

Formulas

Measurement unit abbreviations

ft.	foot
in.	inch
kg	kilogram
lb.	pound

Constants

π	3.1416
1 ft. $\times$ 1 ft. $\times$ 1 in. of steel plate	40.8 lb.
1 kg	2.2 lb.

Formulas

Descriptions	Full	Abbreviated
Area of circle	$\pi \times \text{radius}^2$	πr^2
Circumference	$\pi \times \text{diameter}$	6D
Force	area $\times$ pressure	A $\times$ P
Ladder ratio	$A^2 + B^2 = C^2 + 3$ overhang	$A^2 + B^2 = C^2 + 3$
Number of wire rope clips	(3 $\times$ diameter of rope) + 1 to next whole number	3D + 1
Overall length encompassing 2 bends for double hooks	length + 18 $\times$ diameter $\times$ number of bars	L + 18D $\times$ # bars

Formulas (continued)

Pythagorean theorem	$(\text{side } a)^2 + (\text{side } b)^2 = (\text{side } c)^2$	$a^2 + b^2 = c^2$
Sling tension	$\frac{\text{weight}}{\text{number of slings}} \times \frac{\text{length}}{\text{vertical length}}$	$\frac{W}{\# \text{ slings}} \times \frac{L}{\text{vert. } L}$
Spacing between clips	$6 \times \text{diameter}$	$6D$
Weight on snatch block	$2 \times \text{weight}$	$2W$
Working load limit	$\text{diameter}^2 \times 2\,000$	$D^2 \times 2\,000$