

INDUSTRY TOOLS **WT/FT CALCULATION**

Formula for calculating weight per foot on round stainless and carbon steel tubing and pipe

Average Weight/Foot

$$W = 10.68 (D - t)t$$

Minimum Weight/Foot

$$W = 10.68 \left(D - \frac{t}{0.875} \right) \frac{t}{0.875}$$

W = Weight in pounds per foot (carried to four digits)
 D = Outside diameter in inches (to three decimal places)
 t = Wall thickness in decimals (to three decimal places)

** To determine Average or Minimum Wall Weight of square or rectangular tubing, substitute 13.60 for 10.68 in the above formula*

Formula for calculating weight per foot on stainless and carbon steel bars

STAINLESS AND CARBON

- Rounds:** $2.673 \times D^2$
- Squares:** $3.403 \times D^2$
- Hexagons:** $2.947 \times D^2$
- Flats:** $3.403 \times t \times W$

ALUMINIUM

- Rounds:** $3.1416 \times r^2 \times \text{alloy factor}$
- Squares:** $W \times W \times \text{alloy factor}$
- Hexagons:** $0.866 \times (\text{across flat})^2 \times \text{alloy factor}$
- Flats:** $W \times T \times \text{alloy factor}$
- Rectangular:** $W \times H \times \text{alloy factor}$

Formula for calculating aluminum tube

Round Tube:

$$(O.D. - WT) \times WT \times \pi \times \text{alloy factor} = \text{WT/FT}$$

Square Tube:

$$(W - WT) \times 4 \times WT \times \text{alloy factor} = \text{WT/FT}$$

Rectangular Tube:

$$(W + H - WT \times 2) \times 2 \times WT \times \text{alloy factor} = \text{WT/FT}$$

r = Radius
 H = Height
 W = Width
 OD = Outside diameter
 T = Thickness
 WT = Wall thickness