

BS EN 16291-1:2013



BSI Standards Publication

Glass packaging — Screw finishes for pressure capsules

Part 1: Returnable glass MCA 2 finish

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National foreword

This British Standard is the UK implementation of EN 16291-1:2013.

The UK participation in its preparation was entrusted to Technical Committee PKW/0/-/7, Packaging - Glass.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Date	Text affected
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ICS 55.100

English Version

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Returnable glass MCA 2 finish**Emballage en verre - Bagues à vis pour capsules à
pression - Partie 1: Bague MCA 2 pour verre consignéVerpackungen aus Glas - Schraubmundstücke für
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Mundstück

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Foreword

This document (EN 16291-1:2013) 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of an identical text or by endorsement, at the latest by September 2013, and conflicting national standards shall be withdrawn at the latest by September 2013.

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EN 16291, *Glass packaging — Screw finishes for pressure capsules*, consists of the following parts:

- *Part 1: Returnable glass MCA 2 finish;*
- *Part 2: One way glass MCA 2 finish.*

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Introduction

This document is based on CE.T.I.E. (International Technical Centre for Bottling and related Packaging) data sheet GME 320 [1].

Efficient packaging is of great importance for the distribution and the protection of goods. Insufficient or inappropriate packaging can lead to damage or wastage of the contents of the pack.

1 Scope

This European Standard specifies the dimensions of the screw finish for glass containers designated MCA 2 for returnable glass.

2 Terms and definitions

For the purposes of this document, the following term and definition applies.

2.1

MCA

(glass) finish designed for the closure of pressurised or vacuum liquids with a tamper-evident closure (metal or plastic)

3 Dimensions

The design and dimensions of the finish shall be as shown in Table 1 and Figures 1, 2, 3, 4 and 5.

Table 1 – Design and dimensions of the finish

Pitch	β	TPI	\emptyset cutter
3,175 mm	2° 12'	8	12,5 mm
β = Helix angle or angle of fixture to cutter. NOTE TPI = Threads per Inch. One inch is equal to 25,4 mm.			

The $\tan \beta$ of helix angle for cutter is calculated via the following formula:

$$\tan \beta = \frac{\text{pitch}}{\frac{\pi (\text{nominal T} + \text{nominal E})}{2}}$$

where

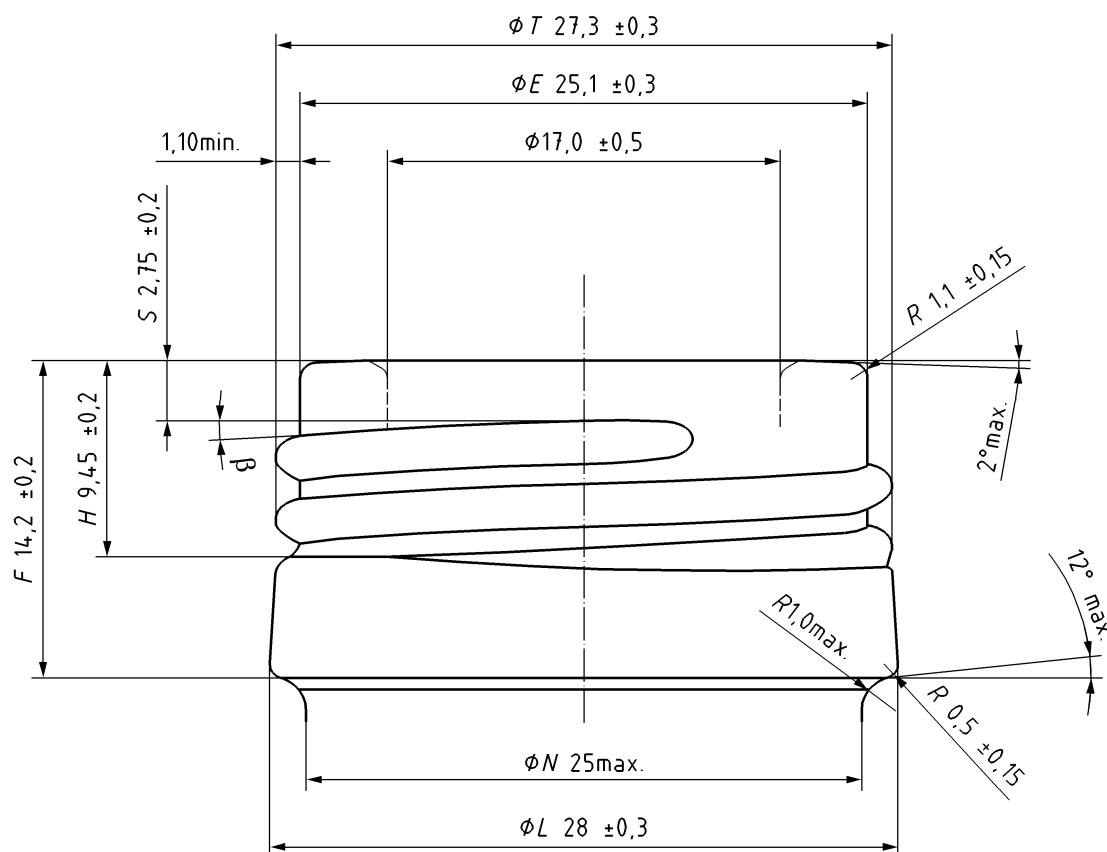
T is the thread diameter;

E is the wall diameter of threaded finish.

The average of the maximum and minimum of "L" diameter is as close as possible to "L" nominal.

The mean diameter $L \frac{\text{diameter max} + \text{diameter min}}{2}$ is in the tolerance of $\pm 0,2$ mm.

Optional: depressed thread at mould parting line (see EN 16292).



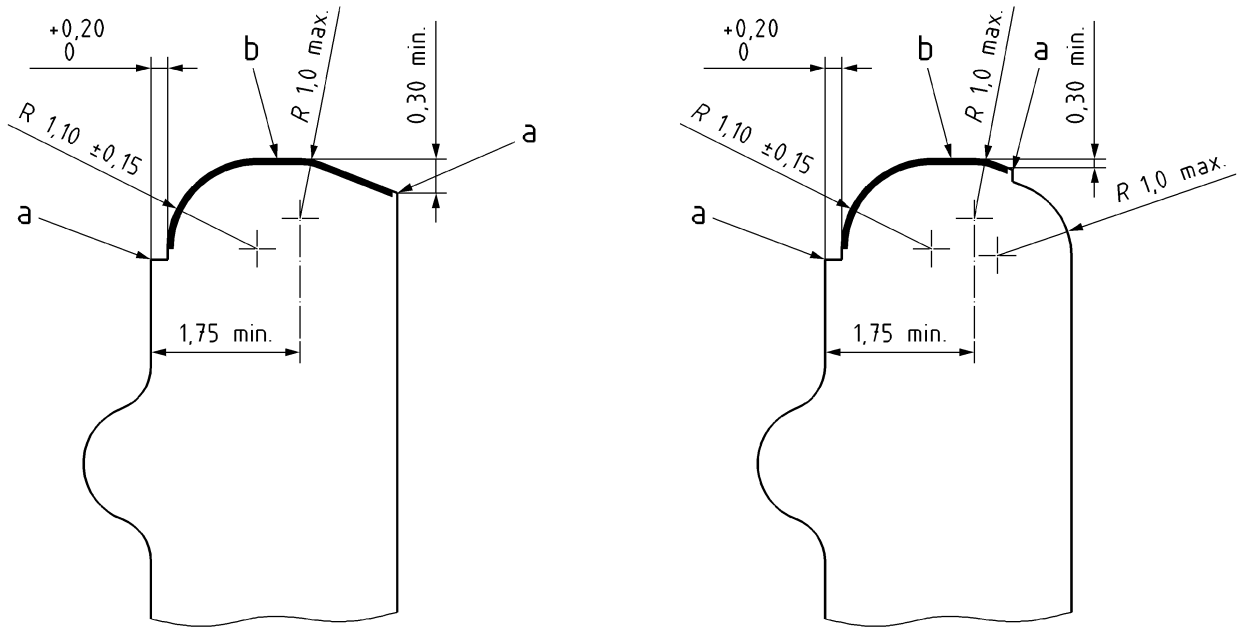
Key

- 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
- L locking bead diameter
- T thread diameter
- E wall diameter of threaded finish

NOTE Bore diameter: $17,0 \text{ mm} \pm 0,5 \text{ mm}$ for a depth of 3 mm.

Figure 1 — MCA 2 finish

Dimensions in millimetres



Key

- a mould parting line
- b sealing surface

The sealing surface is smooth and free of any defects and flash.

Figure 2 — Possible alternative construction of the bore entrance to suit glass manufacturer

Dimensions in millimetres

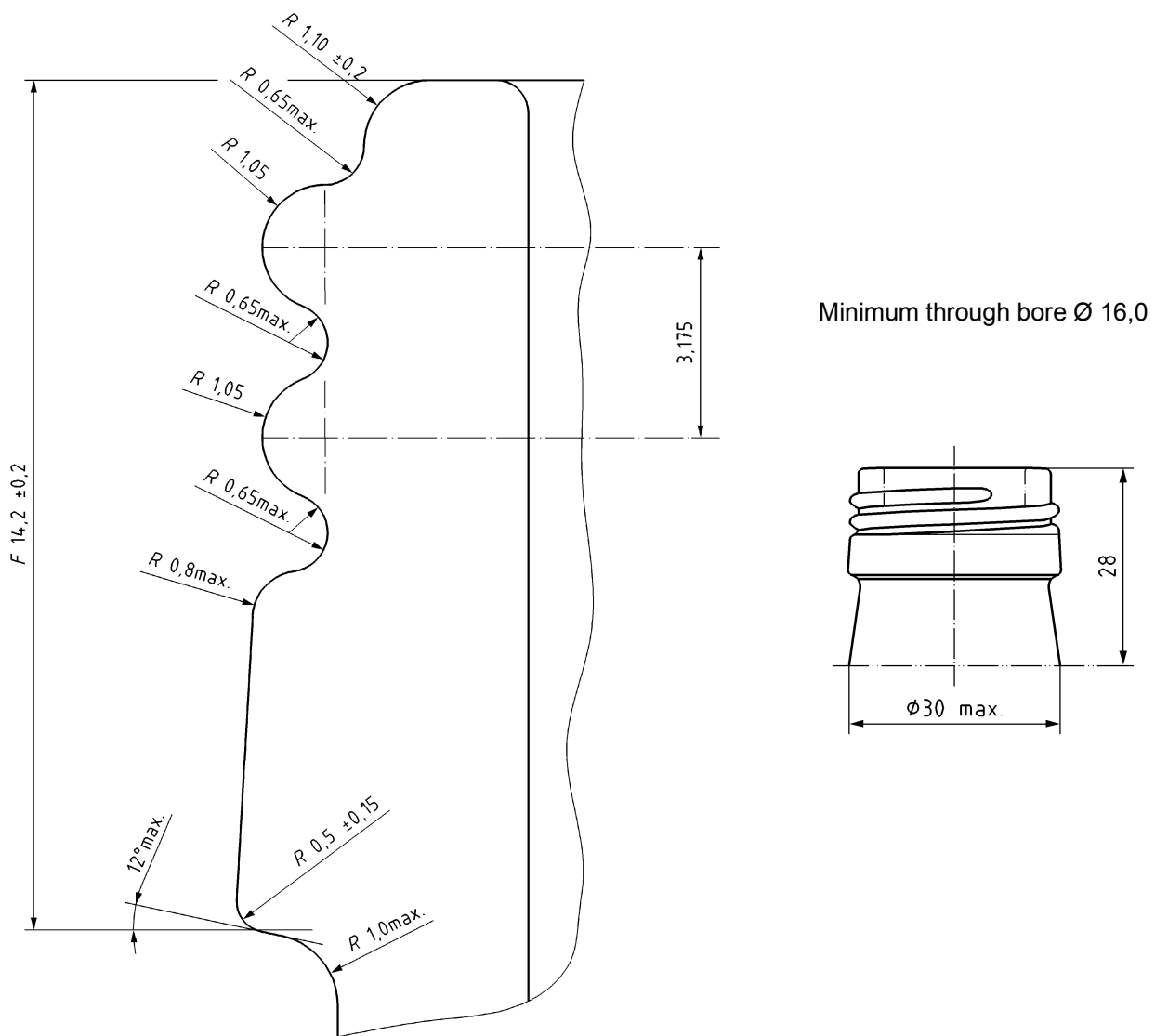
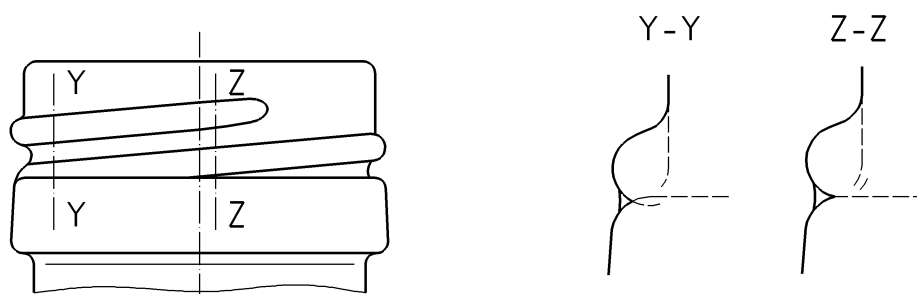


Figure 3 — Detail of the profile



NOTE Z-Z is the last full depth and width of thread. Beyond this point and Y-Y, the thread root is gradually increased to full thread diameter T in 90°

Figure 4 — Run out of thread

Dimensions in millimetres

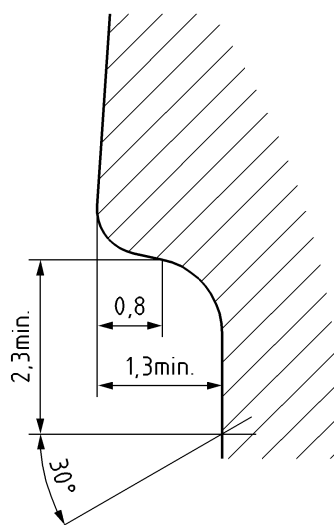


Figure 5 — Limit of construction

Bibliography

- [1] CE.T.I.E. data sheet GME 320 - *Pilferproof for pressured beverages*¹⁾
- [2] EN 16292, *Glass packaging — Screw finishes — Depressed threads*

1) Obtainable through *Centre Technique International de l'Embouteillage et du Conditionnement* (CE.T.I.E), 112- 114, rue La Boétie, 75008 Paris, France; www.cetie.org, TP: 0033-1-42 65 26 45, TF: 0033-1-40 07 03 21.

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