

Invention principle of electric discharge machining machine for sinker

Detail Introduction :

When it comes to the invention of electric discharge machining machine for sinker, you can't afford to overlook these two principles. Because of these two mechanical principles, CNC and EDM are collaborating with each other nowadays to achieve the goal of a high-precision cutting and milling for sinker. Compared with other cutting processes, EDM is preferred by many machining industry in making precise cuttings for sinker due to its low hogging, high finishness and high productivity.

Invention Principle of Electric Discharge Machining Machine For Sinker

Electric discharge machining machine (EDM) involves the use of a voltage-regulated, high-frequency spark to shape an electrode. The sparks generated by the EDM are small in size and are typically emitted by a tool called an anode. These particles are discharged into a workpiece, creating a gap between the workpiece and the tool. This process is called "electric discharge machining" and is a versatile machining process.



An EDM machine uses controlled electric sparks to cut and erode material. The workpiece never touches the electrode, which creates an insulating gap between the workpiece and the electrode. The amount of material removed by each spark is relatively small compared to the area impacted. The process also works well on plastics, as the materials are easily sanded. The electrical discharge machining machine for sinker can be used to manufacture plastics, molds, and a variety of other items.

The EDM works by transferring a small amount of heat energy into a micro-channel. The temperature of the discharge is up to 10000 degrees Fahrenheit. The heat caused by the discharge melts a small

portion of the metal material. The metal particles condense into solids and are rapidly taken away by the working fluid. The workpiece is left with a tiny pit mark. The electrodes are then suspended, and the working fluid returns to its insulating state.

The electrode and workpiece are immersed in a fluid that has a high temperature. The working fluid charges the discharge gap with a pulse of voltage and then bursts the working fluid. The workpiece and electrode are separated by a gap the width of a human hair. As the workpiece is melted, the working liquid takes the metal particles away. After the workpiece is melted, a small pit mark is left on the surface of the workpiece.

The electrical discharge machining machine for sinker has been in use for more than a decade. The EDM can be used for a variety of applications and has a high level of versatility. It uses a series of electrodes, which is pressed into the workpiece. The electrodes are in contact with the workpiece at the bottom of the tool and are pressed into the workpiece. Each pulse erodes a tiny amount of metal. The entire process is repeated over, allowing it to create complex shapes with complex shapes. The electric discharge machining machine for sinker is a high-speed machining process. The electrodes are made from graphite or copper. The material is chosen based on its resistance to erosion and its conductivity. Graphite is easier to machine than copper, but copper is stronger and more suitable for sinker EDM. The working fluid holder controls the feeding of the tool electrode to the workpiece.



An EDM is used to size materials. The spark-driven tool electrode is immersed in the working fluid. The working fluid is charged into the discharge gap. The tool is fed through the gap by an automatic control system. The voltage generated by the electrical discharge breaks the working fluid and creates a spark. This action causes the sinker to break and form a hole. The resulting slit is the welded sinker.

The working fluid and the electrode are immersed in an insulating liquid. The EDM cuts the material, which results in a deep hole. The material is abrasive, and the electrode is charged with a high-frequency spark. The slit is connected to an electrically-operated circuit. The workpiece is not contacted. A gap of a few millimeters separates the electrode from the workpiece.

A large amount of heat energy is instantaneously concentrated within the micro-channel of the discharge. The discharge can reach a temperature of up to 10000 °C. This vaporized metal is melted into the working fluid. It quickly condenses into solid metal particles and is removed from the workpiece. Once the workpiece is cooled, the resulting hole is a pit.

To sum up, we can see that the principle of EDM is to induce electric arc to melt the metal surface and form a characteristic pore feature on the article surface to increase surface roughness. And it can be seen that this principle is used in CNC as well as in other types of EDM machine. Thus, CNC has a strong foundation for establishing its building standard on the basis of EDM machine .