



## Your One-Stop Shop for **EDM SUPPLIES**

MWI is your trusted partner for EDM graphite, consumables, and machined electrodes.

We are a leading provider of graphite machining solutions dedicated to delivering the highest quality products and customer experience.

ISO 9001:2015 & ITAR Certified



# TABLE OF CONTENTS

About I

Capabilities II

EDM Graphite Grades | Graphite Machining III

EDM Consumables IV

Working with MWI V

# WE ARE MWI



No matter where you are in the manufacturing process,  
MWI will exceed your expectation, one  
custom solution at a time.

# I. ABOUT



## MWI, Your Trusted Partner for EDM Graphite, Machined Electrodes, and EDM Consumables

Whether you require custom graphite electrodes, EDM wire supplies, or dielectric fluid, we cater to every unique need with a strong commitment to quality and excellence. We source, rigorously test, and carefully select our products, to ensure that we offer you only top-grade EDM supplies. Our mission is not just to be a supplier, but to be your strategic partner in maximizing output and success in your machining operations.

Moreover, quality consumables also lead to longer machine life, lower maintenance costs, and improved part finish, representing a significant saving in time and money over the long run. By leveraging our consumables, you set yourself up for an efficient, economical, and reliable production process that is second to none. With MWI, you don't just get consumables; you get a commitment to excellence and a partner dedicated to your success.

## II. CAPABILITIES



Our promise at MWI is to deliver excellent customer service, exceptional value, and product quality, driven by our continuous investment in research and technology.

To keep pace with the changing dynamics of the precision manufacturing industry, we continually improve our processes. We aim to be your one-stop shop for all EDM supplies, backed by our technical expertise & customer-centric approach.

Our capabilities cater to the diverse needs of various industries, which include:

Tool & Die
Mold Making
Aerospace
Medical
Oil & Gas
Automotive
LED

### EDM Consumables

- **Graphite:** Stocked in standard plates, diameters, & precision ground blanks; custom machining available.
- **EDM Metallics:** Includes brass, copper, tungsten, copper tungsten, tellurium copper silver tungsten, & tungsten carbide.
- **Brass/Copper Tubes:** For hole poppers & small hole EDM. O.D. : 0.2mm – 6mm; 12" or 16" long.
- **Bedra Wire:** Brass and coated EDM wires for finish quality, speed, longevity, and value.
- **Black Diamond Tooling:** CVD-coated end mills for graphite, ceramics, aluminum, & plastics.
- **EDM Tooling:** Distributor of System 3R® & EROWA® Tooling Systems
- **Dielectric Fluids:** DC-100 and IonoPlus 3000-US synthetic oil for die-sinking EDM.
- **Dynamic Filtration Filters:** 1–25 microns; plastic or metal wrapped.
- **Resin Regeneration:** Services for all resin tank/bag sizes.
- **Tapping Electrodes:** Graphite or copper-impregnated; available in standard, orbital and metric options.



## III. GRAPHITE GRADES



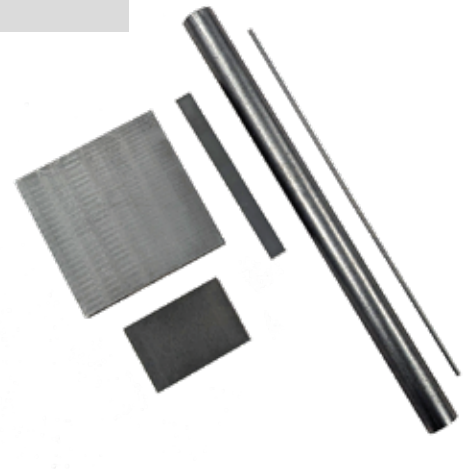
At the core of MWI's EDM Graphite materials is our signature Electro Carb "EC" Graphite.

- EC-4
- EC-12
- EC-14
- EC-15
- EC-15C
- EC-16
- EC-17

MWI also offers the exclusive HK graphite. Our HK material is a perfect option for when super fine surface finishes are required.

- HK-6
- HK-6C

There's an EC grade  
available for every application!



## GRAPHITE MACHINING



**MWI stands at the forefront of the carbon and graphite machining industry.**

We offer cutting-edge technology and software to stand as your go-to choice for advanced graphite machining. We invest our time in ensuring precision, efficiency and quality in every project. MWI strives to offer expertise in carbon and graphite machining, because your success is our priority.

We offer a wide range of:

- Diameters
- Plates
- Precision Ground Blanks
- Machined to print graphite electrodes



## IV. EDM CONSUMABLES



### EDM Metallics

MWI supplies a broad range of electrode materials including brass, copper, tungsten, copper tungsten, silver tungsten, tungsten carbide, and Telco (tellurium copper). We can machine these materials for you or you can choose to machine them yourself depending on your specific needs.

- Tellurium Copper (TELCO) Plates & Diameters
- Copper Tungsten: Plates, Sheets, Rods & Tubes
- Tungsten Carbide: Tubes & Solid Rods
- Tungsten: Wire, Rods & Plates
- Silver Tungsten
- Brass & Copper: Small Diameter Rods



### Brass or Copper Tubes

Ideal for small-hole EDM, these tubes deliver precision and accuracy. Our tubes are extruded with diameters ranging from .2mm to 6mm and come in lengths of either 12", 16" and 24"

- Single Hole & Multi-Channel Tubing



### Tapping Electrodes

MWI offers high-quality tapping electrodes for EDM, available in standard and orbital types, as well as metric sizes. These electrodes are made from EC-15, EC-15C, and copper tungsten, with custom options available upon request.



## IV. EDM CONSUMABLES



### Black Diamond CVD End Mills

The Black Diamond brand are premium end mills with the following features:

- H6 Tolerance on the shanks (+0.0000", -0.0005") for controlled T.I.R. (1/3 of industry standards)
- Proprietary geometry for increased tool life, increased surface finishes and reduced harmonics
- Nitro 3 – A new generation of Diamond (CVD) Coating. This coating provides for long tool life and a new generation of productivity

### Benefits

---

Longer life on finished tools

---

Higher productivity from increased feeds & speeds

---

Improved overall cost of tooling

---

Decreased down time for tool changes

---

No harmonics



- Fractional End Mills
- Mini Series
- Metric – 3mm Shank
- Metric – 4mm Shank
- Metric – 6mm Shank
- Shredder Style Cutter

MADE IN   
**USA**

**MOST ITEMS IN STOCK AND AVAILABLE FOR IMMEDIATE SHIPPING.**





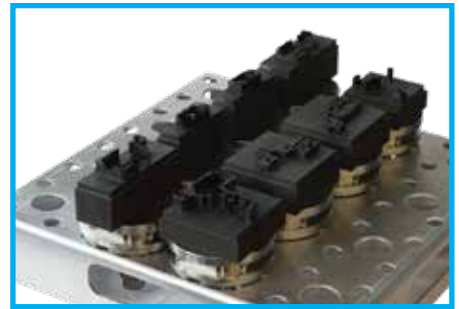
## EDM Tooling - Ready to Run Product Line

MWI's commitment to the growing needs of automation and lights out machining cells, is demonstrated by our new graphite Ready to Run product line. This product range includes the complete selection of EROWA® and System 3R® solutions designed for sinker EDM tooling. You can find both standard & custom sizes.

### EROWA for Sinker EDM Automation

EROWA provides you with a full range of products – everything fits together!

- Pre-machined T-Slot design
- Electrode holders and chucks
- Custom and pre-drilled hole patterns available



### System 3R for Sinker EDM Automation

Fitting the machines with the same reference system means that electrodes and workpieces can be moved between the machines without subsequent alignment and checking – One Minute Set-up.

- Custom and pre-drilled hole patterns available
- MacroJunior & MacroCombi – Kit & Accessories
- Electrode holders and chucks
- Pre-fitted pallets and coins
- Pre-machined T-Slot design
- User Kit, 3R-468.31-S



Interested in our Ready to Run product line? Call us at 1-800-966-4694 or email us today!  
[sales@mwi-inc.com](mailto:sales@mwi-inc.com)

# BEDRA EDM WIRE



## We carry the full line of Bedra EDM wire!

Since the beginning of wire EDM, Bedra has been an innovator in manufacturing processes of EDM wire. They have developed a complete product line of high quality brass and coated EDM wires to achieve excellent performance results. Speed, precision and accuracy are at the forefront of their offerings. Depending on your application, MWI can provide assistance in selecting the proper wire.

Bedra utilizes precise German technology and virgin raw materials in the manufacturing of all their products. They incorporate this technology with the intelligent evolution of modern-day production.

As a partner of Bedra, MWI can offer support through:



- Global Supply
- Technical Training
- Product availability in multiple warehouse locations for just-in-time delivery

## Product Features

- Contaminate Free
- Made with virgin raw materials
- Available Worldwide
- German Engineered
- Sustainability
- Wide range of applications
- Price-Performance Ratio



## Classic Portfolio

- Cobracut®: Soft zinc-coated
- Cobracut® Type A: Hard zinc-coated
- Cobracut® Type G: For highest precision
- Megacut® Type A: For highest precision
- Megacut® Plus: For high cutting performance & precision
- Topas® Plus H: High speed
- Topas® Plus X: High speed
- Broncocut® Type X: Fast & precise EDM wire for Charmilles

## Super-fine Wires

- Microcut®: For sophisticated processing in microEDM
- Microcut® CCA: For high demands in microEDM
- Microcut® MF2A: For micro EDM applications requiring higher tensile strength
- Microcut® SF: Gamma-phase fine wire
- Confrecut ONE: Contamination-free wire erosion

## Bedra EDM Wire Manufacturer's Compatibility

Application	Type of wire	OEM							
		Fanuc	GFMS	Makino	Mitsubishi	ONA	Seibu	Sodick	Vollmer
Standard	betterbrass ONE.9	x	x	x	x	x	x	x	
Very high precision / very good surface quality	topas plus G		x						
	cobracut A		x						
	cobracut								x
Highest precision / best surface quality	cobracut G		x						
	megacut A	x		x	x	x	x	x	
High cutting rate / high precision	topas plus H		x		x				
	megacut plus	x							
	topas plus X		x						
	broncocut X		x						
Highest cutting rate / high precision	gapstar ONE.9	x	x	x	x	x	x	x	
Taper machining	gapstar ONE.5	x	x	x	x	x	x	x	
	gapstar ONE.4	x	x	x	x	x	x	x	
	cobracut		x						
	cobracut G		x						
	betterbrass ONE.5	x	x	x	x	x	x	x	
Fine wires	microcut CCA	x	x	x	x	x	x	x	
	microcut SF	x	x	x	x	x	x	x	
	microcut MF-2A	x	x	x	x		x	x	

# DIELECTRIC FLUID



MWI offers two types of dielectric fluids: our proprietary DC-100 and the high-quality IonoPlus® 3000-US synthetic oil designed for die-sinking EDM.

## DC-100

DC-100 is a premium dielectric fluid formulated specifically for Electrical Discharge Machining. It is characterized by its low viscosity (32.1 SUS @ 100° F), high dielectric strength (45kv per 2.5 mm) which prevents premature dielectric breakdown.

### Product Features

- Clear & Odorless
- Low Viscosity
- Less fuming during discharge
- 99.9% Paraffin
- High flash point (244° F) to prevent ignition of fluid
- Highly refined with "Triboderm" added to aid in skin protection



Available in  
55 gallon drums  
& 5 gallon pails

### Property Comparison Between DC-100 & EDM-244

	MWI: DC-100	Commonwealth: EDM-244
• Viscosity (@100 F) SUS	32.1	32.1
• Viscosity (@40C) cSt A.P.I. Gravity	52	52
• Specific Gravity (@60 F)	0.771	0.78
• Flash Point (deg. F pmcc)	244	244
• Flash Point (deg. F COC)	272	259
• Dielectric Strength (KV / 2.5 mm)	47	47

### HELPFUL TIPS

- DC-100 can be mixed with Rustlick 250 & Commonwealth 244.
- DC-100 should **NOT** be mixed with IonoPlus or other "synthetic" oils.

## IonoPlus 3000-US

IonoPlus® 3000-US is a high performance dielectric fluid made with a blend of high-purity synthetic products and enriched with satellite electrodes. Its patented formula includes discharge-intensifying and wear-reducing additives, along with ageing inhibitors. IonoPlus provide effective flushing and excellent disruptive strength. IonoPlus has been tested to concern no operational health hazards or allergic symptom concerns.

IonoPlus provides effective flushing and impressive disruptive strength, making it suitable for a variety of tasks, ranging from intricate finishing processes to highly efficient rough cutting.

### Product Features

- Up to 20% higher removal rate
- Long service life of the dielectric
- Reduction of electrode wear
- Good filterability
- Better surface finish
- Low in aromatics



Unlike conventional mineral oil products, this combination of highly refined synthetic products is enriched with satellite electrodes in a special blending process. As a truly universal dielectric, IonoPlus 3000-US is suited for all operations from the finest finishing processes to the most effective rough cut. Besides having the best possible effectiveness in flushing and the greatest possible disruptive strength, it offers a whole series of unique advantages.

IonoPlus 3000-US dielectric has been thoroughly tested by the Institute for Research and Control of Work Materials in Baden-Württemberg/Germany in respect to operational safety and industrial hygiene. Toxic or allergic symptoms should not occur during use. A tolerance limit in the air surrounding the place of work (MAK value) is not reached. IonoPlus 3000-US dielectric can be used with all conventional filters. The regulations for flammable liquids (VbF) do not apply to IonoPlus 3000-US.



# DYNAMIC FILTERS



Dynamic Filtration EDM filters offer a range of competitive advantages that benefit EDM machine users in terms of efficiency, cost savings, and the quality of finished products. Their high filtration efficiency and other features make them a valuable choice for companies looking to optimize their EDM processes.



## Product Advantages

- **Enhanced Filtration Efficiency:** Captures and removes fine particulate matter and debris from dielectric fluid, ensuring consistent machining performance and surface finish.
- **Extended Tool and Electrode Life:** Removes contaminants to prolong the lifespan of electrodes, reducing downtime and costs.
- **Improved Surface Finish:** Prevents contamination in dielectric fluid, resulting in high-quality finished products with minimal post-processing.
- **Optimized Machine Performance:** Ensures clean, consistent dielectric fluid to prevent workpiece pitting and DC arcing.
- **Maintenance Costs:** Minimizes the need for frequent EDM machine cleaning, leading to cost savings and increased uptime.
- **Environmental Compliance:** Designed to meet or exceed environmental regulations, supporting sustainable manufacturing practices.
- **User-Friendly Design:** Engineered for easy installation and maintenance, reducing machine downtime.
- **Broad Product Offering:** Filters available for all EDM machine makes and models in 1, 3, 5, 10, and 25 microns.

## V. WORKING WITH MWI



Where we truly distinguish ourselves in the EDM consumable landscape is our commitment to consistency. MWI's expertise in material selection is our primary differentiator in this industry. We source graphite exclusively from one supplier, fostering an unbroken chain of quality that assures consistency in every batch.

At MWI, we understand the significance of high-quality EDM consumables for your productivity and finished product. We are committed to attaining the highest levels of quality in all products and services we provide. We firmly believe that success is attainable through high-quality machining, competitive pricing, quick delivery with short lead times, and exceptional customer service to our valued customers.

---

Interested in any of our EDM consumables, reach out today or send us a Request for Quotation to [sales@mwi-inc.com](mailto:sales@mwi-inc.com)







<https://mwi-inc.com>

### Contact Locations

Corporate Office

1269 Brighton-Henrietta Town Line Road  
Rochester, NY 14623

Northeast Division

61 Industrial Lane  
Agawam, MA 01001

Midwest Division

623 South Laurel Street  
Mishawaka, IN 46544

West Division

2000 West Gaylord Street  
Long Beach, CA 90813