

MIRKA

Precision Industries

PRECISION INDUSTRIES

– Reshaping the Industry

Mirka offers abrasives, tools and solutions for challenging conditions. Whether your work is in aerospace or automotive industries, manufacturing industrial rollers or powertrain components, tooling or consumer electronics, microfinishing or glass sanding, you can be sure we have the best products and solutions.

Through continuous improvement and dedication to the finish we continue to shape the industry with our expertise and innovation. Mirka is an independent and solid family-owned Finnish company, big enough to support and supply to all global players. We are a world leader in abrasives technology, offering a complete range of technically superior abrasives, innovatively designed tools and efficient sanding systems. No matter how demanding the application, we will improve your processes, providing faster and more cost-effective results.

Mirka's journey began in 1943. Since then we have been constantly developing better surface finishing solutions. In 2009 we began investing in the precision industry business, with a vision to provide customers with products and solutions from start to finish. To gain further competence, we formed a strategy to acquire companies that fit the Mirka brand. And for a company to become a part of Mirka, we need to share common values – Responsible, Innovative, Respectful and Committed.

In 2017 this led to the acquisition of Cafro – a reputable family-owned company with a perfect portfolio match, opening new markets and opportunities for us. Together we will form a strong and competitive player in the precision industry field. We have now made the first move into a new market – and the journey has just begun.

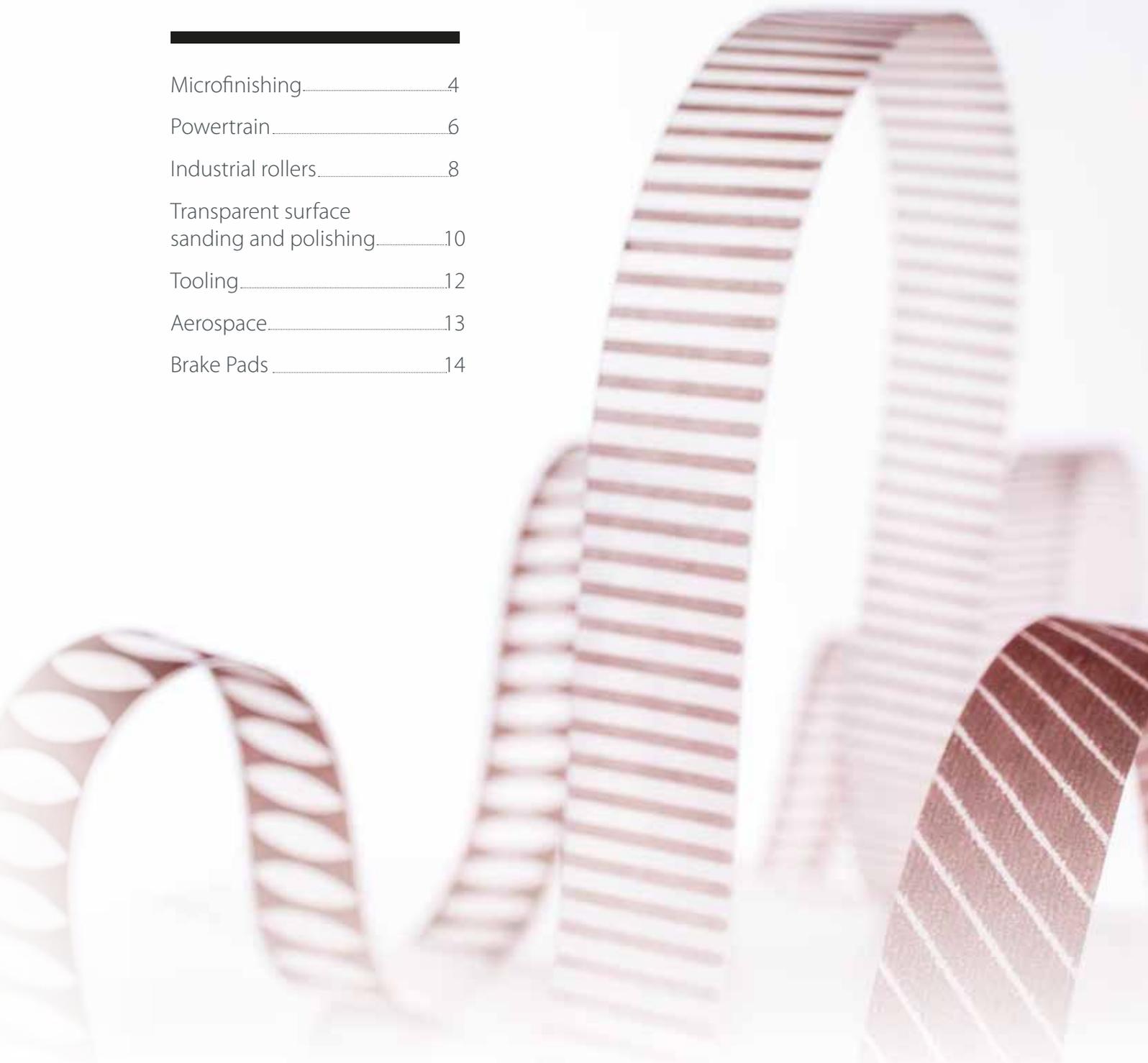
www.mirka.com/precision-industries/

The Mirka headquarter and production units are located in Finland. The company has more than 1300 employees and subsidiaries located in Europe, Middle East, North and South America as well as Asia. More than 97% of Mirka's production is exported, with products being sold in over 100 countries.

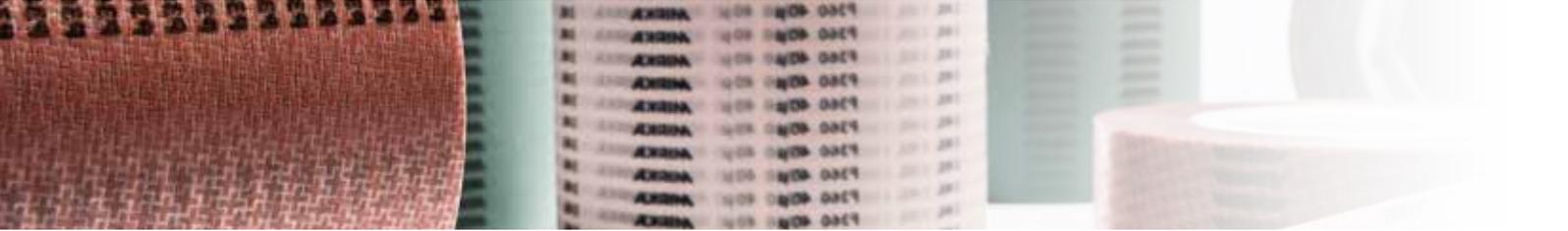




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MICROFINISHING

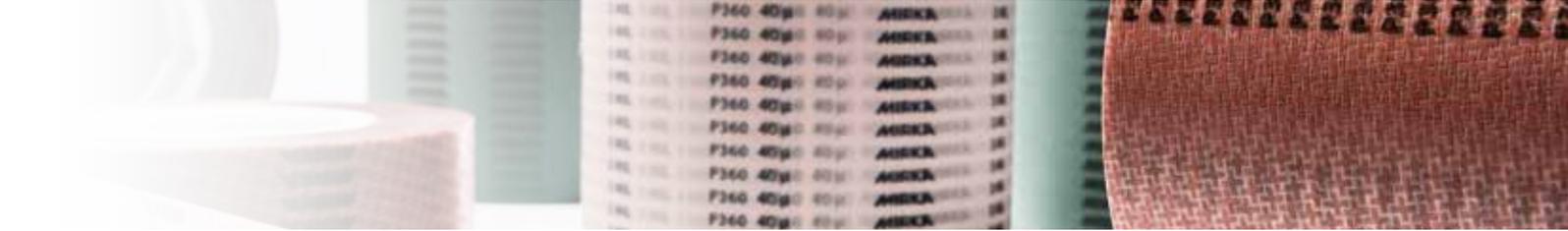


Find a sustainable microfinishing solution

When a consistent microfinishing result with guaranteed surface properties and functional values is required, Mirka's state-of-the-art technology will ensure your success. Our solutions start with your challenges.

We offer:

- A supremely fast and reliable supply chain concept
- Total cost savings
- Independent, reliable and solid partnership
- An ultra-smooth finish or unique surface structure for everything, from high-tech businesses to B2B and consumer electronic products



Increase your productivity in technically demanding surfaces and applications

With Mirka products, you can optimise your microfinishing process and improve profitability. Let us help you improve the surfaces and functional values of your products.

Demanding applications require solutions which ensure more efficient and rapid, cleaner and safer finishing processes. The benefits of our solutions include:

- Supply chain excellence
- Cost leadership
- Superior and consistent surface finishing
- Optimised finishing processes
- Product customisation

POWERTRAIN



Stabilise the quality of precision components

Mirka offers both superior off-the-shelf products and tailor-made advanced solutions to improve your grinding and polishing process.

Using our Mirka® Cafro vitrified CBN wheels in your grinding process gives you:

- Optimization of wheel dressing time and intervals
- Grinding time reduction
- Improved surface value characteristics
- No scatter marks and no steel burning
- Superior supply chain – fast and reliable delivery times
- Flexibility and customization of the products and services
- Total offering with lower TCO, from tools to wheels to tapes
- Security – peace of mind

By the time you reach the final polishing process, you will have a better surface to begin with, including less waviness on journal profiles.

Powertrain microfinishing

Our microfinishing films are used in many powertrain applications, where demanding tolerances are required. These include the manufacturing of crankshafts and camshafts, piston pins, rings and rods, as well as balancer shafts and rotor shafts. And our tools find work in the manufacturing of electric motors, too.

The right microfinishing technologies are crucial in minimizing wear and prolonging the service life of the high-efficiency engine components of today and tomorrow.

The modern powertrain industry presents numerous challenges, and by working together we can:

- Improve supply chain efficiency
- Increase flexibility
- Obtain improved friction and tribological properties
- Offer a cleaner and optimised polishing process
- Offer bearing journal shaping or journal surface texturing
- Decrease emissions
- Reduce and optimise costs

Finishing engine components with an optimized process ensures desired engine performance. A consistent, high-quality component finish provides a competitive edge through a longer engine lifetime.



Microfinishing films



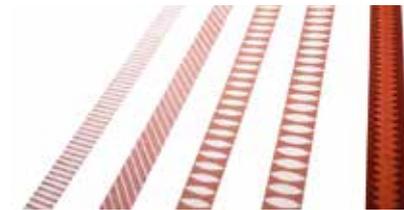
MI231C – for rough and fine polishing
Aluminum oxide with ceramic coating



MI231A – for fine polishing
Aluminum oxide



MI232C – for rough polishing
Aluminum oxide with ceramic coating



Structured film
with customised pattern surface

Superabrasives

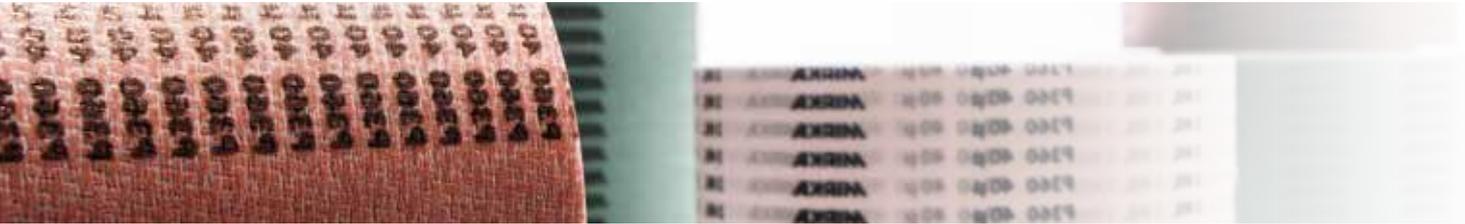


MIRKA® CAFRO
Vitrified CBN Wheels



MIRKA® CAFRO
Resin Bonded Wheels

INDUSTRIAL ROLLERS



Consistency takes precision.

In order to produce perfect end products in a continuous process, large-scale industrial roller surfaces must be both consistent and precise.

Our new surface finishing techniques enable cleaner roller conditioning. In cooperation with leading machine suppliers, we can optimise your microfinishing processes. The entire finishing process can be expedited by optimizing the production steps.

Customised finishing processes with improved roughness values guarantee required tolerances, achieving savings in roller conditioning materials. With Mirka products you can attain consistent surface finishing and more, including reduced material, production and maintenance costs and improved process speed and uptime.

Flawless roller conditioning increases productivity

In both surface smoothness and hardness, there are increasing quality requirements and a number of environmental aspects. Mirka solutions are here to help you reach your production goals through consistent roundness and cylindricity, providing constantly reproducible surface conditions. Flawless roller conditioning means fewer and shorter maintenance stops, boosting productivity.

Mirka® Cafro Diamond wheels up to Dia 750 mm are designed for cylindrical grinding of extremely hard materials, such as carbides. The wheel specifications have been optimized especially for this challenging application, to grind both the roller coating and the steel body. Our wheels are designed to reduce vibrations.



Diamond film

– For extremely hard, difficult to grind materials

Mirka's electrostatically coated, micron-graded DmD microfinishing films are perfect for challenging conditions, such as thermal spray coatings in the oil and gas industry and coated rollers. Due to a special bond/glue system, adhesion between the film and the diamond grains is extremely strong in all conditions, which increases the lifetime of the abrasive. These films provide excellent stock removal with a superb finish, allowing you to optimise your processes. They are colour coded for ease of use, and the films are available in rolls and endless belts in several dimensions.

We use strong, flexible 5MIL PET film backing, which means that products can be used in either dry conditions or with water, emulsion or other lubricants. The flexibility of the film provides fantastic adaptability for complex surfaces.

Microfinishing films



MI231C
Aluminum oxide
with ceramic coating



MI231A
Aluminum oxide



MI241D
Diamond

MI231D
Diamond

Abrasives



ABRANET® ACE
Ceramic coating



ABRANET® NS
Aluminum oxide



ABRANET® MAX



MIRKA® CAFRO
Resin Bonded
Diamond Wheels



MIRKA® CAFRO
Vitrified CBN Wheels



MIRKA® CAFRO
PCD Inserts

TRANSPARENT SURFACE SANDING AND POLISHING



Don't replace, refurbish.

Mirka has a unique total solution for refurbishing several types of transparent surfaces, prolonging their life. From cleaning to sanding to polishing, Mirka's clear step-by-step process is easy to follow, giving you new light through old windows.

The Mirka-invented solution for refurbishing glass can be used in many different industries, including architectural, automotive and marine. It suits glass surfaces ranging from building facades to interior doors and stairs as well as yacht, train and vehicle windows, where refurbishing is the best solution.





Abrasives



ABRANET® SIC NS



ABRANET® VERSIONS



ABRANET® MAX

Polishing



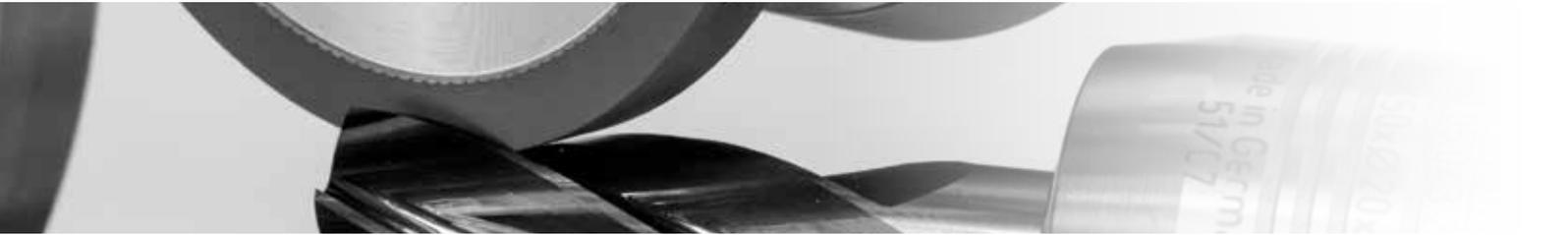
POLARSHINE E3
Glass polishing compound



MIRKA® PS 1437



TOOLING



It takes tools to make tools.

Mirka® Cafro grinding wheels are exceptionally well suited to machine a wide spectrum of different tool products with great precision. Our products are used in the manufacturing of circular saws, band saws and knives, as well as milling tools and profiled tools, for example. With our Superfin wheels, we can produce a one-step mirror finish result in carbide drills or end-mills manufacturing.



In the grinding of cutting tools, there is a growing demand for sharp edges on cup wheels. New CNC machines allow for increasingly complex geometries, measuring systems and software simulations, which increases the demand on quality. We have developed the EDGE bond to meet these important requirements. It is born for a specific application: external relief and gashing.

We have also developed a new bond family for flute grinding, called HP. The HP wheel is able to remove more material in less time.



Machine: Walter CNC (coolant oil, micro-filtered)
Workpiece: Various tungsten carbide end-mills

AEROSPACE

The sky is the limit.

For Mirka, aerospace technology is a fast-growing field that takes our expertise to another dimension. Our precision products are used in different areas of aircraft manufacturing, including machining carbon-fiber fuselages with PCD milling tools and grinding engine turbines with vitrified CBN wheels – both areas where extreme precision and uncompromised consistency is not only needed, but demanded.

Our compression-resistant Polycrystalline Diamond (PCD) milling tools can reach a faster cutting speed with smaller wear and better finish than carbide or ceramic tools. Their extreme hardness makes them perfectly suited for machining aerospace materials such as carbon fiber and graphite.

With their hardness second only to diamond and thermal stability up to 1000°C, Cubic Boron Nitride (CBN) electroplated wheels are suited for ferrous materials or alloys that are traditionally challenging to machine. Mirka® Cafro vitrified CBN wheels provide close tolerances and a good surface finish, resulting in high productivity.

Mirka offers flexible abrasives for cylindrical grinding, centerless grinding and sanding, together with polishing and finishing for several implementations.



BRAKE PADS



Better brakes from start to finish.

Mirka® Cafro Electroplated Diamond Wheels and segments are used in brake pad machining, ranging from shaping brake pads to turning brake discs with PCBN inserts. Our brake pad machining solutions offer a high grinding speed and great cutting performance, which improves produceability and profitability.

Consistency in manufacturing tool quality enables consistent braking performance – something you want to be able to count on.

Mirka® Cafro electroplated wheels are available in various dimensions, and our flexible production will suit even the most challenging wheel designs. The service life of our wheels can easily be extended: they can be recoated several times, and we can offer you logistical solutions for this.





MI231A

MI231A



Mirka Ltd
Finland

Brazil Mirka Brasil Ltda.

Belgium Mirka Belgium Logistics NV

Canada Mirka Canada Inc.

China Mirka Trading Shanghai Co., Ltd

Finland & Baltics Mirka Ltd

France Mirka France Sarl

Germany Mirka GmbH

India Mirka India Pvt Ltd

Italy Mirka Italia s.r.l., CAFRO S.p.A

Mexico Mirka Mexicana S.A. de C.V.

Russia Mirka Rus LLC

Singapore Mirka Asia Pacific Pte Ltd

Spain KWH Mirka Ibérica S.A.U.

Sweden Mirka Scandinavia AB

Turkey Mirka Turkey Zımpara Ltd Şirketi

United Kingdom Mirka (UK) Ltd

United Arab Emirates Mirka Middle East FZCO

USA Mirka USA Inc.

For contact information,
please visit www.mirka.com/precision-industries

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