

JIS

JAPANESE INDUSTRIAL STANDARD

Limits of Sizes and Tolerances for
Unified Coarse Screw Threads

JIS B 0210-1973

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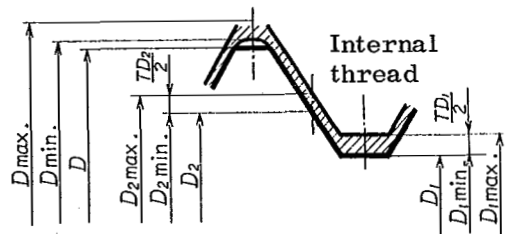
B 0210-1973

1. Scope

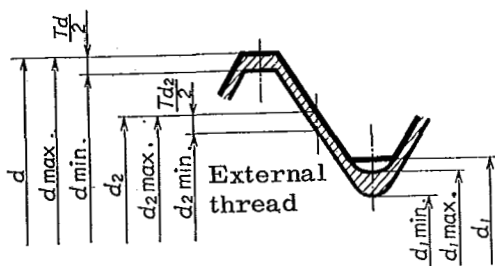
This Japanese Industrial Standard specifies limits of sizes and tolerances for unified coarse screw threads specified in JIS B 0206-Unified Coarse Screw Threads, mainly used for the purpose of fastening.

2. Relations of Basic Profile, Basic Dimensions, Limits of Sizes, Tolerances and Fundamental Deviations

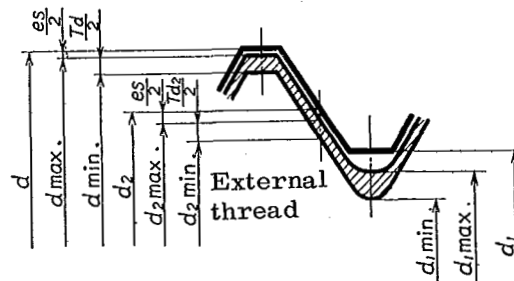
The relations of basic profile, basic dimensions, limits of sizes, tolerances and fundamental deviations are shown in the following Figure:



For Classes 3 B, 2 B and 1 B Screw Threads ($EI = 0$)



For Class 3 A Screw Thread
($es = 0$)



For Classes 2 A and 1 A
Screw Threads ($es < 0$)

Fig. Diagrams showing Relations of Basic Profile, Basic Dimensions, Limits of Sizes, Tolerances and Fundamental Deviations for Unified Coarse Screw Threads

Applicable Standards:

JIS B 0206-Unified Coarse Screw Threads

JIS B 0255-Screw Thread Limit Gauges for Unified Coarse Thread

Reference Standard:

ANSI B 1.1 a -1968 Unified Screw Threads-Metric Translation

The meaning of symbols in the Figure are as follows:

D , D max. and D min.	Basic dimension, maximum limit of size and minimum limit of size for major diameter of internal thread
D_2 , D_2 max., D_2 min., T_{D2} and EI :	Basic dimension, maximum limit of size, minimum limit of size, tolerance and fundamental deviation for pitch diameter of internal thread
D_1 , D_1 max., D_1 min., T_{D1} and EI :	Basic dimension, maximum limit of size, minimum limit of size, tolerance and fundamental deviation for minor diameter of internal thread
d , d max., d min., T_d and es	: Basic dimension, maximum limit of size, minimum limit of size, tolerance and fundamental deviation for major diameter of external thread
d_2 , d_2 max., d_2 min., T_{d2} and es	: Basic dimension, maximum limit of size, minimum limit of size, tolerance and fundamental deviation for pitch diameter of external thread
d_1 , d_1 max. and d_1 min.	: Basic dimension, maximum limit of size and minimum limit of size for minor diameter of external thread

The heavy line indicates the basic profile, and hatched portion the tolerance zone for internal or external thread.

The values of D , D_2 , D_1 , d , d_2 and d_1 are given in the Table of JIS B 0206.

3. Classes, Limits of Sizes and Tolerances for Screw Threads

The classes for screw threads shall be 3 B, 2 B and 1 B for internal threads, and 3 A, 2 A and 1 A for external threads. These classes are divided as shown in the following Table according to whether they are for internal threads or for external threads and amount of tolerances. The limits of sizes and tolerances shall conform to Tables 1 to 6 according to the arrangement of the following Table.

It is permissible, if necessary, to mate internal and external threads of different classes.

Division of class		3 B	3 A	2 B	2 A	1 B	1 A
Reference table	Internal thread	Table 1	-	Table 3	-	Table 5	-
	External thread	-	Table 2	-	Table 4	-	Table 6

Reference: The values of limits of sizes in Tables 1 to 6 conform to ANSI B 1. 1 a-1968 (Unified Screw Threads-Metric Translation). And, the values of fundamental deviations in Tables 2, 4 and 6 comply with ANSI B 1. 1 a above mentioned.

4. Inspection of Screw Threads

The inspection of screw threads made according to this standard shall, as a rule, be performed by the screw thread limit gauges specified in JIS B 0255-Screw Thread Limit Gauges for Unified Coarse Thread.