

Formulas

Measurement unit abbreviations

ft.	foot
in.	inch
lb.	pound

Constants

π	3.1416
1 ft. $\times$ 1 ft. $\times$ 1 in. of steel plate	40.8 lb.
Bending pin diameter for uncoated bar	Up to 25M = 6D Greater than 25M = 8D

Formulas

Descriptions	Full	Abbreviated
Area of circle	$\pi \times \text{radius}^2$	πr^2
Circumference	$\pi \times \text{diameter}$	πD
Cut length	all lengths + 2 bar diameters per bend	all L + 2 d_b / bend
Force	area $\times$ pressure	A $\times$ P

Formulas (continued)

Number of wire rope clips	$(3 \times \text{diameter of rope}) + 1$ to next whole number	$3D + 1$
Pythagorean theorem	$(\text{side } a)^2 + (\text{side } b)^2 = (\text{side } c)^2$	$a^2 + b^2 = c^2$
Sling tension	$\frac{\text{weight}}{\text{number of slings}} \times \frac{\text{length}}{\text{vertical length}}$	$\frac{W}{\# \text{ slings}} \times \frac{L}{\text{vert. length}}$
Spacing between clips	$6 \times \text{diameter}$	$6D$
Working load limit	$\text{diameter}^2 \times 2\,000$	$D^2 \times 2\,000$