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**ISO metric trapezoidal screw  
threads — Basic and design profiles**

*Filetages métriques trapézoïdaux ISO — Profils de base et nominal*



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# Contents

	Page
Foreword .....	iv
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 Symbols .....	1
5 Basic profile .....	2
6 Design profile .....	4
Bibliography .....	6

## 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

The committee responsible for this document is ISO/TC 1, *Screw threads*.

This third edition cancels and replaces the second edition (ISO 2901:1993), which has been technically revised. The following changes have been made:

- the phrase “maximum material profiles” has been replaced by “design profiles”;
- the reference ISO 2903 has been replaced by ISO 5408;
- the symbols have been updated;
- the definition of basic profile has been deleted;
- [Figure 2](#) has been revised and Figure 3 has been deleted.

# ISO metric trapezoidal screw threads — Basic and design profiles

## 1 Scope

This document specifies the basic and design profiles of ISO metric trapezoidal screw threads.

This document is chiefly applicable to traversing threads for traversing motion on machines, tools, etc. It can also be used for fastening threads.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5408 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

## 4 Symbols

For the purposes of this document, the following symbols apply.

$D$	major diameter of internal thread on basic profile
$D_4$	major diameter of internal thread on design profile
$d$	major diameter of external thread (nominal diameter)
$D_2$	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 on basic profile
$d_3$	minor diameter of external thread on design profile
$P$	pitch
$H$	fundamental triangle height
$H_2$	thread height on basic profile
$H_0$	thread overlap on design profile
$H_4$	thread height of internal thread on design profile