

Advantages and disadvantages of various materials

Aluminium

Design with special, high-quality Aluminium with extra surface treatment



- + Measuring surfaces are smooth like a mirror and can be lapped in highest precision
- + Fast adaptation of the material temperature to the environment
- + Consistent expansion
- + Unbreakable
- + Smaller dimensions possible
- + More possibilities for a perfect insertion of fixation threads
- + Surface is extremely hard
- Dents can occur through excessive mechanical damage
- High thermal expansion, which has no negative effect with square measuring equipment, as the test square is expanding evenly

Hard stone

Design with black, fine-grained natural hard stone

- + High precision
- + Stable towards fast temperature changes
- + Low expansion coefficient

- Very slow adaptation of the stone temperature to the environment
- Microscopic porous surfaces
- Limited amount of thread holes because of the use of thread inserts
- Delicate to breaking

Ceramics

Design with white aluminium-oxide-ceramic

- + High precision
- + Stable towards fast temperature changes
- + Low expansion coefficient
- Very slow adaptation of the ceramic temperature to the environment
- Microscopic porous surfaces
- Limited amount of thread holes because of the use of thread inserts
- Brittle material, delicate to breaking
- Expensive

Steel

Design with hardened, stainless steel

- + This alternative is solely used, when working with small test items (smaller than 100 mm)
- + Medium expansion coefficient