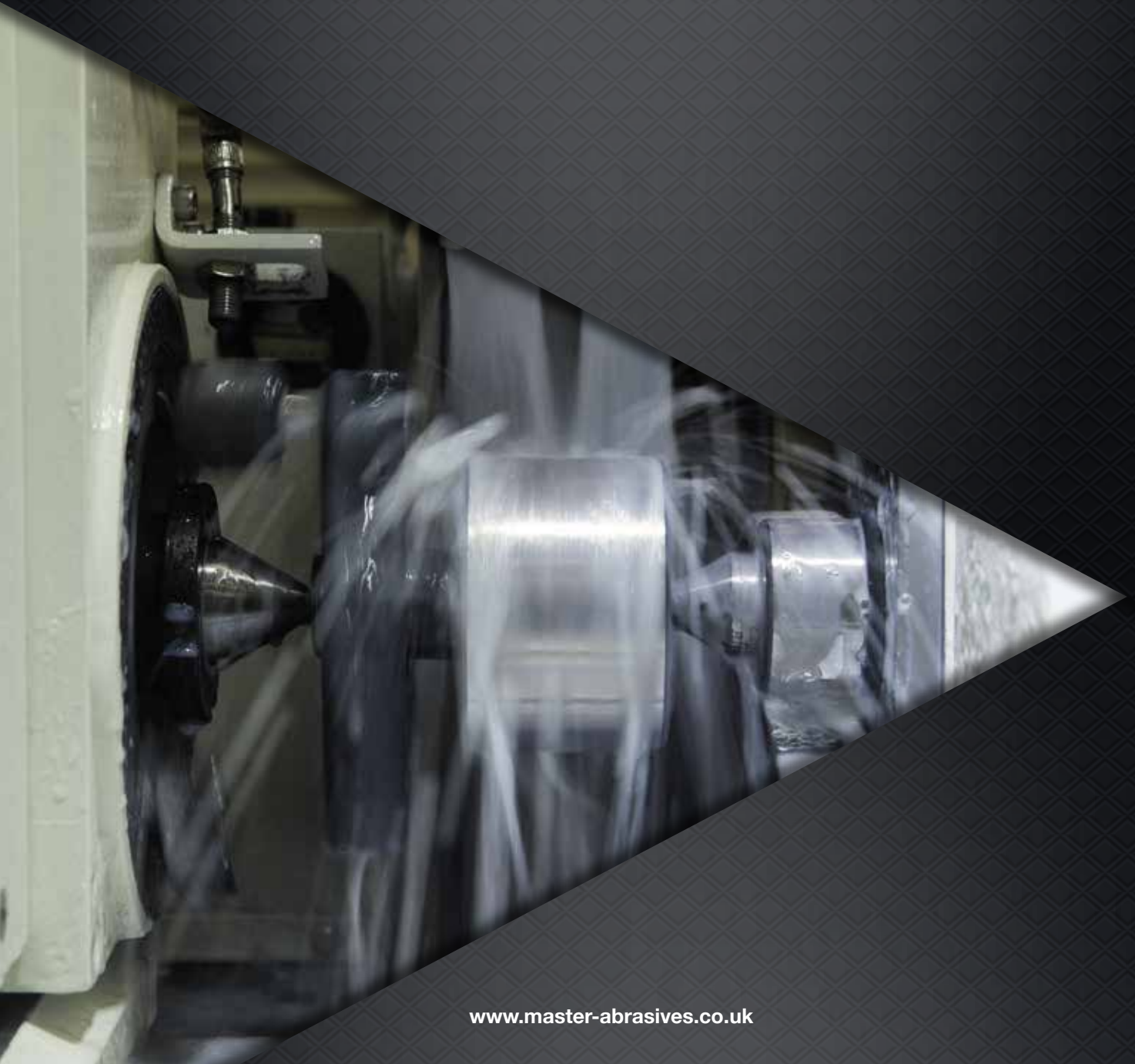


MASTER ABRASIVES

Machinery & Equipment

SOLUTIONS FOR INDUSTRY



Introduction

Master Abrasives

At Master Abrasives, we have a hard and long earned reputation in the UK market for providing solutions with high-quality products and professional service. We now serve industry globally as an independent UK owned company and have an extensive product portfolio including our own affordable, high-quality Master® brand abrasives range.

We have carefully selected partners to enable us to also offer our customers first-class machinery and equipment - so they can find a complete grinding solution from their familiar and reliable abrasives supplier. We can now provide machinery including grinding machines, metrology and balancing equipment, superfinishing spindles and mass finishing machines. Our technical applications team has strong knowledge of these areas and works with customers worldwide finding solutions to achieve improved productivity.

Offering high-quality products backed up by a professional and technical service and support, we aim to provide ultimate solutions for industry.



Machinery & Equipment

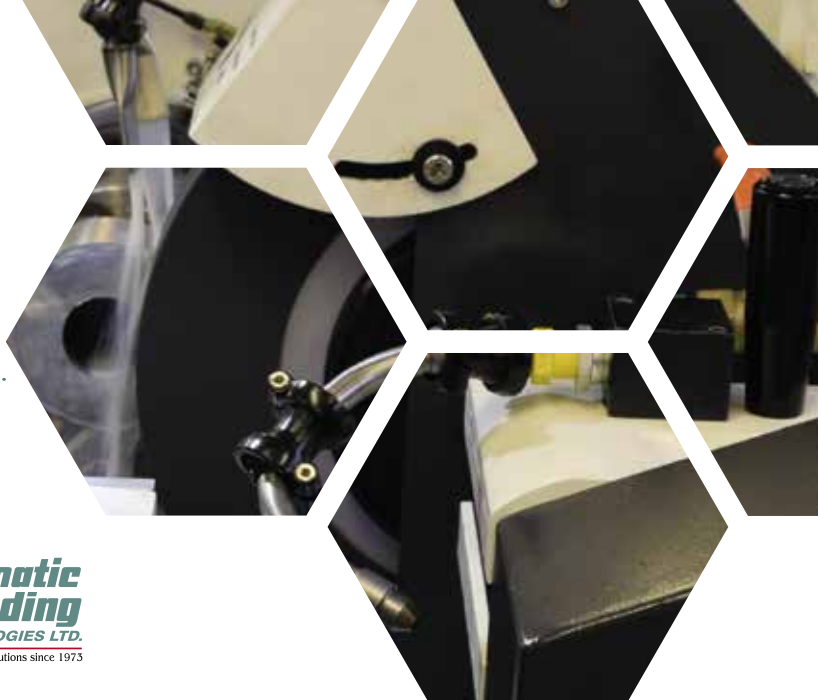
In our showroom we can demonstrate a range of machines and equipment. The following are included in our machinery and equipment range:

- Grinding Machines
by Micromatic Grinding Technologies
- Grinding Machines
by Alex Machine Tools
- Rotary Balancing Equipment
by RK-System
- Mass Finishing Machines
by ActOn Finishing
- Metrology Equipment
by Innovative Automation Products
- Superfinishing Spindles
by Thielenhaus Superfinish Innovation



Grinding Machines

We have a comprehensive range of precision grinding machines such as external hydraulic and CNC Cylindrical, Internal and Centreless grinding machines manufactured by Micromatic Grinding Technologies, part of the Ace Micromatic Group.



Cylindrical Grinding Machines

In the hydraulic machine range, the compact model eco 200 is ideal for external, internal or face grinding of large or heavy components in small to medium production batches. The versatile eco 200 is available for demonstration in our grinding and finishing showroom. Their cylindrical range is available in several models and sizes to accommodate most customer requirements and can be fully CNC controlled.



Centreless Grinding Machines

Micromatic centreless grinding machines are configured for both through-feed & in-feed grinding. Various types of automation can be integrated with the machine for parts such as engine valves, U-J cross, piston pin, shocker tube, hydraulic valve spool and others.



Special Purpose Machines

Micromatic Grinding Technologies have also developed special purpose machines by working with customers to solve application challenges. Special purpose machines such as Valve Seat Grinders, Piston Ring Profile Grinders and special grinders for grinding Fuel Injection parts have been developed indigenously by Micromatic.

With extensive experience in precision abrasives, we have a deep understanding of not only the machine tool but the application itself. Our aim is to provide solutions for every aspect of the grinding process, whether it's the best grinding wheel, dresser, coolant delivery system or machine for the application. Our applications engineering team can help you cut costs and increase productivity in manufacturing.

Grinding Machines

A full range of surface grinders by Alex Machine Tools is offered by us as their sole agent in the UK and Ireland. ALEX is the largest manufacturer of high-precision surface grinding solutions in India and supplies machines globally to more than 20 countries as a result of a continued development in design, quality, electronics and automation.



Reciprocating Grinding Machines

ALEX offers machines for movements in X, Y and Z directions and attains a precision of $90^{\circ} \pm 0^{\circ}$ to provide superior stability even at extreme ends of working range. All models are available with the option for CNC controls for automatic grinding cycle including wheel dressing and compensation. The NH-500 grinder is available for demonstration in our grinding and finishing showroom.



Double Disk Grinders

This series of ALEX machines uses powerful double disk grinding technology to simultaneously grind opposite and parallel surfaces flat at excellent rates of production. These machines are available with options of CNC controls for automatic grinding cycle, auto-loading/unloading and auto-gauging specific to the grinding application.

Rotary Grinding Machines

ALEX rotary grinding machines are well suited for high-precision surface grinding of thin and circular parts where one piece is to be ground at a time. They're a great alternative for improved production times and are available with the option for CNC controls for automated grinding cycles.



Rotor Balancing Equipment

Representing RK-System, we can offer VibroDAQ, a professional measurement system for balancing and vibration measurements. These instruments can be used in various industries involved in maintenance of mechanical equipment in different types of companies.

The VibroDAQ portable system allows one to four plane rotor balancing. The device is equipped with an LCD touch screen display and has special sophisticated algorithms for grinding wheel balancing and control, meeting the ISO1940 requirements. It's provided with USB 2.0 (high speed, full speed) and RS-232 communication interfaces.

A graphical chart of the vibrations and spectrum analysis views are available. The software provides many additional features: balance tuning - eliminates errors in placement of correction mass, correction mass division for balancing of propeller fans and balancing of grinding wheels directly on the grinder.

The VibroDAQ is ideal for use on those machines without automatic balancing options and is easy to use. It allows for grinding wheels to be balanced in situ ensuring rapid accurate wheel balancing - essential for good surface finishes and ecumenical use of grinding wheels. The system can also be used for other critical balancing of rotary shafts.

RK-SYSTEM®



Mass Finishing Machines

As agents for ActOn Finishing, we can offer vibratory finishing machines manufactured in Britain including bowls, troughs, duals, and centrifugal high energy finishing machines. ActOn finishing machines are built with a wear-resistant polyurethane lining to prevent damage and reduce maintenance costs and come with a 12-month warranty.

Mass finishing of components results in improved surface finish alongside cost and time savings as it allows large numbers of parts to be finished simultaneously. This process can be used for a variety of applications, such as deburring, removal of machining lines and superfinishing in many industries including medical, automotive and aerospace.

Alongside a full range of machines, we can offer sample testing and a full range of Master media to ensure you achieve your optimum finish and productivity.

ActOn®
FINISHING



Metrology Equipment

As the UK representative for Innovative Automotive Products, we offer a full range of measuring equipment for the grinding process including optical, air, co-ordinate and other areas of metrology. A selection of tools is available for viewing at our grinding and finishing showroom, including a height gauge, air gauge and vertical profile projector.



Air metrology equipment such as air gauges offer high accuracy and repeatability and provide SPC output. They are available as single or multi-channel and with single or double displays.



Co-ordinate metrology

equipment includes 1D and 2D height gauges, available in manual and motorised versions. These come with a measuring length of 325, 625, 1025 or 1150mm.



Optical metrology equipment includes profile projectors, available as vertical, horizontal, slant screen and offset with a 200-1000mm screen diameter. Geometric data processors and software are offered for profile projectors which are compatible with CAD and can export data to Excel.



Special purpose metrology equipment includes items such as cam shaft profile measuring machines.

Innovative Automation Products has a complete in-house design team for mechanical, electronics and software development. The manufacturing set up is equipped with two units having a state-of-the-art mechanical workshop, clean SSMT electronics assembly line, calibration facilities and more. Our applications engineering team can work with customers to get the most suitable and accurate products offering advanced performance for reliable and easy to use measuring in the grinding process.



Superfinishing Spindles

We represent Superfinish Innovation AG, a division of Thielenhaus Technologies GmbH, in the UK & Ireland. Their superfinishing devices, compatible with abrasive tapes or stones, are offered for high-precision applications requiring optimum geometry and surface quality.



The range of tape finishers includes machines for different tape widths such as SL50 for maximum 50mm and SL100 for maximum 100mm wide tape contact rollers.

SL50

The standard tape finisher is model SL50 which is available for demonstration at our grinding and finishing showroom. The SL50 has a double-side mounted tape contact roller. This device is equipped with sensors and can be integrated directly into a machine tool. It has an oscillation frequency of 300-1,400 double-strokes per minute.



Benefits of superfinishing include reduced workpiece wear, increased percentage contact area, improved energy efficiency and savings in workpiece material and weight.

As a provider of solutions, we can offer the devices and abrasive superfinishing and lapping tapes from our precision product portfolio.

Service and Support

Master Abrasives machinery and equipment portfolio is built around our expertise and knowledge in grinding and finishing applications. The range is continually evolving to offer our customers optimum solutions. Contact us for more information on any of the products displayed in this brochure.

Our highly experienced applications engineering team offers service and support, including service contracts, for our machinery and equipment.





Aerospace

Tooling

Fabrication

Power
Generation

Medical

Heavy
Engineering

Automotive

Bearing

Oil & Gas

Woodwork

SOLUTIONS FOR INDUSTRY

For further information on Master Abrasives' products and services or technical applications support, please contact us

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