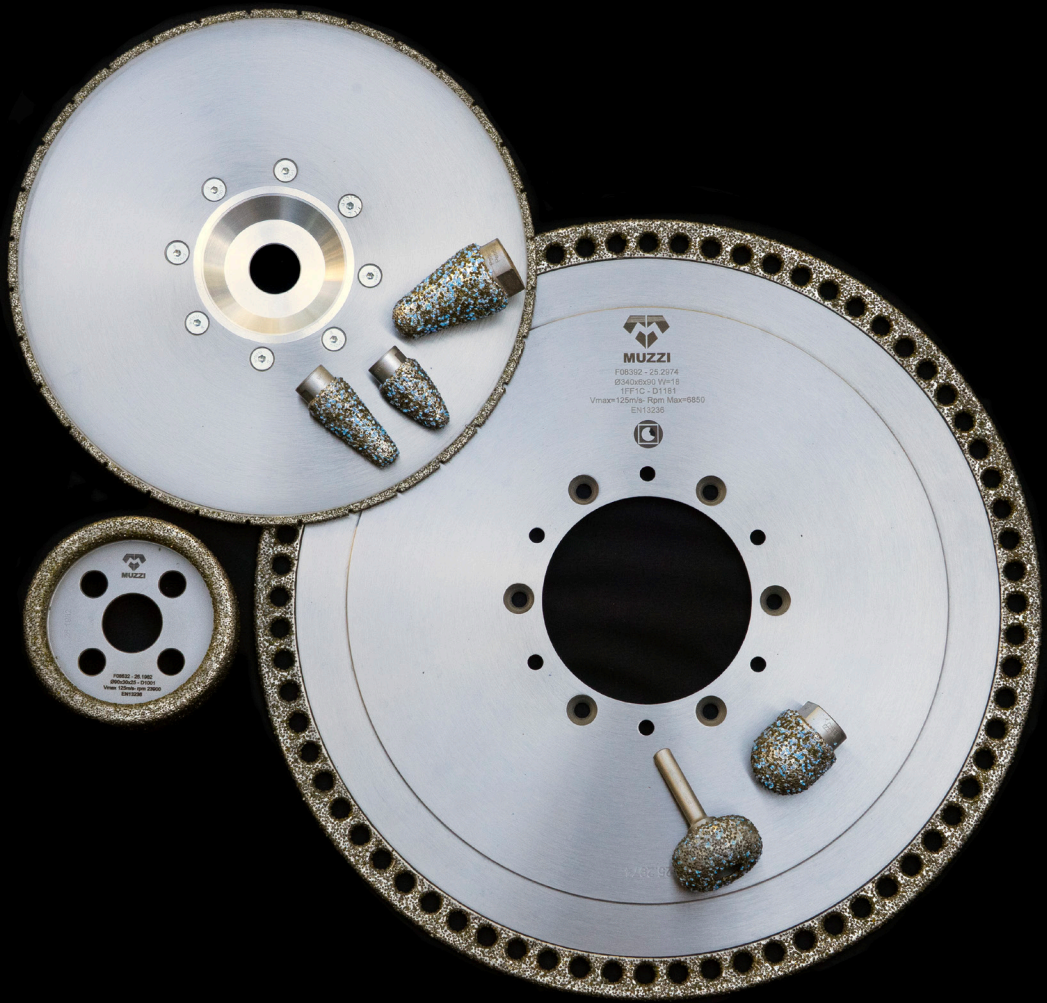
MUZZI

NEXT-GENERATION ELECTROPLATED DIAMOND TOOLS

ADVANCED SUPERABRASIVE TECHNOLOGY FOR CAST IRON GRINDING



Muzzi presents an innovative advancement in electroplated grinding technology. Engineered specifically for automatic and manual foundry fettling, our new proprietary diamond mixtures deliver exceptional material removal, extended tool life, and significantly reduced operational costs.

USER ADVANTAGES & VALUE PROPOSITION

While the initial purchase cost of these specialized superabrasive wheels is slightly higher, the return on investment is immediate and substantial:

- **Increased feed rates**: enhanced sharpness and thermal resistance allow higher machine feed rates without burning or glazing.
- **Reduced deburring times**: faster cycle times directly increase output capacity across automated and manual fettling stations.
- **Lower total production costs**: extended tool longevity reduces wheel consumption, setup labor, and costly machine downtime.

TAILOR-MADE ENGINEERING SOLUTIONS

At Muzzi, we specialize in developing customized solutions tailored directly to your specific manufacturing parameters. Our engineering team utilizes advanced 3D CAD modeling and finite element stress analysis to design, prototype, and produce custom tools for your equipment.

- **Custom geometry:** tailored wheel profiles, cups, pins, and disc shapes engineered to match your casting features.
- **Spindle Mounting Options**: available with standard bored hubs to fit all the grinding machines or with our company standards : Muzzi-Fit threaded mounting, 25-Fit, 30-Fit, 70-Fit and 90-Fit.
- **Adapters**: our cast iron program is completed with adapters according to ISO and HSK international standard spindles. Custom adapters are developed and produced to fit any specific exigence.

MUZZI
BLAU

MUZZI
GELB

1. MUZZI BLAU PATENT PENDING

Muzzi Blau is an engineered blend that combines premium synthetic diamond crystals with blue ceramic abrasive particles of similar grit size.

- **Optimized crystal spacing**: the precise ratio of ceramic particles creates uniform gaps between diamond grains, allowing swarf and debris to clear rapidly.
- **Anti-clogging performance:** by facilitating optimal chip clearance, Muzzi Blau prevents surface loading and thermal buildup during heavy material removal on grey and nodular cast iron.
- **Consistent cut rate**: maintains continuous sharpness throughout the entire operational lifecycle of the tool.

Real-world performance benchmark

The internal grinding of heavy components deemed it necessary to reduce the grinding time by increasing the feed rate of the robotic arm.
That is where our Muzzi Blau performed exceptionally well in comparison with competitor's tool.

Grinding wheel type	Feed rate during grinding	Performance increase	Grinding quality
Competitor's product	25 mm / sec	Baseline	Standard
D1181 Muzzi Blau innovation	35 mm / sec	- 28% grinding time	Standard

2. MUZZI GELB PATENT PENDING

Muzzi Gelb is a proprietary blend formulated from distinct, high-grade diamond types optimized for extreme durability and heavy-duty grinding applications.

- **Multi-phase crystal structure**: blends hard, blocky crystals for shock resistance with sharp, high-friability grains for aggressive cutting.
- **Maximum durability:** specially treated crystal surfaces enhance nickel matrix retention under extreme forces and elevated temperatures.
- **Heavy-duty deburring:** ideal for robotic cells and high-pressure grinding systems tackling demanding casting geometries.

Real-world performance benchmark

In side-by-side production trials on automatic cast iron cutting lines, Muzzi Gelb demonstrated extraordinary durability compared to industry-standard D1181 electroplated grinding wheels.

Grinding wheel type	Total ground pieces	Performance increase	Grinding quality
Standard D1181 Wheel	4,000	Baseline	Standard
Muzzi Gelb innovation	6,500	+62.5% tool life	62.5% less downtime

MUZZI

SPECIAL ABRASIVE TOOLS

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Quality Certification:
ISO 9001 Certified for Design, Production and Regeneration