Отрезные круги для металлургии
Технические характеристики

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Metallography is the study of the microstructure of metals. This is essential for key industries such as automotive, aerospace and new materials development. Metallography is used to determine if the material has been properly prepared and is of a reliable structure.

The finished material can be affected by different factors ranging from alloy composition to processing conditions such as; cold working, heat treatment, and welding. A finished part's environment can also affect its microstructure and cause problems such as corrosion and decarburization. The åtto range provides cutting wheels specifically matched to metallic types to ensure minimum material changes.

Technical Specifications:

At åtto Abrasives we manufacture a range of Metallurgical Sampling wheels to meet the unique requirements of our customers. To match their needs, we employ a variety of abrasive grit types (e.g. A, WA, C & GC), grit sizes (60-400 FEPA) and Resin bonds to formulate our unique range of Metallurgical Sampling wheels, for cutting both ferrous and non-ferrous materials of varying degrees of hardness.

Correct Matchings

Choosing the cut-off wheel involves considering factors such as surface speed (SFM) for given wheel diameter and the type of cooling system employed. However the primary factor is the hardness of the material being cut.

The abrasive cut-off wheel specifications must be appropriate for your specific material.

We take the vast variety of materials and hardness levels into consideration and have a wheel to match every requirement. Including both Ferrous and Non-Ferrous Materials

Ferrous metals = Metals that contain iron. Some examples include: steel, carbon steel, light iron and cast iron.

Non-Ferrous metals = Metals that do not contain any iron. Some examples include: aluminum, aluminum alloys, copper, brass, gold, nickel, silver, tin, lead, and zinc.

One simple test you can use to discover which type (*ferrous or non-ferrrous),* the metal you are working, is to see whether or not it is magnetic.

Ferrous metals = magnetic

Non-Ferrous metals = not magnetic

Below are brief examples of some ferrous and non-ferrous metals. *For assistance in finding the correct product for your requirements or for any additional queries use the Product Matching & Customization Form to contact us.*

Ferrous Metals			
Steel	Cast Iron	Light Iron	Iron
Sheet Iron	Tin	Carbon Steel	Alloy Steel
carbon steel	wrought iron	Grey Iron	Iron alloys

Not exhaustive list of Ferrous Metals

Non-Ferrous Metals			
Aluminum	Aluminum copper coils	Brass	Bronze
Burnt copper	Carbide	Cobalt	Gold
Inconel 792	Inconel 800	Inconel 820	Kovar
Copper	Nickel	Platinium	Rod Brass

Not exhaustive list of Non-Ferrous Metals

åtto abrasives precision cutting wheels

åtto abrasives precision cutting wheels

Metallurgical Sampling

Precision Cutting Wheels

Intro

Metallography is the study of the microstructure of metals. This is essential for key industries such as automotive, aerospace and new materials development. Metallography is used to determine if the material has been properly prepared and is of a reliable structure.

åtto range

Metallurgical sampling is the cutting of a small sample of metal without changing its characteristics in order to conduct testing. åtto offers products in rubber and resin specifications.

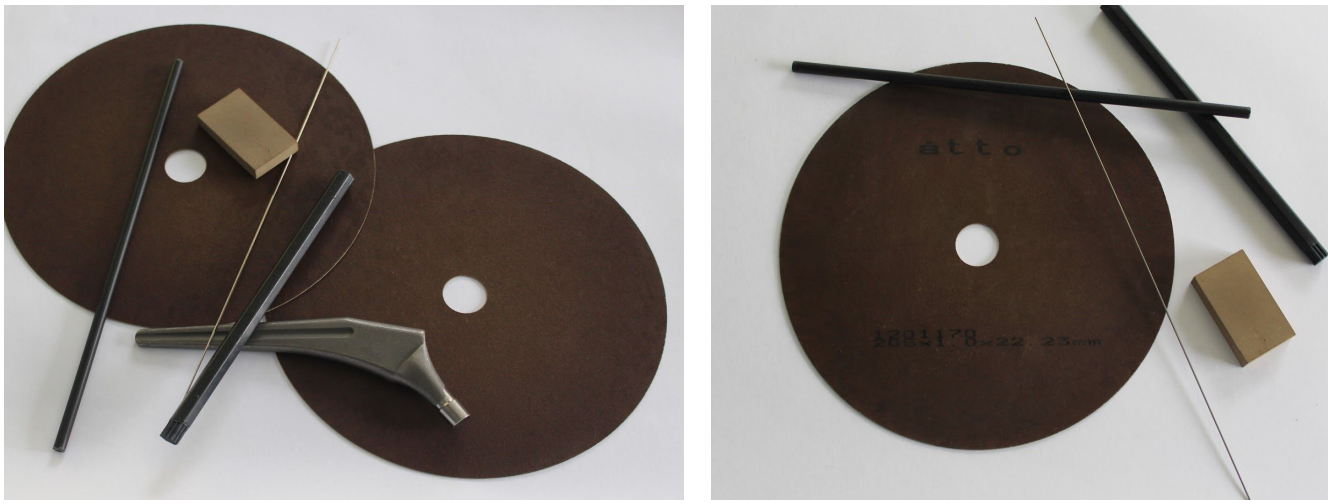


Fig No.1 (åtto resin cutting wheel)

Benefits of åttos wheels for metallurgical samples

- Cost effective cutting
- Reduced cycle time
- Minimum Heat generation
- Minimum Burr
- Full range of sizes & specifications
- Rubber & Resin specifications available

Correct wheel specification to match your application

To select the most suitable wheel specifications several factors should be considered, including; material; material hardness; part shape; cutting process (*with or without coolant*); wheel size.
The material hardness is of primary importance. Below is a selection of the cutting wheel specifications & sizes manufactured by åtto.

Customised sizes & specifications can be provided.

Resin

Soft-Ferrous Metals 0-300 (HV)
Specifications WA80 - N - B590

150 x 0.8 x 12.7
250 x 1.5 x 32
300 x 2 x 32

Medium-Ferrous Metals 0-300 (HV)
Specifications WA80 - M - B590

150 x 0.8 x 12.7
250 x 1.5 x 32
300 x 2 x 32

Hard-Ferrous Metals 0-300 (HV)
Specifications WA80 - L - B590

150 x 0.8 x 12.7
250 x 1.5 x 32
300 x 2 x 32

Non-Ferrous Metals 0-300 (HV)
Specifications WA80 - Q - B590

150 x 0.8 x 12.7
250 x 1.5 x 32
300 x 2 x 32

Rubber

Soft-Ferrous Metals 0-300 (HV)
Specifications WA100 - N - R49

150 x 0.8 x 12.7
250 x 1.5 x 32
300 x 2 x 32

Medium-Ferrous Metals 0-300 (HV)
Specifications WA100 - M - R49

150 x 0.8 x 12.7
250 x 1.5 x 32
300 x 2 x 32

Hard-Ferrous Metals 0-300 (HV)
Specifications WA100 - L - R49

150 x 0.8 x 12.7
250 x 1.5 x 32
300 x 2 x 32

Non-Ferrous Metals 0-300 (HV)
Specifications C120 - Q - R49

150 x 0.8 x 12.7
250 x 1.5 x 32
300 x 2 x 32

Ferrous Metals = Metals that contain Iron. E.g Alloy steel, Carbon steel, Cast Iron
Non-Ferrous Metals = Metals that do not contain Iron. E.g Aluminium, Copper, Lead, Zinc, Inconel,

Technical Specifications:

At åtto Abrasives we manufacture a range of Resin Cut-Off wheels to meet the unique requirements of our customers. To match their needs, we offer a variety of abrasive grit types (e.g. A, WA, C & GC), grit sizes (60-400 FEPA) and Resin bonds to formulate our unique Resin Bonded cut off wheels.

Customised Solutions:

As an established manufacturer of Rubber & Resin bonded cut off wheels, we at åtto have the knowledge and experience to meet the most demanding precision cutting applications. Let us know your requirements and we can formulate a specification customised to your precise needs.

Metallurgical Sampling Ferrous Metals Hardness (0-300HV)

åtto Abrasives Metallurgical Sampling range

Our special cut-off wheels are specifically manufactured for the precision cutting of ferrous Metals of hardness 0-300HV.

- Provide Burr free precision cutting
- Resinoid cut-off wheels suitable for all soft ferrous metals
- *Safety Data sheet atto Abrasives rubber cut off MSDS 2017*
- **Further sizes and specifications available upon request**

Description

At åtto Abrasives we manufacture a range of Metallurgical Sampling cut-off wheels to meet your requirements.

These Metallurgical Sampling cut-off wheels are specifically manufactured for the precision cutting of

soft ferrous metals with a hardness of 0-300HV.

- These cut-off wheels provide Burr free precision cutting
- They are Resin-Bonded & suitable for cutting of ferrous metals with a hardness of 0-300HV
- **Further sizes and specifications available upon request**

- Standard Tolerances+/- 0.05mm (0.002”)
- Available in a full range of specifications, abrasive grit types & sizes
- Customised to suit particular process needs & applications

The selection of cutting wheel must be made from the proper family of abrasive wheels to meet the requirements for your specific material. These particular wheels are specifically formulated for the cutting of Ferrous Metals of hardness (0-300 HV).

Ferrous Metals = Metals that contain Iron.

One simple test you can use to discover which type (ferrous or non-ferrrous), the metal you are working, is to see whether or not it is magnetic. Ferrous metals are magnetic.

Metallurgical Sampling Ferrous Metals Hardness (300-500HV)

åtto Abrasives Metallurgical Sampling range

Our special Metallurgical Sampling cut-off wheels for ferrous metals are specifically manufactured for the precision cutting of all Metallic types.

- Provide Burr free precision cutting
- Resinoid cut-off wheels suitable for all hard ferrous metals
- *Safety Data sheet atto Abrasives rubber cut off MSDS 2017*
- **Further sizes and specifications available upon request**

Description

At åtto Abrasives we manufacture a range of Metallurgical Sampling consumables or cut-off wheels to meet your Metallurgy Testing requirements.

These Metallurgical Sampling cut-off wheels for ferrous metals, are specifically manufactured for the precision cutting of ferrous metals with a hardness of 300-500HV.

- These Metallurgical Sampling cut-off wheels provide Burr free precision cutting
- They are Resin-Bonded & suitable for cutting of ferrous metals with a hardness of 300-500HV. **Further sizes and specifications are available upon request**
- Standard Tolerances+/- 0.05mm (0.002”)
- Available in a full range of specifications, abrasive grit types & sizes

The selection of consumables or cutting wheel for your specific material type is important in achieving the best precision cut. These particular wheels are specifically formulated for the cutting of Hard-ferrous metalic materials (300-500 HV). For more information about correct product matching contact us here.

Ferrous Metals = Metals that contain Iron.

One simple test you can use to discover which type (ferrous or non-ferrrous), the metal you are working, is to see whether or not it is magnetic. Ferrous metals are magnetic.

Resin cut-off wheels

åtto Abrasives Metallurgical Sampling range

Our special cut-off wheels are specifically manufactured for the precision cutting of all hard ferrous Metallic types.

- Provide Burr free precision cutting
- Resinoid cut-off wheels suitable for all hard ferrous metals
- *Safety Data sheet atto Abrasives rubber cut off MSDS 2017*

Description

At åtto Abrasives we manufacture a range of Metallurgical Sampling consumables aka (cut-off wheels)to meet your requirements.

These Metallurgical Sampling consumables or cut-off wheels are specifically manufactured for the precision cutting of ferrous metals with a hardness of 500+HV.

- These cutting wheels provide Burr free precision cutting
- They are Resin-Bonded & suitable for cutting of ferrous metals with a hardness of 500+HV
- **Further sizes and specifications available upon request**

- Standard Tolerances+/- 0.05mm (0.002”)
- Available in a full range of specifications, abrasive grit types & sizes
- Customised to suit particular process needs & applications

The selection of cutting wheel for your specific material type is important in achieving the best precision cut. These particular wheels are specifically formulated for the cutting of Hard-ferrous metalic materials (500+ HV). For more information about correct product matching contact us here.

Ferrous Metals = Metals that contain Iron.

One simple test you can use to discover which type (ferrous or non-ferrrous), the metal you are working, is to see whether or not it is magnetic. Ferrous metals are magnetic.

Resin bonded cut-off wheels

åtto Abrasives Metallurgical Sampling range

Our special metallurgical sampling cut-off wheels are specifically manufactured for the precision cutting of all Metallic types.

- Provide Burr free precision cutting
- Resin-Bonded & suitable for all Metallic types
- *atto Abrasives Safety Data Sheet for resin cut off wheels MSDS 2017*
- **Further sizes and specifications available upon request**

Description

Metallurgical Sampling cut-off wheels **manufactured by åtto Abrasives to meet your requirements.**

- We employ a variety of abrasive grit types, grit sizes, rubber and resin bonds to formulate our unique cut off wheels, **suitable for the precision cutting of all Metallic Types.**
- These are specialised cutting wheels for precision burr-free wet cutting of tubes & components, for metallurgy testing & metallurgical sampling.
- They are suitable for cutting any type of metallic material

- They provide very precise cuts due to product finesse

- **Further sizes and specifications available upon request**
- Standard Tolerances+/- 0.05mm (0.002”)
- Available in a full range of specifications, abrasive grit types & sizes
- Customised to suit any particular process needs & applications

Rubber-Bonded cut-off wheels for all Metals

Metallurgical Consumables range.

Our special Rubber Bonded cut-off wheels are specifically manufactured for the precision cutting of all Metallic types.

- Provide Burr free precision cutting
- Rubber Bonded & suitable for all Metallic types
- *Safety Data sheet atto Abrasives rubber cut off MSDS 2017*
- **Further sizes and specifications available upon request**

Description

Rubber-Bonded cut-off wheels at åtto Abrasives we manufacture a range of Metallurgical Sampling to meet your requirements.

These åtto Rubber Bonded consumables are a part of the atto abrasives metallurgical sampling range. These Rubber bonded consumables or abrasive blades are designed to provide high quality sectioning results with no burning and minimal surface deformation. They are perfect for high precision cutting or Metallurgy Testing applications where the integrity of the material being cut needs to be maintained. Abrasive cutting is the most common method of sectioning to achieve a clean and efficient cut. åtto abrasive cut-off wheels are designed to provide high quality sectioning mor cutting results with no burning and minimal surface deformation.

These Rubber bonded blades are designed to give a high cut quality and provide good lifetime. When carrying out cutting applications, to acheive a clean and efficient cut, a blade needs to break down. This is important as during cutting, this allows the exposure of new abrasive particles. Depending on the hardness of the material, the blade needs to break down at different rates. åtto abrasive cutting wheels are developed for specific applications to ensure the proper rate of wear for your specific cutting application.

- These products are specialised cutting wheels for metallurgical sampling.
- They are specifically designed for the cutting of any type of metallic material.
- Provides clean precise cuts due to product finesse.

- **Further sizes and specifications available upon request**
- Standard Tolerances for these products are +/- 0.05mm (0.002”)
- They are available in a full range of specifications, abrasive grit types & sizes, just let us know your requirements.
- Here at åtto abrasives we can tailor our products to suit any particular need & application.
- **Customised to suit your particular process needs & applications.**

Resin bonded cut-off Wheels

åtto Abrasives Metallurgical Sampling range

Our special cut-off wheels are specifically manufactured for the precision cutting of all non-ferrous Metallic types.

- Provide Burr free precision cutting
- Resinoid cut-off wheels suitable for all non-ferrous metals
- *Safety Data sheet atto Abrasives rubber cut off MSDS 2017*
- **Further sizes and specifications available upon request**

Description

At åtto Abrasives we manufacture a range of Metallurgical Sampling cut-off wheels to meet your Metallurgy testing requirements.

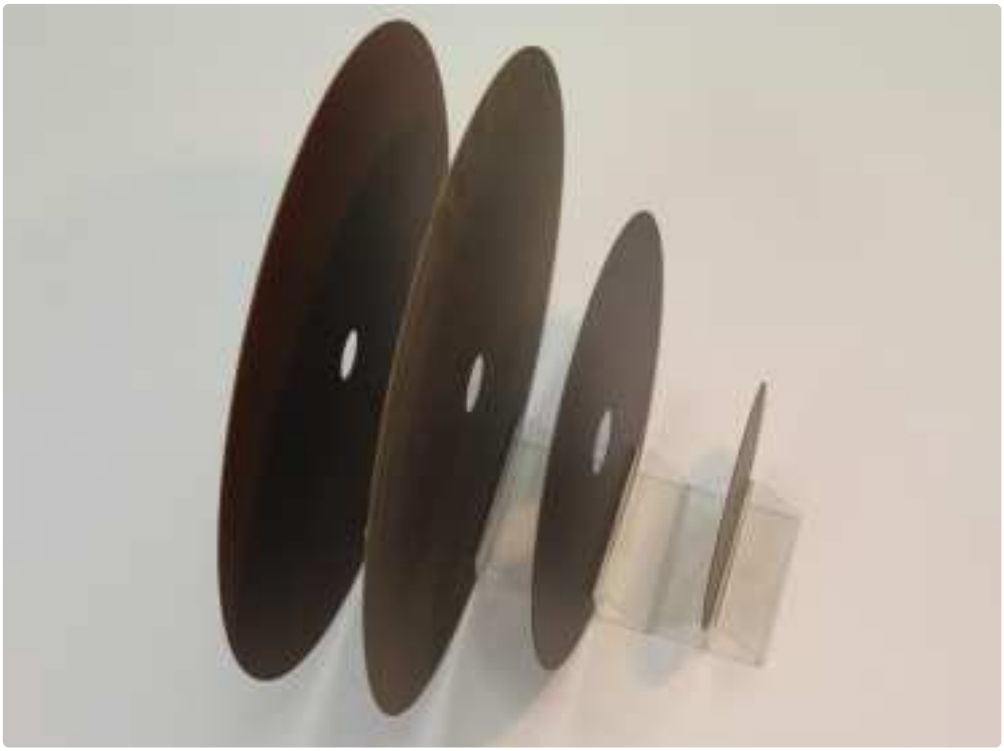
These Metallurgical Sampling cut-off wheels are specifically manufactured for the precision cutting of non-ferrous metals. These abrasive blades are designed to provide high quality sectioning results with no burning and minimal surface deformation.

- These cut-off wheels provide Burr free precision cutting
- They are Resin-Bonded & suitable for cutting of non-ferrous metals.
- **Further sizes and specifications available upon request**
  - Standard Tolerances+/- 0.05mm (0.002”)
  - Available in a full range of specifications, abrasive grit types & sizes
  - Customised to suit particular process needs & applications

These wheels are speicifcally manufactured for the precision cutting of Non-Ferrous Metals

Non-Ferrous metals = Metals that do not contain any iron. Some examples include: aluminum, aluminum alloys, copper, brass, gold, nickel, silver, tin, lead, and zinc.

One simple test you can use to discover which type (*ferrous or non-ferrrous),* the metal you are working, is to see whether or not it is magnetic.



6 inch cut-off wheels

Sectioning Cut-off Blades 6” x 0.020” x 12.7mm Ferrous Hard (Rc 55+)

- Resinoid cut-off wheels
- Specification: A120 – FHB
- Size: 6 x 0.020 x 12.7mm
- Material Matching: Hard ferrous metals (Rc 55+)
- *Safety Data sheet atto Abrasives rubber cut off MSDS 2017*

- **Further sizes and specifications available upon request**

Description

Sectioning Cut-off Blades 6” x 0.020” x 12.7mm Ferrous Hard (Rc 55+)

Pack Qty 10

åtto abrasives Precise burr free sectioning blades, are specifically matched by material hardness to ensure no material alteration during cutting. This ensures a labortory quality cutting process, providing the below benefits

- No Material Alteration
- Burr Free cutting
- Minimum Material loss
- Longer Wheel Life
- Fast & Cost effective cutting

Pack Size	**Quantity 10**
Wheel Diameter (Inch)	**6”**
Hole Size (mm)	**12.7mm**
Wheel Thickness	**0.020”**
Abrasive Material	**Aluminum Oxide**
Specification	**A120 – FHB**
Speed	**3,000rpm**
Material Hardness matching	**Ferrous Hard Metals (55+ Rc)**
Abrasive Type	**Aluminum Oxide**
Reinforced	**Nonreinforced**
Bond Type	**Resinoid**
Coolant	**Optional**

Safety	**For use only on a totally guarded fixed machine** **Do not exceed operating speed** **Handle with care**
Tool Compatibility	**Stationary Tools (Use only on a full guarded machine)**

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