



The **BRILLANT 220** is a compact, user-friendly precision wet abrasive cut-off machine. It can be fitted with up to three automatic axes (X, Y, Z) and several cutting modes for maximum flexibility and ideal use of space.

With its modular construction and different options and clamping tools the Brilliant 220 can be easily equipped for specific applications.



CONSTRUCTION

Openings on both sides of the solid aluminium construction allow sectioning of long or continuous parts up to $\varnothing 70$ mm. The cutting chamber which is illuminated by energy-saving LED is easily accessible through a sliding front door and the side door with safety interlock.

The cut-off wheel is water cooled by versatile jointed hoses on both sides. Further the machine can be equipped with a quick-change-system for easy and time saving changing of the cut-off wheel.

AXES

The Brilliant 220 is standardly equipped with automatic vertical cut-off (Y-axis, 80 mm) and definable regulated travel for large cut-off wheels. The horizontal movement (X-axis, 210 mm) is available in automatic or manual mode.

In combination with optional cross-feed (Z-axis, 80 mm) it allows maximum flexibility for precise, soft touch cutting.



CONTROL

To reduce time for setting up, all axes can be controlled with a joystick.

The built-in electronic control with its simple and clearly defined touch screen display enables easy programming, storage and loading.

During the automatic cutting process all parameters such as feed speed, cutting force etc. can be monitored and modified.





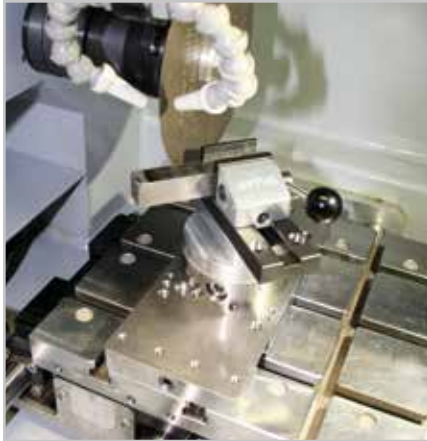
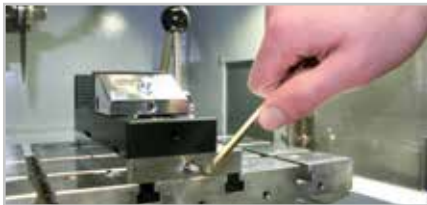
FEED CONTROL

The feed adjusts automatically to different thickness and hardness of materials. The feed speed is variable.

PULSED CUTTING

In pulsed cutting mode the feed speed is interrupted and continued in opposite direction periodically. This helps the wheel stay sharp and allows coolant to flush the point of contact, clearing debris and keeping the material cool.

The characteristic, pulsed cutting in definable intervals can be switched on to every cutting mode.



EASY-CLAMPING SYSTEM



ROTAVICE

CUTTING MODES

Step and diagonal cut optimize the operating angle for gently cutting. The step cut divides the sample in layers and is especially suited for large parts and bulky materials.

The diagonal cut is recommended for asymmetrical specimens; this is done by combining vertical and horizontal cut modes.

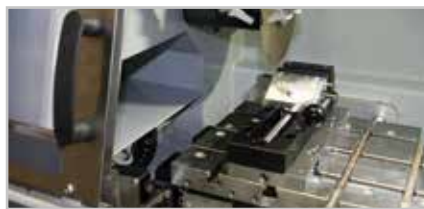
PRECISION CROSS FEED

The automatic cross feed with serial cutting function produces precise parallel cuts of 1 μm (0.001 mm) in equal or varied sizes.

The preselected cut-off wheel thickness is automatically included in the process. The integrated Z-axis can also be used as a precision cross feed for pot wheels (thin cuts).

SHARPENING DEVICE

Diamond cut-off wheels and pot wheels can be dressed easily with the sharpening device. The sharpening device is manually operated by a lever from outside and during the operation sequence.



FAST LOCK VICE 50

LASER

With line laser you can display the scheduled cut on the sample. This helps to define the exact cutting position.

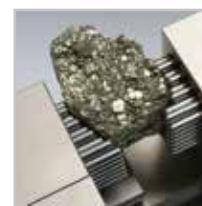


CLAMPING TOOLS

The Brillant 220 is equipped with the innovative ATM-easy-clamping system. This makes changing and adjusting of clamping tools very easy and supersedes fixing by T-slots.

All clamping tools, e.g. Fast Lock Vice 50, 60, 80, X-Clamp, Vacuum Vice and Rotavice can be fitted with the Easy-clamping system.

VACUUM
CLAMP



X-CLAMP 3858





BASIC MODULE



BRILLANT 220

Order No.: M1890000

- » Y-axis automatic
- » Openings on the left and right for continuous long parts
- » Sliding door
- » Table made of stainless steel
- » Electronic control with clear LCD
- » Electronic travel measuring
- » Cutting force dependent feed-control
- » Automatic pulsed cutting
- » Step cut, diagonal cut
- » Program storage
- » Direct positioning via joystick (all automatic axes)
- » Current safety standard with door interlock (safety protection)
- » Optimal cutting chamber with LED illumination
- » Solid aluminium construction, powder coated

EQUIPMENT

POWER SUPPLY (select equipment)

Equipment 1

230 V/50 Hz (1/N/PE)

Order No.: A1890000

Equipment 2

110 V/60 Hz (1/N/PE)

Order No.: A1890001

ARBOUR SIZE (select equipment)

Equipment 1

Fixed shaft fitting Ø12.7 mm

Order No.: A1890002

Equipment 2

Quick-change system

available soon

TABLE DRIVE (select equipment)

Equipment 1

X-axis manual (handle)

Order No.: A1890004

- » X-axis travel 210 mm
- » Precision 0.1 mm

Equipment 2

X-axis automatic

Order No.: A1890005

- » X-axis travel 210 mm
- » Precision 0.1 mm



E-Lab-ready



EQUIPMENT

CROSS FEED Z-AXIS (select equipment)

Equipment 1

without Z-axis

Order No.: A1890008

Equipment 2

Z-axis manual (handle)

Order No.: A1890009

- » Z-axis travel 80 mm
- » Precision 0.1 mm

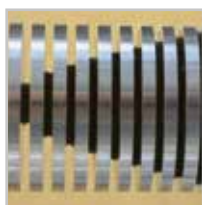
Equipment 3

Z-axis automatic

Order No.: A1890010

- » Z-axis travel 80 mm
- » Precision 0.001 mm

SERIAL CUTS WITH MIT Z-AXIS



OPTION

LASER ALIGNMENT AID

Order No.: A1890011

- » Laser line to visualize the cutting line
- » Laser class 2 EN/IEC 60825-1



ROTATION TOOL

on request

- » Tool with vertical rotary feed, parallel to wheel
- » Angle input via software control





ACCESSORIES

RECIRCULATION COOLING SYSTEM



- » No voltage selection required
- » Pump 8 Ltr./min
- » 24 V

Recirculation cooling system

Order No.: A1800160

- » Tank 15 Ltr.



- » Controlled by cut-off machine
- » 2-chamber-pvc-compartment
- » Incl. connection set

Mobile, with insertion mechanism for System lab cabinets

Order No.: A5800323

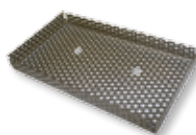
- » Tank 45 Ltr.

SHARPENING DEVICE



Order No.: A1890012

- » For dressing diamond and pot wheel



SAMPLE COLLECTOR

Order No.: Z1800002

- » Stainless steel, incl. fixing screws

SYSTEM LAB CABINET



Order No.: M5800044

- » System lab assembly
- » WxHxD 880x800x800 mm

CENTRIFUGAL SEPARATOR



400 V/50 Hz (3/PE)

Order No.: Z1820009

480 V/60 Hz (3/PE)

Order No.: Z1820012

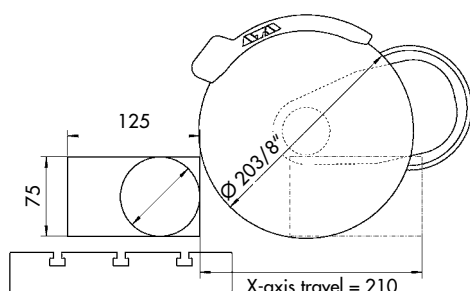
220 V/60 Hz (3/PE)

Order No.: Z1820011

- » To remove coolant mist
- » Increases quality of illumination
- » exhauster power 180 or 215 m³/h depending on power supply



SPECIFICATIONS

Max. cutting capacity $\varnothing 75$ mm (depends on cut-off wheel)

Cut-off wheel 75 - 203 mm/8"

Arbour size $\varnothing 12.7$ mm

VERTICAL / HORIZONTAL MOVEMENT (X-/Y-AXIS)

Table BxD 300 x 210 mm (T-slot 8 mm)

Feed 0.005 - 3 mm/sec

Precision 0.1 mm

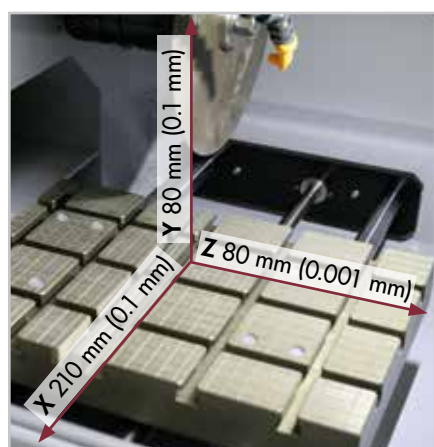
Vertical movement (Y-axis) 80 mm

Horizontal movement (X-axis) 210 mm

CROSS FEED (Z-AXIS)

Table BxD 280 x 210 mm
(T-slot 8 mm or Easy-clamping-system)

Feed 80 mm

Precision 0.001 mm (1 μ m)Variable speed 300 - 5000 rpm
in steps of 100 rpm

Connected load 2.3 kVA

Power supply 1 230 V/50 Hz (1/N/PE)
2 110 V/60 Hz (1/N/PE)

WxHxD 710 x 570 x 485 mm

Cutting chamber WxD 405 x 500 mm

Weight approx. 82 kg

