

SVENSK STANDARD

SS-EN 755-9:2008

Fastställt/Approved: 2008-03-31

Publicerad/Published: 2008-05-12

Utgåva/Edition: 2

Språk/Language: engelska/English

ICS: 77.150.10; 77.120.10

Aluminium och aluminiumlegeringar – Strängpressad stång, rör och profiler – Del 9: Profiler, toleranser för dimension och form

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

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Denna standard ersätter SS-EN 755-9, utgåva 1.

The European Standard EN 755-9:2008 has the status of a Swedish Standard. This document contains the official English version of EN 755-9:2008.

This standard supersedes the Swedish Standard SS-EN 755-9, edition 1.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 755-9

March 2008

ICS 77.120.10; 77.150.10

Supersedes EN 755-9:2001

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

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

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Foreword

This document (EN 755-9:2008) 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of an identical text or by endorsement, at the latest by September 2008, and conflicting national standards shall be withdrawn at the latest by September 2008.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 755-9:2001.

Within its programme of work, Technical committee CEN/TC 132 entrusted CEN/TC 132/WG 5 "*Extruded and drawn products*" to revise EN 755-9:2001.

The following technical modifications have been introduced during the revision:

- Clause 2: Alloys EN AW-3102, EN AW-6010A, EN AW-6023 and EN AW-6360 are added in Group I
- Clause 2: Alloys EN AW-5049, EN AW-6014, EN AW-6262A, EN AW-6065, EN AW-6182, EN AW-7108, EN AW-7108A and EN AW-7021 are added in Group II
- Subclause 4.3: Figure 6 is added to illustrate the measurements of convexity-concavity in hollow sections

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*

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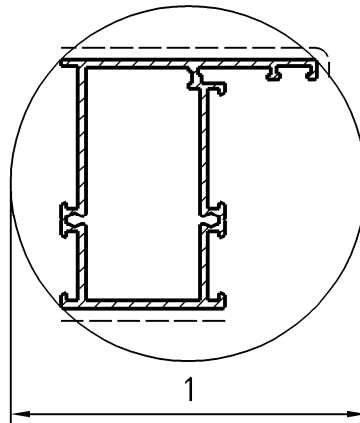
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1 Scope

This document 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 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	<p>EN AW-1050A, EN AW-1070A, EN AW-1200, EN AW-1350</p> <p>EN AW-3102, EN AW-3003, EN AW-3103</p> <p>EN AW-5005, EN AW-5005A</p> <p>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</p>
Group II	<p>EN AW-2007, EN AW-2011, EN AW-2011A, EN AW-2014, EN AW-2014A, EN AW-2017A, EN AW-2024, EN AW-2030</p> <p>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</p> <p>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</p> <p>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</p>

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.

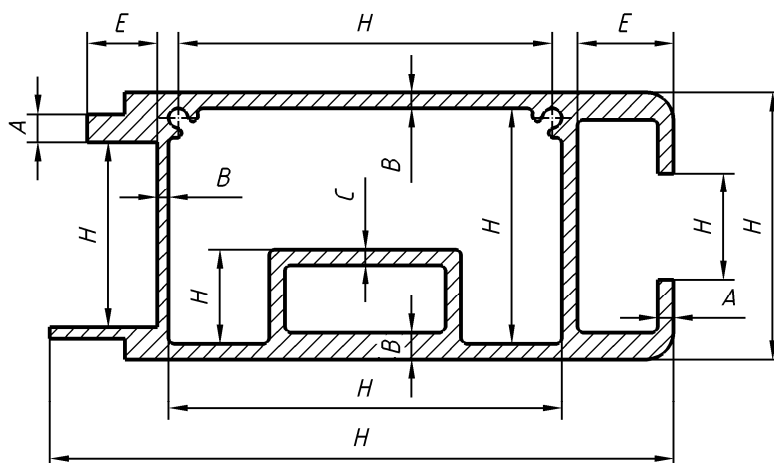


Figure 2 — Definition of dimensions A, B, C, E, H

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.