



PanCake® Level Cell
Such a small solution
to a big problem!

The most reliable solution for level control in tanks, silos, vessels.

The perfect solution to all your level control requirements: Revolutionary PanCake Technology for level-by-weight applications! Extremely robust and durable for utmost precision in virtually all applications. Independent of material properties and environment. Retrofitting is fast and easy. Tried and tested in many installations and available at an incomparably affordable price.

Extremely accurate.

Conventional level control instrumentation could lead to errors of 5% and more. In extreme cases this could result in interruption of the associated process.

New PanCake level-by-weight technology gives accurate readings better than 1% in "real-life" applications – over the complete range of capacities of up to 50 t net content.

Exceptionally competitive.

The new PanCake system offers not only a lot of technical advantages, it also offers exceptional value for money. Compared to Ultrasonic or Radar systems, savings of up to 50% are possible.



Highly reliable and 100% maintenance free.
The robust design of the sensors and the use of high quality materials leads to unrivalled reliability even under harsh industrial conditions. Maintenance or re-calibration of the sensor is not required, except in case of mechanical changes to the vessel.

The high-quality sensor keeps its calibration for decades. Without drift, ageing or creep.

The stainless steel housing is hermetically sealed by welding and complies to the highest IP rating (IP 68, 10000 hrs, 1.5 metres) equivalent to NEMA 6.

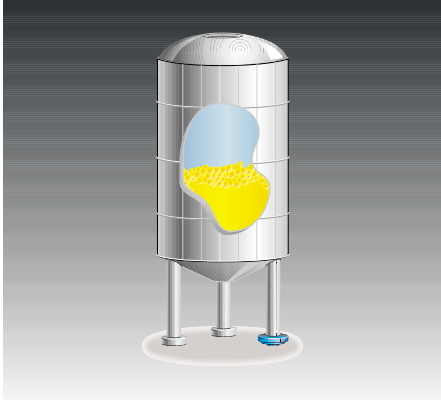
Unbeatably economical.
Extremely accurate, competitive pricing, easy to use, durable and maintenance free – PanCake technology: a true performer offering the best value for money available.



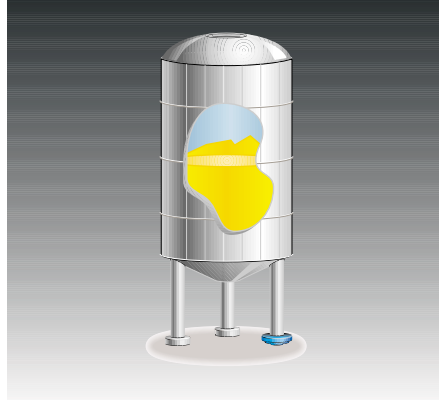
Precise for all materials.

The new PanCake level-by-weight technology determines the actual content of a vessel directly in kilograms.

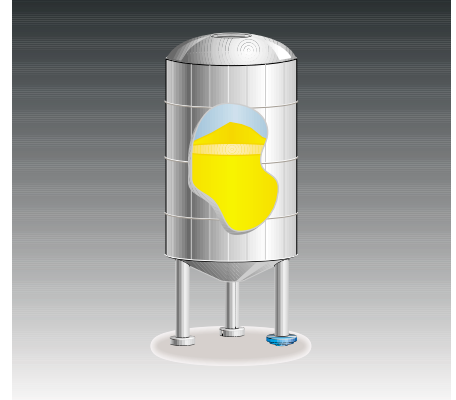
It provides reliable readings independent of the material measured. One sensor for all materials.



Example 1:
Formation of foam and bubbles, phase transition and evaporation may effect others – not PanCake.



Example 2:
Material sticking to the wall of the vessel, variable moisture content and deviations in particle size – PanCake gets it right.

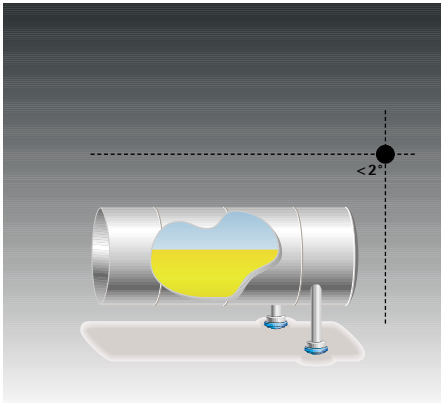


Example 3:
Material cones from filling or discharging can't irritate readings of PanCake.

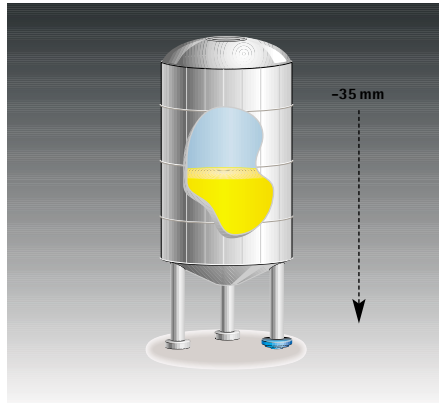
Easy to install.

It's that simple and straightforward: Just lift one leg of the vessel for a little more than an inch, slide the PanCake into the gap, ready.

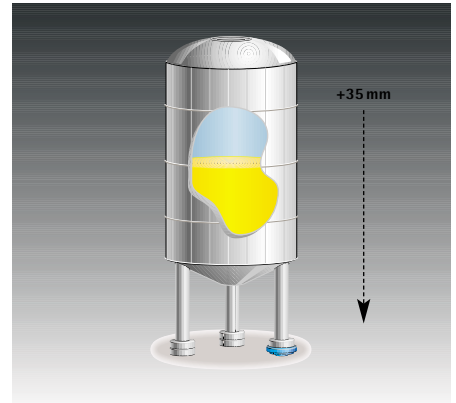
In many instances even without additional mounting kits or complicated mechanical conversion of the vessel or changes to the pipework.



Example 1:
The vessel is lifted at one side only. The resulting inclination is in many cases small enough not to disturb the readings.



Example 2:
One leg of the vessel is just shortened by an inch. No inclination occurs.



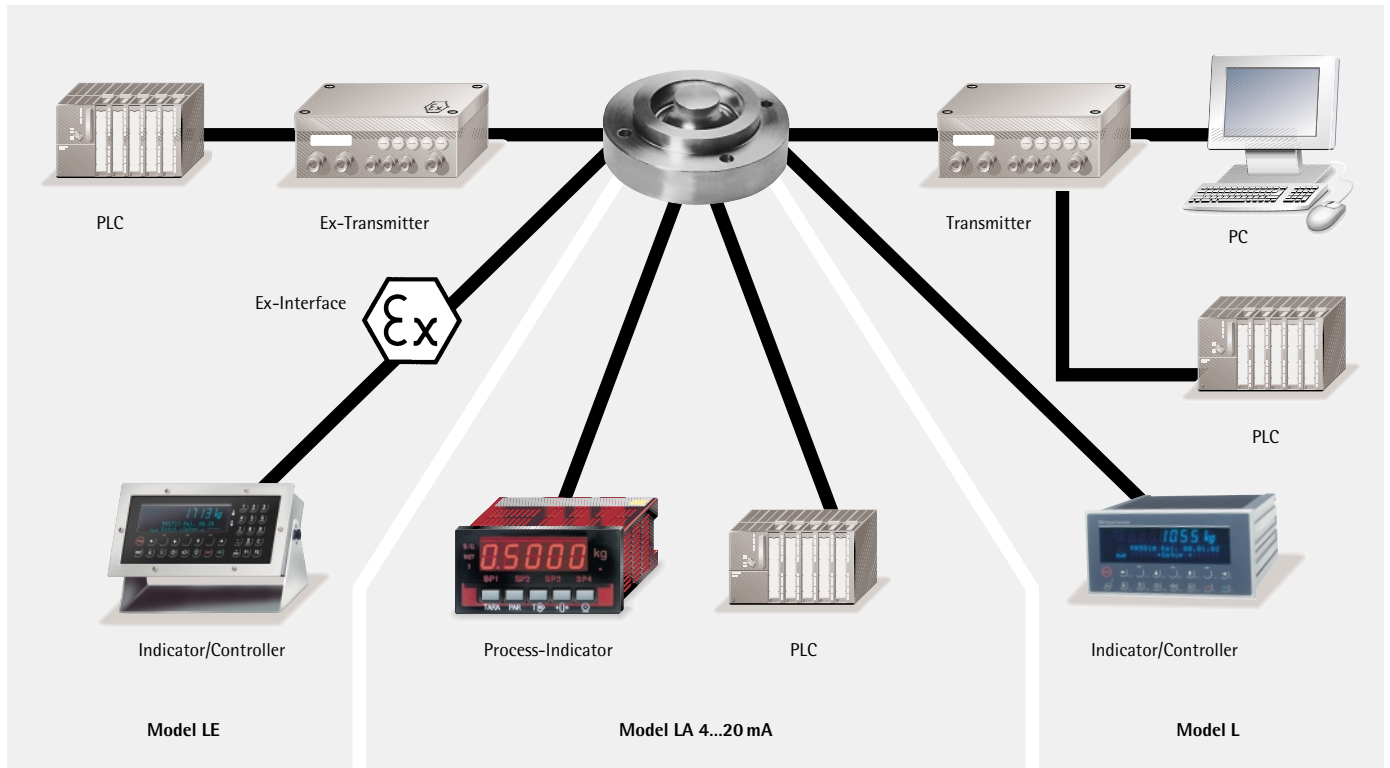
Example 3:
The vessel is lifted leg-by-leg. One leg to be supported by a PanCake. The other legs are levelled out by simple shimming plates.

N.B.: Use one PanCake only for vessels with 3 legs, or 2 PanCakes for vessels with 4 legs.

The complete system capabilities at a glance:

Configure your system to your specific needs. The model LA provides 4...20 mA output for direct connection to process instrumentation or PLCs/DCS. The model L and LE featuring mV/V output are connected via our vast range of transmitters and indicators.

Usually only one PanCake is required (three legs). If two PanCakes are used (4 legs) you still require only one input channel in your PLC or Process Indicator by simply switching the two outputs in parallel.



Common level control systems in comparison:

The performance of conventional level control instrumentation is rarely better than a glimpse into the tank or a blow with the hammer. Ultrasonic, Radar and many other systems suffer from a wide range of application

related problems: rotating mixer blades, varying shape of material cones and vessels are the stumbling stones of one-dimensional height measurement instead of real content determination. Specific material properties

like particle size, foam, reflection properties, vapour and dust or material sticking to the walls and the equipment add to the complications. In comparison, only PanCake level-by-weight technology provides reliable results.

Measurement method	Solids			Liquids		
	free flowing/granular	fine powders/dust	coarse/lumpy	volatile	foaming	viscous/adhesive
Radiometry	+	+	+	+	+	+
Radar	?	?	?	+	+	+
Ultrasonic	?	?	?	?	x	?
Hydrostatic	+	+	x	?	?	?
Displacement	x	x	x	?	?	x
PanCake®	+	+	+	+	+	+
Feasibility of use:	+ optimal		? under certain conditions		x not suitable	

Source: VDI/VDE 3519, page 1+2.
Application notes and further information available on request.

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