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At Metal Sheets Ltd, we pride ourselves on offering an extensive collection of high-quality sheet metals that cater to various projects and needs. Our range includes premium copper and brass sheets in sizes up to 3000mm x 1000mm, as well as zinc sheets with maximum dimensions of 3000mm x 1100mm. For those seeking unique materials, we offer corten steel sheets in sizes up to 2500mm x 1250mm and pewter sheets in dimensions of 2000mm x 1000mm. In addition to these options, we carry a variety of other sheet metals, including aluminum, stainless steel, and bronze. Our processing capabilities include press brakes with a capacity of 3 meters and guillotines that can cut materials up to 6mm thick. We offer part sheets and custom-cut pieces through our MetalOffcuts store. Whether you need prototyping, one-off pieces, or large-scale production, we are equipped to assist. To help guide your selection process, we have provided a sheet metal gauge chart for reference. If you have any questions or require further assistance, please don't hesitate to reach out to us. The term "gauge" refers to the thickness of a metal sheet, with higher numbers indicating thinner sheets. The gauge system originated in North America and is based on a Browne & Sharpe metering system. However, it's essential to note that there is no conversion formula between gauge and inches, and even non-ferrous metals and steel plates can have different thicknesses despite having the same gauge number. A chart is provided below to convert sheet metal gauge sizes to millimeters or inches. Generally, as the gauge number increases, the material thickness decreases. The gage size table includes various materials, such as aluminum, brass, and steel, with corresponding decimal equivalents in inches. When specifying sheet metal, it's recommended to provide both gauge numbers and decimal thicknesses for accuracy. However, errors can occur if relying solely on gauge sizes, especially when using tables or approximate equivalents. The author recommends providing both specifications to ensure precise measurements. The provided table lists the weight and thickness of various sheet metals in different gauge numbers, including aluminum, brass, steel strip, and more. This chart provides a reference for determining standard gauge sizes for specific materials. The text discusses tolerances for sheet metal in different materials, including steel, aluminum, and stainless steel. For steel sheet metal, there are three types: cold rolled commercial quality (A366), hot rolled commercial quality (A569), and hot rolled structural quality (A570). The thickness tolerance ranges from 0.002 to 0.011 inches for the different types. For aluminum sheet metal, the tolerances are listed by thickness range, with a maximum deviation of ±0.028 inches for widths up to 36 inches and ±0.036 inches for widths up to 48 inches. Stainless steel sheet metal tolerances are also listed by thickness range, with a maximum deviation of ±0.030 inches for widths up to 36 inches and ±0.041 inches for widths up to 48 inches. The text also provides material specifications for steel sheet metal, including A366, A569, A570, A526 (zinc-coated), A526/A527 (galvanneal), and A591 (electrolytically zinc plated). Finally, the text mentions mechanical tolerances according to ASTM and ANSI standards. The use of gauge sizes in various industries is not standardized, leading to inconsistencies in the measurement of sheet metals. The standard thickness for different materials varies, and using the wrong gauge can lead to errors in fabrication design. This guide provides common gauge and size charts for popular sheet metal types, along with background information on measuring sheet metal. In Australia, typical sheet metal thickness ranges from 0.5 mm to 6 mm, with anything thicker classified as metal plate and thinner than 0.5 mm as metal foil. The measurement of thickness is often in millimeters or mils, but less common in everyday conversation. However, stainless steel, a versatile material used in various applications, has a standard gauge chart ranging from 30 to 60. The key to accurate sheet metal fabrication lies in understanding the differences in standard thicknesses for each type of metal, with varying classification above and below 0.6 mm. Standard steel is typically categorized into hot rolled and cold rolled steel. Hot rolled steel is processed at high temperatures to create a malleable and ductile product with a scaly finish and slight distortions, making it suitable for structural components and automotive frames. However, this process results in a cheaper material that lacks the smooth surface and strength of cold-rolled steel. Cold-rolled steel, on the other hand, is processed at high temperatures with additional processing to incorporate cold reduction materials, resulting in a more refined product with a smoother finish and improved strength. This type of steel is often used in precise applications such as aerospace components and home appliances due to its superior surface quality and durability. Galvanized steel sheets are fabricated to protect metal sheets from corrosion by coating them with a layer of molten zinc metal. These materials are commonly used for decorative fixtures, construction purposes, automotive parts, and home/kitchen appliances, offering resistance to corrosion and protection against environmental factors. Aluminum sheet metal is widely utilized due to its versatility, light weight, corrosion resistance, and workability. Its applications range from the packaging industry, particularly in food and beverage containers, to automobile bodies, cookware, and construction sectors. Zinc sheets were initially developed for industrial purposes such as chemical resistance, water resistance, and scientific applications. Over time, their use expanded into commercial applications, including cabinet tops, bar finishes, and other areas, showcasing the material's diverse capabilities. Copper materials have gained popularity in various architectural designs and industrial applications due to their unique properties. One notable example is zinc, which is often used for decorative purposes in France. Recently, zinc has also been incorporated into food-grade applications such as stove enclosures, kitchen cooking areas, and sink tops. Copper sheets are renowned for their high electrical conductivity, heat capacity, antimicrobial properties, corrosion resistance, malleability, and ductility. These characteristics have made copper a preferred material for welding fixtures, ground straps to prevent electrostatic discharges, plumbing fittings due to their corrosion resistance, power transmission components like sprockets and belt pulleys, and heat exchangers. Brass is an alloy of zinc and copper with a distinct yellow color, and its properties vary depending on the ratio of zinc to copper. Copper itself is durable and resistant to corrosion, making it suitable for tools like hammers used in delicate steel components, musical instruments due to their tonal quality, and technology applications that require high electrical conductivity. The gauge system, an identifier for sheet metal thickness, is based on weight rather than actual measurement. This means that different materials with the same gauge number can have varying thicknesses. The gauge system originated from the British wire industry before modern measurement systems were developed. When working with sheet metal, it's crucial to understand its gauge value to accurately determine its thickness. To do this, compare the material's gauge with a sheet metal gauge of matching material. There are two types of gauge wheels: one for nonferrous metals (without iron) and another for ferrous metals (with iron). Identify your gauge wheel type by reading the label on the wheel itself. The gauge wheel has gaps corresponding to numbers; insert the sheet metal into these gaps until it fits perfectly in one, then check the number associated with this gap - it should indicate the gauge of the sheet metal. Note that you're looking for the flat gap, not the rounded inner one. Sheet metals come in various sizes despite having standard thicknesses. Common sizes include 36"x96", 36"x120", 36"x144", 48"x96", 48"x120", and 48"x144". While sheet metal thickness is tied to weight ratios (lbs per square foot or kilograms per square meter), its size isn't directly related. This means an 18-gauge metal sheet can be found in different sizes, depending on the project's requirements. Knowing the required thickness is vital as it determines what fabrication processes can be used. Thinner sheets are suitable for specific applications and processes over thicker ones. Therefore, understanding the necessary thickness is critical in the design process. Some argue that sheet metal thickness is its most crucial parameter since it affects material constraints and temperature gradients directly. Processes like stretching, bending, and straightening also depend on the thickness. Selecting sheet metal thickness based on application and metal type is essential. For instance, if a very flexible sheet is needed but must retain some strength, choosing a thicker sheet would offset this flexibility while preserving its unique properties. However, it's equally important to consider other factors such as size, material properties, and application when designing a project. It's also worth noting that sheet metal stretches in length when bent, with the amount of stretch referred to as bend deduction, measured from the outside edges of the bend. The bend radius is the inside radius and depends on the sheet metal's properties and thickness. Bend allowance is the material added to ensure correct cutting or flat pattern cutting, determined using a formula involving thickness, bend angle, inside radius, and the K-Factor. Disclaimer: This article provides general information for informational purposes only. Kanyana Engineering does not guarantee ongoing completeness and reliability of this information. Always seek specific advice on your metal fabrication project to account for all variables. With a wealth of knowledge spanning multiple decades within the metal fabrication industry, Graham spearheads Kanyana Engineering's pursuit of innovative excellence. He not only focuses on cutting-edge technology but also prioritizes comprehensive integration, encompassing CAD, CAM, and MRP solutions to propel Kanyana forward in the sector's growth trajectory. Embracing Australia's manufacturing prowess, Graham is confident that the country will continue to thrive globally. As the manager of Kanyana Engineering's state-of-the-art facility in Mandurah, WA, Graham consistently delivers high-quality services to a diverse range of clients across commercial, industrial, and government sectors.

Stainless steel gauge thickness. Stainless sheet gauge chart. Stainless sheet metal gauge chart. Standard sheet metal gauge sizes. What are metal gauge sizes. 16 gauge sheet metal. Stainless steel sheet size.