

# PanCake® Level Cell

**NOVA WEIGH**

**Capacities: 500 kg to 16 t**

- **Easy 'Bolt-in mounting'**
- **Ultra low-profile, 25 - 35 mm installation height**
- **Stainless steel, IP68 construction**
- **LE version with EEx ia IIC T6 CENELEC certification**
- **LA version with 4-20 mA output**
- **Perfect for level measurement without the disadvantages of other techniques**



**PanCake® level cell**

## **The Benefits of Weighing**

Weighing is the only level measurement method that can deliver reliable results under difficult process conditions. It is not affected by product foaming, dust or phase boundaries - precisely the environments where other techniques such as Ultrasonics or Radar fail to maintain accurate readings.

## **PanCake® Level Cell**

Even though load cells are recognised to deliver the best level measurement results, their installation can sometimes appear more complex than, say, fitting an ultrasonic device.

The PanCake® level cell is designed for simplicity. It offers the benefits of weighing plus easy installation.

The welded stainless steel construction rated IP68 makes it ideal for wash-down environments such as dairies and food processing plants.

## **Fitting the PanCake® Level Cell**

The extremely low profile height of the cell (only 25 - 35 mm) makes it possible to fit into existing installations without significant loss of headroom or changes to existing pipe-runs etc. Simple adaptor plates are available to match the cell to standard vessel foot designs.

A stainless steel base-plate is available to locate the loading button of the cell.

Typical mounting arrangements are shown overleaf and the ultra low-profile design means that often no alterations to the vessel legs are required. Nova Weigh will give advice on individual applications.

## **Instrumentation**

The PanCake® level cell is compatible with the full range of Nova Weigh instruments.

The LA variant of the cell has an integral weight amplifier and transmitter allowing the direct connection of the cell to PLCs etc.

## **EX Version**

The LE version of the cell is suitable for use in hazardous areas when used with the appropriate Nova Weigh instrumentation. The CENELEC certification is EEx ia IIC T6.

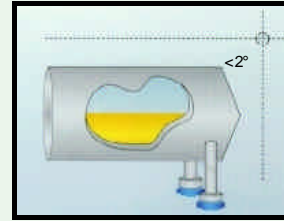
# TECHNICAL SPECIFICATION

# EASY TO INSTALL

## Performance

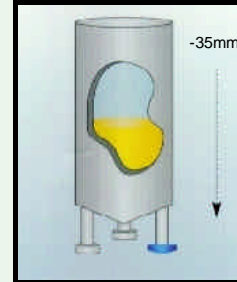
		L	LA	LE	
Accuracy class		0.5	0.5	0.5	%
Minimum dead load	$E_{min}$	0	5	0	% $E_{max}$
Rated capacity	$E_{max}$	See table below			
Max. useable load	$E_u$	150	120	150	% $E_{max}$
Destructive load	$E_d$	300	300	300	% $E_{max}$
Rated output	$C_n$	2.0	16 mA	2.0	mV/V
Tolerance on rated output	$d_c$	< 4	< 4	< 4	% $C_n$
Tolerance on zero signal	$S_{min}$	< 4	4 mA	< 4	% $C_n$
Repeatability error	$o_R$	< 0.1	< 0.1	< 0.1	% $C_n$
Creep during 30 min	$d_r$	< 0.1	< 0.1	< 0.1	% $C_n$
Non-linearity	$d_{lin}$	< 0.25	< 0.25	< 0.25	% $C_n$
Hysteresis	$d_{hy}$	< 0.15	< 0.15	< 0.15	% $C_n$
Temperature effect on zero	$TK_{Smin}$	< 0.15	< 0.15	< 0.15	% $C_n/10K$
Temperature effect on	$T_{Kc}$	< 0.1	< 0.1	< 0.1	% $C_n/10K$
Input impedance	$R_{i,c}$	645±60	-	645±60	$\dot{U}$
Output impedance	$R_o$	635±15	-	635±15	$\dot{U}$
Insulation impedance	$R_{is}$	>5000x10 <sup>6</sup>	-	>5000x10 <sup>6</sup>	$\dot{U}$
Recommended supply	$B_n$	4.24	20.28	4.24	V
Max. supply voltage	$U_{max}$	32	28	25	V
Nominal ambient temp.	$B_T$	-10..+70	-10..+55	-10..+55	°C
Usable ambient temp. range	$B_{Tn}$	-30..+95	-30..+70	-30..+95	°C
Storage temperature range	$B_{Tl}$	-40..+95	-40..+80	-40..+95	°C
Permissible eccentricity	$S_{ex}$	10	10	10	mm
Vibration resistance	-	20g, 100h, 10..150 Hz			
Air pressure effects	$PK_{Smin}$	<20g/kPa			
Nominal deflection	$S_{nom}$	Up to 2t <0.1/16t<0.2mm			

**Cable** Robust, flexible, screened  
 Sheath: Thermopl. Elastomer Colour: grey (LE:blue)  
 Diameter: 3mm, wires 4 x 0, 13 mm<sup>2</sup> Length: 5 m  
 Bending radius: 50 mm



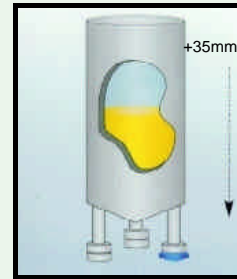
### Example 1

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



### Example 2

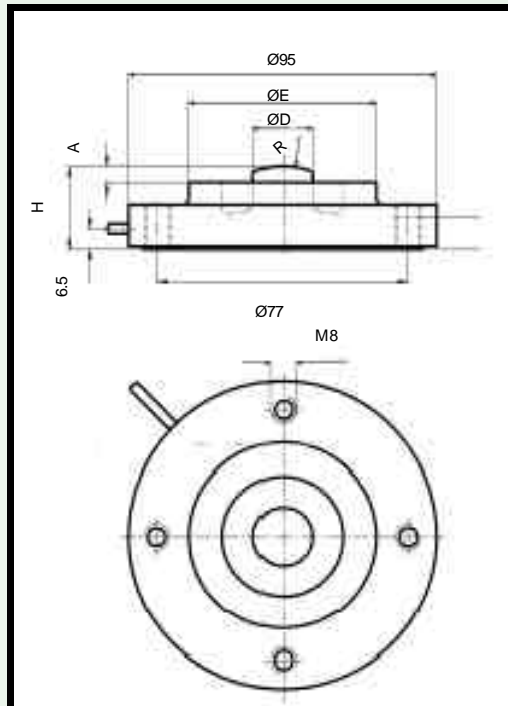
One leg of the vessel is just shortened by an inch. No inclination occurs.



### 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.

## DIMENSIONS (mm)



Nominal load $E_{max}$	Weight Dimensions (mm)				
	A	D	E	H	R
500 kg	5	18	57.5	25	25
1 t	5	18	57.5	25	25
2 t	5	18	57.5	25	35
3 t	5	18	57.5	25	50
5 t	5	18	57.5	25	50
10 t	8	21.7	57.5	35	70
16 t	5	23	67	35	100



# NOVA WEIGH



Nova Weigh's policy of constant product development dictates that we may alter specifications and or the appearance of our product range without notice.

Visit us on the web [www.novaweigh.co.uk](http://www.novaweigh.co.uk)

BS EN ISO 9001:2000 Cert No: FM 11445

Pancake/11/01