

INTERNATIONAL STANDARD

ISO
6410-3

First edition
1993-05-15

Technical drawings — Screw threads and threaded parts —

Part 3:

Simplified representation
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Dessins techniques — Filetages et pièces filetés —

ISO 6410-3:1993

Partie 3: Représentation simplifiée

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INTERNATIONAL

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Reference number
ISO 6410-3:1993(E)

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 6410-3 was prepared by Technical Committee ISO/TC 10, *Technical drawings, product definition and related documentation*, Sub-Committee SC 6, *Mechanical engineering documentation*.

ISO 6410 consists of the following parts, under the general title *Technical drawings — Screw threads and threaded parts*:

- Part 1: *General conventions*
- Part 2: *Screw thread inserts*
- Part 3: *Simplified representation*

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International Organization for Standardization

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Introduction

ISO 6410 has been devised to provide an universal means of communication among the various interests involved in the design, manufacture and installation of fasteners.

Requirements within industries vary considerably; in recognition of this fact ISO 6410 is presented in three parts (see foreword).

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Technical drawings — Screw threads and threaded parts —

Part 3: Simplified representation

1 Scope

This part of ISO 6410 establishes rules for the simplified representation of threaded parts, with the exception of screw thread inserts, which are covered in ISO 6410-2. This representation is applicable when it is not necessary to show the exact shape and details of the parts (see ISO 6410-1), for example in assembly drawings.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 6410. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 6410 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 225:1983, *Fasteners — Bolts, screws, studs and nuts — Symbols and designations of dimensions*.

ISO 6410-1:1993, *Technical drawings — Screw threads and threaded parts — Part 1: General conventions*.

3 Simplified representation

3.1 General

In simplified representation only essential features shall be shown. The degree of simplification depends on the kind of object represented, the scale of the drawing and the purpose of the documentation.

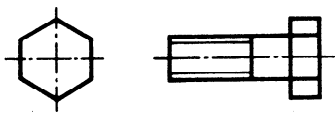
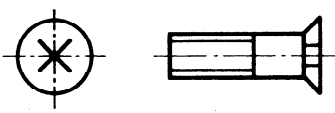
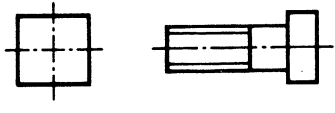
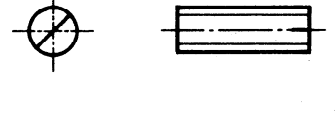
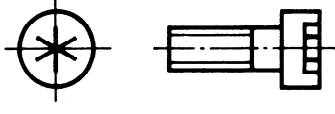
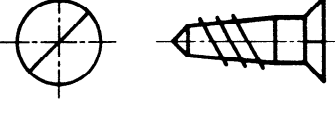

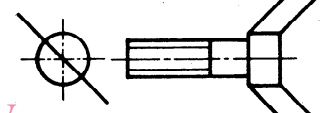

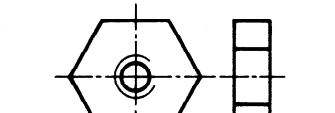
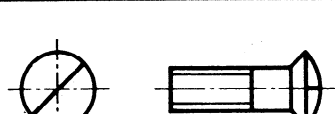

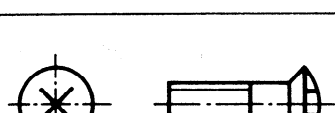
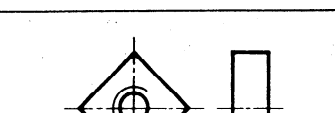
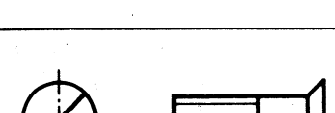
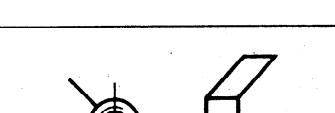
Therefore, the following features shall not be drawn in simplified representations of threaded parts:

- edges of chamfers of nuts and heads;
- thread run-outs;
- the shape of ends of screws;
- undercuts.

3.2 Screws and nuts

When it is essential to show the shapes of screw heads, drive patterns or nuts, the examples of simplified representations shown in table 1 shall be used. Combinations of features, not shown in table 1, may also be used. A simplified representation of the opposite (threaded) end view is not necessary.

Table 1

No.	Designation	Simplified representation	No.	Designation	Simplified representation
1	Hexagon head screw		9	Countersunk screw, cross slot	
2	Square head screw		10	Set screw, slot	
3	Hexagon socket screw		11	Wood and self-tapping screw, slot	
4	Cylinder screw (pan-head type), slot		12	Wing screw	
5	Cylinder screw, cross slot		13	Hexagon nut	
6	Oval countersunk screw, slot		14	Crown nut	
7	Oval countersunk screw, cross slot		15	Square nut	
8	Countersunk screw, slot		16	Wing nut	

3.3 Small diameter threads

It is permissible to simplify the representation and/or the indication of dimensions if

- the diameter (on the drawing) is ≤ 6 mm or
- there is a regular pattern of holes or threads of the same type and size.

The designation shall include all necessary features normally shown in a conventional representation and/or dimensioning (see ISO 6410-1:1992, 4.3).

The designation shall appear on a leader line which points to the centre-line of the hole and terminates in an arrowhead (see figures 1 to 4).

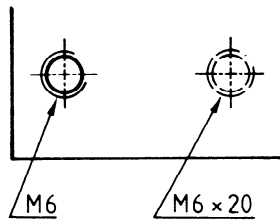


Figure 1

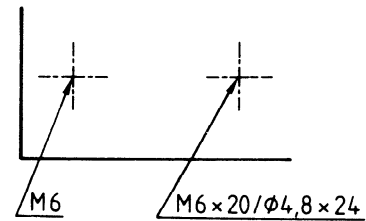


Figure 3

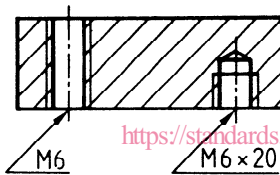


Figure 2

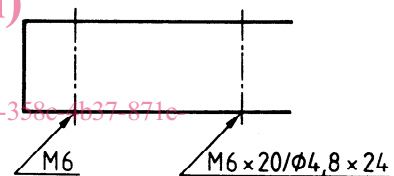


Figure 4

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