



The universal wet cut-off machine BRILLANT 275 meets the highest of demands on space available and possibilities for cutting with its innovative concept for design, construction and operation.

The automatic horizontal table (X-axis) and cutting wheel movement (Y-axis) can reach up to 80 mm/sec. through highly



#### OPERATION

**Touch-Screen display** for the ATM-Software control is easy to read thanks to smart phone technology and even easier to operate. Compact program sequences are easy to compile and therefore enable automated, password-secured program sequences. Update and back-up possible via USB.

#### CUT OPTIMIZATION

In addition to the type of cut, variable pulse-cut feed can also be selected. Rhythmic **pulsed feed** ensures regular cooling and removal of cutting debris from the sample.

#### REMOTE MAINTENANCE

Using your existing broadband Internet connection, ATM provides an online fault diagnosis and operator support.

## BRILLANT 275

dynamic axis drives in rapid-run. Parallel setting of the wheel guard during vertical cutting sequences increases the cutting capacity considerably. The large front and hinged door with safety lock enable access to the machine table with longitudinal and cross T-slots. Recirculating cooling and automatic central lubrication systems are integrated into the robust aluminum construction body of the machine.

#### CONTROL

A wide range of cutting procedures is at your disposal for the very best cutting results. Through the combination of this **unlimited range of positions**, series cuts or differing cut sequences can be made into reality - all made possible by such a large variety of positions. The cutting process is rightly supported by **controlled cut-off wheel revolutions**. **Control of the cutting speed** and a **soft start control** serve additionally for an economical cutting feed. Manual control commands in the X-/Z-/Y-axes are also possible using an industrial joystick.

#### LASER ALIGNMENT AID

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



#### MULTI-POSITION PROCESS MPP

With the "Multi-Position-Process" (MPP) you can place several different specimens on the table and cut them in one sequence.

#### TYPES OF CUT

**Travel and cutting wheel** offer a wide-ranging repertoire of types of cut through different combinations. In addition to the linear **diagonal cut**, the layer and segment-cuts are recommended for gentle cuts. The **layer-cut** is well-suited for cutting taller and longer objects as well as solid material. The **segment-cut** is especially suitable for large objects and hard materials.



## BASIC MODULE

## BRILLANT 275

**Order No.: M1832000**

- » automatic table (X-axis) and cutting wheel movement (Y-axis) can reach up to 80 mm/sec. through highly dynamic axis drive in rapid-run
- » equipment: automatic cross feed (Z-axis)
- » spacious cutting chamber with large T-slot table
- » machine table made of stainless steel with longitudinal and cross T-slots
- » parallel setting of wheel guard during vertical cutting sequences increases cutting capacity
- » Multi-position process MPP allows positioning of different components on the table simultaneously and adding into an automatic cutting process
- » economical cutting feed by control of the cutting speed and soft start control
- » variable speed
- » manual control of X-/Y-/Z-axis via an industrial joystick
- » Touch-Screen display with smart phone technology and ATM-Software control
- » smart phone optics for easy compilation of compact program sequences with position steps and cutting modes (travel-, cut-off-, diagonal-, layer- and segment cut)
- » an unlimited number of password-secured program sequences can be stored and updated; file exchange and backup via USB
- » ATM online-diagnostics and user support available
- » easy access to cutting chamber by large sliding and side door (with safety lock during wheel movement)
- » sliding door with large window made of scratchproof safety glass
- » options: laser alignment aid, centrifugal separator
- » incl. cutting wheel arbour with wear ring and optimum cutting chamber illumination
- » automatic central lubrication (6 bar compressed air required)
- » robust powder-coated aluminum construction body of machine
- » Easy-nut – for easy change of cutting wheel
- » e-Lab-ready



## EQUIPMENT

## POWER SUPPLY



Equipment 1

400 V/50 Hz (3Ph/N/PE)

Order No.: A1832000

Equipment 2

480 V/60 Hz (3Ph/PE)

Order No.: A1832002

## TABLE DRIVE



Equipment 1

**Table with X-axis**

Order No.: A1832008

- » made of stainless steel

Travel X-axis 420 mm

Precision 0.1 mm

Equipment 2

**Table with X/Z-axis**

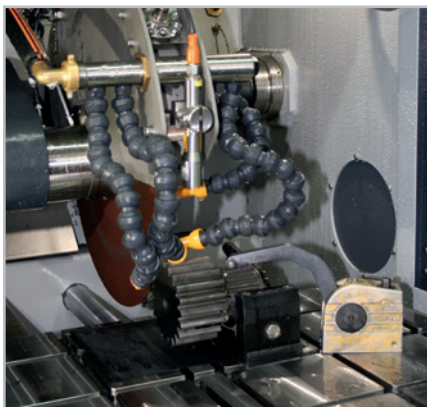
Order No.: A1832011

- » made of stainless steel

Travel X-axis 420 mm

Travel Z-axis 200 mm

Precision 0.1 mm



Clamping example

## EQUIPMENT

## WHEEL GUARD



Equipment 1  
**Cut-off wheel Ø 432 mm/17"**  
 Order No.: A1832001

Equipment 2  
**Cut-off wheel Ø 508 mm/20"**  
 Order No.: A1832010

## COOLING AND FILTER SYSTEMS



Equipment 1  
**Recirculation cooling unit**

400 V/50 Hz (3Ph/PE)

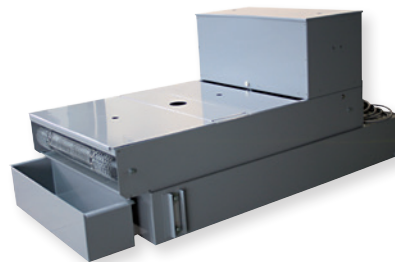
Order No.: A1832005

480 V/60 Hz (3Ph/PE)

Order No.: A1832006

Tank approx.	200 ltr.
Pump approx.	100 ltr./min
WxHxD	810x608x1008 mm

- » integrated, mobile
- » multi chamber filtration  
(see consumables)



Equipment 2  
**Belt filter system 285**

400 V/50 Hz (3Ph/PE)

Order No.: A6501000

480 V/60 Hz (3Ph/PE)

Order No.: A6501002

Tank	285 ltr.
Filter capacity	100 ltr./min (referring emulsion)
Pump	100 ltr./min
Filter area	0.85 m <sup>2</sup>
Filter fleece width	710 mm
WxHxD	929x790x1745 mm
Weight approx.	120 kg

- » incl. filter roll

**Connection set 275**  
 Order No.: Z6501000  
 » for belt filter system please order  
 connection set

## OPTION

## CENTRIFUGAL SEPARATOR



- » to remove coolant mist
- » increases quality of illumination
- » suction output 425 or 500 m<sup>3</sup>/h depends on power supply

400 V/50 Hz (3Ph/PE)

Order No.: A1832007

480 V/60 Hz (3Ph/PE)

Order No.: A1832009

## LASER ALIGNMENT AID



- Order No.: A1832004
- » laser line to visualize the cutting line
  - » laser class 2M Norm EN 60825-1

SPECIFICATIONS

Cut-off wheel	1	Ø 400 mm/17" *
	2	Ø 500 mm/20" **
Max. sample size	Ø 156 mm* / Ø 190 mm**	
Arbour size	Ø 32 + 40 mm	
Vertical movement	280*/240** mm	

Horizontal movement	420 mm
Feed rate	0.001-50 mm/sec

Z-axis automat.	200 mm (equipment)
Precision	0.1 mm

Table WxD	700 x 500 mm (without Z-axis)
	550 x 500 mm (with Z-axis)
T-slot	12 mm

Motor cut-off wheel	15 kW, S1-mode
Connected load	30 kVAyy
Variable speed	1000-2800 rpm*
	1000-2400 rpm**
Power supply	1 400 V 50 Hz (3/N/PE)
	2 480 V 60 Hz (3/PE)

WxHxD approx.	1300 x 1820 x 1250 mm
Weight approx.	1000 kg (depends on equipment)

use with cut-off wheel \* Ø 400 mm or \*\* Ø 500 mm

