

Weighing unit PK 100

Accessories for load cell K35-K200

Weighing unit TYPE PK for maximum 100 kg is used for weighing small containers and platforms.

The load carrier is attached to the weighing unit, into which the load cell has been integrated, and the unit is fixed to a vertical surface (wall, column etc.). Disturbing forces and torques acting on the load carrier will be taken up by the weighing unit without acting on the load cell.



The weighing unit consists of two vertical members interconnected by two accurately matched, parallel flat springs. These are rigid in all directions except the vertical one. One of the members is fastened to a rigid, vertical surface and the other to the load carrier. The two uprights are also connected to the load cell via a bar arrangement so that the cell takes up the vertical force only.

- The weighing unit is also provided with an overload protection.
- The mounting holes have the same position on both sides of the unit.
- To reduce the influence from inclined mounting surfaces the two lower mounting brackets have been made pliant to rotation around the vertical axis.

A counterweight set is available as an accessory. Load carriers of the types, for which weighing unit type PK 100 is mostly used, for instance small weighing hoppers, their own weight including valves and other attachments is generally considerable in relation to measuring range.

The weighing accuracy can considerably be increased if, the weight of the load carrier itself -the tare -is balanced by a mechanical counterweight and the load cell is chosen only with regard to the range. The set consists of a cross spring pivot (to avoid friction), which is mounted in the weighing unit and which balances the tare against a counterweight placed below the weighing unit. It is also obtainable as a separate unit guided by parallelogram springs to eliminate oscillations after sudden load changes. The counterweight unit has a base weight with about 5.2 kg tare action and in addition standardized weight units, each with 4.7 kg tare action. As well the weighing unit as the counterweight unit are clamped with speciallocking beams during shipment and installation.

Designations and specifications

The designation consists of a 3-unit code:

PK-100

Counterweight

Number of counterweight

The first unit relates to the weighing unit. The second unit indicates:

- O without counterweight set
- M counterweight set including attachment for counterweight
- MW counterweight set complete for 5.2 kg tare

The third unit gives the number of additional counterweights, each for 4.7 kg tare. Code example on next page. Maximum load is the same as for load cell for 100 kg rated load. For larger loads weighing unit PK 1000, spec. F31-18E, is recommended.

The centre of gravity of the load must fall within a circle with a radius of 300 mm around the line symmetry of the mounting surface as shown in figure on next page.

Tare action of weighing unit itself: 8 kg.

Limit load of overload protection: 150 kg.

Tare action of counterweight: 0.75 times counterweight in kg.

J Counterweights: 5.2 kg + max. 10 pieces of 4.7 kg tare action each.

Finish: blue enamel on rust resistant primer. Stainless steel version also available.

Calculation of counterweights and code example

The total load acting on the load cell, counterweight set not included, is:

Tare of weighing unit + weight of hopper + weighing range

The action of the two first terms can be reduced by the use of a counterweight set.

Example:

Range 5 kg. Weight of hopper with bottom valve: 50 kg. Suitable rated load for the load cell in respect of the range: 35 kg, Total acting on the cell: $8 + 50 + 5 = 63$ kg, The load acting on the load cell consequently has to be reduced to maximum 35 kg but minimum 5 kg, which gives a total counterweight of min. 28 kg and max. 58 kg.

6 counterweight units added to the base weight would give: $5.2 + 6 \times 4.7 = 33.4$ kg, which is suitable.

Code example: PK-100-MW-6

Dimensions and weight

