

New

High precision straight edge as lightweight / type G5

Description

The new type of straight edge, type G5, was specially developed for the assembling / calibration of machine tools as well as for service and maintenance works. It is at the same time very light and highly precise. The weight is only approx. 11 kg / 1000 mm. Because of its light weight the deformation caused by bending is much lower than with versions made of hard stone. The ruler has two parallel measuring faces. The calibration is carried out in lying as well as in upright position. This way you will have a straightness reference in highest precision.



Material

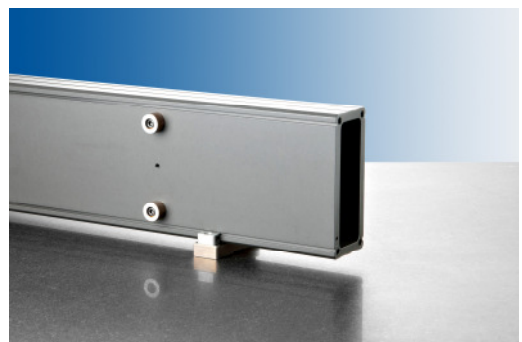
The straight-edge is made of special aluminium free from distortion and with a deep hard coat. The advantages of this material are its homogeneous structure and its fast and equal temperature spreading. The measuring surfaces are lapped very fine and polished. The glassy surface has in contradiction to hard stone almost no pores – this allows measuring in highest precision level.

Support

For the measurement the ruler will be supported on its supports which are in the scope of delivery. This will never have contact with the machine table, which could scrap the surfaces. In addition the certain point of support is always defined exactly.



Ruler in upright position



View of the profile (handles demounted)

Bending

Because of its hollow structure the bending of its own weight is very low. This means that the precision in lying as well as in upright position can be achieved even when not precisely supported at the Bessel points. (Bessel points means the distance of the supports from the end, on which the deformation caused by bending is the lowest; it is actually $0.22 \times L$).



Ruler lying on its three point supports

Sensors

In spite of all good qualities it should be recognised that only sensors are used which have a low sensor force, typically 0.1 – 0.2 N. Older types of dial gauges usually have a sensor force until 2 N, which is definitely too much and could scratch the surface.

Technical data

Type	800	1000	1300	1500	2000
Cross section (mm)	140 / 60	140 / 60	140 / 60	140 / 60	140 / 60
Section thickness (mm)	9	9	9	9	9
Weight approx. (kg)	10	11	13	15	22
Total length (mm)	810	1010	1310	1510	2010
Calibrated length (mm)	800	1000	1300	1500	2000
Straightness 876/000 * (μm)	1.80	2.00	2.30	2.50	3.00
Straightness 876/0000 * (μm)	0.90	1.00	1.15	1.25	1.50
Flatness and parallelism	double value of straightness				

* The mentioned straightness describes a line in the middle and is defined to ISO.

We reserve the right for technical changes.



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