

### Introduction

This document contains the technical elements necessary for the graphic design of CDR labels. The elements provided (files or films) must be ready for printing without any prior corrections. Sending documents that do not respect these specifications slows down the processing of your order and may incur additional cost.

### Printing technique

**Silk-screen printing only**, with up to 6 passages :

- From 1 to 6 spot colors, chosen in the Pantone coated model
- 4 primary colours CMYK + 1 or 2 additional passages (Pantone spot colors)

### Films quality

- **Positive films, right reading (emulsion side up), in 120 LPP.**
- Elliptical dots on the films.
- Separate films for each colour, including color mark up on each film.
- Frame angles recommended; it is important to have a **minimum of 30° difference between each film.**
  - CMYK :  
Black : 45°   Cyan : 105°   Magenta : 75°   Yellow : 90° or 0°
  - Framed spot colors :  
**minimum of 30° difference between each film**
- For CMYK labels, supply one colour proof (cromalin, matchprint, etc.) with its colour range.
- Each film should be outlined (without trimming) and include the central recess of the printing surface selected : see pages 3, 4, 5 and 6.
- The following marks must appear on each film (thickness of 0,35 pt = 0,12 mm) :
  - 1 centring cross
  - 4 register marks, with their centres placed 1 cm away from the surface of the CD (see the example of a STD CDR 1 printing surface in fig. 2)

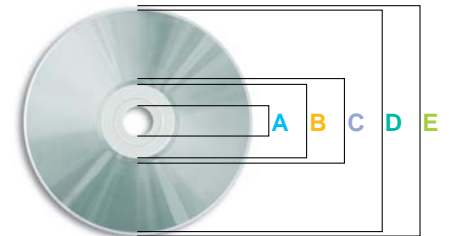
Using X-Press, except for the centring cross, the register marks are generated automatically during flashing. Therefore your document measures 120 mm x 120 mm; the main picture box measures 116 mm x 116 mm and is positioned at 2 mm on X and Y. Templates are available as .qxd files from our departments on request.

The technical lines (physical diameters of the CD-R) must not appear on the films.

### Printing restrictions

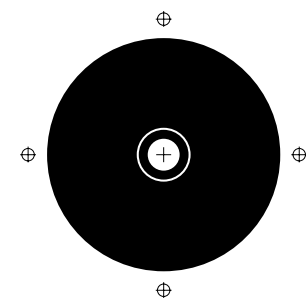
- Reflectivity of the CDR
- The CD's surface looks metallic and is very different from white paper. A white background may therefore be necessary before printing colours (see the example of four-colour printing in fig. 3). Indicate on your request for a quotation whether the label is **with or without a background**. (Note that although a white background considerably lessens the difference in appearance between the metallic area and the transparent plastic area, this is not completely eliminated).

### 1 General aspect of the CDR



- A** Physical hole in the CD-R (diameter 15 mm)
- B** Transparent plastic areas (diameter 34 mm)
- C** Metallic area not used for recording (diameter 40 mm)
- D** Metallic recording area (diameter 118 mm)
- E** Outer physical diameter (120 mm)

### 2 Register marks



### 3 White is a colour !



Four-colour label without white background



Four-colour label with white background on STD CDR 1 surface

- Thickness of characters and lines

Minimum size for characters: at least **4 points in positive**, at least **5 points in negative** (for sans serif fonts in standard type).

Always avoid halftones – 4-colour or Spot colours – in texts in small size.

Thickness of lines – at least 0.10 mm in positive, at least 0.25 mm in negative.

- Density and tolerance of screen rulings

**Greater than 15% in highlights, less than 85% in shades.**

- Gradients see fig. 4

Using gradient in silk screen printing accentuates the phenomenon of "density surge" which lies somewhere between 50 and 60%. This physical phenomenon (a break in the regularity of the shading) can be lessened during flashing by using a lower screen ruling (eg 85 lpi).

### Don't forget...

- Choose the logo corresponding to your product. see fig. 5. Those logos are available from our departments as .ai files ( EPS MAC & EPS PC Illustrator files).
- The mention "Made in France by MPO" or "Fabriqué en France par MPO"
- A reference identifying your product (no more than 16 characters).

### CARBON CD

The printed side of a carbon CD is identical in appearance to that of a CD-R, except for the non-metallic plastic area within a 34 mm diameter, which is black – see fig. 6.

You can choose to position your graphic design in one of the three printing standards on CD-Rs – **STD CDR 1**, **STD CDR 2** or **STD CDR 3**, described in the following pages.

Nevertheless we recommend that you opt for standard 1, with a white background (or any other Pantone spot colour).

**⚠** The appearance may differ in the black plastic area depending on the colours used. Don't hesitate to contact us when you are designing your graphic work.

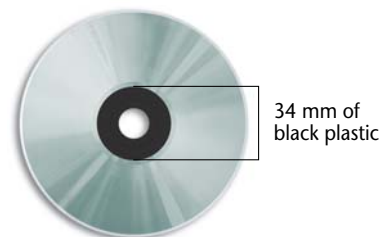
- 4 Gradient in silk-screen printing



- 5 Logos



- 6 Carbon CD aspect

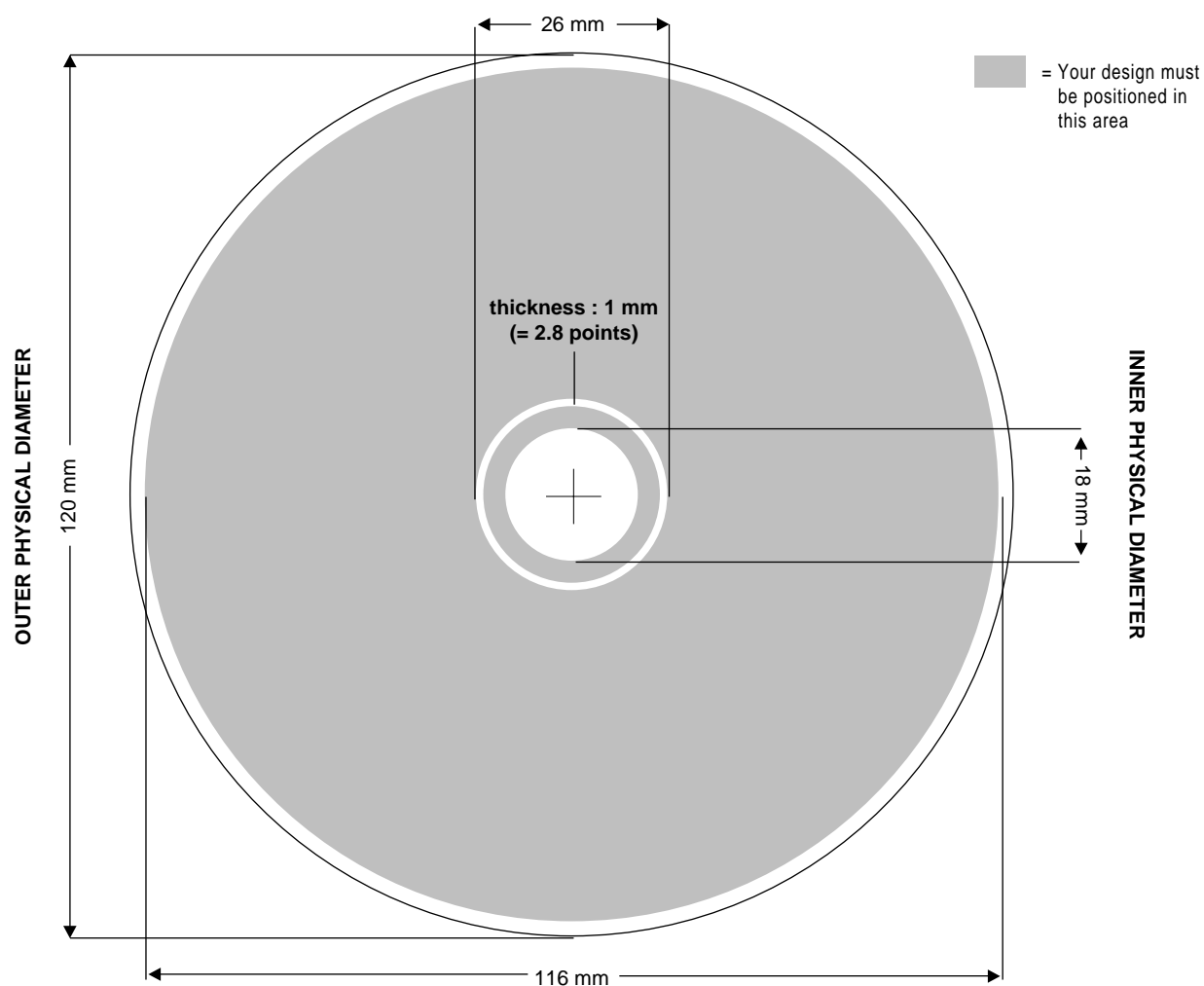


## STD CDR 1

Total printing area: **116 mm / 18 mm**

Printing area suitable for graphic design with background.

The printing area corresponds to the metallic surfaces of the CD and the non-metallic plastic area at the centre of the CD except for a groove which cannot be printed on; this is 1 mm thick and is located 13 mm from the centre.

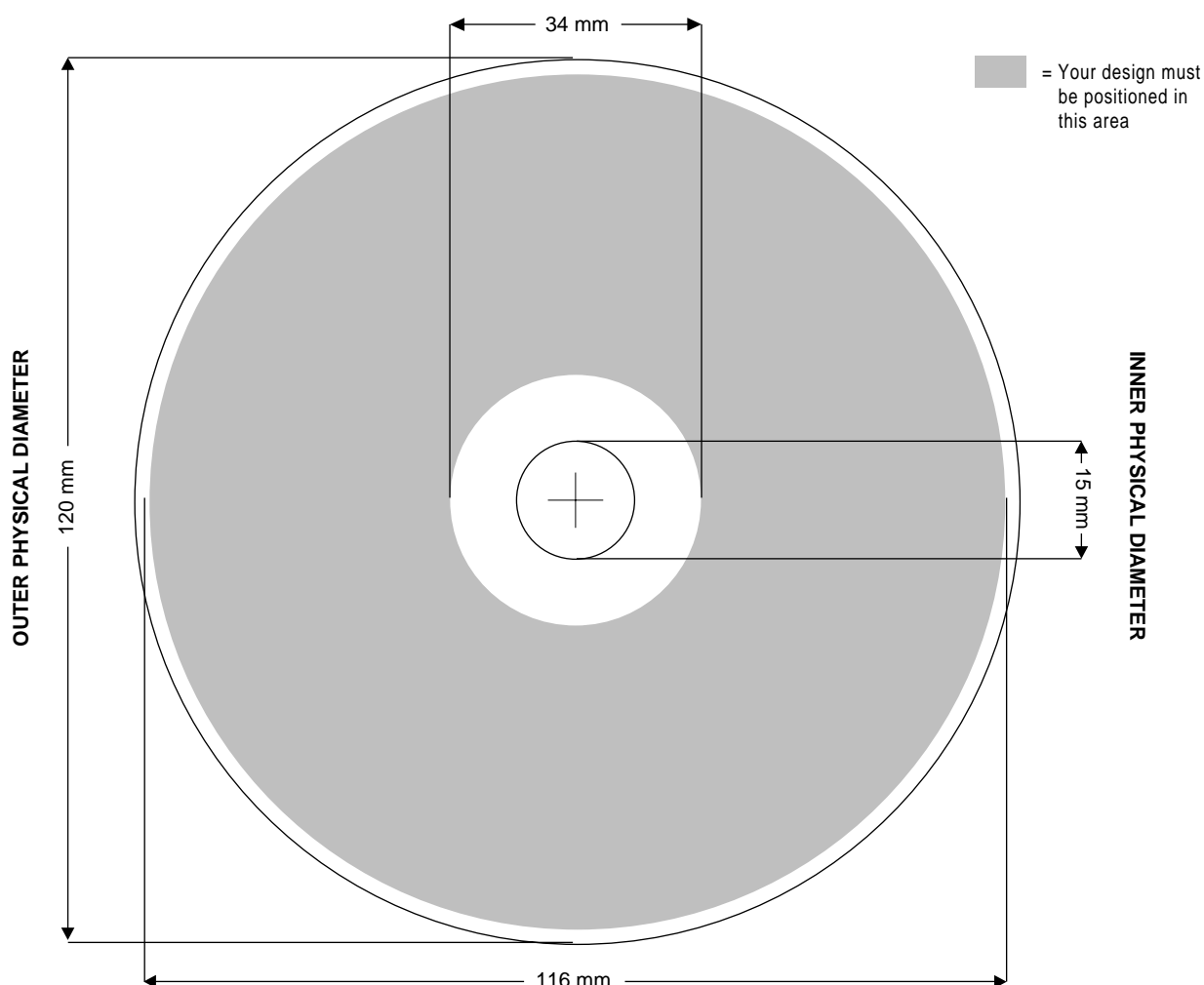


## STD CDR 2

Total printing area: **116 mm / 34 mm**

Printing area suitable for graphic design with or without background.

The printing area corresponds to the metallic surfaces of the CD. Note that the metal coating looks different in the central area (between 40 mm and 34 mm).



## STD CDR 3

Total printing area: **116 mm / 40 mm**

Printing area suitable for graphic design without background.

The printing area corresponds to the metallic surfaces of the CD, less the ring with a different appearance around the centre of the CD.

