

INTERNATIONAL
STANDARD

ISO
5864

Second edition
1993-12-15

**ISO inch screw threads — Allowances and
tolerances**

Filetages ISO en inches — Jeux et tolérances



Reference number
ISO 5864:1993(E)

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International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 5864 was prepared by Technical Committee ISO/TC 1, *Screw threads*, Sub-Committee SC 2, *Tolerances*.

This second edition cancels and replaces the first edition (ISO 5864:1978), tables 2 and 4 of which have been technically revised.

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ISO inch screw threads — Allowances and tolerances

1 Scope

This International Standard specifies a system of allowances and tolerances for standard thread series, covering the range of diameters from 0,06 in to 6 in, and pitches from 80 to 4 threads per inch.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 263:1973, *ISO inch screw threads — General plan and selection for screws, bolts and nuts — Diameter range 0.06 to 6 in.*

ISO 725:1978, *ISO inch screw threads — Basic dimensions.*

ISO 5408:1983, *Cylindrical screw threads — Vocabulary.*

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 5408 apply.

In this International Standard, the terms "external threads" and "internal threads" are synonymous with bolt threads and nut threads, respectively, as used in some other International Standards.

4 Symbols and abbreviations

d	Major diameter of external thread (nominal diameter)
d_2	Pitch diameter of external thread
d_1	Minor diameter of external thread
D	Major diameter of internal thread (nominal diameter)
D_2	Pitch diameter of internal thread
D_1	Minor diameter of internal thread
P	Pitch
n	Number of threads per inch
L_e	Length of thread engagement (for formula)
LE	Length of thread engagement (for designation)
SE	Special length of thread engagement (for designation)
PD	Pitch diameter (for designation)
MOD	Modified diameter limits (for designation)
H	Height of fundamental triangle
T_d	} Tolerances for d , d_2 , D_2 and D_1
T_{d2}	
T_{D2}	
T_{D1}	

5 Sizes and series

Nominal sizes, basic dimensions and the thread pitches available in each size and the pitch series in which they are classified appear in ISO 263 and ISO 725.

Thread series are groups of diameter-pitch combinations distinguished from each other by the number of threads per inch applied to series of specific diameters. The various diameter-pitch combinations are of three series with graded pitches, coarse (UNC), fine (UNF) and extra fine (UNEF) and eight series with constant pitches, 4 UN, 6 UN, 8 UN, 12 UN, 16 UN, 20 UN, 28 UN and 32 UN.