



SLOVENSKI STANDARD

SIST ENV 1729-1:2002

01-maj-2002

BUXca Yý U
SIST ISO 5970:1996

Pohištvo - Stoli in mize za vzgojno-izobraževalne ustanove - 1. del: Funkcionalne mere

Furniture - Chairs and tables for educational institutions - Part 1: Functional dimensions

Möbel - Stühle und Tische für Bildungseinrichtungen - Teil 1: Funktionsmaße

Meubles - Chaises et tables pour les établissements d'enseignement - Partie 1:
Dimensions fonctionnelles

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Ta slovenski standard je istoveten z: EN 1729-1:2001

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97.140 Pohištvo Furniture

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EUROPEAN PRESTANDARD
PRÉNORME EUROPÉENNE
EUROPÄISCHE VORNORM

ENV 1729-1

May 2001

ICS 97.140

English version

Furniture - Chairs and tables for educational institutions -Part 1:Functional dimensions

Meubles - Chaises et tables pour les établissements
d'enseignement - Partie 1:Dimensions fonctionnelles

Möbel - Stühle und Tische für Bildungseinrichtungen - Teil
1:Funktionsmaße

This European Prestandard (ENV) was approved by CEN on 7 April 2001 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

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.

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Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 207 "Furniture", the secretariat of which is held by IBN.

Annexes A and B are informative.

This European Prestandard includes a Bibliography.

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

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Introduction

This European Prestandard is based upon the principle that chairs and tables, intended for use in educational institutions for general purpose education, should be designed to encourage good postures for those using them.

This European Prestandard takes the best known national standards into consideration.

It provides for a wide range of designs, including fixed or adjustable furniture, especially as regards dimensions, which apply to several ergonomic principles.

This European Prestandard does not specify whether the furniture shall be fixed or adjustable, but it does not prevent such furniture from fulfilling the requirements of the Prestandard.

This European Prestandard does not provide one solution. School furniture can be adapted to the different applications in practice. It allows a number of interpretations to be made, taking into consideration local customs, principles for the arrangement of class rooms and finally the conditions and financial circumstances in each country.

The data on which the Prestandard is based derives from those documents mentioned in the Bibliography.

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1 Scope

This European Prestandard specifies functional dimensions and marking for chairs and tables for general educational purposes in educational institutions.

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The Prestandard does not apply to computer related and special purpose workstations, e.g. offices, laboratories, ranked seating, workshops, and spaces for design and technology.

NOTE Part 2 of this Prestandard specifies safety requirements and test methods.

2 Terms and definitions

For the purposes of this European Prestandard, the following terms and definitions apply.

2.1

median plane

vertical plane passing through the geometrical centre of the seat, dividing the seat from front to rear into two equal parts (see Figure 5)

2.2

transverse plane

vertical plane perpendicular to the median plane passing through the geometrical centre of the seat (see Figure 5)

2.3

foremost point of the backrest

foremost point on the median plane

If the backrest is adjustable, the foremost point of the backrest is determined when the backrest is in its most forward position.

For a tilting backrest, the bottom and top edges of the backrest in the centre line shall be placed in the same vertical plane on the centre line of the backrest, before determining the position of the foremost point. If this is not possible, the position as close as possible to the vertical plane shall be used.

2.4

double sloped seat

seat intended for seating using either the front part of the seat for seating with the feet resting on the ground or using the rear part of the seat for seating with the feet resting on a footrest (see Figures 4 and 8)

2.5

(α) inclination of a single sloped seat and of the front part of a double sloped seat

angle formed by the front part of the seat and the horizontal. It is measured in the median plane, as the angle between horizontal and the line passing through the upper part of the front edge, and the corresponding point at the rear part of the seat (for single sloped seats) or at the top point of the seat (for double sloped seats)

(α) is negative for rearwards sloping seats

(α) is positive for forwards sloping seats.

2.6

(δ) inclination of the rear part of a double sloped seat

angle formed by the rear part of the seat and the horizontal determined in the median plane

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Front



Figure 1 - Examples of measuring the angle of single sloped seat with negative seat angle

Front

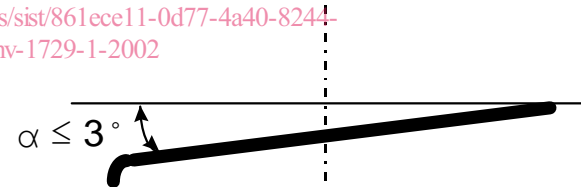


Figure 2 - Example of measuring the angle of single sloped seat with positive seat angle

Front

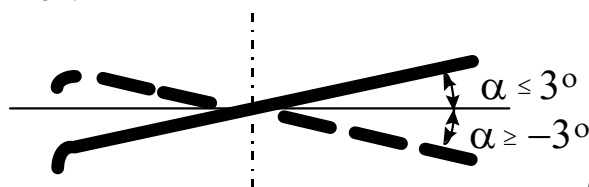


Figure 3 - Examples of measuring the angle of single sloped tiltable seat

Front

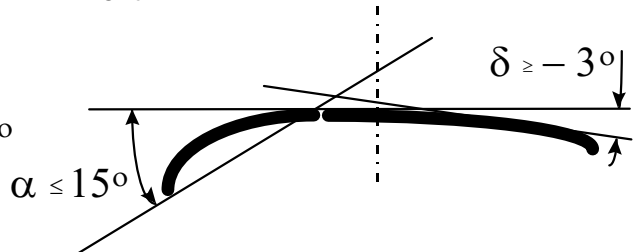


Figure 4 - Example of measuring the angle of double sloped seat

3 Functional dimensions for chairs and tables

The functional dimensions and corresponding size marks and colour codes for chairs and tables are specified in this clause.

The dimensions of the furniture take into account pupils wearing shoes.
When determining stature height or popliteal height it should be noted that measurements will be 20 mm greater (shoe allowance) than the corresponding stature and popliteal dimensions given in Tables 1 and 2 which do not include an allowance for shoes.

3.1 Functional dimensions and size marks for chairs

The dimensions, angles, size marks and colour codes for chairs shall be as given in Table 1.

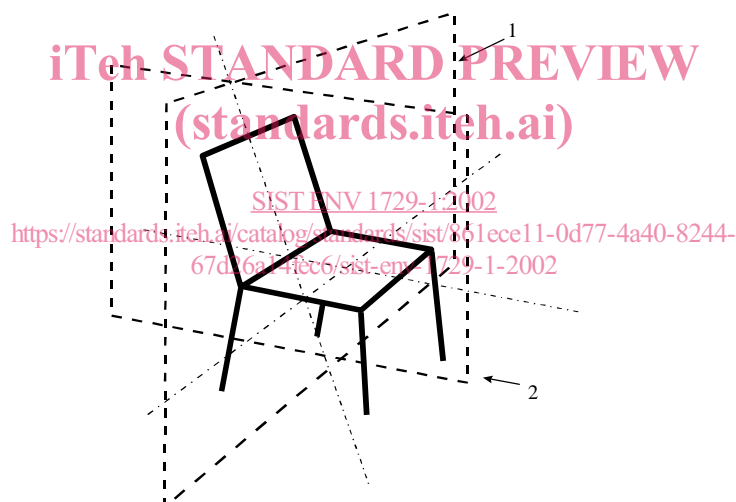
The depth of the rear part of the seat (t_6) shall be not less than 50 % of the seat depth ($t_5 + t_6$) (if the seat is double sloped).

The front edge of the seat shall be curved and the front part of the seat may be curved.

Room for free movement of the posterior shall be ensured.

The side of chair seat shall not be raised to form a ridge which is higher than 15 mm than any lower point of the seat surface in the transverse direction of the seat.

The upper and the lower edge of the backrest shall be well rounded.



Key

- 1 Transverse
- 2 Median plane

Figure 5 - Illustration of the median and transverse plane

The determination of the functional dimensions of chairs is specified below (see also Figures 6 to 9).

(h₈) The height of the seat is determined on the median plane. For seats with single slope, the height is the vertical distance between the front of the seat and the ground. For seats with double sloped seat, the height is the vertical distance between the highest point of the seat and the ground (see also Figures 6 to 8).

(t₄) The depth of the seat is determined on the median plane as the horizontal distance between the front edge of the seat and the vertical projection of the foremost point of the backrest (see also Figures 6 to 9).

(b₃) The width of the seat is determined as the horizontal distance between vertical lines through the side edges of the seat surface on the transverse plane, at a distance equal to half of t₄ (see also Figure 9).

(h₆) The height of the lowest point of the backrest is determined on the median plane. It is the vertical distance between the lowest point of the backrest and the seat surface (see also Figures 6 to 8).

(h₇) The height of the highest point of the backrest is determined on the median plane. It is the vertical distance between the upper edge of the backrest and the seat surface (see also Figures 6 to 8).

(b₄) The width of the backrest is the greatest horizontal distance between its side edges (see also Figure 9).

(r₂) The horizontal radius of the backrest is determined on the horizontal plane, placed at the same height as the foremost point of the backrest (see also Figure 9).

(t₅) The depth of the front part of the seat is determined on the median plane. It is the horizontal distance between the front edge of the seat and the foremost top point of the rear part of the seat (see also Figure 8).

(t₆) The depth of the rear part of the seat is determined on the median plane. It is the horizontal distance between the foremost point of the backrest and the foremost top point of the rear part of the seat (see also Figure 8).

(W) The height of the foremost point of the backrest is determined on the median plane. It is the vertical distance between the foremost point of the backrest and the seat surface (see also Figures 6 to 8)