

Metric buttress threads

Deviations and tolerances

DIN
513
Part 3

Metrisches Sägewinde; Abmaße und Toleranzen

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In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

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1 Introduction

The same tolerance system is used for single-start metric buttress threads as for ISO metric screw threads. Thus, this standard includes extracts from DIN 13 Part 15 for threads up to 8 mm pitch and values supplemented by fundamental deviations A_0 , by lengths of thread engagement and by tolerances for threads with pitches greater than 8 mm. The tolerance zones recommended for buttress threads are different from those for screw threads, whilst the tolerance grades 1) specified for the pitch diameter are identical with those specified for metric trapezoidal screw threads.

As the buttress thread is supposed to be centred round the major diameter, the circular fit H10/h9 has been specified for it.

2 Designations

The complete designation of a screw thread includes information on the thread system, the nominal size of the thread and a symbol for the thread tolerance.

The designation for the metric buttress thread is given in DIN 513 Part 2.

The symbol for the metric buttress thread tolerance refers only to the pitch diameter tolerance as only one tolerance is fixed for the minor diameter of the internal thread and one for the major diameter of the internal and external threads.

Each symbol for the thread tolerance consists of a number indicating the tolerance grade, a letter giving the tolerance position, with an upper case letter for the internal thread and a lower case letter for the external thread.

Example of designation for an internal thread: S 40 x 7 – 7H

Example of designation for an external thread: S 40 x 7 – 7e

A fit is indicated by the symbol for the internal thread tolerance followed by the symbol for the external thread tolerance, both separated by an oblique stroke.

Example: S 40 x 7 – 7H/7e

3 Tolerance grades

Table 1. Tolerance grades for major, pitch and minor diameters

Diameters	Tolerance grades		
Major diameter of internal thread		H10*)	
Major diameter of external thread	9	h 9*)	
Minor diameter of internal thread	4		
Minor diameter of external thread	7	8	9
Pitch diameter of internal thread	7	8	9
Pitch diameter of external thread	7	8	9

*) Tolerance zone as specified in DIN 7160 or DIN 7161.

1) Previously referred to as "tolerance quality". This term does not comply with the definition of the concept "quality" as established in DIN 55350 Part 11, however.

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