



SLOVENSKI STANDARD SIST EN 17220:2019

01-december-2019

Embalaža - Prožne aluminijaste tube - Odprtine/šobe

Packaging - Flexible aluminium tubes - Tube nozzles

Packmittel - Aluminiumtuben - Tubenhäse

Emballage - Tubes souples en aluminium - Têtes

Ta slovenski standard je istoveten z: **EN 17220:2019**

[SIST EN 17220:2019](https://standards.iteh.ai/catalog/standards/sist/ec3abc58-032a-414e-80a5-1a596e7a5835/sist-en-17220-2019)

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ICS:

55.120	Pločevinke. Tube	Cans. Tins. Tubes
77.150.10	Aluminijski izdelki	Aluminium products

SIST EN 17220:2019

en,fr,de

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EUROPEAN STANDARD

EN 17220

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2019

ICS 55.120

English Version

Packaging - Flexible aluminium tubes - Tube nozzles

Emballage - Tubes souples en aluminium - Têtes de tubes

Packmittel - Flexible Aluminiumtuben - Tubenhäse

This European Standard was approved by CEN on 7 July 2019.

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

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European foreword

This document (EN 17220:2019) has been prepared by Technical Committee CEN/TC 261 “Packaging”, 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of an identical text or by endorsement, at the latest by February 2020, and conflicting national standards shall be withdrawn at the latest by February 2020.

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

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EN 17220:2019(E)**1 Scope**

This document is applicable to flexible aluminium tubes.

This document defines the dimensions of the tube nozzle including orifice and thread.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12374:2009, *Packaging — Flexible tubes — Terminology*

3 Terms and definitions

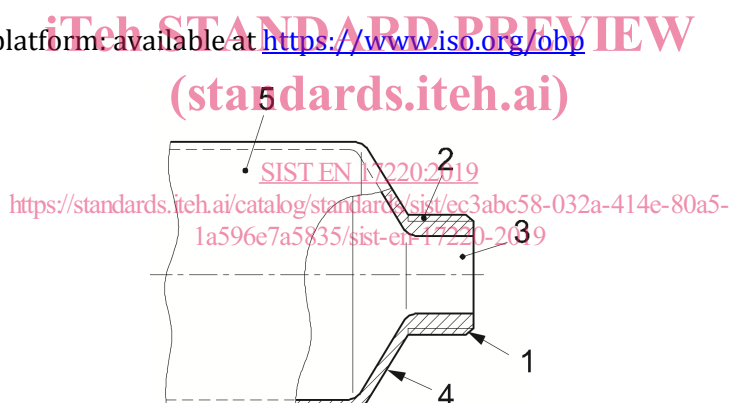
For the purposes of this document, the terms and definitions given in EN 12374:2009 and the following apply.

NOTE See also Figure 1.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at <http://www.electropedia.org/>

— ISO Online browsing platform: available at <https://www.iso.org/obp>

**Key**

- 1 tube nozzle
- 2 tube thread
- 3 tube nozzle orifice
- 4 tube shoulder
- 5 tube body

Figure 1 — Examples of definitions for a tube

3.1**tube nozzle shape A**

tube nozzle with metrical outer thread and smooth shoulder

3.2**tube nozzle shape B**

tube nozzle with metrical outer thread with cannula nozzle

3.3**tube nozzle shape C**

tube nozzle shape with applied plastics nozzle, threaded

3.4**tube nozzle shape D**

tube nozzle with applied plastics nozzle, threaded cannula

3.5**tube nozzle shape E**

tube nozzle with membrane

4 Dimensions

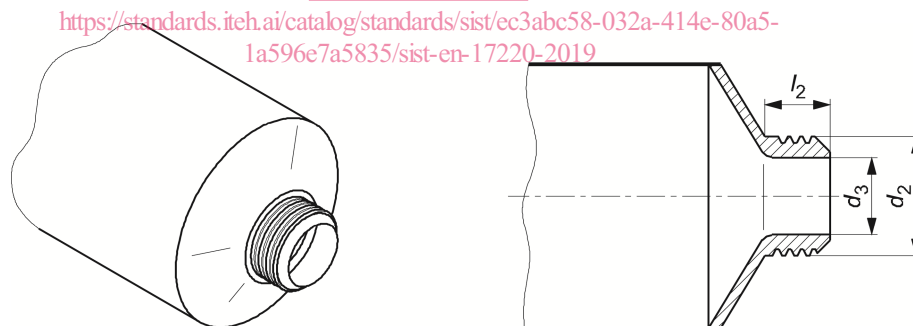
The tube nozzle may not be equivalent to the figure; only the indicated dimensions given in the following clauses shall be considered.

5 Tube nozzle shapes**5.1 General**

This clause defines the sizes for the different shapes of nozzles and the relevant threads of flexible aluminium tubes.

5.2 Shape A

The metrical outer threads for the dimensions of the tube nozzles shape A with smooth shoulders as shown in Figure 2 as an example, are specified in Table 1.

**Key**

- d_2 nominal diameter of thread
- d_3 tube nozzle orifice diameter
- l_2 height of tube nozzle

Figure 2 — Example of a tube nozzle shape A

Table 1 — Threads for tube nozzles shape A

Dimensions in millimetres

d_2	d_3 $\pm 0,3$	l_2 $\pm 0,3$	Nominal tube diameter according to EN 13046 (informative)
M7	3,6	5,5	11; 13,5; 16
M9	5,5	5,7	16; 19; 22; 25; 28; 30; 35
M11	6,8	6,3	19; 22; 25; 28; 30; 32; 35; 38; 40
M15 × 1,5	10	7 a	30; 32; 35; 38; 40; 45; 50; 60
M15 × 1,5	10	7,9 a	35; 38; 40; 45; 50; 60
M20 × 1,5	15	8,8	40; 45; 50; 60

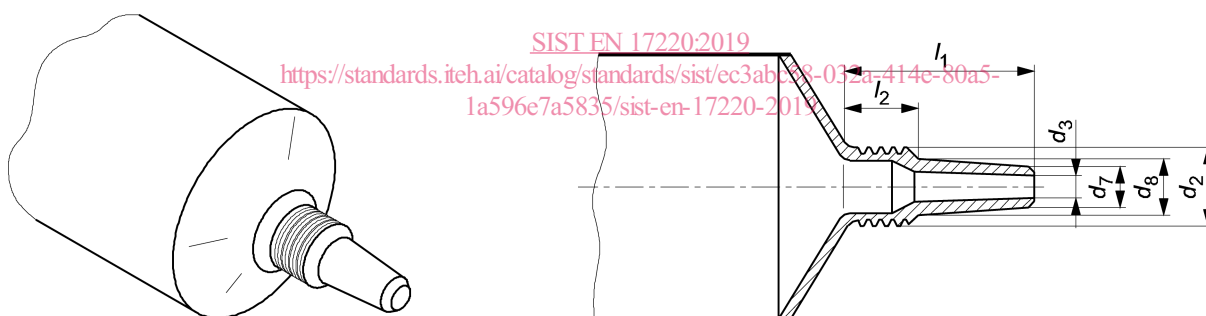
^a Depends on the cap

An example of tube nozzle shape A with d_2-l_2 , is:

EXAMPLE Tube nozzle A — M15 × 1,5-7

5.3 Shape B

The metrical outer threads for the dimensions of the cannula nozzles shape B of a tube as shown in Figure 3 as an example, are specified in Table 2.



Key

- d_2 nominal diameter of thread
- d_3 tube nozzle orifice diameter
- d_7 cannula outer diameter TOP
- d_8 cannula outer diameter BOTTOM
- l_1 height of tube nozzle + cannula
- l_2 height of tube nozzle

Figure 3 — Example of a tube nozzle shape B

Table 2 — Threads for cannula nozzles shape B

Dimensions in millimetres

d_2	d_3 $\pm 0,3$	d_7 $\begin{matrix} 0 \\ -0,2 \end{matrix}$	d_8 $\pm 0,2$	l_1 $\pm 0,2$	l_2 $\pm 0,2$	Nominal tube diameter according to EN 13046 (informative)
M7	1,6	3,1	5	5,5	15	11; 13,5; 16; 19; 22; 28
M9	2,4	4 or 4,5 ^a	6,5	5,7	19 or 21 ^a	16; 19; 22; 25; 28; 30; 32; 35; 40
M11	2,4	5,5	6,5	6,4	19 or 21 ^a	19; 22; 25; 28; 30; 32; 35; 40

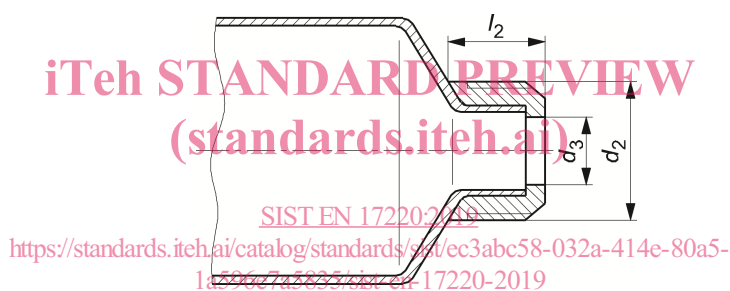
^a Depends on the cap

An example of tube nozzle shape B with $d_2-d_7-l_1$, is:

EXAMPLE Tube nozzle B — M11–6,4–19

5.4 Shape C

The metrical outer threads of the applied plastics nozzle for the dimensions of the nozzles “Shape C” of a tube as shown in Figure 4 as an example, are specified in Table 3.



Key

- d_2 nominal diameter of thread
- d_3 tube nozzle orifice diameter
- l_2 height of tube nozzle

Figure 4 — Example of a tube nozzle shape C

Table 3 — Threads for the applied plastics nozzle for nozzles shape C

Dimensions in millimetres

d_2	d_3 $\begin{matrix} 0 \\ -0,2 \end{matrix}$	l_2 $\pm 0,2$	Nominal diameter according to EN 13046 (informative)
M12 × 1,25	6,5	7,8	22; 25; 28; 30; 32; 35
M13 × 1,25	7,5	7,8	22; 25; 28; 30; 32; 35; 40
M15 × 1,25	8	6,7	25; 28; 30; 32; 35; 40
M15 × 1,5	7,2	10	30; 35; 40; 45

An example of tube nozzle shape C with d_2-l_2 , is:

EXAMPLE Tube nozzle C — M15 × 1,5–10