

Dipco16.0
Operating Manual

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HEIDELBERG

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1.1 Production reliability thanks to a package of coordinated digital measuring elements

Types of control elements

- Quality control strips are important control elements for quality proofing in offset printing. They therefore contain various measurement fields for determining solids, ink trapping, dot gain, print contrast and gray balance and for measuring slurring and doubling. All digital quality control strips are well-suited to the ink zone width of Heidelberg presses and support the printer effectively. All Prinect color measuring systems can measure and evaluate the quality control strips and generate the control factors for online ink control from the resulting data.

- Together with Prinect Image Control, Mini Spots enable faster reactions to altered conditions in the color workflow. They are used for monitoring both proofing and printing. The measured values determined by the Mini Spots help adapt existing characteristic curves, process calibrations and ICC profiles to changed printing conditions.

- The fully automatic inline measurement and control of the register in the printing press is carried out using the control marks for Prinect Auto Register. Special register marks support the printer in checking the register visually.

- A subfolder named *Dipco* is located in the *Prinect Signa Station* directory stored on the **USB stick for installing Prinect**. You can access this directory directly or open the *SetupPrinect.exe* file. Chapter B "Installation using SetupPrinect.exe" describes how to use *SetupPrinect.exe*. When the Prinect Signa Station is installed, the Dipco control elements are automatically stored in the

"..\Marks\dipco" subfolder in the Signa station program folder.

- Available for download from the Prinect user portal.



Note

The control elements are supplied for Heidelberg workflows (*Prinect* directory) and for third-party workflows with an output resolution of 2400 dpi (*foreign2400dpi* directory) and 2540 dpi (*foreign2540dpi* directory). If you use a third-party workflow with a different resolution, you may have to generate PDF files for this deviating resolution. You can find information on this in the operating manual in chapter B., "Generating PDF files".

	Discontinued	16.04.2014 11:19
	eps	16.04.2014 11:20
	foreign2400dpi	16.04.2014 11:20
	foreign2540dpi	16.04.2014 11:20
	Prinect	16.04.2014 11:20
	DipcoOverview.pdf	25.02.2014 14:45
	DipcoPoster_Format_...	25.02.2014 14:45
	DipcoUebersichten.pdf	25.02.2014 14:45
	Handbuch.pdf	25.02.2014 14:45
	Manual.pdf	25.02.2014 14:45
	version.txt	25.02.2014 14:45

Fig. 1 Structure of the Dipco directory

Structure of the Dipco directory

The directory structure is arranged as follows:

Notes on use/Overview posters

- The notes on use can be found in the Handbuch.pdf/Manual.pdf file in the root directory. The overview posters are stored in the same directory in pdf format

Control elements from previous versions

- Discontinued
This directory contains all control elements that are no longer updated.

Control elements in eps format

- eps
This directory contains the control elements in eps format

Control elements for Heidelberg Prinect workflow

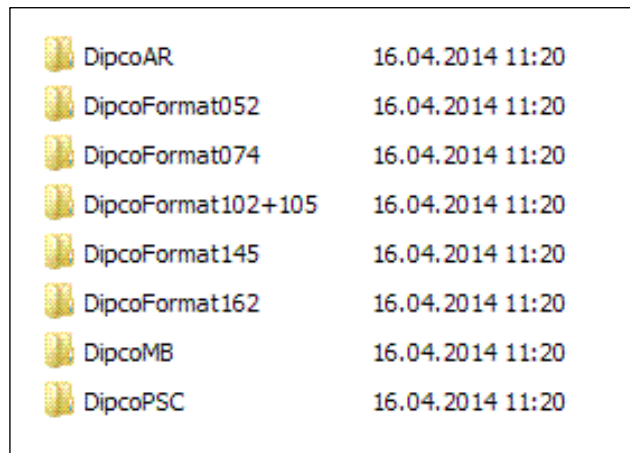
- Prinect
This directory contains the current control elements for Heidelberg Prinect workflows for all output resolutions.

Control elements for third-party workflows with 2400 dpi resolution

- foreign2400dpi
This directory contains the current control elements for third-party workflows that work with an output resolution of 2400 dpi. The subdirectories have the same structure as the *Prinect* directory.

Control elements for third-party workflows with 2540 dpi resolution

- foreign2540dpi



DipcoAR	16.04.2014 11:20
DipcoFormat052	16.04.2014 11:20
DipcoFormat074	16.04.2014 11:20
DipcoFormat102+105	16.04.2014 11:20
DipcoFormat145	16.04.2014 11:20
DipcoFormat162	16.04.2014 11:20
DipcoMB	16.04.2014 11:20
DipcoPSC	16.04.2014 11:20

Fig. 2 Substructure in the *Prinect* directory

This directory contains the current control elements for third-party workflows that work with an output resolution of 2540 dpi. The subdirectories have the same structure as the *Prinect* directory.

Subdirectories with Dipco elements

The *Prinect*, *foreign2400dpi* and *foreign2540dpi* directories each have the following subdirectories.

Control marks for Prinect Auto Register

- DipcoAR

These directories contain the control marks for Prinect Auto Register.

Quality control strips

- DipcoFormat052
- DipcoFormat074
- DipcoFormat102+105
- DipcoFormat145
- DipcoFormat162

These directories contain the quality control strips. The figures stand for the sheet size classes 52, 74/75, 102/105/106, 145 and 162 cm.

Mini Spots

- DipcoMB

This directory contains the Mini Spots.

Measuring marks for paper stretch compensation

- DipcoPSC

This directory contains the measuring marks for the paper stretch compensation.

1.3 Data formats of the control elements

The control elements are available in the data formats EPS and PDF. The individual formats are used in the following areas:

- PDF format (file extension .pdf):
The PDF format is for use in a composite PDF workflow. It can be used with Prinect Signa Station and third-party software.
- EPS format (file extension .eps):
The *.eps files can be found in the *eps* directory. The EPS format is for use in a Composite-PostScript™ workflow. It can be used in connection with other imposition software and can also be positioned directly, e.g. with QuarkXPress™ or Adobe InDesign™.

**Note**

If you need the control element in PDF format, it is best to use the PDF file on the CD. These PDF files contain embedded "PostScript XObjects". If your workflow cannot edit these PDF files and has an output resolution other than 2400 or 2540 dpi, you can generate PDF files without embedded "PostScript XObjects" from the EPS files. Please refer to chapter B., "Generating PDF files" at the end of this documentation.

1.4 Color abbreviations and color designations

Color abbreviation	Color designation
B	Color designation of the 1st ink (usually black)
C	Color designation of the 2nd ink (usually cyan)
M	Color designation of the 3rd ink (usually magenta)
Y	Color designation of the 4th ink (usually yellow)
X	Color designation of the 5th ink
Z	Color designation of the 6th ink
U	Color designation of the 7th ink
V	Color designation of the 8th ink
S1 ... S8	Color designation of the 9th to the 16th ink

Tab. 1 Assignment of color abbreviation to color designation

1.5 General notes on use

- Dipco 16 has been tested together with Heidelberg Prepress systems. As a result of the variety of possible combinations of hardware platforms and application software Heidelberg cannot guarantee its suitability in third-party prepress systems!
- Some measurement fields (e.g. measurement fields for slurring and doubling) are only displayed coarsely on the screen. However, these measurement fields are output correctly if the output resolution and the handling of the PostScript XObjects in the workflow are set correctly. For third-party workflows with an output resolution other than 2400 or 2540 dpi, please refer to the notes in chapter B., "Generating PDF files".
- Position the control elements to their original scale! If you increase or decrease control elements, change the grid or size of the measurement field. The Prinect color measuring devices and Prinect Auto Register need the control elements to be in their original scale and cannot

measure control elements that have been made smaller or larger.

► **Note**

The control elements carry information on the overall size in the file name. For example: PCS_40AB__120x14v16 requires an area which is 120 mm wide and 14 mm high.

- Position the control elements on the sheet in such a way that the measurement fields are not cropped or covered. Bled measurement fields cause incorrect measurements and error messages or prevent the measuring device from recognizing the control element.
- Please be aware that digital control elements - in contrast to conventional sheet assembly - can be influenced by the settings in prepress (calibration) and the geometric properties of the imagesetter. The correct geometric settings must be made on the imagesetter, for example to display measurement fields for slurring and doubling correctly.

1.6 What are the new features compared to previous Dipco versions?

► **Note**

Dipco 16 has been specially developed for use with the current version of Prinect Signa Station. Due to comprehensive changes to the software, we cannot guarantee the functionality of Dipco 16 in connection with older versions of Signa Station. When using versions older than Prinect Signa Station 4.5 you should carry out an update or, to make sure, have the previous version of your Dipco elements at hand.

As of Prinect Signa Station 4.5, the contents of the Dipco CD are also included on the Signa Station CD. As of Prinect Signa Station 10.0 the contents of CtP-Tools 10.0 are also integrated.

A wizard tool for importing marks is available from Prinect Signa Station 10.0 onward, which simplifies the update or import of several marks significantly.

The wizard tool for importing marks cannot be started from the Dipco directory (it aborts the process with a warning message). Start the assistant for importing marks from one of the subdirectories "Prinect", "foreign2400dpi" or "foreign2540dpi".

New features in Dipco 16 compared to Dipco 13.0

New micro control elements with control marks for die cutting in formats 102/105/145/162 cm. These marks

are available in 6 and 7 color versions. The file names are Fxxx_MicroDCB.

New features in Dipco 13.0 compared to Dipco 12.0

As of Dipco 13.0, the *.pre files are no longer used as they are no longer needed for the Prinect workflow. The *.eps files have been moved and are now located under the *eps* directory.

New features in Dipco 12.0 compared to Dipco 11.0

- New and shorter directory and file names, new marks: Micro-10 (sheet size 74 to 162) and G7-4 (sheet size 52 to 106).

New features in Dipco 11.0 compared to Dipco 10.0

- New directory structure, Dipco elements for third-party workflows with 2400 and 2540 dpi output resolution are supplied.

New features in Dipco 10.0 compared to Dipco 4.5

- New directory structure with one layer simplifies working with the assistant for importing marks.
- Measuring marks for paper stretch compensation: The measuring marks for 8, 10 and 12 colors have been added to the new version.

New features in Dipco 4.5 compared to Dipco 3.1

- New directory with measuring marks for paper stretch compensation.
- New Mini Spots have an additional white patch. The previous Mini Spots can be found in the *Discontinued* directory.
- As of version 3.1, the control elements for the format category 145 cm have been added.

New features in Dipco 3.1 compared to Dipco 3.0

- As of version 3.0, the control elements for the sheet size class 162 cm have been added.

New features in Dipco 3.0 compared to Dipco 2.1

- Quality control strip "7S" for 7-color printing.
- Mini Spots for 5, 6 and 7-color printing.
- Modifications to "6S" with assignments for printing with special colors:
 - 6S-XZ (X, Z, U, V, S1, S2).
 - 6S-BX (B, X, Z, U, V, S1).
 - 6S-XC (X, C, M, Y, Z, U).
- Micro strips for Prinect Inpress Control.

New properties of the control elements

Recognition of cropped measurement fields

Cropped measurement fields cause problems in measurement. To prevent this, the quality control strips include integrated PostScript information that is read out

by suitable workflows, such as Prinect Prepress Manager. If this contains information that individual measurement fields were bled by a clip path (bleed size of up to 0.5 mm is tolerated), the whole measurement field is suppressed. The prerequisites for this function in the PDF workflow are as follows:

- The workflow allows processing of the integrated PostScript commands.
- The measurement field is actually cropped by a clip path. Subsequent overlaps by other objects are not recognized.

Assignment of color designation to color abbreviation

In a composite workflow the assignment of color designation to color abbreviation (X, Z, U, V...) is shown in the quality control strips directly below the measurement fields. This function is also executed through integrated PostScript commands. Prerequisite for this function:

- The workflow allows processing of the integrated PostScript commands.

Discontinued (not developed any further) control elements

Several control elements have been discontinued (not developed any further) or replaced by new ones. However, these control elements were applied unchanged in the *Discontinued* directory on the current CD.



Note

Some of the discontinued control elements cannot automatically recognize cropped measurement fields or automatically assign color designations to color abbreviations.

Color control elements

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1 Quality control strips

1.1 Directories with quality control strips

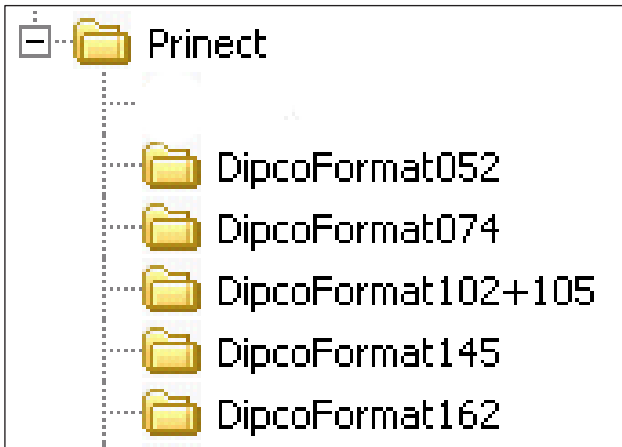


Fig. 1 Directories with quality control strips

There are 5 directories with quality control strips.

- *DipcoFormat052*
This directory contains quality control strips for presses with a sheet width of 52 cm.
- *DipcoFormat074*
This directory contains quality control strips for presses with a sheet width of 74/75 cm.
- *DipcoFormat102+105*
This directory contains quality control strips for sheet widths of 102 cm, 105 cm and 106 cm. The quality control strips are suitable for all 3 sheet widths.
- *DipcoFormat145*
This directory contains quality control strips for sheet widths of 145 cm.
- *DipcoFormat162*
This directory contains quality control strips for sheet widths of 162 cm.

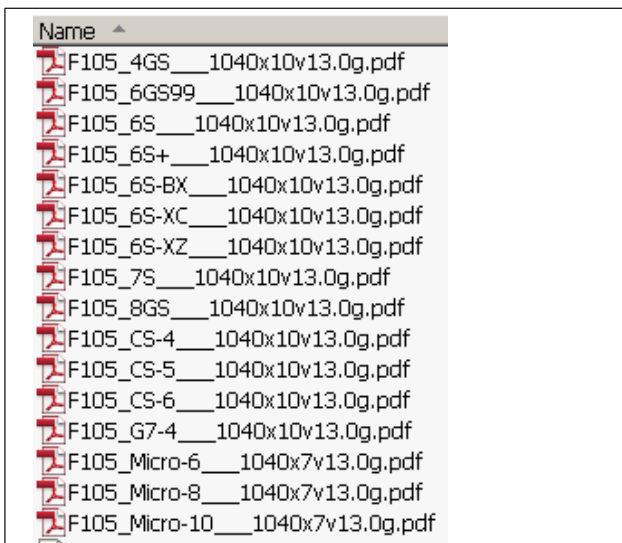


Fig. 2 *DipcoFormat102+Format105* directory

The quality control strips available for the respective sheet size classes can be found in the directories. The individual quality control strips are explained in more detail in the following section.

Where are the FOGRA quality control strips?

The FOGRA quality control strips have been frozen to their condition of Dipco 2.1 and can be found in the *Discontinued* directory. FOGRA quality control strips cannot be assessed by Prinect Inpress Control. Alternatively you can use CS quality control strips, which also contain the 40% and 80% measurement fields.

► Note

In order to use the CS quality control strips on the Prinect Axis Control color measuring system on Prinect CP2000 Center, software version 47 or a corresponding service patch is needed. For further information, please contact your local Heidelberg Service. Prinect Image Control software version 5 is required.

Naming conventions

The file name gives some information on the type of quality control strip.

Example: F105_8GS__1040x10v16

- F105= sheet width (in this case for sheet widths of 102, 105 and 106 cm).
- 8GS = type of quality control strip and number of colors (in this case GS quality control strip for 8 colors).

- 1040x10 = width x height of the quality control strip (in this case 1040 mm x 10 mm).
- v16 = version (in this case Dipco 16).

1.2 Notes on positioning



Note

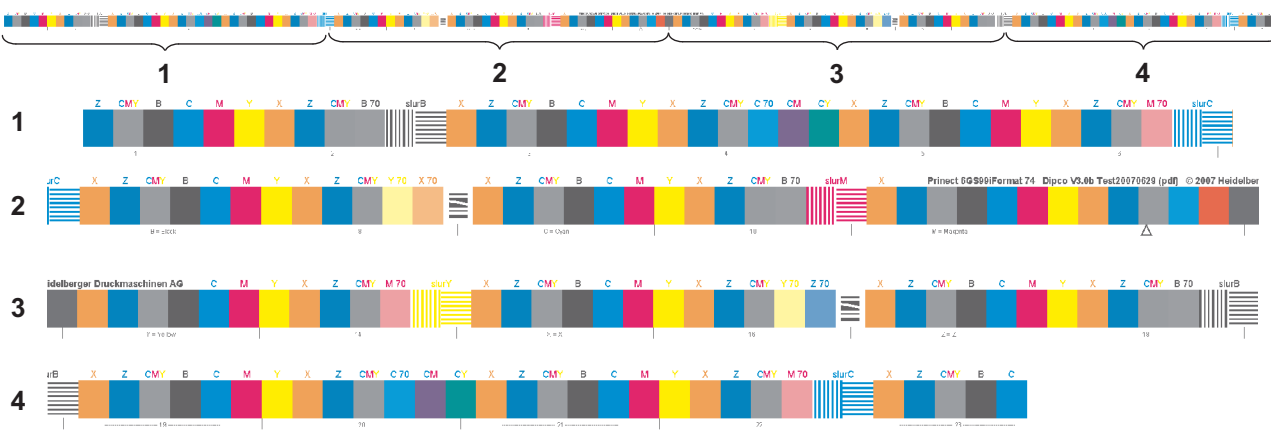
Notes on positioning for all Prinect measuring systems can be found in the section "Notes on assembling and positioning Dipco elements".

1.3 GS quality control strips

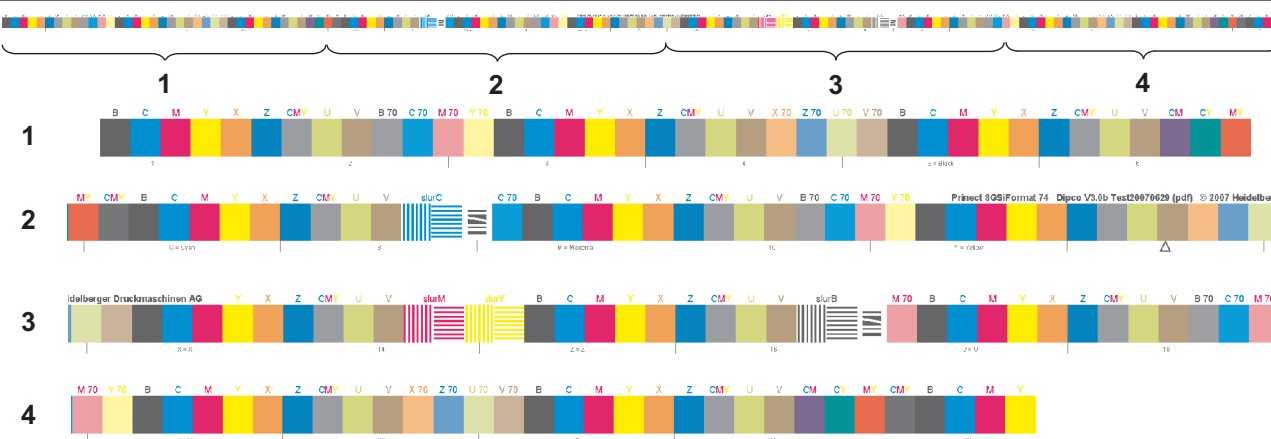
GS (Gray Solid): These quality control strips are for controlling the gray balance of the colors cyan, magenta and yellow with the Prinect Axis Control and Prinect Image Control (first generation) color measuring systems. There is at least one chromatic gray field in each ink zone. The number of solid tone patches is lower due to the gray fields, which is why S quality control strips are better suited for ink control by solids. All quality control strips with the exception of the 52 cm sheet size range are also suitable for use with Prinect Inpress Control.

Control element	Prinect 4GS
Description	Quality control strip for gray balance control of cyan, magenta and yellow for 4 colors (BCMY). The halftone patches and ink trapping fields make versatile evaluations possible.
Legend	Format (...)Prinect 4GS(i) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	52 cm: F52_4GS__510x10v16 74/75 cm: F74_4GS__740x10v16 102/105/106 cm: F105_4GS__1040x10v16

Tab. 1 Prinect 4GS

Control element	Prinect 6GS99
 <p>The image shows the Prinect 6GS99 color control strip. It consists of four main sections labeled 1, 2, 3, and 4. Section 1 contains color patches for Z, CMY, B, C, M, Y, X, Z, CMY, B70, and a registration mark. Section 2 contains color patches for X, Z, CMY, B, C, M, Y, X, Z, CMY, Y70, X70, and a registration mark. Section 3 contains color patches for X, Z, CMY, B, C, M, Y, X, Z, CMY, B70, and a registration mark. Section 4 contains color patches for X, Z, CMY, B, C, M, Y, X, Z, CMY, M70, and a registration mark. The strip also includes a grayscale ramp and a registration mark.</p>	
Description	<p>Quality control strip for gray balance control of cyan, magenta and yellow for 6 colors (BCMY + 2 special colors X, Z). The halftone patches and ink trapping fields make versatile evaluations possible.</p> <p>In combination with the Prinect 6S+ quality control strip up to 12 colors can be controlled. This function can only be used with Prinect Image Control (first generation).</p>
Legend	Prinect 6GS99(i) Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	<p>52 cm: F52_6GS99_F52_510x10v16</p> <p>74/75 cm: F74_6GS99_740x10v16</p> <p>102/105/106 cm: F105_6GS99_1040x10v16</p>

Tab. 2 Prinect 6GS99

Control element	Prinect 8GS
 <p>The image shows the Prinect 8GS color control strip. It consists of four main sections labeled 1, 2, 3, and 4. Section 1 contains color patches for B, C, M, Y, X, Z, CMY, U, V, B70, M70, Y70, and a registration mark. Section 2 contains color patches for M70, CMY, B, C, M, Y, X, Z, CMY, U, V, and a registration mark. Section 3 contains color patches for B, C, M, Y, X, Z, CMY, U, V, B70, C70, M70, Y70, and a registration mark. Section 4 contains color patches for M70, Y70, B, C, M, Y, X, Z, CMY, U, V, X70, Z70, U70, V70, and a registration mark. The strip also includes a grayscale ramp and a registration mark.</p>	
Description	<p>Quality control strip for gray balance control of cyan, magenta and yellow for 8 colors (BCMY + 4 special colors X, Z, U, V). The halftone patches and ink trapping fields make versatile evaluations possible.</p>
Legend	Prinect 8GS(i) Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	<p>52 cm: F52_8GS_510x10v16</p> <p>74/75 cm: F74_8GS_740x10v16</p> <p>102/105/106 cm: F105_8GS_1040x10v16</p>

Tab. 3 Prinect 8GS

1.4 S quality control strips

S (Solid): These quality control strips are designed for ink control by solids. There is a solid tone patch for every color in each ink zone (except Prinect 7S). There are few or no gray fields, slurring fields, doubling fields and ink trapping fields. If necessary, Mini Spots can be positioned in addition.

All quality control strips with the exception of the 52 cm sheet size range are also suitable for use with Prinect Inpress Control.

Control element	Princt 6S

Tab. 4 Princt 6S

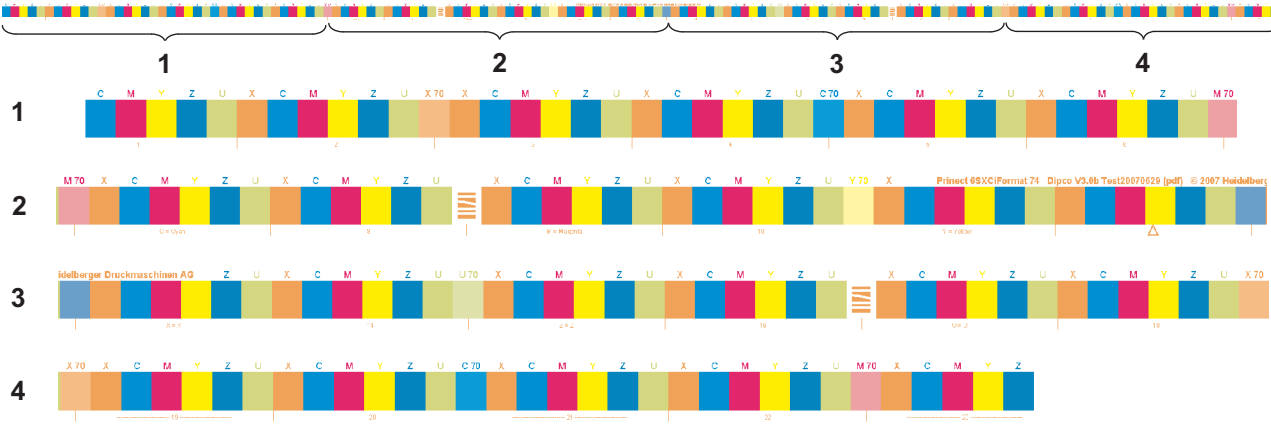
[illegible]

Control element	Prinect 6S+
Description	The Prinect 6S+ can be positioned as a second strip for controlling more than 6 (up to 12) colors, in addition to a Prinect 6S or 6GS99. This function can only be used with Prinect Image Control (first generation).
Legend	Prinect 6S+(i) Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	52 cm: Not available 74/75 cm: F74_6S+_740x10v16 102/105/106 cm: F105_6S+_1040x10v16

Tab. 5 Prinect 6S+

Control element	Prinect 6S-BX
	
Description	Quality control strip for ink control by solids in 6 colors. (B + X, Z, U, V, S1). The reference color is black (B).
Legend	Prinect 6S-BX(i) Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	52 cm: F52_6S-BX_510x10v16 74/75 cm: F74_6S-BX_740x10v16 102/105/106 cm: F105_6S-BX_1040x10v16

Tab. 6 Prinect 6S-BX

Control element	Prinect 6S-XC
	

Control element	Prinect 6S-XC
Description	Quality control strip for ink control by solids in 6 colors. (CMY + X, Z, U). The reference color is the special color X, which replaces black (B).
Legend	Prinect 6S-XC(i) Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	52 cm: F52_6S-XC__510x10v16 74/75 cm: F74_6S-XC__740x10v16 102/105/106 cm: F105_6S-XC__1040x10v16

Tab. 7 Prinect 6S-XC

Control element	Prinect 6S-XZ
Description	Quality control strip for ink control by solids in 6 colors. (6 special colors X, Z, U, V, S1, S2). The reference color is the special color X.
Legend	Prinect 6S-XZ(i) Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	52 cm: F52_6S-XZ__510x10v16 74/75 cm: F74_6S-XZ__740x10v16 102/105/106 cm: F105_6S-XZ__1040x10v16

Tab. 8 Prinect 6S-XZ

Control element	Prinect 7S
Description	Quality control strip for ink control by solids in 7 colors. (BCMY + X, Z, U). The reference color is black (B).

Control element	Prinect 7S
Legend	Prinect 7S-(i) Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	52 cm: F52_7S__510x10v16 74/75 cm: F74_7S__740x10v16 102/105/106 cm: F105_7S_1040x10v16

Tab. 9 Prinect 7S

1.5 CS quality control strips

CS (Color Solution): These quality control strips are designed for ink control by solids. They are Heidelberg's equivalent to FOGRA quality control strips, which have a similar measurement field order. In addition the CS-4 and CS-5 variants allow register control with Prinect Inpress Control.

Control element	Prinect CS-4
Description	Quality control strip for ink control by solids in 4 colors (BCMY). This quality control strip also contains measuring elements for register control with Prinect Inpress Control. The halftone patches and ink trapping fields make versatile evaluations possible.
Legend	Prinect CS-4(i) Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	52 cm: F52_CS-4__510x10v16 74/75 cm: F74_CS-4__740x10v16 102/105/106 cm: F105_CS-4_1040x10v16 145 cm: F145_CS-4_1430x10v16 162 cm: F162_CS-4_1625x10v16

Tab. 10 Prinect CS-4

Control element	Prinect CS-5
Description	Quality control strip for ink control by solids in 5 colors (BCMY + X). This quality control strip also contains measuring elements for register control with Prinect Inpress Control.
Legend	Prinect CS-5(i) Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	52 cm: F52_CS-5_510x10v16 74/75 cm: F74_CS-5_740x10v16 102/105/106 cm: F105_CS-5_1040x10v16 145 cm: F145_CS-5_1430x10v16 162 cm: F162_CS-5_1625x10v16

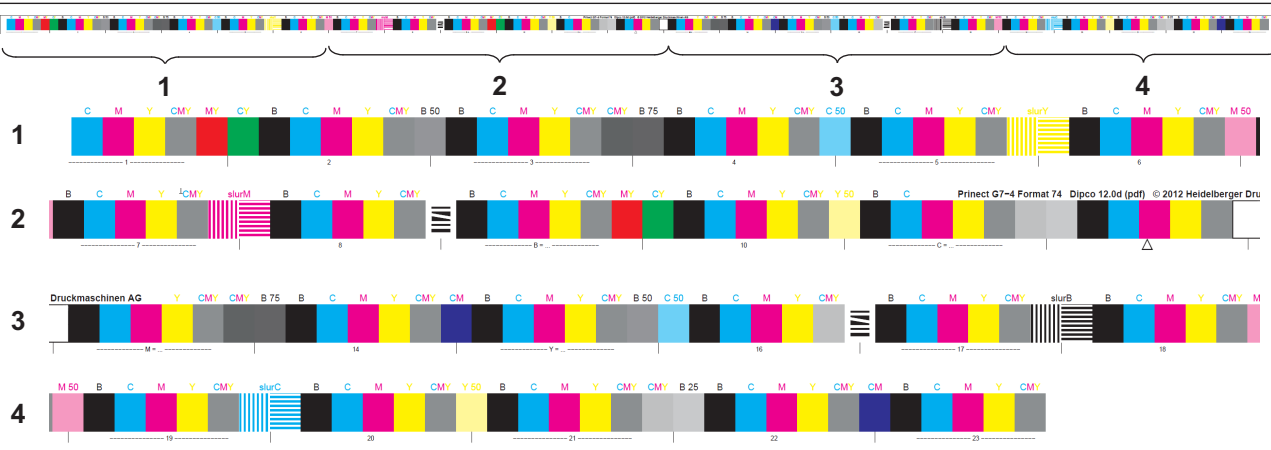
Tab. 11 Prinect CS-5

Control element	Prinect CS-6
Description	Quality control strip for ink control by solids in 6 colors (BCMY + X, Z).
Legend	Prinect CS-6(i) Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	52 cm: F52_CS-6_510x10v16 74/75 cm: F74_CS-6_740x10v16 102/105/106 cm: F105_CS-6_1040x10v16 145 cm: F145_CS-6_1430x10v16 162 cm: F162_CS-6_1625x10v16

Tab. 12 Prinect CS-6

1.6 G7 quality control strips

G7 quality control strips are for application of the G7 method. They meet the full requirements of the G7 method.

Control element	Prinect G7-4
	
Description	Quality control strips for gray balance control of 4 colors (BCMY) in accordance with the G7 method. The quality control strip contains halftone patches with 25%, 50% and 75% for the individual colors and for combined printing.
Legend	Prinect G7-4 Format (...) Dipco 16 © 2013 Heidelberger Druckmaschinen AG
File names	52 cm: F52_G7-4__510x10v16 74/75 cm: F74_G7-4__740x10v16 102/105/106 cm: F105_G7-4__1040x10v16 145 cm: F105_G7-4__1430x10v16 162 cm: F162_G7-4__1625x10v16

Tab. 13 Prinect G7-4

1.7 Micro quality control strips

The micro quality control strips can be used in connection with Prinect Inpress Control, Prinect Axis Control on Prinect Press Center (from software version S10A) and Prinect Image Control (from 2012). Due to the minimum space requirement, the small measurement fields enable ink control and, in connection with Prinect Inpress Control, also register control to be performed. You cannot use the micro quality control strips if other measuring devices requiring larger measurement fields are to be used.

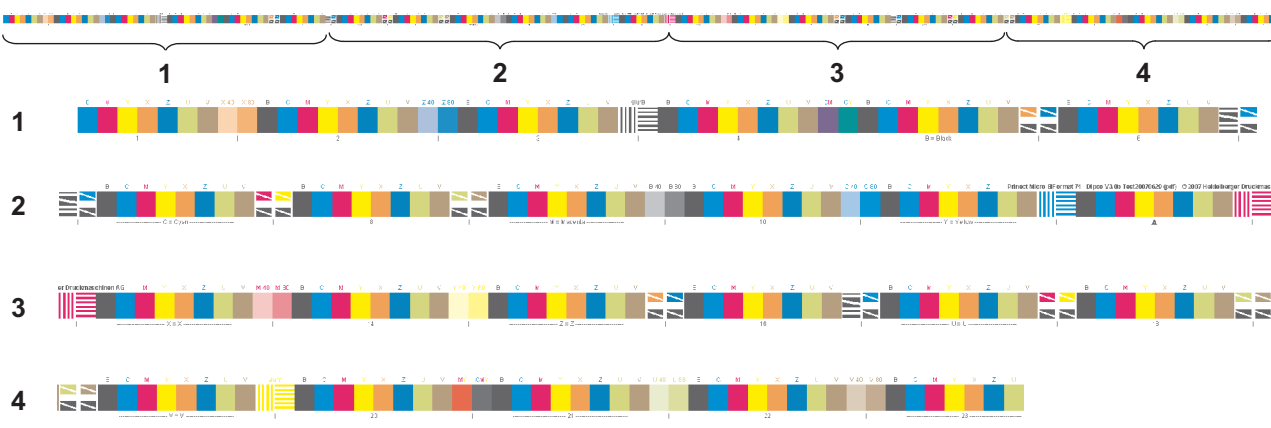


Note

On Prinect Micro-10_j, no register control with Prinect Inpress Control is possible. In 2 zones, the color field S2 is no longer used in order to accommodate the position marks. Ink control is performed via the neighboring zones!

Control element	Prinect Micro-6_i
	
Description	Quality control strip for color and register control of max. 6 colors (BCMY + X, Z).
Legend	Prinect Micro-6i Format (...) Dipco 16 © 2013 Heidelberg Druckmaschinen AG
File names	52 cm: F52_Micro-6__510x_7v16 74/75 cm: F74_Micro-6__740x_7v16 102/105/106 cm: F105_Micro-6_1040x_7v16 145 cm: F145_Micro-6_1430x_7v16 162 cm: F162_Micro-6_1625x_7v16

Tab. 14 Prinect Micro-6_i

Control element	Prinect Micro-8_i
	
Description	Quality control strip for color and register control of max. 8 colors (BCMY + X, Z, U, V).
Legend	Prinect Micro-8i Format (...) Dipco 16 © 2013 Heidelberg Druckmaschinen AG
File names	52 cm: F52_Micro-8__510x_7v16 74/75 cm: F74_Micro-8__740x_7v16 102/105/106 cm: F105_Micro-8_1040x_7v16 145 cm: F145_Micro-8_1430x_7v16 162 cm: F162_Micro-8_1625x_7_v16

Tab. 15 Prinect Micro-8_i

Control element	Prinect Micro-10_i
	<p>The diagram illustrates the layout of the Prinect Micro-10i color control strip. It consists of four horizontal rows of color patches, each labeled with a number (1, 2, 3, or 4) above it. Row 1 contains 16 patches, row 2 contains 16 patches, row 3 contains 16 patches, and row 4 contains 16 patches. Each patch is labeled with its dimensions (e.g., 1x1, 2x1, etc.) and a color code (e.g., M, Y, X, Z, U, V, S1, S2). The patches are arranged in groups of 8, 8, 8, and 8 for rows 1, 2, 3, and 4 respectively.</p>
Description	Quality control strip for ink control of max. 10 colors (BCMY + X, Z, U, V, S1, S2).
Legend	Prinect Micro-10i Format (...) Dipco 16 © 2013 Heidelberg Druckmaschinen AG
File names	52 cm: F52_Micro-10__510x_7v16 74/75 cm: F74_Micro-10__740x_7v16 102/105/106 cm: F105_Micro-10__1040x_7v16 145 cm: F145_Micro-10__1430x_7v16 162 cm: F162_Micro-10__1625x_7_v16

Tab. 16 Prinect Micro-10 i

1.8 Micro quality control strips MicroDCB with control marks for die cutting

These micro quality control strips contain additional control marks for die cutting. They can be used in connection with Prinect Inpress Control, Prinect Axis Control on Prinect Press Center (from software version S10A) and Prinect Image Control (from 2012).

Note: on software versions before S14B or 2014, the MicroDCB quality control strips are included in the color strip database so that the measuring devices can identify them.

Due to the minimum space requirement, the small measurement fields enable ink control and, in connection with Prinect Inpress Control, also register control to be performed. You cannot use the micro quality control strips if other measuring devices requiring larger measurement fields are to be used.

These micro quality control strips are available in 6 and 7-color versions for sheet size ranges 102 to 162. There are two versions for every sheet size range, which are indicated by the letters L and S at the end.

- **L = Large:** use this quality control strip if you intend to process large sheet sizes close to the maximum sheet size. The two control marks for

die punching are relatively far apart. Prerequisite for using the "L" variants:

- On machines with a sheet size of 102/105/106 cm, the quality control strips must be printed with a minimum width of 720 mm.
- On machines with a sheet size of 145/162 cm, the quality control strips must be printed with a minimum width of 1120 mm.
- S = Small: use this quality control strip if you intend to process smaller sheet sizes. The two control marks for die punching are relatively close together.

► **Note**

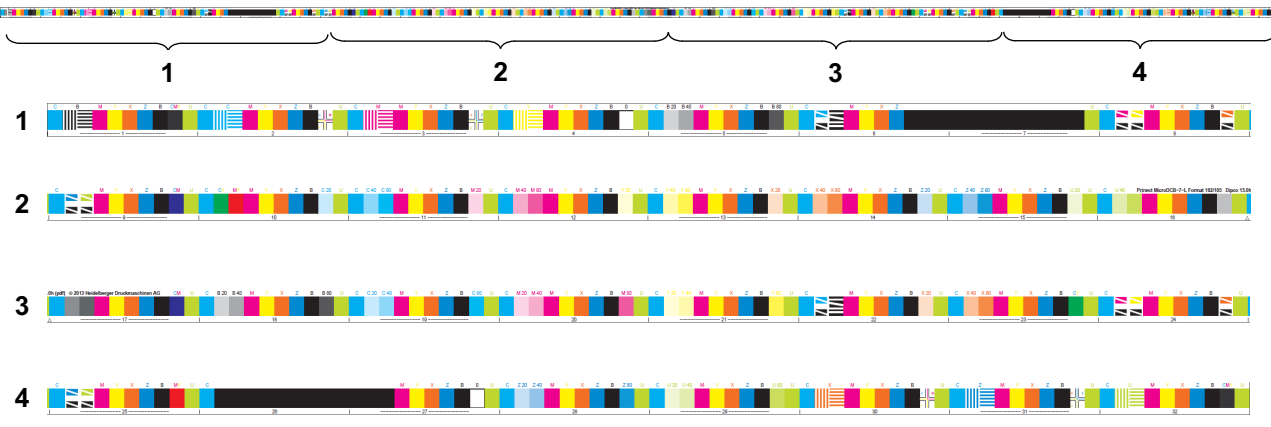
The two control marks for die punching are black strips about the same width as an ink zone. The measuring fields in the adjacent zones are used for the ink control in these zones.

Control element	Prinect MicroDCB-6-L
Description	<p>Quality control strip for color and register control of max. 6 colors (BCMY + X, Z) with control marks for the die cutter.</p> <p>L = control marks far apart for die cutting with large sheet sizes. Prerequisite for using the Prinect MicroDCB-6-L:</p> <ul style="list-style-type: none"> ● On machines with a sheet size of 102/105/106 cm, the quality control strips must be printed with a minimum width of 720 mm. ● On machines with a sheet size of 145/162 cm, the quality control strips must be printed with a minimum width of 1120 mm.
Legend	Prinect MicroDCB-6-L Format (...) Dipco 16.0 © 2013 Heidelberger Druckmaschinen AG
File names	<p>102/105/106 cm: F105_MicroDCB-6-L___1040x7v16</p> <p>145 cm: F145_MicroDCB-6-L___1430x7v16</p> <p>162 cm: F162_MicroDCB-6-L___1625x7v16</p>

Tab. 17 Prinect MicroDCB-6-L

Control element	Prinect MicroDCB-6-S
	
Description	<p>Quality control strip for color and register control of max. 6 colors (BCMY + X, Z) with control marks for the die cutter.</p> <p>S = control marks close together for die punching with smaller sheet sizes.</p>
Legend	Prinect MicroDCB-6-S Format (...) Dipco 16.0 © 2013 Heidelberger Druckmaschinen AG
File names	<p>102/105/106 cm: F105_MicroDCB-6-S__1040x7v16</p> <p>145 cm: F145_MicroDCB-6-S__1430x7v16</p> <p>162 cm: F162_MicroDCB-6-S__1625x7v16</p>

Tab. 18 Prinect MicroDCB-6-S

Control element	Prinect MicroDCB-7-L
	
Description	<p>Quality control strip for color and register control of max. 7 colors (BCMY + X, Z) with control marks for the die cutter.</p> <p>L = control marks far apart for die cutting with large sheet sizes. Prerequisite for using the Prinect MicroDCB-7-L:</p> <ul style="list-style-type: none"> On machines with a sheet size of 102/105/106 cm, the quality control strips must be printed with a minimum width of 720 mm. On machines with a sheet size of 145/162 cm, the quality control strips must be printed with a minimum width of 1120 mm.
Legend	Prinect MicroDCB-7-L Format (...) Dipco 16.0 © 2013 Heidelberger Druckmaschinen AG
File names	<p>102/105/106 cm: F105_MicroDCB-7-L__1040x7v16</p> <p>145 cm: F145_MicroDCB-7-L__1430x7v16</p>

Control element	Prinect MicroDCB-7-L
	162 cm: F162_MicroDCB-7-L___1625x7v16







Tab. 19 Prinect MicroDCB-7-L

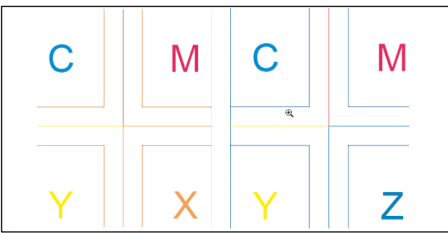
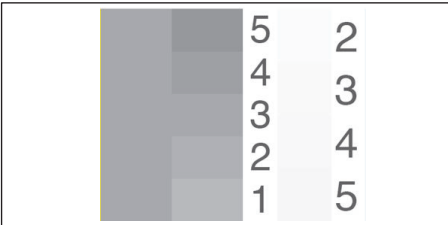
Control element	Prinect MicroDCB-7-S
Description	<p>Quality control strip for color and register control of max. 7 colors (BCMY + X, Z) with control marks for the die cutter.</p> <p>S = control marks close together for die punching with smaller sheet sizes</p>
Legend	Prinect MicroDCB-7-S Format (...) Dipco 16.0 © 2013 Heidelberger Druckmaschinen AG
File names	<p>102/105/106 cm: F105_MicroDCB-7-S___1040x7v16</p> <p>145 cm: F145_MicroDCB-7-S___1430x7v16</p> <p>162 cm: F162_MicroDCB-7-S___1625x7v16</p>

Tab. 20 Prinect MicroDCB-7-L

1.9 Structure and function of the individual measurement fields

	Designation	Function
	<p>Solid tone patch</p> <p>The color abbreviation is shown above the solid tone patch.</p>	<p>Solid tone patches check that the inking is even across the entire width of the sheet.</p>
	<p>Halftone patch</p> <p>The color abbreviation and tone value in % are shown above the halftone patch.</p>	<p>Halftone patches are used for evaluating the dot gain.</p>

	Designation	Function
	Slurring fields (slurring and doubling field) "Slur" and the color abbreviation are shown above the fields	Slurring fields consist of horizontal and vertical lines. Both fields should possess an identical tone value (around 50%). Deviations indicate slurring or doubling.
	Slurring and doubling field with Prinect/FOGRA quality control strip.	In the 4-color version the slurring/doubling fields have the standard measurement field size and can thus be assessed using measurement technology. The angling of the line fields by 60°/0°/120° enables an exact assessment of what proportion of the dot gain can be attributed to slurring or doubling. In the 5-color version the same line arrangement is concentrated in one field. This field is assessed visually.
	Ink trapping fields The color abbreviations of colors printed on top of each other are shown above the fields.	Measurement fields for assessing ink trapping in 2- and 3-color composite printing.
	Gray fields The left-hand gray field is a composite of cyan, magenta and yellow. The right-hand gray field is a 70% halftone patch in black.	The gray fields are used for gray balance control and visual monitoring. Under standardized conditions a neutral gray should result, which roughly resembles a 70% field in color separation B.
	Position mark for Prinect Inpress Control	This field requires Prinect Inpress Control in order to recognize the position of the quality control strip.
	Measuring elements for register control with Prinect Inpress Control	This field requires Prinect Inpress Control for automatic register control.

	Designation	Function
	Register marks	For visual register control.
	Process check box (only on Prinect/FOGRA_4)	<p>The left-hand part consists of a fine screen strip and a line screen as a comparison scale. While the fine screen reacts very sensitively to process fluctuations, the tone value of the comparison scale remains virtually stable. Generally, step 3 of the tone value should correspond with the fine screen.</p> <p>The right-hand part enables observation of the highlight dots. The 4 fields contain dots with a tone value of 2% to 5%. The figures indicate the corresponding tone values.</p>

Tab. 21 Measurement fields

2 Mini Spots

2.1 Naming conventions for Mini Spots

12MB_100_72x8v13.0g.pdf	MB_100_0_80_40_S3_24x8v13.0g.pdf
MB_100_0_70_SLUR_B_30x8v13.0g.pdf	MB_100_0_80_40_S4_24x8v13.0g.pdf
MB_100_0_70_SLUR_C_30x8v13.0g.pdf	MB_100_0_80_40_U_24x8v13.0g.pdf
MB_100_0_70_SLUR_M_30x8v13.0g.pdf	MB_100_0_80_40_V_24x8v13.0g.pdf
MB_100_0_70_SLUR_S1_30x8v13.0g.pdf	MB_100_0_80_40_X_24x8v13.0g.pdf
MB_100_0_70_SLUR_S2_30x8v13.0g.pdf	MB_100_0_80_40_Y_24x8v13.0g.pdf
MB_100_0_70_SLUR_S3_30x8v13.0g.pdf	MB_100_0_80_40_Z_24x8v13.0g.pdf
MB_100_0_70_SLUR_S4_30x8v13.0g.pdf	MB_100_70_40_CMYK_78x8v13.0g.pdf
MB_100_0_70_SLUR_U_30x8v13.0g.pdf	MB_100_75_50_25_CMYK_102x8v13.0g.pdf
MB_100_0_70_SLUR_V_30x8v13.0g.pdf	MB_100_80_40_5C_96x8v13.0g.pdf
MB_100_0_70_SLUR_X_30x8v13.0g.pdf	MB_100_80_40_6C_114x8v13.0g.pdf
MB_100_0_70_SLUR_Y_30x8v13.0g.pdf	MB_100_80_40_7C_132x8v13.0g.pdf
MB_100_0_70_SLUR_Z_30x8v13.0g.pdf	MB_100_80_40_CMYK_78x8v13.0g.pdf
MB_100_0_75_50_25_B_30x8v13.0g.pdf	MB_Process_B_90x10v13.0g.pdf
MB_100_0_75_50_25_C_30x8v13.0g.pdf	MB_Process_C_90x10v13.0g.pdf
MB_100_0_75_50_25_M_30x8v13.0g.pdf	MB_Process_M_90x10v13.0g.pdf
MB_100_0_75_50_25_S1_30x8v13.0g.pdf	MB_Process_S1_90x10v13.0g.pdf
MB_100_0_75_50_25_S2_30x8v13.0g.pdf	MB_Process_S2_90x10v13.0g.pdf
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MB_100_0_75_50_25_X_30x8v13.0g.pdf	MB_Process_X_90x10v13.0g.pdf
MB_100_0_75_50_25_Y_30x8v13.0g.pdf	MB_Process_Y_90x10v13.0g.pdf
MB_100_0_75_50_25_Z_30x8v13.0g.pdf	MB_Process_Z_90x10v13.0g.pdf
MB_100_0_80_40_B_24x8v13.0g.pdf	PCS_40A_240x8v13.0g.pdf
MB_100_0_80_40_C_24x8v13.0g.pdf	PCS_40AB_120x14v13.0g.pdf
MB_100_0_80_40_M_24x8v13.0g.pdf	PCS_60A_360x8v13.0g.pdf
MB_100_0_80_40_S1_24x8v13.0g.pdf	PCS_60AB_180x14v13.0g.pdf
MB_100_0_80_40_S2_24x8v13.0g.pdf	

Fig. 3 Directory for Mini Spots

► Note

The Mini Spots are in the DipcoMB directory. The file names serve as a classification characteristic.

- *MB_100_0_70_SLUR_ (color abbreviation)___30x8v13g*

These Mini Spots consist of a solid tone patch, white patch, 70% halftone patch and slurring patches. Space requirement: 30x8 mm.

- *MB_100_0_75_50_25_ (color abbreviation)___30x8v13g*

These Mini Spots consist of a solid tone patch, white patch and 75%, 50% and 25% halftone patches. Space requirement: 30x8 mm.

- *MB_100_0_80_40_ (color abbreviation)___24x8v13g*

These Mini Spots consist of a solid tone patch, white patch and 80% and 40% halftone patches. Space requirement: 24x8 mm.

- *MB_Process_ (color abbreviation)___90x10v13g*

These Mini Spots are used for monitoring the process calibration. These Mini Spots consist of a 13-level scale with halftone patches and slurring fields. Space requirement: 90x10 mm.

- *12MB_100_72x8v1 6, PCS_40A_240x8v1 6, PCS_40AB_120x14v1 6, PCS_60A_360x8v1 6, PCS_60AB_180x14v1 6, MB_100_70_40_CMYK_78x8v1 6, MB_100_75_50_25_CMYK_102x8v1 6, MB_100_80_40_5C_96x8v1 6, MB_100_80_40_6C_114x8v1 6, MB_100_80_40_7C_132x8v1 6, MB_100_80_40_CMYK_78x8v1 6*

These are the "multicolored" Mini Spots.

► Note

The size of the measurement field is 6 x 6 mm for all Mini Spots.

2.2 Field of application

Using Mini Spots and Prinect ImageControl you can check the quality of your proofing and printing process and correct process calibrations and profiles. The Mini Spots are particularly suited to correcting individual parameters of the printing process, e.g. changing the paper or color series.

An advantage of Mini Spots is that very little space is needed on the printing form. Therefore Mini Spots can often run with standard production jobs and thus significantly reduce the need for special test proofs.

The basis for the successful use of Mini Spots is an optimal and constant print setting and ongoing monitoring of the process parameters of the printing press. The ideal fields of application are print motifs with an area coverage of more than 30% and homogeneous form design.

Mini Spots for correcting profiles

With the Mini Spots PCS_40A/AB or PCS_60A/AB, it is possible to check (ICC) profiles and correct them if necessary.

Mini Spots for correcting process calibrations

If you want to check and correct a process calibration (dot gain), Mini Spots with 13 measurement fields are adequate (e.g. MB_100_70_40_CMYK or MB_100_80_40_CMYK). There are also Mini Spots with 17 measurement fields (MB_100_75_50_25_CMYK) and with measurement fields with finer gradations (MB_Process_13).

- Mini Spots are only suitable for correcting and customizing existing process calibrations and profiles. The number of measurement fields is insufficient for processing a totally new profile or process calibration.

2.3 Positioning



Fig. 4 Position on the print sheet

► Note

Important: Do not scale the Mini Spots. Leave the size unchanged. Otherwise Prinect Image Control cannot find the Mini Spots.

- The positioning of the Mini Spots depends on their intended purpose. Mini Spots for determining the color space and for proof correction should be arranged vertically and within one ink zone where possible. Mini Spots for monitoring the tone value should be arranged horizontally and only positioned in areas with ink coverage in the printed image.
- Do not position the Mini Spots near the outer edges or at the lead edge of print (the shaded areas in Fig. 4), as this can affect the lateral distribution of the inking. Mini Spots only cover a small measuring surface. This means that they react much more strongly to fluctuations in the process, especially inking.

- For greater measuring reliability, position two Mini Spots on the sheet and/or measure several consecutive print sheets if possible, and calculate the average of the measuring results.
- Prinect Signa Station - mark type: Mini Spots are color control marks.

2.4 Mini Spots in detail

Control element	MB_100_0_70_SLUR_color abbreviation
Description	Single-line Mini Spot with a solid tone patch, white patch, 70% field and 2 slurring fields The control element is 30 mm long and 8 mm high.
Recommended use	<ul style="list-style-type: none"> • Mini Spot for monitoring dot gain taking into account the slurring and doubling behavior of the printing press.
File names	MB_100_0_70_SLUR_(color abbreviation*)__30x8v16 * = Color abbreviation (B, C, M, Y, X, Z, U, V, S1, S2, S3, S4)

Tab. 22 MB_100_70_SLUR

Control element	MB_100_0_75_50_25_color abbreviation
Description	Single-line Mini Spot with solid tone patch, white patch, 75% field, 50% field and 25% field The control element is 30 mm long and 8 mm high.
Recommended use	<ul style="list-style-type: none"> • Mini Spot for checking linearizations and process calibrations for film and plate

Control element	MB_100_0_75_50_25_color abbreviation
File names	MB_100_0_75_50_25_(color abbreviation*)__30x8v16 * = Color abbreviation (B, C, M, Y, X, Z, U, V, S1, S2, S3, S4)

Tab. 23 MB_100_75_50_25

Control element	MB_100_0_80_40_color abbreviation
Description	Single-line Mini Spot with solid tone patch, white patch, 80% field and 40% field The control element is 24 mm long and 8 mm high.
Recommended use	<ul style="list-style-type: none"> Mini Spot for checking linearizations and process calibrations for film and plate
File names	MB_100_80_40_(color abbreviation*)__24x8v16 * = Color abbreviation (B, C, M, Y, X, Z, U, V, S1, S2, S3, S4)


Tab. 24 MB_100_75_50_25

Control element	MB_Process_color abbreviation
Description	Single-line control element with a 13-stage scale with halftone patches and slurring fields The control element is 90 mm long and 10 mm high.
Recommended use	<ul style="list-style-type: none"> Color strip for creating and checking linearizations and process calibrations for film and plate
File names	MB_Process_(color abbreviation*)_90x10v16 * = Color abbreviation (B, C, M, Y, X, Z, U, V, S1, S2, S3, S4)

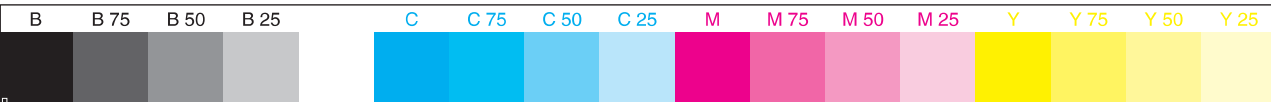
Tab. 25 MB_Process_13

Control element	12MB_100
Description	Single-line control element with solid tone patches in 12 colors The control element is 72 mm long and 8 mm high.
Recommended use	<ul style="list-style-type: none"> For copy-related ink control (for instance, packaging with special colors) or controlling individual motifs on mixed forms. For checking the chromaticity locus and density of the solids
File names	12MB_100__72x8v16

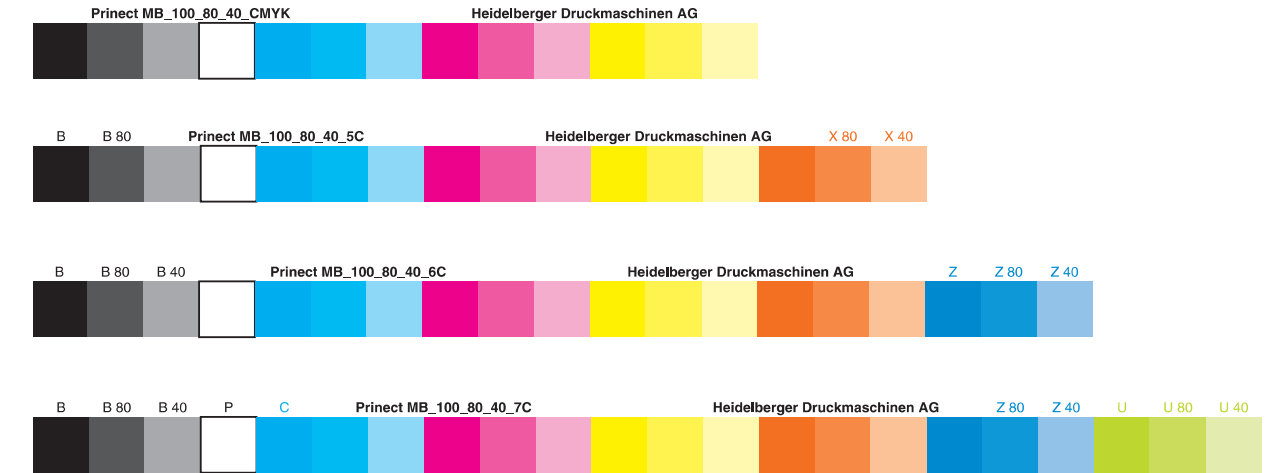
Tab. 26 12MB_100.

Control element	MB_100_70_40_CMYK
	
Description	<p>Single-line control element with solid tone patch, 70% and 40% field in 4 colors for process monitoring</p> <p>The control element is 78 mm long and 8 mm high.</p>
Recommended use	<ul style="list-style-type: none"> Color strips for quality analyses in printing (solids, dot gain) Color strips for monitoring process calibrations
File names	MB_100_70_40_CMYK__78x8v16

Tab. 27 MB_100_70_40_CMYK


Control element	MB_100_75_50_25_CMYK
	
Description	<p>Single-line control element with solid tone patch, 75%, 50% and 25% field in 4 colors for process monitoring</p> <p>The control element is 102 mm long and 8 mm high.</p>
Recommended use	<ul style="list-style-type: none"> Color strips for quality analyses in printing (solids, dot gain) Color strips for monitoring process calibrations
File names	MB_100_75_50_25_CMYK__102x8v16

Tab. 28 MB_100_75_50_25_CMYK

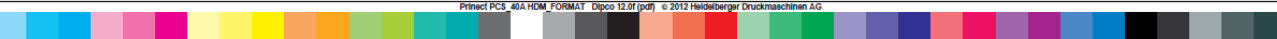
Control element	MB_100_80_40_(CMYK, 5c, 6c, 7c)
	
Description	<p>Single-line control element with solid tone patch, 80% and 40% field in 4, 5, 6 or 7 colors for process monitoring.</p> <p>Size of measuring elements:</p>

Control element	MB_100_80_40_(CMYK, 5c, 6c, 7c)
	Prinect MB_100_80_40_CMYK___78x8v16 78 mm long and 8 mm high. Prinect MB_100_80_40_5c___96x8v16 = 96 mm long and 8 mm high. Prinect MB_100_80_40_6c___114x8v16= 114 mm long and 8 mm high. Prinect MB_100_80_40_7c___132x8v16 = 132 mm long and 8 mm high.
Recommended use	<ul style="list-style-type: none"> Color strips for quality analyses in printing (solids, dot gain) Color strips for monitoring process calibrations
File names	MB_100_80_40_CMYK___78x8v16 MB_100_80_40_5c___96x8v16 MB_100_80_40_6c___114x8v16 MB_100_80_40_7c___132x8v16


Tab. 29 MB_100_80_40

Control element	PCS 40AB Control Strip
	 <p>Prinect PCS_40AB HDM_FORMAT Dipco 12.0f (pdf) © 2012 Heidelberger Druckmaschinen AG</p>
Description	2-lined control element with 40 fields for process monitoring and color measuring data in 4 colors The control element is 120 mm long and 14 mm high.
Recommended use	<ul style="list-style-type: none"> Color strip for quality evaluation of proofing and printing (solids, dot gain, color space size) Color strip for monitoring ICC profiles and process calibrations
File names	PCS_40AB___120x14v16

Tab. 30 PCS 40AB Control Strip


Control element	PCS 40A Control Strip
	 <p>Prinect PCS_40A HDM_FORMAT Dipco 12.0f (pdf) © 2012 Heidelberger Druckmaschinen AG</p>
Description	Single-line control element with 40 fields for process monitoring and conversion of color measuring data in 4 colors The same values as PCS Control Strip 40 (second line attached to the first) The control element is 240 mm long and 8 mm high.
Recommended use	<ul style="list-style-type: none"> (Solids, dot gain, color space size) Color strip for monitoring ICC profiles and process calibrations
File names	PCS_40A___240x8v16

Tab. 31 PCS 40A Control Strip

Control element	PCS 60AB Control Strip
	 <p>Prinect PCS_60AB Heidelberg Druckmaschinen AG</p>
Description	2-line control element with 60 fields for process monitoring and converting color measuring data to 4 colors.

Control element	PCS 60AB Control Strip
	The control element is 180 mm long and 14 mm high.
Recommended use	<ul style="list-style-type: none"> Color strip for quality evaluations of proof and print (solids, dot gain, color space size) Color strip for monitoring ICC profiles and process calibrations
File names	PCS_60AB___180x14v16

Tab. 32 PCS 60AB Control Strip

Control element	PCS 60A Control Strip
	
Description	<p>Single-line control element with 60 fields for process monitoring and converting color measuring data</p> <p>The same values as PCS Control Strip 60 (second line attached to the first)</p> <p>The control element is 360 mm long and 8 mm high.</p>
Recommended use	<ul style="list-style-type: none"> Color strip for quality evaluations of proof and print (solids, dot gain, color space size) Color strip for monitoring ICC profiles and process calibrations
File names	PCS_60A___360x8v16

Tab. 33 PCS 60A Control Strip

3 Control marks for Prinect Auto Register

3.1 General notes

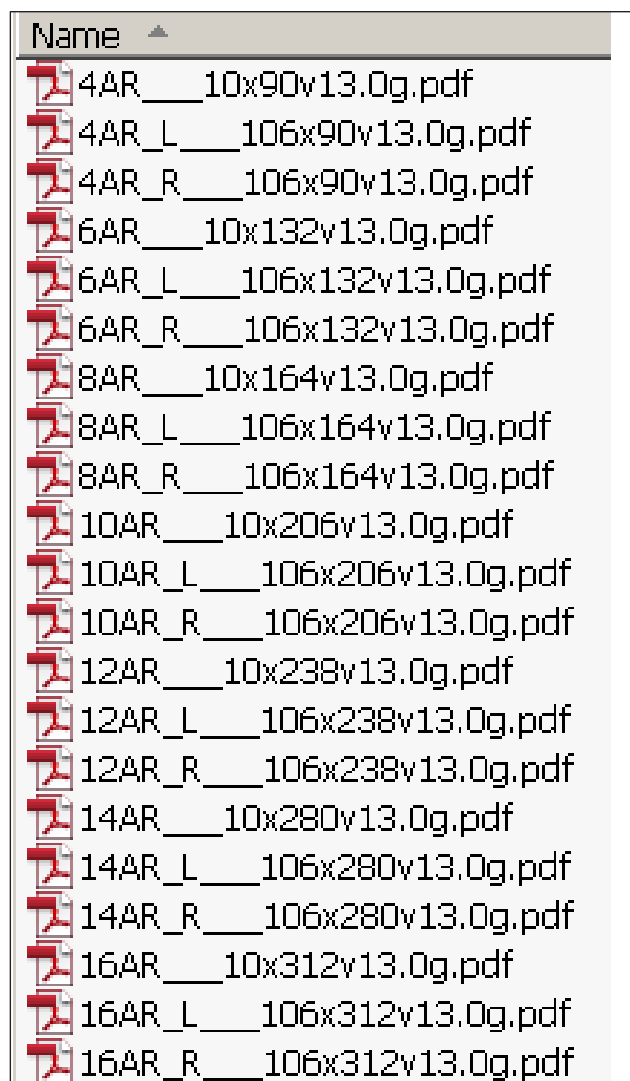


Fig. 5 Files in the directory

Directory with control marks for Prinect Auto Register

The control marks for Prinect Auto Register are in the directory *DipcoAR*.

Naming conventions

Example: 4AR_R___106x90v16.pdf

1 Color number

The file name starts with the color number (in the example: 4 colors).

The control marks are available from 4 to 16 colors in gradations of 2: 4AR, 6AR, 8AR ... 16AR.

2 Mark type

The following letters identify the type of mark (in the example: A control mark with search mark for the right-hand side of the sheet).

AR = control mark without search mark.

AR_L = control mark with search mark for the left-hand side of the sheet.

AR_R = control mark with search mark for the right-hand side of the sheet.

3 Size

The following part of the file name indicates the size (width x height) of the control mark (in the example: The control mark is 106x90 = 106 mm wide and 90 mm high).

4 Version

The version number is at the end of the file name (in the example: v16 = version 16).

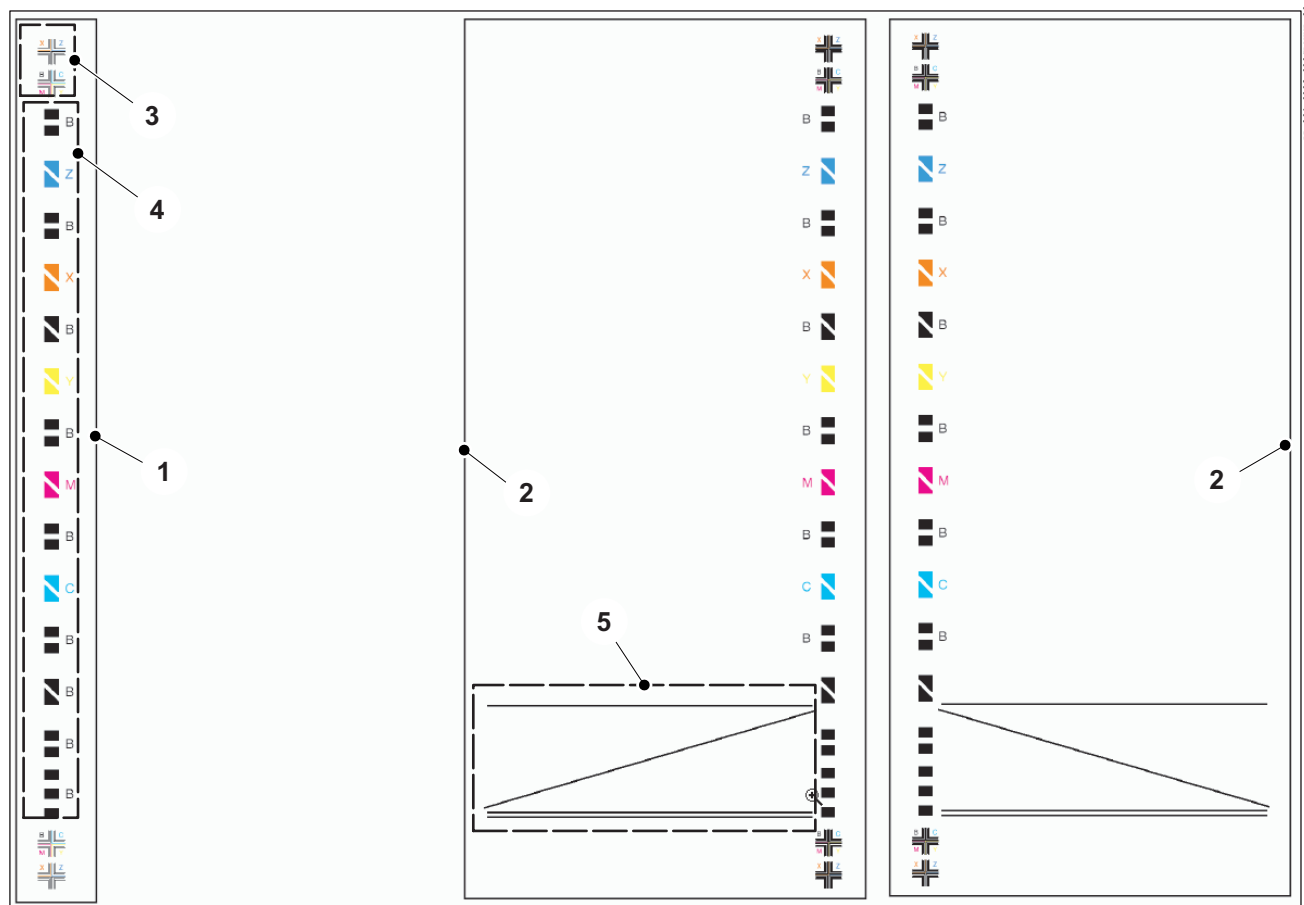


Fig. 6 Control marks

Control mark without search mark (AR)

- This control mark with no search mark (Fig. 6/1) can be positioned on both the left and right-hand edge of the sheet. This control mark consists of the crosshairs for visual monitoring (Fig. 6/3) and the measurement fields area for Prinect Auto Register (Fig. 6/4).

Control marks with search mark (AR_L and AR_R)

The control marks AR_L and AR_R, Fig. 6/2 consist of crosshairs, measurement fields and the additional search mark (Fig. 6/5), which enable the exact position of the control mark to be found quickly without user input.

Mode of operation: The Prinect Auto Register sensors position themselves on the edges of the sheet on the basis of the print material format entered. From here they gradually move toward the center of the press and search for the search marks. The exact position of the control mark is then calculated from the sensing ratio between the diagonal lines and the parallel lines. Thus it is no longer necessary to enter the control mark positions in mm or use the ink zone control panel.

3.2 Notes on assembly

The control marks carry the HEIDELBERG color abbreviation: B C M Y X Z U V S1 S2 S3 ... Furthermore there are crosshairs in front of and behind the control marks, enabling visual register control. With the defined line spacing of 0.2 mm in color separation B, register deviations can be estimated very accurately.

The following applies to all control marks:

- The control marks should start at least 100 mm from the lead edge of sheet (reflections on the grippers cause the Prinect Auto Register sensor to malfunction).
- Position the control marks as far as possible from the rear edge of the sheet (measuring errors can arise from the sheet turning up or fluttering after the printing nip).

The following applies to the control marks with a search mark:

- There are control marks with a search mark (Fig. 7/1 and 8/1) for the left-hand (AR_L) and right-hand edge of the sheet (AR_R) respectively. They have to be positioned in such a way that the search marks print beyond the edge of the sheet (Fig. 7/2 and 8/2). The following figures show examples of assembly for a small (Fig. 7) and large (Fig. 8) distance of the search mark from the sheet edge.



Fig. 7 Assembly with a small distance from the sheet edge



Fig. 8 Assembly with a large distance from the sheet edge

4 Measuring marks for paper stretch compensation

4.1 Contents of the *DipcoPSC* directory

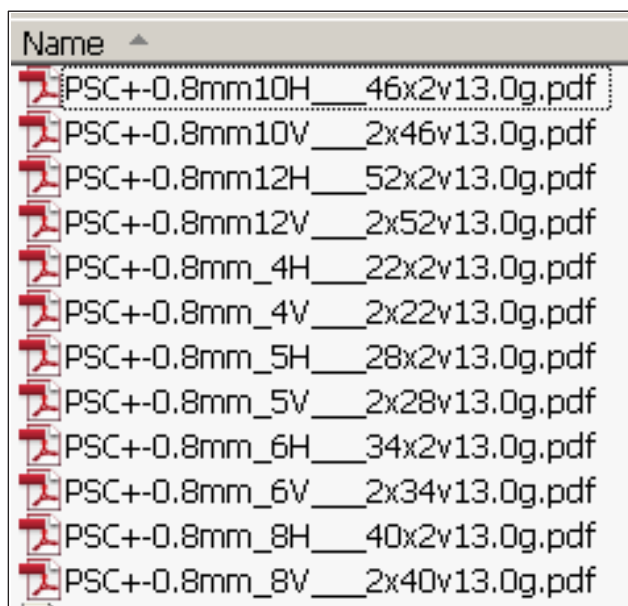


Fig. 9 Contents of the DipcoPSC directory

The directory contains the files of the measuring marks for the paper stretch compensation.

Naming conventions

The file name provides some information on the type of the measuring marks.

Example: PSC+-0.8mm_4V__2x22v16

- PSC+-0.8mm_ = paper stretch compensation measuring range +/- 0.8 mm.
- 4 = number of colors.
There are measuring marks for 4, 5, 6, 8, 10 and 12 colors.
- V = for vertical assembly.
H = for horizontal assembly.
- 2x22 = width x height of the measuring mark, in this case 2 mm x 22 mm.
- v16 = version (in this case Dipco 16).

4.2 Field of application

The paper can stretch while traveling from printing unit to printing unit during the printing process, as a result of which the individual separations might not match up precisely. The "Paper Stretch Compensation" function of Prinect MetaDimension compensates this stretching with a digital distortion by the same factor as the paper had stretched when arriving at the respective printing unit.

With the aid of the measuring marks for paper stretch compensation you can compensate the paper stretch in a range of +/- 0.8 mm. You can enter the acquired measured values in Prinect MetaDimension.

4.3 Positioning

You need at least 4 measuring marks, which you place in the corners of the print sheet. Prinect MetaDimension can take a maximum of 9 measuring marks on a print sheet into consideration. You can find notes regarding use and placement in the Prinect MetaDimension manual.

► Note

Important: The measuring marks must not be turned during assembly. This leads to the prefixes (+ or -) of the reading value becoming mixed up.

4.4 Notes on reading the measuring marks

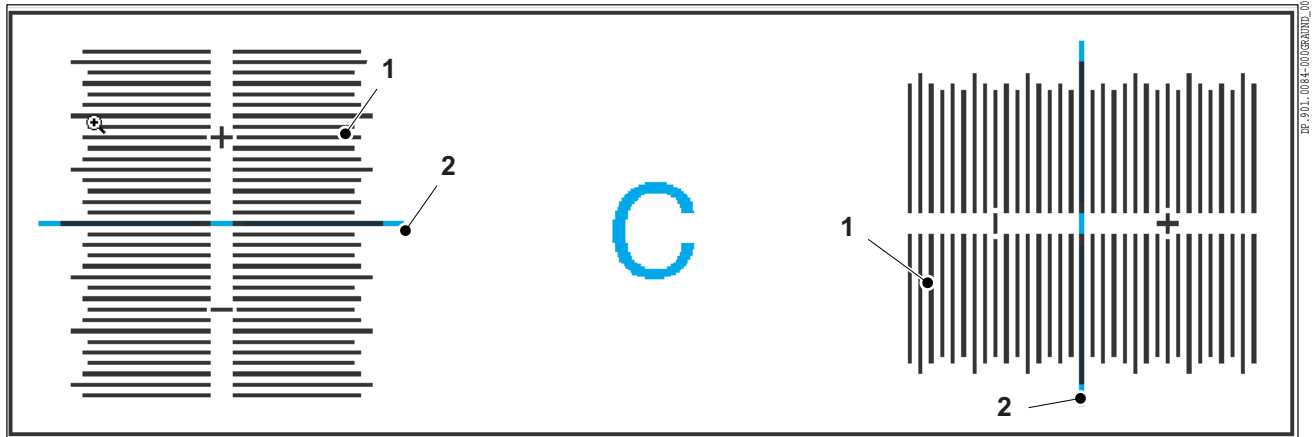


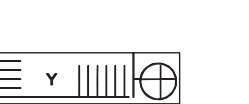
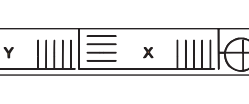





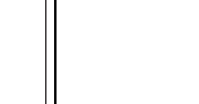


Fig. 10 Evaluation black/cyan

The measuring marks consist of a "rule" (the reference, Fig. 10/1) and individual lines (Fig. 10/2). The "rule" is firmly assigned to the color abbreviation "B". To improve reading accuracy, ensure that the darkest color is always assigned to "B" (and thereby the "rule"). The individual lines (Fig. 10/2) are printed in the other colors.

The lines deviate from the zero line of the "rule" depending on the extent to which the paper is stretched. Read off these deviations of the print sheet. Enter the values in Prinect MetaDimension into the corresponding table in the "Compensation values" tab. You also have to determine where the individual measuring marks are situated on the print sheet in the "Reference points" tab.

4.5 Measuring marks for paper stretch compensation in detail

Control element	PSC+/-0.8mm_4/5/6/8/10/12H
	
	
	
	
	

Control element	PSC+-0.8mm_4/5/6/8/10/12H
Description	Horizontal measuring marks for compensating the paper stretch Dimensions of the control elements: <ul style="list-style-type: none"> • 4 colors: 22 mm x 2 mm • 5 colors: 28 mm x 2 mm • 6 colors: 34 mm x 2 mm • 8 colors: 40 mm x 2 mm • 10 colors: 46 mm x 2 mm • 12 colors: 52 mm x 2 mm
File names	<ul style="list-style-type: none"> • 4 colors: PSC+-0.8mm_4H__22x2v16 • 5 colors: PSC+-0.8mm5_H__28x2v16 • 6 colors: PSC+-0.8mm6_H__34x2v16 • 8 colors: PSC+-0.8mm8_H__40x2v16 • 10 colors: PSC+-0.8mm10H__46x2v16 • 12 colors: PSC+-0.8mm12H__52x2v16

Tab. 34

Control element	PSC+-0.8mm_4/5/6/8/10/12V
	Horizontal measuring marks for compensating the paper stretch Dimensions of the control elements: <ul style="list-style-type: none"> • 4 colors: 2 mm x 22 mm • 5 colors: 2 mm x 28 mm

Control element	PSC+-0.8mm_4/5/6/8/10/12V
	<ul style="list-style-type: none"> • 6 colors: 2 mm x 34 mm • 8 colors: 2 mm x 40 mm • 10 colors: 2 mm x 46 mm • 12 colors: 2 mm x 52 mm
File names	<ul style="list-style-type: none"> • 4 colors: PSC+-0.8mm_4V__2x22v16 • 5 colors: PSC+-0.8mm_5V__2x28v16 • 6 colors: PSC+-0.8mm_6V__2x34v16 • 8 colors: PSC+-0.8mm_8V__2x40v16 • 10 colors: PSC+-0.8mm10V__2x46v16 • 12 colors: PSC+-0.8mm12V__2x52v16

Tab. 35

5 Control elements in the *Discontinued* directory

5.1 Contents of the *Discontinued* directory

The directory contains all control elements that have been "frozen" to their condition from an earlier version. These control elements have not been developed further. You can continue to use these control elements in order to maintain continuity with your previous workflow.

► Note

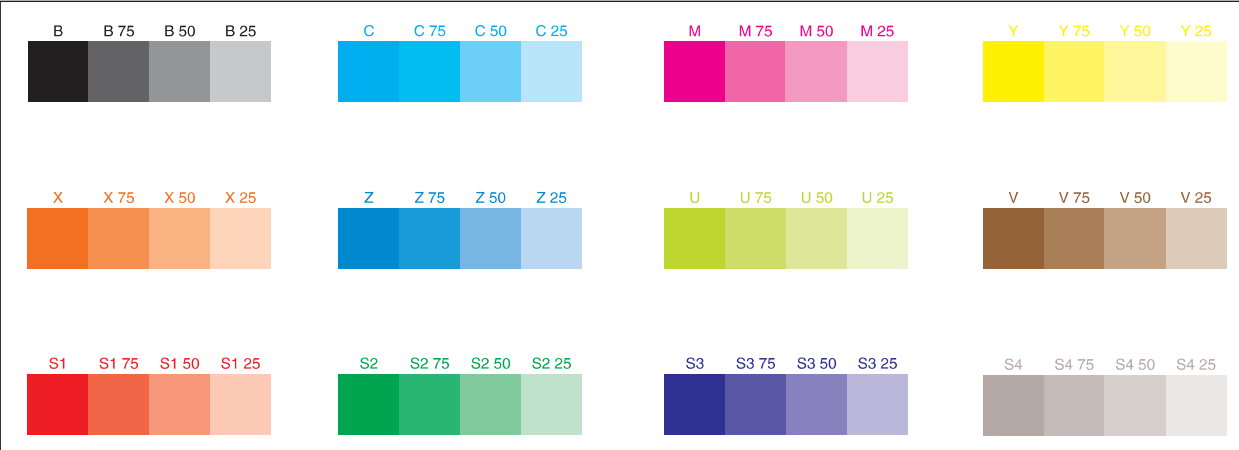
The control elements from Dipco 2.1 have no "intelligent" functions (crop recognition, automatic acceptance of color designation) and are not suitable for use with Prinect Inpress Control. We therefore recommend that you use the new control elements. The Mini Spots are at version 4.5 and have the "intelligent" functions.

Please be aware that Heidelberg no longer offers maintenance of these control elements. This might result in the output of incorrect data, particularly when using new workflows, RIPs or PDF versions. Heidelberg accepts no responsibility for this and is not obliged to adapt these control elements to the new conditions in any way.

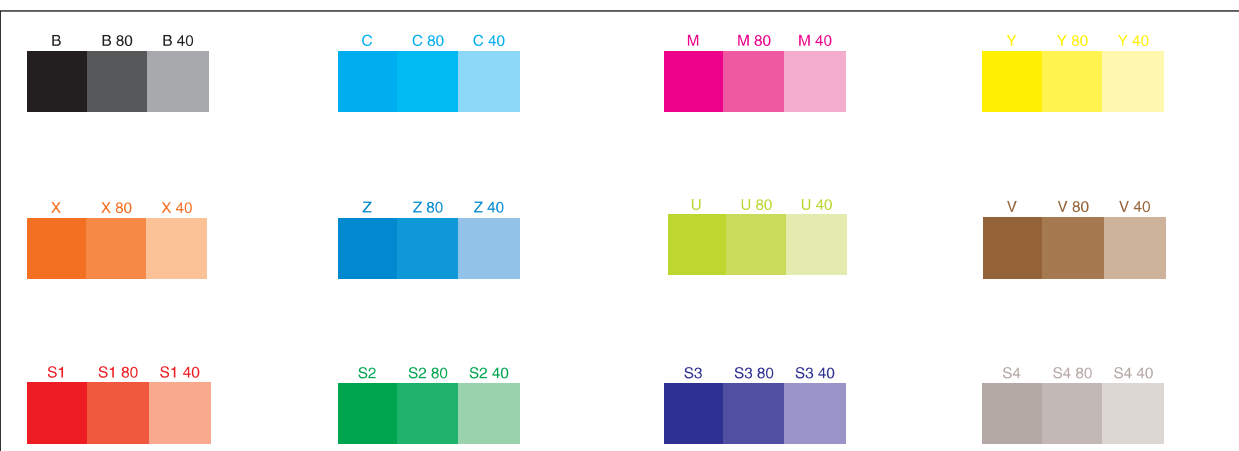
5.2 Mini Spots without white patches

Control element	MB_100_70_SLUR *
Description	Single-line Mini Spot with a solid tone patch, 70% field and 2 slurring fields The control element is 24 mm long and 8 mm high.
Recommended use	<ul style="list-style-type: none"> Mini Spot for monitoring dot gain taking into account the slurring and doubling behavior of the printing press.
File names	Files: MB_100_70_SLUR_*_24x_8_V4.5 * = Color abbreviation (B, C, M, Y, X, Z, U, V, S1, S2, S3, S4)

Tab. 36 MB_100_70_SLUR

Control element	MB_100_75_50_25 *
	
Description	Single-line Mini Spot with solid tone patch, 75% field, 50% field and 25% field The control element is 24 mm long and 8 mm high.
Recommended use	<ul style="list-style-type: none"> Mini Spot for checking linearizations and process calibrations for film and plate
File names	Files: MB_100_75_50_25_*_24x_8_V4.5 * = Color abbreviation (B, C, M, Y, X, Z, U, V, S1, S2, S3, S4)

Tab. 37 MB_100_75_50_25

Control element	MB_100_80_40 *
	
Description	Single-line Mini Spot with solid tone patch, 80% field and 40% field The control element is 18 mm long and 8 mm high.
Recommended use	<ul style="list-style-type: none"> Mini Spot for checking linearizations and process calibrations for film and plate
File names	Files: MB_100_80_40_*_18x_8_V4.5 * = Color abbreviation (B, C, M, Y, X, Z, U, V, S1, S2, S3, S4)

Tab. 38 MB_100_80_40

5.3 Prinect 6GS quality control strip

Control element	Prinect 6GS
Description	<p>Quality control strip for gray balance control of cyan, magenta and yellow for 6 colors (BCMY + 2 special colors X, Z). The halftone patches and combined printing fields enable versatile evaluations.</p> <p>In combination with the Prinect 6S+ quality control strip up to 12 colors can be controlled. (Only with first-generation Prinect Image Control)</p>
Legend	Prinect 6GS Dipco 2.1 Format (...) © 2004 Heidelberger Druckmaschinen AG
File names	<p>52 cm: 6GS_F52_510x12</p> <p>74/75 cm: 6GS_F74_740x12</p> <p>102/105/106 cm: 6GS_F102_1040x12</p>

Tab. 39 Prinect 6GS

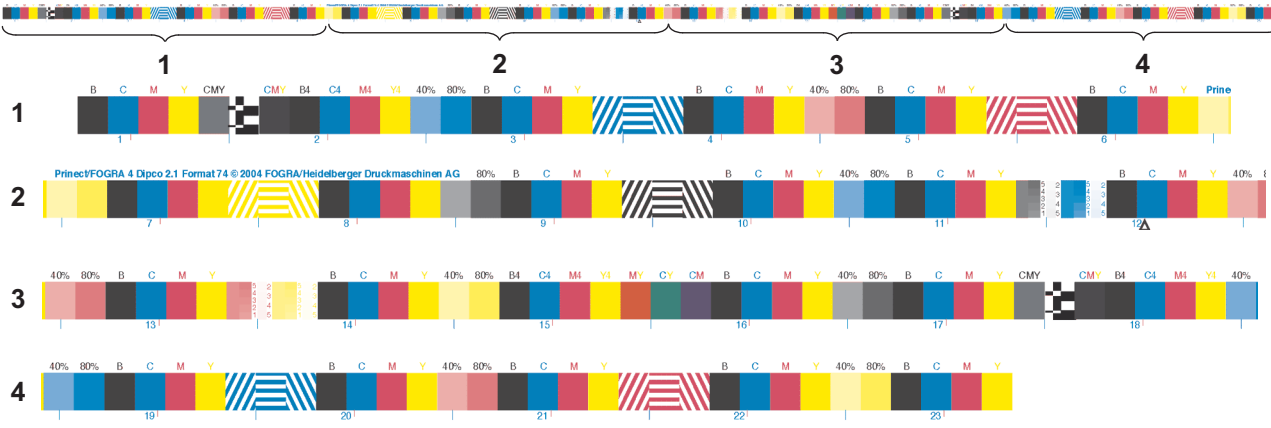
5.4 6PK (control element for CPC 41)

Control element	6PK
Description	Control element for register controlling with CPC 41 (register reader) for a maximum of 6 colors

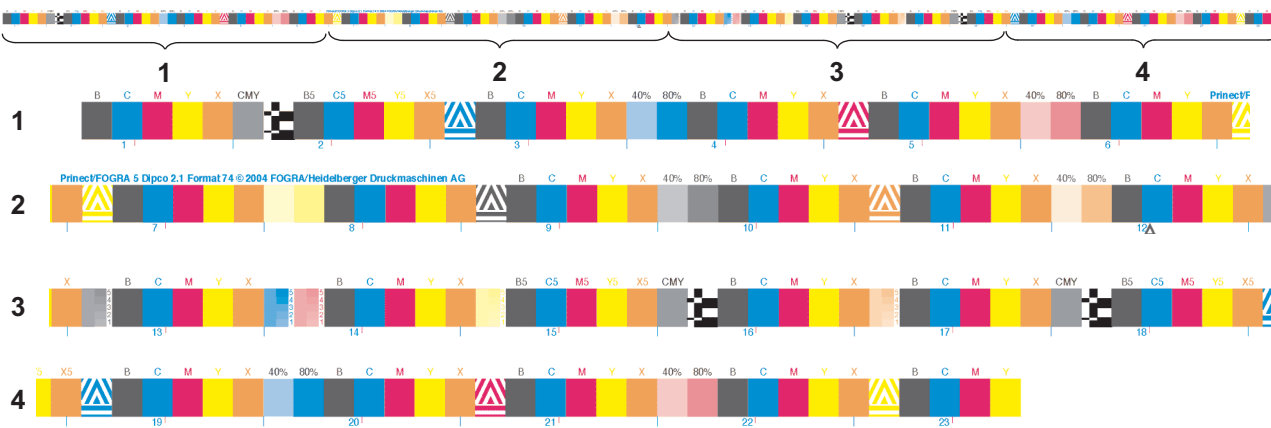
Control element	6PK
File names	6PK_27x27

Tab. 40 6PK

5.5 Prinect/FOGRA quality control strip

Control element	Prinect/FOGRA 4
 <p>The strip is divided into four main sections labeled 1, 2, 3, and 4. Section 1 contains color bars for B, C, M, Y, and CMY. Section 2 contains color bars for B, C, M, Y, and CMY, along with halftone patches. Section 3 contains color bars for B, C, M, Y, and CMY, along with halftone patches. Section 4 contains color bars for B, C, M, Y, and CMY, along with halftone patches.</p>	
Description	Quality control strip for ink control by solids in 4 colors (BCMY). The additional halftone patches, slurring and doubling fields and plate imaging control fields allow more evaluations.
Legend	Prinect/FOGRA 4 Dipco 2.1 Format (...) © 2004 FOGRA/Heidelberger Druckmaschinen AG
File names	52 cm: FOGRA_4_F52_510x10 74/75 cm: FOGRA_4_F74_740x10 102/105/106 cm: FOGRA_4_F102_1040x10

Tab. 41 Prinect/FOGRA 4

Control element	Prinect/FOGRA 5
 <p>The strip is divided into four main sections labeled 1, 2, 3, and 4. Section 1 contains color bars for B, C, M, Y, X, and CMY. Section 2 contains color bars for B, C, M, Y, X, and CMY, along with halftone patches. Section 3 contains color bars for B, C, M, Y, X, and CMY, along with halftone patches. Section 4 contains color bars for B, C, M, Y, X, and CMY, along with halftone patches.</p>	
Description	Quality control strip for ink control by solids in 5 colors (BCMY + special color X). The additional halftone patches, slurring and doubling fields and plate imaging control fields allow more evaluations.
Legend	Prinect/FOGRA 5 Dipco 2.1 Format (...) © 2004 FOGRA/Heidelberger Druckmaschinen AG
File names	52 cm: FOGRA_5_F52_510x10

Control element	Prinect/FOGRA 5
	74/75 cm: FOGRA_5_F74_740x10 102/105/106 cm: FOGRA_5_F102_1040x10

Tab. 42 Prinect/FOGRA 5

Control element	Prinect/FOGRA 6
Description	Quality control strip for ink control by solids in 6 colors (BCMY + special colors X and Z). The additional halftone patches and plate imaging control fields allow more evaluations.
Legend	Prinect/FOGRA 6 Dipco 2.1 Format (...) © 2004 FOGRA/Heidelberger Druckmaschinen AG
File names	52 cm: FOGRA_6_F52_510x10 74/75 cm: FOGRA_6_F74_740x10 102/105/106 cm: FOGRA_6_F102_1040x10

Tab. 43 Prinect/FOGRA 6

5.6 MB_Process step wedges

Control element	MB_Process_13
Description	Single-line control element with 13 steps for plate monitoring
Recommended use	<ul style="list-style-type: none"> Control element for creating and checking linearizations and process calibrations for film and plate
Legend	Prinect MB Process 13 Dipco 2.1 © 2004 Heidelberger Druckmaschinen AG
File names	MB_Process_13_78x8

Tab. 44 MB_Process_13

Control element	MB_Process_25
Description	Single-line control element with 25 steps for plate monitoring

Control element	MB_Process_25
Recommended use	<ul style="list-style-type: none"> Control element for creating and checking linearizations and process calibrations for film and plate
Legend	Prinect MB Process 25 Dipco 2.1 © 2004 Heidelberger Druckmaschinen AG
File names	MB_Process_25_150x8

Tab. 45 MB_Process_25

B Other

Other	B.1.1
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1 Installation using SetupPrinct.exe

1.1 Where is the "SetupPrinct.exe" file located?

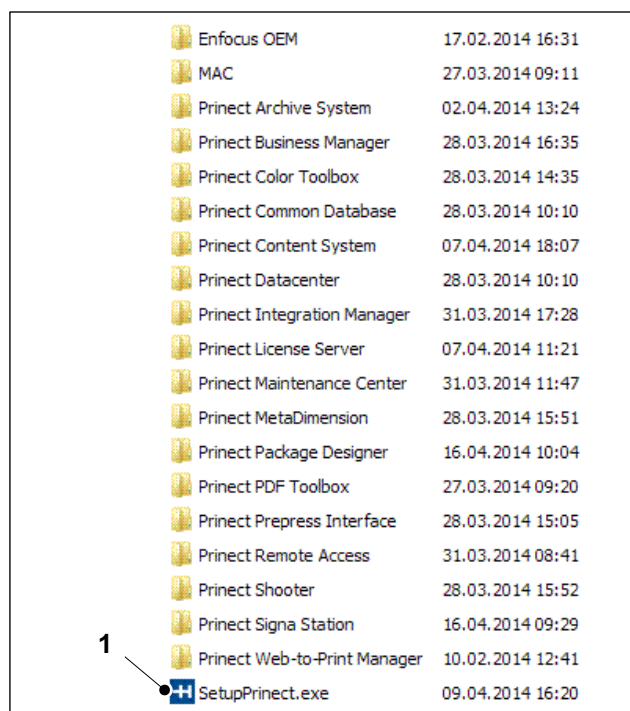


Fig. 1 Main Princt installation directory

The *SetupPrinct.exe* file (Fig. 1/1) is located in the main directory on the **USB stick** for installing Princt.

1.2 Accessing the Dipco directory

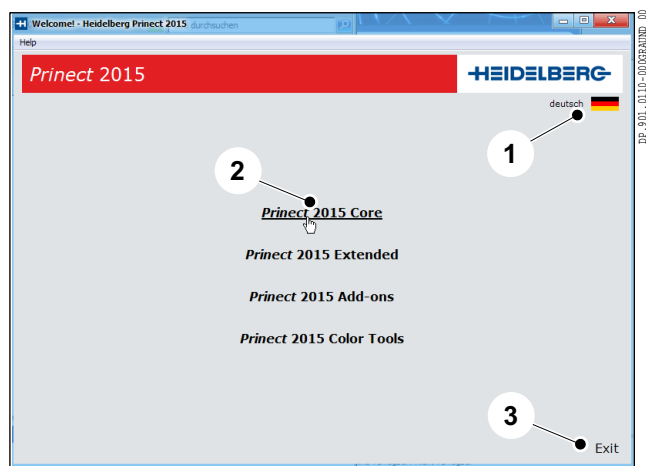


Fig. 2 Start menu of SetupPrinct.exe

1. Double-click *SetupPrinct.exe* (Fig. 1/1) to start the setup process. The start menu (Fig. 2) is shown.

► Note

The procedure described below does not modify data on your computer or start any installation routines. Setup-Princt.exe only accesses the Dipco directory. Clicking the flag icon (Fig. 2/1) changes the menu language. Clicking **Exit** (Fig. 2/3) closes the program.

2. Click the menu entry **Princt 2015 Core** (Fig. 2/2). The **Princt 2015 Core** menu is displayed.

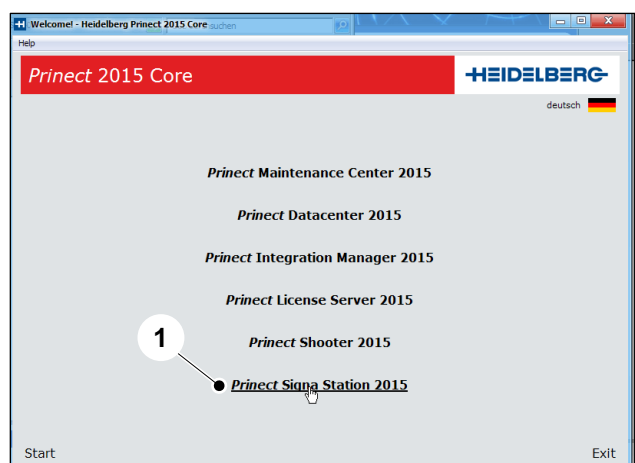


Fig. 3 Prinect 2015 Core menu

- Click the menu entry **Prinect Signa Station 2015** (Fig. 3/1).

The **Prinect Signa Station 2015** menu is displayed.

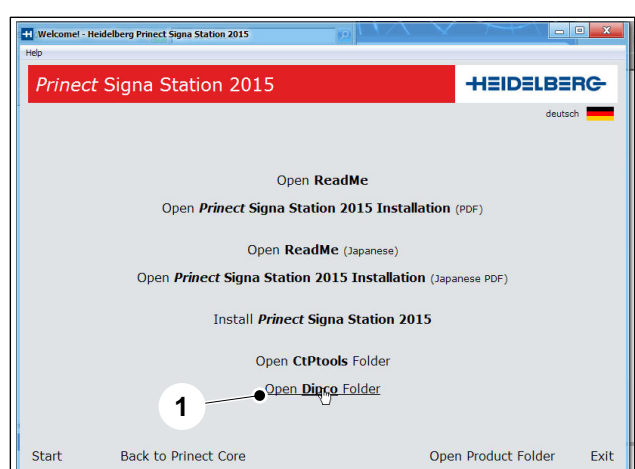


Fig. 4 Prinect Signa Station 2015 menu

- Click the menu entry **Open Dipco Folder** (Fig. 4/1).

The content of the Dipco directory is displayed (Fig. 5).

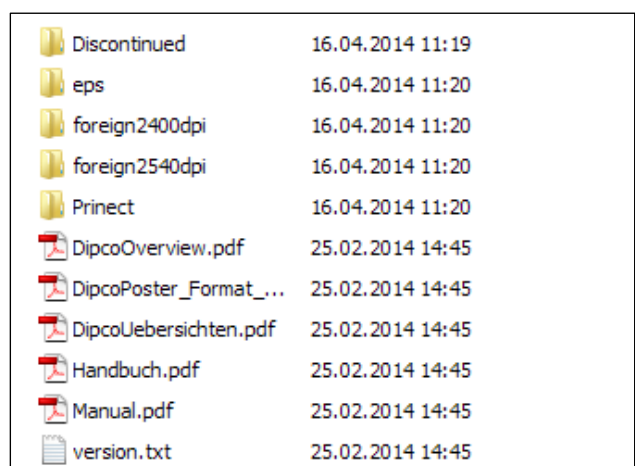


Fig. 5 Content of the Dipco directory

You can now view the operating manual (Manual.pdf) or the color strip overview (DipcoOverview.pdf). You can open the desired subdirectory and import the color strips. The program SetupPrinect.exe is closed at the same time.

2 Notes on assembling and positioning Dipco elements

2.1 General notes for prepress

- You must not alter the dimensions of the quality control strips (compressing, distorting).
- Do not crop the height of the measurement fields of the quality control strips.
- Ensure that no elements to be printed (e.g. crop marks or side marks) are within the quality control strips or at the side of them.
- Some measuring devices require a gap between the quality control strip and the left or right edge of the sheet (please note the following notes for the Prinect measuring devices). This gap (maximum 5 mm) is needed for the detection of the paper white and the position of the quality control strip.
- Select the quality control strip that matches the sheet size of the printing press. This also applies when the minimum sheet size is used. If the sheet width is smaller than the width of the quality control strip, you have to cut off the protruding ends of the quality control strip. Prinect Signa Station usually does this automatically in the Heidelberg workflow.

2.2 Horizontal alignment

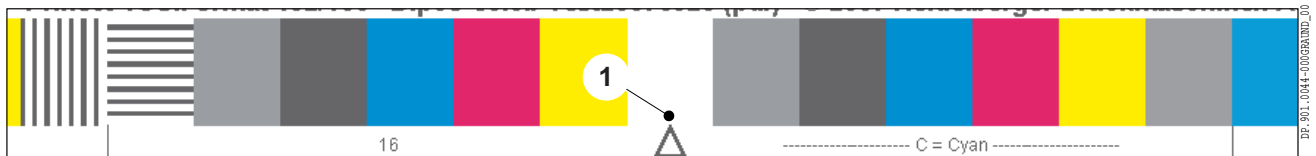


Fig. 6 Center mark

Always align to the center of the press

Position the quality control strips centrally toward the center of the press. This also applies to off-center printing. Generally the center of the sheet is also the center of the press. With quality control strips the center is marked by a small triangle (▲) (Fig. 6/1) in the line below the measurement fields.

- Sheet width 52 cm: The press has 16 ink zones. The center of the press is between ink zones 8 and 9.
- Sheet width 74/75 cm: The press has 23 ink zones. The center of the press is in the center of ink zone 12.
- Sheet width 102/105/106 cm: The press has 32 ink zones. The center of the press is between ink zones 16 and 17.
- Sheet width 145 cm: The press has 44 ink zones. The center of the press is between ink zones 22 and 23.

- Sheet width 162 cm: The press has 50 ink zones. The center of the press is between ink zones 25 and 26.



Fig. 7 Quality control strip, cropped field

- The quality control strips must end in line with a full measurement field on the left and right (Fig. 7/1). Bled measurement fields (Fig. 7/2) result in incorrect measurements.

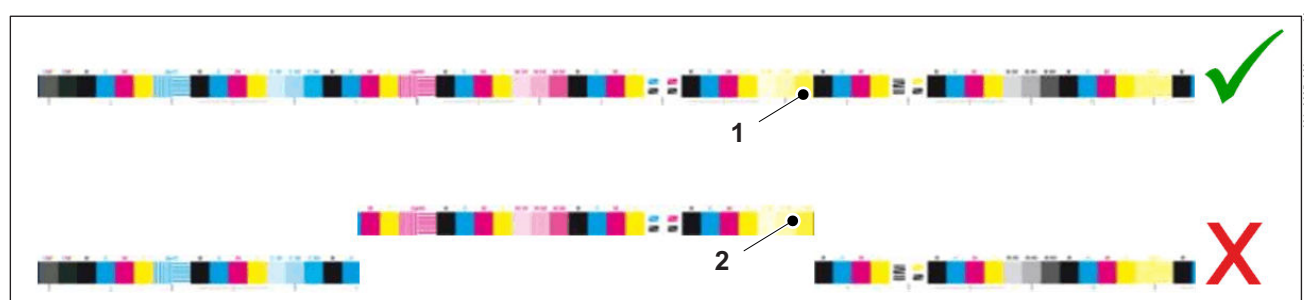


Fig. 8 Quality control strip, partially offset

- Prinect color measuring devices only process quality control strips on one level (Fig. 8/1). Interrupted and offset quality control strips (Fig. 8/2) cannot be measured.
- To facilitate identification of colors, ink zones and other information you should not cut off the legend of the quality control strips. The empty space between the measurement fields and the printed image or the sheet edge guarantees the perfect functioning of the Prinect color measuring devices.
- In addition, in cases where no paper white is necessary between the measurement field and the printed image you should always provide at least 1 mm of paper white at the top and bottom to ensure a trouble-free measuring procedure. This also applies when positioning at the gripper edge. This can prevent an unclear print.

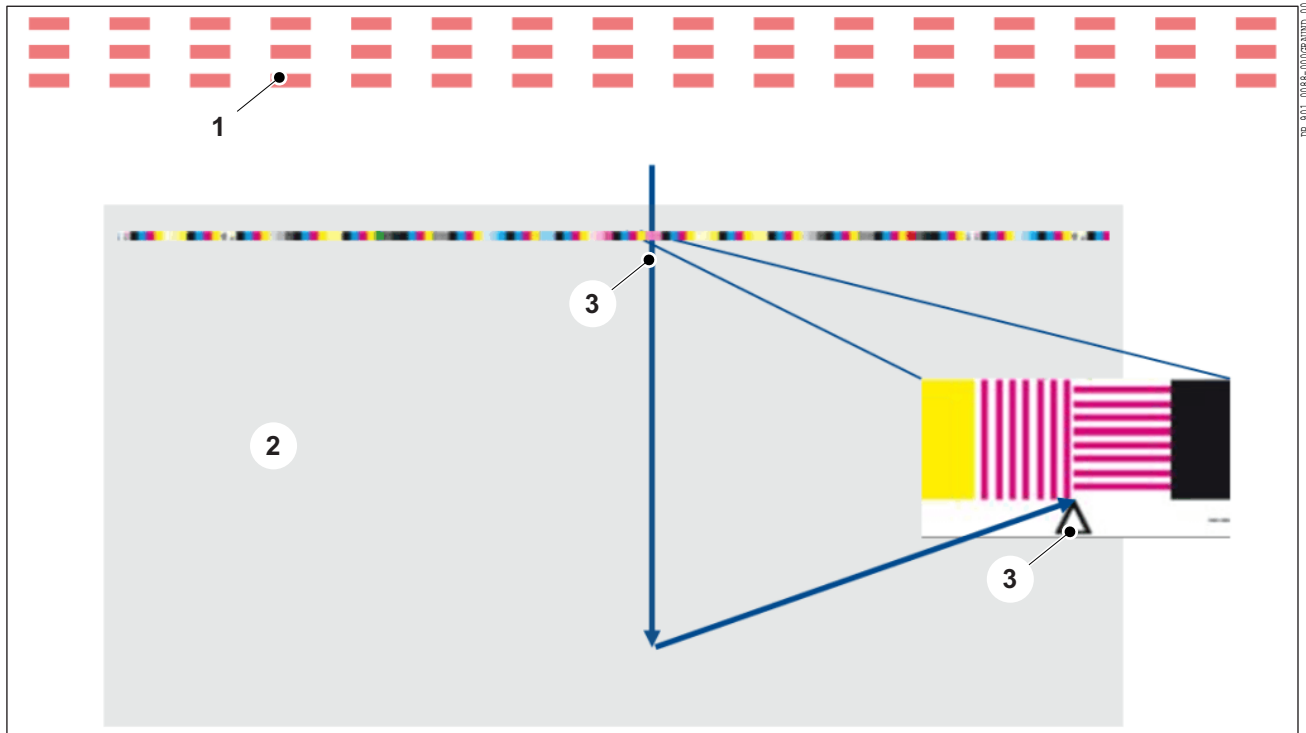


Fig. 9 Off-center printing material

Off-center printing

You must always mount the quality control strip centered to the center of the press (Fig. 9/3). This also applies when the printing material (Fig. 9/2) runs off-center through the press. Only alignment to the center of the press allows correct control of the ink zones (Fig. 9/1).

2.3 General notes for the printer

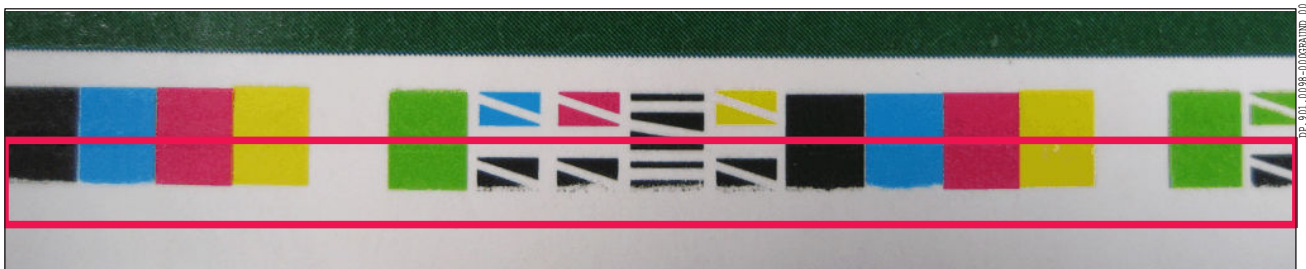


Fig. 10 Incorrectly printed quality control strip

- Ensure that the quality control strips are printed completely and with sharp, clean edges (not as in Fig. 10 in the area in the red box). The quality control strips must never protrude into the gripper margin or over the rear edge of the sheet and must not print at the edge of the blanket.
- Avoid smearing and scumming when printing.
- Correct measuring results are only achieved when the quality control strips are printed on a white background.

Note: An opaque white background cannot be measured and controlled with the Prinect color measuring devices. As the coloring depends on the thickness of the opaque white, fluctuating measured values may result. Heidelberg does not guarantee correct results.

- If individual measurement fields were cut out in prepress, e.g. to prevent smearing caused by the sheet brakes, you have to disable the ink zones concerned on the Prinect color measuring device and control them manually.

Coating

Coat the quality control strips either completely or not at all. Partial coating causes incorrect measurements. If you coat the quality control strips, you need to adapt the target color values accordingly.

3 Prinect Easy Control

3.1 Notes on assembly

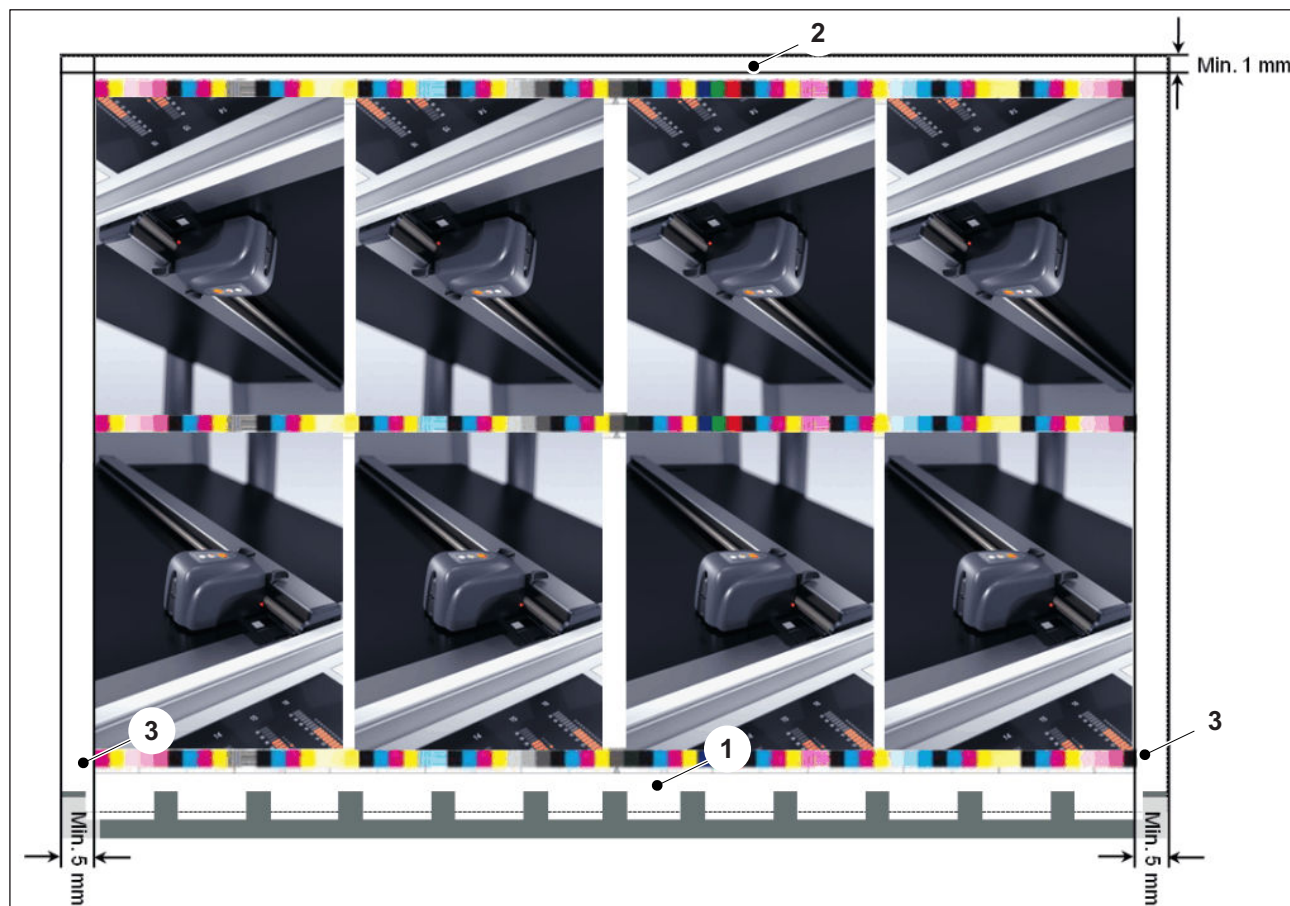


Fig. 11 Mounting Prinect Easy Control

- You can mount the quality control strip at any position you wish between the gripper margin (Fig. 11/1) and the rear edge of sheet (Fig. 11/2).
- In order to facilitate the automatic paper white measurement and detection of the quality control strip, there must be at least 5 mm of paper white between the lateral sheet edges and the start of the quality control strip (Fig. 11/3).
- You can position the quality control strip directly next to the printed image or inside the trim zone. To avoid incorrect measurements you should provide 1 mm of paper white at the top and bottom between the measurement fields and the printed image.
- Prinect Easy Control requires a measurement field size 5 mm wide and 6 mm high.

4 Prinect Axis Control on Prinect CP2000 Center

4.1 Notes on assembly

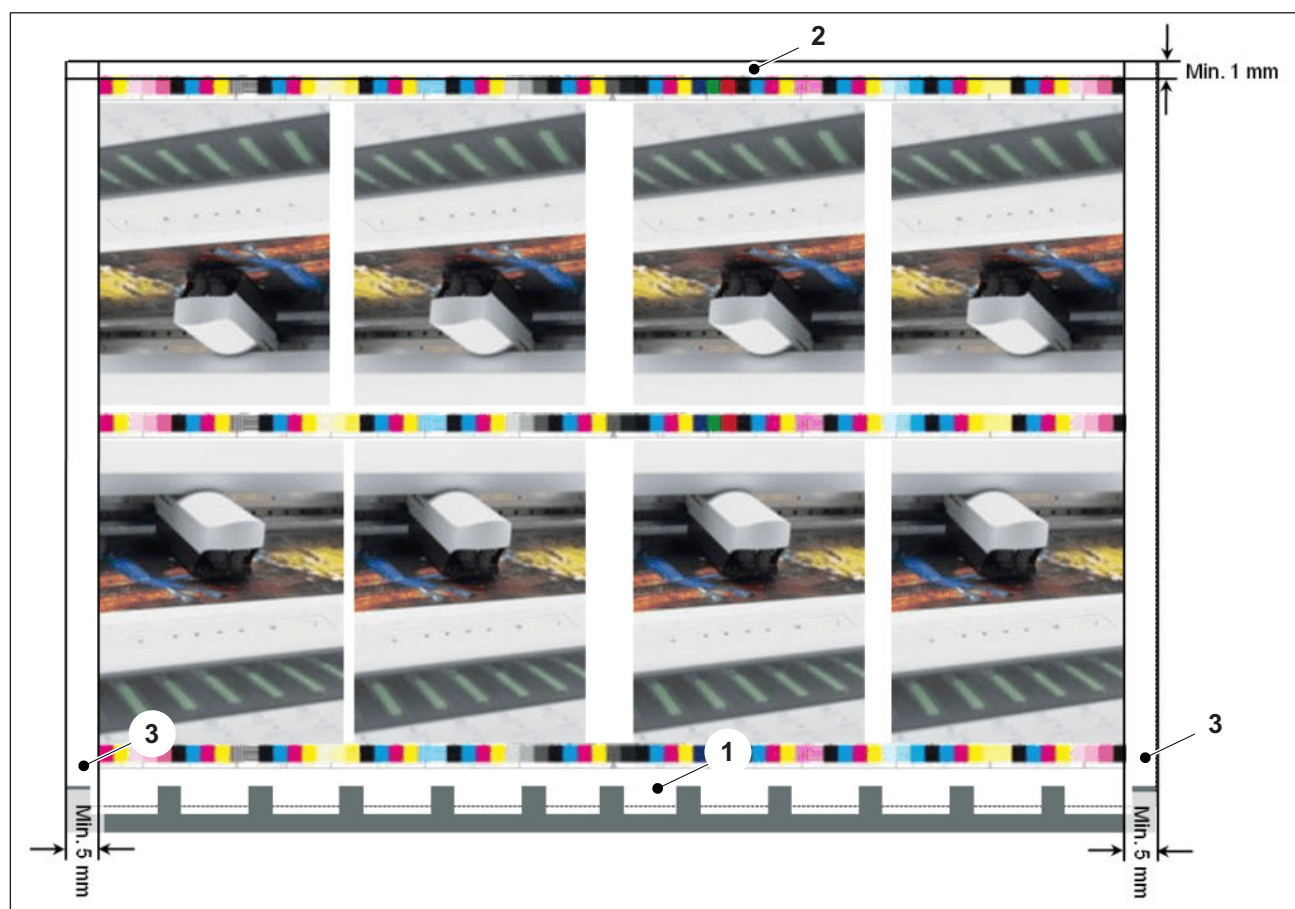


Fig. 12 Mounting Prinect Axis Control on Prinect CP2000 Center

- You can mount the quality control strip at any position you wish between the gripper margin (Fig. 12/1) and the rear edge of sheet (Fig. 12/2).
- In order to facilitate the automatic paper white measurement and detection of the quality control strip, there must be at least 5 mm of paper white between the lateral sheet edges and the start of the quality control strip (Fig. 12/3).
- You can position the quality control strip directly next to the printed image or inside the trim zone. To avoid incorrect measurements you should provide 1 mm of paper white at the top and bottom between the measurement fields and the printed image.
- Prinect AxisControl on Prinect CP2000 Center requires a measurement field size 5 mm wide and 6 mm high.

5 Prinect Axis Control on Prinect Press Center

5.1 Notes on assembly

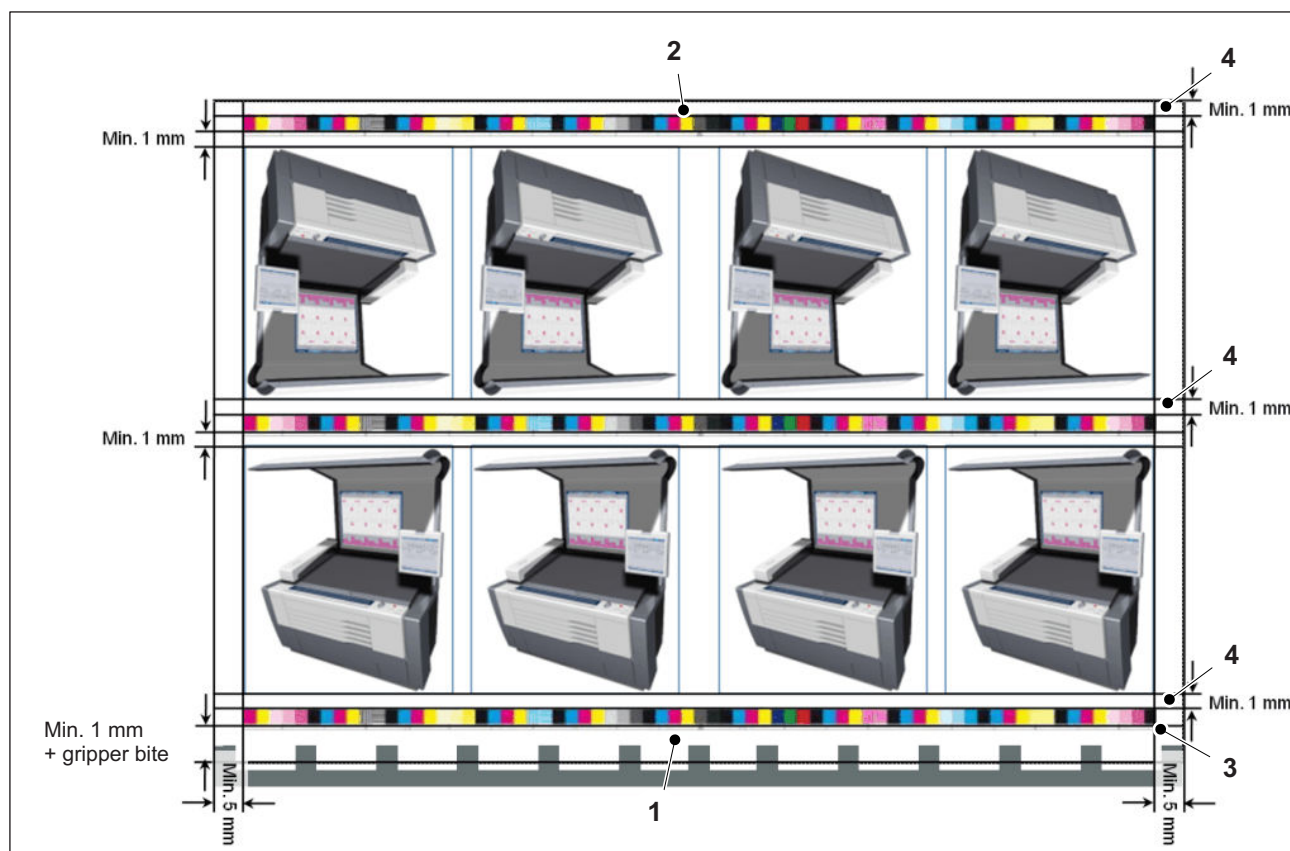


Fig. 13 Mounting Prinect Axis Control on Prinect Press Center

- You can mount the quality control strip at any position you wish between the gripper margin (Fig. 13/1) and the rear edge of sheet (Fig. 13/2).
- In order to facilitate the automatic paper white measurement and detection of the quality control strip, there must be at least 5 mm of paper white between the lateral sheet edges and the start of the quality control strip (Fig. 13/3).

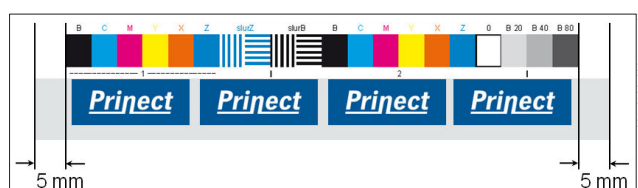


Fig. 14 Lateral minimum distance

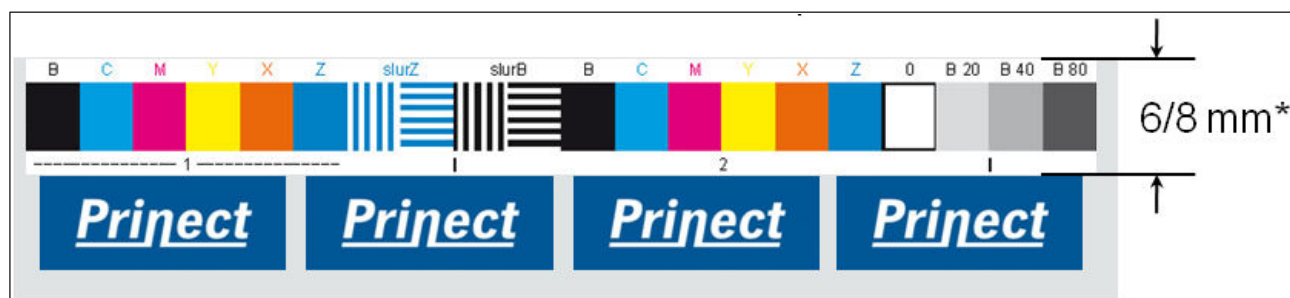


Fig. 15 Measurement field size with auto tracking up to software version S11B

Auto tracking up to software version S11B

- If you are working with auto tracking, there must be a gap of at least 1 mm of paper white from the color measurement field to the printed image and to the rear edge of sheet (Fig. 13/4).

*The measurement field height is at least:

6 mm with micro quality control strips.

8 mm with other quality control strips.

We recommend that you always use auto tracking.

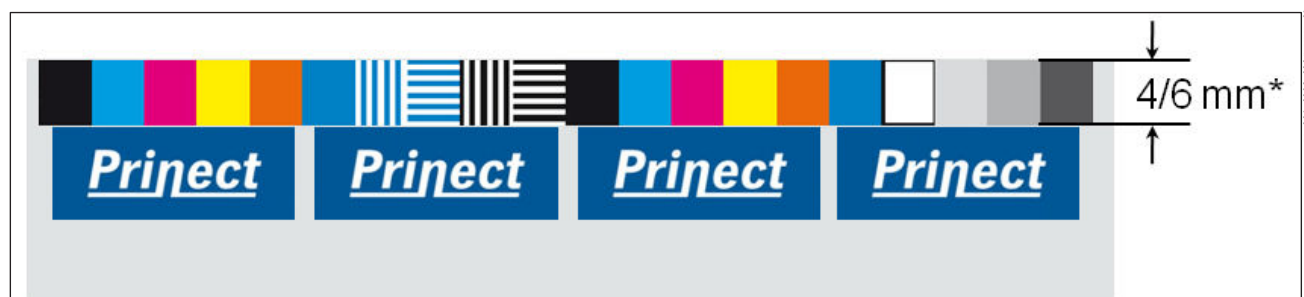


Fig. 16 Measurement field size with auto tracking, software version S12A

Auto tracking from software version S12A

- The paper white is no longer needed as of software version S12A (Fig. 16).

*The measurement field height is at least:

4 mm with micro quality control strips.

6 mm with other quality control strips.

We recommend that you always use auto tracking.

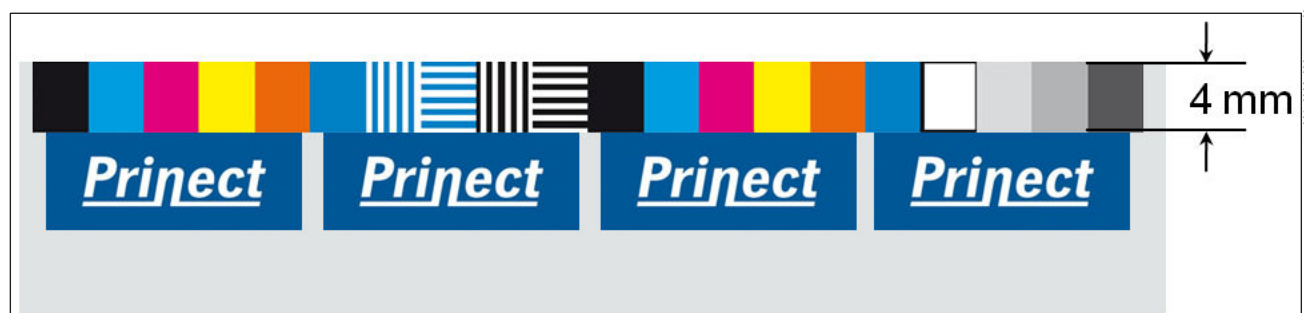


Fig. 17 Measurement field size without auto tracking

Notes for packaging printers

In order to save cardboard, the quality control strip can be mounted directly between the printed image and the rear edge of sheet or gripper margin.

► **Note**

If the measurement fields are no longer printed in full due to a change of paper size in the pile, there is a risk of incorrect measuring results. This also applies in the case of ink piling, ink/coating banding effects as well as only half-coated quality control strips. We therefore generally recommend leaving 1 mm of space between the quality control strip and the sheet edge.

Measuring on transparent, colored or metallic printing materials

In the case of transparent, colored or metallic printing materials, impairments to the measuring accuracy and measuring function are possible.

In order to measure the quality control strip, you first need to print opaque white.

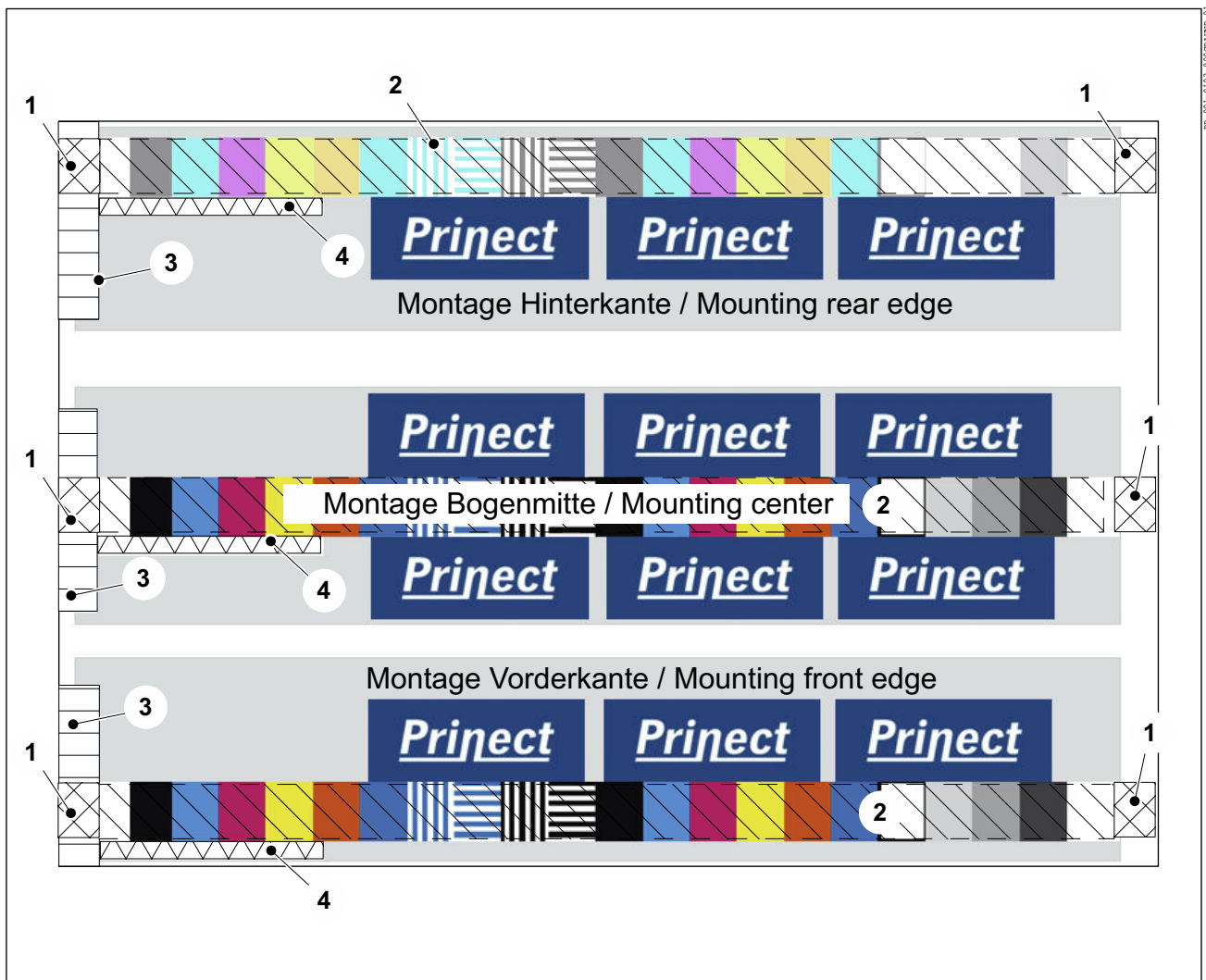


Fig. 18 Areas with opaque white

- 1 There must be opaque white between the left and right-hand sheet edges and the first or last measurement field.

- 2** The entire area of the quality control strip must have an opaque white background.
- 3** At the left-hand sheet edge, an area in the search area of the measuring head of at least 60 mm x 1 mm must be printed with opaque white.
- 4** Below the measurement fields, there must be a 1 mm strip of opaque white within the first 5 cm from the left.

6 Prinect Inpress Control

6.1 Notes on assembly

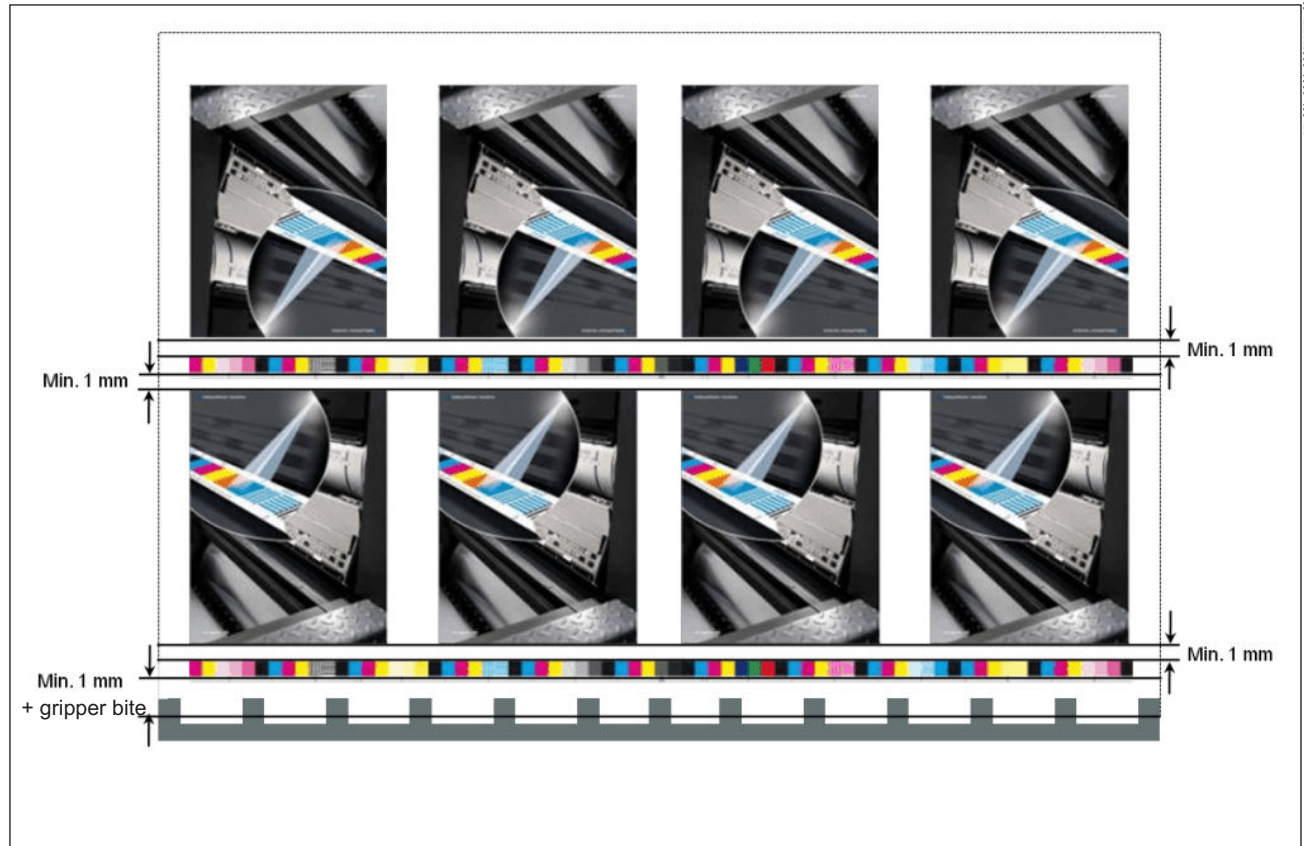


Fig. 19 Mounting Prinect Inpress Control

- You can mount the quality control strip at any position you wish between the gripper margin (Fig. 19/1) and the center of the sheet (Fig. 19/2).
- To guarantee the measurement quality, allow 1 mm of paper white between the gripper margin and the color measurement fields, particularly when using micro strips.

► **Note**

For perfecting on thin (translucent) paper: Do not fit the quality control strips congruently on the front and reverse side. This can lead to measuring errors.

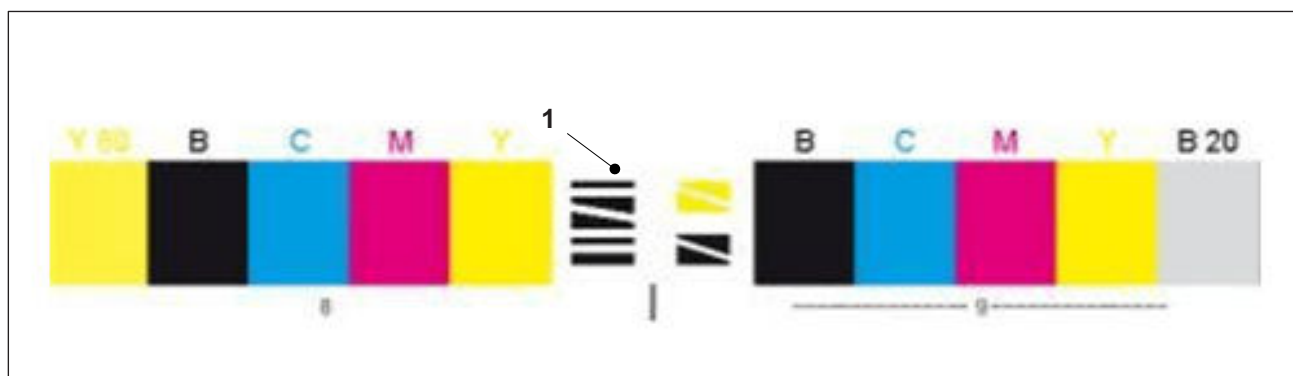


Fig. 20 Position mark, Prinect Inpress Control

- For automatic detection of the quality control strip, position marks (Fig. 20/1) are located on the strip. It is vital that these are in place! Otherwise, the quality control strip will not be found.
- For automatic detection and register control, there has to be sufficient space at the top and bottom. Therefore, there must be at least 1 mm of paper white above and below the measurement fields. This also applies for quality control strips with 5 mm x 6 mm measurement fields!
Note: 1 mm of paper white above and below the measurement fields is recommended for conventional paper types and printing conditions. However, in situations with highly variable or thin paper types, particularly in connection with high ink coverage, more than 1 mm may be necessary!
- Measurement of colored, metallized, film-laminated, aluminized or similarly coated paper types is generally not possible. Measurement with opaque white is also not possible when using opaque white under the quality control strip!

Minimum distances to the rear edge of sheet

If the quality control strip has to be arranged beyond the center of the sheet toward the rear edge of sheet, you need to take into account the following minimum distances to the rear edge of sheet:

- Speedmaster CD 74 and XL 75: 120 mm
- Speedmaster SM 102: 110 mm
- Speedmaster XL 105/106 and CX 102: 150 mm
- Speedmaster XL 145 and XL 162: 350 mm

Gripper bite

The paper white measurement and the adjustment of the spectrophotometer are performed in the gripper margin. The size of the gripper margin is as follows:

- Speedmaster CD 74 and XL 75: 8 - 10 mm
- All other presses: 10 - 12 mm

7 Prinect Image Control manufactured up to 2010

7.1 Notes on assembly

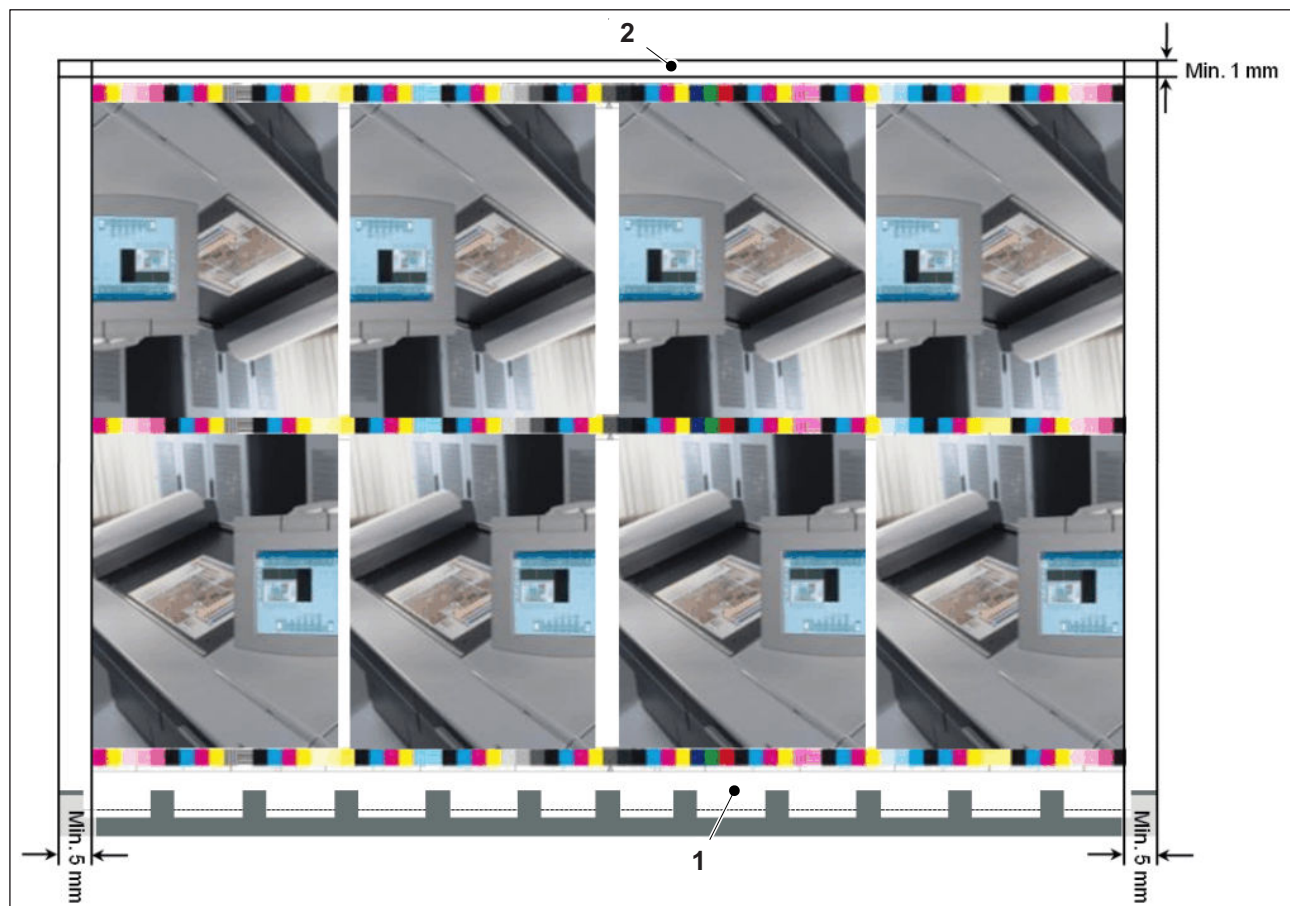


Fig. 21 Mounting Prinect Inpress Control

- You can mount the quality control strip at any position you wish between the gripper margin (Fig. 21/1) and the rear edge of sheet (Fig. 21/2).
- The operator must assign the quality control strip following the first measuring run.
Automatic detection is possible if the quality control strip is assigned as a color mark in the Prinect workflow and is made available as a CIP4-PPF file. Software version 5 and the Color Interface module of Prinect Image Control have to be installed for this purpose.
- You can position the quality control strip directly next to the printed image or inside the trim zone. To avoid incorrect measurements you should provide 1 mm of paper white at the top and bottom between the measurement fields and the printed image.

8 **Prinect Image Control manufactured as of 2011**

8.1 Notes on assembly

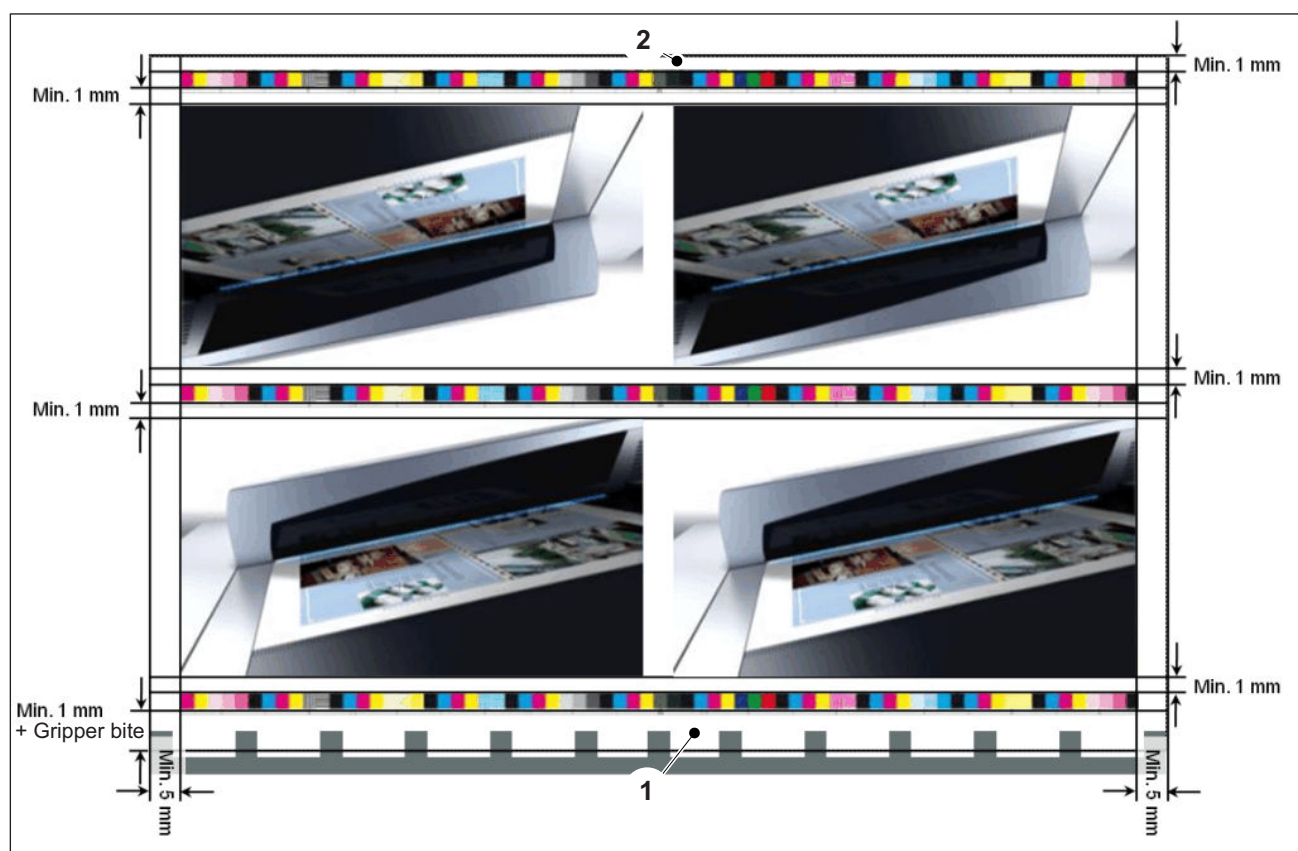


Fig. 22 Mounting Prinect Inpress Control

- You can mount the quality control strip at any position you wish between the gripper margin (Fig. 22/1) and the rear edge of sheet (Fig. 22/2).
- In order to facilitate the automatic paper white measurement and detection of the quality control strip, there must be at least 5 mm of paper white between the lateral sheet edges and the start of the quality control strip.
- Automatic color strip tracking (auto tracking) requires at least 1 mm of paper white from the color measurement fields to the printed image as well as to the rear edge of sheet and the gripper edge.

Measuring on transparent, colored or metallic printing materials

In the case of transparent, colored or metallic printing materials, impairments to the measuring accuracy and measuring function are possible.

In order to measure the quality control strip, you first need to print opaque white.

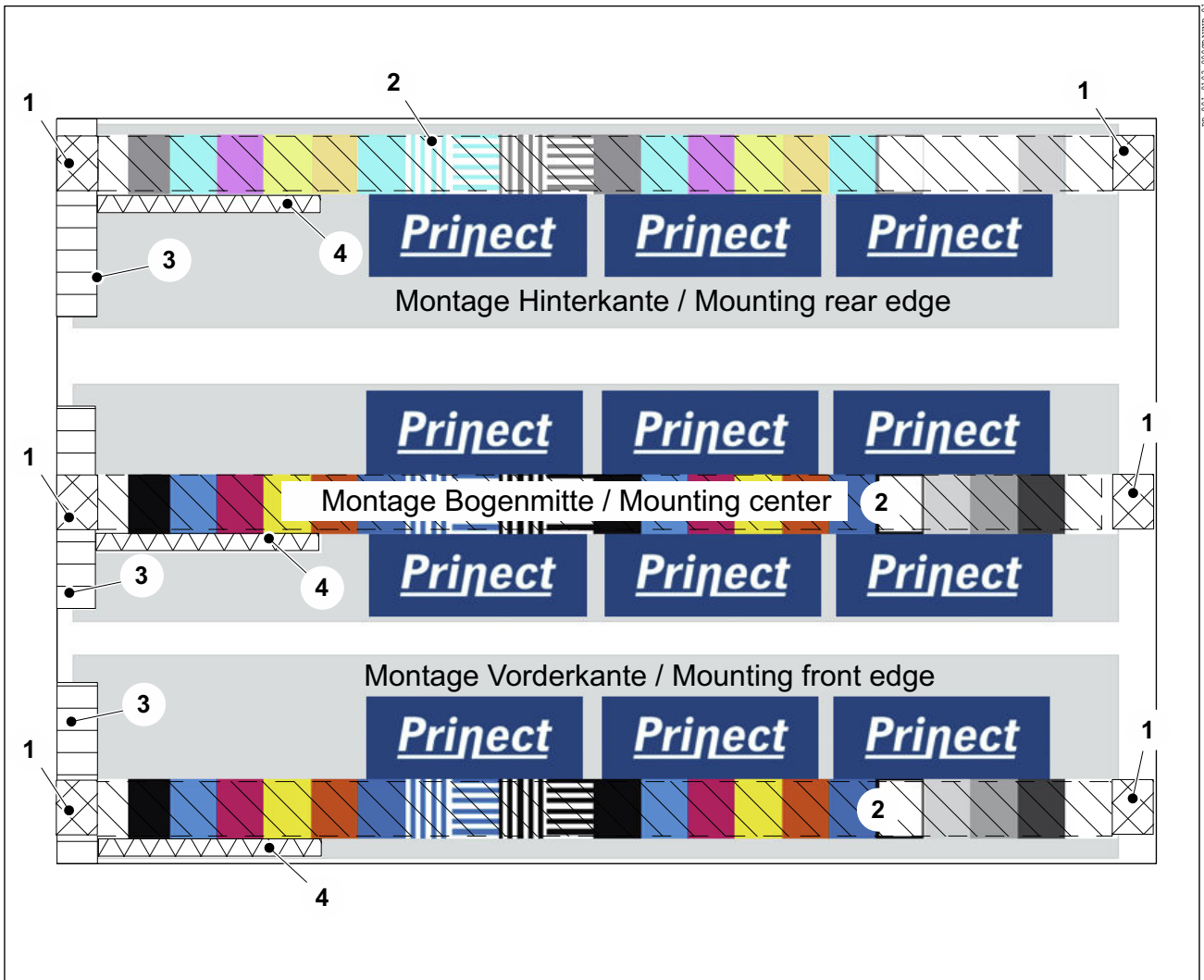


Fig. 23 Areas with opaque white

- 1 There must be opaque white between the left and right-hand sheet edges and the first or last measurement field.
- 2 The entire area of the quality control strip must have an opaque white background.
- 3 At the left-hand sheet edge, an area in the search area of the measuring head of at least 60 mm x 1 mm must be printed with opaque white.
- 4 Below the measurement fields, there must be a 1 mm strip of opaque white within the first 5 cm from the left.

9 Generating PDF files

9.1 When do you have to generate no PDF files yourself?

New from Dipco 11: You only have to generate PDF files yourself if you work with a non-Heidelberg workflow with a resolution other than 2400 or 2540 dpi.

► Note

If you work with a Heidelberg workflow, use the Dipco elements in the *Prinect* directory. You do not need to follow the further instructions in this section.

If you work with a non-Heidelberg workflow with a resolution of 2400 dpi, use the Dipco elements in the *foreign2400dpi* directory. You do not need to follow the further instructions in this section.

If you work with a non-Heidelberg workflow with a resolution of 2540 dpi, use the Dipco elements in the *foreign2540dpi* directory. You do not need to follow the further instructions in this section.

9.2 When do you have to generate PDF files yourself?

Several functions, such as automatic crop recognition, require the use of "hidden PostScript parts", which are embedded in the Dipco files as "PostScript XObjects". Not all third-party RIPs and third-party workflow systems can cope with "PostScript XObjects".

Indications of incorrect processing in the workflow: The Dipco elements are not displayed or are displayed incorrectly, or the entire job is aborted.

Three options for solving the problem are listed below.

1. Check whether you can set the processing of "PostScript XObjects" in your workflow. Switch the processing of "PostScript XObjects" to Disable or Enable as appropriate. If the Dipco elements are then displayed correctly, you can use the PDF files on the CD.
2. Generate PDF files with the same output resolution as your imagesetter. To do this use the EPS files on the Dipco CD. The required settings are described in the following section "Settings in the *General* section".
3. Generate PDF files without "PostScript XObjects". To do this use the EPS files on the Dipco CD. The required settings are described in the following sections.



Note

You will need Acrobat Distiller with the settings described below. Distiller version 7 is used in the example. If you use a different version, you have to adjust the settings as appropriate. Here the settings for the German and English versions are shown side-by-side.

9.3 Setting the output resolution

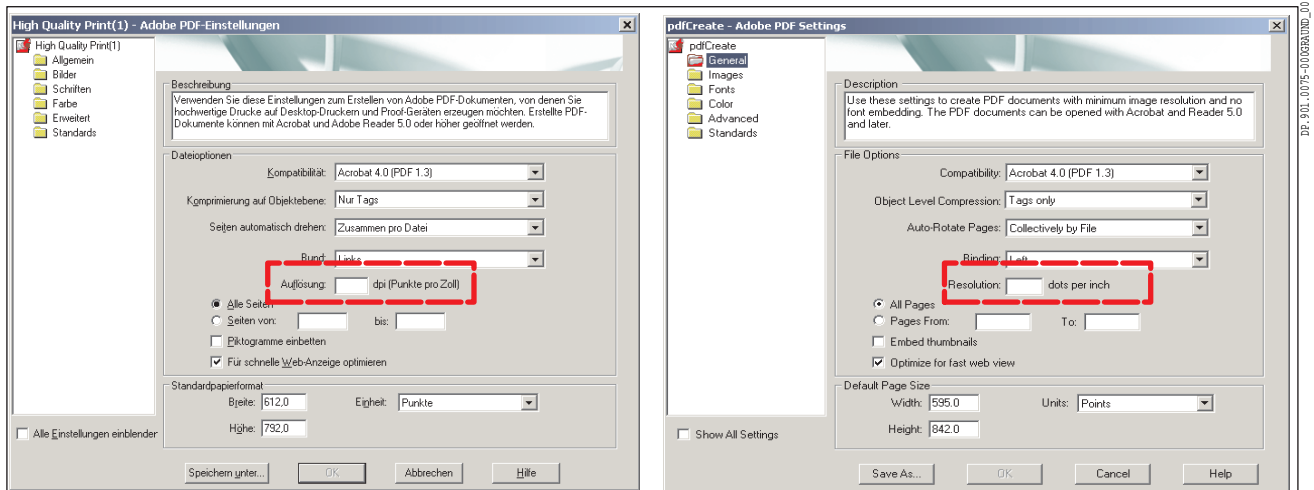


Fig. 24 The **General** section

Output problems with slurring and doubling fields can often be eliminated if you generate PDF files in the output resolution.

1. Select the **General** section under settings.
2. Set the **Resolution** to the exact output resolution of your imagesetter.
3. Set the other parameters as shown in Fig. 24. The other parameters are preset to the standard configuration except for **Compatibility**.

9.4 Generating PDF files without "PostScript XObjects"

1. Set the parameters in the **General** section as shown in Fig. 24. Set the **Resolution** to the exact output resolution of your imagesetter.

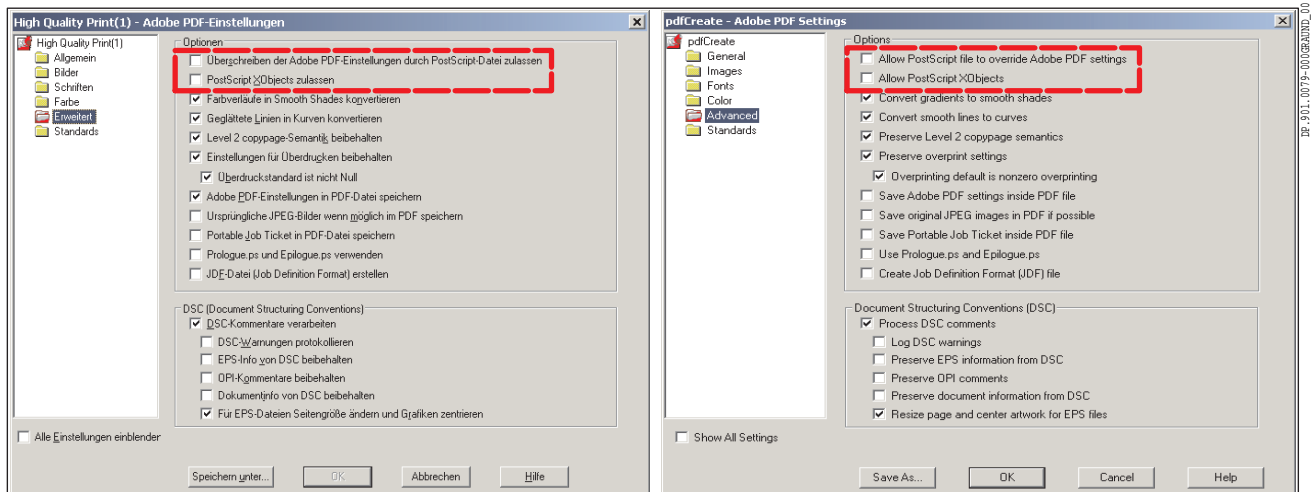


Fig. 25 Extended section

2. Set the parameters in the **Extended** section as shown in Fig. 25.
- Very important: Deselect the functions **Allow PostScript file to override Adobe PDF settings** and **Allow PostScriptXObjects**. This removes the hidden PostScript commands when generating the PDF file.

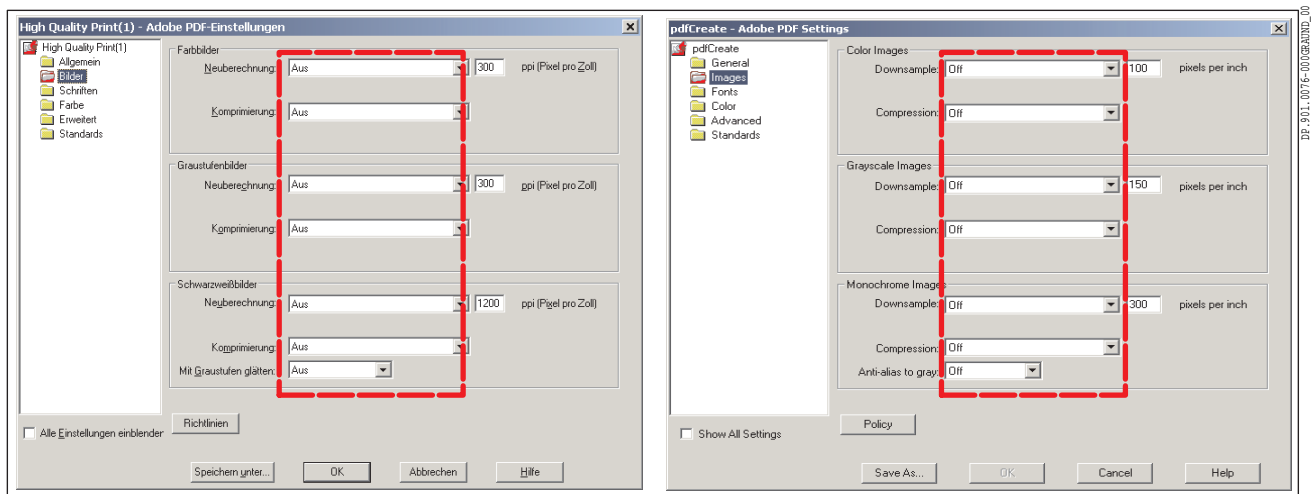


Fig. 26 The Images section

3. Settings in the **Images** section:
Switch all the settings for **Downsample** and **Compression** to **Off**.

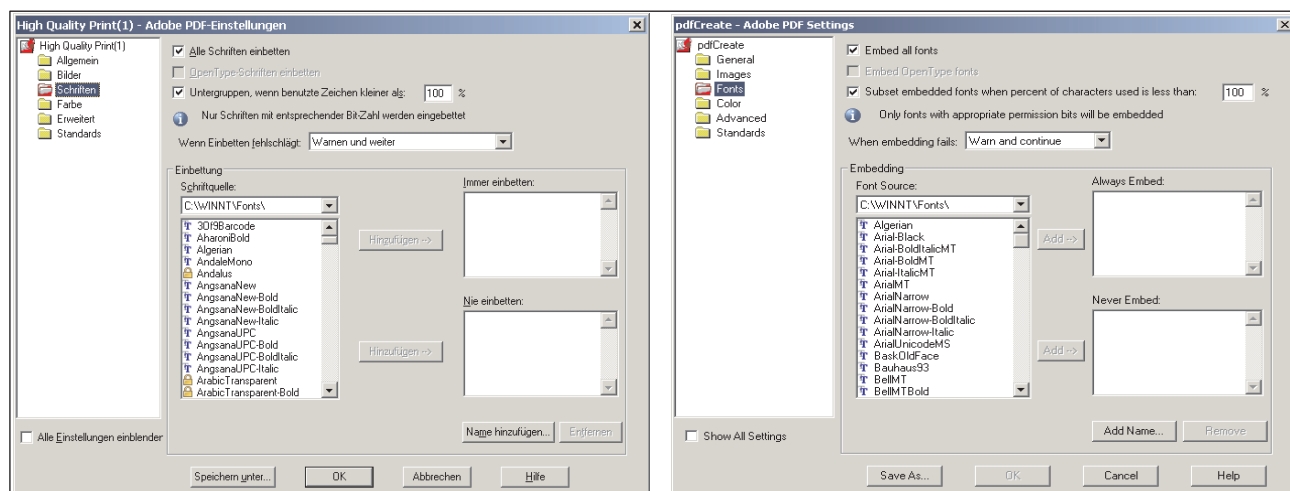


Fig. 27 The **Fonts** section

4. Settings in the *Fonts* section:

Set the parameters as shown in Fig. 27. The parameters are already preset to this in the default configuration.

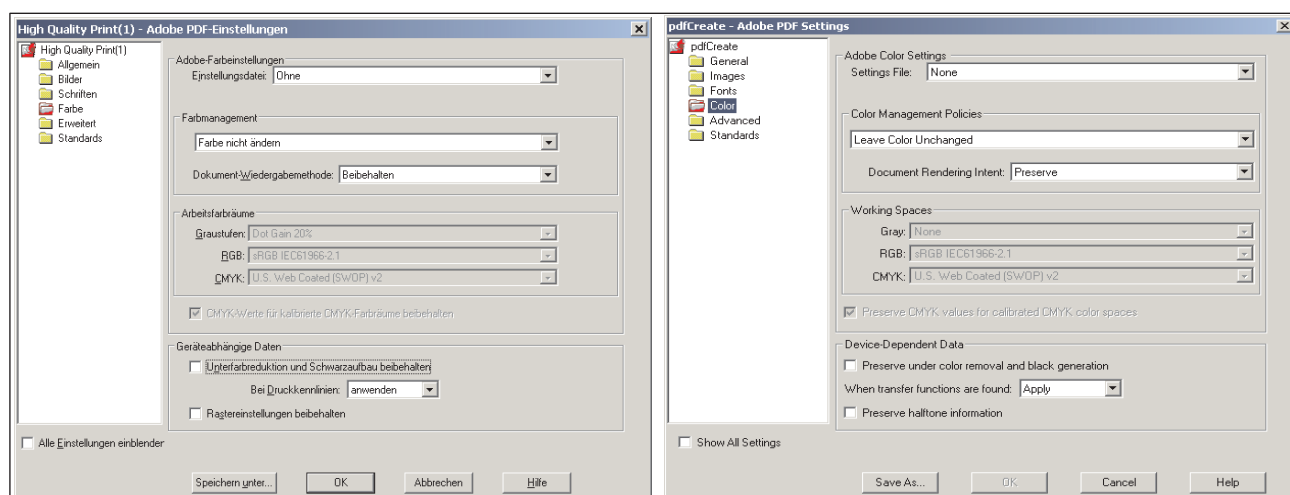
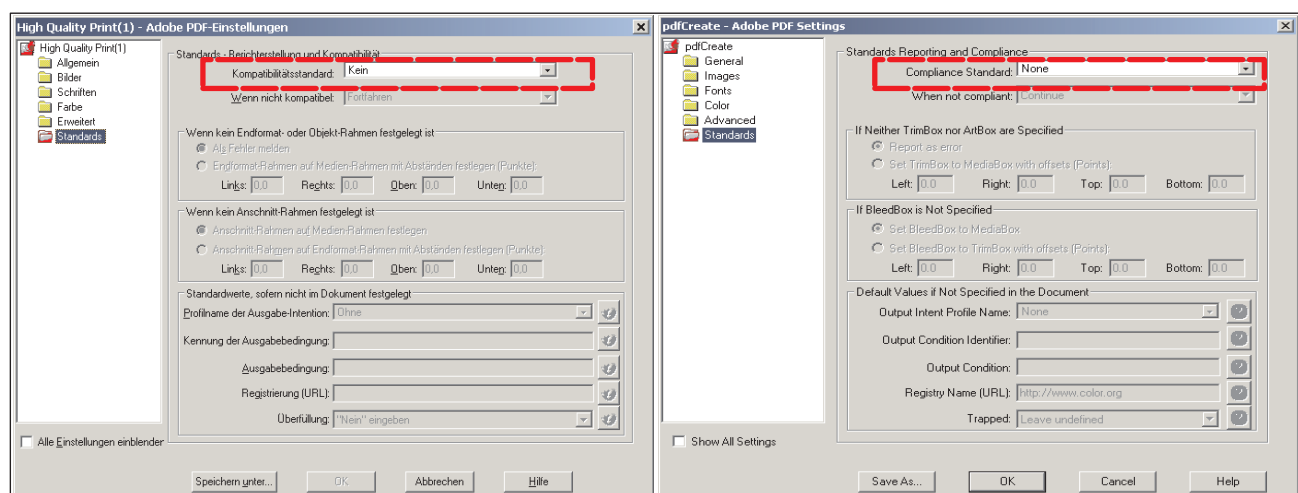


Fig. 28 The **Color** section

5. Settings in the *Color* section:

Set the parameters as shown in Fig. 28. The parameters are preset to the default configuration except for **Preserve under color removal and black generation**.

Fig. 29 The **Standards** section

6. Settings in the *Standards* area:
In the **Compliance Standard** list select **None**. All remaining parameters are then grayed out as in Fig. 29.
7. Save the settings. You can now generate PDF files for your workflow from the EPS files. However these PDF files have no crop recognition or other functions that are enabled by "PostScript XObjects".

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