INTERNATIONAL STANDARD

ISO 5261

Second edition
1995-11-01

Technical drawings — Simplified representation of bars and profile sections

Dessins techniques — Représentation simplifiée des barres et des profilés

Reference number
ISO 5261:1995(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 5261 was prepared by Technical Committee ISO/TC 10, *Technical drawings, product definition and related documentation*, Subcommittee SC 6, *Mechanical engineering documentation*.

This second edition of ISO 5261 together with ISO 5845-1:1995 cancel and replace ISO 5261:1981, which has been technically revised.

Annex A of this International Standard is for information only.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Introduction

For purposes of uniformity, the figures given in this International Standard are shown in first angle orthographic projection and all the linear dimensions are in millimetres. It is understood that other orthographic projections or units of measure could equally well have been used without prejudice to the principles established. The figures, chosen only to illustrate the text, may be incomplete.

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Technical drawings — Simplified representation of bars and profile sections

1 Scope

This International standard specifies rules complementary to ISO 128[1] and ISO 129 for the simplified representation of bars and profile sections in assembly and detail drawings concerning, among others:

— structural metal work consisting of plates and sheets, profile sections and compound elements (including bridges, frameworks, pilings, etc.);

— lifting and transport appliances;

— storage tanks and pressure vessels;

— lifts, moving stairways and conveyor belts.

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

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

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

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 10209-1 apply.

4 Complementary rules for the simplified representation of bars and profile sections

The simplified representation of bars and profile sections shall consist of their relevant ISO designation followed, if necessary, by the cutting length, separated by a hyphen. This designation may also be used when filling in an item list (see ISO 7573).

EXAMPLE

The simplified representation of an equal leg angle profile in accordance with ISO 657-1, measuring 50 mm × 50 mm × 4 mm and having a cutting length of 1 000 mm shall consist of the following ISO designation:

Angle profile ISO 657-1 - 50 × 50 × 4 - 1 000

If there is no designation specified in an International Standard or other relevant standard, the designation shall be composed of the graphical symbol followed by the necessary dimensions, in accordance with tables 1 and 2.

1) This International Standard is at present under revision.

Table 1

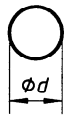
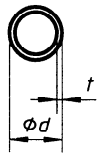
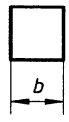
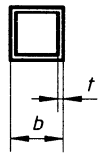
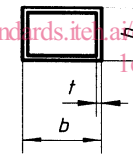
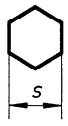
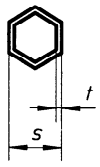
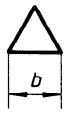
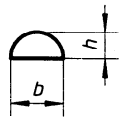
Description of bar section	Dimensions	Designation	
		Graphical symbol	Necessary dimensions
Circular solid section			d
Tube			$d \times t$
Square solid section			b
Square hollow section			$b \times t$
Rectangular solid section			$b \times h$
Rectangular hollow section			$b \times h \times t$
Hexagonal solid section			s
Hexagonal hollow section			$s \times t$
Triangular solid section			b
Semicircular solid section			$b \times h$

Table 2

Description of profile section	Designation		
	Graphical symbol	Alternative letter symbol	Dimensions
Angle section		L	Characteristic dimensions
T-section		T	
I-beam section		I	
H-beam section		H	
Channel section		U	
Z-section		Z	
Rail section			
Bulb angle section			
Bulb flat section			

Table 1 applies to the designation of bar sections.

EXAMPLE

The simplified representation of a rectangular solid bar section measuring 50 mm × 10 mm and having a cutting length of 100 mm shall consist of the following designation:

 50 × 10 - 100

Table 2 applies to the designation of profile sections, and indicates which graphical symbols may be replaced by upper case letters, if appropriate, for simplification.

EXAMPLE

The simplified representation of an angle profile section measuring 89 mm × 60 mm × 7 mm and having a cutting length of 500 mm shall consist of one of the following two designations:

 89 × 60 × 7 - 500

or

L 89 × 60 × 7 - 500

The designation shall be positioned in close proximity to the relevant item (see figures 1 to 3). Figure 3 includes L-shaped profiles for which the graphical symbols are positioned to reflect the arrangement for assembly.

5 Schematic representation of structural metal work

Compound frames of structural metal work can be schematically represented by continuous thick lines (type A, ISO 128) indicating the centroidal lines of the intersecting elements. In this case, the values of the distances between the reference points of the centroidal lines shall be indicated directly on the represented elements (see figure 4).

Closed dimensional chains are permitted. However, in the case of cumulative tolerances, equalization via one of the dimensions shall be indicated.

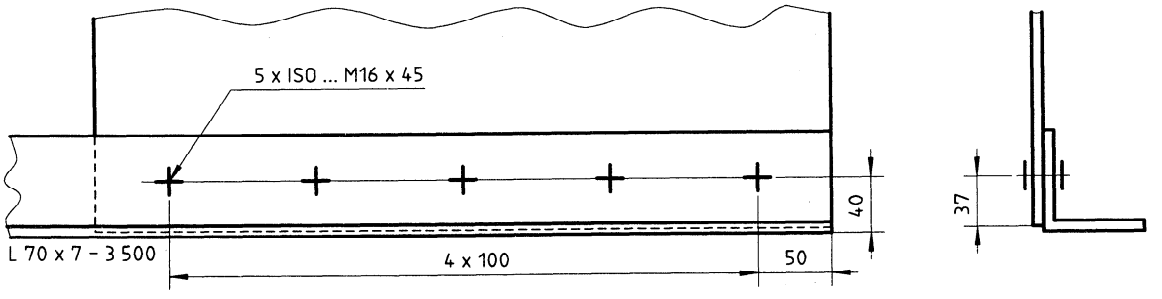


Figure 1

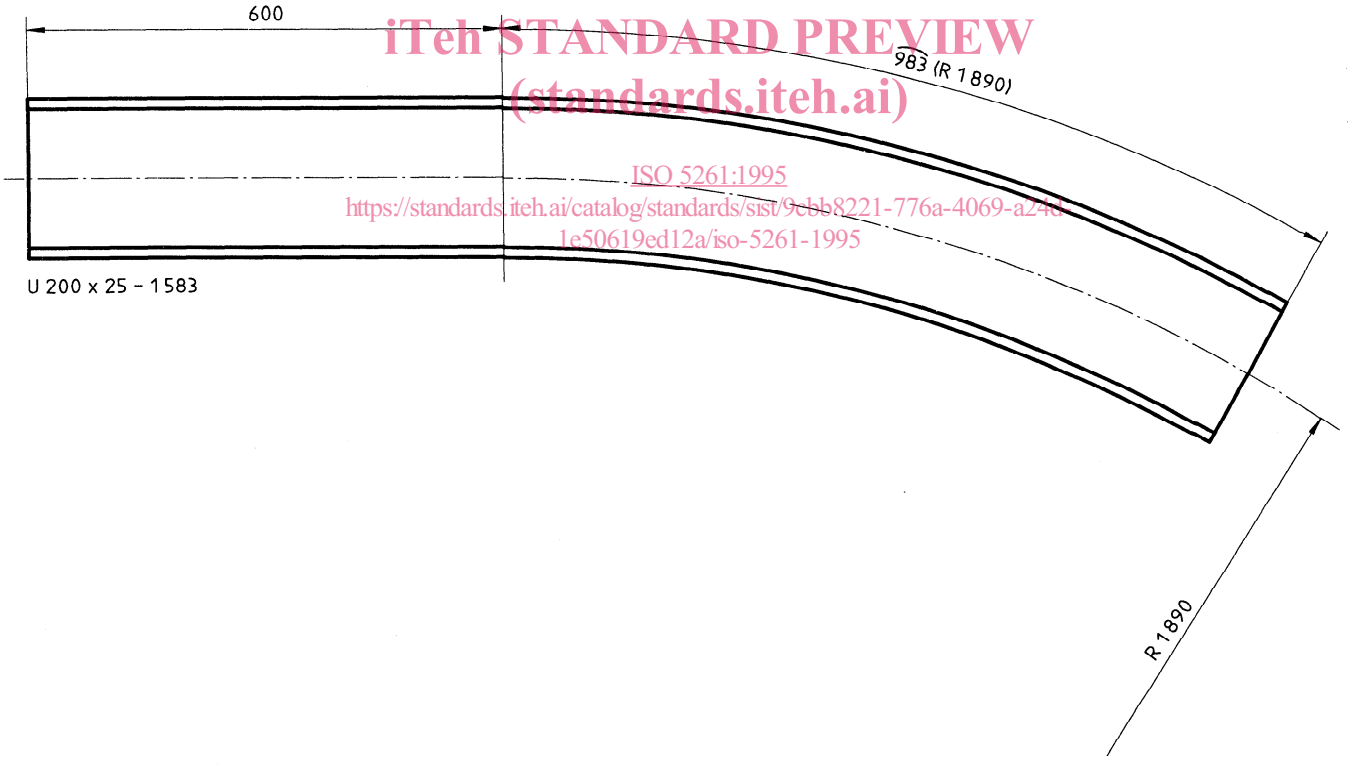


Figure 2

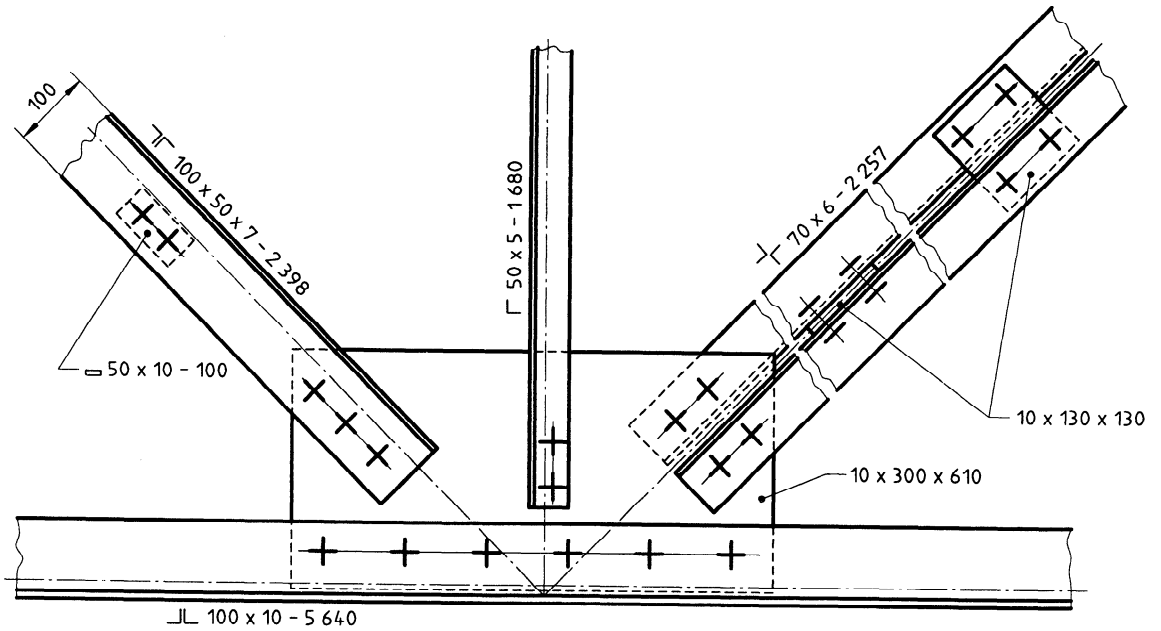


Figure 3

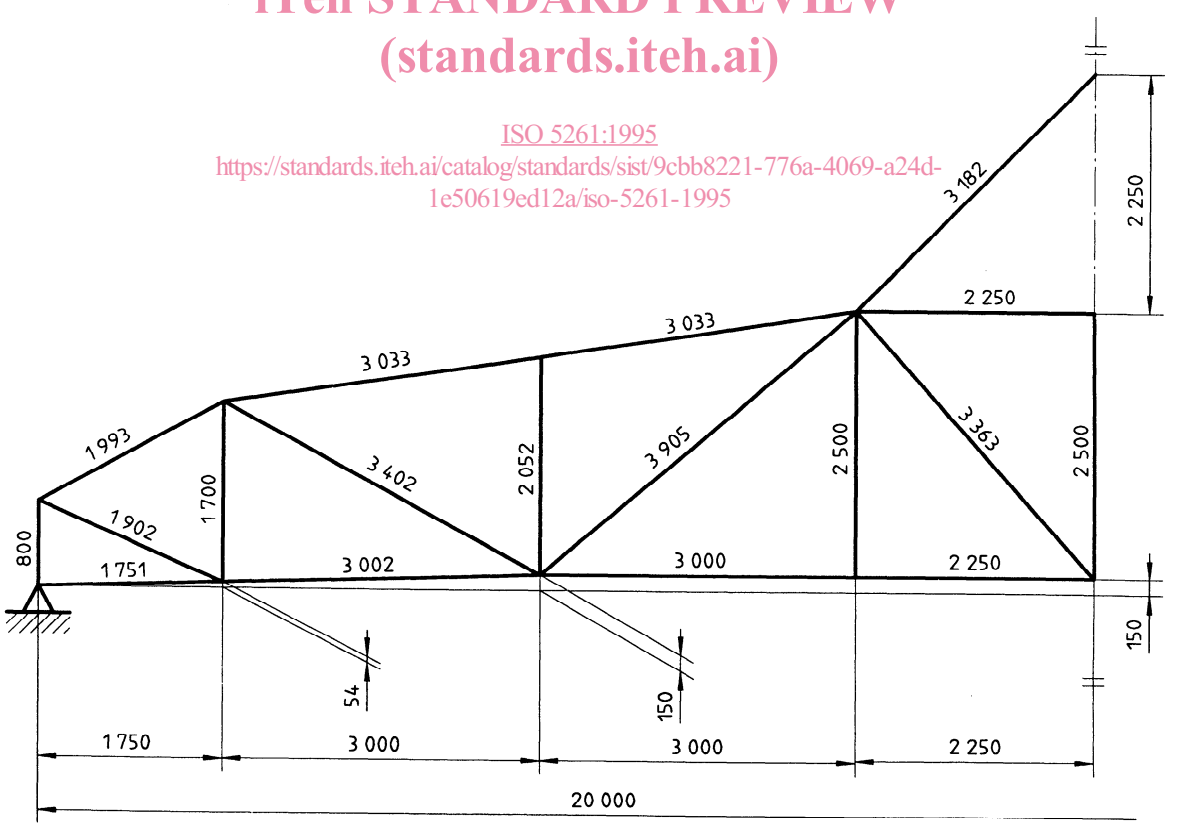


Figure 4