

BURS



ATA

IDA Business & Technology Park, Killygarry, Cavan, Co. Cavan, H12 DK46, Ireland

+353 49 435 2138 Tel: +353 49 432 6298 Email: ask@atagroup.ie

atagroup.com





10

(i)

11

		0
Construction		736
Cut Selection T	ype	737
ATA SGSPRO Bur Shapes		738
Overview of the Cuts		748-749
UNIVERSAL RA	ANGE	751-786
NEXT GENERA	TION 6 RANGE	754-762
	Cylinder wihout Endcut (Shape A, ZYA, SA)	758
	Cylinder with Endcut (Shape B, ZYB, SB)	758
	Ball Nosed Cylinder (Shape C, WRC, SC)	759
	Ball (Shape D, KUD, SD)	759
	Oval (Shape E, TRE, SE)	760
	Ball Nosed Tree (Shape F, RBF, SF)	760
	Pointed Tree (Shape G, SPG, SG)	761
THE	Flame (Shape H, SH)	761
	Ball Nosed Cone (Shape L, KEL, SL)	762
	Cone [Shape M, SKM, SM]	762
DOUBLE CUT		764-775
	Cylinder wihout Endcut (Shape A, ZYA, SA)	766
-	Cylinder with Endcut (Shape B, ZYB, SB)	767
	Ball Nosed Cylinder (Shape C, WRC, SC)	768
=	Ball (Shape D, KUD, SD)	769
	Oval (Shape E, TRE, SE)	770
	Ball Nosed Tree (Shape F, RBF, SF)	771
	Pointed Tree (Shape G, SPG, SG)	772
-	Flame (Shape H, SH)	773
	Ball Nosed Cone (Shape L, KEL, SL)	773
	Cone (Shape M, SKM, SM)	774
	Inverted Cone (Shape N, WKN)	774
-	Countersink 60° (Shape J, KSJ, SJ)	775
	Countersink 90° (Shape K, KSK, SK)	775

		0
SINGLE CUT		776-786
	Cylinder wihout Endcut (Shape A, ZYA, SA)	778
	Cylinder with Endcut (Shape B, ZYB, SB)	779
	Ball Nosed Cylinder (Shape C, WRC, SC)	780
	Ball (Shape D, KUD, SD)	781
	Oval (Shape E, TRE, SE)	782
-	Ball Nosed Tree (Shape F, RBF, SF)	782
	Pointed Tree (Shape G, SPG, SG)	783
-	Flame (Shape H, SH)	783
	Ball Nosed Cone (Shape L, KEL, SL)	784
	Cone (Shape M, SKM, SM)	784
	Inverted Cone (Shape N, WKN)	785
-	Countersink 60° (Shape J, KSJ, SJ)	785
⇒	Countersink 90° (Shape K, KSK, SK)	786
MATERIAL CR		
MATERIAL SPE	ECIFIC	787-831
OMEGA CUT	ECIFIC	787-831 792-798
T. S. W. W. S.	Cylinder wihout Endcut (Shape A, ZYA, SA)	110000000000000000000000000000000000000
T. S. W. W. S.		792-798
T. S. W. W. S.	Cylinder wihout Endcut (Shape A, ZYA, SA)	792-798 794
T. S. W. W. S.	Cylinder wihout Endcut (Shape A, ZYA, SA) Cylinder with Endcut (Shape B, ZYB, SB)	792-798 794 794
T. S. W. W. S.	Cylinder wihout Endcut (Shape A, ZYA, SA) Cylinder with Endcut (Shape B, ZYB, SB) Ball Nosed Cylinder (Shape C, WRC, SC)	792-798 794 794 795
T. S. W. W. S.	Cylinder wihout Endcut (Shape A, ZYA, SA) Cylinder with Endcut (Shape B, ZYB, SB) Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD)	792-798 794 794 795 795
T. S. W. W. S.	Cylinder wihout Endcut (Shape A, ZYA, SA) Cylinder with Endcut (Shape B, ZYB, SB) Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE)	792-798 794 794 795 795
T. S. W. W. S.	Cylinder wihout Endcut (Shape A, ZYA, SA) Cylinder with Endcut (Shape B, ZYB, SB) Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF)	792-798 794 794 795 795 796
T. S. W. W. S.	Cylinder wihout Endcut (Shape A, ZYA, SA) Cylinder with Endcut (Shape B, ZYB, SB) Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG)	792-798 794 794 795 795 796 796
T. S. W. W. S.	Cylinder wihout Endcut (Shape A, ZYA, SA) Cylinder with Endcut (Shape B, ZYB, SB) Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG) Flame (Shape H, SH)	792-798 794 794 795 796 796 797
T. S. W. W. S.	Cylinder wihout Endcut (Shape A, ZYA, SA) Cylinder with Endcut (Shape B, ZYB, SB) Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG) Flame (Shape H, SH) Ball Nosed Cone (Shape L, KEL, SL) Cone (Shape M, SKM, SM)	792-798 794 794 795 796 796 797 797
OMEGA CUT	Cylinder wihout Endcut (Shape A, ZYA, SA) Cylinder with Endcut (Shape B, ZYB, SB) Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG) Flame (Shape H, SH) Ball Nosed Cone (Shape L, KEL, SL) Cone (Shape M, SKM, SM)	792-798 794 794 795 796 796 797 797 798 798
OMEGA CUT	Cylinder wihout Endcut (Shape A, ZYA, SA) Cylinder with Endcut (Shape B, ZYB, SB) Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG) Flame (Shape H, SH) Ball Nosed Cone (Shape L, KEL, SL) Cone (Shape M, SKM, SM)	792-798 794 794 795 795 796 797 797 798 798 800-805



		۵
=>	Ball (Shape D, KUD, SD)	803
	Oval (Shape E, TRE, SE)	804
	Ball Nosed Tree (Shape F, RBF, SF)	804
	Ball Nosed Cone (Shape L, KEL, SL)	805
STEEL CUT		806-812
	Cylinder wihout Endcut (Shape A, ZYA, SA)	808
-8880	Cylinder with Endcut (Shape B, ZYB, SB)	808
	Ball Nosed Cylinder (Shape C, WRC, SC)	809
=€	Ball (Shape D, KUD, SD)	809
	Oval (Shape E, TRE, SE)	810
	Ball Nosed Tree [Shape F, RBF, SF]	810
Allie.	Pointed Tree (Shape G, SPG, SG)	811
	Flame (Shape H, SH)	811
Section 1	Ball Nosed Cone (Shape L, KEL, SL)	812
INOX CUT		814-819
	Cylinder wihout Endcut (Shape A, ZYA, SA)	816
	Cylinder wihout Endcut (Shape A, ZYA, SA) Ball Nosed Cylinder (Shape C, WRC, SC)	816 816
		(103,10e)0
	Ball Nosed Cylinder (Shape C, WRC, SC)	816
	Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD)	816 817
	Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE)	816 817 817
	Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF)	816 817 817 818
	Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG)	816 817 817 818 818
ALLOY SPECIF	Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG) Flame (Shape H, SH) Ball Nosed Cone (Shape L, KEL, SL)	816 817 817 818 818
ALLOY SPECIF	Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG) Flame (Shape H, SH) Ball Nosed Cone (Shape L, KEL, SL)	816 817 817 818 818 819
	Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG) Flame (Shape H, SH) Ball Nosed Cone (Shape L, KEL, SL)	816 817 817 818 818 819 819
	Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG) Flame (Shape H, SH) Ball Nosed Cone (Shape L, KEL, SL) IC CUT Cylinder wihout Endcut (Shape A, ZYA, SA)	816 817 817 818 818 819 819 820-825
-	Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG) Flame (Shape H, SH) Ball Nosed Cone (Shape L, KEL, SL) IC CUT Cylinder wihout Endcut (Shape A, ZYA, SA) Ball Nosed Cylinder (Shape C, WRC, SC)	816 817 817 818 818 819 819 820-825 822
-	Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD) Oval (Shape E, TRE, SE) Ball Nosed Tree (Shape F, RBF, SF) Pointed Tree (Shape G, SPG, SG) Flame (Shape H, SH) Ball Nosed Cone (Shape L, KEL, SL) IC CUT Cylinder wihout Endcut (Shape A, ZYA, SA) Ball Nosed Cylinder (Shape C, WRC, SC) Ball (Shape D, KUD, SD)	816 817 817 818 818 819 819 820-825 822 822

		0
===	Flame [Shape H, SH]	824
	Ball Nosed Cone (Shape L, KEL, SL)	824
-	Cone (Shape M, SKM, SM)	824
Helidell	AS Range Set	825
BASE METAL C	UT	826-831
to the total	Cylinder wihout Endcut (Shape A, ZYA, SA)	828
	Cylinder with Endcut (Shape B, ZYB, SB)	828
	Ball Nosed Cylinder (Shape C, WRC, SC)	828
	Ball (Shape D, KUD, SD)	829
	Oval (Shape E, TRE, SE)	829
	Ball Nosed Tree (Shape F, RBF, SF)	829
	Pointed Tree (Shape G, SPG, SG)	830
=	Flame (Shape H, SH)	830
The same of the sa	Ball Nosed Cone (Shape L, KEL, SL)	830
	Cone (Shape M, SKM, SM)	831
SPECIAL CUT		833-840
VERY FINE DIA	MOND CUT	836-840
\equiv	Cylinder wihout Endcut (Shape A, ZYA, SA)	838
=	Ball Nosed Cylinder (Shape C, WRC, SC)	838
	Ball (Shape D, KUD, SD)	839
1	Ball Nosed Tree (Shape F, RBF, SF)	839
	Pointed Tree (Shape G, SPG, SG)	840
10001	Very Fine Diamond Cut Set	840
PERFORMANC	E RANGE	841-842
G2000		
		842



10



11



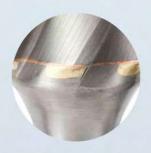


WHAT IS A CARBIDE BUR?

A tungsten carbide bur is a tool used to debur and smooth sharp edges after cutting or machining.

Special geometries are designed to be applied to different materials and applications.

It is imperative to choose the correct bur for your application.



COMPOSITION

ATA burs are made from a mixture of Tungsten Carbide and Cobalt. Cobalt is the binder holding the carbide grains together. Harder than almost all metals, it has the ability to be used at high speeds. It has a reduced risk of contamination and can be used on most materials.



BRAZED CARBIDE BUR



SOLID CARBIDE BUR

BRAZED CARBIDE BUR COMPONENTS

- Carbide Head
- Tri-foil Disc
- Toughened Steel Shank



SUMMARY

A tungsten carbide bur is a tool used to debur and smooth sharp metal edges after cutting or machining.

For drilling holes or cutting a hole in metal, a carbide drill or a carbide end mill or a carbide router is required rather than a carbide bur. Carbide burs are widely used for metalwork, tool making, engineering, model engineering, wood carving, jewellery making, welding, chamferring, casting, deburring, grinding, cylinder head porting and sculpting.

Tungsten carbide is up to three times stronger than high speed steel so it can withstand extreme applications and perform better at higher temperatures.

CUT TYPES

NEXT GENERATION 6 ACCELERATOR CUT

Unprecedented stock removal for hard to grind materials



INOX CUT

High performance grinding on stainless steel applications



Aggressive stock removal for difficult to grind materials



OMEGA CUT

Geometry designed for maximum stock removal and for heavy deburring



Double cut for general purpose use improves control and reduces chips



SINGLE CUT

Standard cut for general applications



Fast Mill cut for rapid stock removal of softer non-ferrous materials including plastics



BASE METAL CUT

Engineered for use on low carbon steels, copper and brass materials



Aggressive cutting form for increased stock removal



AS CUT

Alloy specific cut suitable for Ni-Alloys & Ti-Alloys



Extremely fine finishing and longer life alternative to mounted points



The second second second second

AVAILABLE ON REQUEST



COARSE CUT

For metal removal and finishing on non-ferrous metal alloys



DIAMOND CUT

Diamond cut for smooth operation, good surface finish and hard materials



CROSS CUT

Chipbreaker provides tool control and breaks up the stock into small chips

SHAPES AVAILABLE

B . C D E F G Ball Pointed tree Oval Cylinder without Cylinder with Ball nosed Ball nosed endcut endcut cylinder tree H J K M N RIM | 60° 90° Flame Ball nose Cone Inverted Rim countersink countersink cone cone

10

A

11

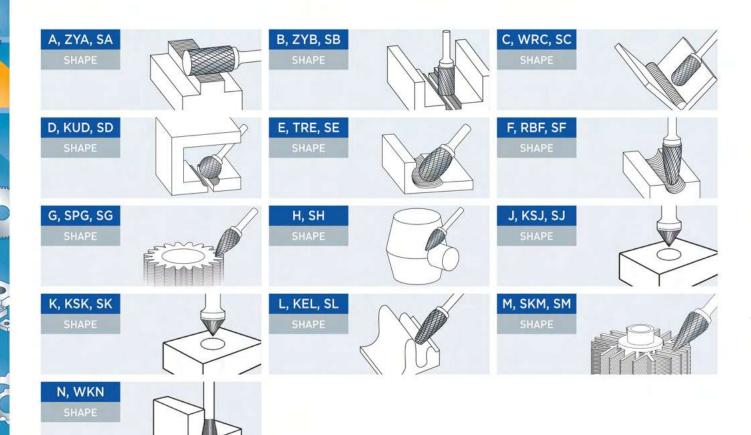
ATA SGSPRO tungsten carbide burs are manufactured to the highest standards. As the worlds leading bur manufacturer, our extensive product portfolio offers the most comprehensive range of burs to suit every deburring application. Our expertise in bur manufacturing ensures that our products offer outstanding quality and deliver excellent and consistent performance across a wide range of metal finishing applications.

Customer Support

Our customer service team is available to answer any questions you may have. Our technical support team is available to discuss any requirements you may have and provide you with a tailor-made solution.

Application Tips

- · Use lubricant or wax to prevent flute loading in soft materials.
- · Using the recommended speed prevents premature wear and/or insufficient material removal rates.
- Maintain grinder concentricity to optimise material removal rates and extend bur life.
- Reduce flutes and increase speed in softer materials. Increase flutes and reduce speed in hardened materials.
- · Cross cut styles (3SP, 4, 6) generally improve stock removal, control, and reduce chip size.



GLOBAL INDUSTRY

ATA DESIGNS, MANUFACTURES AND DISTRIBUTES PRODUCTS FROM AN EXTENSIVE PORTFOLIO OF GRINDING SOLUTIONS, SERVICING ALL MAJOR MANUFACTURING INDUSTRIES FOR MANY YEARS.



DELIVERING INNOVATION - DRIVING EXCELLENCE

ATA is engaged with the design, manufacture and distribution of grinding solutions for all major manufacturing industries.

With over 55 years' experience, ATA offers a wide range of Tungsten Carbide Burs and Routers; an innovative portfolio of Industrial Pneumatic Tools and a complementary assortment of bonded and coated abrasives products.

Over the last decade ATA has been propelled to a position of global excellence to service industries, combining our engineering competence and our solid operational ethos, and a passion for innovation with an extensive technical know-how.

Industries face ongoing challenges with a growing competitive landscape.

Our objective is to increase productivity and to reduce downtime without compromising on quality and operators' safety.

For all your deburring and grinding applications, ATA can offer a standard solution or bespoke offering and outsourcing agreement. From hand-held operations to robotic deburring, ATA works closely with customers to deliver innovation and drive excellence.





















11

Index

AEROSPACE

APPLICATIONS KNOW-HOW



STAINLESS STEEL

Landing gear, structural components, jet engines components, bearings

Bur Cut:	Ø
Single Cut	776
Double Cut	764
Inox Cut	814

TITANIUM ALLOY

Airframe, landing gear, structural components and skin, jet engine components, fasteners

Bur Cut:	Q.
Single Cut	776
Double Cut	764
Alloy Specific	820

FIBREGLASS Engine Cowlings Bur Cut:

2 ALUMINIUM

Striatal components, aircraft skin, cowls

Bur Cut:	
Non Ferrous Cut	800

NICKEL ALLOYS

Gas turbine, jet engine discs, wheels, blades, vanes, rings, cases, shaft, reciprocating engine exhaust valves, air frame structural components

0
776
764
820

Our Aerospace portfolio is dedicated to provide customers with deburring and grinding solutions to suit all applications including new blade deburring, chamfering, weld removing, components marking to turbine refurbishment, engine and landing gear repair.

Designed for all metals and composites, our extensive range of Tungsten Carbide Burs and Routers contains over 10,000 SKUs.

Our specialised range of Industrial Pneumatic Tools offers a reliable, well-designed and ergonomically enhanced array of hand-held tools to maximise productivity and maintain operators' wellbeing. Our complementary range of speciality abrasives, from quickchange discs, linishing belts to our unique patented range of Flexi-discs®.

FGR

845

SHIPYARD

APPLICATIONS KNOW-HOW





PLATE STEEL

Units

Internal Fittings	
Bur Cut:	
Omega Cut	792
Double Cut	764
Steel Cut	808
NEXT GENERATION 6	754

3 FIBREGLASS

Internal Fittings

Router:	
FGR	845

PLATE STEEL

Sub Assemblies

Bur Cut:	
Omega Cut	792
Double Cut	764
Steel Cut	806
NEXT GENERATION 6	754

PLATE

Surface Preparation

Abrasives:	
Flexi-Cut	913
Mini Flexi	917
Mini Discs & Quick Change Discs	911/925

Our marine portfolio is dedicated to provide customers with deburring and grinding solutions to suit all applications including surface preparation, surface finishing and general fabrication works.

Designed for all metals and composites, our extensive range of Tungsten Carbide Burs and Routers contains over 10,000 SKUs.

Our specialised range of Industrial Pneumatic Tools offers a reliable, well-designed and ergonomically enhanced array of hand-held tools to maximise productivity and maintain operators' wellbeing. Our complementary range of speciality abrasives, from quick-change discs, linishing belts to our unique patented range of Flexidiscs®.



2

3

5

) www.

3

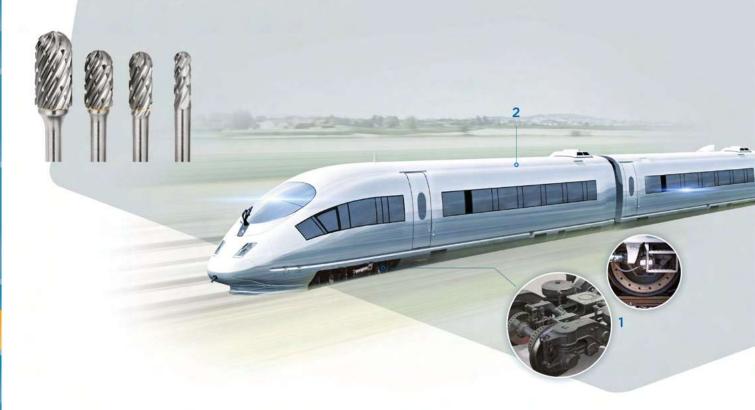
1

10

i

11

RAIL APPLICATIONS KNOW-HOW



0

800

CAST

Bogie

Bur Cut:

Double Cut

NEXT GENERATION 6

Double Cut

764

2 ALUMINIUM

Carraige

Bur Cut: Non Ferrous Cut Our railway portfolio is dedicated to provide customers with deburring and grinding solutions to suit all applications including metal removal and finishing on the bogie and carriages.

Designed for all metals and composites, our extensive range of Tungsten Carbide Burs and Routers contains over 10,000 SKUs.

Our specialised range of Industrial Pneumatic Tools offers a reliable, well-designed and ergonomically enhanced array of hand-held tools to maximise productivity and maintain operators' wellbeing. Our complementary range of speciality abrasives.



ALUMINIUM

Alloy Wheels, Exterior Body (Bonnet and Boot Lid / Roof Panel)

Bur Cut:
Non Ferrous Cut 800

CFRP & MRP

Interior Dashboard

Composite Routers, FGR's

STEEL Exterior - Car Body

Bur Cut:

Double Cut

764

STAINLESS STEEL

Exhaust, Decorative Trims

 Bur Cut:
 Double Cut
 764

 Inox Cut
 814

 NEXT GENERATION 6
 754

STEEL

Steel Wheels

Bur Cut: [Double Cut 76

COMPOSITE PLASTIC

Exterior (Bumper and Trims)

Composite Routers

6 CAST

Engine Block

Bur Cut:

Double Cut (incl. Long Series) 764
Steel Cut 806
NEXT GENERATION 6 754

Our automotive portfolio is dedicated to provide customers with deburring and grinding solutions to suit all applications engine block deburring, alloy wheel mould production and composite routing.

Designed for all metals and composites, our extensive range of Tungsten Carbide Burs and Routers contains over 10,000 SKUs.

Our specialised range of Industrial Pneumatic Tools offers a reliable, well-designed and ergonomically enhanced array of hand-held tools to maximise productivity and maintain operators' wellbeing. Our complementary range of speciality abrasives, from quick-change discs, abrasive belts to our unique patented range of Flexidiscs®.



10

11

Index

OIL & GAS



FORGED

Pressure Valves

Bur Cut:	
Steel Cut	806
Double Cut	764
NEXT GENERATION 6	754

DUPLEX STEEL

Pipeworks, Manifolds, Risers, Storage Tanks

Bur Cut:	
Inox Cut	814
Single Cut	776
Double Cut	764
NEXT GENERATION 6	754





STEELS

Flowlines, Structural Components, Pipelines, Platforms

Bur Cut:	Q
Steel Cut	806
Double Cut	764
NEXT GENERATION 6	754

STAINLESS STEEL

Flowlines, Structural Components, Heat Exchangers, Processing Equipment

Bur Cut:	D
Inox Cut	814
Single Cut	776
Double Cut	764
NEXT GENERATION 6	754

Our oil and gas portfolio includes solutions to supply customers working under the harshest conditions where efficiency and performance is key. Our deburring and grinding solutions suit all applications including pipe work, valves and pumps, fabrication of steel structures and maintenance, repair and overhaul.

Designed for all metals and composites, our extensive range of Tungsten Carbide Burs and Routers can be applied to;

- Mechanical Valves
- Gas Burners & Boilers
- · Heat Exchangeers
- Flanges
- Drill Heads
- · Static & Rotating Equipment

POWER GENERATION



APPLICATIONS KNOW-HOW



COMPOSITE PLASTIC

Solar Panel | Wind Turbine Blade

Composite Routers

HARDENED STEELS

Turbine Blades

Bur Cut:	
Steel Cut	806
Single Cut	776
Double Cut	764
NEXT GENERATION 6	754

NI & TI ALLOYS

Turbine Blades

Bur Cut: AS Cut 820

STAINLESS

Turbine Blades

Bur Cut:	
Inox Cut	814
Single Cut	776
Double Cut	764

Our power generation portfolio is dedicated to provide customers with deburring and grinding solutions to suit all applications including new blade deburring, chamfering, weld removing, components marking to turbine refurbishment.

Designed for all metals and composites, our extensive range of Tungsten Carbide Burs and Routers can be applied to;

- · Compressor Casing
- Combustion Chambers
- · Strutural Fabrication
- Turbine Blades
- · Generator Housing
- Transformer Housing

STEEL

Generator and Transformer Housing Fabrication

Bur Cut:	
Steel Cut	806
Double Cut	764
NEXT GENERATION 6	754



2

3

</l> </li

6 mining

3

9

OIL

10

i





IRON

Bur Cuts:	0
Steel Cut	806
Double Cut	764
NEXT GENERATION 6	754

STEEL

Bur Cuts:	Ø
Double Cut	764
NEXT GENERATION 6	754
Single Cut	776
Omega Cut	792

ALUMINIUM / MAGNESIUM

Bur Cuts:	
Non Ferrous Cut	800

COPPER / ZINC / BRASS BASED

Bur Cuts:	L
Single Cut	776
Base Metal Cut	826

NICKEL BASED

Bur Cuts:	
Single Cut	776
Double Cut	764
Alloy Specific	820

In the Foundry Industry, customers are working in some of the most physically challenging conditions where the improvement of manufacturing processes and performance is key. Our deburring and grinding solutions suit all metal casting.

Designed for all metals, our extensive range of Tungsten Carbide Burs, Routers, Abrasives and Air Tools can be applied to a variety of casting processes including;

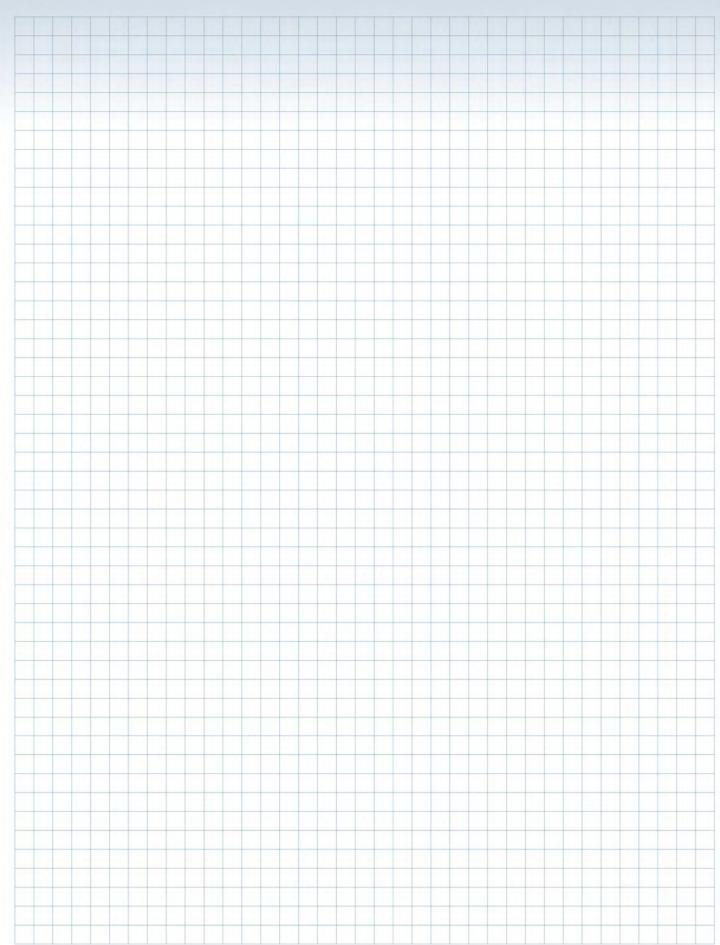
- · Investment casting
- · Sand casting
- · Die casting
- · Low pressure casting
- · Gravity die casting

For applications that include rough grinding, light to medium grinding, heavy deburring, light and medium deburring and finishing & polishing.

Foundries produce components that are vital to the manufacturing processes in all major industries including Automotive, Aerospace, Oil and Gas, Power Generation, Rail, Shipyard and others.



Your notes









1

2















11

Index

NEXT GENERATION 6



The revolutionary new Next Generation 6 cut style

- · Removes more than twice the material when compared against other leading double cut burs.
- · Long tool life comes with high performance.
- . Essentially vibration-free even under the toughest grinding conditions.
- · Available with the latest ACCELERATOR coating technology for extended tool life.
- · For all types of steel such as:
 - Cast iron Steel <60 HRC Stainless steel (INOX) Nickel based

Double Cut 1764-775



he most widely used universal cut style

- · High cutting action through cross cutting style
- Smooth operation
 - Short chips
- · For use on all ferrous metals such as:
- Cast iron · Steel < 60 HRC · Stainless steel (INOX)
- Nickel based and titanium alloy
- Also copper, brass, bronze

Single Cut



- High cutting action with good surface finish
 For use on all ferrous metals such as:
- Cast iron
- Steel < 60 HRC
- Stainless steel (INOX)
- Nickel based and titanium alloy
- Also copper, brass, bronze

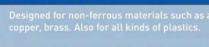
Omega Cut 1792-798



tremely aggressive cross cut style

- \$\text{\$\text{\$\alpha\$}}
- Fast metal removal
 Developed for use in tough grinding conditions, such as shipyards and foundries.
- · For all ferrous metals, such as:
- Cast iron
- Steel < 60 HRC
- Also for copper, brass, bronze

Non Ferrous Cut



- · Wide flute design to prevent loading and material buildup
- Aluminium alloy
- Light metals
- Soft copper and copper alloys (non-ferrous metals)
- Plastics
- Fibre-reinforced plastic [GRP/CRP]

Sets + Displays











1776-786

□ 800-805

Technical data











Steel Cut □ 806-812



- Up to 60% higher machining output as compared to conventional cross cut.
- · High aggressiveness produces large chips with outstanding chip removal
- . No annealing colours at the workpiece due to low heat development.

Inox Cut



- Extremely high machining output and service life for all austenitic, rust- and acid-resilient steels.
- · Titanium alloy (reduce speed to avoid sparking)
- · High-quality surface.
- · No annealing colours at the workpiece due to low heat development.

Very Fine Diamond Cut

3836-840

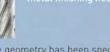


- · Excellent control (also at difficult to reach positions)
- Smooth operation Short chips Good surface finish
- Extremely fine cutting action with good control
- · For all kinds of steel:
 - Up to extra hard steel approx. 70 HRC
 - Heat-resistant substances, such as nickel based + cobalt based alloys

Alloy Specific Cut

₫ 820-825

□ 814-819



The geometry has been specifically designed for use on Ni-Alloys & Ti-Alloys. Our new alloy specific bur geometry offers:

- · Advanced cutting geometry, allowing for increased stock removal Improved surface finish - Increased tool life - Controlled cutting action
- · High performance grinding ensuring production savings and reduced downtime - CNC Machined - high consistent quality
- · A smoother grinding operation Increased productivity

Base Metal Cut □ 826-831



- · High cutting action through cross cutting style
- Smooth operation · Short chips
- · For use on all ferrous metals such as:
- Cast iron
- Steel < 60 HRC Low carbon steels
- Titanium alloys
- · Also copper, brass, bronze

G2000

□ 842



- · Design for aerospace
- . Good finish & high stock removal
- · Specific rake angle
- · Outperform standard cuts in complex alloys
- Respond to complex application
- · Suitable for very hard material and increase life while keeping sharpness

AVAILABLE ON REQUEST

Coarse Cut



- · Deburring, milling, cleaning, finishing.
- · Non-ferrous light metals: brass, copper, zinc
- Plastics
- · Hard Rubber

Crosscut



- · Deburring, milling, cleaning, finishing.
 - Non hardened steel <45HRc
 - · Non-ferrous light metals: brass, copper, zinc.
 - Steel Hardened >45HRc: cast iron

Diamond Cut



- · Fine deburring, fine finishing · Ferrous metals
- Fibreglass
- · Hardened steel >45HRc
- · High temperature-resistant metals: nickel, cobalt.





11

Your notes

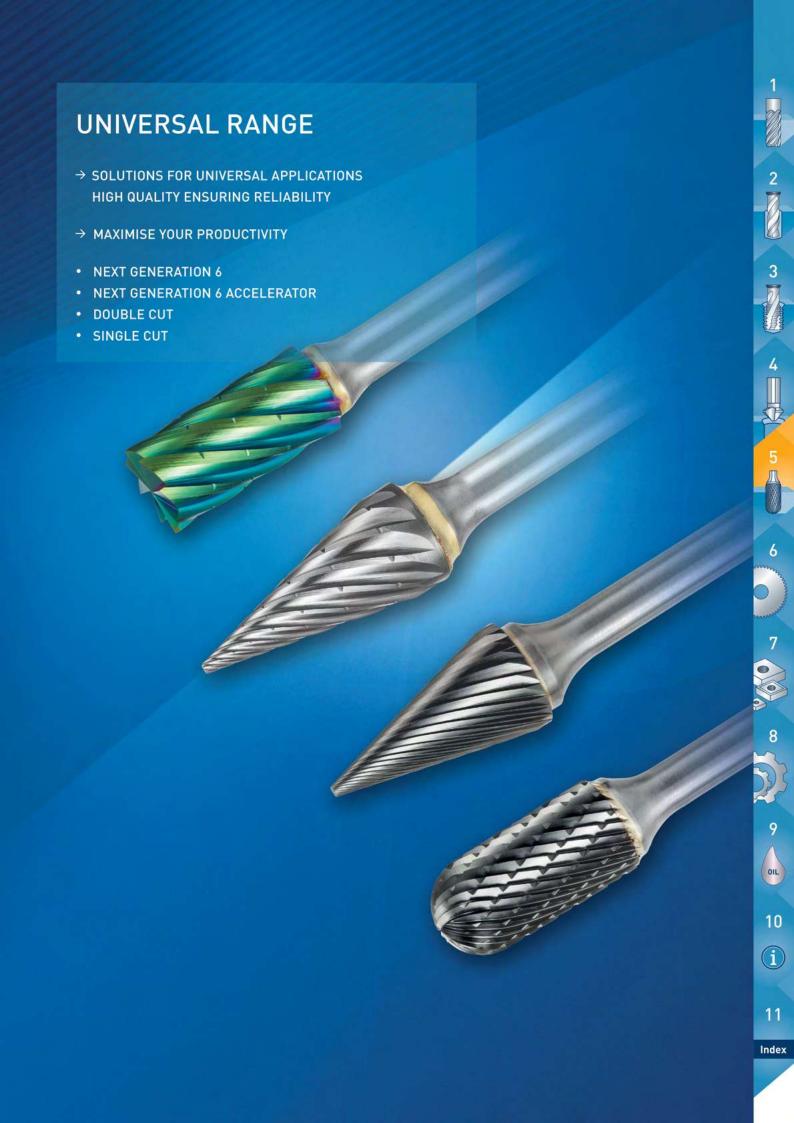


Index

11

uc.

CONTACT INFORMATION



NEXT GENERATION 6

The revolutionary new NEXT GENERATION 6 cut style

APPLICATION



1 754-762





















Stock items

- · Removes more than twice the material when compared against other leading double cut burs.
- Long tool life comes with high performance.
- · Essentially vibration-free even under the toughest grinding conditions.
- · Available with the latest ACCELERATOR coating technology for extended tool life.
- For all types of steel such as:
- Cast iron
- Steel <60 HRC
- Stainless steel (INOX)
- Nickel based

DOUBLE CUT

The most widely used universal cut style

Stainless

APPLICATION





















Copper, copper alloys











GOOD

- High cutting action through cross cutting style
 - Smooth operation
- Short chips
- · For use on all ferrous metals such as:
- Cast iron
- Steel < 60 HRC
- Stainless steel (INOX)
- Nickel based and titanium alloy
- · Also copper, brass, bronze

SINGLE

CUT







11

Index

The most widely used single cut style

Stainless

APPLICATION





- Steel < 60 HRC Stainless steel (INOX)
- Nickel based and titanium alloy

Also copper, brass, bronze

Stock items













DOUBLE CUT

>	Stock item	ıs + catalogı	ue pages										
	ZYA	ZYB	WRC	KUD	TRE	RBF	SPG		KEL	SKM	WKN	KSJ	KSK
	A	₿	0	0	B	G	G	(1)	0	M	N	0	ß
													4
	766	767	768	769	770	1771	772	773	773	774	774	775	775
	Cylinder	Cylinder + end cut	Ball nosed cylinder	Ball	Oval	Ball nosed tree	Tree	Flame	Ball nosed cone		Inverted cone	Countersink 60°	Countersink 90°

SINGLE CUT

>	Stock item	s + catalogi	ue pages											
	ZYA	ZYB	WRC	KUD	TRE	RBF	SPG	-	KEL	SKM	WKN	KSJ	KSK	
	A	₿	0	O	B	F	(3)	(1)	0	M	N	O	K	
	778	779	780	781	782	782	783	783	784	784	785	785	786	
	Cylinder	Cylinder + end cut	Ball nosed cylinder	Ball	Oval	Ball nosed tree	Tree	Flame	Ball nosed cone	Cone	Inverted cone	Countersink 60°	Countersink 90°	

3

2

- State of the sta

8

9



10



11





Innovative, patent pending geometry, developed and engineered by ATA, to accelerate the manufacturing process and increase product life.

WHY CHOOSE THE NEXT GENERATION 6

By choosing the NEXT GENERATION 6, you will achieve huge reductions in time and effort. Combining innovative, patent-pending geometry with the very latest in coating technology, productivity is sustained and longevity is further improved without negatively affecting the vibration for the user.

With the NEXT GENERATION 6 ACCELERATOR coating, stock removal is up to DOUBLE that of other leading premium-quality burs serving this market.

The aggressive geometry greatly improves cutting performance and finishing capabilities, providing a reduction in process costs for heavy stock removal applications.

SPECIALLY DESIGNED TO RAPIDLY REMOVE STOCK, INCREASE PRODUCTIVITY AND EXTEND PRODUCT LIFE

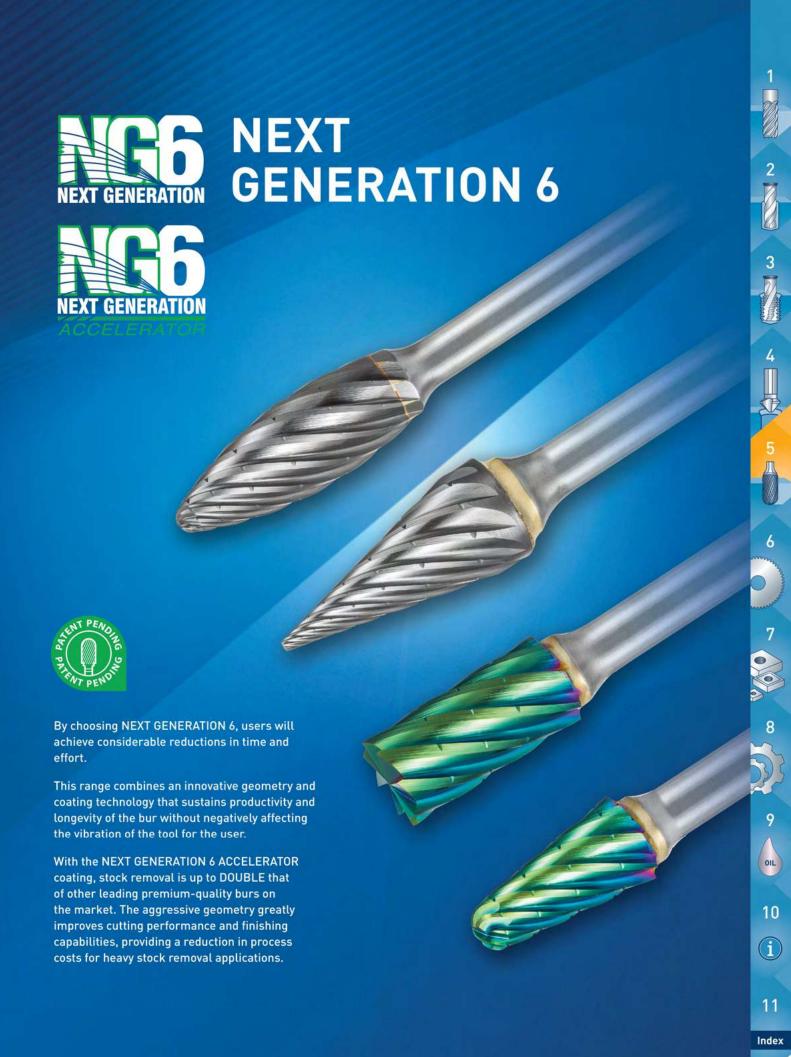
Manufactured from high quality tungsten carbide at our facility, guaranteeing consistent performance and high quality to ISO 9001:2015.

Combined with an ATA Industrial Air Tool, the NEXT GENERATION 6 will give a guaranteed smoother grinding operation.

The patent pending flute geometry is developed with a primary relief angle, which significantly increases the life of the bur.

- · Significantly increased metal removal rates
- · Shortens operator grinding time
- · Aggressive geometry greatly improves cutting performance
- · Reduced component machine time
- · Resulting in the reduction of overall manufacturing costs





NEXT **GENERATION 6**

The revolutionary new NEXT GENERATION 6 cut style

APPLICATION





- Removes more than twice the material when compared against other leading double cut burs.
- Long tool life comes with high performance.
- Essentially vibration-free even under the toughest grinding conditions.
 Available with the latest ACCELERATOR coating technology for extended tool life.
- · For all types of steel such as:
 - Cast iron
 - Steel <60 HRC
 - Stainless steel (INOX)
 - Nickel based

Stock items +	catalogue page	es							
ZYA	ZYB	WRC	KUD	TRE	RBF	SPG		KEL	SKM
A	B	Θ	0	9	G	G	(3)	0	M
758	758	759	759	760	760	761	761	762	762
	Cylinder + end cut	Ball nosed cylinder	Ball	Oval	Ball nosed tree	Tree	Flame	Ball nosed cone	Cone

Stock items +	catalogue page	es							
ZYA	ZYB	WRC	KUD	TRE	RBF	SPG	-	KEL	SKM
A	3	Θ	0	E	•	((2)	0	Ø
									
758	758	759	759	760	760	761	761	762	762
Cylinder	Cylinder + end cut	Ball nosed cylinder	Ball	Oval	Ball nosed tree	Tree	Flame	Ball nosed cone	Cone

11



RECOMMENDED OPERATING SPEEDS

The following operating speeds are a recommended guide for the usage of tungsten carbide burs, based on the bur head diameter.

		Cast Iron		Unhar	dened Steel	Unhardened Steel, Stainless Steel		
Bur Head	Max. Operating Speed	Speed Range	Recommended Start Point	Speed Range	Recommended Start Point	Speed Range	Recommended Start Point	
6mm	65	22-60	45	45-60	50	30-45	40	
8mm	60	20-40	35	30-40	35	20-40	30	
10mm	55	15-40	30	30-40	30	19-30	25	
12mm	35	11-30	25	22-30	25	15-22	20	
16mm	25	9-20	20	18-20	20	12-18	15	
20mm	20	8-17	12	15-17	15	10-15	10	
25mm	15	6-13	10	10-13	10	7-11	8	

Recommended speeds are based on standard overall length of 38mm (1-1/2") maximum overhang of 10mm (3/8"). All speeds in the table above are × 1,000 rpm.

MATERIAL APPLICATION

The NEXT GENERATION 6, along with the coated ACCELERATOR option, outperforms all comparable carbide burs on Steel, Stainless Steel, Mild Steel and Cast Iron.



INDUSTRY APPLICATION

The **NEXT GENERATION 6** is the solution to accelerate manufacturing processes in industry applications where rapid stock removal is required.

Ideal industries include:

- · Shipbuilding
- Foundries
- Heavy Metal Fabrication
- · Oil & Gas
- Automotive
- · Rail

NEXT GENERATION 6 - featuring an innovative, patent pending geometry, a unique combination of profiled fluting with low cross cut and a primary relief. Combined with the very latest in coating technology, never before used with carbide burs, the NEXT GENERATION 6 delivers:

- · Significantly increased metal removal rates
- · Shortens operator grinding time
- · Aggressive geometry greatly improves cutting performance
- · Reduced component machine time

Resulting in the reduction of overall manufacturing costs.

HIGHLIGHT







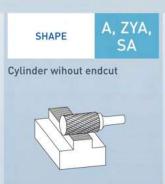


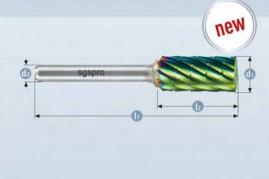
10

11



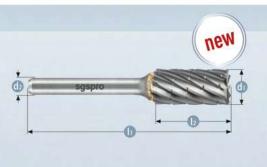


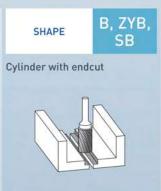


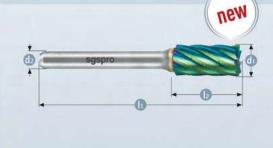


Product Code	d1	l2	d2	L1	brazed	solid
29600	6.0	18.0	6.0	50.0		V
29601	8.0	19.0	6.0	64.0	V	
29602	9.6	19.0	6.0	64.0	~	
29603	12.0	25.0	6.0	70.0	V	
29604	16.0	25.0	6.0	70.0	~	

Product Code	d1	l2	d2	L1	brazed	solid
29750	6.0	18.0	6.0	50.0		V
29751	8.0	19.0	6.0	64.0	V	
29752	9.6	19.0	6.0	64.0	~	
29753	12.0	25.0	6.0	70.0	V	
29754	16.0	25.0	6.0	70.0	V	



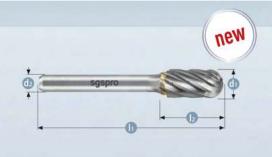


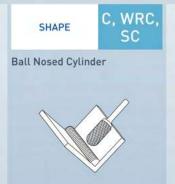


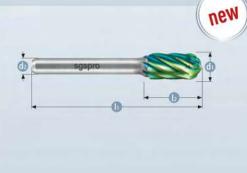
Product Code	d1	l2	d2	L1	brazed	solid
29605	6.0	18.0	6.0	50.0		V
29606	8.0	19.0	6.0	64.0	~	
29607	9.6	19.0	6.0	64.0		
29608	12.0	25.0	6.0	70.0	~	
29609	16.0	25.0	6.0	70.0	V	

Product Code	d1	l2	d2	l1	brazed	solid
29755	6.0	18.0	6.0	50.0		V
29756	8.0	19.0	6.0	64.0	V	
29757	9.6	19.0	6.0	64.0	V	
29758	12.0	25.0	6.0	70.0	V	
29759	16.0	25.0	6.0	70.0	V	

PERFORMANCE - NEXT GENERATION 6 RANGE

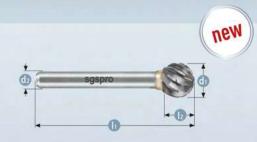


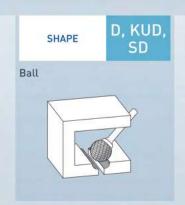




Product Code	d1	L2	d2	L1	brazed	solid
29610	6.0	18.0	6.0	50.0		-
29611	8.0	19.0	6.0	64.0	4	
29612	9.6	19.0	6.0	64.0	V	
29613	12.0	25.0	6.0	70.0	V	
29614	16.0	25.0	6.0	70.0	~	

Product Code	d1	l2	d2	L1	brazed	solid
29760	6.0	18.0	6.0	50.0		V
29761	8.0	19.0	6.0	64.0	V	
29762	9.6	19.0	6.0	64.0	V	
29763	12.0	25.0	6.0	70.0	V	
29764	16.0	25.0	6.0	70.0	V	







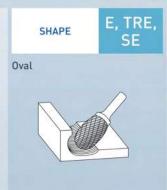
Product Code	d1	l2	d2	L1	brazed	solid
29615	6.0	4.7	6.0	50.0		V
29616	8.0	7.0	6.0	52.0	V	
29617	9.6	8.0	6.0	53.0	V	
29618	12.0	11.0	6.0	56.0	~	
29619	16.0	14.0	6.0	59.0	~	

Product Code	d1	l2	d2	l1	brazed	solid
29765	6.0	4.7	6.0	50.0		V
29766	8.0	7.0	6.0	52.0	V	
29767	9.6	8.0	6.0	53.0	V	
29768	12.0	11.0	6.0	56.0	V	
29769	16.0	14.0	6.0	59.0	V	

10





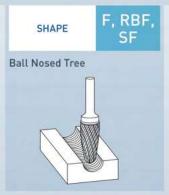




Product Code	d1	12	d2	l1	brazed	solid
29620	6.0	10.0	6.0	50.0		V
29621	8.0	15.0	6.0	60.0	V	
29622	9.6	16.0	6.0	61.0	~	
29623	12.0	21.0	6.0	66.0	V	
29624	16.0	25.0	6.0	70.0	~	

Product Code	d1	l2	d2	L1	brazed	solid
29770	6.0	10.0	6.0	50.0		V
29771	8.0	15.0	6.0	60.0	V	
29772	9.6	16.0	6.0	61.0	V	
29773	12.0	21.0	6.0	66.0	V	
29774	16.0	25.0	6.0	70.0	V	







Product Code	d1	l2	d2	l1	brazed	solid
29625	6.0	18.0	6.0	50.0		V
29626	8.0	20.0	6.0	65.0	~	
29627	9.6	19.0	6.0	64.0		
29628	12.0	25.0	6.0	70.0	~	
29629	16.0	25.0	6.0	70.0	V	

Product Code	d1	l2	d2	l1	brazed	solid
29775	6.0	18.0	6.0	50.0		V
29776	8.0	20.0	6.0	65.0	V	
29777	9.6	19.0	6.0	64.0	V	
29778	12.0	25.0	6.0	70.0	V	
29779	16.0	25.0	6.0	70.0	V	

PERFORMANCE - NEXT GENERATION 6 RANGE

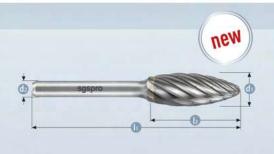




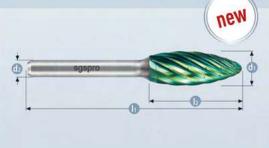


Product Code	d1	l2	d2	L1	brazed	solid
29630	6.0	18.0	6.0	50.0		-
29631	8.0	19.0	6.0	64.0	4	
29632	9.6	19.0	6.0	64.0	V	
29633	12.0	25.0	6.0	70.0	V	
29634	16.0	25.0	6.0	70.0	~	

Product Code	d1	l2	d2	L1	brazed	solid
29780	6.0	18.0	6.0	50.0		1
29781	8.0	19.0	6.0	64.0	V	
29782	9.6	19.0	6.0	64.0	V	
29783	12.0	25.0	6.0	70.0	V	
29784	16.0	25.0	6.0	70.0	V	







Product Code	d1	l2	d2	L1	brazed	solid
29635	6.0	14.0	6.0	50.0		~
29636	8.0	19.0	6.0	64.0	V	
29637	10.0	20.0	6.0	65.0	V	
29638	12.0	30.0	6.0	75.0	~	
29639	16.0	36.0	6.0	81.0	V	

Product Code	d1	l2	d2	l1	brazed	solid
29785	6.0	14.0	6.0	50.0		V
29786	8.0	19.0	6.0	64.0	V	
29787	10.0	20.0	6.0	65.0	V	
29788	12.0	30.0	6.0	75.0	V	
29789	16.0	36.0	6.0	81.0	V	

3

7

3

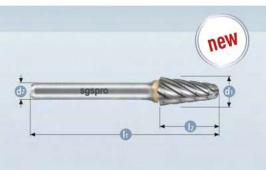
9

OIL

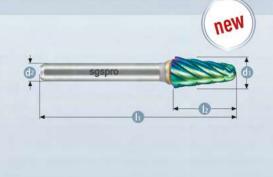
10

<u>i</u>

11







Product Code	d1	12	d2	l1	brazed	solid
29640	6.0	18.0	6.0	50.0		V
29641	8.0	25.0	6.0	70.0	V	
29642	10.0	20.0	6.0	65.0	~	
29643	12.0	30.0	6.0	75.0	V	
29644	16.0	33.0	6.0	78.0		

Product Code	d1	l2	d2	u	brazed	solid
29790	6.0	18.0	6.0	50.0		V
29791	8.0	25.0	6.0	70.0	V	
29792	10.0	20.0	6.0	65.0	4	
29793	12.0	30.0	6.0	75.0	V	
29794	16.0	33.0	6.0	78.0	V	





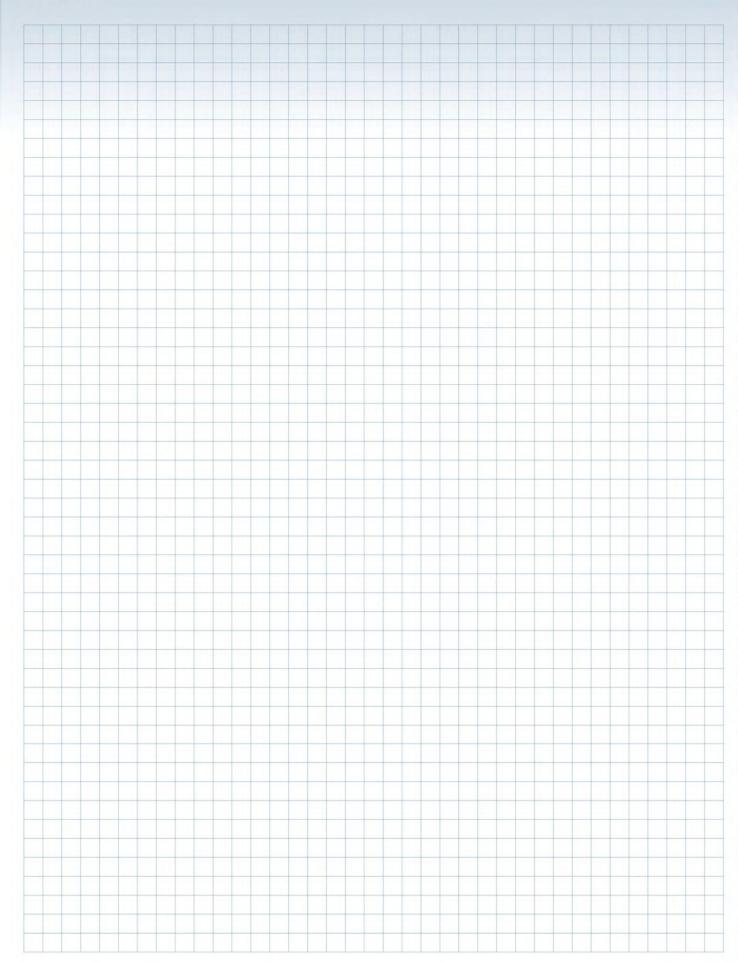


Product Code	d1	l2	d2	l1	brazed	solid
29645	6.0	18.0	6.0	50.0		V
29646	8.0	18.5	6.0	64.0	V	
29647	10.0	19.0	6.0	64.0		
29648	12.0	25.0	6.0	70.0	~	
29649	16.0	29.0	6.0	74.0	V	

d1	l2	d2	l1	brazed	solid
6.0	18.0	6.0	50.0		V
8.0	18.5	6.0	64.0	V	
10.0	19.0	6.0	64.0	V	
12.0	25.0	6.0	70.0	V	
16.0	29.0	6.0	74.0	V	
	6.0 8.0 10.0 12.0	6.0 18.0 8.0 18.5 10.0 19.0 12.0 25.0	6.0 18.0 6.0 8.0 18.5 6.0 10.0 19.0 6.0 12.0 25.0 6.0	6.0 18.0 6.0 50.0 8.0 18.5 6.0 64.0 10.0 19.0 6.0 64.0 12.0 25.0 6.0 70.0	6.0 18.0 6.0 50.0 8.0 18.5 6.0 64.0 ✓ 10.0 19.0 6.0 64.0 ✓ 12.0 25.0 6.0 70.0 ✓



Your notes



























The most widely used universal cut style

APPLICATION





- High cutting action through cross cutting style
- Smooth operation · Short chips
- For use on all ferrous metals such as:
 - Cast iron
- Steel < 60 HRC
- Stainless steel (INOX)
- Nickel based and titanium alloy
- Also copper, brass, bronze

Stock item	s + catalogu	ue pages		HILL								
ZYA	ZYB	WRC	KUD	TRE	RBF	SPG	-	KEL	SKM	WKN	KSJ	KSK
A	₿	0	O	B	•	G	(1)	0	M	N	0	ß
												4
766	767	768	769	770	771	772	773	773	774	774	775	775
Cylinder	Cylinder + end cut	Ball nosed cylinder	Ball	Oval	Ball nosed tree	Tree	Flame	Ball nosed cone	Cone	Inverted cone	Countersink 60°	Countersink 90°

DOUBLE CUT CUT SPECIFICATION



Material group	os		Application	Cutting speed m/min
Steel, cast steel	Non-hardened, non-heat treated steels up to 1200 N/mm² steels, non-alloyed steels, case-ha steels, cast steels		Coarse machining with	450-600
	Hardened, heat-treated steels exceeding 1200 N/mm² (> 38 HRC)	Tool steels, tempering steels, alloyed steel, cast steels	high stock removal	250-350
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse machining with high stock removal	250-350
Non-ferrous	Hard-non-ferrous metals	Bronze, titanium/titanium alloys, hard alu-alloys (high Si content)	Coarse machining with	250-350
metals	High-temperature resistant materials	Nickel based alloys, cobalt based alloys (aircraft engine and turbine construction)	high stock removal	300-450
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL, with nodular graphite cast iron EN-GJS, white annealed cast iron EN-GJMW, black cast iron EN-GJMB	Coarse machining with high stock removal	450-600

utting speed (m/min)									
	250	300	350	400	450	500	600		
Ø (mm)	Rotational speed I	(rpm)							
2	40,000	48,000	56,000	64,000	72,000	80,000	95,000		
3	27,000	32,000	37,000	42,000	48,000	53,000	64,000		
4	20,000	24,000	28,000	32,000	36,000	40,000	48,000		
6	13,000	16,000	19,000	21,000	24,000	27,000	32,000		
8	10,000	12,000	14,000	16,000	18,000	20,000	24,000		
10	8,000	10,000	11,000	13,000	14,000	16,000	19,000		
12	7,000	8,000	9,000	11,000	12,000	13,000	16,000		
16	5,000	6,000	7,000	8,000	9,000	10,000	12,000		
20	4,000	5,000	6,000	6,000	7,000	8,000	10,000		
25	3,000	4,000	4,000	5,000	6,000	6,000	8,000		

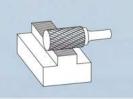




SHAPE

A, ZYA, SA

Cylinder without end cut







Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SA-41M	20603	1.5	6.0	3.0	38.0		~
SA-41ML2	27103	1.5	6.0	3.0	50.0		~
SA-41ML3	27128	1.5	6.0	3.0	75.0		V
SA-42M	20628	2.5	11.0	3.0	38.0		V
SA-42ML2	27153	2.5	11.0	3.0	50.0		V
SA-42ML3	27178	2.5	11.0	3.0	75.0		~
SA-43M	20653	3.0	14.0	3.0	38.0		V
SA-43ML2	27203	3.0	14.0	3.0	50.0		V
SA-43ML3	27228	3.0	14.0	3.0	75.0		V
SA-11M	20403	3.0	12.0	6.0	50.0		V
SA-12M	20428	3.0	16.0	6.0	50.0		V
SA-52M	20703	4.0	12.7	3.0	38.0		V
SA-13M	20453	4.0	16.0	6.0	50.0		V
SA-53M	20728	5.0	12.7	3.0	38.0		~
SA-14M	20478	5.0	16.0	6.0	50.0		V
SA-1M	20003	6.0	16.0	6.0	50.0		V
SA-1ML	20028	6.0	25.0	6.0	50.0		V
SA-1ML6	26178	6.0	12.7	6.0	162.0		V
SA-51M	20678	6.3	12.7	3.0	50.0	~	
SA-2M	20053	8.0	19.0	6.0	64.0	V	
SA-3M	20078	9.6	19.0	6.0	64.0	~	
SA-3ML	20103	9.6	25.0	6.0	70.0	V	
SA-3ML6	26203	9.6	19.0	6.0	169.0	V	
SA-3MZ	29101	10.0	20.0	6.0	60.0	V	
SA-4M	20153	11.0	25.0	6.0	70.0	V	
SA-5MZ	29105	12.0	25.0	6.0	65.0	V	
SA-5M	20178	12.7	25.0	6.0	70.0	~	
SA-5ML6	26228	12.7	25.0	6.0	175.0	V	
*SA-6M	20203	16.0	25.0	6.0	70.0	V	
*SA-7M	20253	19.0	25.0	6.0	70.0	V	
*SA-9M	20353	25.0	25.0	6.0	70.0	~	

*8 mm shanks optional

The revolutionary cylinder-radius bur see pages 873/874



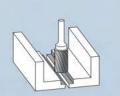




SHAPE

B, ZYB, SB

Cylinder with end cut







	T.	
1	765	=

Tool No.	Art.	d1	l2	d2	II	brazed	solid
SB-41M	21453	1.5	6.0	3.0	38.0		V
SB-41ML2	27253	1.5	6.0	3.0	50.0		~
SB-41ML3	27278	1.5	6.0	3.0	75.0		~
SB-42M	21478	2.5	11.0	3.0	38.0		~
SB-42ML2	27303	2.5	11.0	3.0	50.0		~
SB-42ML3	27328	2.5	11.0	3.0	75.0		~
SB-43M	21503	3.0	14.0	3.0	38.0		V
SB-43ML2	27353	3.0	14.0	3.0	50.0		~
SB-43ML3	27378	3.0	14.0	3.0	75.0		V
SB-11M	21253	3.0	12.0	6.0	50.0		V
SB-12M	21278	3.0	16.0	6.0	50.0		V
SB-13M	21303	4.0	16.0	6.0	50.0		V
SB-14M	21328	5.0	16.0	6.0	50.0		~
SB-1M	20853	6.0	16.0	6.0	50.0		V
SB-1ML	20873	6.0	25.0	6.0	50.0		V
SB-51M	21553	6.3	4.7	3.0	43.0	V	
SB-2M	20903	8.0	19.0	6.0	64.0	~	
SB-3M	20928	9.6	19.0	6.0	64.0	~	
SB-3ML	20953	9.6	25.0	6.0	70.0	V	
SB-3MZ	29109	10.0	20.0	6.0	60.0	V	
SB-4M	21003	11.0	25.0	6.0	70.0	~	
SB-5MZ	29113	12.0	25.0	6.0	65.0	V	
SB-5M	21028	12.7	25.0	6.0	70.0	1	
*SB-6M	21053	16.0	25.0	6.0	70.0	V	
*SB-7M	21103	19.0	25.0	6.0	70.0	~	
*SB-9M	21203	25.0	25.0	6.0	70.0	V	

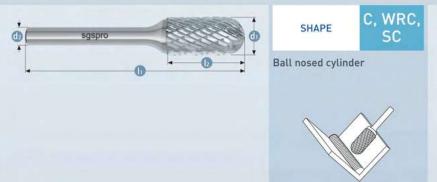
*8 mm shanks optional

The revolutionary cylinder-radius bur see pages 873/874





11



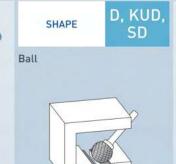


Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SC-41M	22253	2.5	11.0	3.0	38.0		~
SC-42M	22278	3.0	14.0	3.0	38.0		V
SC-42ML2	27453	3.0	14.0	3.0	50.0		V
SC-42ML3	27478	3.0	14.0	3.0	75.0		V
SC-11M	22053	3.0	12.0	6.0	50.0		V
SC-12M	22078	3.0	16.0	6.0	50.0		•
SC-52M	22328	4.0	12.7	3.0	38.0		V
SC-13M	22103	4.0	16.0	6.0	50.0		~
SC-53M	22353	5.0	12.7	3.0	38.0		V
SC-14M	22128	5.0	16.0	6.0	50.0		V
SC-1M	21703	6.0	16.0	6.0	50.0		V
SC-1ML	21728	6.0	25.0	6.0	50.0		~
SC-1ML6	26328	6.0	12.7	6.0	162.0		V
SC-51M	22303	6.3	12.7	3.0	50.0	V	
SC-2M	21753	8.0	19.0	6.0	64.0	~	
SC-3M	21778	9.6	19.0	6.0	64.0	V	
SC-3ML	21803	9.6	25.0	6.0	70.0	~	
SC-3ML6	26353	9.6	19.0	6.0	169.0	~	
SC-3MZ	29117	10.0	20.0	6.0	60.0	V	
SC-4M	21853	11.0	25.0	6.0	70.0	V	
SC-5MZ	29121	12.0	25.0	6.0	65.0	~	
SC-5M	21878	12.7	25.0	6.0	70.0	V	
SC-5ML6	26378	12.7	25.0	6.0	175.0	V	
*SC-6M	21903	16.0	25.0	6.0	70.0	V	
*SC-7M	21953	19.0	25.0	6.0	70.0	~	
*SC-9M	22003	25.0	25.0	6.0	70.0	V	

*8 mm shanks optional









Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SD-41M	22778	2.5	2.3	3.0	38.0		~
SD-42M	22803	3.0	2.8	3.0	38.0		~
SD-42ML2	27553	3.0	2.8	3.0	50.0		V
SD-42ML3	27578	3.0	2.8	3.0	75.0		V
SD-11M	22728	3.0	2.8	6.0	50.0		V
SD-52M	22840	4.0	3.4	3.0	38.0		V
SD-53M	22853	5.0	4.7	3.0	38.0		V
SD-14M	22753	5.0	4.0	6.0	50.0		V
SD-1M	22453	6.0	5.0	6.0	50.0		V
SD-1ML6	26403	6.0	5.0	6.0	155.0		V
SD-51M	22828	6.3	5.0	3.0	44.0	~	
SD-2M	22478	8.0	6.4	6.0	50.0	V	
SD-3M	22503	9.6	8.0	6.0	52.0	~	
SD-3ML6	26428	9.6	8.0	6.0	158.0	~	
SD-3MZ	29125	10.0	9.0	6.0	49.0	~	
SD-4M	22528	11.0	9.5	6.0	54.0	~	
SD-5MZ	29129	12.0	10.8	6.0	51.0	V	
SD-5M	22553	12.7	11.0	6.0	55.0	~	
SD-5ML6	26453	12.7	11.0	6.0	161.0	~	
*SD-6M	22578	16.0	14.0	6.0	58.0	V	
*SD-7M	22628	19.0	16.0	6.0	62.0	~	
*SD-9M	22678	25.0	21.0	6.0	72.0	V	





3

D ...

8

9

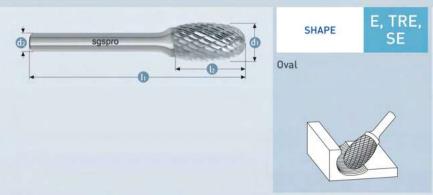


10



11

Index



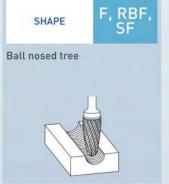


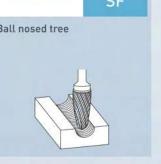
Tool No.	Art.	d1	l2	d2	LI .	brazed	solid
SE-41M	23153	3.0	5.5	3.0	38.0		V
SE-41ML2	27603	3.0	5.5	3.0	50.0		V
SE-41ML3	27628	3.0	5.5	3.0	75.0		V
SE-53M	23203	5.0	7.1	3.0	38.0		6
SE-1M	22953	6.0	9.5	6.0	50.0		~
SE-1ML6	26478	6.0	9.5	6.0	160.0		~
SE-51M	23178	6.3	9.5	3.0	47.0	V	
SE-3M	22978	9.6	16.0	6.0	60.0	V	
SE-3ML6	26503	9.6	16.0	6.0	166.0	~	
SE-5M	23003	12.7	22.0	6.0	66.0	V	
SE-5ML6	26528	12.7	22.0	6.0	172.0	~	
*SE-6M	23028	16.0	25.0	6.0	70.0	V	
*SE-7M	23078	19.0	25.0	6.0	70.0	~	



i

11 Index







Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SF-41M	23678	3.0	6.0	3.0	38.0		~
SF-42M	23703	3.0	12.7	3.0	38.0		~
SF-11M	23503	3.0	12.7	6.0	50.0		~
SF-42ML2	27653	3.0	12.7	3.0	50.0		~
SF-42ML3	27678	3.0	12.7	3.0	75.0		V
SF-53M	23753	5.0	12.7	3.0	38.0		~
SF-1M	23303	6.0	16.0	6.0	50.0		V
SF-1ML6	26553	6.0	12.7	6.0	163.0		V
SF-51M	23728	6.3	12.7	3.0	56.0	V	
SF-3M	23328	9.6	19.0	6.0	64.0	V	
SF-3ML6	26578	9.6	19.0	6.0	169.0	~	
SF-4M	23353	11.0	25.0	6.0	70.0	V	
SF-5MZ	23522	12.0	25.0	6.0	65.0	~	
SF-13M	23528	12.7	19.0	6.0	64.0	V	
SF-5M	23378	12.7	25.0	6.0	70.0	V	
SF-5ML6	26603	12.7	25.0	6.0	175.0	V	
*SF-6M	23403	16.0	25.0	6.0	70.0	V	
*SF-7M	23453	19.0	25.0	6.0	70.0	~	
*SF-14M	23578	19.0	32.0	6.0	76.0	~	
*SF-15M	23628	19.0	38.0	6.0	82.0	V	







Tool No.	Art.	d1	l2	d2	H	brazed	solid
SG-41M	24153	3.0	6.0	3.0	38.0		~
SG-43M	24203	3.0	9.5	3.0	38.0		~
SG-44M	24228	3.0	12.7	3.0	38.0		~
SG-44ML2	27853	3.0	12.7	3.0	50.0		~
SG-44ML3	27878	3.0	12.7	3.0	75.0		V
SG-53M	24278	5.0	12.7	3.0	38.0		~
SG-1M	23853	6.0	16.0	6.0	50.0		~
SG-1ML6	26628	6.0	12.7	6.0	163.0		~
SG-51M	24253	6.3	12.7	3.0	50.0	~	
SG-2M	23878	8.0	19.0	6.0	64.0	V	
SG-3M	23903	9.6	19.0	6.0	64.0	V	
SG-3ML6	26653	9.6	19.0	6.0	169.0	V	
SG-3MZ	24042	10.0	20.0	6.0	60.0	~	
SG-5MZ	24046	12.0	25.0	6.0	65.0	V	
SG-13M	24053	12.7	19.0	6.0	64.0	~	
SG-5M	23928	12.7	25.0	6.0	70.0	V	
SG-5ML6	26678	12.7	25.0	6.0	175.0	~	
*SG-6M	23953	16.0	25.0	6.0	70.0	V	
*SG-7M	24003	19.0	25.0	6.0	70.0	~	
*SG-15M	24103	19.0	38.0	6.0	82.0	V	





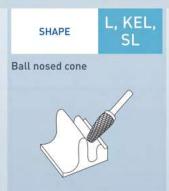




Movie	. 1
0	
É	

Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SH-41M	24553	3.0	6.3	3.0	38.0		~
SH-41ML2	27903	3.0	6.3	3.0	50.0		V
SH-41ML3	27928	3.0	6.3	3.0	75.0		V
SH-53M	24603	5.0	9.5	3.0	38.0		V
SH-2M	24403	8.0	19.0	6.0	64.0	~	
SH-2ML6	26703	8.0	19.0	6.0	169.0	V	
SH-5M	24428	12.7	32.0	6.0	76.0	~	
SH-5ML6	26728	12.7	32.0	6.0	182.0	~	
*SH-6M	24453	16.0	36.0	6.0	80.0	V	
*SH-7M	24503	19.0	41.0	6.0	85.0	V	







Tool No.	Art.	d1	l2	d2	L1	brazed	solid	a°
SL-41M	25403	3.0	9.5	3.0	38.0		~	8°
SL-42M	25428	3.0	12.7	3.0	38.0		V	8°
SL-42ML2	27953	3.0	12.7	3.0	50.0		~	8°
SL-42ML3	27978	3.0	12.7	3.0	75.0		6	8°
SL-53M	25453	5.0	12.7	3.0	38.0		~	14°
SL-1M	25178	6.0	16.0	6.0	50.0		V	14°
SL-1ML6	26753	6.0	16.0	6.0	171.0		V	14°
SL-2M	25203	8.0	22.0	6.0	70.0	V		14°
SL-3M	25228	9.6	30.0	6.0	74.0	~		14°
SL-3ML6	26778	9.6	30.0	6.0	182.0	V		14°
SL-4M	25253	12.7	28.0	6.0	76.0	~		14°
SL-4ML6	26803	12.7	28.0	6.0	183.0	V		14°
*SL-5M	25278	16.0	30.0	6.0	77.0	V		14°
*SL-7M	25353	19.0	38.0	6.0	85.0	V		14°

*8 mm shanks optional

6

ARRIVE S

0

OIL

10

<u>i</u>

11





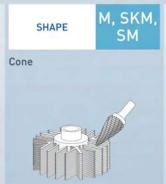






Index





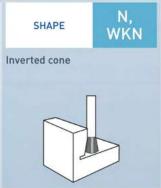




Tool No.	Art.	d1	12	d2	L1	brazed	solid	
SM-41M	25678	3.0	8.9	3.0	38.0		-	12°
SM-42M	25703	3.0	11.0	3.0	38.0		V	14°
SM-42ML2	28053	3.0	11.0	3.0	50.0		~	14°
SM-42ML3	28078	3.0	11.0	3.0	75.0		~	14°
SM-43M	25728	3.0	16.0	3.0	38.0		~	7°
SM-53M	25778	5.0	12.7	3.0	38.0		V	16°
SM-1M	25503	6.0	12.7	6.0	50.0		V	22°
SM-2M	25528	6.0	19.0	6.0	50.0		V	14°
SM-3M	25553	6.0	25.0	6.0	50.0		~	10°
SM-51M	25753	6.3	12.7	3.0	53.0	V		22°
SM-4M	25578	9.6	16.0	6.0	64.0	~		28°
SM-5M	25603	12.7	22.0	6.0	71.0	V		28°
*SM-6M	25628	16.0	25.0	6.0	73.0	~		31°

*8 mm shanks optional

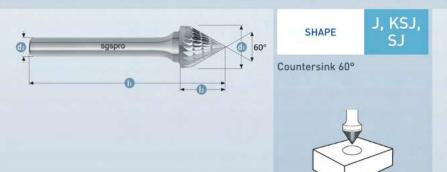






Tool No.	Art.	d1	l2	d2	L1	brazed	solid	a°
SN-41M	26028	2.5	3.0	3.0	38.0		~	10°
SN-42M	26053	3.0	4.0	3.0	38.0		V	10°
SN-53M	26103	5.0	6.3	3.0	38.0		V	10°
SN-1M	25853	6.0	8.0	6.0	50.0		~	10°
SN-51M	26078	6.3	6.0	3.0	44.0	~		10°
SN-2M	25878	9.6	9.5	6.0	53.0	V		13°
SN-4M	25903	12.7	12.7	6.0	57.0	V		28°
*SN-6M	25928	16.0	19.0	6.0	63.0	V		18°
*SN-7M	25978	19.0	16.0	6.0	60.0	V		30°

Index





Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SJ-42M	24903	3.0	2.5	3.0	38.0		~
SJ-1M	24678	6.0	4.0	6.0	50.0		~
SJ-3M	24703	9.6	8.0	6.0	55.0	~	
SJ-5M	24728	12.7	11.0	6.0	58.0	V	
*SJ-6M	24753	16.0	14.5	6.0	61.0	~	
*SJ-7M	24803	19.0	17.5	6.0	65.0	V	
*SJ-9M	24853	25.0	24.5	6.0	68.0	V	

*8 mm shanks optional





Cutting data	Movie
1	0
<u>1</u> 765	É

Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SK-42M	25153	3.0	1.5	3.0	38.0		-
SK-1M	24928	6.0	3.0	6.0	50.0		~
SK-3M	24953	9.6	4.7	6.0	52.0	~	
SK-5M	24978	12.7	6.3	6.0	54.0	~	
*SK-6M	25003	16.0	8.0	6.0	57.0	~	
*SK-7M	25053	19.0	9.5	6.0	58.0	V	
*SK-9M	25103	25.0	12.7	6.0	60.0	~	

SINGLE

CUT

Index

The most widely used single cut style

APPLICATION





- · High cutting action with good surface finish
- · For use on all ferrous metals such as:

 - Steel < 60 HRC
 - Stainless steel (INOX)
 - Nickel based and titanium alloy
- · Also copper, brass, bronze

Stock item	ıs + catalogı	ue pages								20		
ZYA	ZYB	WRC	KUD	TRE	RBF	SPG	-	KEL	SKM	WKN	KSJ	KSK
A	₿	Θ	0	B	•	G	•	0	M	N	0	ß
										W		•
778	779	780	781	782	782	783	783	784	784	785	785	786
								Ball nosed cone		Inverted cone	Countersink 60°	Countersink 90°

SINGLE CUT CUT SPECIFICATION

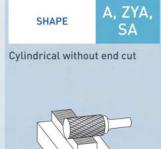


Material group	ps		Application	Cutting speed m/min
Steel, cast steel	Non-hardened, non-heat treated- steels up to 1200 N/mm² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steels	Coarse machining with	450-600
	Hardened, heat-treated steels exceeding 1200 N/mm² (> 38 HRC)	Tool steels, tempering steels, alloyed steel, cast steels	high stock removal	250-350
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse machining with high stock removal	250-350
Non-ferrous	Hard-non-ferrous metals	Bronze, titanium/titanium alloys, hard alu-alloys (high Si content)		250-350
metals	High-temperature resistant materials	Nickel based alloys, cobalt based alloys (aircraft engine and turbine construction)	high stock removal	300-450
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL, with nodular graphite cast iron EN-GJS, white annealed cast iron EN-GJMW, black cast iron EN-GJMB	Coarse machining with high stock removal	450-600

ting speed	d (m/min)						
	250	300	350	400	450	500	600
Ø(mm)	Rotational speed	(rpm)					
2	40,000	48,000	56,000	64,000	72,000	80,000	95,000
3	27,000	32,000	37,000	42,000	48,000	53,000	64,000
4	20,000	24,000	28,000	32,000	36,000	40,000	48,000
6	13,000	16,000	19,000	21,000	24,000	27,000	32,000
8	10,000	12,000	14,000	16,000	18,000	20,000	24,000
10	8,000	10,000	11,000	13,000	14,000	16,000	19,000
12	7,000	8,000	9,000	11,000	12,000	13,000	16,000
16	5,000	6,000	7,000	8,000	9,000	10,000	12,000
20	4,000	5,000	6,000	6,000	7,000	8,000	10,000
25	3,000	4,000	4,000	5,000	6,000	6,000	8,000

11









Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SA-41M	20600	1.5	6.0	3.0	38.0		~
SA-41ML2	27100	1.5	6.0	3.0	50.0		~
SA-41ML3	27125	1.5	6.0	3.0	75.0		~
SA-42M	20625	2.5	11.0	3.0	38.0		~
SA-42ML2	27150	2.5	11.0	3.0	50.0		V
SA-42ML3	27175	2.5	11.0	3.0	75.0		~
SA-43M	20650	3.0	14.0	3.0	38.0		~
SA-43ML2	27200	3.0	14.0	3.0	50.0		~
SA-43ML3	27225	3.0	14.0	3.0	75.0		~
SA-11M	20400	3.0	12.0	6.0	50.0		~
SA-12M	20425	3.0	16.0	6.0	50.0		~
SA-52M	20700	4.0	12.7	3.0	38.0		~
SA-13M	20450	4.0	16.0	6.0	50.0		V
SA-53M	20725	5.0	12.7	3.0	38.0		~
SA-14M	20475	5.0	16.0	6.0	50.0		V
SA-1M	20000	6.0	16.0	6.0	50.0		~
SA-1ML	20025	6.0	25.0	6.0	50.0		V
SA-1ML6	26175	6.0	12.7	6.0	162.0		~
SA-51M	20675	6.3	12.7	3.0	50.0	~	
SA-2M	20050	8.0	19.0	6.0	64.0	~	
SA-3M	20075	9.6	19.0	6.0	64.0	~	
SA-3ML	20100	9.6	25.0	6.0	70.0	V	
SA-3ML6	26200	9.6	19.0	6.0	169.0	~	
SA-3MZ	29100	10.0	20.0	6.0	60.0	V	
SA-4M	20150	11.0	25.0	6.0	70.0	V	
SA-5MZ	29104	12.0	25.0	6.0	65.0	V	
SA-5M	20175	12.7	25.0	6.0	70.0	~	
SA-5ML6	26225	12.7	25.0	6.0	175.0	V	
*SA-6M	20200	16.0	25.0	6.0	70.0	~	
*SA-7M	20250	19.0	25.0	6.0	70.0	V	
*SA-9M	20350	25.0	25.0	6.0	70.0	~	

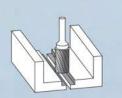




SHAPE

B, ZYB, SB

Cylindrical with end cut





O

1777



Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SB-41M	21450	1.5	6.0	3.0	38.0		~
SB-41ML2	27250	1.5	6.0	3.0	50.0		V
SB-41ML3	27275	1.5	6.0	3.0	75.0		-
SB-42M	21475	2.5	11.0	3.0	38.0		V
SB-42ML2	27300	2.5	11.0	3.0	50.0		~
SB-42ML3	27325	2.5	11.0	3.0	75.0		V
SB-ECOM	21525	3.0	-	3.0	38.0		~
SB-43M	21500	3.0	14.0	3.0	38.0		V
SB-43ML2	27350	3.0	14.0	3.0	50.0		~
SB-43ML3	27375	3.0	14.0	3.0	75.0		V
SB-11M	21250	3.0	12.0	6.0	50.0		V
SB-12M	21275	3.0	16.0	6.0	50.0		~
SB-13M	21300	4.0	16.0	6.0	50.0		V
SB-14M	21325	5.0	16.0	6.0	50.0		V
SB-1M	20850	6.0	16.0	6.0	50.0		V
SB-1ML	20875	6.0	25.0	6.0	50.0		V
SB-51M	21550	6.3	4.7	3.0	43.0	V	
SB-2M	20900	8.0	19.0	6.0	64.0	~	
SB-3M	20925	9.6	19.0	6.0	64.0	~	
SB-3ML	20950	9.6	25.0	6.0	70.0	V	
SB-3MZ	29108	10.0	20.0	6.0	60.0	V	
SB-4M	21000	11.0	25.0	6.0	70.0	~	
SB-5MZ	29112	12.0	25.0	6.0	65.0	V	
SB-5M	21025	12.7	25.0	6.0	70.0	V	
*SB-6M	21050	16.0	25.0	6.0	70.0	~	
*SB-7M	21100	19.0	25.0	6.0	70.0	V	
*SB-9M	21200	25.0	25.0	6.0	70.0	~	

*8 mm shanks optional



4

) Soundhaman



10



11







Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SC-41M	22250	2.5	11.0	3.0	38.0		~
SC-42M	22275	3.0	14.0	3.0	38.0		V
SC-42ML2	27450	3.0	14.0	3.0	50.0		V
SC-42ML3	27475	3.0	14.0	3.0	75.0		V
SC-11M	22050	3.0	12.0	6.0	50.0		V
SC-12M	22075	3.0	16.0	6.0	50.0		V
SC-52M	22325	4.0	12.7	3.0	38.0		~
SC-13M	22100	4.0	16.0	6.0	50.0		V
SC-53M	22350	5.0	12.7	3.0	38.0		~
SC-14M	22125	5.0	16.0	6.0	50.0		V
SC-1M	21700	6.0	16.0	6.0	50.0		~
SC-1ML	21725	6.0	25.0	6.0	50.0	V	
SC-1ML6	26325	6.0	12.7	6.0	162.0		V
SC-51M	22300	6.3	12.7	3.0	50.0	V	
SC-2M	21750	8.0	19.0	6.0	64.0	~	
SC-3M	21775	9.6	19.0	6.0	64.0	V	
SC-3ML	21800	9.6	25.0	6.0	70.0	V	
SC-3ML6	26350	9.6	19.0	6.0	169.0	V	
SC-3MZ	29116	10.0	20.0	6.0	60.0	~	
SC-4M	21850	11.0	25.0	6.0	70.0	V	
SC-5MZ	29120	12.0	25.0	6.0	65.0	~	
SC-5M	21875	12.7	25.0	6.0	70.0	V	
SC-5ML6	26375	12.7	25.0	6.0	175.0	~	
*SC-6M	21900	16.0	25.0	6.0	70.0	V	
*SC-7M	21950	19.0	25.0	6.0	70.0	~	
*SC-9M	22000	25.0	25.0	6.0	70.0	V	











Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SD-41M	22775	2.5	2.3	3.0	38.0		~
SD-42M	22800	3.0	2.8	3.0	38.0		~
SD-42ML2	27550	3.0	2.8	3.0	50.0		~
SD-42ML3	27575	3.0	2.8	3.0	75.0		~
SD-11M	22725	3.0	2.8	6.0	50.0		~
SD-52M	22837	4.0	3.4	3.0	38.0		V
SD-53M	22850	5.0	4.7	3.0	38.0		~
SD-14M	22750	5.0	4.0	6.0	50.0		V
SD-1M	22450	6.0	5.0	6.0	50.0		~
SD-1ML6	26400	6.0	5.0	6.0	155.0	V	
SD-51M	22825	6.3	5.0	3.0	44.0	~	
SD-2M	22475	8.0	6.4	6.0	50.0	V	
SD-3M	22500	9.6	8.0	6.0	52.0	V	
SD-3ML6	26425	9.6	8.0	6.0	158.0	V	
SD-3MZ	29124	10.0	9.0	6.0	49.0	V	
SD-4M	22525	11.0	9.5	6.0	54.0	V	
SD-5MZ	29128	12.0	10.8	6.0	51.0	V	
SD-5M	22550	12.7	11.0	6.0	55.0	V	
SD-5ML6	26450	12.7	11.0	6.0	161.0	V	
*SD-6M	22575	16.0	14.0	6.0	58.0	V	
*SD-7M	22625	19.0	16.0	6.0	62.0	V	
*SD-9M	22675	25.0	21.0	6.0	72.0	V	

3

4

Annanns

8





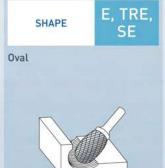
10



11

Index





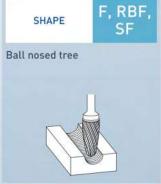




Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SE-41M	23150	3.0	5.5	3.0	38.0		-
SE-41ML2	27600	3.0	5.5	3.0	50.0		V
SE-41ML3	27625	3.0	5.5	3.0	75.0		V
SE-53M	23200	5.0	7.1	3.0	38.0		V
SE-1M	22950	6.0	9.5	6.0	50.0		V
SE-1ML6	26475	6.0	9.5	6.0	160.0	V	
SE-51M	23175	6.3	9.5	3.0	47.0	~	
SE-3M	22975	9.6	16.0	6.0	60.0	V	
SE-3ML6	26500	9.6	16.0	6.0	166.0	~	
SE-5M	23000	12.7	22.0	6.0	66.0	V	
SE-5ML6	26525	12.7	22.0	6.0	172.0	~	
*SE-6M	23025	16.0	25.0	6.0	70.0	V	
*SE-7M	23075	19.0	25.0	6.0	70.0	~	

*8 mm shanks optional







P	Movie
	<u> </u>

Tool No.	Art.	d1	l2	d2	и	brazed	solid
SF-41M	23675	3.0	6.0	3.0	38.0		V
SF-42M	23700	3.0	12.7	3.0	38.0		V
SF-11M	23500	3.0	12.7	6.0	50.0		V
SF-42ML2	27650	3.0	12.7	3.0	50.0		V
SF-42ML3	27675	3.0	12.7	3.0	75.0		V
SF-53M	23750	5.0	12.7	3.0	38.0		V
SF-1M	23300	6.0	16.0	6.0	50.0		V
SF-1ML6	26550	6.0	12.7	6.0	163.0	V	
SF-51M	23725	6.3	12.7	3.0	56.0	V	
SF-3M	23325	9.6	19.0	6.0	64.0	V	
SF-3ML6	26575	9.6	19.0	6.0	169.0	V	
SF-4M	23350	11.0	25.0	6.0	70.0	V	
SF-5MZ	23520	12.0	25.0	6.0	65.0	~	
SF-13M	23525	12.7	19.0	6.0	64.0	V	
SF-5M	23375	12.7	25.0	6.0	70.0	V	
SF-5ML6	26600	12.7	25.0	6.0	175.0	V	
*SF-6M	23400	16.0	25.0	6.0	70.0	~	
*SF-7M	23450	19.0	25.0	6.0	70.0	V	
*SF-14M	23575	19.0	32.0	6.0	76.0	V	
*SF-15M	23625	19.0	38.0	6.0	82.0	V	











Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SG-41M	24150	3.0	6.0	3.0	38.0		~
SG-43M	24200	3.0	9.5	3.0	38.0		V
SG-44M	24225	3.0	12.7	3.0	38.0		V
SG-44ML2	27850	3.0	12.7	3.0	50.0		~
SG-44ML3	27875	3.0	12.7	3.0	75.0		V
SG-53M	24275	5.0	12.7	3.0	38.0	V	
SG-1M	23850	6.0	16.0	6.0	50.0	0.0	~
SG-1ML6	26625	6.0	12.7	6.0	163.0	V	
SG-51M	24250	6.3	12.7	3.0	50.0	-	
SG-2M	23875	8.0	19.0	6.0	64.0	V	
SG-3M	23900	9.6	19.0	6.0	64.0	V	
SG-3ML6	26650	9.6	19.0	6.0	169.0	V	
SG-3MZ	24040	10.0	20.0	6.0	60.0	V	
SG-5MZ	24045	12.0	25.0	6.0	65.0	V	
SG-13M	24050	12.7	19.0	6.0	64.0	V	
SG-5M	23925	12.7	25.0	6.0	70.0	V	
SG-5ML6	26675	12.7	25.0	6.0	175.0	V	
*SG-6M	23950	16.0	25.0	6.0	70.0	V	
*SG-7M	24000	19.0	25.0	6.0	70.0	~	
*SG-15M	24100	19.0	38.0	6.0	82.0	~	









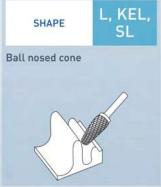
Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SH-41M	24550	3.0	6.3	3.0	38.0		V
SH-41ML2	27900	3.0	6.3	3.0	50.0		V
SH-41ML3	27925	3.0	6.3	3.0	75.0		V
SH-53M	24600	5.0	9.5	3.0	38.0		V
SH-2M	24400	8.0	19.0	6.0	64.0	~	
SH-2ML6	26700	8.0	19.0	6.0	169.0	V	
SH-5M	24425	12.7	32.0	6.0	76.0	~	
SH-5ML6	26725	12.7	32.0	6.0	182.0	~	
*SH-6M	24450	16.0	36.0	6.0	80.0	~	
*SH-7M	24500	19.0	41.0	6.0	85.0	V	

*8 mm shanks optional

OIL

Index











Tool No.	Art.	d1	l2	d2	H	brazed	solid	α°
SL-41M	25400	3.0	9.5	3.0	38.0		V	8°
SL-42M	25425	3.0	12.7	3.0	38.0		V	8°
SL-42ML2	27950	3.0	12.7	3.0	50.0		V	8°
SL-42ML3	27975	3.0	12.7	3.0	75.0		~	8°
SL-53M	25450	5.0	12.7	3.0	38.0		~	14°
SL-1M	25175	6.0	16.0	6.0	50.0		~	14°
SL-1ML6	26750	6.0	16.0	6.0	171.0	V		14°
SL-2M	25200	8.0	22.0	6.0	69.0	V		14°
SL-3M	25225	9.6	27.0	6.0	74.0	V		14°
SL-3ML6	26775	9.6	27.0	6.0	182.0	V		14°
SL-4M	25250	12.7	28.0	6.0	76.0	V		14°
SL-4ML6	26800	12.7	28.0	6.0	183.0	V		14°
*SL-5M	25275	16.0	30.0	6.0	77.0	V		14°
*SL-7M	25350	19.0	38.0	6.0	85.0	V		14°

*8 mm shanks optional





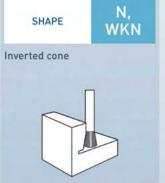




Tool No.	Art.	d1	12	d2	l1	brazed	solid	α°
SM-41M	25675	3.0	8.9	3.0	38.0		~	12°
SM-42M	25700	3.0	11.0	3.0	38.0		V	14°
SM-42ML2	28050	3.0	11.0	3.0	50.0		~	14°
SM-42ML3	28075	3.0	11.0	3.0	75.0		~	14°
SM-43M	25725	3.0	16.0	3.0	38.0		~	7°
SM-53M	25775	5.0	12.7	3.0	38.0		~	16°
SM-1M	25500	6.0	12.7	6.0	50.0		~	22°
SM-2M	25525	6.0	19.0	6.0	50.0		~	14°
SM-3M	25550	6.0	25.0	6.0	50.0		~	10°
SM-51M	25750	6.3	12.7	3.0	53.0	V		22°
SM-4M	25575	9.6	16.0	6.0	64.0	~		28°
SM-5M	25600	12.7	22.0	6.0	71.0	V		28°
*SM-6M	25625	16.0	25.0	6.0	73.0	V		31°











Tool No.	Art.	d1	l2	d2	L1	brazed	solid	α°
5N-41M	26025	2.5	3.0	3.0	38.0		V	10°
SN-42M	26050	3.0	4.0	3.0	38.0		V	10°
SN-53M	26100	5.0	6.3	3.0	38.0		~	10°
SN-1M	25850	6.0	8.0	6.0	50.0		V	10°
SN-51M	26075	6.3	6.0	3.0	44.0	V		10°
SN-2M	25875	9.6	9.5	6.0	53.0	V		13°
SN-4M	25900	12.7	12.7	6.0	57.0	~		28°
*SN-6M	25925	16.0	19.0	6.0	63.0	~		18°
*SN-7M	25975	19.0	16.0	6.0	60.0	V		30°









Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SJ-42M	24900	3.0	2.5	3.0	38.0		V
SJ-1M	24675	6.0	4.0	6.0	50.0		V
SJ-3M	24700	9.6	8.0	6.0	55.0	V	
SJ-5M	24725	12.7	11.0	6.0	58.0	~	
*SJ-6M	24750	16.0	14.5	6.0	61.0	V	
*SJ-7M	24800	19.0	17.5	6.0	65.0	~	
*SJ-9M	24850	25.0	24.5	6.0	68.0	~	

*8 mm shanks optional

4

¹⁷

2

9

OIL

10

1

11









Tool No.	Art.	d1	l2	d2	U1	brazed	solid
SK-42M	25150	3.0	1,5	3.0	38.0		
SK-1M	24925	6.0	3.0	6.0	50.0		V
SK-3M	24950	9.6	4.7	6.0	52.0	~	
SK-5M	24975	12.7	6.3	6.0	54.0	V	
*SK-6M	25000	16.0	8.0	6.0	57.0	~	
*SK-7M	25050	19.0	9.5	6.0	58.0	V	
*SK-9M	25100	25.0	12.7	6.0	60.0	~	

Karnaschi PROFESSIONAL TOOLS



atagroup.com

78

OIL

10

1

11

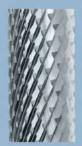
Index



OMEGA CUT

Extremely aggressive cross cut style

APPLICATION























Stock items

- · Developed for use in tough grinding conditions, such as shipyards and foundries.
- · For all ferrous metals, such as:
 - Cast iron
- Steel < 60 HRC
- · Also for copper, brass, bronze

NON FERROUS CUT

Designed for non-ferrous materials such as aluminium, copper, brass. Also for all kinds of plastics

APPLICATION



□ 800-805























Stock items



GOOD

- · Wide flute design to prevent loading and material buildup
- Aluminium alloy
- · Light metals
- · Soft copper and copper alloys (non-ferrous metals)
- · Fibre-reinforced plastic (GRP/CRP)

STEEL CUT



10

11

Index









Engineered for steel and cast steel. Extremely high machining output















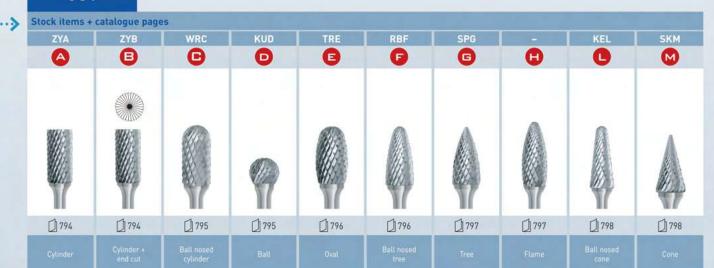




- Up to 60% higher machining output as compared to conventional cross cut.
- High aggressiveness produces large chips with outstanding chip removal.
- No annealing colours at the workpiece due to low heat development.

1 806-812





NON FERROUS CUT

Stock items + catal	ogue pages					
ZYA	ZYB	WRC	KUD	TRE	RBF	KEL
A	₿	Θ	0	(3)	•	•
□ 802	1 802	□ 803	☑ 803	₫ 804	₫ 804	() 805
						Ball nosed cone

STEEL

ZYA	ns + catalogue pages ZYB	WRC	KUD	TRE	RBF	SPG	-	KEL
A	₿	Θ	0	E	6	G	(1)	0
	99	(II)		(G)		A	M	
			6					
W	W	W	W	W	W	W	W	W
2 808	□ 808	1 809	2 809	1 810	☑ 810		□811	☑ 812
Cylinde								

OIL

10













Index

INOX CUT

Designed for stainless steel

APPLICATION



















Stock items



- Extremely high machining output and service life for all austenitic, rust- and acid-resilient steels.
- Titanium alloy (reduce speed to avoid sparking)
- · High-quality surface.
- . No annealing colours at the workpiece due to low heat development.

ALLOY SPECIFIC

Designed specifically to meet the most demanding metal finishing needs of high tech industries

APPLICATION



Hardened steel

























The geometry has been specifically designed for use on Ni-Alloys & Ti-Alloys.

Our new alloy specific bur geometry offers:

- · Advanced cutting geometry, allowing for
 - Increased stock removal - Improved surface finish
- Increased tool life
- Controlled cutting action

- · High performance grinding ensuring production savings and reduced downtime
- · CNC Machined high consistent quality
- · Combined with the ATA Pencil Grinders, the AS range allows for:
- A smoother grinding operation
- Increased productivity

BASE METAL CUT

1 820-825

Engineered for use on low carbon steels, copper and brass materials

1 826-831

APPLICATION

























- · High cutting action through cross cutting style
- Smooth operation
- Short chips
- · For use on all ferrous metals such as:
- Cast iron
- Steel < 60 HRC
- Low carbon steels
- Titanium alloys · Also copper, brass, bronze





ALLOY SPECIFIC CUT

Stock items +	catalogue pages							
ZYA	WRC	KUD	TRE	RBF	SPG	-	KEL	SKM
A	Θ	0	B	6	G	(3)	0	M
2 822	1 822	822	☑ 823	2 823	□ 823	☑ 824	☑ 824	☑ 824
Cylinder	Ball nosed cylinder			Ball nosed tree				

BASE METAL CUT

>	Stock items +	catalogue page	es							
	ZYA	ZYB	WRC	KUD	TRE	RBF	SPG	-	KEL	SKM
	A	3	Θ	0	E	6	©	(2)	C	Ø
	2 828	1 828	1 828	2 829	□ 829	1 829	□ 830	□ 830	☑ 830	☑ 831
		Cylinder + end cut	Ball nosed cylinder	Ball		Ball nosed tree	Tree	Flame	Ball nosed cone	

2

3

4

) Servery and a servery server

0

9

OIL

10



11

OMEGA

CUT

Extremely aggressive cross cut style

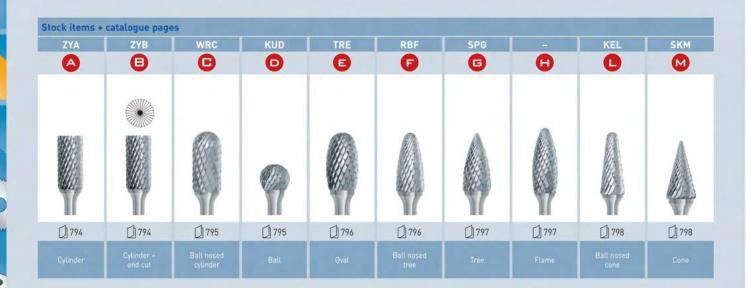


APPLICATION



- · Fast metal removal
- Developed for use in tough grinding conditions, such as shipyards and foundries.
- · For all ferrous metals, such as:

 - Steel < 60 HRC
- · Also for copper, brass, bronze



OMEGA CUT CUT SPECIFICATION



Material gro	oups		Application	Cutting speed m/min
Steel	Non-hardened, non-heat treated steels up to 1200 N/mm² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steels	Coarse machining =	250 - 600
cast steel	Hardened, heat treated steels exceeding 1200 N/mm² (> 38 HRC)	tool steels, tempering steels, alloyed steels, cast steels	high stock removal with impact load	250 - 350
Non-Ferrous metals	High-temperature resistant materiales	Nickel based alloys cabalt based alloys (aircraft engine and turbine construction)	Coarse machining = high stock removal with impact load	250 - 450
Cast iron	Grey cast iron, white cast iron	Cast-iron with flake graphite EN-GJL (GG), with nodular graphite cast iron EN-GJS (GGG), white anneales cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	Coarse machining = high stock removal with impact load	250 - 600

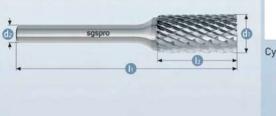
	250	500	600	900
Ø (mm)	Rotational speed (rpm)			
6	13,000	27,000	32,000	48,000
8	10,000	20,000	24,000	36,000
10	8,000	16,000	19,000	29,000
12	7,000	13,000	16,000	24,000
16	5,000	10,000	12,000	18,000



10



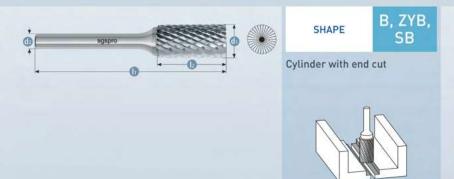
11







Tool No.	Art. Uncoated	Art. Coated	d1	12	d2	l1	brazed	solid
SA-3M DDC	20269	20300	9.6	19.0	6.0	64.0	~	
SA-3ML6 DDC	20331	20354	9.6	19.0	6.0	169.0	V	
SA-5M DDC	20270	20301	12.7	25.0	6.0	70.0	~	
SA-5ML6 DDC	20332	20355	12.7	25.0	6.0	175.0	V	
SA-5M8 DDC	20271	20302	12.7	25.0	8.0	70.0	~	

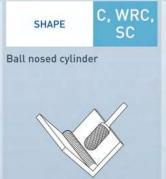




Tool No.	Art. Uncoated	Art. Coated	d1	l2	d2	L1	brazed	solid
SB-3M DDC	20272	20303	9.6	19.0	6.0	64.0	V	
SB-5M DDC	20273	20304	12.7	25.0	6.0	70.0	V	
SB-5M8 DDC	20274	20305	12.7	25.0	8.0	70.0	~	



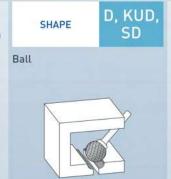






Tool No.	Art. Uncoated	Art. Coated	d1	l2	d2	l1	brazed	solid
SC-3M DDC	20275	20306	9.6	19.0	6.0	64.0	~	
SC-3ML6 DDC	20333	20356	9.6	19.0	6.0	169.0	V	
SC-5M DDC	20276	20307	12.7	25.0	6.0	70.0	V	
SC-5ML6 DDC	20334	20357	12.7	25.0	6.0	175.0	V	
SC-5M8 DDC	20277	20308	12.7	25.0	8.0	70.0	~	
SC-6M8 DDC	20278	20309	16.0	25.0	8.0	70.0	V	







Tool No.	Art. Uncoated	Art. Coated	d1	l2	d2	l1	brazed	solid
SD-3M DDC	20279	20310	9.6	8.0	6.0	52.0	~	
SD-3ML6 DDC	20335	20358	9.6	8.0	6.0	158.0	V	
SD-5M DDC	20280	20311	12.7	11.0	6.0	55.0	~	
SD-5ML6 DDC	20336	20359	12.7	11.0	6.0	161.0	V	
SD-5M8 DDC	20281	20312	12.7	11.0	8.0	62.0	~	

D

3

4

na and

8

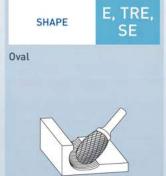
OIL

10

(i)

11



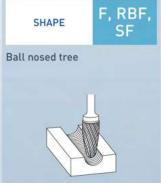






Tool No.	Art. Uncoated	Art. Coated	d1	12	d2	l1	brazed	solid
SE-3M DDC	20282	20313	9.6	16.0	6.0	60.0	~	
SE-3ML6 DDC	20337	20360	9.6	16.0	6.0	166.0	V	
SE-5M DDC	20283	20314	12.7	22.0	6.0	66.0	~	
SE-5ML6 DDC	20338	20361	12.7	22.0	6.0	172.0	V	
SE-5M8 DDC	20284	20315	12.7	22.0	8.0	69.0	~	







Movie
0
É

Tool No.	Art. Uncoated	Art. Coated	d1	l2	d2	L1	brazed	solid
SF-3M DDC	20285	20316	9.6	19.0	6.0	64.0	V	
SF-3ML6 DDC	20339	20362	9.6	19.0	6.0	169.0	V	
SF-5M DDC	20286	20317	12.7	25.0	6.0	70.0	V	
SF-5ML6 DDC	20340	20363	12.7	25.0	6.0	175.0	V	
SF-5M8 DDC	20287	20318	12.7	25.0	8.0	70.0	~	
SF-6M8 DDC	20288	20319	16.0	25.0	8.0	70.0	V	









Tool No.	Art. Uncoated	Art. Coated	d1	12	d2	l1	brazed	solid
SG-3M DDC	20289	20320	9.6	19.0	6.0	64.0	~	
SG-3ML6 DDC	20341	20364	9.6	19.0	6.0	169.0	V	
SG-5M DDC	20290	20321	12.7	25.0	6.0	70.0	~	
SG-5ML6 DDC	20342	20365	12.7	25.0	6.0	175.0	V	
SG-5M8 DDC	20291	20322	12.7	25.0	8.0	70.0	~	
SG-6M8 DDC	20292	20323	16.0	25.0	8.0	70.0	~	







Tool No.	Art. Uncoated	Art. Coated	d1	L2	d2	LT .	brazed	solid
SH-5M DDC	20293	20324	12.7	32.0	6.0	76.0	V	
SH-5ML6 DDC	20343	20366	12.7	32.0	6.0	182.0	V	
SH-5M8 DDC	20294	20325	12.7	32.0	8.0	76.0	~	

mhiⁿ

~

9



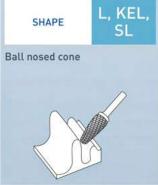
10



11



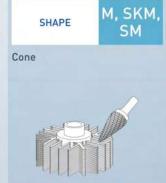






Tool No.	Art. Uncoated	Art. Coated	d1	12	d2	l1	brazed	solid
SL-3M DDC	20295	20326	9.6	27.0	6.0	74.0	~	
SL-3ML6 DDC	20344	20367	9.6	27.0	6.0	177.0	V	
SL-4M DDC	20296	20327	12.7	28.0	6.0	76.0	~	
SL-4ML6 DDC	20345	20368	12.7	28.0	6.0	178.0	V	
SL-4M8 DDC	20297	20328	12.7	28.0	8.0	76.0	~	







Tool No.	Art. Uncoated	Art. Coated	d1	l2	d2	l1	brazed	solid
SM-5M DDC	20298	20329	12.7	22.0	6.0	71.0	~	
SM-5M8 DDC	20299	20330	12.7	22.0	8.0	71.0	~	





POWER. PRECISION. PERFORMANCE.



11 Index

NON FERROUS CUT

Designed for non-ferrous materials such as aluminium, copper, brass. Also for all kinds of plastics.

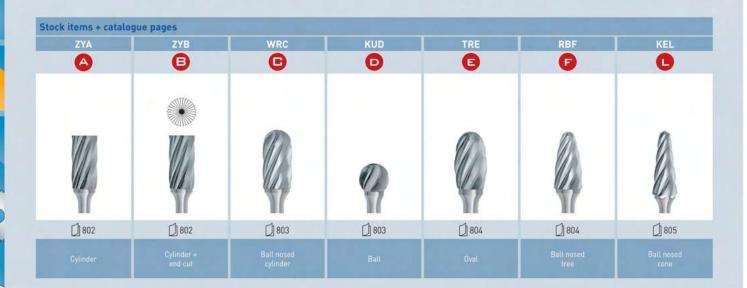
OPTIMAL

GOOD

APPLICATION



- · Aluminium alloy
- · Light metals
- Soft copper and copper alloys (non-ferrous metals)
- · Fibre-reinforced plastic [GRP/CRP]



10

NON FERROUS CUT CUT SPECIFICATION



	Application	Cutting speed m/min	
	Alu alloys, brass	Coarse machining = high stock removal	600 - 1100
Soft non-ferrous metals	copper, zinc	Fine machining = low stock removal	900 - 1100
	Bronze, titanium,	Coarse machining = high stock removal	600 - 1100
Hard non-ferrous metals	(high Si content)	Fine machining = low stock removal	900 - 1100
Plastics. Fibre-reinforced plastic (GRP/CRP)		Coarse machining = high stock removal	500 - 1100
		Fine machining = low stock removal	500 - 1100
	Soft non-ferrous metals Hard non-ferrous metals Fibre-reinforced p	Soft non-ferrous metals Alu alloys, brass copper, zinc Bronze, titanium, hard non-ferrous metals Alu alloys, brass	Soft non-ferrous metals Alu alloys, brass copper, zinc Bronze, titanium, hard aluminium alloys, [high Si content] Fine machining = low stock removal Coarse machining = high stock removal Coarse machining = high stock removal Fine machining = low stock removal Coarse machining = high stock removal Coarse machining = low stock removal Coarse machining = high stock removal Fine machining = high stock removal Fine machining = high stock removal

Cutting spee	ed (m/min)			
	500	600	900	1100
Ø (mm)	Rotational speed (rpm)			
2	80,000	95,000	143,000	175,000
3	53,000	64,000	95,000	116,000
4	40,000	48,000	72,000	88,000
6	27,000	32,000	48,000	59,000
8	20,000	24,000	36,000	44,000
10	16,000	19,000	29,000	35,000
12	13,000	16,000	24,000	30,000
16	10,000	12,000	18,000	22,000
20	8,000	10,000	14,000	17,000
25	6,000	8,000	11,000	13,500















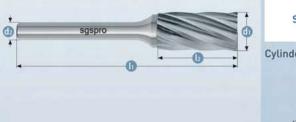


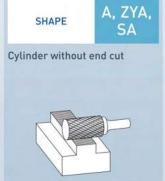




11





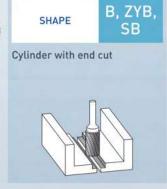




Tool No.	Art.	d1	l2	d2	11	brazed	solid
SA-1MNF	29000	6.0	19.0	6.0	50.0		V
SA-3MNF	29002	9.6	19.0	6.0	64.0	V	
SA-5MNF	29004	12.7	25.0	6.0	70.0	~	
*SA-6MNF	29006	16.0	25.0	6.0	70.0	V	
*SA-7MNF	29008	19.0	25.0	6.0	70.0	~	
SA-7M8NF	29010	19.0	25.0	8.0	70.0	V	

*8 mm shanks optional







Tool No.	Art.	d1	l2	d2	u	brazed	solid
SB-1MNF	29012	6.0	19.0	6.0	50.0		V
SB-3MNF	29014	9.6	19.0	6.0	64.0	V	
SB-5MNF	29016	12.7	25.0	6.0	70.0	~	
*SB-6MNF	29018	16.0	25.0	6.0	70.0	~	
*SB-7MNF	29020	19.0	25.0	6.0	70.0	~	
SB-7M8NF	29022	19.0	25.0	8.0	70.0	V	



6

7

8

9

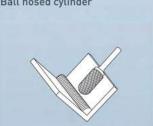
10

i

11 Index

SHAPE C, WRC, SC

Ball nosed cylinder

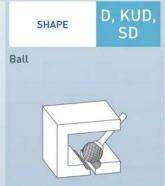




Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SC-1MNF	29024	6.0	19.0	6.0	50.0		V
SC-3MNF	29026	9.6	19.0	6.0	64.0	V	
SC-5MNF	29028	12.7	25.0	6.0	70.0	V	
*SC-7MNF	29032	19.0	25.0	6.0	70.0	V	
SC-7M8NF	29034	19.0	25.0	8.0	70.0	V	

*8 mm shanks optional

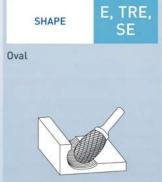






Tool No.	Art.	d1	l2	d2	u	brazed	solid
SD-1MNF	29036	6.0	5.0	6.0	50.0		~
SD-3MNF	29038	9.6	8.0	6.0	54.0	V	
SD-5MNF	29040	12.7	11.0	6.0	56.0	~	
*SD-6MNF	29042	16.0	14.0	6.0	59.0	V	
*SD-7MNF	29044	19.0	16.0	6.0	62.0	-	
SD-7M8NF	29046	19.0	16.0	8.0	62.0	V	



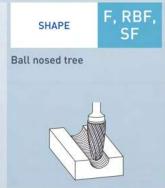






Tool No.	Art.	d1	l2	d2	11	brazed	solid
SE-3MNF	29048	9.6	16.0	6.0	60.0	~	
SE-5MNF	29050	12.7	22.0	6.0	66.0	V	
*SE-6MNF	29052	16.0	25.0	6.0	70.0	~	
*SE-7MNF	29054	19.0	25.0	6.0	70.0	V	
SE-7M8NF	29056	19.0	25.0	8.0	70.0	~	







Tool No.	Art.	d1	12	d2	l1	brazed	solid
SF-1MNF	29058	6.0	19.0	6.0	50.0		V
SF-3MNF	29060	9.6	19.0	6.0	64.0	V	
SF-5MNF	29062	12.7	25.0	6.0	70.0	~	
*SF-6MNF	29064	16.0	25.0	6.0	70.0	V	
*SF-14MNF	29066	19.0	32.0	6.0	76.0	~	
SF-14M8NF	29068	19.0	32.0	8.0	76.0	V	









Tool No.	Art.	d1	l2	d2	11	a°	brazed	solid
SL-3MNF	29070	9.6	27.0	6.0	76.0	14°	~	
SL-4MNF	29072	12.7	28.0	6.0	77.0	14°	V	
*SL-5MNF	29074	16.0	30.0	6.0	78.0	14°	~	
*SL-7MNF	29078	19.0	38.0	6.0	86.0	14°	V	
SL-7M8NF	29080	19.0	38.0	8.0	86.0	14°	~	

*8 mm shanks optional





atagroup.com

15

7

3)

OIL

10

i

11

STEEL Engineered for steel and cast steel. CUT Extremely high machining output

APPLICATION



- Up to 60% higher machining output as compared to conventional cross cut.
- · High aggressiveness produces large chips with outstanding chip removal.
- · No annealing colours at the workpiece due to low heat development.

Stock items + o	catalogue pages							
ZYA	ZYB	WRC	KUD	TRE	RBF	SPG		KEL
A	B	Θ	O	E	0	G	(1)	C
2 808	☑ 808	☑ 809	☑ 809	☑ 810	☑810	1 811	1 811	☑ 812
				Oval		Tree		

STEEL CUT CUT SPECIFICATION



Material g	roups	Application	Cutting speed m/min		
Steel	Non-hardened, non-heat treated steels up to 1200 N/mm² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steels	Coarse machining =	750 750	
cast steel	Hardened, heat treated steels exceeding 1200 N/mm² (> 38 HRC)	tool steels, tempering steels, alloyed steels, cast steels	high stock removal with impact load	450 - 750	

cutting speed (m/m	in)	
	450	750
Ø (mm)	Rotational speed (rpm)	
3	48,000	80,000
6	24,000	40,000
8	18,000	30,000
10	14,000	24,000
12	12,000	20,000
16	9,000	17,000





Index

11









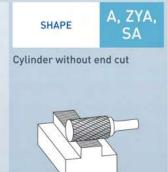








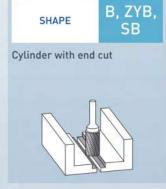






Tool No.	Art.	d1	12	d2	11	brazed	solid
SA-1M	29350	6.0	18.0	6.0	50.0		V
SA-2M	29351	8.0	19.0	6.0	64.0	V	
SA-3M	29352	9.6	19.0	6.0	64.0	~	
SA-5M	29353	12.7	25.0	6.0	70.0	V	



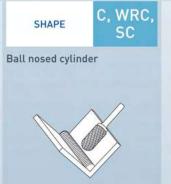




Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SB-1M	29354	6.0	18.0	6.0	50.0		V
SB-2M	29355	8.0	19.0	6.0	64.0	V	
SB-3M	29356	9.6	19.0	6.0	64.0	~	
SB-5M	29357	12.7	25.0	6.0	70.0	V	



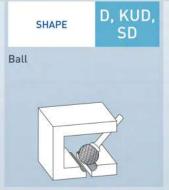






Tool No.	Art.	d1	12	d2	l1	brazed	solid
SC-1M	29362	6.0	18.0	6.0	50.0		~
SC-2M	29363	8.0	19.0	6.0	64.0	V	
SC-2M	29364	9.6	19.0	6.0	64.0	~	
SC-5M	29365	12.7	25.0	6.0	70.0	V	







Tool No.	Art.	d1	12	d2	l1	brazed	solid
SD-1M	29358	6.0	4.7	6.0	50.0		~
SD-2M	29359	8.0	6.0	6.0	52.0	V	
SD-3M	29360	9.6	8.0	6.0	54.0	~	
SD-5M	29361	12.7	11.0	6.0	56.0	V	

5 M

NAME OF THE PARTY OF

8

9

OIL

10



11





4











11

Index

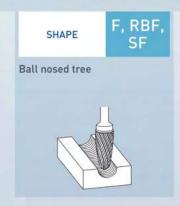
SHAPE E, TRE, SE

Oval



Tool No.	Art.	d1	12	d2	l1	brazed	solid
SE-5M	29379	12.7	22.0	6.0	67.0	V	







Tool No.	Art.	d1	12	d2	u	brazed	solid
SF-1M	29375	6.0	18.0	6.0	50.0		V
SF-2M	29376	8.0	20.0	6.0	65.0	V	
SF-3M	29377	9.6	19.0	6.0	64.0	~	
SF-5M	29378	12.7	25.0	6.0	70.0	V	









Tool No.	Art.	d1	12	d2	l1	brazed	solid
SG-1M	29366	6.0	18.0	6.0	50.0		~
SG-2M	29367	8.0	19.0	6.0	64.0	V	
SG-3M	29368	9.6	19.0	6.0	64.0	-	
SG-5M	29369	12.7	25.0	6.0	70.0	~	







Tool No.	Art.	d1	l2	d2	u	brazed	solid
SH-2M	29370	8.0	19.0	6.0	64.0	V	
SH-5M	29371	12.7	32.0	6.0	77.0	~	











Tool No.	Art.	d1	12	d2	l1	brazed	solid	a°
-	29372	10.0	20.0	6.0	65.0	~		14°
SL-3M	29373	9.6	30.0	6.0	76.0	V		14°
SL-4M	29374	12.7	32.0	6.0	77.0	~		14°







atagroup.com



10



11

Designed for stainless steel



APPLICATION



- · Extremely high machining output and service life for all austenitic, rust- and acid-resilient steels.
- Titanium alloy (reduce speed to avoid sparking)
- · High-quality surface.
- · No annealing colours at the workpiece due to low heat development.



11

INOX CUT CUT SPECIFICATION



Material group	s	Application	Cutting speed m/min	
Stainless steel		Austenitic and ferritic stainless	Coarse machining = high stock removal	150 - 100
INOX	Rust and acid-resistant steels	steels	Fine machining = low stock removal	450 - 600

utting speed (m/min)						
	450	600				
Ø (mm)	Rotational speed (rpm)					
3	48,000	64,000				
6	24,000	32,000				
8	18,000	24,000				
10	14,000	19,000				
12	12,000	16,000				
16	9,000	12,000				







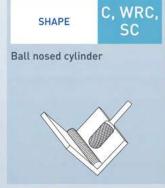






Tool No.	Art.	d1	l2	d2	I1	brazed	solid
SA-43M	29150	3.0	14.0	3.0	38.0		V
SA-51M	29151	6.3	12.7	3.0	45.0	V	
SA-1M	29152	6.0	18.0	6.0	50.0		V
SA-2M	29153	8.0	19.0	6.0	64.0	V	
SA-3M	29154	9.6	19.0	6.0	64.0	~	
SA-5M	29155	12.7	25.0	6.0	70.0	V	







Tool No.	Art.	d1	l2	d2	li .	brazed	solid
SC-42M	29156	3.0	14.0	3.0	38.0		V
SC-51M	29157	6.3	12.7	3.0	45.0	V	
SC-1M	29158	6.0	18.0	6.0	50.0		V
SC-2M	29159	8.0	19.0	6.0	64.0	V	
SC-3M	29160	9.6	19.0	6.0	64.0	~	
SC-5M	29161	12.7	25.0	6.0	70.0	V	



3

4

7

8

9

10

<u>i</u>

11

Index



0



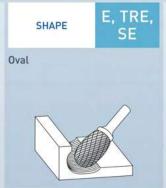


Cutting data

î

Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SD-42M	29162	3.0	2.5	3.0	38.0		-
SD-51M	29163	6.3	5.0	3.0	38.0	V	
SD-1M	29164	6.0	4.7	6.0	50.0		~
SD-2M	29165	8.0	6.0	6.0	52.0	V	
SD-3M	29166	9.6	8.0	6.0	54.0	~	
SD-5M	29167	12.7	11.0	6.0	56.0	V	





Tool No.	Art.	d1	l2	d2	11	brazed	solid
SE-2M	29168	8.0	15.0	6.0	60.0	V	
SE-3M	29169	9.6	16.0	6.0	60.0	~	
SE-5M	29170	12.7	22.0	6.0	67.0	~	







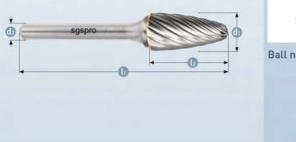


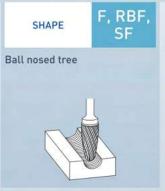






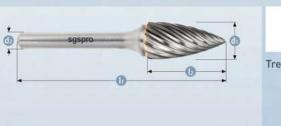








Tool No.	Art.	d1	12	d2	11	brazed	solid
SF-42M	29171	3.0	14.0	3.0	38.0		V
SF-51M	29172	6.3	12.7	3.0	45.0	V	
SF-1M	29173	6.0	18.0	6.0	50.0		V
SF-2M	29174	8.0	20.0	6.0	65.0	V	
SF-3M	29175	9.6	19.0	6.0	64.0	~	
SF-5M	29176	12.7	25.0	6.0	70.0	V	







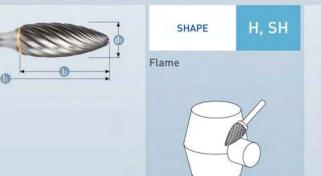
Tool No.	Art.	d1	l2	d2	u	brazed	solid
SG-1M	29177	6.0	18.0	6.0	50.0		V
SG-2M	29178	8.0	19.0	6.0	64.0	V	
SG-3M	29179	9.6	19.0	6.0	64.0	V	
SG-5M	29180	12.7	25.0	6.0	70.0	V	

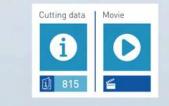


(i)

11

Index



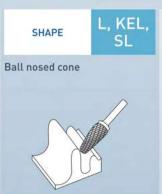


Cutting data

i

Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SH-2M	29181	8.0	19.0	6.0	64.0	~	
SH-3M	29182	9.6	19.0	6.0	65.0	V	
SH-5M	29183	12.7	32.0	6.0	77.0	~	







Tool No.	Art.	d1	l2	d2	L1	brazed	solid	a°
SL-2M	29184	8.0	25.4	6.0	70.0	~		14°
-	29185	10.0	20.0	6.0	65.0	V		14°
SL-4M	29186	12.7	32.0	6.0	77.0	~		14°

Designed specifically to meet the most demanding metal finishing needs of high tech industries

APPLICATION





The geometry has been specifically designed for use on Ni-Alloys & Ti-Alloys.

Our new alloy specific bur geometry offers: · Advanced cutting geometry, allowing for

- Increased stock removal · Improved surface finish · Increased tool life · Controlled cutting action
- · High performance grinding ensuring production savings and reduced downtime
- CNC Machined high consistent quality
- · Combined with the ATA Pencil Grinders, the AS range
 - A smoother grinding operation · Increased productivity



11

ALLOY SPECIFIC CUT CUT SPECIFICATION



Material groups	Application	Cutting speed m/min
Ni-Alloys & Ti-Alloys	Increased stock removal / Improved surface finish / Increased tool life / controlled cutting action	300 - 500
		•

Cutting speed (m/min	Cutting speed (m/min)								
	300	500							
Ø (mm)	Rotational speed (rpm)								
3	48,000	64,000							
6	24,000	32,000							

1

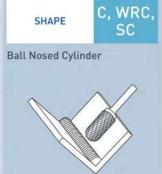


SHAPE A, ZYA, SA Cylinder without Endcut

Tool No.	Art.	d1	l2	d2	u	brazed	solid
SA-43M BUR	40100	3.0	12.0	3.0	38		V

ALLOY SPECIFIC

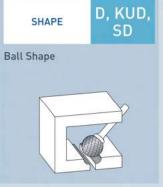




Tool No.	Art.	d1	l2	d2	u	brazed	solid
SC-42M BUR	40110	3.0	14.0	3.0	38		~

ALLOY SPECIFIC



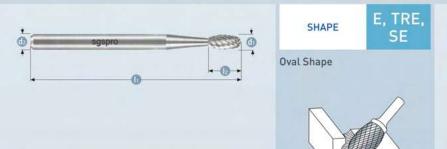


Tool No.	Art.	d1	L2	d2	u	brazed	solid
SD-42M BUR	40120	3.0	2.5	3.0	38		~

11

10

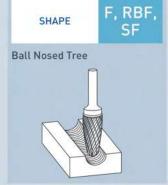




Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SE-41M BUR	40130	3.0	6.0	3.0	38		~

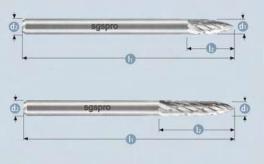
ALLOY SPECIFIC





Tool No.	Art.	d1	l2	d2	u	brazed	solid
SF-42M BUR	40140	3.0	14.0	3.0	38		~

ALLOY SPECIFIC





Tool No.	Art.	d1	l2	d2	u	brazed	solid
SG-41M BUR	40150	3.0	8.0	3.0	38		~
SG-44M BUR	40160	3.0	14.0	3.0	38		~

manny of

8

9

OIL

10



11



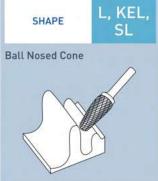




Tool No.	Art.	d1	L2	d2	u	brazed	solid
SH-41M BUR	40170	3.0	6.0	3.0	38		~

ALLOY SPECIFIC

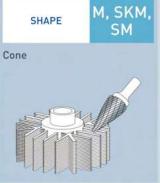




Tool No.	Art.	d1	l2	d2	u	brazed	solid
SL-42M BUR	40180	3.0	14.0	3.0	38.0		~

ALLOY SPECIFIC





Tool No.	Art.	d1	l2	d2	u	brazed	solid
SM-43M BUR	40190	3.0	15.0	3.0	38.0		-

AS RANGE SET

Features & Benefits

FEATURES

BENEFITS

Compact

Easy to carry

Versatile assortment

Ideal for demonstrations, samplings

or special promotions



Art.	Line	Description Type	Contents
40200	Sets	10 pcs Alloy Specific Cut	40100; 40110; 40120; 40130; 40140; 40150; 40160; 40170; 40180; 40190

SPEED GUIDE

Bur Head Diameter.	Maximum Operating Speed	Speed Range	Suggested Air Tools
3mm (1/8")	100,000	45,000 - 100,000	SP Range

Recommended speeds are based on standard overall length of 38mm (1-1/2") maximum overhang of 10mm (3/8")





























11

BASE METAL CUT

Engineered for use on low carbon steels, copper and brass materials

APPLICATION





- High cutting action through cross cutting style
 - Smooth operation
 - Short chips
- For use on all ferrous metals such as:
 - Cast iron
- Steel < 60 HRC · Low carbon steels
- Titanium alloys
- · Also copper, brass, bronze



10

BASE METAL CUT CUT SPECIFICATION



Material group	ps		Application	Cutting speed m/min
Steel, cast steel	Non-hardened, non-heat treated steels up to 1200 N/mm² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steels	Coarse machining with	450-600
	Hardened, heat-treated steels exceeding 1200 N/mm² (> 38 HRC)	Tool steels, tempering steels, alloyed steel, cast steels	high stock removal	250-350
Non-ferrous	Hard-non-ferrous metals	Bronze, titanium/titanium alloys, hard alu-alloys (high Si content)	Coarse machining with	250-350
metals	High-temperature resistant materials	Nickel based alloys, cobalt based alloys (aircraft engine and turbine construction)	high stock removal	300-450
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL, with nodular graphite cast iron EN-GJS, white annealed cast iron EN-GJMW, black cast iron EN-GJMB	Coarse machining with high stock removal	450-600
				:

	250	300	350	400	450	500	600
Ø (mm)	Rotational speed	(rpm)					
2	40,000	48,000	56,000	64,000	72,000	80,000	95,000
3	27,000	32,000	37,000	42,000	48,000	53,000	64,000
4	20,000	24,000	28,000	32,000	36,000	40,000	48,000
6	13,000	16,000	19,000	21,000	24,000	27,000	32,000
8	10,000	12,000	14,000	16,000	18,000	20,000	24,000
10	8,000	10,000	11,000	13,000	14,000	16,000	19,000
12	7,000	8,000	9,000	11,000	12,000	13,000	16,000
16	5,000	6,000	7,000	8,000	9,000	10,000	12,000
20	4,000	5,000	6,000	6,000	7,000	8,000	10,000
25	3,000	4,000	4,000	5,000	6,000	6,000	8,000



...

www.

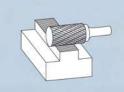
OIL

Index

BASE METAL RANGE



A, ZYA, SA SHAPE Cylinder without Endcut



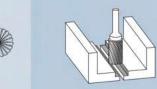
Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SA-2M	40300	8.0	19.0	6.0	64	~	
SA-3M	40310	9.6	19.0	6.0	64	~	
SA-5M	40320	12.7	25.0	6.0	70	~	

BASE METAL RANGE



B, ZYB, SB SHAPE

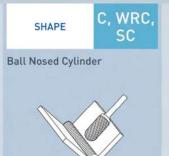
Cylinder with Endcut



Tool No.	Art.	d1	l2	d2	u	brazed	solid
SB-2M	40330	8.0	19.0	6.0	64	~	
SB-3M	40340	9.6	19.0	6.0	64	~	
SB-5M	40350	12.7	25.0	6.0	70	~	

BASE METAL RANGE

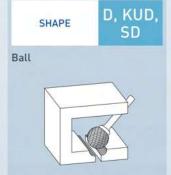




Tool No.	Art.	d1	12	d2	u	brazed	solid
SC-2M	40360	8.0	19.0	6.0	64	V	
SC-3M	40370	9.6	19.0	6.0	64	~	
SC-5M	40380	12.7	25.0	6.0	70	~	

BASE METAL RANGE

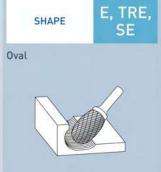




Tool No.	Art.	d1	l2	d2	u	brazed	solid
SD-2M	40390	8.0	6.4	6.0	50	V	
SD-3M	40400	9.6	8.0	6.0	52	~	
SD-5M	40410	12.7	11.0	6.0	55	V	

BASE METAL RANGE

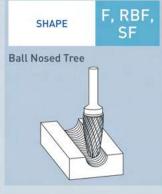




Tool No.	Art.	d1	12	d2	L1	brazed	solid
SE-3M	40420	9.6	16.0	6.0	60	~	
SE-5M	40430	12.7	22.0	6.0	66	~	

BASE METAL RANGE





Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SF-3M	40440	9.6	19.0	6.0	64	V	
SF-5M	40450	12.7	25.0	6.0	70	~	

4

5 —

· www.

8

35

OIL

10



11

BASE METAL RANGE





Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SG-2M	40460	8.0	19.0	6.0	64	~	
SG-3M	40470	9.6	19.0	6.0	64	V	
SG-5M	40480	12.7	25.0	6.0	70	~	

BASE METAL RANGE





Tool No.	Art.	d1	l2	d2	u	brazed	solid
SH-5M	40490	12.7	32.0	6.0	77	~	

BASE METAL RANGE





Tool No.	Art.	d1	12	d2	ıı	brazed	solid
SL-2M	40500	8.0	25.4	6.0	70	~	
SL-3M	40510	9.6	30.0	6.0	76	V	
SL-4M	40520	12.7	32.0	6.0	77	~	

11

BASE METAL RANGE





Tool No.	Art.	d1	l2	d2	u	brazed	solid
SM-4M	40530	9.6	16.0	6.0	64	~	
SM-5M	40540	12.7	22.0	6.0	69	~	

BASE METAL RANGE

Base Metal Range Speed Guide

	Material Groups	НВ*	British Standard	EN	DIN
Grad	Magnetic Soft	<120	230M07, 050A12	EN1, EN2 Leadloy	RFe60
Steel	Structural case carburising	<200	230M07, 050A12	EN3A, 4,6,7,8 32 EN207,S62	st37-2, 16MnCr5, St50-2
111111111111111111111111111111111111111	Lameller graphite	<150	grade 150, grade 400	Grey cast iron soft	GG10, GG40
Cast Iron	Nodular graphite, malleable	<200	420/12, P440/7, 700/2, 30g/72	S.G. iron Mehanite Black & White Heart	GGG40, GGG70, GTS45-06, GTW45-07
1 71 1	Unalloyed	<100	C101	Commercially Pure	E-Cu57, SE-Cu
Brass, Copper, Bronze	B - Brass, Bronze	<200	CZ120, CZ109, PB104	2.1030, 2.1080	CuZn39Pb2, CuZn40, CuSn8, CuSn6n
	Y - Brass	<200	CZ108, CZ106		CuZn37, CuZn28

^{*}HB = Hardness Brinell

Head Diameter	6mm	8mm	10mm	12mm	Sugested Air Tool Ranges
Max. RPM	65,000	60,000	55,000	35,000	
Steel	35,000 - 45,000	30,000 - 40,000	22,500 - 35,000	20,500 - 30,000	S, SD, SM & SMD Die Grinder
Cast Iron	22,500 - 45,000	20,000 - 40,000	15,000 - 35,000	11,000 - 30,000	Ranges
Brass, Copper, Bronze	22,500 - 45,000	20,000 - 40,000	15,000 - 35,000	11,000 - 30,000	



11

Your notes

11

CONTACT INFORMATION

SPECIAL CUT

→ VERY FINE DIAMOND CUT



2

3

4

)

7

8

9



10



Link.

Fine cross cut style

VERY FINE

DIAMOND CUT

APPLICATION





















Stock items

- Excellent control (also at difficult to reach positions)
 Smooth operation
 Short chips
 Good surface finish
 Extremely fine cutting action with good control
 For all kinds of steel:

- - Up to extra hard steel approx. 70 HRC
- Heat-resistant substances, such as nickel based + cobalt based alloys





VERY FINE

DIAMOND CUT



Index

Fine cross cut style

APPLICATION





- Excellent control (also at difficult to reach positions)
 Smooth operation
 Short chips
 Good curfee field.

 - Good surface finish
- Extremely fine cutting action with good control
- For all kinds of steel:
- Up to extra hard steel approx. 70 HRC
- Heat-resistant substances, such as nickel based + cobalt based alloys

Stock items + catalogue pag	es			
ZYA	WRC	KUD	RBF	SPG
(A)	Θ	0	6	(3)
			_	
D 838	□ 838	■ 839		□ 840
Cylinder	Ball nosed cylinder			Tree

VERY FINE DIAMOND CUT CUT SPECIFICATION

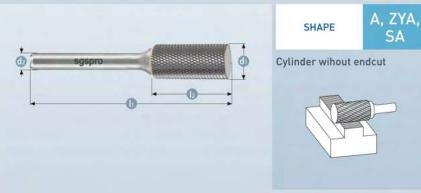


Material group	os		Application	Cutting speed m/min
Steel, cast steel	Non-hardened, non-heat treated- steels up to 1200 N/mm² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steels	Fine machining =	650-750
Hardened, heat-treated steels Too exceeding 1200 N/mm² (> 38 HRC)		Tool steels, tempering steels, alloyed steel, cast steels	medium stock removal	450-600
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Fine machining = medium stock removal	450-600
Non-ferrous	Hard-non-ferrous metals	Bronze, titanium/titanium alloys, hard alu-alloys (high Si content)	Fine machining =	/50 /00
metals High-temperature	High-temperature resistant materials	Nickel based alloys, cobalt based alloys (aircraft engine and turbine construction)	medium stock removal	450-600
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL, with nodular graphite cast iron EN-GJS, white annealed cast iron EN-GJMW, black cast iron EN-GJMB	Fine machining = medium stock removal	650-750

	450	600	650	750
Ø (mm)	Rotational speed (rpm)			
2	72,000	95,000	104,000	120,000
3	48,000	64,000	68,000	80,000
4	36,000	48,000	52,000	60,000
6	24,000	32,000	34,000	40,000
8	18,000	24,000	26,000	30,000
10	14,000	19,000	21,000	24,000
12	12,000	16,000	18,000	21,000
16	9,000	12,000	14,000	17,000



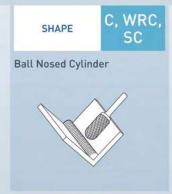
—





Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SA-41M VF	29910	2.0	11.0	3.0	38.0		~
SA-43M VF	29911	3.0	14.0	3.0	38.0		V
SA-1M VF	29912	6.0	18.0	6.0	50.0		V
SA-51M VF	29913	6.3	12.7	3.0	45.0	V	
SA-5MZ VF DIN 8033	29914	12.0	25.0	6.0	65.0	~	



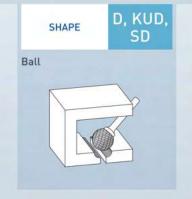




Tool No.	Art.	d1	l2	d2	l1	brazed	solid
SC-41M VF	29915	2.0	11.0	3.0	38.0		V
SC-42M VF	29916	3.0	14.0	3.0	38.0		V
SC-1M VF	29917	6.0	18.0	6.0	50.0		V
SC-51M VF	29918	6.3	12.7	3.0	45.0	V	
SC-5MZ VF DIN 8033	29919	12.0	25.0	6.0	65.0	~	



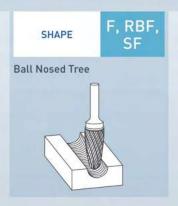






Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SD-40M VF	29920	2.0	1.8	3.0	38.0		V
SD-42M VF	29921	3.0	2.5	3.0	38.0		
SD-52M VF	29922	4.0	3.4	3.0	38.0		V
SD-51M VF	29923	6.3	5.4	3.0	38.0	V	
SD-3M VF	29924	9.6	8.0	6.0	52.0	V	
SD-5MZ VF DIN 8033	29925	12.0	10.8	6.0	51.0	V	







Tool No.	Art.	d1	l2	d2	L1	brazed	solid
SF-41M VF	29926	3.0	8.0	3.0	38.0		~
SF-42M VF	29927	3.0	14.0	3.0	38.0		V
SF-51M VF	29928	6.3	12.7	3.0	45.0	~	
SF-5MZ VF DIN 8033	29929	12.0	25.0	6.0	65.0	V	

4

5

unauti

0

9



10

i

11







Tool No.	Art.	d1	12	d2	l1	brazed	solid
SG-44M VF	29930	3.0	14.0	3.0	38.0		~
SG-1M VF	29931	6.0	16.0	6.0	50.0		~
SG-51M VF	29932	6.3	12.7	3.0	45.0	V	
SG-5MZ VF DIN 8033	29933	12.0	25.0	6.0	65.0	V	

BUR SET VERY FINE DIAMOND CUT

Corner Radius Line

10 Piece Very Fine Diamond Cut Set

Tool No.	Art.	Contents
10 PIECE VF CUT BUR SET	29940	29910, 29911, 29915, 29916, 29920, 29921, 29922, 29926, 29927, 29930





- → FOR YOUR MOST CHALLENGING APPLICATIONS AND MATERIALS
- → MAXIMISE YOUR PRODUCTIVITY

























Features & Benefits - G2000

FEATURES

Design for aerospace Good finish & high stock removal Specific rake angle

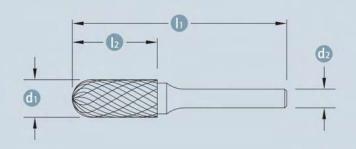
BENEFITS

Outperform standard cuts in complex alloys Respond to complex application Suitable for very hard material and increase life while keeping sharpness

							0		9	(4)	-	-					
SA-43MGDC	SA-51MGDC	SB-43MGDC	SC-41MGL2DC	SC-42MG DC	SC-51MGDC	SD-42MGDC	SD-51MGDC	SE-41MGDC	SE-51MGDC	SF-42MGDC	SG-42MGDC	SG-44MGDC	SG-51MGDC	SH-41MGDC	SL-4MGDC	SM-43MGDC	SM-51MGDC

Tool No.	Art. Uncoated	d1	12	d2	11	brazed	soli
Cylinder							
SA-43MG D/C	29200	3.0	12.7	3.0	38.0		V
SA-43MGL2 D/C	29201	3.0	12.7	3.0	50.0		V
SA-51MG D/C E/C	29202	6.3	12.7	3.0	45.0	~	
Cylinder with End Cut							
SB-43MGDC	29203	3.0	14.0	3.0	38.0	~	
Cylinder Shape with Radius End							
SC-41MG D/C	29204	2.3	11.0	3.0	38.0		V
SC-41MGL2 D/C	29205	2.3	11.0	3.0	50.0		V
SC-42MG D/C	29206	3.0	14.0	3.0	38.0		V
SC-42MGL2	29207	3.0	14.0	3.0	50.0		V
SC-42MGL3 D/C	29208	3.0	14.0	3.0	75.0		V
5C-51MG D/C	29209	6.3	12.7	3.0	45.0		V
Ball Shape			(0.2990)				
SD-42MG D/C	29210	3.0	2.8	3.0	38.0		V
SD-51MG D/C	29224	6.3	5.0	3.0	38.0	~	-
Oval Shape	7.000		20000				
SE-41MG D/C	29225	3.0	5.5	3.0	38.0		V
SE-51MG D/C	29211	6.3	9.5	3.0	41.0	V	
Tree Shape with Radius End		0.0	7.10	0.0	41.0		
SF-42MG D/C	29212	3.0	12.7	3.0	38.0		~
SF-42MGL2 D/C	29213	3.0	12.7	3.0	50.0		V
SF-51MG D/C	29214	6.3	12.7	3.0	45.0	~	
Tree Shape with Pointed End		0.0	14.0	9.0	40.0		
SG-42MG D/C	29215	3.0	14.0	3.0	38.0		V
5G-44MG D/C	29216	3.0	12.7	3.0	38.0		-
SG-51MG D/C	29217	6.3	12.7	3.0	45.0		V
Flame Shape	2/21/	0.0	12.7	0.0	40.0		
SH-41MG D/C	29218	3.0	6.3	3.0	38.0		V
Cone Shape	2/210	0.0	0.0	5.0	00.0		
SM-42MG D/C	29220	3.0	11.0	3.0	38.0		V
SM-43MG D/C	29221	3.0	16.0	3.0	38.0		-
SM-43MG D/C	29223	6.3	12.7	3.0	48.0	~	







3

5

6 Marriage)

3

OIL

10

(i)

11















FIBREGLASS ROUTERS



ATA

IDA Business & Technology Park, Killygarry, Cavan, Co. Cavan, H12 DK46,

+353 49 435 2138 Tel: +353 49 432 6298 Email: ask@atagroup.ie

atagroup.com





10

(i)

11

Fibreglass Routers

METRIC RANGE

FEATURES

· Special cut style

BENEFITS

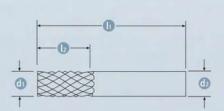
- · Best for roughing and contouring composite
- · Can be used with hand-held tools or CNC machines
- Can be used on various materials, from large fibreglass panels to small parts made of composite

APPLICATIONS

- Trimming
- Routing
- Pocketing

INDUSTRY TARGETS

- Aerospace
- Automotive
- Railway











Tool No.	d1	l2	d2	LT .	solid	No End Cut	With End Cut	Endmill	Drill Point
FGR-1M	1.6	5.0	3.0	38.0	V	83001	83015	83030	83045
FGR-1-1M	2.4	9.5	3.0	38.0	~	83002	83016	83031	83046
FGR-2M	3.0	12.0	3.0	38.0	~	83003	83017	83032	83047
FGR-3M	4.0	16.0	4.0	50.0	~	83004	83018	83033	83048
FGR-4M	4.0	16.0	6.0	50.0	~	83005	83019	83034	83049
FGR-5M	6.0	19.0	6.0	50.0	V	83006	83020	83035	83050
FGR-6M	6.0	19.0	6.0	63.0	~	83007	83021	83036	83051
FGR-6-1M	6.0	25.0	6.0	75.0	V	83008	83022	83037	83052
FGR-7M	8.0	25.0	8.0	63.0	~	83009	83023	83038	83053
FGR-8M	10.0	25.0	10.0	75.0	V	83010	83024	83039	83054
FGR-9M	12.0	25.0	12.0	75.0	~	83011	83025	83040	83055

NO END CUT	Used for profile applications
BUR STYLE	Used for profiling and slotting application
ENDMILL	Used for plunging, slotting and profiling applications were a square corner is required
DRILL POINT	Used for plunging into application prior to starting routing operation

RECOMMENDATIONS

- The routers are recommended for use on phenolics, fibreglass and hard non-metallic materials
- For the best results, FGRs should be rigidly mounted in accurate collet chucks

APPLICATIONS

- Trimming
- Routing
- Pocketing



SPECIAL BURS / SOLUTIONS RANGE



ATA

IDA Business & Technology Park, Killygarry, Cavan, Co. Cavan, H12 DK46,

Tel: +353 49 435 2138 +353 49 432 6298 Email: ask@atagroup.ie

atagroup.com

5.3





10



11

SPECIAL BURS

1849-874

Radius bur line & Radius bur sets



Combi bur line & Combi bur sets



Corner radius line & Corner radius sets



D 873-874

SOLUTIONS RANGE

875-888

Locksmith range



2 875-876

Tyre router range



2 877-882

Bolt remover range & Bolt remover sets





1 883-888

Index

10

RADIUS BUR LINE

THE RADIUS BUR an added dimension in finishing technology

This exclusive range of multi-application burs will cover almost all your general metal removal work. With an exclusive inverted curve design, this innovative range of burs provides a versatility that makes these burs suitable for use across a wide range of jobs and reduces the need for consumable and tool changes, saving you time as well as money.

Features & Benefits

- Unique Inverted Curve Ideal for creating a smooth radius on sharp corners
- Unique Guide System Ease of control on sharp edges
- Special Tooth Geometry Smooth cutting action using all faces and rapid material removal
- · CNC Machined High consistent quality
- Manufactured from High Quality Sintered Tungsten Carbide - Guaranteed high performance and durability
- Manufactured to strict quality control standards - Incorporates 100% inspection of brazed joints
- Versatile Can be used on a wide variety of materials e.g. titanium, bronze, stainless steel, cast iron, brass, etc

APPLICATIONS

Radius bur geometry and design allows easy grinding where an internal / external chamfer or blend is required on a multitude of materials

INDUSTRY TARGETS

- Automotive
- Aerospace
- Foundries

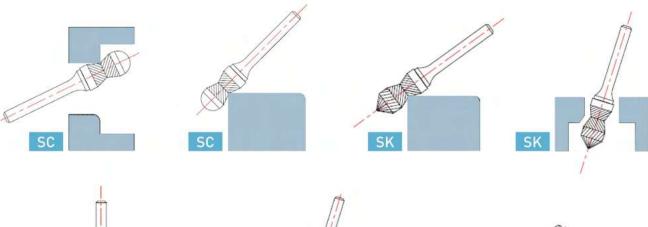


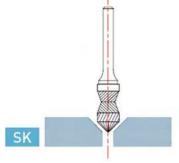


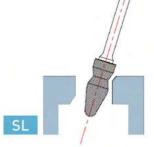


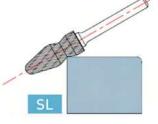


APPLICATIONS





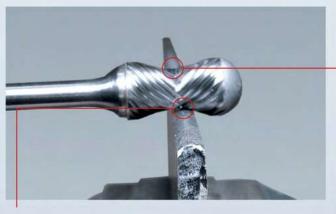




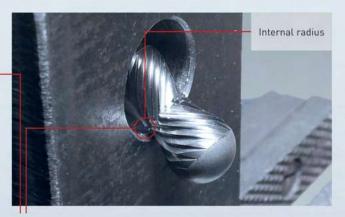
10







External radius



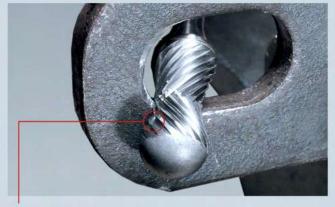
The intersecting points of the countersink [WKN] and cone shapes [SKM] form the unique RADIUS+CURVE guiding-rounding-deburring system



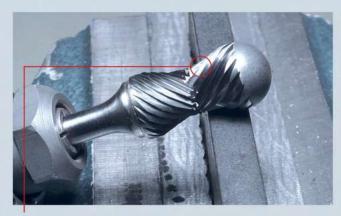
Internal chamfer with SKM shape



External chamfer with SKM shape



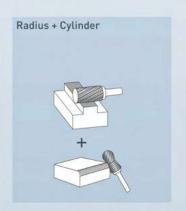
Internal chamfer with WKN shape



External chamfer with WKN shape











Metric Series	Art.	d1	12	d2	l1	brazed	solid	Included Angle
SA-5MRA D/C	21755	12.7	25.0	6.0	70.0	~		-















3

4

3

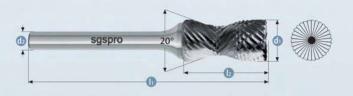
9

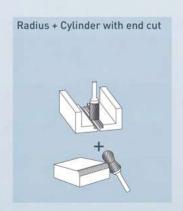
10

(i)

Index



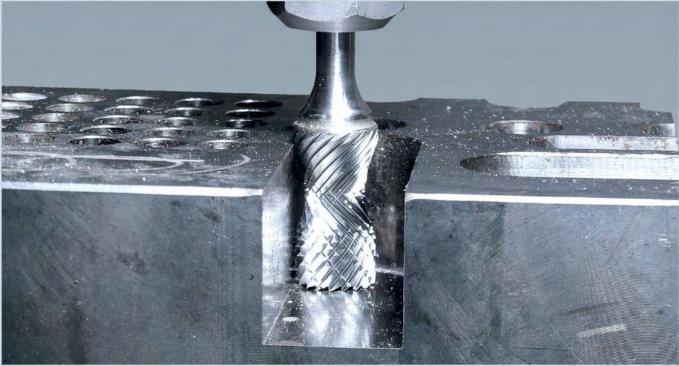








Metric Series	Art.	d1	l2	d2	L1	brazed	solid	Included Angle
SB-5MRA D/C	21756	12.7	25.0	6.0	70.0	~		-









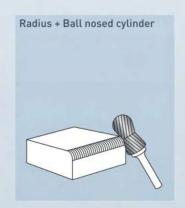
















Metric Series	Art.	d1	12	d2	u	brazed	solid	Included Angle
SC-5MRA BUR	21757	12.7	25.0	6.0	70.0	~		-















3

4

3

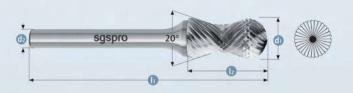
) word

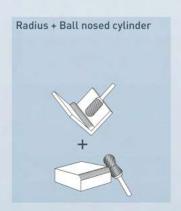
OIL

10

(i

11









Metric Series	Art.	d1	l2	d2	L1	brazed	solid	Included Angle
SC-5MRA C	21758	12.7	25.0	6.0	70.0	~		-







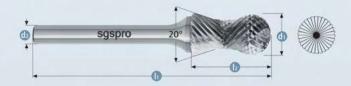


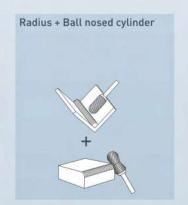
















Metric Series	Art.	d1	l2	d2	t1	brazed	solid	Included Angle
SC-5MRA D/C	21759	12.7	25.0	6.0	70.0	~		-















2

2

) Sandage

3

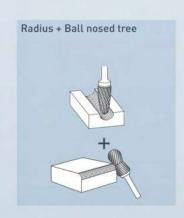
OIL

10

1

11







Movie	
0	
€	

Metric Series	Art.	d1	12	d2	u	brazed	solid	Included Angle
SF-5MRA D/C	21760	12.7	35.0	6.0	80.0	~		-



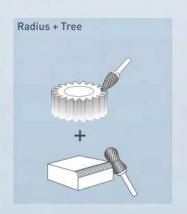








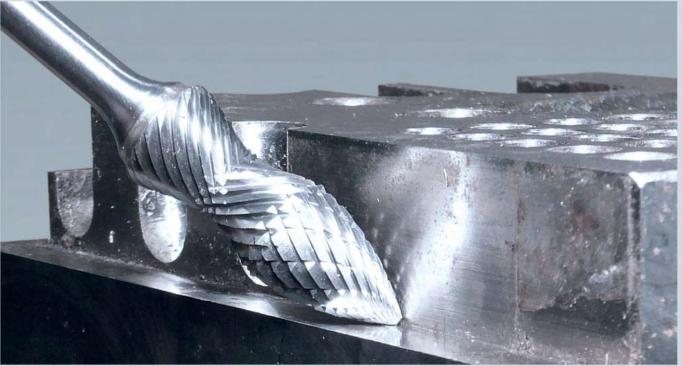








Metric Series	Art.	d1	12	d2	11	brazed	solid	Included Angle
SG-5MRA D/C	21761	12.7	35.0	6.0	80.0	~		-











4

5

No Sandy Andrew Street

3

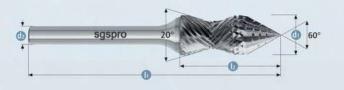
OIL

10



11











Metric Series	Art.	d1	l2	d2	u	brazed	solid	Included Angle
SJ-5MRA D/C	21762	12.7	31.0	6.0	76.0	V		-



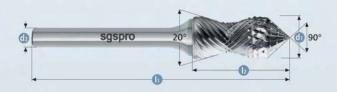


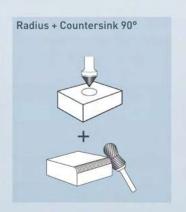
















Metric Series	Art.	d1	12	d2	l1	brazed	solid	Included Angle
SK-5MRA D/C	21763	12.7	28.0	6.0	73.0	~		-















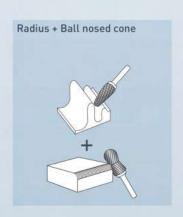
10



11

Index









Metric Series	Art.	d1	l2	d2	u	brazed	solid	Included Angle
SL-5MRA D/C	21764	12.7	35.0	6.0	80.0	~		14°







RADIUS BUR SETS

Radius Bur Line

10 Piece Radius Application Set Metric Code - BUR10MRA 28225 SA-5RA D/C BUR
SB-5RA D/C BUR
SC-5RA C BUR
SC-5RA C BUR
SC-5RA D/C BUR
SF-5RA D/C BUR
SG-5RA D/C BUR
SJ-5RA D/C BUR
SK-5RA D/C BUR
SK-5RA D/C BUR



Radius Bur Line

5 Piece Chamfer Application Set Metric Code - BUR5MRA 28220 SB-5RA D/C BUR SC-5RA D/C BUR SF-5RA D/C BUR SK-5RA D/C BUR SK-6CO C BUR





Your notes



11 Index

CONTACT INFORMATION

COMBIBURLINE

THE COMBI BUR versatility to suit almost any application

Just like any multi-tool in the DIY sector, there are now high performance multi-purpose burs for the industry! The combi bur line has been developed to reduce downtime and cover multi-application processes for metal removal. These exclusive new shapes will cover your deburring, edging and blending work in one simple bur solution. This range is ideal for complex parts where different shapes are required. The combi bur will maximise your productivity!

Features & Benefits

Reduced downtime for the end user

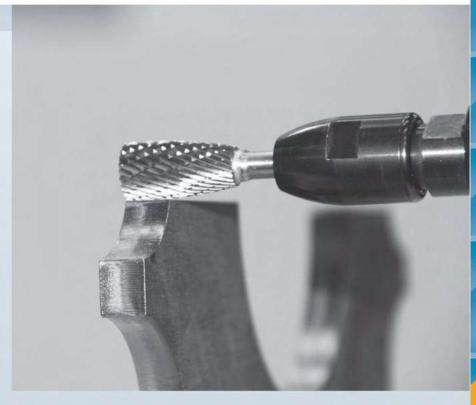
- Special Tooth Geometry manufactured using the latest CNC machines
- The highest Quality Sintered Tungsten Carbide is used to ensure consistent performance
- A versatile bur to be used on a wide range of materials and processes
- 14 EXCLUSIVE new combination shaped burs to suit all your complex applications!

APPLICATIONS

 Combi bur geometry and design allows easy grinding where deburring, edging and blending is required on a multitude of materials

INDUSTRY TARGETS

- Transportation
- Aerospace
- Foundries

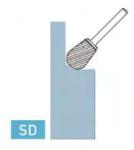






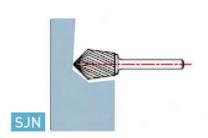


APPLICATIONS

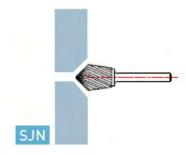














5

mani

8

Á

10



11





COMBIBURLINE

PRODUCT DESCRIPTION:

COMBI BUR LINE versatility to suit almost any application.

Just like any multi-tool in the DIY sector, there is now high performance multipurpose burrs for the industry. The COMBI BUR LINE line has been developed to reduce downtime and cover multi-application processes for metal removal. These exclusive new shapes will cover your deburring, edging and blending work in one simple burr solution. This range is ideal for complex parts where different shapes are required. The COMBI BUR LINE will maximise your productivity.

Features and benefits

- · Reduced downtime for end user
- · Special tooth geometry manufactured using the latest CNC machines
- The highest quality sintered tungsten carbide is used to ensure consistent performance
- · A versatile burr to be used on a wide range of materials and processes

Can be used on a wide variety of material e.g. cast iron, steel <60 HRC, stainless steel (INOX), nickel-based and titanium alloys, copper, brass and bronze.





















3

5

)

6

3

1

10

i

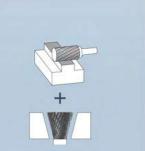
11

Index

SHAPE ZYA / WKN

Syspro

Cylinder without end cut + inverted cone







Metric Series	Art.	d1	l2	d2	l1	brazed	solid	Included Angle
SA-5MC0 D/C	25855	12.7	25.0	6.0	70.0	~		-

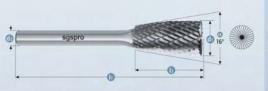
Application examples





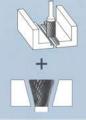








Cylinder with end cut + inverted cone







Metric Series	Art.	d1	l2	d2	u	brazed	solid	Included Angle
SB-5MC0 D/C	25856	12.7	25.0	6.0	70.0	~		170

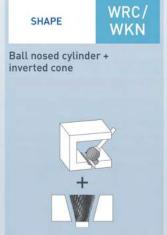
















Metric Series	Art.	d1	l2	d2	L1	brazed	solid	Included Angle
SD-5C0 C	25857	12.7	20.0	6.0	65.0	~		=















Movie
0
€

Metric Series	Art.	d1	l2	d2	L1	brazed	solid	Included Angle
SD-5MC0 D/C	25858	12.7	20.0	6.0	65.0	~		170



9	1	







6

7

8

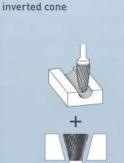
9

10

i

11 Index

SHAPE RBF/WKN
Ball nosed tree +







Metric Series	Art.	d1	12	d2	l1	brazed	solid	Included Angle
SF-5MC0 D/C	25859	12.7	32.0	6.0	77.0	~		775

Application examples

0

















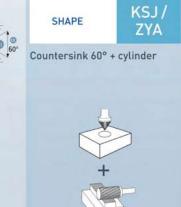
Metric Series	Art.	d1	l2	d2	l1	brazed	solid	Included Angle
SG-5MC0 D/C	25860	12.7	32.0	6.0	77.0	~		-















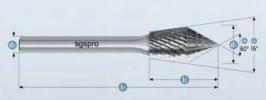
Metric Series	Art.	d1	l2	d2	L1	brazed	solid	Included Angle
SJA-5MC0 D/C	25861	12.7	25.0	6.0	70.0	V		60°















N	1ovie
	0
	=

Metric Series	Art.	d1	l2	d2	L1	brazed	solid	Included Angle
SJN-5MC0 D/C	25862	12.7	23.0	6.0	68.0	V		60°









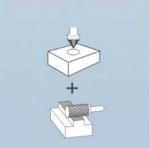






KSK/ ZYA

Countersink 90° + cylinder









	Metric Series
Ī	SKA-5MC0 D/C

Art.	
25863	



25.0

6.0

70.0

90°

Application examples











SHAPE

KSK/ WKN

Countersink 90° + inverted cone











ı	Metric Series
ı	SKN-5MC0 D/C

AFT.	
25864	

12.7

18.0

6.0

64.0

Ì	~	Ī		

14°

Application examples









10 (i)

11









Metric Series	Art.	d1	l2	d2	i1	brazed	solid	Included Angle
SK-6MC0 C	25865	16.0	15.0	6.0	60.0	~		-

Application examples















Metric Series	Art.	d1	l2	d2	L1	brazed	solid	Included Angle
SL-5MC0 D/C	25866	12.7	32.0	6.0	77.0	~		=



















Metric Series	Art.	d1	l2	d2	l1	brazed	solid	Included Angle
SM-5MC0 D/C	25867	12.7	35.0	6.0	80.0	~		77

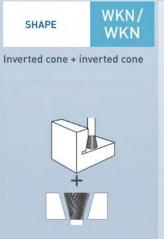
















Metric Series	Art.	d1	l2	d2	l1	brazed	solid	Included Angle
SN-5MC0 D/C	25868	12.7	25.0	6.0	70.0	~		170

Application examples









nant

8

OIL

10

i

11

COMBIBUR SETS

Combi Bur Line

10 Piece Combi Application Set Metric Code - BUR10MC0 28235 SB-5CO D/C BUR SD-5CO D/C BUR SF-5CO D/C BUR SG-5CO D/C BUR SJN-5CO D/C BUR SKA-5CO D/C BUR SNA-5CO D/C BUR SL-5CO D/C BUR SM-5CO D/C BUR

Combi Bur Line

5 Piece Multi Purpose Set Metric Code - BUR5MC0 28230 SD-5CO D/C BUR SJA-5CO D/C BUR SNA-5CO D/C BUR SK-6CO C BUR SN-5CO D/C BUR









atagroup.com

The Corner Radius Line

THE CORNER RADIUS

Unique design transforms the conventionlal cylinder bur

The corner radius bur range has been specially developed to meet the highest manufacturing standards of the Aerospace industry. The radius design at the top of the cylinder provides extended tool life. This unique design with its double cut will improve operator control, reduce the size of chips and prevent damage to expensive parts.

FEATURES & BENEFITS

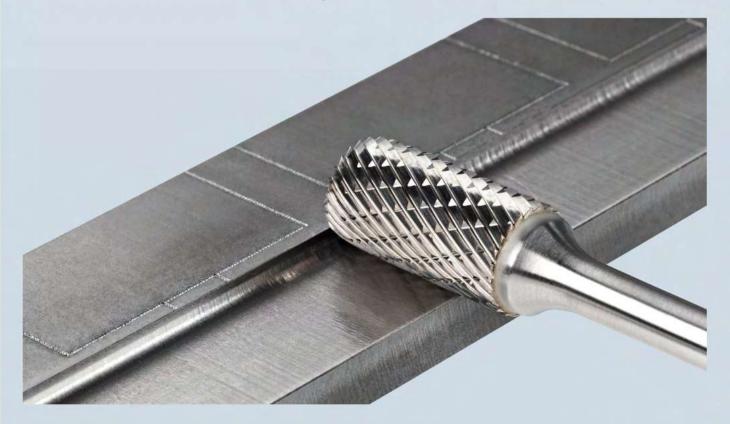
- · Corner radius at the top of the cylinder
- Offers improved flute strength at the head of the bur
- · Prevents digging into the work piece at the intersecting point
- · Produces a corner radius on the work piece
- · Reduces flute chipping at the intersection points

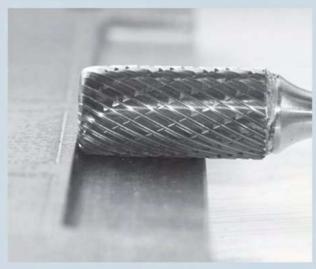
APPLICATIONS

 Corner radius bur geometry is designed to extend tool life. The design itself allows easy grinding where blending is required on expensive components

INDUSTRY TARGETS

- Transportation
- Aerospace







3

A PARTY OF

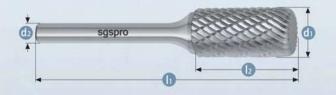
OIL

10

1

.....

CORNER RADIUS



Metric Series	Art.	d1	l2	d2	l1	brazed	solid
SA-43MCR D/C	20155	3.0	14.0	3.0	38.0		V
SA-1MCR D/C	20156	6.0	18.0	6.0	50.0		~
SA-2MCR D/C	20157	8.0	20.0	6.0	64.0	~	
SA-3MCR D/C	20158	9.6	19.0	6.0	64.0	~	
SA-5MCR D/C	20159	12.7	25.0	6.0	70.0	~	
SA-6MCR D/C	20160	16.0	25.0	6.0	70.0	V	

BUR SETS CORNER RADIUS

Corner Radius Line

6 Piece Corner Radius Set Metric Code - BUR6MCR 28240 SA-43CR D/C BUR SA-1CR D/C BUR SA-2CR D/C BUR SA-3CR D/C BUR SA-5CR D/C BUR SA-6CR D/C BUR







) ARMINE

OIL



LOCKSMITH

FEATURES & BENEFITS

- · Centring radius bur geometry Allowing full control in an intricate space
- Purposely designed lock breaker bur Removing the broken lock completely in one go
- CNC manufactured bur Offering full control of extracting a broken lock barrel

DESIGN FEATURES

Tailor made range developed for the locksmith industry

- · Specific diameter and cutting lengths to suit various lock repairs
- Long reach and parallel shanks for easy access
- · Developed cutting geometry to grind all types of lock metals





EDP no.	Shape	Cut Style	Cut Diameter	Length of Cut	Reach Length	Shank Diameter	Overall Length	brazed	solid
22380	SC	Double	3.0	14.0	n/a	3.0	50.0		~
22381	sc	Double	3.0	14.0	n/a	3.0	60.0		V
22382	SC	Double	3.0	14.0	n/a	3.0	75.0		V
22383	SC	Double	3.0	14.0	n/a	3.0	100.0		~
22384	SC	Double	3.0	15.0	30	6.0	60.0		~
22385	SC	Double	4.0	15.0	30	6.0	60.0		~
22386	SC	Double	6.0	18.0	n/a	6.0	50.0		V
22387	SC	Double	6.0	18.0	n/a	6.0	60.0		~
22388	SC	Double	6.0	18.0	n/a	6.0	80.0		~
22389	SC	Double	6.0	18.0	n/a	6.0	100.0		~
22390	SC	Double	6.0	18.0	n/a	6.0	150.0		~
22391	SC	Coarse	6.0	18.0	n/a	6.0	50.0		~
22399	n/a	Lock pin breaker	4.6	30.0	n/a	6.0	60.0		~



3

4

)

7

0

3

A

10



......

TYRE ROUTER RANGE

Application examples







Tyre repair

Rotating mills for precise damage processing at radial and diagonal tyres.

Suitable for car, truck, agricultural vehicle, and construction tyres.

The specifically adjusted cutting geometry permits clean and professional processing of the hole channel.

Procedure - Processing the hole channel

The course of the hole channel from the inside out is to be determined with a pricking awl. This measures the damage size on the inside and the outside of the tyre (max. 6mm).

The hole channel is first processed and cleaned with a Tyre Router from the inside outwards and then from the outside inwards.

For this, it must be particularly observed that the damage channel is penetrated precisely without enlarging the damage, that intact cord ropes are not damaged and that expansion/loosening of the surrounding tissue is avoided.

If further damage such as rust formation or loosening is found, the tyre must be inspected again for the possibility of repair with prefabricated repair elements.

FEATURES & BENEFITS

- · Centring carbide router system Allowing full control on convex surfaces
- Cone endpoint Allows pierced hole to be enlarged to stem size
- Specific designed flute geometry Effective method of grinding rubber and steel belt sections
- CNC machined High consistent quality

DESIGN FEATURES

Engineered range developed for tyre repair

- Specific diameters to cover the range of vulcanizing Stem inserts available
- Long reach and parallel shanks for ease of use
- Developed cutting geometry to grind rubber and hardened steel sections

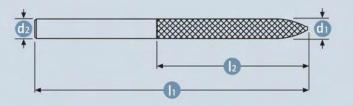
See Tyre Router in action







Art.	d1	l2	d2	u	brazed	solid
83301	3.0	25.0	3.0	50.0		~
83302	4.5	30.0	6.0	90.0		~
83303	6.0	36.0	6.0	65.0		
83304	6.0	50.0	6.0	80.0		~
83305	8.0	50.0	8.0	110.0	~	
83306	10.0	60.0	10.0	110.0	~	



uter

5 ...

Newson and

1

10

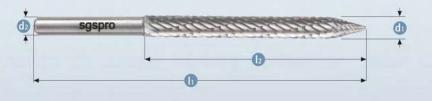
(i)





Suitable for:	
Rotational speed:	2500 rpm

Art.	d1	l2	d2	L1	brazed	solid
83301	3.0	25.0	3.0	50.0		~





Art.	d1	12	d2	L1	brazed	solid
83302	4.5	30.0	6.0	90.0		~



6

8

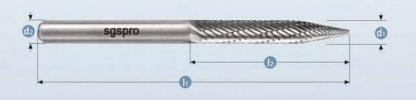
9

10

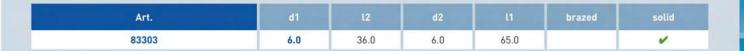
<u>i</u>

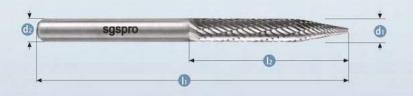
Index

11









Suitable for:

Rotational speed: max. 2500 rpm

Art.	d1	12	d2	ti .	brazed	solid
83304	6.0	50.0	6.0	80.0		~









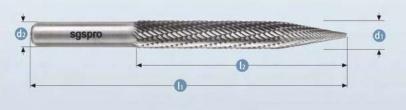






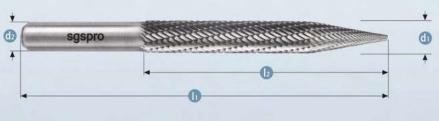








Art.	d1	l2	d2	li .	brazed	solid
83305	8.0	50.0	8.0	110.0	V	





Art.	d1	12	d2	l1	brazed	solid
83306	10.0	60.0	10.0	110.0	V	







A RANGE OF BURS DESIGNED FOR THE PREPARATION AND REMOVAL OF BROKEN STUDS

Features & Benefits

- · Centering carbide bur system
- · Maximising the potential of drilling threads on center
- · Extracting of broken bolt thread
- · Reducing damage to existing threaded holes
- Guided steps to accomplish required outcome
- · Saving the threads and the component
- · CNC machined
- · High consistent quality

See Bolt Remover in action



RANGE DETAILS

- · Range offering to suit various thread diameters
- · Five diameters of plain cylinder with end cut
- · Five diameters of 150° countersinks
- Operations 1 & 2 available in 5pcs sets
- Operations 1 to 4 available in specific diameter sets

DESIGN FEATURES

- Engineered range developed for the removal of broken bolts
- Specific diameter and cutting lengths to suit various thread diameters
- Developed cutting geometry to grind case hardened threads

INDUSTRY TARGETS

- · Automotive repair shops
- Maintenance departments



Maximum Operating Speed

Bur Head Ø	Maximum Operating Speed
≤ 6mm	65,000 rpm
≤ 8mm	60,000 rpm
≤ 10mm	55,000 rpm
≤ 12mm	35,000 rpm

Maximum operating Speeds are based on standard shank length of $45 \text{mm},\,\text{max}$ overhang of 10 mm

Index

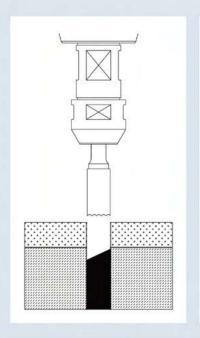
Operation 1

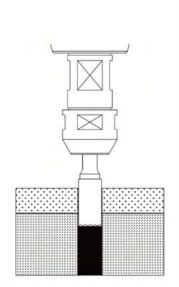
GRIND THE BROKEN SURFACE FLAT

- Choose the correct size carbide bur for the broken bolt
- Use a right-angle die grinder
- Ensure the bur is perpendicular to the broken bolt
- · Grind the broken surface flat

5 Piece Bolt Remover Cylinder with End Cut Set 29555

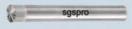
EDP no.	Description	Contents
29555	5 pc Bolt Remover - Cylinder Set	29550, 29551, 29552, 29553, 29554

















EDP No. 29550

EDP No. 29551

EDP No. 29552

EDP No. 29553

EDP No. 29554

Plain Cylinder with End-Cut only

EDP no.	Bolt Size	Head Diameter	Head Length	Shank Diameter	Overall Length	brazed	solid
29550	1/4-20, 24, 28, M6	4.9	20.0	6.0	50.0		~
29551	5/16-18, 24, 32, M8	6.4	5.0	6.0	50.0	~	
29552	3/8-16, 24, M10	7.8	19.0	6.0	65.0	V	
29553	7/16-14, 20, M12	9.3	19.0	6.0	65.0	V	
29554	1/2-13, 20, M14	10.7	25.0	6.0	70.0	V	

Index

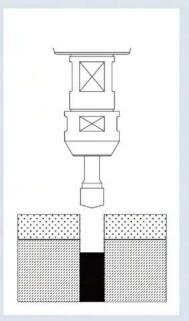
Operation 2

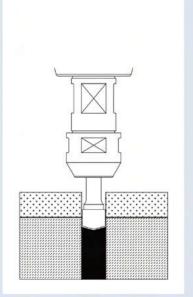
FORM A COUNTERSINK LOCATION AT THE CENTERPOINT OF THE BOLT

- · Choose the correct size carbide countersink bur for the broken bolt
- Use a right-angle die grinder
- Ensure the bur is perpendicular to the broken bolt
- Grind into the prepared surface to form a countersink location at the center point of the bolt

5 Piece Bolt Remover Countersink Set 150° 29565

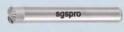
EDP no.	Description	Contents
29565	5 pc Bolt Remover - Countersink Set	29560, 29561, 29562, 29563, 29564

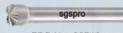


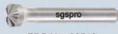














EDP No. 29561

EDP No. 29562

EDP No. 29563

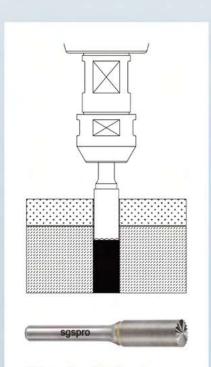
EDP No. 29564

Countersink 150°

EDP no.	Bolt Size	Head Diameter	Head Length	Shank Diameter	Overall Length	brazed	solid
29560	1/4-20, 24, 28, M6	4.9	20.0	6.0	50.0		V
29561	5/16-18, 24, 32, M8	6.4	5.0	6.0	50.0	~	
29562	3/8-16, 24, M10	7.8	5.0	6.0	50.0	~	
29563	7/16-14, 20, M12	9.3	5.0	6.0	50.0	~	
29564	1/2-13, 20, M14	10.7	5.0	6.0	50.0	V	



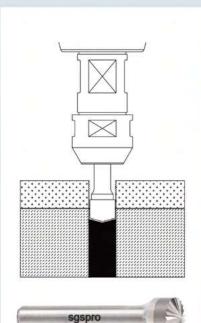
When extracting the broken bolt, use a right angle die grinder and ensure that the bur and screw extractors are perpendicular to the broken bolt to avoid damaging the threads.



Step 1 - Cylinder Grind the broken surface flat

Grind the broken surface flat

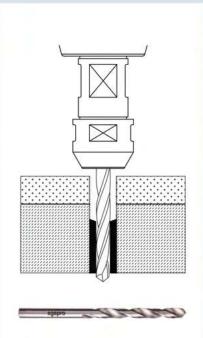
 Ensure the surface area of the bolt is flat after grinding



Step 2 - Countersink

Form a countersink location at the centerpoint of the bolt

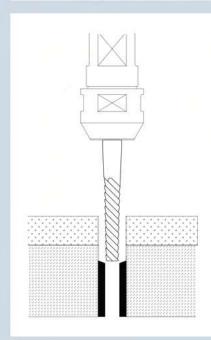
 Grind into the prepared surface to form a countersink location at the center point of the bolt



Step 3 - Drill

Drill into the previously ground countersink location

 Drill into the countersink location at the center point of the original bolt





Extractor

Step 4 - Screw

EXTRACT THE BOLT

 Use sized screw extractor for the removal of the remaining broken bolt



10

(i)

11

Index

A RANGE OF BURS DESIGNED FOR THE PREPARATION AND REMOVAL OF BROKEN STUDS

Nuts and bolts are the critical elements that hold our every day components and structures in place. When exposed to stress or harsh conditions that cause damage or deterioration, these bolts can often be sheared, rusted or seized and will need to be removed and replaced.

The ATA Bolt Remover Kits have been designed to efficiently extract bolts without damaging the threads or the component, ensuring a safe removal without rethreading the hole.

One of the biggest frustrations in manufacturing and repair is the seizing or breaking of bolts. When exposed to stress or harsh conditions that cause damage or deterioration, bolts can often be sheared, rusted or seized and will need to be removed and replaced. It can be challenging to remove the bolt without damaging the threads and having to re-tap the hole.

Don't let a broken bolt bring your project to a complete halt. The ATA Bolt Remover Kits have been designed to efficiently extract bolts without damaging the threads or the component, ensuring a safe, clean removal.

See Bolt Remover in action





PERFORMANCE

- Centering carbide bur system which maximises the potential of drilling threads on center
- Efficient extraction of broken bolt thread, avoiding damage to existing threaded holes
- Complete set to easily remove broken screws and bolts



THE KIT

- Range offering to suit the extraction of bolts with diameters from 6mm - 14mm
- · Simple four step solution
- · CNC machined for consistently high quality and performance



EDP no.	29570	29571	29572	29573	29574
Description	M6 Bolt Remover Set	M8 Bolt Remover Set	M10 Bolt Remover Set	M12 Bolt Remover Set	M14 Bolt Remover Set
Bolt Size	1/4-20, 24, 28, M6	5/16-18, 24, 32, M8	3/8-16, 24, M10	7/16-14, 20, M12	1/2-13, 20, M14

Choose the appropriate set above to match your bolt size.



SETS · DISPLAYS





5.4

CONTACT

ATA

IDA Business & Technology Park, Killygarry, Cavan, Co. Cavan, H12 DK46, Ireland Tel: +353 49 435 2138 Fax: +353 49 432 6298 Email: ask@atagroup.ie

atagroup.com

ONLINE





2

3

6 monoramentes

A

10



11

ATA has selected an assortment of the most popular burs for use in general application. These sets are presented in robust packaging that is:

- Easy to carry
- Compact
- Recyclable

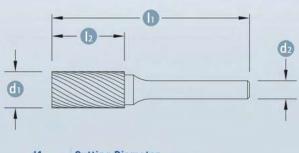
Ideal for:

- · Demonstrations
- Samplings
- Special promotions

The following sets are all universal double cut sets:

28251	28262
28260	28263
28266	28264
28261	

- Designed for general application
- Offers good control
- Reduced chip size
- Industries applicable to many industries



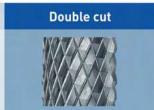
d1	Cutting Diameter
12	Length of Cut
d2	Shank Diameter
11	Overall Length

DOUBLE CUT - 5 PIECE SET 28260

CONTENTS

- 5 piece selection of standard shaped burs
- 9.5mm and 12.7mm cut diameters
- 6mm shanks





Tool No.	Art.	Contents	d1	l2	d2	L1	Included Angle
SB-3M	20928	Cylinder with endcut	9.5	19.0	6.0	63	
SC-5M	21878	Ball nosed cylinder	12.7	25.0	6.0	69	2
SF-5M	23378	Ball nosed tree	12.7	25.0	6.0	69	
SG-3M	23903	Pointed tree	9.5	19.0	6.0	63	2
SL-4M	25253	Ball nosed cone	12.7	28.0	6.0	76	14°

LECT



DOUBLE CUT - 5 PIECE SET 28251

CONTENTS

- 5 piece selection of established burs
- 9.5mm cut diameters
- 6mm shank





Tool No.	Art.	Contents	d1	L2	d2	L1	Included Angle
SB-3M	20928	Cylinder with endcut	9.5	19.0	6.0	63.0	
SC-3M	21778	Ball nosed cylinder	9.5	19.0	6.0	63.0	5
SD-3M	22503	Ball	9.5	8.0	6.0	52.0	-
SF-3M	23328	Ball nosed tree	9.5	19.0	6.0	63.0	
SL-3M	25228	Ball nosed cone	9.5	27.0	6.0	74.0	14°

DOUBLE CUT - 5 PIECE SET 28266

CONTENTS

- · 5 piece selection of standard coated burs
- 9.5mm and 12.7mm cut diameters
- 6mm shanks





Tool No.	Art.	Contents	d1	l2	d2	L1	Included Angle
SB-3M	21795	Cylinder with endcut	9.5	19.0	6.0	65.0	
SC-5M	21895	Ball nosed cylinder	12.7	25.0	6.0	69.0	-
SF-5M	23395	Ball nosed tree	12.7	25.0	6.0	69.0	2
SG-3M	23910	Pointed tree	9.5	19.0	6.0	63.0	
SL-4M	25258	Ball nosed cone	12.7	28.0	6.0	76.0	14°

DOUBLE CUT - 10 PIECE SET 28261

CONTENTS

- 10 piece selection of standard shaped burs
- 9.5mm and 12.7mm cut diameters
- 6mm shanks





Tool No.	Art.	Contents	d1	12	d2	L1	included Angle
SB-3M	20928	Cylinder endcut	9.5	19.0	6.0	63	
SB-5M	21028	Cylinder endcut	12.7	25.0	6.0	69	+
SC-3M	21778	Ball nosed cylinder	9.5	19.0	6.0	63	-
SC-5M	21878	Ball nosed cylinder	12.7	25.0	6.0	69	-
SD-5M	22553	Ball	12.7	11.0	6.0	55	2
SE-3M	22978	Oval	9.5	16.0	6.0	60	+
SF-5M	23378	Ball nosed tree	12.7	25.0	6.0	69	-
SG-3M	23903	Tree	9.5	19.0	6.0	63	+
SG-5M	23928	Tree	12.7	25.0	6.0	69	
SL-4M	25253	Ball nosed cone	12.7	28.0	6.0	76	14°























DOUBLE CUT - 5 PIECE SET 28262



Double cut

















Index



•	5 piece selection of established shaped burs
•	12.7mm cut diameters

6mm shanks

CONTENTS

Tool No.	Art.	Contents	d1	12	d2	L1	Included Angle
SB-5M	21028	Cylinder with endcut	12.7	25.0	6.0	69.0	
SC-5M	21878	Ball nosed cylinder	12.7	25.0	6.0	69.0	-
SD-5M	22553	Ball	12.7	11.0	6.0	55.0	2
SF-5M	23378	Ball nosed tree	12.7	25.0	6.0	69.0	
SM-5M	25603	Cone	12.7	22.0	6.0	69.0	28°

DOUBLE CUT MINIATURE - 10 PIECE SET 28263



Double cut	

CONTENTS

- 10 piece selection of established shaped burs
- · 3mm cut diameters
- 3mm shanks

Tool No.	Art.	Contents	d1	12	d2	l1	Included Angle
SA-43M	20653	Cylinder w/o endcut	3.0	14.0	3.0	38.0	-
SB-43M	21503	Cylinder with endcut	3.0	14.0	3.0	38.0	
SC-42M	22278	Ball nosed cylinder	3.0	14.0	3.0	38.0	
SD-42M	22803	Ball	3.0	2.8	3.0	38.0	
SE-41M	23153	Oval	3.0	5.5	3.0	38.0	- 2
SF-42M	23703	Ball nosed tree	3.0	12.7	3.0	38.0	-
SG-44M	24228	Tree	3.0	12.7	3.0	38.0	
SH-41M	24553	Flame	3.0	6.3	3.0	38.0	-
SL-41M	25403	Ball nosed cone	3.0	9.5	3.0	38.0	8°
SM-42M	25703	Cone	3.0	11.0	3.0	38.0	14°

DOUBLE CUT - 40 PIECE DISPLAY CASE 28264

40 Piece display case showcases the wider bur offering.

- Counter top display
- Low maintenance
- Heavy duty packaging
- Secure product
- · Maximise retail space
- 100% recyclable

CONTENTS INCLUDE:

- Double cut burs
- 6mm, 8mm, 9.5mm & 12.7mm diameter
- 6mm shanks
- · Five shape configurations

Case includes two of each of the burs listed below



Double cut



Tool No.	Art.	Contents	d1	12	d2	L1	Included Angle
SB-1M	20853	Cylinder with endcut	6.0	16.0	6.0	50.0	+
SB-2M	20903	Cylinder with endcut	8.0	19.0	6.0	63.0	2
SB-3M	20928	Cylinder with endcut	9.5	19.0	6.0	63.0	
SB-5M	21028	Cylinder with endcut	12.7	25.0	6.0	69.0	- 2
SC-1M	21703	Ball nosed cylinder	6.0	16.0	6.0	50.0	-
SC-2M	21753	Ball nosed cylinder	8.0	19.0	6.0	63.0	-
SC-3M	21778	Ball nosed cylinder	9.5	19.0	6.0	63.0	-
SC-5M	21878	Ball nosed cylinder	12.7	25.0	6.0	69.0	27
SF-1M	23303	Ball nosed tree	6.0	16.0	6.0	50.0	-
SF-2M	28060	Ball nosed tree	8.0	20.0	6.0	65.0	-
SF-3M	23328	Ball nosed tree	9.5	19.0	6.0	63.0	-
SF-5M	23378	Ball nosed tree	12.7	25.0	6.0	69.0	1 2
SG-1M	23853	Pointed tree	6.0	16.0	6.0	50.0	-
SG-2M	23878	Pointed tree	8.0	19.0	6.0	63.0	-
SG-3M	23903	Pointed tree	9.5	19.0	6.0	63.0	-
SG-5M	23928	Pointed tree	12.7	25.0	6.0	69.0	-
SL-1M	25178	Ball nosed cone	6.0	16.0	6.0	50.0	14°
SL-2M	25203	Ball nosed cone	8.0	22.0	6.0	69.0	14°
SL-3M	25228	Ball nosed cone	9.5	27.0	6.0	74.0	14°
SL-4M	25253	Ball nosed cone	12.7	28.0	6.0	76.0	14°

OMEGA CUT - 5 PIECE SET 28265

CONTENTS

- · 5 piece selection of standard shaped burs
- 12.7mm cut diameter
- 6mm shanks
- Omega Cut maximum stock removal
- · Industries foundry & shipbuilding steel applications



Omega cut



Tool No.	Art.	Contents	d1	12	d2	l1	Included Angle
SB-5M-DDC	20273	Cylinder with endcut	12.7	25.0	6.0	69.0	
SC-5M-DDC	20276	Ball nosed cylinder	12.7	25.0	6.0	69.0	2
SF-5M-DDC	20286	Ball nosed tree	12.7	25.0	6.0	69.0	-
SG-5M-DDC	20290	Pointed tree	12.7	25.0	6.0	69.0	- 2
SL-4M-DDC	20296	Ball nosed cone	12.7	28.0	6.0	76.0	14°



10



AS RANGE - SET

FEATURES

- Compact
- · Versatile assortment

BENEFITS

- Easy to carry
- Ideal for demonstrations, samplings or special promotions



Alloy Specific cut



Line	Description Type	Contents	Alloy Specific Part No.
Sets	10 pcs Alloy Specific Cut	40100; 40110; 40120; 40130; 40140; 40150; 40160; 40170; 40180; 40190	40200

INOX RANGE - 5 PIECE SET 29187

CONTENTS

- 5 piece selection of standard shaped burs
- 12.7mm cut diameter
- 6mm shanks

BENEFITS

- Developed cutting geometry
- · High performance grinding
- Reduces heat build up on the workpiece



Inox cut



Tool No.	Art.	Contents	d1	l2	d2	L1	Included Angle
SA-5M	29155	Cylinder without endcut	12.7	25.0	6.0	70.0	
SC-5M	29161	Ball nosed cylinder	12.7	25.0	6.0	70.0	-
SF-5M	29176	Ball nosed tree	12.7	25.0	6.0	70.0	
SG-5M	29180	Pointed tree	12.7	25.0	6.0	70.0	-
SL-4M	29186	Ball nosed cone	12.7	32.0	6.0	77.0	14°

INOX RANGE - 5 PIECE SET 28253

CONTENTS

- · 5 piece selection of established burs
- 9.6mm cut diameter
- 6mm shank







Tool No.	Art.	Contents	d1	l2	d2	L1	Included Angle
SA-3M	29154	Cylinder without endcut	9.6	19.0	6.0	64.0	-
SC-3M	29160	Ball nosed cylinder	9.6	19.0	6.0	64.0	-
SD-3M	29166	Ball	9.6	8.0	6.0	54.0	
SF-3M	29175	Ball nosed tree	9.6	19.0	6.0	64.0	+
SL-3M	29185	Ball nosed cone	10.0	20.0	6.0	64.0	14°

11

STEEL RANGE - 5 PIECE SET 29380

Steel cut





CONTENTS

- · 5 piece selection of standard shaped burs
- 12.7mm cut diameter
- 6mm shanks

BENEFITS

- · Increases machine output on steel components
- · Aggressive cutting form
- Specifically engineered steel cutting geometry

Tool No.	Art.	Contents	d1	l2	d2	11	Included Angle
SB-5M	29357	Cylinder with endcut	12.7	25.0	6.0	70.0	
SC-5M	29365	Ball nosed cylinder	12.7	25.0	6.0	70.0	
SF-5M	29378	Ball nosed tree	12.7	25.0	6.0	70.0	
SG-5M	29369	Pointed tree	12.7	25.0	6.0	70.0	-
SL-4M	29374	Ball nosed cone	12.7	32.0	6.0	77.0	14°

STEEL RANGE - 5 PIECE SET 28252

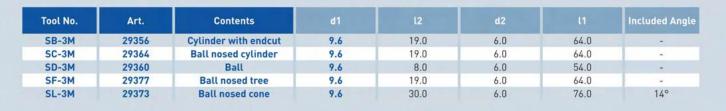


Steel cut



CONTENTS

- 5 piece selection of established burs
- 9.6mm cut diameter
- · 6mm shank



10

11

RADIUS BUR - 5 PIECE SET 28220



The Radius bur sets contain an exclusive range of multi-application burs that cover all general metal removal, thanks to the exclusive inverted curve design.

CONTENTS

- 12.7mm and 16mm cutting diameter
- 6mm shanks

BENEFITS

- · Ease of control
- Reduces downtime
- · Creates smooth radius



Tool No.	Art.	Contents	d1	l2	d2	11
SB-5RMA D/C	25865	Double Inverted 45°	16.0	15.0	6.0	60.0
SC-5MRA D/C	21756	Radius/Cylinder w endcut	12.7	25.0	6.0	70.0
SF-5MRA D/C	21757	Radius/Cylinder ball nosed	12.7	25.0	6.0	70.0
SK-5MRA D/C	21760	Radius/Ball nosed tree	12.7	35.0	6.0	80.0
SK-6MCO C	21763	Radius/Cylinder/Countersink 90°	12.7	28.0	6.0	73.0

RADIUS BUR - 10 PIECE SET 28225

Radius Bur



CONTENTS

- 12.7mm cut diameter
- 6mm shanks



Tool No.	Art.	Contents	d1	12	d2	L1
SA-5MRA D/C	21755	Radius/Cylinder	12.7	25.0	6.0	70.0
SB-5MRA D/C	21756	Radius/Cylinder with endcut	12.7	25.0	6.0	70.0
SC-5MRA C	21757	Radius/Cylinder ball nosed	12.7	25.0	6.0	70.0
SC-5MRA C	21758	Radius/Cylinder ball nosed	12.7	25.0	6.0	70.0
SC-5MRA D/C	21759	Radius/Cylinder ball nosed	12.7	25.0	6.0	70.0
SF-5MRA D/C	21760	Radius/Ball nosed tree	12.7	35.0	6.0	80.0
SG-5MRA D/C	21761	Radius/Tree	12.7	35.0	6.0	80.0
SJ-5MRA D/C	21762	Radius/Countersink 60°	12.7	31.0	6.0	76.0
SK-5MRA D/C	21763	Radius/Cylinder/Countersink 90°	12.7	28.0	6.0	73.0
SL-5MRA D/C	21764	Radius/Ball nose cone	12.7	35.0	6.0	80.0

COMBI BUR - 5 PIECE SET 28230

Combi Bur



The Combi bur sets include high performance, multipurpose burs for the multi-application industries. Their innovative design allow for less downtime and covers multiple applications.

CONTENTS

- 12.7mm cut diameter
- 6mm shanks

BENEFITS

- · Better performance
- Suit complex application
- · Consistent performance



Tool No.	Art.	Contents	d1	l2	d2	l1
SD-5MC0 C	25858	Inverted/Ball	12.7	20.0	6.0	65.0
SJA-5MCO-D/C	25861	Cylinder/Countersink 60°	12.7	25.0	6.0	70.0
SNA-5MCO D/C	25864	Inverted/Countersink 90°	12.7	18.0	6.0	63.0
SK-6MCO C	25865	Double Inverted 45°	16.0	15.0	6.0	60.0
SN-5MCO D/C	25868	Double Inverted	12.7	25.0	6.0	70.0

COMBI BUR - 10 PIECE SET 28235





CONTENTS

- 12.7mm cut diameter
- 6mm shanks



Tool No.	Art.	Contents	d1	l2	d2	L1
SB-5MC0 D/C	25856	Inverted/Cylinder with endcut	12.7	25.0	6.0	70.0
SD-5MCO D/C	25857	Inverted/Ball	12.7	20.0	6.0	65.0
SF-5MCO D/C	28559	Inverted/Ball nosed tree	12.7	32.0	6.0	77.0
SG-5MCO D/C	25860	Inverted/Tree	12.7	32.0	6.0	77.0
SJN-5MCO D/C	25862	Inverted/Countersink 60°	12.7	23.0	6.0	68.0
SKA-5MC0 D/C	25863	Cylinder/Countersink 90°	12.7	25.0	6.0	70.0
SNA-5MCO D/C	25864	Inverted/Countersink 90°	12.7	18.0	6.0	63.0
SL-5MCO D/C	25866	Inverted/Ball nosed cone	12.7	32.0	6.0	77.0
SM-5MCO D/C	25867	Inverted/Cone	12.7	35.0	6.0	80.0
SN-5MCO D/C	25868	Double Inverted	12.7	25.0	6.0	70.0









7













11



The Corner Radius bur set has been specially designed to meet the high manufacturing standards of the Aerospace industry. The radius design at the top allows for extended tool life.

CONTENTS

- 3mm, 6mm, 8mm,
 9.6mm, 12.7mm and
 16mm cut diameter
- 3mm and 6mm shanks

BENEFITS

- · Stronger flute design
- Prevents from digging
- · Reduces flute chipping



Tool No.	Art.	Contents	d1	L2	d2	L1
SA-43MCR D/C	20155	Cylinder with Radius	3.0	14.0	3.0	38.0
SA-1MCR D/C	20156	Cylinder with Radius	6.0	18.0	6.0	50.0
SA-2MCR D/C	20157	Cylinder with Radius	8.0	20.0	6.0	64.0
SA-3MCR D/C	20158	Cylinder with Radius	9.6	19.0	6.0	64.0
SA-5MCR D/C	20159	Cylinder with Radius	12.7	25.0	6.0	70.0
SA-6MCR D/C	20160	Cylinder with Radius	16.0	25.0	6.0	70.0

NEXT GENERATION 6 ACCELERATOR - 5 PIECE SET 29800



CONTENTS

- 5 piece selection of popular bur shapes
- · 9.6mm cut diameter
- 6mm shanks
- · Unique Accelerator coating

Art.	Contents	d1	l2	d2	11
29757	Cylinder with endcut	9.6	19.0	6.0	64.0
29762	Ball nosed cylinder	9.6	19.0	6.0	64.0
29767	Ball	9.6	8.0	6.0	53.0
29777	Ball nosed tree	9.6	19.0	6.0	64.0
29782	Pointed Tree	9.6	19.0	6.0	64.0

NEXT GENERATION 6 ACCELERATOR - 5 PIECE SET 29801

CONTENTS

- 5 piece selection of popular bur shapes
- · 12mm cut diameter
- 6mm shanks
- · Unique Accelerator coating



Art.	Contents	d1	l2	d2	11
29758	Cylinder with endcut	12.0	25.0	6.0	70.0
29763	Ball nosed cylinder	12.0	25.0	6.0	70.0
29768	Ball	12.0	11.0	6.0	56.0
29778	Ball nosed tree	12.0	25.0	6.0	70.0
29783	Pointed Tree	12.0	25.0	6.0	70.0



3

4

9

nanh

8

9

OIL

10



11

NEXT GENERATION 6 RANGE - 5 PIECE SET 29690

CONTENTS

- 5 piece selection of popular bur shapes
- 9.6mm cut diameter
- 6mm shanks
- Unique aggressive geometry



Art.	Contents	d1	l2	d2	11
29607	Cylinder with endcut	9.6	19.0	6.0	64.0
29612	Ball nosed cylinder	9.6	19.0	6.0	64.0
29617	Ball	9.6	8.0	6.0	53.0
29627	Ball nosed tree	9.6	19.0	6.0	64.0
29632	Pointed Tree	9.6	19.0	6.0	64.0

NEXT GENERATION 6 RANGE - 5 PIECE SET 29691

CONTENTS

- 5 piece selection of popular bur shapes
- 12mm cut diameter
- 6mm shanks
- Unique aggressive geometry



Art.	Contents	d1	l2	d2	L1
29608	Cylinder with endcut	12.0	25.0	6.0	70.0
29613	Ball nosed cylinder	12.0	25.0	6.0	70.0
29618	Ball	12.0	11.0	6.0	56.0
29628	Ball nosed tree	12.0	25.0	6.0	70.0
29633	Pointed Tree	12.0	25.0	6.0	70.0

11