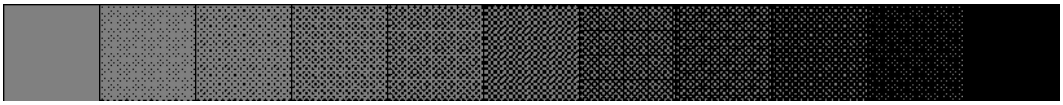
Halftone Guideline Sheet

What is a halftone?

In our applications, halftone artwork is used to reproduce grayscale art such as a black and white photograph. A halftone breaks the image into small dots. These dots will vary in size to represent the tonal areas of the artwork, giving the illusion of a grayscale image.

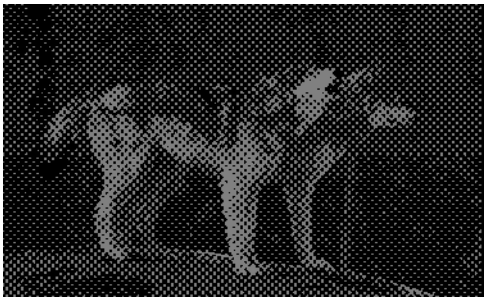
With halftones, the dots representing shades of gray up to 50% will appear as black spots on white; those representing shades of gray over 50% will appear as white dots on black.

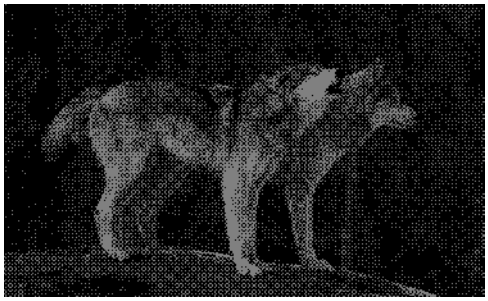


Terminology

LPI – Refers to the measurement of line screen or "lines per inch." This determines the number of lines of halftone dots that will make up the image. Sandcarvers may interchange the term lpi with "halftone dpi" which also refers to the number of lines of halftone dots.

Example: Creating a halftone at 35 lpi will mean that the image will be comprised of fewer lines, resulting in larger, coarser dots. A halftone at 65 lpi will have more lines, resulting in a finer screen with smaller dots and finer detail.


Halftone created using a 35 lpi screen


Halftone created using a 65 lpi screen

DPI – Refers to a measurement of "dots per inch." In printing and digital imaging, resolution is measured in terms of dpi. Digital images are comprised of "dots" or pixels. The more "dots" in an image, the higher the resolution, the better the quality. For digital files, we recommend that the files be at a resolution of 600 dpi or higher (1200 dpi is optimal). For printer output, we recommend devices that can output at 600 dpi or higher, again, 1200+ dpi is optimal.

NOTE: In the sandcarving industry, people often refer to halftones in terms of dpi which can sometimes lead to confusion between image/output resolution and the actual halftone screen. When referring to halftone dpi, try to use the phrase "HALFTONE DOTS PER INCH."

Halftone Recommendations

Image Resolution

For best results, the image should be scanned at a resolution of 600 dpi or higher (1200 dpi is optimal). Lower will work, but quality will be sacrificed. Note: High resolution images will result in large file sizes.

Image Quality

The image should be clean and even in tone. Images with too much contrast will result in solid black or white areas when converting to halftone. Good halftone images should be comprised entirely of dots – no solid areas.

Line Screen

Most of PhotoBrasive® Systems ProMask™ and show samples are created using 35 halftone dpi. Finer halftones can be achieved, but success will also require a certain skill level from the user and proper grit. *Why we recommend this?* Halftones in general are typically more difficult to wash out, usually requiring a pressure washer. When the halftone is finer than 35, the risk increases for problems in development. Halftones also require more attention when blasting. For finer halftones, a finer grit (220 or higher) also needs to be used.

Output Media

For best results, PhotoBrasive Systems recommends using AccuBlack™ Inkjet Film or a real film positive. Film positives will aid in achieving a proper exposure and an easier washout. **Do not use vellum!**

Output Device

For AccuBlack™ positives, we recommend an inkjet printer with an output resolution of at least 720 dpi (1200 or higher is preferred).

PhotoBrasive® SYSTEMS

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