1. TECHNOLOGICAL PARTS OF THE CARD

CARD DIMENSIONS

Dimensions of plastic cards of individual types set out by applicable standards ISO EN 7810, 7811, 7813, 7816.

The standard size of the card is 85.50 x 54mm.

Other card sizes - see page 8 and 9.

CARD THICKNESS

PVC laminated standard card - thickness 0.76 mm or 0.50 mm.

PVC laminated contactless chip card - thickness up to 0.85 mm.

CARD MATERIAL

As a standard, we produce laminated PVC cards - white PVC core and PVC overlay. We use plastics and laminating foils produced by the world's leading producers of these special materials for the production of cards within the EU

2. CARD PRINTING

Printing is done according to the client's requirements, the graphics supplied, and also according to the required impression volume.

For higher impression volumes, CMYK offset printing or PANTONE spot colors are used. This type of printing is used for most standard cards.

Offset printing can also be combined with screen printing - metallic color printing.

Combining prints results in an exquisite effect, premium design and a high "value" of the card. When choosing this method of printing, it is necessary to consult the preparation of the supporting materials for production with our DTP studio.

Small impression volumes and identification cards (with photo) are inkjet printed. Here too the requirements for graphic design of the card are the same as for offset printed cards.

3. CARD IDENTIFICATION ELEMENTS

BAR – QR (2D) CODE

Barcode - EAN 8, EAN 13, CODE 39, CODE 128, Interleave 2 of 5, QR (2D) codes, etc.

Based on the client-supplied database or number series, we generate barcodes that we print on a plastic card.

Each card can carry a unique barcode. Such a card identifies its owner.

The gap from left and right must be at least 2.50 mm from the first barcode line from the white recess.

Although the height of the bar code may vary, it is not recommended to print bar codes below 6 mm without a number and below 8 mm with a number.

A white barcode substrate is always recommended.

CONTACTLESS CHIPS

EM Marine – this is the most widespread chip in the Czech Republic. Determining this chip in the card is read-only and its operating frequency is 125kHz, memory 64b. Chip type: EM4102, EM4200

Mifare chip – used for read-and-write cards, operating frequency is 13.54 MHz. Types: Mifare Ultralight | Mifare Classic 1kB * | Mifare Classic 4kB * | Mifare Desfire 4kB EV1, Mifare Desfire 8kB EV1 * | Mifare Desfire 4kB EV2, Mifare Desfire 8kB EV2 * |

Combination of chips on the card – used at the same time in systems with different types of readers working at different frequencies (125 kHz and 13.56 MHz)

The contactless chip and coil are not visible on the card, they are located inside the card body.

The barcode can be placed in different sizes (depending on the EAN code type) anywhere on the card. Always at least 0.50 cm from the edge of the card. It must also be placed on a white area and the distance of the last line from the white edge must be 2.5 mm.

2,5 mm

bleeding 60 mm

54 mm

85,5 mm

bleeding 91,5 mm

0 797776 816293

MAGNETIC STRIPE

We produce two types of cards with magnetic stripe.

HiCo - High Coercivity 2750 Oe nebo 4000 Oe

LoCo - Low Coercivity 300 Oe

Magnetic stripes normally consist of three horizontal tracks, with a width of 1.27 cm.

– The first track is alphanumeric and can contain a maximum of 79 characters (name, company name ...).

– The second track is numeric and can contain a maximum of 40 characters (identification numbers ...).

– The third track is alphanumeric and can contain a maximum of 107 characters (PIN, bonus ...).

position magnetic stripe

5 mm

12,7 mm

12,7 mm

5 mm

The 1.27 cm wide magnetic stripe is located at a distance of 0.50 cm from the edge of the card, always on the longer side of the card.
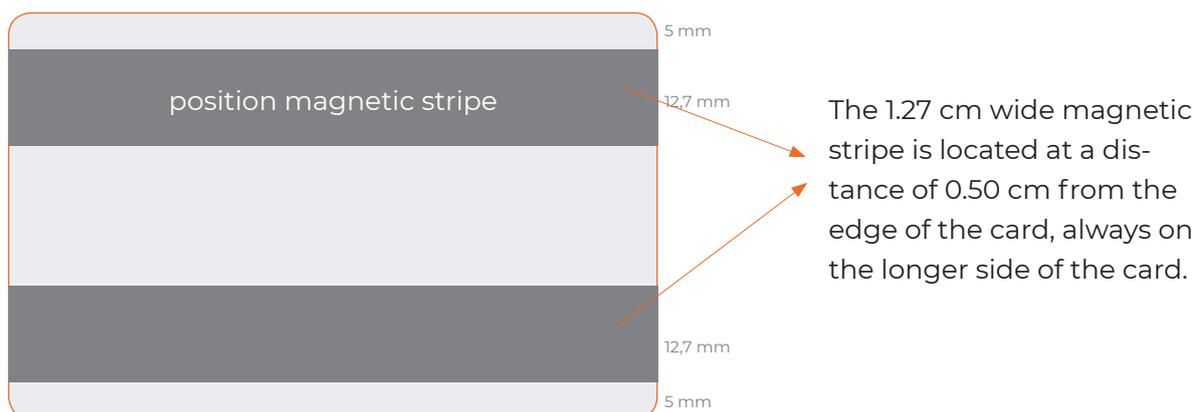
4. REQUIREMENTS FOR PRINT BASE MATERIALS

Always prepare graphic materials with an overlap of 3 mm. The overlap (bleeding) is necessary for cutting cards from the printing sheet. The base materials must always be in CMYK color mode (not RGB!), images must be at least 300 dpi. Texts and logotypes are best in curves, as they can be difficult to read in a bitmap (as a image) because of the size of the plastic card. The net size of the card is 85.5x54 mm (corner rounding / radius is 3 mm).

5. REQUIREMENTS FOR PRINT BASE MATERIAL PROCESSING

– Prepress pdf

– Adobe Illustrator CC (version 22.0 and older) - in .ai, .eps
   (always convert fonts to curves) or .pdf format

– CorelDraw (version 11.0 and older) - in .cdr format
   (always convert fonts to curves) or .pdf (for prepress)

– Adobe InDesign - prepress pdf only
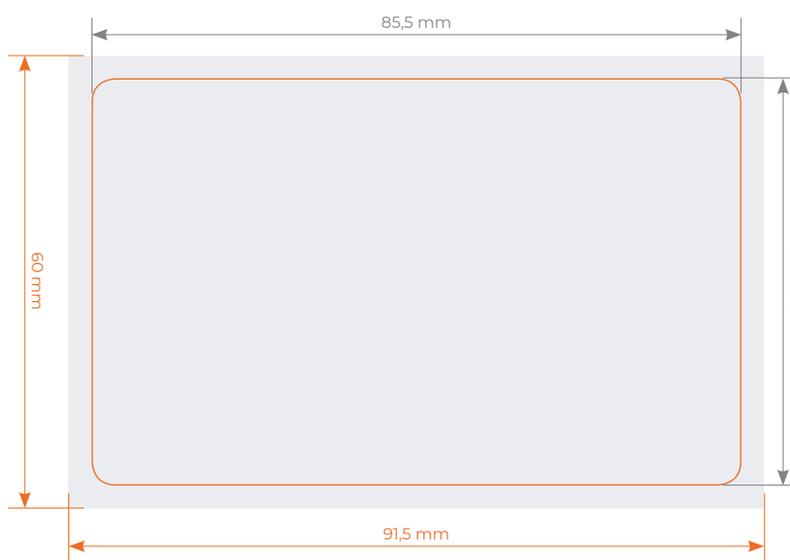
Net card size after cut-out: 85.5 x 54 mm
(corner rounding / radius 3 mm).

The graphics must always be prepared with overlap (bleeding): 91.5 x 60 mm
(without rounded corners).

# 6. TECHNICAL DRAWINGS OF OTHER PRODUCED CARDS

MIFARE CHIP CARD

54 mm

85,6 mm

EM4102 CHIP CARD

54 mm

85,6 mm
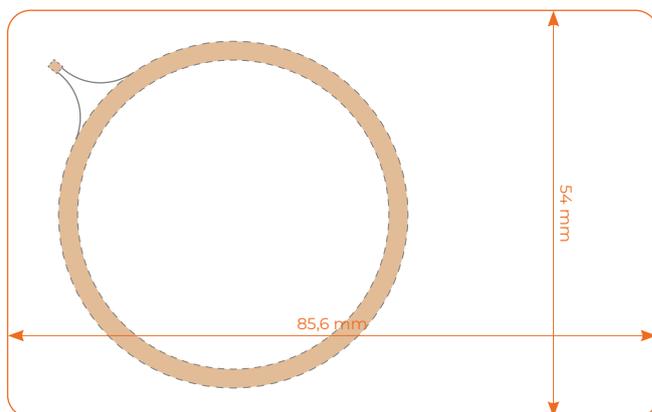
DUAL-CHIP CARD (EM4102 + MIFARE - MF STANDARD)
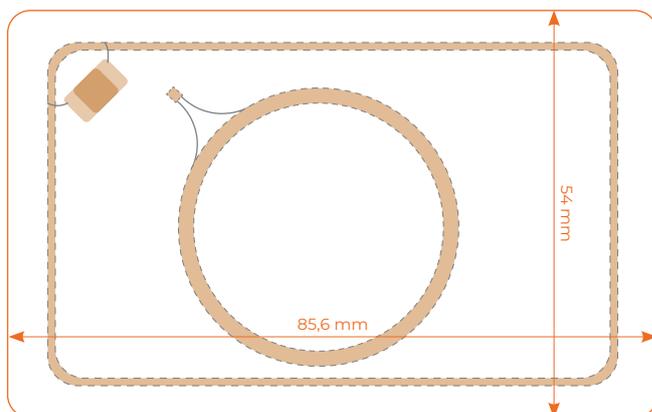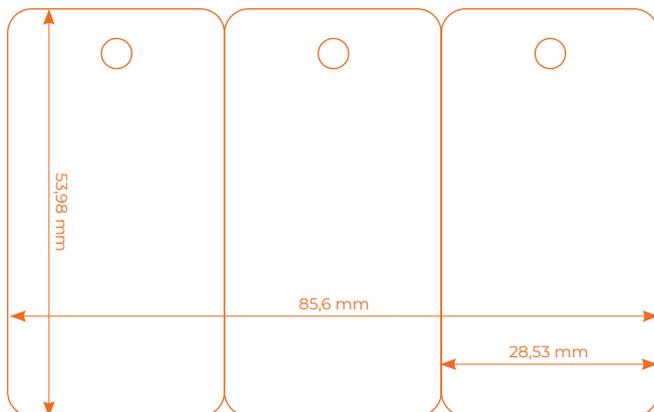
54 mm

85,6 mm

TRIPLE CARD

53,98 mm

85,6 mm

28,53 mm

Round holes may be cut-out on the card in the left, center, or right.

23,04 mm

14,27 mm

5,5 mm

8,77 mm

CARD + KEY FOB

54 mm

85,6 mm

28,53 mm

Round holes may be cut-out on the card in the left, center, or right position.

23,04 mm

14,27 mm

5,5 mm

8,77 mm

2/3 CARD + KEY FOB

53,98 mm

85,6 mm

57,07 mm

28,53 mm

Round holes may be cut-out on the card in the left, center, or right position.

23,04 mm

14,27 mm

5,5 mm

8,77 mm
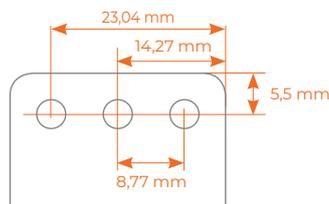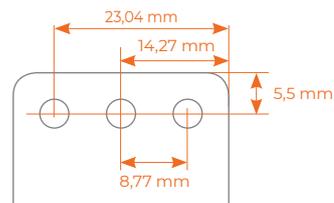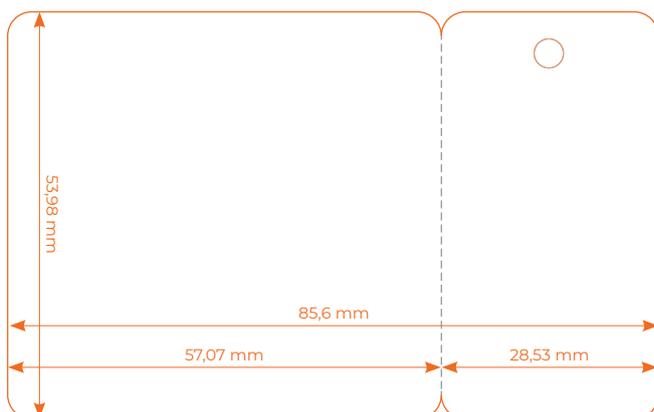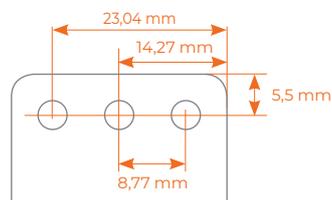
WHEN PREPARING GRAPHIC DESIGNS, KEEP THE FOLLOWING IN MIND:

Net size of cards after cut-out - see technical drawings. (corner rounding / radius 3 mm).

The graphics must always be prepared with overlap (bleeding) + 3 mm on each side. (without rounded corners)