



SLOVENSKI STANDARD
SIST ISO 7465:1999

01-april-1999

Osebna in tovarna dvigala - Vodila za kabino in protiutež - Tip T

Passenger lifts and service lifts -- Guide rails for lifts and counterweights -- T-type

Ascenseurs et monte-charge -- Guides de cabine et de contrepoinds -- Profils en T

Ta slovenski standard je istoveten z: ISO 7465:1997

[SIST ISO 7465:1999](#)

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INTERNATIONAL STANDARD

ISO 7465

Second edition
1997-09-15

Passenger lifts and service lifts — Guide rails for lifts and counterweights — T-type

*Ascenseurs et monte-charge — Guides de cabine et de contrepoids —
Profils en T*

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Reference number
ISO 7465:1997(E)

ISO 7465:1997(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 7465 was prepared by Technical Committee ISO/TC 178, *Lifts, escalators, passenger conveyors*.

This second edition cancels and replaces the first edition (ISO 7465:1983), which has been technically revised.

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X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

Passenger lifts and service lifts — Guide rails for lifts and counterweights — T-type

1 Scope

This International Standard specifies the grades and quality, the dimensional characteristics and tolerances, and the surface finish of standardized guide rails and their fishplates.

The dimensional tolerances include the tolerances on shape and dimensions, straightness, twisting and perpendicularity defects.

In addition, this International Standard defines a designation system for guide rails.

This International Standard is applicable to guide rails used in passenger lifts and service lift installations to provide guiding for the car and the counterweight.

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2 Normative references

[SIST ISO 7465:1999](https://standards.iteh.ai/catalog/standards/sist/9465447f-acb4-47a5-8005-710000000000/iso-7465-1997)

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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 468:1982, *Surface roughness — Parameters, their values and general rules for specifying requirements*.

ISO 630:1995, *Structural steels — Plates, wide flats, bars, sections and profiles*.

ISO 1302:1992, *Technical drawings — Method of indicating surface texture on drawings*.

3 Definitions

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

3.1 guide rails: Components which provide guiding for the car or the counterweight, if there is one.

3.2 fishplate: Piece of steel used to connect the guides.

4 Symbols and units (see also figure 1)

The following symbols and corresponding units of measurement are used in this International Standard.

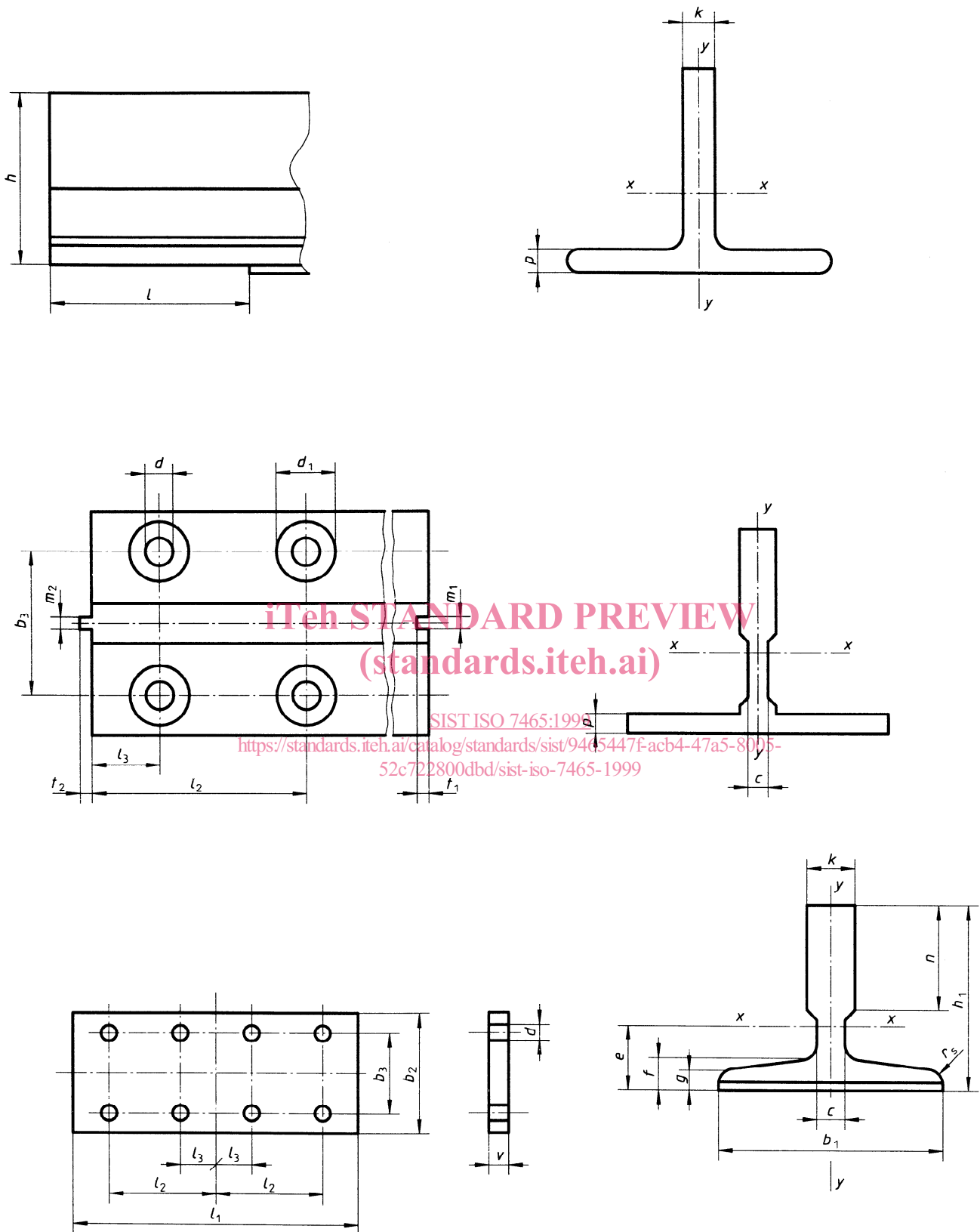
| Symbols | Dimension | Units |
|------------|---|-----------------|
| b_1 | Guide width | mm |
| b_2 | Fishplate width | mm |
| b_3 | Distance between the axes of the holes (in the transverse direction of the guide) | mm |
| c | Width of the part that connects the foot to the blade | mm |
| d | Hole diameter | mm |
| d_1 | Countersinking diameter | mm |
| e | Distance from the rear surface to the centre of gravity | cm |
| f | Foot depth at its connection with the blade | mm |
| g | Foot depth at its extremity in a transverse plane | mm |
| h | Guide height at the level of the machined surface for the location of the fishplate | mm |
| h_1 | Guide height | mm |
| I_{xx} | Moment of inertia of the cross-sectional area of the guide related to the x-x axis | cm ⁴ |
| I_{yy} | Moment of inertia of the cross-sectional area of the guide related to the y-y axis | cm ⁴ |
| i_{xx} | Radius of gyration corresponding to the x-x axis | cm |
| i_{yy} | Radius of gyration corresponding to the y-y axis | cm |
| k | Blade width | mm |
| l | Machined surface length for the location of the fishplate | mm |
| l_1 | Fishplate length | mm |
| l_2 | Distance, in the guide longitudinal direction, between the axis of the holes farthest from the end of the guide and this end; and distance, in the fishplate longitudinal direction, between the axis of the holes farthest from the transverse axis of the fishplate and this axis | mm |
| l_3 | Distance, in the guide longitudinal direction, between the axis of the holes nearest to the end of the guide and this end; and distance, in the fishplate longitudinal direction, between the axis of the holes nearest to the transverse axis of the fishplate and this axis | mm |
| l_x, l_y | Machining sub-length for the location of the fishplate | mm |
| m_1 | Width of the keyway for the junction of the guides | mm |
| m_2 | Width of the key for the junction of the guides | mm |

| | | |
|--------------------|--|-----------------|
| n | Blade height | mm |
| p | Foot depth (in the case of a flat foot) | mm |
| q_1 | Linear density for a finished guide rail | kg/m |
| q_2 | Mass of a finished fishplate | kg |
| Ra | Roughness (see ISO 468) | m |
| r_s | Foot radius | mm |
| S | Cross-sectional area of the guide | cm ² |
| t_1 | Depth of the keyway for the junction of the guides | mm |
| t_2 | Length of the key for the junction of the guides | mm |
| v | Fishplate thickness (when machined) | mm |
| v_{basic} | Fishplate thickness (when not machined) | mm |
| W_{xx} | Cross-sectional area modulus related to the x-x axis | cm ³ |
| W_{yy} | Cross-sectional area modulus related to the y-y axis | cm ³ |

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NOTE — For cold-drawn guides, the dimension h is identical to the dimension h_1 .

Figure 1 — Dimension symbols

5 Manufacture and materials

5.1 Guide rails

Guide rails may be cold-drawn or machined. In this International Standard, the manufacturing process for each type of guide is indicated by the letter A for cold-drawn and B for machined.

The strength of the steel raw material used shall be at least 370 N/mm² and not more than 520 N/mm². For this purpose, it is recommended to use steel grade Fe 360 B for cold-drawn guides and steel grade Fe 430 B for machined guides, in accordance with ISO 630.

5.2 Fishplate

The steel grade shall be the same as for the guide rails (see 5.1).

6 Dimensional characteristics and tolerances

6.1 Guide rails

6.1.1 Dimensions

See tables 1 and 2.

Guide rails with other dimensions can be delivered on specific agreement between the manufacturer and the customer.

The length of the guide shall be indicated in millimetres with a tolerance of ± 2 mm; it is recommended to supply in bars of 5 000 mm length.

6.1.2 Machined surface for the location of the fishplate

Depending on the machining method, three cases can occur.

6.1.2.1 Case 1 — Cross horizontal milling

See figure 2.

$$l = \left(\frac{l_1}{2} + 3 \right) +_0^3 \text{ mm (no sub-length)}$$

6.1.2.2 Case 2 — Vertical milling

See figure 2.

$$l = \left(\frac{l_1}{2} + 3 \right) +_0^3 \text{ mm (sub-length: } l_y = 10 \text{ mm max.)}$$