

Magnutom-5000

Cut to the Point

Automotive cutting:

18 cuts in 25 minutes

18 sections in a crankshaft would normally take one hour. But not anymore. With the use of Magnutom-5000, our engineers reduced that time by **more than 50%** and completed a sectioning sequence of 18 cuts in just 25 minutes. Imagine the amount of time saved when you implement this for hundreds – or even thousands – of sections.

Cut the cost. Cut the time. Make the cut

Time is money. It is really very simple, and if you agree, then let us take you for a stroll and reveal the secrets behind our **most timesaving** cut-off machine in Struers' 143-year history. Let's cut to the point.



Get the cut right the first time with simulator

As the only cut-off machine in its field, Magnutom-5000 can map out the most complex of section sequences and then simulate all individual sections for you to correct or validate. No time or materials are wasted on trial sections.

Save consumables with automatic rpm-compensation

Magnutom-5000 adapts its speed automatically via rpm-optimization as the cut-off wheel wears down. This means 30% more sections per cut-off wheel can be produced in certain situations by using Struers' specialized consumables.

Re-clamping superseded by automated rotary table

A section is only as accurate as the quality of the clamping. The Magnutom-5000 is the largest machine in its field with an automated rotary table. This means no time wasted re-clamping.

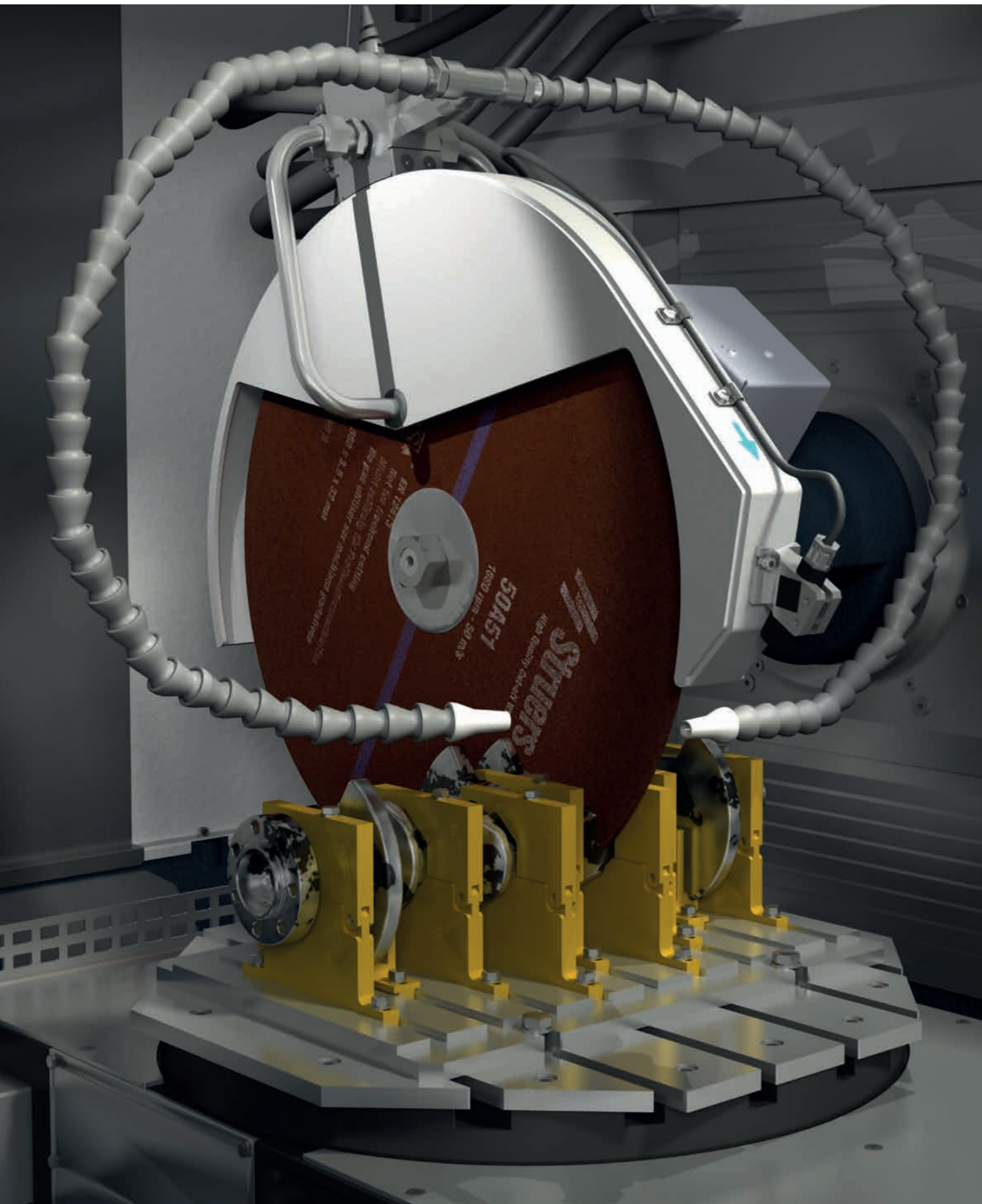
Ensure accurate reproducibility with intuitive programming

With the intuitive programming built into the Magnutom-5000, you can reproduce sections with the same accuracy hundreds – or even thousands – of times.

All inclusive

Magnutom-5000 includes all aspects of the section process in one machine – cut-off machine, filtration/cooling, cut off wheels and clamping.





Let's go into details

Take a stroll around Magnutom-5000 and discover some of the innovative features that can save you both time and money.

Built for large workpieces

Magnutom-5000 is specially built for large workpieces such as crankshafts, gears, and CV joints. The spacious 1000 mm wide cutting chamber and sliding front door that opens wide even make it possible to use a forklift or crane to load heavy samples.

Powerful motor for parallel cuts

The motor in Magnutom-5000 is so powerful that you can install two cut-off wheels and make parallel sections.

Make a wide range of cuts

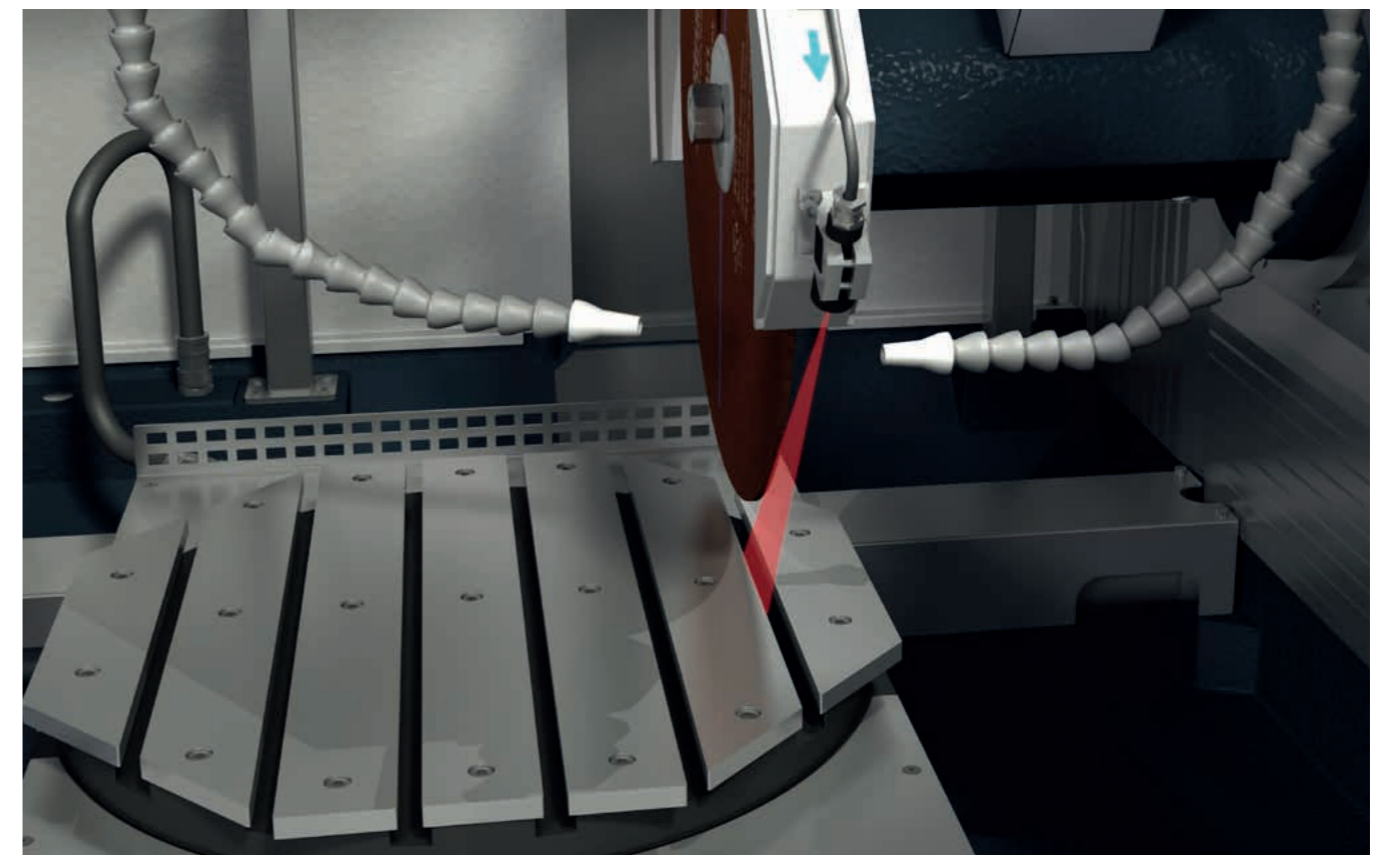
Magnutom-5000 allows a 4-axis positioning of the cut-off wheel, which enables a large variety of sectioning possibilities.

Thinner cut-off wheels for accuracy

With the right clamping method, you can use thinner cut-off wheels and section closer to the area of interest, saving you expensive grinding time and reducing the risk of burning the surface of the sample.

Never again short on uptime

Maximum uptime requires daily maintenance, and with Magnutom-5000 this has never been easier. Improved waterflow and a steeper slant in the chamber make it easy to wash away dirt. The central greasing system keeps the machine going, and with a thorough lifetime test performed, you can rest assured that your machine can withstand 24/7 cutting.



Axiowash automatic cleaning with Struers' patented cleaning program.

Spindle lock makes it faster and easier to change cut-off wheels.

Cut-off wheel monitoring helps you save consumables.

Hinge side door that opens up completely for optimal access.

Laser light points out the precise position for your section.

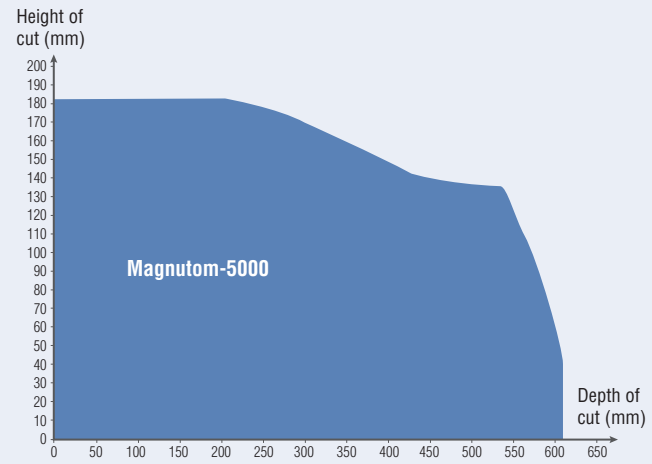
Three table variants enable clamping for any need.

Faster programming with icon-based user interface.

User-friendly joystick enables fast and easy programming.



CUTTING CAPACITY



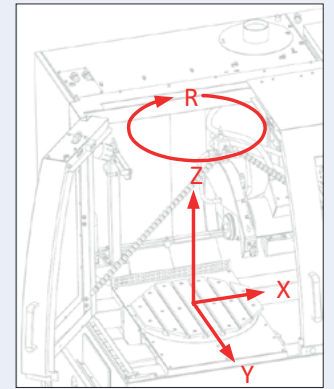
Cutting capacity using YZ or AxioCut cutting mode with a D508 mm cut-off wheel.

Subject	Specification
	Metric / Imperial
Cutting capacity (max) Magnutom-5000	ø190 mm / 7.4" 190 x 254 mm / 7.4 x 10" and 184 x 400 mm / 7.2 x 15.7" 114 x 618 mm / 4.5 x 24.3"
PHYSICAL SPECIFICATIONS	
Cutting motor	Cutting power (S1) 11 kW / 14.7 HP Cutting power (S3) 16 kW / 21.5 HP
Cut-off wheels for Magnutom-5000	Max. diameter x Thickness x Centre-hole 508 x 3.5 x 32 mm / 20 x 0.13 x 1.26" Rotational speed (at rated load) 1000-2400 rpm
Positioning & Feed	Positioning range (of cut-off wheel) Y= 395 mm / 15.55", Z= 214 mm / 8.43"
Cutting table	
Fixed cutting table, (YZ)	Width x Depth 751x781 mm / 29.57 x 30.7"
X-table (XYZ)	Width x Depth (max.) 524x781 mm / 20.63 x 30.7"
R-table (XYZR)	Diameter 533 mm / 21.0"
X-table stroke range	370 mm / 14.6"
T-slots, bi-directional	12 mm / 0.48"
Dimensions and weight	Width 1758 mm / 5' 9" Depth 1463 mm / 4' 9" Height 1882 mm / 6' 2" Weight 2400 kg / 5291 lbs
Cutting chamber	Width 1000 mm / 3' 3" Depth 1206 mm / 3' 11" Height 918 mm / 3' 0"

Magnutom-5000 is CE labelled in conformity with relevant EU directives. Struers' products are subject to constant product development. Therefore, we reserve the right to introduce changes in our products without notice.

MODELS

Magnutom-5000 YZ (2 axes)	Magnutom-5000 XYZ (3 axes)	Magnutom-5000 XYZR (4 axes)
Intuitive icon-based programming	Intuitive icon-based programming	Intuitive icon-based programming
Simulator function (patent pending)	Simulator function (patent pending)	Simulator function (patent pending)
AxioWash automatic cleaning	AxioWash automatic cleaning	AxioWash automatic cleaning
Laser light	Laser light	Laser light
ExciCut for very hard materials	ExciCut for very hard materials	ExciCut for very hard materials
Optifeed – intelligent feed control	Optifeed – intelligent feed control	Optifeed – intelligent feed control
Cut-off wheel database	Cut-off wheel database	Cut-off wheel database
	Automatic RPM optimization on Struers cut-off wheels	Automatic RPM optimization on Struers cut-off wheels
Fixed table	Automatic X-,Y-movement	Automatic X-,Y-movement
		Automatic rotary movement



MACHINE ACCESSORIES

- For maximum utilization of Magnutom-5000 a wide range of extensions and accessories is available.
- Demister Centrifugal separator. Removes coolant mist.
 - Signaling light. Colored light displays machine status.
 - Extension Tunnel for sectioning long workpieces.
 - Cutting table platform for elevation of the workpieces which increases clamping options.
 - Working table with rollers for convenient handling of large and bulky workpieces.

CLAMPING TOOLS

- A complete range of clamping tools is available for regular and irregular workpieces. e.g.:
- Quick clamping tools (left/right)
 - Base plate clamping tools (left/right)
 - Vertical clamping tools
 - Chain spanner
 - XL quick clamping tools
 - Optional jaws for Quick clamping tools
 - Support blocks with optional crowns
- For more information about Struers' clamping tools, please see the brochure **Reliable clamping of any workpiece**.

CUT-OFF WHEELS

- Struers' cut-off wheels are designed for Struers' machines and cover the full range of materials that are met in materialographic applications. All Struers abrasive bakelite wheels have built-in compensation to changing wear characteristics. Magnutom-5000 can be used with cut-off wheels diameter 350-508 mm (14"-20"), e.g.:
- Abrasive bakelite wheels with alumina or SiC grains, and a choice of fiber-reinforcement. Get smooth, reliable, burn-free surfaces for most metals and alloys.
 - Hexagonal abrasive bakelite wheels with alumina grains. Improve cooling with the characteristic 3D surface.
 - Premium abrasive bakelite wheels with hard, self-sharpening grains. Increase the number of cuts or cutting speed with the spiral-shaped, slim wheels.
 - Diamond and CBN wheels with the hardest abrasives. Get reliable, repeatable results in the toughest applications.
- For more information about Struers' Cut-off Wheels, please see the brochure **Cut-off Wheels**.



Clamping Tools



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Ensuring Certainty

With offices and affiliates in 24 countries and a presence in more than 50 countries worldwide, Struers is the world's leading materialographic solution supplier. We are dedicated to enabling our customers to ensure certainty in all aspects of materialographic preparation and testing as well as material hardness testing - wherever they are in the world. Struers offers a complete range of equipment, consumables, service and training programmes – all supported by the most comprehensive knowledge base, global applications support and a certified global service set-up.

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