

Compression load cell PR 6202 and mounting kit PR 6002

Hygienic design for silo and vessel weighing



Hygienic Design



German Quality

The compression load cells in the PR 6202 series are specially developed for the complex demands of the food, pharmaceutical and chemical industry. Together with the mounting kits in the PR 6002 series, they are characterised by simple cleaning and safe inspection, and therefore offer the optimal hygienic design for silo and vessel weighing.

The right solution for all of these uses:



Weighing



Filling
and dosing



Fill quantity
control

Technical specifications

Compression load cell PR 6202						
Parameter	Description	Abbr.	C1	C3	C4	Unit
Accuracy class			0.03	0.015	0.012	%E _{max}
Minimum dead load	Lowest limit of specified measuring range	E _{min}	0	0	0	%E _{max}
Maximum capacity	Highest limit of specified measuring range	E _{max}	See ordering information table			kg
Safe load limit	Maximum load without irreversible damage	E _{lim}	150	150	150	%E _{max}
Destructive load	Danger of mechanical destruction	E _d	>300	>300	>300	%E _{max}
Minimum LC verification	Minimum load cell verification interval; V _{min} = E _{max} /Y For E _{max} = 2 t	Y	5,000	14,000	16,000	
		Y	5,000	10,000	/	
Deadload output return	Factor for deadload output return after load (DR=1/2*E _{max} /Z)	Z	1,000	3,000	4,000	
Rated output	Relative output at maximum capacity	C _n	2			mV/V
Tolerance on rated output	Permissible deviation from rated output	d _c	<0.25	<0.07	0.07	%C _n
Zero output signal	Load cell output signal under unloaded condition	S _{min}	<1.0	<1.0	<1.0	%C _n
Reproducibility	Max. change in load cell output for repeated loading	ε _R	<0.01	<0.005	<0.005	%C _n
Creep	Max. change of output signal under E _{max} during 30 min.	d _{cr}	<0.03	<0.015	<0.0125	%C _n
Non-linearity	Max. deviation from best straight line through zero	d _{lin}	<0.03	<0.01	<0.01	%C _n
Hysteresis	Max. difference in LC output between loading and unloading	d _{hy}	<0.03	<0.015	<0.0125	%C _n
Temperature effect (TK) on S _{min}	Max. change of S _{min} in B _T	TK _{Smin}	<0.028	<0.01	<0.007	%C _n /10 K
Temperature effect (TK) on C	Max. change of C in B _T	TK _C	<0.02	<0.01	<0.008	%C _n /10 K
Input impedance	Between supply terminals	R _{LC}	1,080±10			Ω
Output impedance	Between measuring terminals	R _O	1,010±2	1,010±1	1,010±1	Ω
Insulation impedance	Between measuring circuit and housing at 100 V _{DC}	R _{IS}	>5,000×10 ⁶			Ω
Insulation voltage	Between circuit and housing (PR 62../..E only)		500			V
Recommended supply voltage	To hold the specified performance	B _u	4...24			V
Max. supply voltage	Permissible for continuous operation without damage	U _{max}	32 (EX versions: 25)			V
Nominal ambient temp. range	To hold the specified performance	B _T	-10...+70	-10...+55	-10...+55	°C
Usable ambient temp. range	Permissible for continuous operation without damage	B _{TU}	-40...+95			°C
Storage temperature range	Without electrical and mechanical stress	B _{TI}	-40...+95			°C
Permissible inclination	Permissible displacement from nominal load line	S _{ex}	10			mm
Vibration resistance	Resistance against oscillations (IEC 68-2-6 Fc)		20 g, 100 h, 10... 150 Hz			
Barometric pressure influence	Influence of barometric pressure on output	PK _{Smin}	1 t... 10 t: 190/25 t...50 t: 390			g/kPa
Nominal deflection	Max. elastic deformation under nominal load	S _{nom}	Up to 6 t: ≤0.3 Up to 25 t: ≤0.5 50 t: ≤0.8			mm
Material (load cell housing)	Stainless steel 1.4404 acc. DIN EN 10088-3 (conforms to 316L AISI/SAE)					
Protection class	IP68 / IP69					
Cable	Length: E _{max} ≤10 t: 5 m, E _{max} >10 t: 12 m Diameter: 5 mm Cross section: 4×0.35 mm ² Material cable sheath: TPE					
Bending radius	≥25 mm at fixed installation ≥75 mm at flexible installation					

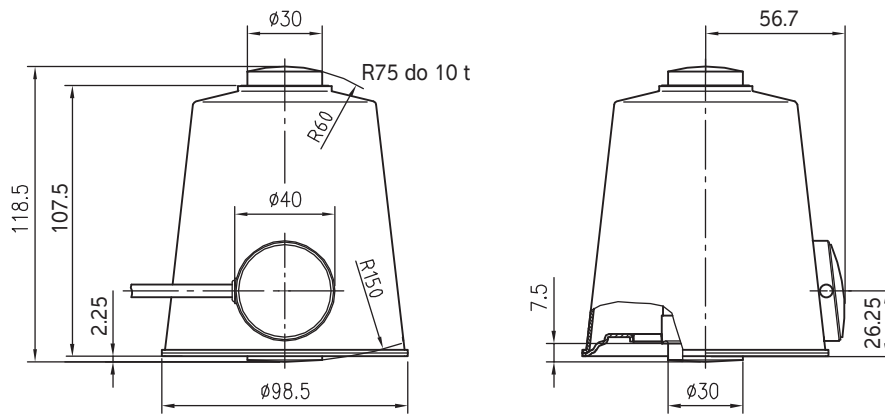
Mounting kit PR 6002

Maximum capacity of load cell	Mounting kit// accessories	Material	Description/comments	Mounting screws	Installation height (mm)	Max. permissible horizontal force (kN)	Max. permissible lift-off force [kN]	Max. permissible eccentricity	Max. permissible vertical load without load cell
1 t–10 t	PR 6002/00S	Stainless steel 1.4542	Upper and lower load disc	/	160.5	/	/	/	/
	PR 6002/02S	Stainless steel 1.4301 (AISI 304)	Plate mounting kit incl. upper and lower load disc	M12	190.5	/	/	/	/
	PR 6002/04S		Plate mounting kit incl. load discs, lift-off and fall protection	M12		/	25	± 5 mm	2.5 t
	PR 6002/10S		FlexLOCK	M12		25	25	± 5 mm	2.5 t
25 t–50 t	PR 6002/01S	Stainless steel 1.4542	Upper and lower load disc	/	160.5	/	/	/	/
	PR 6002/03S	Stainless steel 1.4301 (AISI 304)	Plate mounting kit incl. upper and lower load disc	M12	190.5	/	/	/	/
	PR 6002/05S		Plate mounting kit incl. load discs, lift-off and fall protection	M12		/	25	± 5 mm	2.5 t (10 t*)
	PR 6002/11S		FlexLOCK	M12		25	25	± 5 mm	2.5 t (10 t*)

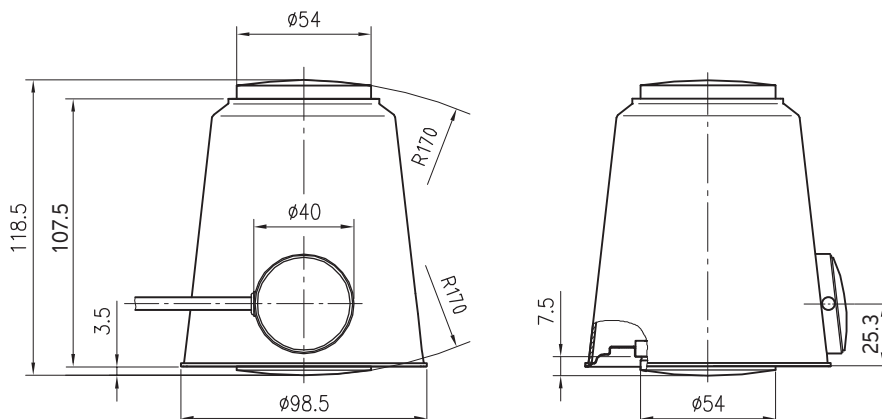
* max. permissible vertical load with transport protection (supports)

Technical diagrams

Compression load cell PR 6202 (1 t ... 10 t)

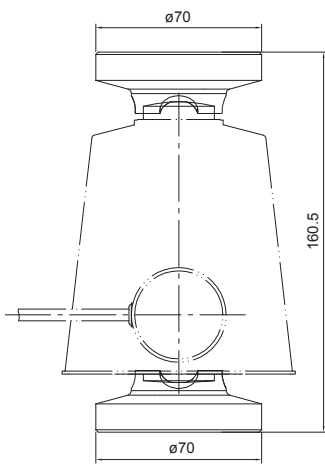


Compression load cell PR 6202 (25 t ... 50 t)

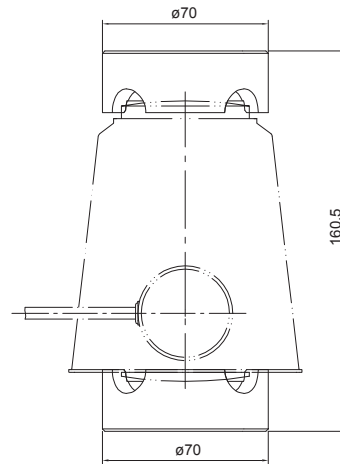


All dimensions in mm

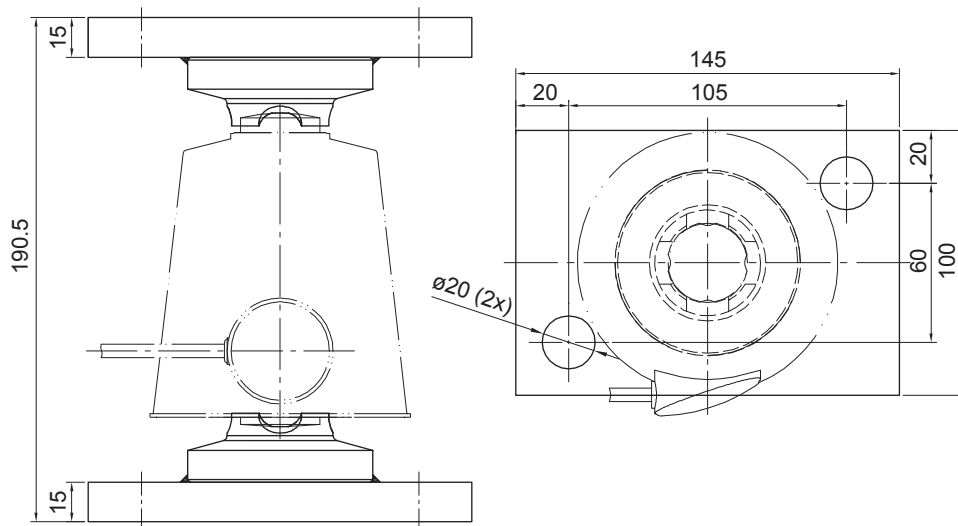
Mounting kit PR 6002/00S



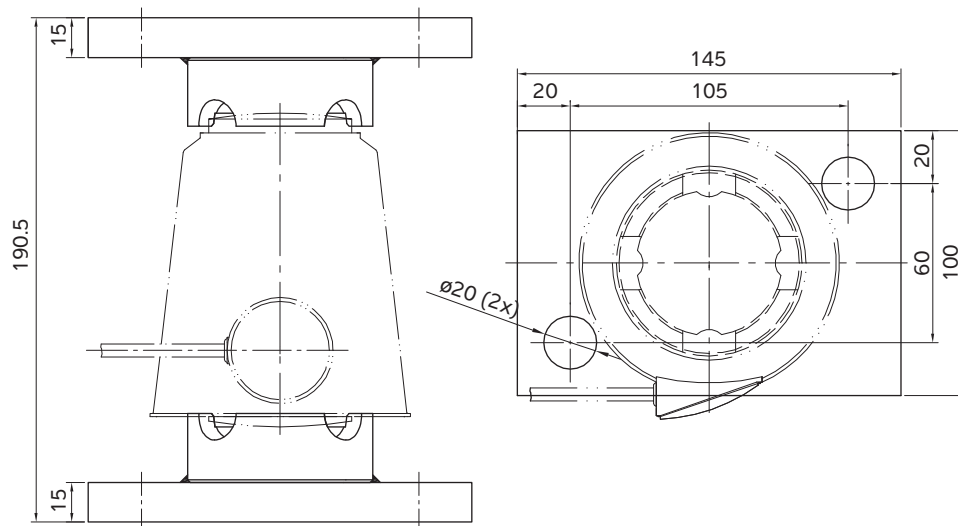
Mounting kit PR 6002/01S



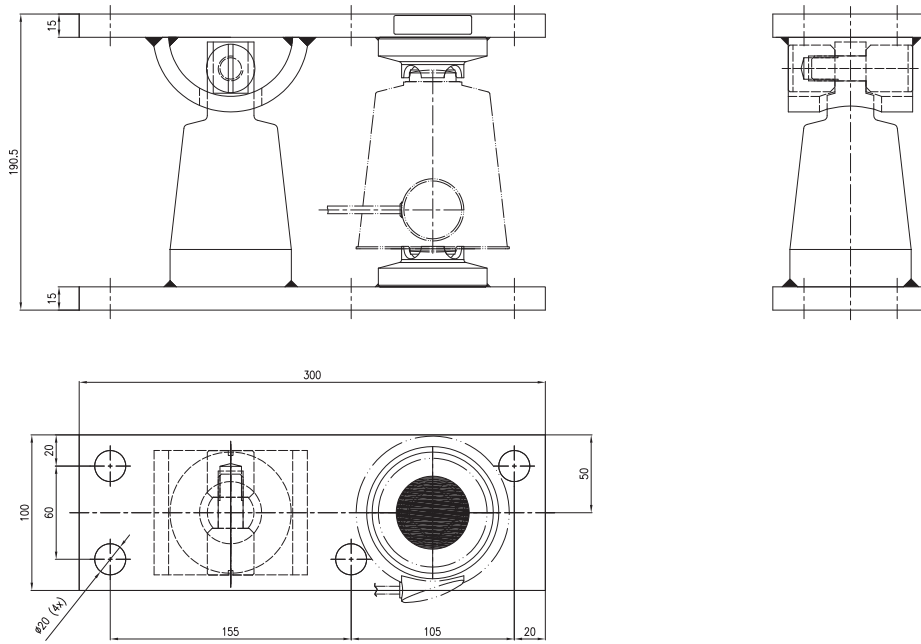
Mounting kit PR 6002/02S



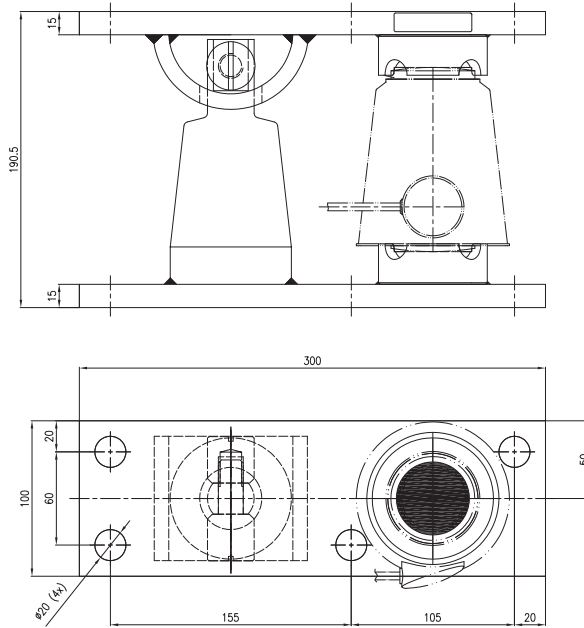
Mounting kit PR 6002/03S



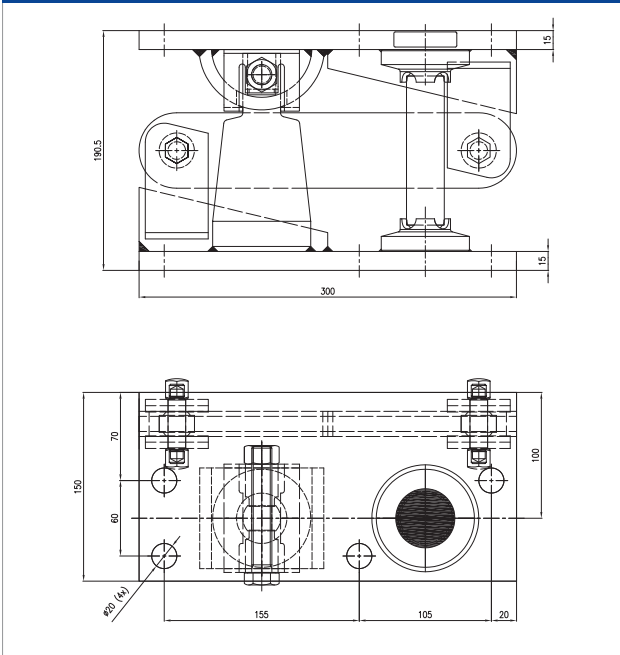
Mounting kit PR 6002/04S



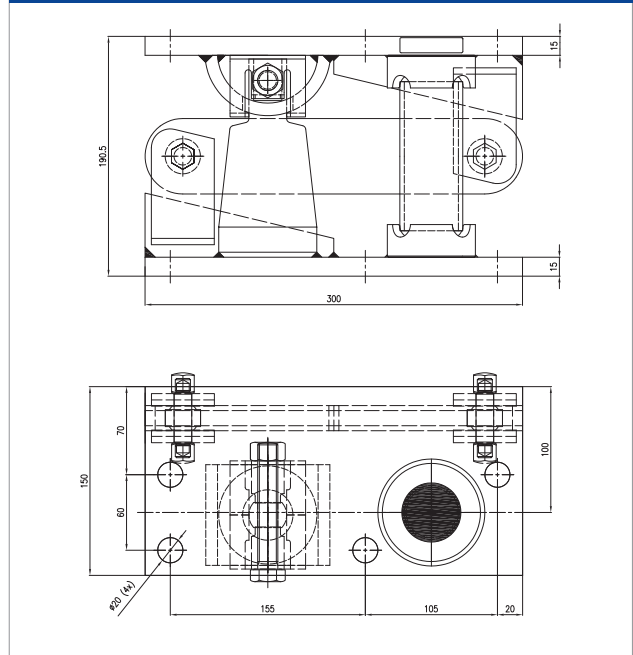
Mounting kit PR 6002/05S



FLEXLOCK mounting kit PR 6002/10S



FLEXLOCK mounting kit PR 6002/11S



All dimensions in mm

Ex approval

Scope of validity:

PR 6202/... E (1 t ... 50 t)



Hygienic Design



Explosion protection

Hygiene certificate compression load cell PR 6202

Zone	Labelling	Certificate number	For
0 and 1	II 1G Ex ia IIC T6 Ga Ex ia IIC T6 Ga	BVS 16 ATEX E 005 IECEX BVS 16.0005	PR 6202/ ... E
20 and 21	II 1D Ex ta IIIC T160 °C Da Ex ta IIIC T160°C Da	TÜV 03 ATEX 2301 X IECEX TUN 17.0025X	all PR 6202
2 and 22	II 3G Ex nA IIC T6 Gc II 3D Ex tc IIIC T85 °C Dc	Manufacturer's declaration	all PR 6202
FMus class I, II, III div. 1 + 2	IS CL I, II, III, DIV 1, GP A,B,C,D,E,F,G Entity – 4012 101 5688 NI CL I, II, III, DIV 2, GP A,B,C,D,E,F,G – 4012 101 5688; NIFW T4A Ta= -30°C to 70°C; T5 Ta= -30°C to 55°C	FM17US0276	all PR 6202
FMca class I, II, III div. 1 + 2	IS CL I, II, III, DIV 1, GP A,B,C,D,E,F,G Entity – 4012 101 5688 NI CL I, II, III, DIV 2, GP A,B,C,D, E, F, G – 4012 101 5688; NIFW T4A Ta= -30°C to 70°C; T5 Ta= -30°C to 55°C	FM17CA0138	all PR 6202

Ordering information

The accuracy class of the compact compression load cell PR 6211 is classified and checked in accordance with OIML R60.



Compression load cells, accuracy class C1=0.03%

Type	Order number
PR 6202/1tC1	940520202210
PR 6202/2tC1	940520202220
PR 6202/4tC1	940520202240
PR 6202/6tC1	940520202260
PR 6202/10tC1	940520202310
PR 6202/25tC1	940520202325
PR 6202/50tC1	940520202350

Compression load cells, accuracy class C1=0.03%, EX version

Type	Order number
PR 6202/1tC1E	940560202210
PR 6202/2tC1E	940560202220
PR 6202/4tC1E	940560202240
PR 6202/6tC1E	940560202260
PR 6202/10tC1E	940560202310
PR 6202/25tC1E	940560202325
PR 6202/50tC1E	940560202350

Compression load cells, accuracy class C3=0.015%

Type	Order number
PR 6202/2tC3	9405202 03220
PR 6202/4tC3	940520203240
PR 6202/6tC3	940520203260
PR 6202/10tC3	940520203310
PR 6202/25tC3	940520203325
PR 6202/50tC3	940520203350

Compression load cells, accuracy class C3= 0.015%, EX version

Type	Order number
PR 6202/2tC3E	940560203220
PR 6202/4tC3E	940560203240
PR 6202/6tC3E	940560203260
PR 6202/10tC3E	940560203310
PR 6202/25tC3E	940560203325
PR 6202/50tC3E	940560203350

Compression load cells, accuracy class C4=0.012%

Type	Order number
PR 6202/4tC4	940520204240
PR 6202/6tC4	940520204260
PR 6202/10tC4	940520204310
PR 6202/25tC4	940520204325
PR 6202/50tC4	940520204350

Compression load cells, accuracy class C4=0.012%, EX version

Type	Order number
PR 6202/4tC4E	940560204240
PR 6202/6tC4E	940560204260
PR 6202/10tC4E	940560204310
PR 6202/25tC4E	940560204325
PR 6202/50tC4E	940560204350

Load disc kits for compression load cell PR 6202

Type	Order number
PR 6002/00S (1 t–10 t)	940536002002
PR 6002/01S (25 t–50 t)	940536002012

Plate mounting kits, not incl. constrainer, for mounting kit PR 6002

Type	Order number
PR 6002/02S (1 t–10 t)	940536002022
PR 6002/03S (25 t–50 t)	940536002032
PR 6002/04S (1 t–10 t)	940536002042
PR 6002/05S (25 t–50 t)	940536002052

FLEXLOCK mounting kits with integrated constrainer for mounting kit PR 6002

Type	Order number
PR 6002/10S (1 t–10 t)	940536002102
PR 6002/11S (25 t–50 t)	940536002112

The products and solutions presented in this data sheet make major contributions in the following sectors:



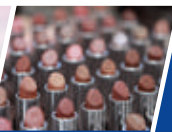
Food and beverages



Pharmaceutical



Chemical



Cosmetics

The technical data given serves as a product description only and should not be understood as guaranteed properties in the legal sense.

Specifications subject to change without notice.
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