EESTI STANDARD EVS-EN ISO 5456-1:2000

Technical drawings - Projection methods - Part 1: Synopsis

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 5456-1:2000 sisaldab Euroopa standardi EN ISO 5456-1:1999 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 5456-1:2000 consists of the English text of the European standard EN ISO 5456-1:1999.
Standard on kinnitatud Eesti Standardikeskuse 11.01.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 11.01.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

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English version

Technical drawings - Projection methods - Part 1: Synopsis (ISO 5456-1:1996)

Dessins techniques - Méthodes de projection - Partie 1: Récapitulatif (ISO 5456-1:1996)

Technische Zeichnungen - Projektionsmethoden - Teil 1: Übersicht (ISO 5456-1:1996)

This European Standard was approved by CEN on 27 May 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. 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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

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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 an European Standard by CEN/CS.

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 January 2000, and conflicting national standards shall be withdrawn at the latest by January 2000.

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

Endorsement notice

The text of the International Standard ISO 5456-1:1996 has been approved by CEN as a European Standard without any modification.

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

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 10209-2	1993	Technical product documentation - Vocabulary - Part 2: Terms relating to projection methods	EN ISO 10209-2	1996

INTERNATIONAL STANDARD

ISO 5456-1

First edition
1996-06-15

Technical drawings — Projection methods —

Part 1: Synopsis

Dessins techniques — Méthodes de projection —

Partie 1: Récapitulatif

Reference number
ISO 5456-1:1996(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 5456-1 was prepared by Technical Committee ISO/TC 10, *Technical drawings, product definition and related documentation*, Subcommittee SC 1, *Basic conventions*.

ISO 5456 consists of the following parts, under the general title *Technical drawings — Projection methods*:

— *Part 1: Synopsis*

— *Part 2: Orthographic representations*

— *Part 3: Axonometric representations*

— *Part 4: Central projection*

Annex A of this part of ISO 5456 is for information only.

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Introduction

In the broad field of technical activities, various projection methods are used to represent objects. All these methods have their own merits, but also their inherent disadvantages.

The normal technical drawing is often an orthogonal projection, in which related representations of more than one view are utilized (see ISO 5456-2) to draw and completely define any object by means of carefully chosen views, cuts and sections.

However, the execution of such two-dimensional representations requires an understanding of both the projection method and its interpretation, so that the observer will be able to synthesize the single views into a three-dimensional object.

For many technical fields and their stages of development, however, it is necessary to provide an easily understood picture to observers. Such drawings, called pictorial representation, provide a three-dimensional view of an object as it would appear to the observer. No special technical training for reading pictorial representations is necessary.

Pictorial representations may be presented on their own or may supplement orthogonal drawings.

Various methods of pictorial representations exist, but their nomenclatures differ, and may be used even contradictorily.

The steady increase in global technical intercommunication, as well as the evolution of methods of computer-aided design and draughting with their various types of three-dimensional representations, suggest the need for ISO/TC 10 to clarify this problem.

The rules and conventions given in ISO 5456 should be used, in accordance with ISO 128, for all types of technical drawings and in all fields of technical activities, such as:

— mechanical and construction drawings;

— manuals and instruction books;

— X-ray views;

— exploded views.

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Technical drawings — Projection methods —

Part 1: Synopsis

1 Scope

This part of ISO 5456 gives a survey of the various types of projection methods as well as their geometric relationships.

Parts 2 to 4 specify details for the selection and application of the various projection methods.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 5456. 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 5456 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 1503:1977, *Geometrical orientation and directions of movements.*

ISO 5456-2:1996, *Technical drawings — Projection methods — Part 2: Orthographic representations.*

ISO 5456-3:1996, *Technical drawings — Projection methods — Part 3: Axonometric representations.*

ISO 5456-4:1996, *Technical drawings — Projection methods — Part 4: Central projection.*

ISO 10209-1:1992, *Technical product documentation — Vocabulary — Part 1: Terms relating to technical drawings: general and types of drawings.*

ISO 10209-2:1993, *Technical product documentation — Vocabulary — Part 2: Terms relating to projection methods.*

3 Definitions

For the purposes of this part of ISO 5456, the definitions given in ISO 10209-1 and ISO 10209-2 and the following definitions apply.

3.1 pictorial representation: Parallel or central projection on a single projection plane giving a three-dimensional image of an object.

3.2 true view: View of the features of an object that lie on a plane parallel to the projection plane; geometrically similar to the corresponding features of the object.

3.3 exploded view: Drawing of an assembly in pictorial representation in which all the components are drawn to the same scale and correctly orientated relative to each other, but are separated from each other in their correct sequence along common axes.

NOTE 1 This term should not be confused with representations where a covering layer is removed in order to show inner portions like those presented in section (cut-away view).

3.4 principal view: View of an object showing the important features, which may be chosen from the point of view of design, assembly, sales, service or maintenance.

4 Survey of projection methods

Projection methods are defined by:

— the type of projectors, which may be either parallel or convergent;