

Compact Mounts for Ring-Torsion Load Cells



- Complete compact mount with integrated bumper check and hold-down
- Legal-for-trade
- Simple, rugged and flat design
- Dynamic load damping properties
- High resistance to environmental influences and chemicals
- Maintenance-free
- Roughly aligned in factory

Application

The compact mounts are designed for load input into Schenck ring-torsion load cells optimised with regard to measurement.

Designed as mounting unit with integrated bumper check and hold-down, the compact mounts are used on all kinds of industrial scales, e.g. hopper, silo, container and mixer scales.

Construction

The compact mount consists of load input section, bumper check, and hold-down.

The compact mount is positioned by shifting in the receiving structure.

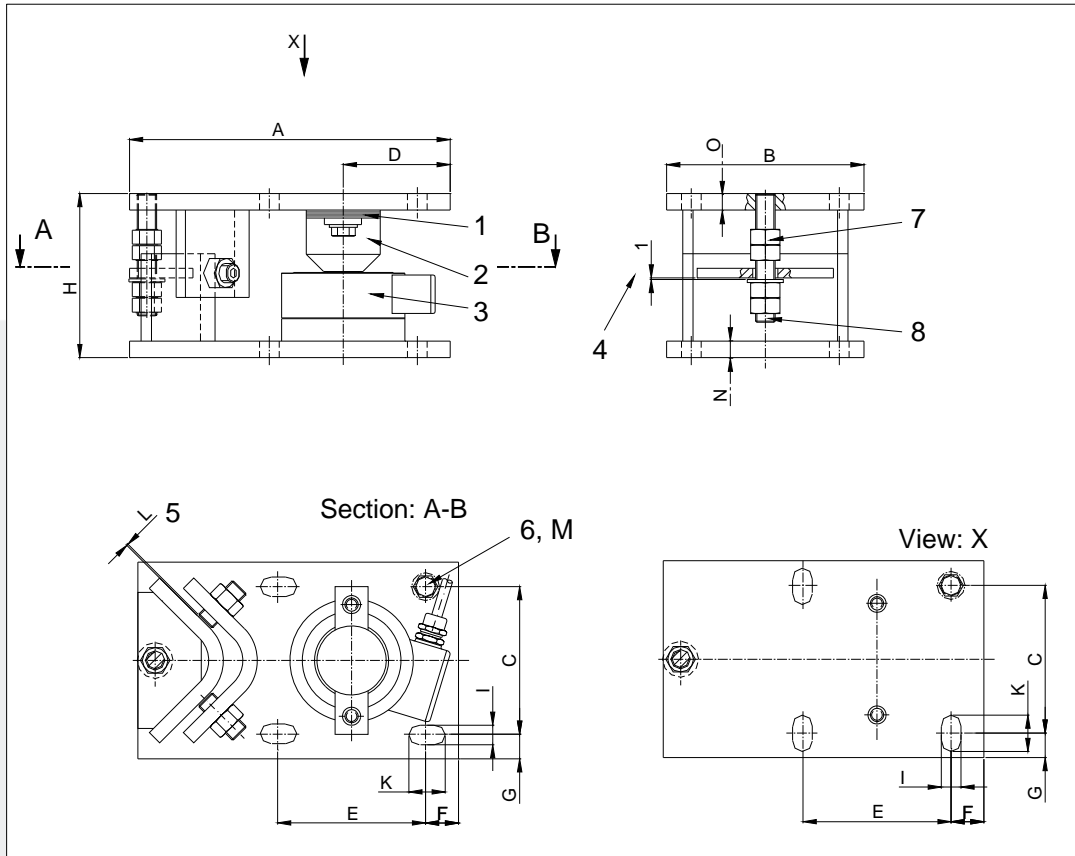
The play of bumper check and hold-down can be checked and adjusted using set screws, also in narrow space conditions.

Function

The weight to be measured is applied to the load cell via a contact plate. Due to the special design, the vertical deflection is extremely low and proportional to the load. Occurring side forces deform the elastomer in parallel direction. The mount centres automatically when relieved of these side forces.

The bumper check limits the play, the hold-down prevents lift-off. No tie-rod is required.

Compact Mounts for Load Cells 0.25 – 33 t



Item	Text
1	Shims supplied loosely
2	Elastomer (from 10t rated capacity onward, seated under the load cell)
3	Load cell
4	Hold-down set with 1 mm play
5	Set movement limit stop to dimension L.
6	Set fixing screw and washer to dimension M.
7	After local mounting, screw up transit restraint nuts by 10 mm and secure.
8	Upon shop and field mounting, align bolt centrally to bore, ensure same all-round distance between bolt and bore
9	After mounting, transit restraint is replaced by load cell. Attention: Transit restraint is not designed for loading with rated capacity.

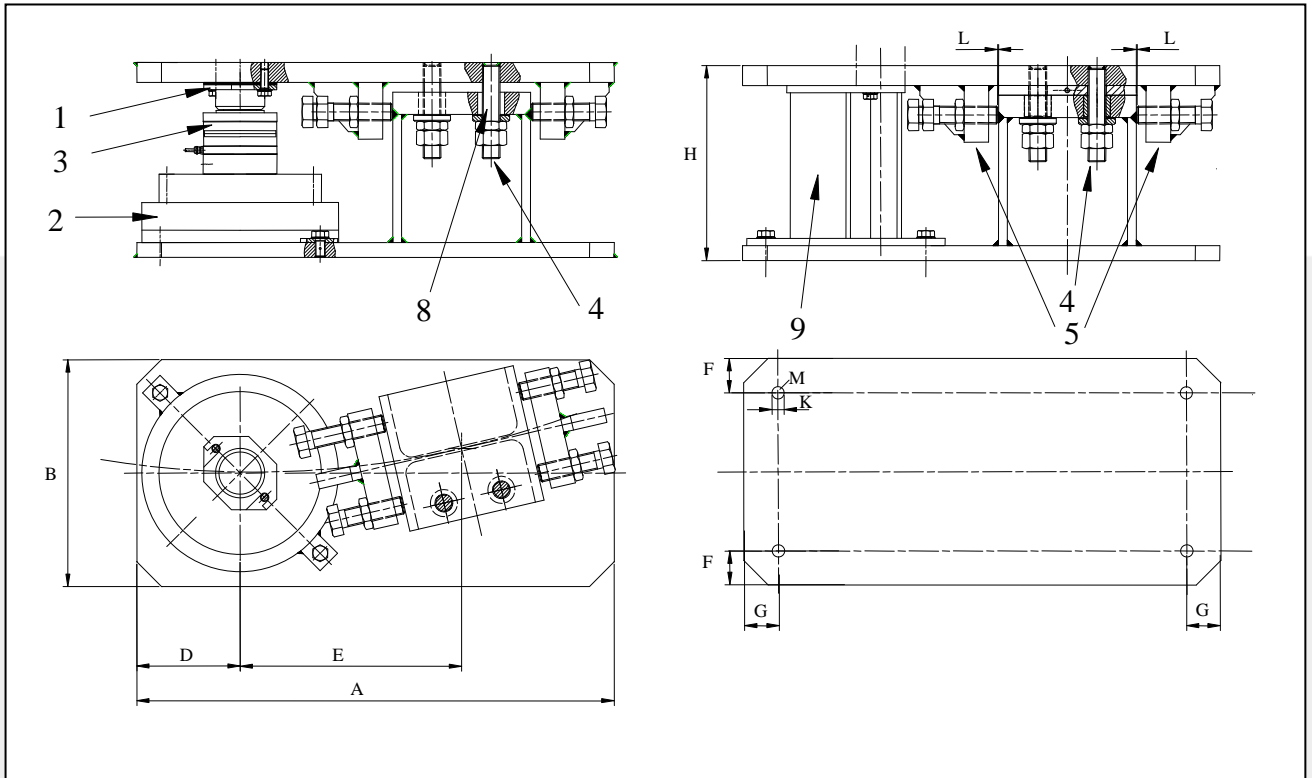
Type of Mount / Load Cell	A	B	C	D	E	F	G	H*	I	K	L	M	N	O
DKM 0.25 t – 0.5 t for RTB / V / W	195	120	90	65	90	20	15	100-5	12	12	1	M 8	10	10
VKN 1 t – 4.7 t for RTN	200	140	100	60	100	15	20	115-5	15	20	1	M 12	8	10
VKN 10 t – 22 t for RTN	235	180	140	90	140	20	20	155-5	18	22	1.5	M 16	10	10
VKN 33 t for RTN	340	250	200	135	200	35	25	197-5	22	26	2	M 20	12	12

*use shims for height levelling

Admissible max. force		
Type	Max. Horizontal force [kN]	Max. Vertical force (Lift-off force) [kN]
DKM 0,25 t – 0,5 t	0,5	0,7
VKN 1 t – 4,7 t	5	7
VKN 10 t – 22 t	22	33
VKN 33 t	33	50

If loads on horizontal limit stop and hold-down are excessive, take separate measures.

Compact Mounts VKN 47t – 470t



Technical Data and Variants VKN 47 – 470 t

Type Load Cell	A	B	H*	D	E	L	F	G	K	M	Max. Horizontal force [kN]	Max. Vertical Force (Lift-off force) [kN]
VKN 47 t	730	340	253-5	140	350	2	50	50	Ø 21	M 20	70	70
VKN 68 t	730	340	275-5	140	350	2	50	50	Ø 21	M 20	70	70
VKN 100 t	860	410	304-5	160	420	2	60	60	Ø 26	M 24	100	100
VKN 150 t	970	460	395-5	210	450	2	60	60	Ø 26	M 24	150	150
VKN 220 t	1150	470	468-5	235	545	2	-	-	-	-	220	220
VKN 330 t, 470 t on request												

*use shims for height levelling

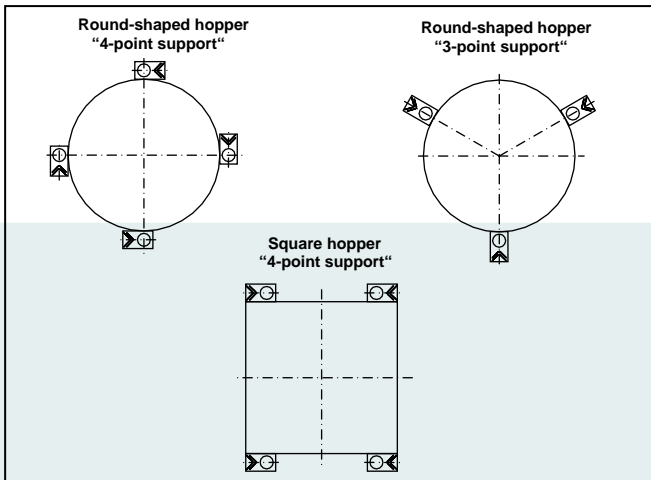
If loads on horizontal limit stop and hold-down are excessive, take separate measures.

Important:

The contact surfaces for the mounts must be flat and clean. Maximum height difference in the contact area: 0.2mm. Painted surfaces are not suitable for a load cell mounts.

Lifting and lowering of the load application elements may cause a non-repeatable load to be applied to the load cell and produce errors in measurement. Therefore ensure that the load cell in the compact mount is never totally relieved. Select minimum preload such that load cell and contact plate, or base plate, are always positively tied in operation.

Compact Mounts DKM 0.25 t – 0.50 t and VKN 1 t – 33 t – Support Point Arrangement



Please observe in all cases

The present support point arrangements merely consider the weighing aspects. It is up to the user to ensure strength and solidity of the support structure.

Admissible load per support point:

Max. horizontal force: 10 % x L_n

Max. vertical lift-off

(tensile) force: 15 % x L_n

L_n = rated load

per support point

Mounts VKN 47 – 150 t are designed for use on round-shaped hoppers of 3 – 6 m diameter. 3 to 4 mounts are mounted radially as shown above (round-shaped hopper, 4-point support).

Technical Data

Variant	DKM	VKN
Rated capacity	0.25 ... 0.50t	1 ... 33t
Weight (including load cell)	DKM 0.25 – 0.50 8.5kg	VKN 1 – 4.7 12.3kg VKN 10 - 22 19kg VKN 33 42kg VKN 47 185kg VKN 68 190kg VKN 100 297kg VKN 150 495kg VKN 220 750kg
Material - Elastomer Option: (available on special request)	Neoprene (chlorine butadiene rubber), FKM (fluorinate rubber), SBR (styrene butadiene rubber), EPDM (ethylene propylene diene rubber)	
Height adjustment	5 mm	
Deflection	approx. 0.8 mm at rated capacity	
Max. allowable skewness of substructure	0,2°	
Max. allowable angle between higher and lower connecting structures	0,6°	
Nominal temperature	-10 to +40°C	
Operating temperature	-30 to +80°C	
Options	Heat insulating plates, protection from water jets, weld-on plates	

Stainless Steel Metal Parts

Variant	Ordering Number
DKM 0.25	V041 091.B01
DKM 0.50	V041 092.B01
VKN 1 / VKN 2.2	D 731 186.01
VKN 4.7	D 731 186.02
VKN 10 - 22	D 731 353.01

Metal Parts St 37 lacquered to RAL 5018 (VKN 33 t St 37 Hot-Dip Galvanized)

Variant	Ordering Number
VKN 33	D 731 415.01
VKN 47	V007 097.B01
VKN 68	V007 098.B01
VKN 100	V007 099.B01
VKN 150	V007 100.B01
VKN 220	V036 578.B01

For more information on compact mounts VKN, please ask us for detailed planning-in drawings.

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