

M70



Stainless steel compression diaphragm-type load cells.
Capacity range from 10 to 30 t.
Environmental protection IP68

Key features

- The load cells are made from materials and components supplied by the world's leading manufacturers
- Each load cell is sealed with a stainless steel cover welded to a flexible element by laser welding
- Each load cell is tested for leaks with a helium leak detector
- The load cells are tested using TENZO-M load producing machines.
- The machines are certified as first-grade reference machines based on the State Verification Procedure for Load Measuring Instruments (GOST 8.640-2014)
- The load cells are supplied in groups to be used together in scales
- The warranty period is 4 years

Application

Truck scales, car scales, vessel and tank weighing systems

Standards compliance

GOST 8.631-2013

Basic configuration

- Design according to GOST 8.631-2013: 3000 verification intervals
- Cable length 16 m
- Four-wire connection diagram
- Cable shield is not connected to the load cell body
- Explosion protection according to TR TS 012/2011

Options

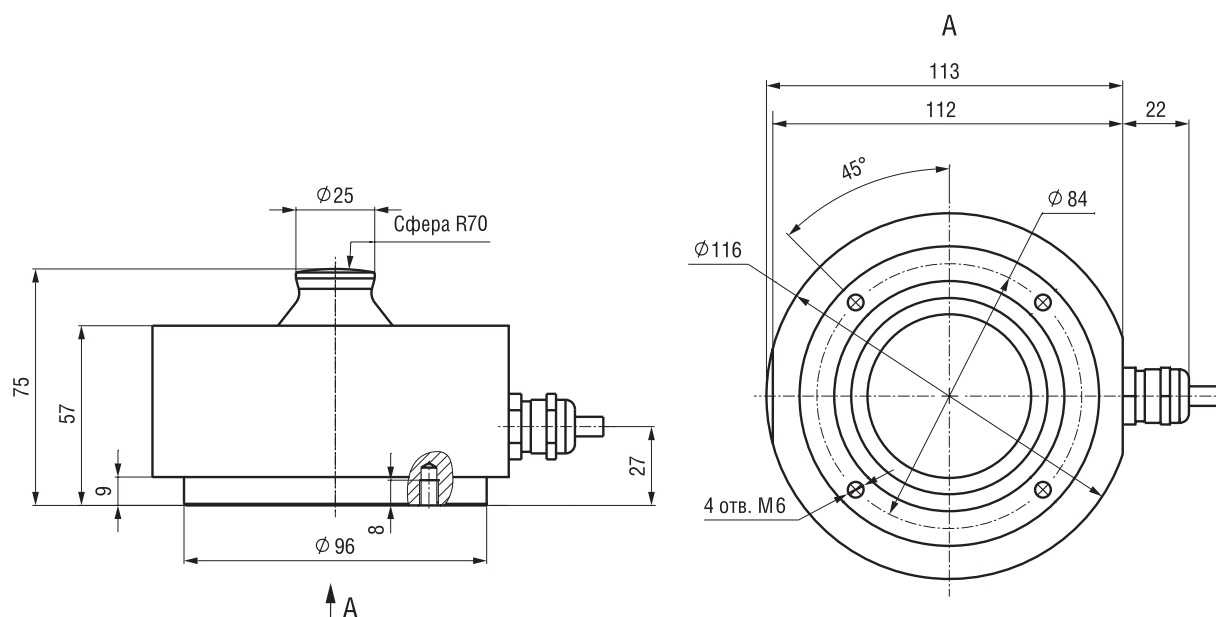
- Design according to GOST 8.631-2013: 1000 verification intervals
- Cable length from 2 to 100 m
- Six-wire connection diagram
- Input voltage from 2 to 24 V

Specifications

Load cell characteristics	Unit of measure	Values	
Maximum capacity	t	10, 15, 20, 25, 30	
Accuracy class according to GOST 8.631-2013		C1	C3
Number of verification intervals		1000	3000
Minimum verification interval		Max capacity / 5000	Max capacity / 10000
Operating voltage ratio (OVR)	mV/V	2 ± 0,010	2 ± 0,002
Initial voltage ratio (IVR)	% of OVR	< 3	< 3
Combined error	% of OVR	≤ ± 0,040	≤ ± 0,020
Creep (30 minutes)	% of OVR	≤ ± 0,049	≤ ± 0,025
Temperature effect on IVR	% of OVR/°C	≤ ± 0,0028	≤ ± 0,0014
Temperature effect on OVR	% of OVR/°C	≤ ± 0,0022	≤ ± 0,0011
Max DC input voltage	V	12	
Input resistance	Ω	750 ± 15	
Output resistance	Ω	700 ± 1	
Insulation resistance	GΩ	≥ 5	
Temperature compensation range	°C	-30... +40	
Nominal temperature range	°C	-50... +50	
Environmental protection according to GOST 14254		IP68	
Safe load limit for no more than 1 hour	% of max capacity	25	
Ultimate load	% of max capacity	300	
Load cell material		Stainless steel	

Weight and dimensions

Maximum capacity, t	Load cell weight, kg	Cable length, m
10, 15, 20, 25, 30	4	16



Hardware

M/ПУ

Basic load transfer device for hanging a vessel on load cells

Combined construction of a soft steel flange and a heat treated insert ensures proper installation at low costs.

Used with horizontal base plate and foot.

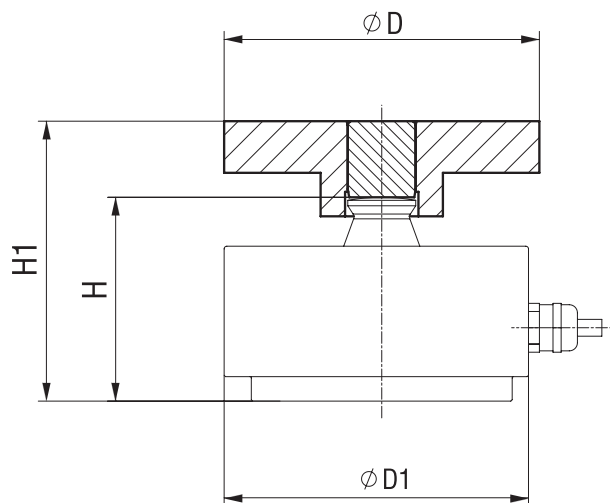
Material — structural or stainless steel



Load transfer devices for compression load cells

Dimensions

Load cell type	Designation	Material	D, mm	D1, mm	H, mm	H1, mm
M50	M50/ПУ	structural steel	116	98	50	78
	M50/ПУН	stainless steel	98			
M70	M70К/ПУ	structural steel	116	116	75	103
	M70К/ПУН	stainless steel				
M100	M100/ПУ	structural steel	156	156	100	140
	M100/ПУН	stainless steel				



M50, M70K/P, P1, P2, PK1, M100/P2

Load transfer device (adjustable mount) for hanging a vessel on load cells

Combined with adjustable РП/РПН/РПА/РПАН embedded part it is used to install vessels on load cells even in challenging conditions (sloped foundation or mounts of different heights).

P: Thread diameter of the sleeve M48.
Material – structural steel.

P1, PK: Thread diameter of the sleeve from M20 to M48. Material – stainless steel and structural steel. Supplied with a protective cover.

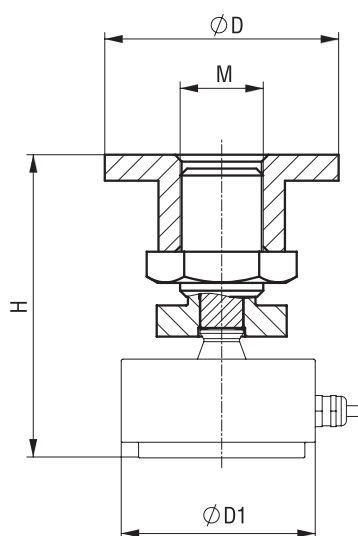
P2: Thread diameter of the sleeve M56x3.
Material – structural steel.

PK1: Used with a threaded hole in the tank mount.
Material – stainless steel. Supplied with a protective cover.



Dimensions

Load cell type	Designation	Material	H, mm	D, mm	D1, mm	M, mm
M50	M50/P	structural steel	150... 170	116	98	M48
M70	M70K/P		170... 190			



Adjustable mounts

Dimensions

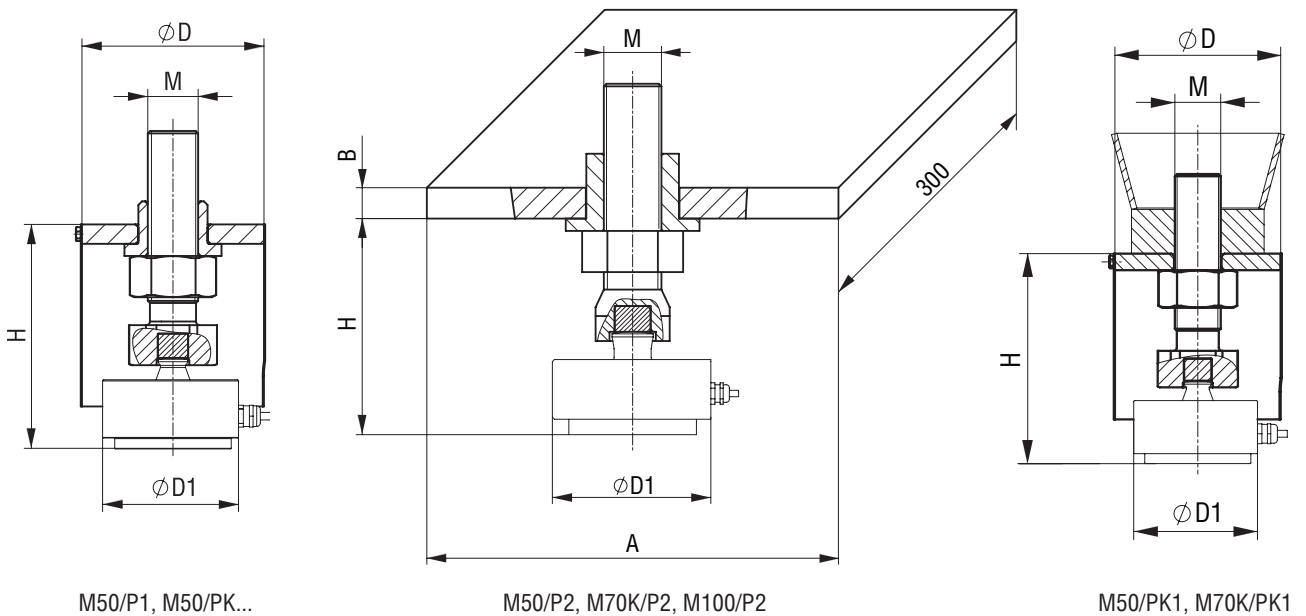
Load cell type	Designation	Material	M, mm	D, mm	D1, mm	H, mm
M50	M50/P1	structural steel*	M20, M24, M30, M36, M42, M48	150	98	190... 220
M70	M70K/P1				116	
M50	M50/PK	stainless steel	M20, M24, M30, M36, M42, M48		98	
M70	M70K/PK				116	

Load cell type	Designation	Material	A, mm	B, mm	H, mm	D1, mm	M, mm
M70 or 15τ	M70K/P2	structural steel*	300x400	min 25	210... 260	116	M56x3
M100	M100/P2					156	

* – stainless steel cover

Load cell type	Designation	Material	M, mm	D, mm	D1, mm	H, mm
M50	M50/PK1	stainless steel	M20, M24, M27, M30, M42, M48**	150	98	180... 220
M70	M70K/PK1				116	

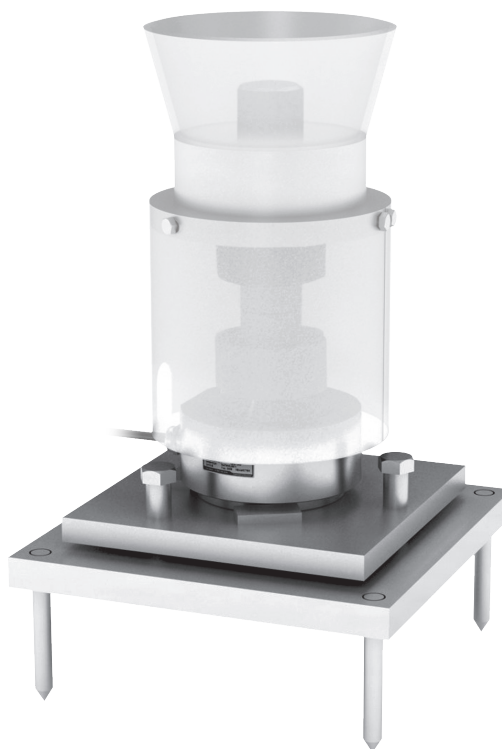
** – threading also possible upon request



M50, M70K/РП, РПН, РПА, РПАН

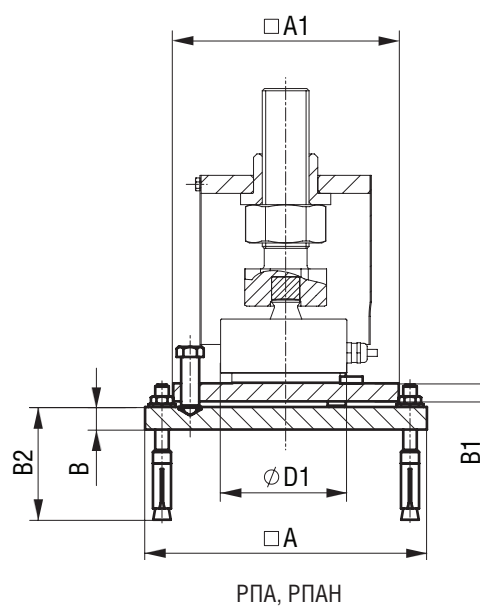
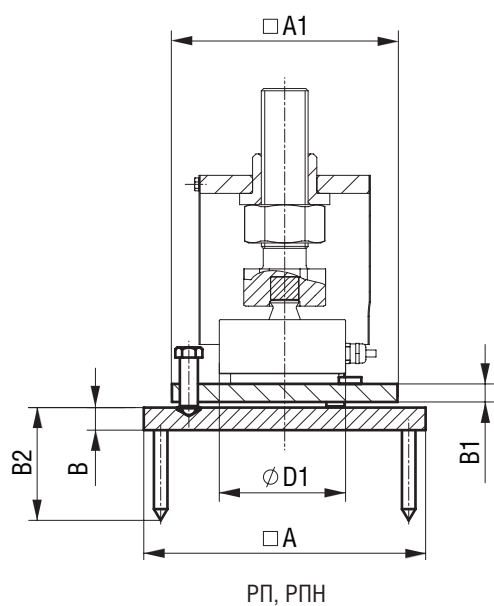
Adjustable embedded mount
with limit stops and anchor bolts
for installing a vessel on load cells

Used to install a vessel on load cells
with a sloped foundation. Can be used together
with the adjustable PK/P1/P2/PK1 mount



Dimensions

Load cell type	Designation	Material	A, mm	A1, mm	B, mm	B1, mm	B2, mm	D1, mm
M50	M50/РП, M50/РПА	structural steel	250	200	16, 20	16, 20	100	98
M70	M70K/РП, M70K/РПА							116
M50	M50/РПН, M50/РПАН	stainless steel						98
M70	M70K/РПН, M70K/РПАН							116



Load transfer devices of the weighted doll type

M70/B, M70K/B,
M100/B

Load transfer device
of the weighted doll type
for car scales and their
upgrading

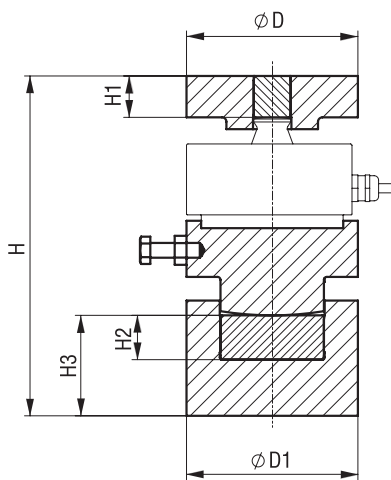
Allows to use a flat bottom load cell as a self-adjusting unit. Combined construction of a soft steel flange and a heat treated insert ensures proper installation at minimum costs.



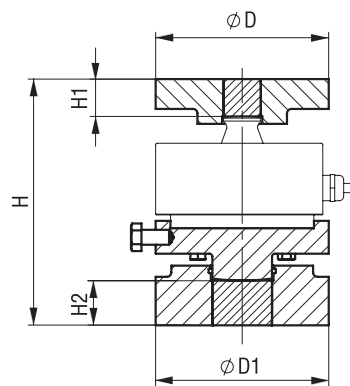
Load transfer devices
for compression load cells

Dimensions

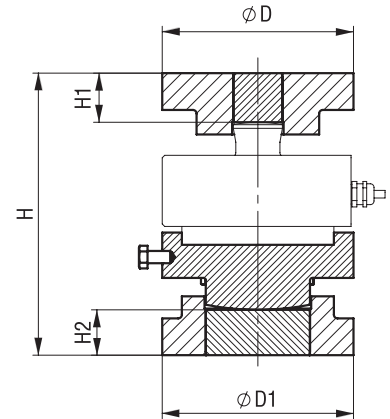
Type	Designation	H, mm	H1, mm	H2, mm	H3, mm	D, mm	D1, mm
M70	M70/B	230	28	30	68	116	116
	M70K/B	165	25				
M100	M100/B	230	40	37	-	156	156



M70/B



M70K/B



M100/B

Load transfer devices of the **TENSO₁M** weighted doll type

M70K/BC, M70K/BM

Силопередающее устройство «Ванька-встанька» для автомобильных весов и их модернизации

Позволяет использовать датчик с плоским основанием как самоустанавливающийся. Снабжено защитным кожухом. Применяется при сборке автомобильных весов



Dimensions

Type	Designation	H, mm	H1, mm	H2, mm	H3, mm	D, mm	D1, mm	M, mm
M70	M70K/BC	236	42	60	288	116	128	M27x2
	M70K/BM	241	47		-			-

