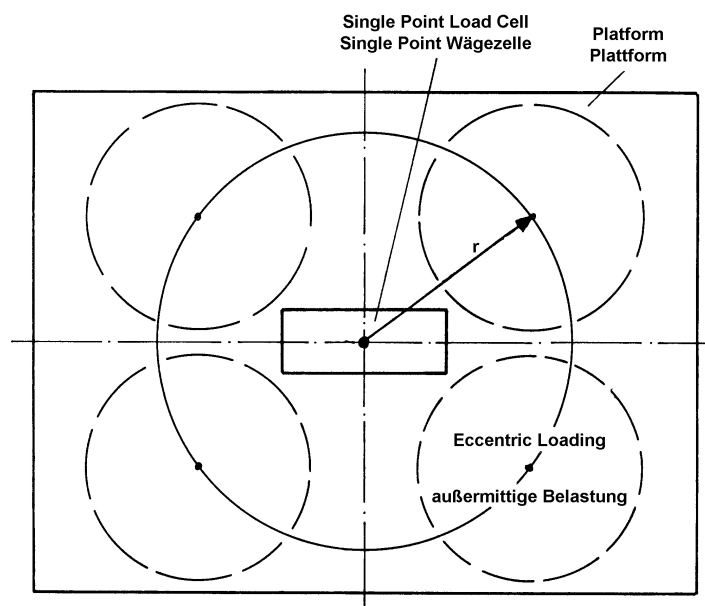




A. Error Diagnostics at Eccentric Loadings of Single Point Load Cells

1. If the load is applied eccentrically (not in the centre of the load cell), an error can appear. This error is maximum $\pm 0,0000085 \text{ \% / cm}$.



2. Example: Platform size 80 x 60 cm.
If a load is applied and its centre of gravity is in a radius of 25 cm from the load cells centre ($r = 25 \text{ cm}$), the indicated signal can show an error of
 $25 \text{ cm} \times 0,0000085 \text{ \% / cm} = 0,00002125 \text{ \%}$.

In clearer values:

Load Cell Capacity	Load applied	Error $\pm$
050 kg	050 kg	0,011 kg
070 kg	070 kg	0,015 kg
100 kg	100 kg	0,021 kg
150 kg	150 kg	0,032 kg
200 kg	200 kg	0,043 kg
300 kg	300 kg	0,064 kg
500 kg	500 kg	0,106 kg
600 kg	600 kg	0,128 kg
635 kg	635 kg	0,135 kg

3. To reduce such an error, the load should be applied – if possible – in the centre of the platform (directly over load cell), or well-proportioned all over the platform.
4. Extreme eccentric loadings should be avoided.
They not only create errors in the readings, but can also damage the load cell due to the leverage effect.
This can be seen when the zero signal changes, so the tare value.