

Sheet Metal Gauge Chart: Thickness Explained in Detail



If you're within the metalworking industry, whether you're a producer, fabricator, or builder, you know choosing the correct thickness of sheet metal is significant. That's where a [sheet metal gauge chart](#) comes into play.

This chart converts gauge numbers into real thickness (in mm or inches), making it simpler to choose the right fabric for your venture.

What is Sheet Metal Gauge?

The gauge of a sheet metal alludes to its thickness. It's a standardized estimation, the lower the gauge, the thicker the metal, and the higher the gauge, the more slender it is.

For illustration:

- ✓ 10-gauge steel is thick, approximately 3.42 mm. whereas,
- ✓ 20 gauge is more slender, almost 0.91 mm.

Why Gauge Rating?

Utilizing gauge lets engineers, fabricators, and providers rapidly communicate thickness without disarray, regardless of fabric. But it's not widespread over all materials; for example, 16-gauge steel and 16-gauge aluminum are not the same thickness.

Types of Sheet Metal Gauge

Gauge charts ordinarily come in 3 assortments:

- ➡ For Steel (Mild or Carbon)
- ➡ For Stainless Steel
- ➡ For Aluminum

Each has its claim standard thickness for a given gauge.

Standard Thickness Values (Gauge to Thickness)

Here are the list of commonly utilized thickness values (in mm) for sheet metal:

➡ Steel (Mild or Carbon)

10 gauge \approx 3.42 mm

14 gauge \approx 1.9 mm

16 gauge \approx 1.52 mm

18 gauge \approx 1.21 mm

20 gauge \approx 0.91 mm

➡ Stainless Steel

10 gauge \approx 3.57 mm

14 gauge \approx 1.98 mm

16 gauge \approx 1.59 mm

18 gauge \approx 1.27 mm

20 gauge \approx 0.95 mm

➡ Aluminum

10 gauge \approx 2.59 mm

14 gauge \approx 1.63 mm

16 gauge \approx 1.29 mm

18 gauge \approx 1.02 mm

20 gauge \approx 0.81 mm

Why Thickness Conversion Matters?

For engineers and architects:

- ➡ Thickness specifically impacts quality, solidness, and load-bearing capacity.
- ➡ It controls shaping and bending properties.
- ➡ It influences welding, cutting, and wrapping up strategies.

Applications Based on Gauge Thickness:

- ➡ 10–14 gauge: Basic components, overwhelming brackets, car outlines, agricultural equipment.
- ➡ 16–20 gauge: Car body boards, material, ductwork, furniture, machines.
- ➡ Higher gauge (over 20): Light casings, walled in areas, decorative components, jewelry.

How to Measure Thickness in Your Workshop?

➡ Employing a Vernier caliper:

Open the jaws and put the metal sheet between them. The scale specifically appears thickness in mm.

➡ Employing a Thickness Gauge:

It's also called a sheet metal gauge apparatus, it's a specialized instrument with spaces labeled by gauge.

➡ Utilizing Ultrasonic Thickness Analyzer:

Non-destructive, it emits signals through metal and calculates thickness based on travel time.

Conversion from Gauge to mm or Inches: Formula (For Steel)

To approximate thickness in mm from gauge:

$$\text{Thickness (in mm)} \approx 3.42 - (\text{Gauge} \times 0.17)$$

This equation highlights the reverse connection, gauge increments, thickness drops.

Why Thickness May Vary Between Materials?

Distinctive materials have distinctive densities and generation strategies, yielding slight fluctuation in thickness for the same gauge.

- ➡ Stainless steel is denser than carbon steel;
- ➡ Aluminum is lighter and more slender at the same gauge

Why Sheet Metal Gauge Chart is So Important?

- ➡ Ensuring you select the right thickness for your application.
- ➡ Giving uniform wording over engineers, providers, and fabricators.
- ➡ Making a difference you maintain a strategic distance from under-engineering or over-engineering.
- ➡ Making estimating, sourcing, and fabric acquiring more exact.

✓ Always refer to a certified [sheet metal gauge chart](#) for your fabric of choice.

✓ Approve thickness physically in case you're uncertain, it maintains a strategic distance from expensive mistakes afterward.