

Open up to high capacity cutting
– unleash your cutting power 24/7



- Cuts large workpieces efficiently
- Designed for maximum uptime and productivity
- Robust and easy to operate

The high capacity cut-off machine built to go the distance

Successful production companies are constantly looking for new ways to meet the demands of their customers quickly, efficiently and with the best quality products. This requires meeting tight deadlines without increasing resources or costs, and ensuring that every part of the production process – including production cutting, quality testing and inspection activities – run as smoothly and effectively as possible.



HIGH CAPACITY

Magnutom is a high capacity automatic cut-off machine that gives you a powerful way to streamline cutting and preparation processes – with representative specimens the first time. Magnutom is built with the quality, precision and certainty you expect from Struers to deliver high capacity cutting of large workpieces – fast, efficiently and safely – all day, every day.

Magnutom is available in two versions, see specifications for details.

Huge capacity in a small space

Magnutom is designed to deliver high capacity cutting without compromising valuable floor space. It's compact and streamlined – with a footprint of just 2.6 m². Yet, Magnutom has the largest cutting table in its class. A powerful motor, a very spacious 1000 mm wide cutting chamber, combined with a 2-axis moveable cut-off wheel, contribute to a large variety of cutting possibilities. The left cutting table may be removed for additional space (fixed table version only). For extra long parts, an optional Safety extension box is available.

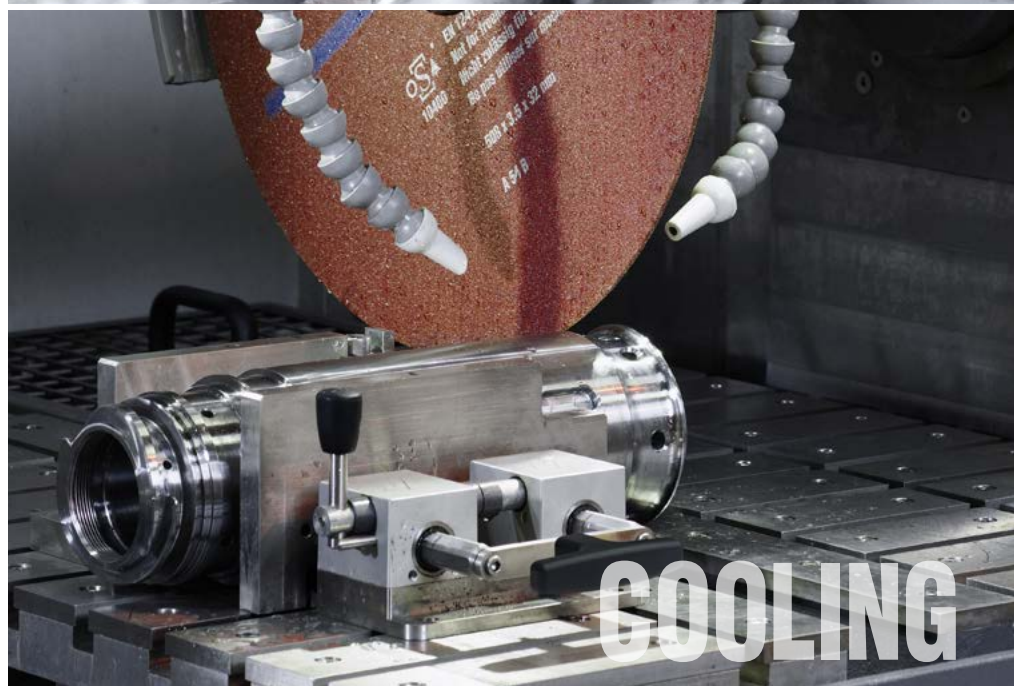
Designed for maximum uptime and minimum maintenance

Magnutom can withstand even the toughest conditions and all machine parts have been CAE-stress tested to ensure that they can withstand 24/7 cutting. The straightforward design, robust frame, oversized machine parts and DirectDrive belt-less transmission ensure maximum efficiency and operation – around the clock.

DirectDrive provides direct transmission between the motor and cut-off wheel, and ensures increased efficiency, less noise, minimal maintenance and a longer lifetime. DirectDrive transmission also means no drive belt noise.



**CUTTING
24/7**



COOLING



TOP LOADING

Extraordinary wheel cooling

Large wheel size and large samples take extraordinary cooling. Cooling nozzles on both sides of the wheel ensure that the coolant is dispensed as close to the specimen as possible allowing you optimal cooling at any time. For supplementary cooling, two flexible water jets are provided.

Exceptional access for easier handling

Built specifically for high capacity cutting of large specimens, Magnutom makes it easy to access machine parts and handle large workpieces. Smart, sliding and hinged doors open to give you even more space and unrestricted access for smoother loading and better placement of large workpieces.

Use forklift or crane to load heavy samples and access the very large cutting chamber from three sides.

The cut-off wheel is fully retractable and hence there are no fit-under-wheel limitations.

Easy and safe to use

Cutting large workpieces for later inspection and testing is an important part of production and quality processes. Magnutom is developed to be as simple to operate as possible.

Intuitive, icon-based user interface, automatic programming, turn/push knob and joystick control make it easy for all your employees to use the machine. You get the highest quality specimens the first time without having to use a lot of time and resources on training and operation.

Magnutom has a high level of safety. During cutting, the two doors are secured by a safety lock, and cannot be opened until the wheel has stopped rotating. A two-hand activation feature ensures safe operation with open doors.

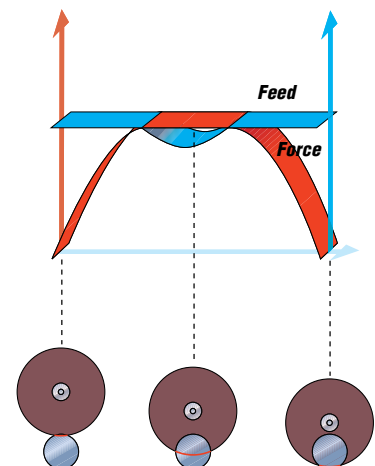


Boosting your cutting productivity

- **VarioSpeed** – optimises the cutting of difficult parts for speed and quality
- **Four cutting modes** – for maximum cutting flexibility
- **OptiFeed** – ensures the correct feed speed without compromising cut quality or wheel economy
- **AxioWash** – Struers' patented* automatic cleaning program to clean the inside of the machine
- **AutoCut** – Cut-off wheel automatically moves to predefined start position – faster cutting of uniform samples
- **ExciCut** – speeds up cutting of very hard materials
- **Method Database** – store up to 300 cutting methods for easy retrieval
- **Cut-off wheel database** – Magnutom suggests the Struers' cut-off wheel and recommended rotational speed based on material hardness
- **Count-down timer** – displays the estimated time to completion

OptiFeed

The Feed speed is automatically adapted to the preset Force. Thanks to OptiFeed you will always cut through the workpiece at the fastest possible speed, within the set parameters - and without overloading the workpiece and the cut-off wheel.



*AxioWash is protected under EP Pat no. 1965947.

High capacity cutting - rob



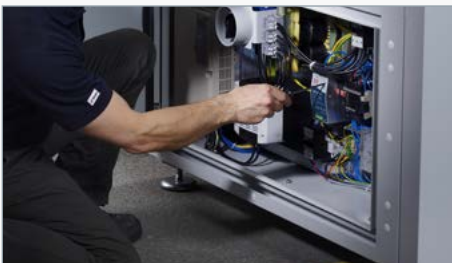
AxioWash



Flushing gun



**2 x Powerful LED
chamber illumination**



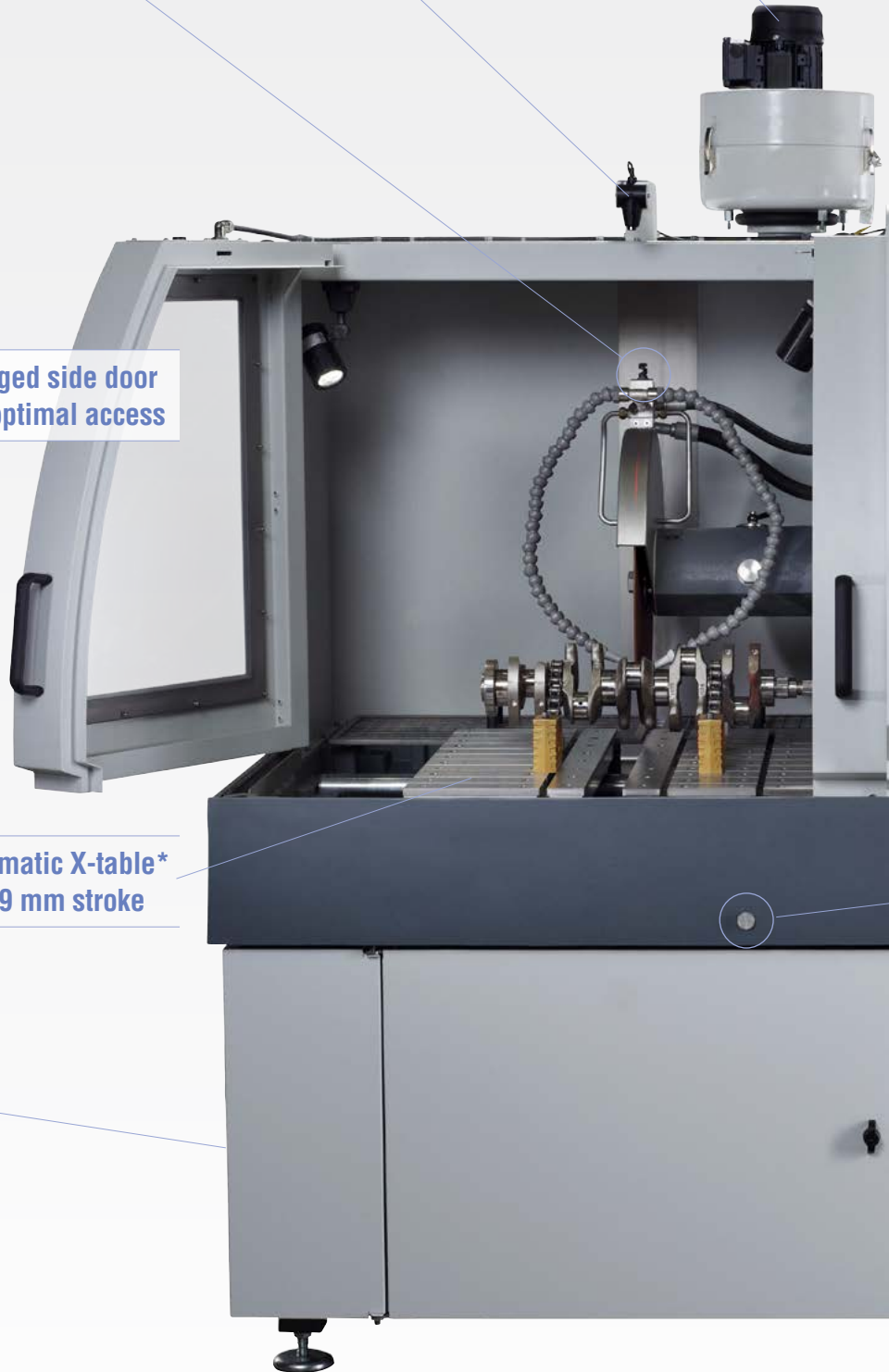
Superior serviceability

Laser straight edge*

Demister*

**Hinged side door
for optimal access**

**Automatic X-table*
269 mm stroke**



rust, oversized components



Signalling light*

Sliding front door

Easy-to-use controls



Easy change of cut-off wheel



User-friendly joystick



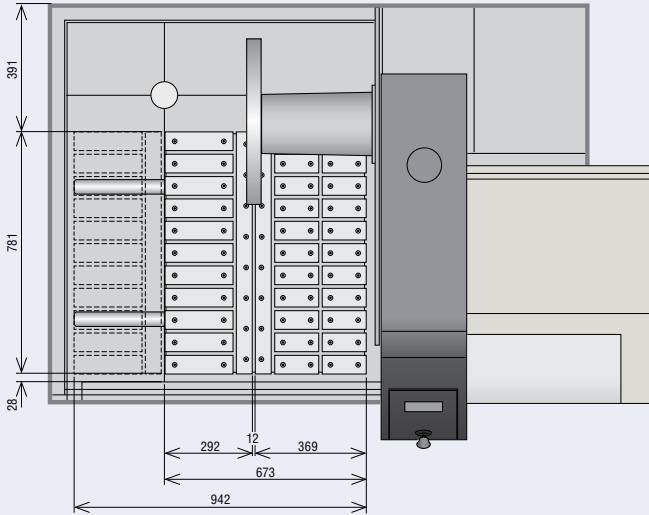
Two-hand safety operation with open door

Coolimat-200 bandfilter*

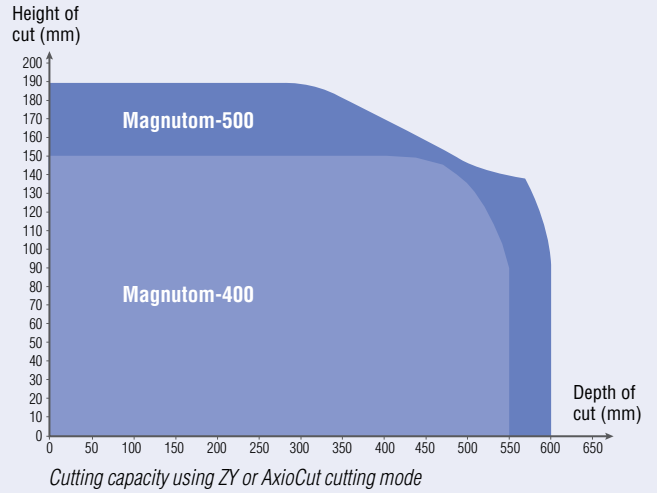
with large 200 l tank and 500 m filter paper roll

*Optional

CUTTING SPECIFICATIONS - Magnutom-500



CUTTING CAPACITY



Subject

Specification

		Metric / Imperial
Cutting capacity (max) Magnutom 500		ø189 mm / 7.4"
		189 x 280 mm / 7.4 x 11"
		92 x 600 mm / 6.6 x 23.6"
Cutting capacity (max) Magnutom 400		ø151 mm / 5.9"
		151 x 403 mm / 5.9 x 15.9"
		92 x 550 mm / 3.6 x 21.7"

PHYSICAL SPECIFICATIONS

Cutting motor	Cutting power (S1)	11 kW / 14.7 HP
	Cutting power (S3)	16 kW / 21.5 HP
Cut-off wheel for Magnutom 400	Diameter x Thickness x Centre-hole	432 x 3.0 x 32 mm / 17 x 0.12 x 1.26"
	Rotational speed (at rated load)	1000-1950 rpm
Cut-off wheel for Magnutom 500	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)	1000-1850 rpm
Positioning & Feed	Positioning range (of cut-off wheel)	Y= 385 mm / 15.16", Z= 235 mm / 9.25"
	Max. height of sample underneath cut-off wheel	(no limitation)
	Max. positioning speed	Y= 70 mm/sec / 2.75"/s, Z= 50 mm/sec / 1.97"/s
	Feed Speed range	0.1 – 10 mm/s / 0.002 – 0.2"/s
	(adjustable in steps of)	(0.1 mm/s / 0.002"/s)
	Cutting force	0-1400 N / 10-315 lbf
Cutting table	Fixed cutting table, Magnutom-400/-500	Width x Depth
		827x781 mm / 32.56 x 30.75"
	X-table (option)	Width x Depth (max.)
		942x781 mm / 37.10 x 30.75"
		Width x Depth (min.)
	673x781 mm / 26.50 x 30.75"	
X-table range		269 mm / 10.6"
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"
Surrounding temperature		5 - 40 °C / 41 - 104 °F
Humidity		0 - 95 % RH, non-condensing

ENVIRONMENT

Noise level Approx. 65 dB(A) running idle, at a distance of 1.0 m / 39.4" from the machine.

ELECTRICAL DATA

Specification

Cutting Power at constant duty, S1	Cutting Power at intermittent duty, S3 15%	Max. Power	Nom. Load	Max. Load
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Voltage / frequency:

3 x 380-480 V / 50-60 Hz	11 kW / 14.7 HP	16 kW / 21.5 HP	18 kW / 24.1 HP	23 A	63 A
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SPECIFICATIONS

Magnutom-400 with fixed table

Automatic cut-off machine for ø432 mm (17") cut-off wheels. Motor with variable spindle speed. With ExciCut, AxioCut and OptiFeed. Fixed cutting table. Bandfilter recirculation cooling unit and clamping tools are ordered separately.

Cat. no:	Voltage
06276146	3 x 380-480V / 50-60 Hz

Magnutom-400 with automatic x-table

Automatic cut-off machine for ø432 mm (17") cut-off wheels. 15-20 kW motor with variable spindle speed. With ExciCut, AxioCut and OptiFeed. Automatic x-table. Bandfilter recirculation cooling unit and clamping tools are ordered separately.

Cat. no:	Voltage
06276246	3 x 380-480V / 50-60 Hz

Magnutom-500 with fixed table

Automatic cut-off machine for ø508 mm (20") cut-off wheels. Motor with variable spindle speed. With ExciCut, AxioCut and OptiFeed. Fixed cutting table. Bandfilter recirculation cooling unit and clamping tools are ordered separately.

Cat. no:	Voltage
06146146	3 x 380-480V / 50-60 Hz

Magnutom-500 with automatic x-table

Automatic cut-off machine for ø508 mm (20") cut-off wheels. 15-20 kW motor with variable spindle speed. With ExciCut, AxioCut and OptiFeed. Automatic x-table. Bandfilter recirculation cooling unit and clamping tools are ordered separately.

Cat. no:	Voltage
06146246	3 x 380-480V / 50-60 Hz

Struers' equipment is in conformity with the provisions of the applicable International Directives and their appurtenant Standards. (Please contact your local supplier for details)

Struers' products are subject to constant product development. Therefore, we reserve the right to introduce changes in our products without notice.

ACCESSORIES

Laser straight edge

Laser alignment aid for Magnutom-400/-500. Visualizes cutting line.

06146915

Demister

Centrifugal separator for Magnutom-400/-500. Removes coolant mist for better viewing.

06146912

Signalling light

Signalling light for Magnutom-400/-500. Coloured light displays machine status.

06146913

Safety Extension Box for Magnutom-400/-500

For cutting of long workpieces protruding from cutting chamber, to be mounted on the left hand side of Magnutom-400/-500. For workpieces with a maximum size of h x w: 107.8 x 327 mm / 4.2" x 12.8". Max load 200 kg. Includes tunnel, rubber curtain and windowless side door.

06146914

Replacement stainless steel bands

For Magnutom-400/-500 cutting table. 60 x 781 mm. Set of 2.

06146916

XL Vertical clamping tool for 12 mm T-slots

For clamping irregularly shaped workpieces on the cutting table. Suitable for all machines with 12 mm T-slots. Clamping height is adjustable up to 176 mm (with riser block). Complete with operating key and one flat clamping shoe.

05876936

XL Quick clamping tool for 12 mm T-slots, left

For securing regular workpieces on left side of cut-off wheel. Complete with backstop and spanner.

Jaw movement:
60 mm. Max. height: 116 mm.

05876928

XL Quick clamping tool for 12 mm T-slots, right

For securing regular workpieces on right side of cut-off wheel. Complete with backstop and spanner.

Jaw movement:
60 mm. Max. height: 116 mm.

05876929

XL Prism type jaw blocks for 12 mm T-slots

Set of 2 jaw blocks for optimum clamping of round and oval workpieces. For use with XL Quick clamping tool (058769XX).

05876930

XL Grooved jaw blocks for 12 mm T-slots

Set of 2 jaw blocks for optimum clamping of regular workpieces. For use with XL Quick clamping tool (058769XX).

05876931

ACCESSORIES

Chain spanner for 12 mm T-slots

Complete with anchor block and operating key.

05046912

0.5 m Extension chain

For use with Chain spanner (05046912). Including chain assembly set.

05046924

Riser block for 12 mm T-slots

Increases the clamping height of the 12 mm vertical clamping tool by 74 mm.

05046905

Arm extension for Vertical clamping tool

For extending clamping arm of 8 mm, 10 mm and 12 mm Vertical clamping tool (05036915, 05116905, 05046904).

05046906

Support block with base plate, for 12 mm T-slots

Turnable, horizontally and vertically adjustable support block with base plate. Height adjustment range: 20 mm. Used with customizable crowns (05876902), which are ordered separately. Additional support blocks (05876923) can be added to the base plate.

05876901

Support block for 12 mm T-slots

Turnable, horizontally and vertically adjustable support block. Height adjustment range: 20 mm. Fits directly into 12 mm T-slot. Used with customizable crowns (05876902/03/04), which are ordered separately.

05876924

Extra Support block, 12 mm

Additional support block for use with Support block (05876901)

05876923

Crown for Support block, 60-80 mm

Customizable crown. Used with Support block (05876901 or 05876924), the crown offers a height adjustment range of 60-80 mm.

05876902

Crown for Support block, 80-100 mm

Customizable crown. Used with Support block (05876901 or 05876924), the crown offers a height adjustment range of 80-100 mm.

05876903

Crown for Support block, 100-120 mm

Customizable crown. Used with Support block (05876901 or 05876924), the crown offers a height adjustment range of 100-120 mm.

05876904



FLEXIBLE CLAMPING

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About Struers

Struers is the world leader in materialographic innovation. We develop, manufacture and distribute quality materialographic preparation solutions to help our customers realize maximum productivity and performance in laboratories and production facilities around the world. Struers is based in Copenhagen, Denmark with affiliates in 23 countries. We have employees globally, including experienced metallographers, qualified service personnel, and a worldwide network of dealers.

Learn more

Contact a Struers sales representative today or visit www.struers.com/magnutom