

EYE ON IT

Your filters are an integral part of your edm machine longevity and performance. In this day and age, it's a fools adventure sending out quotes to 5 suppliers and buying the lowest price.

The quality of the products in the market today are from one extreme to the other. Name brands kept the name but not the quality. Many suppliers have no idea what they are selling but sell it on price. Ten years ago, many service people of today would not have lasted in their job a day; with their limited knowledge of the edm process and consumables.

You paid a high price for your machine. As a former machine tool distributor, I am sure you probably had test cuts done before buying, put isolation plates under your machine, you may even have added a buck booster and line conditioner. You have a considerable investment, so for this reason, I don't understand clients that buy the cheapest products they can find. Why go through all of that effort and time to lose all the benefits on cheap products?

There is a big difference between value and price.



Filter Facts

As machines have become better at efficiency, faster in speed and closer in accuracy, the filter becomes a main player in the interaction.

The dielectric, whether water or oil, has several jobs it must do to make the edm process work. It must insulate the workpiece from the electrode, It must provide cooling and temperature stability during the cut and it needs to flush away the debris from the cut.

One of the biggest factors with the newer machinery is the gap has been reduced to increase surface quality but making much smaller "chips".

The smaller particles, if not removed, create havoc in the gap. These particles can cause premature sparking, low energy sparking, low quality surface finishes, wire breakages and the most expensive item: accelerated wear on all the internal machine components.

It is important to understand that using a cheap filter or a filter with a larger micron rating is not saving money. They may

increase the filter life but at the expense of the machine components.

All edm machine manufacturers spend a lot of time issuing articles dealing with the maintenance of the edm. In every case, filters are a main focus. Unfortunately, the cost of not paying attention to the edm filter does present itself immediately. It is a slow death of the machine and the entire edm process. One which will exceed any cost savings that were thought to be gained.

You need to remember that your machine contains many very small and delicate components. All of which need to function quickly and repeatably. Further, your machine cuts with very definitive shape electronic pulses tuned to a clean machine. As the machine gets dirty these items send errant signals, fail to operate as designed thus reducing your accuracy, surface finish and performance.

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