

Technical drawings — Screw threads and threaded parts

Part 2. Screw thread inserts

The European Standard EN ISO 6410-2 : 1996 has the status of a
British Standard

ICS 01.100.20; 21.040

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee TDE/4, Engineering drawing practice, upon which the following bodies were represented:

- Atomic Weapons Establishment
- British Gas plc
- British Standards Society
- Drawing Office Material Manufacturers' and Dealers' Association
- Electricity Association
- Gauge and Tools Makers' Association
- HEVAC Association
- Institution of Chemical Engineers
- Institution of Engineering Designers
- Power Generation Contractors' Association
- Society of British Aerospace Companies Ltd.
- University of Warwick

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on 15 August 1996

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Amendments issued since publication

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The following BSI references relate to the work on this standard:
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Contents

	Page
Committees responsible	Inside front cover
National foreword	ii
Foreword	2
Introduction	2
Specification	
1 Scope	3
2 Normative references	3
3 Representation	3
4 Designation and dimensioning	4
Annex	
ZA (normative) Normative references to international publications with their relevant European publications	8



National foreword

This British Standard has been prepared by Technical Committee TDE/4 and is the English language version of EN ISO 6410-2 : 1996 *Technical drawings — Screw threads and threaded parts — Part 2: Screw thread inserts*, published by the European Committee for Standardization (CEN). It is identical with ISO 6410-2 : 1993 published by the International Organization for Standardization (ISO).

This British Standard partially supersedes BS 308 : Part 1. It is envisaged that when the full range of European Standards on technical drawing is implemented BS 308 will be withdrawn.

Cross-references

Publication referred to	Corresponding British Standard
EN 20225 : 1991 (ISO 225 : 1983)	BS EN 20225 : 1992 <i>Fasteners. Bolts, screws, studs and nuts. Symbols and designations of dimensions</i>
	BS EN ISO 6410 <i>Technical drawings — Screw threads and threaded parts</i>
EN ISO 6410-1 : 1996 (ISO 6410-1 : 1993)	BS EN ISO 6410-1 : 1996 <i>General conventions</i>

Compliance with a British Standard does not of itself confer immunity from legal obligations.

ICS 01.100.20; 21.040

Descriptors: Drawings, technical drawings, screw threads, threaded parts, graphic methods

English version

Technical drawings — Screw threads and threaded parts — Part 2: Screw thread inserts

(ISO 6410-2 : 1993)

Dessins techniques — Filetages et pièces
filetées —
Partie 2: Inserts filetés
(ISO 6410-2 : 1993)

Technische Zeichnungen — Gewinde und
Gewindeteile —
Teil 2: Gewindeeinsätze
(ISO 6410-2 : 1993)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels



Foreword

The text of the International Standard from Technical Committee ISO/TC 10, Technical drawings, product definition and related documentation, of the International Organization for Standardization (ISO) has been taken over as a European Standard by the Technical Board of CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 1996, and conflicting national standards shall be withdrawn at the latest by October 1996.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

NOTE. Normative references to International Standards are listed in annex ZA (normative).

Introduction

ISO 6410 has been devised to provide a 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.

Technical drawings — Screw threads and threaded parts —

Part 2: Screw thread inserts

1 Scope

This part of ISO 6410 specifies methods for the representation of screw thread inserts on technical 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 128:1982, *Technical drawings — General principles of presentation.*

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

3 Representation

3.1 Detailed representation of the true shape of screw thread inserts

The detailed representation of the true shape of screw thread inserts (see figures 1 to 3) shall only be used for illustrations, e.g. in catalogues, and should be avoided in technical drawings.

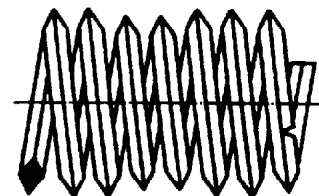


Figure 1

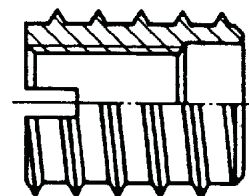


Figure 2

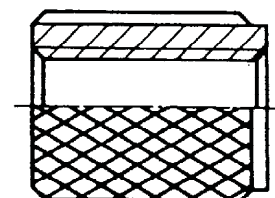


Figure 3



3.2 Conventional representation

Screw thread inserts are usually drawn using a conventional representation derived from ISO 6410-1.

The outer forms of screw thread inserts vary greatly depending on the intended purpose, the material, the manufacturer, etc., and may not even be threaded, but all shall be depicted in the same way. Examples are shown in table 1.

3.3 Simplified representation

In simplified representation only the essential features shall be shown, depending on the kind of drawing and the purpose of the documentation.

The simplified representation for screw thread inserts should be used whenever possible.

The principle of simplification is shown in figure 4. Different examples and possible identification for simplified representation of inserts are shown in table 1.

In sections, the outlines of the screw thread insert (external and internal crests) shall be shown by a continuous thick line (type A, ISO 128). The nominal diameter of the internal thread in assembled condition shall not be shown. The insert itself shall not be hatched (see figure 5).

On an end view, the external and internal crests shall be shown as a full circle by a continuous thick line. The nominal diameter of the internal thread in the assembled condition shall not be shown (see figure 6).

4 Designation and dimensioning

Screw thread inserts shall be designated as given in the relevant International Standards. If such standards are not available the designation shall consist of the designation for the thread, $d \times P$ (screw thread for which the screw thread insert is intended) followed by the letters INS (for insert).

EXAMPLE

M30 × 1,5 INS

When a more general description is sufficient, e.g. there is an insert placed, the abbreviation INS shall be indicated (see figures 5 and 6).

NOTE 1 If the thread is coarse, the designation of the pitch, P , may be omitted.

Additional information (manufacturer's name, catalogue number, etc.) may be added.

The designation may be indicated by means of a leader line (see figure 7) or as a dimension (see table 1).

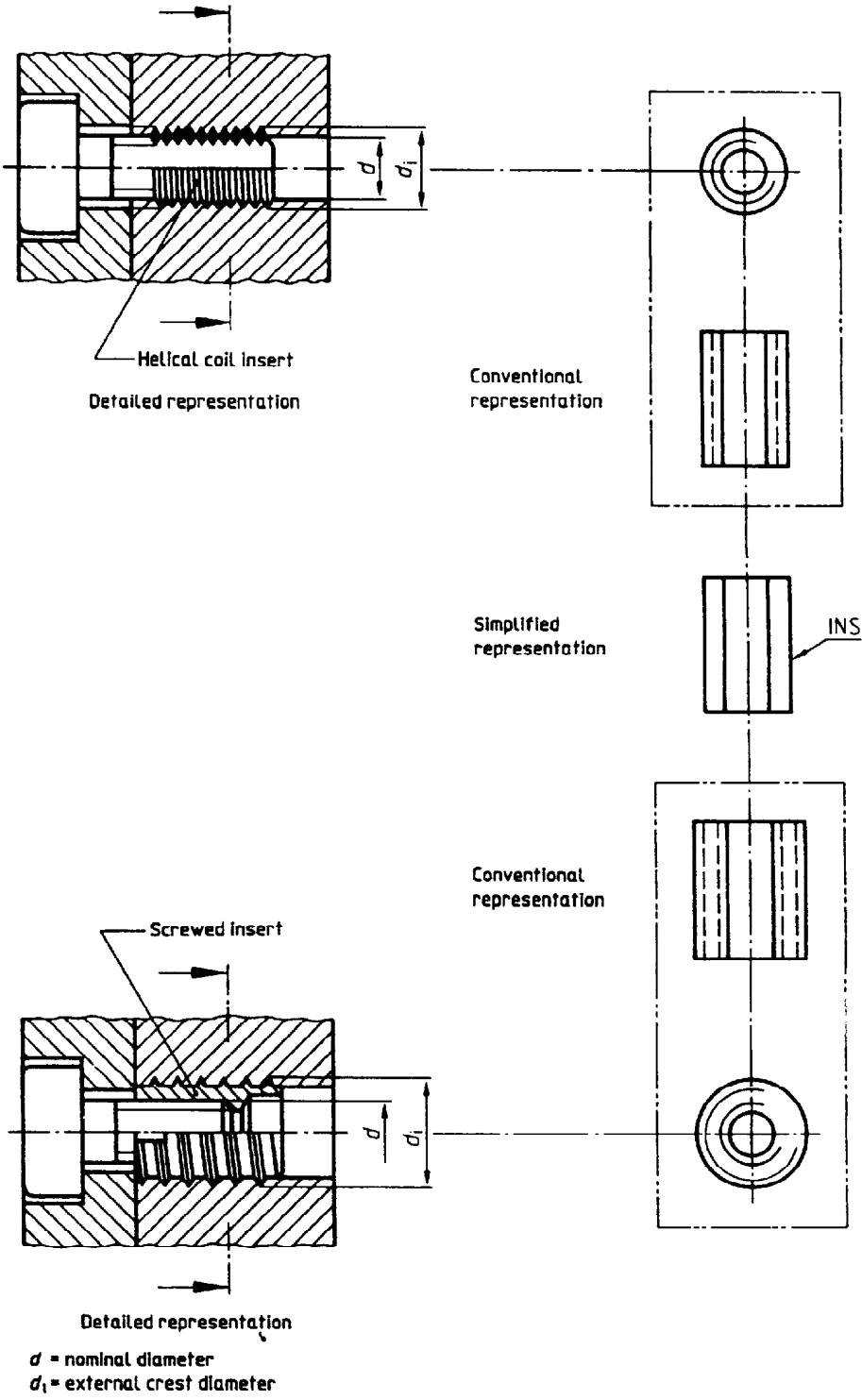
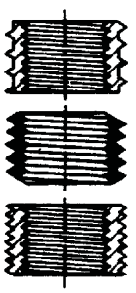
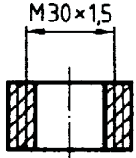
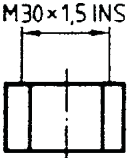
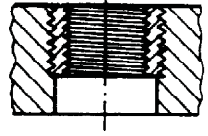
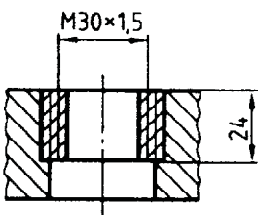
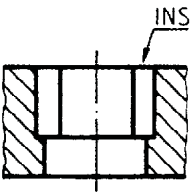
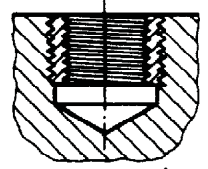
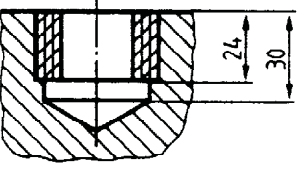
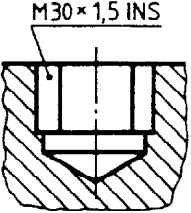
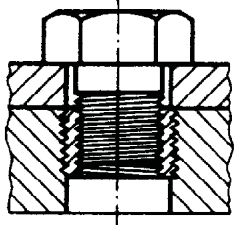
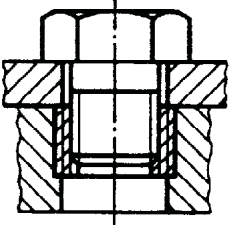
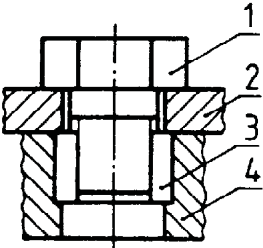
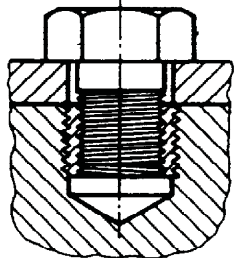
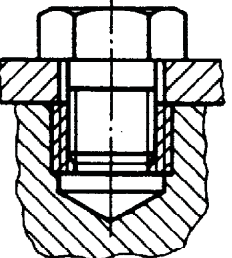
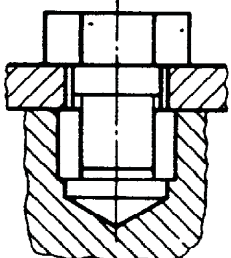


Figure 4

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Table 1

	Representation		
	Detailed	Conventional	Simplified
Insert			
Installed insert			
			
Assembly of an insert			
			

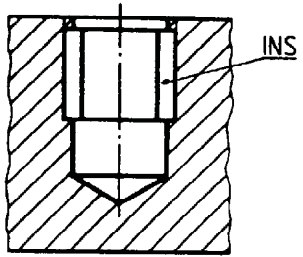


Figure 5

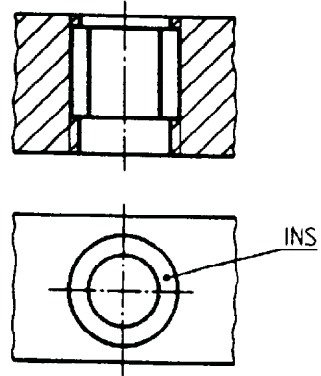


Figure 6

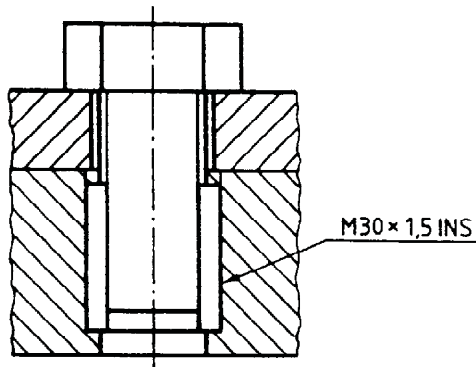


Figure 7



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Annex ZA (normative)**Normative references to international publications with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

Publication	Year	Title	EN	Year
ISO 225	1983	<i>Fasteners — Bolts, screws, studs and nuts — Symbols and designations of dimensions</i>	EN 20225	1991
ISO 6410-1	1993	<i>Technical drawings — Screw threads and threaded parts — Part 1: General conventions</i>	EN ISO 6410-1	1996

List of references

See national foreword.



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