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# Introduction

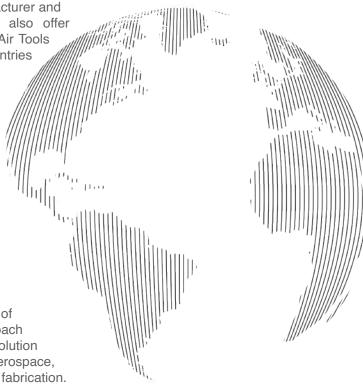
Established in 1963, ATA are the world's leading manufacturer and distributor of tungsten carbide burs. The company also offer customers an extensive range of Abrasives, Industrial Air Tools and Cutting Tools which are sold in over eighty countries

globally.

The company has state-of-the-art facilities in Ireland, the UK, the US and Germany. ATA products are now sold in eighty five countries around the world, with advanced manufacturing plants, along with research and development centers and sales offices in three continents.

For over 55 years, ATA have been making burs to the highest specification in the market. We have advised and served customers by combining technical expertise and the highest standard of manufacturing technologies to lead the market in innovative solutions.

Our extensive range of high quality products, our level of knowledge and expertise and the flexibility of our approach and structure, allows us to design a complete bespoke solution for our customers in all major industry sectors including aerospace, automotive, oil and gas markets, shipbuilding and metal fabrication.



# The ATA Offering



State of the art manufacturing facilities located in Ireland, UK & USA



100 CNC Machines globally, maintaining consistent product quality



Manufacturing process conducted to strict quality control standards Accredited ISO9001: 2015

#### R&D capabilities to develop and supply material specific cutting geometries

- Manufactured from high quality sintered tungsten carbide, guaranteeing constant high performance and durability
- Improved stock removal
- Smoother operator experience
- Removing difficult to grind material more efficiently
- Reducing heat build up at the cutting edge and workpiece material
- Achieving performance related grinding ensuring production savings and reduced downtime





# **ATA Locations**



ATA Manufacturing, R&D and Sales Centre



ATA Manufacturing Plant and Sales Centre



ATA Sales Office



Distribution Centre and Sales Office



Areas Covered by Distribution



# **INTERNATIONAL OFFICES**

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**F:** +353 (0) 49 432 6298 **E:** sales@atagroup.ie

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# **CONSTRUCTION**

#### 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 can withstand extreme applications and perform better at higher temperatures.



# **CUT TYPES**



Double Cut



Standard Cut



Aluminium Cut



Inox Cut



Steel Cut



Foundry Cut



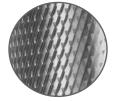
Base Metal Cut



Alloy Specific



Fine Cut



Fine Double Cut



Cross Cut / Chipbreaker

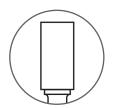


Diamond Cut

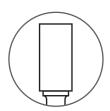


Coarse Cut

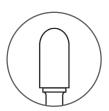
# **Bur Shapes**



A Shape



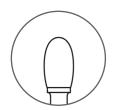
B Shape



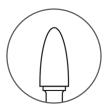
C Shape



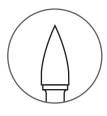
D Shape



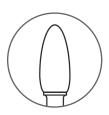
E Shape



F Shape



G Shape



H Shape



J Shape



K Shape



L Shape



M Shape

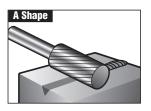


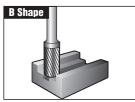
N Shape

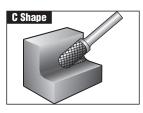


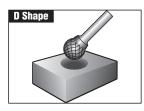
Rim Shape

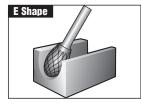
# **CUT APPLICATIONS**

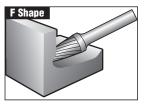


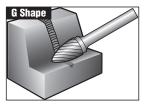


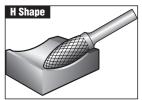


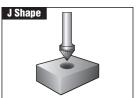




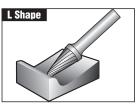




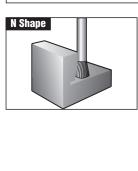














# **Application Tips**



# DO:

- Always operate the bur within the recommended speed range
- Select the appropriate shape, diameter and cut style for the application
- Ensure the appropriate Air Tool is used and that it is regularly maintained
- Fix the maximum length of bur in the collet
- Run extra long burs at slower speed, do not exceed 15,000 RPM
- Check that the bur is running true in the Air Tool before use
- Securely fix workpiece and hold the Air Tool firmly
- Use a smooth cutting action with constant movement.
- Use light pressure, let the bur do the work



# **DONT:**

- Run the bur above the Maximum Operating Speed (refer to speed guide on page 8)
- Run the bur too slowly (refer to speed guide on page 8)
- Allow bur to be exposed to excessive mechanical or thermal shock
- Sink the bur to more than one-third of its periphery
- Jam the bur into grooves, crevices or cavities
- Allow the brazed bur to become too hot, this may cause the braze to soften and cause the head to become detached from the shank. (only applies to burs where head diameter is greater than the shank diameter)







Observe the recommended rotational speed, especially when using burs with long shanks!







# RECOMMENDED OPERATING SPEEDS

#### How to use the speed guide below:

- 1. Select application and material group
- 2. Identify the appropriate cut style. Please refer to previous page to match your application and the appropriate cutting style.
- 3. Identify recommended cutting speed.
- 4. Select bur diameter.
- 5. Follow maximum rotational speed.

RECOMMENDED OPERATING SPEEDS: All speeds in the table below quoted x 1,000 rpm		Aluminium, Plastic		Brass, Copper Cast Iron, Bronze		Unhardened Steel		Hardened Steel, Stainless Steel, Nimonic Alloys	
Bur Head Diameter	Maximum Operating Speeds	Speed Range	Recomm. Start Point	Speed Range	Recomm. Start Point	Speed Range	Recomm. Start Point	Speed Range	Recomm. Start Point
3mm (1/8")	100	60-80	65	45-80	65	60-80	80	60-80	80
6mm (1/4")	65	15-60	40	22-60	45	45-60	50	30-45	40
10mm (3/8")	55	10-50	25	15-40	30	30-40	30	19-30	25
12mm (1/2")	35	7-30	20	11-30	25	22-30	25	15-22	20
16mm (5/8")	25	6-20	15	9-20	20	18-20	20	12-18	15
20mm (3/4")	20	5-17	10	8-17	12	15-17	15	10-15	10
25mm (1")	15	4-13	8	6-13	10	10-13	10	7-11	8

Recommended speeds are based on standard shank length of  $45 \, \text{mm}$  / (1-3/4") max overhang of  $10 \, \text{mm}$  (3/8") Maximum recommended operating speeds for extended length shanks is  $15,000 \, \text{rpm}$ 



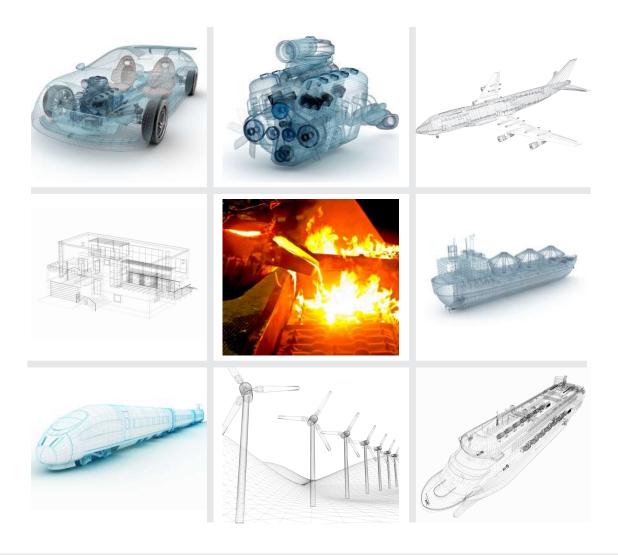


ATA Serving all major Global Industries



# **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.

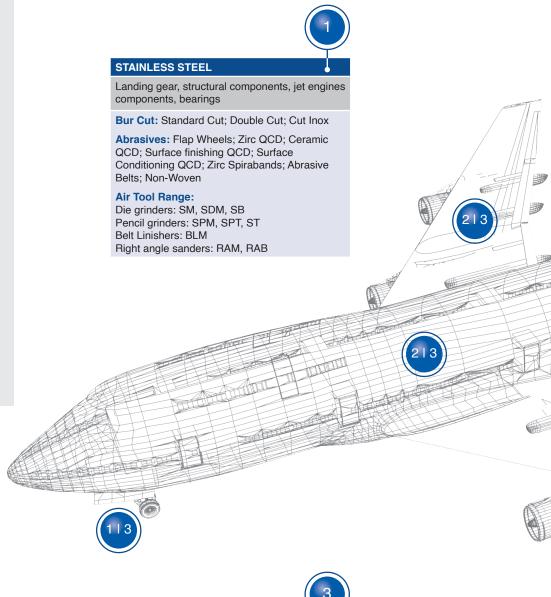
# **AEROSPACE**

#### **Applications know-how**

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 quick-change discs, linishing belts to our unique patented range of Flexi-discs®.









#### **TITANIUM ALLOY**

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

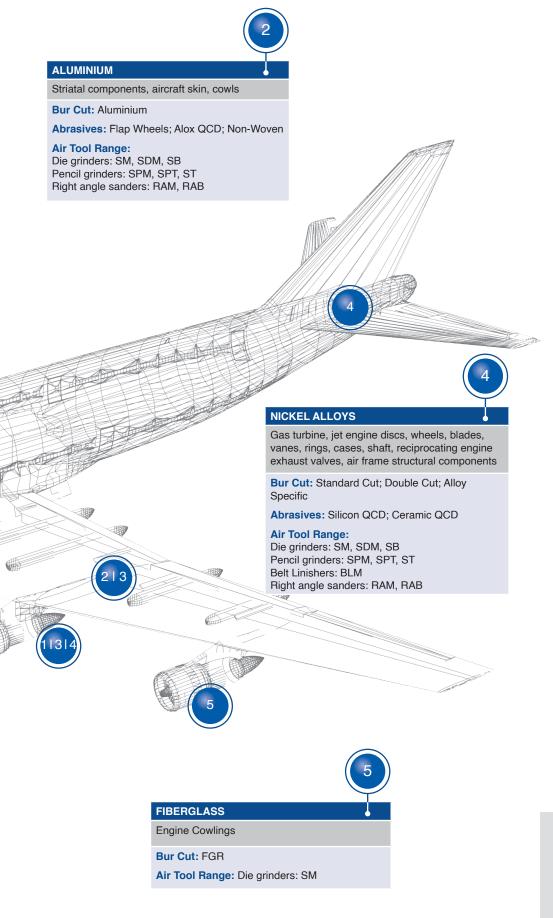
**Bur Cut:** Standard Cut; Double Cut; Alloy Specific

Abrasives: Silicon QCD; Ceramic QCD

Air Tool Range:

Die grinders: SM, SDM, SB Pencil grinders: SPM, SPT, ST Right angle sanders: RAM, RAB











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#### **International Office**

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#### **US Office**

E sales@atatools.com T +1 300-928-7744



To find out more scan here

# **AUTOMOTIVE**

## **Applications know-how**

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®.



#### **COMPOSITE PLASTIC**

Exterior (Bumper and Trims)

**Composite Routers** 



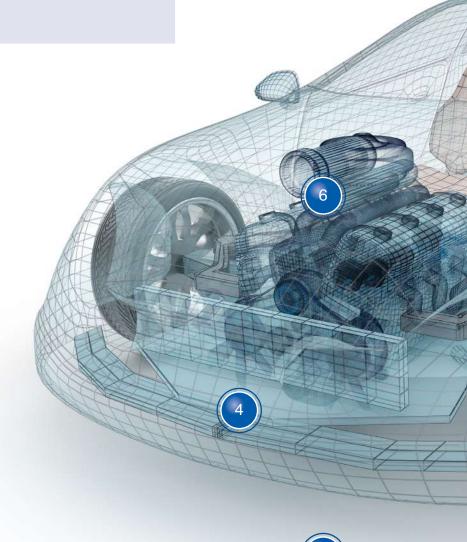
Engine Block

**Bur Cut:** Double Cut (incl. Long Series) Steel Cut, NG6

Abrasives: Flap Wheels I Quickchange Discs

**Air Tool Ranges:** 

Die Grinders: SM, SMX Angle Grinders: RA12M









## ALUMINIUM

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

**Bur Cut:** Aluminium Cut

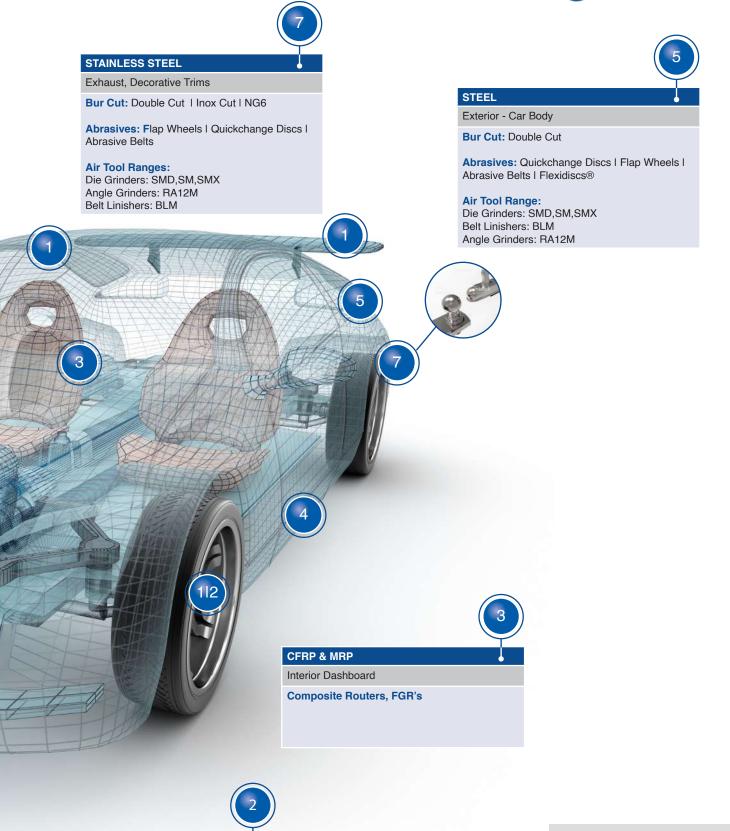
Abrasives: Flap Wheels, Abrasive Belts

Air Tool Range:

Die Grinders: SMD, SM, SMX

Belt Linishers: BLM





# STEEL

Steel Wheels

Bur Cut: Double Cut

Abrasives: Flap Wheels, Abrasive Belts

#### Air Tool Range:

Die Grinders: SMD, SM, SMX Belt Linishers: BLM



To find out more scan here

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## POWER GENERATION

# Applications know-how

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









#### COMPOSITE PLASTIC

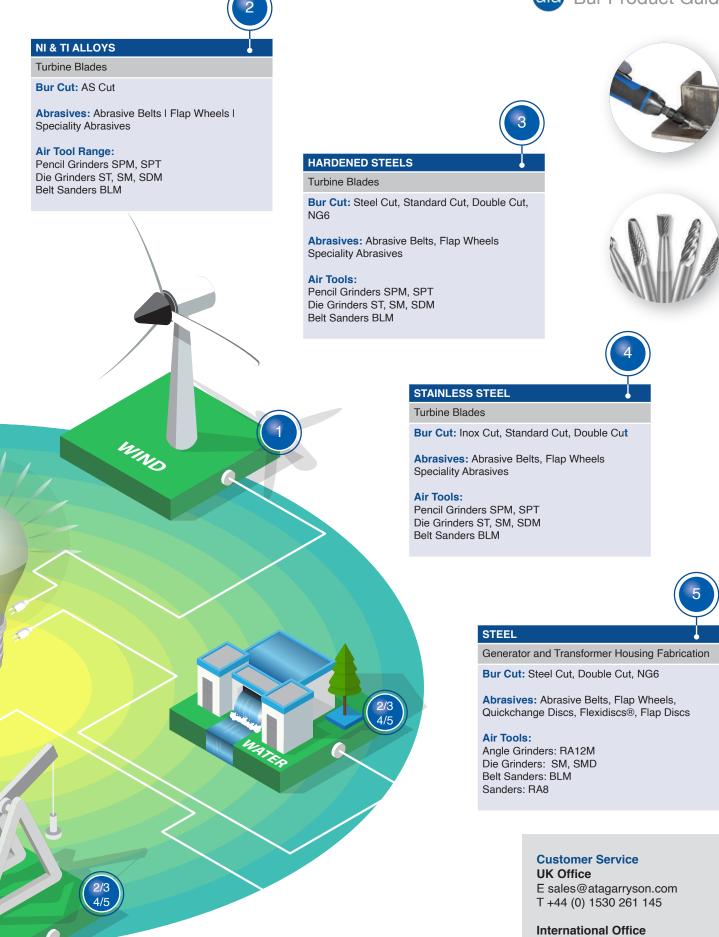
Solar Panel I Wind Turbine Blade

**Composite Routers** 





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# **RAIL**

## **Applications know-how**

Our railway portfolio is dedicated 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

Carraige

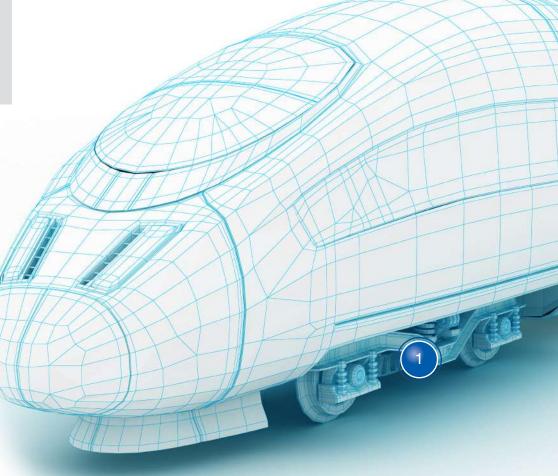
Bur Cut: Aluminium Cut Bur

Abrasives: Aluminium Oxide, Zirconium Flap

Discs

Air Tool Range:

Die Grinders: SMD, SM Angle Grinders: RA14, RA8





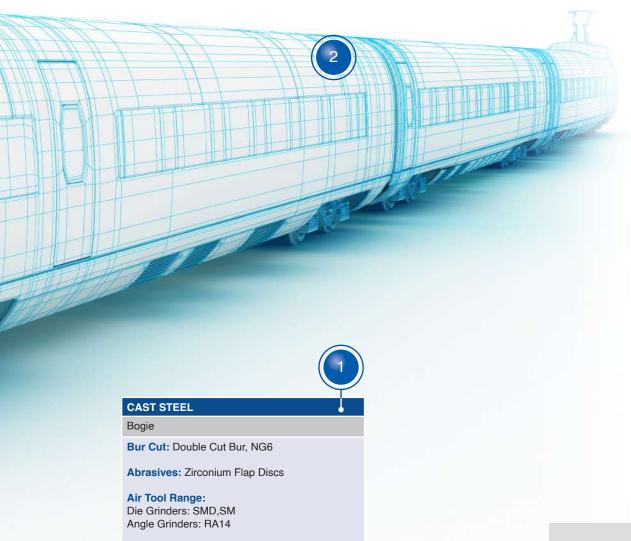














To find out more scan here

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## SHIPYARD

#### **Applications know-how**

Our marine portfolio is dedicated provide customers with to 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, wellergonomically designed and 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 Flexidiscs®.







Fabrication: Units

**Internal Fittings** 

Bur Cut: Foundry Cut, Double Cut, Steel Cut,

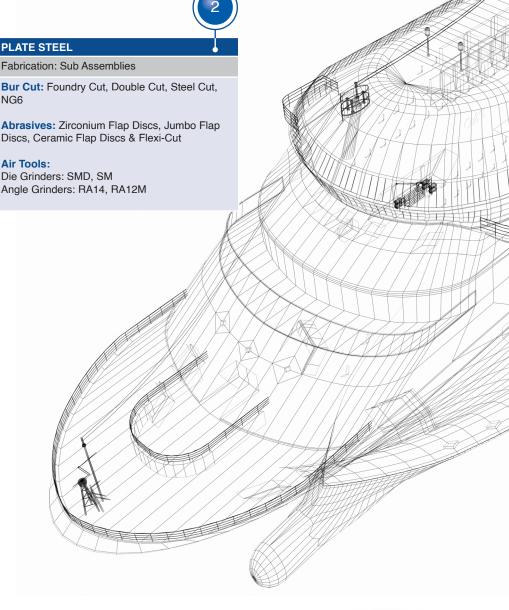
NG6

Abrasives: Zirconium Flap Discs, Jumbo Flap

Discs, Ceramic Flap Discs & Flexi-Cut

Air Tools:

Die Grinders: SMD, SM Angle Grinders: RA14, RA12M

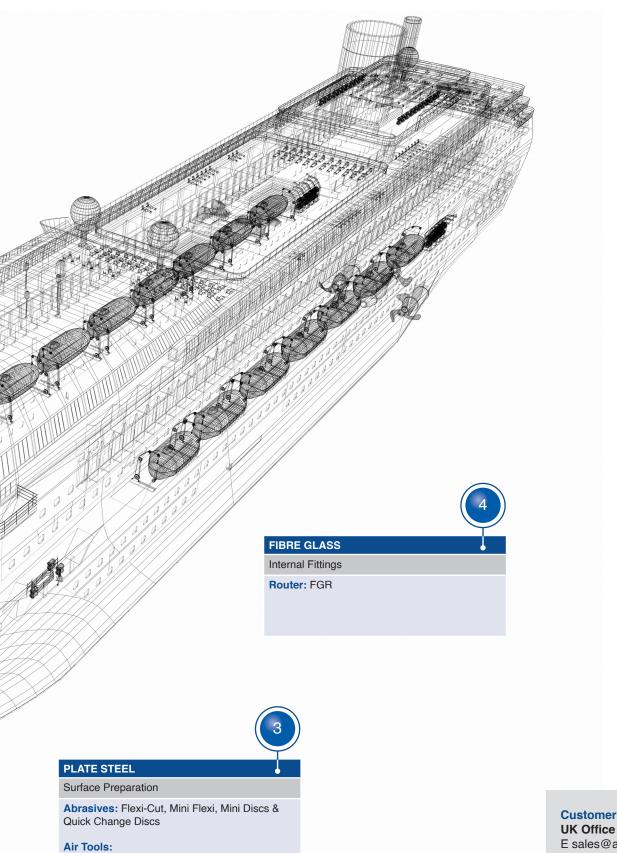












Angle Grinders: RA12M, RAMX



To find out more scan here

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# OIL & GAS

#### **Applications know-how**

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.

Air Tools:

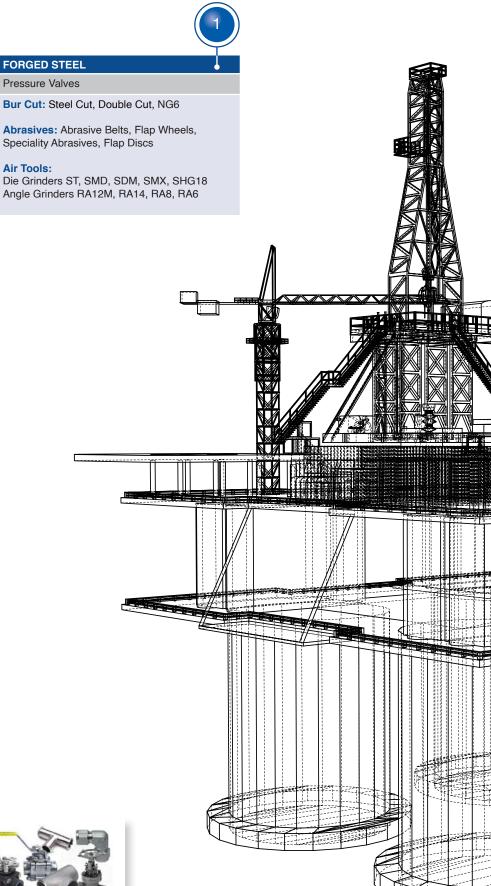
Designed for all metals and composites, our extensive range of Tungsten Carbide Burs and Routers can be applied to;

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













#### **DUPLEX STEEL**

Pipeworks, Manifolds, Risers, Storage Tanks

**Bur Cut:** Inox Cut, Standard Cut, Double Cut, NG6

**Abrasives:** Abrasive Flap Discs, Zirconium Flap Discs, Ceramiq Flap Discs

#### **Air Tools:**

Die Grinders ST, SMD, SDM, SMX, SHG18 Angle Grinders RA12M, RA14, RA8, RA6





#### **CARBON STEELS**

Flowlines, Structural Components, Pipelines, Platforms

Bur Cut: Steel Cut, Double Cut, NG6

**Abrasives:** Abrasive Belts, Flap Wheels, Speciality Abrasives, Flap Discs

#### Air Tools:

Die Grinders ST, SMD, SDM, SMX, SHG18 Angle Grinders RA12M, RA14, RA8, RA6







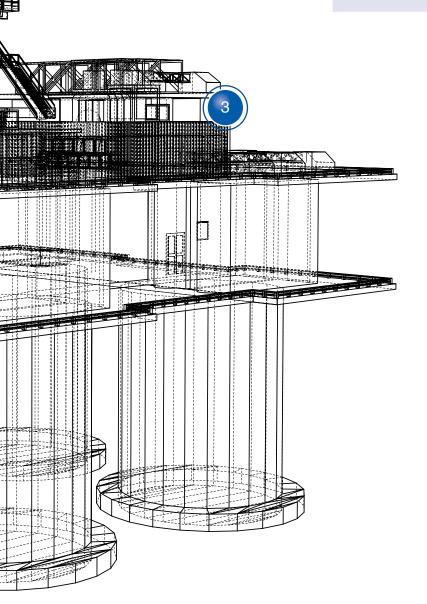
Flowlines, Structural Components, Heat Exchangers, Processing Equipment

**Bur Cut:** Inox Cut, Standard Cut, Double Cut, NG6

**Abrasives:** Abrasive Belts, Flap Wheels, Speciality Abrasives, Flap Discs

#### Air Tools:

Die Grinders ST, SMD, SDM, SMX, SHG18 Angle Grinders RA12M, RA14, RA8, RA6



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#### **FOUNDRY**

#### **Applications know-how**

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.





#### **IRON**

Bur Cuts Steel Cut, Double Cut, NG6

Air Tools

Die Grinders - SPM, SMD, SM, SMX

#### **STEEL**

Bur Cuts

Double Cut, NG6, Standard Cut, Foundry Cut

Air Tools

Die Grinders - SPM, SM, SMD, SMX

#### **ALUMINIUM / MAGNESIUM**

**Bur Cuts** 

Aluminium Cut

Air Tools

Die Grinders - SMD, SM

#### **COPPER / ZINC / BRASS BASED**

Bur Cuts

Standard Cut, Base Metal Cut

Air Tools

Die Grinders - ST, SPM, SM, SMD

#### **NICKEL BASED**

**Bur Cuts** 

Standard Cut, Double Cut, Alloy Specific

Air Tools

Die Grinders - ST, SPM, SM, SMD

# ABRASIVES Abrasives and Air Tools

Abrasives are a key product group for all foundry applications across all metal classes. Here are some abrasive and air tool pairings.

Zirconium Flap Discs

Air Tools - RA12M, RA14, RA6, RA8

CeramIQ Flap Discs

Air Tools - RA12M, RA14, RA6, RA8

Flexidiscs (large and small)

Air Tools - RAM, RAMX, RA12M, RA14

Flap Wheel (Alox and CeramIQ) Air Tools - SMX, STX5, S5

Abrasive Belts

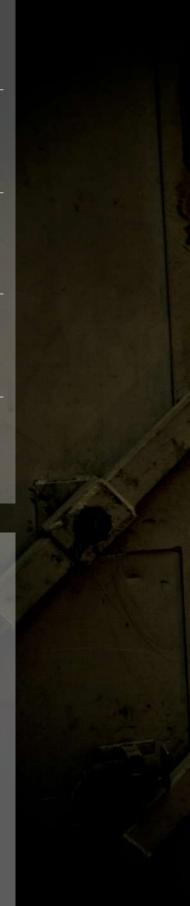
Air Tools - RALM, BLM

QCE

Air Tools - RAM, RAMX

Fibre Discs

Air Tools - RA14S











# BUR SELECTION BASED ON MATERIAL APPLICATION

Applications	Material	Cut
Efficient stock removal deburring, finishing, cleaning.	Ferrous metals	Double Cut
Medium stock removal deburring, milling, cleaning, finishing.	Non hardened steel <45HRc Hardened steel >45HRc: stainless steel High temperature-resistant metals: nickel, cobalt, titanium. Non-ferrous light metals: brass, copper, zinc. Hardened >45HRc: cast iron	Standard Cut
Heavy stock removal deburring, milling, cleaning, machining	Non-ferrous metal: aluminium alloys Plastics	Aluminium Cut
Heavy stock removal deburring, milling.	Free machining Stainless steel <25HRc Austenitic Stainless steel <25HRc Ferritic, Austenitic & Martensitic Stainless Steel <32HRc	Inox Cut
Heavy stock removal deburring, milling.	Non-hardened or treated steel < 38HRc Construction steels; Structural steels; Carbon steels & tool steels Hardened or treated steel >38HRc Alloy steel; hardened and tempered steel	Steel Cut
Heavy stock removal deburring, milling.	Non hardened steel <45HRc Hardened steel >45HRc: stainless steel High temperature-resistant metals: nickel, cobalt, titanium. Non-ferrous light metals: brass, copper, zinc. Hardened >45HRc: cast iron	Foundry Cut
Heavy stock removal deburring, milling	Low carbon steels, copper and brass	Base Metal (BM)
Medium stock removal deburring, milling, cleaning, finishing.	Ni-Alloys & Ti-Alloys	Alloy Specific (AS)
<b>Light stock removal</b> fine deburring, fine finishing	Steel <60 HRC Stainless Steel High temperature resistant materials - nickel based alloys	Fine Cut
<b>Light stock removal</b> fine deburring, fine finishing	Steel <60 HRC Stainless Steel High temperature resistant materials - nickel based alloys	Fine Double Cut
Medium stock removal deburring, milling, cleaning, finishing.	Non hardened steel <45HRc Non-ferrous light metals: brass, copper, zinc. Steel - Hardened >45HRc: cast iron	Cross Cut / Chip Breaker
Light stock removal fine deburring, fine finishing	Ferrous metals Fibreglass Hardened steel >45HRc High temperature-resistant metals: nickel, cobalt.	Diamond Cut
Medium stock removal - deburring, milling, cleaning, finishing.	Non-ferrous light metals: brass, copper, zinc Plastics Hard Rubber	Coarse Cut



**UNIVERSAL RANGE** 

Standard Cut - Double Cut

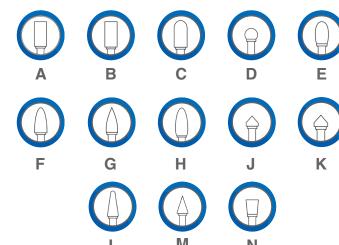
# STANDARD CUT

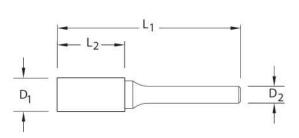
# Designed for general purpose applications

#### Features & Benefits:

- Advanced cutting geometry
  - Allowing rapid stock removal on ferrous materials
  - Increasing production output
  - Resulting in a smoother operation
- CNC machined, to provide the most consistent quality
- Manufactured to the strictest quality control standards
- Combination of ATA Air Tool with SINGLE CUT geometry delivers a guaranteed smoother grinding operation

# **Shapes Available**





D1: Cutting ØL2: Length of cutD2: Shank ØL1: Overall length

# **APPLICATIONS**





- Deburring
- Finishing
- Milling

# **INDUSTRY TARGETS**



- Aerospace
- Automotive
- · Die & Mold
- Foundries
- Marine
- Oil & Gas
- Power Generation
- Rail

#### **MATERIALS**



Rapid stock removal on ferrous materials, e.g.;

- Brass and Copper
- Cast Iron
- Nickel
- Steel
- Stainless Steel
- Titanium
- Zinc





# **DOUBLE CUT**

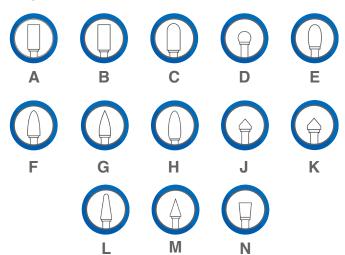
# Designed for general purpose applications

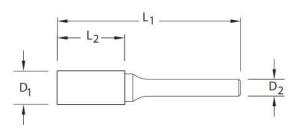
#### Features & Benefits:

- Advanced cutting geometry
  - Allowing rapid stock removal
  - Increasing production output
  - Resulting in a smoother operation
  - Breaking down the material removed efficiently
- CNC machined, to provide the most consistent quality
- Manufactured to the strictest quality control standards
- Combination of ATA Air Tool with DOUBLE CUT geometry delivering a guaranteed smoother grinding operation



# **Shapes Available**





D1: Cutting Ø
L2: Length of cut
D2: Shank Ø
L1: Overall length

#### **APPLICATIONS**



- Cleaning
- Deburring
- Finishing

#### **INDUSTRY TARGETS**



- Aerospace
- Automotive
- · Die & Mold
- Foundries
- Marine
- Oil & Gas
- Power Generation
- Rail

# **MATERIALS**

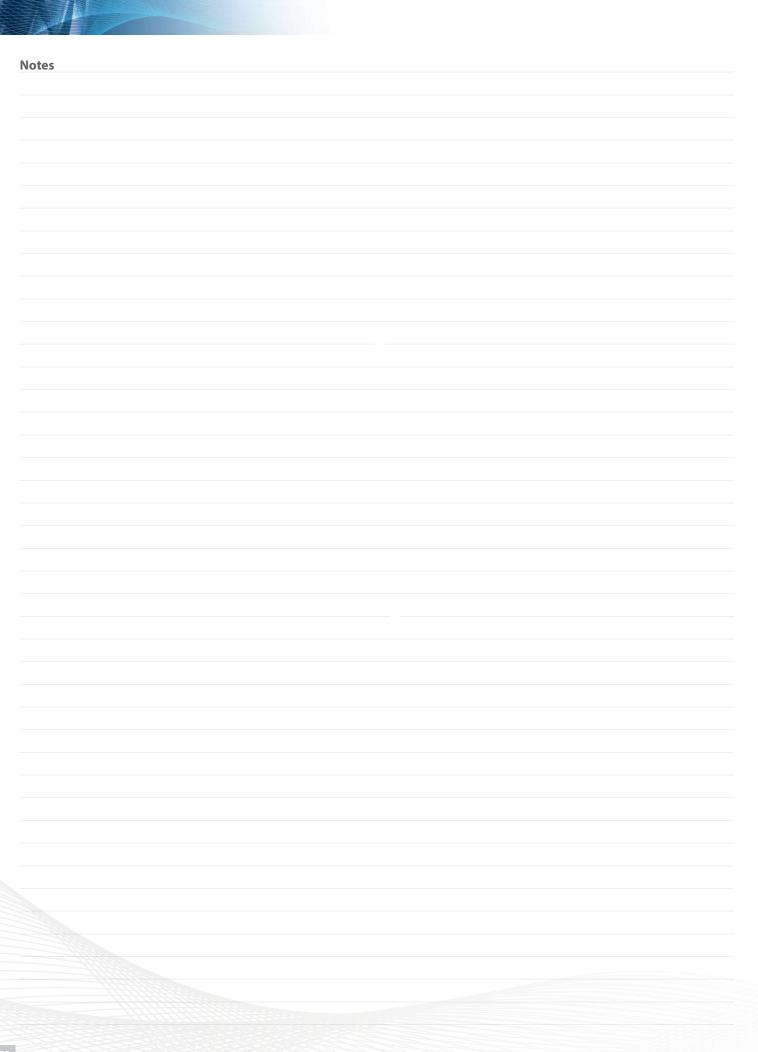


Rapid stock removal on ferrous materials, e.g.;

- Brass and Copper
- Cast Iron
- Nickel Alloy
- Steel
- Stainless Steel
- Titanium
- Zinc



For information on the full range available, please refer to your product catalogue. If you have a specific requirement, contact us directly on sales@atagroup.ie *Full contact details can be found on page 5* 





# MATERIAL SPECIFIC

Aluminium Cut - Inox Cut - Steel Cut Foundry Cut - Base Metal Cut Alloy Specific Cut

# **ALUMINIUM CUT**

Bur geometry designed for maximum stock removal on non-ferrous and plastic materials

#### Features & Benefits:

- · Specifically developed cutting geometry
  - Allowing rapid stock removal on non-ferrous and plastics materials
  - Avoiding clogging
  - Ensures smooth cutting operation
- CNC machined high consistent quality
- Manufactured to strict quality control standards incorporates 100% inspection of brazed joints
- · Combination of ATA air tool with Aluminium cut geometry
  - Giving a guaranteed smoother grinding operation

# **Shapes Available**











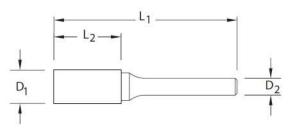












D1: Cutting ØL2: Length of cutD2: Shank ØL1: Overall length

### **APPLICATIONS**





- Deburring
- Finishing
- Milling

#### **INDUSTRY TARGETS**



- Aerospace
- Automotive
- · Die & Mold
- Foundries
- Marine
- Oil & Gas
- Power Generation
- Rail

# **MATERIALS**



Rapid stock removal on non-ferrous materials, e.g.;

- Aluminium
- Soft Plastcis



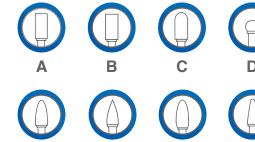
# **INOX CUT**

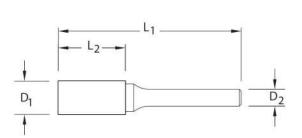
# Designed for machining stainless steel materials

#### Features & Benefits:

- High stock removal on Inox components
- High performance grinding
  - Ensuring production savings and reduced downtime
  - Reduced heat build up at the cutting edge and work-piece
  - 35% more stock removal compared to conventional bur geometry
- CNC machined, to provide the most consistent quality
- Manufactured to the strictest quality control standards
- Combination of ATA Air Tool with INOX CUT geometry delivering a guaranteed smoother grinding operation

# **Shapes Available**





D1: Cutting ØL2: Length of cutD2: Shank ØL1: Overall length

#### **APPLICATIONS**





Milling

# **INDUSTRY TARGETS**



- Aerospace
- Construction
- Foundries
- Marine

#### **MATERIALS**



Heavy stock removal on ferrous materials, e.g.;

- Stainless Steel
  - Austenitic
  - Ferritic
  - Martensitic



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# STEEL CUT

Designed for machining steel & cast steel materials

#### Features & Benefits:

- Specifically developed geometry
  - Increasing machining output on Steel components compared to single, double and omega cut
  - Aggressive cutting form with increased stock removal
  - 35% more stock removal compared to conventional bur geometry
  - Specifically engineered geometry generating lower heat at cutting edge
- CNC machined, to provide the most consistent quality
- Manufactured to the strictest quality control standards
- Combination of ATA Air Tool with STEEL CUT geometry delivering a guaranteed smoother grinding operation

# **Shapes Available**











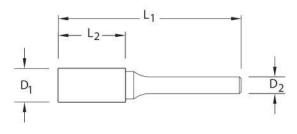
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D1: Cutting Ø
L2: Length of cut
D2: Shank Ø
L1: Overall length

# **APPLICATIONS**

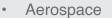




Milling

#### **INDUSTRY TARGETS**





- Construction
- Foundries
- Marine

#### **MATERIALS**



Heavy stock removal on ferrous materials, e.g.;

- Cast Steel
- Hardened Steel
- Steel



## **FOUNDRY CUT**

Bur geometry designed for maximum strength, maximum power and maximum output

#### Features & Benefits:

- Enhanced geometry and deep fluting configurations
  - Allowing maximum stock removal
  - Increasing production output
  - Increasing tooth strength
  - Longer tooth life vs conventional burs
  - Improved productivity and cost savings
- CNC machined high consistent quality
- Manufactured to strict quality control standards incorporates 100% inspection of brazed joints
- Combination of ATA SMD air tool with the Foundry cut geometry gives a guaranteed smoother grinding operation

#### **Shapes Available**









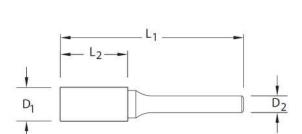












D1: Cutting ø L2: Length of cut **D2**: Shank ø L1: Overall length

#### **APPLICATIONS**





Milling

# **INDUSTRY TARGETS**



- Aerospace
- Construction
- Foundries
- Marine

### **MATERIALS**



Heavy stock removal on ferrous materials, e.g.;

- Stainless Steel
  - Austenitic
  - Ferritic
  - Martensitic



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## **BASE METAL CUT**

Bur geometry designed for general purpose applications on ferrous materials

#### Features & Benefits:

- Advanced cutting geometry to suit
  - Allowing rapid stock removal
  - Increasing production output
  - Resulting in a smoother operation
  - Breaking down the material removed efficiently
- CNC machined, to provide the most consistent quality
- Manufactured to the strictest quality control standards incorporates 100% inspection of brazed joints
- Combination of ATA air tool with BM geometry gives a guaranteed smoother grinding operation

# **Shapes Available**













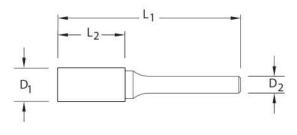








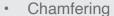




D1: Cutting ØL2: Length of cutD2: Shank ØL1: Overall length

# **APPLICATIONS**





- Deburring
- Refurbishment & Repair

#### **INDUSTRY TARGETS**



- Aerospace
- Automotive
- Railway
- Marine

#### **MATERIALS**



Rapid stock removal on a broad spectrum of materials, e.g.;

- Low Carbon Steels
- Copper
- Brass





# **ALLOY SPECIFIC CUT-**

Designed for machining Ni-Alloys & Ti-Alloys

#### Features & Benefits:

- Developed cutting geometry offers
  - Precise control
  - High stock removal
  - Improved surface finish
  - Increased tool life
  - Faster cutting action
- CNC machined, to provide the most consistent quality
- Combination of ATA Pencil Grinders with the ALLOY SPECIFIC CUT geometry - delivering a guaranteed smoother grinding operation



## **Shapes Available**









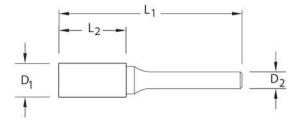








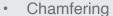




D1: Cutting ø **L2**: Length of cut Shank ø D2: L1: Overall length

#### **APPLICATIONS**





- Deburring
- Refurbishment & Repair

#### **INDUSTRY TARGETS**



- Power Generation
  - Gas Turbine
  - Steam Turbine
  - Wind Turbine
- Aerospace
  - Civil
  - Defence
  - Space

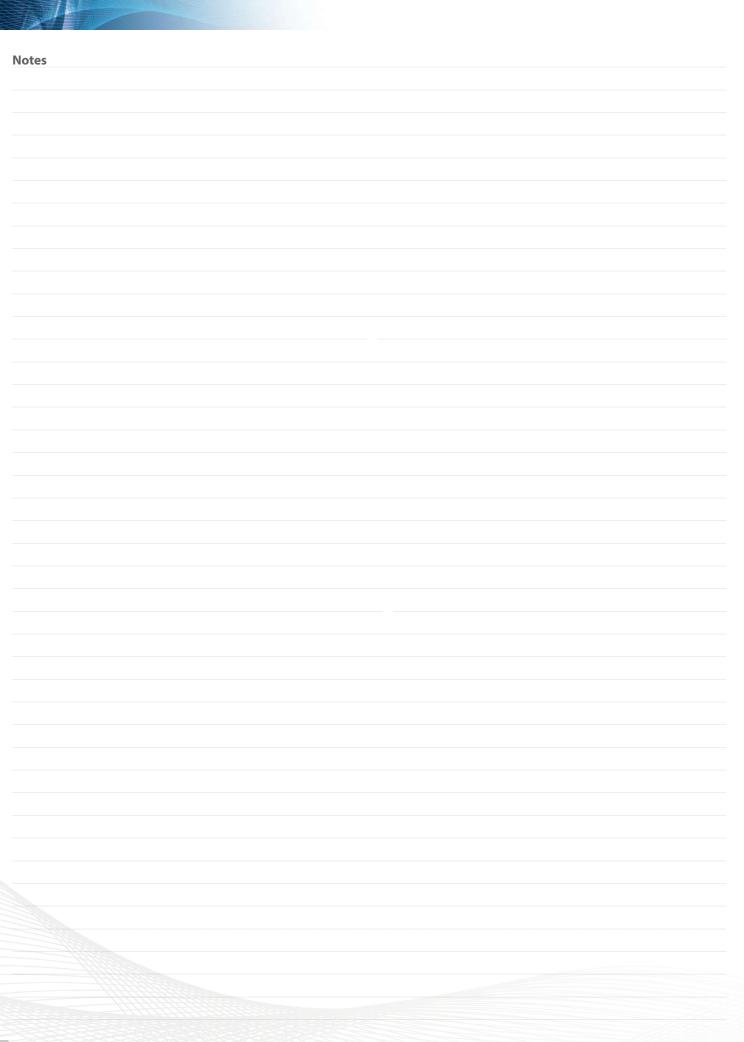
# **MATERIALS**



- Medium stock removal for;
- Nickel Alloys
- **Titanium Alloys**



For information on the full range available, please refer to your product catalogue. If you have a specific requirement, contact us directly on sales@atagroup.ie Full contact details can be found on page 5





# **SPECIAL CUT**

Coarse Cut - Fine Cut Fine Double Cut Superfine Double Cut

# **SPECIAL CUTS**

Additional bur geometries developed by the ATA engineering team to provide solutions for specific application requirements









Coarse Cut

Fine Cut

Fine Double Cut

Superfine Double Cut

#### Features & Benefits:

- Advanced engineered cutting geometry to answer two generated application requirements
  - · Coarse cut geometry allows rapid stock removal
    - Increasing production output
- Finer cuts result in smoother grinding operation
  - Increasing operator control on intricate components
  - · Developed to remove low amounts of material on hard metals
- CNC machined high consistent quality

## **INDUSTRY TARGETS**



- Aerospace
- Automotive
- Die & mold
- Foundries
- Railway
- Marine
- · Oil & Gas
- Power Generation



# **COARSE CUT**

#### **Cut Analogy**

- Bur geometry designed for high stock removal on
  - Light metals incl. Cast Iron
  - Plastics
  - Hard rubber



# **Shapes Available**

























Alternative shapes may be available upon request. Please contact us for further details.

# **FINE CUT**

#### **Cut Analogy**

- Bur geometry designed for fine machining on
  - Steel <60 HRC
  - Stainless Steel
  - · High temperature resistant materials nickel based alloys
- · Increased control on intricate components achieved
- Finer surface finish



#### **Shapes Available**



























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# FINE DOUBLE CUT

#### **Cut Analogy**

- · Bur geometry designed for fine machining on
  - Steel <60 HRC</li>
  - · Stainless Steel
  - · High temperature resistant materials nickel based alloys
- High stock removal
- Left hand helix providing short swarf chips
- · Increased control on intricate components achieved

# **Shapes Available**



Alternative shapes may be available upon request. Please contact us for further details.



# SUPERFINE DOUBLE CUT

#### **Cut Analogy**

- · Bur geometry designed for fine machining on
  - Steel <60 HRC</li>
  - Stainless Steel
  - · High temperature resistant materials nickel based alloys
- · Increased control on intricate components achieved
- · Superfine surface finish



#### **Shapes Available**















E

Alternative shapes may be available upon request. Please contact us for further details.



**CARBIDE ROUTERS** 

Fibreglass Routers

# **FIBREGLASS ROUTERS - FGRS**

FGR cutting geometry designed for non-metallic applications

#### Features & Benefits:

- Innovative cutting geometry Best for roughing & contouring materials. Can be used with hand-held or CNC machines
- Recommended for use on phenolic, fiberglass, non-metallic and composite materials
- CNC machined, to provide the most consistent quality
- Manufactured to the strictest quality control standards

#### **Range Details**







Bur Style



End Mill



**Drill Point** 

#### **APPLICATIONS**





- Routing
- Pocketing

# **INDUSTRY TARGETS**



- Aerospace
- Automotive
- Railway

#### **MATERIALS**



- Rapid stock removal on a broad spectrum of materials, e.g.;
- Low Carbon Steels
- Copper
- Brass



# **SOLUTIONS**

Locksmith Range - Tyre Router Range Bolt Remover Range

## **LOCKSMITH RANGE**

An intentionally designed range of burs for professional locksmiths

#### Features & Benefits:

- CNC manufactured burs
  - Offering full control of extracting a broken lock barrel
  - Reducing the potential of damaging the existing lock
- Centring radius bur geometry
  - Allowing full control in tight situations
- Purposely designed lock breaker bur
  - Removing the broken lock completely in one go

# **Design Features**

- Tailor made range developed for the locksmith industry
  - Specific diameter and cutting lengths to suit various lock repairs
  - Long reach and tapered shanks for easy access
  - Developed cutting geometry to grind all types of lock metals





#### **APPLICATIONS**



 Drilling through hard or broken locks

#### **INDUSTRY TARGETS**



- Locksmiths
- Automotive repair shops
- Emergency services

# **RANGE DETAILS**



- Twelve ball nose configurations available
- One specifically designed, hard lock pin breaker
- Five piece Locksmith Set available



# **LOCKSMITH RANGE**

#### **APPLICATION GUIDE**

- 1. Use the end of the Locksmith Bur to mark a spot below the barrel (Fig 1)
- 2. Start to drill using the location spot as a guide, the bur will remain centred
- 3. The drilled hole is centred in the section that houses the pins
- The cutting geometry easily cuts through the outer cover and into the brass pins without additional pressure being exerted
- 5. On encountering the first pin chamber, the grinding noise will change (Fig 2)
- 6. It is recommended to clean out the pin and lock debris AFTER each pin has been drilled (Fig 3). This will avoid damaging the bur

- 7. It is important that the pin chambers are counted, normally there are five to six chambers on this lock style
- 8. With the chamber pins successfully drilled, remove all of the remaining debris
- It is essential that the drilling is stopped after the removal of the last pin to avoid damaging the lock cam
- 10. Rotate the barrel in the direction needed to open the door (Fig 4)





For information on the full range available, please refer to your product catalogue. If you have a specific requirement, contact us directly on sales@atagroup.ie Full contact details can be found on page 5

## **TYREROUTER RANGE**

An intentionally designed range of routers for use in the rubber vulcanisation process

#### 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
  - Consistently high quality

# **Design Features**

- Engineered range developed for the tyre repair
  - Specific diameters to cover the range of 'vulcanizing
  - Stem inserts' available
  - Long reach and tapered shanks for ease of use
  - Developed cutting geometry to grind rubber and hardened steel sections



#### **APPLICATIONS**



 Grinding of Rubber and Steel Belt molded sections

# **INDUSTRY TARGETS**



Automotive tyre repair centers

 Maintenance of conveyor system

## **RANGE DETAILS**



 6 Diameter variations – double cut cylinder with cone point



# **TYREROUTER RANGE**

#### APPLICATION GUIDE

- The repair process is controlled by the standard
  - BS AU 159G:2013, 'Specification for repairs to tyres for motor vehicles used on the public highway'
- Within this standard the following elements are controlled
  - The maximum permissible diameter of a plug that can be used on a specific tyre, based on the tyres applicable speed rating
  - The position of the repairs, this is based on the width of the tyre
  - The amount of repairs allowed on a single tyre

Cut Diameter	Scooter / Motorcycle	Car / Light Van	Commercial Vehicles
3.0mm	•	•	
4.5mm	•	•	•
6.0mm	•	•	•
8.0mm			•
10.0mm			•

- · Above guide to be used for reference only
- In use, the operator would choose the smallest diameter Tyre Router to suit the repair required
- The router diameters have been chosen to suit the plugs available within the repair process



▶ Watch video



## **BOLT REMOVER RANGE**

An intentionally designed range of burs for the removal of broken studs

#### Features & Benefits:

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



## **Design Features**

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



# **APPLICATIONS**



Removal of broken studs

#### **INDUSTRY TARGETS**



- Automotive repair shops
- Maintenance departments
- Emergency services

#### **RANGE DETAILS**



- 5 variations of plain cylinder with end cut
- 5 variations of 150°
   Countersinks



# **TROUBLESHOOTING**

#### **TYPICAL BUR FAILURE MODES**



# Chipping of the bur teeth

- Bur running too slow
- Eccentric running caused by
  - worn bearings
  - loose collets
- Jamming the bur into a corner
- Bouncing or impacting the work piece



# Premature wearing of bur teeth

- Bur running too fast
- Eccentric running caused by
  - worn bearings
  - loose collets
- Incorrect cut geometry selected



# Bur head detaching from steel shank

- Allowing bur to become too hot, causing braze to melt
- Friction generated between shank and workpiece coming into contact
- Friction generated when worn collets allow bur to overspeed



Please refer to pages 8 and 9, for recommended operating speeds and tips for safe practice





ATA is a global leader in the provision of high-end industrial air tools. Our comprehensive portfolio offers a solution for every grinding and finishing application, optimising processes in terms of economic efficiency, reliability and safety.

Quality and continuous improvement are priorities at ATA. We strive for exemplary quality in our products and services. In the procurement of goods and services, we look for partnerships with suppliers that apply the same principles of quality assurance. Our Quality Management System is certified to ISO 9001:2015.



# Innovation from day one

Founded in 1963, ATA is a true pioneer in industrial air tools.

Since then we have continued to provide our customers with products and solutions to suit their processes and requirements. Our industrial expertise and detailed application know-how have led to pioneering developments.

Our comprehensive portfolio offers a solution for every grinding and finishing application, optimizing processes in terms of economic efficiency, reliability and safety. Our customers come from a wide variety of industries, including automotive, aerospace, foundries, metal fabrication, oil & gas, marine, medical, rail and power & energy.

#### RECOMMENDED SPEEDS

Bur Head ø	Maximum Operating Speeds (rpm)	
3mm	100,000	
6mm	55,000	
10mm	37,500	
12mm	28,000	
16mm	22,500	

Recommended speeds are based on standard shank length of 45mm, maximum overhang of 10mm







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# AIR TOOLS PRODUCT RANGE



# **DIE GRINDERS**

#### Features and Benefits

Moulded sleeve for improved ergonomics, operator comfort and insulation

Governor design offering a range of speeds

A variety of models suitable for all applications from light to heavy deburring

Collet options to accommodate a range of shank mounted consumables

Power ranges from 0.4hp (300 watts) to 1.1hp (820 watts)

Select tools with extended bodies for two handed operation and extended spindles for for restricted access applications

Selected models offered with vibration dampening system



#### **PENCIL GRINDERS**

#### Features and Benefits

Improved roll throttle offers enhanced torque and is suitable for continuous use

Ergonomic design improves operator comfort and control

High speed results in a finer surface finish

Small diameter facilitates precise control

Speed ranges from 45,000rpm to 100,000rpm

Select models are oil free ideal for applications where workpiece contamination is an issue

# **FULL RANGE INCLUDES**



**Angle Grinders** 



Sanders



**Belt Sanders** 



See our products in action

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