



# SLOVENSKI STANDARD

## SIST EN 755-6:1998

01-april-1998

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### Aluminij in aluminijeve zlitine - Iztiskane palice/drogovi, cevi in profili - 6. del: Palice s šesterkotnim prerezom, odstopki mer in tolerance oblik

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

Aluminium und Aluminiumlegierungen - Stranggepreßte Stangen, Rohre und Profile -  
Teil 6: Sechskantstangen, Grenzabmaße und Formtoleranzen

Aluminium et alliages d'aluminium - Barres, tubes et profilés filés - Partie 6: Barres  
hexagonales, tolérances sur dimensions et forme

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Ta slovenski standard je istoveten z: EN 755-6:1995

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#### **ICS:**

77.150.10      Alumijski izdelki      Aluminium products

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EUROPEAN STANDARD

EN 755-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 1995

ICS 77.120.10; 77.140.90

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

English version

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

Aluminium et alliages d'aluminium - Barres, tubes et profilés filés - Partie 6: Barres hexagonales, tolérances sur dimensions et forme

Aluminium und Aluminiumlegierungen - Stranggeprägte Stangen, Rohre und profile - Teil 6: Sechskantstangen, 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.

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**CEN**

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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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 755-6 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 6 : Hexagonal 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 755-3 Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 3 : Round bars, tolerances on dimensions and form

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 755-7 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 dimension and form tolerances for aluminium and aluminium alloy extruded hexagonal bars having widths across flats in the range from 10 mm up to 220 mm

## 2 Tolerances on dimensions and form

### 2.1 Width across flats

The tolerances on width across flats are specified in table 1.

For the purpose of this European 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 6.

**Table 1 : Tolerances on width across flats**

Width across flats S		Tolerances	
over	up to	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	± 0,50	± 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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## 2.2 Corner radii

Maximum corner radii are specified in table 2.

**Table 2 : Maximum corner radii**

Width across flats $S$		Maximum corner radii
over	up to	
$\geq 10$	30	1,5
30	60	2,0
60	80	2,5
80	120	3,0
120	180	4,0
180	220	5,0

## 2.3 Convexity - Concavity

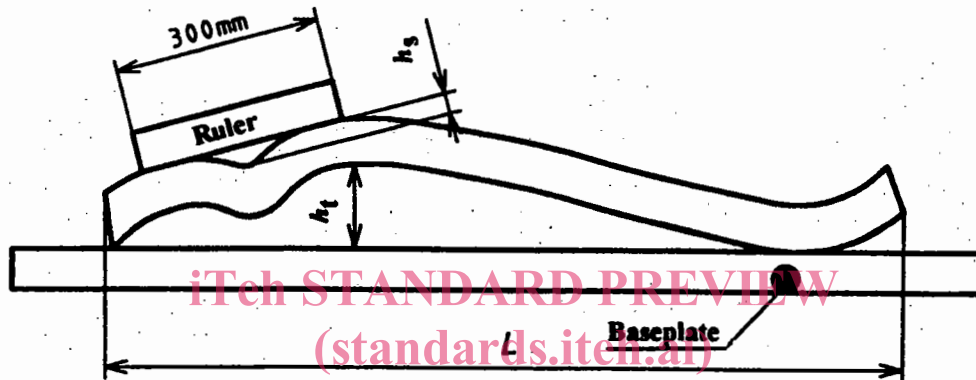
The convexity - concavity tolerances for hexagonal bar shall be included within the width-across-flats tolerances.

## 2.4 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.

Straightness tolerances are specified in table 3.

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**

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**Table 3 : Straightness tolerances**

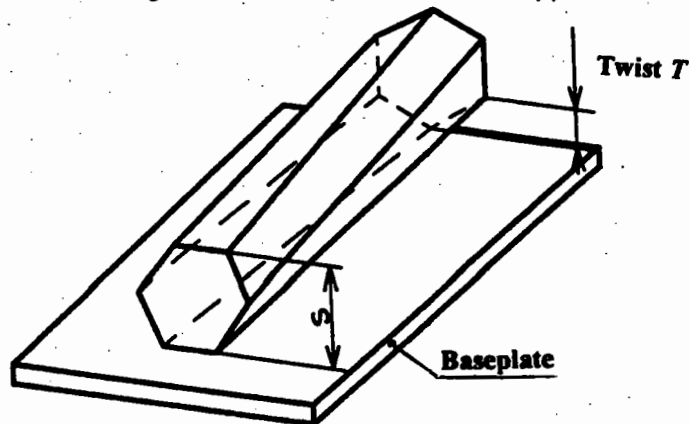
Width across flats $S$		Dimensions in millimetres	
over	up to	Maximum deviation from straightness $h_t$ in mm/m	Maximum localised kink in any 300 mm portion $h_s$
$\geq 10$	80	2	0,8
80	120	2	1,0
120	220	3	1,5

**2.5 Twist**

The twist measurement shall be carried out as shown in figure 2.

The twist tolerances are specified in table 4.

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



**Figure 2 : Measurement of twist**

**Table 4 : Twist tolerances**

Width across flats $S$		Dimensions in millimetres	
over	up to	Twist tolerances $T$	
		per 1 000 mm of length	over the total length
$\geq 10$	30	1	1,5
30	80	1,5	2,5
80	120	2	3
120	220	2,5	4



## 2.6 Length

If fixed lengths are to be supplied, this shall be stated on the order. The fixed length tolerances are specified in table 5.

**Table 5 : Fixed length tolerances**

Width across flats S		Tolerances on length		
from	up to and including	$L \leq 2\,000$	$2\,000 < L \leq 5\,000$	$L > 5\,000$
-	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, hexagonal extruded bars may be delivered in random lengths. The actual lengths and tolerances on random lengths shall be agreed between purchaser and supplier.

## 2.7 Squareness of cut ends

The squareness of cut ends shall be within half of the fixed-length tolerance range (table 5) for both fixed and random lengths, e.g. for a fixed length tolerance of + 10 the squareness of cut ends shall be within 5 mm.

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