SLOVENSKI STANDARD
SIST ISO 68:1995

01-november-1995

ISO vijačni navoji za splošno uporabo - Osnovni profil

ISO general purpose screw threads -- Basic profile

Filetages ISO pour usages généraux -- Profil de base

Ta slovenski standard je istoveten z: **ISO 68:1973**

ICS:

21.040.01	Navoji na splošno	Screw threads in general

SIST ISO 68:1995 **en**

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INTERNATIONAL STANDARD

ISO **68**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION •МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

ISO general purpose screw threads — Basic profile

First edition — 1973-05-01

UDC 621.882.082   Ref. No. ISO 68-1973 (E)

Descriptors : fasteners, threads, screw threads, profiles, dimensions.

Price based on 3 pages

ISO 68-1973 (E)

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, International Standard ISO 68 replaces ISO Recommendation R 68-1969 drawn up by Technical Committee ISO/TC 1, *Screw threads.*

The Member Bodies of the following countries approved the Recommendation :

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

The Member Bodies of the following countries expressed disapproval of the Recommendation on technical grounds :

Australia
U.S.A.

INTERNATIONAL STANDARD

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ISO general purpose screw threads — Basic profile
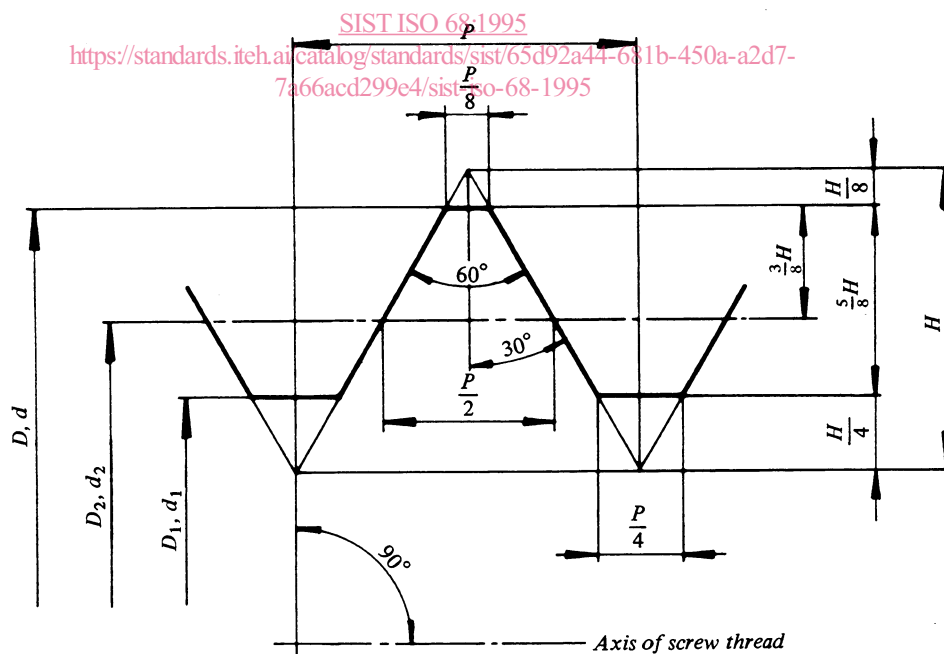
1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the basic profile for ISO general purpose metric and inch screw threads.

2 DEFINITION

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

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

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3 DIMENSIONS

3.1 Metric dimensions

$$H = \frac{\sqrt{3}}{2}P = 0,866\ 025\ 404\ P$$

$$\tfrac{5}{8}H = 0,541\ 265\ 877\ P$$

$$\tfrac{3}{8}H = 0,324\ 759\ 526\ P$$

$$\frac{H}{4} = 0,216\ 506\ 351\ P$$

$$\frac{H}{8} = 0,108\ 253\ 175\ P$$

TABLE 1

Dimensions in millimetres

Pitch P	H	$\tfrac{5}{8}H$	$\tfrac{3}{8}H$	$\dfrac{H}{4}$	$\dfrac{H}{8}$
0,2	0,173 205	0,108 253	0,064 952	0,043 301	0,021 651
0,25	0,216 506	0,135 316	0,081 190	0,054 127	0,027 063
0,3	0,259 808	0,162 380	0,097 428	0,064 952	0,032 476
0,35	0,303 109	0,189 443	0,113 666	0,075 777	0,037 889
0,4	0,346 410	0,216 506	0,129 904	0,086 603	0,043 301
0,45	0,389 711	0,243 570	0,146 142	0,097 428	0,048 714
0,5	0,433 013	0,270 633	0,162 380	0,108 253	0,054 127
0,6	0,519 615	0,324 760	0,194 856	0,129 904	0,064 952
0,7	0,606 218	0,378 886	0,227 332	0,151 554	0,075 777
0,75	0,649 519	0,405 949	0,243 570	0,162 380	0,081 190
0,8	0,692 820	0,433 013	0,259 808	0,173 205	0,086 603
1	0,866 025	0,541 266	0,324 760	0,216 506	0,108 253
1,25	1,082 532	0,676 582	0,405 949	0,270 633	0,135 316
1,5	1,299 038	0,811 899	0,487 139	0,324 760	0,162 380
1,75	1,515 544	0,947 215	0,568 329	0,378 886	0,189 443
2	1,732 051	1,082 532	0,649 519	0,433 013	0,216 506
2,5	2,165 063	1,353 165	0,811 899	0,541 266	0,270 633
3	2,598 076	1,623 798	0,974 279	0,649 519	0.324 760
3,5	3,031 089	1,894 431	1,136 658	0,757 772	0,378 886
4	3,464 102	2,165 063	1,299 038	0,866 025	0,433 013
4,5	3,897 114	2,435 696	1,461 418	0,974 279	0,487 139
5	4,330 127	2,706 329	1,623 798	1,082 532	0,541 266
5,5	4,763 140	2,976 962	1,786 177	1,190 785	0,595 392
6	5,196 152	3,247 595	1,948 557	1,299 038	0,649 519
8	6,928 203	4,330 127	2,598 076	1,732 051	0,866 025

3.2 Inch dimensions

$$H = \frac{0.866\,025\,404}{n}$$

$$\tfrac{5}{8}H = \frac{0.541\,265\,877}{n}$$

$$\tfrac{3}{8}H = \frac{0.324\,759\,526}{n}$$

$$\frac{H}{4} = \frac{0.216\,506\,351}{n}$$

$$\frac{H}{8} = \frac{0.108\,253\,175}{n}$$

n is the number of threads per inch

TABLE 2

Dimensions in inches

Number of threads per inch	Pitch P	H	$\tfrac{5}{8}H$	$\tfrac{3}{8}H$	$\dfrac{H}{4}$	$\dfrac{H}{8}$
80	0.012 500	0.010 825	0.006 766	0.004 059	0.002 706	0.001 353
72	0.013 889	0.012 028	0.007 518	0.004 511	0.003 007	0.001 504
64	0.015 625	0.013 532	0.008 457	0.005 074	0.003 383	0.001 691
56	0.017 857	0.015 465	0.009 665	0.005 799	0.003 866	0.001 933
48	0.020 833	0.018 042	0.011 276	0.006 766	0.004 511	0.002 255
44	0.022 727	0.019 682	0.012 301	0.007 381	0.004 921	0.002 460
40	0.025 000	0.021 651	0.013 532	0.008 119	0.005 413	0.002 706
36	0.027 778	0.024 056	0.015 035	0.009 021	0.006 014	0.003 007
32	0.031 250	0.027 063	0.016 915	0.010 149	0.006 766	0.003 383
28	0.035 714	0.030 929	0.019 331	0.011 599	0.007 732	0.003 866
24	0.041 667	0.036 084	0.022 553	0.013 532	0.009 021	0.004 511
20	0.050 000	0.043 301	0.027 063	0.016 238	0.010 825	0.005 413
18	0.055 556	0.048 113	0.030 070	0.018 042	0.012 028	0.006 014
16	0.062 500	0.054 127	0.033 829	0.020 297	0.013 532	0.006 766
14	0.071 429	0.061 859	0.038 662	0.023 197	0.015 465	0.007 732
13	0.076 923	0.066 617	0.041 636	0.024 982	0.016 654	0.008 327
12	0.083 333	0.072 169	0.045 105	0.027 063	0.018 042	0.009 021
11	0.090 909	0.078 730	0.049 206	0.029 524	0.019 682	0.009 841
10	0.100 000	0.086 603	0.054 127	0.032 476	0.021 651	0.010 825
9	0.111 111	0.096 225	0.060 141	0.036 084	0.024 056	0.012 028
8	0.125 000	0.108 253	0.067 658	0.040 595	0.027 063	0.013 532
7	0.142 857	0.123 718	0.077 324	0.046 394	0.030 929	0.015 465
6	0.166 667	0.144 338	0.090 211	0.054 127	0.036 084	0.018 042
5	0.200 000	0.173 205	0.108 253	0.064 952	0.043 301	0.021 651
4.5	0.222 222	0.192 450	0.120 281	0.072 169	0.048 113	0.024 056
4	0.250 000	0.216 506	0.135 316	0.081 190	0.054 127	0.027 063