Hydraulic Ring Force Transducer

Heavy Duty - Version

Forces from 8 kN up to 2500 kN

F6126 – ND 40
F6132 – ND 60
F6139 – ND 90
F6151 – ND 160
F6154 – ND 240
F6166 – ND 410

Description

Robust hydraulic ring force transducer for use in rough environmental conditions.

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.

The connection of the indicating device can optionally be done via capillary or measuring tube. This enables the customer to read the measurement result easily. Furthermore the measuring tube allows a “leak free separation“, which enables the change of the indicating unit without dismounting the force transducer.

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 min. ± 0,5% F.S.
- Very robust design for use in rough environmental conditions
- Connection optionally via capillary tube or measuring tube
- Operates without power supply
- Piston movement ≤ 0,8 mm
- 5 Years Leak-Proofness Guarantee*

Measuring range

- 0 ... 8 kN up to 0 ... 2500 kN

Applications

- Apparatus engineering
- Test and measurement equipment
- Special mechanical engineering
- Geotechnics
- Foundation construction

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

Model: F6126, F6132, F6139, F6151, F6154, F6166

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Selection - Dimension - Sheet: Hydraulic Ring Force Transducer – Heavy Duty - Version

Model	**F6126 / F6132 / F6139 / F6151 / F6154 / F6166**		**Optionen**
Nominal diameter	ND 40 / ND 60 / ND 90 / ND 160 / ND 240 / ND 410		
Nominal load F_{nom}	0 ... 8 kN up to 0 ... 3000 kN		
Version	**Analog Display**	**Digital Display**	
Accuracy class	≤ ±1,0% 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	< 0,8 mm		
Nominal temperature range	-25 … +90°C		
Protection type acc. EN60529/IEC529	IP 65		
Housing	Stainless steel		- Mounting flange
Piston	Stainless steel		
Diaphragm	Plastic		
Connection type	Adapter		- Capillary tube - Measuring tube for "leak free separation"
Display	Pressure gauge P2324 (ND100)	Digital pressure gauge P3962	- Drag pointer - Pressure gauge P2032 (ND63) - Pressure gauge 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	P2324	P3962	Meas. tube DN2 [max. L 1]	Capillary tube [max. L 1]	Ø A	Weight	Ø C	Ø D	Ø Tk	Ø G	H	E	F	H1	Weight [approx. kg]
							[m]		[mm]										
F6126	40	**4** kN	100 N	10	■	-	**1,0**	**2,0**											
F6126	40	**6** kN	100 N	16	■	-	**1,0**	**2,0**	100	83	38	25	70	M8	15	58	3	22,5	3,1
F6126	40	**8** kN	-	20	-	■*	**1,5**	**2,0**											
F6126	40	**10** kN	200 N	25	■	-	**1,5**	**2,0**											
F6126	40	**16** kN	500 N	40	■	-	**1,5**	**2,0**											
F6126	40	**20** kN	-	50	-	■	**2,0**	**2,0**						25 mm deep; 4x 90°; 45° right rotated					
F6126	40	**25** kN	500 N	60	■	-	**2,0**	**2,0**											
F6126	40	**40** kN	1 kN	100	■	-	**2,0**	**2,0**											
F6126	40	**60** kN	1 kN	160	■	-	**2,0**	**4,0**											
F6126	40	**100** kN	2 kN	250	■	■	**3,2**	**4,0**											
F6126	40	**160** kN	5 kN	400	■	■	**3,2**	**6,0**											
F6126	40	**240** kN	5 kN	600	■	■	**3,2**	**6,0**											
F6132	60	**6** kN	100 N	10	■	-	**1,0**	**2,0**											
F6132	60	**10** kN	200 N	16	■	-	**1,0**	**2,0**	120	100	56	40	90	M8	15	62	5	22,5	4,5
F6132	60	**12** kN	-	20	-	■*	**1,5**	**2,0**											
F6132	60	**15** kN	500 N	25	■	-	**1,5**	**2,0**											
F6132	60	**25** kN	500 N	40	■	-	**1,5**	**2,0**											
F6132	60	**30** kN	-	50	-	■	**2,0**	**2,0**											
F6132	60	**36** kN	1 kN	60	■	-	**2,0**	**2,0**											
F6132	60	**60** kN	1 kN	100	■	-	**2,0**	**2,0**											
F6132	60	**100** kN	2 kN	160	■	-	**2,0**	**4,0**						15 mm deep; 4x 90°; 45° right rotated					
F6132	60	**150** kN	5 kN	250	■	■	**3,2**	**4,0**											
F6132	60	**250** kN	5 kN	400	■	■	**3,2**	**6,0**											
F6132	60	**350** kN	10 kN	600	■	■	**3,2**	**6,0**											
F6139	90	**9** kN	200 N	10	■	-	**1,0**	**2,0**											
F6139	90	**15** kN	500 N	16	■	-	**1,0**	**2,0**	170	130	80	60	120	M10	18	68	5	22,5	10,5
F6139	90	**18** kN	-	20	-	■*	**1,5**	**2,0**											
F6139	90	**24** kN	500 N	25	■	-	**1,5**	**2,0**											
F6139	90	**35** kN	1 kN	40	■	-	**1,5**	**2,0**											
F6139	90	**45** kN	-	50	-	■	**2,0**	**2,0**											
F6139	90	**55** kN	1 kN	60	■	-	**2,0**	**2,0**											
F6139	90	**95** kN	2 kN	100	■	-	**2,0**	**2,0**											
F6139	90	**150** kN	5 kN	160	■	-	**2,0**	**4,0**											
F6139	90	**225** kN	5 kN	250	■	■	**3,2**	**4,0**						18mm deep; 4x 90°; 45° right rotated					
F6139	90	**350** kN	10 kN	400	■	■	**3,2**	**6,0**											
F6139	90	**550** kN	10 kN	600	■	■	**3,2**	**6,0**											

F6151	160	**16**	kN	500 N	10	■	-	**1,0**	**2,0**											
F6151	160	**25**	kN	500 N	16	■	-	**1,0**	**2,0**	210	188	120	100	170	M10	18	70	5	22,5	13,5
F6151	160	**34**	kN	-	20	-	■*	**1,5**	**2,0**											
F6151	160	**40**	kN	1 kN	25	■	-	**1,5**	**2,0**											
F6151	160	**65**	kN	1 kN	40	■	-	**1,5**	**2,0**											
F6151	160	**80**	kN	-	50	-	■	**2,0**	**2,0**											
F6151	160	**100**	kN	2 kN	60	■	-	**2,0**	**2,0**											
F6151	160	**160**	kN	5 kN	100	■	■	**2,0**	**2,0**											
F6151	160	**250**	kN	5 kN	160	■	■	**2,0**	**4,0**											
F6151	160	**400**	kN	10 kN	250	■	■	**3,2**	**4,0**											
F6151	160	**650**	kN	10 kN	400	■	■	**3,2**	**6,0**											
F6151	160	**1000**	kN	20 kN	600	■	■	**3,2**	**6,0**											
F6154	240	**25**	kN	500 N	10	■	-	**1,0**	**2,0**											
F6154	240	**40**	kN	1 kN	16	■	-	**1,0**	**2,0**	250	225	142	125	200	M12	20	75	5	22,5	20,5
F6154	240	**50**	kN	-	20	-	■*	**1,5**	**2,0**											
F6154	240	**60**	kN	1 kN	25	■	-	**1,5**	**2,0**											
F6154	240	**100**	kN	2 kN	40	■	-	**1,5**	**2,0**											
F6154	240	**120**	kN	-	50	-	■	**2,0**	**2,0**											
F6154	240	**150**	kN	5 kN	60	■	-	**2,0**	**2,0**											
F6154	240	**250**	kN	5 kN	100	■	■	**2,0**	**2,0**											
F6154	240	**400**	kN	10 kN	160	■	■	**2,0**	**4,0**											
F6154	240	**600**	kN	10 kN	250	■	■	**3,2**	**4,0**											
F6154	240	**1000**	kN	20 kN	400	■	■	**3,2**	**6,0**											
F6154	240	**1500**	kN	50 kN	600	■	■	**3,2**	**6,0**											
F6166	410	**40**	kN	1 kN	10	■	-	**1,0**	**2,0**											
F6166	410	**65**	kN	1 kN	16	■	-	**1,0**	**2,0**	310	280	180	160	260	M12	22	75	5	22,5	30,5
F6166	410	**80**	kN	-	20	-	■*	**1,5**	**2,0**											
F6166	410	**100**	kN	2 kN	25	■	-	**1,5**	**2,0**											
F6166	410	**160**	kN	5 kN	40	■	-	**1,5**	**2,0**											
F6166	410	**200**	kN	-	50	-	■	**2,0**	**2,0**											
F6166	410	**250**	kN	5 kN	60	■	-	**2,0**	**2,0**											
F6166	410	**400**	kN	10 kN	100	■	■	**2,0**	**2,0**											
F6166	410	**650**	kN	10 kN	160	■	■	**2,0**	**4,0**											
F6166	410	**1000**	kN	20 kN	250	■	■	**3,2**	**4,0**											
F6166	410	**1600**	kN	50 kN	400	■	■	**3,2**	**6,0**											
F6166	410	**2500**	kN	50 kN	600	■	■	**3,2**	**6,0**											

Other nominal loads and versions on request

*Accuracy class: ≤ ±1,0% v.E.

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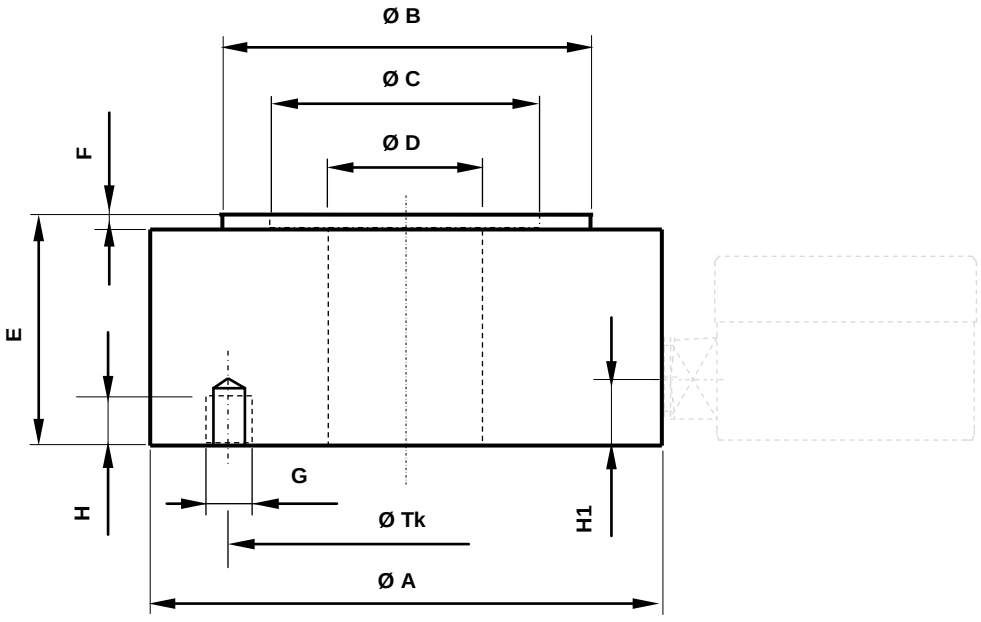

Remark: **Couplings of the hydraulic force transducer must not be disconnected!**
In case of violation there will be no guarantee and no measuring function.