

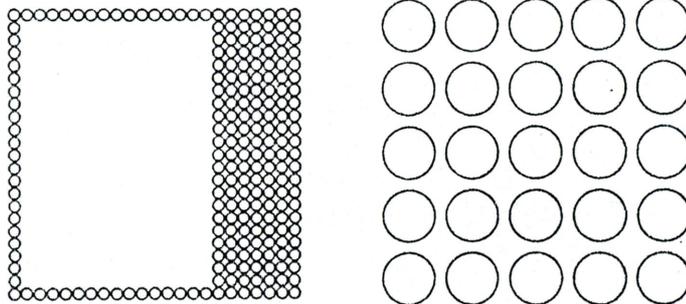
The coarse screen as reference value

Theoretical considerations and test series have demonstrated that an extremely coarse screen is subject to very minor changes of tonal value. These are so small that, compared with the fluctuations which, say, a screen of 60 lines per centimeter suffers in print, they can be ignored for practical purposes. Hence, the coarse screen is suitable as a reference value for the measurement of screen dot enlargement. The screen width was selected so that the measuring field is just integrated by the usual well-known reflection densitometers.

Distortion of screen dots always occur on the outlines, except for the extremely fine points. A fine screen has more screen dots per unity of surface than a coarse screen, and therefore more outlines or 'marginal areas'. A screen of 60 lines has 5 times more marginal areas than a 12 line screen. In the corresponding element of the Brunner measuring strip for the measurement of screen dot enlargement, this difference proved to be advantageous. Table 1 compares the circumference of a coarse screen dot with that of the corresponding 25 fine screen dots.

For screen widths other than 60 lines/cm dot enlargement is different. The finer screens are characterized by a more important dot enlargement, the coarse screens by a smaller one. Conversion of values according to Table 2.

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1 A 60 line screen has 5 times more marginal areas than a 12 line screen. Screen dot enlargement of a fine screen is five times bigger than screen dot enlargement of a coarse screen.