



SLOVENSKI STANDARD
oSIST prEN 17829:2022
01-april-2022

**Steklena embalaža - Grla z navojem odprtine 28 mm za steklenice (oznaka MCA) -
Mere**

Glass packaging - 28 millimetre-screw finishes for glass containers (MCA range) -
Dimensions

Verpackungen aus Glas - 28 Millimeter-Schraubenausführungen für Glasbehälter (MCA-
Serie) - Abmessungen

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Ta slovenski standard je istoveten z: prEN 17829

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ICS:

55.100

Steklenice. Lonci. Kozarci

Bottles. Pots. Jars

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en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 17829

March 2022

ICS 55.100

Will supersede EN 16287-1:2014, EN 16287-2:2014,
EN 16288-1:2014, EN 16288-2:2014, EN 16289:2013,
EN 16290-1:2014, EN 16290-2:2014, EN 16291-
1:2013, EN 16291-2:2013

English Version

Glass packaging - 28 millimetre-screw finishes for glass containers (MCA range) - Dimensions

Verpackungen aus Glas - 28 Millimeter-
Schraubenausführungen für Glasbehälter (MCA-Serie) -
Abmessungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 261.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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 CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 17829:2022) has been prepared by Technical Committee CEN/TC 261 “Packaging”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede:

- EN 16287-1:2014, *Glass packaging — Screw finishes for pressure capsules — Part 1: Returnable glass MCA 1 finish*;
- EN 16287-2:2014, *Glass packaging — Screw finishes for pressure capsules — Part 2: One way glass MCA 1 finish*;
- EN 16288-1:2014, *Glass packaging — Screw finishes for pressure capsules — Part 1: Returnable glass MCA 3 finish*;
- EN 16288-2:2014, *Glass packaging — Screw finishes for pressure capsules — Part 2: One way glass MCA 3 finish*;
- EN 16289:2013, *Glass packaging — Screw finishes for pressure capsules — MCA 7,5 RF finish*;
- EN 16290-1:2014, *Glass packaging — Screw finishes for pressure capsules — Part 1: Returnable glass MCA 7,5 R finish*;
- EN 16290-2:2014, *Glass packaging — Screw finishes for pressure capsules — Part 2: One way glass MCA 7,5 R finish*;
- EN 16291-1:2013, *Glass packaging — Screw finishes for pressure capsules — Part 1: Returnable glass MCA 2 finish*; <https://standards.iteh.ai/catalog/standards/sist/4ef5f86e-7516-44ec-9228-7eaf6b05efc8/osist-pren-17829-2022>
- EN 16291-2:2013, *Glass packaging — Screw finishes for pressure capsules — Part 2: One way glass MCA 2 finish*;
- EN 16291-2/AC:2014, *Glass packaging — Screw finishes for pressure capsules — Part 2: One way glass MCA 2 finish — Corrigendum*.

In comparison with the previous edition, the following technical modifications have been made:

- merge of all the requirements and dimensional features in one single document.

Introduction

MCA is the designation for the agreement regarding a common finish specification between the companies Metal Closures Limited in Great Britain and Alcoa in the USA which are at the origin of these finishes. Originally, these finishes were used on “one way” (single trip) bottles with aluminium closures. The advent of the returnable market in Europe made it necessary to redesign the neck finish to overcome shortcomings in thread and sealing performance. The main differences between the finishes are concerning the thread profile and its pitch.

Historically, the development of the MCAs is partially explained by the differences presented below:

- MCA1: “flat” under-thread profile, well adapted to the plastic closures;
- MCA2: round thread profile, more robust and hence better adapted to returnable bottles, but with more risks of ‘blow-off’ with plastic closures;
- MCA3: thinner thread with flat profile both under and above the finish, closer to the MCA 1, and better adapted for plastic closures and to high pressure than MCA2;
- MCA R (R for round profile): based on the MCA2 but with deeper thread;
- MCA (RF for round flat): compromise between MCA1 (flat profile under the thread) and the MCA2 (strong wider thread profile).

A non-exhaustive list of examples of uses in Europe is given in Annex A.

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1 Scope

This document specifies the dimensions of the various 28 mm screw finishes for glass containers designated MCA.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

MCA

finish designed for the closure of pressurized or vacuum liquids with a tamper-evident closure (metal or plastic) which needs to be snapped during first opening

Note 1 to entry: The finish can be designed with an optional bead for design flexibility (see Figure 1).



a) MCA without additional transfer bead

b) MCA with additional transfer bead

Key

- 1 optional transfer bead

Figure 1 — Example of MCA without and with additional transfer bead

4 Capping head clearance

The capping head clearance shall comply with Figure 2. The Detail A shows the limits of construction under the crimping bead.

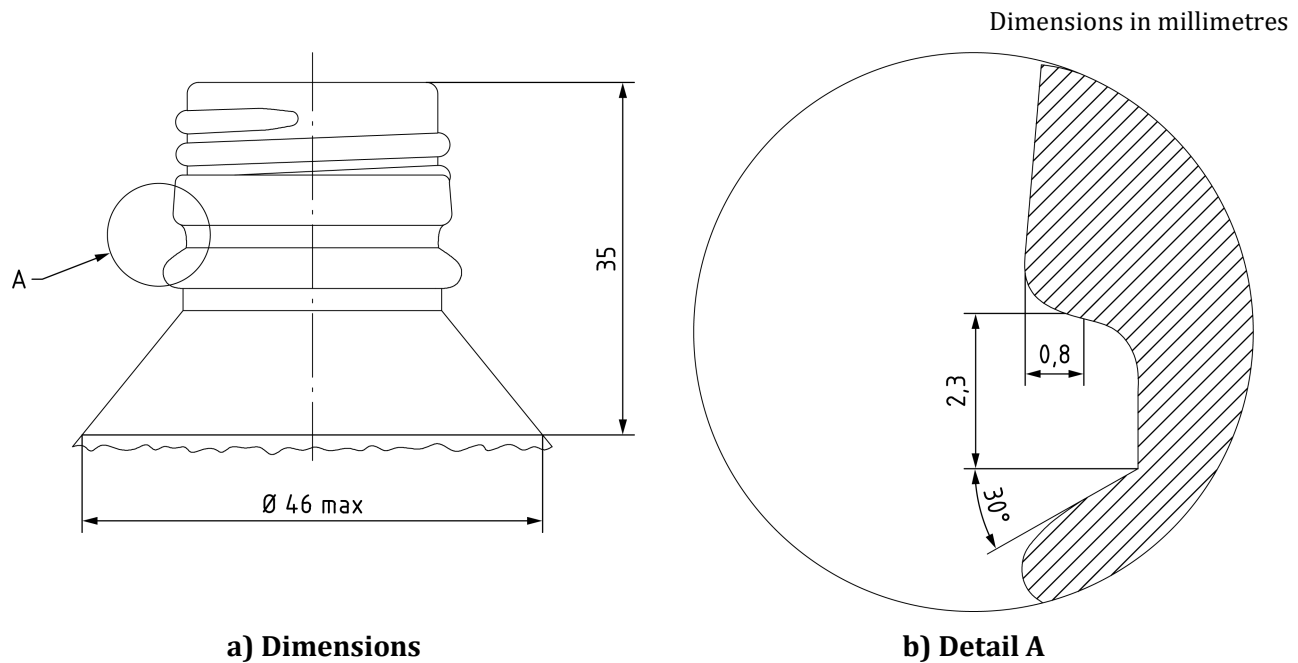


Figure 2 — Capping head clearance

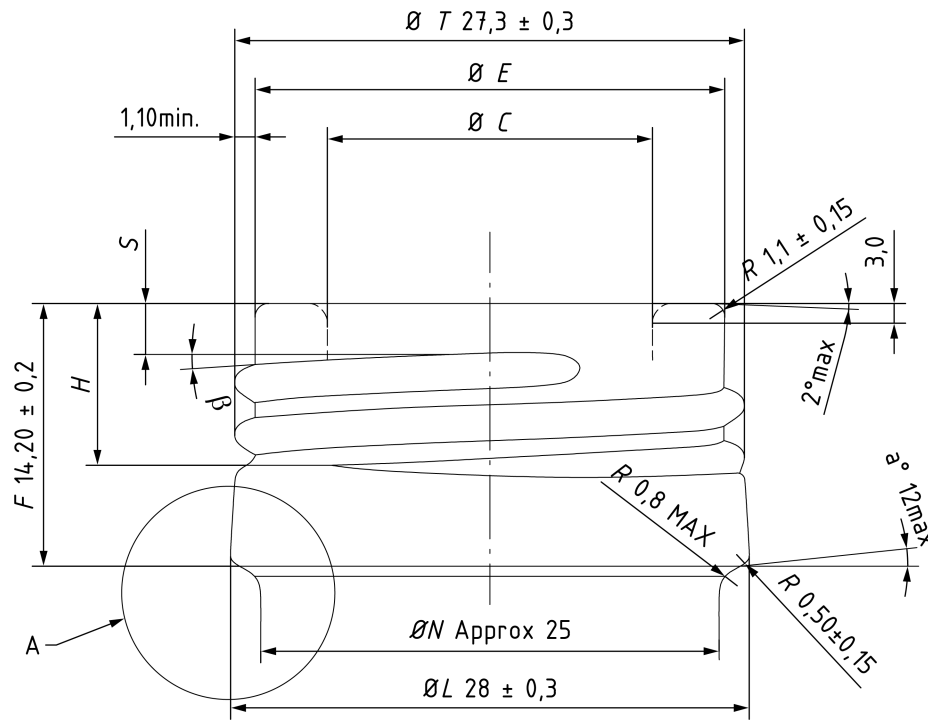
5 Dimensions

The dimensions shall comply with Figure 3 completed with Table 1.

The entry bore shall comply with one of the alternative constructions given in Figure 4.

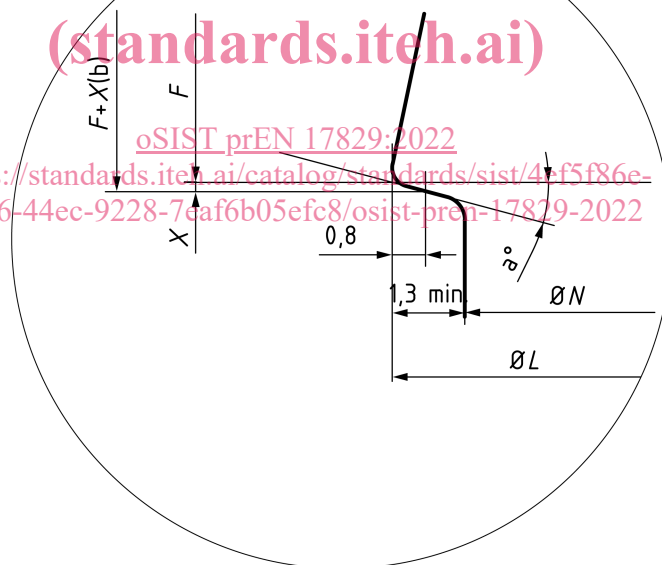
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Key

N neck (under bead) diameter

H thread height

S start of thread position from sealing surface to intersection of thread flank

F height of the finish (justification of the choice of the F dimension is given in Annex B)

NOTE The value of X can be calculated from the a° chosen on the mould: $X = 0,8 \times (\tan a^\circ)$. For example: $a^\circ = 10^\circ$, $X = 0,14$ mm.

L locking bead diameter

T thread diameter

E wall diameter of threaded finish

a° angle under locking bead

Figure 3 — Main dimensions

Table 1 — Dimensions specific to each MCA type

Type	S mm	H mm	Ø E mm	Threads ^a per inch	Helix angle β	Ø c ^b mm
MCA 1 (returnable)	2,75 ± 0,2	9,45 ± 0,2	24,95	8	2°13'	17,00 ± 0,5
MCA 1 (One-way)			± 0,3			19,0 max.
MCA 2 (returnable)			25,10			17,00 ± 0,5
MCA 2 (One-way)			± 0,3			18,1 ± 1,0
MCA 3 (returnable)			25,05			17,00 ± 0,5
MCA 3 (One-way)			± 0,3			19,0 max.
MCA 7.5 R (returnable)	2,50 ± 0,2	9,65 ± 0,2	24,95	7,5	2° 22'	17,00 ± 0,5
MCA 7.5 R (One-way)			± 0,3			19,0 max.
MCA 7.5 RF			25,00			17,00 ± 0,5

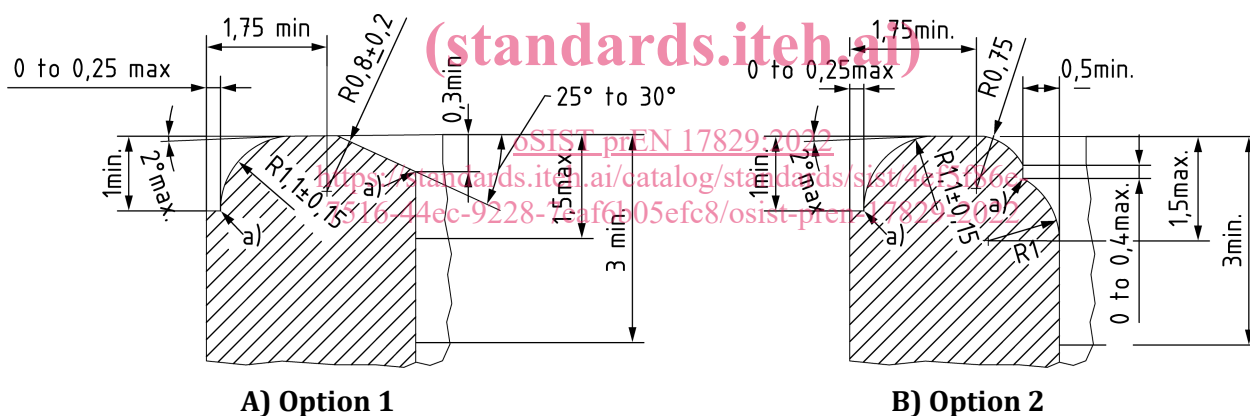
Key

^a Pitch: see Figure 5.

^b for a depth from 1,5 to 3 mm.

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Dimensions in millimetres



Key

a Mould parting line

Figure 4 — Alternative constructions of the entry bore to suit glass manufacturer

6 Thread profiles

The thread profile shall comply with the profile of the corresponding MCA type in Figure 5.

The start of thread and its run-out shall comply with the Figures 6 and 7.