EESTI STANDARD EVS-EN ISO 6413:1999

# Tehnilised joonised. Kiilude ja hammaste kujutamine

Technical drawings - Representation of splines and serrations

EESTI STANDARDIKESKUS

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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EUROPEAN STANDARD

NORME EUROPÉENNE

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**EN ISO 6413**

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Descriptors: drawings, technical drawings, splines, graphic methods

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English version

# Technical drawings - Representation of splines and serrations (ISO 6413:1988)

Dessins techniques - Représentation des cannelures et des dentelures (ISO 6413:1988)

Technische Zeichnungen - Darstellung von Keilwellen und Kerbverzahnungen (ISO 6413:1988)

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

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**Foreword**

This European Standard was taken over by CEN from the work of ISO/TC 10 "Technical drawings, product definition and related documentation" of the international Standards Organization (ISO).

The Technical Board had decided to submit the final draft for Formal Vote. The result was positive.

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of an identical text or by endorsement, at the latest by April 1995, and conflicting national standards shall be withdrawn at the latest by April 1995.

According to the CEN/CENELEC Internal Regulations, 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, United Kingdom.

**Endorsement notice**

The text of the International Standard ISO 6413:1988 was approved by CEN as a European Standard without any modification.

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# INTERNATIONAL STANDARD

ISO
6413

First edition
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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

## Technical drawings — Representation of splines and serrations

*Dessins techniques — Représentation des cannelures et des dentelures*

Reference number
ISO 6413 : 1988 (E)

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## 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 approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6413 was prepared by Technical Committee ISO/TC 10, *Technical drawings.*

Annex A forms an integral part of this International Standard.

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# Technical drawings — Representation of splines and serrations

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## 1 Scope

This International Standard specifies the rules and graphical symbols for the representations of splines and serrations on technical drawings.

Two methods of representation are specified as follows :

a) true representation;

b) simplified representation.

The rules and graphical symbols specified in this International Standard are applicable to detail drawings of the parts (shafts and hubs) and to assembly drawings of joints.

NOTE — For uniformity all figures in this International Standard are drawn in the first-angle orthographic projection.

It should be understood that the third-angle orthographic projection could equally well have been used without prejudice to the principles established.

## 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 listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 14 : 1982, *Straight-sided splines for cylindrical shafts with internal centering — Dimensions, tolerances and verification.*

ISO 128 : 1982, *Technical drawings — General principles of presentation.*

ISO 3098-1 : 1974, *Technical drawings — Lettering — Part 1 : Currently used characters.*

ISO 3461-2 : 1987, *General principles for the creation of graphical symbols — Part 2 : Graphical symbols for use in technical product documentation.*

ISO 4156 : 1981, *Straight cylindrical involute splines — Metric module, side fit — Generalities, dimensions and inspection.*

## 3 Definitions

For the purposes of this International Standard, the following definitions apply.

**3.1 spline joint** : Connecting, co-axial, elements that transmit torque through the simultaneous engagement of equally spaced teeth situated around the periphery of a cylindrical external member with similar spaced mating spaces situated around the inner surface of the related cylindrical internal member. [ISO 4156 : 1981]

**3.2 involute spline** : One member of a spline joint having teeth or spaces that have involute flank profiles. [ISO 4156 : 1981]

**3.3 straight-sided spline** : One member of a spline joint having teeth or spaces that have straight-sided flank profiles.

**3.4 serration** : One member of a spline joint having teeth or spaces that generally have flank profiles of 60° pressure angle.

## 4 Designation

The designation of spline joints shall consist of the graphical symbol of the type and the designation of joint specified in the relevant International Standard (see clause 2) or any other standard dealing with this subject.

### 4.1 Graphical symbols

The type of spline joint is indicated by graphical symbols.

The graphical symbols for the straight-sided spline (see ISO 14) are shown in figure 1 and for the involute spline (see ISO 4156) and for serrations are shown in figure 2.

Figure 1

Figure 2

The proportion and dimensions of the graphical symbols are specified in annex A.