

DESIGN
MANUFACTURE
SUPPLY

DIAMOND TOOLING
SETTING THE STANDARD
WORLDWIDE

INTRODUCTION



THE COMPANY

D.K. Holdings Limited has been manufacturing diamond tools and associated products since 1959. We have developed a unique expertise in producing and supplying diamond tools specifically for the glass industry.

ISO 9001 QUALITY STANDARD

Our products are made to the highest quality standards. We are certified with the approved quality management system BS EN ISO 9001 : 2015 for manufacture and supply of our products.

DIAMOND TOOLS

Electroplated, electroformed, metal bonded and resin bonded diamond tools are used on various materials because of very fast clean cutting, long life, versatility of design and relatively low cost.

REPLATE & REDRESS SERVICE

We are able to replate and or redress at very competitive prices many products of our own manufacture and also of other manufacturers which improves performance of the tools and saves money!

STOCK & SPECIAL TOOLS

A large range of the most popular products are held in stock at our Staplehurst factory for immediate despatch. Special tools can be designed and manufactured to meet your specific requirements on a relatively short lead time.

Our Technical Department can test and advise on the best tooling required for special materials.

VISIT OUR FACTORY

We are happy to invite you to visit our UK factory located opposite Staplehurst Railway Station, which is on the main railway line just 60 minutes from London's Charing Cross Station.

ADDRESS:	Station Approach, Staplehurst, Kent TN12 0QN, UK
TELEPHONE:	+44 (0)1580 891662
FAX:	+44 (0)1580 892724
E-MAIL:	info@dk-holdings.co.uk
WEBSITE:	www.dk-holdings.co.uk

INFORMATION

The information in this product guide is given as a reference only and we reserve the right to alter, withdraw or amend, specifications and product availability without prior notice.



@DK_Holdings



DK Holdings Limited

INTRODUCTION

DIAMOND & CBN SUPERABRASIVES

The use of Superabrasives for cutting, grinding, drilling, profiling, reaming and polishing has become increasingly more important because of the tremendous benefits gained with quality, speed and cost saving of the final finished product.

Diamond is pure carbon in a cubic crystal structure. It is the hardest of all known materials. Many applications benefit by the use of diamond in the Engineering Industry for cutting, drilling, profiling, grinding and polishing etc. because it enables faster operation, extended life of the tool and allows accurate tolerances of shape and size. Used in industry it is either 'natural' diamond extracted from the ground, crushed and shaped to suit a particular requirement, or it is 'synthetic' man-made diamond for specific applications. Diamond is made and graded according to its size, shape and friability. Diamond is used for cutting or grinding hard brittle and abrasive materials, but it is not suitable for grinding steels due to iron having an affinity for carbon (which is what diamond is) at a high temperature.

Cubic Boron Nitride is man made like synthetic diamond and is a chemical bond of the elements boron and nitrogen with a cubic lattice structure, made in a high temperature/pressure process. It is available in different grades and sizes and is particularly designed for grinding hardened steels.

GRIT SIZE CONVERSION TABLE

BS5851 1ST SYSTEM SINGLE GRADE CODES (FEPA)	BS5851 2ND SYSTEM US STANDARD ASTM-E-11-70	BS1987
1181	16/18	14/16
1001	18/20	16/18
851	20/25	18/22
711	25/30	22/25
601	30/35	25/30
501	35/40	30/36
426	40/45	36/44
356	45/50	44/52
301	50/60	52/60
251	60/70	60/72
213	70/80	72/85
181	80/100	85/100
151	100/120	100/120
126	120/140	120/150
107	140/170	150/170
91	170/200	170/200
76	200/230	200/240
64	230/270	240/300
54	270/325	300/350
46	325/400	350/400

MICRON CONVERSION TABLE

DK SIZE REF.	APPROXIMATE RANGE	APPROXIMATE FEPA EQUIVALENT	APPROXIMATE EQT MESH SIZE
50	40/60	—	400
45	35/45	M40	500
35	30/40	—	600
25	20/30	M25	800
15	10/20	M16	1100
9	6/12	M10	1800
6	4/8	M6.3	3000
3	2/4	M2.5	8000

The above micron range is for guidance only.
Other sizes are available on request.



PRODUCT INDEX

	Page No.		Page No.
A		F	
Aluminium Oxide Sticks	20	Files, Hand	6
Audible Signal Detector, Microtouch	20	FLEXIBLE DIAMOND & CBN PRODUCTS	7-11
		Belts	10
B		Cushioned Hand Pads	8
Belts, Flexible	10	D-Loc Discs	9
Blade Dressers	22	Sheets	11
Brake Dresser	20	FEPA IDENTIFICATION CODES	15
		Form Wheels	2
C			
Ceramic Internal Grinders	18	G - H	
Cushioned Hand Pads, Flexible	8	Hand Files, Electroplated Diamond	6
		Hand Pads, Flexible	8
D		HYBRID BONDED DIAMOND & CBN	17
Diaform Chisels	22	I - J	
Direxpander Precision Reamers	4	Index Dresser	21
Discs, Flexible Diamond & CBN	9	Internal Grinding Wheels	5
D-Loc Flexible Discs	9		
D-Loc Mandrels	9	K - L	
Dressing Sticks, Aluminium Oxide	20	KD Dressers	22
Dressing Tools	21-22		
Blade Dressers	22	M	
Diaform Chisels	22	Mandrels, D-Loc	9
Index Dressers	21	Multi Point Dressing Tools	21
KD Dressers	22		
Multi Point Dressers	21	N - O	
Single Point Dressers	21	Needle Files (Electroplated)	6
E			
ELECTROFLEX DIAMOND & CBN PRODUCTS	7-11	P - Q	
ELECTROPLATED DIAMOND & CBN PRODUCTS	1-6	Polycrystalline Tools	19
Direxpander Precision Reamers	4	Precision Profile Wheels	2-3
Internal Grinding Wheels	5	Precision Reamers	4
Needle Files	6		
Precision Profile Wheels	2		
Spatulas	6		

PRODUCT INDEX

	Page No
R	
Reamers, Electroplated Diamond	4
RESIN/METOID BONDED DIAMOND & CBN	12 - 16
Diamond	12
CBN	12
Metoid	12
Polyimide	12
FEPA Identification Codes	15
Wheel Shapes	14
S	
SERVICES	23
Sheets, Flexible Diamond & CBN	11
STANDARD WHEEL SHAPES	14
Single Point Dressing Tools	21
T	
Trueing Device	20
U - V - W	
Wheel Preparation	20
Wheel Shapes	14
X - Y - Z	
6	



ELECTROPLATED DIAMOND & CBN

DK Holdings Limited manufacture and supply a very wide range of electroplated products which includes:

- Peripheral Wheels
- Precision Reamers (Direxpanders)
- Precision Profile Wheels
- Radius, Flat, 'V' Form, Special Forms, Cut-off Wheels
- Straight and Taper Cup Wheels
- Internal Grinding Wheels
- Routers
- Needle Files
- Sharpening Wheels/Discs and Saw Blades
- Drill Bits
- Flexible Diamond Products.

REPLATING

An extremely economical service is offered, subject to the body of the tool concerned being undamaged. Tools can be returned for strip and replating at a considerable cost reduction of the original tool price.

Our Technical Department will be pleased to give advice.

APPLICATIONS

DK electroplated products have been used very successfully in a large number of applications. Some of the materials worked with diamond and CBN includes:

- Aluminium
- Beryllium Copper, Boron Carbide, Brass
- Carbon, Carbon Fibre, Ceramics, Cermet, Copper
- Ferrite, Frozen Foods
- Glass, Granite, Graphite
- Kevlar
- Leather
- Marble, Mild Steel
- Nimonic
- Pottery, PVC
- Reinforced Plastics, Rubber
- Slate, Stainless Steel, Stellite
- Tool Steel, Titanium, Tungsten Carbide
- Vanadium
- Wood

GRIT SIZES

We can advise which grit sizes of diamond or CBN are recommended for optimum performance for each application.

Please see the Grit Size Table on Page I-ii.



ELECTROPLATED DIAMOND & CBN

PRECISION PROFILE WHEELS

DK Holdings Limited are world leaders in the manufacture of accurate diamond and CBN profile wheels for creep feed grinding. DK originally known as "Kendia" were the first diamond tool company to promote the concept of creep feed grinding using very accurately formed diamond wheels for the production of hard metal inserts. Wheels with diameters from 10mm to 500mm can be manufactured. Prices and details available on request.

DIAMOND & CBN

Diamond: tungsten carbide, ceramics, ferrites, glass, carbon, reinforced plastics and other nimonics.

CBN: high speed and tools steels, etc.

APPLICATIONS

Carbide tooling and inserts, centreless profile grinding, circular form tools, crusher blocks, thread forms, thread milling tools, broach and cam grinding, gear forms, medical tools and devices and specialized applications.

VERY ACCURATE TOLERANCES

As good as ± 0.003 mm dimensionally and $\pm 3'$ on angles. Generally such tight tolerances are not required, $\pm .01$ mm and $\pm 10'$ are suitable for most tooling.

NUMBER OF PROFILES

With certain profiles it is possible to make more than one form per wheel. This doubles, trebles or even quadruples the life of the wheel for relatively smaller increase in wheel cost. We will advise when submitting quotations where this is possible.

EQUIPMENT & COOLANT

DK profile wheels should be used in conjunction with a creep-feed grinding machine having adequate coolant supply. The absolute minimum supply of coolant is 50 litres per minute. The use of a centrifuge system delivering up to 135 litres per minute will lead to substantially improved wheel life and surface finish.

SETTING UP

Each wheel is supplied with a clocking flange or clocking groove depending on wheel thickness. Wheels must be trued to these datum faces for both side and peripheral run-out. Run-out should not exceed 0.005 mm in either direction.

CLEARANCE ANGLES

Top rake front clearance and helix angles are compensated for in the design of the wheel profile. A suitable wheel is produced from a customer's insert or drawing. If side clearance is required we can supply 'split' profile wheels.

GRIT SIZE

The grit size on accurate profile wheels is determined by the profile tolerances minimum radii and depth of profile. We will recommend the most suitable grit size.

REPEAT/STRIP & REPLATE

Repeat wheels are supplied at a substantially lower price than the original wheel. A strip and replate service is offered at very competitive prices.



ELECTROPLATED DIAMOND & CBN



ELECTROPLATED DIAMOND & CBN

DIREXPANDER®

Diamond and CBN precision reamers for very accurate bore finishing. The Direxpander® consists of a diamond coated helical sleeve mounted on a tapered mandrel which allows the final diameter of the tool to be adjusted to very fine limits. The combination of the sleeve and hardened tapered mandrel produces a tool of great rigidity and the diamond coating ensures a consistent gauging over thousands of components. The Direxpander® will size a bore to within 0.002 mm on diameter and leave a standard finish of 0.4 RA (16 CLA) in one pass and at the same time correct the bore geometry. Finishes between 0.2 RA (8 CLA) and 0.8 RA (32 CLA) can also be achieved.

Over the last six decades the Direxpander® has become the definitive tool for sizing and straightening the bores of cast components eg Hydraulic Transfer Valves, Connecting Rods. During these years our technicians have acquired a wealth of knowledge and expertise covering all aspects of the problems associated with this operation.

These precision reamers can be supplied in a standard range of sizes from 6 mm diameter.



Material	Roughing Reamer 0.8 RA (32 CLA)	Finishing Reamer 0.4 RA (16 CLA)
Cast Iron	0.038 mm (0.0015")	0.015 mm (0.0006")

Advantages of using the DIREXPANDER®

- Consistency of bore size
- Consistency of finish
- Correction of any bore misalignment
- Single pass operation
- Increased production rates
- Lower tool cost per component
- Unskilled operation
- Longer tool life
- Negligible component rejection

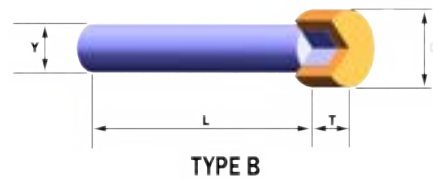
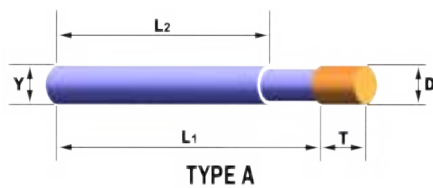


ELECTROPLATED DIAMOND & CBN

INTERNAL GRINDING WHEELS

Electroplated internal grinders are widely used on Jig and Internal Grinding Machines. They are widely used in the production of Dies, Punches and cutting tools.

Available in standard sizes but specials are also readily available.
 Profiled internal grinders can also be manufactured.









	CODE		D	W	Y	L1	L	GRIT
	Diamond	CBN	(mm)	(mm)	(mm)	(mm)	(mm)	
TYPE 'A'	BEI005D	BEI005B	0.5	3	3	7	55	D91-170/200
	BEI007D	BEI007B	0.7	3	3	7	55	
	BEI010D	BEI010B	1.0	5	3	10	55	
	BEI015D	BEI015B	1.5	5	3	12	55	
	BEI020D	BEI020B	2.0	5	3	12	55	
	BEI025D	BEI025B	2.5	5	3	16	55	D126-120/150
	BEI030D	BEI030B	3.0	5	3	16	55	
	BEI035D	BEI035B	3.5	5	6	20	60	
	BEI040D	BEI040B	4.0	5	6	20	60	
	BEI050D	BEI050B	5.0	6	6	20	60	
TYPE 'B'	BEI060D	BEI060B	6.0	8	6	20	60	D181-85/100
	BEI070D	BEI070B	7.0	8	6	-	60	
	BEI090D	BEI090B	9.0	10	6	-	60	
	BEI100D	BEI100B	10.0	10	6	-	60	
	BEI120D	BEI120B	12.0	10	6	-	60	
	BEI150D	BEI150B	15.0	10	6	-	60	

Other sizes can be manufactured to customers specification, please enquire.

ELECTROPLATED DIAMOND & CBN

NEEDLE FILES

A full range of quality diamond coated needle files is available in the most popular shapes and grits, fine, medium and coarse.

TYPE NO.	CODE	GRIT SIZE	DESCRIPTION
Tapered			
TF1	ENF020	120/150	Taper Flat
TF3	ENF080	120/150	3 Square
TF5	ENF140	120/150	Square
TF6	ENF170	120/150	Round
TF9	ENF260	120/150	Half Round
Parallel			
PF10	ENF290	120/150	Hand
Handle			
<div><div> Taper Flat</div><div> 3 Square</div><div> Square</div><div> Round</div><div> Half Round</div><div> Hand (Parallel)</div></div>			



ELECTROPLATED DIAMOND SPATULAS

Electroplated diamond spatulas suitable for cleaning contacts are available in three grades of diamond on the coated blades. Both sides of the file are coated electroplated diamond and are fitted with a flexible polythene colour coded handle for easy grade identification, blue being coated with coarse diamond, red with medium diamond and yellow with fine diamond.

CODE	DESCRIPTION	PRICE
*ECF189	Spatula DSB No. 147189 Coarse, Blue	£7.10
*ECF190	Spatula DSR No. 147190 Medium, Red	£7.10
*ECF191	Spatula DSY No. 147191 Fine, Yellow	£7.10



When ordering

please state code part numbers.

FLEXIBLE DIAMOND & CBN

FLEXIBLE DIAMOND ELECTROFLEX FOR ENGINEERING

DK's flexible material has been developed by our engineers to combine the long life and aggressive cutting action of diamonds with a backing material which has strength and flexibility. This diamond impregnated material enables tools of various shapes to quickly and economically grind and polish a wide range of hard materials including hard metals.



MANUFACTURING PROCESS

The manufacturing process produces diamond islands of identical size and shape with a regular spacing. This manufacturing process has been specifically designed to allow slurry to be freely washed away with the lubricant (water) without any clogging. The overall pattern produced gives the optimum rapid stock removal with the ability to achieve the desired honed or polished finish.

ELECTROFLEX

Selected high quality diamonds are electroplated with a nickel matrix through special flexible stainless steel mesh, or a very strong flexible backing cloth, which achieves a very robust fast grinding and finishing product.

CBN FLEX

Our CBN Flexible material was developed to offer a long-lasting solution for wet grinding, polishing or finishing a range of ferrous metals including iron-base alloys, titanium alloys, stainless steel, high-temperature alloys as well as thermal spray coating. It can be manufactured to fit a variety of machines.

WET WORKING

Electroflex products have been designed for wet use to achieve the maximum performance, finish and life.

DRY WORKING

Some Electroflex products are available for dry working where appropriate.

COLOUR	TYPE	GRIT	MICRON
GREEN	METAL	60	250
BLACK	METAL	120	125
RED	METAL	200	74
YELLOW	METAL	400	40-50
WHITE	METAL	800	20-30
BLUE	METAL	1800	6-12
WHITE	RESIN	800	20-30
BLUE	RESIN	1800	6-12
ORANGE	RESIN	12000	1-3

The above micron range is for guidance only.

FLEXIBLE DIAMOND & CBN

DIAMOND FLEXIBLE ELECTROFLEX HAND PADS

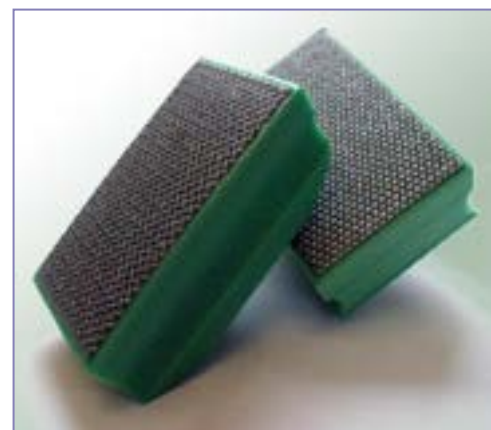
Diamond flexible material hand pads developed by DK Holdings for wet hand grinding and polishing the edges and surfaces of hard metals and other hard materials for the engineering industry. All diamond hand pads are colour coded with green, black red, yellow, white, blue and orange foam backing for easy grade identification.

FLEXIBLE CUSHIONED HAND PADS

The diamond flexible cushioned hand pads have a superior foam backing for a more comfortable grip. These diamond hand pads are suitable for wet grinding and polishing the edges, corners and flat surfaces of hard metals used in the engineering industry.

Sizes	90 x 55mm and 100 x 55mm
Electroflex:	
Metal Grades	800 - 1800 grit
Resin Grades	800 - 12000 grit

GRADE CODE	
90mm x 55mm	
M60	*BEPN202
M120	*BEPN212
M200	*BEPN217
M400	*BEPN222
M800	*BEPN223
M1800	*BEPN224
100mm x 55mm	
M60	*BEPN200
M120	*BEPN210
M200	*BEPN215
M400	*BEPN220
M800	*BEPN221
M1800	*BEPN228



When ordering

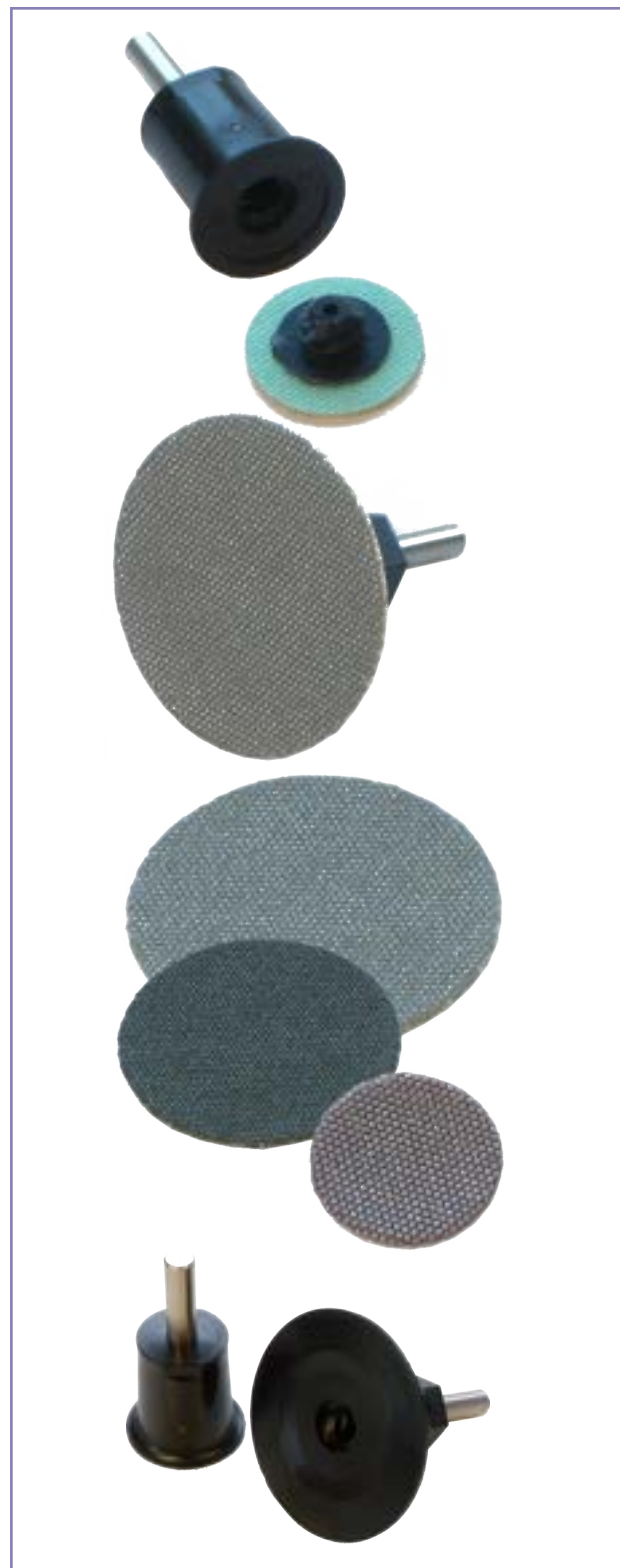
please state code part numbers.

FLEXIBLE DIAMOND & CBN

DIAMOND FLEXIBLE ELECTROFLEX DISCS

Electroflex discs are suitable for wet grinding and polishing all types of hard materials in the engineering industry. All sizes, backings and grades are available with various fittings for hand and stationary machines.

Diameters	25, 50 & 75mm
Electroflex:	
Metal Grades	60 - 1800 grit
Resin Grades	800 - 12000 grit



FLEXIBLE DIAMOND D-LOC DISCS

D-Loc quick release discs are for grinding, polishing and de-burring applications in the engineering industry.

GRADE	CODE
Ø25mm	
M60	*BEPN900A
M120	*BEPN900C
M200	*BEPN900D
M400	*BEPN900E
M800	*BEPN900F
M1800	*BEPN900J
Ø50mm	
M60	*BEPN910A
M120	*BEPN910C
M200	*BEPN910D
M400	*BEPN910E
M800	*BEPN910F
M1800	*BEPN910J
Ø75mm	
M60	BEPN915A
M120	BEPN915C
M200	BEPN915D
M400	BEPN915E
M800	BEPN915F
M1800	BEPN915J

D-LOC MANDRELS FOR DISCS

Quick release backup pads with 6mm diameter shank for D-Loc Electroflex discs.

CODE	DIAMETER
*BES900	Ø25mm
*BES910	Ø50mm
*BES915	Ø75mm

FLEXIBLE DIAMOND & CBN

ELECTROFLEX FLEXIBLE DIAMOND BELTS

DK's flexible diamond belts are being used extensively in wet grinding and polishing applications in the engineering industry. Advantages are consistent finish, increased productivity and reductions in downtime and abrasive costs.

Electroflex flexible belts are available in a wide range of grits and sizes and can be supplied in diamond or CBN.

High quality manufacturing processes allow for long life and good edge retention.

Applications for flexible belts can be as diverse as —

- Replacement knee joints
- Roll grinding for the paper industry
- Automotive Cam Shaft grinding/polishing
- Automotive Crank Shaft grinding/polishing

A full range of dry application belts is available on request.



FLEXIBLE DIAMOND & CBN

FLEXIBLE ABRASIVE SHEETS

Flexible diamond and CBN sheets for hand polishing all types of hard materials in the engineering industry. The colour coded flexible abrasive material can be supplied in Electroflex sheets of various sizes and backings, which can be easily cut with scissors to make customised tooling.

Electroflex – maximum sheet size (without joint)

Metal Grades 60 - 120 – Sheet Dimensions 850 x 290mm

Metal Grades 200 - 1800 – Sheet Dimensions 3000 x 290mm

Resin Grades 800 - 12000 - Sheet Dimensions 650 x 290mm

Types of Backings -

Unbacked (Canvas)

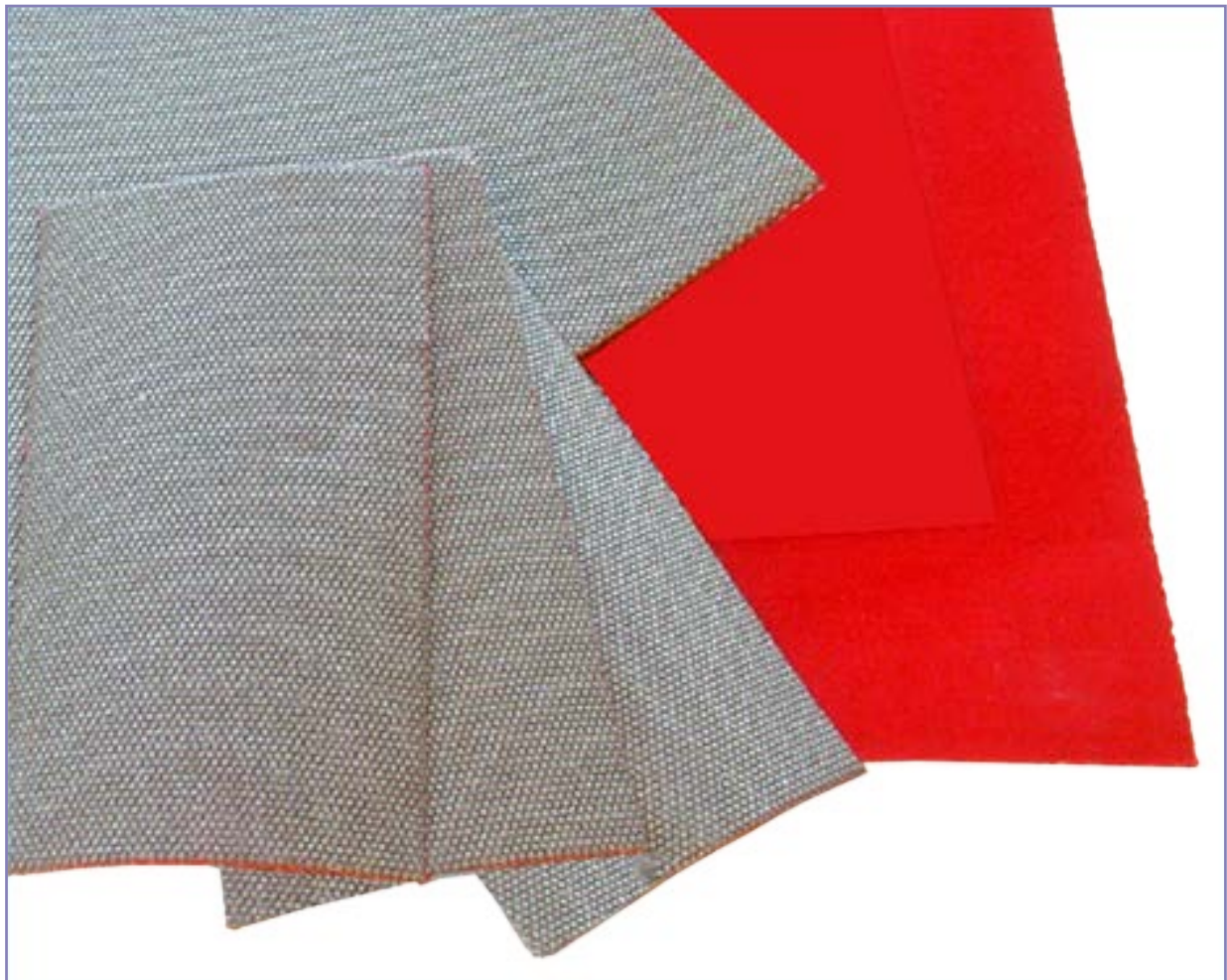
QRS (Quick Release System - Velcro(tm))

Self-Adhesive (S/A)

Plastazote (Foam Rubber)

Magnetic

Available for both wet and dry applications.



RESIN/METOID BONDED DIAMOND & CBN

DIAMOND & CBN WHEELS

Diamond wheels for — Tungsten Carbide, Titanium Carbides and Ceramics.
Cubic Boron Nitride (CBN/Borazon) wheels for — High Speed Steels, Various Hardened Steels, Stellites and Cast Iron.

DIAMOND WHEELS

The major use of resin bonded diamond wheels is for the grinding of cemented carbides. Results have proved that the resin bonded wheel provides the most economical method of grinding tungsten carbide when high stock removal, coupled with good surface finish is the prime consideration. These wheels find their use in all types of grinding operations such as surface, cylindrical, optical profile, slot grinding, saw grinding, multi-tooth cutter grinding and can be used wet or dry.

Our technical staff can recommend the correct bond and diamond type for your application.

CUBIC BORON NITRIDE (CBN/BORAZON)

Cubic Boron Nitride is a synthetic abrasive produced by subjecting hexagonal Boron Nitride, in the presence of a catalyst, to a high pressure and temperature. The resulting crystals of CBN are considerably harder than the conventional silicon carbide and aluminium oxide abrasives and thermally more stable than diamond.

ABRASIVE	HARDNESS (Knoop Scale)
Diamond	7,000
CBN	4,700
Silicon Carbide	2,480
Aluminium Oxide	2,100

The DK Holdings CBN resin bonded wheels were developed for grinding hard, tough, high speed tool and die steels and show the following advantages over conventional abrasives.

1. Wheel wear is very low and grinding can be done without wheel compensation.
2. Close tolerances can be maintained without interim checks.
3. More effective stock removal.
4. Increase production.
5. Cool cutting and lack of residual stress.
6. Generates less heat, less power required.
7. Can be used wet or dry

METOID® BOND WHEELS

The Metoid® bonded range was developed for those difficult grinding operations where conventional resin bond wheels cannot be used effectively. The Metoid® bond is extremely tough combining the free cutting properties of resin bond wheels with a robustness normally found only in metal bonded wheels.

It is possible to undertake the dry grinding of brazed tooling when using a Metoid® diamond bond wheel and the dry grinding of tool steels using the CBN Metoid® wheels. These wheels are effective grinding ceramics, stellites, nimonics and a variety of other exotic materials. These wheels are extremely versatile and effective under both wet and dry conditions. Its outstanding corner holding characteristics make it ideally suited for production and creep feed grinding.

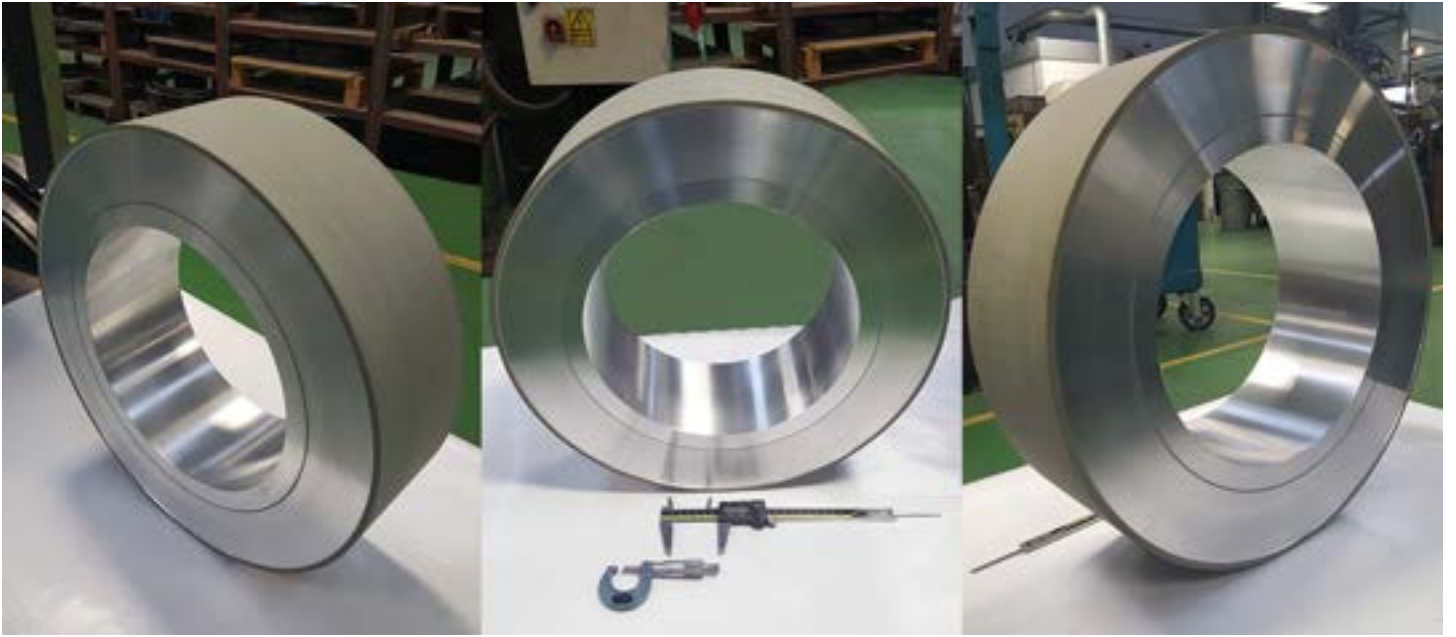
Metoid® bond wheels are available in a wide variety of shapes and sizes. Complying with the FEPA international standards, wood working machine tool manufacturers standards or as specials. A full range of slitting discs are also available.

POLYIMIDE BOND WHEELS

DK are also able to produce wheels using the most up to date high temperature Polyimide Bonds. This type of bond is particularly successful in the most arduous grinding processes including saw sharpening operations.



RESIN/METAL BONDED DIAMOND & CBN



RESIN/METOID BONDED DIAMOND & CBN

STANDARD WHEEL SHAPES

Peripheral Wheel



TYPE 1A1
Dish Wheel



TYPE 4BT9
Peripheral Cup Wheel



TYPE 11A9
Flaring Cup Wheel



TYPE 12V9 45°
Taper Cup Wheel



TYPE 11A2
OPG Wheel



TYPE 14F1
Internal Grinding Wheel



TYPE 1A1W
Saw Sharpening
TWIN RIM WHEEL
for VOLLMER MACHINE



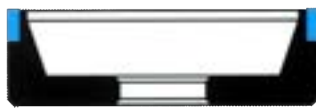
Peripheral Wheel



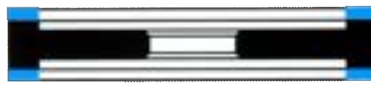
SLITTING SAW
TYPE 1A1R
Dish Wheel



TYPE 4ET9
Peripheral Cup Wheel



TYPE 6A9
Double Face Wheel



TYPE 9A3
Dish Wheel



TYPE 12A2 45°
OPG Wheel



TYPE 3A1
Hand Hone



TYPE DHH1
Saw Sharpening



FACE GRINDING WHEEL
for AKE MACHINE

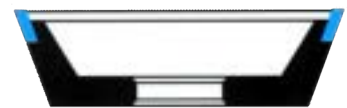
Dish Wheel



TYPE 4A2
Dish Wheel



TYPE 12A2 20°
Flaring Cup Wheel



TYPE 11V9
Cup Wheel



TYPE 6A2
OPG Wheel



TYPE 14A1
Internal Grinding Wheel



TYPE 1A8W
Hand Hone



TYPE DHH2

RESIN/METOID BONDED DIAMOND & CBN

FEPA - IDENTIFICATION CODE DIAMOND/CBN WHEEL SHAPES

With the exception of "specials" and wheels for the woodworking industry DK resin wheels are produced to FEPA standard shapes and sizes. These diagrams are designed to describe the shape of a complete diamond or CBN wheel and is made up with four components see Analysis of a typical diamond/CBN wheel shape (Fig. 1), Basic Core Shape (Fig. 2), Shape of Diamond/CBN Cross Section (Fig. 3) and Location of Diamond/CBN section (Fig. 4).

Fig. 1. Analysis of a Typical Diamond or CBN Wheel Shape.

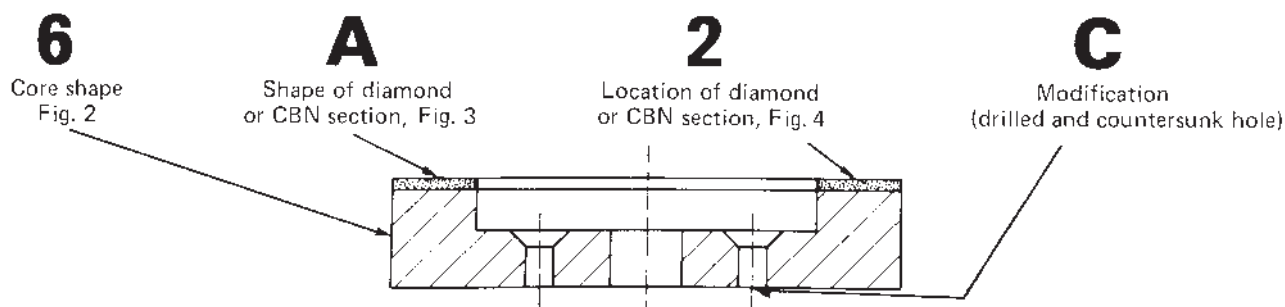


Fig. 2. Core Shapes and Designations.

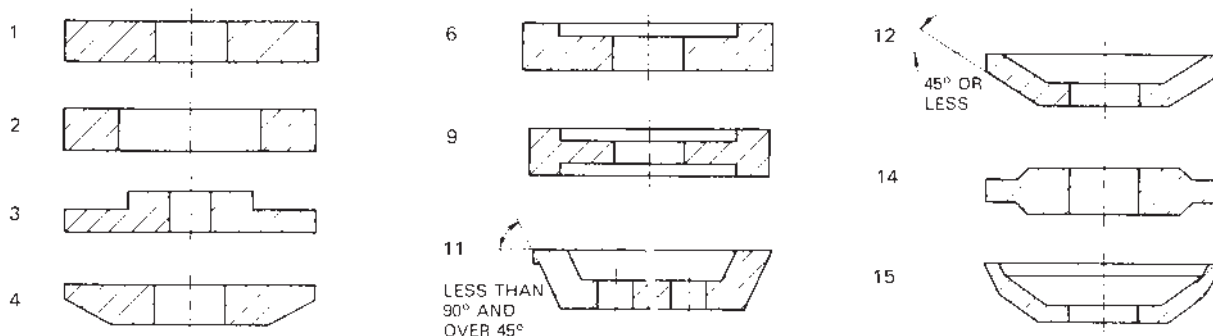
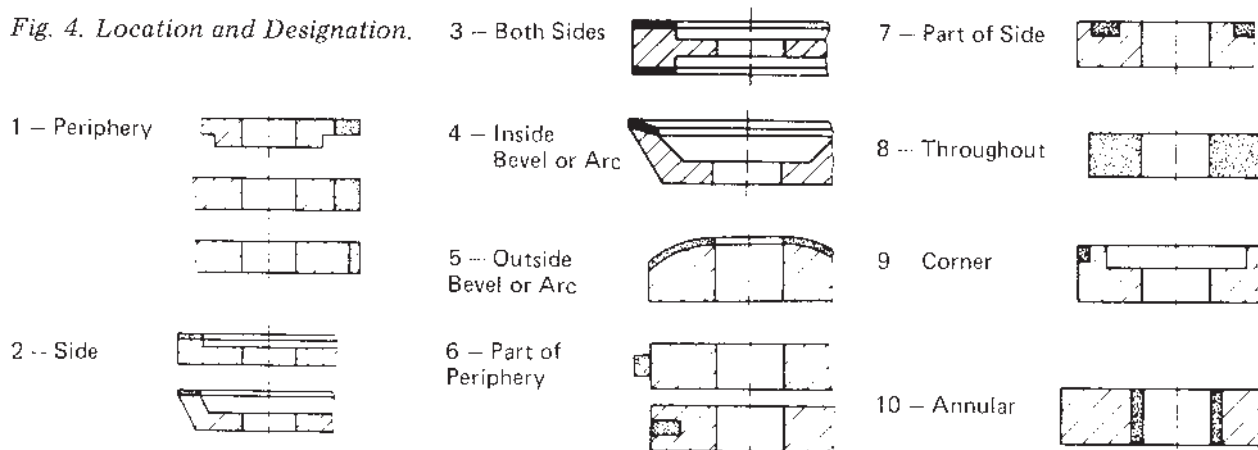


Fig. 3. Diamond or CBN Cross Sections and Designations.

			A	AH	B	C
H	D	DD	E	EE	F	FF
G	H	J	K	L	LL	M
P	Q	OQ	S	U	V	Y

Fig. 4. Location and Designation.



RESIN/METOID BONDED DIAMOND & CBN



RESIN BONDED SUPERABRASIVE WHEELS

A wide range of shapes and sizes is available for toolroom and production use. Many other shapes and sizes can be manufactured on request for special machines.

RESIN BOND DIAMOND WHEELS

The main use is for grinding tungsten carbide tools and ceramics. A range of bonds is available to suit different applications including grinding glass, ferrites and other non-ferrous hard materials.

RESIN BOND CBN WHEELS

The DK CBN wheels have been specially developed for the efficient grinding of hardened steels, super alloys and other similar materials.

BONDS

Wheel performance and the economy of the grinding operation is determined to a large extent by the correct choice and the careful manufacture of the bond, as well as by the quality and size of the diamond/CBN grit.

The bond should give perfect diamond/CBN grit retention to ensure maximum utilisation and suitable wear characteristics to expose fresh diamond/CBN tips.

DK have specialized bonds such as Phenolics, Polyimide, Metoid, etc.

SPECIFICATIONS

Please refer to our Technical Department to advise you on the best wheel specifications for your applications.

The variations are:

- Grit type - Diamond or CBN
- Grit size - See the grit size table on Page I-ii
- Concentration - grit per unit volume
- Body material and Bond type -
Wheel body usually available in Aluminium, Resinal or Bakelite

ORDERING

When placing orders it would be helpful to give the following information.

1. Wheel shape and description - see standard wheels shapes on Page 14.
2. Wheel size.
3. Type of Superabrasive - diamond or CBN.
4. Grit size.
5. Concentration.
6. Application.

HYBRID BONDED DIAMOND & CBN

The new DK Hy-bond range of Diamond and CBN wheels for manufacturing and regrinding of precision tools on CNC tool and cutter grinders.

Extensive testing with leading UK based tool manufacturers has resulted in the next generation of hybrid wheels. These metal/resin bonded hybrid wheels have been proven to offer excellent edge retention, increased stock removal and reduced cycle times.

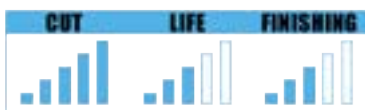
Our technical team is available to assist and advise in obtaining optimum operating conditions, and to discuss special tooling requirements.



The DK Hybond range of wheels is available in three modes (F) Fast, (M) Medium and (H) Hard to suit our customers' exact requirements.

FAST

HIGHEST FEEDRATES



MEDIUM

BALANCED PERFORMANCE



HARD

LONG LIFE



COMPONENTS GROUND WITH DK'S HYBOND WHEELS



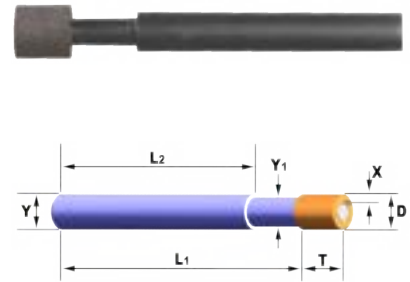
CERAMIC BONDED DIAMOND & CBN

CERAMIC INTERNAL GRINDERS

Ceramic internal grinding wheels are available in diameters 4mm to 25mm and are supplied with or without a shank. The diamond wheels are for grinding carbides and ceramics and the CBN wheels are for grinding hardened steels. Ceramic grinders are extremely tough and have a porous structure which has the following advantages:

1. Extremely fast cutting with low wear.
2. Cool cutting with improved surface finish when used dry.
3. Outlasts electroplated wheels by up to 20 times whilst cutting 25% faster.

DIAMOND CODE	C.B.N. CODE
VIG004D	VIG004B
VIG006D	VIG006B
VIG008D	VIG008B
VIG010D	VIG010B
VIG012D	VIG012B
VIG015D	VIG015B
VIG020D	VIG020B
VIG025D	VIG025B



INTERNAL GRINDING WHEEL DIMENSIONS							
CODE	D	T	X	Y	L1	Y1	L1-L2
VIG004	4	5	1	3	50	2	6
VIG006	6	5	1.5	3	50	-	-
VIG008	7	8	2.5	6	50	4	10
VIG010	10	8	2.5	6	50	5	10
VIG012	12	10	3	6	50	-	-
VIG015	15	10	3	6	50	-	-
VIG020	20	10	3	10	50	-	-
VIG025	25	10	3	10	50	-	-

NOTE:

Other shapes of wheels and sizes are available on request.

When ordering

please state code part numbers.

POLYCRYSTALLINE DIAMOND & CBN

POLYCRYSTALLINE TOOLS

Many materials can be machined successfully with Polycrystalline diamond and CBN tools which include:

DIAMOND: Light Alloys, Bronzes, Composite Products,
Precious Metals, Plastics, Rubber, Ceramics, Porcelain,
Granite and Sandstone.

CBN: Hardened Steels and Hardened Super Alloys.

The benefits of using Polycrystalline are:

1. Longer life.
2. Higher cutting speeds.
3. Consistent precise defined surface finishes.

The DK range of these tools is available as tips to fit standard throw away tools, Turning Tools, Boring Tools, Boring and Facing Tools, Microbores, Drills, Routers and Reamers.



CODE	DESCRIPTION
BMPHL	Custom made tools and inserts

WHEEL PREPARATION

DIAMOND/CBN WHEEL PREPARATION

Wheel mounting

As with any grinding wheel it is very important that diamond or CBN wheels are mounted true with the aid of a clock dial indicator.

Trueing & dressing

It is essential with diamond and C.B.N. wheels that they are trued on the machine and properly dressed to expose the abrasive particles.

BRAKE DRESSER

The Brake Dresser is a simple but fast and effective method of wheel trueing and dressing and is supplied with two dressing wheels. It is a fully self-contained unit which can be used on any grinding machine. Using the Brake Dresser will improve both the working life of your wheels and the quality of the surface finish.

The Brake Dresser consists of a cast body containing a shaft, which is controlled by a centrifugal braking system. A silicon carbide wheel is mounted on the shaft. Due to its simplicity, the unit requires virtually no maintenance.



CODE		DESCRIPTION
*BMP002		Self-contained Trueing/Dressing Unit
*BMP005		Dressing Wheels 3" x 1" x 1/2" C150 IV

ALUMINIUM OXIDE STICKS

Dress diamond wheels with a wet grade 100 grit aluminium oxide stick and CBN wheels aggressively dress with a wet 220 grit aluminium oxide stick.

DRESSING STICKS		
CODE	SIZE	GRADE
*BMP010	1" x 1" x 6"	100 mesh
*BMP015	1" x 1" x 6"	220 mesh



DRESSING TOOLS

We offer a wide range of Natural Diamond Tooling for the engineering industry to suit your application and include single point, chisel point, cone point, multi-point and index diamond dressers.

GRADE		DIAMOND QUALITY
KE	Economy	A very economic robust quality of irregular shape with usually one to two points.
KA	Quality Industrial	General toolroom quality of good shape with five working points.

SINGLE POINT DRESSING TOOLS



The 'Single Point' is the traditional diamond dressing tool for straight grinding of conventional grinding wheels. A single natural diamond is used which can usually be reset several times so that new cutting points can be exposed once a point becomes blunt. The size of the diamond used can vary in weight, normally from 0.25 carats each to 5 carats or more. The diamonds are selected from a wide range of qualities and shapes to suit each working application.

Ordering and Resetting Service

Please give shank dimensions, quality and size of diamond when placing orders. Contact our technical department for advice. We offer a fast, reliable dressing tool reset service for the KA grade.

CODE	DESCRIPTION
BMPHL	Single Point Natural Diamond Dresser

MULTI POINT DRESSING TOOLS



The Multi Point is used for straight dressing of conventional grinding wheels or very simple profiles. They can be supplied in various diamond sizes to suit wheels to be dressed. These dressers are often used in place of a Single Point where fast dressing or stock removal is required. Fine diamonds can be used where high finish or sharp corners are required.

The dressing load is divided on a number of natural diamond particles which are set in a strong matrix. These tools do not require re-setting. Various designs are available. A cost effective dresser in the production environment where used as a disposable tool. Special custom tools can be made on request.

CODE	DESCRIPTION
BMPHL	Multi Point Diamond Disposable Dresser

INDEX DRESSERS



A cost effective Single or Multi Point Dresser which comprises of multiple diamonds which are set in a strong matrix around the circumference of the wheel. After the diamonds in one position have become worn the wheel is easily indexed to the next line of diamonds and locked into position. These can be used one after the other by simply rotating the tool. Can be made to dress straight or profile wheels.

CODE	DESCRIPTION
BMPHL	Single or Multi Point Diamond Dresser

DIAFORM CHISELS

The Diaform Diamond Chisels are used with grinding wheel forming equipment and the diamond chisels can be built into the machine design. Mainly used for precision profiling of grinding wheels, sometimes in conjunction with Blade Dressers which can be used to rough out a form.

Specially selected diamonds are used to produce these tools and can be supplied in various size tip radii and normally with 40 or 60 degree angles, shank size to customers specification. The natural diamond used is high quality, can be re-set and relapped also there is a remake service available.



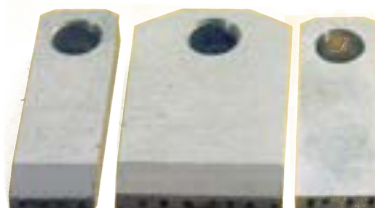
CODE	DESCRIPTION
BMPHL	Natural Diamond Diaform Chisel

BLADE DRESSERS

Diamond Blade Dressers can be used for both straight or profiling of grinding wheels. These diamond dressers can be used to rough profiles before finishing with a Chisel Point Dresser.

The diamond blade dresser provides a robust and cost effective alternative to the single stone diamond chisel. It maintains a consistent, thin diamond cutting edge throughout its working life.

Blade Dressers are produced in a number of widths to suit requirements and adjustable, re-useable or fixed head holders are available for mounting the diamond blade dresser.



CODE	DESCRIPTION
BMPHL	Diamond Blade Dressing Tool

KD DRESSERS

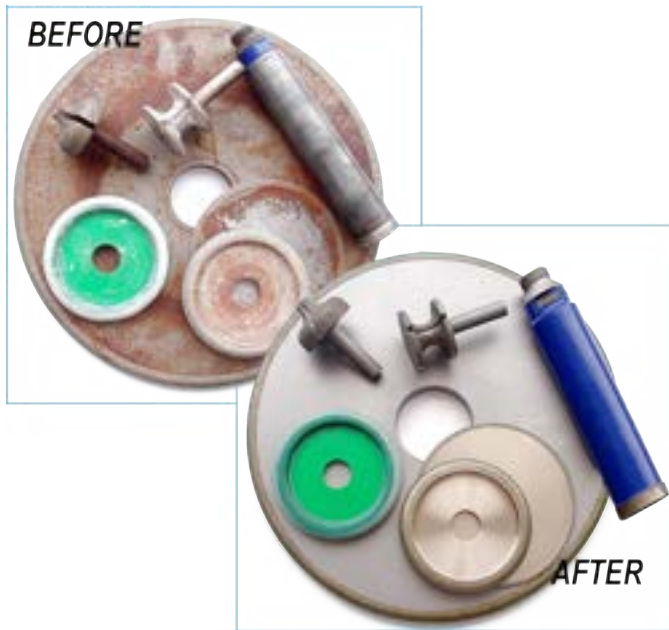
Metal bonded disposable diamond dressing tools for dressing medium to coarse grained grinding wheels by hand or mounted in a suitable holder. No resetting required.

Manufactured using higher quality coarse natural diamonds to give long life and continuously produce an 'open' grinding wheel.



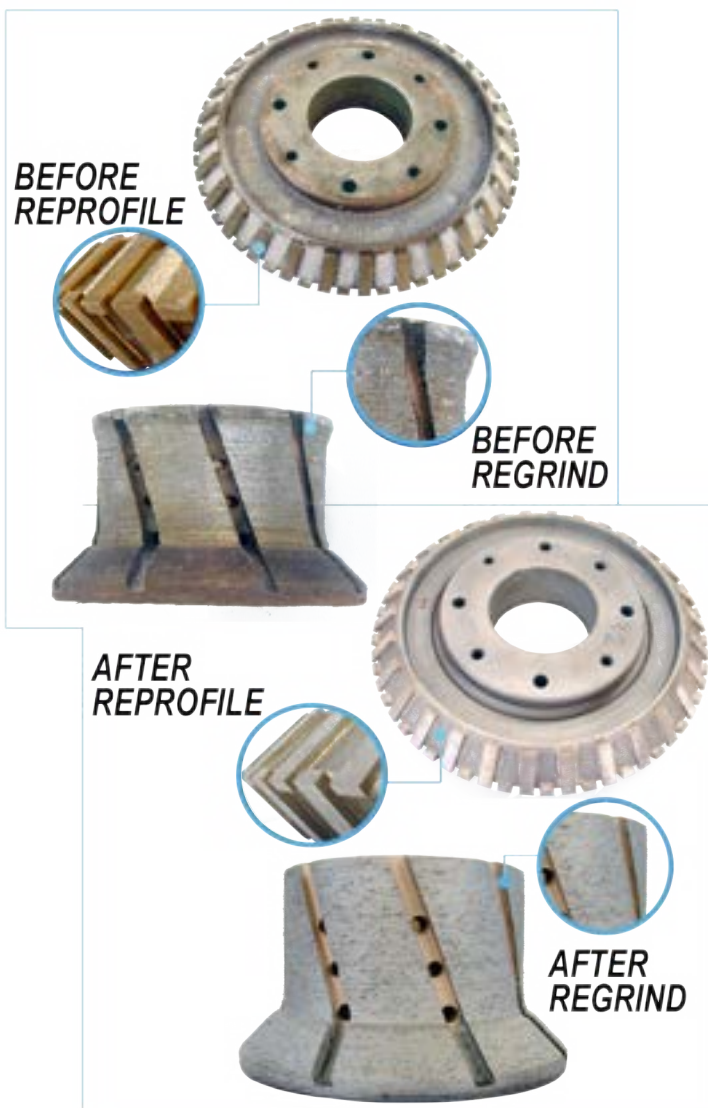
CODE	DESCRIPTION
BMPHL	Metal Bond diamond disposable dresser

SERVICES



STRIP, REPLATE & REDRESS SERVICE

SAVE up to 40% by giving your old tools a new lease of life using DK's STRIP & REPLATE or REDRESS SERVICE!



REGRINDING & REPROFILING OF METAL BOND AND RESIN BOND WHEELS

We offer our customers an in house regrind and reprofile service and can deliver a prompt and accurate return with minimal stock removal to ensure the maximum life for our customer's tools.

Please contact us for a quotation.

BUSINESS TERMS

BUSINESS HOURS

Monday — Friday : 8.00 am - 5.00 pm

ORDERING IS EASY

Contact us on:



TELEPHONE - +44 (0)1580 891662



E-MAIL - sales@dk-holdings.co.uk



Or alternatively post your order to:
DK Holdings Limited
Station Approach, Staplehurst
Kent TN12 0QN
UK

MINIMUM ORDER VALUE

There is no minimum order value.

DELIVERY

Phone or email your order through to our sales department before 12.00pm for same day despatch on certain stocked items when you hold an approved credit account. For non account holders we will despatch on receipt of payment. Cheques and credit card/debit payments accepted.

DEDICATED SALES TEAM

Our fully trained sales staff are ready to take your calls from 8.00am to 5.00pm Monday to Friday (answering system outside these call times). They can offer advice and guidance to ensure that you get the right product for your application.

SERVICE IS OUR STRENGTH

Our service does not end when a product has been sold. Qualified personnel provide operator training and after-sales technical support.

PAYMENT TERMS

Paying is easy. Open an account, pay by credit/debit card, cheque or credit transfer.

To qualify for credit account status, a credit application must be completed in full. Satisfactory references are required for credit consideration.

CARD PAYMENTS

We accept payment by Visa, MasterCard, Maestro and Visa Debit.

BANK DETAILS

International Bank Account Number (IBAN)

Bank: National Westminster Bank PLC
Address: 3 High Street, Maidstone,
Kent, ME14 1XU,
United Kingdom.

Country: GB
Currency: STERLING
Sort Code: 60-60-08
Account No: 02901749
IBAN No: GB10NWBK60600802901749
B.I.C. No: NWBKGB2L



@DK_Holdings



DK Holdings Limited

PURCHASE ORDER

Company Name & Address		Despatch Address <i>[if different to Company Address]</i>	
Name:	Authorized Signature:	Order No.	Date:

DESPATCHING INSTRUCTIONS		INVOICING INSTRUCTIONS	
9	Courier	9 Visa 9 Visa Debit	9 Mastercard 9 Maestro
9	1st Class Post	Account No.	
9	Parcel Post	Expiration date	Security No.
9	Air Freight	Name of cardholder	
9	Road Freight	9 COD 9 Prepayment	
9	Other	9 Invoice - established account, approved credit	

QTY	CODE	DESCRIPTION	UNIT PRICE

D.K. Holdings Limited collects personal information when you complete this form or place an order with us for our products. We will use this information to provide the products and services requested, maintain guarantee records and, if you have agreed, to send you occasional marketing information. For further information on how our data might be used, please see our Privacy Notice.

We would like to send you information about our products. Please tick one of the following.

Yes, I do agree ~
No, I do not agree ~

Get in touch with us and find out more
about our other Diamond Tooling Ranges.