

UDC 389.1 : 536.5

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Reference Temperature  
of Measuring Tools and Workpieces

DIN  
102

Bezugstemperatur der Meßzeuge und Werkstücke

This Standard conforms with the ISO Recommendation R 1 "Standard Reference Temperature for Industrial Length Measurements" (July 1951).

The reference temperature for measuring tools and workpieces is

20 °C

The reference temperature is the temperature at which the measuring tools and workpieces must have the prescribed measurements. The reference temperature 20 °C applies to all statements of technical measurement unless the contrary is expressly stated.

Standard temperature, standard pressure, standard condition, see DIN 1343

Explanations

The ISO Recommendation R 1 "Standard Reference Temperature for Industrial Length Measurements" (July 1951) stipulates 20 °C as the reference temperature for industrial measuring instruments and conforms with ISA Bulletin 24.

In comparison with DIN 102 (July 1921) the following alterations have been made in the new edition of DIN 102:

The explanation of the term "Reference Temperature" has been revised.

The remark concerning the coefficient of thermal expansion of materials to be used for measuring tools has been omitted, since in special cases materials with coefficients of thermal expansion other than the previously recommended value are also used for measuring tools.

The reference to verification of measurements by official measuring offices has been omitted since this is out of place in a standard concerning Reference Temperature.

The stipulation that the reference temperature 20 °C must be stated on measuring tools has been omitted, since the reference temperature 20 °C has now become generally established and can be considered a rule.