

MASTER[®]

Product Range

SOLUTIONS FOR INDUSTRY



www.master-abrasives.co.uk

Introduction

Master Abrasives has a hard and long earned reputation in the UK abrasives market for providing solutions with high-quality products and professional service. Established in Daventry in 1967, it's now an independent UK owned abrasive company with an extensive range of abrasive products providing technical support. **The MASTER®** brand provides solutions for industry, offering high quality at a cost-effective level for improved productivity.

We have developed the range of Master branded products to provide consistently high quality under ISO 9001. The product range is extensive, covering coated and non-woven surface finishing products as well as grinding and superabrasive products and finishing media. Our technical application team works with customers worldwide, offering technical solutions for application problems and to aid in maximising productivity.

Our application engineers can assess your application and needs and work with you to develop both the product and process with a view to reducing your costs. Offering high quality products at competitive prices via the Master product range backed by a professional and technical service, we aim to provide ultimate solutions for industry.

Contents

Mounted Points	3	Rubber Finishing Products.....	7
Carbide Burrs	3	Cut-off Wheels.....	8
Quick Change Discs	4	Abrasive Belts.....	8
Flap Wheels.....	4	Rotary & Stationary Dressing Tools	9
Abrasive Bands & Spirobands	5	Grinding Wheels & Stones	9
Cartridge Rolls.....	5	Vitrified CBN Products.....	10
Convolute Wheels.....	6	Superabrasives.....	10
Unitized Products	6	Mass Finishing Consumables	11
MASTERFLEX Polishing Products.....	7	Superfinishing Products.....	11

Mounted Points

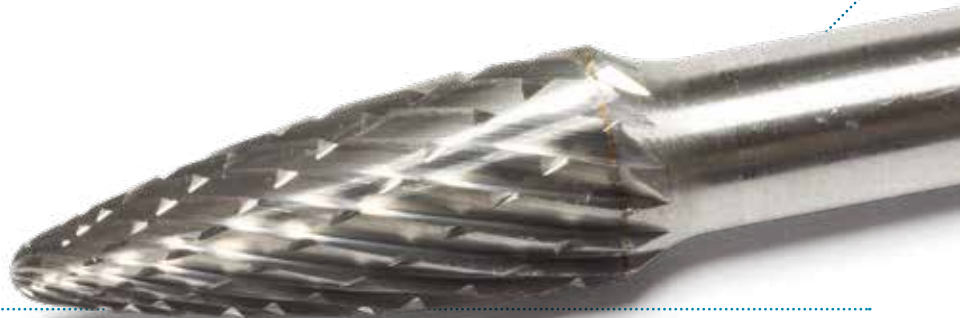


Master mounted points offer fast grinding and a high-quality finish. We offer grades and sizes for every industry and market, suitable for many applications from fast stock removal to fine finishing. Our industry-specific specifications have been formulated in direct development work with key customers.

Master mounted points are available in Vitrified and Resin bonds, as well as rubber, Unitized, felt, MASTERFLEX cotton bond and Nickel electroplated superabrasive points. Offered on 3mm, 6mm, 1/4" or 1/8" shanks, they are available in all FEPA standard "W", "A", and "B" shapes, as well as specialised shapes. We can supply these in Aluminium Oxide and Silicon Carbide abrasives, as well as Ceramic, CBN, and Diamond grades.

Master mounted points are suitable for various applications for stock removal, grinding, and finishing in areas such as metal fabrication and foundry. See the illustrated Master mounted points brochure for more information complemented by the cost-effective range of ZIPP® air die grinders.

Carbide Burrs



Master Tungsten Carbide Burrs are manufactured in a wide range of shapes, sizes, and cuts. They are designed to provide high stock removal rates and long life and are produced from Tungsten Carbide material that has been specifically selected for the Master burr range.

Master burrs are available on a 3 or 6mm shank as standard and offered as long shank burrs and double ended burrs to meet application requirements. We offer a full range of cuts which are continually being improved. We can also develop specific modified cuts to suit specific and tough applications.

Master carbide burrs are used for stock removal, grinding, and deburring in aerospace, foundry, and fabrication applications. See the illustrated Master carbide burrs brochure for more information. This range is complemented by the cost-effective range of ZIPP air die grinders.



Quick Change Discs

The Master brand offers a comprehensive range of high quality quick change discs for a full range of surface finishing applications. The quick change mounting systems are designed for fast disc changes and secure attachment, an excellent solution for high volume, high production operations.

Master quick change discs are available in 25, 38, 51 and 76mm diameter in grits from 36-320. A range of standard discs with the threaded screw-type mounting system (MRD) is available from stock in Aluminium Oxide, Zirconium, Ceramic, Silicon Carbide, and surface conditioning and Unitized specifications, as well as rubber holders in soft, medium, and hard density. Rubber bonded discs also available. Other mounting systems, such as the metal-to-metal twist-lock discs (MSD), are available upon request.

These discs are widely used in many industries including aerospace, fabrication, foundry, and automotive, for grinding or blending and finishing.

Master quick change discs are complemented by the cost effective range of ZIPP air angle die grinders.

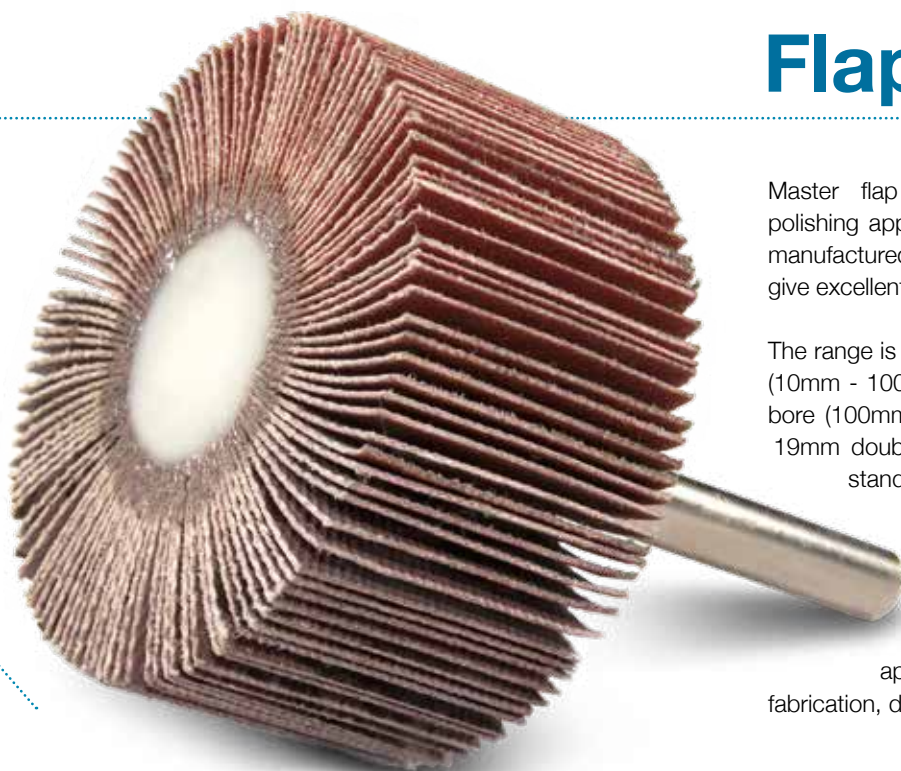


Flap Wheels

Master flap wheels are well-suited to grinding and polishing applications to provide a uniform finish. They are manufactured from top quality coated abrasive material to give excellent cut rates with high quality finishes.

The range is available as small spindle mounted flap wheels (10mm - 100mm diameter), large flap wheels with a centre bore (100mm - 350mm diameter), and flap wheels with a 19mm double keyway. They can be manufactured in the standard coated abrasive material, non-woven surface conditioning material or an interleaved coated and non-woven abrasive format, according to application requirements.

Flap wheels are used for a variety of applications, including blending welds, metal fabrication, deburring, and polishing.



Abrasive Bands & Spirobands

Master abrasive bands are manufactured with an overlap joint for use in grinding applications on steels and non-ferrous materials. These are used on our industrial quality spindle mounted rubber holders.

Our Aluminium Oxide abrasive bands are suitable for general surface finishing and deburring, especially in applications where access is limited. They are also manufactured in Zirconia grades for heavy stock removal and high cut rates and in Ceramic Oxide grades for heavy duty grinding, both available on request.

Master spirobands are wrapped around strengthened cloth material and are most suitable for polishing and blending contours when smooth running is a primary concern. Available in Aluminium Oxide or Zirconium, our range can be used to finish hard-to-reach areas and remove imperfections and burrs on surfaces.



Cartridge Rolls

Master cartridge rolls are lengths of abrasive cloth wound around a spindle for a multi-layer product which exposes new abrasive cutting points throughout the product life. This makes them long lasting in deburring and metal removal applications.

Our rolls are available as straight or tapered cylinders to suit the application and are manufactured in a standard Aluminium Oxide grit. They are also available in Zirconium and Ceramic Oxide on request.

Cartridge rolls are ideal for irregular contours and hard-to-reach areas for metalworking applications.





Convolute Wheels

Master Convolute Wheels have a semi-open and uniform structure with a bonded non-woven abrasive material, making them ideal for consistent and aggressive finishing action. During use, convolute wheels are cool-cutting and will not modify the properties of metals and special alloys.

Master convolute wheels are available in a variety of grades, and for each grade the non-woven abrasive material is available in Silicon Carbide and Aluminium Oxide grit. The Master range of Unitized and convolute products is continually being reviewed and developed to suit the ever-changing demands of our worldwide customers.

Convolute wheels are suitable for fine finishing in the medical industry and removing burrs and surface defects on turbine blades in aerospace applications.

Unitized Products

Master Unitized products provide a solution to various tough deburring and finishing applications. Unitized products are a combination of several layers of non-woven abrasive material compressed and impregnated with resin. Widely used in the aerospace industry, they have excellent cutting and finishing properties. Our application specialists can help customers choose the right specification for their applications.

Our Unitized products are offered in the form of type 1 and type 27 wheels, as well as quick change disc format, in a wide range of Aluminium Oxide and Silicon Carbide grades.

Master Unitized products are widely used in the medical and aerospace industry for polishing jet blades and blending cast turbine blades.



MASTERFLEX® Polishing Products



MASTERFLEX is a cotton fibre material pressed into a densely bonded form with Aluminium Oxide abrasive. Master Abrasives converts this material into wheels, mounted points, and sticks. The unique qualities of this material allow faster grinding with a cooler cut and smooth, non-loading action.

The range of MASTERFLEX mounted points is available in the standard FEPA shapes and sizes. Wheels are available in type 1 and type 27, in sizes 25-300mm diameter with a range of bore sizes to suit requirements. MASTERFLEX products can be manufactured in grit sizes and grades to suit applications, with GFX as the soft latex bonded material for blending and finishing, and MTX as the hard resin bonded grade for stock removal.

MASTERFLEX products are suitable for a range of industrial applications, including aerospace and automotive where they're ideal for grinding and finishing stainless steel and other high alloys. See the illustrated MASTERFLEX brochure for more information.

For the complete range of polishing products, Master also offers felt products to complement this range.

Rubber Finishing Products

The Master range of rubber and epoxy bonded products is available in wheel, mounted point, and stick form for a range of finishing applications.

Our rubber bonded grinding wheels offer a high-quality finish with excellent wheel life. They are cooler cutting, can offer a super finish and longer life, and are available in all shapes according to requirements. We offer the latest developments in diamond impregnated rubber products and control wheels for centreless applications and can work with customers on the development of specialised products as a solution to application needs.

Master epoxy bonded grinding wheels have a controlled porosity bond with premium abrasives, increasing productivity. The Master technical team works with customers to offer and develop rubber bonded products to suit application needs.

The range of Master rubber products can be used for cutting, grinding, and polishing applications in automotive and medical markets.



Cut-off Wheels

Master cut-off wheels are available in a range of sizes and grades to suit various cutting applications. These wheels are designed for a long life and faster cut without the additional operator pressure.

Aluminium Oxide and Silicon Carbide wheels in resin bond can be supplied as reinforced or non-reinforced and are widely used in foundry, but also available for industrial metallurgical sampling. Metal, electroplated, and resin bonded cut-off wheels are available in the Master range to suit varying application needs.

Master metal-bonded cut-off wheels generally use diamond abrasives and are widely used in the glass and ceramics industry for their hard wearing and durable qualities. Electroplated cut-off wheels have a single layer of superabrasive grain which are encapsulated by a layer of nickel plating onto a steel core. Resin bonded cut-off wheels are available in conventional abrasives or superabrasives according to the application.

Master cut-off wheels are suitable for a range of industrial applications on metal, ceramic, composites, stainless steel, and other materials.



Abrasive Belts

Manufactured on-site at our Daventry facility in a wide variety of materials and sizes, Master belts are suitable for use on both portable and stationary machines in a range of grinding and finishing applications.

Master belts are offered in paper and cloth backed materials in a full range of grits, in sizes from 3mm - 300mm wide. Master surface conditioning belts are also available for applications requiring less aggressive cutting action and finer finishes. Suitable applications for Master abrasive belts include surface grinding and finishing of metals, sanding and finishing wood, and general blending and finishing.

Our high quality belts produced especially for pneumatic file belt sanders are complemented by the cost effective range of ZIPP belt sanders.



Rotary & Stationary Dressing Tools

A comprehensive range of dressing tools and systems is available in the Master brand, covering all aspects and requirements of tooling required to carry out successful dressing of all types and forms of grinding wheels.

Master offers general diamond tooling, diamond dressing cups and discs, and precision diamond form roller dressers. We can also design and specify specially made diamond dressing products to suit your needs. All our Master diamond rolls come with a quality check sheet for high-quality assurance.

The range of Master dressing systems includes the brake dresser, high frequency dressing units for precise accuracy, and pneumatic dressing spindles.

See our Master superabrasives brochure for further information on products available in this range.



Grinding Wheels & Stones



Master grinding wheels are the cost-effective solution for maximum productivity in grinding applications. Manufactured in a full range of sizes and grades, the Master range includes grinding wheels, sharpening stones, segments, honing stones, and dressing sticks.

Master grinding wheels are manufactured in a full range of shapes and sizes. A standard range is available in a full range of abrasive grains, including Aluminium Oxide, Zirconium, Ceramic Aluminium Oxide, Silicon Carbide and Mono Crystalline abrasive, and various grit sizes are offered to suit desired results. Master bond types include Vitrified, Resin, and other resin derivatives, with soft and hard grades offered for different bonds. Honing stones are products which are coarser than 320 grit.

Whilst the grain is a very important part of the wheel performance, it is equally important to ensure the correct complementary bond is selected, one which gives maximum grit retention but also releases the dulled grain as grinding pressures increase to provide optimum grain utilisation.

Product specifications can be advised according to application requirements; please contact Master Abrasives technical sales team for support. See the Master grinding wheels brochure for further information.

Master Vitrified CBN Products

The Master Vitrified Cubic Boron Nitride (CBN) range of products have been developed to offer our customers high quality premium performance abrasive products at realistic costs. CBN is a highly durable synthetic (manmade) abrasive grain that is second only to diamond in hardness. This makes it ideal for grinding hardened steels, superalloys and difficult to grind materials that conventional abrasives struggle to cope with and rapidly break down. These grain characteristics combined with flexibility and high inherent strength of vitrified bond technology produces a grinding wheel range ideally suited for tough grinding applications, but also giving superior productivity in high volume production environments.

The Master range utilises a wide selection of CBN crystal types combined with vitrified bonds developed to suit real world applications. The range offers wheels from 1mm up to 1200mm diameter in various designs, including thread mounted and formed wheels. We also have formulations that can offer single point dressability and dry grinding both applications areas that are not normally associated with successful implementation of vitrified CBN products.

The success of vitrified CBN wheels of course is in part down to the wheel formulation, but just as critical is the correct assessment and support applications engineering of the product onto the customers machines. The final part of the equation is the subsequent wheel consistency and continued support of the customer by the supplier. Master offers all this and more in support of the Master vitrified CBN product angle.



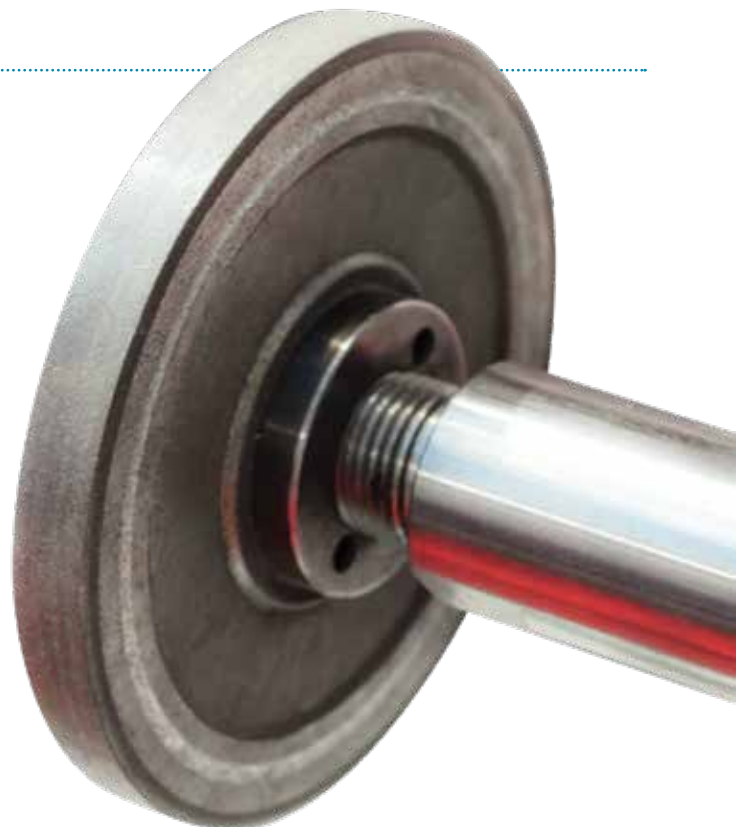
Superabrasives

Master superabrasives are designed for grinding harder, more challenging materials.

Superabrasives products are available in a range of specifications to suit most applications in different formats, such as wheels and stones. Bonds offered include Resin (Phonolic and Polyamide), Electroplated, and Metal, with wheels available in all FEPA shapes.

Superabrasives products are well-suited to grinding and finishing composites, ceramics, and glass.

See our Master superabrasives brochure for further information on products available in this range.



Mass Finishing Consumables



The Master range offers high-quality finishing consumables for mass finishing applications. This is a process that automates the mechanical and chemical finishing of various shaped parts, a stage in the manufacturing process of components which allows large numbers of parts to be finished simultaneously.

Vibratory finishing machines are available as bowls, troughs, duals, and dryers, each with their own advantages. Master consumables have been developed with an aim to provide the desired finish for various applications. This category includes Master plastic, ceramic, agro (dry), and special media, all to suit the numerous challenges in different industries. Master also offers liquid compounds, vital to the cleaning and finishing process, as well as powders and pastes which contribute to the grinding and polishing of materials.

These processes 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.

Superfinishing Products

Superfinishing is a low temperature, low stock removal process which improves part geometry and surface finish by removing the amorphous layer formed during the grinding process. This dramatically improves these imperfections, which can compromise part quality and performance.

Superfinishing products are available in stone or wheel form with grit sizes finer than 320 mesh in metal, resin, and vitrified bonds. We provide a range of stones used in through-feed processes to finish cylindrical parts such as tapered rollers, piston pins, shock absorber rods, shafts and needles. As well as this, we offer stones with special radii and features appropriate for plunge processes which are commonly used to finish surfaces of irregular shaped parts. Wheels for flat or spherical superfinishing processes are also available.

Superfinishing products are well-suited to manufacture of parts for the automotive, diesel, bearing, and medical industries worldwide.





Aerospace

Tooling

Fabrication

Power
Generation

Medical

Heavy
Engineering

Automotive

Bearing

Oil & Gas

Woodwork

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

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