

# GLASS BOTTLES WITH A DEPOSIT

## – GUIDELINES FOR DESIGNING CONTAINERS AND CONTAINER SYMBOLS

### 1 GENERAL

In order to connect a glass bottle to the Palpa deposit-based return system, it must meet certain material, dimension and shape requirements and be reliably identifiable as a container with a deposit by reverse vending machines.

The purpose of these guidelines is to guide beverage manufacturers and beverage importers in designing the shape and layout of containers and in registering their products in the deposit-based return system.

### 2 CONTAINER SHAPE AND DIMENSIONS

The reverse vending machine identifies beverage containers returned by consumers based on the bar code on the bottle and the shape of the bottle. The bottle must be cylinder-shaped so that the reverse vending machine can rotate it if necessary in order to locate the bar code. Other bottle shapes can be accepted as part of the return system on a case-by-case basis, provided that they work in all reverse vending machine models on the market.

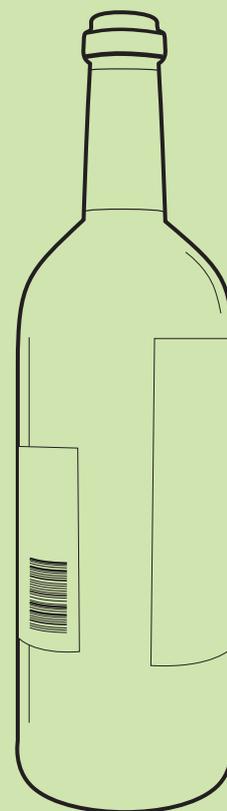
#### Reverse vending machines place restrictions on container dimensions:

External diameter of bottle	50–120 mm
Bottle height (including closure)	130–380 mm
Bottle weight	≤ 1.5 kg

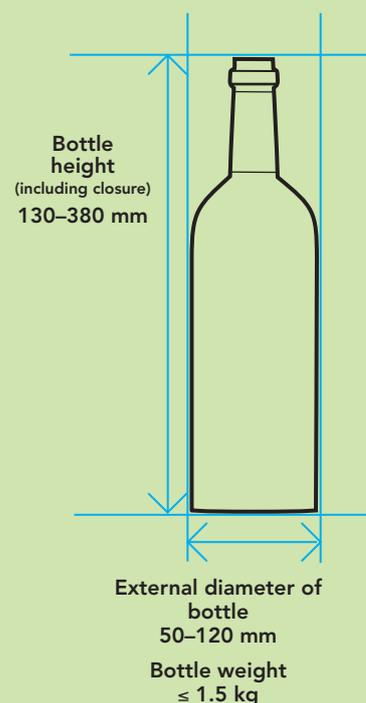
#### CHANGES TO CONTAINERS

Palpa must be notified of all changes made to beverage containers with a deposit.

If changes are made to the shape or dimensions (diameter, height, weight) of a container that has been approved for the deposit system, Palpa must be notified of the change and new sample bottles must be delivered to Palpa and the reverse vending machine suppliers so that they can be inspected and the dimension information can be updated. This ensures that the container will be identifiable by the reverse vending machines.



#### DIMENSIONS OF GLASS BOTTLES WITH A DEPOSIT



### 3 BAR CODE

A container connected to the return system must have a bar code. The bar code can be of the type EAN-13, EAN-8, UPC-A or UPC-E. A bar code that has been used earlier may not be used for a beverage container with a deposit, nor can a bar code used on a beverage container with a deposit be reused on other containers. The reverse vending machine reads the bar code automatically, so special attention must be paid to the size, quality and placement of the code.

The nominal size of an EAN-13 bar code is 37.29 mm x 22.85 mm and the nominal size of an EAN-8 bar code is 26.73 mm x 18.23 mm. The minimum size of an EAN-13 bar code is 29.83 mm x 18.28 mm and that of an EAN-8 bar code is 21.38 mm x 14.58 mm. A sufficiently wide clearance area must be left at the beginning and end of the bar code in the background colour.

It is recommended to place the bar code on the bottle vertically (in the “ladder rung” position), so that the bars are horizontal. The bar code may also be placed horizontally, but this is not recommended for bottles with a small diameter or angular shape. The bar code must be placed on the straight surface of the bottle at a height between 20 mm and 230 mm when measured from the bottom of the bottle.

In order for a product to be accepted as part of the return system, it must be accepted by all reverse vending machine models on the market. The beverage manufacturer/importer is responsible for ensuring that the bar code of all product batches released for sale is identifiable by the machines.

#### BAR CODE USAGE AREA

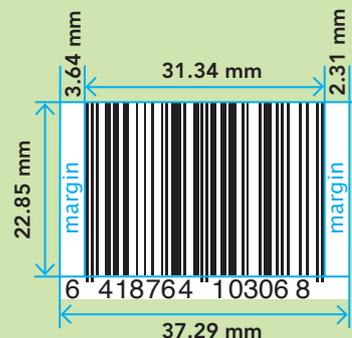
A glass beverage container can be registered in the deposit-based return system with a bar code in use only in Finland or internationally. The type of marking affects the use of the deposit symbol and the amount of the recycling fee.

#### Placement of the bar code

It is recommended to place the bar code vertically on the straight surface of the bottle.



#### EAN-13 (nominal size)



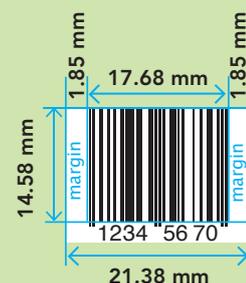
#### EAN-13 (minimum size)



#### EAN-8 (nominal size)



#### EAN-8 (minimum size)



## 4 RETAIL AND HORECA PRODUCTS

Glass beverage containers can be registered in the return system either as retail or Horeca products. Retail products are products sold to the consumer and returned to the recycling system using reverse vending machines. Horeca products are products sold to hotels, restaurants and catering companies and returned to the recycling system using Palpa's glass return containers. Reverse vending machines do not issue deposits for Horeca products.

A product registered as a Horeca product can be registered later as a retail product if the product is made available to consumers. An application for the change can be submitted via the extranet. In connection with the change, the product manufacturer/importer must deliver sample bottles to the reverse vending machine suppliers for testing.

## 5 DEPOSIT SYMBOL

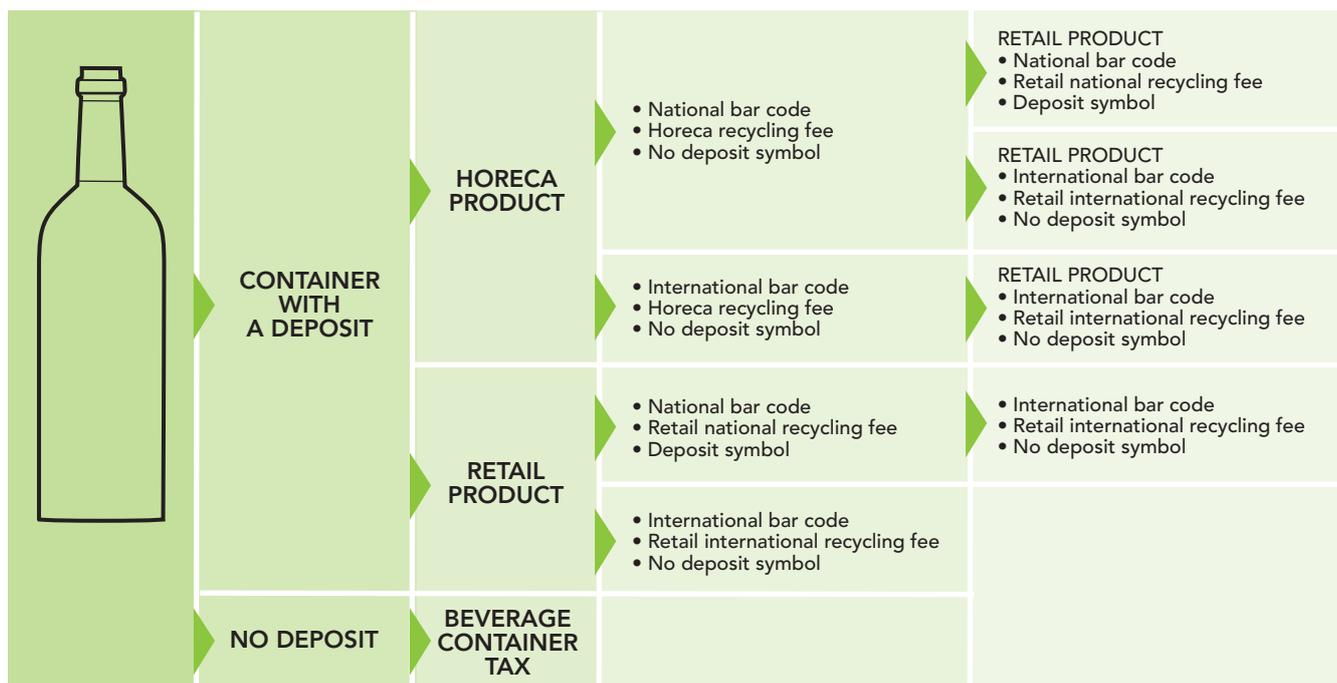
The consumer identifies a container as having a deposit based on the deposit symbol. The smallest permissible size for the symbol is 11 mm x 8 mm and its colouring can be adapted to the other colours of the container. A solid-colour background and high contrast make it easier to find the symbol on the container.

The value of the deposit is determined by the decree on beverage containers. The value of the deposit for glass bottles is €0.10.

**Minimum size of deposit symbol**

The deposit symbol can be downloaded at  
<https://www.palpa.fi/materials/material-bank/#glass-bottle>

## Registering a glass bottle in the deposit-based return system



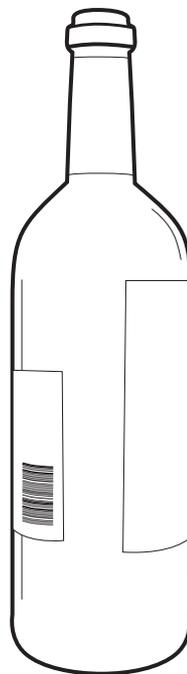
## 6 CHANGE OF BEVERAGE IMPORTER

If the importer of a product changes, the new beverage importer must notify Palpa of the change. Palpa will update the product's beverage importer information.

## 7 MATERIAL SPECIFICATION

### YES

- Aluminium, plastic and natural cork closure
- Flip-top closure (plastic)
- Metal foiling
- Glass materials of various colours
- Glued, adhesive, sleeve and PSL labels
- Campaign, security and RFID stickers



### NO

- Flip-top closure (porcelain) and lead closure
- Painted glass bottle
- Opal and lead glass
- Ceramic material
- Fixed basket, bag or plastic coating
- Metal ring or seal
- Bottle shape not suitable for reverse vending machine processing

## 8 OTHER RELATED INSTRUCTIONS

- Joining the deposit-based return system (general guidelines)
- Price list
- Instructions for sending sample containers