

Technical Sample

How do you keep scanned file size low while maintaining quality?

Base your scanner resolution on the screen ruling

What is the best scanner resolution setting for a halftone? Most everyone agrees that scanner resolution should be between a 1:1 and 2:1 ratio to the screen ruling; but the higher the ratio, the larger the file size and the longer the output time. This sample can give you some idea of what ratio to choose. All of the halftones on this page are at a 45° screen angle and a 150 line per inch screen ruling. All were output on a Linotronic 330 imagesetter with a RIP 30 over Ethernet. Each one is an 8 bit grayscale scan which has been brought in at the resolution listed below. The scanner's resolution is the only variable. Examine the halftones to see the effect of the ratio of scanner resolution to screen ruling. Check below to see how that affects output time.

Scanning Ratio - .67:1
100 dpi, File Size = .78 MB
Output time = 2 min. 42 sec[†].

Scanning Ratio - 1:1
150 dpi, File Size = 1.71 MB
Output time = 3 min. 35 sec[†].

Scanning Ratio - 1.33:1
200 dpi, File Size = 3.05 MB
Output time = 4 min. 10 sec[†].

Scanning Ratio - 2:1
300 dpi, File Size = 6.87 MB
Output time = 6 min. 3 sec[†].

[†]File size and output times are all measured on a 8" x 10" halftone

For more information, ask your Linotype-Hell representative for the technical information article on Scanned File Size.

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Part number 3054, 11/91

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