

# ZNC EDM Machine - How to Select the Right Wire

## **Detail Introduction :**

When purchasing a ZNC EDM Machine, there are a few important factors that you should know before making your purchase. Learn about Wire EDM, Die-sinking EDM, Hole drilling, and the Electrode material. Then, select your machine carefully. Once you have made your selection, you'll be well on your way to achieving the highest quality part. Once you've chosen the right machine, you can move on to other tasks with confidence.

## **Die-sinking EDM**

An Electrical Discharge Machine (EDM) Die-sinking machine can be used to produce molds and dies. The electrode and workpiece are submerged in a dielectric fluid. A spark emitted from the electrode causes the material to be vaporized and melts. The workpiece is then eroded by the electrical current. The electrode is automatically lowered as the base metal erodes. The machine's settings control the electrode duty cycle.

The ZNC Die-sinking EDM machine features numerical control and super low-wear circuits. It was designed for both minor cavity sinking processes and medium-sized mold production. This machine is based on proven technology and is space-saving. It also features a rigid casting and massive contact guides for maximum stability. These features ensure precise and efficient machining. The ZNC Die-sinking EDM machine provides precise results while reducing costs.

A die-sinking EDM machine is an excellent choice for many industries. It can reproduce matrices, injection molds, and other complex shapes. Because this machine is able to run continuously, it offers excellent performance across all sizes and shapes. You can easily set the depth and parameters for desired results, and the machine will do the rest. Although all machines require maintenance, it's worth considering the high-quality benefits this machine can provide.

The Die-sinking ZNC EDM process is a low-volume production process that requires a high degree of accuracy. Surface finish is approximately 0.32-18 microns. It is most commonly used to create tooling for injection moulding parts. A lower voltage and slow cutting speed are necessary for this process. It's also possible to create internal and external profiles on a ZNC EDM machine.



## Wire EDM

The benefits of a ZNC Wire EDM Machine outweigh the downsides of other similar machines. This type of wire is especially useful for high-volume production, difficult-to-flush workpieces, and for machining against a variety of materials. This article will discuss how to select the right wire for your project, as well as some of the common types of wire. Read on to learn more about these machines and their advantages.

A ZNC Wire EDM Machine can be used to drill several different types of components, including hydraulic cylinders, turbine blades, and locating pins. It can even drill protective wire holes in hex nuts. ZNC Wire EDM Machines have numerous applications and can meet a variety of customer specifications. However, if accuracy and surface finish are not crucial, a ZNC Wire EDM machine may be a better choice.

With its variety of applications, a ZNC Wire EDM Machine will allow you to produce parts of any size. You can achieve higher productivity with this type of machine and achieve better results with speed, precision, and surface finish. The wire EDM is also able to machine complex and precision components. The deionized water solution is sent through the electrode at a pressure between 50 and 100 kg/cm<sup>2</sup>. To control the power supply, you can set the peak current, on time, and capacity parameters. Once the process is complete, the discharge activates to begin drilling.

The ZNC Wire EDM Machine is ideal for a variety of applications, from tool making to mold and die sinking. The die sinking wire makes it possible to replicate the shape of matrices and injection molds with precision and accuracy. These machines are also designed for continuous use and provide excellent performance no matter what size your parts are. You can set the maximum depth of working to match your needs. These machines will need maintenance once in a while, so make sure you have the time to schedule a maintenance visit.

## Hole drilling function

The ZNC EDM machine has hole drilling function that makes the drilling process faster and easier for its users. This machine is suitable for drilling small and deep holes in various conductive materials. You can use the ZNC EDM machine to drill injection nozzles, locating pins, turbine blades, ball bearings, and protective wire holes in hex nuts. With hole drilling function, you can make holes in various conductive materials including metal, plastic, ceramic, and ceramic.

The ZNC series consists of high-speed EDM machines with hole drilling function. These machines are capable of drilling with diameters ranging from 0.1 mm to 3.0 mm, or 0.004 in to 0.118 in. These

machines are equipped with 10 um extended-life filters, resistivity sensors, and ION exchange resin, which ensure reliable, smooth machining even during prolonged operation. This high-end machining machine is ideally suited for the processing of small-scale aircraft and engine parts.

The Novidrill EDM drill uses a low-cost electrode tube, which is usually copper or brass. The Novidrill is a unique EDM drill that can drill holes in electrically conductive materials quickly and precisely. Its hole diameter and depth diameter ratio can reach 300. The Novidrill can drill holes on an inclined surface workpiece as well. This machine has a high-speed EDM hole drilling function, which eliminates secondary deburring processes.

Another benefit of hole drilling EDMs is the fact that the electrode never touches the surface of the workpiece. Unlike drills, EDM drills produce no burrs, which means that the job is completed faster and saves the user time and money. Besides, ZNC EDM machines come with excellent after-sale service. They can also be easily adapted to your production process. So, if you're looking for an affordable EDM machine, consider Amasun's products.

## **Electrode material**

The best electrode material for your ZNC EDM machine will have very little variation in particle size and be resistant to thermal wear. Graphite, on the other hand, will be more efficient than metallic electrodes in this regard. Graphite has higher melting points and can be used to produce very fine, mirror-like finishes. However, you should make sure that you choose the right material for your machine, as not all materials are created equal.

Most manufacturers of EDM machines recommend using graphite as the electrode material. But if you're not familiar with the different grades, selecting the right one can be a challenge. If you're not familiar with graphite grades, you might end up with an electrode material that has lower performance or doesn't perform as well. Listed below are a few things to look for when selecting an electrode material for your ZNC EDM machine.

A quality electrode material is important when it comes to the quality of the work you're going to do. Graphite and pure copper are excellent options for your machine. You can even have it custom-machined for a unique design. This type of electrode is great for prototyping and production parts. To get started, start by processing your graphite electrode. Then, follow up with the rest of the process by buying the right material for your ZNC EDM machine.

Another consideration is the type of metal used as the electrode. Copper alloy electrodes offer high strength and low tool wear, but are more expensive than tungsten carbide or graphite. Graphite, on the other hand, is softer than copper. It's better for small cavities, but not so good for large ones. Copper tungsten sintered electrodes are another option. They have low wear rates and good electrothermal conductivity.

## **Manufacturing process**

A ZNC EDM machine is a specialized tool that can drill openings in electrical discharge work. The machine's pulsating high-frequency current removes a thin layer of material from a workpiece, with the tool immersed in a dielectric fluid. The workpiece is fed into a suitably shaped tool by means of a feed mechanism. Because this process does not require finishing, it has numerous industrial applications.

The ZNC electrical discharge machine is made in India by Sparkonix. Its machining characteristics are controlled through settings, such as voltage and current. A special circulation system is built into the machine to keep the machining area flush. The electrode is then mounted on the workpiece and fed through an automatic feed system with a spool. This process is repeated repeatedly to finish the workpiece. The machine has a built-in servo controller that controls the distance between the electrodes and the workpiece.

Another key difference between a ZNC EDM machine and a traditional one is the electrode feeding system. With the former, a rod electrode is mounted on a tool post. The electrode is then loaded with a dielectric media such as deionized water. The dielectric medium is circulated via a pumping system. The control unit integrates with the CNC program and controls the flow of the dielectric. The electrode is also used as a tool in the EDM machining process. Servo systems may also be added to the

control mechanism, which keeps the gap between the workpiece and the electrode. The ZNC EDM Sinker is the most popular type of EDM machine, a multi-axis tool used in mold and tool making. Its die sinking feature allows it to replicate matrices and injection molds. ZNC EDM machines are designed to provide excellent performance in all sizes. They feature imported Sanyo servo motor control and Taiwan-made ball screw with 0.005mm resolution. They also feature a resin sand casting body and inner stress removal.