



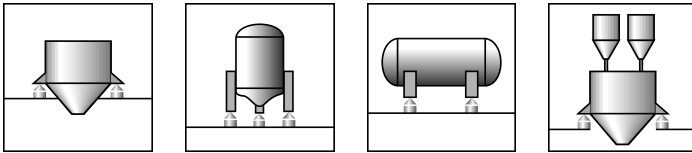
Z6...

Load cells



Special features

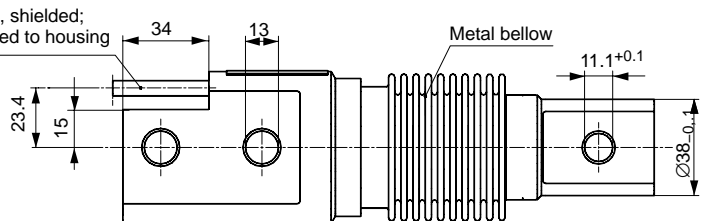
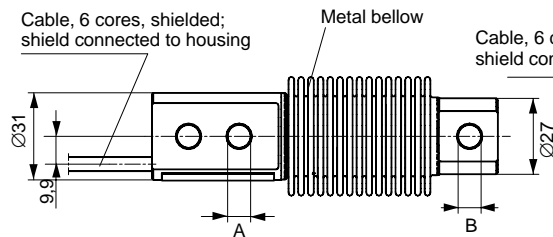
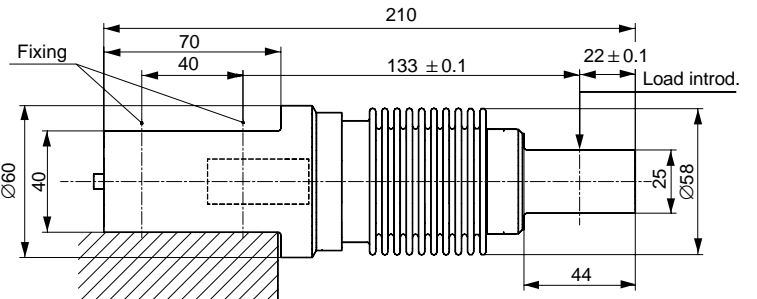
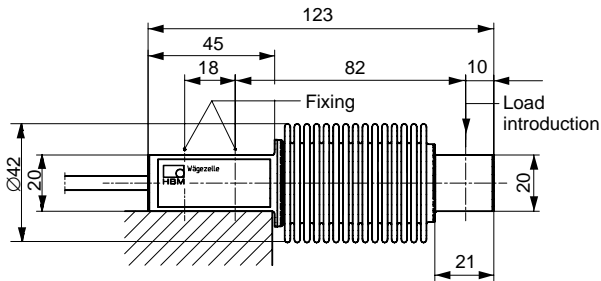
- Welded on metal bellow
- Max. capacities 5 kg...1 t
- Load cells and mounting aids entirely made from stainless material
- Complies with OIML R60 regulations up to 6000 d
- Six-wire circuit
- Optimized for parallel connection with corner-pretadjustment
- Meets today EMC/ESD requirements according to EN 45501
- Explosion proof version acc. to ATEX 95 optional



Dimensions (in mm; 1 mm = 0.03937 inches)

Z6; Max. capacities 5 kg...500 kg

Z6; Max. capacity 1 t



	A	B
5...200 kg	8.2	8.2
500 kg	10.5	11.1

Specifications

Type		Z6FD1	Z6FC3	Z6FC3MI	Z6FC4	Z6FC6			
Accuracy class according to OIML R 60		D1	C3	C3/M17.5	C4	C6			
Maximal numbers of load cell verif. intervals (n_{LC})		1000	3000	3000	4000	6000			
Max. capacity (E_{max})	kg	5; 10; 20; 50; 100; 200; 500	10; 20; 50; 100; 200; 500	50; 100; 200	20; 50; 100; 200; 500	50; 100; 200;			
	t	1	1	-	-	-			
Minimum load cell verification interval (v_{min})	% of E_{max}	0.0360	0.0090	0.0066					
Min. dead load output return (D_{DR})		-	-	$0.5 \cdot E_{max} / 7500$	-	-			
Sensitivity (C_n)	mV/V	2							
Tolerance on sensitivity	%	+1; -0.1	$\pm 0.05^1$						
Temperature effect on sensitivity (TK_C) ²⁾	% of C_n	± 0.0500	± 0.0080	± 0.0080	± 0.0070	± 0.0040			
Temperature effect on zero balance (TK_0)	% of $C_n / 10$ K	± 0.0500	± 0.0125	± 0.0093	± 0.0093	± 0.0093			
Hysteresis error (d_{ny}) ²⁾		± 0.0500	± 0.0170	± 0.0066	± 0.0130	± 0.0080			
Linearity deviation (d_{lin}) ²⁾	% of C_n	± 0.0500	± 0.0180	± 0.0180	± 0.0150	± 0.0110			
Creep (d_{DR}) in 30 min.		± 0.0490	± 0.0166	± 0.0098	± 0.0125	± 0.0083			
Input resistance (R_{LC}) (black-blue)	Ω	350...480							
Output resistance (R_0) (red-white)		356 ± 0.2	356 ± 0.12						
Reference excitation voltage (U_{ref})	V	5							
Nominal range of excitation voltage (B_U)		0.5...12							
Insulation resistance (R_{is})	G Ω	> 5							
Nominal temperature range (B_T)		-10...+40 [-15...+105]							
Service temperature range (B_{tu})	$^{\circ}C$ [$^{\circ}F$]	-30...+70 [-20...+160]							
Storage temperature range (B_{st})		-50...+85 [-60...+185]							
Safe load limit (E_L)		150							
Breaking load (E_d)	% of E_{max}	≥ 300							
Max. capacity	kg	5	10	20	50	100	200	500	1000
Permissible dynamic load (F_{srel})	% of E_{max}	100	100	100	100	100	100	70	100
Deflection at max. load, (s_{nom}) approx. (± 15 %)	mm	0.24	0.3	0.29	0.27	0.31	0.39	0.6	0.55
Weight (G), approx.	kg	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.3
Protection class (IP) acc. to EN60529 (IEC529)		IP 68 (more rigorous test conditions: 100 h at 1 m water column)							
Material	Measuring body Metal below Cable entrance Cable sheath	stainless steel stainless steel stainless steel / Viton® PVC							

1) With Z6FC3/10kg load cell: $\leq \pm 0.1$ %.

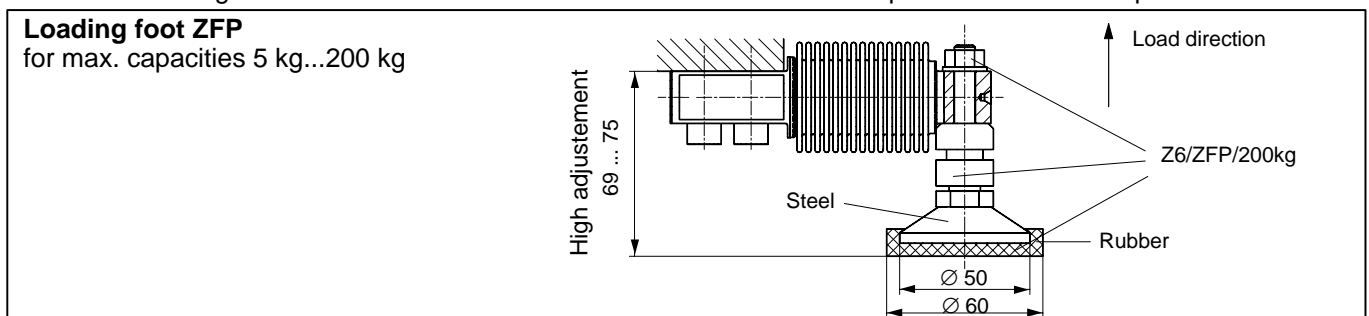
2) The data for deviation of linearity, hysteresis and temperature effect on sensitivity are typical values. The sum of these data meets the requirements according to OIML R60.

Options:

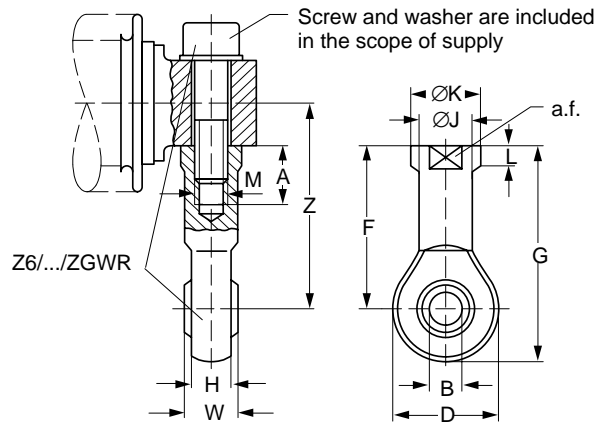
- Explosion-proof versions according to ATEX 95:**
- II 2 G EEx ia IIC T4 resp. T6 (Zone 1) *)
 - II 3 G EEx nA II T6 (Zone 2)
 - II 2 D IP68 T80 $^{\circ}C$ (Zone 21) *)
 - II 3 D IP68 T80 $^{\circ}C$ (Zone 22 for non-conductive dust)
- *) with EC-type examination certificate

Mounting aids, not included in scope of supply (Dimensions in mm; 1 mm = 0.03937 inches)

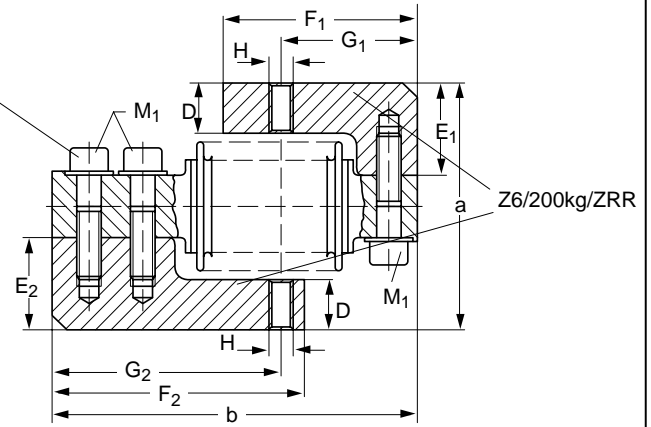
Note: All mounting aids are made from stainless material. The ZEL rubber parts are from chloroprene caoutchouc.



ZGWR Knuckle eye (maintenance-free)
for max. capacities of 5 kg...1 t



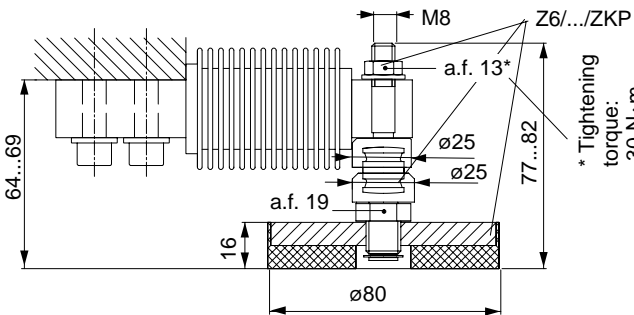
ZRR Fold-back arm for max. capacities of 5 kg...200 kg



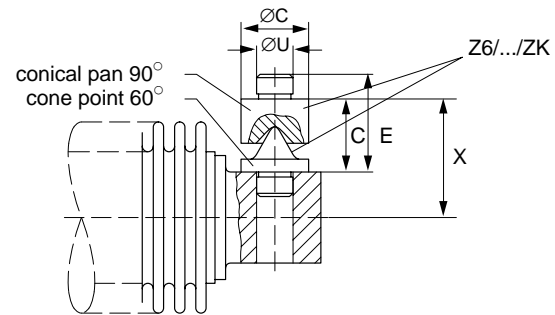
Max. capacity	ZGWR Knuckle eye	A	B	D	F	G	H	Ø J	Ø K	L	M	a.f.	W	Z
5 kg...200 kg	Z6/200kg/ZGWR	16	8 ^{H7}	24	36	48	9	12.5	16	5	M8	14	12	46
500 kg/1 t	Z6/1t/ZGWR	20	10 ^{H7}	28	43	57	10.5	15	19	6.5	M10	17	14	53/55.5

Max. capacity	ZRR Fold-back arm	D	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H	M ₁	a	b	Width
5 kg...200 kg	Z6/200kg/ZRR	16	30	30	65	85	46	77	M8	M8x30	80 ± 1.1	123	15

Loading foot ZKP for max. capacities 5 kg...200 kg

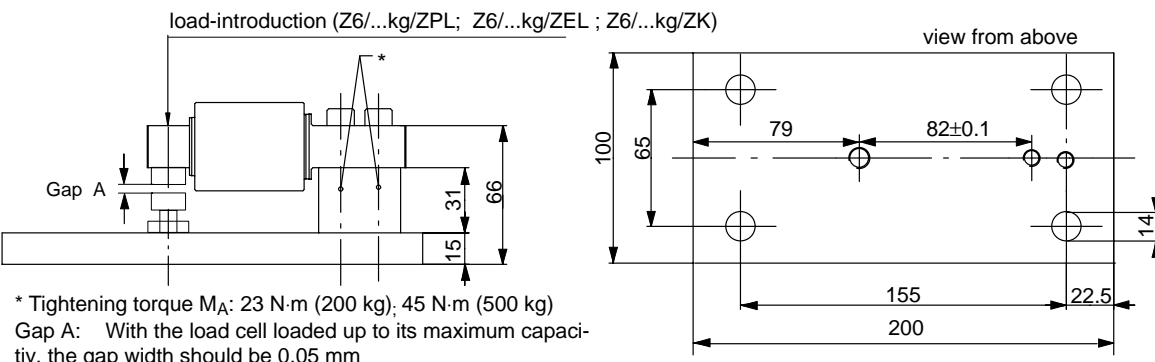


Cone and conical pan ZK for max. capacities 5 kg...1 t

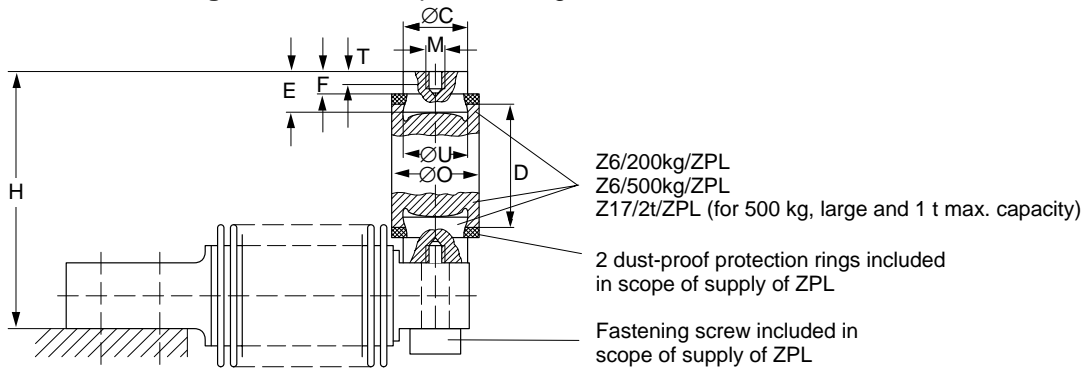


Max. capacity	Cone and conical pan ZK	Ø C	D	E	Ø U	X
5...200 kg	Z6/200kg/ZK	15	16	21	8.1 _{-0.05}	26
500 kg	Z6/1t/ZK	18	24	32	11 _{-0.05}	34
1 t	Z6/1t/ZK	18	24	32	11 _{-0.05}	36.5

Base plate/ Mounting kit for max. capacities 5 kg (Z6/ZPU/200kg) ... 500 kg (Z6/ZPU/500kg)



Pendulum bearing ZPL for max. capacities 5 kg...1 t

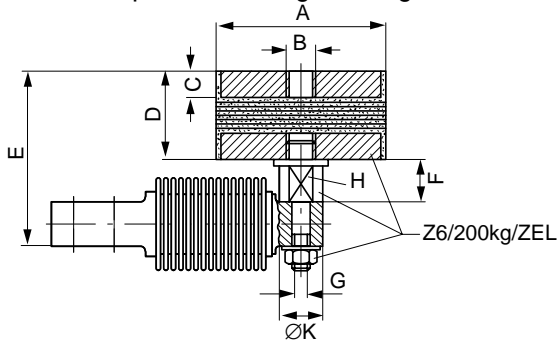


Max. capacity	Pendulum bearing ZPL	Ø C	D	H	M	Ø O	T	E	F	Ø U	F _R * (% of applied load)	S _{max} ** (mm)
5...200 kg	Z6/200kg/ZPL	20 _{-0.2}	45	89 ^{+0.6} _{-0.8}	M8	30	6.5	17	9	20 ^{D10}	2.8	3.5
500 kg	Z6/1t/ZPL	20 _{-0.2}	45	89 ^{+0.6} _{-0.8}	M8	30	6.5	17	9	20 ^{D10}	2.8	3.5
1 t	Z6/1t/ZPL	30 _{-0.1}	60	126.5	M10	46	8	22	14	20 ^{D10}	2	7.5

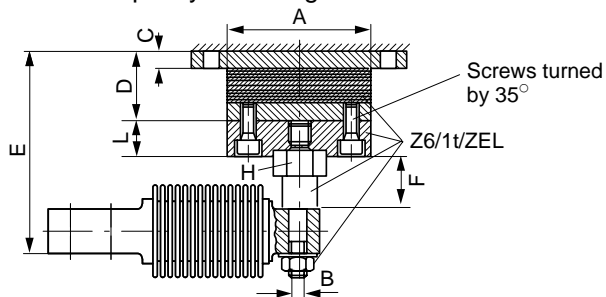
* F_R: restoring force in N for s = 1 mm

** S_{max}: max. lateral displacement of load introduction loaded with max. capacity

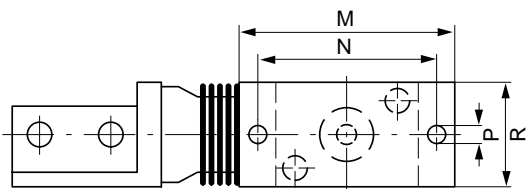
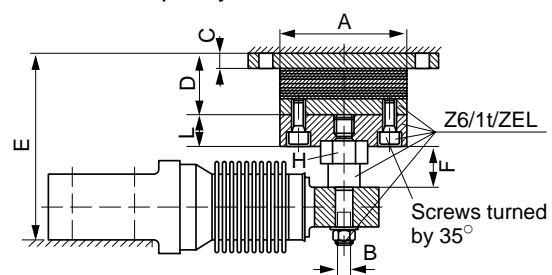
ZEL Rubber-metal bearing for max. capacities of 5 kg...200 kg



for max. capacity of 500 kg



ZEL Rubber-metal bearing for max. capacity 1 t



Correct mounting position of the rubber metal bearing

Max. capacity	ZEL Rubber-metal bearing	A	B	C	D	E	F	G	H	K	L	M	N	P	R	F _R * (N)	S _{max} ** (mm)
5 kg...200 kg	Z6/200kg/ZEL	75	M12	12	40	79 ± 1.3	18.5	M8	a.f. 17	19	-	-	-	-	-	163	3
500 kg	Z6/1t/ZEL	80	M10	10	39	105 ^{+2.1} _{-2.2}	26	-	a.f. 27	-	20	120	100	9	60	400	4.5
1 t	Z6/1t/ZEL	80	M10	10	39	117 ^{+2.1} _{-2.2}	26	-	a.f. 27	-	20	120	100	9	60	400	4.5

* F_R = restoring force in N for 1 mm lateral displacement

** S_{max}: = in mm, max. lateral displacement of load introduction loaded with max. capacity

Modifications reserved.

All details describe our products in general form only. They are not to be understood as express warranty and do not constitute any liability whatsoever.

Hottinger Baldwin Messtechnik GmbH

Im Tiefen See 45, D-64293 Darmstadt, Germany

Tel.: +49 6151 803-0 Fax: +49 6151 803 9100

Email: support@hbm.com Internet: www.hbm.com



measurement with confidence