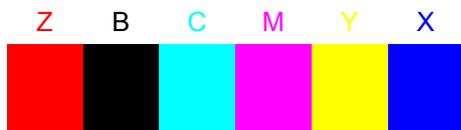


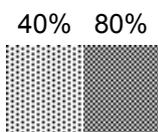
Description of the FOGRA Color Control Bars

Solid patches



For each color separation there is a solid patch in each zone. These are for checking uniform inking across the entire width of the sheet.

Dot gain patches



For checking dot gain and print contrast, there are 40% and 80% halftone patches. These patches are labeled above with their halftone percentages (40% and 80%) in two process colors (black and the color applicable in each case). These patches are generated using the screen parameters of the job in question (dot shape, screen ruling, etc.). The tonal values correspond to the characteristic curve used to calibrate the job. Under ideal conditions, the dot gain on press sheets (depending on the paper type) should correspond to the standardized values.

Slurring and doubling patches



In the four-color version, each slurring and doubling patch is of normal size and therefore simple to measure. The lines are angled by 60°/0°/120° to permit precise assessment of the extent to which dot gain is being caused by slurring or doubling.



In the five-color version, all three line angles are contained within a single patch. This patch is for visual evaluation.

Trapping patches



The four-color version contains patches for assessing ink acceptance when two or three colors are laid down on top of one another.

Gray patches

CMY

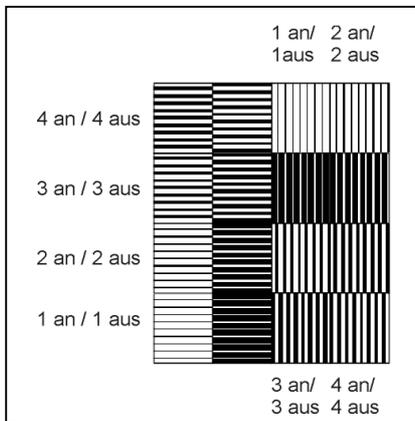


The gray patches are for visual inspection. The gray hue used is mixed with the proportions typical of Heidelberg color control strips:

- 70% Cyan
- 60% Magenta
- 60% Yellow

Under standardized conditions, this should yield a neutral gray that approximates a 70% tint in the black separation.

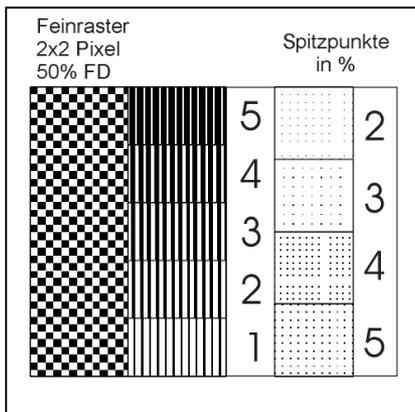
Patch for checking plate imaging



In the 4-, 5- and 6-color versions, this patch is provided for each color. It contains areas with line thicknesses of 1/2/3/4 pixels on or off.

These are also used to visually check the quality of plate imaging. When imaging of thermal positive plates achieves the theoretical optimum, the adjacent positive and negative lines should have the same thickness. For other plate types, optimum imaging may be indicated by a different relationship.

Process control patches



The four-color version includes special patches for visually monitoring the printing process. The left half consists of a fine screen strip (2x2 pixels) and several different line patterns for purposes of comparison, with tonal values that increase in steps of 6.25%. This is achieved by varying the line widths within a 16-pixel-wide cell:

- 5: 12 pixels on, 4 off = 75.00%
- 4: 11 pixels on, 5 off = 68.75%
- 3: 10 pixels on, 6 off = 62.50%
- 2: 9 pixels on, 7 off = 56.25%
- 1: 8 pixels on, 8 off = 50.00%

While the fine screen responds very sensitively to process fluctuations, the tonal value of the comparison scale remains quite stable.

Normally, the tonal value of level 3 should match the fine screen.

The right half is for evaluating fine dots. The four fields contain – in the screen ruling applied by the RIP in each case – dots with tonal values ranging from 2% to 5%. The numbers indicate the percentages.