



PHARMA CODE SPECIFICATIONS

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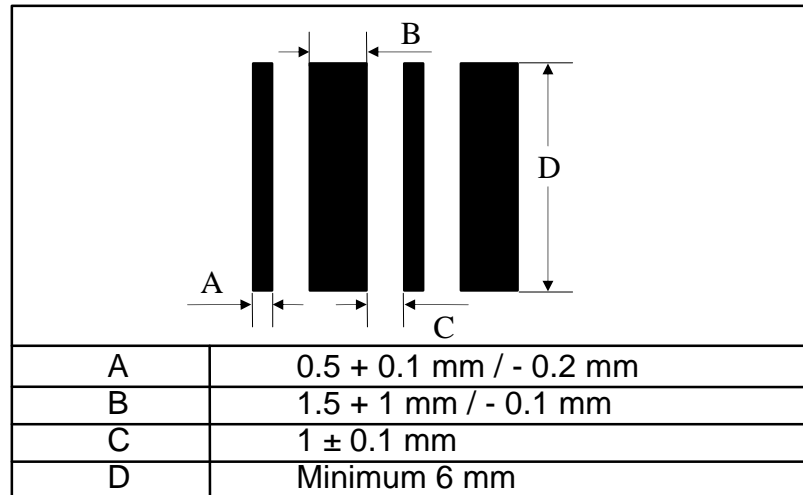
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PHARMA CODE SPECIFICATIONS

DIMENSIONS



The dimension D is not really part of the specifications of the barcode, (the necessary measurements for the correct de-codification). However, taking into account the currently used barcode scanners, a height of 2 mm would be sufficient to realize the reading, but in automatic machines the level of rejection due to not performed reading would be very high as a result from mechanic tolerances of the machine itself.

The currently recommended value of a minimum of 6 mm is considered adequate for most applications, but of course it can be higher or lower depending on the machine tolerances.

DESCRIPTION

The Pharma code can be decimally decoded using the following procedure:

The number assigned to each code will be equal to the addition of the values of the bars that compose the code. The value assigned to each bar depends on the type (fine or thick) of the bar and its position in the code.

POSITION	7	6	5	4	3	2	1	0
FINE BAR VALUE	128	64	32	16	8	4	2	1
THICK BAR VALUE	256	128	64	32	16	8	4	2

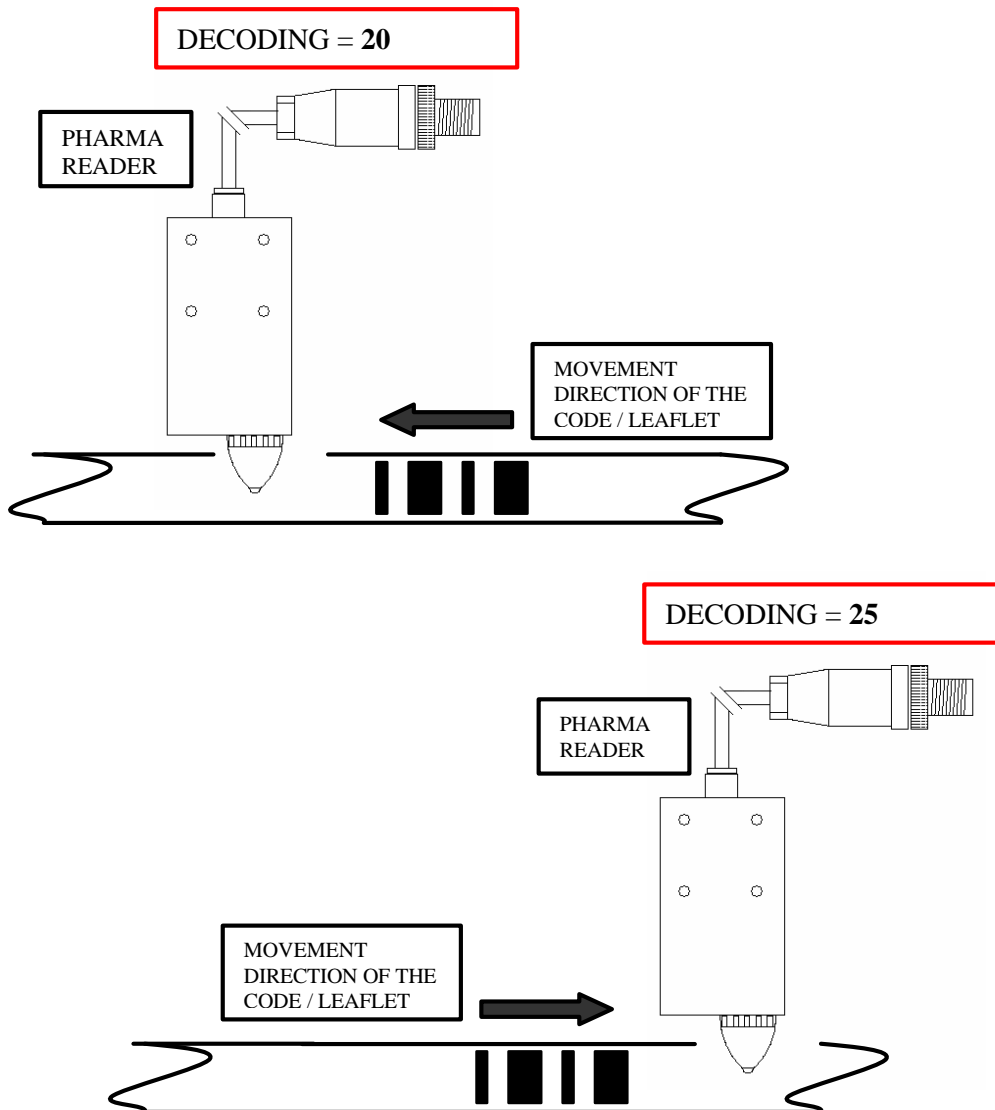
EXAMPLE:



In order to reach maximum reliability it is recommended **not to use codes of less than three bars**, as well as **to use at least one fine bar and one thick one in each code** .

READING DIRECTION

Depending on the direction in which the code is read, it can be decoded with two different results.



COLOUR

The following specifications are based on black printing on white background.

Below you find one table with the colour combinations readable by the standard readers and another one with the colour combinations readable only by special readers.

COLOURS READABLE WITH STANDARD READERS	
Code	Background
Black	White
Blue	White
Verde	White
Brown	White
Black	Orange
Blue	Orange
Verde	Orange
Dark brown	Orange
Black	Yellow
Blue	Yellow
Verde	Yellow
Dark brown	Yellow
Black	Red
Blue	Red
Verde	Red
Dark brown	Red

COLOURS READABLE ONLY WITH SPECIAL READERS	
Code	Background
Yellow	White
Orange	White
Red	White
Light brown	White
Red	Verde
Blue	Verde
Black	Light green
Black	Dark green
Gold	White
Black	Gold
Orange	Gold
Red	Gold
Red	Blue
Red	Light brown
Black	Blue
Black	Dark brown

- The colour combination tables are intended to serve as an illustrative consultation tool. When in doubt regarding any colour combination, it is recommended to ask for advice and if necessary make colour trials in order to determine if there is enough contrast.

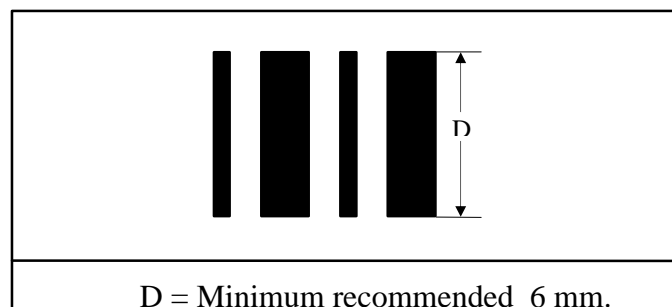
RECOMMENDATIONS FOR THE PRINTING OF BARCODES

If the bar codes have to be read during production, some rules should be taken into account that will facilitate the reading.

- Depending on the type of code, it shall be printed according to its technical specifications for the size of its modules, the resolution, and unprinted areas on both sides of the code.

- The dimension D is not really part of the barcode specifications (the necessary measurements for the correct de-codification). However, taking into account the currently used barcode scanners, a height of 2 mm would be sufficient to realize the reading, but in automatic machines the level of rejection due to not realized reading could be very high as a result from mechanic tolerances of the machine itself.

The currently recommended minimum value of 6mm is considered adequate for most applications, but of course it can be higher or lower depending on the machine tolerances.



- The contrast of the bars with the background should be as good as possible, since the best results will always be achieved with a black code printed on white background. If this is not possible, you should always try to achieve the maximum possible contrast, avoiding those colours which cannot be read by scanners with red laser. On the next page you find an illustrative colour overview for your orientation.
- Besides the contrast, it is very important to avoid shine or reflection. For instance, although a black code on a metallic silver background has enough contrast, the background may produce undesired reflections. Reflecting backgrounds should be avoided, instead you should always print on matt backgrounds.

The above mentioned recommendations are of generic type and will always be related to the quality of the printing, the code size, the reading speed, the technical characteristics of the scanner, etc.

In any case of doubt we recommend to print some samples and perform reading tests in real production conditions.

ILLUSTRATIVE COLOUR TABLE

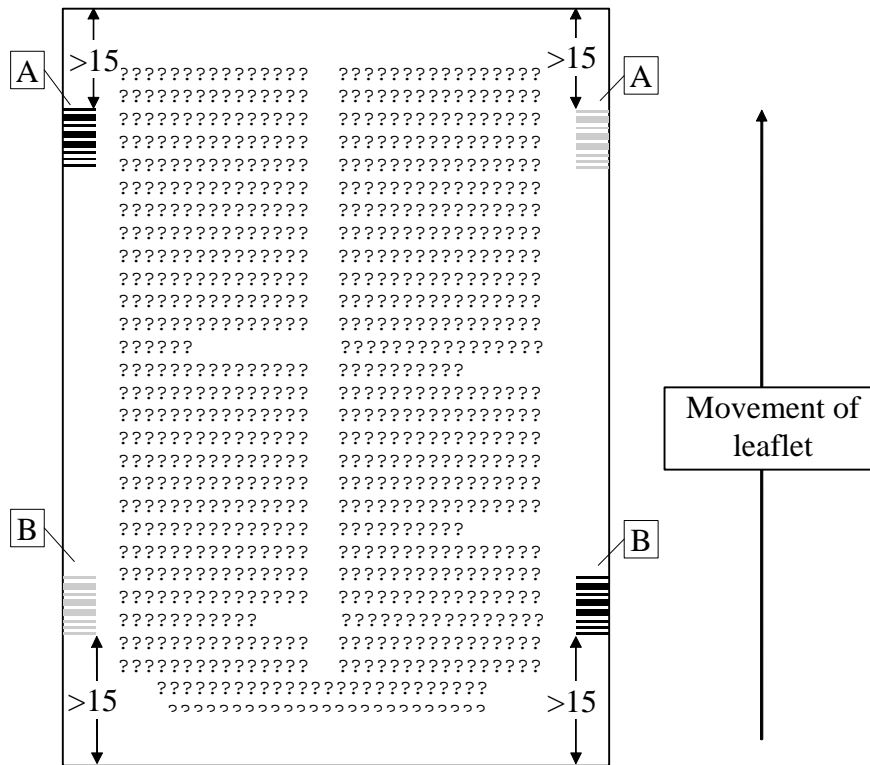
- The following table shows the typical colour combinations that are accepted for red laser scanners (632 nm, 650 nm, 670 nm).



- If the colour of the barcode is brighter than that of the background (inversely printed barcodes), it is not readable for standard scanners.

PRINTING EXAMPLES (STANDARD PHARMA READERS)

LEAFLET READING IN FOLDER

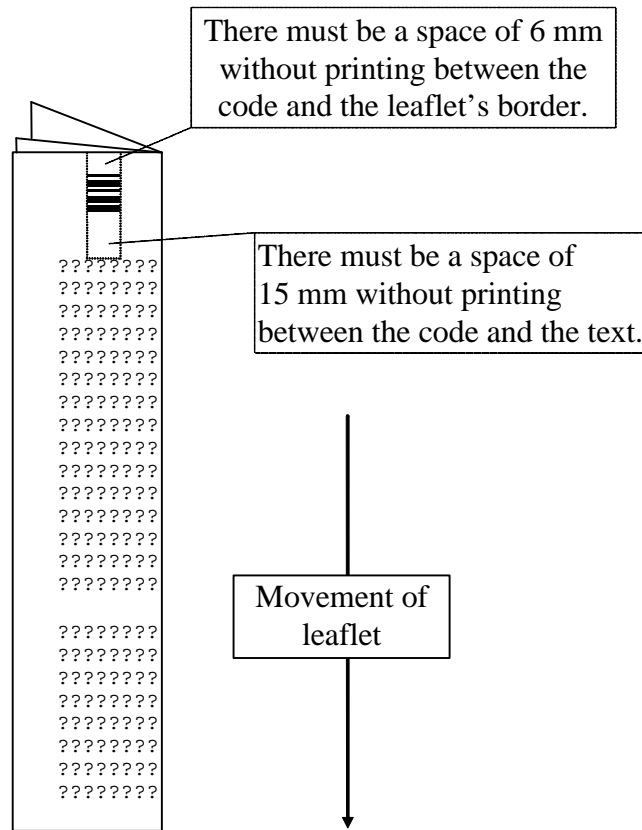


It is recommended to print the code in the A positions to avoid possible transparencies.

If the paper quality does not allow printing transparencies, the A and B positions can be used for printing in order to achieve more flexibility for the installation of the scanners and the positioning of the leaflet in the folding device.

These specifications can vary depending on the characteristics of the folding device and the dimensions of the leaflet. If you have any doubt regarding the code position we recommend to ask for advice before carrying out any definitive printing.

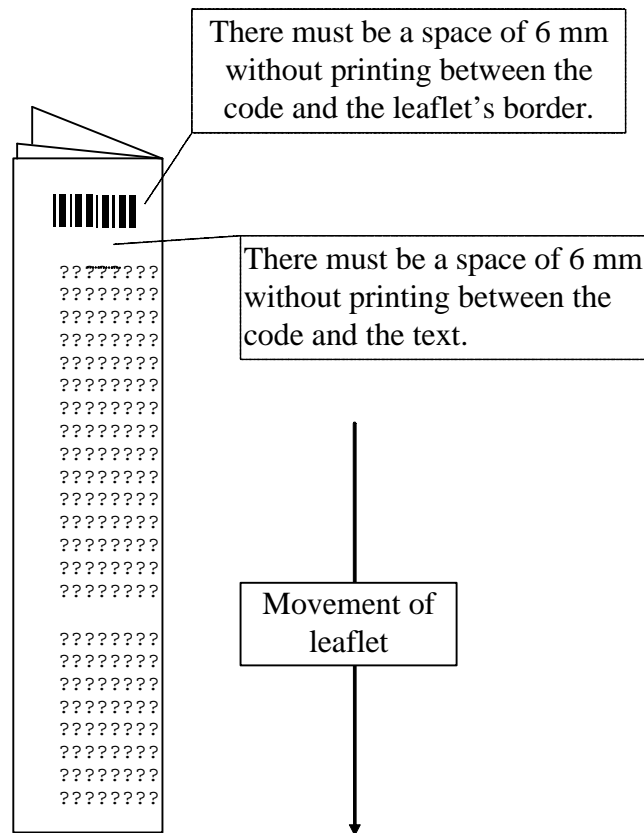
READING OF A FOLDED LEAFLET BY PHARMA AND LASER READERS



It is convenient to avoid the printing of text on the back side of the printed code in order to avoid any text shining through the paper.

These specifications can vary depending on the direction of the movement of the leaflet. In case of any doubts regarding the code position we recommend to ask for advice before establishing the definitive printings.

READING OF A PRE-FOLDED LEAFLET BY LASER READERS

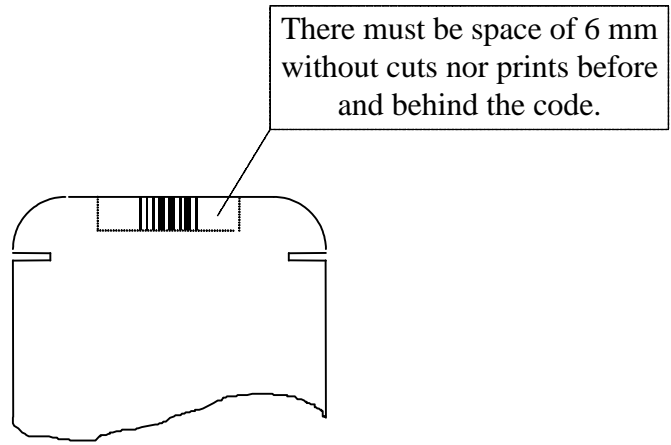


The code must be completely visible at some moment for its reading, above mechanical obstacles.

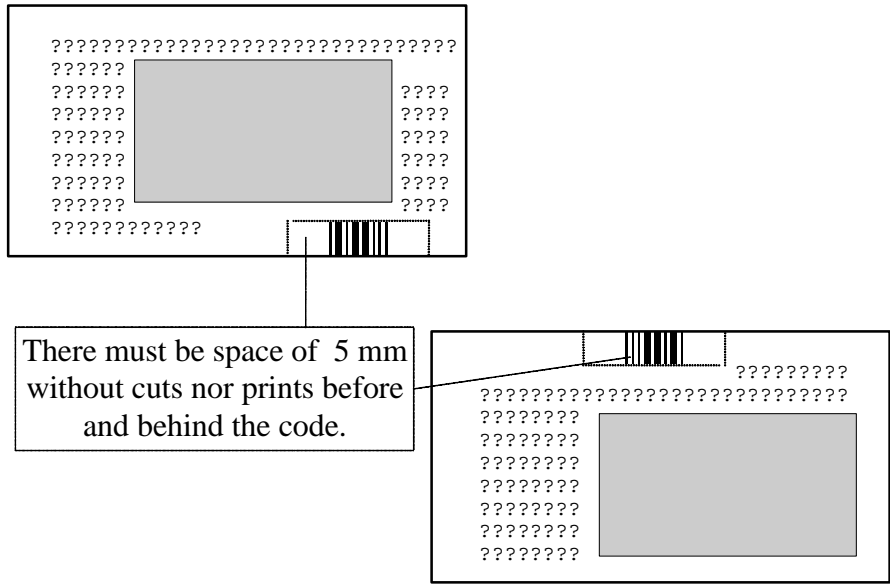
It is convenient to avoid the printing of text on the code's rear zone to prevent possible transparencies.

If you have any doubts regarding the position of the code, we recommend to ask for advice before carrying out any definitive printing.

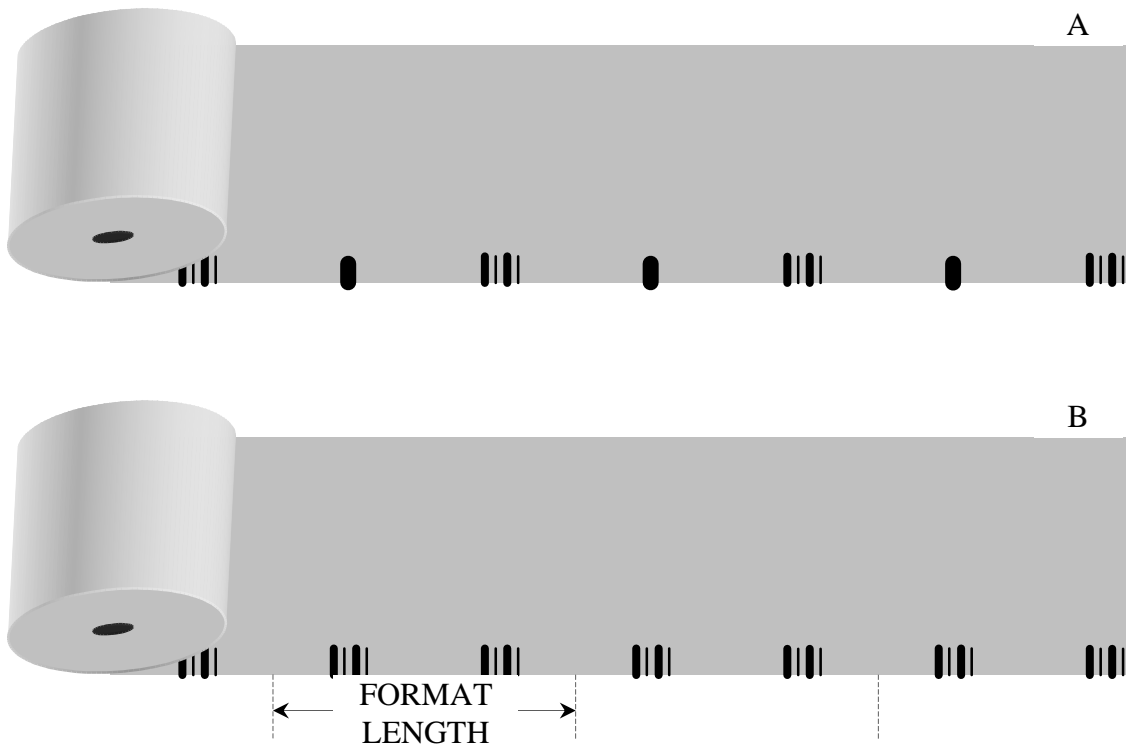
CASE READING



LABEL READING



ALUMINIUM FOIL READING



On aluminium foil with position marks, the bar code should be printed in the center between the position marks. (A)

On aluminium foil without position marks, two bar codes should be printed per format length. (B)

The printing can be located on any of the borders of the film or in any other position where there is no printing interfering in the reading area.

To guarantee a perfect reading, there must be the best possible contrast between the code and the aluminium. Coloured aluminium foil requires special attention.

READING IN TUBE MACHINES

For tube machines, there are two ways to read the code, either on the flat tube before folding, or during rotation in the orientation station.

If the code is read on the flat tube, a laser reader can be used.

If it is read during rotation, a standard optical reader should be used (M02, M04, etc.). The tube has to rotate twice. When the orientation mark is detected for the first time, the synchronism signal will be given to the reader and then the rotation continues. When the orientation mark is detected for the second time, rotation will stop.

Due to the curvature of the tube, the pharma code can only be read in the orientation station with a laser reader if you respect the following design measures, in which the tolerances have been limited to the minimum required for successful reading.

