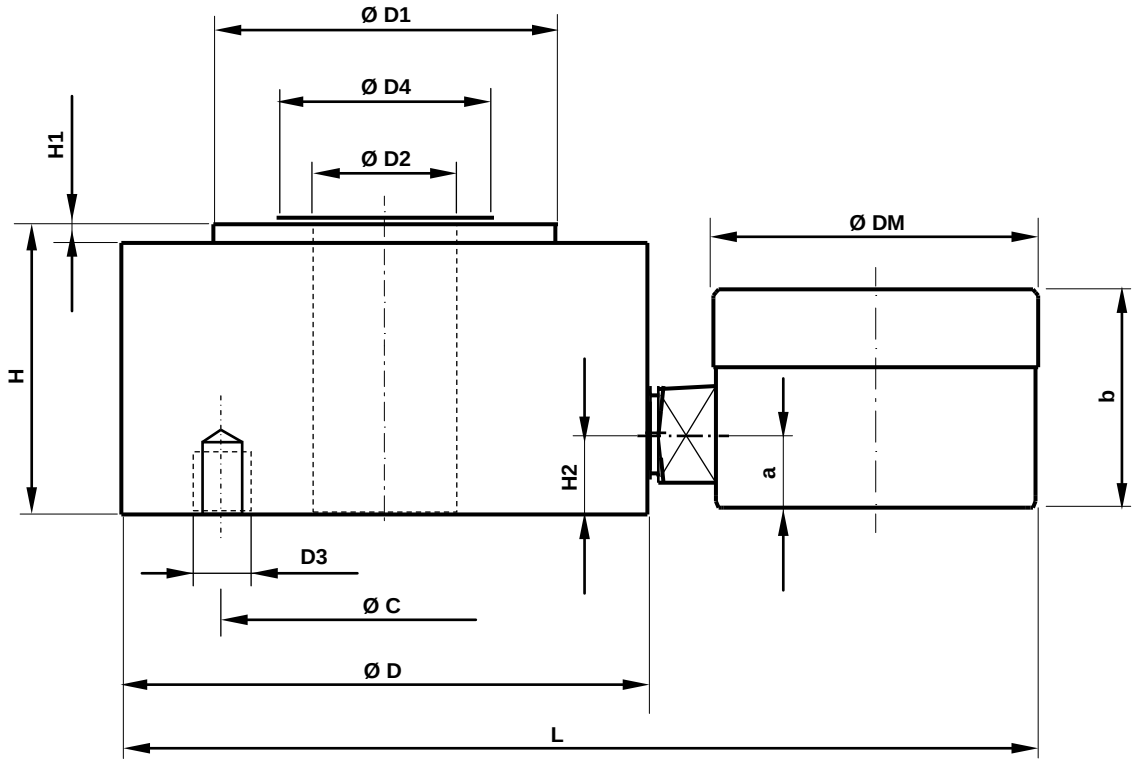
*Accuracy class: ≤ ±1,0% v.E.

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

Model: F1115



Model: F6116



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