SLOVENSKI STANDARD
kSIST FprEN 755-9:2015

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Aluminij in aluminijeve zlitine - Iztiskane palice/drogovi, cevi in profili - 9. del: Profili, tolerance mer in oblike

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

Aluminium und Aluminiumlegierungen - Stranggepresste Stangen, Rohre und Profile - Teil 9: Profile, Grenzabmaße und Formtoleranzen

Aluminium et alliages d'aluminium - Barres, tubes et profilés filés - Partie 9 : Profilés, tolérances sur dimensions et forme

Ta slovenski standard je istoveten z: **FprEN 755-9**

ICS:

77.150.10	Aluminijski izdelki	Aluminium products

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FprEN 755-9

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English Version

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

Aluminium et alliages d'aluminium - Barres, tubes et profilés filés - Partie 9 : Profilés, tolérances sur dimensions et forme

Aluminium und Aluminiumlegierungen - Stranggepresste Stangen, Rohre und Profile - Teil 9: Profile, Grenzabmaße und Formtoleranzen

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (FprEN 755-9:2015) has been prepared by Technical Committee CEN/TC 132 “Aluminium and aluminium alloys”, the secretariat of which is held by AFNOR.

This document is currently submitted to the Unique Acceptance Procedure.

This document will supersede EN 755-9:2008.

The following technical modifications have been introduced during the revision:

— subclause 4.2, Straightness;

— subclause 4.3, Convexity-Concavity;

— Table 10;

— subclause 4.4 Contour;

— Table 11;

— subclause 4.5, Twist.

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*

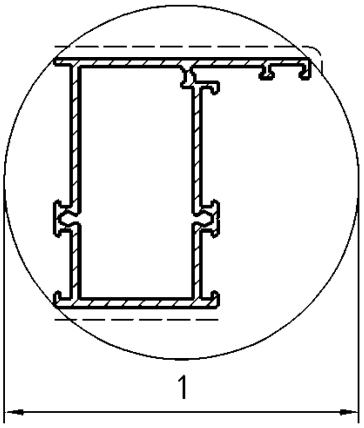
— *Part 9: Profiles, tolerances on dimensions and form*

1 Scope

This European Standard specifies the tolerances on dimensions and form for aluminium and aluminium alloy extruded profile with a cross section contained within a circumscribing circle not greater than 800 mm (see Figure 1).

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

This European Standard applies to extruded profiles for general engineering applications only.



Key

1 circumscribing circle $CD \leq 800$ mm

Figure 1 — Circumscribing circle

2 Alloy groups

For the purpose of this document, the alloys are distributed into two groups which correspond to varying degrees of 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. 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-6101A, EN AW-6101B, EN AW-6005, EN AW-6005A, EN AW-6106, EN AW-6008, EN AW-6010A, EN AW-6023, EN AW-6060, EN AW-6360, EN AW-6063, EN AW-6063A, EN AW-6463
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-5051A, EN AW-5251, EN AW-5052, EN AW-5154A, EN AW-5454, EN AW-5754, EN AW-5083, EN AW-5086 EN AW-6012, EN AW-6014, EN AW-6018, EN AW-6351, EN AW-6061, EN AW-6261, EN AW-6262, EN AW-6262A, EN AW-6065, EN AW-6081, EN AW-6082, EN AW-6182 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 Cross-sectional dimensions

3.1.1 General

The tolerances on the dimensions listed below (see Figures 2, 3 and 4) are specified in the relevant Tables 2 to 9.

— *A*: wall thicknesses except those enclosing the hollow spaces in hollow profiles;

— *B*: wall thicknesses enclosing the hollow spaces in hollow profiles except those between two hollow spaces;

— *C*: wall thicknesses between two hollow spaces in hollow profiles;

— *E*: the length of the shorter leg of profiles with open ends;

— *H*: all dimensions (except wall thickness) between points on the cross section of the profile or the centres of open screw holes. Between points on the outer contour to points inside a hollow chamber so long as they are not identical to wall thickness *B*. Alternatively from the inside of a hollow chamber to the inside of another hollow chamber so long as they are not identical to wall thickness *C* and are not within the definition of dimension *H*. Such dimensions shall be replaced by dimension *H* plus wall thickness *B* or *C* or shall be subject to agreement between supplier and purchaser.

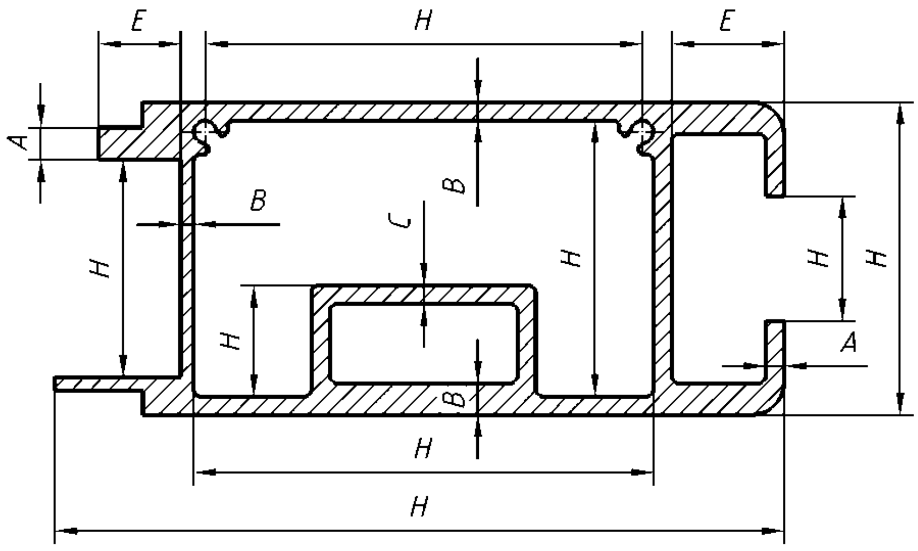


Figure 2 — Definition of dimensions *A, B, C, E, H*

3.1.2 Tolerances on dimensions other than wall thickness

The tolerances on dimensions shall be as specified in Tables 2 and 3. For profiles with open ends (see Figures 3, 4 and the relevant examples) the tolerances specified in Table 4 shall be added to those of Tables 2 and 3 for dimension *H* across open ended legs in order to obtain the tolerances on the gap between any opposite points on these ends.

Table 2 — Tolerances on cross-sectional dimensions of solid and hollow profiles - Alloy group I

Dimensions in millimetres

Dimension *H*		Tolerances on *H* for circumscribing circle *CD* [a, b]				
Over	Up to and including	*CD* ≤ 100	100 < *CD* ≤ 200	200 < *CD* ≤ 300	300 < *CD* ≤ 500	500 < *CD* ≤ 800
-	10	± 0,25	± 0,30	± 0,35	± 0,40	± 0,50
10	25	± 0,30	± 0,40	± 0,50	± 0,60	± 0,70
25	50	± 0,50	± 0,60	± 0,80	± 0,90	± 1,0
50	100	± 0,70	± 0,90	± 1,1	± 1,3	± 1,5
100	150	-	± 1,1	± 1,3	± 1,5	± 1,7
150	200	-	± 1,3	± 1,5	± 1,8	± 2,0
200	300	-	-	± 1,7	± 2,1	± 2,4
300	450	-	-	-	± 2,8	± 3,0
450	600	-	-	-	± 3,8	± 4,2
600	800	-	-	-	-	± 5,0

[a] These tolerances do not apply to tempers O and Tx510. For these tempers, the tolerances shall be subject to agreement between supplier and purchaser.

[b] For profiles with open ends, see Figures 3 and 4, the tolerances for *H* in the area of the open ends shall be increased by the values specified in Table 4.

Table 3 — Tolerances on cross-sectional dimensions of solid and hollow profiles - Alloy group II

Dimensions in millimetres

Dimension *H*		Tolerances on *H* for circumscribing circle *CD* [a, b]				
Over	Up to and including	*CD* ≤ 100	100 < *CD* ≤ 200	200 < *CD* ≤ 300	300 < *CD* ≤ 500	500 < *CD* ≤ 800
-	10	± 0,40	± 0,50	± 0,55	± 0,60	± 0,70
10	25	± 0,50	± 0,70	± 0,80	± 0,90	± 1,1
25	50	± 0,80	± 0,90	± 1,0	± 1,2	± 1,3
50	100	± 1,0	± 1,2	± 1,3	± 1,6	± 1,8
100	150	-	± 1,5	± 1,7	± 1,8	± 2,0
150	200	-	± 1,9	± 2,2	± 2,4	± 2,7
200	300	-	-	± 2,5	± 2,8	± 3,1
300	450	-	-	-	± 3,5	± 3,8
450	600	-	-	-	± 4,5	± 5,0
600	800	-	-	-	-	± 6,0

[a] These tolerances do not apply to tempers O and Tx510. For these tempers, the tolerances shall be subject to agreement between supplier and purchaser.

[b] For profiles with open ends, see Figures 3 and 4, the tolerances for *H* in the area of the open ends shall be increased by the values specified in Table 4.