



SLOVENSKI STANDARD

SIST EN 755-3:1998

01-april-1998

Aluminij in aluminijeve zlitine - Iztiskane palice/drogovi, cevi in profili - 3. del: Palice z okroglim prerezom, odstopki mer in tolerance oblik

Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 3: Round bars, tolerances on dimensions and form

Aluminium und Aluminiumlegierungen - Stranggepreßte Stangen, Rohre und Profile - Teil 3: Rundstangen, Grenzabmaße und Formtoleranzen

Aluminium et alliages d'aluminium - Barres, tubes et profilés filés - Partie 3: Barres rondes, tolérances sur dimensions et forme

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Ta slovenski standard je istoveten z: EN 755-3:1995

ICS:

77.150.10 Aluminijski izdelki Aluminium products

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EUROPEAN STANDARD

EN 755-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 1995

ICS 77.140.90

Descriptors: extruded products, rolled products, aluminium, aluminium alloys, metal bars, round bars, dimensions, dimensional tolerances, form tolerances

English version

**Aluminium and aluminium alloys - Extruded
rod/bar, tube and profiles - Part 3: Round bars,
tolerances on dimensions and form**

Aluminium et alliages d'aluminium - Barres,
tubes et profilés filés - Partie 3: Barres
rondes, tolérances sur dimensions et forme

Aluminium und Aluminiumlegierungen -
Stranggepresste Stangen, Rohre und Profile -
Teil 3: Rundstangen, Grenzabmaße und
Formtoleranzen

This European Standard was approved by CEN on 1995-05-14. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 132 "Aluminium and aluminium alloys" of which the secretariat 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 December 1995, and conflicting national standards shall be withdrawn at the latest by December 1995.

Within its programme of work, Technical Committee CEN/TC 132 entrusted CEN/TC 132/WG 5 "Extruded and drawn products" to prepare the following standard :

EN 755-3 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 3 : Round bars, tolerances on dimensions and form

This standard is part of a set of nine standards. The other standards deal with :

EN 755-1 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 1 : Technical conditions for inspection and delivery

EN 755-2 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 2 : Mechanical properties

EN 755-4 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 4 : Square bars, tolerances on dimensions and form

EN 755-5 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 5 : Rectangular bars, tolerances on dimensions and form

EN 755-6 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 6 : Hexagonal bars, tolerances on dimensions and form

EN 755-7 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 7 : Seamless tubes, tolerances on dimensions and form

EN 755-8 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 8 : Porthole tubes, tolerances on dimensions and form

EN 755-9 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 9 : Profiles, tolerances on dimensions and form

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

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1 Scope

This part of EN 755 specifies the tolerances on dimensions and form for aluminium and aluminium alloy extruded round bars having diameters in the range from 8 mm up to 320 mm.

2 Tolerances on dimensions and form

2.1 Diameter

The tolerances on diameter are specified in table 1:

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 4.

Table 1: Diameter tolerances

Diameter D		Tolerances	
over	up to	Alloy group I	Alloy group II
≥ 8	18	$\pm 0,22$	$\pm 0,30$
18	25	$\pm 0,25$	$\pm 0,35$
25	40	$\pm 0,30$	$\pm 0,40$
40	50	$\pm 0,35$	$\pm 0,45$
50	65	$\pm 0,40$	$\pm 0,50$
65	80	$\pm 0,45$	$\pm 0,70$
80	100	$\pm 0,55$	$\pm 0,90$
100	120	$\pm 0,65$	$\pm 1,0$
120	150	$\pm 0,80$	$\pm 1,2$
150	180	$\pm 1,0$	$\pm 1,4$
180	220	$\pm 1,15$	$\pm 1,7$
220	270	$\pm 1,3$	$\pm 2,0$
270	320	$\pm 1,6$	$\pm 2,5$

2.2 Ovality

Ovality is the difference between the maximum and minimum diameters measured in one cross-section.

The maximum permissible ovality is 50 % of the tolerance range specified in table 1; e.g. for a diameter tolerance of $\pm 0,22$ mm, the maximum permissible ovality is 0,22 mm.

2.3 Straightness

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

The straightness tolerances are specified in table 2.

The straightness tolerances apply to 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 purchaser and supplier.

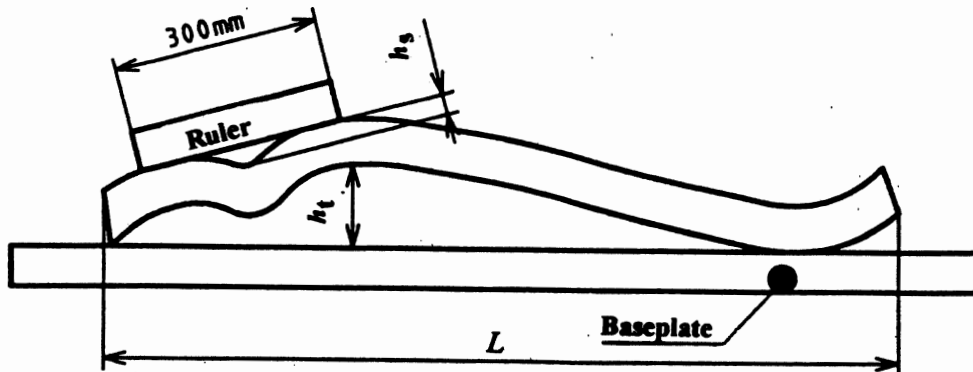


Figure 1 : Measurement of deviation from straightness

Table 2 : Straightness tolerances

Diameter D		Dimensions in millimetres	
over	up to	Maximum deviation from straightness h_t in mm/m	Maximum localised kink in any 300 mm portion h_s
≥ 8	80	2	0,6
80	120	2	1,0
120	200	3	1,5
200	320	6	3,0

2.4 Length

If fixed lengths are to be supplied, this shall be stated on the order. The fixed length tolerances are specified in table 3.

Table 3 : Fixed length tolerances

Diameter D		Dimensions in millimetres		
over	up to	Tolerances on length		
		$L \leq 2000$	$2000 < L \leq 5000$	$L > 5000$
-	100	+5 0	+7 0	+10 0
100	200	+7 0	+9 0	+12 0
200	320	+8 0	+11 0	-

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

2.5 Squareness of cut ends

The squareness of cut ends shall be within half of the fixed length tolerance range (table 3) for both fixed and random lengths, e.g. for a fixed length tolerance of : $\begin{matrix} + 10 \\ 0 \text{ mm,} \end{matrix}$ the squareness of cut ends shall be within 5 mm.

3 Alloy groups

The division into group I and group II of the most commonly used general engineering alloys is specified in table 4. Grouping of other alloys is subject to agreement between purchaser and supplier.

Table 4 : Alloy groups

Group I	EN AW-1050A, EN AW-1070A, EN AW-1200, EN AW-1350 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-6012, EN AW-6018, EN AW-6351, EN AW-6060, EN AW-6061, EN AW-6261, EN AW-6262, EN AW-6063, EN AW-6063A, EN AW-6463, EN AW-6081, EN AW-6082
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 ¹⁾ , EN AW-5052, EN AW-5154A, EN AW 5454, EN AW-5754, EN AW-5083, EN AW-5086 EN AW-7003, EN AW-7005A, EN AW-7020, EN AW-7022, EN AW-7049A, EN AW-7075
1) EN AW-5019 is the new designation for EN AW-5056A.	

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