

TONNAGE CALCULATION

Use the guidelines below to calculate the needed tonnage for your stamping project.

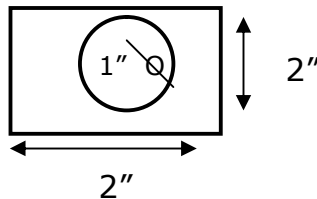
General Formula for Press Tonnage Required

Determine the approximate press tonnage needed to stamp a part based on linear inches of cut.

For Steel: *Material Thickness X Inches of Cut x 25 = Press Tonnage*

Example:

Need: 2" Square washer from .088 thick steel
Base Material: 2 -1/2" coil X 2-1/2" progression



Calculation: $2 + 2 + 2 + 2 = 8$
1" circle perimeter (πD) $3.14 \times 1" = 3.14"$
Total Inches of Cut = $8 + 3.14 = 11.14$

Tonnage Required:
.088 Thick X 11.14 X .25 (factor) = **24.5 tons**

Blanking or Perforating Pressures:

Blanking or Perforating pressure (in tons) equals the total length of cut, or cuts, be it portions or the entire circumference of a circle, the sum of a square, rectangle, or triangle, or the entire total circumference of a number of holes multiplied by the material thickness, multiplied by the shearing strength of material. For answer in tons, the shearing strength must be converted from pounds/square inch (PSI) into tons/square inch by dividing by 2000.

Example:

Mild steel (shearing strength) = $50,000 \text{ PSI} / 2000 = \mathbf{25 \text{ tons/square inch}}$

For drawing, use same method except use tensile strength of material.