

Attainable density

In comparison with offset printing, the silk-screen prints have a more visible relief. This is due to the greater quantity of ink applied on the screen in comparison with an offset press, where a thin application of ink and the flat printing technique allow for colour densities below 5% and over 90%. The results of silk-screen printing are influenced by the screen used, by the capillary film and by the quantity of ink applied.

When a plate is prepared, the print-on screening dots are detailed onto the screen of the stencil. To print a light hue, the ink must be pressured through very small holes in the stencil. Some of those points are covered by the fibres of the stencil, and no ink is applied. This is why at very light values a screening dot deficit can occur; there is a lower limit of about 15% to the achievable saturation values.

Conversely, when printing at a high density, the points in the stencil are so close to one to another that they tend to combine into large surfaces or stains. This limits the maximum density to around 85%.

As a result, it is necessary to plan half-tone prints with levels of opacity not falling below 15% or above 85% !! Moreover, abrupt density changes must be avoided (e.g. artist on stage under spotlight, etc.). If this is unavoidable in the selected artwork, corrections will have to be made during the preparation of the film at the DTP studio.

However, this is not enough sometimes. There are some cases, where artwork is in CMYK (in printable values), but will definitely look far better printed by spot colour (see an example below). The brownish colour used there is C-20%, M-30%, Y-50%, K-0%, which are printable values, but their combination causes printing problems, so we recommend to print such as areas in spot colour, that will ensure the final colour will have solid and consistent look.

