Top Five Manufacturing Methods Used by China Metal Parts Suppliers

Detail Introduction :

Top Five Manufacturing Methods Used by China Metal Parts Suppliers

China metal parts are made using a variety of processes, including metal stamping, forging, and injection molding. Other processes include welding, wire edging, and hot or cold forging. Here are the top five manufacturing methods used by Chinese suppliers. You can use them to make your parts in the most cost-effective manner possible.

Die stamping

Whether you are in need of metal stamping services for your business, or you need to manufacture a large quantity of metal parts, China's manufacturing facilities offer a cost-effective solution. A wide range of products can be manufactured with this service, including automobile parts, electric power parts, and electronic appliances. A variety of manufacturing methods is available, and you can choose between metal stamping, hot stamping, or deep drawn stamping to meet your needs.

A high volume of dies can be produced with this method, but the complexity of the design can raise the price per unit. It can be used to manufacture everything from tiny components to massive propellers. Although a high-volume manufacturing process, die stamping is still more economical when compared to sand casting, and if you need to produce a large number of small parts, die stamping is the best option.

Metal stamping China metal parts is a manufacturing process that involves converting normal sheet metal into a variety of shapes and sizes. Various forming techniques are used, including punching, bending, folding, and melting. A large number of industries use this process to ensure parts meet their exact specifications.

Die stamping is a highly automated process, which is able to produce complicated pieces without interruption. It is also able to minimize errors and reduce total scrap waste. Furthermore, stamping machines use a series of dies that perform multiple operations during each press stroke. In addition, some dies are large enough to produce more than one piece part per cycle, and some machines can process as many as 1,500 strokes per minute.

Die stamping on china metal parts uses a process known as progressive die stamping. Traditionally, this process was limited to one operation at a time and required a different tool for each operation.

Moreover, this technique is not suitable for parts that require intricate designs, and it results in long turnaround time and high labor costs.

Four-slide stamping

A four-slide metal stamping machine is a versatile machine that can produce intricate shapes and many types of metal parts. It works by utilizing four bevel gears to move the workpiece and four cams to bend and stamp from four different angles. The process is highly efficient, and allows for the creation of many different parts in just one step.

Custom manufacturers can create four-slide stampings in a variety of materials and sizes. Various material types are used, including brass, music wire, oil-tempered steel, Inconel, Monel, titanium, and beryllium copper. Four-slide stampings can also be designed with a variety of springs, including compression, extension, and torsion.

Four-slide stamping machines are cost-effective, and can eliminate the need for high-speed power presses. They can produce parts at speeds of up to 15,000 pieces per hour, depending on the size and complexity of the parts. In addition, the process can produce less scrap than power press machinery, meaning that production costs will be reduced.

When sourcing custom stamped metal parts from China, it is important to be able to communicate the specific requirements of your project. Once you know the volume of parts you will need, the China manufacturer will be more willing to accommodate your needs. Communicating with your supplier on the level of detail and the quality of the products will be vital to your overall satisfaction.

The cost of manpower is a major factor in the cost of manufacturing. The more automation a manufacturer has, the less manpower it requires. A good manufacturing engineer can optimize design parameters to reduce costs and maximize efficiency.

Wire edging

Wire edging is a method of joining two sheets of metal with one another. The technique involves rolling the edges of the sheet metal on a metal wire. The result is a stronger and more durable edge. The process gives the parts a more uniform look, and it is easy to install and durable. Wire edging is available in several materials, including carbon steel, stainless steel, aluminum, and galvanized steel.

Hot or cold forging

Cold forging is a process that uses pressure to form metal parts. The speed of cold forging machines varies from seven pieces per minute to over 400 pieces per minute. These machines use a series of tools that shape the metal. This type of forging is also known as cold extrusion and has several advantages over hot forging. Cold forging machines are available at a wide price range, depending on their size and technology. The cost of cold forging equipment comes from the small amount of scrap that is produced.

China metal parts manufactured in this way are stronger than parts produced by casting processes. The compression force used in the forging process makes the internal grains of the metal uniform, which improves strength properties compared to castings. China's hot forging process is suitable for steel, iron, and some aluminum alloys. In some cases, this process prevents the steel from hardening, which is an important factor in producing parts that withstand pressure. Moreover, many factories in the country have in-house heat-treating facilities.

Cold forging is more efficient than hot forging. Since the cold process doesn't require heating the metal, it requires less equipment and a lower overall production cost. Cold forging also yields parts with a high surface finish. It can also produce parts with complex shapes and high dimensional accuracy.

Cold forging reduces labor costs and reduces secondary processing. It can produce parts at high rates, ranging from a few to several thousand parts per hour. It also requires the use of specialized tools that must be sturdy and durable. Cold forging also increases the strength and durability of the workpiece.

Fine blanking

The fine blanking on China metal parts has been used for over a thousand kinds of products. Some of these products include aircraft brake linings, motor car drive sprockets, tanks, and friction plates. The fine blanking material has a strength of 700 to 800 MPa and can be as thin as 19mm.

The fine blanking process forms high-strength materials by varying the forming force. In this process, the load on the die is high in the early blanking stroke and decreases later on. This reduces the unnecessary mold load that is produced by the forming force. Furthermore, the forming force does not fracture the material, and it reduces unnecessary mold loads.

The Chinese fine blanking technology has long been stable and conforms to relevant technical requirements. It has also absorbed foreign technology and improved its own technology. The quality of fine blanking parts is increasingly better and more precise. Fine blanking is the most cost-effective production method for batch production. Fine blanking is the process of shaping metal into complex shapes by applying three different types of force: shear, plastic, and compression.

Fine blanking is a more complex process than general stamping. It allows for tight tolerances because there is no fracture zone when the blank is sheared. It also allows for more precise dimension tolerances, and can eliminate secondary operations. This process is faster, more accurate, and requires no secondary work.