



CUT-OFF MACHINE

QCUT 500 A

The Qcut 500 A is the powerhouse of the large cut-off machine family. Equipped with a highly dynamic axis drive and automatic travel cut/chop cut functions, the system cuts large components with exceptional precision, minimal contact, and outstanding speed.

- | Fast, powerful cuts: The highly dynamic axis drive allows rapid traverses of up to 80 mm/s and greatly reduces cutting time
- | Versatile applications: Cutting of particularly long samples is easily possible thanks to side openings on both sides
- | Multi-Position Process (MPP): Simultaneous positioning and automatic cutting of different components on the machine table



CUT-OFF MACHINE QCUT 500 A  
**SUPERIORITY IN DETAIL**

**1. Ergonomic control panel**

- | Large 12.1" industrial touchscreen with intuitive QATM software
- | Quick setup, control of all axes with joystick

**2. Robust machine body**

- | Sturdy powder-coated aluminum construction
- | Integrable recirculating cooling unit
- | Automatic central lubrication of the axes

**3. Large machine table**

- | Made of stainless steel with integrated longitudinal and cross T-slots
- | Secure clamping of complex workpiece shapes using the T-slot table or Easy clamping system

**4. Large cutting chamber**

- | Large sliding door provides easy access and visibility
- | Side swing door for convenient access to cutting chamber
- | Side openings on the right and left for long samples
- | Break-resistant LED interior lighting

**5. Optimized swivel arm**

- | Highly efficient cooling system
- | Increased cutting capacity thanks to parallel guided cut-off wheel guard
- | Laser alignment aid for easy workpiece positioning



## CUT-OFF MACHINE QCUT 500 A

### FEATURES



#### STAINLESS STEEL MACHINE TABLE

Spacious machine table enables precise work even under heavy loads.

- | Integrated T-slots for the Easy clamping system for quick mounting of clamping tools
- | Efficient and reliable fixation of complex geometries using clamping devices
- | Load capacity up to 120 kg (including clamping devices)



#### LASER ALIGNMENT

Optional laser alignment projects the cutting line directly onto the workpiece, enabling precise positioning and exact cut placement.

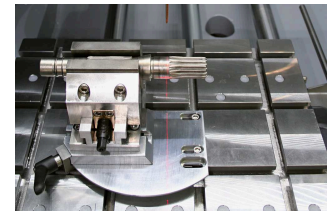
- | Easy positioning of workpieces
- | Precise clamping without much effort



#### ROBUST MACHINE WITH LARGE CUTTING CHAMBER

Robust, powder-coated aluminum machine body features a large sliding door with scratch-resistant laminated safety glass and convenient side access door.

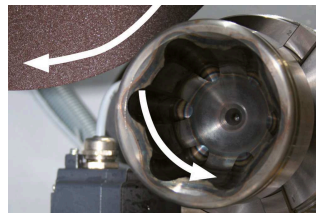
- | Machine body with integrable recirculating cooling unit and automatic central lubrication
- | Large cutting chamber access with safety interlock — doors open only



#### PRECISION CROSS FEED

The table-integrated Z-axis maintains consistent cutting height while the automatic cross feed with serial cutting function delivers precise parallel cuts.

- | Simple and intuitive serial cutting
- | The multi-position process (MPP) allows more complex serial cutting to be carried out



### ROTATION TOOL

The optional rotation tool features a vertical rotary feed parallel to the wheel with software-controlled angle input.

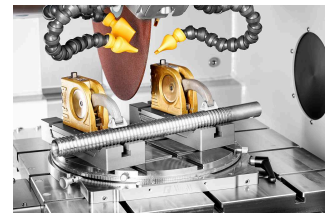
- | More uniform cutting surfaces and cutting quality
- | Cutting time is halved for rotationally symmetrical parts
- | Protects against cut-off wheel run-out



### INTUITIVE AND EASY OPERATION

Large 12.1" industrial touchscreen with intuitive QATM user software and joystick.

- | Easily manage process parameters and create customer-specific maintenance tasks (200 user programs can be saved)
- | Parameters such as feed rate, travel distance, and cutting force can be changed during automatic operation



### PULSED CUTTING

For thick and difficult-to-cut materials, the adjustable automatic pulsed cutting provides gentle sectioning with optimal cooling of the cut interface.

- | Enhanced cutting results for larger components
- | Superior cooling of contact surfaces



### CUTTING FORCE DEPENDENT FEED CONTROL (X- AND Y-AXIS)

The feed rate automatically decreases when cutting force reaches a preset limit, protecting the machine, sample, and clamping tools from overloading.

- | Time savings thanks to variable feed rate

CUT-OFF MACHINE QCUT 500 A

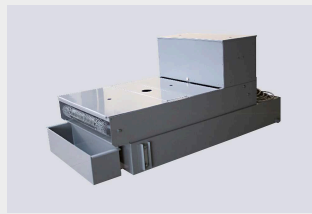
**ACCESSORIES**



**RECIRCULATION COOLING UNIT**

Compact, integrable cooling system for standard applications.

- | Can be integrated into the housing and extended
- | Multi-chamber filtration
- | Inlet sieve with filter bag (see consumables)



**BELT FILTER SYSTEM**

Large cooling and filter system for continuous operation, e.g. in serial applications.

- | Tank size: 285 l
- | Filtering capacity: 100 l/min (referring emulsion)
- | Pump capacity: 100 l/min



**CENTRIFUGAL SEPARATOR**

Work safety: Working environment with improved air quality.

- | Removes coolant mist
- | Purifies the air and increases visibility
- | Exhaust power 452 or 500 m<sup>3</sup>/h depending on voltage

## PERFECT CUTTING - CUT-OFF WHEELS FROM QATM

Cutting is more reliable, safe and efficient when processed with the right ingredients: knowledge, care and the right choice of consumables and instruments. The Qprep range includes specially developed cut-off wheels for a wide variety of materials and requirements.

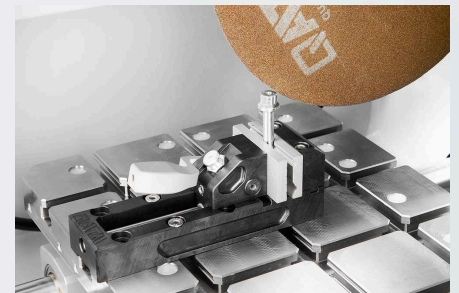
- | Low thermal influence on the specimen during the cutting process
- | Wet abrasive cutting achieves very fine surface finishes after cutting
- | Optimal cutting shortens the further preparation process



## FAST, POWERFUL, FLEXIBLE - QTOOL CLAMPING DEVICES

Our innovative clamping devices are used to clamp workpieces securely and precisely to ensure exact cutting and grinding processes. There is a wide range of different clamping devices that have been developed for specific applications and workpiece sizes.

- | Suitable for regular and irregularly shaped samples
- | Fast, repeat-accurate clamping of regularly shaped samples
- | Large range of different clamping tools and systems available



## CUT-OFF MACHINE QCUT 500 A

### TECHNICAL DATA



### FEATURES

<b>Cutting wheel</b>	up to $\varnothing$ 508 mm/20"
<b>Max. cutting capacity</b>	$\varnothing$ 190 mm
<b>Feed rate</b>	0.001 - 50 mm/sec
<b>Wheel flange size</b>	$\varnothing$ 32/40 mm
<b>X-axis automatic</b>	420 mm
<b>Y-axis automatic</b>	280 mm
<b>Z-axis automatic (option)</b>	200 mm
<b>Precision Z-axis</b>	0.1 mm
<b>Table with Z-axis WxD</b>	550 x 500 mm, stainless
<b>Table without Z-axis WxD</b>	700 x 500 mm, stainless
<b>T-slot</b>	12 mm
<b>Speed</b>	variable 1000-2800 /1000-2400 rpm
<b>Connection power</b>	30 KVA
<b>Drive power (main drive)</b>	15 kW, SI operation

**W x H x D**

1300 x 1820 x 1250 mm

**Weight**


~ 1000 kg (depends on equipment)

[www.qatm.com/qcut-500-a](http://www.qatm.com/qcut-500-a)

## ORDER DATA

### BASIC EQUIPMENT

#### MACHINE (ALL ITEMS REQUIRED)

M1832000  Qcut 500 A (Brillant 275) Base machine

#### POWER SUPPLY (1 ITEM REQUIRED)

A1832000 Qcut 500 A power supply 400V/50Hz (3Ph/N/PE)

A1832002 Qcut 500 A power supply 480V/60Hz (3Ph/PE)

#### WHEEL GUARD (1 ITEM REQUIRED)

A1832001 Qcut 500 A wheel guard 432mm 17"

A1832010 Qcut 500 A wheel guard 508mm 20"


#### CROSS FEED (1 ITEM REQUIRED)

A1832008 Qcut 500 A table with X-axis

A1832011 Qcut 500 A table with X/Z-axis

#### RECIRCULATION SYSTEM (1 ITEM REQUIRED)

A1832005  Qcut 500 A recirculation system 400V/50Hz (3Ph/PE)

A1832006  Qcut 500 A recirculation system 480V/60Hz (3Ph/PE)


A6501000  Belt filter 285 400V/50Hz (3Ph/PE)

A6501002  Belt filter 285 480V/60Hz (3Ph/PE)

Z6501000 Connection set belt filter 285

#### OPTIONS (TO BE ORDERED WITH MACHINE)

A1832004 Qcut 500 A laser alignment aid

A1832007  Qcut 500 A centrifugal separator 400V 50Hz (3Ph/PE)

A1832009  Qcut 500 A centrifugal separator 480V 60Hz (3Ph/PE)

## PRECISION CLAMPING DEVICES, CLAMPING\_DEVICES, PRECISION\_CLAMPING\_DEVICES

Z1870063 Reduction ring Ø 30 mm, Clamping\_devices, Precision\_clamping\_devices

Z1870069 Manual chuck Ø 44 mm, Clamping\_devices, Precision\_clamping\_devices

## QUICK CLAMPING TOOLS, CLAMPING\_DEVICES

### QTOOL 80, CLAMPING\_DEVICES, QTOOL\_SERIES

Z2231203 Qtool 80 - 100mm, Clamping\_devices, Qtool\_series

Z2231204 Qtool 80 - 150mm, Clamping\_devices, Qtool\_series

02231243 Clamping jaw 40 mm, Clamping\_devices, Qtool\_series

Z2231215 Clamping jaws 70 mm, Clamping\_devices, Qtool\_series

02231245 Clamping jaw 40 mm bevelled, Clamping\_devices, Qtool\_series

02231246 Clamping jaw 40 mm cross prism, Clamping\_devices, Qtool\_series

Z2231216 Clamping jaws 70 mm slotted, Clamping\_devices, Qtool\_series

Z2231217 Clamping jaws 70 mm slotted prism, Clamping\_devices, Qtool\_series

### QTOOL 80 VARIO, CLAMPING\_DEVICES, QTOOL\_SERIES

Z2231200 Qtool 80 Vario - 100 mm, Clamping\_devices, Qtool\_series

Z2231201 Qtool 80 Vario - 150 mm, Clamping\_devices, Qtool\_series

Z2231202 Qtool 80 Vario - 250 mm, Clamping\_devices, Qtool\_series

Z2231210 Workpiece stop, Clamping\_devices, Qtool\_series

02231200 Clamping jaw, 40 mm - for Qtool 80 Vario, Clamping\_devices, Qtool\_series

Z2231211 Clamping jaws, 70 mm, Clamping\_devices, Qtool\_series

02231213 Prism jaw, 40 mm, Clamping\_devices, Qtool\_series

02231229 Bevelled jaw, 40 mm, Clamping\_devices, Qtool\_series

02231230 Cross prism jaw, 40 mm, Clamping\_devices, Qtool\_series

Z2231212 Round bar jaws, 70 mm slotted, Clamping\_devices, Qtool\_series

Z2231213 Prism jaws, 70 mm slotted, Clamping\_devices, Qtool\_series

Z2231214 Clamping jaws, 70 mm slotted, Clamping\_devices, Qtool\_series

## POWER CLAMPING SYSTEMS, CLAMPING\_DEVICES, POWER\_CLAMPING\_SYSTEMS

POWER CLAMPING SYSTEM 100-540, CLAMPING\_DEVICES, POWER\_CLAMPING\_SYSTEMS

Z2234016 Power clamping system 100-540, Clamping\_devices, Power\_clamping\_systems

Z2234018 Prism clamping jaw, Clamping\_devices, Power\_clamping\_systems

Z2234017 Clamping jaw flat, Clamping\_devices, Power\_clamping\_systems

Z2234019 Angular drive, Clamping\_devices, Power\_clamping\_systems

POWER CLAMPING SYSTEM LC 90, CLAMPING\_DEVICES, POWER\_CLAMPING\_SYSTEMS

Z2234001 Power clamping system LC 90, Clamping\_devices, Power\_clamping\_systems

Z2234003 Carrier jaws LC 90, Clamping\_devices, Power\_clamping\_systems

Z2234004 V-groove jaw 100, Clamping\_devices, Power\_clamping\_systems

Z2234005 Clamping jaw flat, Clamping\_devices, Power\_clamping\_systems

Z2234009 Quick-change adapter, Clamping\_devices, Power\_clamping\_systems

Z2234008 Step jaw 100, Clamping\_devices, Power\_clamping\_systems

Z2234002 Clamping system X-Clamp 100, Clamping\_devices, Power\_clamping\_systems

Z2234006 Socket 90°, Clamping\_devices, Power\_clamping\_systems

## EASY-CLAMPING PLATES, CLAMPING\_DEVICES, EASY\_CLAMPING\_PLATES

## CLAMPING ACCESSORIES FOR ROTATING, SWIVELING AND SPECIAL APPLICATIONS, CLAMPING\_DEVICES, CLAMPING\_ACCESSORIES\_SPECIALS

Z1304636 Expansion clamping device, Clamping\_devices, Clamping\_accessories\_specials

Z1340000 Cross vice 80 - 100, Clamping\_devices, Clamping\_accessories\_specials



Z1340001 Cross vice 80 - 150, Clamping\_devices, Clamping\_accessories\_specials




#### ANGLE AND ROTATING VICES, CLAMPING\_DEVICES, CLAMPING\_ACCESSORIES\_SPECIALS

Z1304001 Angle vice 60, Clamping\_devices, Clamping\_accessories\_specials  
 01304008 Prism jaw angle vice 60, Clamping\_devices, Clamping\_accessories\_specials  
 Z1302000 Angle vice 80, Clamping\_devices, Clamping\_accessories\_specials  
 01302016 Prism jaw angle vice 80, Clamping\_devices, Clamping\_accessories\_specials

#### ROTATING DEVICES, CLAMPING\_DEVICES, ROTATION\_DEVICES

Z1870059 Rotation device type RD1, Clamping\_devices, Rotation\_devices  
 Z1891001 Rotation device type RD2.1, Clamping\_devices, Rotation\_devices

#### UNIVERSAL VICES AND ACCESSORIES, CLAMPING\_DEVICES, UNIVERSAL\_VICES\_AND\_ACCESSORIES

Z1350025 Clamping rail, Clamping\_devices, Universal\_vices\_and\_accessories  
 01350022 Prism 120°, Clamping\_devices, Universal\_vices\_and\_accessories  
 01350023 Prism slim, Clamping\_devices, Universal\_vices\_and\_accessories  
 01350024 Prism 90°, Clamping\_devices, Universal\_vices\_and\_accessories  
 01350025 Prism 90° high, Clamping\_devices, Universal\_vices\_and\_accessories  
 Z1350002  Universal vice Mono 6l, Clamping\_devices, Universal\_vices\_and\_accessories  
 Z1350004  Suitcase set universal vice Mono 6l, Clamping\_devices, Universal\_vices\_and\_accessories  
 Z1350011  Universal vice Mono 132, Clamping\_devices, Universal\_vices\_and\_accessories  
 Z1350005 Universal vice Duo, Clamping\_devices, Universal\_vices\_and\_accessories  
 Z1350006 Chain vice set, Clamping\_devices, Universal\_vices\_and\_accessories  
 92005796 Longitudinal v-shoe, Clamping\_devices, Universal\_vices\_and\_accessories  
 92005797 Traverse v-shoe, Clamping\_devices, Universal\_vices\_and\_accessories  
 92005799 Longitudinal bridge, Clamping\_devices, Universal\_vices\_and\_accessories  
 92005800 Traverse bridge, Clamping\_devices, Universal\_vices\_and\_accessories

92005798	Standard clamping shoe, Clamping_devices, Universal_vices_and_accessories
Z1350007	Height adapter 60mm Piccolo, Clamping_devices, Universal_vices_and_accessories
Z1350003	Height adapter 74mm Mono, Clamping_devices, Universal_vices_and_accessories
95003172	Clamping arm extension Piccolo 54 and Mono 61, Clamping_devices, Universal_vices_and_accessories
Z1304591	Fixing screw M6 x 25, Clamping_devices, Universal_vices_and_accessories
95003169	Fixing screw Piccolo M8 x 25, Clamping_devices, Universal_vices_and_accessories
95003170	Fixing screw Piccolo M10 x 25, Clamping_devices, Universal_vices_and_accessories
95003168	Fixing screw Mono M10 x 32, Clamping_devices, Universal_vices_and_accessories
91001157	T-slot nut - stainless M6 x 8, Clamping_devices, Universal_vices_and_accessories
91001161	T-slot nut - stainless M8 x 10, Clamping_devices, Universal_vices_and_accessories
91001159	T-slot nut - stainless M8 x 12, Clamping_devices, Universal_vices_and_accessories
91001158	T-slot nut - stainless M10 x 12, Clamping_devices, Universal_vices_and_accessories