FLEXIBLE SUPER ABRASIVES

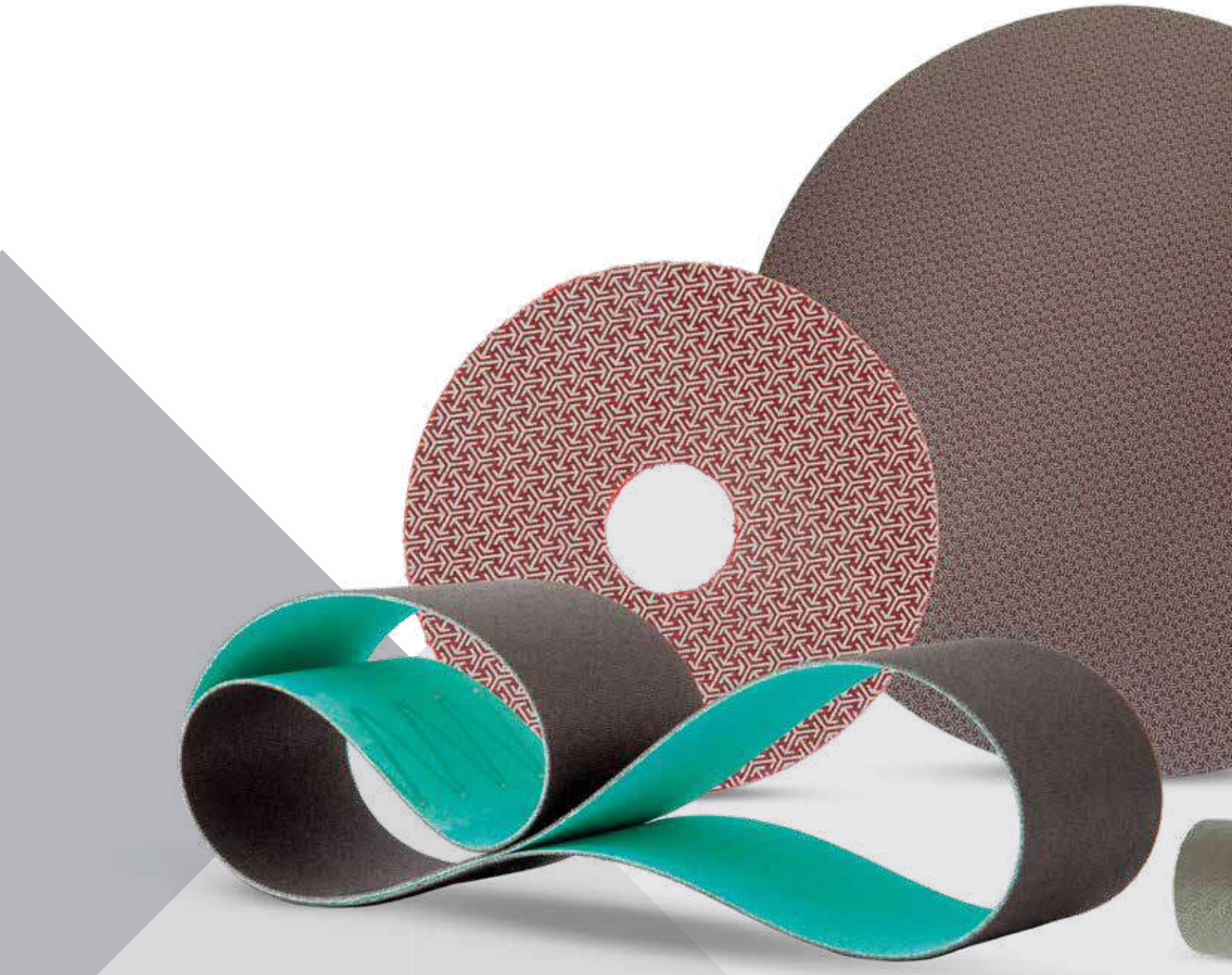
FOR INDUSTRIAL APPLICATIONS



KGS
Swiss Diamond Technology®
KGS.SWISS

INNOVATORS SINCE 1906

KGS FLEXIBLE DIAMOND ABRASIVES



THE SOLUTION FOR GRINDING HARD AND BRITTLE MATERIALS



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OUR TEAM - CUSTOMER SPECIFIC TOOLS
TECH CENTRE

DEAR CUSTOMER,

Thank you very much for choosing our flexible diamond tools as a solution for your grinding, shaping and polishing needs.

KGS Diamond, a world leader in manufacturing flexible diamond tools, brings you the technology to grind, shape and polish very hard and brittle materials. In this catalogue, you will find an overview of the most frequently used tools, in various product shapes, along with important tips to get the best results.

The first chapter is a flashback about our history, who and where we are, which markets we service, and more important, about our values and commitment to you; our highly valued customer.

The technical data chapter provides details of the construction of our quality products which are made in our own factories, to the highest quality standards. This technical information will not only expand your knowledge, but also deepen your know-how about flexible diamond tools and will simplify your choice for a certain diamond grinding pattern or grain size.

In the following chapter you will find our products; the solution for sanding and polishing hard and brittle materials. All of these products comply with our high quality requirements: Swiss Diamond Technology®. As we are the manufacturer, we can also provide special assistance and engineered solutions for difficult applications. Please contact us at your convenience.

As you can read in the Success Stories, KGS Diamond has developed many successful solutions in close contact with the customer and/or end user. We would like to write our next success story with you. Are you looking for a solution to sand or polish a hard and brittle material? We will be happy to discuss and develop a tailor-made solution together with you.

In “behind the scenes”, you can see more aspects of the company and the people behind the daily business. KGS Diamond is a family business and we value the human factor enormously. This applies not only internally, but most certainly also externally.

We are customer driven and you can expect the highest possible service from us and of course the solution for grinding hard and brittle materials.

Kind regards,
KGS DIAMOND Team



A HISTORY OF **INNOVATION**

KGS DIAMOND, with its headquarters in Switzerland, is a world leading abrasives innovation company since 1952.

KGS not only patents its newest inventions and innovations on a regular basis but also controls unique and automated, proprietary production technologies, which guarantee an attractive cost base giving us the ability to compete with any manufacturer globally.

Further advantages of these abilities are a high reliability and reproducibility of our products. All this translates into “Swiss Diamond Technology®”.

Our values are our commitment to you with State of the Art Products and Services, Reliability and Accountability.

I personally stand by our commitment, so do not hesitate to contact me for comments and suggestions at office-sf@kgs.swiss

Yours sincerely,

Sandro Ferronato
President & CEO

KGS DIAMOND
A TECHNOLOGY DRIVEN COMPANY

The history of KGS DIAMOND starts in 1952 when Natale Ferronato founds a company near Zürich, Switzerland, producing cold bonded quality abrasives, mainly for grinding and polishing applications: Natale Ferronato & Co. In the next years the production activities expand with the introduction of sintering production methods.

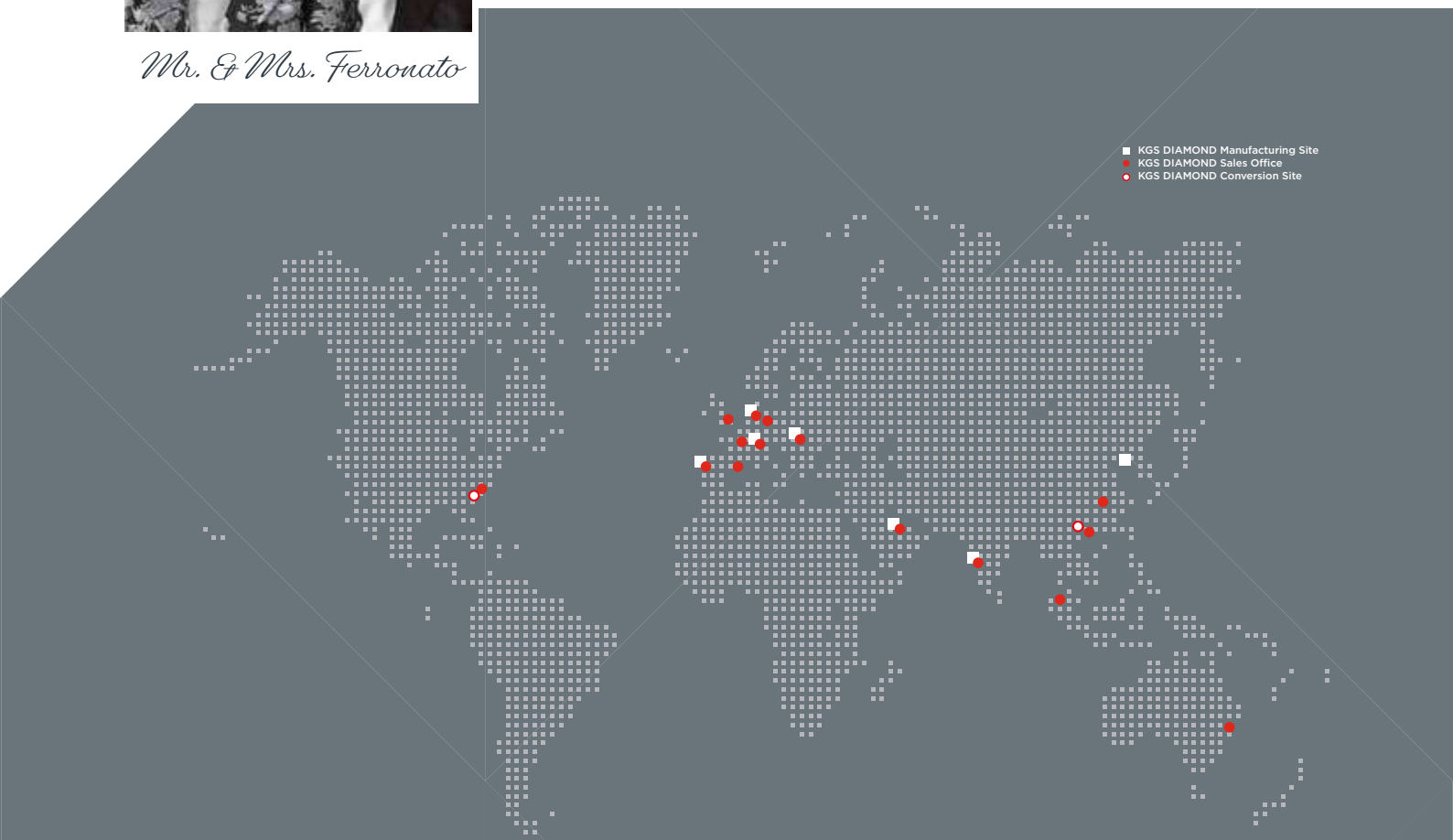
In 1970 Natale Ferronato passes the management responsibility to his wife Maryse Ferronato, who is succeeded in 1980 by Sandro Ferronato, today's President and CEO.



Mr. & Mrs. Ferronato

In 1985 the company is renamed to KGS DIAMOND. In the next years a strong international development starts and the company opens sales offices around the world and acquires new production facilities.

KGS is a globally active company – with Swiss roots. In order to be close to our customers we have a global sales and distribution network with 20 companies in 15 countries in Europe, North America, Middle East, and Asia providing engineered solutions for hard to grind & brittle materials in Aerospace, Glass, Porcelain, Electronics, Automotive, Construction, Stone and Floor related markets. 6 manufacturing sites – located in Switzerland, The Netherlands, Hungary, Portugal and the United Arab Emirates – providing a wide range of diamond tools, flexible diamond abrasives and premium coated abrasives.



“PROVEN EXPERIENCE & CONSISTENT PERFORMANCE OVER DECADES”



CUSTOMER DRIVEN

Our philosophy is to adapt our products to our customer’s production facilities and circumstances to achieve the best quality in terms of product reliability, productivity and expected finish.

QUALITY

Swiss Diamond Technology® Certification to ISO 9001:2015.

SWISS ROOTS

Started in 1906 as a Swiss family owned, cement moulding company.
Since 1952 a world leading company in the flexible diamond abrasives industy.



TECHNOLOGY DRIVEN

Control of complex technologies;
- Metallized fabrics
- Electroplating
- Metal bond and resin bond sintering
- Moulded resin expertise
- Spray coating
- Standard coated abrasives technologies

UNIQUE INNOVATIONS & PATENTS

Specialized in high-precision Metalized Fabrics for applications in screen printing, filtration and electromagnetic shielding industries. First manufacturer to offer Flexible Diamond Abrasives designed for dry grinding and polishing glass, marble and granite; KGS Swiflex®.

EXPERIENCE

Our long experience and state of the art production lines provide high volume orders and custom made solutions at the same time.

SAFETY

Member of the Federation of European Producers of Abrasives; FEPA

GLOBAL ACTIVE COMPANY

Located in 15 countries on 4 continents
6 factories, 20 sales offices Production is based mainly in Europe.


KBS

DIVISIONS
DIAMOND ABRASIVE TOOLS

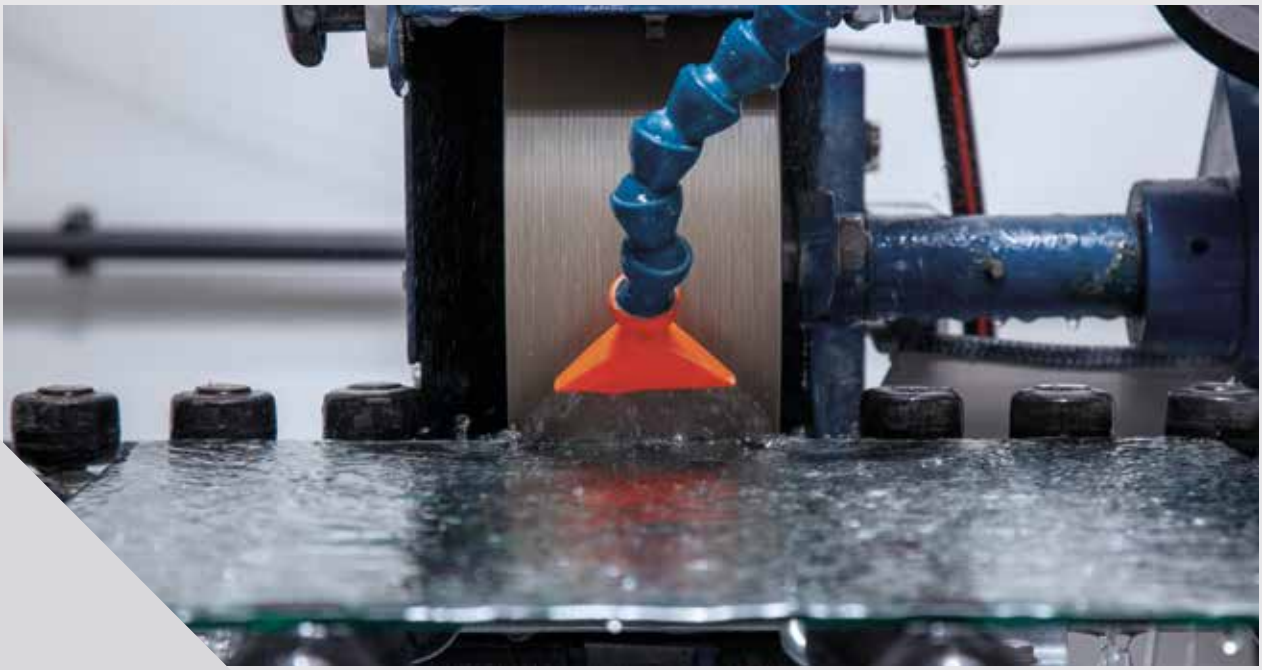
STONE



FLOOR



PRECISION



See next pages for Precision markets & branches

FLEXIBLE DIAMOND ABRASIVES

FOR PRECISION APPLICATIONS ARE USED IN MANY

HEAVY INDUSTRIES



Mechanical & mould engineering



Metallography



Defense industry



Printing and paper industry



Steel rolling mills



Chemical plants & components



Oil and gas industry



Food and injection molding industry

TRANSPORTATION



Aerospace



Metro & train



General transportation



Marine



Cabins & container industry



Earth moving equipment



Electronic components



Mining

DIFFERENT INDUSTRIES

ENERGY



Power plants



Windmill



Water technology



Solar thermal power plants

BUILDING MATERIAL PROCESSING



Construction



Glass processing industry



Ceramic & rooftiles



Natural stone

LEISURE / HOUSE & GARDEN / SPORTS



Porcelain table ware



Ski industry



Optical



Gardening tools



Knives



Dental



Clothing



Mobile phone



TECHNICAL DATA

MATERIALS

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DIAMOND TOOLS
FOR HARD AND BRITTLE MATERIALS

KGS flexible diamond tools have been specifically tailored for many industrial abrasive applications. Excellent cost / performance benefit, KGS diamond tools are long lasting and faster cutting.

A wide range of materials are suitable to be ground or finished with KGS Flexible diamond tools.

HARD METALS
Grey and nodular cast iron, metal alloys with a hardness > 55 HrC, molybdenum





HARD COATINGS
Thermal sprayed materials like Tungsten Carbide, Chrome Carbide, Aluminium Oxyde, Chrome Oxyde, Yttria Zirconia Oxyde, Aluminium Titanium Oxyde.





CERAMICS

Tiles, porcelain and refractories





COMPOSITES

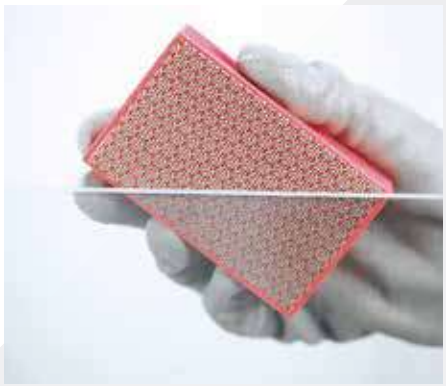
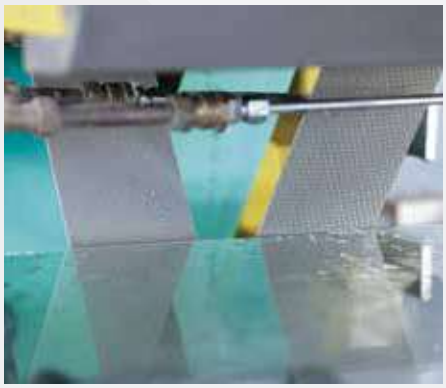
Carbon and glass fiber reinforced plastics





GLASS

Flat glass, tempered glass, sculptures, crystallerie and scientific glass

5 REASONS TO USE



FLEXIBLE DIAMOND TOOLS

1 WHEN MATERIALS CANNOT BE GROUND, POLISHED OR SHAPED WITH CONVENTIONAL ABRASIVES

- Hard and brittle material, hardness HRC > 55
- Typical materials are glass, stone, hard metals, ceramics, technical ceramics, hard coatings and composites
- Diamond is much harder and its cutting edges remain sharp, even on hard, abrasive materials

2 HIGH FINISH REQUIREMENTS

- Constant cutting rate & surface finish from beginning till end of the diamond tool lifetime
- Continuously high material removal rates

3 PERFECT EXTENSION TO THE CONVENTIONAL COATED ABRASIVE RANGE

- Requires similar type of machines and knowledge
- Great add-on to your existing product portfolio

4 IN MANY CASES, PROVIDES A MORE ECONOMICAL & ENVIRONMENTALLY FRIENDLY SOLUTION

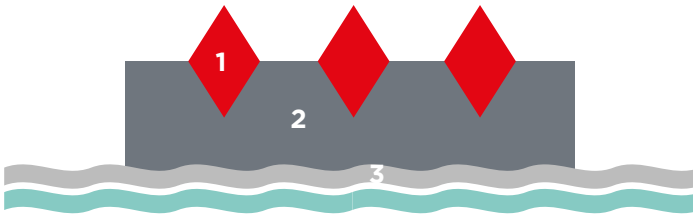
- Higher productivity
- Less down time resulting in increased productivity
- Far higher tool life and less waste

5 KGS FLEXIBLE DIAMOND TOOLS CAN REDUCE CYCLE TIMES, PROCESS TIME AND COST COMPARED TO DIAMOND WHEELS

- Lower purchase prices
- Easy and fast to change the KGS flexible diamond tools in different grit sizes, quicker to final results
- High flexibility for grinding hard to grind product shapes and areas

PRODUCT SPECIFICATION
& CONSTRUCTION

A flexible diamond product is made up of **three basic raw materials;** grit (1), bond (2) and backing (3).



1. GRITS

Diamond is the hardest material available which provides a predictable, consistent and repeatable finish for hard and brittle materials. Diamond consists of pure carbon in a crystalline structure. For grinding tools, the diamond used are generally synthetic, produced at very high temperatures under high pressure.

The grit size data for diamond is based upon the average grit diameter in µm. All grits are colour coded which is a standard for flexible diamond tools within the abrasive industry. Grit availability differs per bond (metal or resin) and pattern.

THE FOLLOWING GRIT SIZES ARE AVAILABLE

Grit size	50	60	120	200	320	400	500	800	1500	3000
Mesh	50	60	120	200	320	400	500	800	1500	3000
Fepa	P60	P80	P120	P220	P320	P400	P500	P600	P2500	
Micron	301 µm	250 µm	125 µm	74 µm	54 µm	40 µm	30 µm	20 µm	9 µm	3 µm

Stock removal — Grinding — Finishing — Polishing

FROM COARSE TO VERY FINE GRITS

A coarse grit increases stock removal and surface roughness of the workpiece. Choosing the right grit size depends on various factors;

- Application
- Material
- Tool speeds and feeds
- Wet (water, lubricant) or dry grinding
- Required finish (Roughness level Ra)

General rule: Flexible diamond tools perform best when used wet.

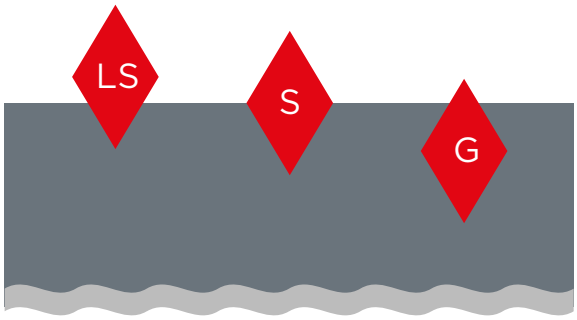
2. BONDS

KGS manufactures flexible diamond tools in metal and resin bond versions.

METAL BOND

Metallic bond of nickel deposit by a special electroplating process, mainly used for coarse and medium grits and operations, which require high material removal.

This process starts as metallised fabric.
The pattern is electroformed using nickel plating.
Diamond is sprinkled on, and plating continued to the required specification LS, S or G.



GRIT RANGE

The availability of metal bond grits differs by pattern.

RESIN BOND

These products are made with a continuous layer of resin. Diamond is all the way through the resin and the product works best when opened up to achieve optimum performance.

If a resin product starts to glaze or become dull it can be dressed so that new diamond will be exposed, and restore cutting power.



GRIT RANGE

The availability of resin bond grits differs by pattern.

METALLISED FABRIC

KGS Flexible diamond tools are based on a proprietary (metallised) fabric manufactured by KGS in Switzerland. This unique process provides strength and flexibility versus competitors and niche applications which require a special – often unique – construction.

This fabric gives good dimensional stability, high wear resistance plus excellent heat dissipation and can be laminated to many different types of polyester and or polycotton backings.

DIAMOND PELLETS / PATTERNS

KGS offers a wide and unique range of patterns which are often multifunctional in terms of application and performance or developed as unique patterns for specific application materials.

3. BACKERS

A wide range of backings have been designed and selected enabling KGS to provide the best option for each application. KGS backers are made of cotton, polyester or a combination of polyester and cotton (poly-cotton) for optimum diamond retention, flexibility, rigidity and superb edge wear.

Using the right type of backer is a key factor in the successful performance of the product, ease of use, performance, lifetime, finish. Backers can be combined with many different patterns and grits, customised to fit the application or specific needs of the customer. KGS offers a variety of backings to support the diamond tool. From heavy duty to very flexible backing.

OUR BACKERS CAN BE CLASSIFIED INTO FOUR GROUPS

Highly flexible & light

Semi flexible & strong

Heavy & stable

Very heavy & stable

THE FINAL CHARACERISTICS OF THE SUPPORT OF A FLEXIBLE DIAMOND TOOLS IS DETERMINED BY:

- The properties of the backer, i.e. cotton, poly-cotton, weaving structure, fillers
- The type of bond, resin or metal bond, i.e. metallized fabric
- The type of pattern, open dots, closed structure

Note : Not all backers can be combined



MAIN BACKINGS



Heavy polyester Y-weight backing



Heavy polyester stable Y-weight backing



Thin Hard Polyester X-weight backing.



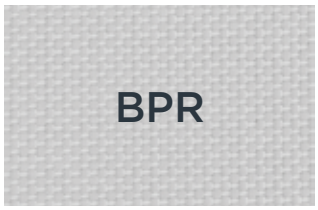
Strong polyester XY– backing



Strong heavy backing, Y-weight, polyester



Flexible polyester XF-weight backing



Strong flexible XF-weight backing



Very thin hard backing X-weight polyester



Thin flexible JF - backing



Thin very flexible XF-weight backing



Light weight, F-weight canvas backing

SPECIAL CONNECTING BACKERS / FIXATIONS

QRS



Quick release system (Velcro®) for quick changing grit size. Coulor coded grit sizes for easy identification

S/A



Self adhesive backer, environmentally friendly (no dust pollution risk)

MAGN



Magnetic backing for quick changing grit sizes. Magnetic disc gives flat even surface with slight “give”. Good for reducing “first contact” stress.

K-LOC



Quick change system with a mandrel which can be screwed in the back up pad for secure attachment and rapid swapping.

PATTERNS

KGS offers a wide range of different patterns, in metal and resin bond.

METAL BOND: This process starts as metallised fabric. The pattern is electroformed using nickel plating. Diamond is applied, and plating continued to realise the specified pattern. The design, pattern, and spacing of these grit islands determines the cut-rate, lifetime, grade of abrasive and pressure required to achieve the required stock removal and finish.

RESIN BOND: A continuos multi-layer or moulded shapes of resin and diamond particles spread all the way through the resin layer.

KGS TELUM®

Strong interlocking arrow pattern, specifically developed for heavy stock removal and finishing. Ideal for grinding on the slack of the belts and for grinding a surface with sharp edges.

This pattern with lines in all directions, is always in contact with the work piece ensuring a high level of consistent grinding with no witness lines. The structure of the pattern ensures good heat dissipation. Available with different backing types.

Telum® T1



FEATURES
- » Metal bond
- » Most closed pattern
- » Coarse to fine grits
- » For discs only

ADVANTAGES
- » Fine finishes

GRIT RANGE



Telum® T2



- » Metal bond
- » More open pattern

- » High flexibility
- » Stock removal
- » Premium belt performance



Telum® CP1



- » Resin bond
- » Fine to very fine grits

- » Polishing applications



Telum® H



- » Metal bond
- » Coarse to fine grits
- » Most open Telum® pattern

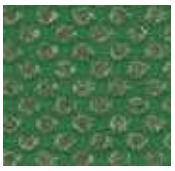
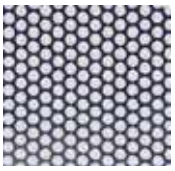
- » High stock removal

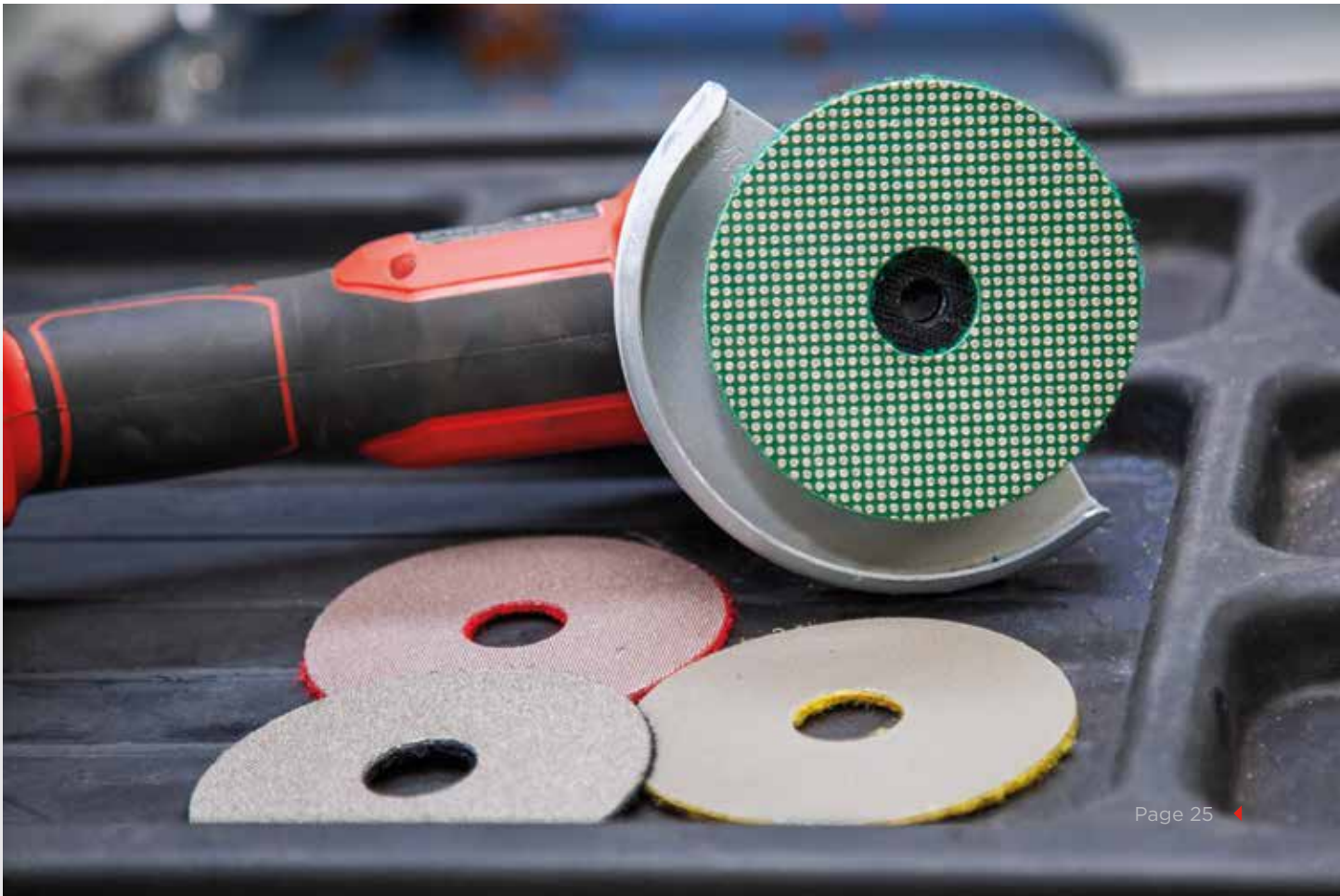


KGS FLEXIS®

Standard dot pattern, positioned in a precise pattern. The dots are positioned in such a way to create an optimal balance between stock removal and surface finish.

This pattern has a high temperature resistance, due to a superior heat dissipation, which makes it outstanding in performance. Available in metal & resin bond and with different backing types.

		FEATURES	ADVANTAGES	GRIT RANGE
Flexis® 21		» Metal bond » ± 2mm ø per dot 16 dots / cm2 » Coarse grits	» Extra flexibility » Agressive cutting action Improved coolant flow » Increased swarf removal	50 60
Flexis® 18		» Metal bond » ± 0,7mm ø per dot » 120 dots / cm2 » Medium to fine grits	» Fine finishes	120 200 320 400 800 1500
Flexis® CP1		» Resin bond » Fine to very fine grits	» Polishing applications	500 1500 3000



KGS QUADROFLEX™

A unique and continuous cconnected wave pattern, a good general purpose pattern for high material removal.

A very strong no clogging pattern with an open structure and lower diamond concentration. It ensures higher pressure per grit and high stock removal. Available with different backing types.

Q1 Quadroflex™



FEATURES
- » Metal bond
- » Coarse grits
- » Open connected
- » pattern 6x6 mm

ADVANTAGES
- » For general purpose applications which require high stock removal

GRIT RANGE

50 60

Q2 Quadroflex™



- » Metal bond
- » Medium to fine grits
- » More close pattern
- » 3x3 mm

- » For general purpose applications which require stock removal and precision

120 200 320 400 800 1500



KGS TELUM® CH

Special resin cross pattern. Designed specifically for precision grinding & polishing of extremely hard materials, such as those used in the Thermal Spray Industry.

Telum® CH



FEATURES
- » Swiss flag pattern
- » Individual resin “island”
- » Thick bond layer
- » Tough, hard resin
- » From coarse to very fine grit

ADVANTAGES
- » Unique and recognizable
- » Mechanically strong and durable
- » Long life, excellent finish
- » Roughing to super finishing
- » Greatly reduced cycle times compared to bonded wheels in roll grindingand precision

GRIT RANGE



KGS SWIFLEX® SDA

Thin structured diamond abrasive resin layer, which can be used for various applications, for both wet & dry usage. Available with different backing types – flexible and rigid – for flat or complex shapes.

The feel, look and touch of this product is very similar to the conventional coated products.

Swiflex® SDA 1



FEATURES
- » Resin bond
- » Coarse to
- » medium grits
- » Coarse pattern structure

ADVANTAGES
- » Stock removal applications

GRIT RANGE



Swiflex® SDA 2



- » Resin bond
- » Medium to fine grits

- » Finishing and polishing
- » applications



PRODUCTS

» DIAMOND SPIRAL BELTS
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» SMALL DIAMOND BELTS
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» DIAMOND FLAP WHEEL
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» DIAMOND TRIANGLES
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» SEMI FLEXIBLE DISCS
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DIAMOND SPIRAL

Spirals belts can be used on hard to grind materials such as glass, porcelain, rhodium, iridium, titanium, technical ceramics and hard coatings like tungsten carbide. Finishing of corners, edges and cleaning of hard to reach areas. The spiral belts remove uneven surfaces, ensure flatness providing an excellent base for fittings. They can be used for shaping, cleaning edges of drilled holes and corner dubbing. Artisan companies use them for shaping sculptures.

Specialized glass companies, like glass fencing firms (swimming pools) utilize KGS spiral belts for shaping and cleaning the edges of drilled holes (for locking systems) in glass doors. Spiral belts are also used for corner dubbing applications which need a high accuracy and fine adjustments. Available up to Ø150 mm for expanding rubber drums. These products are often used in the crystal glass industry, lapidary, technical quartz, and in the stone industry.

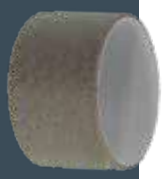
Spiral belts are ideal for curved and contoured surfaces that need high attention and accuracy. Polishing of corners, edges and cleaning of hard to reach areas, like pre-moulded holes of porcelain sanitary ware.

TYPE OF GRINDING MACHINE

Hand-Held machines. The spiral belts have a reinforced backing which allows high speeds up to 45 m/s ensuring a superb finish. Optimum speed will vary with the material ground. Slower speeds may prove beneficial with the finer grits.

KGS TELUM® SPIRAL BELTS

The KGS Telum® pattern is generally best for corner dubbing machines and for flat surface area's providing a smooth grinding action (– no soldering).



- **DIMENSION** Ø 15x30, 22x20, 25x25, 30x30, 45x30, 50x42, 75x38 & 75x42 mm

KGS FLEXIS® SPIRAL BELTS

Industry standard - dot pattern. The dot pattern is more flexible and ideal for smaller diameters as the dots tend to give more grip on uneven surfaces.



- **DIMENSION** Ø 15x30, 22x20, 25x25, 30x30, 45x30, 50x42 & 75x42 mm

KGS SWIFLEX® SDA SPIRAL BELTS

Good alternative for dry running applications - can be used on all difficult hard brittle materials.



- **DIMENSION** Ø 15x30, 25x25, 30x30, 45x30, 50x42 & 75x38 mm

KGS TELUM® SPIRAL BELTS

The spiral belts can be used for corner dubbing machines, providing a smooth grinding action, no soldering. Ideal for shaping, cleaning the edges of drilled holes. Spirals can also be used for overspray removal to remove the surplus of coatings fast.

Backing BPR - Strong flexible XF-weight backing

Materials Glass, natural stone, ceramic, hard coatings, hard metal

Usage



Size (mm)	Grit	Art. no.
15x30	60	10002
	120	10003
	200	10004
	400	10005
	800	10006

Size (mm)	Grit	Art. no.
22x20	60	10011
	120	10012
	200	10013
	400	10014

Size (mm)	Grit	Art. no.
25x25	60	10019
	120	10020
	200	10021
	400	10022
	800	10023

Size (mm)	Grit	Art. no.
30x30	60	10028
	120	10030
	200	10032
	400	10034
	800	10036

Size (mm)	Grit	Art. no.
45x30	60	10044
	120	10045
	200	10046
	400	10047
	800	10048

Size (mm)	Grit	Art. no.
50x42	60	10064
	120	10066
	200	10068
	400	10070

Size (mm)	Grit	Art. no.
75x38	60	10053
	120	10055
	200	10057
	400	10059

Size (mm)	Grit	Art. no.
75x42	60	10086
	120	10087
	200	10088
	400	10089
	800	31620
	1500	31621

KGS FLEXIS SPIRAL BELTS

The spiral belts can be used for corner dubbing machines, provided a smooth grinding action, no soldering. Ideal for shaping, cleaning the edges of drilled holes. Spirals can also be used for overspray removal to remove the surplus of coatings fast.

Backing BPR - Strong flexible XF-weight backing

Materials Glass, natural stone, ceramic, hard coatings, hard metal

Usage



Size (mm)	Grit	Art. no.
15x30	60	10118
	120	10121
	200	10123
	400	10125
	800	10127

Size (mm)	Grit	Art. no.
22x20	60	10138
	120	10139
	200	10140
	400	10141
	800	10142

Size (mm)	Grit	Art. no.
25x25	60	10146
	120	10147
	200	10148
	400	10150
	800	10151

Size (mm)	Grit	Art. no.
30x30	60	10158
	120	10160
	200	10161
	400	10162
	800	10163

Size (mm)	Grit	Art. no.
45x30	60	10170
	120	10172
	200	10174
	400	10176
	800	10178

Size (mm)	Grit	Art. no.
50x42	60	10194
	120	10196
	200	10198
	400	10200
	800	10202

Size (mm)	Grit	Art. no.
75x42	60	10213
	120	10214
	200	10215
	400	10216

KGS SWIFLEX® SDA SPIRAL BELTS

Good option from dry running applications - can be used on all difficult hard brittle materials.

Backing BYW3 - Strong and stable, XY-weight polyester, water proof.

Materials Glass, natural stone, ceramic, hard coatings, hard metal

Usage



Size (mm)	Grit	Art. no.
15x30	60	10355
	120	10356
	200	10357
	400	10358
	800	10359
	1500	10360
	3000	10361

Size (mm)	Grit	Art. no.
25x25	60	10362
	120	10363
	200	10364
	400	10365
	800	10366
	1500	10367
	3000	10368

Size (mm)	Grit	Art. no.
30x30	60	10348
	120	10349
	200	10350
	400	10351
	800	10352
	1500	10353
	3000	10354

Size (mm)	Grit	Art. no.
45x30	60	10384
	120	10385
	200	10386
	400	10387

Size (mm)	Grit	Art. no.
50x42	60	10369
	120	10370
	200	10371
	400	10372
	800	10373
	1500	10374
	3000	10375

Size (mm)	Grit	Art. no.
75x38	60	10341
	120	10342
	200	10343
	400	10344
	800	10345
	1500	10346
	3000	10347

Size (mm)	Grit	Art. no.
75x42	120	10376
	200	10377
	400	10378

Size (mm)	Grit	Art. no.
100x38	60	10379
	120	10380
	400	10381

KGS RUBBER WHEELS FOR SPIRAL BELTS

6X40 MM SHAFT

Size (mm)	Art. no.
15x30	22035
22x20	22034
25x25	22033
30x30	22032
45x30	22031



M14

Size (mm)	Art. no.
50x42	22037



KGS MANDREL M14

For KGS rubber wheel with bore 25

Size (mm)	Art. no.
M14x25	21546







SMALL DIAMOND BELTS

Small diamond belts can be used on hard to grind materials such as glass, porcelain, hard metals and hard coatings like tungsten carbide.

Since these small belts – used for difficult corners or small cut-outs, run over a small pulley, it is important to pay attention to the flexibility of the belt specification. KGS Flexis® belts have a more open pattern which give it the right flexibility to run smoothly over the pulley. Especially on very small pulleys the KGS Telum® pattern can be too stiff.

KGS TELUM® BELTS

The KGS Telum® pattern is generally best for corner dubbing machines and for flat surface area's providing a smooth grinding action (– no soldering).



- **DIMENSIONS** 330x8, 533x30, 520x20 & 762x25 mm
- **MATERIALS** Glass, hard coatings, hard metals

KGS FLEXIS® BELTS

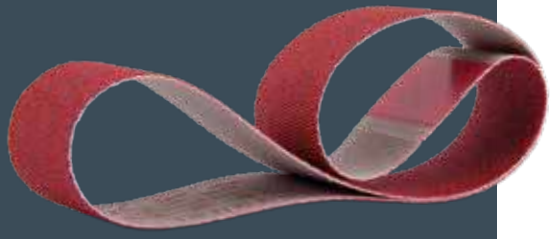
Industry standard - dot pattern. The dot pattern is more flexible and ideal for smaller diameters as the dots tend to give more grip on uneven surfaces.



- **DIMENSIONS** 305x13, 330x10, 457x13, 457x18, 520x20, 533x30 & 762x25 mm
- **MATERIALS** Glass, hard coatings, hard metals

KGS SWIFLEX® SDA BELTS

Good option for dry running applications.



- **DIMENSION** 520x20, 533x30 mm
- **MATERIALS** All difficult hard brittle materials.

KGS TELUM® BELTS

Premium product, with special interlocked arrow pattern delivers top performance and has a extra long life time. The interlocked arrow pattern ensures high mechanical strength. The belts have a strong tough flexible backer, ideal for grinding on slack of the belt. The KGS Telum® pattern avoids soldiering. High productivity output.

Backing Available with BP2, BPG or BPR backing

Materials Glass, hard coatings, hard metals

Usage



BP2 BACKING

Strong tough flexible poly cotton backer, water- and emulsion proof

Size (mm)	Grit	Art. no.
533x30	60	12063
	120	12064
	200	12065
	400	12066
	800	12067

Size (mm)	Grit	Art. no.
520x20	60	39271
	120	12147
	200	12148
	400	12149

Size (mm)	Grit	Art. no.
762x25	60	39386
	120	39387
	200	39388
	400	39389

Size (mm)	Grit	Art. no.
457x18	60	39243
	120	12082
	200	30304
	400	39244

BPG BACKING

Flexible polyester XF-weight backing

Size (mm)	Grit	Art. no.
330x8	60	10777
	120	10778
	200	10779
	400	10780
	800	10781

BPR BACKING

Thin flexible F-weight backing

Size (mm)	Grit	Art. no.
330x8	120	10754
	200	10755

KGS FLEXIS® BELTS

Flexible diamond belts for hand-held machines. The flexible diamond belts are often used to remove overspray of HVOF and TBC coatings. It's the ideal solution for grinding off the surplus of coatings fast, with considerable time saving, compared to conventional abrasive tooling.

Backing BP2 - Strong tough flexible poly cotton backer, water- and emulsion proof

Materials Glass, hard coatings, hard metals

Usage



Size (mm)	Grit	Art. no.
305x13	60	34645
	120	34646
	200	39211
	400	39212

Size (mm)	Grit	Art. no.
330x10	60	11071
	120	11072
	200	11073
	400	11074

Size (mm)	Grit	Art. no.
457x13	60	34100
	120	31813
	200	10947
	400	32138

Size (mm)	Grit	Art. no.
457x18	60	39103
	120	10858
	200	39104
	400	39105

Size (mm)	Grit	Art. no.
520x20	60	10853
	120	10854
	200	10855
	400	10856

Size (mm)	Grit	Art. no.
533x30	60	12205
	120	12206
	200	12207
	400	12209
	800	12210

Size (mm)	Grit	Art. no.
762x25	60	39100
	120	39101
	200	10803
	400	39102

KGS SWIFLEX® SDA BELTS

Standard flexible diamond coated product, delivers good performance. The coarse pattern makes the belt very suitable for stock removal. Low pressure is required, thanks to a thin structured diamond abrasive resin layer, this makes the KGS Swiflex® SDA belts easy to use. Grinds faster and longer vs. conventional abrasives. Excellent value for money.

Backing BYW4 - Strong polyester XY– backing

Materials Glass, hard coatings, hard metals

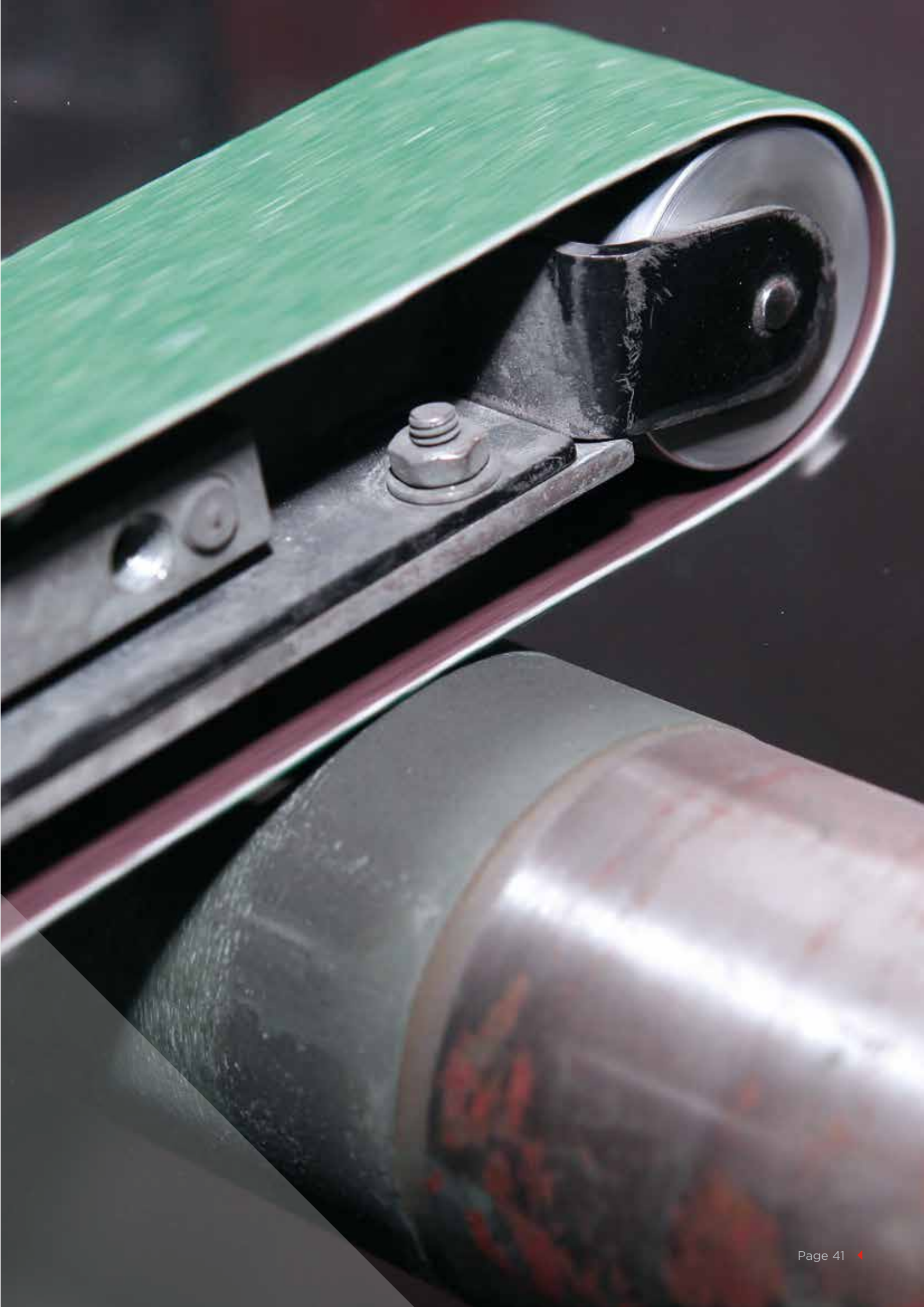
Usage



Size (mm)	Grit	Art. no.
520x20	60	41039
	120	41040
	200	41041
	400	41042

Size (mm)	Grit	Art. no.
533x30	60	33253
	120	11169
	200	11171
	400	11173
	800	11175
	1500	11176

TECH TIP
For longer life, try to grind on the slack of the belt, not the fixed platen or pulley. This will enhance the lifetime of the diamond belt.





LARGE DIAMOND BELTS

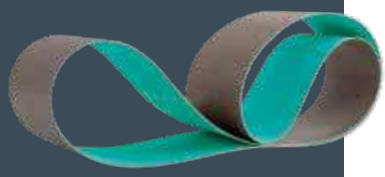
KGS Diamond offers a broad selection of sizes and grits for most dimensioning, intermediate grinding and polishing belt applications on hard and brittle materials. We have a long history in manufacturing flexible diamond belts, standard sizes as well as tailor-made. We specialize in working on extremely hard to grind materials with challenging surface finish requirements. The feedback of customers, operators and engineers have offered us the possibility to develop a range of joints which offer a solutions for most of your demands on materials where conventional abrasives can no longer meet your requirements.

This is our expertise and commitment to the customer, our specialty to offer engineered solutions in customized products and sizes to fit your application – in small quantities that fit the needs of the customer, without becoming too expensive.

PRODUCT OFFERING
Below are examples - a snapshot of belt types and sizes we manufactured, we have hundreds more to choose from to meet the exact specifications of your application. For additional belt sizes, contact us with your requirements, we will be pleased to be of service to you. More about our special dimensions you will find on page 49.

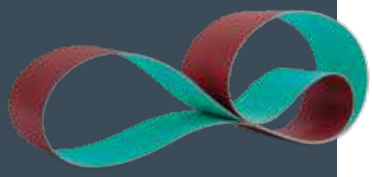
KGS LARGE TELUM® BELTS
Premium product with top performance and extra long life time.

- **DIMENSIONS:** 1800x100, 1830x100, 2130x60, 3000x100, 3350x100 & 2000x50 mm



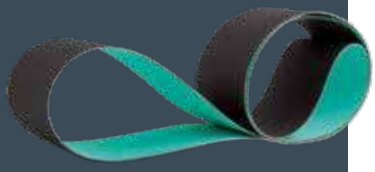
KGS FLEXIS® BELTS
Professional industrial product with high temperature resistance

- **DIMENSIONS:** 1800x100, 1830x100, 2130x60, 3000x100, 3350x100 & 2000x50 mm



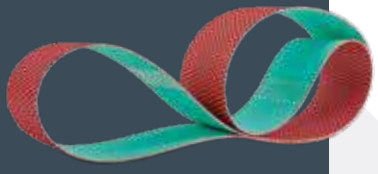
KGS SWIFLEX® SDA BELTS
Good alternative for dry running applications.

- **DIMENSIONS**: 1800x100, 1830x100, 2500x100, 3000 x100 & 2000x50 mm



KGS TELUM® CH BELTS
Specifically engineered to replace both metal bond diamond wheels and super-finishing systems.

- **DIMENSIONS:** 2000x50 and many other dimensions on request



KGS TELUM® BELTS

Premium product, with special interlocked arrow pattern delivers top performance giving extra long life time. The interlocked arrow pattern ensures high mechanical strength.

The belts have a strong tough flexible backer, this makes them ideal for grinding on slack of the belt. The KGS Telum® pattern avoids soldiering. High productivity output. Suitable for stand alone grinding machines.

Backing BP2 - Heavy polyester Y-weight backing

Materials Glass

Usage



Size (mm)	Grit	Art. no.
1800x100	60	12090
	120	12091
	200	12092

Size (mm)	Grit	Art. no.
1830x100	60	39045
	120	39046
	200	12100

Size (mm)	Grit	Art. no.
2000x50	400	11358

Size (mm)	Grit	Art. no.
2130x60	60	38989
	120	12152
	200	12153

Size (mm)	Grit	Art. no.
3000x100	60	12079
	120	39047
	200	39048

Size (mm)	Grit	Art. no.
3350x100	60	12087
	120	39049
	200	12088

KGS FLEXIS® BELTS

Flexible diamond belts for hand-held machines. The flexible diamond belts are often used to remove overspray for HVOF and TBC coatings.

It's the ideal solution for grinding off the surplus of coatings fast, with considerable time saving, compared to conventional abrasive tooling.

Backing BP2 - Heavy polyester Y-weight backing

Materials Glass, hard coatings, hard metals

Usage



Size (mm)	Grit	Art. no.
1800x100	60	12253
	120	12254
	200	39422

Size (mm)	Grit	Art. no.
1830x100	60	39390
	120	39391
	200	12229

Size (mm)	Grit	Art. no.
2000x50	60	39974
	120	11600
	200	11601
	400	11602

Size (mm)	Grit	Art. no.
2130x60	60	39044
	120	11475
	200	11476

Size (mm)	Grit	Art. no.
3000x100	60	39392
	120	39419
	200	39421

Size (mm)	Grit	Art. no.
3350x100	60	12248
	120	12249
	200	12250

KGS SWIFLEX® SDA BELTS

Standard flexible diamond coated product, delivers good performance. The coarse pattern makes the belt very suitable for stock removal.

Low pressure is required, thanks to a thin structured diamond abrasive resin layer, this makes the KGS Swiflex® SDA belts easy to use. Grinds faster and longer vs. conventional abrasives. Excellent value for money.

Backing BP3 - extra heavy Y polyester, waterproof.

Materials Glass, hard coatings, hard metals

Usage



Size (mm)	Grit	Art. no.
1800x100	60	39240
	120	39241
	200	39242

Size (mm)	Grit	Art. no.
1830x100	60	39127
	120	11904
	200	11906

Size (mm)	Grit	Art. no.
2000x50	60	11179
	120	11180
	200	38933
	400	38934
	800	38936
	1500	38937
	3000	38938

Size (mm)	Grit	Art. no.
2500x100	60	11181
	120	11183
	200	11185

Size (mm)	Grit	Art. no.
3000x100	60	11927
	120	11928
	200	39146

KGS TELUM® CH BELTS

For wet grinding and polishing of cylinders with hard coatings. Especially those used in the pulp, paper & printing industries. Including Chrome replacement with HVOF Tungsten Carbide - Hydraulic rams and shock absorbers plus rolls and cylinders used for hot rolling in the metal industry.

KGS Telum® CH Belts are engineered to replace both metal bond diamond wheels and super-finishing systems. Combines the accuracy of rigid tools (bonded wheels); with the speed, consistency & ease of use of a flexible diamond belt system. And for many applications, can replace the need for Diamond Film Finishing. Benefits: Same results every time - Grinds fast, can polish too - Hard pulley gives high calibration An efficient, low cost solution - Lower grinding force than wheels - Much lower capital investment

Backing BP2 - Heavy and very durable backing, Y-weight poly-cotton, waterproof

Materials Hard materials and coatings like HVOF

Usage

Size (mm)	Grit	Art. no.
2000x50	60	11727
	120	11728
	200	11729
	400	11730
	800	11731



Other dimensions and grit sizes are available on request

Grit range: 50 up to 3000

Dimensions

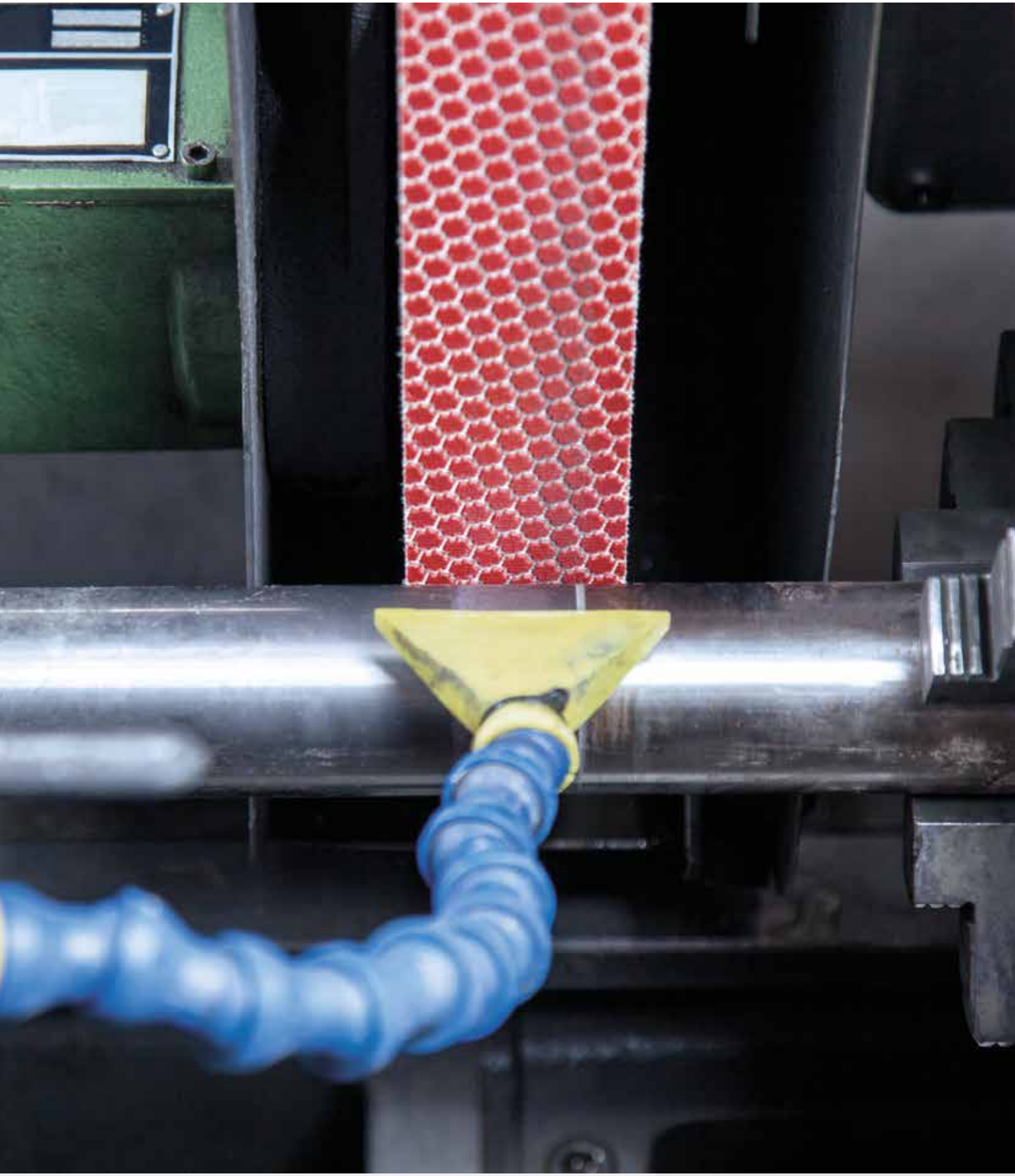
	min (mm)	max (mm)
Width	20	300
Length	533	5000

TECH TIP

For calibration hard materials and coatings use grit 60. For finishing use grit 800 (sometimes grit 400 will be enough also) to achieve an RA of around 0.2.

Use coolant additives suitable for belt grinding operations like Shell Metalina B200 or D3202 (non-solvent base), avoid oil based coolants.





ENGINEERED SOLUTIONS

The market for thermal spray coatings and other advanced materials are showing a strong upward trend. Special and very hard coatings are applied for resurfacing metal parts to minimize the effects of mechanical wear, extending the “material life”.

Examples are tungsten carbide coatings for corrosive low-temperature wear and nickel chromium carbides for elevated temperature wear (1000° C). Carbide coatings containing cobalt chrome have over 4 - 6 times the abrasive wear. Wire flame, powder and plasma arc spraying are examples of thermal spray wear coating methods, next to the well-known HVOF (High Velocity Oxygen Fuel Spraying method) which creates very high micro structure densities close to that of rough materials.

All these coatings are very hard to grind and often applied to complex 3D shapes which makes it a challenge to achieve the required surface finish during the grinding process while keeping up productivity.

These hard to grind materials require engineered flexible diamond abrasive solutions to keep productivity at the right pace, costs under control and servicing within expectations.

KGS highly-engineered flexible diamond belts are the most efficient tools to grind and polish hard coatings on flat, concave and complex 3D shapes. KGS diamond tools for hard to grind coated geometries offer a perfect balance between cut-rate, flexibility, strength, surface finish and high productivity.

Flexible diamond tools are easier to use, require less operators’ skills and are more sustainable than other abrasives, resulting in a more consistent and predictable result.

PRODUCT AVAILABILITY

- In grits 50 to 3000
- Metal and resin bond
- In different types of backers, strong, heavy and flexible
- In dimensions up to 300mm wide and 10.000mm long

APPLICATIONS

For many different applications such as:

- Mud rotor finishing Page: 50
- Extrusion spirals Page: 52
- Rolls and cylinders Page: 54

FLEXIBLE DIAMOND BELTS
FOR MUD ROTOR FINISHING

The high-end manufacturers of down hole mud rotors in the oil and gas industry are using KGS diamond belts to finish and blend the tungsten carbide coating. An obvious choice, which increases productivity, lifetime, the surface finish and thus the performance of the rotors. Most applications need belts to work dry. KGS offers enhanced joint technology, this enables the resulting belt joint to withstand the maximum pressure under dry working conditions.





Type of grinding machines: Several set-ups are possible to reach the required finish. Stationary belt grinders provide a consistent finish where manual belt grinders allow the finishing of more difficult to reach areas.

The belts can be used with or without coolant. Use with coolant gives a better lifespan. With KGS diamond belts finishes up to high gloss (Ra < 0.05) are within reach and conceivable.



KGS FLEXIS® BELTS

These sustainable belts have a dot pattern, metal bond design, that ensures a very strong, precise diamond grain adhesion which delivers long-lasting durability, high cut-rate and consistent grinding results.

The flexible backer allows the diamond abrsive to respond to surface imperfections and contoured shapes, with continuous high cut-rate and excellent productivity. The open dot pattern allows the removal of swarf, reducing loading, providing longer lifetime. KGS Flexis® belts perform at best when used wet.

AVAILABLE ON REQUEST

Grit range: 120 up to 1500
Dimensions:

	min (mm)	max (mm)
Width	8	300
Length	305	5000



KGS SWIFLEX® SDA BELTS

These sustainable belts have a flexible backer with a thin structured resin bond diamond layer. The feel and touch of this product is very similar to coated abrasives.

KGS Swiflex® SDA are designed for wet and dry use. The flexible backer, type FSC, has a high flexibility to follow intricately contoured shapes

AVAILABLE ON REQUEST

Grit range: 60 up to 3000
Dimensions:

	min (mm)	max (mm)
Width	8	300
Length	305	5000

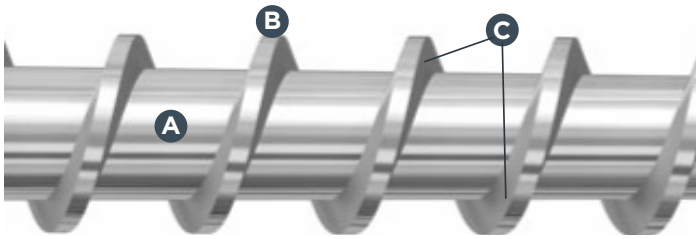


FLEXIBLE DIAMOND BELTS
FOR EXTRUSION SPIRALS

Extrusion spirals shapes have different geometries with hard to reach area's requiring different abrasive tools to achieve the required surface finish, reducing productivity and increasing grinding costs.

For these type of complex grinding processes KGS DIAMOND sets a new standard. To grind and polish both the outside and inside radius with one specification in a few short steps.

TYPE OF GRINDING MACHINE
Complex 3D spiral shapes such as injection molding screws.



A: Simple to reach area
B: Not to diffulct to reach area
C: Hard to reach area

Our products can do both A & C in one operation



KGS FLEXIS® BELTS

These sustainable belts have a dot pattern, metal bond design, that ensures a very strong, precise diamond grain adhesion which delivers long-lasting durability, high cut-rate and consistent grinding results.

The flexible backer allows the diamond abrsive to respond to surface imperfections and contoured shapes, with continuous high cut-rate and maintaining the productivity. The open dot pattern allows the removal of swarf, reducing loading and providing longer lifetime.

KGS Flexis® belts perform at their best when used wet. Roughness finish Ra < 0.1 can be achieved, depending on the coating type. Recommended grit sequence: BK-120 (125 micron) , RD-200 (74 micron), Ye-400 (40 micron).

AVAILABLE ON REQUEST

Grit range: 120 up to 1500
Dimensions:

	min (mm)	max (mm)
Width	8	300
Length	305	5000



KGS SWIFLEX® SDA BELTS

These sustainable belts have a flexible backer with thin structured resin bond diamond layer. The feel and touch of this product is very similar to coated abrasives.

KGS Swiflex® SDA are designed for wet and dry use. The flexible backer, type FSC, has a high flexibility to follow adequately contoured shapes. Recommended grit sequence: BK-120 (125 micron) , RD-200 (74 micron), Ye-400 (40 micron).

AVAILABLE ON REQUEST

Grit range: 60 up to 3000
Dimensions:

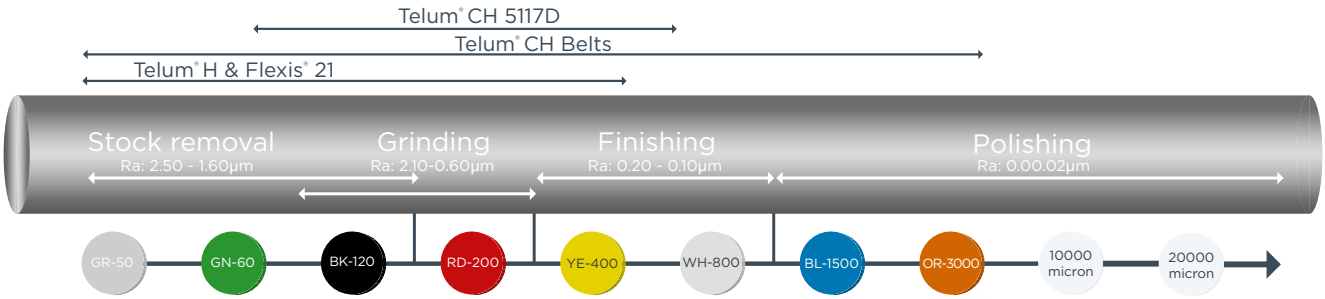
	min (mm)	max (mm)
Width	8	300
Length	305	5000



FLEXIBLE DIAMOND BELTS AND STRIPS **FOR ROLLS AND CYLINDERS**

For wet grinding, finishing and polishing of cylinders with hard coatings, especially those used in the pulp, paper & printing industries. Including chrome replacement with HVOF tungsten carbide. hydraulic rams and shock absorbers plus rolls and cylinders used for hot rolling in the metal industry.

THE GRINDING PROCESS
FROM STRIPPING TO SUPERFINISHING



STOCK REMOVAL
METAL BOND BELTS & STRIPS TELUM® H & FLEXIS® 21

Start the dimensioning step of your operation with KGS Telum® H or Flexis® 21 in grits 60 up to 400. These nickel belts are designed for fast grinding operations with high stock removal. Easy to use, yet still providing consistent and accurate results.

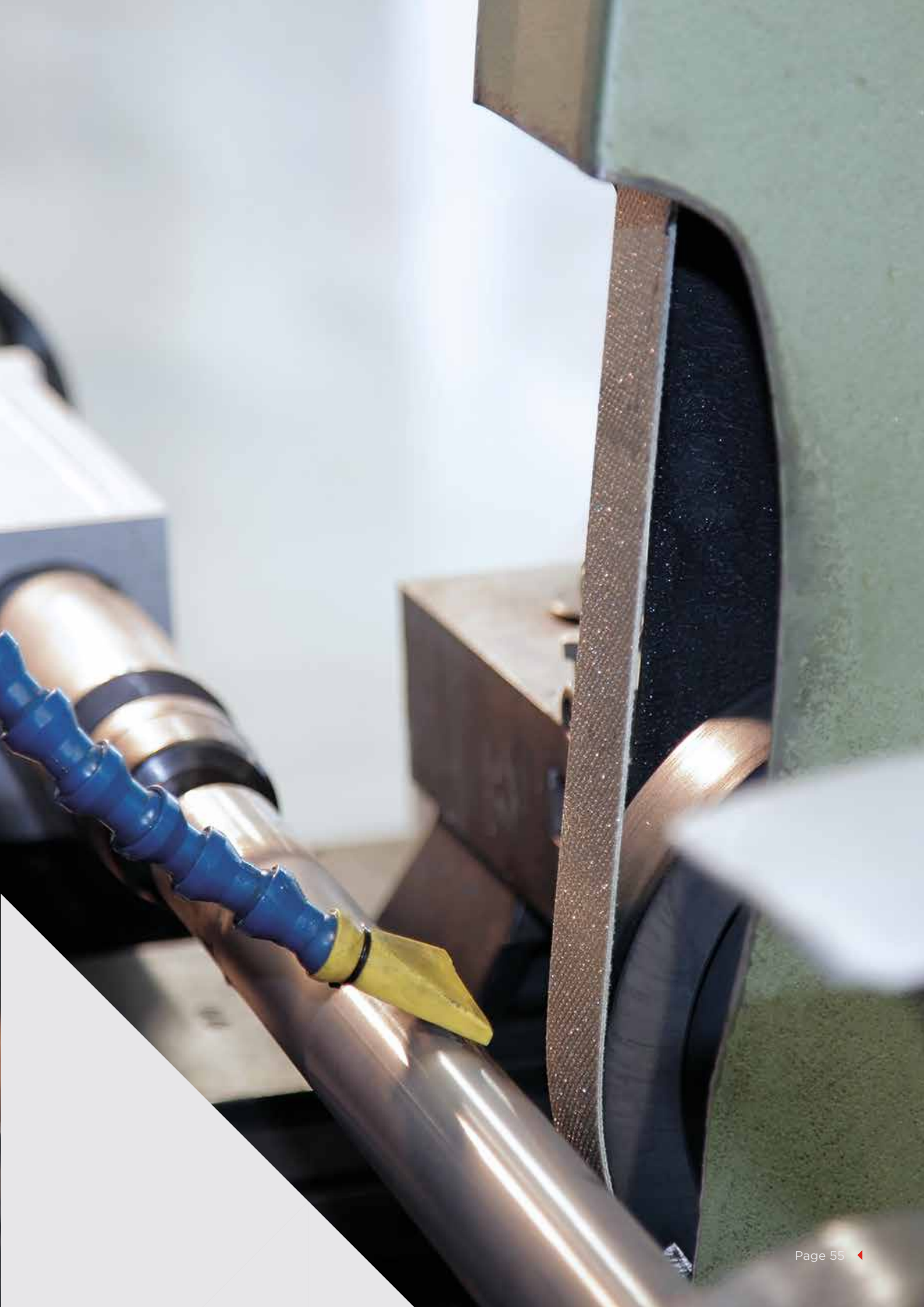
Depending on the Ra finish your product requires, these products provide the right preparation for a final finish and polish step with the resin bond KGS Telum® CH product.

GRINDING
METAL BOND BELTS & STRIPS TELUM® H, FLEXIS® 21 AND TELUM® CH

The KGS Telum® H, Flexis® and Telum® CH are versatile belts used for grinding purposes. The flexible backer combined with the highly-engineered diamond grain adhesion allows the system to become a market leader in fast dimensioning and durability. Especially designed for hard materials and coatings like HVOF and available in various grits.

POLISHING
TELUM® CH

KGS-Telum® CH Resin Belts - engineered to replace both metal bond diamond wheels and super-finishing systems. Combines the accuracy of rigid tools (bonded wheels); with the speed, consistency & ease of use of a flexible diamond belt system and suitable for many applications which can also replace the need for diamond film finishing. KGS Telum® CH belts are available in grit 50 up to 3000 for high stock removal and superfinishing applications.

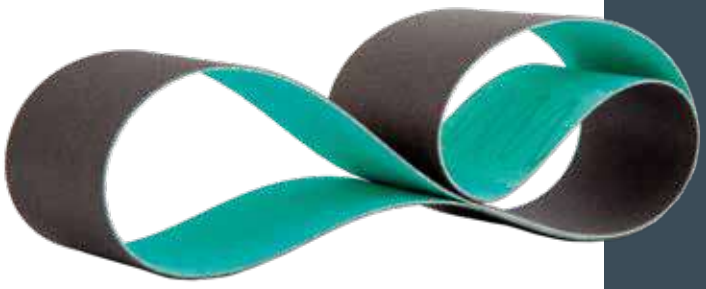


FLEXIBLE DIAMOND BELTS AND STRIPS **FOR ROLLS AND CYLINDERS**

KGS FLEXIS® BELTS

Stronger pattern, ideal for grinding on slack of belt. Available with BP2 backing, excellent for roll grinding, aggressive cutting with reduced loading.

Also availanle with BPT backing, for applications where more stiffness is required, reduced loading, aggressive cutting.



AVAILABLE ON REQUEST

Grit range: 50 up to 1500
Dimensions:

	min (mm)	max (mm)
Width	8	300
Length	305	5000

KGS TELUM® H BELTS

Stronger pattern, ideal for grinding on slack of belt.



AVAILABLE ON REQUEST

Grit range: 50 up to 1500
Dimensions:

	min (mm)	max (mm)
Width	10	300
Length	305	5000

KGS TELUM® CH BELTS

Superior performance with resin bond product, less pressure required compared to metal bond.

AVAILABLE ON REQUEST

Grit range: 50 up to 1500
Dimensions:

	min (mm)	max (mm)
Width	25	300
Length	533	5000



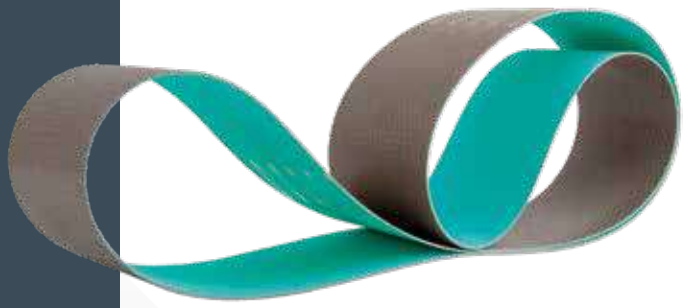
KGS TELUM® BELTS

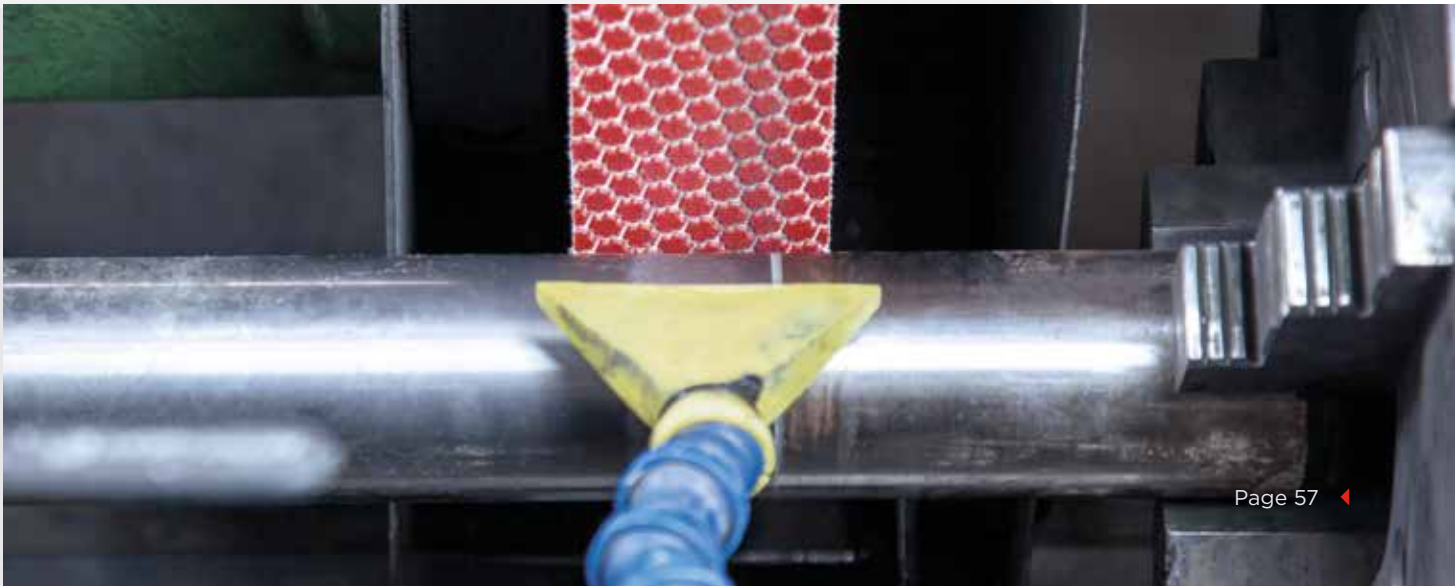
For applications where more stiffness is required in combination with connected pattern.

AVAILABLE ON REQUEST

Grit range: 50 up to 1500
Dimensions:

	min (mm)	max (mm)
Width	10	300
Length	305	5000







DIAMOND STRIPS

KGS flexible diamond tools are used on super-finishing machines for roll finishing of very hard materials like tungsten carbide, ceramics, thermal spray, epoxy and special alloys. This process in mainly used for precision engineering applications, ensuring improved operations and a longer product life.

TYPE OF GRINDING MACHINE
Superfinishing machines from OEM's like Loeser, GEM, Dynabrade, offered for installation on existing lathes or as a complete finishing line.

INDUSTRY
Pulp, paper, printing, hot rolling mills, oil, gas, mining, drilling, water engineering, earthmoving equipment.

PRODUCT OFFERING



KGS TELUM® STRIPS
For superfinishing applications, premium pattern

- **MATERIALS** Very hard materials like tungsten carbide, ceramics, thermal spray, epoxy and special alloys



KGS FLEXIS® STRIPS
For superfinishing applications, open pattern reduces loading, aggressive cutting

- **MATERIALS** Very hard materials like tungsten carbide, ceramics, thermal spray, epoxy and special alloys

KGS TELUM® STRIPS

Diamond strips, with strong interlocking arrow pattern. These long strips – also known as MO-strips - are available in various widths and lengths. The strips have 1000 mm tails for lead-in and lead-out and are supplied on a 75mm keyed plastic core. Flexible diamond tools perform at best when used with coolant.

Backing BYW3

Materials Very hard materials like tungsten carbide, ceramics, thermal spray, epoxy and special alloys.

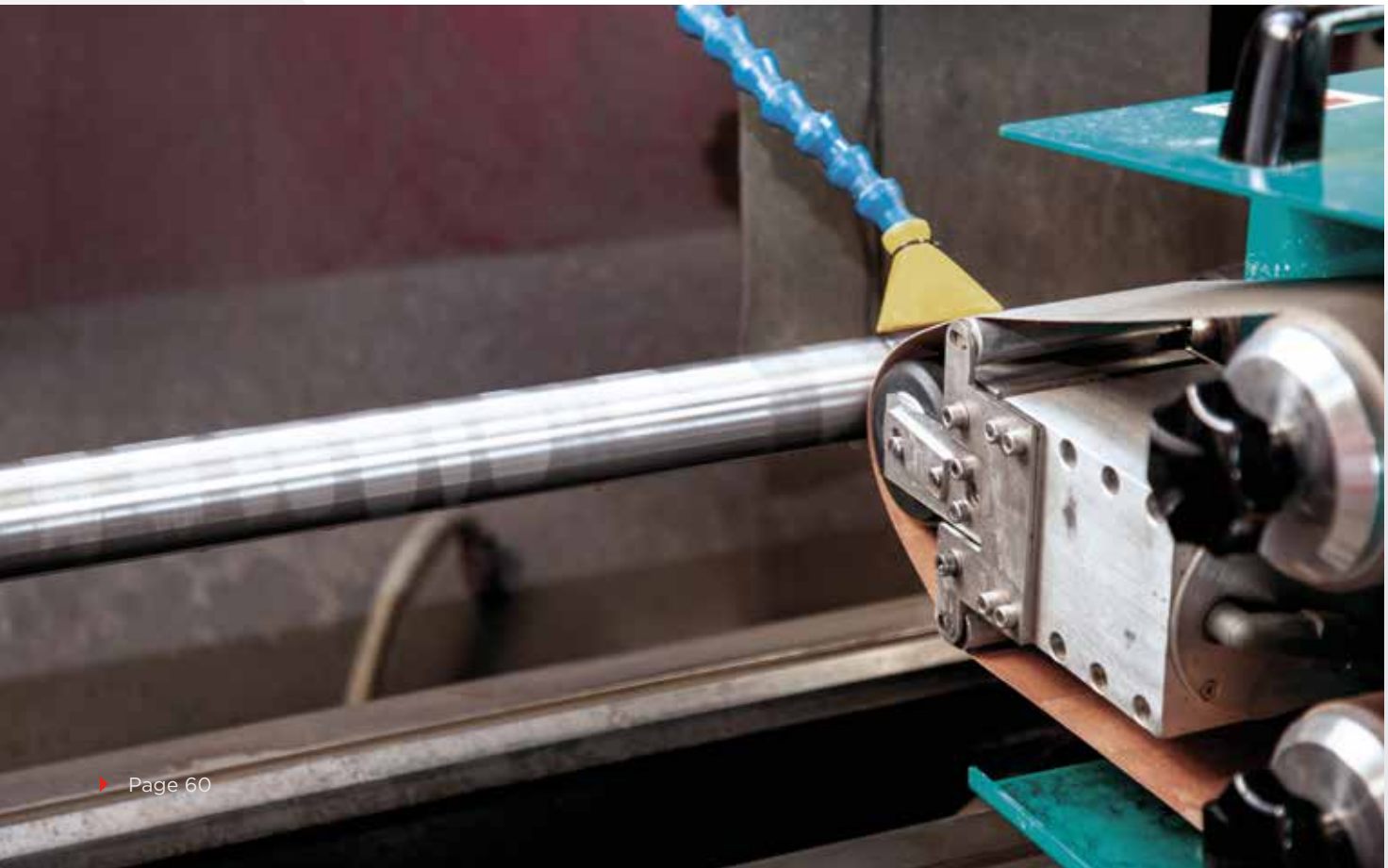


AVAILABLE ON REQUEST

Grit range: 60 up to 1500
Dimensions:

	min (mm)	max (mm)
Width	50	200
Length	200	10000

» **Popular widths:** 50, 75, 100, 150 & 200 mm
» **Popular lengths:** 3.200/1.200, 4.000/2.000, 6.000/4.000, 7.000/5.000, 12.000/10.000 mm



KGS FLEXIS® STRIPS

Diamond strips for superfinishing applications, open pattern reduces loading, aggressive cutting. The strips have 1000 mm tails for lead-in and lead-out and are supplied on a 75 mm keyed plastic core. Flexible diamond tools perform at best when used with coolant.

Backing BYW3

Materials Very hard materials like tungsten carbide, ceramics, thermal spray, epoxy and special alloys.

AVAILABLE ON REQUEST

Grit range: 60 up to 1500
Dimensions:

	min (mm)	max (mm)
Width	50	200
Length	1200	10000



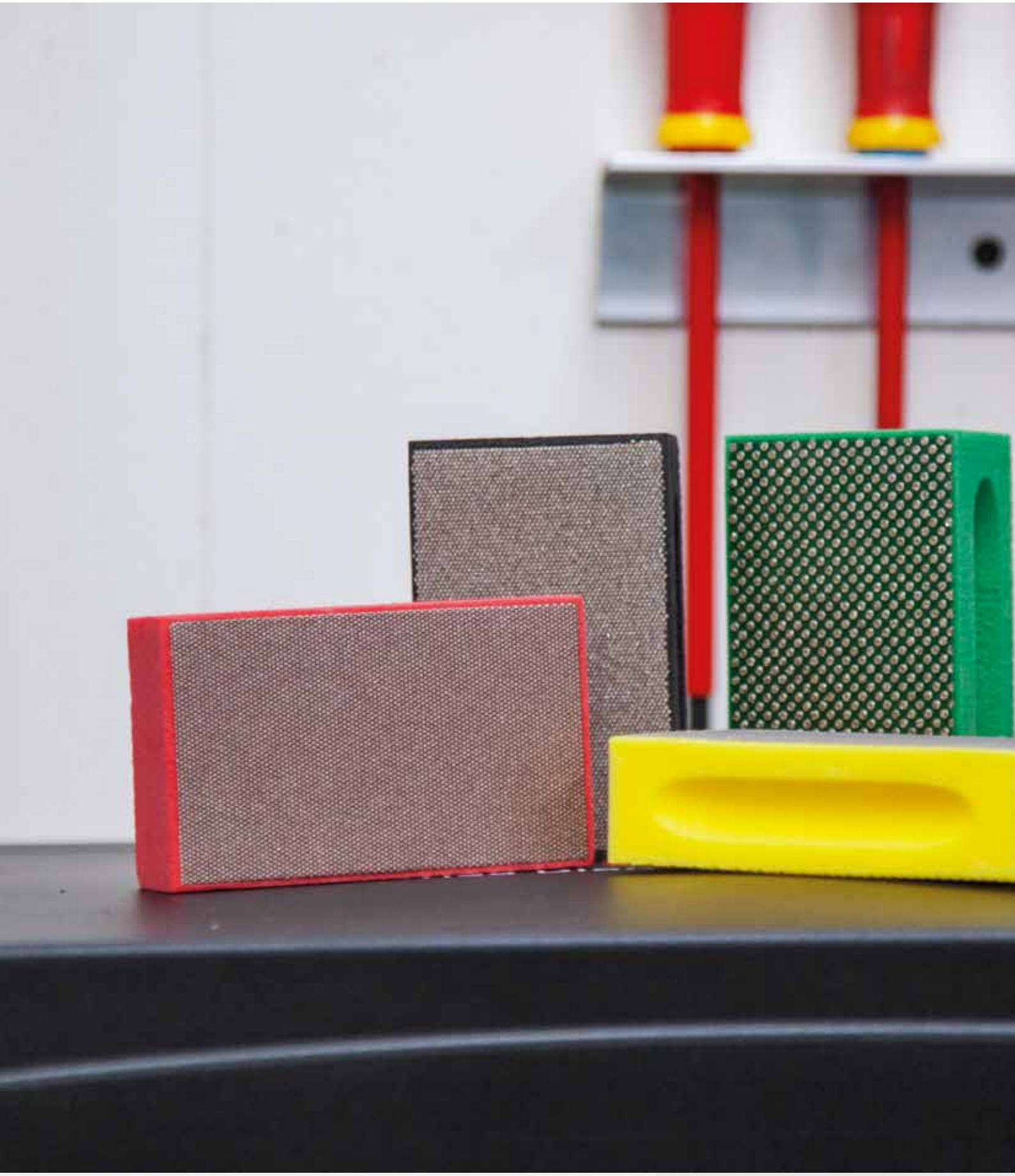
» **Popular widths:** 50, 75, 100, 150 & 200 m
» **Popular lengths:** 3.200/1.200, 4.000/2.000, 6.000/4.000, 7.000/5.000, 12.000/10.000 mm

BENEFITS OF KGS SUPERFINISHING STRIPS

» Tight tolerance material, less maintanance, less replacement costs / investments. This system provides predictable, consistent (over the entire surface) and repeatable finishes. It improves the surface structure which can easily be compared to levels reached by honing or lapping.

» The ability to achieve the desired surface texture. From a highly reflective finish and low Ra value, to a specific surface roughness for friction grip and/or ink, water or oil retention. During the constant use of these rolls, they tend to lose this surface roughness and become “polished” over time. In this way rolls can be refurbished many times before fully being stripped and recoated.

» Removal of chatter marks, feed marks and other imperfections left by previous grinding operations.



DIAMOND HANDPADS

THE MOST USEFUL TOOL IN YOUR TOOLBOX - LASTS MUCH LONGER THAN SANDPAPER! Precision diamond super abrasive within a nickel or resin matrix. Delivers professional results on every job.

Handpads are versatile, general purpose tools for manual edging and shaping. Handpads are used for beveling edges manually, removing small faults, and corner dubbing. Excellent for de-burring and finishing applications. They are often used dry. To obtain a more polished finish with resin pads, they must be used wet, - plain water is usually perfectly ok.

Suitable for work on hard metals, hard coatings, natural and engineered stone, composites, glass, ceramic, or concrete surfaces, e.g. spot/selective grinding for concrete cosmetics.

The 75x75 mm handpads have only 10 mm foam, this extra flexibility means they are very suitable for grinding and polishing on profiled surfaces.

KGS TELUM® HANDPAD

Diamond handpad with an unique KGS design, for a perfect finish! Premium product for handpad application, with extra long lifetime, consistent performance and finish.



- **DIMENSIONS** 55x90 & 75x75 mm
- **MATERIALS** Hard metal, hard coatings, natural stone, ceramic, engineered stone, concrete, composite, glass and many more.

KGS FLEXIS® HANDPADS

Professional standard dot pattern with good price-performance ratio. Fast grinding and polishing. Safely and easily grind and polish difficult shapes, such as corners, flats, and round edges.



- **DIMENSION** 55x90 & 75x75 mm
- **MATERIALS** Hard metal, hard coatings, natural stone, ceramic, engineered stone, concrete, composite, glass and many more.

KGS TELUM® HANDPADS

Diamond handpads with an unique KGS design for maximum performance. A versatile tool with very long service life, consistent material removal and finish. The KGS Telum® handpads are a premium product for handpad applications with comfort for manual grinding, finishing and polishing.

Suitable for hard-to-reach places, corners, edges, and for manual work, such as deburring, tool sharpening, and general defect removal. The handpad 75x75 series is available for greater flexibility and for sanding round or curved surfaces.

Backing With flexible foam backing

Grit range 60 - 800 metal bond (m)
500 - 3000 resin bond (r)

Materials Hard metal, hard coatings, natural stone, ceramic, engineered stone, concrete, composite, glass and many more.

Usage Wetting the surface with a little bit of water improves the grinding process.

Size (mm)	Grit	Art. no.
90x55	60 (m)	14733
	120 (m)	14735
	200 (m)	14738
	400 (m)	14742
	500 (r)	14749
	800 (m)	14744
	1500 (r)	14750
	3000 (r)	14751



Size (mm)	Grit	Art. no.
75x75	60 (m)	14753
	120 (m)	14754
	200 (m)	14755
	400 (m)	14756
	500 (r)	14758
	800 (m)	14757
	1500 (r)	14759
	3000 (r)	14760



KGS FLEXIS® HANDPADS

Diamond Handpad, with a nickel or resin dot matrix. Delivers professional results on every job: wet or dry; cost-effective. Suitable for hard-to-reach places, corners, edges, and for manual work, such as deburring, tool sharpening, and general defect removal. The KGS Flexis® pattern have a high temperature resistance due to superior heat dissipation. An extremely versatile tool and suitable for a large number of materials

The handpad 75x75 series is available for greater flexibility and for sanding round or curved surfaces.

Backing With flexible foam backing

Grit range 60 - 800 metal bond (m)
500 - 3000 resin bond (r)

Materials Hard metal, hard coatings, natural stone, ceramic, engineered stone, concrete, composite, glass and many more.

Usage Wetting the surface with a little bit of water improves the grinding process.

Size (mm)	Grit	Art. no.
90x55	60 (m)	14801
	120 (m)	14807
	200 (m)	14815
	400 (m)	14822
	500 (r)	14837
	800 (m)	14829
	1500 (r)	14842
	3000 (r)	14846



Size (mm)	Grit	Art. no.
75x75	60 (m)	14850
	120 (m)	14852
	200 (m)	14854
	400 (m)	14857
	500 (r)	14861
	800 (m)	14859
	1500 (r)	14863
	3000 (r)	14865




KGS

DIAMOND HAND FILES

Diamond files, another great addition to any toolbox. The files are very usefull hen working with a variety of materials. Perfect tool for deburring and finishing hard materials, stone, metal, glass, ceramics and composites.

Ideal for deburring and smoothing delicate surfaces, beveling edges, removing burs and sharpening tools. The hand files are color-coded for easy grit identification. The diamond embedded in the metal bond gives high strength and superior heat dissipation which ensures a long lasting consistent performance. The plastic handle is lightweigth, rigid and strong with an ergonomical design for operator comfort.

KGS FLEXIS® HANDFILES

Available in 4 different shapes and sizes – facilitate easy access to a variety of workpieces. Ideal solution for those parts and shapes that may have hard-to-reach areas or edges, for industrial application, and also suitable for all kind of other tools and materials.

- **DIMENSIONS**
  Type 1: 38x19 mm, flat
  Type 2: 43x12 mm, flat
  Type 3: 43x12 mm, half round
  Type 4: 60x6 mm, flat
- **MATERIALS**
  Hard materials, like hard metal, hard coatings, glass, stone and ceramics and composites



KGS FLEXIS® HANDFILES

Diamond files are very usefull when working with a variety of materials. Perfect tool for deburring and finishing hard materials, stone, metal, glass, ceramics and composites. Ideal for deburring and smoothing delicate surfaces, beveling edges, removing burs and sharpening tools. The hand files are color-coded for easy grit identification.

Materials Hard materials, like hard metal, hard coatings, glass, stone and ceramics and composites

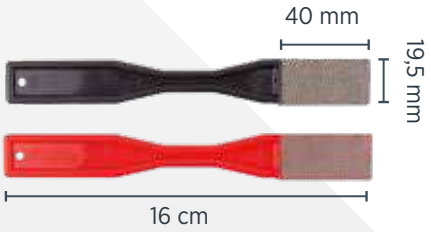
Usage

Dimension Four different shapes in one pack 60x6 mm (flat), 43x12 mm (half round), 43x12 mm (flat) and 38x19 mm (flat)

Size (mm)	Grit	Art. no.
Set of 4 files in different shapes	120 - Black	34562
	200 - Red	34563

DIFFERENT SHAPES OF THE DIAMOND FILES

Type 1: 38x19 mm, flat



Type 2: 43x12 mm, flat

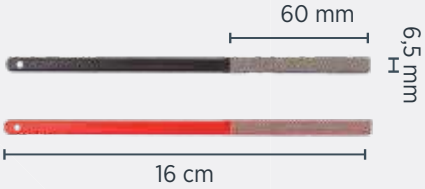


Type 3: 43x12 mm, half round

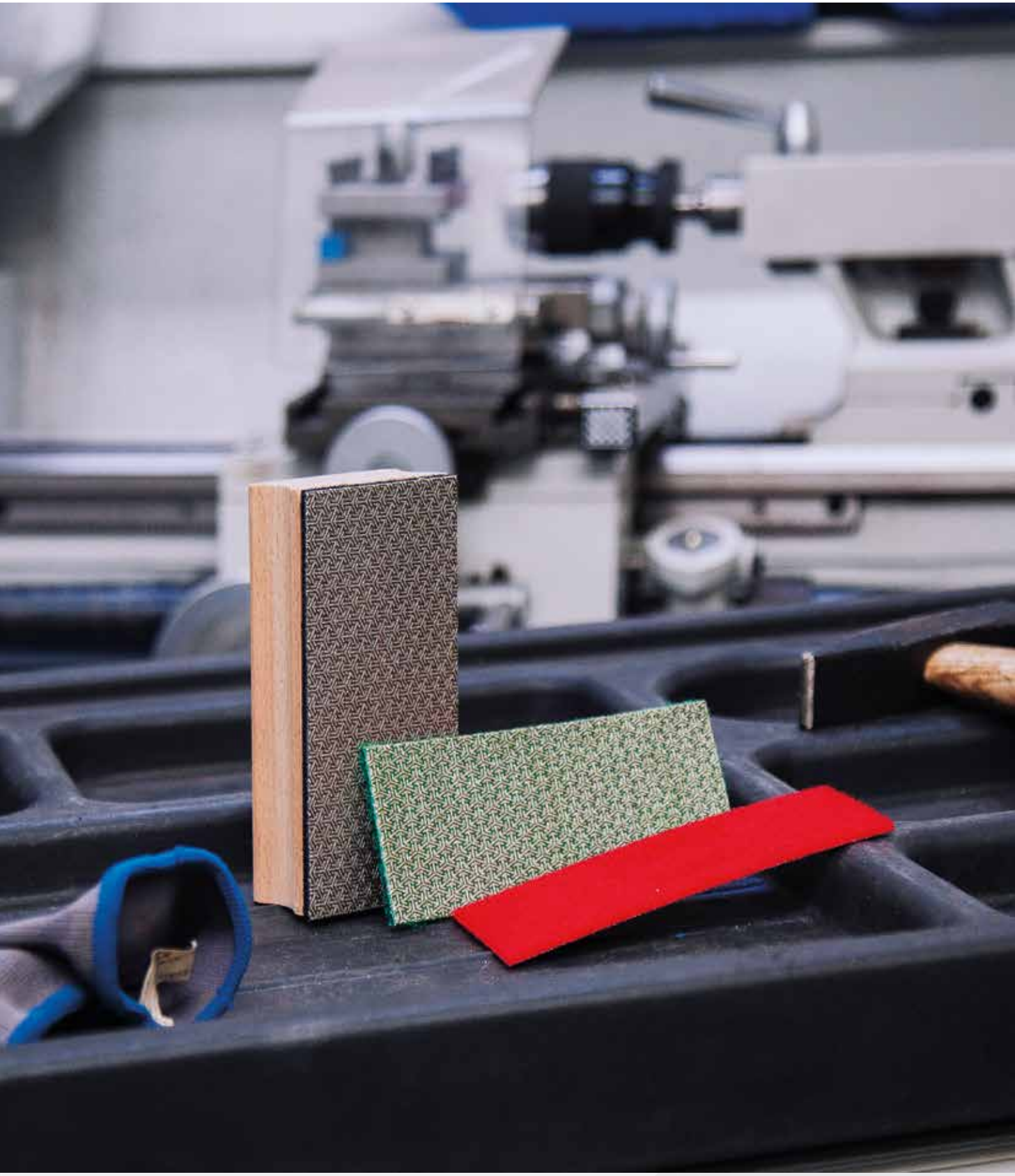


*Radius = +/- 5 mm

Type 4: 60x6 mm, flat







DIAMOND SHEETS

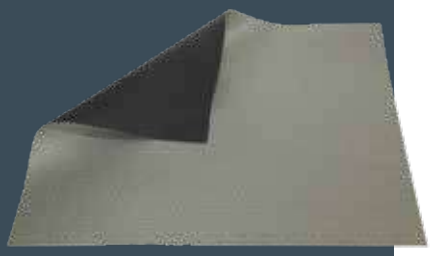
Very flexible hand sheets for wet grinding and polishing by hand with water. Available in canvas (CV) backing for plain sheets. Also available with Quick Release System (QRS) or Self-Adhesive (SA) backing.

The sheets can easily be cut to the desired shape and size, for example for a file, sandpaper or a tool for sanding stones and skirting boards. The KGS Telum® sheets are more durable than the KGS Flexis® dot pattern. The dot pattern has a more open structure which gives more flexibility.

KGS TELUM® SHEETS

Diamond sheet with an unique KGS design for maximum performance. Premium product, with extra long lifetime, cconsistent material removal and finish. Best choice in terms of performance and lifetime.

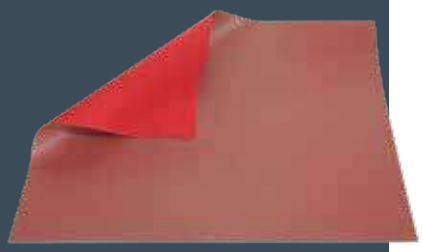
- **DIMENSIONS** 120x70, 130x55 and 280x230 mm
- **MATERIALS** Natural stone, ceramic, engineered stone, concrete, composite, glass and many more.



KGS FLEXIS® SHEETS

Diamond sheet with a professional standard dot pattern with good price-performance ratio. The dot pattern is a more open pattern which make it more flexible. Fast grinding and polishing. High temperature resistance due to superior heat dissipation.

- **DIMENSIONS** 120x70, 130x55 and 280x230 mm
- **MATERIALS** Natural stone, ceramic, engineered stone, concrete, composite, glass and many more.



KGS TELUM® SHEETS

Very flexible diamond sheets for wet grinding, finishing and polishing of hard and brittle materials by hand. Very flexible colour coded canvas backing, easy to tear. Premium product for, with extra long lifetime, consistent performance and finish.

Backing Available in different backeers:
- » Canvas (CV)
- » Self adhesive (SA)
- » Quick Release system (QRS)

Materials Natural stone, ceramic, engineered stone, concrete, composite, glass and many more

Usage



CANVAS BACKING

Size (mm)	Grit	Art. no.
280x230	60	15210
	120	15211
	200	15212
	400	15213
	800	15214

SELF ADHESIVE BACKING

Size (mm)	Grit	Art. no.
280x230	60	15229
	120	15230
	200	15231
	400	15232
	800	15234

QRS (VELCRO®) BACKING

Size (mm)	Grit	Art. no.
120x70	60	15239
	120	15240
	200	15241
	400	15242
	800	15243

Size (mm)	Grit	Art. no.
130x55	60	15202
	120	15203
	200	15204
	400	15205
	800	15206

Size (mm)	Grit	Art. no.
280x230	60	15323
	120	15324
	200	15325
	400	15326

KGS WOODEN BLOCK

Dimension	Art. no.
130x55 mm	17158



KGS FLEXIS® SHEETS

Very flexible diamond sheets for wet grinding, finishing and polishing of hard and brittle materials by hand. Very flexible colour coded canvas backing, easy to tear. The KGS Flexis® dot pattern is a more open pattern, this makes the sheets very flexibel. Good price-performance ratio

Backing Available in different backeers:
- » Canvas (CV)
- » Self adhesive (SA)
- » Quick Release system (QRS)

Materials Natural stone, ceramic, engineered stone, concrete, composite, glass and many more

Usage



CANVAS BACKING

Size (mm)	Grit	Art. no.
280x230	60	15492
	120	15494
	200	15496
	400	15498
	800	15500

SELF ADHESIVE BACKING

Size (mm)	Grit	Art. no.
280x230	60	15527
	120	15529
	200	15532
	400	15534
	800	15535

QRS (VELCRO®) BACKING

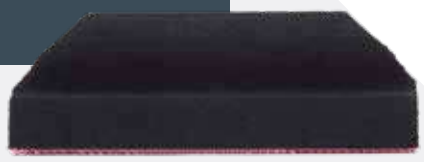
Size (mm)	Grit	Art. no.
120x70	60	38968
	120	38969
	200	38970
	400	32289
	800	15547

Size (mm)	Grit	Art. no.
130x55	60	15467
	120	15470
	200	15473
	400	15476
	800	15479

Size (mm)	Grit	Art. no.
280x230	60	15695
	120	15697
	200	15700
	400	15703
	800	15705

KGS FOAM BLOCK WITH QRS-HOOK

Dimension	Art. no.
120x70 mm	21463




DIAMOND WHETSTONE
200

DIAMOND WHETSTONES

KGS Diamond whetstones for very fast sharpening of hard, brittle materials. No need for conventional sharpening stones any more. Diamond sharpening stones work much faster, keeping an aggressive cut, maintaining an incredible long life.

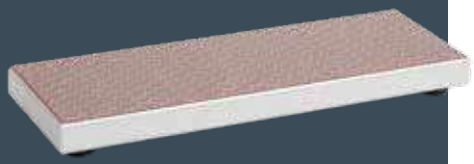
The KGS Whetstone is a precision diamond sharpening tool. The whetstone has metal bonded diamond for high strength. The aluminium support plate has plastic nubs on the back, preventing the slipping of the whetstone during sharpening.

The precision diamond tools is well suited for sharpening or deburring any hard, brittle materials. Ideal for precision faceting and sharpening of chisels, blades, knives, ice-skates, for any type of tools that requires resharpening.

KGS TELUM® WHETSTONES

Premium strong interlocking arrow pattern for precision grinding and polishing similar to conventional rigid diamond tools, with an even greater performance and very long life.

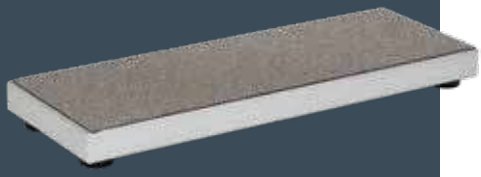
- **DIMENSIONS** 100x25, 150x50 & 200x75 mm
- **MATERIALS** Hard and brittle material, hard metals like Tungsten Carbide.



KGS FLEXIS® WHETSTONES

Professional standard dot pattern with high temperature resistance due to superior heat dissipation, open dot pattern reduces loading.

- **DIMENSIONS** 100x25, 150x50 & 200x75 mm
- **MATERIALS** Hard and brittle material, hard metals like Tungsten Carbide.



KGS TELUM® WHETSTONE

Diamond whetstone with a premium strong interlocking arrow pattern for sharpening, deburring and defect removal. Suitable for manually controlled sharpening of chisels, drills and cutting tools, especially those made out of hard and brittle material, like Tungsten Carbide.

The KGS Telum® whetstones work much faster and have an incredible long life compared to conventional whetstones. They are available in five different grits and in a combination of two grits. Thanks to the two different grits on one whetstone it's easy to switch between grinding and finishing.

Materials Hard and brittle material, hard metals like Tungsten Carbide.

Usage Wet is recommended. When using them wet, use water (not oil).

Size (mm)	Grit	Art. no.
100x25	120	16223
	200	16224
	400	16225
	800	33081



Size (mm)	Grit	Art. no.
150x50	120	16227
	200	16228
	400	16229
	800	16230
	200 & 400	16240

Size (mm)	Grit	Art. no.
200x75	120	16231
	200	39972
	400	16232
	800	16233



MANUALLY CONTROLLED SHARPENING

Make the surface extremely sharp!

Perfect for chisels, drills and cutting tools, especially those made out of hard and brittle material, like Tungsten Carbide.

KGS FLEXIS® WHETSTONE

Diamond whetstone with a professional standard dot pattern with a high temperature resistance due to superior heat dissipation, open dot pattern reduces loading. Perfect tool for sharpening, deburring and defect removal. Suitable for manually controlled sharpening of chisels, drills and cutting tools, especially those made out of hard and brittle material, like Tungsten Carbide.

The KGS Flexis® whetstones work much faster and have an incredible long life compared to conventional whetstones. They are available in five different grits and in a combination of two grits. Thanks to the two different grits on one whetstone it's easy to switch between grinding and finishing.

Materials Hard and brittle material, hard metals like Tungsten Carbide.

Usage Wet is recommended. When using them wet, use water (not oil).

Size (mm)	Grit	Art. no.
100x25	120	16252
	200	16254
	400	29626



Size (mm)	Grit	Art. no.
150x50	120	16258
	200	16259
	400	16261
	800	16262
	200 & 400	16266

Size (mm)	Grit	Art. no.
200x75	120	41591
	200	33274
	400	16264
	800	16265

The sharp diamond abrasives make dull cutting edges sharp again. These 100 x 25 mm diamond whetstones make hand sharpening easy, which leads to faster work and sharper edges. The whetstone is also very suitable for faceting stone and tile edges.




120
400

DIAMOND K-LOC DISCS

K-Loc discs are flexible diamond quick change discs (Ø25, 50 and 75 mm). The diamond disc “screws” into the mandrel for a tight hold. This does make the disc stiffer so they will work best on flat surfaces and straight edges. K-Loc discs can be used on different materials such as stone, glass, ceramics, composites, hard metals and hard coatings.

KGS TELUM® K-LOC

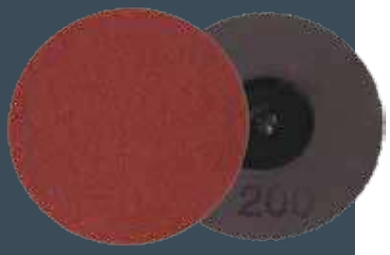
KGS Telum® - Strong interlocking arrow pattern, specifically developed for heavy stock removal and finishing. The structure of the pattern ensures good heat dissipation.



- **DIMENSIONS** Ø25, 50 & 75 mm
- **MATERIALS** Hard coatings, hard metals, glass, ceramics, composites, and stone

KGS SWIFLEX® SDA K-LOC

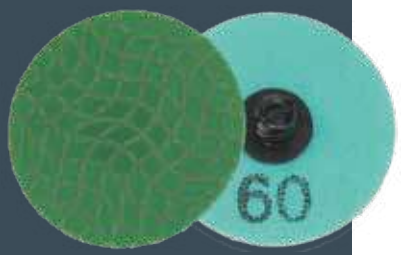
Flexible diamond tools perform best when used wet. Sometimes the circumstances or equipment does not allow operators to grind wet. For optimal dry grinding results KGS Swiflex® SDA has been developed. A resin bond product which can be used wet and dry.



- **DIMENSIONS** Ø25, 50 & 75 mm
- **MATERIALS** Hard coatings, hard metals, glass, ceramics, composites, and stone

KGS QUADROFLEX™ K-LOC

KGS Quadroflex™ - A unique and continuous connected wave pattern, for high stock general purpose. Excellent for cooler grinding and heavy grinding applications. A very strong no clogging pattern with an open structure and lower diamond concentration. It ensures high stock removal and higher pressure per grit.



- **DIMENSIONS** Ø25, 50 & 75mm
- **MATERIALS** Tungsten carbide and chrome carbide, thermal sprays, Yttria-Stabilized Zirconia (YSZ) and alumina ceramics

KGS TELUM® K-LOC

K-Loc system (quick change system) suitable for corner dubbing of glass and finishing thermal barrier coatings and ceramics in complex three dimensional shapes such as the aerospace or prosthetics industry.

Backing BP - strong, durable & thick Y-weight poly-cotton, water- and emulsion proof.

Materials Hard coatings, hard metals, glass, ceramics, composites, and stone

Usage

Size (mm)	Grit	Art. no.
Ø 25	60	12633
	120	12634
	200	12635
	400	12636
	800	12637



Size (mm)	Grit	Art. no.
Ø 75	60	12647
	120	12649
	200	12650
	400	12651

Size (mm)	Grit	Art. no.
Ø 50	60	12638
	120	12639
	200	12640
	400	12641
	800	12642



KGS SWIFLEX® SDA K-LOC

K-Loc disc with a thin structured diamond abrasive resin layer, which can be used for various applications, for both wet & dry usage. The feel and touch of this product is very similar to conventional coated products.

Backing BYW4 - Strong heavy Y polyester, waterproof

Materials Hard coatings, hard metals, glass, ceramics, composites, and stone

Usage

Size (mm)	Grit	Art. no.
Ø 25	60	12808
	120	12809
	200	12810
	400	12811
	800	12812
	1500	12813
	3000	12814



Size (mm)	Grit	Art. no.
Ø 50	60	12815
	120	12816
	200	12817
	400	12818
	800	12819
	1500	12820
	3000	12821

Size (mm)	Grit	Art. no.
Ø 75	60	12822
	120	12823
	200	12824
	400	12825
	800	12826
	1500	39691
	3000	39692



KGS QUADROFLEX™ K-LOC

The KGS Quadroflex™ k-loc disc is primarily used for grinding thermal barrier coatings. Versatile and flexible diamond tool for finishing and dimensioning flat and contoured surfaces, also for hard to reach areas.

Rigid enough to remove material at a high rate and flexible enough to follow difficult geometries easily. Suitable for a variety of hard-to-grind materials. It removes coating overspray's and coatings prior to part refurbishment.

Backing BP - strong, durable & thick Y-weight poly-cotton, water- and emulsion proof.

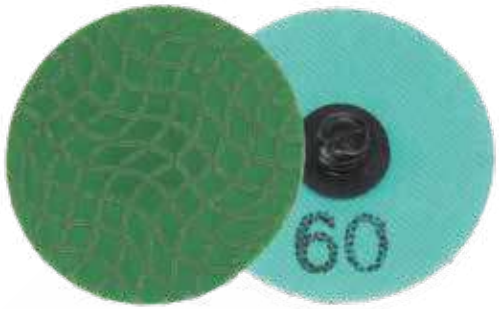
Materials Tungsten carbide and chrome carbide, thermal sprays, Yttria-Stabilized Zirconia (YSZ) and alumina ceramics

Usage

Size (mm)	Grit	Art. no.
Ø 25	60	12720
	120	12721
	200	12722

Size (mm)	Grit	Art. no.
Ø 50	60	12715
	120	12716
	200	12717
	400	12718

Size (mm)	Grit	Art. no.
Ø 75	60	12729
	120	12732
	200	12735
	400	12737



K-LOC BACK-UP PAD

6X40 MM SHAFT



K-Loc back-up pad / mandrel, with 6 mm shaft

Size (mm)	Art. no.
Ø 25	21929
Ø 35	21486
Ø 45	21928
Ø 70	21927





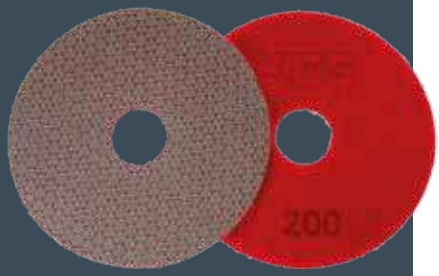
DIAMOND DISCS

Depending on the application, KGS offers a range for wet and dry grinding discs. For wet grinding and polishing our QRS disc range, with hole for central water feeding, iis available in KGS Telum® and KGS Flexis® versions. The mounting on a QRS back up pad ensures a flat and stable surface for controlled edging application.

KGS TELUM® DISCS - WITH QRS BACKING

Premium diamond disc with high performance. The KGS Telum® pattern ensures comfortable grinding and high stock removal.

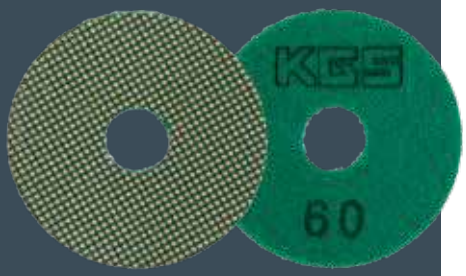
- **DIMENSIONS** Ø75, 100, 115 and 125 mm
- **MATERIALS** Glass, ceramics, porcelain, granite, marble and composites



KGS FLEXIS® DISCS - WITH QRS BACKING

Professional industrial diamond disc with dot pattern for general purpose. Perfect heat dissipation and free cutting.

- **DIMENSIONS** Ø75, 100, 115 and 125 mm
- **MATERIALS** Glass, ceramics, porcelain, granite, marble and composites



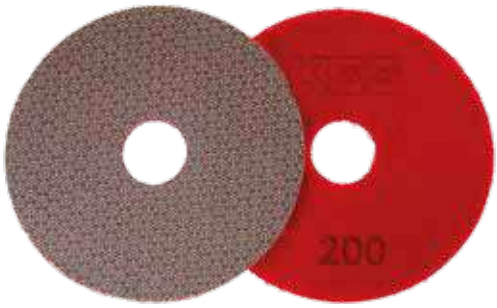
KGS TELUM® DIAMOND DISCS

Premium diamond disc with strong QRS system, making the disc easy to change. Suitable for electric and air tools. The KGS Telum® pattern delivers high performance, ensures comfort when grinding and has a high material removal rate, thanks to the high diamond content and the special interlocking arrow pattern.

Backing QRS - Quick release system (Velcro®) for quick changing grit size. Coulor coded grit sizes for easy identification

Materials Glass, ceramics, porcelain, granite, marble and composites

Usage



Size (mm)	Grit	Art. no.
Ø 75x25	60	12845
	120	12846
	200	12847
	400	12848
	800	12849

Size (mm)	Grit	Art. no.
Ø 100x25	60	13092
	120	13093
	200	13094
	400	13095
	800	13096

Size (mm)	Grit	Art. no.
Ø 115x25	60	13102
	120	13103
	200	13104
	400	13105
	800	13106

Size (mm)	Grit	Art. no.
Ø 125x25	60	13118
	120	13119
	200	13120
	400	13121
	800	13122



KGS FLEXIS® DIAMOND DISCS

Professional industrial diamond disc with strong QRS system, making the disc easy to change. Suitable for electric and air tools. A versatile diamond disc that can be used for various grinding and polishing applications. The KGS Flexis® pattern ensures perfect heat dissipation and free cutting.

Backing QRS - Quick release system (Velcro®) for quick changing grit size. Coulor coded grit sizes for easy identification

Materials Glass, ceramics, porcelain, granite, marble and composites

Usage



Size (mm)	Grit	Art. no.
	60	12906
	120	12907
Ø 75x25	200	12908
	400	12909
	800	12910

Size (mm)	Grit	Art. no.
	60	13249
	120	13253
Ø 100x25	200	13257
	400	13261
	800	13263

Size (mm)	Grit	Art. no.
	60	13276
	120	13280
Ø 115x25	200	13284
	400	13288
	800	13291

Size (mm)	Grit	Art. no.
	60	13343
	120	13346
Ø 125x25	200	13349
	400	13352
	800	13355

KGS Telum® is our premium pattern, because of the interlocking structure these discs follow the material the best for smooth grinding. However sometimes you need more free cutting and for these applications we advise KGS Flexis®.

For both patterns goes; do not apply a lot of pressure, let the diamond do the work!

BACK-UP PADS FOR QRS DISCS

KGS BACK-UP PAD M14 VELCRO®

Back-up pad with Velcro® connection.

Size (mm)	Art. no.
Ø 75x10	21925
Ø 100x10	21923
Ø 125x10	41187



KGS BACK-UP PAD M14 VELCRO® WITH 10 MM FOAM

Back-up pad with Velcro® connection and industrial foam for more flexibility and a softer grind.

Size (mm)	Art. no.
Ø 100	41190
Ø 115	41191
Ø 125	41192



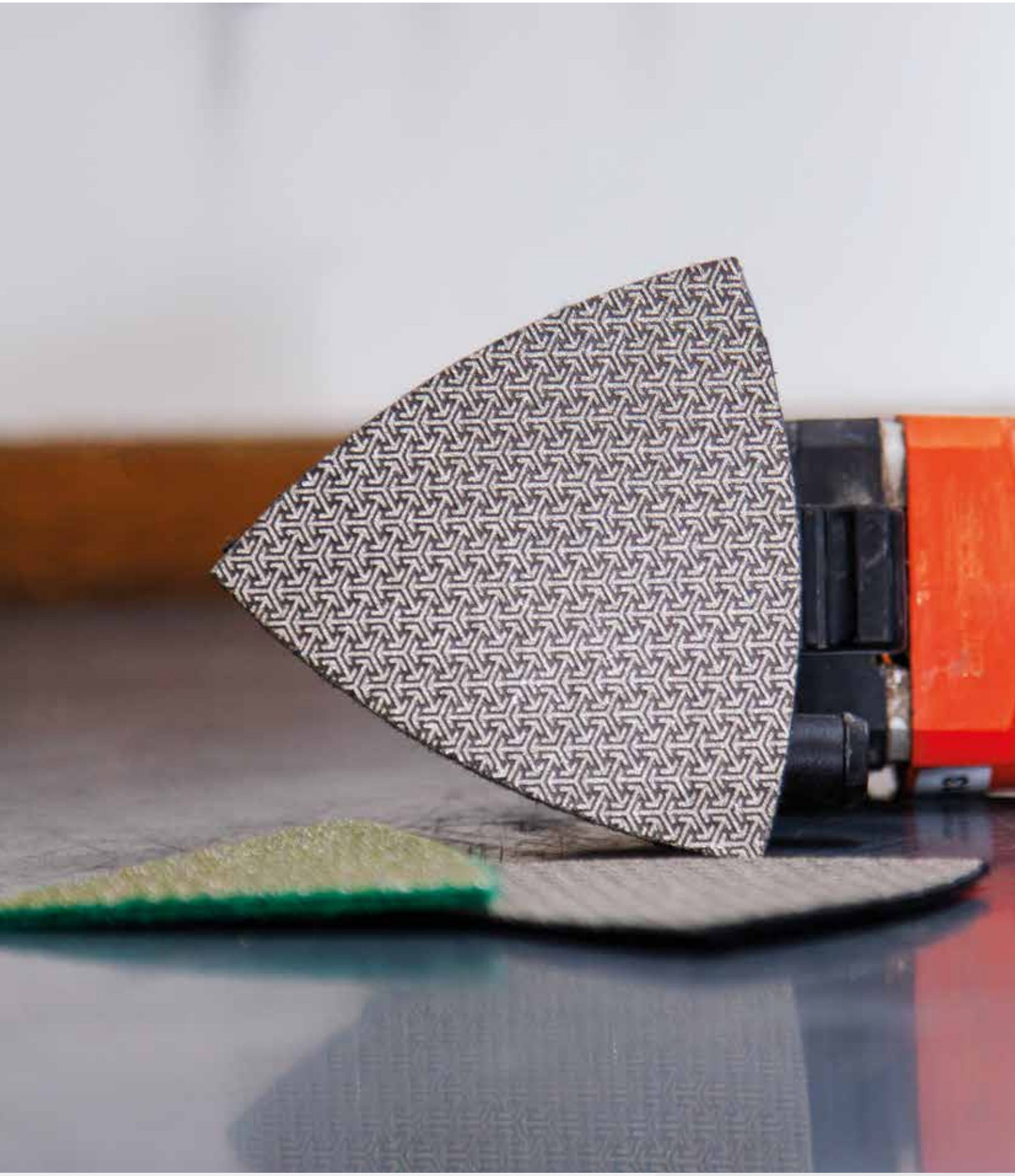
KGS BACK-UP PAD FLEXIBLE RUBBER M14 VELCRO®

Flexible rubber back-up pad with Velcro® connection. Especially for grinding and polishing of geometric shapes and curves.

Size (mm)	Art. no.
Ø 100	22007





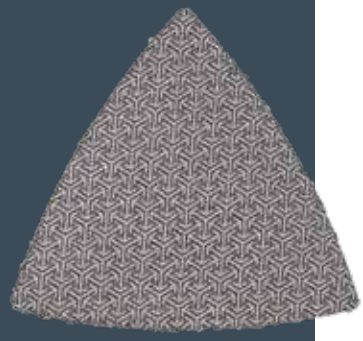


DIAMOND TRIANGLE PADS

Flexible diamond polishing pads can be used on various materials such as natural stone, ceramic, engineered stone, and concrete. Great for work in hard-to-reach corners and edges.

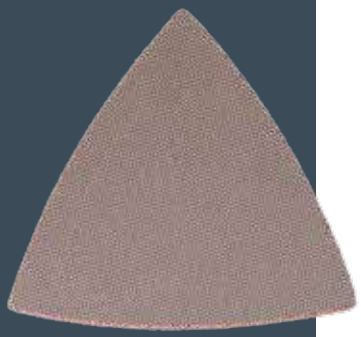
MACHINE TYPE
KGS Diamond triangle pads are suitable for use on standard Fein (80x80 mm) and Bosch (94x94 mm) triangle grinding machines.

KGS TELUM® TRIANGLE PADS
Innovative design, patented technology with interlocked arrow, snowflake pattern. Ideal for grinding and polishing of corners. Leaves a nice polished surface. Long life product



- **DIMENSIONS** 80x80 mm (Fein machines)
  94x94 mm (Bosch machines)
- **MATERIALS** Hard metal, hard coating, ceramic, engineered stone, concrete and natural stone

KGS FLEXIS® TRIANGLE PADS
Professional standard dot pattern with good price-performance ratio. Fast grinding and polishing. Safely and easily grind and polish difficult shapes, such as corners, flats, and round edges.



- **DIMENSIONS** 80x80 mm (Fein machines)
  94x94 mm (Bosch machines)
- **MATERIALS** Hard metal, hard coating, ceramic, engineered stone, concrete and natural stone

KGS TELUM® TRIANGLE PADS

Premium diamond triangle pad with KGS Telum® pattern, this patterns delivers high performance, ensures comfort when grinding and has a high material removal rate, thanks to the high diamond content and the special interlocking arrow pattern. The triangle pads are ideal for grinding and polishing of corners. Leaves a nice polished surface. Suitable for use on standard Fein and Bosch triangle grinding machines.

Backing QRS - Quick release system (Velcro®) for quick changing grit size. Coulor coded grit sizes for easy identification

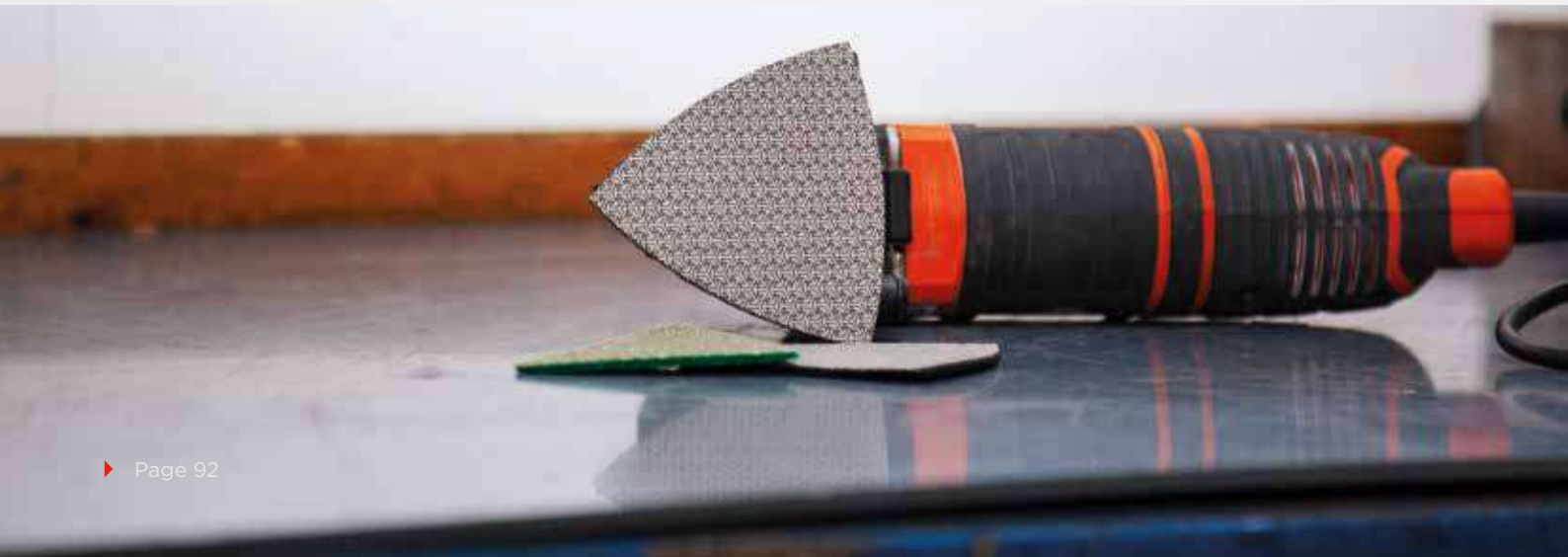
Materials Hard metal, hard coating, ceramic, engineered stone, concrete and natural stone

Usage



Size (mm)	Grit	Art. no.
80x80 (Fein)	60	15094
	120	15095
	200	15096
	400	15097
	800	15098

Size (mm)	Grit	Art. no.
94x94 (Bosch)	60	15104
	120	15105
	200	15106
	400	15107
	800	15108



KGS FLEXIS® TRIANGLE PADS

Diamond triangle pads with professional standard dot pattern, offers a good price-performance ratio. Ideal for fast grinding and polishing of different materials. The KGS Flexis® triangle pads can be used on standard Fein and Bosch triangle grinding machines. Great for work in hard-to-reach corners and edges.

Backing QRS - Quick release system (Velcro®) for quick changing grit size. Coulor coded grit sizes for easy identification

Materials Hard metal, hard coating, ceramic, engineered stone, concrete and natural stone

Usage

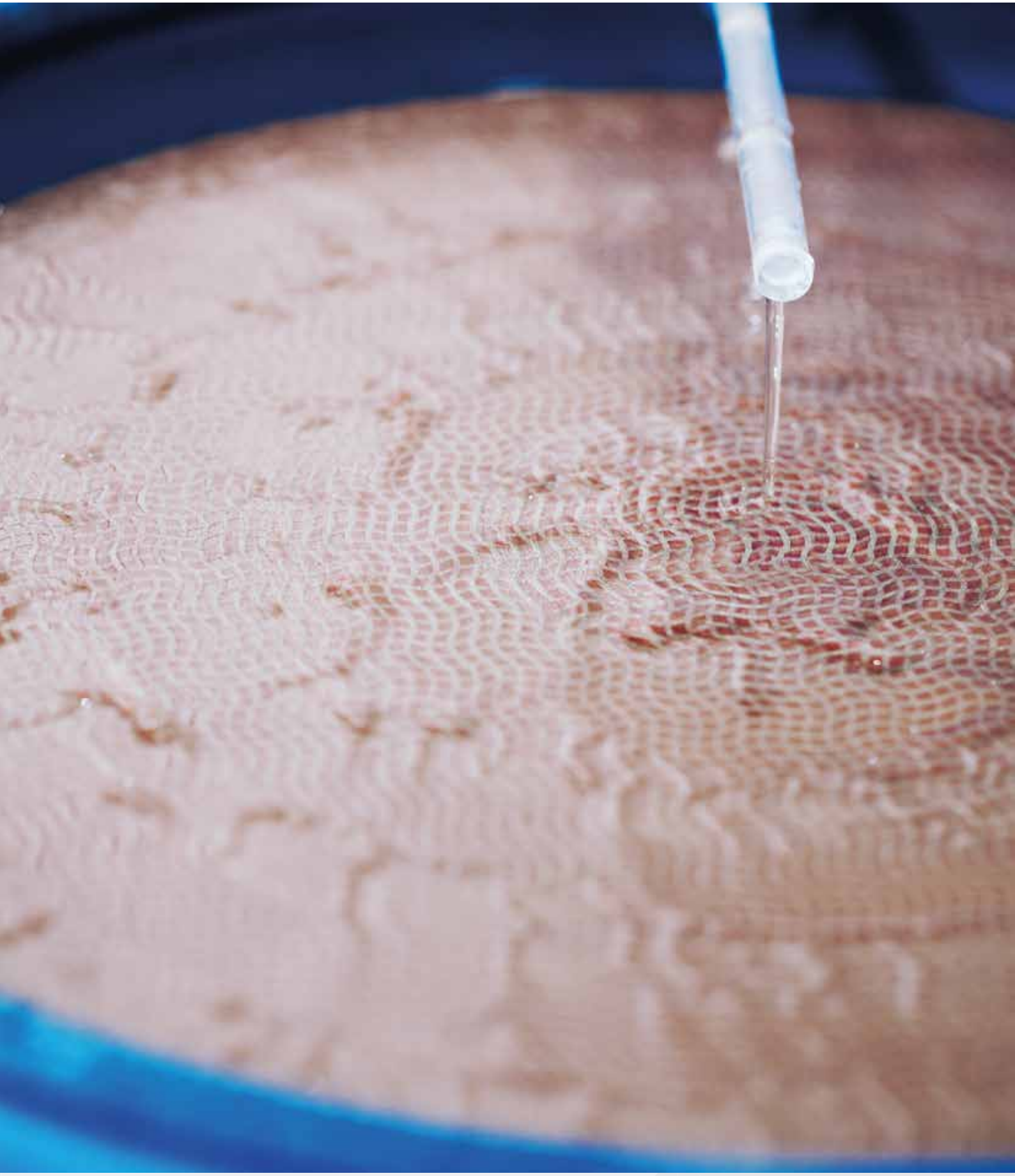


Size (mm)	Grit	Art. no.
80x80 (Fein)	60	15136
	120	15139
	200	15142
	400	15145
	800	15148

Size (mm)	Grit	Art. no.
94x94 (Bosch)	60	15160
	120	15162
	200	15164
	400	15166
	800	15168

TECH TIP
Triangular sanders are without water feed, dry working is possible, but not ideal.

To enhance both lifetime and performance we advise to moisten your workpiece.

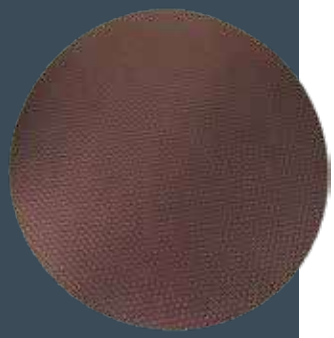


LARGE DIAMOND DISCS

Flat lapping grinders can be used with flexible diamond discs for rough grinding through final polish. KGS offers a wide range of large discs for different applications. Flexible diamond discs grind and polish much faster than a diamond slurry system.

Both electroplated and resin discs are available - from diameter 200 to 600 mm and larger sizes are available on request.

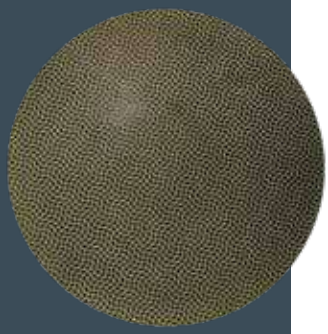
The electroplated discs, with a very abrasive surface, are used at the initial grinding stage for removing material, leaving a rough but consistent and predictable finish. Having used the metal bond discs, it is not possible to polish the surface. The next step, following the diamond metal bond disc, would be a resin diamond disc, for smoothing the rough surface. Then the workpiece is ready for polishing. Discs can be supplied with various quick change options; self adhesive (SA), magnetic (MAGN) or quick release system (QRS) backing.



KGS TELUM® LARGE DISCS

The strong interlocking arrow pattern, specifically developed for stock removal and finishing is ideal for grinding non-metallic materials.

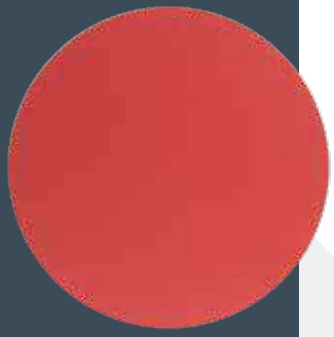
- **DIMENSIONS** Ø200, 250, 300, 450 and 600 mm
- **MATERIALS** Glass, ceramics and stone



KGS QUADROFLEX™ LARGE DISCS

The open structure of this pattern increases the grinding pressure per diamond, ideal for flattening larger pieces.

- **DIMENSIONS** Ø200, 300 and 600 mm
- **MATERIALS** Glass, ceramics, porcelain, granite, marble and composites



KGS SWIFLEX® SDA

This resin product can deliver rapid polishing at an economical cost. This product is more suitable for small part grinding and polishing.

- **DIMENSIONS** Ø200, 250 300 and 600 mm
- **MATERIALS** Glass, ceramics and stone

KGS TELUM® LARGE DISCS

The strong interlocking arrow pattern, specifically developed for stock removal and finishing is ideal for grinding non-metallic materials such as ceramics, glass and stone. This pattern, with the arrows in multi directional line structure, has continuous contact with the work piece ensuring a clear, homogeneous grinding action that eliminates any witness lines. TThese discs are extremely flat, highly aggressive and have a long lifetime which allows perfect control of automatic cycles. Best used with coolant.



Backing Available in different backers:
- » Self adhesive (SA)
- » Magnetic (MAGN)
- » Quick Release system (QRS)

Materials Ceramic, glass and stone

Usage

SELF ADHESIVE BACKING

Size (mm)	Grit	Art. no.
Ø 200	60	14033
	120	14034
	200	14035
	400	14036
	800	14037
	1500	14038

Size (mm)	Grit	Art. no.
Ø 300	60	14008
	120	14009
	200	14010
	400	14011
	800	14012
	1500	14013

Size (mm)	Grit	Art. no.
Ø 250	60	14019
	120	14138
	200	14139
	400	14140
	800	14141

Size (mm)	Grit	Art. no.
Ø 450	60	30553

MAGNETIC BACKING

Size (mm)	Grit	Art. no.
Ø 200	60	39469
	120	14096
	200	14097
	400	39470
	800	39623

Size (mm)	Grit	Art. no.
Ø 300	60	14089
	120	14090
	200	14091
	400	14092
	800	39438

Size (mm)	Grit	Art. no.
Ø 600	60	28237
	120	39439
	200	39466
	400	39467
	800	39468

QRS BACKING

Size (mm)	Grit	Art. no.
Ø 200	60	14073
	120	14074
	200	14075
	400	14076
	800	14077
	1500	14078



KGS QUADROFLEX™ LARGE DISCS

Electroplated discs, used for removing material from your workpiece, leaving a rough but consistent and predictable finish. The open structure of the KGS Quadroflex™ pattern increases the grinding pressure per diamond, ideal for flattening larger pieces.

Backing Available in different backers
- » Self adhesive (SA)
- » Magnetic (MAGN)

Materials Glass

Usage



SELF ADHESIVE BACKING

Size (mm)	Grit	Art. no.
Ø 200	60	14470
	120	14471
	200	14472
	400	14473

Size (mm)	Grit	Art. no.
Ø 300	60	14474
	120	14432
	200	14433
	400	14434
	800	32349

MAGNETIC BACKING

Size (mm)	Grit	Art. no.
Ø 300	60	39859
	120	39861
	200	14437
	400	14438

Size (mm)	Grit	Art. no.
Ø 600	60	39871
	120	39872
	200	39873
	400	39892

TECH TIPS: It is important to follow the correct working sequence, starting from coarse grits, working towards the fine grits. Skipping grits can be possible, but must be tested for each workpiece material, depending on surface finish requirements.

Keep your used discs clean! During the grinding process ground material will build up on your diamond surface. It is recommended to wash the discs after each session, otherwise it will influence the life and cutting capacity of the product.

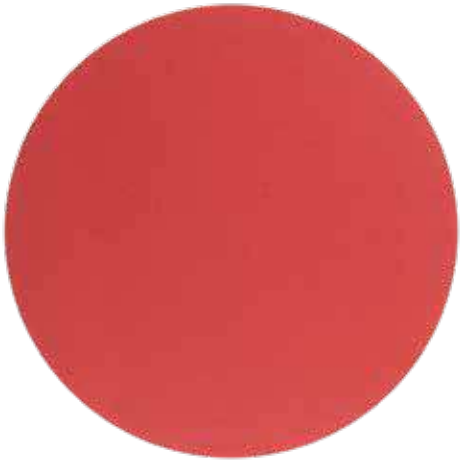
KGS SWIFLEX® SDA LARGE DISCS

KGS Swiflex® SDA discs can be used for both wet and dry grinding. This resin product can deliver rapid polishing at an economical cost. Grinds faster and longer vs. conventional abrasives. These discs are more suitable for small part grinding & polishing.

Backing Available in different backers:
- » Self adhesive (SA)
- » Magnetic (MAGN)
- » Quick Release system (QRS)

Materials Glass and metallography

Usage



SELF ADHESIVE BACKING

Size (mm)	Grit	Art. no.
Ø 200	60	14694
	120	14695
	200	14696
	400	14697
	800	14698
	1500	14699
	3000	14700

Size (mm)	Grit	Art. no.
Ø250	60	39945
	120	39946
	200	14635
	400	14636
	800	14637
	1500	14638
	3000	14639

Size (mm)	Grit	Art. no.
Ø300	60	14640
	120	14641
	200	14642
	400	14643
	800	14644
	1500	14646
	3000	14648

QRS BACKING

Size (mm)	Grit	Art. no.
Ø200	60	40429
	120	40430
	200	40431
	400	40432
	800	40434
	1500	40436
	3000	40437

MAGNETIC BACKING

Size (mm)	Grit	Art. no.
Ø300	60	14626
	120	14627
	200	14628
	400	14629
	800	14630
	1500	14631
	3000	14632



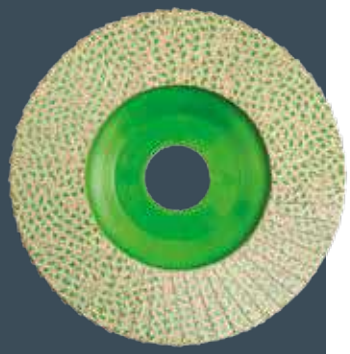
DIAMOND FLAP DISCS

Diamond flap discs can be used for sanding almost all materials, often often they are used for natural stone, concrete, technical ceramics, glass or composite materials. The focus is on material removal and deburring, excellent for chamfering and bevelling, also suitable for both edge and surface grinding.

The KGS diamond flap discs offer a smooth and even grind, protection for the operator, and significantly reduced hand and arm vibrations compared to cup wheels.

KGS HYBRID® FLAP DISCS

Focus is on material removal and deburring, excellent for chamfering and bevelling, also suitable for both edge and surface grinding.



- **DIMENSIONS** Ø115 x M14
Ø115 x 22.23 mm
- **MATERIALS** Hard metal, hard coatings, technical ceramics, natural stone, engineered stone, concrete, composites, glass and many more

KGS HYBRID® T FLAP DISCS

Fast material removal with a soft and smooth feel, with reduced hand and arm vibrations compared to cup wheels.



- **DIMENSIONS** Ø115 x M14
Ø115 x 22.23 mm
- **MATERIALS** Hard metal, hard coatings, technical ceramics, natural stone, engineered stone, concrete, composites, glass and many more

KGS HYBRID® FLAP DISCS

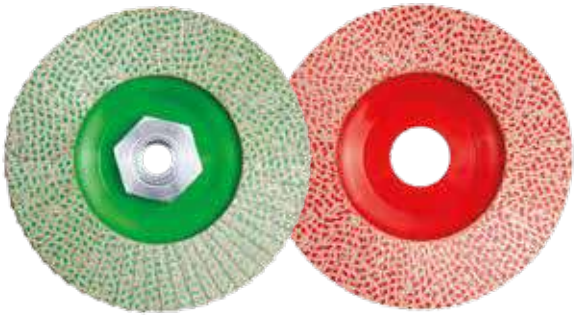
KGS Hybrid diamond flap discs are made of metal bonded diamond flaps, this makes the discs very aggressive compared to the KGS Hybrid® T discs.

Diamond flap discs can be used for grinding almost all materials. The focus is on material removal and deburring, excellent for chamfering and bevelling, also suitable for both edge and surface grinding.

Material removal and speed of the KGS Hybrid® flap disc is equal to that of cup wheels, however, the vibrations of the machine during use are much less.

Materials Hard metal, hard coatings, technical ceramics, natural stone, engineered stone, concrete, composites, glass and many more

Usage



M14 22.23 mm

Size (mm)	Grit	Art. no.
Ø 115 x M14	50	18941
	60	18931
	120	18932
	200	18933

Size (mm)	Grit	Art. no.
Ø 115 x 22.23	60	18911
	120	18912
	200	18913

The discs are available with regular 22.23 hole and with M14 thread. The M14 thread can be screwed directly on the machine and enables you to change discs faster! Also available in 5/8”-11 thread





KGS HYBRID® T FLAP DISCS

KGS Hybrid® T flap discs are made of metal bonded diamond flaps combined with silicon carbide flaps. This results in fast material removal with a soft and smooth feel, with reduced hand and arm vibrations compared to cup wheels.

The focus is on material removal and deburring. Very well suited for chamfering, also suitable for edge and surface grinding.

Materials Hard metal, hard coatings, technical ceramics, natural stone, engineered stone, concrete, composites, glass and many more

Usage



M14 22.23 mm

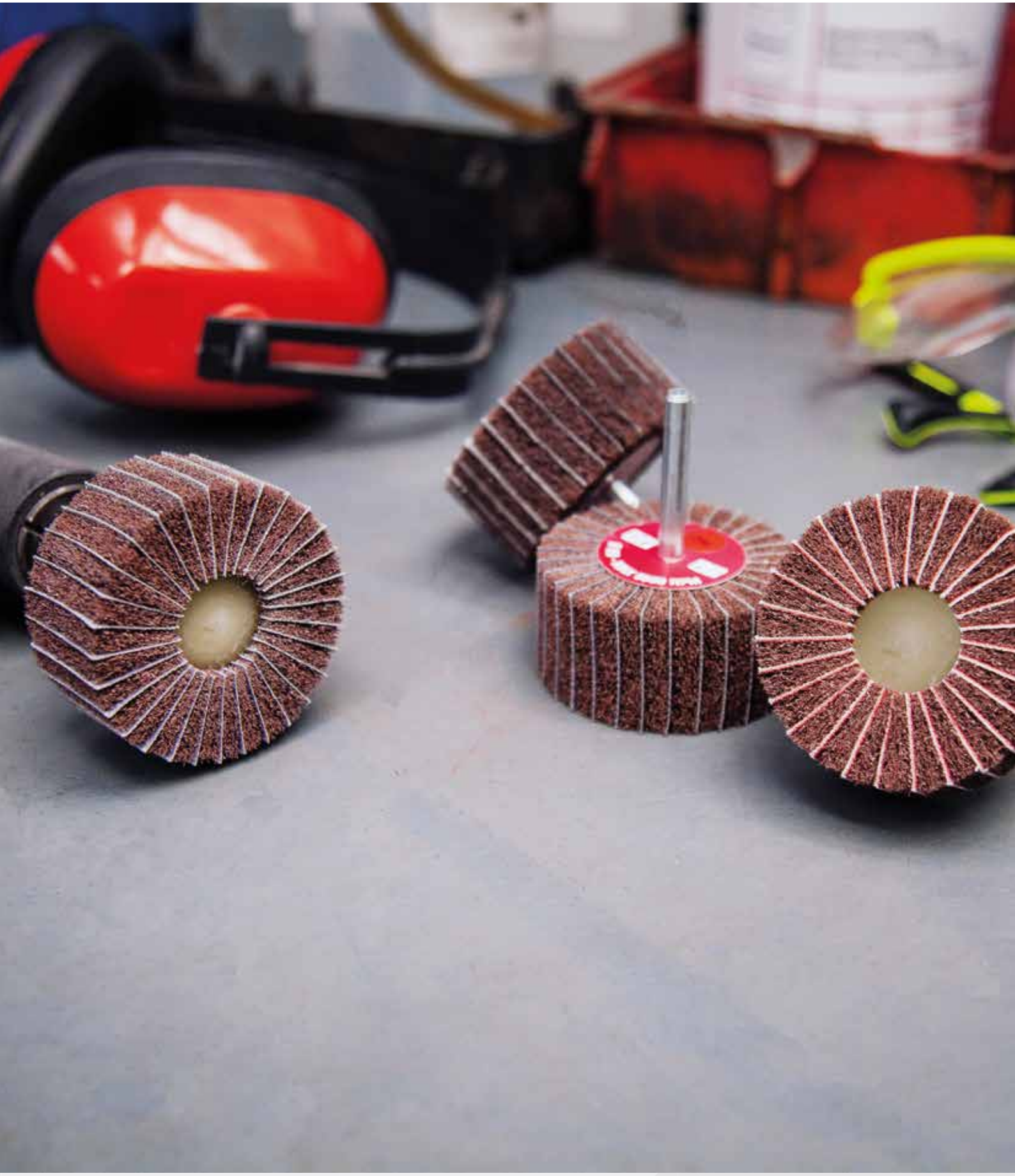
Size (mm)	Grit	Art. no.
Ø 115 x M14	60	28088
	120	28089
	200	28090
	400	27431

Size (mm)	Grit	Art. no.
Ø 115 x 22.23	60	18914
	120	18915
	200	18916
	400	18917



The discs are available with regular 22.23 hole and with M14 thread. The M14 thread can be screwed directly on the machine and enables you to change discs faster! Also available in 5/8”-11 thread





DIAMOND FLAPWHEELS

The indispensable tool for blending, deburring and finishing; KGS Flexis® diamond flapwheel. Flexible diamond tools continue to work and maintain high productivity on hard to grind materials, working both fast and precise.

The abrasive flaps offer a long lasting supply of fresh abrasives and have a load resistant design. Interwoven abrasive flapwheels have a high finishing/removal capacity and can be used to remove small faults on surfaces.

KGS Flexis® diamond flapwheels are the perfect tool for use on various materials, like stone, glass, crystal and concrete shapes, hard materials like titanium, removal of overspray of hard coatings and hard materials in complex 3D shapes.

TYPE OF GRINDING MACHINE

Flapwheels are commonly used with die grinders or bench grinders. Available in spindle mounted construction on a 6mm shaft with flexible diamond in metal bond. Non-woven abrasive flapwheels are used on electrical, pneumatic and flexible shaft machines for work on intricate surfaces.

KGS FLEXIS® FLAPWHEEL

- **DIMENSIONS** Ø60x30 & 30x20 mm
- **MATERIALS** Stone, glass, crystal, concrete, titanium, hard coatings and hard metals



KGS FLEXIS® FLAPWHEEL

Diamond flapwheel is a combination of diamond with non-woven flaps. Perfect solution for blending, deburring and finishing of flat and contoured surfaces, giving easy access on difficult to reach areas. The alternated flaps ensure a comfortable and clean polishing process, with a high finishing/removal capacity. Perfect tool for use on various materials and removal of overspray of hard coatings and hard materials in complex 3D shapes.

Materials Stone, glass, crystal, concrete, titanium, hard coatings and hard metals

Usage



Size (mm)	Grit	Art. no.
30x20	60	39209
	120	29969
	200	29970
	400	29971
	800	39210

Size (mm)	Grit	Art. no.
60x30	60	39207
	120	29894
	200	29895
	400	29896
	800	39208


PowerGrab
PLUS


KGS

SEMI-FLEXIBLE DISCS

Silicon carbide semi-flexible grinding discs consist of a special heavy red fibre backing with several layers of silicon carbide (SIC) abrasive grits embedded in a resin bond. The focus is on material removal, grinding, and deburring, from rough grinding to medium grinding. Excellent for both edge and surface grinding.

Semi-flexible grinding discs create less grinding vibration in comparison to grinding wheels.

KGS SEMI FLEXIBLE TYPE A – ALUMINUM OXIDE

KGS Semi Flexible disc for metal work with angle grinders. Applications include aggressive grinding, leveling and cleaning of surface imperfections. Perfect for weld removal, rust cleaning and most metal abrasive applications.

- **DIMENSIONS** Ø115, 127 and 178 mm
- **MATERIALS** Iron, stainless steel welds, cleaning off rust, deburring and most metal applications.



KGS SEMI FLEXIBLE TYPE C – BLACK SILICON CARBIDE

KGS Semi Flexible disc for soft stones and plastic materials use with angle grinders. Applications include aggressive grinding, leveling and cleaning of surface imperfections. Semi-flexible abrasive grinding discs are perfect for joint leveling, glue and resin removal and other cleaning applications.

- **DIMENSIONS** Ø115, 127 and 178 mm
- **MATERIALS** Marble, granite terazzo, concrete, fiberglass bodies, mastic glue, and coating removal.



KGS SEMI FLEXIBLE TYPE A – ALUMINUM OXIDE

KGS Semi Flexible Aluminum Oxide disc for metal work with angle grinders. Applications include aggressive grinding, leveling and cleaning of surface imperfections in iron, stainless steel, copper, bronze or aluminium.

Aluminum Oxide Semi-flexible abrasive grinding discs are perfect for weld removal, rust cleaning and most metal abrasive applications. The red semi-flexible fiber reduces vibrations that normally occur with the use of grinding wheels, it facilitates the operator's labor while providing an excellent performance. Spiral pattern with cooling ridges to improve productivity and avoid loading. Semi-flexible discs must be used with the appropriate backing pad.

Backing Red fiber backing, very flexible back-up pad required.

Gritrange 16, 24, 36, 60, 80

Materials Iron, stainless steel welds, cleaning off rust, deburring and most metal applications.

Usage



Size (mm)	Grit	Art. no.
Ø 115x22	16	28276
	24	28277
	36	28278
	60	28279
	80	28280

Size (mm)	Grit	Art. no.
Ø 127x22	16	28256
	24	28257
	36	28258
	60	28259
	80	28260

Size (mm)	Grit	Art. no.
Ø 178x22	16	28261
	24	28262
	36	28263
	60	28264
	80	28265

* Grit 80 for diameter 115, 127 and 178 mm are available on request

KGS SEMI FLEXIBLE TYPE C – BLACK SILICON CARBIDE

KGS Semi Flexible Black Silicon Carbide discs for soft stones and plastic materials use with angle grinders. Applications include aggressive grinding, leveling and cleaning of surface imperfections in marble, concrete, terrazzo, ceramic tiles, glass fiber and glue.

Semi-flexible abrasive grinding discs are perfect for joint leveling, glue and resin removal and other cleaning applications. The red semi-flexible fiber reduces vibrations that normally occur with the use of grinding wheels, it facilitates the operator's labor while making it more precise. Spiral pattern with cooling ridges to improve productivity and avoid loading. Semi-flexible Silicon Carbide Sanding discs must be used with the appropriate backing pad.

Backing Red fiber backing, very flexible back-up pad required.

Gritrange 16, 24, 36, 60, 80, 120

Materials Marble, granite terazzo, concrete, fiberglass bodies mastic, glue, and coating removal.

Usage

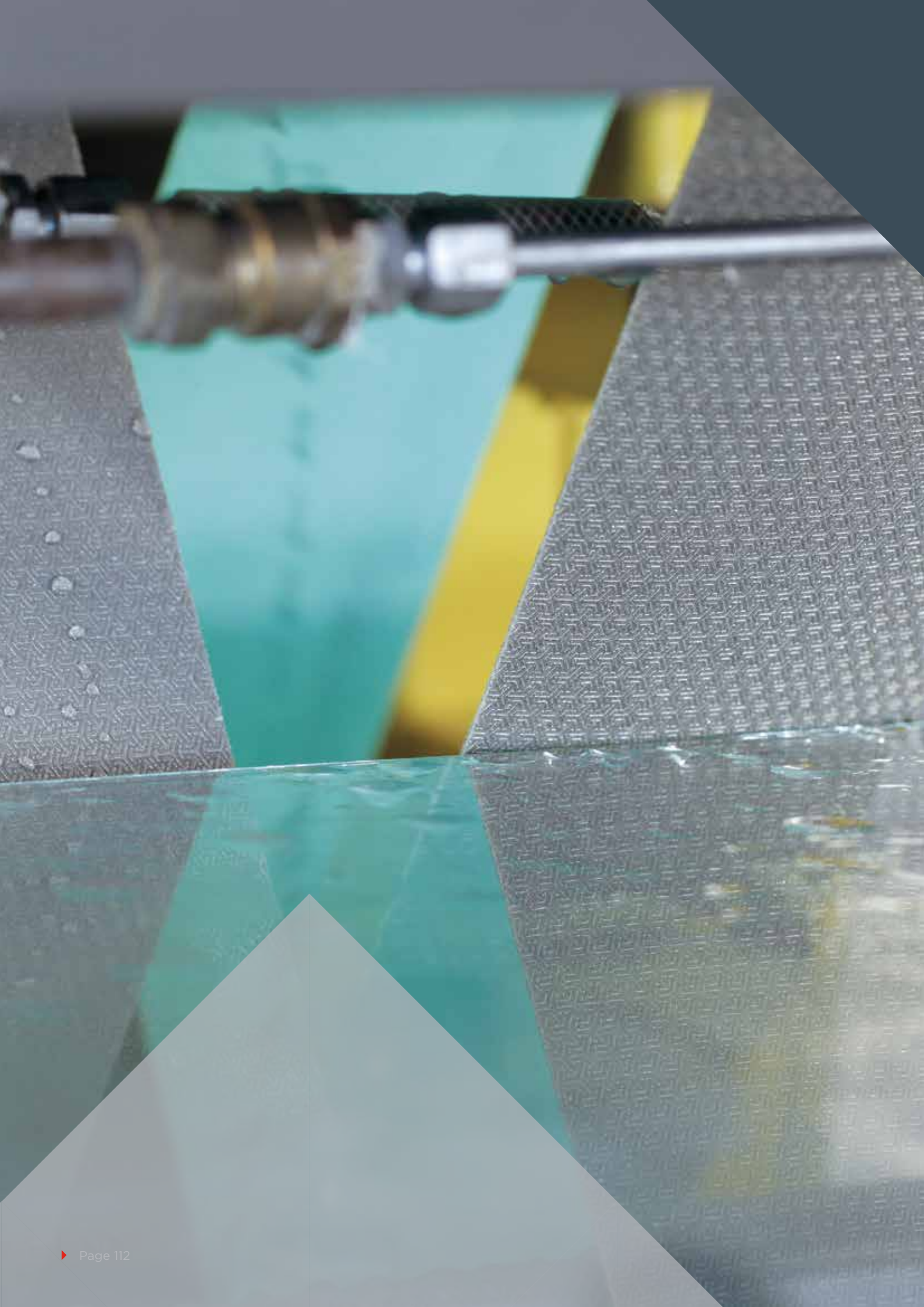


Size (mm)	Grit	Art. no.
Ø 115x22,2	16	19163
	24	19164
	36	19165
	60	19166
	80	19167
	120	19168

Size (mm)	Grit	Art. no.
Ø 127x22,2	16	19169
	24	19170
	36	19171
	60	19172
	80	19173
	120	19174

Size (mm)	Grit	Art. no.
Ø 178x22,2	16	19175
	24	19176
	36	19177
	60	19178
	80	19179
	120	19180

Diameter 230 mm
available on request



SUCCESS STORIES



GLASS SEAMING

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ROLL GRINDING

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POLISHING OF COMPLEX SHAPES

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ELECTRONICS

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PORCELAIN

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TURBINE BLADES

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GLASS SEAMING

KGS Flexible diamond belts for glass edging on automatic seaming lines. Specifically developed in co-partnership with OEM's for seaming of architectural glass in tempering plants to produce toughned glass.

"KGS Telum® glass edging belts proven to be the best in the industry"

KGS has aquired a leading position in the glass industry with the well known KGS Telum® glass edging belts.

These well known KGS Telum® belts have been used in this typical application on a wide range of glass seaming machines.

The interlocking (patented) structure gives the product a longlasting continuous performance. Proven to be the best in the industry.





ROLL GRINDING

The market for thermal spray coatings and other advanced materials is showing a strong upward trend. Special and very hard coatings are applied for resurfacing cylindrical parts to minimize the effects of mechanical wear, extending the "material life", or increase the resistance against elevated temperatures controlling the thermal wear.

KGS flexible diamond belts are easier to use, require less operators skills, for more consistent, faster and predictable results. From stripping to finishing, for the wet grinding and polishing of cylinders with hard coatings KGS brings a metal and resin bond range with proven products like KGS Flexis®, KGS Telum®, KGS Telum® H and KGS Telum® CH.



POLISHING OF COMPLEX SHAPES

Special shapes and hard to reach areas. KGS flexible diamond belts are the most efficient tools to grind and polish hard coatings on concave and complex 3D shapes (Mud rotors, Extrusion spirals).

Our resin and metal bond diamond technology, our wide range of flexible backers in combination with our application experience have resulted in taking a strong position in this market.

ELECTRONICS

Our latest investment in new resin diamond technology and machinery has lead us into a leading position into the electronics industry, i.e. the polishing of cellphone frames & cases made from various materials like stainless steel, very hard ceramics and aluminum.

“Optimal price / performance levels with incredible high productivity”

New resin diamond product concepts have proven to very successful by delivering optimal price / performance levels with incredible high productivity figures with consistent and repeatable surface finish.





PORCELAIN

The production of porcelain tableware has gone through a process of automation of equipment for polishing the bases and feet of porcelain tableware. This, combined with today's trend of short series diversity requires flexible production techniques.

KGS flexible diamond tools have been developed to fit the machine concepts from OEM's like Lippert, Sama and customized machines from engineering teams. All of these factors have enabled KGS to take a leading position in diamond grinding technology within the porcelain industry.



TURBINE BLADES

Thermal barrier coatings (TBC) are highly advanced materials systems applied to metallic surfaces, such as on gas turbine or aero-engine parts, operating at elevated temperatures, as a form of exhaust heat management.

These coatings create a very hard and tough to grind surface on turbine blades in different shapes and geometries, from small to quite large sized parts.

KGS DIAMOND has developed a special range of small K-Loc discs for this specific application, the Quadroflex™ K-Loc, which creates the perfect balance between cutting power and accuracy.

IS OUR **NEW SUCCESS STORY** WITH YOU?



BEHIND THE SCENES



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OUR TEAM

KGS DIAMOND International is based in Elburg, the Netherlands. The company employs a large team in various departments; from production, accounting, purchasing, marketing, warehouse, R&D, customer service to quality and sales.

The team is very versatile, ranging from young colleagues to very experienced employees with more than 25 years' experience in the company. All with one common goal; to provide you, our customer, with a quality solution for grinding and polishing of hard and brittle materials.

One of our new colleagues described the atmosphere within the company very well: "When I entered the company, I immediately noticed the roots of a enterpreneurial driven family company, in terms of atmosphere and ambitions represented by everyone on the floor, this really appeals to me and gives a nice and strong dynamic".

The blend of old school and new generations makes the KGS team a strong team. The "juniors" learn from the "seniors" and vice versa whereas the youngers generation has grown up with new awareness of the digital world, bringing new idea's, understanding the needs of the new generations in terms of information needs, availability and presentation.



CUSTOMER SERVICE

Our customer service team is available from Monday to Friday between 08:00 and 16:30.

» + 31 525 683 300

» sales@kgs.swiss



WE ARE THERE TO HELP & ADVICE YOU

CUSTOMER SPECIFIC TOOLS

KGS specializes in the design, support and production of customer specific flexible diamond tools.

Our application engineers will work closely together using the experience and expertise of our R&D and production department to define the optimum solution for your special project creating an unique product specification.

Special shapes, density of diamond patterns, backers, bonds are used to suit your specific demand and provide you with a tools in line with performance requirements, expected lifetime and costs.

Our production technologies allow us to produce large as well as small lot sizes. The technical superiority combined with unique products, allow KGS to offer innovative solutions with high added value and in perfect harmony with market requirements.

It is within our mission to provide you with the ultimate solution - adapted to your process - to reduce the abrasive costs and providing higher quality results. We do this based on our experience in combination with in-depth analysis of your process requirement, proposing you an optimal concept for your grinding set-up.





TECHNICAL SUPPORT

If you have any questions about the optimization of your grinding task or about solving specific application problems, or how to grind/finish an exotic hard material, our sales application engineers will be happy to help you and look for the right solution.

CUSTOMERS NEED CHECKLIST

Are you searching for a solution for yourself or for your customer? Please use the below chart / checklist for the needed input for advising the right product.

WORKPIECE

Material being ground	
Shape (cylinder, complex 3D)	
Starting Ra or pre-treatment	
Stock removal required (high, low)	
Surface finish required (Ra)	

APPLICATION

Wet or dry?	
If wet, which coolant?	
Machine name	
Machine type	
Machine rpm	
Pulley diameter	
Pulley hardness	
Peripheral or linear speed	
Feed speed of workpiece	
Pressure applied	

COMMERCIAL DATA

Life of current product used	
How many stages / grits	
Price of current product	
Volume of product per (year/month/week)	
Any other info (timescales, tests expected)	

PRODUCT

Product discription (belt, cisc, etc.)	
How many stages / grits	
Dimensions	
Current competetive product	
Grit size	
Electroplated / resin	

TECH CENTRE

It is our goal to establish a long-term relationship with our customers, with a strong emphasis on sharing our professional skills, process knowledge and providing up-to-date information regarding industry developments. The result allows you, our customer, to receive the greatest value from our product solutions for engineered solutions.

Our Tech Centre in Elburg is a perfect location for hands-on training and fully equipped with of common hand-held and stationary machines and a range of hard and brittle materials used in the engineered markets. We will be pleased to welcome you at our Tech Centre and/or meet at your most convenient location to share experience, training technicians and your sales staff to maximize close collaboration between our team and our customers to choose the right product, providing the best performance, evaluating market trends, and anticipating future developments.











SAFETY

ALWAYS READ THE SAFETY INSTRUCTIONS

Abrasive products improperly used can be very dangerous.

» Always follow the instructions provided on the product and by the machine supplier.

» Ensure that the abrasive product is suitable for its intended use. Always examine all products for damage when re-using or defects upon first use.

» Follow the correct procedures for handling and storage of the products.

Be aware of the hazards likely during the use of abrasive products and observe the recommended precautions to be taken

» Bodily contact with the abrasive product at operating speed

» Injury resulting from product breakage during use

» Grinding debris, sparks, fumes and dust generated by the grinding process

» Noise / vibration

Please refer to the relevant EN standard for detailled information.

» EN12413 for Bonded Abrasives

» EN13236 for Superabrasives

» EN13743 for Specific Coated Abrasives

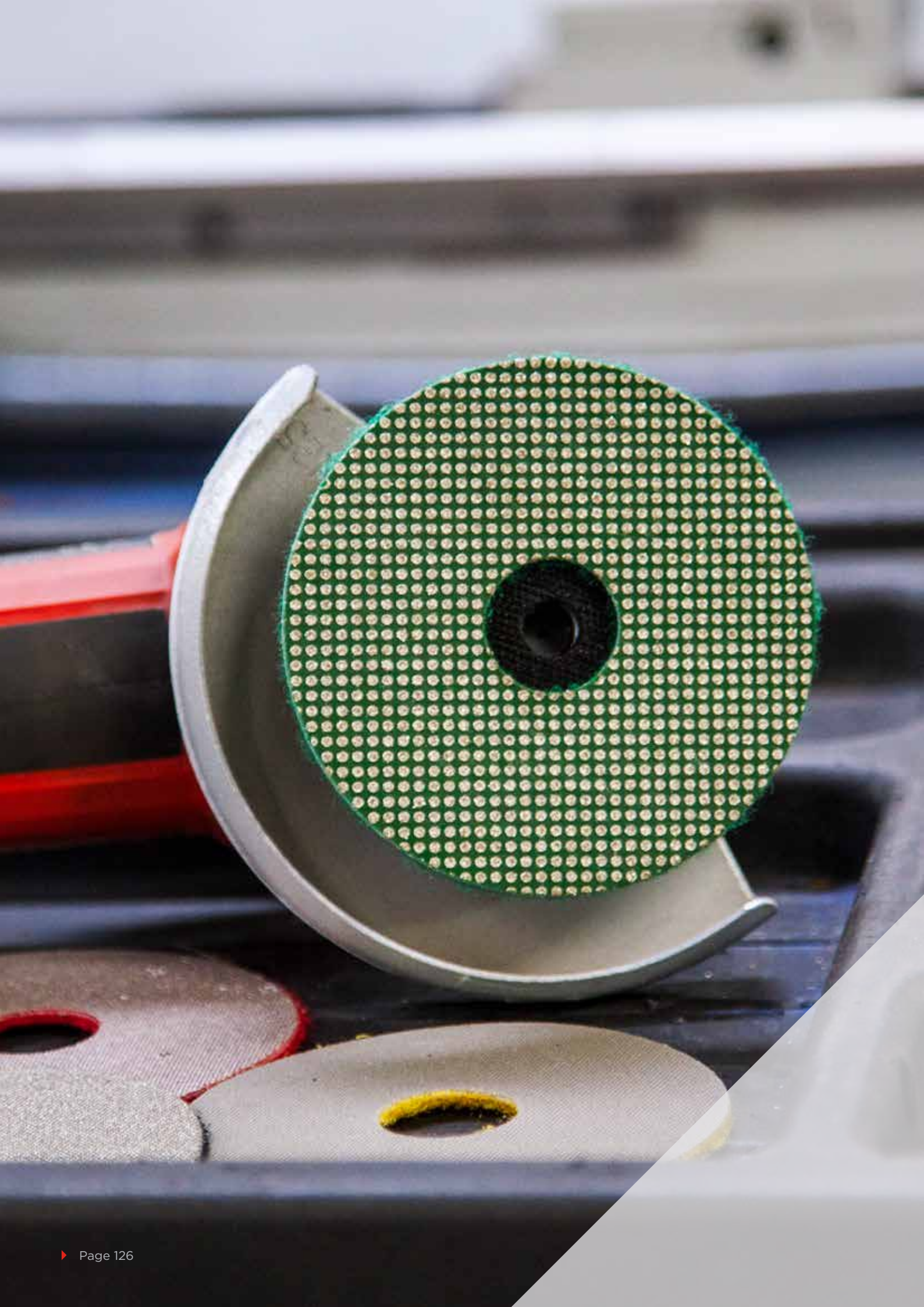


Never use a machine that is not in good working condition or one with defective parts.

Employers should carry out a risk assessment on all individual abrasive processes to determine the necessary protective measures. They should ensure that their employees are suitably trained to carry out their duties.

WORK SAFE!

- Wear eye protection (ISO 7010)
- Wear a mask (ISO 7010)
- Wear hearing protection (ISO 7010)
- Wear gloves and necessary protective clothing.
- Always take into consideration the correct provided working indications as wet, dry or hybrid tools.



USAGE

RESPECT THE MAXIMUM SPEED

Find the wheel's maximum speed rating, and don't surpass that speed. Exceeding the rated speed by even a small amount can result in considerable added stress on the wheel, putting operator safety at risk.

Reference speed conversion table

Maximim operating speed m/s

Speed of Rotation 1/m

Ø in mm

	16	20	25	32	35	40	45	50	63	80
6	51000	64000	80000	102000	112000	128000	143240	160000	201000	-
8	38200	48000	60000	76500	84000	95500	107430	120000	150500	191000
10	30600	38200	48000	61200	67000	76500	86000	95500	120500	153000
13	23550	29500	35600	47100	51500	58800	66500	73500	92600	118000
16	19100	23900	29850	38200	41800	47800	54000	59700	75200	95500
20	15300	19100	23900	30600	33500	38200	43000	47800	60200	76500
25	12300	15300	19100	24500	26800	30600	34400	38200	48200	61200
32	9550	11950	14950	19100	20900	23900	26900	30000	37600	48000
40	7650	9550	11950	15300	16750	19100	21500	23900	30100	38200
50	6150	7650	9550	12250	13400	15300	17200	19100	24100	30600
63	4850	6100	7600	9750	10650	12150	13650	15200	19100	24300
80	3850	4800	6000	7650	8400	9550	10750	12000	15100	19100
100	3100	3850	4800	6150	6700	7650	8600	9550	12100	15300
115	2700	3350	4200	5350	5850	6650	7500	8350	10500	13300
125	2450	3100	3850	4900	5350	6150	6900	7650	9650	12250
150	2050	2250	3200	4100	4500	5100	5750	6400	8050	10200
180	1700	2150	2700	3400	3750	4250	4800	5350	6700	8500
200	1550	1950	2400	3100	3350	3850	4300	4800	6050	7650
230	1350	1700	2100	2700	2950	3350	3750	4200	5250	6650
250	1250	1550	1950	2450	2700	3100	3450	3850	4850	3150
300	1050	1300	1600	2050	2250	2550	2870	3200	4050	5100
350/356	875	1100	1400	1750	1950	2200	2450	2750	3450	4400
400/406	765	960	1200	1550	1700	1950	2150	2400	3050	3850
450/457	680	850	1100	1400	1500	1700	1950	2150	2700	3400
500/508	615	765	960	1250	1350	1550	1750	1950	2450	3100
600/610	510	640	800	1050	1150	1300	1450	1600	2050	2550

CONTACT

EUROPE

HEAD OFFICE

KGS DIAMOND GROUP SA
Châtel-St-Denis, Switzer-land
T +41 21 967 00 00
info@kgs.swiss

INTERNATIONAL SALES OFFICE

KGS DIAMOND INTER-NATIONAL
Elburg, The Netherlands
T +31 525 683 300
sales@kgs.swiss

KGS DIAMOND NEDER-LAND BV
Elburg, The Netherlands
T +31 525 685 500
salesnl@kgs.swiss

KGS WINTER GmbH
Dortmund, Germany
T +49 231 9 67 87 900
kgswinter@kgs.swiss

KGS DIAMOND FRANCE SAS
Quetigny, France
T +33 3 80 49 76 65
kgsfrance@kgs.swiss

KGS DIAMOND POR-TUGAL LDA
Viana do Castelo, Portu-gal
T +351 258 735 189
sales-pt@kgs.swiss

KGS DIAMOND ESPAÑA SL
Barcelona, Spain
kgsspain@kgs.swiss

KGS DIAMOND UK LTD
London, United Kingdom
T +44 1580 211 975
salesuk@kgs.swiss

KGS DIAMOND HUN-GARY Kft
Budapest, Hungary
T +36 1 347 80 20
kgshungary@kgs.swiss

AMERICAS

SALES OFFICE, SERVICE AND DISTRIBUTION CENTER

KGS DIAMOND USA INC
Columbia, United States of America
T +1 865-604-2198
kgs-usa@kgs.swiss

ASIA / MIDDLE-EAST / AFRICA / AUSTRALIA

HEAD OFFICE

THE FERRONATO KGS HOLDING LTD
Dubai, United Arab Emira-tes
T +971 43 99 11 22
info-dubai@kgs.swiss

SERVICE CENTER FOR THE MIDDLE EAST:

KGS DIAMOND TOOLS GENERAL TRADING LLC
Dubai, United Arab Emira-tes
T +971 43 99 11 22
info-dubai@kgs.swiss

KGS DIAMOND TOOLS
Private LTD
Bangalore, India
T +91 80 2972 2271
sales-india@kgs.swiss

KGS DIAMOND GU-ANGZHOU Ltd
Guangzhou, China
T +86 20 3758 5369
china@kgs.swiss

KGS DIAMOND HONG KONG LLC
Hong Kong, China
T +86 20 3758 5369
saleshk@kgs.swiss

KGS DIAMOND Nanjing
Representative Office
Nanjing, China
T +86 25 8773 8918
china@kgs.swiss

KGS DIAMOND AUSTRALASIA PTY Ltd
Sydney, Australia
T +61 498 999 698
australasia@kgs.swiss

FERRONATO KGS SINGAPORE Pte Ltd
Singapore, Singapore
T +65 6692 1053
info-singapore@kgs.swiss