



SLOVENSKI STANDARD SIST EN 4045:2002

01-januar-2002

Aerospace series - Capillary tubes, seamless in heat resisting alloys - Diameter 0,6 mm <= D <= 2 mm - Dimensions

Aerospace series - Capillary tubes, seamless in heat resisting alloys - Diameter 0,6 mm <= D <= 2 mm - Dimensions

Luft- und Raumfahrt - Kapillarrohre, nahtlos aus hochwarmfesten Legierungen - Durchmesser 0,6 mm <= D <= 2 mm - Maße

Série aérospatiale - Tubes capillaires, sans soudure en alliages résistant a chaud - Diametres 0,6 mm <= D <= 2 mm - Dimensions

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Ta slovenski standard je istoveten z: EN 4045:2001

ICS:

49.080 Štejni sistemi in komponente za letalske sisteme in komponente
Aerospace fluid systems and components

SIST EN 4045:2002 en

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EUROPEAN STANDARD

EN 4045

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2001

ICS 49.080

English version

Aerospace series - Capillary tubes, seamless in heat resisting alloys - Diameter $0,6 \text{ mm} \leq D \leq 2 \text{ mm}$ - Dimensions

Série aérospatiale - Tubes capillaires, sans soudure en alliages résistant à chaud - Diamètres $0,6 \text{ mm} \leq D \leq 2 \text{ mm}$ - Dimensions

Luft- und Raumfahrt - Kapillarrohre, nahtlos aus hochwarmfesten Legierungen - Durchmesser $0,6 \text{ mm} \leq D \leq 2 \text{ mm}$ - Maße

This European Standard was approved by CEN on 2 May 2001.

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 Management Centre 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 Management Centre 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.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

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 March 2002, and conflicting national standards shall be withdrawn at the latest by March 2002.

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.

0 Introduction

This standard is part of the series of EN metallic material standards for aerospace applications. The general organization of this series is described in EN 4258.

1 Scope

This standard specifies the dimensions and tolerances of:

Capillary tubes, seamless
in heat resisting alloys
Diameter $0,6 \text{ mm} \leq D \leq 2 \text{ mm}$

for aerospace applications.

2 Normatives references

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.

- | | |
|---------|---|
| EN 3848 | Aerospace series - Semi-finished metallic products - Method of measuring form deviations. |
| EN 4258 | Aerospace series - Metallic materials - General organization of standardization - Links between types of EN standards and their use |

3 Form

See figure 1.

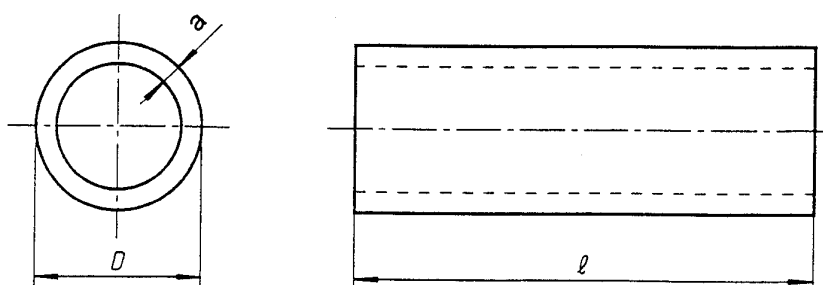


Figure 1

4 Recommended dimensions and mass

4.1 Diameter, thickness and mass

See table 1.

Table 1

Nominal D mm	Linear mass ^a in kg/m for nominal a in mm:	
	0,1	0,2
0,6	1,32	–
0,8	1,85	–
1,0	2,38	4,22
1,2	2,90	5,28
1,4	–	6,33
1,6	–	7,39
2,0	–	9,50

^a For information, calculated with a density of 8,1 kg/dm³

4.2 Length

The order shall specify if tubes are to be supplied in fixed or in random lengths. In the event of a supply of random lengths the minimum and maximum values for the lengths shall be specified on the order.

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5 Tolerances

5.1 Dimensional tolerances

5.1.1 Diameter

See table 2.

Table 2

Dimensions in millimetres

Diameter	Tolerance
$0,6 \leq D \leq 2$	$\pm 0,03$

5.1.2 Thickness

See table 3.

Table 3

Dimensions in millimetres

Thickness	Tolerance
$0,1 \leq a \leq 0,2$	$\pm 0,02$

5.1.3 Length

See table 4, only applicable to tubes supplied in fixed lengths.

Table 4

Dimensions in millimetres	
Length	Tolerances
$l \leq 500$	+1 0
$500 < l \leq 2\ 000$	+2 0
$2\ 000 < l \leq 5\ 000$	+5 0
$l > 5\ 000$	+10 0

5.2 Geometric tolerances

5.2.1 Straightness

5.2.1.1 Method of measurement and symbols

See EN 3848.

5.2.1.2 Tolerances

See table 5.

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Table 5

Dimensions in millimetres	
Diameter	Straightness deviation Y_1 per metre
$0,6 \leq D \leq 2$	$\leq 1,7$

5.2.2 Roundness

5.2.2.1 Method of measurement and symbol

See EN 3848.

5.2.2.2 Tolerances

Roundness deviation shall be contained within the outside diameter tolerances.

5.2.3 Eccentricity

5.2.3.1 Method of measurement and symbol

See EN 3848.

5.2.3.2 Tolerances

Eccentricity shall be contained within the thickness tolerances.