



SLOVENSKI STANDARD
SIST ISO/R 1501:1998
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Miniaturni navoj ISO

ISO miniature screw threads

Filetages miniatures ISO

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Ta slovenski standard je istoveten z: ISO/R 1501:1970

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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1501

ISO MINIATURE SCREW THREADS
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BRIEF HISTORY

The ISO Recommendation R 1501, *ISO miniature screw threads*, was drawn up by Technical Committee ISO/TC 1, *Screw threads*, the Secretariat of which is held by the Sveriges Standardiseringskommission (SIS).

Work on this question led to the adoption of Draft ISO Recommendation No. 1501, which was circulated to all the ISO Member Bodies for enquiry in May 1968. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Austria	Italy	South Africa, Rep. of
Belgium	Japan	Spain
Canada	Korea, Rep. of	Sweden
Chile	Netherlands	Switzerland
Czechoslovakia	New Zealand	Thailand
Denmark	Peru	Turkey
France	Poland	U.A.R.
Hungary	Portugal	United Kingdom
Israel	Romania	

The following Member Bodies opposed the approval of the Draft :

Australia	Norway
Germany	U.S.A.
India	U.S.S.R.

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided to accept it as an ISO RECOMMENDATION.

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ISO MINIATURE SCREW THREADS

1. SCOPE

This ISO Recommendation specifies ISO miniature screw threads with thread sizes from 0.3 to 1.4 mm diameter.

For technological and functional reasons the tolerancing system for these threads differs from the tolerancing system for ISO general purpose metric screw threads.

2. BASIC PROFILE

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The *basic profile* is the theoretical profile, and this is associated with the basic sizes of the major, pitch, and minor diameters of the thread. The deviations are applied to these basic sizes.

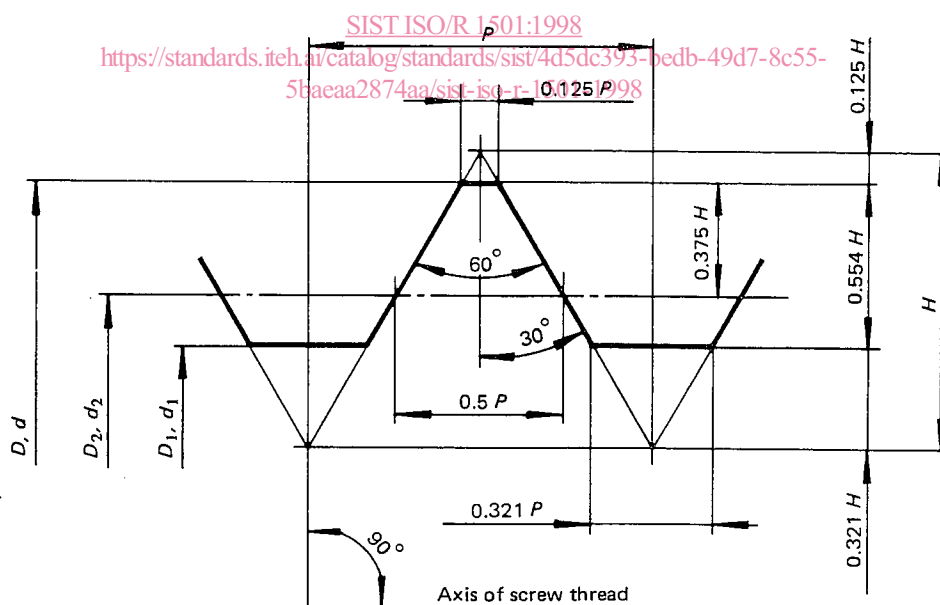


FIG. 1 - Basic profile

D	= major diameter of internal thread	D_1	= minor diameter of internal thread
d	= major diameter of external thread	d_1	= minor diameter of external thread
D_2	= pitch diameter of internal thread	P	= pitch
d_2	= pitch diameter of external thread	H	= height of fundamental triangle

Basic profile dimensions are given in Table 1.

TABLE 1

Values in millimetres

Pitch <i>P</i>	H $0.866\ 025\ P$	$0.554\ 256\ H$ $0.48\ P$	$0.375\ H$ $0.324\ 760\ P$	$0.320\ 744\ H$ $0.277\ 772\ P$	$0.125\ H$ $0.108\ 253\ P$
0.08	0.069 282	0.038 400	0.025 981	0.022 222	0.008 660
0.09	0.077 942	0.043 200	0.029 228	0.024 999	0.009 743
0.1	0.086 603	0.048 000	0.032 476	0.027 778	0.010 825
0.125	0.108 253	0.060 000	0.040 595	0.034 721	0.013 532
0.15	0.129 904	0.072 000	0.048 714	0.041 666	0.016 238
0.175	0.151 554	0.084 000	0.056 833	0.048 610	0.018 944
0.2	0.173 205	0.096 000	0.064 952	0.055 554	0.021 651
0.225	0.194 856	0.108 000	0.073 071	0.062 499	0.024 357
0.25	0.216 506	0.120 000	0.081 190	0.069 443	0.027 063
0.3	0.259 808	0.144 000	0.097 428	0.083 332	0.032 476

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3. SCREW THREAD SIZES

TABLE 2

Values in millimetres

Nominal diameter		Pitch
Column 1 (1st choice)	Column 2 (2nd choice)	
0.3		0.08
	0.35	0.09
0.4		0.1
	0.45	0.1
0.5		0.125
	0.55	0.125
0.6		0.15
	0.7	0.175
0.8		0.2
	0.9	0.225
1		0.25
	1.1	0.25
1.2		0.25
	1.4	0.3

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Choice of diameter

Choose, for preference, diameters in column 1.

4. SCREW THREAD DESIGNATION

A screw thread taken from this ISO Recommendation should be designated by the letter S followed by the value of the nominal diameter in millimetres.

Example : S 0.8

5. BASIC DIMENSIONS

TABLE 3

Values in millimetres

Nominal diameter	Pitch P	Major diameter D, d	Pitch diameter D_2, d_2	Minor diameter D_1, d_1
0.3	0.08	0.300 000	0.248 038	0.223 200
0.35	0.09	0.350 000	0.291 543	0.263 600
0.4	0.1	0.400 000	0.335 048	0.304 000
0.45	0.1	0.450 000	0.385 048	0.354 000
0.5	0.125	0.500 000	0.418 810	0.380 000
0.55	0.125	0.550 000	0.468 810	0.430 000
0.6	0.15	0.600 000	0.502 572	0.456 000
0.7	0.175	0.700 000	0.586 334	0.532 000
0.8	0.2	0.800 000	0.670 096	0.608 000
0.9	0.225	0.900 000	0.753 858	0.684 000
1	0.25	1.000 000	0.837 620	0.760 000
1.1	0.25	1.100 000	0.937 620	0.860 000
1.2	0.25	1.200 000	1.037 620	0.960 000
1.4	0.3	1.400 000	1.205 144	1.112 000