super/flex®

ANDOR®

Manufacturer and Supplier of

specialised abrasive products

A Company of the TYROLIT Group

www.grindtech.com

Grinding Techniques

Superflex cutting and grinding discs for portable machines

Grinding Techniques locally manufactures Superflex cutting and grinding discs specifically engineered for applications on various materials from steel and stainless to non-ferrous metals, stone and concrete.

Our range from Professional to Industrial consists of both Slimline (ultra-thin discs) and conventional discs with different shapes, sizes and wheel thicknesses to ensure that you can easily find a cutting or grinding disc suited to a specific application.

Superflex cutting discs for stationary cut-off machines

Superflex discs are specifically engineered to suit different applications, machine types and speed requirements.

Available in a range of sizes for optimum performance on stationary machines.

Andor resinoid bonded snagging wheels

Achieve high grinding performance with maximum stock removal and continuance with our Andor snagging wheels. Specifically designed for rough grinding applications, such as portable grinding, bench, pedestal and pendulum (swing frame) grinding, as well as rail grinding.

Andor wheels are reinforced for high speeds and specific applications.

Vitrified bonded precision grinding wheels for the automotive sector

Grinding Techniques has vast experience in developing task specific bonded wheels for the automotive component's manufacturers for both OEM and engine reconditioning markets. With continuous research and development, we are able to not only offer a product that is cost effective, but also well known for its consistent reliability.

From our Andor range of crankshaft, camshaft, valve and conrod grinding wheels, Grinding Techniques is capable of delivering world class quality and innovative products to meet customer specific stock removal and surface finishing requirements.

Vitrified-and-resinoid bonded Andor grinding wheels for precision grinding

Andor vitrified-and-resinoid bonded precision wheels are specifically engineered to suit applications including, but not limited to mining, saw sharpening, thread and gear grinding.

A comprehensive range of shapes, sizes and specifications are available to suit most requirements.

Local manufacture enables us to engineer specific products to cater for individual requirements with short lead times.

Vitrified-and-resinoid bonded segments

Surface grinding segments are available in a range of shapes and sizes to suit various applications from blade and knife grinding, to surface grinding in the automotive sector.

Specifically engineered to ensure excellent stock removal and low heat generation.

Mounted points, polishing points and abrasive cones

Used in all foundries, heavy engineering and machine shops, tool rooms and the construction industry; mounted points are the ideal tool for removing excess material.

Available in various sizes and specifications, they are suited to a number of applications - Blending tools and dies, deburring, enlarging holes and fettling of castings.

Hi-glo products conform to all surface contours to achieve a completely uniform surface finish with minimal stock removal which will remain constant throughout the life of the polishing point. Various grit sizes and specifications are available for a range of applications from descaling and cleaning to finishing and smoothing.

Tungsten carbide Burrs

Tungsten carbide burrs are suited to a number of applications with superior performance for high speed machines - Ideal for rapid stock removal when machining hard materials.

Available in a range of shapes and sizes.

Oilstones, carbotools, rubbing bricks and dressing sticks

Oilstones and carbotools are used to super finish pre-sharpened tools to obtain a long-lasting edge, or to deburr or hand hone precision tooling.

Rubbing bricks are normally used for smoothing down concrete form work, or for flattening press molds.

Dressing sticks are used to dress other abrasive products.

Dressing tools

Dressing tools are used to bring abrasive products back into truth - (i.e the correct shape), to put a special shape onto a grinding face, or to dress open the grinding face of an abrasive product, thereby ensuring an efficient grinding action. Dressers are available in both single-and-multipoint designs.

Boron carbide dressing sticks, and spare sets or standard abrasive dressing sticks are available.

Diamond blades

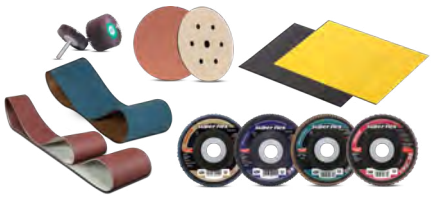
We offer a wide selection of diamond blades in various sizes and designs. They are used to cut concrete, brick, glass, paving stones, clay products, refractories, slate, terrazzo, granite, porcelain, marble and many other products. Available in segmental, continuous and turbo configurations. Both our Andor and Superflex diamond blades offer great value for money with high performance.

Diamond and CBN (Cubic boron nitride) wheels

Diamond wheels are used to grind cemented carbides, where CBN wheels are the abrasive choice when conventional abrasives come up against extremely “hard to grind” materials. CBN wheels are particularly effective on difficult steels – (usually harder than 58 HRC).

Various specifications are on offer.

Coated abrasives



Achieve optimum surface finishing with our wide range of grit sizes to suit the required application. Our coated range is available in a variety of different products to create the desired finish.

We carry a wide variety of products ranging from application on metal and wood to the automotive industry.

With rolls, sheets, discs and belts on offer, we supply superior industrial quality products, locally converted to suit specific customer requirements.

Non-woven abrasives

Our selection of non-woven abrasives is manufactured to create even finishes in fewer steps than with conventional coated abrasives. Designed with flexibility, they are ideal for achieving high-quality micro-satin surface finishes on metal, plastics, coatings and composite materials.

Products are available in rolls, hand pads, surface conditioning discs, buff wheels and spindle mounted flap wheels - All available in different grit sizes, to achieve customer specific requirements.

Accessories

In some instances, additional products are needed to facilitate the use of abrasive products.

We carry a range of items suited for this including back-up pads, mandrels, flanges and abrasive adhesive.

Products for home improvements

Our range of abrasive products are ideal for every application at home. From cutting and grinding to sanding and finishing, we carry a vast assortment of products to suit your project requirement.

Superflex products are available at all major retailers.

Grinding Techniques

Grinding Techniques was founded in Chamdor (Krugersdorp) in 1981 with the aim of supplying specialised grinding products for the industrial market. Since then, our company has developed into an important force in the industrial abrasives market. With an extensive range of high quality cut-off and grinding wheels, specialised industrial and diamond tools and a wide range of surface finishing tools, you will always find the right product for your application.

Since 2014, Grinding Techniques is an important part of the global TYROLIT Group, one of the world's leading manufacturers of grinding and dressing tools and a system provider for the construction industry based in Austria.

Grinding Techniques headquarters in Chamdor (Krugersdorp)

FEATURES AND BENEFITS

Superflex and Andor Products are manufactured in South Africa to the highest international standards EN and ANSI.

Using the latest production methods and best quality raw materials, they are specifically formulated to suit many working conditions.

The TYROLIT Group

TYROLIT is one of the world’s leading manufacturers of grinding and dressing tools as well as a system provider for the construction industry.

Since 1919, TYROLIT stands for products of the highest quality, innovation and service strength. Headquartered in Schwaz (Austria), the Tyrolean family-owned business combines the strengths of being a part of the dynamic Swarovski Group with a century’s worth of individual corporate and technological experience. With more than 4,500 employees at 29 production sites in 11 countries, the TYROLIT Group manufactures over 80,000 different products in three business divisions.

TYROLIT headquarters in Schwaz (Austria)

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ABRASIVE PRODUCTS CATALOGUE

Grinding Techniques (Pty) Ltd.

ON THE CUTTING EDGE OF TECHNOLOGY

ISO 9001:2000

Founded in 1981, Grinding Techniques (Pty) Ltd. is the largest privately owned abrasive manufacturer in Africa, operating under the principal business ethos of developing mutually beneficial business partnerships with our valued customers.

A wide spectrum of quality Bonded Abrasives are manufactured to ISO 9001:2000 standards; the company also converts Coated Abrasives, and markets Tungsten Carbide Burrs, diamond products and other ancillary items. In addition, Grinding Techniques (Pty) Ltd. is the Southern African agent for Tyrolit abrasives. The company distributes through a network of branches in South Africa, and exports extremely successfully on a worldwide basis.

Grinding Techniques (Pty) Ltd. is an equal opportunity employer, committed to environmental protection and constant product improvement through ongoing research.

ON THE CUTTING EDGE OF TECHNOLOGY

Grinding Techniques (Pty) Ltd.

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FOREWORD

Grinding Techniques (Pty) Ltd. was founded during 1981 to supply specialized grinding wheels and abrasive products to the industrial market where a need for quality grinding wheels and allied products had been created through the use of modern specialized wear resistant metals, steels and materials with varying properties.

Through persistent research and development coupled with the drive to supply "only the highest quality products" much success was achieved, which inspired the formation of a manufacturing company, "ANDOR GRINDING WHEEL MANUFACTURING CO. (PTY) LTD.", to produce "Andor" bonded abrasive products.
During 1989, a coated abrasive plant was added to the manufacturing facilities; these coated abrasive products are marketed under the "Sandflex" brand name. Together with our "Superflex" reinforced cutting and angle grinding wheels, these three brands make up 99% of all products sold by Grinding Techniques (Pty) Ltd.

When using the products recommended you are assured of complete satisfaction due in part to the following reasons:

A) Continuous research and development programme – ensures the latest technology is available at all times.

B) Careful selection of quality raw materials – enhances the final product to ensure the most economical stock removal without sacrificing finish.
This leads to productivity.

C) Technical assistance – ensures that the correct wheel/product or speed is specified to enhance productivity thus maximising capital equipment.

D) Prompt deliveries and realistic manufacturing lead times – ensures goods are received without undue delay.

Grinding Techniques products are manufactured to ISO 9001:2000 quality standards, and are guaranteed against any defects in manufacture.

Andre Bezuidenhout

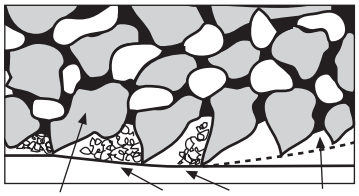
INTRODUCTION

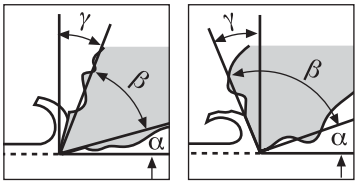
The range of abrasive products supplied by Grinding Techniques (Pty) Ltd. includes Bonded Abrasive, Coated Abrasives, Superabrasives (Diamond and CBN), Tungsten Carbide burrs, and other ancillary items to support these products.

BONDED ABRASIVES

"Bonded Abrasives" is the name given to the range of abrasive (cutting and grinding) products where abrasive grain is mixed with bonding materials, pressed and fired into various shapes (grinding wheels, segments, rubbing bricks, dressing sticks, mounted points, grinding cones, oilstones etc).

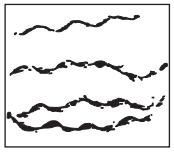
GRINDING: is the cutting action of thousands of sharp abrasive grains on the face of the grinding wheel, resembling a complex cutting tool with cutting angles and voids for chip clearance. When closely inspected, the cuttings are identical to those produced by a lathe tool.
A secondary process which takes place is a chemical reaction creating corrosion. This process is less noticeable on high corrosion resistant steels ie. stainless steel.
With the improvement in grinding technology, grinding machines and grinding wheels, grinding has developed into one of the most economic mechanical operations which not only has heavy metal removal rates, but with which accurate and close tolerances and fine surface finishes are achieved.
Specific grinding operations demand grinding wheels with particular qualities which necessitate a wide variety of shapes, sizes and compositions and also places stringent requirements on their manufacture.





α = clearance angle
β = wedge angle
γ = swarf angle

Discontinuous grinding chip obtained from grinding cast iron.



Continuous grinding chip obtained from grinding SAE 1112 steel and indicates the free chip formation possible under good grinding conditions.

COMPOSITION OF A GRINDING WHEEL

A grinding wheel has three main components:

- The abrasive grain that does the actual cutting.
- The bond that supports the abrasive grains while they cut.
- Fillers to promote the metal removing action.

The arrangement of the first two components in the abrasive product gives a definite characteristic known as **STRUCTURE (PORES)**. In order to provide chip clearance, air spaces or voids must be left between adjacent grains.
When considering whether a bonded abrasive product is suitable for the operation it has to perform, all of its components have to be taken into account.

These components are:

1. **ABRASIVE TYPE**
2. **GRIT SIZE**
3. **GRADE**
4. **STRUCTURE**
5. **BOND TYPE**
6. **ADDITIONAL COMPONENTS**

These components will be examined in greater detail.

1. ABRASIVE TYPE

There are two basic types of manufactured abrasives, the one is aluminium oxide and the other is silicon carbide. The ideal abrasive for a grinding operation is one which has the following two properties:

- Ability to fracture when a serious dullness is reached.
- Maximum resistance to pointware.

It is obviously difficult to obtain this in a single type of abrasive material. To grind glass, a material of low tensile strength must be used. In this instance silicon carbide abrasive stays sharp longer, and on hardened steel, a material of high tensile strength, aluminium oxide abrasive stays sharp longer. Therefore each abrasive works best when it is suited to the grinding operation.
The principle requirements which the abrasives must satisfy can be summarized as follows:

- extreme hardness
- either higher grain toughness or higher brittleness, dependent on the abrasive grain type
- suitable grain shape which guarantees a good cutting capacity

These requirements are fulfilled to a large extent by synthetic grinding abrasives. The abrasives which the majority of grinding wheels contain are **Aluminium Oxide (Al203)** or **Silicon Carbide (SiC)**.
In addition, diamond or Cubic Boron Nitride (CBN) are used principally for special applications.
The GRINDING TECHNIQUES manufacturing program currently embraces grinding products based on Aluminium Oxide and Silicon Carbide, which are further broken down into different types of Aluminium Oxide and Silicon carbide.
The reason for having various types of aluminium oxide and silicon carbide abrasives is that materials have different properties and therefore require a different type of grain to readily grind it. If looked at under a microscope, one will find that the various types of aluminium oxide grain are different in their structure, some are blocky in shape and are normally very tough and resist breaking down and dulling to a great degree, others will have sharp points which will break off when under pressure and expose new sharp edges continuously. Then we get to a third category that are reasonably sharp and do not break down as readily but are able to resist the dulling or blunting whilst in use. The most well known one is 31A or better known as RUBY grade. Silicon carbide on the other hand normally shows sharper edges and, when in use, breaks away more readily as it is a very friable but hard material.

ALUMINIUM OXIDE

Aluminium Oxide is generally used for grinding carbon steel, alloy steel, high speed steel, annealed malleable iron, wrought iron, hard bronzes and similar material. These are various different types of aluminium oxides and all abrasive manufacturers source these from the same suppliers. However they designate them to suit their own methods.

A – GREY BLUE
1A – GREY BLUE
5A - OFF-WHITE
9A – WHITE
11A – PINK
31A – RUBY

Mixtures of the above types are also used and in turn have doces relevant to them.

SILICON CARBIDE

This type of grain is used for grinding grey iron, chilled iron, brass, soft bronze, copper, aluminium, stone, marble, rubber, hard facing alloys, glass and cemented carbides. There are various types of silicon carbide as in the case of aluminium oxide.

8C – GREEN
C – BLACK
6C – BLACK (REFINED)

The chart below gives the abbreviated designations (symbols) in accordance with recommendations for the well known Grinding Techniques qualities as well as their characteristics

TYPES OF ABRASIVES

SYMBOL	GRAIN TYPE	CHARACTERISTICS	FIRED COLOUR
A	Regular Brown Aluminium Oxide	Blocky Tough	Blue Grey
1A	Semi Friable Aluminium Oxide	Sharp Edged	Blue Grey
5A	Mono Crystalline Aluminium Oxide	Sharp Edged BIZARRE	Off-white
9A	White Pure Aluminium Oxide	Sharp Edged	White
11A	Pink Aluminium Oxide	Sharp Edged BIZARRE	Pink
15A	Blended Aluminium Oxide	Sharp Edged	Grey
31A	Ruby Aluminium Oxide	Cubical BIZARRE	Ruby-Red
C	Black Silicon Carbide	Sharp Edged	Black
6C	Refined Black Silicon Carbide	Sharp Edged	Black
8C	Green Silicon Carbide	Sharp Edged	Green
ZA	Alumina Zirconia	Tough - Sharp	Dark Grey
ZZ	Eutectic Alumina Zirconia	Tough Microcrystalline	Dark Grey
SA	Sol Gel	Uniformly Sharp Edged	Blue

***Note:** With resin bonded grinding wheels, the colour of the finished products is not determined by the abrasive material but by the bond - usually brown to black.

2. GRIT SIZE

The number designation that follows the abrasive type on any specification represents the approximate number of openings per linear inch in the final screen used to size the grain. This ranges from a grit 8 up to a grit 1 200, grain 8 being the coarser. The internationally valid Grain Size Standard is contained in FEPA AND ANSI CODES respectively.

BONDED FEPA CODE 32 F-1971

ANSI B74.12-1976

COATED FEPA CODE 30 F-1971

ANSI B74.18-1977

The block shaped crude abrasives are reduced to abrasive grain size by crushing and milling. The abrasive grains are then graded, the range of sizes being internationally standardised according to the sieve mesh size. The grain numeral gives the number of meshes per linear inch. Very fine grains (micro grains) are obtained by sifting and sedimentation.

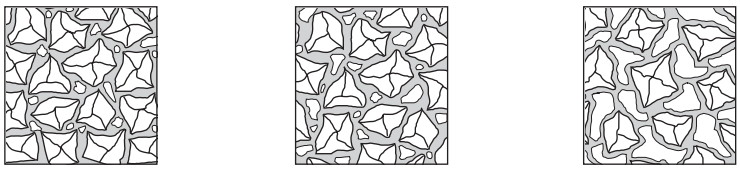
GRAIN SCALE

Grain Size Numeral		Dimension mm	Grain Size Numeral		Dimension mm
8		2,83-2,0	90		0.18-0,13
10	very	2,38-1,68	100		0,15-0,11
12	coarse	2,0-1,41	120		0,13-0,09
14		1,68-1,19	150	fine	0,11-0,06
16		1,41-1,0	180		0,09-0,05
20		1,19-0,84	220		0,075-0,045
24	coarse	0,84-0,60	240		0,047-0,043
30		0,71-0,50	280		0,038-0,035
36		0,60-0,42	320		0,031-0,028
46		0,42-0,30	400		0,018-0,016
54		0,35-0,25	500	very fine	0,014-0,012
60	medium	0,30-0,21	600		0,010-0,008
70		0,25-0,18	800		0,008-0,006
80		0,21-0,15	1000		0,005-0,004
			1200		0,004-0,003

Coarser grits remove stock more rapidly, but do not leave a good finish. Conversely, finer grits give a better finish, but slower stock removal rates.

3. GRADE (Strength of Bonding)

The grade indicates the relative strength (holding power) of the bond which holds the abrasive grains in place. When the amount of bond is increased the size of the bond postes connecting each abrasive grain to its neighbours is increased. This larger bond poste is naturally stronger therefore increasing the hardness of the wheel. Hardness grades range from "A" to "Z" in the order of increasing hardness.



The size of the 'postes' of bond supporting each grain of abrasive is a measure of the hardness of the grade. From left to right these grades are: Hard; Medium; Soft.

Symbols for hardness grade	Hardness Grade
A B C D	extremely soft
E F	very soft
G H J	soft
K L M	medium
N O P Q	hard
R S T	very hard
U V W X Y Z	extremely hard

HARDNESS (Grades)

The expression "wheel hardness" does not refer to the grinding abrasive, but to the "degree of strength" with which the abrasive grains are held in the bond setting of the wheel. The wheel hardness is a measure of the resistance of the bond to the grains being torn out during the grinding process ie. the grain particles will break out of a soft wheel more readily than out of a hard one. As a general rule of thumb, hard workpieces normally necessitate softer grades, and vice-versa. When grinding a hard workpiece with a hard grade, the grain will not be released timeously; it will become blunt, and will not cut freely; the face of the wheel will glaze, generating heat and burning the workpiece.

4. STRUCTURE

The total volume of the grinding wheel is made up from the abrasive grains, the bonding material and the pore volume. The pore volume characterises the structure and is of considerable importance for the grinding process. The pores form chip chambers and assist cooling during grinding.

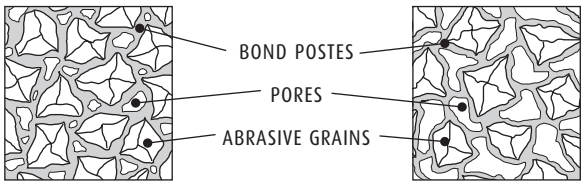
The proportions of abrasive grains, bonding material and pores can be varied and the structure of the wheels is designated by structure numbers.

Every grinding wheel has a natural porosity. This is expressed in structure numbers 1-9 which are considered to be normal structures.

The natural porosity of a wheel can be artificially increased by mixing in a foreign material which then produces additional porous space. This artificially increased porosity (induced porosity) is expressed in structure numbers 11-12 and is then referred to as porous structure.

The structure number indicates the structure of grain spacing in the wheel. When the abrasive grains are close together, relative to their size, the wheel has a denser structure as indicated by a lower structure number such as 4 or 5. Usually you will not have to be concerned with a structure number in wheel selection. Experience has proved that for each grit size and grade, there is a best or standard structure. The structure number is omitted from certain types of wheels which are supplied in the standard structure only.

Diagrammatic illustration of grinding wheel structure



STRUCTURE NUMBERS

Natural porosity Normal porosity	Induced porosity Porous structure
1 2 3 4 5 6 7 8 9 10	**11 12**

The higher the structure number, the more open the structure.

Grinding products with porous structure are marked with the letter P and can be further classified as follows:

P1	Coarse pores
P2 **P3**	Medium pores
P5 **P8**	Fine pores
P12	Very fine pores

5. BOND TYPES

There are four basic types of bonds used in making grinding wheels.

1. **VITRIFIED BOND**
2. **RESINOID BOND**
3. **RUBBER BOND**
4. **SHELLAC BOND**

For our purpose, we only look at the following two bonds:

VITRIFIED BOND - which is used for over 75% of grinding wheels manufactured. Porosity and strength of wheels made with this bond give high stock removal and their rigidity helps in the attainment of high precision. They are not affected by water, acid, oil or ordinary temperature variations.

Vitrified bond symbol: V

Vitrified bonded grinding wheels are fired at a temperature of approximately 1250-1325 °C. They are not sensitive to chemical influences and can be stored indefinitely. Sudden changes in temperature, shocks or blows should however be avoided.

RESINOID BOND - used for high speed wheels in foundries, welding and billet shops; also used in cut-off and thread grinding operations.

Resinoid bond symbol: B

The resinoid bond is made from phenolic resins and various fillers which help to determine the characteristics of the bond. Resinoid bonded grinding wheels are cured at a temperature of approximately 180°C. They are less sensitive to sudden temperature changes, shocks or blows than vitrified bonded wheels. Chemical influences and lengthy storage should be avoided.

Resin bonds can be broadly categorised into two types; one for rough grinding, and the other for precision grinding.

6. ADDITIONAL COMPONENTS

These components are added to perform specific functions, and can consist of special porosities, fibreglass reinforcement, steel reinforcing rings, etc.

WHEEL MARKINGS

31A	60	I	12	V86	P
Abrasive Type	**Grit Size**	**Grade**	**Structure**	**Bond Type Symbols**	**Additional**
Vitrified Bond	**Very coarse**	**Extremely soft**	**Dense**		
A	8	A	0		**P - Porous**
1A	10	B	1		
7A	12	C	2		
9A	14	D	3		
11A	**Coarse**	**Very Soft**	**Normal**		
15A	16	E	4		
31A	20	F	5		
91A	24	G	6		
C	30	**Soft**	7		
6C	36	H	8		
8C	**Medium**	**I**	9		
Resinoid Bond	46	J	**Porous**		
A	54	**Medium**	10		
11A	**60**	K	11		
9A	70	L	**12**		
A/C	80	M			
C/A	90	**Hard**		**V - Vitrified**	
ZA	**Fine**	N		B - Resinoid	
ZZ	100	O		BF - Resin reinforced	
C	120	P		E - Shellac	
6C	150	Q		R - Rubber	
Resinoid Bond Reinforced	180	**Very Hard**			
	220	R			
AS	**Very Fine**	S			
CS	240	T			
A/C	280	**Extremely Hard**			
C/A	320	U			
ZA	400	V			
	500				
	600				

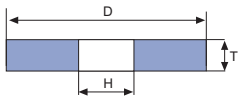
MINIMUM SIZES OF FLANGES FOR STANDARD BORE SIZE WHEELS
(Machine must be equipped with sufficient guard)

A	B	C		s	E
Wheel diameter	Minimum O.D. of flanges	Adjust ring width		Minimum flange thickness at the bore	Minimum flange thickness with recessed wheels
		min. mm	max. mm		
50	20	5	2,5	3	2,5
75	25	6	3	4	2,5
100	35	10	3	5	3
150	50	12	5	10	5
200	70	12	6	10	5
250	90	16	6	10	6
300	100	16	8	12	7
350	120	20	8	13	8
400	140	25	10	14	9
450	150	25	13	15	10
500	170	32	13	16	11
600	200	32	16	17	12
700	240	38	20	19	14
800	270	45	22	21	16
900	300	50	24	23	19

REMARKS: 1. The inner face of the flanges must be tapered for a minimum depth of 2 to 5mm depending upon the wheel diameter.
2. We suggest the use of flanges thicker than the recommended size, to allow their re-grinding after wear.

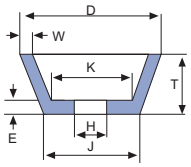
DIMENSIONS AND SHAPES

Shape 1



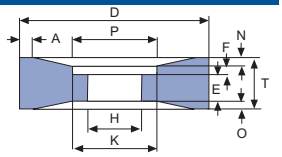
Straight grinding wheel

Shape 11



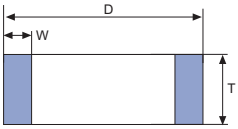
Flaring cup wheel

Shape 25



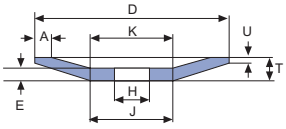
Grinding wheel recessed one side and relieved both sides

Shape 2



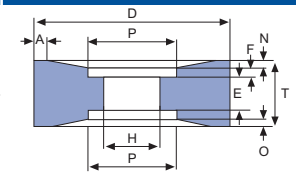
Grinding cylinder

Shape 12



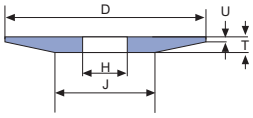
Dish wheel

Shape 26



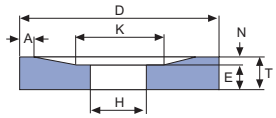
Grinding wheel recessed and relieved both sides

Shape 3



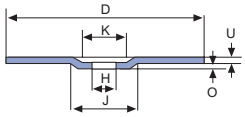
Grinding wheel tapered one side

Shape 20



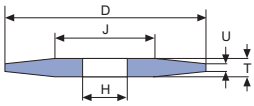
Grinding wheel relieved one side

Shape 27



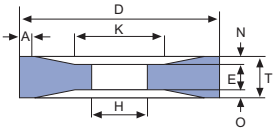
Depressed centre wheel

Shape 4



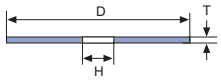
Grinding wheel tapered both sides

Shape 21



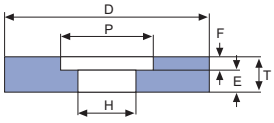
Grinding wheel relieved both sides

Shape 41



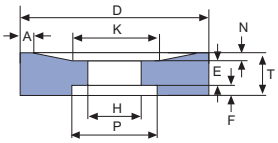
Straight cutting wheel

Shape 5



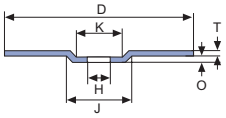
Straight grinding wheel recessed one side

Shape 22



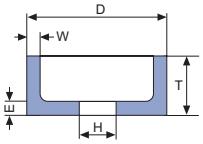
Grinding wheel recessed one side and relieved other side

Shape 42



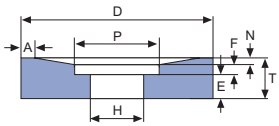
Cutting wheel depressed centre

Shape 6



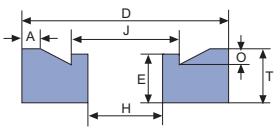
Straight cup wheel

Shape 23



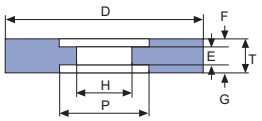
Grinding wheel recessed and relieved one side

Shape 115



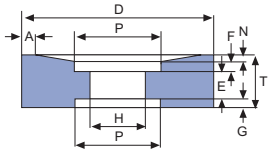
Grinding wheel relieved one side raised boss

Shape 7



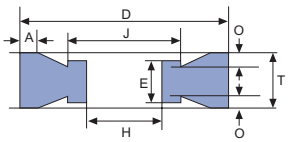
Straight grinding wheel recessed both sides

Shape 24



Grinding wheel recessed both sides and relieved one side

Shape 116



Grinding wheel relieved both sides raised boss

Dimension Symbols

Principal dimensions:

D Diameter (o.d.)
T Thickness
H Hole size (see also general dimensions, letter H)

General dimensions:

A Width of flat spot.
Minor width dimension on trapezoidal shaped grinding segments.
Minor height dimensions of carving tool stone.
B Width of grinding segments, abrasive sticks and stones.
E Base thickness of cup and dish wheels.
Thickness at hole for recessed wheels, shapes 5, 6, 7, 11, 12, 20 to 26.
F, G Depth of recess.
H Height of grinding segments, abrasive sticks and stones.
Thread diameter for shapes 16 to 19.
(see also principal dimensions)
J Diameter of outside flat of cup and dish wheels, shapes 11 and 12.
Flange contact areas for shapes 3 and 4.
Outside diameter of offset, shape 27.
K Diameter of inside flat for cup and dish wheels, shapes 11 and 12.
Minor diameter of bevel for cup, shapes 20, 21, 22 and 25.
Inside diameter of offset, shape 27.
L Length of grinding segment, abrasive sticks and stones.
Free length of mandrel of mounted wheels.
Length of thread for shapes 16 to 19.
N, O Depth of bevel, shapes 21, 25 and 26.
O Height of offset, shape 27.
P Diameter of recess for straight grinding wheels, shapes 5, 7, 22 to 26.
R Radius.
S Diameter of mandrel of mounted wheels.
U Width of edge.
V Angle for wheel face N.
W Wall thickness.
X Width of face for wheel face N.

U = 3mm; if other widths required, state on the order.

V and X must be stated on the order.

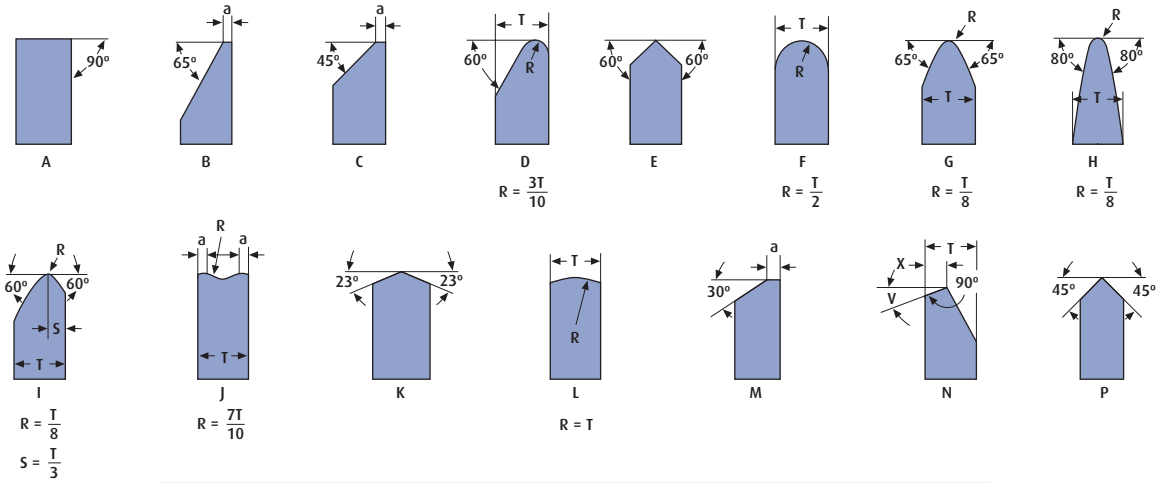
For orders of wheels shapes 5 and 7, with wheel faces B, C, D, M or N, a drawing is required.

Examples of how to designate:
Grinding Wheels with inserted nuts shape 16, 17, 18, 18R, 19.

All dimensions in millimetres.

TECHNICAL INFORMATION

WHEEL FACES FOR SHAPES 1, 5 AND 7



ISO METRIC STANDARDS FOR GRINDING WHEELS

Diameter (o.d)	Thickness	Hole	
mm	mm	Inches	mm
6	1	1/16	1,59*
10	1,6		1,60
13	2,5	3/32	2,38*
16	3,2		2,50
20	4		3,00
25	5	1/8	3,18*
32	6	5/32	3,97*
40	8		4,00
50	10	3/16	4,76*
65	13		6,00
70	16	1/4	6,35*
80	20	3/8	9,53*
90	25		10,00
100	32	1/2	12,70*
125	40		13,00
150	50	5/8	15,88*
180	65		16,00
200	80	3/4	19,05*
230	90		20,00
250	100	7/8	22,23*

Diameter (o.d)	Thickness	Hole	
mm	mm	Inches	mm
300	125		25,00
350	160	1	25,40*
400	200	1 1/8	28,60*
450	250	1 1/4	31,75*
500	300		32,00
600	400	1 3/8	34,93*
650	500	1 1/2	38,10*
700			40,00
750		2	50,80
800		2 1/2	63,50*
900		3	76,20
1060		5	127,00
1250		6	152,40
1500		7	177.80*
		8	203,20
		9	228,60*
		10	254,00*
		12	304,80
		15	381,00*
		20	508,00

NOTE: Hole sizes marked thus* are considered as transitional standards which will ultimately become non-standard at some future date.

The specifications in this catalogue are recommendations only. For further information or special application specifications, please contact Grinding Techniques Technical Department (011) 271 6400 or email: info@grindtech.com

TECHNICAL INFORMATION

SAFETY IN GRINDING

Responsibilities

Grinding wheel manufacturer:

- Guarantee of safety factor X for the grinding wheel against breakage
- Test run in the factory at increased peripheral speed
- Destruction testing in the factory
- Designation and marking of the grinding wheel in accordance with regulations, including permissible speed The responsibility extends to perfect packing for despatch, not however to damage caused in transport or due to improper storage

Grinding machine manufacturer:

- Easy adjustment of the work rest and wheelguard to suit reducing wheel diameters
- Self-acting interlocking of the speed adjustment steps
- Limitation of stepless speed variators
- Suitable safety guard made of a ductile material which will withhold the pieces of the wheel in case of breakage

The user, operator:

Before mounting the grinding wheel:

- Check for external transport damage, ring test
- Check permissible speed
- Correct mounting
- Check out of balance, if necessary balancing the grinding wheel
- Readjustment of the work rest and wheelguard
- Allow the new wheel to run free at full speed for five minutes
- Chipping the grinding wheel is forbidden

For these reasons each GRINDING TECHNIQUES grinding wheel is marked with the maximum permissible speed:
Permissible r.p.m. =

Peripheral Speeds

In the international regulations, the maximum permissible peripheral speeds are defined as follows:

Normal peripheral speeds:

- Up to 33m/s for vitrified bonded grinding wheels
- Up to 48m/s for hard grade non-reinforced resinoid bonded grinding wheels, dependent on mounting conditions; soft, porous wheels should operate at slower speeds
- Up to 80m/s for cutting and angle grinding wheels used on standard portable machines
- Up to 100m/s for cutoff wheels mounted on floorstand machines

Increased peripheral speeds, which require a special technology:

- Higher than 33m/s for vitrified bonded grinding wheels
- Higher than 48m/s for resinoid bonded grinding wheels

The current practical values are:

- 45, 60 and 80m/s for vitrified bonded grinding wheels
- 60 and 80m/s for resinoid bonded grinding wheels

Wheels for operation at increased peripheral speeds are specially marked.
The mark follows the designation of the specification.

Example: 15A60 L5V86 - **60m/s**

Grinding wheels for operation at increased peripheral speeds are marked according to international standards with a diagonal stripe of at least 5mm width in one of the following colours:

Blue - 45m/s vitrified bond
Yellow - 60m/s
Red - 80m/s vitrified and resinoid bonds

Depressed centre grinding wheels, shape 27, as well as cutoff wheels shapes 41 (reinforced and non-reinforced) and 42, are excepted.
The grinding machines have to be marked accordingly by the user. In special cases, reduced peripheral speeds are fixed by the manufacturer for safety reasons. This concerns very soft and porous grinding wheels and especially thin-walled cup and cylinder wheels.

RECOMMENDED SPEED IN M/SEC FOR GRINDING WHEELS

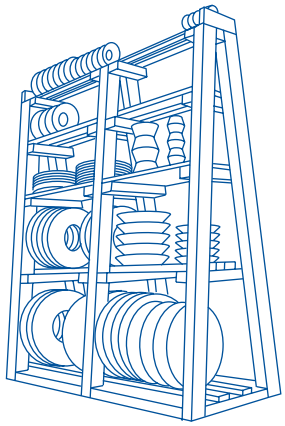
Application	m/sec
Tool sharpening	25-30
Saw gumming	18-25
Knife sharpening (large diameter wheel)	20-25
Surface grinding	20-25
Cylindrical grinding	30-45
Centreless grinding	30-45
Snagging	48-80
Cutting off	80-100

For speed conversions please refer to page 83.

STORAGE & MOUNTING

Check each delivery for any possible transport damage (ring test).
Grinding wheels should be stored in a manner that they cannot be damaged.
The store room must be dry, frost-free and protected against unsuitable heating or vibration.

Resinoid bonded grinding wheels should not be stored longer than 2-3 years, otherwise they will become brittle and therefore reduced in strength.
Vitrified bonded grinding wheels can be stored indefinitely.



Suggested practical wooden racks for storing grinding wheels.

MOUNTING GRINDING WHEELS

Before mounting, every grinding wheel must be checked for damage (ring test). The clamping surfaces of the wheel flanges must be clean. Grinding wheels must be an easy fit on the grinding spindle or clamping device and must be firmly secured to them. After mounting the grinding wheel has to be balanced.

THE RING TEST

The ring test should be carried out immediately before mounting a new or used grinding wheel. The wheel should be lightly tapped to the right and to the left of the vertical centreline. Light wheels should be held on the finger or on a mandrel, heavier wheels tilted on edge of the floor. The wheel must be dry for the ring test. A crack-free wheel will emit a clear ringing sound; a damaged wheel will sound cracked. Resinoid bonded wheels do not emit the same clear metallic ring as do vitrified wheels.

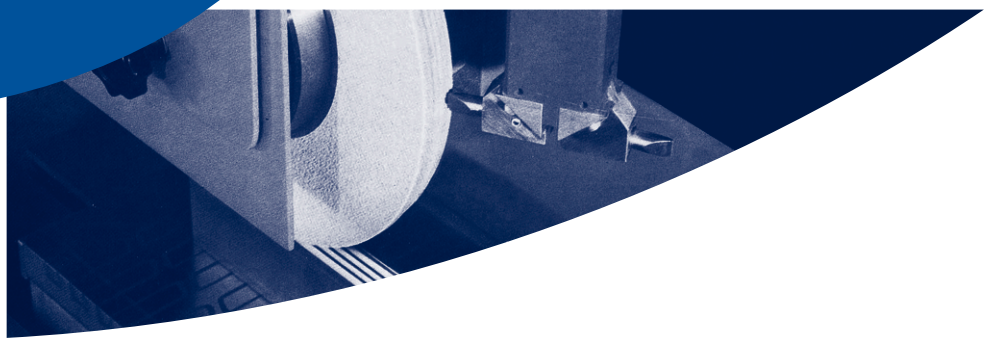
COATED ABRASIVES

Coated Abrasives are abrasive grains which are attached to various types of backings, and then converted to specific product types such as rolls, sheets, discs, flap discs, flapwheels, evenrun bands etc.
As for Bonded Abrasives, there are different **types of abrasive grain** with specific characteristics, and **grit sizes** follow the same pattern (grit 16: extremely coarse; grit 1200: extremely fine).
The grain is electro coated to the backing to ensure a uniform, upright, sharp grain position, and can be applied as a full coverage (closed coat) or a partial coverage (open coat).
Backings can be of paper, light, medium or heavy weights; cloth, in various weights to provide greater support or flexibility; polyesters or polycottons; or vulcanised fibre.
Adhesion of the grain to the backing is done in two stages; the maker coat adheres the grain to the backing, and the size coat - applied over the abrasive surface - locks the grains in place to prevent grain shedding.
Combinations of glues or resins are used to adhere the grain to the backing.
Before converting, the jumbo roll of abrasive is **flexed** to aid conformability. This process can be a single flex, double flex, or triple flex.
Finally, coated abrasives can have specific **treatments** added to them. These treatments include Zinc Stearate as an anti-clogging agent; latex to waterproof the product; P.S.A glues or velcro backings.

The Coated Abrasive range of products supplied by Grinding Techniques (Pty) Ltd. is of excellent quality, and provides optimum performance.

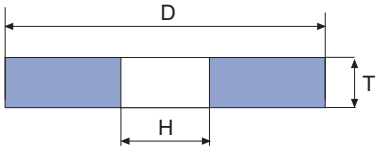
SUPERABRASIVES

"Superabrasives" consist mainly of specially shaped grinding wheels with diamond or CBN (cubic boron nitride) abrasive, and cutting wheels with diamond abrasive on their periphery.
Basically, diamond is used to grind tungsten carbide, or cut through bricks, concrete or natural stoneware, while CBN is used on hard to grind steels.
For further information, please consult the relevant pages in the catalogue.



SPECIFICATIONS

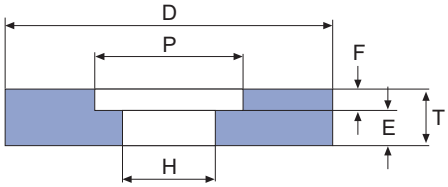
SHAPE 1



ORDERING DATA:
Diameter (D) x Thickness (T) x Height (H) – Shape 1
These grinding wheels can also be supplied in
shapes 20 and 21 (page 10)
or with wheel faces as per page 11

D	T				H		
150	13					31,75/32	
175	13					31,75/32	
200	13	20				31,75/32	
250	20	25	32			50,8	76,2
300	20	25	32	50	80	76,2	127
350	32	40	50			127	
400	32	50	80	100		127	
500	50	80	100	160		203,2	304,8
600	50	80	100	160		304,8	
750	50	80	100	160		304,8	

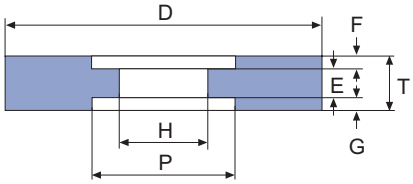
SHAPE 5 Recessed one side



ORDERING DATA:
Diameter (D) x Thickness (T) x Height (H) – O/S P x F – Shape 5
These grinding wheels can also be supplied
in shapes 22, 23 and 25 (page 10)
or with wheel faces as per page 11

D	T			H	P	F
300	50	80		76,2	150	1)
				127,0	190	
350	50	80		127,0	215	
400	50	80	100	127,0	215	
500	80	100	160	203,2	290	
				304,8	390	
600	80	100	160	304,8	390	
750	80	100	160	304,8	410	

SHAPE 7 Recessed both sides



ORDERING DATA:
Diameter (D) x Thickness (T) x Height (H) – B/S P x F/G – Shape 7
These grinding wheels can also be supplied
in shapes 24 and 26 (page 10)
or with wheel faces as per page 11

D	T			H	P	
300	50	80		76,2	150	1)
				127,0	190	
350	50	80		127,0	215	
400	50	80	100	127,0	215	
500	80	100	160	203,2	290	
				304,8	390	
600	80	100	160	304,8	390	
750	80	100	160	304,8	410	

All dimensions in millimetres.

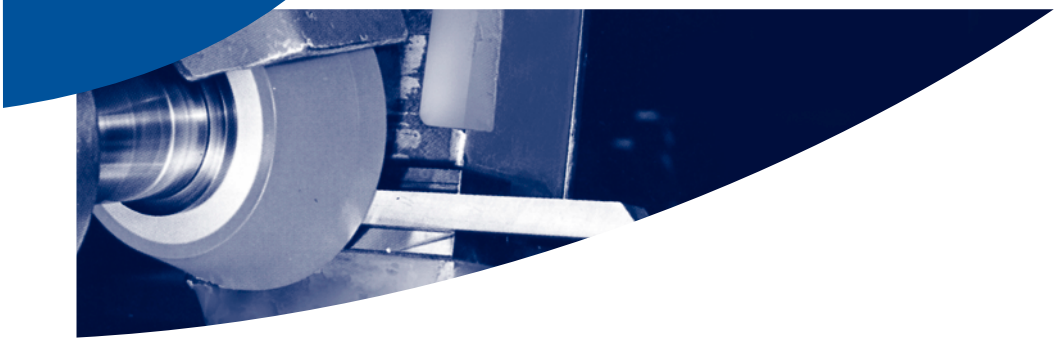
The specifications in this catalogue are recommendations only. For further information or special application specifications, please contact Grinding Techniques Technical Department (011) 271 6400 or email: info@grindtech.com

APPLICATION TABLE

FIELD OF APPLICATION			SPECIFICATION	
With straight grinding wheels (shapes 1, 5 ,7)			**up to Ø 400**	**Ø 450 and above**
Universal Use	**Steel**	Soft	1A46J7V86	1A36/2J7V86
		Hardened	11A46J8V86	11A46I8V86
Specific Use	**Steel**	Soft	1A46J8V86 31A46J8V86	1A36J7V86 1A46J8V86
		Hardened to 63 Rc	11A46J8V86 11A60G12V86P 31A60G12V86P	31A46F12V86P
		Hardened over 63 Rc	31A60F12V86P 31A80F12V86P	11A46F12V86P 31A60F12V86P
		Hardchrome plated	11A60F12V86P	31A60F12V86P
		Stainless, acid and heat resistant - Soft	11A60G10V86P 11A60F10V86P	11A46G10V86P
		- Hardened	11A46I8V86 11A60H8V86	11A54H8V86 11A60G8V86
		Nitriding unprocessed	11A46J8V 11A60J7V	
		Nitride hardened	8C60I9V11 8C60I9V11	8C60I9V11 8C60I9V11
		Cast	15A46J8V86	15A46I8V86
	Cast Iron	Grey	8C46H10V11P	
		Spheroid	31A46G12V86P 31A60G12V86P	8C46H10V11P 31A46G12V86P
	Tungsten carbide		8C60G10V11P 8C80G10V11P	
	Aluminium and non-ferrous metals, plastics		8C60H10V11P	8C46H10V11P
	Stellite		11A46H10V86	
Profile surface grinding with straight grinding wheels (shapes 1, 5, 7)			**Reciprocating Grinding Process**	**Creep Feed Grinding Process**
High Alloyed CR-Steel		Hardened (cold work steel for matrixes and stamp manufacture)	31A80 J9V86 31A80 I7V86 31A120 J9V86P8	8C220 H9V11 8C320 G9V11
		Including FERRO-TIC – hardened	31A180 I8V86	
		Non-alloyed & Alloyed Carbirizing and tool steels – hardened	11A80 I8V86 11A120 J9V86P	
		High Speed Tool Steels – hardened	11A80 I8V86 11A120I7V86 8C120J8V11	8C120G8V11P8 8C180G8V11
		Alloyed Tool Steels – hardened (on nickel-chromium-tungsten basis)		11A60 I10V86P5 11A80 H10V86P5
		Low Alloyed Tool Steels, hardened or partially hardened	11A80 I8V86 11A120 J9V86P	11A60 I10V86P5 11A80 I10V86P5
Thread-Rolling Dies (12-13% CR-Steel – hardened)				
Pitch	Min. Radius			
0,25 - 0,8	0,03			8C400 G9V11
1 - 1,25	0,10			8C320 G9V11
1,5 - 1,75	0,16		9A 220 J6V86	8C220 G9V11
2 and above	0,22		9A 150 J6V86	8C180 G9V11

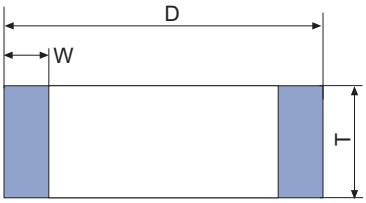
ANDOR

SURFACE GRINDING
CUP WHEELS AND CYLINDERS



SPECIFICATIONS

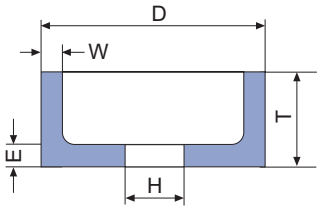
SHAPE 2 Grinding Cylinder



ORDERING DATA:
Diameter (D) x Thickness (T) x Rim width (W) – Specification – Shape 2

D	T		W	
150	50	80	13	16
180	80		13	16
200	50	100	20	25
250	100		25	
300	100		25	32
350	100	125	40	45
400	125		40	50
450	125		40	50
500	125		50	

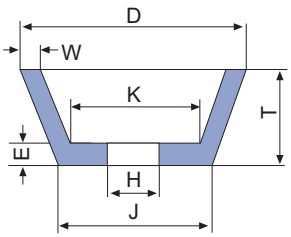
SHAPE 6 Straight Cup Wheel



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H) – Specification – Rim width (W) x Back thickness (E) – Shape 6

D	T	H				W		E	
100	50	31,75/32				10		10	
125	40	31,75/32	50,8			10		10	
	50	31,75/32		50,8		13		13	
	60	31,75/32		50,8		13	16	16	
	65	31,75/32		50,8		13	16	16	
	80	31,75/32		50,8		20		20	
150	40	31,75/32	50,8			10	13	10	13
	50	31,75/32	50,8	65,0		13	20	13	20
	65	31,75/32	50,8	65,0	76,2	20		20	
	80	31,75/32	50,8	65,0	76,2	20	25	20	25
165	65	31,75/32	50,8			20		20	
	80	31,75/32	50,8			20		20	
180	65	31,75/32	50,8	65,0	76,2	20		20	
	80	31,75/32	50,8	65,0	76,2	20		20	
	100	31,75/32	50,8	65,0	76,2	20	25	20	25
200	80	31,75/32	50,8	65,0	76,2	20		20	
	100	31,75/32	50,8	65,0	76,2	20	25	20	25
250	80	50,8	76,2			20	25	20	25
	100	50,8	76,2			25		25	
300	100	76,2				25		25	

SHAPE 11 Flaring Cup Grinding Wheel



ORDERING DATA:
Standard sizes:
Diameter (D)/Diameter (J) x Thickness (T) x Hole size (H) – Specification – Shape 11

Non-standard sizes:
All above information plus dimensions W, E and K

D	T	H		W	E	J	K
65	40	20,00		6	10	45	32
90	40	31,75/32		8	10	70	56
100	40	31,75/32		8	13	80	66
115	50	31,75/32		8	13	95	78
125	40	31,75/32		8	13	95	76
	45	31,75/32		8	13	95	76
	50	31,75/32		8	13	95	78
150	50	31,75/32	50,8	10	13	92	67
	50	31,75/32	50,8	10	13	114	96
	60	31,75/32	50,8	10	13	114	96
	65	31,75/32	50,8	10	15	120	100

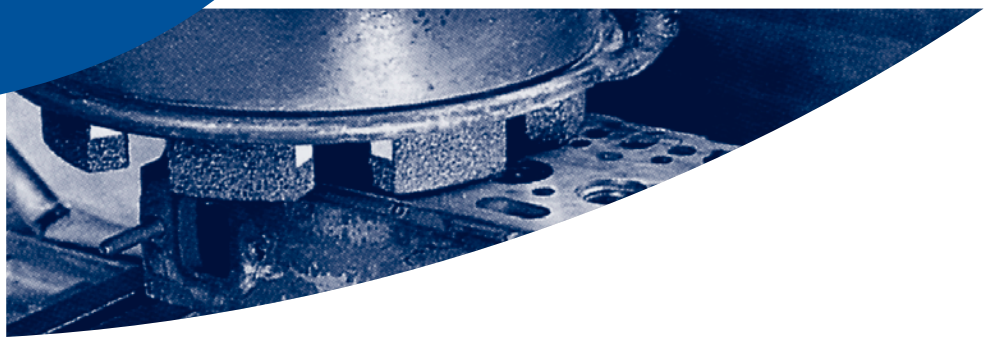
All dimensions in millimetres.

APPLICATION TABLE

FIELD OF APPLICATION			SPECIFICATION
Universal Use	**Steel**	Soft	11A36 H8V86
		Hardened	11A36 G9V86
Specific Use	**Steel**	Soft	11A36 H8V86 9A36 G9V86
		Hardened to 63Rc	9A36 G9V86 11A46 G12V86P
		Hardened to 63Rc	11A46 F12V86P 9A46 J8B2
		Hard chrome plated	9A46 F12V86
		Stainless, acid and heat resistant - Soft	9A36 H8V86
		- Hardened	11A46 F12V86P
		Nitride unprocessed	9A36 G8V86
		Nitride hardened	8C46 H8V11
		Cast	11A46 F12V86P
	Cast Iron	Grey	8C46 H8V11
		Spheroid	31A46 G12V86P
	Tungsten Carbide		8C46 G10V11P
	Aluminium and non-ferrous metals, plastics		8C46 H10V11P
	Ceramics		6C36 I8B2
	Stellite		11A46 H9V86

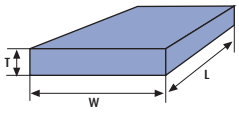
ANDOR

SURFACE GRINDING SEGMENTS



SPECIFICATIONS

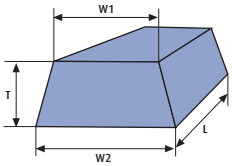
TYPE F1



Popular sizes:
50 x 25 x 150
80 x 25 x 160
90 x 35 x 200
110 x 40 x 160
120 x 30 x 160
120 x 40 x 180

ORDERING DATA:
Width (W) x Thickness (T) x Length (L) – Specification – Type F1

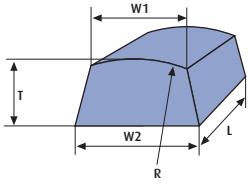
TYPE F2



Popular sizes:
53/45 x 16 x 80
53/45 x 16 x 100
59/48 x 21 x 120
63,5/44 x 20 x 100
65/58 x 20 x 60
65/58 x 20 x 80
70/64 x 25 x 150
80/70 x 40 x 150

ORDERING DATA:
Width (W2/W1) x Thickness (T) x Length (L) – Specification – Type F2

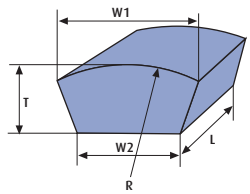
TYPE F3



Popular sizes:
63,5/55 x 27 x 127
65/62 x 20 x 80 F3a
65,4/57 x 25,4 x 100
80/66 x 31 x 129
90/76 x 30 x 127
101,5/83 x 38 x 130
101,5/83 x 38 x 203
118/90 x 44 x 204

ORDERING DATA:
Widths (W2/W1) x Thickness (T) x Length (L) – Specification – Type F3

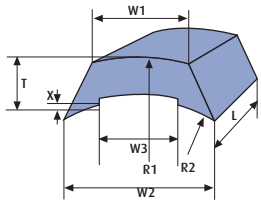
TYPE F4



Popular sizes:
106/85 x 44,5 x 255
113/80 x 42 x 190
116/77 x 44,5 x 150
157/114 x 57 x 305

ORDERING DATA:
Widths (W1/W2) x Thickness (T) x Length (L) plus Radius (R) – Specification – Type F4

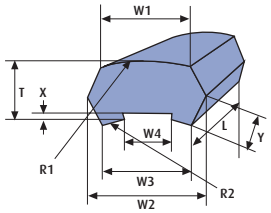
TYPE F5



ORDERING DATA:
Widths (W2/W1) x Thickness (T) x Length (L) – Specification – Type F5

Additional information required:
Radii (R1) and (R2)
Recess depth (X)
Dimension (W3)

TYPE F6

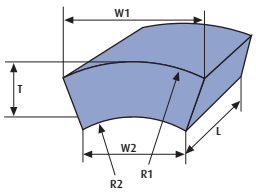


Popular sizes:
90/75/90 x 35 x 175 F6a
170/146/150 x 50 x 200

ORDERING DATA:
Widths (W2/W1/W3) x Thickness (T) x Length (L) – Specification – Type F6

Additional information required:
Radii (R1) and (R2)
Recess depth (X)
Dimensions (W4), (Y),and (X)

TYPE F7

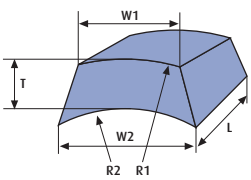


Popular sizes:
72/44 x 25 x 100
115/80 x 30 x 180
114/71 x 40 x 140
143/103,5 x 38 x 200

ORDERING DATA:
Widths (W1/W2) x Thickness (T) x Length (L) – Specification – Type F7

Additional information required:
Radii (R1) and (R2)

TYPE F8



Popular sizes:
50/45 x 16 x 90
51/46 x 20 x 90
53,5/47 x 16 x 110
80/72 x 20 x 90

ORDERING DATA:
Widths (W2/W1) x Thickness (T) x Length (L) – Specification – Type F8

Additional information required:
Radii (R1) and (R2)

All dimensions in millimetres.

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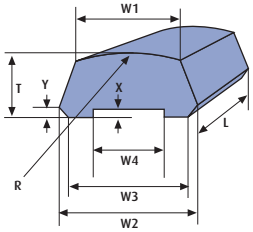
SPECIFICATIONS

TYPE F9

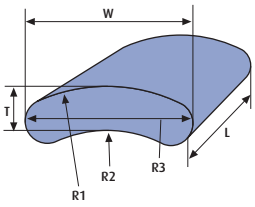


Popular sizes: 117/89/95 x 44 x 155 F9a
118/90/95 x 44 x 204 F9a

ORDERING DATA:
Widths (W2/W1) x Thickness (T) x Length (L) – Specification – Type F9

Additional information required:
Radius (R)
Recess depth (X)
Dimension (W3), (W4) and (Y)

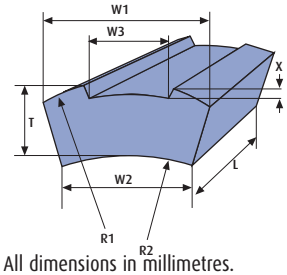
TYPE F11



ORDERING DATA:
Width (W) x Thickness (T) x Length (L) – Specification – Type F11

Additional information required:
Radii (R1), (R2) and (R3)

TYPE F10

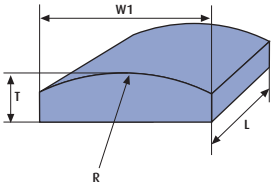


All dimensions in millimetres.

ORDERING DATA:
Widths (W1/W2) x Thickness (T) x Length (L) – Specification – Type F10

Additional information required:
Radii (R1) and (R2)
Recess depth (X)
Dimension (W3)

TYPE F12



Popular sizes: 84 x 33 x 130
285 x 57 x 150

ORDERING DATA:
Width (W) x Thickness (T) x Length (L) – Specification – Type F12

Additional information required:
Radius (R)

APPLICATION TABLE

FIELD OF APPLICATION		SPECIFICATION
Aluminium & non-ferrous metals		6C24 H8V1
Cast Iron	Large Contact Area	11A30 F12V86P
	Small Contact Area	11A30 G12V86P
		6C36 I5V1
		6C46 K8B3-Z
Cemented Carbide		8C60 I8V1
Steel - Soft	Large Contact Area	15A24 J8B3-Z
		11A30 G12V86P
	Small Contact Area	15A30 K8B3-Z
		9A46 J8B3-Z
Steel - Hardened to 63RC	Large Contact Area	11A30 E12V86P
		11A30 F12V86P
	Small Contact Area	11A30 G12V86P
Steel - Stainless	Austenitic	11A30 I8V86
	Ferritic	11A30 H8V86
Stellite		11A36 H10V86
Titanium		11A30 G12V86P

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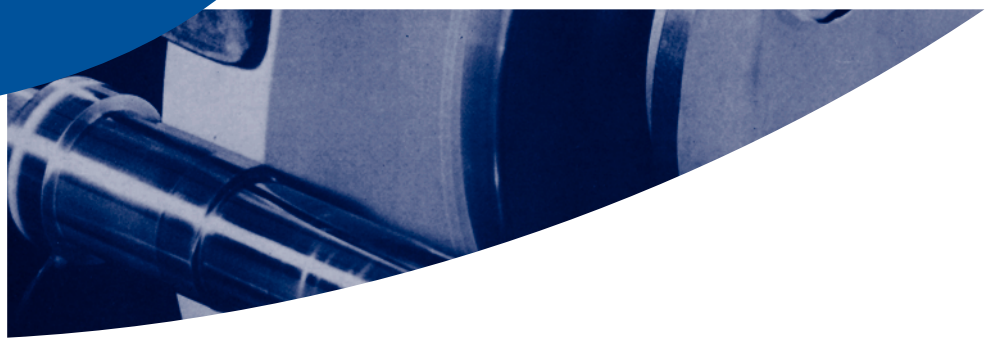
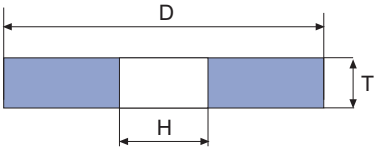
EXTERNAL CYLINDRICAL GRINDING



SPECIFICATIONS

SHAPE 1

Straight Grinding Wheels



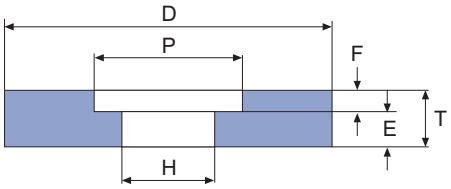
ORDERING DATA:
Diameter (D) x Thickness (T) x Height (H) – Shape 1
These grinding wheels can also be supplied in
shapes 20 and 21 (Page 10)
or with wheel faces as per Page 11

***For peripheral speeds up to 45m/s only**

D	T							H	
250	13	16	20	25				76,2	127
300	13	16	20	25	32	40	50	127	
350	16	20	25	32	40	50		127	
400	20	25	32	40	50	63	80	127	
450	20	25	32	40	50	63	80	127	203,2
500	25	32	40	50	63	80	100	203,2	304,8*
600	32	40	50	63	80	100		203,2	304,8*
750	32	40	50	63	80	100	125	304,8	
900	32	40	50	63	80	100	125	304,8	
1000	50	63	80	100	125			304,8	

SHAPE 5

Straight Grinding Wheel - recessed one side



ORDERING DATA:
Diameter (D) x Thickness (T) x Height (H) – P x F –
– Shape 5
These grinding wheels can also be supplied in
shapes 22, 23 and 25 (Page 10)
or with wheel faces as per Page 11

***For peripheral speeds up to 45m/s only**

D	T			H	P	F
300	40	50		127	190	13
350	40	50		127	215	13
400	40	50	63	127	215	13
	80					25
	100					40
450	40	50	63	127	215	13
	80					25
	100					40
	40	50	63	203,2	290	13
	80					25
	100					40
500	40	50	63	203,2	290	13
	80					25
	100					40
	40	50	63	304,8*	390	13
	80					25
	100					40
600	63			203,2	290	13
	80					25
	100					50
	63			304,8*	390	13
	80					25
	100	125				50
750	63			304,8	410	13
	80					25
	100	125	160			50
900	63			304,8	440	13
	80					25
	100	125	160			50

All dimensions in millimetres.

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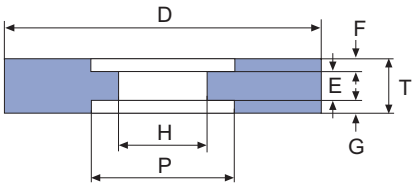
SPECIFICATIONS

SHAPE 7

Straight Grinding Wheels - recessed both sides



ORDERING DATA:
according to SN-standard – Shape 7

without SN-standard:
Diameter (D) x Thickness (T) x Height (H) - P x F/G
– Shape 7

These grinding wheels can also be supplied in
shapes 24 and 26 (Page 10)
or with wheel faces as per Page 11

***For peripheral speeds up to 45m/s only**

D				T		H	P
300	40	50		127	190	6	6
350	40	50		127	215	6	6
400	40	50	63	127	215	6	6
	80					13	13
	100					13	25
450	40	50	63	127	215	6	6
	80					13	13
	100					13	25
	40	50	63	203,2	290	6	6
	80					13	13
	100					13	25
500	40	50		203,2	290	6	6
	63	80				13	13
	100					13	25
	40	50		304,8*	390	6	6
	63	80				13	13
	100					13	25
600	50			203,2	290	6	6
	63	80				13	13
	100					13	40
	50			304,8*	390	6	6
	63	80				13	13
	100	125				13	13
750	80			304,8	410	13	13
	100	125	160			13	40
900	80			304,8	440	13	13
	100	125	160			13	40

All dimensions in millimetres.

EXTERNAL CYLINDRICAL GRINDING

APPLICATION TABLE

FIELD OF APPLICATION			SPECIFICATIONS	
ROUGHING			**up to ø 450**	**ø500 and above**
Universal Use	**Steel**	Soft	15A46 L6V86	15A46 K6V86
		Hardened	15A46 K7V86	15A46 J7V86
Specific Use	**Steel**	Soft	15A54 K6V86 15A60 K6V86 9A60 K6V86	15A36 L6V86 9A46 K6V86 15A46 L6V86
		Hardened to 63Rc	9A46 J7V86 9A60 H8V86 15A60 J7V86	9A46 J8V86 9A60 J7V86
		Hardened over 63Rc	31A60 H8V86 31A80 H8V86	31A60 H8V86
		Stainless, acid, and heat resistant - Soft	15A46 K6V86 15A60 J7V86 8C80 K8V1	15A46 K6V86
		- Hardened	15A60 J6V86 8C60 J8V1	11A46 K6V86
		Hard-chrome-plated	15A60 K6V86	15A60 K6V86
		Nitriding unprocessed	11A46 J8V86 8C60 J8V1	8C54 J8V1 11A46 J8V86
		Nitride hardened	—	—
		Cast	15A46 K6V86 15A46 L6V86	15A46 L6V86
	Cast Iron	Grey	11A46 K6V86 8C46 I7V1 8C60 I7V1	11A46 K6V86 8C46 I7V1
		Spheroid	8C46 I7V	8C46 I7V1
	Tungsten Carbide		8C46 J6V1 8C60 J6V1	8C46 J6V1
	Aluminium and non-ferrous metals		8C60 H10V11P	8C46 H10V11P
	Rubber		9A46 E12V86P 31A46 E12V86P	8C36 F12V86P 31A46 E12V86P

FIELD OF APPLICATION			SPECIFICATIONS
Crankshaft Grinding		Roughing	A36 M5V86
		Finishing	A54 L6V86 A54 M6V86
	Re-grinding – general purpose		A54 LM6V86
	Re-built (welded)		A46 L5V86
Camshaft Grinding			
	Cast Iron Alloy	Roughing	15A36 L7V86
		Finishing	15A60 L5V86
	Steel Soft	Roughing	15A36 M5V86
	Hardened	Roughing	15A46 L6V86
		Finishing	15A60 L5V86
		Re-grinding	1A60 M5V86

FIELD OF APPLICATION			SPECIFICATIONS
Bearing Diameters			
	Cast Iron Alloy	Roughing	15A36 L7V86
		Finishing	15A60 K6V86
	Steel	Soft	15A36 M5V86
		Hardened	A54 L5V86
Roll Grinding			
	Hot Mill:	Roughing rolls	6CA36 N8B3-Z
		Forged steel work rolls	9AC302 L8B3-Z
		High speed steel rolls	5A54 K7V86
	Cold mill:	Work rolls	A46 N8B3-Z
		Forged steel rolls	9AC302 L8B3-Z
		Finish rolls	6AC120 M8B3-Z
		Taper, drive, idler rolls	5A80 K8V86
		Polishing coated rolls (Tyrolit)	C400K8 B122-50

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EXTERNAL CYLINDRICAL GRINDING

APPLICATION TABLE

FIELD OF APPLICATION			SPECIFICATIONS		
FINISHING AND FINE GRINDING			**Finishing up to ø450**	**ø500 and above**	**Fine & Superfine Grinding**
Universal Use	**Steel**	Soft	15A60 K6V86	15A60 J6V86	
		Hardened	15A60 J8V86 15A80 J8V86	15A60 I8V86	
Specific Use	**Steel**	Soft	15A60 K6V86 15A60 L6V86 15A80 K6V86 15A80 L6V86	15A60 J6V86 15A60 K6V86	
		Hardened to 63Rc	15A60 J8V86 9A60 J7V86 15A80 J8V86	15A60 I8V86 9A60 J8V86	8C320 E3E
		Hardened over 63Rc	31A80 G8V86 15A80 H8V86 8C120 K8V1	31A60 H8V86	8C320 E3E
		Stainless, acid, and heat resistant - Soft	11A60 K8V86	11A60 J6V86	
		- Hardened	11A80 I8V1 8C80 J8V1	11A60 I8V86	8C320 E3E
		Hard-chrome-plated	15A60 L6V86 15A80 L6V86	15A60 K6V86 15A80 K6V86	8C320 E3E
		Nitriding unprocessed	11A60 K6V86 8C80 J8V1	11A60 K6V86 8C60 H8V1	
		Nitride hardened	8C60 I7V11 8C80 J8V1	8C54 I8V1 8C60 H8V1	8C320 E3E
		Cast	15A60 K5V86	15A54 K6V86 15A60 J6V86	
	Stellite		11A60 K8V86	11A54 J7V86	
	Cast Iron	Grey	8C60 I7V11 31A60 K6V86	8C54 I7V11 31A60 J8V86	
		Spheroid	8C60 I7V11 31A60 I6V86	8C54 I7V11 31A60 I8V86	
	Tungsten Carbide		8C60 K6V1 8C80 J6V1 8C120 I8V1	8C60 I8V1	8C320 E3E
	Aluminium and non-ferrous metals, plastics		8C70 H8V11	8C60 H8V11	
	Rubber		31A80 F12V86P 8C60 H10V11P	8C60 H10V11P	
PLUNGE-CUT GRINDING **Straight and angular, 35 and 45 m/s**			**Ø400 and above**		
	Steel	Soft	15A60 K6V86 15A80 K6V86		
		Small profiles	31A180 J6V86		
		Hardened	15A60 J6V86 15A80 J6V86		
		Small profiles	31A180 I6V86		
		Over 63Rc	8C120 L5V11		

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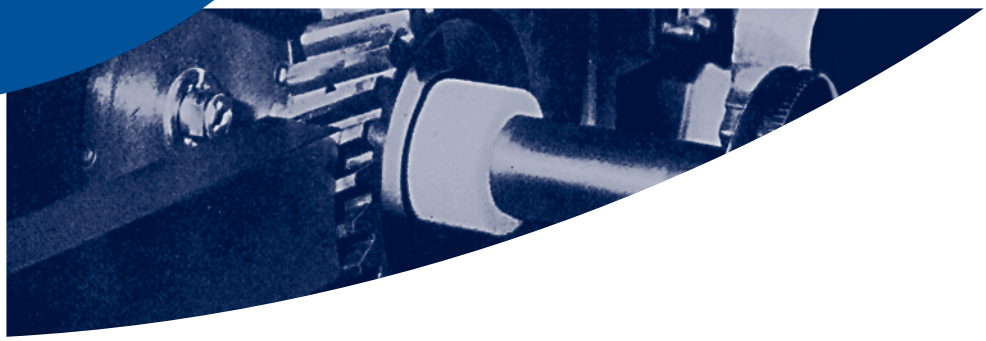
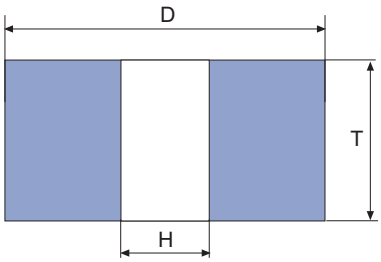
INTERNAL CYLINDRICAL GRINDING



SPECIFICATIONS

SHAPE 1

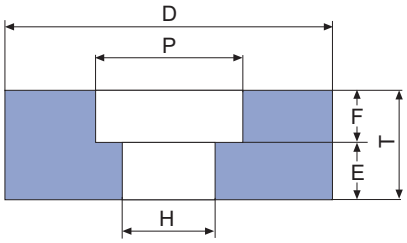


ORDERING DATA:
Diameter (D) x Thickness (T) x Height (H) – Shape 1

D	T	H
12	12	4
16	16	6,35
20	20	6/6,35
25	20	6
35	30	12
40	20	12,7
45	13	20
50	13	20
60	13	20

D	T	H
65	13	20
70	13	20
75	13	20
76	6	10
80	13	20
85	13	20
90	13	20
95	13	20
100	13	20

SHAPE 5 Recessed one side



ORDERING DATA:
Diameter (D) x Thickness (T) x Height (H) – P x F – Shape 5

D		T	H	P
16	20	6	10	10
18	25	8	12	16
20	20	6	12	12
23	25	8	13	13
25	20	6	14	10
25	25	6,35	13	16
28	25	8	14	17
32	32	10/12	16	20
40	40	9,53/10	20	20
40	40	12	24	20
45	40	9,53	20	25
45	40/50	15,88	23	34
50	40	10/12,7	20	20
50	50	12,7	20	20
55	50	22,23	32	32
60	50	20	32	32
65	65	20/25,4	32	40
70	50	22,23	40	27
80	50	22,23	40	25
80	50	25,4	45	40
90	50	22,23	40	32
100	50	31,75	24	37

Other sizes on application.

All dimensions in millimetres.

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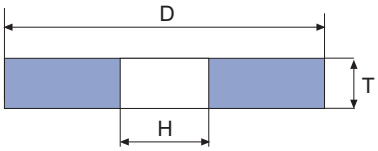
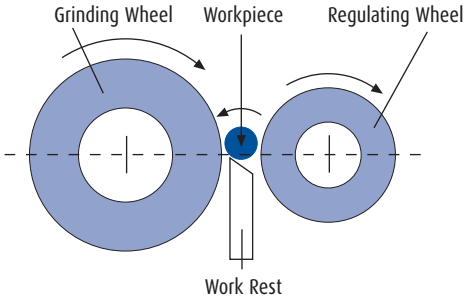
APPLICATION TABLE

FIELD OF APPLICATION			SPECIFICATION	
Universal Use	**Steel**	Soft	31A60 K6V86 31A80 K6V86	31A54 K6V86
		Hardened	31A60 J6V86 31A80 J6V86	31A60 J6V86
Specific Use	**Steel**	Soft	31A60 K6V86 31A80 K6V86 31A80 L6V86	31A46 J8V86 31A54 J8V86
		Hardened to 63 Rc	31A60 I8V86 31A60 J8V86 31A80 H8V86	31A46 J8V86 31A60 I8V86
		Hardened over 63 Rc	31A60 H12V86P3 8C60 J8V1	31A60 H12V86P3 8C60 H8V86P 31A80 H8V86
		Hard chrome plated	1A60 K6V86	1A60 K6V86
		Stainless, acid and heat resistant - Soft	1A60 J6V86	1A60 J6V86
		- Hardened	31A80 I8V86 8C60 J8V1	31A60 I6V86 8C60 J8V1
		Nitriding unprocessed	1A60 K6V86	1A60 K6V86
		Nitride hardened	8C60 J8V1 8C80 I8V1	8C60 J8V1
		Cast	15A60 K6V86	15A46 K6V86
	Cast Iron	Grey Spheroid	31A60 J6V86 8C60 K8V1	31A60 J6V86 8C60 K8V1
	Tungsten Carbide		8C60 I8V1	8C60 I8V1
	Aluminium and non-ferrous metals, plastics		8C60 I8V11	8C60 I8V1

SPECIFICATIONS

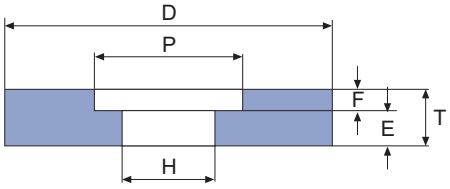
SHAPE 1





ORDERING DATA:
Diameter (D) x Thickness (T) x Height (H) – Shape 1

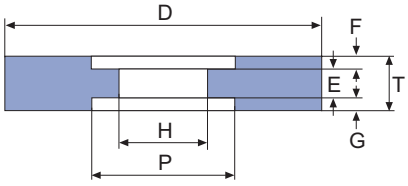
SHAPE 5 Recessed one side



D	T								H	P	F	G
300	25	40	63	100	125				127	190		
400	25	40	63	100	125	160	200	250	203,2	270		
500	40	63	100	125	160	200	250		304,8	390	1)	1)
600	100	125	160	200	250	315	400		304,8	390		
750	100	125	160	200	250	315	400		304,8	410		

ORDERING DATA:
Diameter (D) x Thickness (T) x Height (H) – P x F
– Shape 5

SHAPE 7 Recessed both sides



D	T								H	P	F	G
200	25	40	63	100	125				76,2	114		
250	25	40	63	100	125	160	200	250	127	160		
300	40	63	100	125	160	200	250		127	190	1)	1)
350	100	125	160	200	250	315	400		127	190		
									203,2	270		

ORDERING DATA:
Diameter (D) x Thickness (T) x Height (H) – P x F/6
– Shape 7

1) The recess depths F and G should be selected as per width T, whereby dimension E should not be appreciably less than ½ T

All dimensions in millimetres.

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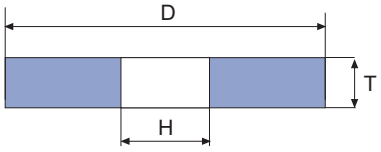
APPLICATION TABLE

FIELD OF APPLICATION			SPECIFICATIONS	
Grinding wheels			**up to ø450**	**ø500 and above**
Universal Use	**Steel**	Soft	15A60 L5V86 15A60 M5V86	15A54 L6V86 15A60 L5V86
		Hardened	15A60 K5V86	15A54 K6V86
Specific Use	**Steel**	Soft	15A60 L5V86 11A60 K5V86 8C60 L5V11 15A80 L5V86	15A46 M5V86 8C54 L8V11 1A54 L8V86
		Hardened to 63Rc	15A60 J7V86 15A60 K5V86	15A54 K6V86 15A60 L5V86
		Hardened over 63Rc	15A60 J7V86 15A80 I8V86	15A60 I8V86 15A60 J7V86
		Stainless, acid and heat resistant - Soft	8C60 K5V1 8C80 K5V1	8C46 L5V11 8C60 K5V1
		- Hardened	15A60 L5V86 11C60 K5V1	15A54 K5V86 8C60 K5V1
		Nitriding unprocessed	15A60 L5V86	15A60 L5V86
		Nitride hardened (max. stock removal 0,04)	8C60 J5V1 8C80 J5V1	8C60 J5V1
		Cast	15A60 L5V86 11A80 L5V86	15A54 L6V86
	Cast Iron	Grey	8C60 M5V11 15A60 K5V86	8C46 M5V11 8C60 L5V1
		Spheroid	15A60 L5V86 15A80 L5V86	15A54 L6V86
	Tungsten Carbide		8C60 J6V1 8C80 J6V1 8C120 J6V1	
	Aluminium and non-ferrous metals[1], plastics		8C60 K8V1 8C60 J12V1P 8C80 J12V1P	8C60 K8V1 8C60 J12V1P 8C80 J12V1P
	Rubber		8C60 F12V1P	8C60 F12V1P
Regulating Wheels		Workpiece diameters 10mm and above	A80 S3VR A80 RR	

1) for aluminium, emulsion with minimum 10% grease content.

SPECIFICATIONS

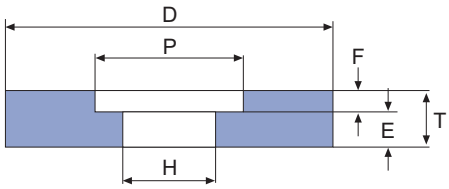
SHAPE 1



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Shape 1
These grinding wheels can also be supplied with faces as per page 11 from width T = 4

D	T				H	
50	4	6	10		13	(10)
80	4	6	8	10	13	(10)
100	6	8	10	13	20	
125	6	10	13	16	20	
150	6	10	13	16	20	31,75/32	(20)
175	6	10	13	16	20	31,75/32	
200	6	10	13	16	20	31,75/32	

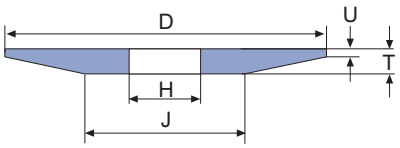
SHAPE 5 Recessed one side



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H) – P x F
– Shape 5

D	T	H		P	F
150	32	31,75/32	(20)	80	20
175	32	31,75/32	50,8	90	20
200	40	31,75/32	50,8	110	25
250	40	50,8	76,2	150	25
300	40		76,2	150	25
	50				30

SHAPE 3 Tapered one side



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H) plus U, J
– Shape 3

D	T	H		U	J
80	5	13		1	40
100	6	20		1,5	50
125	8	31,75/32	(20)	2	63
150	8	31,75/32	(20)	2	75
175	10	31,75/32		3	85
200	13	31,75/32		3	100
250	14	31,75/32		3	125

All dimensions in millimetres.

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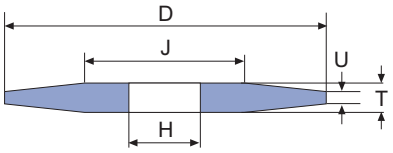
SPECIFICATIONS

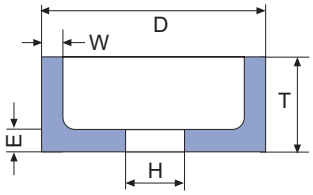
SHAPE 4 Tapered both sides



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H) plus U, J
– Specification – Shape 4

D	T	H	U
80	8	12,7	2	35
100	10	20	2	40
125	10	31,75/32	2	65
150	13	31,75/32	2	65
180	13	31,75/32	3	100
200	16	31,75/32	3	100
250	20	31,75/32	4	130

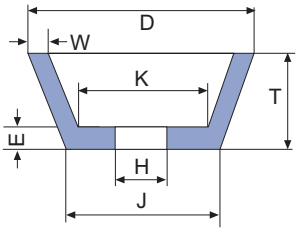
SHAPE 6 Straight cup wheel



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Rim width (W) x Back thickness (E)

D	T	H				W		E	
100	50	31,75/32				10		10	
125	40	31,75/32	50,8			10		10	
	50	31,75/32	50,8			13		13	
	60	31,75/32	50,8			13	16	16	
	65	31,75/32	50,8			13	16	16	
	80	31,75/32	50,8			20		20	
150	40	31,75/32	50,8			10	13	10	13
	50	31,75/32	50,8	65,0		13	20	13	20
	65	31,75/32	50,8	65,0	76,2	20		20	
	80	31,75/32	50,8	65,0	76,2	20	25	20	25
165	65	31,75/32	50,8			20		20	
	80	31,75/32	50,8			20		20	
180	65	31,75/32	50,8	65,0	76,2	20		20	
	80	31,75/32	50,8	65,0	76,2	20		20	
	100	31,75/32	50,8	65,0	76,2	20	25	20	25
200	80	31,75/32	50,8	65,0	76,2	20		20	
	100	31,75/32	50,8	65,0	76,2	20	25	20	25
250	80	50,8	76,2			20	25	20	25
	100	50,8	76,2			25		25	
300	100	76,2				25		25	

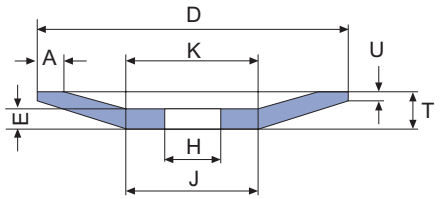
SHAPE 11 Flaring cup wheel



ORDERING DATA:
Standard sizes:
Diameter (D)/Diameter (J) x Thickness (T) x Hole size (H) – Specification – Shape 11
Non-standard sizes:
All above information, plus dimensions W, E, K

D	T	H		W	E	J	K
65	40	20		6	10	45	32
90	40	31,75/32		8	10	70	56
100	40	31,75/32		8	13	80	66
115	50	31,75/32		8	13	95	78
125	40	31,75/32		8	13	95	76
	45	31,75/32		8	13	95	76
	50	31,75/32		8	13	95	78
150	50	31,75/32	50,8	10	13	92	67
	50	31,75/32	50,8	10	13	114	96
	60	31,75/32	50,8	10	13	114	96
	65	31,75/32	50,8	10	15	120	100

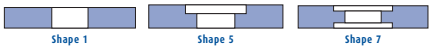
SHAPE 12 Dish grinding wheel



ORDERING DATA:
Standard sizes:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Shape 12
Non-standard sizes:
All above information, plus dimensions A, U, E, J/K

D	T	H	A	U	E	J/K
100	13	31,75/32	5	3	8	50
125	13	31,75/32	6	3	8	64
150	13	31,75/32	10	3	8	80
150	20	31,75/32	10	3	10	80
180	13	31,75/32	11	3	8	89
200	20	31,75/32	13	3	13	100

APPLICATION TABLE

FIELD OF APPLICATION		SPECIFICATION		
With straight grinding wheels (shapes 1, 5, 7) 		**up to ø200**	**ø225 and above**	
Hand tools	Tool steel, soft	A46 N5V86 A60 M5V86 A80 L5V86	A36 P5V86 A46 N5V86 A60 M5V86	
	Tool steel	15A46 L6V86 15A60 L6V86 15A80 L6V86	15A46 L6V86 15A60 L6V86	
	High speed steel	11A46 K8V86 11A60 J6V86 11A80 J6V86	11A46 K8V86 11A60 J6V86	
Turning and planing tools	Tool steel	15A46 L6V86 15A60 L6V86 15A80 L6V86	15A46 K6V86 15A60 K6V86	
	High speed steel	11A46 J8V86 11A60 J6V86 11A80 J6V86	11A46 J8V86 15A46 I8V86 11A60 I8V86	
	Tungsten carbide tipped	8C46 I8V1 8C60 I8V1 8C80 I8V1	8C46 I8V1 8C60 I8V1	
Twist drills	Tool steel	15A60 K5V86 15A80 J6V86	15A60 K5V86	up to ø10
		15A46 K6V86 15A60 K5V86	15A46 K6V86 15A60 K5V86	over ø10
	High speed steel	15A60 J6V86 15A80 J6V86	15A60 J6V86 11A60 J6V86	up to ø10
		15A46 J6V86 15A60 J6V86	11A46 J6V86	over ø10
	Tool steel and high speed steel on bench grinder	A60 M5V86		up to ø10
		A46 N5V86		over ø10
	Tungsten carbide tipped	8C60 K8V1 8C80 J8V1	8C60 K8V1	up to ø10
		8C46 K8V1 8C60 K8V1	8C46 K8V1	over ø10

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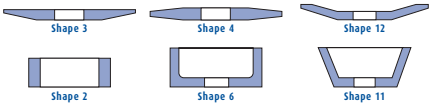
APPLICATION TABLE

FIELD OF APPLICATION		SPECIFICATIONS	
With grinding wheels other than straight type diameters (shapes 2, 3, 4, 6, 11, 12) 		**Smaller wheel diameters**	**Larger wheel diameters**
CUTTING TOOLS			
Universal Use	Tool steel	11A60 K7V86	11A60 J6V86
	High speed steel	11A60 J7V86	11A46 J8V86
	Carbide tipped	8C60 J8V1	8C60 J8V1
Specific Use	Tool steel	11A46 K6V86 11A60 J5V86 11A80 J5V86	11A46 J8V86 11A60 J7V86 11A80 J7V86
	High speed steel	11A46 J8V86 11A60 J8V86 11A80 J8V86	11A46 I8V86 11A60 I8V86 11A60 J7V86
	Carbide tipped	8C60 J8V1 8C80 I8V1	8C46 J8V1 8C60 I8V1 8C60 J8V1
Gear Hobbing Cutters (Grinding wheel shape 3)			11A60 F12V86P 11A60 I9V86 9A46 J8V86
Planing and Cutting Knives (Grinding Wheel Shapes 2 & 6)	Tool steel		15A54 H5V86 15A54 J9V86 9A54 J8B2
	High speed steel		11A54 J9V86 11A54 F12V86P 9A54 I8B2
Grooving Cutters for Wood-working (Dish Grinding Wheel – Shape 12)	High speed steel		11A46 G12V86P 11A60 18V86
HSS Circular Mill Knives			11A60 G8V86
Mill Crop Shear Blades			11A60 H8V86

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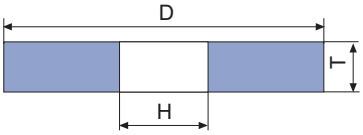
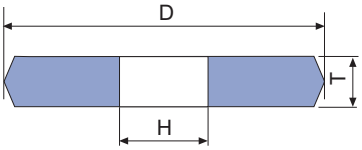
SPECIFICATIONS

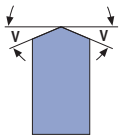
SHAPE 1 Straight grinding wheels



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H) – Shape 1

SHAPE 1 "K" FACE Straight grinding wheels



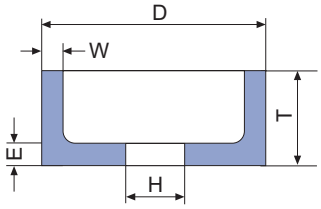


For drills with crossed cutting edges: V =24°

For drills with "X" cutting edges:
Left "X" bits 105° : V = 20.5°
Right "X" bits 75° : V = 27°
Right "X" bits 90° : V = 24°

ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H) x 'V' – Shape 1"K"
Quote angle 'V' to suit shape of cutting edges

SHAPE 6 Straight cup wheels
For drills with chisel edges.



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Rim width (W) x Back thickness (E)

All dimensions in millimetres.

APPLICATION TABLE

FIELD OF APPLICATION	SPECIFICATIONS			
	Straight wheels	"K" face wheels	Cup & cylinder wheels	Mounted
Coal Picks and Borers	8C54N5V11 – P5V55		8C46 N6 – P6V11	
Cross and "X" Bits	8C46 M5V11 8C54 M5V11	8C46 N5V11 8C60 L5V11		
4 Point Bits		8C54 M5V11 8C60 L5V11	8C46 N6 – P6V11	
Drag Bits and Reamers	8C54 M5V11			
Button Bits				W218 25X12X6spl. 6C60 MV W220 25X25X6 spl. 6C60 MV
Integral Drill Steel	8C46 N5V11 8C54 M5V11 8C60 L5V11		8C46 N6V11 8C54 M6V11 8C60 L6V11	W242 50X25X6spl 6C100 MV

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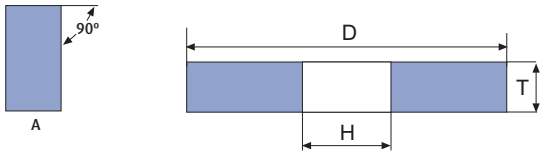
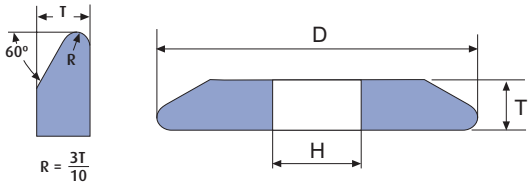
SPECIFICATIONS

STANDARD PROFILES:

"A" face



"D" face



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H) – Specification – A face/D face

All dimensions in millimetres.

APPLICATION TABLE

FIELD OF APPLICATION	SPECIFICATIONS		
Saw sharpening with straight grinding wheels	**Wheel width up to 4mm Fine teeth**	**Wheel width 4-10mm Medium teeth**	**Wheel width 10mm upwards Coarse teeth**
Metal Cutting Circular Saws	A60 NB2 11A80 K5V86 11A80 M5V86	11A54 K6V86 11A60 L6V86	11A46 J6V86 11A54 K6V86 11A60 K6V86
Band Saws		15A60 L6V86 15A60 M5V86 15A80 K6V86	
Woodworking Circular Plate Saws		15A54 N6V86 9A54 N6V86	15A54 M6V86 9A54 M6V86
Frame Saws		15A54 N6V86 9A54 N6V86	15A54 M6V86 9A54 M6V86
Slitting Saws		11A60 M5V86 11A60 N5V86 11A80 M5V86	
Chain Saws		15A60 K6V86	

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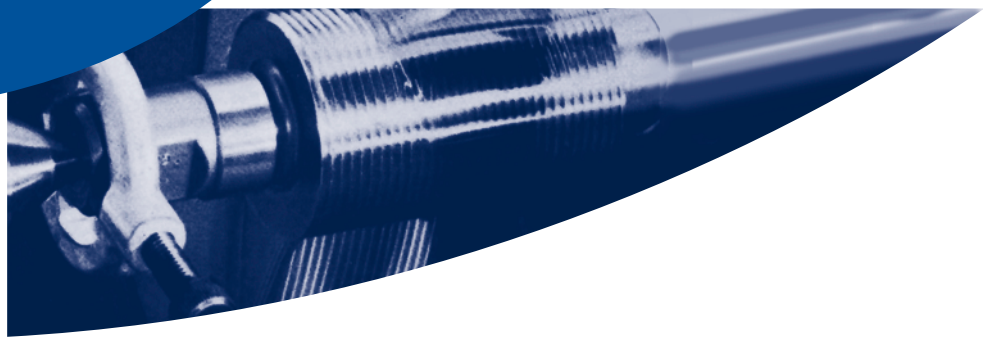
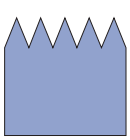
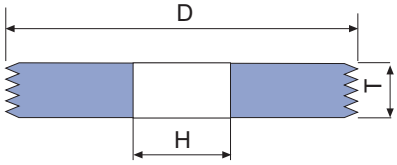
THREAD GRINDING WITH MULTI-RIB WHEELS



SPECIFICATIONS

SHAPE 1





Shape 1 with multi-rib profile.
(Wheels are crushed on the machine)

ORDERING DATA:
Example: 350 x 40 x 160 – 8C320 J6V – Shape 1

APPLICATION TABLE

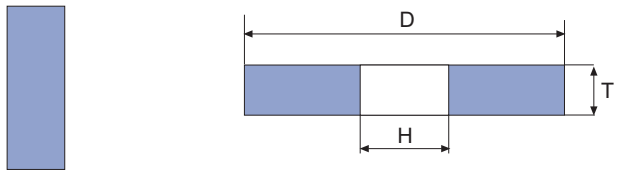
FIELD OF APPLICATION		RANGE OF PITCHES		GRINDING WHEEL SIZE	SPECIFICATIONS
		Metric ISO-Profiles mm	UN, BSW t.p.i	350 x (T) x 160 / T	
Traverse Grinding	Construction, tool and high speed steel	0,60-0,90	26-488		9A400 K6V
		1,0-1,25	20-25	8,12	9A320 K6V
		1,50-1,75	14-19	12,16	9A220 J6V
		2,0	11-13	12,16,20	9A220 J6V
		1,0-1,25	20-25	8,12	9A320 K6V
		2,5	10	16,20	9A180 J6V
		3,0	8-9	20,25	9A150 J6V
		3,50-4,50	6-7	25	9A120 J6V
		5,0-6,0	4-5	30	9A100 J6V
Plunge Cut Grinding	Tool and high speed steel	0,40-0,50	50-60		8C400 K6V
		0,60-0,80	36-48		8C400 K6V
		0,90-1,50	19-32	20,30,40	8C320 J6V
		1,75-2,50	10-18		8C280 J6V
		2,75-6,0	4-9		8C220 J6V

All dimensions in millimetres.

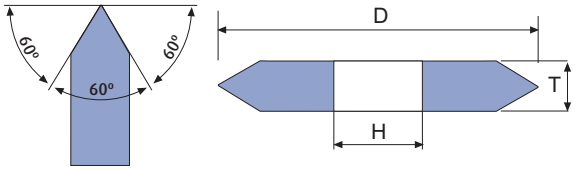
THREAD GRINDING WITH SINGLE-RIB WHEELS

SPECIFICATIONS

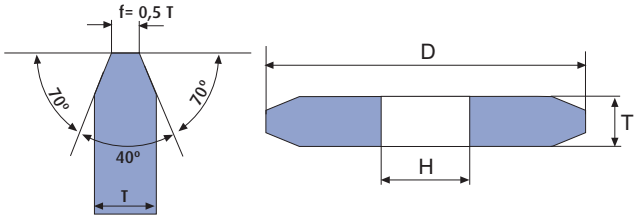
SHAPE 1



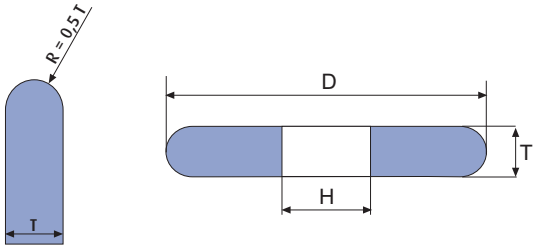
SHAPE 1E



SHAPE 1 Esp.



SHAPE 1F



All dimensions in millimetres.

APPLICATION TABLE

FIELD OF APPLICATION

Traverse Grinding		RANGE OF PITCHES		GRINDING WHEEL SIZE	SPECIFICATIONS
		Metric ISO-Profiles mm	UN, BSW t.p.i	350 x (T) x 160 / T	
	Construction steel	0,30 - 0,45	56 - 80		9A400 M6V
		0,50 - 0,80	32 - 48		9A400 M6V
		0,90 - 1,0	24 - 28		9A320 L6V
		1,25	20 - 22	250x6x155	9A280 K6V
		1,50	18 - 19	9A220 L6V	
		1,75 - 2,0	12 - 16	350x8x160	9A220 L6V
		2,50 - 3,0	8 - 11		9A180 K6V
		3,50 - 4,0	6 - 7		9A150 J5V
		4,50 - 6,0	4 - 5		9A120 J5V
	Tool steel and high speed seel	0,30 - 0,45	56 - 80		8C400 N6V
		0,50 - 0,80	32 - 48		8C400 N6V
		0,90 - 1,0	24 - 28	250x6x155	8C320 K6V
		1,25	20 - 22		8C320 K6V
		1,50	18 - 19	350x8x160	8C280 K6V
		1,75 - 2,0	12 - 16		8C220 J6V
		2,50 - 3,0	8 - 11		8C180 J5V

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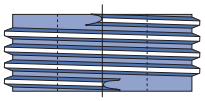
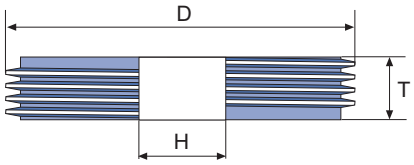
SPECIFICATIONS

REISHAUER SYSTEM
Pre-profiled grinding wheels



SHAPE 1sp.



ORDERING DATA:
For straight grinding wheels Shape 1:
Example: Shape 1 – 350 x 84 x 160 – 67A120 G/H10V

For pre-profiled grinding wheels Shape 1sp:
Example: Shape 1sp. – 350 x 84 x 160 67A120 G/H10V
pre-profiled – module 4 – pressure angle 20°

POPULAR SIZES	
350 x 62 x 160	400 x 74 x 160
350 x 84 x 160	400 x 104 x 160
350 x 104 x 160	

APPLICATION TABLE

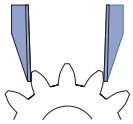
FIELD OF APPLICATION			
	RANGE OF MODULES		
Case hardening and heat treatable steels	Grinding wheels ø350	Grinding wheels ø400	SPECIFICATIONS
	2,0 – 2,25	1 – 1,75	9A180I6V
	2,5 – 3,5	2 – 2,75	9A150I6V
	3,75 – 5	3 – 3,75	9A120I6V
		4 – 4,75	9A100I6V
	5 – 6	5 – 6	9A100I6V
		6 – 7	9A80I6V

In practice variations in the wheel selection (grain size finer or coarser) are dependant on the grindability of the material, the dressing device or the surface finish required. In order to achieve an economical grinding the wheel has to be selected as coarse as possible. For grinding wheels dressed with diamond tools (up to module 6) take the next coarser grain size. Grinding wheels for other tooth flank grinding machines are available on request.
Please forward a completed questionnaire together with the following additional data: Module, number of teeth, P.C.D., tooth width, pressure angle, spiral tooth angle.

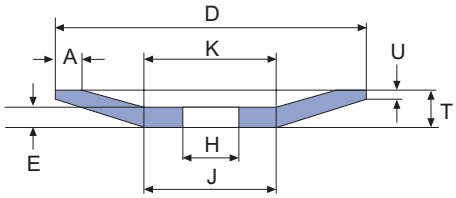
All dimensions in millimetres.

SPECIFICATIONS

MAAG SYSTEM
Dish grinding wheels



SHAPE 12sp.



Grinding wheel ø (according to machine)	Most frequent range of modules
220	2 – 4
280	3 – 6
340	3,5 – 9
400 – 500	4 – 15

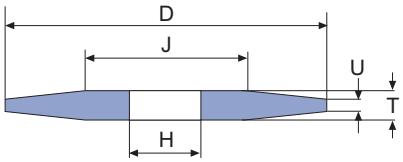
ORDERING DATA:
Example: Dish grinding wheel Shape 12sp.
280 x 32 x 90 – 11A60 19V86 – U6

All dimensions in millimetres.

APPLICATION TABLE

FIELD OF APPLICATION	SPECIFICATIONS	
Heat treatable steel – 90-100 kg/mm²	11A46 I8V86 11A54 J9V86 11A54 I9V86	**Recommendations for wheel selection:** Coarser grains for larger modules, finer grains for smaller modules. Select wheels 1 to 2 grades softer for special 'burn-free' grinding. Grinding wheels for other tooth flank grinding machines on request. Please forward a completed questionnaire together with the following additional data: Module, number of teeth, P.C.D., tooth width, pressure angle, spiral tooth angle.
Case-hardening steel – 55-60Rc	11A54 H8V86 11A60 E12V86P	
Tool steel, high speed – approx. 63Rc	11A60 E12V86P 11A60/2K6V86	
Nitriding steel – hardened over 65Rc	8C60 I9V1	
General Purpose	9A46/2K6V86	

NILES & HÖFLER SYSTEM

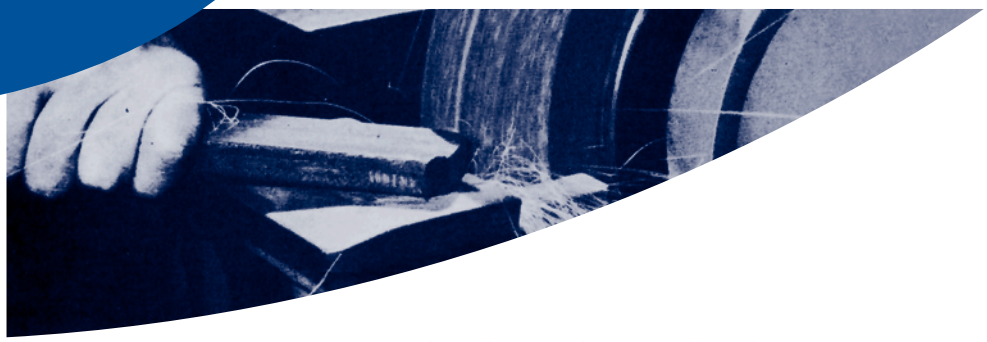


APPLICATION TABLE

FIELD OF APPLICATION	SPECIFICATIONS				
Niles & Höfler System	**Wheel Diameter**	**Module 0,75-2**	**Module 2,5-4**	**Module 4-7**	**Module 8 PLUS**
Heat Treatable Steel 90-100Kg/mm²	240mm 350mm	11A100K5V86	11A70L6V86 11A60J5V86	11A54L6V86 11A46J5V86	
Tool Steel - Soft 35-50Rc	240mm 350mm		11A60K8V86 9A70/2K6V86	11A60K8V86 9A60/2KV86	
Case-hardening Steel – 55-60Rc	240mm 350mm 350x30mm 350x35mm	11A100J5V86	11A70/2K5V86 11A60I5V86	11A54K5V86 11A46J5V86	 31A46I7V86 11A36/4J8V86
Tool Steel - High speed 58-63Rc	240mm 350mm 350x30mm 350x35mm	11A120H6V86	11A70I5V86 11A60J5V86	11A54J5V86 11A54I7V86	 31A46I7V86 11A36/4J8V86
Tool Steel - High speed 64-65Rc	240mm 350mm		 11A60H8V86	 11A60H8V86	
Nitriding Steel – Hardened over 65Rc		8C100J5V1			

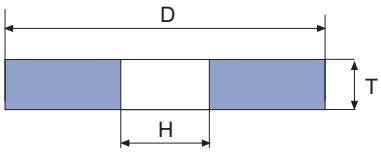
ANDOR

VITRIFIED
BENCH & FLOORSTAND GRINDING



SPECIFICATIONS

SHAPE 1



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Shape 1

D	T					H	
80	10					13	(10)
100	13	20				16	(20)
125	20	25				20	
150	16	20	25			20	
200	20	25	32	40		20	31,75/32
250	20	25	32	40		31,75/32	
300	25	32	40	50	63	31,75/32	
350	32	40	50	63		31,75/32	
400	40	50	63			40	
500	50	63	80			50,8	
600	63	80				76,2	
750	80					76,2	

APPLICATION TABLE

FIELD OF APPLICATION		SPECIFICATIONS	
Bench and floorstand machines up to 35m/s with vitrified grinding wheels (shapes 1,5)		**up to ø300**	**ø350 and above**
Universal Use		A46 N5V86	A36 P5V86
	Steel and Cast Steel	A24 P5V86 A36 P5V86 A46 N5V86 A60 M5V86	A20 P5V86 A24 P5V86 A36 P5V86 A46 N5V86 A60 M5V86
	Grey Cast Iron and Spheroid Cast Iron	A24 P5V86 A36 P5V86 A46 N5V86 6C24 P5V11 6C36 P5V11	A20 P5V86 A36 P5V86 6C20 P5V11 4C24 P5V11
	Aluminium (aluminium alloys)	6C24 M5V11G	6C24 N5V11G
	Non-ferrous Metal (bronze and brass)	6C24 P5V11 6C46 M5V11	6C24 P5V11 6C46 L5V11
	Tungsten Carbide	8C46 K8V1 8C60 K8V1 8C80 J8V1	8C46 K8V1 8C60 K8V1 8C80 J8V1

All dimensions in millimetres.

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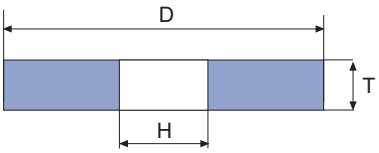
SNAGGING: BENCH, FLOORSTAND & SWINGFRAME GRINDING

SPECIFICATIONS

SHAPE 1



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Shape 1

For Floorstand and Swing Frame Machines at 45m/s

D	T			H	
350	50			127	152,4
400	50	63		127	152,4
500	50	63	80	127	203,2
600	63	80		203,2	304,8
750	80	100		304,8	
900	80	100		304,8	

APPLICATION TABLE

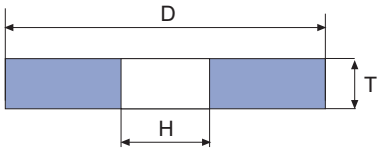
FIELD OF APPLICATION	SPECIFICATIONS		
Floorstand and Swing Frame Machines 45m/s to 80m/s with resinoid bonded grinding wheels (shape 1)	**at 45m/s**	**at 60m/s**	**at 80m/s**
Steel and Cast Steel – with low pressure	A 12 to 20 grit R to T grade -5B2H	A 12 to 20 grit P to R grade -5B2H-F/60	A 12 to 20 grit P to R grade -5B2H-F/80
Steel and Cast Steel – with high pressure	ZA 12 to 20 grit R to T grade -5B2H	ZA 12 to 20 grit P to R grade -5B2H-F/60	ZA 12 to 20 grit P to R grade -5B2H-F/80
Grey Cast Iron and Spheroid Cast Iron	A, 6C, AC or CA 12 to 20 grit R to T grade -5B2H	A, 6C, AC or CA 12 to 20 grit Q to R grade -5B2H-F/60	A, 6C, AC or CA 12 to 20 grit P to R grade -5B2H-F/80

All dimensions in millimetres.

GRINDING ON PORTABLE MACHINES

SPECIFICATIONS

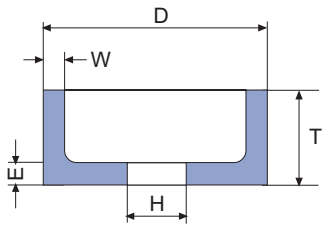
SHAPE 1 Straight grinding wheels



D	T			H		
40	13		13			
	20	9,53				
50	13/20	9,53				
65	13	9,53				
	20	9,53				
80	13	9,53	12,70			
	20	9,53	12,70	15,88		
100	13	9,53	12,70	15,88		
	20/25	9,53	12,70	15,88	20,00	
125	13/20/25			15,88	20,00	22,23
150	13/20/25			15,88	20,00	22,23
200	25			15,88	20,00	22,23

ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Shape 1

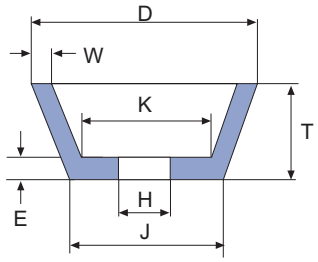
SHAPE 6 Straight cup wheels



D		T	H	W
150	50	22,23	40	20
150	65	5/8 BSW	42	20
150	75	5/8 BSW	25	20

ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H) – Specification
– Rim width (W) x Back thickness (E) – Shape 6

SHAPE 11 Flaring cup wheels



D		T	H	W	E	J
80	50	5/8 BSW	17	16	54	28
110	55	22,23	20	12	90	48
125	50	22,23	25	20	100	54
		5/8 BSW				48
		M14 - 1,5				48
150	50	22.23	25	20	120	70
		5/8 BSW				
		M14 - 1,5				

ORDERING DATA:
Standard sizes:
Diameter (D)/Diameter (J) x Thickness (T)
x Hole size (H) – Specification – Shape 11
Non-standard sizes:
All above information plus dimensions W, E and K

All dimensions in millimetres.

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GRINDING ON PORTABLE MACHINES

APPLICATION TABLE

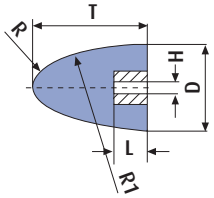
FIELD OF APPLICATION	SPECIFICATIONS		
SNAGGING 45 m/s	**SHAPE 1**		**SHAPE 6**
Material	**ø50-80mm**	**ø100-120mm**	**SHAPE 11**
Aluminium, Brass & Bronze Castings	6C20 R5B2H	6C20 R5B2H	6C20 R5B2H
Billets – High Carbon Alloy, Tool Steel & Stainless Steel. Malleable Iron & Steel Castings. Carbon & Stainless Steel Welds.	A30 T5B2H	A&ZZ,16-20 R to S grade -5B2H	A&ZZ,16-20 R to S grade -5B2H
Grey Iron Castings	6C20 T5B2H	6C20 T5B2H	6C20 R to T grade -5B2H
General Purpose Steels	A30 T5B2H	A,16-20 R to S grade -5B2H	A,16-20 R to S grade -5B2H
General Purpose - Non-ferrous & Non-metallics	6C20 R5B2H	6C20 R5B2H	6C16 R5B2H 6C20 R5B2H 6C24 R5B2H

IMPORTANT NOTE: For safety reasons, Vitrified Bonded Grinding Wheels must never be used on portable machines.

CONES & PLUG WHEELS WITH INSERTED NUTS

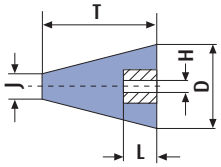
SPECIFICATIONS

SHAPE 16 Cone, curved side



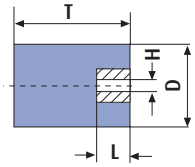
ORDERING DATA:
Diameter (D) x Thickness (T) x Insert type (H) – Specification – Shape (S16)

SHAPE 17 Cone, straight side



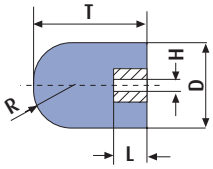
ORDERING DATA:
Diameter (D)/ Diameter (J) x Thickness (T) x Insert type (H) – Specification – Shape (S17)

SHAPE 18 Plug, square end



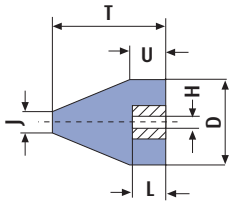
ORDERING DATA:
Diameter (D) x Thickness (T) x Insert type (H) – Specification – Shape (S18)

SHAPE 18R Plug, round end



ORDERING DATA:
Diameter (D) x Thickness (T) x Insert type (H) – Specification – Shape (S18R)

SHAPE 19 Plug, conical end



ORDERING DATA:
Diameter (D) x Thickness (T) x Insert type (H) – Dimension (U) – Specification – Shape (S19)

SHAPE	D	J	T	INSERT H
16	40		80	5/8 BSW
	40		80	M14 - 1,5
	50		80	5/8 BSW
17	70	60	80	5/8 BSW
18	65		50	5/8 BSW
18R	40		80	5/8 BSW
	40		80	M14 - 1,5

APPLICATION TABLE

FIELD OF APPLICATION		SPECIFICATIONS
General Purpose	Steels	A16 T5B2H
	Non-ferrous and non-metallics, aluminium, brass and bronze castings	6C20 S5V55
Billets	High carbon alloy, tool steels and stainless steel	11A36 R6V86 11A30 R5V86 11/31A 30R486
Grey Iron Castings		6C20 S5V55 11/31A30 R4V86
Malleable Iron and Steel Castings		A16 R5B2H 11A36 R6V86 11A30 R5V86 11/31A30 R4V86
Carbon Steel Welds		A16 R5B2H A16 T5B2H
Stainless Steel Welds		A16 R5B2H A46 R5B2H

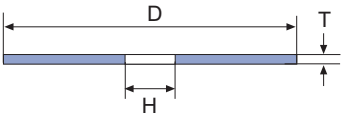
All dimensions in millimetres.

SLIMLINE CUTTING WHEELS

SPECIFICATIONS

SHAPE 41

Ultra thin straight cut-off wheels reinforced



DIAMETER	THICKNESS	BORE	MAX RPM	PACK QTY
100	1,0	16,0	15280	10
100	1,6	16,0	15280	10
115	1,0	22,2	13280	10
115	1,6	22,2	13280	10
125	1,0	22,2	12280	10
125	1,6	22,2	12280	10
150	1,6	22,2	10190	10
180	1,8	22,2	8600	10
230	1,8	22,2	6600	10
230	2,2	22,2	6600	10

ORDERING DATA:
Diameter (D) x Thickness (T) x Bore (H)
– Specification – Shape 41

SPECIFICATIONS

1A46T-BF (2 in 1)
1A36T-BF (2 in 1)

APPLICATION TABLE

Used primarily for cutting stainless steels, special alloy steels, cast iron, composite materials and mild steels.
Excellent for use on sheet metal, piping, steel sections and cables, and steel reinforcing.
Used in many industries, such as construction (structural steel), panelbeating, coach building, ship building, tank and pressure vessel construction, and any steel maintenance work.

FEATURES AND BENEFITS

FEATURE – Ultra thin reinforced cutoffs

BENEFITS
- Fully reinforced – can be used on portable machines
- Quicker cutting than standard cutoffs
- Minimal cutting waste – cost saving
- Minimal dust and swarf generated
- Reduces tool load, therefore less machine power required, and reduced tool maintenance
- Less force (pressure) required, therefore easier to control in the cut
- Less "rag" (burr) left on the workpiece after the cut, therefore less cleanup necessary
- Less heat generation, therefore less distortion or discolouration

FEATURE – Top quality raw materials

- **2 in 1 Specification**

BENEFIT – Means they can be used on a wide variety of applications, therefore reducing stockholding

- **Superior Quality Sharp Grain**

BENEFIT – Coupled with the ultra thin kerf width, this means they can be used with considerable success on non-ferrous metals such as aluminium, brass, bronze, etc.
- Consistently freer cutting action
- Less heat generation

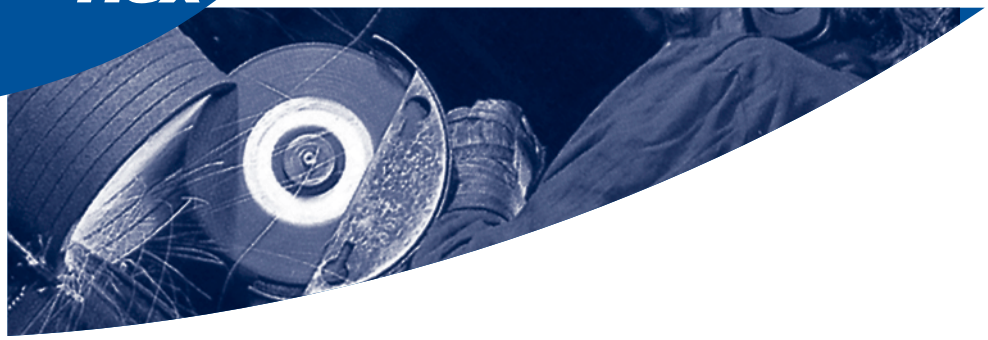
- **Long Life Bonding**

BENEFIT – Tests have shown that, if used correctly - without excessive pressure - Slimline cutoffs can last at least as long as the standard superior quality Superflex cutting wheels

- **Iron, Sulphur and Chlorine Free**

BENEFIT – Results in a product that will not contaminate the workpiece or cause rust, and is user-friendly

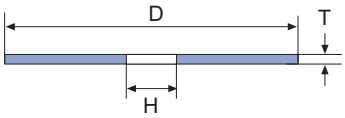
All dimensions in millimetres.



SPECIFICATIONS

SHAPE 41

Straight cut-off wheels reinforced



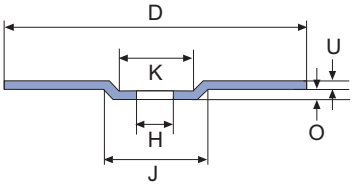
D	T				H
	Standard	Professional	Stainless Steel	Stone	
100	2,5	2,5	2,5	2,5	16
115	3,0	2,5	2,5	3,0	22,2
125	3,0	2,5	2,5	3,0	22,2
150	3,0	–	–	3,0	22,2
180	3,0	3,0	3,0	3,0	22,2
230	2,7;3,0	3,0	3,2	3,0	22,2

ORDERING DATA:

Diameter (D) x Thickness (T) x Hole size (H)
– Shape 41

SHAPE 42

Depressed centre cut-off wheels reinforced



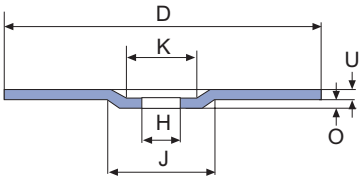
D	U				H
	Standard	Professional	Stainless Steel	Stone	
100	2,5	2,5	2,5	2,5	16
115	3,0	2,5	2,5	3,0	22,2
125	3,0	2,5	2,5	3,0	22,2
180	3,0	3,0	3,0	3,0	22,2
230	2,7;3,0	3,0	3,2	3,0	22,2

ORDERING DATA:

Diameter (D) x Width (U) x Hole size (H)
– Shape 42

SHAPE 27

Depressed centre grinding wheels reinforced



D	U				H
	Standard	Professional	Stainless Steel	Stone	
100	4; 6	4,5; 6	4,5; 6	4; 6	16
115	4,5; 6	4,5; 6	4,5; 6	6	22,2
125	4,5; 6	4,5; 6	4,5; 6	–	22,2
180	4,5; 6; 8;10	7; 8	7	4,5; 6; 8;10	22,2
230	4,5; 6; 8;10	7; 8	7	4,5; 6; 8	22,2

ORDERING DATA:

Diameter (D) x Width (U) x Hole size (H)
– Shape 27

All dimensions in millimetres.

The specifications in this catalogue are recommendations only. For further information or special application specifications, please contact Grinding Techniques Technical Department (011) 271 6400 or email: info@grindtech.com

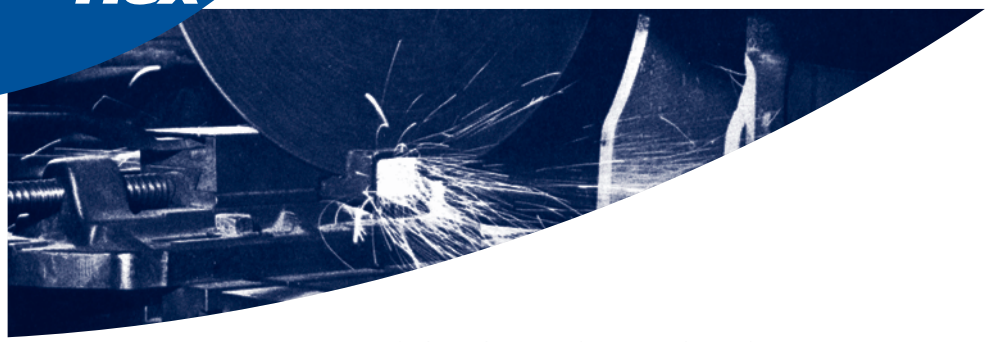
APPLICATION TABLE

D.I.Y and General Light Duty Applications (Reinforced Wheels - for Portable Machines - 80m/s)

FIELD OF APPLICATION	SPECIFICATIONS		
	Wheel Type	Cutting - Shapes 41 & 42	Grinding - Shape 27
Metal	Standard	AS30S B27 F2	AS24/30T BF28 DC
Stone & Non-ferrous Metal	Standard	CS30S B40 F2	CS24TBF40 DC

Heavy Duty Industrial Applications (Reinforced Wheels - for Portable Machines - 80m/s)

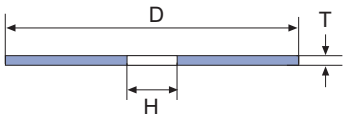
	Wheel Type	Cutting - Shapes 41 & 42	Grinding - Shape 27
Metal & mild steel	Professional	AS30S B26 Professional	AS30R BF32 Professional DC
Carbon & Hardened Steel	Professional	AS30S B26 Professional	AS30R BF32 Professional DC
Stainless Steel	Stainless steel	AS24S B5 SS Professional	AS24 Reactor BF42 SS Prof. DC
Grey & Spheroid Cast Iron	Professional	AS30S B26 Professional	AC24 TBF DC
	Standard	CS30S B40 F2	CS24T BF40 DC
Non-ferrous Metals	Standard	CS30S B40 F2	CS24T BF40 DC
Stone, Concrete, Ceramics	Standard	CS30S B40 F2	CS24T BF40 DC
Plastics	Standard	CS30S B40 F2	



SPECIFICATIONS

SHAPE 41

Straight cut-off wheels reinforced

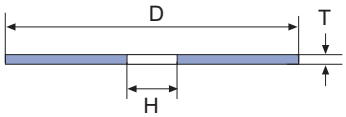


ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Shape 41

D	T			H
	Standard	Professional	Stone	
300	2,8	–	3,0	25,4
300	–	3,5	3,0	40
350	3,0	–	3,0	25,4
350	–	3,5	3,0	40
400	3,2	–	3,0	25,4
400	–	4,0	3,0	40
500	–	5,0		40

SHAPE 41

Straight cut-off wheels non-reinforced



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Shape 41

D	T	H
150	1,6; 2,0; 2,5; 3,2	20; 31,75
180	1,6; 2,0; 2,5; 3,2	31,75
200	1,6; 2,0; 2,5; 3,2	31,75
230	1,6; 2,0; 2,5; 3,2	31,75
250	2,5; 3,2	31,75
300	2,5; 3,2	31,75

All dimensions in millimetres.

The specifications in this catalogue are recommendations only. For further information or special application specifications, please contact Grinding Techniques Technical Department (011) 271 6400 or email: info@grindtech.com

APPLICATION TABLE

FIELD OF APPLICATION	SPECIFICATIONS	
Application	**Wheel Type**	**Cutting**
Light Duty Machines (2kw & less) - Reinforced Cutoff Wheels - 80 m/s		
Steel	Standard	AS30R BF 2E
Stone & non-ferrous metals	Standard	CS24R BF 50

N.B: Light duty 'Standard' wheels are only available with a 25,4mm bore.

Heavy Duty Industrial Machines - Reinforced Cutoff Wheels - 100m/s		
Steel	Professional	AS24R BF/A30Q B55 F2
Stone & non-ferrous metals	Professional	CS24R BF 50

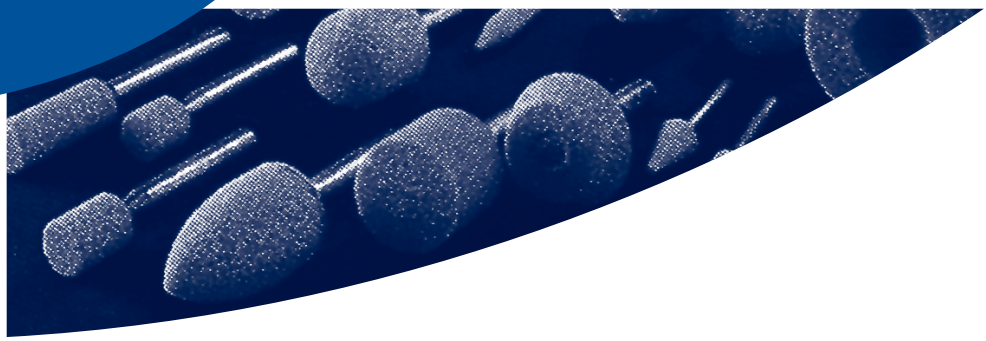
N.B.: Heavy duty 'Professional' wheels are only available with a 40mm bore.
Specifications for other specialized applications available on request.

Rail Cutting - Reinforced Cutoff Wheels - 100m/s	
350 x 4,2 x 25,4	A24Q B55 F2
400 x 4,2 x 25,4	A24Q B55 F2

Non-reinforced Cutoff Wheels (80 m/s max)		
Universal use	A60 PB2	A46 PB2
Steel, soft	A60 PB2	A46 PB2
Steel, alloyed, hardened, high speed steel, spheroid cast iron, non-ferrous metals	A60 OB2; A80 OB2	A46 OB2
Grey cast iron, stone, ceramics & plastics	C60 OB2; A60 OB2	C46 OB2; A46 OB2

ANDOR

MOUNTED POINTS & WHEELS

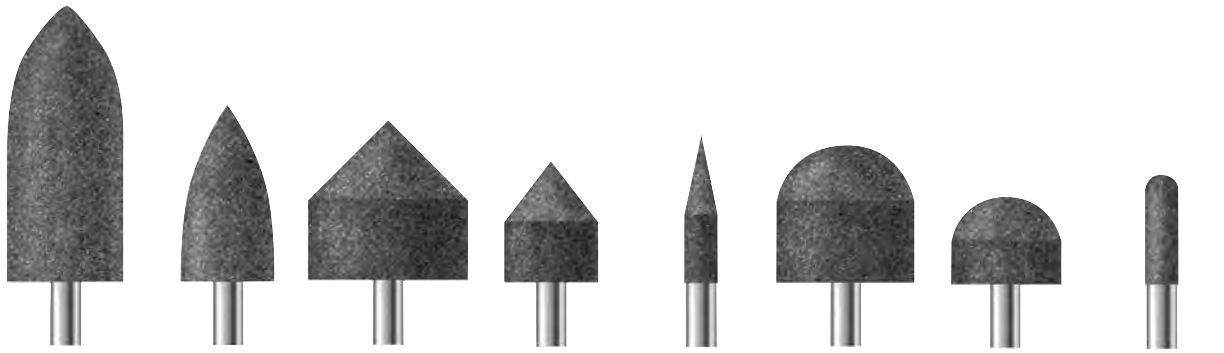


Abrasive Mounted Points are used in all foundries, heavy engineering and machine shops, toolrooms and in the construction industry. They are used for blending tools and dies, deburring and enlarging of holes, fettling of castings and many other operations where removal of excess material is required. Optimum grit sizes are pre-selected by Grinding Techniques (Pty) Ltd. to suit the size of the mounted point and the probable operation.

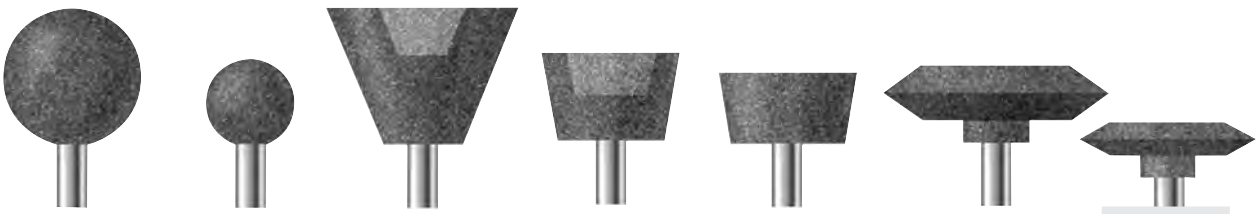
SPECIFICATIONS

GROUP A

	A1 20x65mm	**A2** 25x32mm	**A3 mini** 18x44mm	**A3** 22x70mm	**A4** 32x32mm	**A6** 20x30mm
RPM	19800•16500	38200•32620	19860•15100	16100•13080	29840•24750	39000•29700



	A11 22x50mm	**A12** 17x32mm	**A13** 29x29mm	**A14** 17x22mm	**A15** 6x25mm	**A21** 25x25mm	**A22** 20x16mm	**A24** 6x20mm
RPM	19860•15100	48000•35250	33950•32250	53050•40500	72750•47620	34500•26250	50930•40500	76500•49500



	A25 25mm diam	**A26** 16mm diam	**A31** 32x25mm	**A32** 25x16mm	**A33** 25x13mm	**A36** 40x10mm	**A37** 32x6mm
RPM	35620•27370	59680•46500	27280•26250	38200•38200	38200•38200	23520•23520	29840•29840

Mounted points are depicted smaller than actual size. • Dimensions of wheels: WIDTH X HEIGHT as shown in GREY numerals.
FIGURES IN BLUE ARE MAX. RPM FOR OVERHANG OF 0-13MM • FIGURES IN BLACK ARE MAX. RPM FOR OVERHANG OF 25MM

ORDERING DATA:
Specification

SPECIFICATIONS

GROUP B

	B41	B42	B44	B52	B53	B54	B55	B61
SIZE	16X16mm	13x20mm	6x10mm	10x20mm	6x16mm	6x13mm	3x6mm	20x8mm
RPM	33750	33750	68400	45370	60000	60000	105000	38250
RPM	23250	23250	42370	28500	38020	38020	64500	24370

	B72	B81	B84	B91	B92	B96	B101	B103
SIZE	13x3mm	20x5mm	8x5mm	13x16mm	6x6mm	3x6mm	16x17mm	16x5mm
RPM	73500	47750	105000	34500	81370	105000	33750	59680
RPM	43650	41250	64500	22500	51000	64500	23250	41250

	B104	B111	B121	B122	B123	B131	B132	B136
SIZE	8x10mm	11x17mm	13mm diam	10mm diam	5mm diam	13x13mm	10x13mm	6x8mm
RPM	68400	33750	45370	61650	104250	34500	45370	77250
RPM	42370	23250	28500	37720	61820	22500	28500	45920

NOTE: Optimum grit sizes are pre-selected by Grinding Techniques (Pty) Ltd. to suit the size of the mounted point and the probable operation.

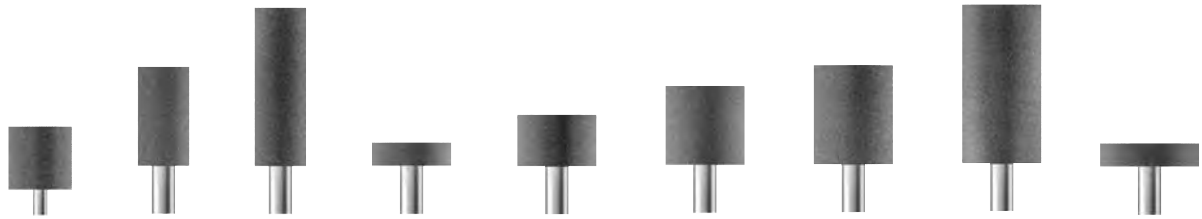
Mounted points are depicted smaller than actual size. • Dimensions of wheels: WIDTH X HEIGHT as shown in GREY numerals.
FIGURES IN BLUE ARE MAX. RPM FOR OVERHANG OF 0-13MM • FIGURES IN BLACK ARE MAX. RPM FOR OVERHANG OF 25MM

SPECIFICATIONS

3mm spindles

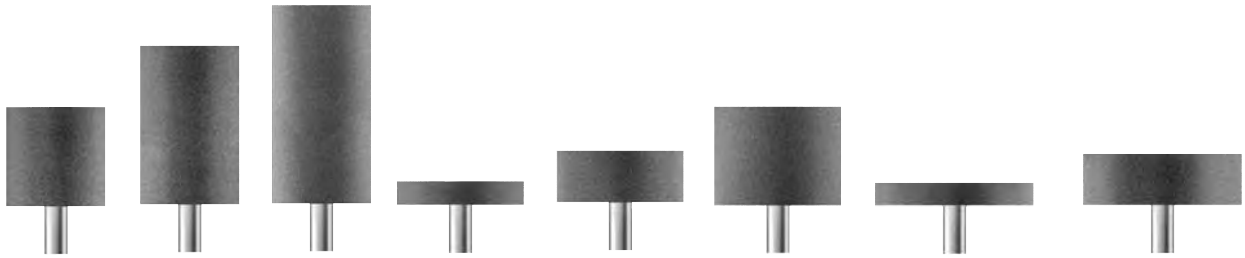
GROUP W - Cylindrical

	W144	W146	W152	W163	W164	W167	W171	W174	W176	W178	W182	W183
SIZE	3X6mm	3x13mm	5X6mm	6X13mm	6X20mm	8X6mm	8X20mm	10X6mm	10X13mm	10X25mm	13X3mm	13X6mm
RPM	105000	105000	105000	60000	45900	75000	37120	69000	45370	26250	73460	51750
RPM	64500	64500	64500	38020	30000	45750	25500	41250	28500	18750	43650	31870



	W185	W187	W188	W201	W203	W204	W205	W207	W216
SIZE	13x13mm	13X25mm	13X40mm	20X6mm	20X13mm	20X20mm	20X25mm	20X40mm	25X6mm
RPM	34500	40500	30370	47750	47750	42750	34500	24000	38200
RPM	22500	30000	24000	47750	36370	30750	25870	18520	38200

6mm spindles



	W220	W221	W222	W225	W227	W229	W235	W236
SIZE	25X25mm	25X40mm	25X50mm	30X6mm	30X13mm	30X25mm	40X6mm	40X13mm
RPM	25500	19120	15900	29840	30560	24000	25130	25130
RPM	19120	14620	12370	29840	29620	18750	25130	25130

	W237	W238	W242	W264-6	W264-10
SIZE	40X25mm	40X40mm	50X25mm	50X6mm	50X10mm
RPM	22500	15600	19100	18500	18500
RPM	17620	12000	15950	18500	18500

Mounted points are depicted smaller than actual size. • Dimensions of wheels: WIDTH X HEIGHT as shown in GREY numerals.
FIGURES IN BLUE ARE MAX. RPM FOR OVERHANG OF 0-13MM • FIGURES IN BLACK ARE MAX. RPM FOR OVERHANG OF 25MM

ORDERING DATA:
Specification

HI-GLO POLISHING WHEELS

SPECIFICATIONS

Hi-Glo elastic bonded polishing points can be used for descaling, cleaning, deoxidizing, rust removal, mottling, deburring, polishing, fine grinding and finishing, radiussing, trimming, superfinishing, smoothing and scratch removal. They are a particularly useful medium for correcting faults in all types of metals, whilst at the same time maintaining a good surface finish; they take over whenever vitrified or resin bonded abrasive products can no longer bring about any improvement in the quality of surface finish. Hi-Glo products conform to all surface contours to achieve a completely uniform surface finish with minimal stock removal; this surface finish will remain constant throughout the life of the polishing point.

SIZE	6x10mm	8x10mm	10x10mm	15x20mm	20x20mm	25x20mm
SPINDLE SIZE	3	3	3	6	6	6
RPM	50000	50000	47000	31000	23000	19000
RPM	25000	25000	23500	16500	11500	9500

PRODUCT TYPE	GRAIN TYPE	GRIT SIZE	SPINDLE CEMENT COLOUR	DESIGNATED END USE	AVAILABILITY
NK	Aluminium Oxide	46 80 120 180	Black White Red Green	Mild and tool steels, stainless steel, cast iron, hard aluminium, etc	Standard Stock
SC	Silicon Carbide			Carbide, ceramic, porcelain, soft non-ferrous metals, plastics, glass, etc	On Request

GRIT SIZE SELECTION

Coarser grits make it easier to refine a higher initial roughness with less effort, whilst finer grits give a better finish.

COOLANT/LUBRICANT

Can be used wet or dry. In most cases, coolant is not necessary

GENERAL APPLICATIONS

Toolmaking, mould manufacture, metal and machinery fabrication, turbine blade manufacture, finishing of mechanically welded seams, automotive and aircraft industries and for many other diverse applications.

SPECIFIC TECHNICAL BENEFITS

Improved finish on moulded products from improved finish on moulds; reduced frictional resistance of components; raised mechanical loading capacity of highly stressed components through reduced surface roughness; reduced stress fractures by edge deburring and radiussing of mechanical parts; improved contactability of electrical conductors.

SPECIFIC TECHNICAL BENEFITS

Improved finish on moulded products from improved finish on moulds; reduced frictional resistance of components; raised mechanical loading capacity of highly stressed components through reduced surface roughness; reduced stress fractures by edge deburring and radiussing of mechanical parts; improved contactability of electrical conductors.

OPERATING SPEED

The maximum operating speed quoted relates to polishing points with a shaft overhang of no greater than 5mm. Minimum clamping length of the shaft in the collet should be no less than 10mm. The stated maximum operating speed should be reduced by 50% when high axial pressure is used. Excessive working pressure causing heat in excess of 100° C will destroy the polishing point.

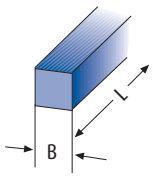
Mounted points are depicted smaller than actual size. • Dimensions of wheels: WIDTH X HEIGHT as shown in GREY numerals.
FIGURES IN BLUE ARE MAX. RPM FOR OVERHANG OF 5mm • FIGURES IN BLACK ARE MAX. RPM FOR OVERHANG OF >5mm

OILSTONES, BRICKS, STICKS & GRAIN

SPECIFICATIONS

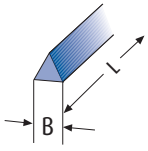
ABRASIVE OILSTONES & CARBOTOOLS

Shape A - Square



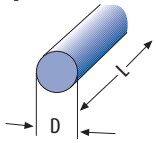
WIDTH	LENGTH
6	100
8	100
10	100
13	150
20	150

Shape C - Triangular



WIDTH	LENGTH
6	100
8	100
10	100
13	150
20	150

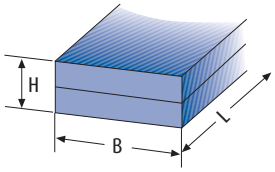
Shape D - Round



WIDTH	LENGTH
6	100
8	100
10	100

Aluminium Oxide Oilstones are available in fine or medium grits.
Silicon Carbide Carbotools are available in fine grit only.

RECTANGULAR COMBINATION OILSTONES

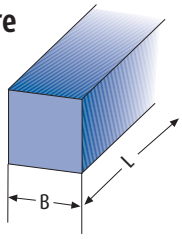


WIDTH	HEIGHT	LENGTH
50	25	150
50	25	200

Combination Oilstones are a combination of both fine and medium grits.

ABRASIVE RUBBING BRICKS

Shape A - Square



Rubbing Bricks are available in:
6C16 M5V11 (Extra coarse)
6C24 M5V11 (Coarse)
6C46 L5V11 (Medium)
6C60 L5V11 (Fine)
6C80 L5V11 (Extra fine)

WIDTH	LENGTH
50	100
50	200

ABRASIVE GRAIN

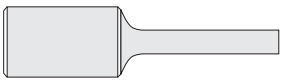
Avaialble per Kg or in 50Kg sacks.

Abrasive Type	Grain Size
Brown aluminium oxide	10 to 220
White aluminium oxide	12 to 500
Special aluminium oxide, ruby and pink	12 to 320
Silicon carbide - green	10 to 1000
Silicon carbide - black	10 to 1000

All dimensions in millimetres.

SPECIFICATIONS

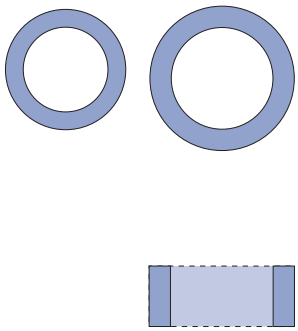
GRINDING WHEEL MANDRELS



3/8" x 6mm spindle

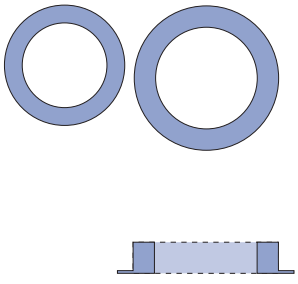
APPLICATION
Offhand Grinding - used with 9.53mm bore Resin Bonded Wheels

REDUCING BUSHES FOR GRINDING WHEELS



SIZE
31,75 - 12,70mm
31,75 - 15,88mm
31,75 - 19,05mm
31,75 - 20,00mm
31,75 - 22,23mm
31,75 - 25,40mm
31,75 - 28,60mm
31,75 - 30,00mm
31,75 - 31,75mm
31,75 - 34,00mm
31,75 - 38,10mm
31,75 - 41,28mm
31,75 - 44,45mm

REDUCING BUSHES FOR CUT OFF WHEELS

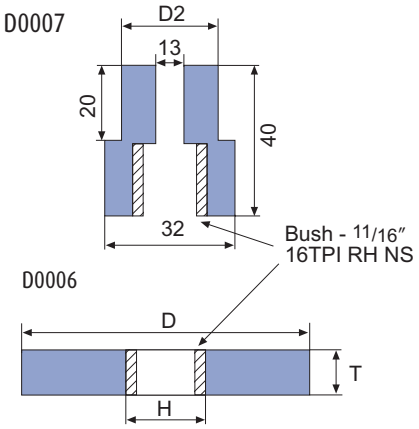


SIZE
22,23 - 16,00mm
22,23 - 19,05mm
22,23 - 20,00mm
40,00 - 22,23mm
40,00 - 25,40mm
40,00 - 31,75mm

All dimensions in millimetres.

SPECIFICATIONS

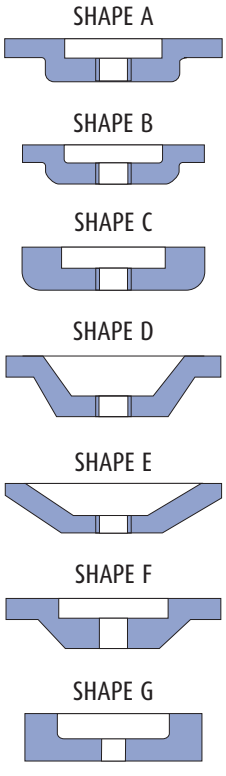
VALVE SEAT GRINDING WHEELS



ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Shape D0006/D0007

SHAPE	SIZE & SPECIFICATION	PACK QTY
D0007	26/32 x 40 x 11/16NS 11A80O7V86 D0007	5
D0007	29/32 x 40 x 11/16NS 11A80O7V86 D0007	5
D0006	32 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	35 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	38 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	41 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	44 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	47 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	50 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	53 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	56 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	59 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	62 x 20 x 11/16NS 11A80O7V86 D0006	5
D0006	65 x 20 x 11/16NS 11A80O7V86 D0006	5

VALVE FACE/STEM END WHEELS



SIZE	SPECIFICATION	SHAPE	APPLICATION
76 x 32 x 15,88	15A46L5V86 16R9B	G	Kwikway VS & SVS - Stem end - R/H
100 x 25 x 15,88	15A46L5V86 D0008	C	Sioux 645L, 680, 2001 -Stem end - R/H
100 x 25 x 15,88	15A80N5V86 D0009	B	Sioux 645L - Valve face - L/H
100 x 32 x 15,88	15A46 L5V86 20R13B	G	Repco Synchro – Stem end – R/H
125 x 19 x 19,05	15A80N5V86 D0048	A	Wolf - Valve face - L/H
125 x 23 x 15,88	15A80N5V86 D0010	A	Black & Decker FE, TD - Valve face
125 x 23 x 12,23	1A80N5V86 D0001	D	Kwikway VS - Valve face - L/H
150 x 32 x 25,40	15A80N5V86 D0014	A	Repco Synchro
175 x 32 x 65	9A80L8V86 12R13B	G	PEG (white)
178 x 18 x 44,45	15A80N5V86	1	Sioux 2001, 680 - L/H
180 x 26 x 22,23	15A80N5V86 D0002	D	Kwikway SVS - L/H
200 x 10x41	8C100N5V1	1	Serdi (green)
200 x 10x41	9A80M6V86	1	Serdi (white)
215/182 x 35 x 76,2	9A80L8V86 D0053	11	Comec

ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Shape

All dimensions in millimetres.

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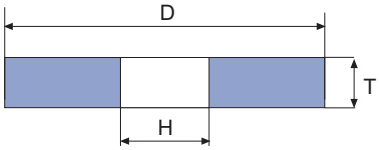
SPECIFICATIONS

CONROD GRINDING WHEELS

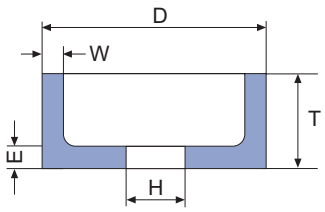
COLOUR - PINK



SHAPE	SIZE & SPECIFICATION	PACK QTY
1	45 x 13 x 20 11A46L5V86	5
1	50 x 13 x 20 11A46L5V86	5
1	55 x 13 x 20 11A46L5V86	5
1	60 x 13 x 20 11A46L5V86	5
1	65 x 13 x 20 11A46L5V86	5
1	70 x 13 x 20 11A46L5V86	5
1	75 x 13 x 20 11A46L5V86	5
1	80 x 13 x 20 11A46L5V86	5
1	85 x 13 x 20 11A46L5V86	5
1	90 x 13 x 20 11A46L5V86	5
1	95 x 13 x 20 11A46L5V86	5
1	100 x 13 x 20 11A46L5V86	5

ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Shape 1

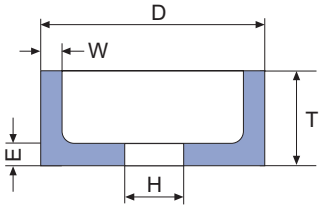
CAP & ROD GRINDING WHEELS



SIZE	SPECIFICATION	SHAPE	APPLICATION
150 x 50 x 31,75	15A46K8V86 20R16B	6	Sunnen 750 & 770
180 x 65 x 76,2	9A46K8V86 20R15B	6	Berco SBP 200
180 x 80 x 76,2	9A46K8V86 20R20B	6	Berco, CCL, Castono, Primo
180 x 80 x 78	9A46K8V86 20R20B	6	Robbi, Schledum

ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Rim width (W) x Back thickness (E)

SHIM GRINDING WHEELS



SIZE	SPECIFICATION	SHAPE	APPLICATION
100 x 50 x 31,75	9A60J6V86 13R13B	6	Piccinotti
100 x 50 x 31,75	9A80J5V86 13R13B	6	Piccinotti

Used with Reducing Bushes 31,75 – 20mm.

ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H)
– Specification – Rim width (W) x Back thickness (E)

All dimensions in millimetres.

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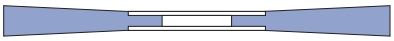
SPECIFICATIONS

CRANKSHAFT GRINDING WHEELS

TYPE 116

TYPE 26



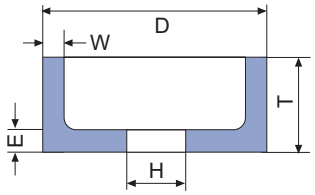
SPECIFICATION	D	T		H
		Type 116	Type 26	
A54LM6V86	650	19, 22, 25	28,30,32,35,38,40	152,4; 203,2; 225; 304,8
	700	19, 22, 25	28,30,32,35,38,40	152,4; 203,2; 225; 304,8
	750	19, 22, 25	28,30,32,35,38,40	152,4; 203,2; 225; 304,8
	800	19, 22, 25	28,30,32,35,38,40	152,4; 203,2; 225; 304,8

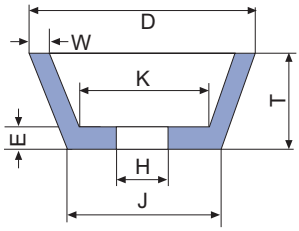
Other sizes available on request.

APPLICATIONS	
General purpose	A54 LM6V86
Rough welded crankshafts	A46 L5V86
Hard chrome	9A60 K5V86

ORDERING DATA:
Diameter (D) x Thickness (T) x Hole size (H) – Specification – Type

BRAKE & CLUTCH GRINDING WHEELS



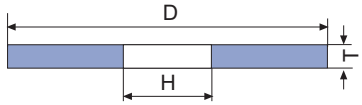


SIZE	SPECIFICATION	W	E
80 x 35 x 20	15A36 L5V86 o/s 40 x 20	20	15
80 x 35 x 20	6C46 R5V55 o/s 40 x 20	20	15

SIZE	SPECIFICATION	W	E	J	K
90/70 x 40 x 31,75	6C46 K8V1 T11(12 RIM)	12	10	70	45
	9A46 K5V86 T11(12 RIM)	12	10	70	45
100/80 x 40 x 31,75	9A46 K5V86 T11	8	13	80	66
125/95 x 45 x 31,75	9A46 K8V86 T11	8	13	95	76
125/100 x 65 x 31,75	6C36 J8V1 T11	13	13	100	75
	6C46 K6V1 T11	13	13	100	75
	9A46 K6V86 T11	13	13	100	75
150/120 x 65 x 31,75	6C36 J8V1` T11	15	15	120	85
	6C46 K6V1 T11	15	15	120	85
	9A46 K6V86 T11	15	15	120	85

ORDERING DATA:
Diameter (D) x Thickness (T) x
Hole size (H) – Specification – Shape

CAMSHAFT GRINDING WHEELS



SPECIFICATION	D	T	H
IA60 M5V86	350	25	127
IA60 M5V86	450	25	152,4

Other sizes and specifications available ex-manufacture.

ORDERING DATA: Diameter (D) x Thickness (T) x Hole size (H) – Specification

All dimensions in millimetres.

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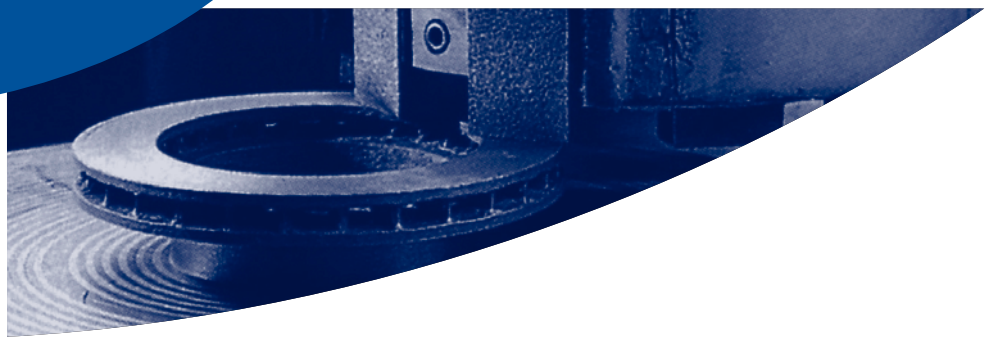
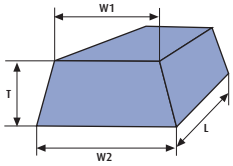


SPECIFICATIONS

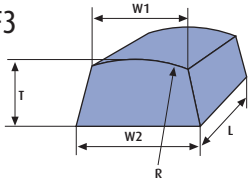
SURFACE GRINDING SEGMENTS

TYPE F2



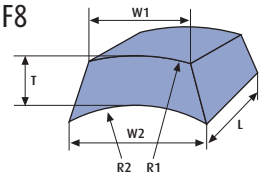
SIZE	MACHINE
53/45 x 16 x 80	AMC SG1400
53/45 x 16 x 100	AMC SG1400
59/48 x 21 x 120	Serdi; Robbi
63,5/44 x 20 x 100	Piccinotti Model 950; Matra
65/58 x 20 x 60	Exacta; Zanrosso (Baby); Technodue SP330M
65/58 x 20 x 80	Zanrosso G610

TYPE F3



SIZE	MACHINE
65/62 x 20 x 80 (F3a)	Schledum RVA 300S
65,4/57 x 25,4 x 100	Berco; Caorla PA400; Schledum RT 753; Serdi 1000, 1300; Technodue SG45; Zanrosso 1500
90/76 x 30 x 127	AMC PSI; Schou 330

TYPE F8



SIZE	MACHINE
50/45 x 16 x 90	Athena; Camurri; Schledum TF U5; Brembo; Sneider
51/46 x 16 x 90	Delta LC 500
53,5/47 x 16 x 110	Misal
80/72 x 20 x 90	Schledum RT17Y, RTM 370

SPECIFICATIONS:

BLACK :	6C46 K8B3-Z/6C36 I5VI
WHITE :	9A46 J8V86

ORDERING DATA:
Size – Specification – Type

All dimensions in millimetres.

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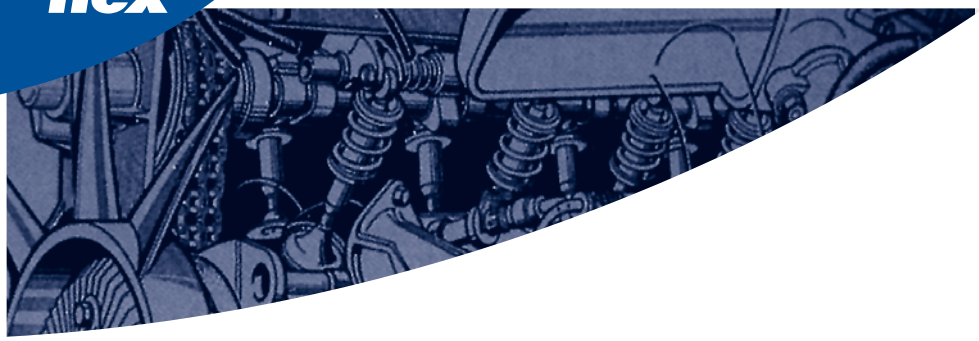
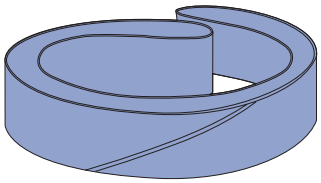
AUTOMOTIVE ENGINE RECONDITIONING



SPECIFICATIONS

CRANKSHAFT POLISHING BELTS

JA344
Aluminium Oxide Abrasive
"J" Weight – Extra Flexible Cloth Backing



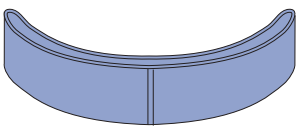
SIZE (WxL)	GRIT SIZES					PACK QTY
	P240	P320	P360	P400	P600	
20 x 1500	•	•	•	•	•	15
25 x 1500	•	•	•	•	•	12
25 x 1650	•	•	•	•	•	12
25 x 1850	•	•	•	•	•	12
25 x 2300	•	•	•	•	•	12

Other grits and sizes available ex manufacture.

ORDERING DATA:
Material – Grit size – Width (W) x Length (L)

BRAKE SHOE GRINDING BELTS

PA361/PZ633
90° join, full top skive belts
PA631: Aluminium Oxide Grain - Polyester Backing – Brown
PZ633: Zirconium Grain - Polyester Backing – Blue



SIZE (WxL)	GRIT SIZES	PACK QTY
	P36	
115 x 343	•	10
115 x 400	•	10
115 x 425	•	10
155 x 425	•	10
270 x 425	•	10
270 x 465	•	10
300 x 444	•	10

Other grits sizes available ex manufacture.

ORDERING DATA:
Material – Grit size – Width (W) x Length (L)

All dimensions in millimetres.

DRESSING PROCEDURES

Dressing of abrasive products usually consists of two stages:

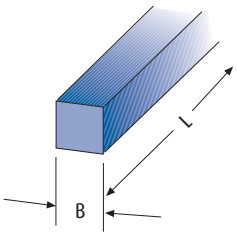
1. TRUEING Where the grinding face of the product is brought back into truth.

2. DRESSING Where the grinding face of the product is left with sharp, protruding grain particles, which results in a free-cutting abrasive surface and optimum grinding performance.
Dressing can be done offhand with abrasive dressing sticks, Boron Carbide dressing sticks, Huntington dressers or hand-held diamond dressers. Huntington Dressers are normally used on bench or floorstand machines. Precision dressing is normally done with single point or multipoint diamond dressers.

SPECIFICATIONS

ABRASIVE DRESSING STICK

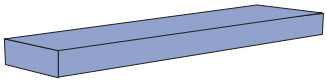
Shape A - Square



STANDARD SPECIFICATION	WIDTH	LENGTH
6C24 R5V55	25	150

ORDERING DATA:
Width x Length – Specification

BORON CARBIDE DRESSING STICK



SIZE	DESCRIPTION
76 x 13 x 8mm	Boron Carbide Dressing Stick

ORDERING DATA:
Size – Description

This hand held dressing stick is used to dress abrasive products. It will bring a worn grinding wheel back into truth, leaving an open wheel face ready ro remove stock.It is particularly effective when used to dress special shapes onto grinding wheels for profile grinding, or to “back off” cup grinding wheels or internal grinding wheels when grinding with the wheel face.

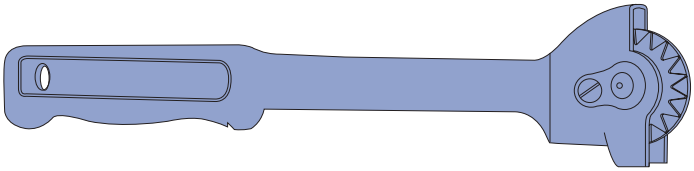
All dimensions in millimetres.

SPECIFICATIONS

HUNTINGTON GRINDING WHEEL DRESSERS

Huntington grinding wheel dressers consist of star cutters made of heat treated carbon steel. These cutters spin when applied against a moving grinding wheel to re-true and clean its surface. Huntington dressers are an excellent tool to restore a grinding wheel to its original condition. When properly used, a Huntington dresser will extend the life and dramatically increase the efficiency of a grinding wheel.

COMPLETE DRESSERS

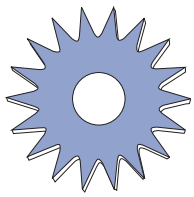


SIZE	LENGTH	WEIGHT Kg	GRINDING WHEEL DIA.	GRINDING WHEEL FACE	DRESSING FACE
No. 0	290	0,680	up to 250	50	13
No. 1	300	0,900	250 - 400	75	13
No. 2	380	2,270	400 - 900	100	25

ORDERING DATA:
Dresser size – Huntington Dresser

All dimensions in millimetres.

SPARE CUTTERS



CUTTER SET	DIMENSIONS	PACK QTY.
No. 0	32 x 2,4 x 6,35	10 sets
No. 1	38 x 2,4 x 12,7	10 sets
No. 2	60 x 3,2 x 15,1	1 set

ORDERING DATA:
Size – Spare Cutter

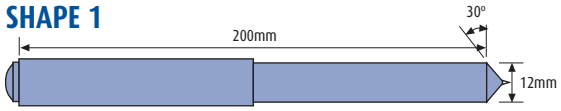
All dimensions in millimetres.

DIAMOND DRESSERS

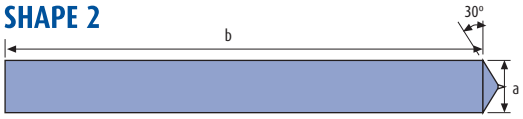
SPECIFICATIONS

SINGLE POINT DIAMOND DRESSERS

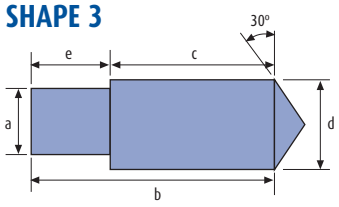
SHAPE 1



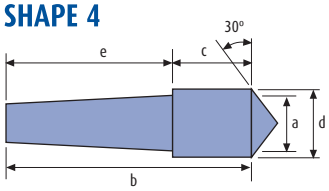
SHAPE 2



SHAPE 3

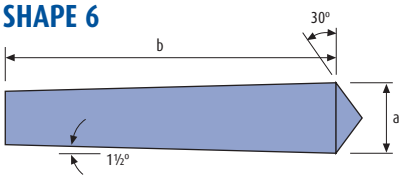


SHAPE 4



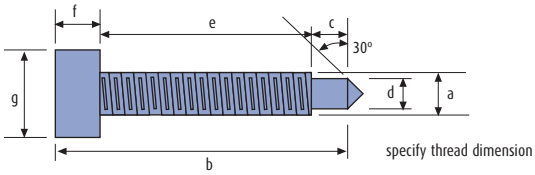
(No. 0 or No. 1 Morse Taper)

SHAPE 6

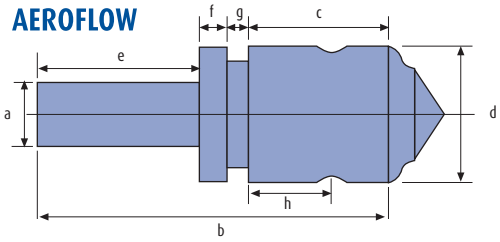


(No. 0 or No. 1 Morse Taper)

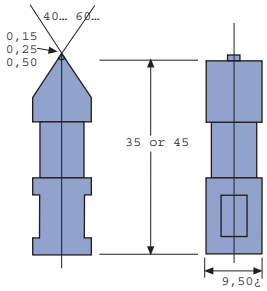
SHAPE 7



AEROFLOW



DIAFORM



DRESSER POINT SIZES
0,25 Carat Hand Desser
0,50 Carat Hand Dresser
0,75 Carat Hand Dresser
1,00 Carat Hand Dresser

ORDERING DATA:
Caratage – Shape – Dimensions (a, b, c etc) as required.

The standard tools supplied with each Diaform are:

Model 5/1 Pantograph ratio x 10	**Models 5/2 and 5/4** Pantograph ratio x 5
Tool Sizes	Tool Sizes
Rougher 60°/,020" (,500mm) approximately	Rougher 60°/,020" (,500mm) approximately
Finisher 40°/,005" (,125mm)	Finisher 40°/,010" (,250mm)
Finisher 60°/,010" (,250mm)	Finisher 60°/,010" (,250mm)
Overall Tool Lengths	Model 5/1 and 5/2, 1¾", (44,5mm)
	Model 5/4, 2¼", (57mm)

Note: Model 5/4 may have been supplied to special order with 1¾" (44,5mm) length tools.

All dimensions in millimetres.

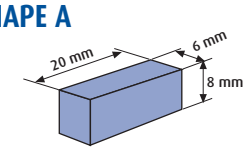
The specifications in this catalogue are recommendations only. For further information or special application specifications, please contact Grinding Techniques Technical Department (011) 271 6400 or email: info@grindtech.com

DIAMOND DRESSERS

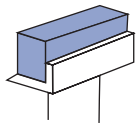
SPECIFICATIONS

MULTIPOINT (IMPREGNATED) DIAMOND DRESSERS

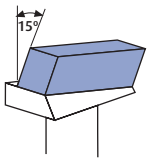
NIB SHAPE A



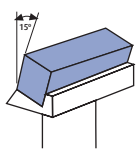
A1



A2



A3



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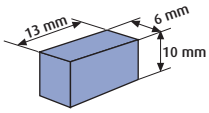
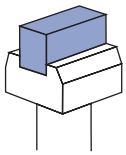
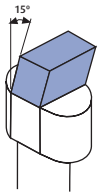


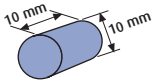
B1



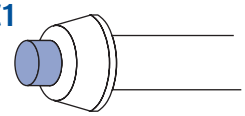
B2



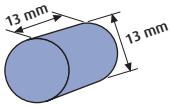
NIB SHAPE C



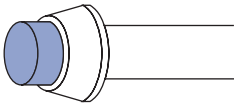
C1



NIB SHAPE D



D1



SHAPE	DESCRIPTION
A1	Standard Multipoint Diamond Dresser
A1	Gold Multipoint Diamond Dresser
B1	Standard Multipoint Diamond Dresser
C1	Standard Multipoint Diamond Dresser
D1	Standard Multipoint Diamond Dresser

ORDERING DATA:
Shape – Description

In many instances, Multipoints have replaced the traditional Single Point diamond dressers for trueing and dressing, except where intricate forms and profiles for extremely fine finishes are required. Multipoints often prove to give greater effective service life than Single Point tools. See application table on page 63 for recommended starting points or minimum requirements for use on wheels grit 46 and finer.

DIAMOND DRESSERS

APPLICATION TABLE

FIELD OF APPLICATION		SPECIFICATIONS	
	Wheel diameter	Multipoint	Single Point
Surface Grinding	0 – 180mm	C1	0,25 Carat
	200 – 250mm	B1/C1	0,50 Carat
	300 – 350mm	B1/C1	0,50 Carat
	400 – 450mm	A1/C1	0,75 Carat
	500mm+	A1/D1	1,00 Carat
Centreless Grinding	up to 400mm	A1/D1	1,00 Carat
	450 – 500mm	A1/D1	1,50 Carat
	500mm+	A1/D1	2,00 Carat
Cylindrical Grinding	up to 400mm	A1/D1	1,00 Carat
	450 – 500mm	A1/D1	1,50 Carat
	500mm+	A1/D1	2,00 Carat
Bench Grinder	0 – 300mm (offhand in holder)	C2	0,50 Carat

OPERATING PARAMETERS

INFEED

SINGLE POINT

Roughing
0,037 – 0,05mm
(1½ – 2 thou)

Finishing
0,012 – 0,025mm
(½ – 1 thou)

Normal
0,012mm (½ thou)

MULTIPOINT

Normal
0,0254mm (1 thou)
Can increase infeed up to
0,051mm (2 thou)

Note:
Initially, do (4-5) passes at 0,127mm (5 thou) to open face and ensure full contact

TRAVERSE RATE

SINGLE POINT
3,4 – 4,2mm/sec
0,05 – 0,15mm/rev

MULTIPOINT
5,1 – 10,2mm/sec
0,05 – 0,5mm/rev
Can increase traverse rate up to 17mm/sec for rapid stock removal

Slower traverse rates "close" the face of the wheel, resulting in less stock removal and improved workpiece finish. Faster traverse rates "open" the face of the wheel, resulting in greater stock removal and a rougher workpiece finish.

WORKING POSITIONS

SINGLE POINT
The tool should be presented to the wheel with a drag angle of between 5° – 15°, with the point of contact just below centre line of wheel.

MULTIPOINT
Multipoints should be presented to the wheel with full face contact.

COOLANT

A full flood of coolant should be used whilst dressing. Coolant should be switched on before any dressing is done.

INDEXING

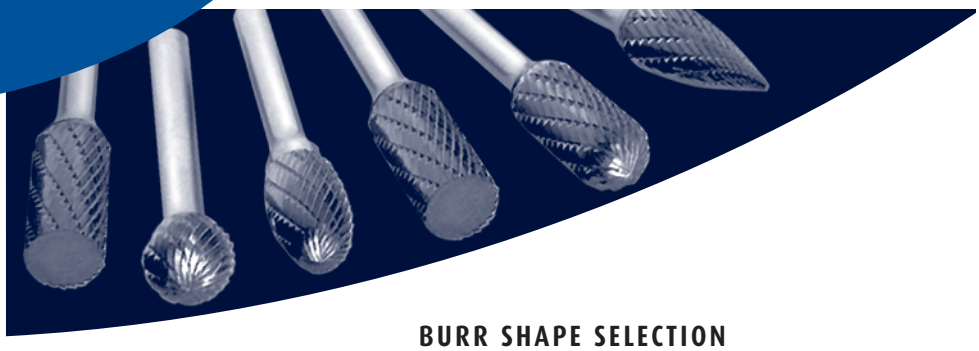
Single point dressers should be indexed at regular intervals to maintain a sharp point and to increase working life. The dresser should be rotated approx. 60° around its own axis.

A blunt single point diamond dresser is of no use as a dressing tool. All that it will do is true a grinding wheel; the blunt diamond will crush the abrasive grain back into the wheel face. A closed wheel face will not remove stock, and will often result in burning the workpiece.

All dimensions in millimetres.

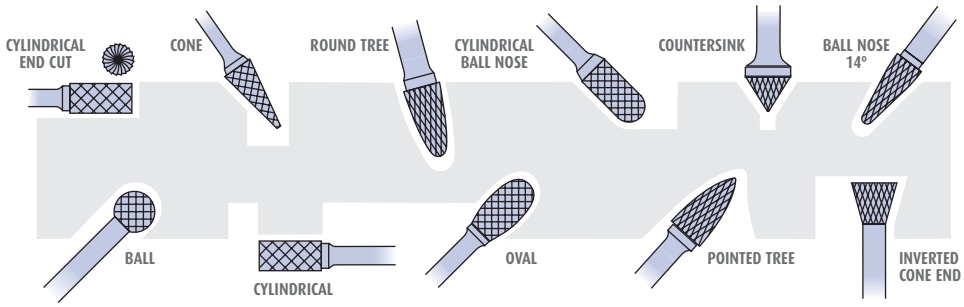
ANDOR

TUNGSTEN CARBIDE BURRS



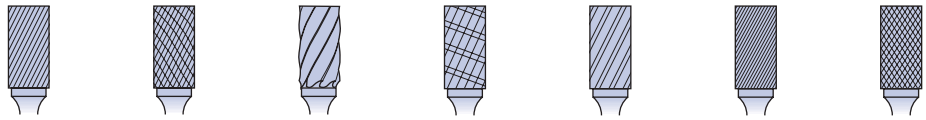
BURR SHAPE SELECTION

Select the shape which conforms to your workpiece. Maximize the area of contact between the tool and material. Having more of the cutting edge engaged in the material will improve the part finish.



CUTTING STYLE SELECTION

The choice of flute cut style is dependent on the type of material being machined, the amount of stock removal, and the finish required. In general, the harder the material being machined, the finer the cut should be.



STANDARD CUT | DOUBLE CUT | ALU CUT | CHIP BREAKER CUT | COARSE CUT | FINE CUT | DIAMOND CUT

It is also essential that adequate power and operating speed of the drive is used to ensure optimum performance and tool life; machine collets must be absolutely concentric to avoid chipping, and any tool runout will result in chatter and premature wear. Suitable lubricants (grease, paraffin, chalk, etc.) can be used to ease loading problems when machining soft materials.

The Double Cut fluting style can be used almost universally, and allows for rapid stock removal when machining the harder materials. This chisel tooth pattern not only minimizes tool chatter, but also reduces the chip to a granular shape in most materials, thereby reducing or eliminating the sharp sliver chips that are normally experienced. This chip reduction also helps to eliminate loading of the flutes. An improvement in tool control will be realized as the Double Cut tends to reduce the pulling action of the main flute pattern; operator fatigue is also lessened. Although some finish reduction may be experienced, improvement in material removal (and, therefore, increased production) will be realized.

For these reasons, Grinding Techniques (Pty) Ltd. stocks mainly Double Cut style burrs, although some sizes are also stocked in Standard Cut and Alu Cut; other flute styles are available ex-manufacture.

SPECIFICATIONS

BALL

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
CB 030303	3	2.4	3	38
CB 030306	3	2.4	6	50
CB 060603	6	5.5	3	43
CB 060606	6	5.5	6	50
CB 080806	8	6	6	50
CB 101006	10	9	6	53
CB 121206	12	10	6	54
CB 161606	16	14	6	58
CB 191906	19	17	6	62

CYLINDRICAL BALL NOSE

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
CR 020603	2	6	3	38
CR 031203	3	12	3	38
CR 061203	6	12	3	50
CR 061606	6	16	6	50
CR 062006	6	20	6	50
CR 082006	8	20	6	64
CR 102006	10	20	6	64
CR 122506	12	25	6	69
CR 162506	16	25	6	69

CYLINDRICAL END CUT

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
CE 031203	3	12	3	38
CE 031218	3,2	12	3.2	38
CE 062006	6	20	6	50
CE 082006	8	20	6	64
CE 102006	10	20	6	64
CE 122506	12	25	6	69
CE 162506	16	25	6	69

All dimensions in millimetres.

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TUNGSTEN CARBIDE BURRS

SPECIFICATIONS

OVAL

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
OV 030503	3	5	3	38
OV 061006	6	10	6	50
OV 101606	10	16	6	60
OV 122006	12	20	6	66
OV 162506	16	25	6	69
OV 162508	16	25	8	69

CONE

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
CO 031203	3	12	3	38
CO 031603	3	16	3	38
CO 061203	6	12	3	50
CO 062506	6	25	6	50
CO 102006	10	20	6	64
CO 122506	12	25	6	69
CO 162506	16	25	6	69

CYLINDRICAL

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
CP 031203	3	12	3	38
CP 062006	6	20	6	50
CP 082006	8	20	6	64
CP 102006	10	20	6	64
CP 122506	12	25	6	69
CP 162506	16	25	6	69
CP 162508	16	25	8	69

ROUND TREE

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
TR 031203	3	12	3	38
TR 061203	6	12	3	50
TR 062006	6	20	6	50
TR 102006	10	20	6	63
TR 122506	12	25	6	69
TR 162506	16	25	6	69

POINTED TREE

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
TP 031203	3	12	3	38
TP 061203	6	12	3	50
TP 062006	6	20	6	50
TP 082006	8	20	6	63
TP 102006	10	20	6	64
TP 122506	12	25	6	69
TP 202506	20	25	6	69

BALL NOSE 14° included angle

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
T 031203	3	12	3	38
T 061606	6	16	6	50
T 103006	10	30	6	71
T 123006	12	30	6	74
T 163006	16	30	6	74

COUNTERSINK

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
CO 120606-90°	12	6	6	53
CO 160806-90°	16	8	6	56
CO 121006-60°	12	10	6	58
CO 161306-60°	16	13	6	61

INVERTED CONE END

REFERENCE	CUTTER DIA	LENGTH OF CUT	SHANK DIA	OVERALL LENGTH
IC 060603	6	6	3	44
IC 101006	10	10	6	53
IC 121206	12	12	6	56

RECOMMENDED CUTTING SPEEDS:

ALU CUT STYLE BURRS

SOFT NON-FERROUS METALS:
(Brass, Copper, Zinc, Aluminium Alloys)

Coarse machining (High stock removal)	600 - 900 m/min
Fine machining (Deburring etc)	800 - 900 m/min

PLASTICS:
(Fibre Reinforced Plastics, Thermoplastics, Hard Rubber)

Coarse machining (High stock removal)	500 - 900 m/min
Fine machining (deburring etc)	500 - 900 m/min

DOUBLE CUT STYLE BURRS

STEEL & STEEL CASTINGS:

Non-hardened, non-heat treated steels up to 35 HRC	450 - 600 m/min
Hardened, heat treated steels over 35 HRC	250 - 350 m/min
STAINLESS STEELS	250 - 350 m/min

HARDENED NON-FERROUS METALS:
(Bronze, Titanium, Hard Aluminium)

Coarse machining (High stock removal)	250 - 350 m/min
Fine machining (Deburring etc)	350 - 450 m/min
NICKEL BASED ALLOYS	300 - 450 m/min
CAST IRON	450 - 600 m/min

CONVERSION CHART - meters per minute (m/min) to revolutions per minute (RPM)

Burr dia.	2	3	4	6	8	10	12	16	20
m/min	RPM								
250	39773	26515	19886	13258	9943	7955	6629	4972	3977
300	47727	31818	23864	15909	11932	9545	7955	5966	4773
350	55682	37121	27841	18561	13920	11136	9280	6960	5568
450	71591	47727	35795	23864	17898	14318	11932	8949	7159
500	79545	53030	39773	26515	19886	15909	13258	9943	7955
600	95455	63636	47727	31818	23864	19091	15909	11932	9545
900	143182	95455	71591	47727	35795	28636	23864	17898	14318

ORDERING DATA:
Specification – Cutting Style

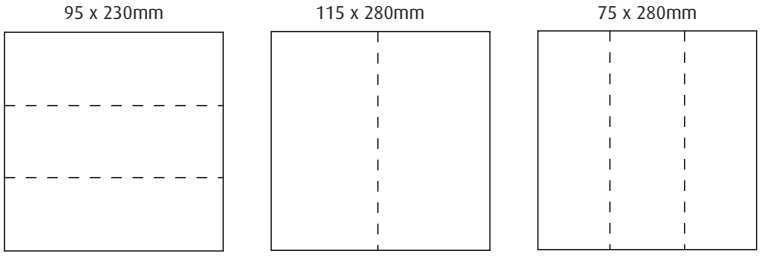
All dimensions in millimetres.

SANDPAPER GUIDE

MATERIAL & APPLICATION	SANDPAPER STRIPS				CABINET PAPER SHEETS			FINISHING PAPER SHEETS			WATER PAPER SHEETS			METAL CLOTH SHEETS		
	300mmx1m				230x280mm			230x280mm			230x280mm			230x280mm		
	P40	P60	P80	P100	P60	P80	P120	P150	P180	P220	P80	P120	P220	P60	P80	P100
	Coarse	Med/ Coarse	Med/ Fine	Fine	Coarse	Med.	Fine	Coarse	Med.	Fine	Coarse	Med.	Fine	Coarse	Med.	Fine
WOOD																
Stripping paint	D	D			D						D					
Heavy stock removal	D				D											
Moderate stock removal		D	D			D					D	D				
Finish prior to sealing				D			D		D	D		D	D			
Between coats - sealer/paint									D	D			D			
METAL																
Stripping paint	D	D									W			D	D	
Rust removal		D	D								W			D	D	
Heavy stock removal	D										W			D		
Moderate stock removal		D	D									W			D	
Finish prior to priming				D				D				W				D
Between paint coats									D	D			W			
PAINTS & LACQUERS																
Stripping walls and pools	D	D														
Roughing walls		D	D													
Between coats									D	D			W			
PLASTIC & FIBREGLASS																
Heavy stock removal	D				D						W					
Moderate stock removal		D	D			D		D				W				
Finishing									D	D			W			

USAGE CODE: RECOMMENDED GRIT SIZES: **D = USE DRY ONLY**
W = PREFERABLY USE WET

CUT SHEETS FOR ORBITAL & HAND SANDERS AS FOLLOWS:



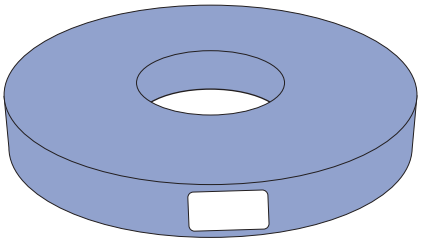
HANDY HINTS

Start with the coarsest recommended grit and work progressively through the next finer grades.
When sanding wood, always sand with the grain - never against it. Do not press too hard - use gentle, swift movements. Utilise a sanding block; using a hand (fingers) leaves an uneven surface.
Tap dust and debris out of the sandpaper at regular intervals to prevent premature clogging.
Observe basic safety precautions - wear a dust mask and goggles, and work in a well-ventilated area.

ABRASIVE ROLLS

SPECIFICATIONS

HANDY ROLLS – KA162

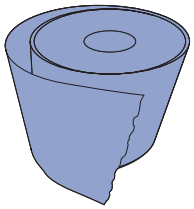


CODE	GRIT	WIDTH	LENGTH	PACK QTY
KA162	P40J	40mm	50m	1
	P60J	40mm	50m	1
	P80J	40mm	50m	1
	P100J	40mm	50m	1
	P120J	40mm	50m	1
	P150J	40mm	50m	1
	P180J	40mm	50m	1
	P240J	40mm	50m	1
KA162	P40J	50mm	50m	1
	P60J	50mm	50m	1
	P80J	50mm	50m	1
	P100J	50mm	50m	1
	P120J	50mm	50m	1
	P150J	50mm	50m	1
	P180J	50mm	50m	1
	P240J	50mm	50m	1

ORDERING DATA:
Grit size – Width x Length

GENERAL PURPOSE FLOORPAPER ROLLS

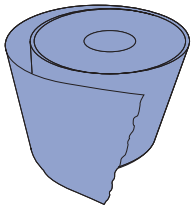
Black



GRIT	SIZE	DESCRIPTION	PACK QTY.
P40	300mm x 50m	GP Floorpaper Rolls	1
P60	300mm x 50m	GP Floorpaper Rolls	1
P80	300mm x 50m	GP Floorpaper Rolls	1
P100	300mm x 50m	GP Floorpaper Rolls	1

GENERAL PURPOSE SANDPAPER ROLLS

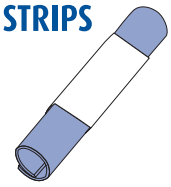
Yellow



GRIT	SIZE	DESCRIPTION	PACK QTY.
P40	300mm x 50m	EA367 Sandpaper Rolls	1
P60	300mm x 50m	DA367 Sandpaper Rolls	1
P80	300mm x 50m	DA367 Sandpaper Rolls	1
P100	300mm x 50m	DA367 Sandpaper Rolls	1

SANDPAPER STRIPS

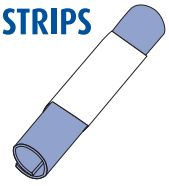
Yellow



GRIT	SIZE	DESCRIPTION	CASE QTY.
P40E	300mm x 1m	EA367 Sanding Strips	20
P60D	300mm x 1m	DA367 Sanding Strips	20
P80D	300mm x 1m	DA367 Sanding Strips	20
P100D	300mm x 1m	DA367 Sanding Strips	20

FLOORPAPER STRIPS

Black



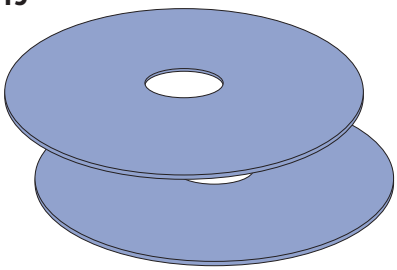
GRIT	SIZE	DESCRIPTION	CASE QTY.
P40E	300mm x 1m	GP Floorpaper Strips	20
P60D	300mm x 1m	GP Floorpaper Strips	20
P80D	300mm x 1m	GP Floorpaper Strips	20
P100D	300mm x 1m	GP Floorpaper Strips	20

ABRASIVE DISCS

SPECIFICATIONS

ALUMINIUM OXIDE FIBRE DISCS

VA113



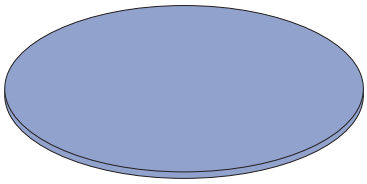
GRIT	DIAMETER	HOLE DIAM	PACK QTY	MAX. RPM
P24	100	16	25	145000
P36	100	16	25	145000
P60	100	16	25	145000
P80	100	16	25	145000
P100	100	16	25	145000
P24	115	22	25	13300
P36	115	22	25	13300
P60	115	22	25	13300
P80	115	22	25	13300
P100	115	22	25	13300
P120	115	22	25	13300
P16	178	22	25	8500
P24	178	22	25	8500
P36	178	22	25	8500
P50	178	22	25	8500
P60	178	22	25	8500
P80	178	22	25	8500
P100	178	22	25	8500
P120	178	22	25	8500
P36	230	22	25	6500
P60	230	22	25	6500
P80	230	22	25	6500

ORDERING DATA:
Material type – Grit size – Diameter x Hole size

Other grits and sizes available on request.

CLOTH & POLYESTER DISCS

XA517F: Aluminium Oxide – Resin Bond – "X" Weight Polyester



GRIT	DIAMETER	PACK QTY
P24 – P400	150	10
	180	10
	200	10
	230	10
	300	10

PA631: Aluminium Oxide – Resin Bond – "Y" Weight Cloth

GRIT	DIAMETER	PACK QTY
P36 – P400	150 – 300	10

PZ633: Zirconium – Resin Bond – "Y" Weight Polyester

GRIT	DIAMETER	PACK QTY
P36/P40/P60/P80	150 – 300	10

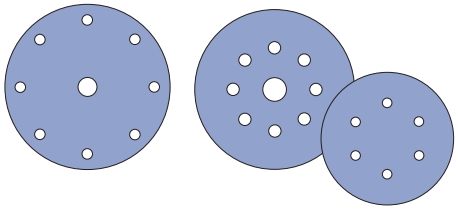
ORDERING DATA:
Material type – Grit size – Diameter

Other sizes and types available on request.

VELCRO & PSA DISCS

Supplied to customers specifications.

ORDERING DATA:
Material type – Grit size – Diameter – Shape type



All dimensions in millimetres.

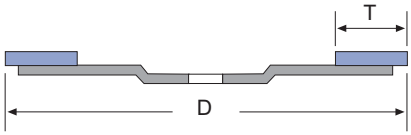
The specifications in this catalogue are recommendations only. For further information or special application specifications, please contact Grinding Techniques Technical Department (011) 271 6400 or email: info@grindtech.com

FLAP DISCS FOR PORTABLE MACHINES

SPECIFICATIONS

DIY FLAP DISCS

Aluminium Oxide Abrasive (A)



TYPE 27 - Flat

ABRASIVE TYPE	SIZE	TYPE	GRIT SIZES					MAX. RPM
			P24	P40	P60	P80	P120	
A	100 x 16	27		●	●	●		15280
A	115 x 22	27		●	●	●		13280
A	180 x 22	27		●	●	●		8600

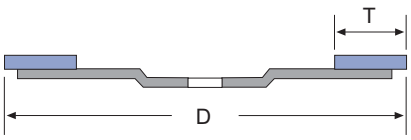
● Normal standard stock

ORDERING DATA:

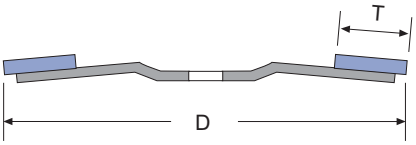
Abrasive type – Grit size – Size – Type

INDUSTRIAL FLAP DISCS

Zirconium Abrasive (AZ)



TYPE 27 - Flat



TYPE 29 - Angular

ABRASIVE TYPE	SIZE	TYPE	GRIT SIZES					MAX. RPM
			P24	P40	P60	P80	P120	
AZ	100 x 16	27	●	●	●	●	●	15280
AZ	115 x 22	27	●	●	●	●	●	13280
AZ	180 x 22	27	●	●	●	●	●	8600
AZ	115 x 22	29	●	●	●	●	●	13280
AZ	180 x 22	29	●	●	●	●	●	8600

● Normal standard stock ● Ex make (including other sizes)

ORDERING DATA:

Abrasive type – Grit size – Size – Type

OPERATING INSTRUCTIONS

NB. Address the flap disc at an angle of 30° to the workpiece for stock removal. Lessen the angle for the final blending passes. Let the flaps do the work; use less working pressure than for angle grinding discs for best grinding performance and life.

CHOICE OF GRIT SIZE

As starting points, we recommend:

- Grit 24 and 40: for aluminium and other soft non-ferrous metals, wood and plastics
- Grit 40 and 60: for alloyed and low-alloy steels
- Grit 60 and 80: for high alloyed, stainless, heat-treatable steels, and high tensile non-ferrous metals
- Grit 120: for a fine finish of metal surfaces

GRIT CONVERSION

Always choose a Flap Disc at least ONE GRADE COARSER than the Fibre Disc being used to obtain a similar finish with the same aggression:

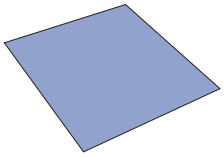
FIBRE DISC	P100	P80	P60	P36
FLAP DISC	P80	P60	P40	P24

All dimensions in millimetres.

ABRASIVE SHEETS: BULK PACKS

SPECIFICATIONS

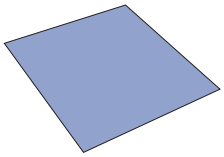
WATERPAPER SHEETS



GRIT	SIZE	DESCRIPTION	SALES QTY.
P80C	230 x 280	CC768 Waterpaper Sheets	100
P100C	230 x 280	CC768 Waterpaper Sheets	100
P120C	230 x 280	CC768 Waterpaper Sheets	100
P150C	230 x 280	CC768 Waterpaper Sheets	100
P180C	230 x 280	CC768 Waterpaper Sheets	100
P220A	230 x 280	AC768 Waterpaper Sheets	100
P280A	230 x 280	AC768 Waterpaper Sheets	100
P320A	230 x 280	AC768 Waterpaper Sheets	100
P360A	230 x 280	AC768 Waterpaper Sheets	100
P400A	230 x 280	AC768 Waterpaper Sheets	100
P600A	230 x 280	AC768 Waterpaper Sheets	100
P800A	230 x 280	AC768 Waterpaper Sheets	100
P1000A	230 x 280	AC768 Waterpaper Sheets	100
P1200A	230 x 280	AC768 Waterpaper Sheets	100

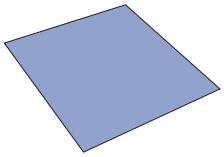
Other grits available on request.

CABINET PAPER SHEETS



GRIT	SIZE	DESCRIPTION	SALES QTY.
P40E	230 x 280	EA367 Cabinet Paper Sheets	100
P60D	230 x 280	DA367 Cabinet Paper Sheets	100
P80D	230 x 280	DA367 Cabinet Paper Sheets	100
P100D	230 x 280	DA367 Cabinet Paper Sheets	100
P120D	230 x 280	DA367 Cabinet Paper Sheets	100

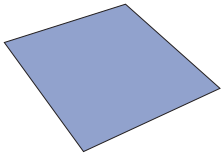
FINISHING PAPER SHEETS



GRIT	SIZE	DESCRIPTION	SALES QTY.
P150C	230 x 280	CCM66 Coarse Finishing Paper Sheets	100
P180A	230 x 280	ACM66 Medium Finishing Paper Sheets	100
P220A	230 x 280	ACM66 Fine Finishing Paper Sheets	100

Finishing Paper Sheets are Zinc Stearated.
Other grit sizes available on request.

METALCLOTH SHEETS



GRIT	SIZE	DESCRIPTION	SALES QTY.
P60	230 x 280	Coarse Metalcloth Sheets	100
P80	230 x 280	Medium Metalcloth Sheets	100
P100	230 x 280	Fine Metalcloth Sheets	100

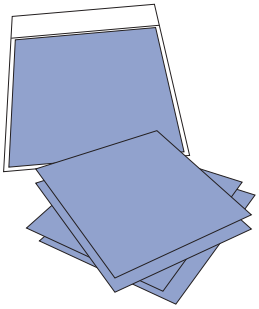
All dimensions in millimetres.

ABRASIVE SHEETS: PRE-PACKS

SPECIFICATIONS

WATERPAPER SHEETS

- 4 Sheets per pre-pack
- 25 pre-packs per case

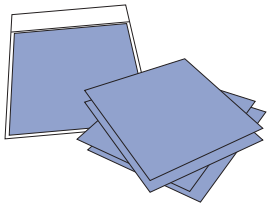


RECOMMENDED ABBREVIATED PRE-PACK STOCK RANGE			
GRIT	**SIZE**	**DESCRIPTION**	**CASE QTY.**
P80C	230 x 280	CC768 Coarse Waterpaper Sheets	25
P120C	230 x 280	CC768 Medium Waterpaper Sheets	25
P220A	230 x 280	AC768 Fine Waterpaper Sheets	25

ADDITIONAL GRIT SIZES AVAILABLE			
GRIT	**SIZE**	**DESCRIPTION**	**CASE QTY.**
P100C	230 x 280	CC768 Waterpaper Sheets	25
P150C	230 x 280	CC768 Waterpaper Sheets	25
P180C	230 x 280	CC768 Waterpaper Sheets	25
P320A	230 x 280	AC768 Waterpaper Sheets	25
P360A	230 x 280	AC768 Waterpaper Sheets	25
P400A	230 x 280	AC768 Waterpaper Sheets	25
P600A	230 x 280	AC768 Waterpaper Sheets	25
P800A	230 x 280	AC768 Waterpaper Sheets	25
P1000A	230 x 280	AC768 Waterpaper Sheets	25
P1200A	230 x 280	AC768 Waterpaper Sheets	25

CABINET PAPER SHEETS

- 4 Sheets per pre-pack
- 25 pre-packs per case

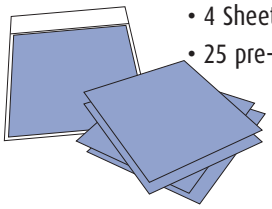


RECOMMENDED ABBREVIATED PRE-PACK STOCK RANGE			
GRIT	**SIZE**	**DESCRIPTION**	**CASE QTY.**
P60D	230 x 280	DA367 Coarse Cabinet Paper Sheets	25
P80D	230 x 280	DA367 Medium Cabinet Paper Sheets	25
P120D	230 x 280	DA367 Fine Cabinet Paper Sheets	25

ADDITIONAL GRIT SIZES AVAILABLE			
GRIT	**SIZE**	**DESCRIPTION**	**CASE QTY.**
P40E	230 x 280	EA367 Cabinet Paper Sheets	25
P100D	230 x 280	DA367 Cabinet Paper Sheets	25

FINISHING PAPER SHEETS

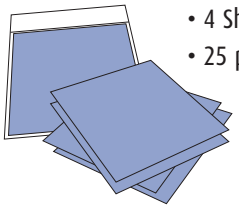
- 4 Sheets per pre-pack
- 25 pre-packs per case



RECOMMENDED ABBREVIATED PRE-PACK STOCK RANGE			
GRIT	**SIZE**	**DESCRIPTION**	**CASE QTY.**
P150C	230 x 280	CCM66 Coarse Finishing Paper Sheets	25
P180A	230 x 280	ACM66 Medium Finishing Paper Sheets	25
P220A	230 x 280	ACM66 Fine Finishing Paper Sheets	25

METALCLOTH SHEETS

- 4 Sheets per pre-pack
- 25 pre-packs per case

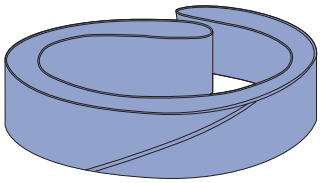


RECOMMENDED ABBREVIATED PRE-PACK STOCK RANGE			
GRIT	**SIZE**	**DESCRIPTION**	**CASE QTY.**
P60	230 x 280	Coarse Metalcloth Sheets	25
P80	230 x 280	Medium Metalcloth Sheets	25
P100	230 x 280	Fine Metalcloth Sheets	25

All dimensions in millimetres.

ABRASIVE BELTS

SPECIFICATIONS



All belts are made with high quality abrasives and backings using "Resin over Resin" adhesion methods of construction.
Belts can be made of any length, and up to 300mm width.

MATERIAL TYPES

XA167 **ALUMINIUM OXIDE ABRASIVE** – "X" Weight Polycotton Backing
For portable sanding belts

XA517F **ALUMINIUM OXIDE ABRASIVE** – "X" Weight Polycotton Backing
For general purpose – wood and metal – belts 1 metre and longer

YA635 **ALUMINIUM OXIDE ABRASIVE** – "Y" Weight Polycotton Backing
PA631 **ALUMINIUM OXIDE ABRASIVE** – "Y" Weight Full Polyester Backing – Upgrade of YA635
For metal - heavy duty work

YZ633 **ZIRCONIUM ABRASIVE** – "Y" Weight Polycotton Backing
PZ633 **ZIRCONIUM ABRASIVE** – "Y" Weight Full Polyester Backing – Upgrade of YZ633
For metal - extra heavy duty work

JA344 **ALUMINIUM OXIDE ABRASIVE** – Extra flexible "J" Weight Cloth Backing
For metal - especially crankshaft polishing

XC221 **SILICON CARBIDE ABRASIVE** – "X" Weight waterproof Cloth Backing
PC221 **SILICON CARBIDE ABRASIVE** – "Y" Weight Full Polyester Backing – Upgrade of XC221
For glass and non-ferrous products

JC122 **SILICON CARBIDE ABRASIVE** – Extra flexible "J" Weight Cloth Backing
For non-ferrous products

PZ343 **ZIRCONIUM ABRASIVE** – "Y" Weight Polyester Backing - OPENKOTE
For the leather trade

GRIT SIZES AVAILABLE

	24	36	40	50	60	80	100	120	150	180	220	240	280	320	360	400	600
XA167			●		●	●	●	●									
XA517F	●	●	●	●	●	●	●	●	●	●	●	●		●		●	
YA635/PA631		●			●	●	●	●		●	●			●		●	
JA344					●	●	●	●	●			●		●	●	●	●
YZ633/PZ633		●	●		●	●											
XC221/PC221					●	●		●									
JC221												●					
PZ343	●																

Other grit sizes available on request.

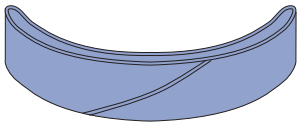
ABRASIVE BELTS

SPECIFICATIONS

All belts are made with high quality abrasives and backing using "Resin over resin" adhesion methods of construction.
Belts can be made to any length and up to 300mm wide.

XA167/XA517F PORTABLE BELTS – Bulk

Aluminium Oxide Abrasive
"X" Weight Polycotton Backing



Standard Grit Sizes: P40; P60; P80; P100; P120
Other grit sizes available on request.

ORDERING DATA:
Material type – Grit size – Length x Width

WIDTH	LENGTH	MINIMUM MAKE QTY	CONVERSION UNIT QTY
13	455	92	23
60	400	20	8
65	410	16	4
75	457	16	4
75	480	16	4
75	510	16	4
75	532	16	4
75	610	16	4
100	532	12	3
100	552	12	3
100	559	12	3
100	610	12	3
100	620	12	3
100	685	12	3
100	914	12	3
110	620	12	2

XA167 PORTABLE BELTS – 10 per box

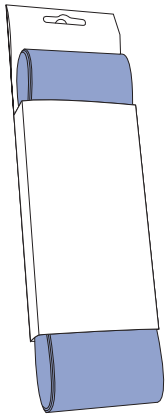
Aluminium Oxide Abrasive
"X" Weight Polycotton Backing

ORDERING DATA:
Material type – Grit size – Length x Width

WIDTH	LENGTH	QUANTITY PER BOX
75	532	10
75	610	10
100	559	10
100	610	10
100	914	10

Standard Grit Sizes: P40; P60; P80; P100; P120. Other grit sizes available on request.

PRE-PACKS



XA167 PORTABLE BELTS
2 per pack – 6 packs per case

ORDERING DATA:
Material type – Grit size – Length x Width

WIDTH	LENGTH	GRIT SIZE		
		P40	P60	P100
60	400	•	•	•
65	410	•	•	•
75	457	•	•	•
75	480	•	•	•
75	510	•	•	•
75	532	•	•	•
75	610	•	•	•
100	532	•	•	•
100	559	•	•	•
100	610	•	•	•
100	620	•	•	•
100	914	•	•	•
110	620	•	•	•

All dimensions in millimetres.

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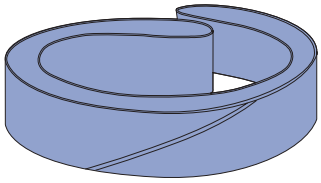
SPECIFICATIONS

PC221 GLASS & NON-FERROUS PRODUCTS Grinding/Polishing Belts

Silicon Carbide Abrasive
"Y" Weight Polyester Backing



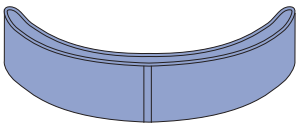
ORDERING DATA:
Material type – Grit size – Length x Width

WIDTH	LENGTH	MINIMUM MAKE QTY	CONVERSION UNIT QTY
25	480	48	12
30	530	40	10
100	610	12	3
100	1800	9	3
100	2400	9	3
100	2700	9	3
100	2830	9	3
100	3300	9	3
120	2400	6	2
120	2800	6	2

Standard Grit Sizes: P60; P80 and P120. Other grit sizes available on request.

PA631 BRAKE SHOE GRINDING BELTS

Aluminium Oxide Abrasive
"Y" Weight Full Polyester Backing



PZ633 BRAKE SHOE GRINDING BELTS

Zirconium Abrasive
"Y" Weight Full Polyester Backing

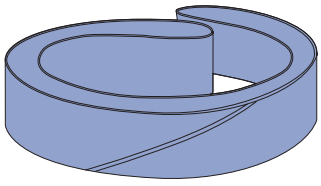
ORDERING DATA:
Material type – Grit size – Length x Width – 90° full top skive join

WIDTH	LENGTH	MINIMUM MAKE QTY	CONVERSION UNIT QTY
115	343	10	2
115	400	10	2
115	425	10	2
155	425	10	2
270	425	10	1
270	465	10	1
300	444	10	1

Standard Grit Sizes: P36. Other grit sizes available on request.

JA344 CRANKSHAFT POLISHING BELTS

Aluminium Oxide Abrasive
"J" Weight Extra Flexible Cloth Backing



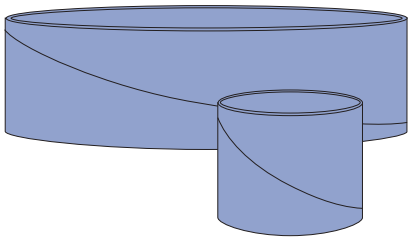
ORDERING DATA:
Grit size – Length x Width – Specification

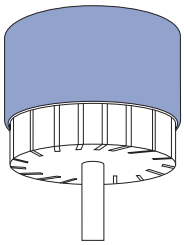
WIDTH x LENGTH	GRIT SIZES					PACK QTY
	P240	P320	P360	P400	P600	
20 x 1500	•	•	•	•	•	15
25 x 1500	•	•	•	•	•	12
25 x 1650	•	•	•	•	•	12
25 x 1850	•	•	•	•	•	12
25 x 2300	•	•	•	•	•	12

Other grits and sizes available on request.

EVENRUN BANDS/SPIRABANDS
NO LAP SLEEVES

SPECIFICATIONS





POPULAR SIZES	AVAILABLE GRIT SIZES					
Diameter x Height	P100	P80	P60	P50	P40	P36
10 x 10	•	•				
10 x 20	•	•				
12,7 x 25	•	•	•			
19 x 25	•	•	•			
25 x 25	•	•	•	•		
30 x 30	•	•	•	•		
38 x 25	•	•	•	•	•	
45 x 30	•	•	•	•	•	•
50 x 25	•	•	•	•	•	•
75 x 30	•	•	•	•	•	•

Evenrun bands are made from cloth backed abrasives, spirally-wound and bonded to an inner liner. They are used on expanding rubber drums for sanding and polishing into corners, curves, grooves and contours.
The spirally wound construction is designed to eliminate skipping and bumping, and increases the integral strength of the product.

Standard Grit Sizes:
P50 – P240. Finer grit sizes up to P600 are available. The coarser grit sizes (P24; P36; P40) are available for the larger diameter Evenrun Bands.

Diameter sizes available in mm:
10; 12,7; 19; 25; 30; 32; 38; 45; 50; 63,5; 70; 75; 80; 90; 100; 126,5

Maximum width available – 700mm.

Various minimum make quantities may apply.

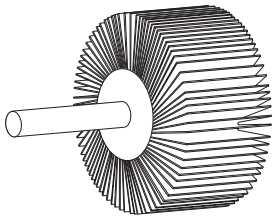
ORDERING DATA:
Grit Size – Diameter x Height

All dimensions in millimetres.

SPINDLE MOUNTED FLAP WHEELS

SPECIFICATIONS

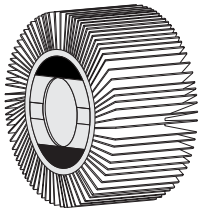
SPINDLE MOUNTED FLAP WHEELS



GRIT	DIA.	THICKNESS	SPINDLE DIA.	MAXIMUM RPM	RECOMM. RPM
P80X	30	10	6	18000	12000
P120X	30	10	6	18000	12000
P60X	40	15	6	18000	9600
P80X	40	15	6	18000	9600
P120X	40	15	6	18000	9600
P60X	40	20	6	18000	9600
P80X	40	20	6	18000	9600
P120X	40	20	6	18000	9600
P80X	50	10	6	12000	7000
P120X	50	10	6	12000	7000
P240X	50	10	6	12000	7000
P80X	50	15	6	12000	7000
P120X	50	15	6	12000	7000
P240X	50	15	6	12000	7000
P60X	50	20	6	12000	7000
P80X	50	20	6	12000	7000
P60X	50	30	6	12000	7000
P80X	50	30	6	12000	7000
P120X	50	30	6	12000	7000
P60X	60	30	6	10000	6300
P80X	60	30	6	10000	6300
P120X	60	30	6	10000	6300
P60X	60	40	6	10000	6300
P80X	60	40	6	10000	6300
P120X	60	40	6	10000	6300
P60X	80	40	6	7000	4800
P80X	80	40	6	7000	4800
P120X	80	40	6	7000	4800
P60X	80	50	6	7000	4800
P80X	80	50	6	7000	4800
P120X	80	50	6	7000	4800

ORDERING DATA:
Grit size – Diameter x Thickness – 6mm spindle
– Spindle Mounted Flap Wheel

ARBOR MOUNTED FLAP WHEELS



GRIT	DIA.	THICKNESS	HOLE DIA.	MAXIMUM RPM
P60X	150	25	25	5500
P80X	150	25	25	5500
P120X	150	25	25	5500
P120X	150	40	25	5500
P60X	150	50	25	5500
P80X	150	50	25	5500
P120X	150	50	25	5500

ORDERING DATA:
Grit size – Diameter x Thickness x Hole size
– Arbor Mounted Flap Wheel

All dimensions in millimetres.

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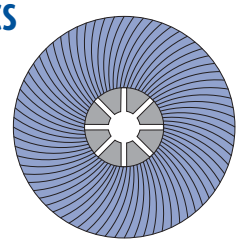
COATED MISCELLANEOUS

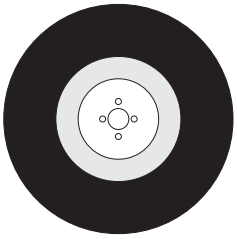
SPECIFICATIONS

CECROPS DISCS



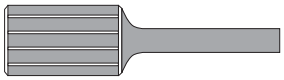
GRIT	WIDTH	THICKNESS	HOLE SIZE	PACK QTY
C16	180	3	22	25
F24	180	3	22	25

BACKUP PADS FOR FIBRE DISCS



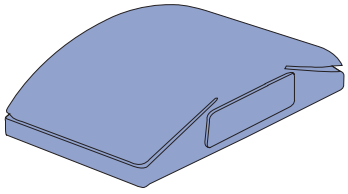
DESCRIPTION	PACK QTY
100 with M10 nut	1
100 with M14 nut	1
115 with M14 nut	1
178 with M14 nut	1
230 with M14 nut	1

EVENRUN BAND MANDRELS



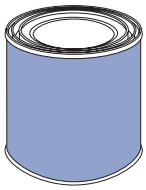
WIDTH	HEIGHT	SPINDLE	PACK QTY.
13	25	6	1
19	25	6	1
25	25	6	1

SANDING BLOCKS



DESCRIPTION	PACK QTY.
Rubber Sanding Block	1

COATED ABRASIVE DISC ADHESIVE



DESCRIPTION	PACK QTY
500ml can Feathering Disc adhesive	1

All dimensions in millimetres.

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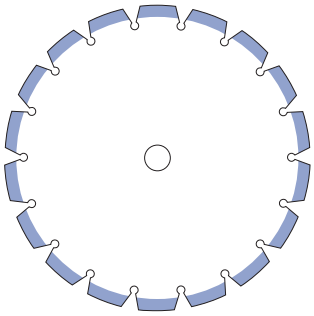
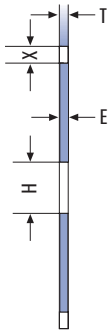
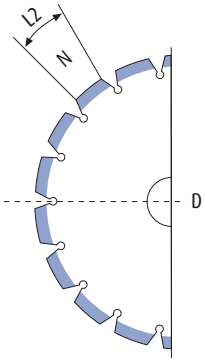
SPECIFICATIONS







STANDARD D.I.Y.

DESCRIPTION
115 x 22,2 Standard DIY
230 x 22,2 Standard DIY

* UNIVERSAL ECONOMY

*Lazerwelded

DESCRIPTION	N	E	SEGMENT DIMENSION
115 x 22,2 Universal Economy	8	1,5	35 x 2,4 x 5+2
230 x 22,2 Universal Economy	16	1,8	40 x 2,6 x 5+2

* UNIVERSAL PREMIUM

*Lazerwelded

DESCRIPTION	N	E	SEGMENT DIMENSION
115 x 22,2 Universal Premium	8	1,5	35 x 2,4 x 7+2
230 x 22,2 Universal Premium	16	1,8	40 x 2,6 x 7+2
300 x 25,4 Universal Premium	18	1,8	40 x 2,8 x 7+2
350 x 25,4 Universal Premium	21	1,8	40 x 2,8 x 7+2

* GRANITE UNIVERSAL STANDARD

*Lazerwelded

DESCRIPTION	N	E	SEGMENT DIMENSION
115x22,2 Granite Universal Standard	8	1,5	35 x 2,4 x 5+2
230x22,2 Granite Universal Standard	16	1,8	40 x 2,6 x 5+2

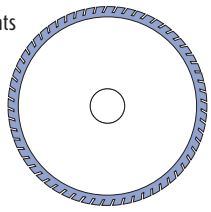
* GRANITE UNIVERSAL PREMIUM

*Lazerwelded

DESCRIPTION	N	E	SEGMENT DIMENSION
230x22,2 Granite Universal Premium	16	1,8	40 x 2,6 x 7+2

UNIVERSAL TURBO SEGMENTS Standard

Continuous rim-offset segments



DESCRIPTION
115x22,2 Universal Turbo Segments Std.
230x22,2 Universal Turbo Segments Std.

***Lazerwelded** – suitable for cutting of wire reinforced applications.

ORDERING DATA:

Type – Size – N – E – Segment Dimension

All dimensions in millimetres.

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ANDOR DIAMOND SAWS

APPLICATION TABLE

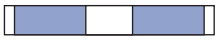
DIAMOND SAW	FIELD OF APPLICATION
Standard DIY	DIY use - bricks and concrete
Universal Economy	Industrial use - bricks and concrete
Universal Premium	High quality - bricks, concrete, terazzo, floor stones, lintels and walling
Granite Universal Standard	Granite, natural stone, concrete
Granite Universal Premium	High quality - granite, natural stone, concrete
Universal Turbo Segments Standard	Ceramics, tiles, stone, concrete, natural stone counter tops

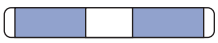
TYROLIT DIAMOND & CBN SUPERABRASIVES

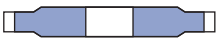
WHEEL SHAPES

Diamond Products are used to grind or cut cemented carbides (cemented with cobalt, tungsten, etc), certain die steels with high carbon content, ceramics, glass and non-ferrous metals.

Cubic Boron Nitride (CBN) Products are used to grind or cut difficult tool steels, especially nickel, iron or cobalt alloys, which are harder than 58 Rockwell "C" scale.


Shape 1A1


Shape 1L1

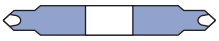

Shape 14A1

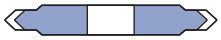
Shape 1A1R

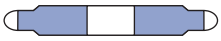
Shape 1F1R

Shape 14A1R

Shape 14F1R

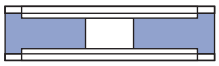

Shape 14E6Q


Shape 14EE1

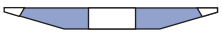

Shape 14F1


Shape 1FF1

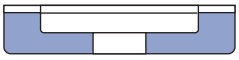

Shape 14U1

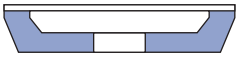

Shape 9A3


Shape 4A2

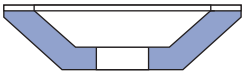

Shape 4ET9

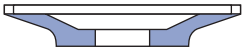

Shape 4BT9


Shape 6A2

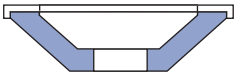

Shape 11A2

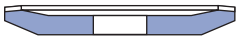

Shape 12A2

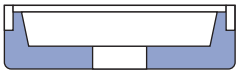

Shape 12A2D

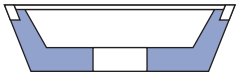

Shape 12A2F


Shape 12V2


Shape 12C2

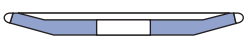

Shape 12V5


Shape 6A9

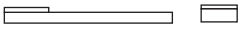

Shape 11V9


Shape 12V9


Shape 4C2-409


Shape 4C2-2204


Shape 1A8W/1A1W


Shape FHG

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SPECIFICATIONS

CHOICE OF CONCENTRATION		
High concentration:	125	5,5 carats
	100	4,4 carats
Normal concentration:	75	3,3 carats
	50	2,2 carats
Low concentration:	25	1,1 carats

CHOICE OF GRAIN/GRIT SIZES	
Rough grinding	251 – 126 grit
Finish grinding	107 – 76 grit
Fine & precision grinding	46 – 35 grit
	30 – 15 µm
	10 – 2 µm
Polishing	10 – 2 µm

CORE MATERIAL

Core Material	Damping Property	Heat Dissipation	Static Strength	Designation
Aluminium	Poor	Very good	Very good	AL
Aluminium/ resinoid compound	Medium	Adequate	Good	BA
Filled synthetic resin	Very good	Adequate	Adequate	BK
Wear-away core	Very good	Adequate	Adequate	BG
Steel	Poor	Very good	Excellent	ST

ECONOMICAL OPERATING SPEEDS (m/s)

	Diamond				CBN			
	Resin		Metal		Resin		Metal	
	WET	DRY	WET	DRY	WET	DRY	WET	DRY
Surface grinding	20-30		15-25		22-35		20-25	
Internal grinding	15-25	15-20	15-20	10-15	20-30	18-25	15-25	15-20
External cylindrical grinding	20-35		15-25		22-35		20-25	
Tool grinding	18-35	15-25	15-20	10-15	20-30	18-25	15-25	15-20

ORDERING DATA:

Shape	Core Dimensions Diam x Width x Bore	Coating Dimensions Diam x Width x Height	Grain Type	Grain Size	Concentr.	Bond	Core Material
4A2	150 x 22 x 32	150 x 10 x 2	D Diamond	126	C50	B	52
14A1	400 x 30 x 127	400 x 10 x 4	B CBN	151	C75	B	54

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RECOMMENDATIONS FOR BOND SELECTION	
METAL BOND	Produces finer surface finishes, but lower stock removal rates than Resin Bond. Used where a very rigid bonding is required, such as in offhand operations, for ceramics, glass and certain profile grinding.
RESIN BOND	Most popular bond, giving high stock removal rates and very cool grinding; used on carbides, welded alloys, alloyed structural and tool steels.
HARD BOND	Narrow abrasive coatings, long working life, long profile life required, wet grinding.
SOFT BOND	Wide abrasive coatings, workpieces sensitive to heat, dry grinding.

DIAMOND GRINDING WHEELS					
Grinding Process	**Softer**	**Standard**	**Harder**	**Wet**	**Dry**
Surface Grinding	B65	B52	B53	X	X
External Cylindrical Grinding		B52	B53	X	X
Internal Cylindrical Grinding	B78	B52	B53	X	X
Tool Grinding - DRY:					
Diamond width up to 3mm	B52	B73			X
Diamond width over 3mm		B52	B73		X
Tool Grinding - WET:					
Diamond width up to 3mm	B52	B74		X	
Diamond width over 3mm		B52	B74	X	
Creep-feed Grinding - Carbide Metal Tools					
Fluting operations		B42	B41	X	
Grinding open spaces		B74		X	
Relief grinding		B74	B42	X	
Sharpening of Tungsten Carbide Tipped Saws					
Face grinding		B74		X	
Clearance angle grinding (concentration)	B68/B68 100/75	B63/B65 100/75	B68/B68 120/90	X	
Tooth-flank grinding		B53	B42	X	
Groove with saw sharpening points		B41		X	
Polish grinding with fine grits		B61	B64	X	

CBN GRINDING WHEELS					
Grinding Process	**Softer**	**Standard**	**Harder**	**Wet**	**Dry**
Surface Grinding	B65	B54	B53	X	X
External Cylindrical Grinding		B54	B53	X	X
Internal Cylindrical Grinding	B65	B78	B54	X	X
Tool Grinding - DRY:					
CBN width up to 3mm		B85	B75		X
CBN width over 3mm		B54	B73		X
Tool Grinding - WET:					
CBN width up to 3mm		B74		X	
CBN width over 3mm		B54	B74	X	
Creep-feed Grinding - Carbide Metal Tools					
Fluting operations		B42	B41	X	
Grinding open spaces		B74		X	
Relief grinding		B74	B42	X	
Grinding Stellited saws		B74		X	
Polish grinding		B61	B64	X	

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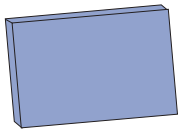
SPECIFICATIONS

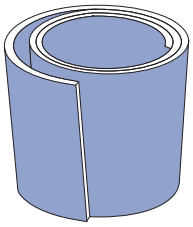
HAND PADS – CLEAN & FINISH



ORDERING DATA:
Type – Width x Length

TYPE	WIDTH	LENGTH	COLOUR	BOX QTY
Type A very fine	150mm	225mm	Maroon	20
General purpose	150mm	225mm	Green	20

CLEAN & FINISH ROLLS



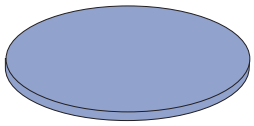
ORDERING DATA:
Type –Width – Length

TYPE	WIDTH	LENGTH	COLOUR
Type A medium	25mm	10m	Maroon
	50mm	10m	Maroon
	75mm	10m	Maroon
	100mm	10m	Maroon
	125mm	10m	Maroon
	150mm	10m	Maroon
	850mm	1m	Maroon
	850mm	10m	Maroon

Also available: Type A Very Fine - Maroon
Type A Fine - Maroon
Type A Coarse - Tan/Maroon
General Purpose - Green

SURFACE CONDITIONING DISCS

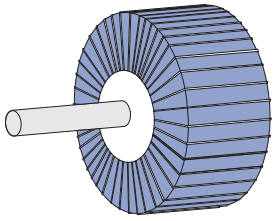
Hook & Loop



ORDERING DATA:
Type – Diameter

TYPE	DIAMETER	COLOUR	MIN QTY
Coarse	180mm	Brown	10
Medium	180mm	Maroon	10
Very Fine	180mm	Blue	10
Coarse	200mm	Brown	10
Medium	200mm	Maroon	10
Very Fine	200mm	Blue	10

SPINDLE MOUNTED FLAP WHEELS



ORDERING DATA:
Type – Diameter x Width

TYPE	DIAMETER	WIDTH
PGS – non-woven abrasive only	80mm	50mm
P80 PGC – non-woven & 80 grit abrasive	80mm	50mm
P120 PGC – non-woven & 120 grit abrasive	80mm	50mm

SPINDLE DIAMETER – 6mm

RECOMMENDED OPERATING SPEEDS: Wood: 5000 rpm
Metal: 1200 rpm

CONVERSION TABLE – SPEEDS

m/s to RPM

SPEEDS UP TO 35 m/s

WHEEL DIA. (mm)	MAXIMUM OPERATING SPEED IN m/s						
	10 m/s	12 m/s	16 m/s	20 m/s	25m/s	32 m/s	35m/s
6	31900	38200	51000	64000	80000	102000	112000
8	24000	29000	38200	48000	60000	76500	84000
10	19100	23000	30600	38200	48000	61200	67000
13	14700	17700	23550	29500	36800	47100	51500
16	11950	14350	19100	23900	29850	38200	41800
20	9550	11500	15300	19100	23900	30600	33500
25	7650	9200	12300	15300	19100	24500	26800
32	6000	7200	9550	11950	14950	19100	20900
40	4800	5750	7650	9550	11950	15300	16750
50	3850	4600	6150	7650	9550	12250	13400
63	3050	3650	4850	6100	7600	9750	10650
80	2400	2900	3850	4800	6000	7650	8400
100	1950	2300	3100	3850	4800	6150	6700
115	1700	2000	2700	3350	4200	5350	5850
125	1550	1850	2450	3100	3850	4900	5350
150	1300	1550	2050	2550	3200	4100	4500
180	1100	1300	1700	2150	2700	3400	3750
200	955	1150	1550	1950	2400	3100	3350
230	830	1000	1350	1700	2100	2700	2950
250	765	920	1250	1550	1950	2450	2700
300	640	765	1050	1300	1600	2050	2250
350/356	550	655	875	1100	1400	1750	1950
400/406	480	575	765	960	1200	1550	1700
450/457	425	510	680	850	1100	1400	1500
500/508	385	460	615	765	960	1250	1350
600/610	320	385	510	640	800	1050	1150
660	290	350	465	580	725	930	1050
750/762	255	310	410	510	640	820	895
800/813	240	290	385	480	600	765	840
900/914	215	255	340	425	535	680	750
1000/1016	195	230	310	385	480	615	670
1050/1067	185	220	295	365	455	585	640
1100/1120	175	210	280	350	435	560	610
1200/1220	160	195	255	320	400	510	560
1500/1525	130	155	205	255	320	410	450

RPM

m/s to RPM

SPEEDS OVER 35 m/s

WHEEL DIA. (mm)	MAXIMUM OPERATING SPEED IN m/s							
	40 m/s	45m/s	50 m/s	63m/s	80 m/s	100m/s	125m/s	140m/s
6	128000	143500	160000	201000				
8	95500	107500	120000	150500	191000			
10	76500	86000	95500	120500	153000	191000		
13	58800	66200	73500	92600	118000	147000	184000	
16	47800	53750	59700	75200	95500	120000	150000	168000
20	38200	43000	47800	60200	76500	95500	120000	134000
25	30600	34500	38200	48200	61200	76500	95500	107000
32	23900	27000	30000	37600	48000	60000	75000	84000
40	19100	21500	23900	30100	38200	47800	59700	67000
50	15300	17200	19100	24100	30600	38200	47750	53500
63	12150	13650	15200	19100	24300	30350	37900	42500
80	9550	10750	12000	15100	19100	23900	29850	33500
100	7650	8600	9550	12100	15300	19100	23900	26800
115	6650	7500	8350	10500	13300	16650	20800	23250
125	6150	6900	7650	9650	12250	15300	19100	21400
150	5100	5750	6400	8050	10200	12750	16000	17850
180	4250	4780	5350	6700	8500	10650	13300	14900
200	3850	4300	4800	6050	7650	9550	11950	13400
230	3350	3750	4200	5250	6650	8350	10400	11650
250	3100	3450	3850	4850	6150	7650	9550	10700
300	2550	2870	3200	4050	5100	6400	8000	8950
350/356	2200	2460	2750	3450	4400	5500	6850	7650
400/406	1950	2150	2400	3050	3850	4800	6000	6700
450/457	1700	1910	2150	2700	3400	4250	5350	5950
500/508	1550	1720	1950	2450	3100	3850	4800	5350
600/610	1300	1450	1600	2050	2550	3200	4000	4500
660	1200	1300	1450	1850	2350	2900	3650	4050
750/762	1050	1150	1300	1650	2050	2550	3200	3600
800/813	960	1075	1200	1550	1950	2400	3000	3350
900/914	850	955	1100	1350	1700	2150	2700	3000
1000/1016	765	860	960	1250	1550	1950	2400	2700
1050/1067	730	820	910	1150	1500	1850	2300	2550
1100/1120	695	785	870	1100	1400	1750	2200	2450
1200/1220	640	720	800	1050	1300	1600	2000	2250
1500/1525	510	575	640	805	1050	1300	1600	1800

RPM

The table above shows the maximum operating speed in rpm of the abrasive wheel or machine spindle for a given abrasive wheel diameter and preipheral operating speed in m/s.

$$\text{Speed in rpm} = \frac{60{,}000 \times \text{speed in m/s}}{\pi \times \text{diameter (mm)}}$$

$$\text{Speed in m/s} = \frac{\pi \times \text{diameter (mm)} \times \text{speed in rpm}}{60{,}000}$$

The specifications in this catalogue are recommendations only. For further information or special application specifications, please contact Grinding Techniques Technical Department (011) 271 6400 or email: info@grindtech.com

PHOTOSTAT THIS PAGE, COMPLETE THE ORDER FORM AND FAX TO: GRINDING TECHNIQUES (011) 271 6464

ORDER FORM

COMPANY _____

NAME _____

ADDRESS _____

_____

CODE _____

TEL. NO. _____

FAX NO. _____

EMAIL _____

To assure prompt processing of your order, please be sure to supply the following information:

	1. Wheel diameter
	2. Wheel thickness
	3. Bore
	4. Recess diameter by depth
	5. Operating speed of the wheel in RPM
	6. Speed in RPM of work piece
	7. If hand or machine work
	8. Type of machine
	9. Type of work
	10. If for wet or dry use
	11. Work piece or material to be ground
	12. Rockwell and Brinell hardness of the material to be ground
	13. Required finish
	14. Results obtained with the wheels previously used
	15. Any other useful information
	If you wish us to duplicate a wheel which has previously been successfully used, make sure to enclose a fragment of such a wheel where possible.

For further information, refer to the contents of this product catalogue, or contact:
Grinding Techniques (Pty) Ltd. – Telephone (011) 271 6400 – Email: info@grindtech.com

Grinding Techniques (Pty) Ltd.

Grinding Techniques (Pty) Ltd. range of products includes:

- **"SUPERFLEX"** and **"ANDORFLEX"** abrasive cutting wheels and angle grinding wheels.
- **"ANDOR"** – Vitrified and Resinoid bonded grinding wheels – straight or special shapes.
  – abrasive segments, rubbing bricks and dressing sticks.
  – abrasive mounted points, grinding cones and Tungsten Carbide burrs.
  – abrasive oilstones, files and polishing points.
- **"SANDFLEX"** Coated Abrasives – sheets, rolls, discs, locally converted abrasive belts, sanding bobbins and locally manufactured flap discs.
- **"TYROLIT"** – abrasive, diamond and CBN products.

ANDOR®

satin flex®

TYROLIT

super flex®

sandflex®

Grinding Techniques (Pty) Ltd.
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Website: www.grindtech.com

SUPERFLEX
SURFACE CONDITIONING

A Company of the TYROLIT Group
www.grindtech.com

Grinding Techniques

Grinding Techniques

Grinding Techniques was founded in Chamdor (Krugersdorp) in 1981 with the aim of supplying specialised grinding products for the industrial market. Since then, our company has developed into an important force in the industrial abrasives market. With an extensive range of high quality cut-off and grinding wheels, specialised industrial and diamond tools and a wide range of surface finishing tools, you will always find the right product for your application.

Since 2014, Grinding Techniques is an important part of the global TYROLIT Group, one of the world's leading manufacturers of grinding and dressing tools and a system provider for the construction industry based in Austria.

Grinding Techniques headquarters in Chamdor (Krugersdorp)

The TYROLIT Group

TYROLIT is one of the world’s leading manufacturers of grinding and dressing tools as well as a system provider for the construction industry.

Since 1919, TYROLIT stands for products of the highest quality, innovation and service strength. Headquartered in Schwaz (Austria), the Tyrolean family-owned business combines the strengths of being a part of the dynamic Swarovski Group with a century’s worth of individual corporate and technological experience. With more than 4,500 employees at 29 production sites in 11 countries, the TYROLIT Group manufactures over 80,000 different products in three business divisions.

Symbols

Refer to instructions

Wear goggles

Wear ear protection

Wear gloves

Wear a mask

Not permitted for side grinding

Not permitted for wet grinding

Off-hand and hand grinding not permitted

Do not use damaged disc

Cast iron

Concrete

High alloy steel

Non-ferrous metals

Rails

Stainless steel

Steel

Stone

2-in-1

Non-ferrous 2-in-1

Straight grinder

Angle grinder

Bench Grinder

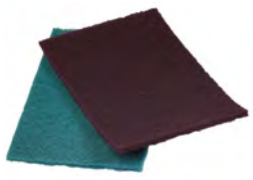
Non-Woven Abrasives

Non-Woven abrasives, also referred to as three dimensional abrasives, are abrasive grains bonded to flexible nylon fibers that allow for a consistent finish with the "open-weave" construction providing a continuous supply of new grain as the fiber and old grain wears away

Non-Woven Handpads

Ideal for cleaning of welds, grind line finishing, intermediate sanding of lacquer and paint as well as cleaning of rust and coatings

Application: Universal Use



Dimensions (mm)	Specification	Part Number	PU
152X229	NON WOVEN HAND PAD MEDIUM (MAROON)	4900HP152229MM	10
152X229	NON WOVEN HAND PAD FINE (MAROON)	4900HP152229FM	10
152X229	NON WOVEN HAND PAD VERY FINE (MAROON)	4900HP152225VFM	10
152X229	NON WOVEN HAND PAD GP (GREEN)	4900HP152229GPG	10

Non-Woven Handpad 2-and-5 Packs

Ideal for cleaning of welds, grind line finishing, intermediate sanding of lacquer and paint as well as cleaning of rust and coatings

Application: Universal Use

Dimensions (mm)	Specification	Part Number	PU
152X229	MEDIUM (MAROON) HAND PAD 2 PACK	4900HP152229M2	2
152X229	FINE (MAROON) HAND PAD 2 PACK	4900HP152229F2	2
152X229	GP (GREEN) HAND PAD 2 PACK	4900HP152229G2	2
152X229	MEDIUM (MAROON)/GP (GREEN) HAND PAD 2 PACK	4900HPCOMBOM2	2
152X229	FINE (MAROON)/GP (GREEN) HAND PAD 2 PACK	4900HPCOMBOF2	2
152X229	MEDIUM (MAROON) HAND PAD 5 PACK	4900HP152229M5	5
152X229	FINE (MAROON) HAND PAD 5 PACK	4900HP152229F5	5
152X229	GP (GREEN) HAND PAD 5 PACK	4900HP152229G5	5

Non-Woven Rolls

Application: Universal Use

Dimensions (mm)	Specification	Part Number	PU
75x10 000	NON WOVEN HAND ROLL MEDIUM (MAROON)	6991A75010NWMMR	1
75x10 000	NON WOVEN HAND ROLL FINE (MAROON)	6991A75010NWFMR	1
75x10 000	NON WOVEN HAND ROLL VERY FINE (MAROON)	6991A75010NWVFMR	1
75x10 000	NON WOVEN HAND ROLL GP (GREEN)	6991A75010NWGPGR	1
150X10 000	NON WOVEN HAND ROLL MEDIUM (MAROON)	6991B06010NWMMRN	1
150X10 000	NON WOVEN HAND ROLL FINE (MAROON)	6991B06010NWFMR	1
150X10 000	NON WOVEN HAND ROLL VERY FINE (MAROON)	6991B06010NWVFMR	1
150X10 000	NON WOVEN HAND ROLL GP (GREEN)	6991B06010NWGPGR	1

Cleaning

Non-Woven Rough Cleaning Disc

Rough cleaning wheels with coarser thicker nylon fibres allow for excellent surface preparation before welding, soldering or anodizing, offering an ideal solution for cleaning welds, removing corrosion, rust, scale and paints without excessive stock removal

Application: Cleaning Steel, Cast Iron, Stainless Steel, Non-Ferrous, Titanium, Composites and Paint

Dimensions DXH (mm)	Specification	Part Number	PU
115X22.23	ROUGH CLEANING DISC	4900N11522CB	1

Conditioning

Non-Woven Flap Disc

Non-Woven flap discs offer a faster and more economical method of stripping, blending, preparation and finishing

Application: Conditioning Steel, Cast Iron, Stainless Steel, Non-Ferrous, Titanium, Composites and Paint

Dimensions DXH (mm)	Specification	Part Number	PU
115X22.23	NON WOVEN FLAP DISC COARSE	4900NFD11522C5	5
115X22.23	NON WOVEN FLAP DISC MEDIUM	4900NFD11522M5	5
115X22.23	NON WOVEN FLAP DISC VERY FINE	4900NFD11522VF5	5
115X22.23	NON WOVEN FLAP DISC COARSE	4900NFD11522CR	1
115X22.23	NON WOVEN FLAP DISC MEDIUM	4900NFD11522MR	1
115X22.23	NON WOVEN FLAP DISC VERY FINE	4900NFD11522VFR	1

Unitised

Non-Woven Unitised Disc

Unitised wheels are compressed non-woven abrasives. Their unique composition make them a perfect tool for deburring, finishing, cleaning and blending as well as pre-polishing, just to name a few.

Application: Pre-Polishing Steel, Stainless Steel, Non-Ferrous, Composites and Titanium

Dimensions DXH (mm)	Specification	Part Number	PU
115X22.23	PREMIUM CONDITIONING DISC FINE-P (Grey)	4900N11522FP	1

Polishing

Non-Woven Felt Polishing Disc

Application: Pre-Polishing Steel, Stainless Steel, Non-Ferrous, Composites and Titanium

Dimensions DXH (mm)	Specification	Part Number	PU
115X22.23	PREMIUM CONDITIONING DISC SHF (White)	4900N11522SHF	1

SUPERFLEX Buffing Wheels and Compounds

Buffing applications follow polishing and refines metallic/ non-metallic surfaces.

A range of cloth wheels are available to suit bench-and-buffing machines with pigtails or spindles and straight-or-die grinders

SUPERFLEX Denim Colour Stitched Buff

Application: Steel, stainless steel, non-ferrous, cast iron, stone, plastic, high speed steel, composites, glass

Dimensions DxT (mm)	Specification	Part Number	PU
150MMX1 SECTION (12.5mm)	DENIM COLOUR STITCHED BUFF	9010CD150S1S	1
150MMX2 SECTION (25mm)	DENIM COLOUR STITCHED BUFF	9010CD150S2S	1
200MMX1 SECTION (12.5mm)	DENIM COLOUR STITCHED BUFF	9010CD200S1S	1
200MMX2 SECTION (25mm)	DENIM COLOUR STITCHED BUFF	9010CD200S2S	1
250MMX1 SECTION (12.5mm)	DENIM COLOUR STITCHED BUFF	9010CD250S1S	1
250MMX2 SECTION (25mm)	DENIM COLOUR STITCHED BUFF	9010CD250S2S	1
300MMX1 SECTION (12.5mm)	DENIM COLOUR STITCHED BUFF	9010CD300S1S	1
300MMX2 SECTION (25mm)	DENIM COLOUR STITCHED BUFF	9010CD300S2S	1
150MMX1 SECTION (12.5mm)	DENIM COLOUR STITCHED BUFF 1 PACK	9010CD150S1SB	1
150MMX2 SECTION (25mm)	DENIM COLOUR STITCHED BUFF 1 PACK	9010CD150S2SB	1
200MMX1 SECTION (12.5mm)	DENIM COLOUR STITCHED BUFF 1 PACK	9010CD200S1SB	1
200MMX2 SECTION (25mm)	DENIM COLOUR STITCHED BUFF 1 PACK	9010CD200S2SB	1

Additional sizes available on request

SUPERFLEX Sisal Buff

Application: Steel, stainless steel, non-ferrous, cast iron, stone, plastic, high speed steel, composites, glass

Dimensions DxT (mm)	Specification	Part Number	PU
150MMX1 SECTION (12.5mm)	SISAL STITCHED BUFF	9010C150SS1S	1
150MMX2 SECTION (25mm)	SISAL STITCHED BUFF	9010C150SS2S	1
200MMX1 SECTION (12.5mm)	SISAL STITCHED BUFF	9010C200SS1S	1
200MMX2 SECTION (25mm)	SISAL STITCHED BUFF	9010C200SS2S	1

Additional sizes available on request

SUPERFLEX Stitched Ball Mop Cotton Buff

Application: Steel, stainless steel, non-ferrous, cast iron, stone, plastic, high speed steel, composites, glass

Dimensions DxTxH (mm)	Specification	Part Number	PU
150MMX1 SECTION (12.5mm)	BALL MOP COTTON BUFF STITCHED	9010CB150S1BS	1
150MMX2 SECTION (25mm)	BALL MOP COTTON BUFF STITCHED	9010CB150S2BS	1
200MMX1 SECTION (12.5mm)	BALL MOP COTTON BUFF STITCHED	9010CB200S1BS	1
200MMX2 SECTION (25mm)	BALL MOP COTTON BUFF STITCHED	9010CB200S2BS	1
150MMX1 SECTION (12.5mm)	BALL MOP COTTON BUFF STITCHED - PACKAGED	9010CB150S1BSB	1
150MMX2 SECTION (25mm)	BALL MOP COTTON BUFF STITCHED - PACKAGED	9010CB150S2BSB	1
200MMX1 SECTION (12.5mm)	BALL MOP COTTON BUFF STITCHED - PACKAGED	9010CB200S1BSB	1
200MMX2 SECTION (25mm)	BALL MOP COTTON BUFF STITCHED - PACKAGED	9010CB200S2BSB	

Additional sizes available on request

SUPERFLEX Loose Leaf Ball Mop Cotton Buff

Application: Steel, stainless steel, non-ferrous, cast iron, stone, plastic, high speed steel, composites, glass

Dimensions DxTxH (mm)	Specification	Part Number	PU
150MMX25 FOLD	BALL MOP COTTON BUFF LOOSE LEAF	9010CB15025LL25F	1
150MMX50 FOLD	BALL MOP COTTON BUFF LOOSE LEAF	9010CB15050LL50F	1
200MMX25 FOLD	BALL MOP COTTON BUFF LOOSE LEAF	9010CB20025LL25F	1
200MMX50 FOLD	BALL MOP COTTON BUFF LOOSE LEAF	9010CB20025LL50F	1
150MMX25 FOLD	BALL MOP COTTON BUFF LOOSE LEAF - PACKAGED	9010CB15025LL25FB	1
150MMX50 FOLD	BALL MOP COTTON BUFF LOOSE LEAF - PACKAGED	9010CB15050LL50FB	1
200MMX25 FOLD	BALL MOP COTTON BUFF LOOSE LEAF - PACKAGED	9010CB20025LL25FB	1
200MMX50 FOLD	BALL MOP COTTON BUFF LOOSE LEAF - PACKAGED	9010CB20025LL50FB	1

Additional sizes available on request

SUPERFLEX Polishing and Finishing Compounds

Application: Stainless steel, steel, titanium, plastic

Specification	Part Number	PU
C3 WHITE POLISHING AND FINISHING COMPOUND	9010CWHITEC3	1
S33 WHITE POLISHING AND FINISHING COMPOUND	9010CWHITES33	1
S33 WHITE POLISHING AND FINISHING COMPOUND - PACKAGED	9010CWHITES33B	1

SUPERFLEX Polishing and Finishing Compounds

Application: Steel, stainless steel, cast iron, high speed steel

Specification	Part Number	PU
BLUE POLISHING AND FINISHING COMPOUND	9010CBLUEPOLC	1
BLUE POLISHING AND FINISHING COMPOUND - PACKAGED	9010CBLUEPOLCB	1

SUPERFLEX Polishing and Finishing Compounds

Application: Non-ferrous metals

Specification	Part Number	PU
BROWN AND GLO NF POLISHING AND FINISHING COMPOUND	9010CGBNFPOLC	1
BROWN AND GLO NF POLISHING AND FINISHING COMPOUND - PACKAGED	9010CGBNFPOLCB	1

Superflex Rollers for burnishing machines

SUPERFLEX A/O Abrasive Roller

Application: Steel, stainless steel, wood

Dimensions DxTxH (mm)	Specification	Part Number	PU
100 X 100 X 19.1 S4	SUPERFLEX A/O ROLLER P40	4900KA100DS4040	1
100 X 100 X 19.1 S4	SUPERFLEX A/O ROLLER P60	4900KA100DS4060	1
100 X 100 X 19.1 S4	SUPERFLEX A/O ROLLER P80	4900KA100DS4080	1
100 X 100 X 19.1 S4	SUPERFLEX A/O ROLLER P120	4900KA100DS4120	1
100 X 100 X 19.1 S4	SUPERFLEX A/O ROLLER P180	4900KA100DS4180	1

Additional sizes available on request

SUPERFLEX Combination Non-Woven Rollers

Application: Steel, stainless steel, wood

Dimensions DxTxH (mm)	Specification	Part Number	PU
100 X 100 X 19.1 S4	SUPERFLEX ROLLER P60 & A MEDIUM	4900KA100DS4060A	1
100 X 100 X 19.1 S4	SUPERFLEX ROLLER P80 & C MEDIUM	4900KA100D4S4080C	1
100 X 100 X 19.1 S4	SUPERFLEX ROLLER P100 & C FINE	4900KA100DS4100C	1
100 X 100 X 19.1 S4	SUPERFLEX ROLLER P150 & C FINE	4900KA100DS4150C	1

Additional sizes available on request

SUPERFLEX Non-Woven Conditioning Rollers

Application: Steel, stainless steel, wood

Dimensions DxTxH (mm)	Specification	Part Number	PU
100 X 100 X 19.1 S4	SUPERFLEX ROLLER A COARSE	4900KA100DS4C	1
100 X 100 X 19.1 S4	SUPERFLEX ROLLER A MEDIUM	4900KA100DS4M	1
100 X 100 X 19.1 S4	SUPERFLEX ROLLER A FINE	4900KA100DS4F	1
100 X 100 X 19.1 S4	SUPERFLEX ROLLER A VERY FINE	4900KA100DS4VF	1

Additional sizes available on request

GRINDING TECHNIQUES (PTY) LTD
28 Van Eck Street, Chamdor, Krugersdorp, Gauteng, South Africa
PO Box 51, Krugersdorp, 1740, South Africa
Tel +27 11 271 6400 | Fax to email 086 656 6989
info@grindtech.com

SUPERFLEX

Curve cutting disc

A Company of the TYROLIT Group
www.grindtech.com

Grinding Techniques

THE WORLD'S FIRST SHAPE 28 THIN DISC

- FOR HAND HELD ANGLE GRINDERS

Product innovation, designed and manufactured by Grinding Techniques in accordance with European Safety Standardss ensures exceptional safety for hand held radii and contour cutting.

- Construction and safety in accordance with European Safety standards
- Suitable for stainless and carbon steel

APPLICATION RESTRICTIONS

- Not suitable for profiles and solid metals
- Not suitable for straight cuts
- Not suitable for grinding

- Manufactured to ISO 9001 quality management system
- The curve cut disc exceeds minimum burst speed and side load standard capacity due to superior construction ensuring exceptional safety
- Suitable for cutting many radii

SUPERFLEX professional curve cut disc

Curve cut: Specially designed to cut and grind many radii only

Application: High alloy steel, Mild and Stainless steel

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		28	115X1.9X22.23	A36S BF INOX CC	3200A1LDFA3600SZA	13 300	25
			125X2.1X22.23	A36S BF INOX CC	3200A1MDFA3600SZA	12 250	25

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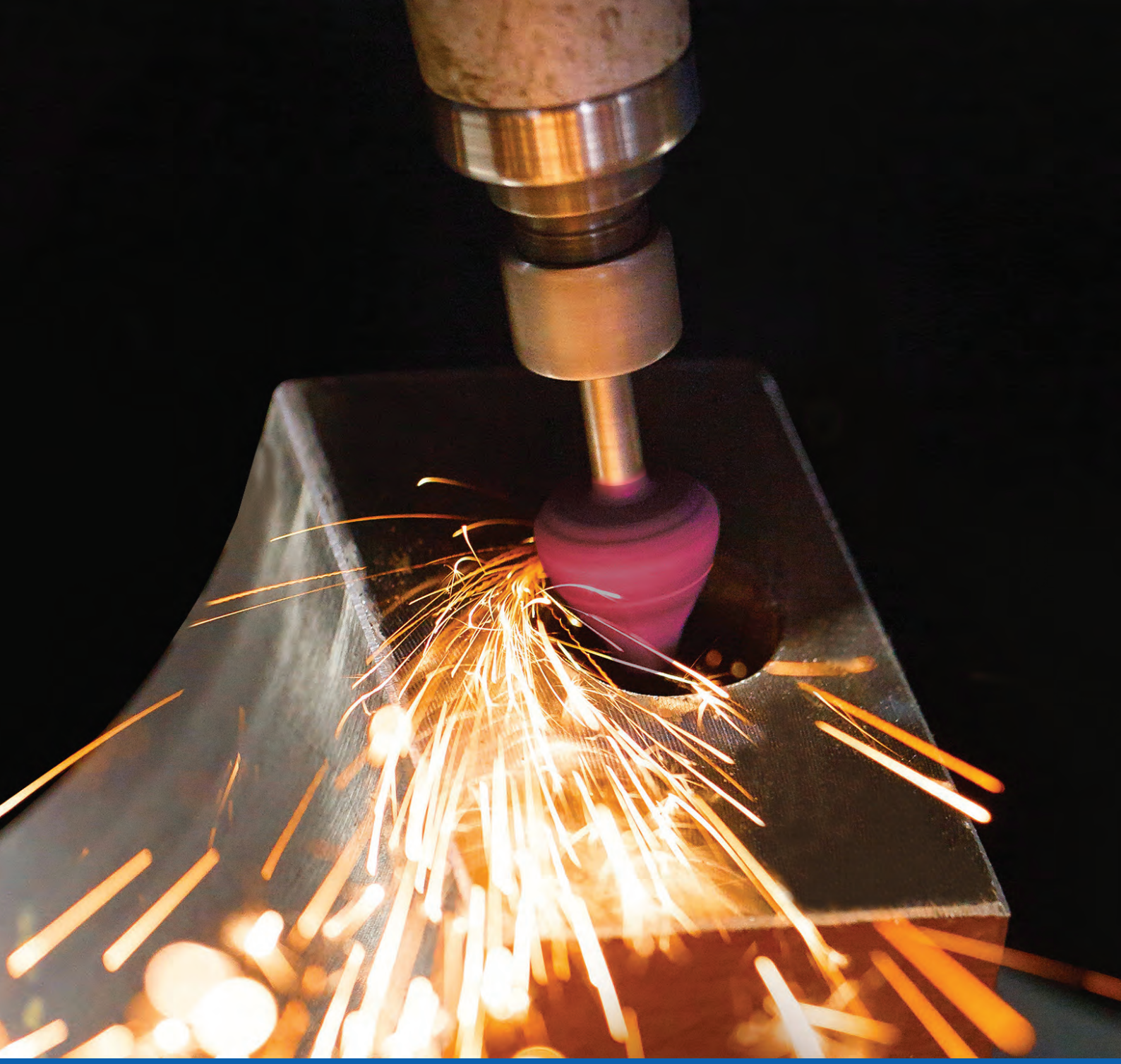


SUPERFLEX

Mounted points

A Company of the TYROLIT Group
www.grindtech.com

Grinding Techniques

Mounted points - Group A, B and W

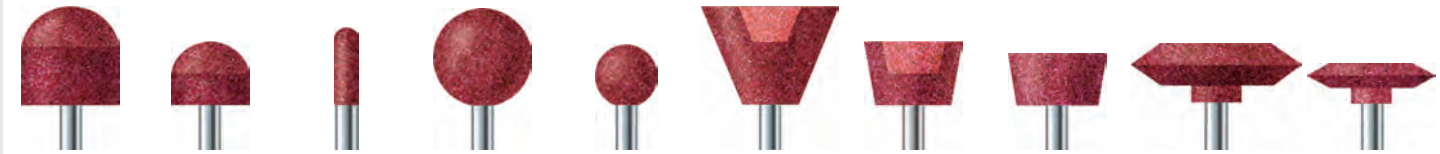
Designed for hard to reach areas where removal of excess material is required Superflex mounted points are perfect for:

- Blending tools and dies
- Deburring and enlarging holes in all foundries
- Heavy engineering, machine shops, construction and tool rooms

Group A Mounted points

6mm spindle

A1	A2	A3 mini	A3	A4	A6	A11	A12	A13	A14	A15
20x65mm	25x32mm	18x44mm	22x70mm	32x32mm	20x30mm	22x50mm	17x32mm	29x29mm	17x22mm	6x25mm



A21	A22	A24	A25	A26	A31	A32	A33	A36	A37
25x25mm	20x16mm	6x20mm	25mm dia	16mm dia	35x25mm	25x16mm	25x13mm	40x10mm	32x6mm

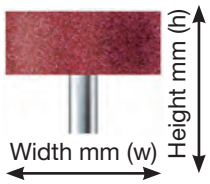
Group B Mounted points

3mm spindle

B41	B42	B44	B52	B53	B54	B55	B61	B72	B81	B84	B91
16x16mm	13x20mm	6x10mm	10x20mm	6x16mm	6x13mm	3x6mm	20x8mm	13x3mm	20x5mm	8x5mm	13x16mm

B92	B96	B101	B103	B104	B111	B121	B122	B123	B131	B132	B136
6x6mm	3x6mm	16x17mm	16x5mm	8x10mm	11x17mm	13mm dia	10mm dia	5mm dia	13x13mm	10x13mm	6x8mm

Group W Mounted points - 3 & 6mm Diameter spindles



Order wheel size by Reference Number corresponding to wheel size required. All dimensions are in milimetres and are measured as Width (w) x Height (h).

Popular Sizes

W187	W188	W220
13x25mm	13x40mm	25x25mm

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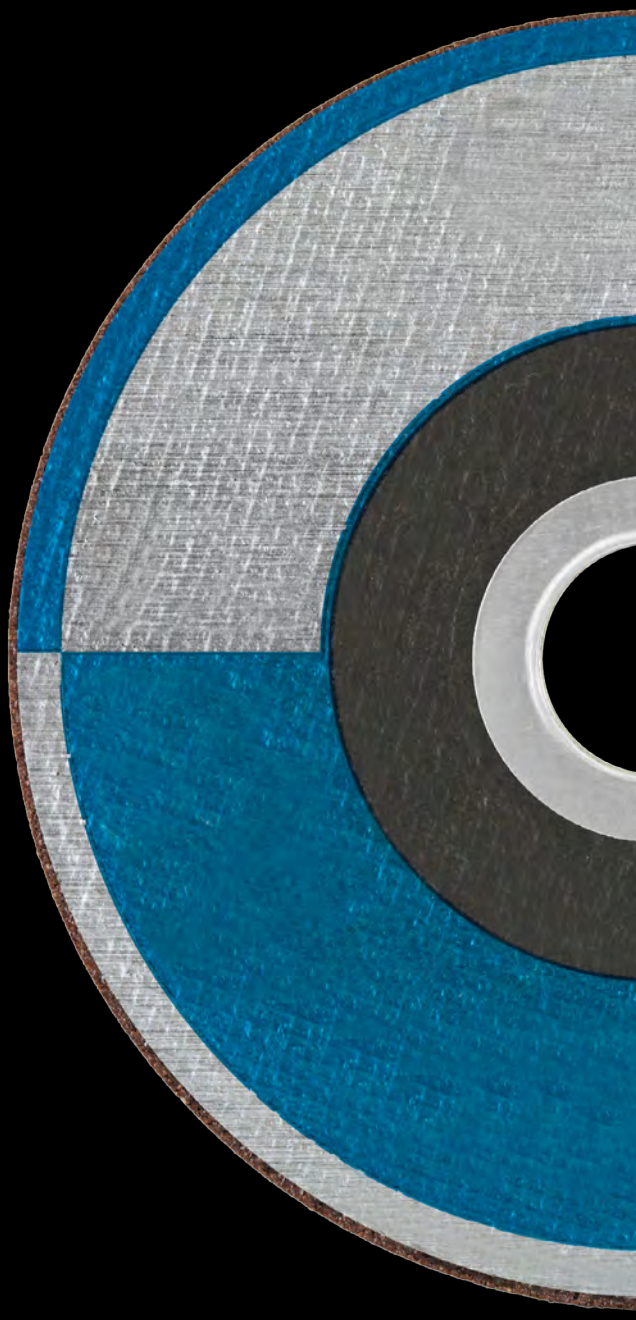
www.grindtech.com



INDUSTRIAL SUPPLY
TOOLS CATALOGUE

A Company of the SWAROVSKI Group
www.tyrolit.com

Content

Symbols

Safety


Wear gloves


Wear a mask


Wear eye protection


Wear protective clothing


Wear ear protection


Observe the instructions


Only permitted for wet grinding


Not permitted for side grinding


Not permitted for wet grinding


Off-hand and hand-guided grinding not permitted


Do not use damaged wheels


Free from FE, S, Cl

Material


Steel

2in1

INOX


Stone


Cast iron


Rail

Non-ferrous metal

Universal

Machines


Angle grinder


Stationary machine


Petrol cutting saw

Straight grinder

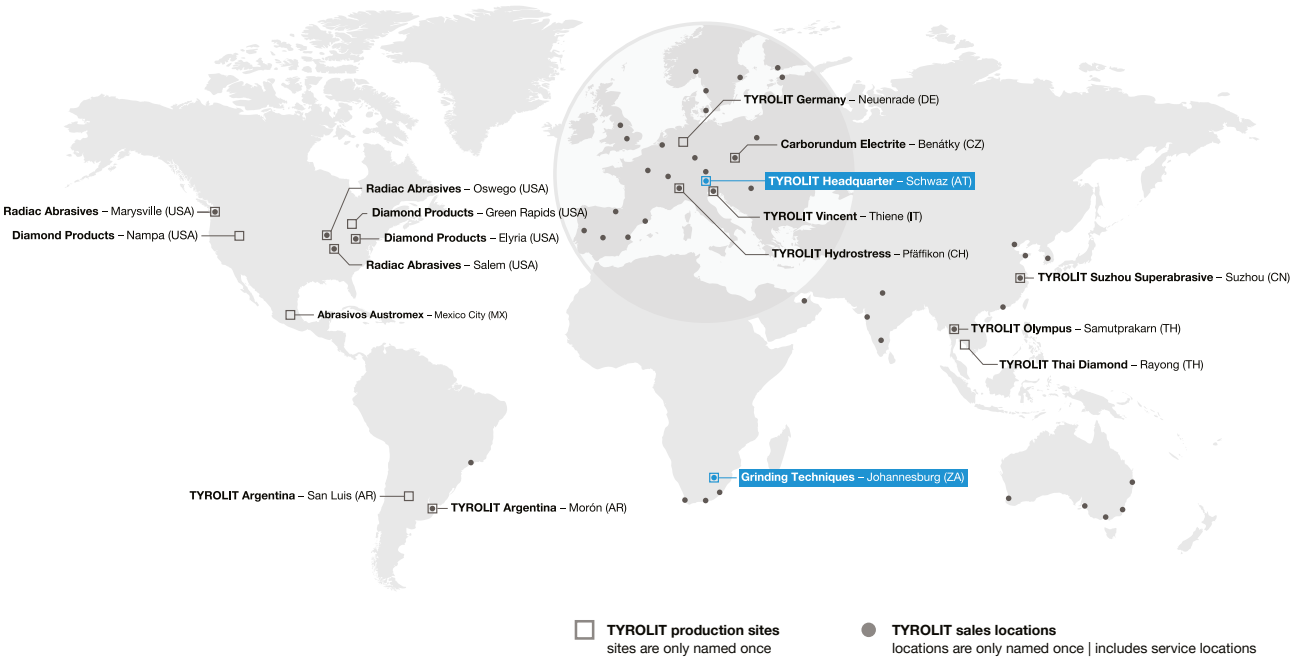
From a good idea **to an excellent product**

Tyrolit is represented in 28 countries through its own sales companies and cooperates in a further 65 countries with local partners.

Our several hundred field service colleagues are working hard everyday in the market alongside our customers, in order to be able to provide them with advice and support whenever they need it. Of course, with these countless visits we are constantly seeing new challenges with application technology, which for us logically means opportunities for new products.

What happens at TYROLIT when we get a good idea for a new product?

First of all, our product management team gets to grips with it. We have to find out precisely what is involved. Once our product managers have analysed all aspects and found them to be viable, a well-established process is initiated in which they take a leading role.



Of course, we do not leave our product managers to deal with this mammoth task on their own. To assist them, there are no fewer than 100 colleagues on hand in Research & Development. Regardless of whether the task involves fundamental research, chemistry, laboratory or special questions, theoretical research or tests in the workshop - our staff in R & D are constantly searching for new solutions.

Thus there are over 400 abrasive types and combinations available to our product managers, which we can integrate in several hundred different bond systems.

From an unimaginable wealth of possibilities, the first test wheels are then produced. We prefer to try out many variations so that we can work in a truly comprehensive way on a solution.

Then the tests start. Here not only is the work result tested, but also whether the relevant solution can later be produced in larger quantities. We test whether the future products can be produced with a consistently high level of quality and of course, we also test important aspects such as unbalance, lateral load and bursting speed values in order to produce not only a very good but also a very safe product for our customers.

And then it comes finally to the material. But not just any material. Here too we are very precise, in order to achieve reliable and above all comparable results. Every test material, therefore, needs a test certificate.

Once comprehensive testing both off-hand and also with stationary machines has been completed and the best abrasive grain and the best bond system have been found, we can start with production.

It is not enough for us to start well with a new product, we want to guarantee a consistently high level of quality. We owe that to our name and to our customers. For this reason, we continue to take and test samples from every production batch in order to guarantee our high-quality standards.

Ultimately it is our most important promise to our customers that we can regularly offer new and excellent innovations at the highest quality level because that is what the name TYROLIT stands for.

SPECIFIC INFORMATION
RESIN BONDED CUT-OFF WHEELS

Cut-off wheels product label

Colour codes

Label	Steel	2in1/3in1	INOX	Non-ferrous metals	Cast iron	Stone
Colour code	Blue	Blue	Red	Orange	Purple	Green
Material	Steel	2in1 = Steel and Stainless steel	Stainless steel	Aluminium, Copper, Zinc, Brass, Bronze	Cast iron	Stone

Cut-off wheel specification

A 4 6 S - B F X A

- A: Abrasive type: A (Regular aluminium oxide) | C (Silicon carbide) | ZA (Zirconia alumina) | CA (Ceramic)
- 46: Grit size (Grit size in mesh)
- S: Grade (Hardness Designation)
- B: Bonding agent: B (resin)
- F: Fibre glass for safety, lateral load, operating speed
- X: TYROLIT internal designation
- A: External reinforcement

CUT-OFF WHEELS
FOR STRAIGHT GRINDERS

+ **Excellent economic efficiency:** TYROLIT straight grinder cut-off wheels offer a great savings potential due to their excellent lifetime.

+ **Shorter cutting times:** The high performance cut-off wheel considerably reduces your cutting and working times.

+ **Environmentally friendly:** The longer lifetime reduces the number of wheel changes required, thus minimising waste production.

PREMIUM ★★★ CUT-OFF WHEELS
Stainless steel

The chemical purity of this tool is a requirement of machining stainless steel in order to avoid impairments to the material, such as corrosion, pitting corrosion or a reduction in the fatigue strength.

The PREMIUM*** cut-off wheel in small diameters is designed for use on straight grinders. This tool is suitable for cutting metal sheets, profiles, pipes, rods and solid material.

Shape	Type number	Dimension	Specification	PU
41	34321469	50 x 1,0 x 6,35	A60R-BFXA	100
	34321486	50 x 1,6 x 6,35	A46R-BFXA	100
	34321489	50 x 2,0 x 6,35	A46R-BFXA	100
	34321481	76 x 1,0 x 6,35	A60R-BFXA	100
	34321487	76 x 1,6 x 6,35	A46R-BFXA	100
	34321491	76 x 2,0 x 6,35	A46R-BFXA	100
	34321468	50 x 1,0 x 10	A60R-BFXA	100
	34321485	50 x 1,6 x 10	A46R-BFXA	100
	34321490	50 x 2,0 x 10	A46R-BFXA	100
	34321483	76 x 1,0 x 10	A60R-BFXA	100
	34321488	76 x 1,6 x 10	A46R-BFXA	100
	34321492	76 x 2,0 x 10	A46R-BFXA	100

ACCESSORIES MANDRELS
for cut-off wheels with a small diameter

These mandrels for mounting small diameter wheels are designed for use on end grinders with a 6mm collet or chuck. The two variants accommodate wheels with either a 6,35mm or a 10mm arbor.

Type number	Dimension	PU
19000L63506MAN	6,35 x 6mm MANDREL	Each
19000L01006MAN	10 x 6mm MANDREL	Each

CUT-OFF WHEELS
FOR ANGLE GRINDERS

+ **Excellent economic efficiency:** TYROLIT cut-off wheels for angle grinders offer a great savings potential due to their excellent lifetime

+ **Shorter cutting times:** The high performance cut-off wheel considerably reduces your cutting and working times.

+ **Environmentally friendly:** The longer lifetime reduces the number of wheel changes required, thus minimising waste production.

PREMIUM ★★★ CUT-OFF WHEELS
for Stainless steel

The chemical purity of this tool is a requirement of machining stainless steel in order to avoid impairments to the material, such as corrosion, pitting corrosion or a reduction in the fatigue strength.

The PREMIUM*** cut-off wheel in small diameters is designed for use on straight grinders. This tool is suitable for cutting metal sheets, profiles, pipes, rods and solid material.

	Shape	Type number	Dimension	Specification	PU
	41	34392326	115 x 1,0 x 22,23	A60R-BFKA INOX	25
		34392327	125 x 1,0 x 22,23	A60R-BFKA INOX	25
		34434037	150 x 2,0 x 22,23	A30R-BFKA INOX	25
		34434038	178 x 2,5 x 22,23	A30R-BFKA INOX	25
		34434039	230 x 2,5 x 22,23	A30R-BFKA INOX	25
	42	34434346	150 x 2,0 x 22,23	A30R-BFKA INOX	25
		34434063	178 x 2,5 x 22,23	A30R-BFKA INOX	25
		34434064	230 x 2,5 x 22,23	A30R-BFKA INOX	25

PREMIUM ★★★ CUT-OFF WHEELS
for non-ferrous metals

The next generation of TYROLIT PREMIUM*** cut-off wheels achieves a better performance than other PREMIUM wheels, and with considerably reduced tool wear. In order to cut non-ferrous metals, the tool must have a high cutting ability.

To this end, TYROLIT has developed a special formula and production method in order to achieve shorter cutting times with NF metals too. New specifications prevent clogging and dulling of the cutting wheel which used to be a common result of metal abrasion.

	Shape	Type number	Dimension	Specification	PU
	41	34321440	115 x 1,0 x 22,23	A60N-BFXA	25
		34321462	115 x 2,5 x 22,23	A30N-BFXA	25
		34321461	125 x 1,0 x 22,23	A60N-BFXA	25
		34321463	125 x 2,5 x 22,23	A30N-BFXA	25
		34321464	230 x 2,5 x 22,23	A30N-BFXA	25

STANDARD ★★ CUT-OFF WHEELS

for Stainless steel

The chemical purity of this tool is a requirement of machining stainless steel in order to avoid impairments to the material, such as corrosion, pitting corrosion or a reduction in the fatigue strength. This tool is suitable for cutting metal sheets, profiles, pipes, rods and solid material.

The assortment of these cut-off wheels ranges from thicknesses of 1.0 to 1.9mm for fast, convenient and low-burr cutting. The stable cut-off wheels in thicknesses between 2.0 and 3.0mm have a very long lifetime and are suitable for stainless and mild steel.

	Shape	Type number	Dimension	Specification	PU
	41	34206861	115 x 1,0 x 22,23	A60R-BF INOX	25
		34206862	115 x 1,6 x 22,23	A46R-BF INOX	25
		34314963	115 x 2,0 x 22,23	A30R-BF INOX	25
		34351106	115 x 2,5 x 22,23	A30R-BF INOX	25
		34206863	125 x 1,0 x 22,23	A60R-BF INOX	25
		34206864	125 x 1,6 x 22,23	A46R-BF INOX	25
		34314968	125 x 2,0 x 22,23	A30R-BF INOX	25
		34351108	125 x 2,5 x 22,23	A30R-BF INOX	25
		34206865	150 x 2,0 x 22,23	A30R-BF INOX	25
		34206866	150 x 2,5 x 22,23	A30R-BF INOX	25
		34206867	178 x 1,6 x 22,23	A46R-BF INOX	25
		34206868	178 x 2,0 x 22,23	A30R-BF INOX	25
		34206869	178 x 2,5 x 22,23	A30R-BF INOX	25
		34206870	230 x 1,9 x 22,23	A46R-BF INOX	25
		34314969	230 x 2,0 x 22,23	A30R-BF INOX	25
		34206901	230 x 2,5 x 22,23	A30R-BF INOX	25
		34354480	230 x 3,0 x 22,23	A30R-BF INOX	25
	42	34206902	100 x 2,0 x 16,00	A30R-BF INOX	25
		34206903	115 x 2,0 x 22,23	A30R-BF INOX	25
		34351109	115 x 2,5 x 22,23	A30R-BF INOX	25
		34206904	125 x 2,0 x 22,23	A30R-BF INOX	25
		34351110	125 x 2,5 x 22,23	A30R-BF INOX	25
		34351141	150 x 2,5 x 22,23	A30R-BF INOX	25
		34206905	178 x 2,5 x 22,23	A30R-BF INOX	25
		34206906	230 x 2,5 x 22,23	A30R-BF INOX	25
		34323293	230 x 3,0 x 22,23	A30R-BF INOX	25

STANDARD ★★ CUT-OFF WHEELS
for steel

This tool not only offers a cost-efficient solution for your everyday work, but also the safety standards customers have come to expect from Tyrolit. This is provided by the excellent lifetime and stability of the STANDARD** cut-off wheel. The tool is particularly suitable for cutting solid steel. The assortment of STANDARD** cut-off wheels for steel, ranges from 2.5 to 3.0mm and offers long lifetime.

Shape	Type number	Dimension	Specification	PU
41	34206699	115 x 2,5 x 22,23	A30S-BF	25
	34206700	125 x 2,5 x 22,23	A30S-BF	25
	34206841	150 x 2,5 x 22,23	A30S-BF	25
	34206842	178 x 3,0 x 22,23	A30S-BF	25
	34206843	230 x 3,0 x 22,23	A30S-BF	25
42	34206844	100 x 2,5 x 16,00	A30S-BF	25
	34206845	115 x 2,5 x 22,23	A30S-BF	25
	34206846	115 x 3,0 x 22,23	A30S-BF	25
	34206847	125 x 2,5 x 22,23	A30S-BF	25
	34206848	125 x 3,0 x 22,23	A30S-BF	25
	34206849	178 x 3,0 x 22,23	A30S-BF	25
	34206850	230 x 3,0 x 22,23	A30S-BF	25

STANDARD ★★ CUT-OFF WHEELS
for stone

The STANDARD** cut-off wheel reduces the work of the operator due to its excellent cutting ability. When used on stone materials the wheel impresses by achieving clean cutting edges and good cutting quality. Reworking is no longer required.

Shape	Type number	Dimension	Specification	PU
41	34206907	115 x 2,5 x 22,23	C30S-BF	25
	34206908	125 x 2,5 x 22,23	C30S-BF	25
	34206909	178 x 3,0 x 22,23	C30S-BF	25
	34206910	230 x 3,0 x 22,23	C30S-BF	25
42	34206911	115 x 2,5 x 22,23	C30S-BF	25
	34206912	125 x 2,5 x 22,23	C30S-BF	25
	34206913	178 x 3,0 x 22,23	C30S-BF	25
	34206914	230 x 3,0 x 22,23	C30S-BF	25

BASIC ★ CUT & GRIND WHEEL
2-in-1 for steel and stainless steel

The BASIC* CUT AND GRIND wheel makes it possible to perform applications such as grinding, deburring and shaping as well as cutting and plunging, with only one tool. The design of the wheel guarantees Good performance right from the start without compromising on safety. While it provides versatile application options, the CUT AND GRIND wheel complies with the highest safety standards.

Shape	Type number	Dimension	Specification	PU
27CG	34321412	115 x 2,5 x 22,23	A30Q-BF	25
	34321415	125 x 2,8 x 22,23	A30Q-BF	25

GRINDING WHEELS
FOR ANGLE GRINDERS

+ **Universal use:**
  TYROLIT rough grinding wheels are equally suitable for surface and edge grinding on a variety of steel applications.

+ **High stock removal rate:**
  The abrasiveness of this rough grinding wheel ensures a high removal rate over the entire lifetime of the wheel.

+ **Enhanced comfort while working:**
  Low pressure for a reduced workload.

PREMIUM ★★★ ROUGH GRINDING WHEELS
for non-ferrous metals

The PREMIUM*** rough grinding wheel developed specifically for non-ferrous metals prevents clogging of the tool in order to reduce loading or dulling. Even at very low pressure, the wheel achieves high abrasiveness.

TYROLIT'S formula and production methods enable exceptionally high stock removal rates to be obtained for non-ferrous metal application.

Shape	Type number	Dimension	Specification	PU
27	34321465	115 x 7,0 x 22,23	A36L-BFX	10
	34321466	125 x 7,0 x 22,23	A36L-BFX	10
	34321467	230 x 7,0 x 22,23	A36L-BFX	10

STANDARD ★★ ROUGH GRINDING WHEELS
for stainless steel

The powerful rough grinding wheel has been specially designed for stainless steel applications. The STANDARD** INOX rough grinding wheel combines a long lifetime and the best cutting ability.

This is achieved through the use of regular aluminium oxide. This rough grinding wheel is specially designed for stainless steel applications.

Shape	Type number	Dimension	Specification	PU
27	34206931	100 x 6,0 x 16,00	A30R-BF INOX	10
	34321420	115 x 4,0 x 22,23	A30R-BF INOX	10
	34206932	115 x 6,0 x 22,23	A30R-BF INOX	10
	34206933	125 x 6,0 x 22,23	A30R-BF INOX	10
	34206934	150 x 6,0 x 22,23	A30R-BF INOX	10
	34206935	178 x 6,0 x 22,23	A30R-BF INOX	10
	34206936	178 x 8,0 x 22,23	A30R-BF INOX	10
	34206937	230 x 6,0 x 22,23	A30R-BF INOX	10
	34206938	230 x 8,0 x 22,23	A30R-BF INOX	10

STANDARD ★★ ROUGH GRINDING WHEELS
for steel

The STANDARD** rough grinding wheel is a powerful rough grinding wheel for surface and edge grinding. The tool boasts optimised cutting ability a long lifetime. Even with low pressure, the wheel is abrasive and easy to handle.

	Shape	Type number	Dimension	Specification	PU
	27	34206915	100 x 6,0 x 16,00	A24S-BF	10
		34206916	115 x 6,0 x 22,23	A24S-BF	10
		34206917	125 x 6,0 x 22,23	A24S-BF	10
		34206918	150 x 6,0 x 22,23	A24S-BF	10
		34206919	178 x 6,0 x 22,23	A24S-BF	10
		34206920	230 x 6,0 x 22,23	A24S-BF	10

STANDARD ★★ ROUGH GRINDING WHEELS
for stone

The abrasive STANDARD** rough grinding wheel for stone is quick and convenient to use and requires minimal exertion. It is ideal for soft to hard stone, natural and artificial stone and concrete. This rough grinding wheel with silicon carbide is specifically for stone and short-chipping materials.

	Shape	Type number	Dimension	Specification	PU
	27	34206939	100 x 6,0 x 16,00	CS30S-BF	10
		34206940	115 x 6,0 x 22,23	CS30S-BF	10
		34206951	125 x 6,0 x 22,23	CS30S-BF	10
		34206952	178 x 6,0 x 22,23	CS30S-BF	10
		34206953	230 x 6,0 x 22,23	CS30S-BF	10

STANDARD ★★ FOCUR ROUGH GRINDING WHEELS
for cast iron

With the STANDARD** FOCUR rough grinding wheel you will obtain a tool that has been optimised in terms of its cutting ability and offers a high level of dimensional stability. Even with low pressure, the tool is abrasive and durable. This powerful tool has been developed for application on all cast materials and can be used for surface grinding, deburring work and rendering.

	Shape	Type number	Dimension	Specification	PU
	27	34206954	178 x 7,0 x 22,23	ZA30O-BF	10
		34206955	230 x 7,0 x 22,23	ZA30O-BF	10

PREMIUM ★★★ RONDELLER®
2IN1 FOR STEEL AND STAINLESS STEEL

+ **High level of comfort while working:**
  These tools make vibration free, ergonomic use possible and protect both user and machine.

+ **Universal use:**
  Ideal for use on steel and stainless steel, as well as for all grinding, deburring and shaping applications on curved surfaces.

+ **Simple handling:**
  Easy assembly - no need to use special accessories, such as back up pads and clamping nuts.

PREMIUM ★★★ RONDELLER®
2in1 for steel and stainless steel

The TYROLIT PREMIUM*** RONDELLER combines the product advantages of different grinding tools with the easiest handling. The unique geometry of the Rondeller enables cool, ergonomic grinding that is kind to materials. Absolutely vibration free use and optimal adaptation to the work piece for all grinding, deburring and shaping applications means that curved surfaces can be machined. Easy assembly - no need to use special accessories, such as back up pads and clamping nuts. Ideal for use on steel and stainless steel.

Shape		Type number	Dimension	Specification	PU
	29RON	57004	115 x 22,23	A24Q-BF	25
		908225	115 x 22,23	A36Q-BF	25
		908226	115 x 22,23	A60Q-BF	25
		57006	178 x 22,23	A24Q-BF	25
		908230	178 x 22,23	A36Q-BF	25
		908231	178 x 22,23	A60Q-BF	25

FLAP DISCS
FOR ANGLE GRINDERS

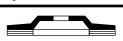
+ **Large selection:**
TYROLIT flap discs are available in all common diameters and grit sizes.

+ **Universal use:**
Achieves excellent results on a wide range of applications.

+ **Ease of use:**
Effortless machining of welding seams, as well as edge and surface grinding.

PREMIUM ★★★ FLAP DISC
CERAMIC for Inox

Thanks to self-sharpening ceramic abrasive grain, The PREMIUM*** CERAMIC flap disc is particularly suitable for stainless steels and demanding grinding applications. The additional TOP SIZE coating ensures cool grinding, allowing a longer tool lifetime and reducing discolouration on the workpiece surface. Thanks to the self-sharpening characteristic of the abrasive grain, a more even surface quality is achieved over the entire lifetime of the disc.

	Shape		Type number	Dimension	Specification	PU
		28A	34166172	115 x 22,23	CA40-B	10
			34166173	115 x 22,23	CA60-B	10
			34166175	125 x 22,23	CA40-B	10
			34166176	125 x 22,23	CA60-B	10
			34166181	178 x 22,23	CA40-B	10
			34166182	178 x 22,23	CA60-B	10

PREMIUM ★★★ FLAP DISC
for non-ferrous metals

With the specification developed specifically for non-ferrous materials, smearing and dulling of the flap disc is prevented. The ceramic grain promotes self-cleaning and sharpening of the disc during material abrasion. This tool offers convenient and high performance results on difficult-to-grind materials such as aluminium, aluminium bronze, aluminium base alloy, copper, bronze, brass and nickel silver.

Shape	Type number	Dimension	Specification	PU
28A	34321433	115 x 22,23	CA40-B ALU	10
	34321434	115 x 22,23	CA60-B ALU	10
	34321435	125 x 22,23	CA40-B ALU	10
	34321436	125 x 22,23	CA60-B ALU	10
	34321438	178 x 22,23	CA40-B ALU	10
	34321439	178 x 22,23	CA60-B ALU	10

STANDARD ★★ FLAP DISC
2in1 for steel and stainless steel

The STANDARD** 2 in 1 flap disc offers two advantages. On one hand it offers the user a very long lifetime, on the other it guarantees very good specific abrasion. The TYROLIT 2 in 1 flap disc is used both on alloyed steels and stainless steel, as well as on unalloyed and low alloyed steels.

Shape	Type number	Dimension	Specification	PU
27A	34314990	115 x 22,23	ZA40-B	10
	34315001	115 x 22,23	ZA60-B	10
	34315004	115 x 22,23	ZA80-B	10
	34315006	115 x 22,23	ZA120-B	10
	34323073	125 x 22,23	ZA40-B	10
	34323074	125 x 22,23	ZA60-B	10
	34323075	125 x 22,23	ZA80-B	10
	34323077	125 x 22,23	ZA120-B	10
	34323078	178 x 22,23	ZA40-B	10
	34323079	178 x 22,23	ZA60-B	10
	34323080	178 x 22,23	ZA80-B	10
	34323091	178 x 22,23	ZA120-B	10
28A	34314985	115 x 22,23	ZA40-B	10
	34314986	115 x 22,23	ZA60-B	10
	34314988	115 x 22,23	ZA80-B	10
	34314989	115 x 22,23	ZA120-B	10
	34323093	125 x 22,23	ZA40-B	10
	34323095	125 x 22,23	ZA60-B	10
	34323096	125 x 22,23	ZA80-B	10
	34323097	125 x 22,23	ZA120-B	10
	34323098	178 x 22,23	ZA40-B	10
	34323099	178 x 22,23	ZA60-B	10
	34323100	178 x 22,23	ZA80-B	10
	34323101	178 x 22,23	ZA120-B	10

BASIC ★ FLAP DISC

2in1 for steel and stainless steel

The BASIC* 2in1 flap disc offers two advantages. On one hand, it offers the user long lifetime, on the other it guarantees good specific abrasion.

The TYROLIT 2 in 1 flap disc is used both on alloyed steels and stainless steel, as well as on unalloyed and low alloyed steels.

Shape	Type number	Dimension	Specification	PU
27A	34208141	100 x 16,00	ZA40-B	10
	34208142	100 x 16,00	ZA60-B	10
	34208143	100 x 16,00	ZA80-B	10
	34208144	100 x 16,00	ZA120-B	10
	34208145	115 x 22,23	ZA40-B	10
	34208146	115 x 22,23	ZA60-B	10
	34208147	115 x 22,23	ZA80-B	10
	34208148	115 x 22,23	ZA120-B	10
	34208149	125 x 22,23	ZA40-B	10
	34208150	125 x 22,23	ZA60-B	10
	34208151	125 x 22,23	ZA80-B	10
	34208152	125 x 22,23	ZA120-B	10
	34208153	178 x 22,23	ZA40-B	10
	34208154	178 x 22,23	ZA60-B	10
	34208155	178 x 22,23	ZA80-B	10
	34208156	178 x 22,23	ZA120-B	10
28A	34023527	100 x 16,00	ZA40-B	10
	34023528	100 x 16,00	ZA60-B	10
	34023529	100 x 16,00	ZA80-B	10
	34023530	100 x 16,00	ZA120-B	10
	320318	115 x 22,23	ZA40-B	10
	320320	115 x 22,23	ZA60-B	10
	320322	115 x 22,23	ZA80-B	10
	719794	115 x 22,23	ZA120-B	10
	320319	125 x 22,23	ZA40-B	10
	320321	125 x 22,23	ZA60-B	10
	320323	125 x 22,23	ZA80-B	10
	719796	125 x 22,23	ZA120-B	10
	34206832	150 x 22,23	ZA40-B	10
	34206833	150 x 22,23	ZA60-B	10
	34206834	150 x 22,23	ZA80-B	10
	34206835	150 x 22,23	ZA120-B	10
	34166901	178 x 22,23	ZA40-B	10
	34166902	178 x 22,23	ZA60-B	10
	34166903	178 x 22,23	ZA80-B	10
	34166904	178 x 22,23	ZA120-B	10

TYROLIT POLISHING PROGRAM FOR ANGLE GRINDERS

Working with an angle grinder is one of the most important processes in the trade and industrial sectors for processing all types of metals. TYROLIT offers an optimally tailored package for polishing metal.

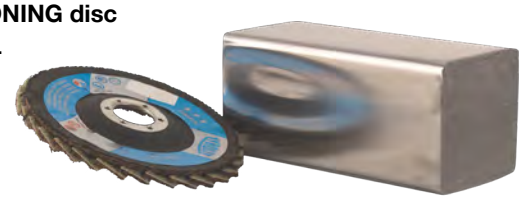
There are many suppliers of polishing accessories. But anyone who has ever polished knows how important it is that all components should be perfectly matched to one another.

With TYROLIT you can get everything you need from one source. You can tell how perfectly our products are matched from the fact that you can get a mirror finish in only three steps - without unwanted discolouration due to overheating.

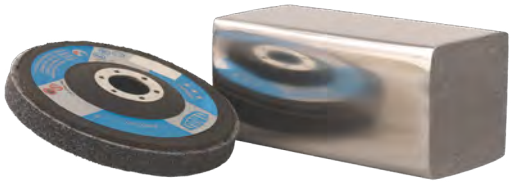
PREMIUM ★★★ POLISHING PROGRAM
THREE STEPS TO A PERFECT MIRROR FINISH

+ **Preparation:**
  Preparing the untreated workpiece
  To prepare the untreated material and get a mirror finish, you need:
  PREMIUM*** Fibre discs ZA-P48
  PREMIUM*** 2in1 flap discs
  STANDARD** SOFT JOB
  Our recommendation: Grit size 80 or 120 depending on material

+ **Step 1**
  Remove rough scratch marks using the PREMIUM* CONDITIONING disc**
  It removes all rough scratch marks from the surface to be machined.
  A multi-dimensional flap design reduces clogging and prevents unwanted material discolouration
  Our recommendation: "Medium" grain



+ **Step 2**
  Prepare for polishing with the PREMIUM* PRE-POLISH disc**
  This provides optimum polishing preparation.
  The disc adapts flexibly to the material surface
  Our recommendation: "Fine-P" grain



+ **Step 3**
  Polish with the PREMIUM* POLISH disc**
  This allows you finally to achieve a perfect mirror finish.
  Different grinding pastes enable processing of different materials, such as steels, stainless steel and non-ferrous metals
  Our recommendation: SHF with "S-POLISH" polishing paste

Recommended speeds

PREMIUM ★★★ Conditioning	PREMIUM ★★★ Pre-Polish	PREMIUM ★★★ Polish	PREMIUM ★★★ Combi
115 mm - 3,500 rpm	115 mm - 3,500 rpm	115 mm - 3,500 rpm	115 mm - 3,500 rpm
125 mm - 3,000 rpm	125 mm - 3,000 rpm	125 mm - 3,000 rpm	125 mm - 3,000 rpm

PREMIUM ★★★ CONDITIONING
for steel and stainless steel

With the PREMIUM*** CONDITIONING wheel you can remove all rough scratch marks from the surface before commencing the polishing process. The three-dimensional flap design reduces clogging of the wheel to a minimum. Using the wheel also prevents discolouration of the workpiece caused by high heat build-up. The tool has been specifically developed to achieve the best results even on non-adjustable angle grinders.

Shape	Type number	Dimension	Specification	PU	Max. RPM
28PCA	742155	115 x 22,23	COARSE	5	12,000
	742157	115 x 22,23	MEDIUM	5	12,000
	742158	115 x 22,23	VERY FINE	5	12,000
	742148	125 x 22,23	COARSE	5	11,000
	742153	125 x 22,23	MEDIUM	5	11,000
	742154	125 x 22,23	VERY FINE	5	11,000

PREMIUM ★★★ PRE-POLISH
for steel and stainless steel

To prepare surfaces for polishing, you require a sturdy, high quality tool. The PREMIUM*** PRE-POLISH comprises several layers of abrasive fabric to achieve a long lifetime and sturdiness. This allows the tool to be used for smaller deburring projects as well. The tool has been specifically developed to achieve the best results even on non-adjustable angle grinders.

Shape	Type number	Dimension	Specification	PU	Max. RPM
28PUA	742379	115 x 22,23	MEDIUM-Q	5	12,000
	742380	115 x 22,23	FINE-P	5	12,000
	742381	115 x 22,23	VERY FINE-P	5	12,000
	742382	125 x 22,23	MEDIUM-Q	5	11,000
	742384	125 x 22,23	FINE-P	5	11,000
	724385	125 x 22,23	VERY FINE-P	5	11,000

PREMIUM ★★★ POLISH
universal use

Compared to conventional felt wheels, this product uses highly flexible flaps for optimum heat distribution and cool grinding. In doing so, the PREMIUM*** POLISH avoids undesired discolouration. Used in combination with the TYROLIT grinding paste, a perfect mirror finish is achieved on your workpiece. The tool has been specifically developed to achieve the best results even on non-adjustable angle grinders.

Shape	Type number	Dimension	Specification	PU	Max. RPM
28PWA	742378	115 x 22,23	SHF	3	9,200
	742375	125 x 22,23	SHF	3	7,700

PREMIUM ★★★ POLISHING PASTES

for steel, stainless steel and non-ferrous metals

With the TYROLIT PREMIUM*** polishing paste in different specifications you will achieve the final mirror finish. They can be used to perform precision machining work depending on the desired surface finish. Polishing pastes are available in three specifications.

Using the POLISH (white) you will achieve a perfectly smooth finish. To achieve a high-gloss finish we recommend S-POLISH (blue) while the POLISH-NE paste is perfect for non-ferrous metals.

	Type number	Dimension	Specification	Colour	PU
90PP	741230	30 x 20 x 90	POLISH	White	2
	741285	30 x 20 x 90	POLISH-NE	Brown	2
	741291	30 x 20 x 90	S-POLISH	Blue	2
	741347	60 x 45 x 160	POLISH	White	1
	741348	60 x 45 x 160	POLISH-NE	Brown	1
	741349	60 x 45 x 160	S-POLISH	Blue	1

PREMIUM ★★★ POLISHING PROGRAM

three steps to a mirror finish

Type no.	Shape	Dimension	Design	Type Number	PU
21262	28PCA	115 x 22,23	MEDIUM	742157	1
	28PUA	115 x 22,23	FINE-P	742380	1
	28PWA	115 x 22,23	SHF	742378	1
	90PP	30 x 20 x 90	S-POLISH	741291	2
52433	28PCA	125 x 22,23	MEDIUM	742153	1
	28PUA	125 x 22,23	FINE-P	742384	1
	28PWA	125 x 22,23	SHF	742375	1
	90PP	30 x 20 x 90	S-POLISH	741291	2

CUT-OFF WHEELS
FOR STATIONARY MACHINES

+ **Broad assortment:**
  For the stationary cutting of a variety of steels. We offer diameters from 300 to 500mm in various thicknesses.

+ **Universal use:**
  It is possible to cut profiles, solid material and large cross sections.

+ **Reduced working times:**
  Clean, non-discoloured surfaces reduce reworking tasks for the operator.

PREMIUM ★★★ CUT-OFF WHEELS
for stainless steel - *also available for steel

TYROLIT provides the optimal tools for use on stationary cutting machines in chop cut. The tool is suitable for cutting metal sheets, profiles, pipes, rods and solid material. Despite its versatile use, the tool offers maximum cutting ability and the longest lifetime.

The chemical purity of this tool is a requirement of machining stainless steel in order to avoid impairment to the materials, such as corrosion, pitting or reduction in the fatigue strength.

Shape	Type number	Dimension	Specification	PU
41	647216*	350 x 3,5 x 40	A24Q4-BF97M	10
	647218*	400 x 4,0 x 40	A24Q4-BF97M	10
	460744*	500 x 5,0 x 40	A24P4-BF97M	10

PREMIUM ★★★ CUT-OFF WHEELS
for steel

TYROLIT provides the optimal tools for use on stationary cutting machines in chop cut. These include the PREMIUM*** cut-off wheel for steel in diameters from 300 to 500 mm. This special tool is ideal for cutting workpieces with large cross-sections, as well as solid material and profiles. As with all TYROLIT PREMIUM*** cut-off wheels, this tool has been optimised to achieve the best possible cutting ability and lifetime.

Shape	Type number	Dimension	Specification	PU
41	780938	400 x 3,5 x 25,4	A36N5BF71M	10
	514338	500 x 5,5 x 40	A24O4BF71M100	10

STANDARD ★★ CUT-OFF WHEELS
for steel

TYROLIT provides the optimal tools for use on stationary cutting machines in chop cut. This special tool is ideal for cutting workpieces with large cross sections, as well as solid material and profiles.

The internal reinforcement and rough side surfaces enable low burr cutting of workpieces. As with all TYROLIT STANDARD** cut-off wheels, this tool has been optimised to achieve excellent cutting ability and lifetime

	Shape	Type number	Dimension	Specification	PU
	41	34206956	300 x 2,5 x 25,4	A46S-BF	10
		34206957	350 x 2,8 x 25,4	A46S-BF	10
		34206958	400 x 3,0 x 25,4	A46S-BF	10
	41H	34314970	300 x 3,5 x 25,4	A30S-BF100	10
		34315170	300 x 3,5 x 40,0	A30S-BF100	10
		34314981	350 x 4,0 x 25,4	A30S-BF100	10
		34315192	350 x 4,0 x 40,0	A30S-BF100	10
		34314983	400 x 4,5 x 25,4	A30S-BF100	10
		34315193	400 x 4,5 x 40,0	A30S-BF100	10

CUT-OFF WHEELS
FOR PETROL CUTTING SAWS

+ **Specifically constructed:**
  For safety with high speed petrol cutting saws.

+ **Universal use:**
  Suitable for cutting profiles, solid material and large cross sections. Especially effective for cutting railway lines.

+ **Reduced working times:**
  Quick and efficient cutting operation. Clean non-discoloured surfaces reduce reworking tasks for the operator

STANDARD ★★ CUT-OFF WHEELS FOR PETROL CUTTING SAWS
for rails

The wheel has been developed specially based on specifications for cutting rails. Despite extreme application conditions, such as humidity, cold and temperature fluctuations, the rail cut-off wheel from TYROLIT offers short cutting times coupled with minimal effort. Exceptionally clean, non-discoloured surfaces reduce reworking tasks and working times. Developed for use on manual cut-off machines with electric or petrol engines suitable for pure off-hand and guided off-hand applications.

Shape	Type number	Dimension	Specification	PU
 41H	34321493	350 x 4,0 x 25,4	A30-BF RAIL	10
	34321495	400 x 4,3 x 25,4	A30-BF RAIL	10

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Our **worldwide subsidiary companies** can be found on our website at **www.tyrolit.com**

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SUPERFLEX FLAP DISC RANGE

Lead with the best, don't settle for anything less

A Company of the TYROLIT Group
www.grindtech.com

Grinding Techniques

Grinding Techniques

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TYROLIT headquarters in Schwaz (Austria)

Application recommendation									
Performance Level	**Specification**	**High Alloy Steel**	**Steel**	**Stainless Steel**	**NF Metals**	**Wood**	**Paint**	**Plastic**	**Rust**
Premium	CA	•	•	•					
Premium Non-Ferrous	CA				•				
Professional	AZ		•	•					
Industrial	AZ		•	•		•	•	•	•
Evolution	AZ		•	•		•	•	•	•

Premium Inox

Premium Non-ferrous

Professional

Industrial

Evolution

WHY USE SUPERFLEX FLAP DISCS?

- Fast stock removal
- Both light and rough grinding can be done with one product.
- In many cases the number of working processes are reduced.
- Constant rate of stock removal and consistent finish is achieved throughout the product's lifetime.
- Reinforced fibre back support eliminates the need for expensive back-up pads, as Flap Discs bolt directly onto the grinder. This also enables the product to be used for corner grinding and sanding.
- Cool and soft grinding with less loading.
- The lighter pressures required for operation results in increased machine life and productivity.
- Competitively priced product which ensures value for money.

Symbols

Refer to instructions

Wear goggles

Wear ear protection

Wear gloves

Wear a mask

Not permitted for side grinding

Not permitted for wet grinding

Off-hand and hand grinding not permitted

Do not use damaged disc

Free from FE, S, Ci, F

Free from FE, S, Ci

Cast iron

Universal

Steel

Non-ferrous metals

Rails

Stainless steel

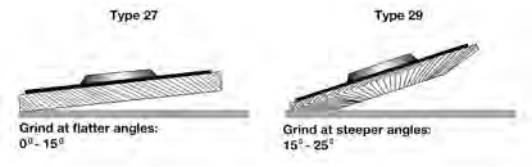
Stone

2-in-1

Angle grinder

Available in 2 types:

- Type 27 that is suited to blending, smoothing and finishing flat surfaces
- Type 29 that is angled and ideally suited for aggressive stock removal, edge work and contouring



Flap discs bolt directly onto the grinder. No back-up pad required.

Reinforced fibreglass back support, contamination free.

Multilayer abrasive grinding flaps.

- A range with different tiers are available to suit various applications

GRIT CONVERSIONS

Always choose a flap disc at least ONE GRADE COARSER when converting from a fribre disc to obtain a similar finish with the same aggression.

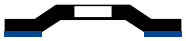
Superflex Flap disc

Locally manufactured with only the best raw materials and adhering to the highest international standards of OSA and ISO, Superflex flap discs have become a popular alternative to abrasive fibre discs when it comes to getting the job done quickly and efficiently.

Easy selection for your application is made possible with various sizes and grits in ranges from Premium to Evolution.

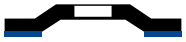
SUPERFLEX premium - Inox

Application: Steel, Stainless steel and Heat sensitive alloys

	Type		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	115 X 22	CA40	405011522040CA27	13 300	10
			115 X 22	CA60	405011522060CA27	13 300	10
			115 X 22	CA80	405011522080CA27	13 300	10
			125 X 22	CA40	405012522040CA27	12 250	10
			125 X 22	CA60	405012522060CA27	12 250	10
			125 X 22	CA80	405012522080CA27	12 250	10
			150 X 22	CA40	405015022040CA27	10 200	10
			150 X 22	CA60	405015022060CA27	10 200	10
			150 X 22	CA80	405015022080CA27	10 200	10
			180 X 22	CA40	405018022040CA27	8 500	10
			180 X 22	CA60	405018022060CA27	8 500	10
			180 X 22	CA80	405018022080CA27	8 500	10
		29	115 X 22	CA40	405011522040CA29	13 300	10
			115 X 22	CA60	405011522060CA29	13 300	10
			115 X 22	CA80	405011522080CA29	13 300	10
			180 X 22	CA40	405018022040CA29	8 500	10
			180 X 22	CA80	405018022080CA29	8 500	10

SUPERFLEX premium - Non- ferrous

Application: Aluminium and Non-ferrous metals

	Type		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	115 X 22	CA40	405011522040P27	13 300	10
			115 X 22	CA60	405011522060P27	13 300	10
			115 X 22	CA80	405011522080P27	13 300	10
			125 X 22	CA40	405012522040P27	12 250	10
			125 X 22	CA60	405012522060P27	12 250	10
			125 X 22	CA80	405012522080P27	12 250	10
			150 X 22	CA40	405015022040P27	10 200	10
			150 X 22	CA60	405015022060P27	10 200	10
			150 X 22	CA80	405015022080P27	10 200	10
			180 X 22	CA40	405018022040P27	8 500	10
			180 X 22	CA60	405018022060P27	8 500	10
			180 X 22	CA80	405018022080P27	8 500	10
		29	115 X 22	CA40	405011522040P29	13 300	10
			115 X 22	CA60	405011522060P29	13 300	10
			115 X 22	CA80	405011522080P29	13 300	10

SUPERFLEX professional

Application: Steel and Stainless steel

Type		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
	27	115 X 22	AZ40	405011522040ZA27P	13 300	10
		115 X 22	AZ60	405011522060ZA27P	13 300	10
		115 X 22	AZ80	405011522080ZA27P	13 300	10
		115 X 22	AZ120	405011522120ZA27P	12 250	10
		125 X 22	AZ60	405012522060ZA27P	12 250	10
		125 X 22	AZ80	405012522080ZA27P	12 250	10
		125 X 22	AZ120	405012522120ZA27P	12 250	10
		150 X 22	AZ60	405015022060ZA27P	10 200	10
		150 X 22	AZ80	405015022080ZA27P	10 200	10
		150 X 22	AZ120	405015022120ZA27P	10 200	10
		180 X 22	AZ40	405018022040ZA27P	10 200	10
		180 X 22	AZ60	405018022060ZA27P	8 500	10
		180 X 22	AZ80	405018022080ZA27P	8 500	10
		180 X 22	AZ120	405018022120ZA27P	8 500	10
	29	115 X 22	AZ60	405011522060ZA29P	13 300	10
		115 X 22	AZ80	405011522080ZA29P	13 300	10
		125 X 22	AZ40	405012522040ZA29P	13 300	10
		125 X 22	AZ60	405012522060ZA29P	12 250	10
		125 X 22	AZ80	405012522080ZA29P	12 250	10
		125 X 22	AZ120	405012522120ZA29P	12 250	10

SUPERFLEX industrial

Application: General purpose - Steel, Stainless steel, Plastics, Wood, Rust and Paint

Type		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
	27	100 X 16	AZ40	405010016040Z27	15 300	10
		100 X 16	AZ60	405010016060Z27	15 300	10
		100 X 16	AZ80	405010016080Z27	15 300	10
		100 X 16	AZ120	405010016120Z27	15 300	10
		115 X 22	AZ24	405011522024Z27	13 300	10
		115 X 22	AZ40	405011522040Z27	13 300	10
		115 X 22	AZ60	405011522060Z27	13 300	5
		115 X 22	AZ80	405011522080Z27	13 300	10
		125 X 22	AZ40	405012522040Z27	12 250	10
		125 X 22	AZ60	405012522060Z27	12 250	10
		125 X 22	AZ80	405012522080Z27	12 250	10
		125 X 22	AZ120	405012522120Z27	12 250	10
		150 X 22	AZ40	405015022040Z27	10 200	10
		150 X 22	AZ60	405015022060Z27	10 200	10
		150 X 22	AZ80	405015022080Z27	10 200	10
		150 X 22	AZ120	405015022120Z27	10 200	10
		180 X 22	AZ24	405018022024Z27	8 500	10
		180 X 22	AZ40	405018022040Z27	8 500	10
		180 X 22	AZ60	405018022060Z27	8 500	10
		180 X 22	AZ80	405018022080Z27	8 500	10
		180 X 22	AZ120	405018022120Z27	8 500	10

SUPERFLEX industrial

Application: General purpose - Steel, Stainless steel, Plastics, Wood, Rust and Paint

Type		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
	29	115 X 22	AZ40 Maxi Flap	405011522040Z00	13 300	10
		115 X 22	AZ40	405011522040Z29	13 300	10
		115 X 22	AZ60	405011522060Z29	13 300	10
		115 X 22	AZ80 Maxi Flap	405011522080Z00	13 300	10
		115 X 22	AZ80	405011522080Z29	13 300	10
		115 X 22	AZ120	405011522120Z29	13 300	10
		125 X 22	AZ40	405012522040Z29	12 250	10
		125 X 22	AZ60	405012522060Z29	12 250	10
		125 X 22	AZ80	405012522080Z29	12 250	10
		125 X 22	AZ120	405012522120Z29	12 250	10
		150 X 22	AZ40	405015022040Z29	10 200	10
		150 X 22	AZ60	405015022060Z29	10 200	10
		150 X 22	AZ80	405015022080Z29	10 200	10
		150 X 22	AZ120	405015022120Z29	10 200	10
		180 X 22	AZ40	405018022040Z29	8 500	10
		180 X 22	AZ60	405018022060Z29	8 500	10
		180 X 22	AZ80	405018022080Z29	8 500	10
		180 X 22	AZ120	405018022120Z29	8 500	10

SUPERFLEX evolution

Application: General purpose - Steel, Stainless steel, Plastics, Wood, Rust and Paint

Type		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
	27	115 X 22	AZ40	405011522040Z27D	13 300	10
		115 X 22	AZ60	405011522060Z27D	13 300	10
		115 X 22	AZ80	405011522080Z27D	13 300	10
		115 X 22	AZ120	405011522120Z27D	13 300	10
	29	115 X 22	AZ40	405011522040Z29D	13 300	10
		115 X 22	AZ60	405011522060Z29D	13 300	10
		115 X 22	AZ80	405011522080Z29D	13 300	10
		115 X 22	AZ120	405011522120Z29D	13 300	10

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Tel +27 11 271 6400 | Fax +27 11 271 6464
Fax to email 086 656 6989 | info@grindtech.com

SUPERFLEX

Cutting and grinding discs

A Company of the TYROLIT Group
www.grindtech.com

Grinding Techniques

Grinding Techniques

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Content

Symbols


Refer to instructions


Wear gloves


Not permitted for wet grinding


Wear ear protection


Wear a mask


Off-hand and hand grinding not permitted


Wear goggles


Not permitted for side grinding


Do not use damaged discs


Cast iron

Non-ferrous metals


Steel

Non-ferrous 2-in-1


Concrete


Rails


Stone


High alloy steel

Stainless steel

2-in-1


Straight grinder


Petrol cutting saw


Angle grinder


Stationary cutting machine

Application recommendation

Performance Level	Specification	High Alloy Steel	Mild Steel	Stainless Steel	Steel	NF Metals	Cast Iron	Concrete Stone	Page
		Cutting discs							
Professional Slimline	A 60 V BF Inox	•	•	•					5
	A 36 V BF INOX	•	•	•					5
	A 46 V BF INOX	•	•	•					5
Industrial Slimline	1 A 46 T BF	•	•	•					6
Professional Slimline	A 60 ALU BF					•		•	7
	A 46 ALU BF					•		•	7
Industrial Slimline	C 60 T-BF							•	7
	C 46 T - BF							•	7
Premium	ZA 24 S BF	•	•				•		8
Professional	AS 30 T BF	•	•						8
	AS 24 S BF INOX	•		•			•		8
	AS 30 S B26 F2	•	•						9
Industrial	AS 30 S B27 F2	•	•						9
Professional	A 36 ALU BF					•			10
Industrial	CS 30 S B40 F2							•	10
Industrial	A 30 0 BF INOX		•	•					11
	AS 24 R BF	•	•						11
	AS 30 Q BF 2E	•	•						11
	AS 30 P BF	•	•				•		11
	A 30 Q B55 F2	•	•						12
	A 30 O BF		•	•			•		12
	AS 30 P B2 CF	•	•				•		12
	AS 30 R BF 2E	•	•						12
	AS 30 Q BF1 R	•	•						12
Industrial	CS 24 R BF50						•	•	13
		Grinding discs							
Premium	CA 24 Q BF	•	•	•			•		15
	ZA 24 R BF	•	•	•			•		15
Professional	AS 30 T BF	•	•				•		15
	AS 24 R BF INOX	•	•	•					16
	AS 30 R BF 32	•	•				•		16
	AC 30 R BF		•				•		16
Professional	A 36 S BF INOX C/G	•	•	•					19
	A 36 M COOL	•	•	•					19
	A 36 S BF INOX CURVE CUT	•	•	•					19
	A 24 ALU BF					•			18
Industrial	AS 24 / 30 T BF28	•	•				•		17
Industrial	CS 24 T BF1						•	•	18

Metal cutting discs
Portable machines

SUPERFLEX slimline professional cutting disc

Application: Steel and Stainless Steel

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		41	50X1.0X6.35	A60V BF INOX	3100A4FAAA6000VZA	30 600	100
			50X1.0X10	A60V BF INOX	3100A4FABA6000VZA	30 600	100
			50X2.0X10	A36V-BF INOX	3100A4FDBA3600VZA	30 600	100
			76X1.0X10	A60V-BF INOX	3100A4IABA6000VZA	20 100	100
			76X2.0X10	A36V-BF INOX	3100A4IDBA3600VZA	20 100	100
		42	50X1.0X10	A60V BF INOX	3110A4FABA6000VZA	30 600	100
			50X2.0X10	A36V BF INOX	3110A4FDBA3600VZA	30 600	100
			76X1.0X10	A60V BF INOX	3110A4IABA6000VZA	20 100	100
			76X2.0X10	A36V BF INOX	3110A4IDBA3600VZA	20 100	100

Mandrels for small diameter disc

	Dimensions DxTxH (mm)	Specification	Part Number	PU
	6,35x6mm	MANDREL	19000L63506MAN	1
	10x6mm	MANDREL	19000L01006MAN	1

SUPERFLEX slimline professional cutting disc

Application: Steel and Stainless Steel

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		41	115X1.0X22.23	A60V BF INOX	3100A3LAFA6000VZA	13 300	25
			125X1.0X22.23	A60V BF INOX	3100A3MAFA6000VZA	12 250	25
			150X1.2X22.23	A46V BF INOX	3100A3MBFA4600VZA	10 200	25
			180X1.6X22.23	A46V BF INOX	3100A3OCFA4600PZA	8 500	25
			230X1.9X22.23	A46V BF INOX	3100A3QDFA3600TZA	6 650	25
			230X2.5X22.23	A36V BF INOX	3100A4QEFA3600VZA	6 650	25
		42	115x0.8x22.23	A60V BF INOX	3400A2LAFA6000VZA	13 300	25

SUPERFLEX slimline industrial cutting disc

Application: Steel and Stainless Steel

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		41	100X1.0X16	1A46T-BF (2IN1)	3100F3KACA4600TZA	15 300	25
			100X1.6X16	1A46T-BF (2IN1)	3100F3KCCA4600TZA	15 300	25
			115X1.0X22.23	1A46T BF (2IN1)	3100F3LAFA4600TZA	13 300	25
			115X1.6X22.23	1A46T-BF (2IN1)	3100F3LCFA4600TZA	13 300	25
			125X1.0X22.23	1A46T-BF (2IN1)	3100F3MAFA4600TZA	12 250	25
			125X1.6X22.23	1A46T-BF (2IN1)	3100F3MCFA4600TZA	12 250	25
			150X1.6X22.23	1A46T-BF (2IN1)	3100F3NCFA4600TZA	10 200	25
			180X1.6X22.23	1A46T-BF (2IN1)	3100F3OCFA4600TZA	8 500	25
			230X1.9X22.23	1A36T-BF (2IN1)	3100F3QDFA3600TZA	6 650	25
			230X2.2X22.23	1A36T-BF (2IN1)	3100F3QDFA3600SZA	6 650	25
		42	115X1.0X22.23	1A46T-BF (2IN1)	3110F3LAFA4600SZA	13 300	25
			125X1.0X22.23	1A46T-BF (2IN1)	3110F3MAFA4600TZA	12 250	25
			180X1.6X22.23	1A46T-BF (2IN1)	3110F3OCFA4600SZA	8 500	25
			230X1.9X22.23	1A36T-BF (2IN1)	3100A3QDFA3600TZA	6 650	25
			230X2.2X22.23	1A36T-BF (2IN1)	3100F3QDFA3600SZA	6 650	25

Non-ferrous and multipurpose cutting discs
Portable machines

SUPERFLEX slimline professional non-ferrous cutting disc

Application: Aluminium and Non-ferrous metals

	Shape	Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
	41	115X1.0X22.23	A60 ALU BF	3100C3LAFA6000AZA	13 300	25
		125X1.0X22.23	A60 ALU BF	3100C3MAFA6000AZA	12 250	25
		230X1.9X22.23	A46 ALU BF	3100C3QDFA3600AZA	6 650	25

SUPERFLEX slimline industrial non-ferrous cutting disc

Application: Masonry, Stone, Concrete, Ceramics and Non-ferrous metals

	Shape	Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
	41	115X1.0X22.23	C60T-BF	3100F1LAFC6000TZA	13 300	25
		125X1.0X22.23	C60T-BF	3100A3MAFC6000TZA	12 250	25
		230X1.9X22.23	C46T-BF	3100F2QDE4600TZA	6 650	25

Conventional thickness metal cutting discs
Portable machines

SUPERFLEX premium cutting disc

Application: High alloy steel, Mild steel, Cast iron, SG iron

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		41	230X2.5X22.23	ZA24S BF HIGH ALLOY STEEL	3100C4QEFA2400SZA	6 650	25
		42	230X3.2X22.23	ZA24S BF HIGH ALLOY STEEL	3110C4QIFA2400SZA	6 650	25

SUPERFLEX professional heavy duty cutting disc

Application: High alloy steel, Mild steel, Cast iron

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		41	250X3.8X22.23	AS30T BF	3100COQKFA3000TZA	6 150	25
		42	230X3.8X22.23	AS30T BF	3110COQKFA3000TZA	6 650	25

SUPERFLEX professional cutting disc

Application: Metal, Steel, Stainless steel

* Other specifications available - application depedent

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		41	100X2.4X16	AS24S BF INOX ULTRA	3100A0KECA2400SZA	15 300	25
			115X2.4X22.23	AS24S BF INOX ULTRA	3100A0LEFA2400SZA	13 300	25
			125X2.4X22.23	AS24S BF INOX ULTRA	3100A0MEFA2400SZA	12 250	25
			150X2.5X22.23	AS24S BF INOX ULTRA	3100A0NEFA2400SZA	10 200	25
			180X2.5X22.23	AS24S BF INOX ULTRA	3100A0OHFA2400SZA	8 500	25
			230X2.5X22.23	AS24S BF INOX ULTRA	3100A0QEFA2400SZA	6 650	25
			230X3.0X22.23	AS24S BF INOX ULTRA	3100A0QHFA2400SZA	6 650	25
			230X3.2X22.23	AS24S BF INOX ULTRA	3100A0QIFA2400SZA	6 650	25
		42	100X2.4X16	AS24S BF INOX ULTRA	3110A0KECA2400SZA	15 300	25
			115X2.4X22.23	AS24S BF INOX ULTRA	3110A0LEFA2400SZA	13 300	25
			125X2.4X22.23	AS24S BF INOX ULTRA	3110A0MEFA2400SZA	12 250	25
			180X2.5X22.23	AS24S BF INOX ULTRA	3110A0OHFA2400SZA	8 500	25
			230X3.2X22.23	AS24S BF INOX ULTRA	3110A0QIFA2400SZA	6 650	25

SUPERFLEX professional cutting disc

Application: Steel, Carbon steel, Manganese and Cast iron

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		41	100X2.5X16	AS30S B26 F2	3100A2KECA3000SZA	15 300	25
			115X2.5X22.23	AS30S B26 F2	3100A2LEFA3000SZA	13 300	25
			125X2.5X22.23	AS30S B26 F2	3100A2MEFA3000SZA	12 250	25
			150X3.0X22.23	AS30S B26 F2	3100A2NGFA3000SZA	10 200	25
			180X3.0X22.23	AS30S B26 F2	3100A2OHFA3000SZA	8 500	25
			230X3.0X22.23	AS30S B26 F2	3100A2QHFA3000SZA	6 650	25
		42	115X3.2X22.23	AS30S B26 F2	3110A2LIFA3000SZA	13 300	25
			180X3.0X22.23	AS30S B26 F2	3110A2OHFA3000SZA	8 500	25
			230X3.0X22.23	AS30S B26 F2	3110A2QHFA3000SZA	6 650	25

SUPERFLEX industrial cutting disc

Application: Metal, Steel

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		41	80X2.0X9.53	AS46S BF	3100A4IDBA4600SZA	19 100	100
			80X3.2X9.53	AS30S B27 F2	3100A4IIBA3000SZA	19 100	100
			100X2.5X16	AS30S B27 F2	3100A4KECA3000SZA	15 300	25
			115X3.0X22.23	AS30S B27 F2	3100A4LHFA3000SZA	13 300	25
			125X3.0X22.23	AS30S B27 F2	3100A4MHFA3000SZA	12 250	25
			150X3.0X22.23	AS30S B27 F2	3100A4NGFA3000SZA	10 200	25
			180X3.0X22.23	AS30S B27 F2	3100A4OHFA3000SZA	8 500	25
			230X3.0X22.23	AS30S B27 F2	3100A4QHFA3000SZA	6 650	25
		42	100X2.5X16	AS30S B27 F2	3110A4KECA3000SZA	15 300	25
			115X3.0X22.23	AS30S B27 F2	3110A4LHFA3000SZA	13 300	25
			125X3.0X22.23	AS30S B27 F2	3110A4MHFA3000SZA	12 250	25
			180X3.0X22.23	AS30S B27 F2	3110A4OHFA3000SZA	8 500	25
			230X3.0X22.23	AS30S B27 F2	3110A4QHFA3000SZA	6 650	25

Non-ferrous and stone cutting discs
Portable machines

SUPERFLEX professional non-ferrous cutting disc

Application: Aluminium and Non-ferrous metals

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		41	115X2.5X22.23	A36 ALU BF	3100C3LEFA3600AZA	13 300	25
			125X2.5X22.23	A36 ALU BF	3100C3MEFA3600AZA	12 250	25
			180X2.5X22.23	A36 ALU BF	3100C3OEFA3600AZA	8 500	25
			230X2.5X22.23	A36 ALU BF	3100C3QEFA3600AZA	6 650	25

SUPERFLEX industrial stone cutting disc

Application: Masonry, Stone, Concrete and Non-ferrous metals

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		41	100X2.5X16	CS30S B40 F2	3100B2KECS3000SZA	15 300	25
			115X3.0X22.23	CS30S B40 F2	3100B2LHFS3000SZA	13 300	25
			125X3.0X22.23	CS30S B40 F2	3100B2MHFS3000SZA	12 250	25
			150X3.0X22.23	CS30S B40 F2	3100B2NHFS3000SZA	10 200	25
			180X3.0X22.23	CS30S B40 F2	3100B2OHFS3000SZA	8 500	25
			230X3.0X22.23	CS30S B40 F2	3100B2QHFS3000SZA	6 650	25
		42	100X2.5X16	CS30S B40 F2	3110B2KECS3000SZA	15 300	25
			115X3.0X22.23	CS30S B40 F2	3110B2LHFS3000SZA	13 300	25
			125X3.0X22.23	CS30S B40 F2	3110B2MHFS3000SZA	12 250	25
			180X3.0X22.23	CS30S B40 F2	3110B2OHFS3000SZA	8 500	25
			230X3.0X22.23	CS30S B40 F2	3110B2QHFS3000SZA	6 650	25

Safety flange sets

Application: Recommended for use with 180-and-230mm diameter cutting disc.

*Only for use with Type 41 disc

	Dimensions DxTxH (mm)	Specification	Part Number	PU
	75mm	SAFETY FLANGE	190001075SAFEFLG	1

Metal cutting discs
Stationary machines

SUPERFLEX cutting disc

Application: Stainless steel and Steel

*Other sizes available on request

Shape	Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
 41	300X3.4X25.4	A30 O BF INOX ULTRA	3100B1RJGA3000OZA	5 100	10
	350X3.4X25.4	A30 O BF INOX ULTRA	3100B1SJGA3000OZA	4 400	10
	400X4.0X25.4	A30 O BF INOX ULTRA	3100B1TLGA3000OZA	3 850	10
	400X4.0X40	A30 O BF INOX ULTRA	3100B1TLHA3000OZI	3 850	10
	500X5.2X40	A30P INOX ULTRA BF	3100B1VNHA3000PZI	3 050	10

SUPERFLEX heavy duty steel cutting disc

Application: Steel and Cast iron

*Other sizes available on request

Shape	Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
 41	300X3.0X25.4	AS24R BF2E/100	3100A8RHGA2400RZA	6 400	10
	300X3.5X40	AS24R BF	3100B0RJGA2400RZA	6 400	10
	350X3.5X40	AS24R BF	3100B0SJHA2400RZA	5 400	10
	400X4.0X40	A30Q	3100B1TLHA3000QZA	4 800	10
	400X4.5X40	A30T B281F5	3100B1TMHA3000TZA	4 800	10
	450X4.2X40	AS30P BF	3100B1UMHA3000PZA	4 250	10
	450X6.0X57.15	A30Q BF	3100B3UPIA3000QZA	4 250	10
	500X4.2X40	A30Q B55 F2	3100B1VMHA3000QZA	3 850	10
	500X5.2X40	A30O BF	3100B1VNHA3000OZA	3 850	10

SUPERFLEX rough sided cutting disc

Application: Steel and Cast iron

*Other sizes available on request

Shape	Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
 41	350X3.6X25.4	AS30P B2 CF	3100B1SJGA3000PZA	4 400	10
	400X4.2X25.4	AS30P-B2 BF1	3100B1TMGA3000PZA	3 850	10

SUPERFLEX light industrial chopsaw disc

Application: Metal, Steel

*Other sizes available on request

Shape	Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
 41	300X2.6X22.23	AS30R BF	3100A8RFFA3000RZA	5 100	10
	300X2.8X25.4	AS30R BF2E	3100A8RGGA3000RZA	5 100	10
	350X3.0X25.4	AS30R BF2E	3100A8SHGA3000RZA	4 400	10
	400X3.2X25.4	AS30R BF2E	3100A8TIGA3000RZA	3 850	10

SUPERFLEX rough sided light industrial chopsaw disc

Application: Metal, Steel

*Other sizes available on request

Shape	Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
 41	300X2.6X25.4	AS30Q BF1 R	3100B1RFGA3000QZR	5 100	10
	350X2.8X25.4	AS30Q BF1	3100B1SGGA3000QZR	4 400	10
	400X3.0X25.4	AS30Q BF1 R	3100B1THGA3000QZR	3 850	10

Stone cutting discs
Stationary machines

SUPERFLEX industrial stone cutting disc

Application: Stone, Concrete, Ceramics and Non-ferrous metals

Shape	Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
 41	300X3X25.4	CS24R BF50	3100B4RHGS2400RZA	5 100	10
	300X3.0X40	CS24R BF50	3100B4RHHS2400RZA	5 100	10
	300X3.2X22.23	CS24T BF50/100	3100B4RIFS2400TZA	5 100	10
	350X3X25.4	CS24R BF50	3100B4SHGS2400RZA	4 400	10
	350X3.5X40	CS24R BF50	3100B4SHHS2400RZA	5 500	10
	400X3.5X25.4	CS24R BF50	3100B4TJGS2400RZA	3850	10
	400X4.5X40	CS24R BF50	3100B4TMHS2400RZA	4 800	10

Rail cutting disc
Stationary machines and Petrol Saws

SUPERFLEX premium cutting disc

Application: Heat sensitive steel, Steel, Cast iron, Stainless steel and Rails

	Shape	Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
	41	350X4.0X25.4	ZA24P BF5	3100C4SLGA2400PZA	5 500	10
		350X4.0X25.4	ZA24Q BF	3100C6SLGA2400QZA	5 500	10
		400X4.2X25.4	ZA24P B175F4	3100C4TMGZ2400PZA	4 800	10

ANDORFLEX cutting disc

Application: Rail

	Shape	Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
	41	350x4.0x25.4	A24Q BF55 F2 rail	3100B1SLGA2400QZA	5 500	10
		400x4.2x25.4	A24Q BF55 F2 rail	3100B1TMGA2400QZA	4 800	10

Metal angle grinding discs
Portable machines

SUPERFLEX premium grinding disc

Application: High chrome, Heat sensitive metal, Steel, Cast iron and Stainless steel

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	230X5.5X22.23	CA30 Q - BF	3200B7QOFC3000QZA	6 650	10
			230X7.0X22.23	CA24 Q - BF	3200B7QTFC2400VZA	6 650	10

SUPERFLEX premium grinding disc

Application: High chrome, Heat sensitive metal, Steel, Cast iron and Stainless steel

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	115X7.0X22.23	ZA24R BF PREMIUM	3200B7LTFZ2400RZA	13 300	10
			230X5.5X22.23	ZA24R BF PREMIUM	3200B7QOFZ2400RZA	6 650	10
			230X6.0X22.23	ZZ24 ZIRCON BF	3200E0QPFZ2400SZA	6 650	10
			230X7.0X22.23	ZA24R BF PREMIUM	3200B7QTFZ2400RZA	6 650	10
			230X7.0X22.23	ZZ24R BF PROFESSIONAL	3200C4QTFZ2400TZA	6 650	10

SUPERFLEX professional heavy duty grinding disc

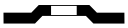
Application: High alloy steel, Steel, Cast iron

* 4.1mm Pipeliner

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	150X4.1X22.23	AS30T-BF HD BF 27	3200CONLFA3000TZA	10 200	10
			180X7.0X22.23	AS30T BF	3200C0OTFA3000TZA	8 500	10
			230X4.1X22.23	AS30T B12HF	3200C0QLFA3000TZA	6 650	10
			230X5.0X22.23	AS30T B12HF	3200C0QNFA3000TZA	6 650	10
			230X5.2X22.23	AS30T-BF HD	3200C0QOFA3000TZA	6 650	10
			230X7.2X22.23	AS30T-BF	3200C0QUFA3000TZA	6 650	10

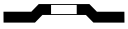
SUPERFLEX professional grinding disc

Application: Steel, Stainless steel and Heat sensitive metals

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	100X6.0X16	AS24R BF INOX ULTRA	3200B6KRCA2400RZA	15 300	10
			115X6.0X22.23	AS24R BF INOX ULTRA	3200B6LPFA2400RZA	13 300	10
			125X6.0X22.23	AS24R BF INOX ULTRA	3200B6MPFA2400RZA	12 250	10
			150X6.5X22.23	AS24R BF INOX ULTRA	3200B6NRFA2400RZA	10 200	10
			180X7.0X22.23	AS24R BF INOX ULTRA	3200B6OTFA2400RZA	8 500	10
			230X4.1X22.23	AS24R BF INOX ULTRA	3200A0QLFA2400SZA	6 650	25
			230X6.0X22.23	A24O BF INOX ULTRA	3200B6QPFA2400RZA	6 650	10
			230X7.0X22.23	AS24R BF INOX ULTRA	3200B6QTFA2400RZA	6 650	10

SUPERFLEX professional grinding disc

Application: Steel, Carbon steel, Cast iron, Manganese and other Castings

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	100X4.5X16	AS30R BF32	3200B8KMCA3000RZA	15 300	10
			100X6.0X16	AS30R BF32	3200B8KPCA3000RZA	15 300	10
			115X4.5X22.23	AS30R BF32	3200B8LMFA3000RZA	13 300	10
			115X6.8X22.23	AS30R BF32	3200B8LSFA3000RZA	13 300	10
			125X4.5X22.23	AS30R BF32	3200B8MMFA3000RZA	12 250	10
			125x6.8x22.23	AS30R BF32	3200B8MSFA3000RZA	12 250	10
			150X6.8X22.23	AS30R BF32	3200B8NPFA3000RZA	10 200	10
			180X7.2X22.23	AS30R BF32	3200B8OTFA3000RZA	8 500	10
			180X8.0X22.23	AS30R BF32	3200B8OVFA3000RZA	8 500	10
			230X7.2X22.23	AS30R BF32	3200B8QTFA3000RZA	6 650	10
			230X8.0X22.23	AS30R BF32	3200B8QVFA3000RZA	6 650	10

SUPERFLEX professional grinding disc

Application: Steel and Cast iron

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	125x6.4x22.23	AC30R BF	3200C6MQFE3000RZA	12 250	10
			180X6.8X22.23	AC30R BF	3200C6OSFE3000RZA	8 500	10
			230X5.5X22.23	AC30R BF	3200C6QOFA3000RZA	6 650	10

SUPERFLEX industrial grinding disc

Application: Steel and Cast iron

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	100X4.5X16	AS24/30T BF28	3200C8KLCA2430TZA	15 300	10
			100X6.0X16	AS24/30T BF28	3200C8KPCA2430TZA	15 300	10
			115X4.5X22.23	AS24/30T BF28	3200C8LMFA2430TZA	13 300	10
			115X6.5X22.23	AS24/30T BF28	3200C8LQFA2430TZA	13 300	10
			125X4.5X22.23	AS24/30T BF28	3200C8MMFA2430TZA	12 250	10
			125X6.5X22.23	AS24/30T BF28	3200C8MRFA2430TZA	12 250	10
			180X4.5X22.23	AS24/30T BF28	3200C8OMFA2430TZA	8 500	10
			180X6.4X22.23	AS24/30T BF28	3200C8OQFA2430TZA	8 500	10
			230X4.5X22.23	AS24/30T BF28	3200C8QMFA2430TZA	6 650	10
			230X6.8X22.23	AS24/30T BF28	3200C8QPFA2430TZA	6 650	10
			230X7.2X22.23	AS24/30T BF28	3200C8QUFA2430TZA	6 650	10
			230X10X22.23	AS24/30T BF28	3200C8QWFA2430TZA	6 650	10
		1	80x6.0x9.53	AS24/30T BF28	3100C8IPBA3000SZA	19 100	10

Non-ferrous metal and stone grinding discs
Portable machines

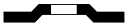
SUPERFLEX professional non-ferrous angle grinding disc

Application: Aluminium and Non-ferrous metals

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	115X7.0X22.23	A24 ALU BF	3200C3LTFA2400AZA	13 300	10
			180X7.0X22.23	A24 ALU BF	3200C3OTFA2400AZA	8 500	10
			230X7.0X22.23	A24 ALU-BF	3200C3QTFA2400AZA	6 650	10

SUPERFLEX industrial stone angle grinding disc

Application: Masonry, Stone, Concrete, Ceramics, Non-ferrous metals and Cast iron

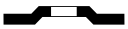
	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	100X6.0X16	CS24T BF1	3200D0KPCS2400TZA	15 300	10
			115X6.4X22.23	CS24T BF1	3200D0LQFS2400TZA	13 300	10
			180X6.0X22.23	CS24T BF1	3200D0OPFS2400TZA	8 500	10
			230X4.5X22.23	CS24T BF1	3200D0QMFS2400TZA	6 650	10
			230X6.0X22.23	CS24T BF1	3200D0QPFS2400TZA	6 650	10

Special purpose cutting and grinding discs
Portable machines

SUPERFLEX professional cut & grind disc

Cut grind: Cutting and light angle grinding

Application: High alloy steel, Mild and Stainless steel

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	115X2.2X22.23	A36S BF INOX CG	3200A1LEFA3600SZA	13 300	25
			125X2.2X22.23	A36S BF INOX CG	3200A1MEFA3600SZA	12 250	25
			150X3.0X22.23	A36S BF INOX CG	3200A2NGFA3600SZA	10 200	25

SUPERFLEX professional curve cut disc

Curve cut: Specially designed to cut and grind many radii only

Application: High alloy steel, Mild and Stainless steel

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		28	115X1.9X22.23	A36S BF INOX CC	3200A1LDFA3600SZA	13 300	25
			125X2.1X22.23	A36S BF INOX CC	3200A1MDFA3600SZA	12 250	25

SUPERFLEX cool cut and grind disc

Application: Steel and Stainless steel

	Shape		Dimensions DxTxH (mm)	Specification	Part Number	MAX RPM	PU
		27	115X3.0X22.23	A36M - BF27 (2 in 1) COOL	3200C141FA3600MZA	13 300	25
			125X3.0X22.23	A36M - BF27 (2 in 1) COOL	3100A3MHFA3600MZA	12 250	25

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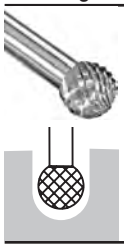
Grinding Techniques

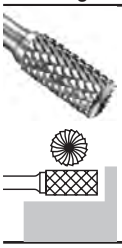
Tunsten Carbide Burrs

Our burrs are made from high quality cemented carbide and suited to a range of handheld, pneumatic and electronic high speed machines. Providing a cool grind, high stock removal and exceptional longevity, this is the ideal tool for grinding in hard to reach areas.

BALL

Cutting Shape	Reference
	CB 030303
	CB 030306
	CB 060603
	CB 060606
	CB 080806
	CB 101006
	CB 121206
	CB 161606

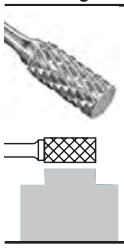
CYLINDRICAL END CUT

Cutting Shape	Reference
	CE 031203
	CE 031218
	CE 062006
	CE 082006
	CE 102006
	CE 122506

CONE

Cutting Shape	Reference
	CO 031203
	CO 031603
	CO 061203
	CO 062006
	CO 102006
	CO 122506

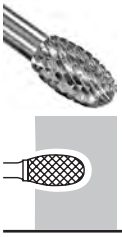
CYLINDRICAL

Cutting Shape	Reference
	CP 031203
	CP 062006
	CP 082006
	CP 102006
	CP 122506

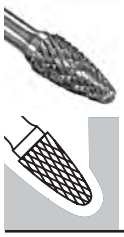
CYLINDRICAL BALL NOSE

Cutting Shape	Reference
	CR 020603
	CR 031203
	CR 061203
	CR 062006
	CR 082006
	CR 102006
	CR 122506

OVAL

Cutting Shape	Reference
	OV 030603
	OV 061006
	OV 101606
	OV 122006
	OV 162508

ROUND TREE

Cutting Shape	Reference
	TR 031203
	TR 061203
	TR 062006
	TR 102006
	TR 122506

POINTED TREE

Cutting Shape	Reference
	TP 031203
	TP 061203
	TP 062006
	TP 102006
	TP 122506
	TP 202506

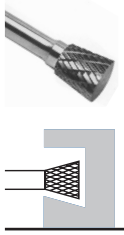
BALL NOSE 14° INCLUDED ANGLE

Cutting Shape	Reference
	T 031203
	T 061606
	T 103006
	T 123006
	T 123006

COUNTERSINK

Cutting Shape	Reference
	CO 120606 - 90°
	CO 160806 - 90°
	CO 121006 - 60°
	CO 161306 - 60°

INVERTED CONE - END

Cutting Shape	Reference
	IC 060603
	IC 101006
	IC 121 206

TYRE BURRS

Cutting Shape	Reference
	T 031203
	T 061606
	T 103006
	T 123006

LONG SHANK BURRS

Cutting Shape	Reference
	CR 082006
	CR 061206
	CP 061606
	TP 061606
	CR 102006
	CR 122506
	TP 102006

*POPULAR SIZES SHOWN; OTHER SIZES AVAILABLE ON REQUEST

RECOMMENDED CUTTING SPEEDS

DOUBLE CUT STYLE BURRS

STEEL AND STEEL CASTINGS	
Non- hardend, non-heat treated steels up to 35 HRC	450 - 600 m/min
Hardend, heat treated steels over 35 HRC	250 - 350 m/min
Stainless steels	250 - 350 m/min

HARDENED NON-FERROUS METALS (Bronze, Titanium, Hard Aluminium)	
Coarse machining (High stock removal)	250 - 350 m/min
Fine machining (Deburring etc)	350 - 450 m/min
Nickel based alloys	300 - 450 m/min
Cast iron	450 - 600 m/min

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