

Hydraulic Compression Force Transducer Compact - Version

Forces from 2 kN up to 850 kN

F1135 – ND 80

F1145 – ND 141



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 $\pm 0,5\%$ 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 ... 2 kN up to 0 ... 850 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: F1135, F1145

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

Model	F1135 / F1145		Options
Nominal diameter	ND 80 / ND 141		
Nominal load F_{nom}	0 ... 2 kN up to 0 ... 850 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 ... +50°C		
Protection type acc. EN60529/IEC529	IP 65		
Housing	Stainless steel		
Piston	Stainless steel		
Connection type	direct		<ul style="list-style-type: none"> - Adapter - Capillary tube - Measuring tube for "leak free separation"
Display	Pressure gauge P1515 (NG63)	Digital pressure gauge P3962	<ul style="list-style-type: none"> - 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		

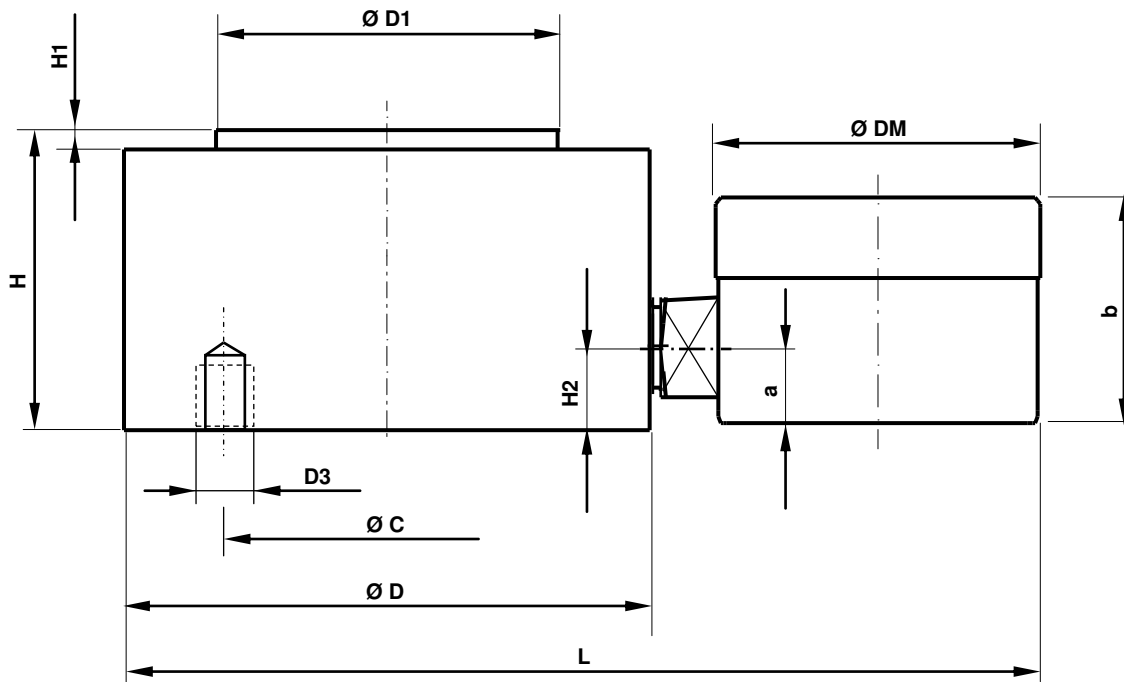
Version				Display		Options		Dimensions															
Model	ND [cm ²]	Nominal load	Resolution	bar	P1515	P3962	Meas. tube DN2 [max. L 1] [m]	Capillary tube [max. L 1] [m]	Ø D	Ø D1	Ø D2	Ø D3	Ø D4	Ø C	H	H1	H2	DM	a	b	ca. L	Weight [ca. kg]	
F1135	80	2 kN	100 N	2,5	■	-	---	---	8 mm deep; 3x 120°; 60° right rotated	138	100	---	M5	---	122	41	3	22,5	63	12,5	34	215	4,6
F1135	80	3,2 kN	100 N	4	■	-	---	1,0											(P1515)	(P1515)	(P1515)	(P1515)	(P1515)
F1135	80	5 kN	200 N	6	■	-	0,5	1,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	8 kN	200 N	10	■	-	1,0	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	12 kN	500 N	16	■	-	1,0	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	16 kN	-	20	-	■*	1,5	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	20 kN	1 kN	25	■	-	1,5	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	32 kN	1 kN	40	■	-	1,5	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	40 kN	-	50	-	■	2,0	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	50 kN	2 kN	60	■	-	2,0	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	80 kN	2 kN	100	■	■	2,0	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	120 kN	5 kN	160	■	■	2,0	4,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	200 kN	10 kN	250	■	■	3,2	4,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	250 kN	10 kN	315	■	-	3,2	4,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1135	80	320 kN	10 kN	400	■	■	3,2	6,0	(P3962)	(P3962)	(P3962)	(P3962)	(P3962)										
F1135	80	480 kN	20 kN	600	■	■	3,2	6,0	(P3962)	(P3962)	(P3962)	(P3962)	(P3962)										
F1145	141	6 kN	200 N	4	■	-	---	1,0	8 mm deep; 3x 120°; 90° right rotated	145	---	134	M5	---	122	50	2	19	63	12,5	34	220	5,6
F1145	141	8 kN	200 N	6	■	-	0,5	1,0											(P1515)	(P1515)	(P1515)	(P1515)	(P1515)
F1145	141	14 kN	500 N	10	■	-	1,0	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	22 kN	1 kN	16	■	-	1,0	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	28 kN	-	20	-	■*	1,5	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	34 kN	1 kN	25	■	-	1,5	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	60 kN	2 kN	40	■	-	1,5	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	70 kN	-	50	-	■	2,0	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	80 kN	2 kN	60	■	-	2,0	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	140 kN	5 kN	100	■	■	2,0	2,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	220 kN	10 kN	160	■	■	2,0	4,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	350 kN	10 kN	250	■	■	3,2	4,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	450 kN	20 kN	315	■	-	3,2	4,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	560 kN	20 kN	400	■	■	3,2	6,0											(P3962)	(P3962)	(P3962)	(P3962)	(P3962)
F1145	141	850 kN	50 kN	600	■	■	3,2	6,0	(P3962)	(P3962)	(P3962)	(P3962)	(P3962)										

Other nominal loads and versions on request

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

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Model: F1135 / F1145



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