



SLOVENSKI STANDARD

SIST EN 755-4:2008

01-maj-2008

BUXca Yý U.

SIST EN 755-4:1998

Aluminij in aluminijeve zlitine - Iztiskane palice/drogovi, cevi in profili - 4. del: Palice s kvadratnim prerezom, tolerance mer in oblike

Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 4: Square bars, tolerances on dimensions and form

Aluminium und Aluminiumlegierungen - Stranggepresste Stangen, Rohre und Profile - Teil 4: Vierkantstangen, Grenzabmaße und Formtoleranzen

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Aluminium et alliages d'aluminium - Barre, tubes et profilés filés - Partie 4 : Barres carrées, tolérances sur dimensions et forme

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English Version

Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 4: Square bars, tolerances on dimensions and form

Aluminium et alliages d'aluminium - Barres, tubes et profilés filés - Partie 4: Barres carrées, tolérances sur dimensions et forme

Aluminium und Aluminiumlegierungen - Stranggepresste Stangen, Röhre und Profile - Teil 4: Vierkantstangen, Grenzabmaße und Formtoleranzen

This European Standard was approved by CEN on 10 February 2008.

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 CEN 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 CEN Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Page

Foreword.....	3
1 Scope	5
2 Alloy groups	5
3 Tolerances on dimensions	5
3.1 Width across flats	5
3.2 Corner radii.....	6
3.3 Length	6
3.4 Squareness of cut ends	7
4 Tolerances on forms	7
4.1 Straightness	7
4.2 Convexity - Concavity	8
4.3 Twist.....	8
4.4 Squareness.....	9
Bibliography	11

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[SIST EN 755-4:2008](https://standards.iteh.ai/catalog/standards/sist/14a3b80c-3fff-465b-b4a2-17aa3a62c1c9/sist-en-755-4-2008)

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Foreword

This document (EN 755-4:2008) has been prepared by Technical Committee CEN/TC 132 "Aluminium and aluminium alloys", the secretariat of which is held by AFNOR.

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 September 2008, and conflicting national standards shall be withdrawn at the latest by September 2008.

This document supersedes EN 755-4:1995.

Within its programme of work, Technical committee CEN/TC 132 entrusted CEN/TC 132/WG 5 "*Extruded and drawn products*" to revise EN 755-4:1995.

The following technical modifications have been introduced during the revision:

- Clause 2: Alloys EN AW-3102, EN AW-6008, EN AW-6010A, EN AW-6014, EN AW-6023, EN AW-6360, EN AW-6262A, EN AW-6065 and EN AW-6182 are added in Group I
- Clause 2: Alloys EN AW-5049, EN AW-7108, EN AW-7108A and EN AW-7021 are added in Group II

EN 755 comprises the following parts under the general title "*Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles*":

- *Part 1: Technical conditions for inspection and delivery*
- *Part 2: Mechanical properties*
- *Part 3: Round bars, tolerances on dimensions and form*
- *Part 4: Square bars, tolerances on dimensions and form*
- *Part 5: Rectangular bars, tolerances on dimensions and form*
- *Part 6: Hexagonal bars, tolerances on dimensions and form*
- *Part 7: Seamless tubes, tolerances on dimensions and form*
- *Part 8: Porthole tubes, tolerances on dimensions and form*
- *Part 9: Profiles, tolerances on dimensions and form*

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

CEN/TC 132 affirms it is its policy that in the case when a patentee refuses to grant licenses on standardized standards products under reasonable and not discriminatory conditions then this product shall be removed from the corresponding standard.

EN 755-4:2008 (E)

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

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1 Scope

This document specifies the tolerances on dimensions and form for aluminium and aluminium alloy extruded square bars having widths across flats from 10 mm up to 220 mm.

The temper designations used in this part are according to EN 515.

2 Alloy groups

The division into group I and group II of the most commonly used general engineering alloys is specified in Table 1. Grouping of other alloys is subject to agreement between supplier and purchaser.

Table 1 — Alloy groups

Group I	EN AW-1050A, EN AW-1070A, EN AW-1200, EN AW-1350 EN AW-3102, EN AW-3003, EN AW-3103 EN AW-5005, EN AW-5005A, EN AW-5051A, EN AW-5251 EN AW-6101A, EN AW-6101B, EN AW-6005, EN AW-6005A, EN AW-6106, EN AW-6008, EN AW-6010A, EN AW-6012, EN AW-6014, EN AW-6018, EN AW-6023, EN AW-6351, EN AW-6060, EN AW-6360, EN AW-6061, EN AW-6261, EN AW-6262, EN AW-6262A, EN AW-6063, EN AW-6063A, EN AW-6463, EN AW-6065, EN AW-6081, EN AW-6082, EN AW-6182
Group II	EN AW-2007, EN AW-2011, EN AW-2011A, EN AW-2014, EN AW-2014A, EN AW-2017A, EN AW-2024, EN AW-2030 EN AW-5019, EN AW-5049, EN AW-5052, EN AW-5154A, EN AW-5454, EN AW-5754, EN AW-5083, EN AW-5086 EN AW-7003, EN AW-7005, EN AW-7108, EN AW-7108A, EN AW-7020, EN AW-7021, EN AW-7022, EN AW-7049A, EN AW-7075

3 Tolerances on dimensions

3.1 Width across flats

The tolerances on width across flats are specified in Table 2.

For the purpose of this standard the alloys are distributed into two groups which correspond to varying difficulty when manufacturing the products.

The division into group I and group II of the most commonly used general engineering alloys is specified in Table 1.

Table 2 — Width across flats tolerances

Dimensions in millimetres

Width across flats <i>S</i>		Tolerances	
Over	Up to and including	Alloy group I	Alloy group II
≥ 10	18	± 0,22	± 0,30
18	25	± 0,25	± 0,35
25	40	± 0,30	± 0,40
40	50	± 0,35	± 0,45
50	65	± 0,40	± 0,50
65	80	± 0,45	± 0,70
80	100	± 0,55	± 0,90
100	120	± 0,65	± 1,0
120	150	± 0,80	± 1,2
150	180	± 1,0	± 1,4
180	220	± 1,15	± 1,7

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3.2 Corner radii

Maximum corner radii are specified in Table 3.

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Table 3 — Maximum corner radii

Dimensions in millimetres

Width across flats <i>S</i>		Maximum corner radii	
Over	Up to and including	Alloy group I	Alloy group II
≥ 10	25	1,0	1,5
25	50	1,5	2,0
50	80	2,0	3,0
80	120	2,5	3,0
120	180	2,5	4,0
180	220	3,5	5,0

3.3 Length

If fixed lengths are to be supplied, this shall be stated in the order document. The fixed length tolerances are specified in Table 4.

Table 4 — Fixed length tolerances

Dimensions in millimetres

Width across flats S		Tolerances on length		
Over	Up to and including	$L \leq 2000$	$2000 < L \leq 5000$	$L > 5000$
≥ 10	100	+5 0	+7 0	+10 0
100	200	+7 0	+9 0	+12 0
200	220	+8 0	+11 0	+14 0

If no fixed or minimum length is specified in the order document, square extruded bars may be delivered in random lengths. The actual lengths and tolerances on random lengths shall be agreed between supplier and purchaser.

3.4 Squareness of cut ends

The squareness of cut ends shall be within half of the fixed-length tolerance range (Table 4) for both fixed and random lengths, (e.g. for a fixed length tolerance of $^{+10}_0$ mm the squareness of cut ends shall be within 5 mm).

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4 Tolerances on forms

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4.1 Straightness <https://standards.iteh.ai/catalog/standards/sist/14a3b80c-3ff-465b-b4a2-17aa3a62c1c9/sist-en-755-4-2008>

Deviations from straightness, h_s and h_t , shall be measured as shown in Figure 1 with the square bar placed on a horizontal base plate so that its mass decreases the deviation.

The straightness tolerances are specified in Table 5 (The straightness tolerance h_t applies to the whole length, e.g. for a length of 6 m the maximum deviation from straightness h_t is the value given in the table multiplied by 6 m).

The straightness tolerances apply to square bars in all tempers except O and Tx510. If a straightness tolerance is required for either O or Tx510 temper, it shall be agreed between supplier and purchaser.