Hydraulic compression force transducer
Compact version, for forces of 550 N to 310 kN
Model F6198

Applications

- Equipment manufacturing
- Construction of jigs and fixtures
- Special-purpose machine building
- Measuring and control systems

Special features

- Measuring ranges 0 ... 550 N to 0 ... 310 kN [0 ... 123,645 lbf to 0 ... 69,691 lbf]
- Relative linearity error
  ±1.0 % F_{nom} with analogue pressure gauge,
  ±0.5 % F_{nom} with digital pressure gauge or pressure sensor
- Piston stroke ≤ 0.5 mm [≤ 0.02 in]
- Operates without supply voltage
- 5-year leak-tightness warranty

Hydraulic compression force transducer, model F6198

Description

This compact hydraulic force transducer enables the simple and economical detection and display of forces.

The force is measured using the principle of hydraulics: The force acting on a piston leads to a pressure increase that can be visualised on a connected display instrument. The scale of the display instrument can be designed in various units, e.g. N, kN, kg, t.

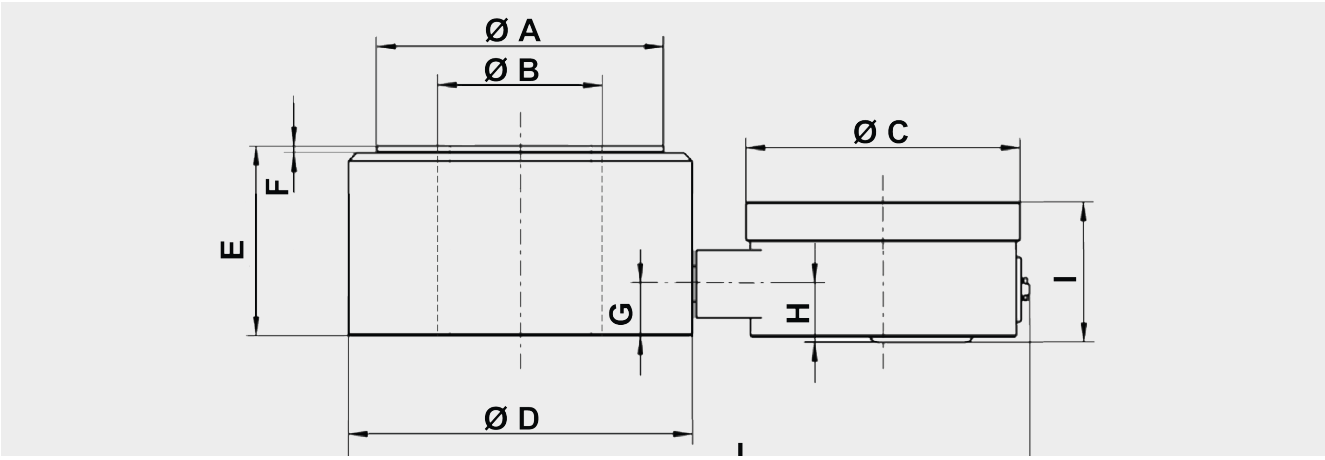
Leak-tightness warranty
The warranty on leak tightness of the hydraulic force measuring unit was extended to 5 years (provided the force measuring unit is used as intended). A force transducer that starts to leak within this period will be repaired free of charge. In this way, we are underlining the quality of our hydraulic force transducers and our confidence in our own technology.

Data sheets showing similar products:
Hydraulic ring force transducer; compact version to 120 kN; model F6116; see data sheet: FO 52.18
Hydraulic ring force transducer; geotechnical version to 700 kN; model F6137; see data sheet: FO 52.20
Hydraulic ring force transducer; geotechnical version to 1,500 kN; model F6148; see data sheet: FO52.21
Hydraulic ring force transducer; heavy Duty version to 1,500 kN; model F6154; see data sheet: FO 52.17

Specifications per VDI/VDE/DKD 2638

Model F6198	
Rated force F_{nom}	0 ... 550 N to 0 ... 310 kN [0 ... 123,645 lbf to 0 ... 69,691 lbf]
Nominal size	NS 35
Display	■ Pressure gauge, model 213.40 (NS 63) ■ Pressure gauge, model 23x.50.100 with max. value pointer ■ Digital pressure gauge, model DG-10 ■ Pressure sensor (on request)
Relative linearity error d_{lin}	
Pressure gauge	≤ ±1.6 % F_{nom}
Pressure sensor/digital pressure gauge	≤ ±0.5 % F_{nom}
Limit force F_L	100 % F_{nom}
Breaking force F_B	> 130 % F_{nom}
Rated displacement s_{nom}	< 0.5 mm [< 0.02 in]
Rated temperature range $B_{T, nom}$	-10 … +50 °C [14 ... 122 °F]
Ingress protection (per EN/IEC 60529)	
Pressure gauge / Digital pressure gauge	IP65
Pressure sensor	IP67
Case	Stainless steel
Piston	Stainless steel
Mounting type	
Pressure gauge	Direct mounting
Digital pressure gauge/pressure sensor	Direct mounting
Option	■ Capillary ■ Measuring hose for “separation without any loss less connection“
Fill fluid	Glycerine 70 % / water 30 %
Force introduction (optional)	Threaded holes on the bottom of the case
Weight	6 kg [13.23 lbs]

Dimensions in mm [in]



Add-on measuring device	Dimensions in mm [in]									
	Ø A	Ø B	Ø C	Ø D	E	F	G	H	I	L
213.40	106 [4.17]	52 [2.05]	63 [2.5]	127 [5]	50.8 [2]	4 [0.16]	19.5 [0.78]	12.5 [0.5]	34 [1.34]	220 [8.66]
DG-10			83.5 [3.3]					15.8 [0.62]	43.1 [1.7]	230 [9.05]

Version				Pressure gauge	Digital pressure gauge	Options	
Rated force		Graduation		System pressure	Model 213.40	Model DG-10	Measuring hose DN 2 (max. L)	Capillary (max. L)
				bar			m	m
550 [123.7]	N/[lbf]	10 [2.3]	N/[lbf]	1.6	■	-	-	-
900 [202.3]		20 [4.5]		2.5	■	-	-	-
1.4 [314.7]	kN/[lbf]	50 [11.2]		4	■	-	-	1.0
2.0 [449.6]		100 [22.5]		6	■	-	0.5	1.0
3.5 [786.8]		100 [22.5]		10	■	-	1.0	2.0
5.5 [1,237]		100 [22.5]		16	■	-	1.0	2.0
7 [1,574]		-		20	-	■ 1)	1.5	2.0
9 [2,023]		200 [45]		25	■	-	1.5	2.0
14 [3,147]		400 [90]		40	■	-	1.5	2.0
18 [4,047]		-		50	-	■	2.0	2.0
20 [4,496]		1 [224.8]	kN/[lbf]	60	■	-	2.0	2.0
35 [7,868]		1 [224.8]		100	■	■	2.0	2.0
55 [12,365]		2 [449.6]		160	■	■	2.0	
90 [20,233]		2 [449.6]		250	■	■	3.2	Other lengths on request
110 [24,729]		5 [1,124]		315	■	-	3.2	
140 [31,473]		5 [1,124]		400	■	■	3.2	
210 [47,210]		10 [2,248]		600	■	■	3.2	
310 [69,691]		10 [2,248]		885	■	■	-	-
Other rated forces and versions on request								

■ = possible selection / - = not available
1) Relative linearity error ≤ ±1.0 % Fnom

02/2023 EN

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