

# HID Card Printing and Handling Guide

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## General Information

HID Global® ISO cards are made with outer layers of PVC and finished with a glossy surface suitable for Photo ID printing. Proximity cards and contactless smart cards contain an antenna coil and integrated electronic chip. Wiegand cards contain magnetic wire code strips.

Care should be taken to follow HID Global's handling and printing recommendations. We hope these suggestions will help you successfully print your HID Global cards.

## Print Design

Surface imperfections caused by the embedded chip and antenna may cause color variations or printing voids with direct to card printers. When designing card artwork, avoid large areas with solid or half-tone backgrounds. Use artwork with varied color or pattern. If the design must print over the internal chip, we recommend the use of a reverse transfer printer. Do not place a photo portrait over the chip location or opposite the edge of a magnetic stripe.

Always print a few test cards, and be prepared to make minor adjustments to the artwork to create the best appearance.

Some printers are capable of edge-to-edge printing. Before running an edge-to-edge design, test several cards to check the printer's capability.

## Card Handling

HID Global's printable cards are shipped shrink wrapped. Care should be taken not to scratch the cards when opening the wrapping, especially when using a sharp object.

Cards should be handled by the edges, not by the flat finished surface. Use lint free gloves or finger cots, since hand oils will transfer to the cards causing smudging, fingerprints or other distortions when printing.



ACCESS experience.

Even with careful card handling, it is possible that the image quality may vary. This can be due to printer setup variations, lot to lot material variations, environmental changes, printer types, background color selections and other variables.

HID Global is not responsible for image quality variations. These cards have been quality controlled and meet requirements for high quality images. Failure to achieve a desired image quality is not the fault of the card.

## Card Printing Tips

Following these instructions will provide optimum printing results.

- 1** Always check cards for noticeable debris. In some instances there may be small pieces of vinyl on the card. Carefully clean cards using 99% pure Isopropyl alcohol and a soft, lint free cloth.
- 2** The office where you print the cards should be neat, clean and free of airborne particles.
- 3** Check the printer's roller frequently. Clean the printer roller, at a minimum, after printing 50 cards.
- 4** Occasionally, fine scuff marks appear on the surface of cards. These marks will not affect the printer, or the outcome of the printed images. These scuff marks may occur during final inspection and testing.
- 5** Printer manufacturers discourage printing cards which are pre-punched. The slot edge may tear the printer ribbon or interfere with card position sensors.
- 6** Print your cards first, then slot punch them. For cards that are already punched, do not print in the area near the slot. If the card has an embedded contact chip, keep the printing at least .0625 in [1.5875 mm] away from its edges.

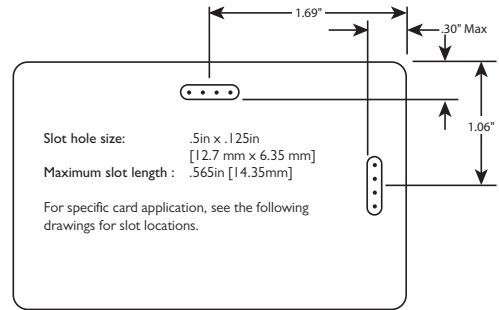
## Card Slotting

HID Global cards have slot punch indicators, small dots visible on the card back which show the only allowable slot locations for the card.

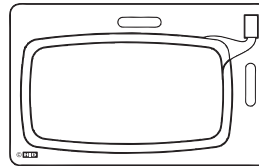
It is strongly suggested to use badge grippers instead of slot punching the cards. These attachment devices provide the same functionality as slot clips, and they maintain the structural integrity of your technology card.

If you slot punch the card, carefully center the indicator marks to the punch, and punch only where the indicator marks appear. Any other position may damage the electronics.

**Always test the first card after printing and slotting. Once satisfied with the quality, continue running the full card lot.**

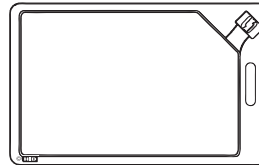


## Card Slot Locations



### 125 kHz Proximity cards

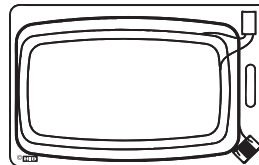
Horizontal  
or  
Vertical Punch



### 13.56 MHz Contactless Smart Cards

iCLASS®  
MIFARE®  
DESFire™

Vertical Punch Only



### Combo cards

125 kHz Proximity plus  
13.56 MHz Contactless Smart  
Cards

Vertical Punch Only

Shown are card backs

**CAUTION: Custom cards may have different slot locations. Verify component placement on your artwork proof before punching custom cards.**