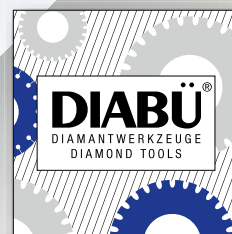


PRODUCT RANGE

High Performance Diamond Tools of DIABÜ®





The company

As an efficient manufacturer and supplier for the stone processing industry and trade, we have been producing diamond tools for more than 45 years for almost any and every application using only up-to-date production methods. We meet constantly demands made by our esteemed customers on such tools by integrating innovative technologies. Quality assurance integrated into all stages of production ensures continued consistency and high quality of our diamond tools. Moreover our major strength in production technique lies in our highly qualified and experienced staff. The basic understanding is strictly translated at all company levels as everybody feels responsible for the predetermined quality criteria, and the partner-like cooperation with our customers is the main object of our interest and work.





Application oriented research and development

For many years the production of high quality tools has been a guarantor for the successful activities of DIABÜ® Diamond Tools GmbH in the diamond tools branch. Our largest demand thereby is not only the permanent perfecting and further development of our tools but also the challenge to get a knowledge of problems in practice and to solve them professionally.

Our research and development department is working with high personal engagement very close together with our customers and suppliers. In order to that a practical and customer oriented product development can be obtained at the highest level and therefore is well prepared for the future. The research and development activity includes all fields of production and the future use of diamond tools as well.



The raw materials

The selection of raw materials, such as diamond grits and metal powders, will be chosen by strict quality characteristics which requires an exact knowledge of the specific material qualities. Not only the analysis certificates of our suppliers but additionally permanent checks on our raw material deliveries guarantee a constant high quality. With the knowledge of our raw material we are able to develop and optimize the segment characteristics directly.

In the last years special attention was focused on the breakage characteristic of diamond crystals. We researched possibilities to describe diamond qualities clearly in order to give an exact statement about the future cutting performance. By an intensive exchange of experience with the technical market leader for diamond syntheses a code system for diamond saw grit could be developed.

We were one of the pioneers of diamond tool producers which at first used successfully titanium or other coatings for diamond crystals and assisted our suppliers on their further developments for new coating systems.

The used metal alloys and bond mixtures have changed drastically in the last years and will be continuously advanced in the next years also. The future belongs to bond systems with excellent easy cutting characteristics and an simultaneously improved tool life. We are working with pre-alloyed and to our requirements adapted metal powders so that tailor-made segment characteristics and reproduceable qualities at the highest level can be delivered.



The manufacturing technologies

Our development activities concern also the technologies for the production of diamond tools. The granulate of bonds and the compression on volumetric high-tech cold presses belong to the milestones in our technical advancement such as the control of the latest vacuum sinter technologies.

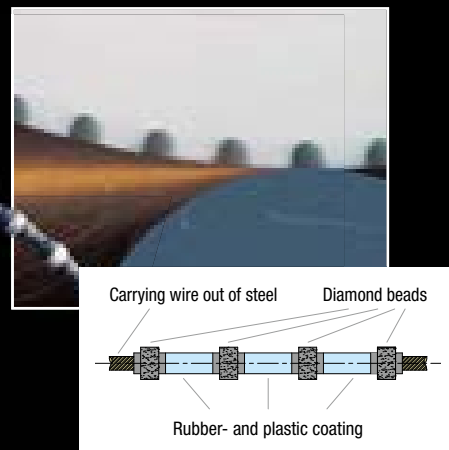
The extensive research of important process parameters and their influence on the performance of our tools led to new ways of permanent advancement. A complete documentation of all important parameters for all production steps and the permanent comparison between the theoretical and actual figures guarantee a constantly high and reproducible quality.

The process reliability which we need for the production of high-quality tools is guaranteed by the most modern production technologies and production lines.

The wire development is the typical example for a diamond tool which has been consistently optimized and further developed by DIABÜ® with exact analyses of existing tool characteristics. We were the first German manufacturer who produced vulcanized diamond wires which show excellent efficiency in all application fields and which also set a new standard in quarries, on block wire saws and on contour wire saws.

The finish of the saw blades is also being permanently advanced by us which includes soldering, tensioning, straightening and sharpening of the tools.

A dynamic optimization of our production will be done continuously by permanent investments into the latest machine technology.

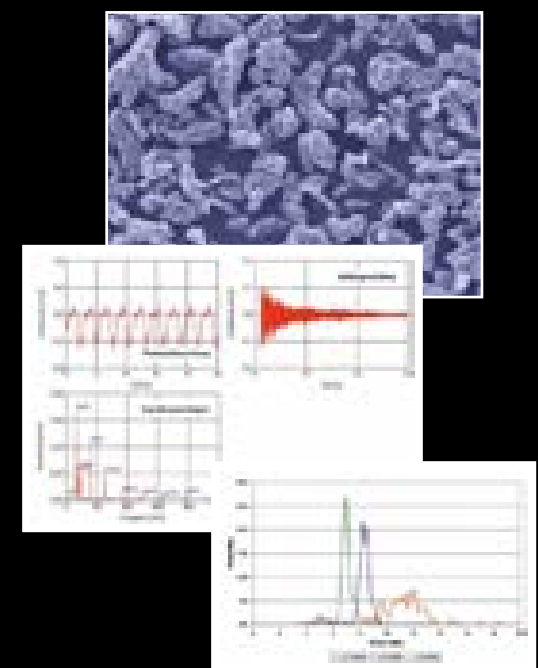


The research

We are working close together with research institutes and well-known suppliers. Tool performance data is determined in cutting tests on laborating machines under practice conditions. Characterisation of application performance shows the improvement possibilities. Very helpful are also series of tests in new materials which give information about their sawability.

The new gained knowledge runs from our application technology and sales department directly to our customers. Permanent customer visits, home and abroad, by our product development department are only natural and essential for a fast and effective development of our tools.

We furthermore will work highly motivated on the realization of new ideas in the future and therefore for our customers' success.





Service

...availability of DIABÜ® technicians to retip your tools with new DIABÜ® segments at any required location

...checking the current parameters at the customers' location and if necessary to optimize them to achieve the maximum tool life with highest productivity

... permanent contact to the customer with solution concepts in case of problems or new requirements of processing natural stone

... individual development of diamond tools for specific problems

... direct reply to requests of our customers

... short delivery times of our tools all over the world

... constant improvement and innovation with the aim of highest benefit for our customers

Quality, know-how and service are the base of our company's philosophy.

*Highly Qualified
Technicians*

*Optimized
Working Parameters*

*Individual
Problem Solutions*

*Short
Delivery Times*

*Constant
Improvement*



DIAMOND WIRES



SAW BLADES



GRINDING TOOLS



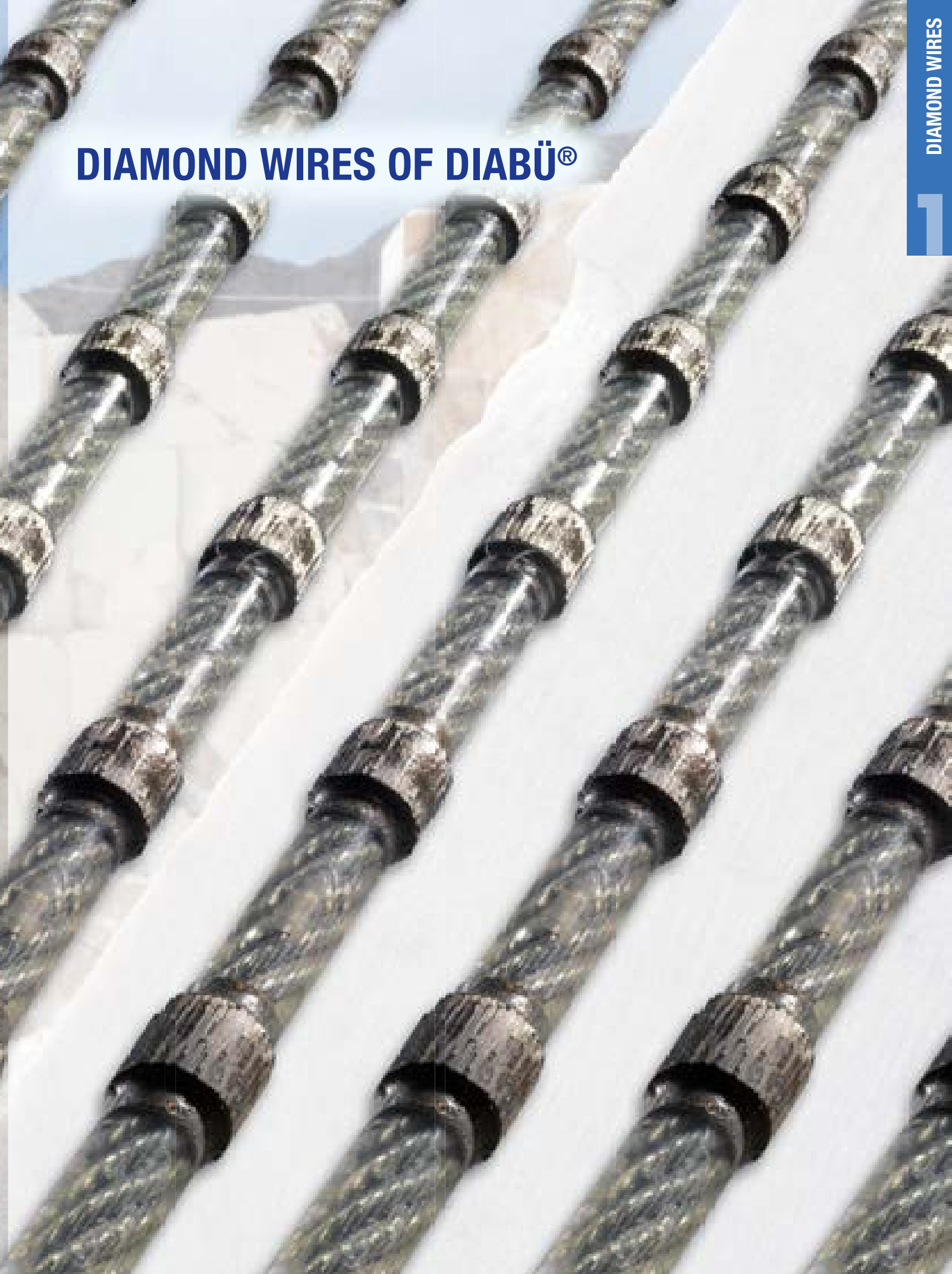
MILLING TOOLS

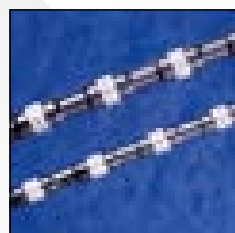


DRILLING TOOLS



DIAMOND WIRES OF DIABÜ®





DIABÜ® Diamond Wire

Components of the diamond wire

The diamond wire consists of

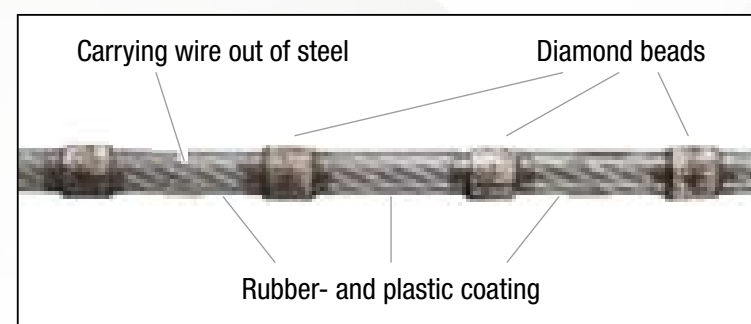
- a carrying wire out of steel
- diamond beads
- a rubber or plastic coating

The steel wire works as a carrier for the beads and the rubber or plastic coating. For this we only use special high load open twisted wires, whose engineered structure ensures a perfect wire rotation with appropriate pre-twisting.

The beads equipped with a diamond mantle segment carry out the actual cutting work. The base of these beads is a cobalt alloy, which has already proved its performance on our segments for diamond circular saws. This base has been modified in order to achieve optimum free cutting and long life characteristics for the wire saw. Embedded into this metal alloy is a diamond quality, which was chosen specifically for the use on diamond wire due to its extreme fractural strength and high quality crystal structure.

The rubber or plastic coating protects the carrier wire from corrosion and from the grinding effect of the material to be sawn. It is also responsible for the fixed sit of the diamond beads on the wire.

The use of new developed plastics or elastomer and their subsequent treatment techniques guarantee the high resistance to aging, the necessary wear and abrasive resistance and the indispensable wire flexibility even under extreme conditions of application.



We also provide the products for joining the wire.

The components of our **Repair Kit** are:

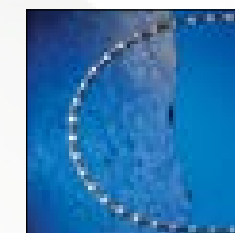
- Hydraulic handheld press
- Pneumatic press
- Pressing tools for hydraulic and pneumatic press
- Wire cutter
- Compressed air grinder
- Brass brush
- Connectors for steel wire for dia. 4 and 5 mm



DIABÜ® Diamond Wire *DIAPERL*®

The diamond wire is a relative new member of the diamond tool industry. In the middle of the eighties it was first used for the quarrying of soft types of granite in quarries.

Due to constant development the diamond wire can be used for quarrying all sorts of granite and marble materials. Its field of application has expanded beyond the use in quarries, too. It is used more and more on stationary machines for block shaping, processing and on contour wire saws. Nowadays, block processing has reached a new technology level; the multi wire system (up to 100 wires on one machine).



Advantages with the use of wire saw technology

The diamond wire gives a whole lot of advantages compared to the conventional methods of granite quarrying. Some of them are:

- High cutting speed
- High yield of material due to small cut
- Reduction in cutting-to-size of blocks due to its good pre-cut shape
- High cutting flexibility, all types of cuts are possible
- Significant reductions of noise level

Economical advantages as well as its flexible application possibilities have led to it, that diamond wires are also used on wire block saws. The following outstanding advantages compared to alternative processing methods can be mentioned:

- High cutting accuracy
- Low reworking costs
- High cutting flexibility
- Low investment costs
- High application flexibility
- Significant reduction of noise level
- Easy tool change

The diamond wire is not only useful for the rough processing of blocks. It can (and increasingly is) also be used for the production of complicated profiles in the field of monument design as well as of decorative objects for the construction industry.



As crucial advantages can be mentioned:

- Economical production of demanding objects
- Very high flexibility
- Very high profile accuracy
- Very high quality surface finish

In this connection our *DIAPERL*® wire saws distinguish themselves by exceptional high quality surface finish. Through this the reworking costs can be reduced quite significantly.

DIAPERL® saw wires are especially used for multi wire saws and contour wire saws. A field of application where diamond wire has been showing its advantages for some time is the reconstruction of buildings and churches.





DIABÜ® Diamond Wire *DIAPERL*® for Multi Wire Saws

DIAPERL® Multiwires refer to steep increasing demand of quality wires required for multi wire machines.

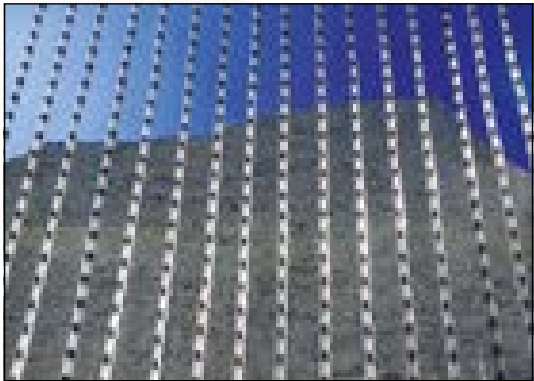
The technology of the multi wire machines replaces more and more the steel grit frame saws.

The reason for this is the extremely higher productivity with diamond saw wires in hard stone and soft stone as well as their easier handling. Moreover this kind of stone processing treats our environment with care by more efficient use of electricity and lower disposal of sludge.

Additionally less cutting thickness increases the use of natural resource stone.

In order to cut more slabs out of the raw blocks, with less material loss, smaller wire diameters will be necessary. The wire construction consists of high tearproof steel wires coated with High-End Thermoplast plastics. The multi wires are delivered closed or endless spliced and manufactured in close tolerances.

DIAPERL® Multiwires are characterized by low vibration sawing. Smooth operation, excellent cutting and surface quality achieve a result of best dimensional accuracy.



DIABÜ® Multiwire *DIAPERL*®

Performance

- Quiet running when sawing
- Low vibration sawing
- Very gentle for machines and equipment
- Very gentle for bearings
- Excellent cutting- and surface quality of the slabs
- Excellent dimensional stability of the slabs

Bead

- Saw beads with diameter 8,5 mm, 7,3 mm and 6,3 mm
- Usable diamond thickness 1,5 mm and 1,15 mm
- High impact-resistant synthetical diamond
- Even wear of the diamond beads
- Development of smaller diameters

Wire Construction

- High strength and flexible galvanized steel wire
- Reduced bending of the wire
- High abrasion-proof plastic coating
- According to application: 35 – 40 beads per meter
- Endless spliced or crimped joint
- Available plastified and if required with springs also

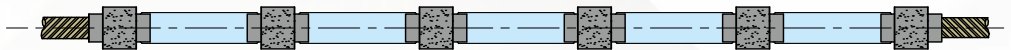
Guarantee

- Performance guarantee
- Repair Service
- Re-plastifying service

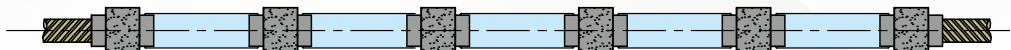
Product Overview *DIAPERL*® Multiwires

Bead Ø Outside (mm)	Beads No. of (pcs./m)
8,5	35 – 40
7,3	35 – 40
6,3	35 – 40

DIAPERL®-Diamond Wire, diameter 6,3 mm, plastified, available with 35 – 40 beads per meter



DIAPERL®-Diamond Wire, diameter 7,3 mm, plastified, available with 35 – 40 beads per meter

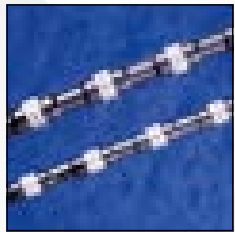


DIAPERL®-Diamond Wire, diameter 8,5 mm, plastified, available with 35 – 40 beads per meter



All the mentioned parameters should only be considered as recommendations based on experiences by application of our *DIAPERL*®-wire, but they can be chosen differently depending on machine type, wire type, materials to be cut and other influencing factors.





DIABÜ® Diamond Wire *DIAPERL*®
for Quarry Wire Saws

DIAPERL® quarry wires are vulcanized rubber wires for the professional extraction of granite-, sandstone- and quartzite blocks in quarries.

The vulcanized rubber wires are flexible, but nevertheless very robust due to the extremely good bond of the rubber on the wire litzes and the beads. So also under the hardest conditions rotating of the beads will be avoided. Sludge and water can not get into the litzes and damage the wire.

These DIAPERL® quarry wires have the best characteristics like high productivity and excellent easy cutting. Due to its core wire construction the wire turns are more constant, resulting in high tool life.

Product Overview *DIAPERL*® Quarrywires

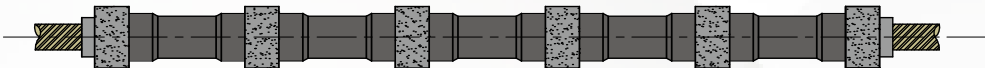
Beads No. of (pcs./m)	Bead Ø Outside (mm)
35	11
40	11

Cutting performance

Material	m²/h
Labrador dark	5,5 – 6,5
Labrador light	4,0 – 6,0
Black Galaxy	4,0 – 6,0
Impala	3,0 – 4,0
Belfast Black	2,5 – 3,0
Juparana	2,0 – 3,0
Grey	ca. 2,5
Rosa Porrinho	ca. 2,5
Dakota Mahagony	ca. 2,0
Travertin	10 – 14
Bej	6,0 – 8,0
Green Marble	3,0 – 4,0
White Marble	ca. 6
Madurai Gold	8 – 12
Visak Blue	5 – 6
Viskont White	4 – 6
Multi Colour Red	3 – 4

m²/h can be doubled or tripled for machines of up to 90 KW

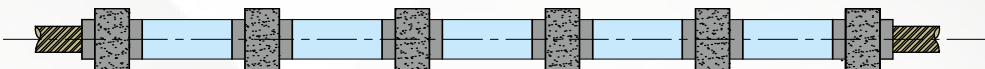
DIAPERL®-Diamond Wire, diameter 11 mm, vulcanized, available with 35 or 40 beads per meter



DIAPERL®-Diamond Wire, diameter 11 mm, vulcanized with springs, available with 35 or 40 beads per meter



DIAPERL®-Diamond Wire, diameter 11 mm, plastified, available with 35 or 40 beads per meter



DIAPERL®-Diamond Wire, diameter 11 mm, plastified with springs, available with 35 or 40 beads per meter

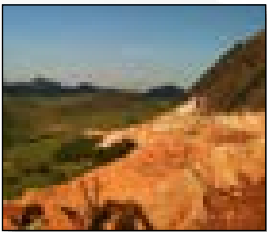


All the mentioned parameters should only be considered as recommendations based on experiences by application of our *DIAPERL*®-wire, but they can be chosen differently depending on machine type, wire type, materials to be cut and other influencing factors.

The new generation of DIABÜ® Diamond Wires: *DIAPERL-HELIX*®

Advantages of *DIAPERL-HELIX*®

- Vulcanized injection-moulding diamond saw wire
- Strong bond between rubber, bead and core wire
- Vulcanized wires improve the safety
- No rotating of beads
- Improved wire construction
- More robust core wire with high tear strength
- Very good wire flexibility and constant wire rotation
- Excellent easy cutting characteristics
- High productivity
- Improved and equal wear by Helix structure
- Improved sludge- and water transport when cutting
- Flexible but robust
- Bead diameter 11 mm, 40 beads per meter





DIABÜ® Diamond Wire *DIAPERL*® for Block Saws

Down feed

Toolpart width	Lowering (cm/h)		
	Kind of Granite		
	soft	medium	hard
2,0 – 2,5 m	approx. 70	approx. 50	approx. 45
2,5 – 3,0 m	approx. 60	approx. 45	approx. 35
3,0 – 3,5 m	approx. 45	approx. 40	approx. 30

Cutting performance

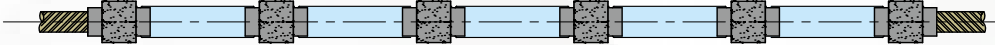
Kind of Granite	m²/h
soft (class I+II)	1,4 – 1,8
medium (class III)	1,0 – 1,4
hard (class IV+V)	0,9 – 1,2



DIAPERL® plastified

Beads No. of (pcs./m)	Bead Ø Outside (mm)	Diamond layer Length (mm)
35 – 40	7,3	6
35 – 40	8,5	6
35 – 40	11	6

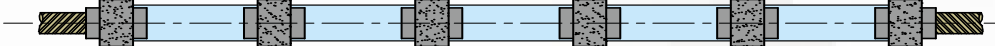
Diameter 7,3 mm, plastified, available with 35 – 40 beads per meter



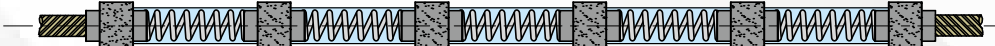
Diameter 7,3 mm, plastified, with springs, available with 35 – 40 beads per meter



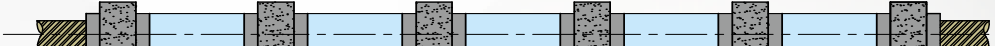
Diameter 8,5 mm, plastified, available with 35 – 40 beads per meter



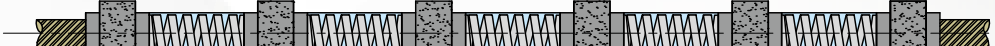
Diameter 8,5 mm, plastified, with springs, available with 35 – 40 beads per meter



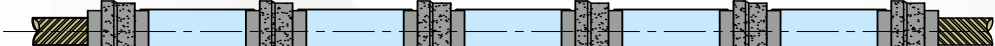
Diameter 11 mm, plastified, available with 35 – 40 beads per meter



Diameter 11 mm, plastified, with springs, available with 35 – 40 beads per meter



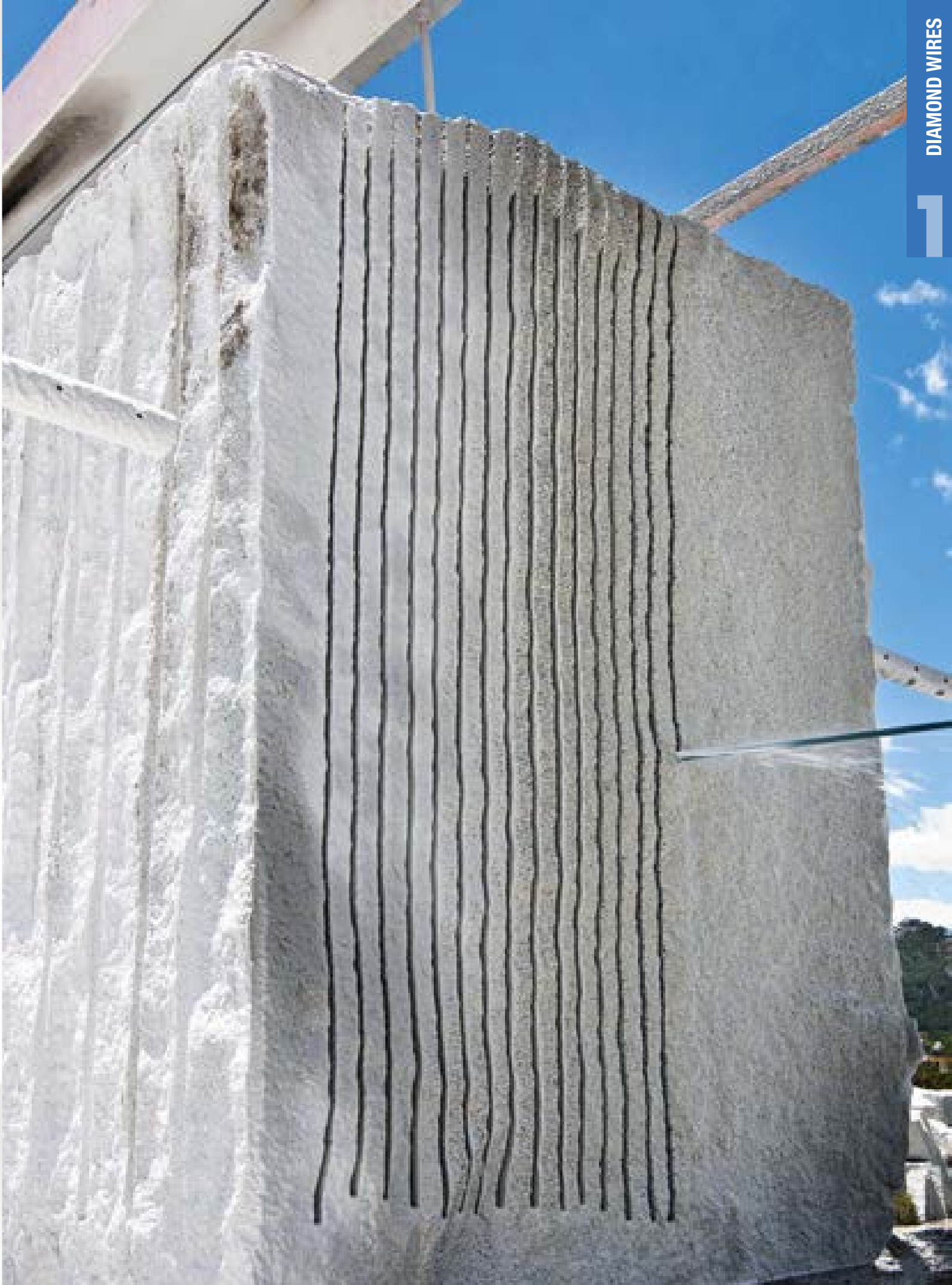
Diameter 11 mm, GT, plastified, available with 35 – 40 beads per meter



Diameter 11 mm, GT, plastified, with springs, available with 35 – 40 beads per meter



All the mentioned parameters should only be considered as recommendations based on experiences by application of our *DIAPERL*®-wire, but they can be chosen differently depending on machine type, wire type, materials to be cut and other influencing factors.





DIABÜ® Diamond Wire *DIAPERL*® for Contour Wire Saws

Cutting performance

Kind of Granite	m²/h
soft (class I-II)	0,5 – 0,6
medium (class III)	0,35 – 0,5
hard (class IV+V)	0,2 – 0,3

DIAPERL® plastified

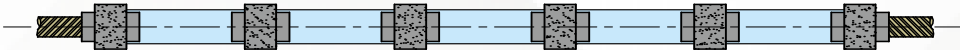
Beads No. of (pcs./m)	Bead Ø Outside (mm)	Diamond layer Length (mm)
35 – 40	8,5	6
35 – 40	11	6



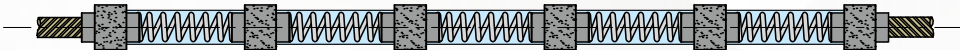
DIAPERL® vulcanized

Beads No. of (pcs./m)	Bead Ø Outside (mm)	Diamond layer Length (mm)
35 – 40	8,5	6
35 – 40	11	6

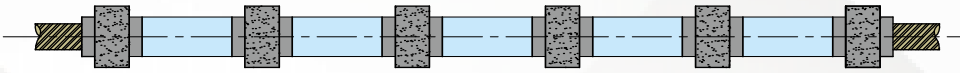
Diameter 8,5 mm, plastified, available with 35 – 40 beads per meter



Diameter 8,5 mm, plastified, with springs, available with 35 – 40 beads per meter



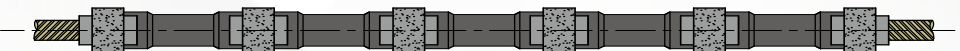
Diameter 11 mm, plastified, available with 35 – 40 beads per meter



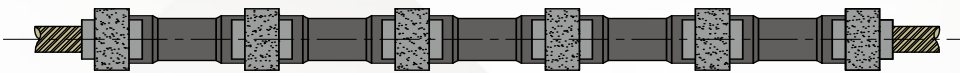
Diameter 11 mm, plastified, with springs, available with 35 – 40 beads per meter



Diameter 8,5 mm, vulcanized, available with 35 – 40 beads per meter



Diameter 11 mm, vulcanized, available with 35 – 40 beads per meter



All the mentioned parameters should only be considered as recommendations based on experiences by application of our *DIAPERL*®-wire, but they can be chosen differently depending on machine type, wire type, materials to be cut and other influencing factors.

Available wire connectors



Art.-No.:	00688	01988	00689	01989
Indication:	Ferrule	Ferrule	Ferrule	Ferrule
Size:	Ø 12/8,5 x 15 mm	Ø 9/5 x 25 mm	Ø 9/7 x 13 mm	Ø 8/5 x 25 mm
Material:	Copper	Copper	Copper	Copper
Application:	Block wire saw 11 mm		Block wire saw 8 mm	Block wire saw 11 mm



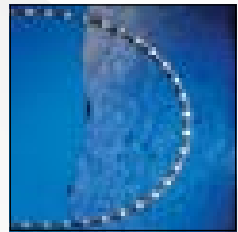
Art.-No.:	01017	02042	02005	00493
Indication:	Ferrule	Ferrule	Ferrule	Ferrule
Size:	Ø 9/5,3 x 30 mm	Ø 9/5 x 20 mm IG	Ø 9/5,1 x 20 mm	Ø 9/5,2 x 20 mm
Material:	Steel	Steel	Steel	Stainless Steel
Application:	Quarry wire	Quarry wire		



Art.-No.:	01002	02271	02208
Indication:	Ferrule	Ferrule	Ferrule
Size:	Ø 8/5,3 x 25 mm	Ø 8/4,2 x 18 mm	Ø 7/4,1 x 18 mm
Material:	Steel	Steel	Steel
Application:	Quarry wire Block wire saw 11mm		multi wire



Art.-No.:	01677	00672	01248	01890
Indication:	Screw cap	Screw cap	Screw cap	Screw cap
Size:	Ø 9,5/5 x 25 mm	Ø 9/5 x 30 mm	Ø 9/5 x 25 mm	Ø 7/4 x 23 mm
Application:	Contour wire	Contour wire	Contour wire	Contour wire



Connecting of *DIAPERL*®-Diamond Wires with hydraulic 10 t press

1. The wire ends have to be cut clean and even. Approx. 15 mm have to be left over to establish a connection.
2. The wire ends have to be deinsulated (approx. 12 – 14 mm, completely clean) and a small sleeve out of the rubber has to be left over.
3. Slip carefully the wire connector over the cleaned and opened wire end. Pre-twist at least once a meter that way so that the core wire threading is turned tighter.
4. The second wire end also has to be inserted into the wire joints. The ends have to be turned back and forth so that at least 10 mm are woven together.
5. First of all press down the 10 mm tool with the hydraulic 10 t press, turn 90 degrees and press a second time. Now keep on pressing with the 8 mm tool and after each press the wire connector has to be turned 90 degrees until it has reached a diameter of 8,5 mm and is pressed round nearly without a burr.

The deinsulation is done best if the wire perimeter has been cut off first with a sharp knife and afterwards the rubber has to be vertically carved in. Now the insulation can carefully be skinned up in one whole with a sharp pliers (if possible not to be torn off, too much rubber would therefore stay on the steel wire).

Now clean the wire ends completely with a soft brass brush. This has to be done best with our compressed air grinder (see our repair kit on page 12). The individual flexes of the steel wire have now to be bent with a small screwdriver. It is necessary to take care of, that the individual flexes will not be damaged or bent off. Again the penetrated rubber between the bent flexes has to be cleaned carefully with a soft brass brush.

Note

The above mentioned technique is at present the best method to get wire connectors with extreme high strength.

Generally the connection of wire saws is a process which only can be learned after several times.

Should there frequent wire connecting problems occur (wire end pulls out of the wire connector or a breaking off the wires-behind the wire connectors), please look at the two pages "TROUBLE SHOOTING" at the end of this chapter. The most often problems and their cause are listed there together with our solution proposal.

Torn wires, in which the wire has been torn off the wire connectors, are mostly the reason of rubber between the flexes or a too low pressing. Remember, remove all rubber before making a connection!

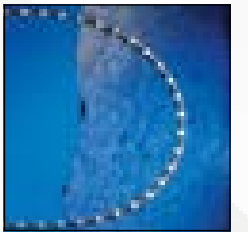
Read operating instructions before using our wires. Take care of all safety measures.

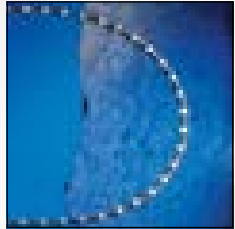


Precautenary measures and working parameters

Checking list for the mounting of diamond wires

- Check rotation of the diamond wire ("peg"- or colour marking method).
- Check if there are no obstacles in the danger area of the machine.
- Examine diamond wire before and after sawing for outer visible defaults. Only use wire without bends, cracks and without extreme uneven wear of the beads ($\pm 0,4$ mm).
Cut out loose beads or damaged connections with additionally extremely worn beads on the right and left side of the coupling and replace by new connections or repair pieces of wire. The diameter of the beads on the repair pieces has to be smaller or the same as the diameter of the existing beads, in order to avoid a blocking of the wire in the cut.
Use only repair pieces of the same diamond wire quality.
For crimping and cutting of diamond wires use only special tools and connectors, which are usually used for diamond wires.
- Pre-twist diamond wire sufficiently. Pre-twist at least once a meter that way, so that the core wire threading is turned tighter. Avoid bends and tight radius when pre-twisting.
- Pre-twist again after each opening or splitting of the wire.
- Check cutting direction of the wire. Run diamond wire only in the cutting direction marked by directional markers on the rubber or plastic coating.
- Check wire tension (parameters please see the following pages).
- Check the fixing of the work piece.
- Install deflection pulleys with sharp workpiece edges and small wrap radius. Guide too long, unguided wires by pressure wheels.
Secure all deflection, pressure and driving pulley firmly against loosening, in that process deflection and driving pulleys have to be aligned. Break sharp workpiece edges.
- Keep the safety distance to the diamond wire saw during cutting.
When working in the danger area of the wire saw stop the diamond wire.
- Pay attention to sufficient water supply at the entrance of the wire and in the cut.



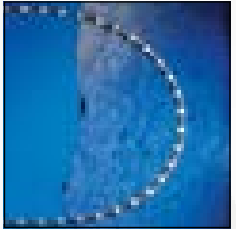


Trouble Shooting *DIAPERL®*-Diamond Wires

Problem	Cause	Solution
Unilateral wear of the wire	Not pretwisted enough	Twist at least once anti-clockwise
	Too much tension on the wire	Reduce down feed
	Distance too short between driving pulley and material	Increase distance
	Pulleys are inclined, the wire is stopped from rotating by flanks of the pulley	Correct alignment of pulleys with wire or guide line
Wire breaks at the connection	Too much tension on the wire	Reduce down feed
	Edges too sharp	Break the edges and install deflection pulleys
	Too much wear at the connection	Increase water supply
	Wrap radius too tight	Install deflection pulleys
	Wrong connection technique	Check press and pressing tool
Wire breaks behind the connection	Too much tension on the wire	Reduce down feed
	Wrap radius too tight	Install pulleys
	Edges too sharp	Break the edges and install pulleys
	Wire connection too long	Install crimp-type repair connection
	Too much vibration on the traction wire	Check wire for constant diameter and reduce down feed
	Contour wire saws with wire length less than 10 m	Use endless wire
Wire vibrates strongly	Tension of the wire too low	Increase down feed
	Edges too sharp	Break the edges and pull through by hand first
	Different diameters on the wire, wire connections too thick	Check wire for constant diameter, check connections
	Not enough deflection pulleys	Install more deflection pulleys
Wire vibrates fast and hard	Wire tension too much	Reduce down feed
	Wrap distances too long	Install more deflection pulleys
	Edges or iron too sharp	Break the edges or install deflection pulleys
	Number of revolutions too high	Reduce the number of revolutions of the driving pulley
Cut is not straight	Not enough deflection pulleys	Install more deflection pulleys with guide line and spirit-level
	Wire tension too low	Increase down feed or tension
	Deflection pulleys are not fixed or correctly aligned when replaced during cutting	Pay attention to precise alignment and fixing of the deflection pulleys when replacing

Trouble Shooting *DIAPERL®*-Diamond Wires

Problem	Cause	Solution
Wire beads are pushed together	Not enough water, leading to heating up	Supply more water or install more water nozzles with direction into the cut. Do not let water spray from bottom to top
	Sliding of the wire on the driving pulley, leading to heating up	Increase wire tension
	Wire whipping too long after wire break	Prevent wire whipping by pressure wheels or other collecting devices like panels, sheets etc.
	Sudden jamming in the material	Wedge the material
Wire pulls out of the crimped connection	Incorrect adjustment of pliers, not crimped enough	Check adjustment of pliers, crimp 6 – 7 times twisted by 90 degree
	Wire piece too short in the connection	Push crimped part of wire further into the bushings
	Too much wire tension, too much vibration	Reduce down feed
Cutting speed too low	Wire tension too low	Increase down feed
	Wrapping sections in the material too long	Install more deflection pulleys
	Wire polishes	Reduce water supply
	Number of revolutions too high	Reduce number of revolutions
	Not enough deflection pulleys, therefore too long wrapping section	Install more deflection pulleys
	Too much water supply	Reduce water supply
	Wire worn out	Install new wire
Wire polishes	Too much water supply	Reduce water supply
	Wire tension too low	Increase down feed
	Number of revolutions too high	Reduce number of revolutions
	Wrapping in the material too long	Install more deflection pulleys
Excessive wear of the wire	Not enough water supply	Increase water supply or install more water nozzles in the cut
	Number of revolutions too low	Increase number of revolutions
	Rotating or running direction of the wire mixed up	Pay attention to the direction of rotation of the wire
	Wrapping sections in the material too short	Increase the wrap radius in the material
Wire cuts grooves		Sharpen the wire
		Change peripheral speed
		Reduce water supply





Recommended Parameters DIABÜ® Diamond Wire *DIAPERL*® for Multi Wire Saws

Lowering

Type of granite	Peripheral speed (m/s)	Lowering (cm/h)
soft (class I+II)	24 – 32	25 – 40
medium (class III)	24 – 30	20 – 30
hard (class IV+V)	22 – 26	15 – 25

Recommended Parameters DIABÜ® Diamond Wire *DIAPERL*® for Quarry Wire Saws

Pretwisting

At least 1,5 times anti-clockwise per meter of wire. The twisting has to be done that way, that the strands of the wires are “tightended”.

The diamond wire should be started without any tension for approx. 5 min. So the twisting can spread out regular over the entire wire.

If the wire has been opened due to early ovalization, please retwist it clockwise 1 to 1,5 times per meter.

Peripheral speed

Type of stone	Peripheral speed
hard	24 – 28 m/s
soft	28 – 40 m/s

During the sharpening process, reduce water supply.

To reduce occuring vibrations of the wire, vary the peripheral speed or the down feed.

Cutting performance

Material	m²/h
Labrador dark	5,5 – 6,5
Labrador light	4,0 – 6,0
Black Galaxy	4,0 – 6,0
Impala	3,0 – 4,0
Belfast Black	2,5 – 3,0
Juparana	2,0 – 3,0
Grey	ca. 2,5
Rosa Porrinho	ca. 2,5
Dakota Mahagony	ca. 2,0
Travertin	10 – 14
Bej	6,0 – 8,0
Green Marble	3,0 – 4,0
White Marble	ca. 6
Madurai Gold	8 – 12
Visak Blue	5 – 6
Viskont White	4 – 6
Multi Colour Red	3 – 4

m²/h can be doubled or tripled for machines of up to 90 KW

Recommended Parameters DIABÜ® Diamond Wire *DIAPERL*® for Contour Wire Saws

Pretwisting

At least once per a meter of wire. The twisting has to be done that way, that the strands of the wires are “tightened”.

Tension

Diameter of wire 5 mm	250 – 350 kg
Diameter of wire 4 mm	160 – 250 kg

Rotation

Bottom strand	+ 210° up to + 360°
Top strand	+ 120° up to + 270°

Peripheral speed

Type of granite	Peripheral speed
soft (class I+II)	26 – 32 m/s
medium (class III)	26 – 32 m/s
hard (class IV+V)	26 – 32 m/s

The harder the material to be cut, the lower the peripheral speed. The longer the workpiece length, the lower the peripheral speed.

Cutting hard material with machines without speed control the wire can get blunt. Therefore, start cutting with new wires first in soft stone and always alternate between soft and hard materials, if possible.

Cooling

during cutting	20 – 30 l/min with 1 bar
----------------	--------------------------

When starting to cut, increase the water supply to approx. 40 l/min. With that, the water nozzles should point to that area, where the wire is going to touch the stone first. Not enough water increases the wear of the wire. Too much water reduces the cutting performance as well as the rotation of the wire and it can lead to breaking

Down feed

The down feed depends on the contour required and the material composition. The higher the workpiece width, the lower the down feed.

While entering the cut, use half feed rate.

Cutting performance

Type of granite	Cutting rate (m²/h)
soft (class I+II)	0,5 – 0,6
medium (class III)	0,35 – 0,5
hard (class IV+V)	0,2 – 0,3

Workpieces with thickness less than 7 cm will cause higher wear and ovalization of the segments.

All the mentioned parameters should only be considered as recommendations based on experiences by application of our DIAPERL®-wire, but they can be chosen differently depending on machine type, wire type, materials to be cut and other influencing factors.

All the mentioned parameters should only be considered as recommendations based on experiences by application of our DIAPERL®-wire, but they can be chosen differently depending on machine type, wire type, materials to be cut and other influencing factors.



Recommended Parameters
DIABÜ® Diamond Wire *DIAPERL*® for Block Wire Saws

Pretwisting

At least once a meter of wire. The twisting has to be done that way, that the strands of the wires are “tightened”.

Tension

Diameter of wire 5 mm	250 – 450 kg
Diameter of wire 4 mm	160 – 250 kg

Rotation

Bottom strand	+ 210° up to + 360°
Top strand	+ 120° up to + 270°

Peripheral speed

Type of granite	Peripheral speed
soft (class I+II)	26 – 28 m/s
medium (class III)	24 – 26 m/s
hard (class IV+V)	22 – 24 m/s

While using new, not sharpened wires reduce speed to 16 – 18 m/s for approx. 4 – 6 m² until wire appears sharp, then increase speed like the a.m. values.

The harder the material to be cut, the lower peripheral speed has to be chosen. The longer the length of the block, the lower peripheral speed has to be chosen.

Cutting hard material with machines without speed control the wire can get blunt. Therefore, start cutting with new wires first in soft stone and always alternate between soft and hard materials, if possible.

Cooling

when starting to cut	min. 50 l/min
----------------------	---------------

With that, the water nozzles should point to that area, where the wire is going to touch the stone first.

during cutting	20 – 30 l/min with 1 bar
----------------	--------------------------

One water nozzle should be positioned at the beginning and the next ones after each 40 cm that way, that the water flow is going directly into the cut. Not enough water increases the wear of the wire. Too much water reduces the cutting performance as well as the rotation of the wire and it can lead to breaking.

Down feed

Width of workpiece	Lowering (cm/h)		
	soft	medium	hard
2,0 – 2,5 m	ca. 70	ca. 50	ca. 45
2,5 – 3,0 m	ca. 60	ca. 45	ca. 35
3,0 – 3,5 m	ca. 45	ca. 40	ca. 30

The longer the block length, the lower the down feed.

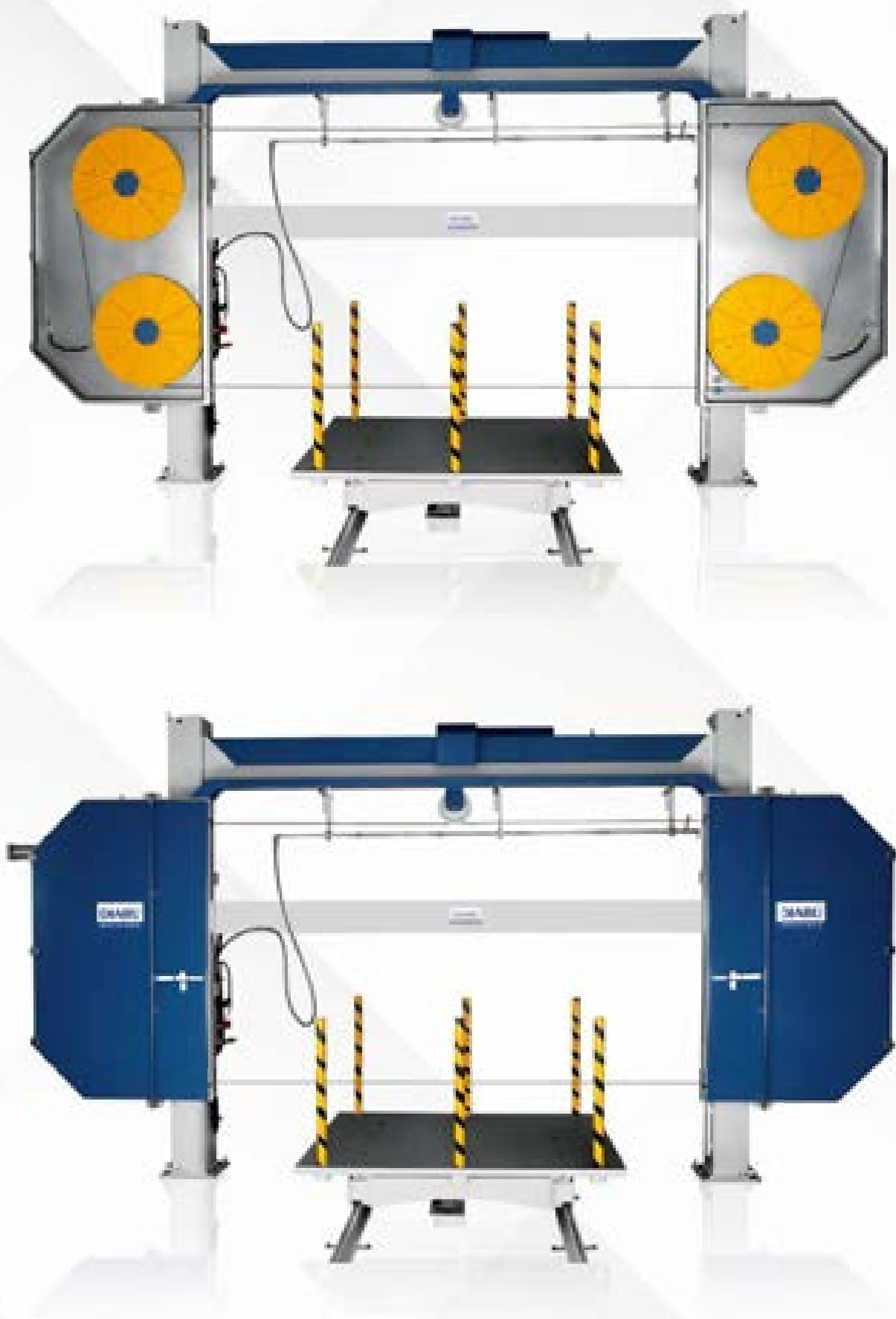
Cutting performance

The following cutting speeds result from the a.m. down feeds:

Type of granite	Cutting rate (m²/h)
soft (class I+II)	1,4 – 1,8
medium (class III)	1,0 – 1,4
hard (class IV+V)	0,9 – 1,2

Wire slope at the entrance of the cut

7° up to 9° respectively max. 70 mm wire slope for wire block saws



NEW: DIABÜ® Block Wire Saw – we produce the adequate machine for you.
Please get in contact with us for more details or a specific offer.

All the mentioned parameters should only be considered as recommendations based on experiences by application of our DIAPERL®-wire, but they can be chosen differently depending on machine type, wire type, materials to be cut and other influencing factors.



Diamond Wire *DIAPERL*® Product Overview

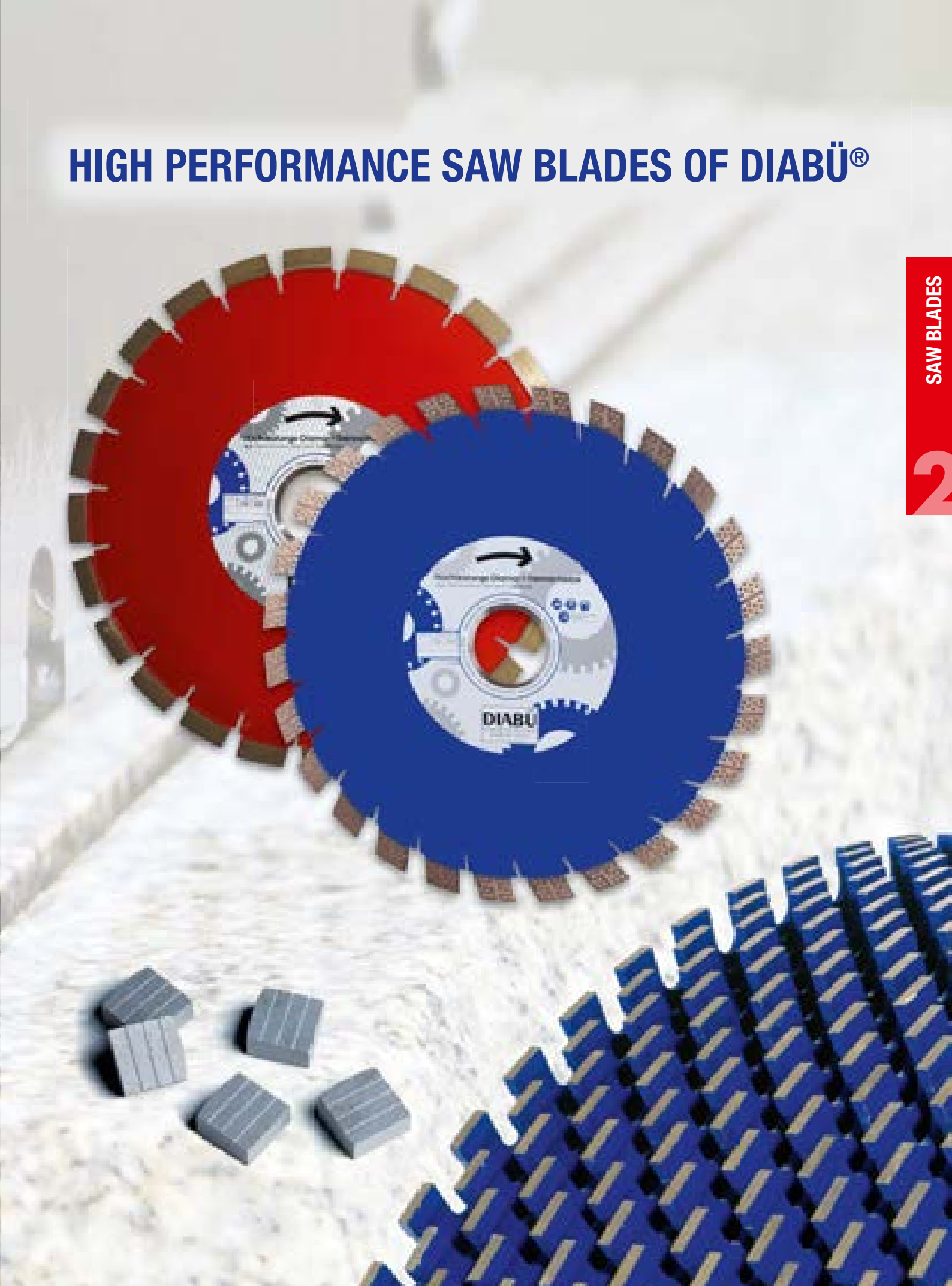
Diameter (mm)	Beads No. of (pcs./m)	Use	Design	Coating
6,3	35	Multi Wire Saws	cylindric	plastified
6,3	36	Multi Wire Saws	cylindric	plastified
6,3	38	Multi Wire Saws	cylindric	plastified
6,3	40	Multi Wire Saws	cylindric	plastified
7,3	36	Multi Wire Saws	cylindric	plastified
7,3	38	Multi Wire Saws	cylindric	plastified
7,3	40	Multi Wire Saws	cylindric	plastified
8,5	35	Multi Wire Saws, Block Wire Saws, Contour Saws	cylindric	plastified
8,5	36	Multi Wire Saws, Block Wire Saws, Contour Saws	cylindric	plastified
8,5	40	Multi Wire Saws, Block Wire Saws, Contour Saws	cylindric	plastified
11	35	Block Wire Saws, Contour Saws, Quarry	cylindric	plastified
11	36	Block Wire Saws, Contour Saws, Quarry	cylindric	plastified
11	38	Block Wire Saws, Contour Saws, Quarry	cylindric	plastified
11	40	Block Wire Saws, Contour Saws, Quarry	cylindric	plastified
11	35	Block Wire Saws, Quarry	Step Bead	plastified
11	36	Block Wire Saws, Quarry	Step Bead	plastified
11	38	Block Wire Saws, Quarry	Step Bead	plastified
11	40	Block Wire Saws, Quarry	Step Bead	plastified
7,3	36	Multi Wire Saws, Block Wire Saws	cylindric	plastified with springs
7,3	38	Multi Wire Saws, Block Wire Saws	cylindric	plastified with springs
7,3	40	Multi Wire Saws, Block Wire Saws	cylindric	plastified with springs
8,5	35	Multi Wire Saws, Block Wire Saws, Contour Saws	cylindric	plastified with springs
8,5	36	Multi Wire Saws, Block Wire Saws, Contour Saws	cylindric	plastified with springs
8,5	40	Multi Wire Saws, Block Wire Saws, Contour Saws	cylindric	plastified with springs
11	35	Block Wire Saws, Contour Saws, Quarry	cylindric	plastified with springs
11	36	Block Wire Saws, Contour Saws, Quarry	cylindric	plastified with springs
11	38	Block Wire Saws, Contour Saws, Quarry	cylindric	plastified with springs
11	40	Block Wire Saws, Contour Saws, Quarry	cylindric	plastified with springs
11	35	Block Wire Saws, Quarry	Step Bead	plastified with springs
11	36	Block Wire Saws, Quarry	Step Bead	plastified with springs
11	38	Block Wire Saws, Quarry	Step Bead	plastified with springs
11	40	Block Wire Saws, Quarry	Step Bead	plastified with springs
8,5	35	Contour Saws	cylindric	vulcanized
8,5	40	Contour Saws	cylindric	vulcanized
11	35	Quarry, Contour Saws	cylindric	vulcanized
11	40	Quarry, Contour Saws	cylindric	vulcanized

Diamond Wire *DIAPERL*® Product Overview

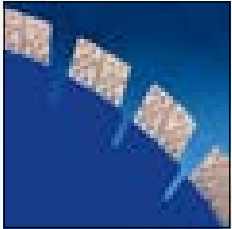
Imaging of different wire constructions



HIGH PERFORMANCE SAW BLADES OF DIABÜ®



SAW BLADES
2



DIABÜ® High Performance Saw Blades

DIABÜ® produces the optimal tool individually for customers and for every use. That's why we have corresponding qualities for the different materials.

Please inform us about your used materials, so we will produce the corresponding high performance tool for you.

Quality overview DIABÜ® High Performance Saw Blades

Materials	Subgroup	Qualities	Features	Cutting Performance	Cutting	Running Time
Granite	all granites	Premium Line	use on strong machines for all the granites good peripheral speed clean cutting quality	Feed: 2,5 – 3,5 m/min Lowering: 2 – 4 cm	+++	++++
	all granites	Blue Line	use on strong machines for all the granites good peripheral speed clean cutting quality	Feed: 2,5 – 3,5 m/min Lowering: 2 – 6 cm	++++	+++
	all granites	Red Line	very easy cutting to be used universally on all the machines	Feed: 2,5 – 4 m/min Lowering: 2 – 4 cm	+++++	++
	all granites	Axis	reinforced core, CNC bridge cutting saws angle- and curve cuts	Feed: 2,5 – 5 m/min Lowering: 2 – 6 cm	+++++	+++
Engineered Stone		Axis	reinforced core CNC bridge cutting saws angle- and curve cuts	Feed: 2,5 – 5 m/min Lowering: 2 – 3 cm	++++	+++
		Engineered Line	especially developed for engineered stone very clean cut rough grinding cutting surface	Feed: 2,5 – 4 m/min Lowering: 2 – 3 cm	++++	++
Sintered Ceramic	Neolith	Kera Line	especially developed for large format ceramic	Feed 0,7 – 3,6 m/min	+ + + +	+ + +
Quarzit		Q Line	high cutting performance very good peripheral speed	Feed: 2,5 – 4 m/min Lowering: 2 – 4 cm	++++	+++
Sandstone	hard sandstone abrasive sandstone	S Line	maximum productivity full cutting with high peripheral speed	++++ +++++	+++++ +++++	++++ ++++
Volcano stone	Basalt, Basalt Lava, Tuff Andesit Porphy	V Line	maximum productivity very good peripheral speed high cutting performance	+++++ +++++ +++++	+++++ +++++ +++++	++++ ++++ ++++
Marble	Jura Beij Lime Rock Travertin hard Marble	M Line	maximum productivity full cutting with high peripheral speed clean and easy cutting full cutting with high peripheral speed high peripheral speed and easy cutting	++++ +++++ +++++ +++++	++++ +++++ +++++ ++++	++++ ++++ ++++ ++++
Fireproof Materials and Ceramic	Chrome stones	X Line	very good material removal very good peripheral speed high cutting performance	+++	++++	++++
	Korund			+++	++++	++++
	Magnesia stones			+++	++++	++++
	Chamotte			++++	++++	++++
	Silka stones			+++	++++	++++
	Carbon silicide			+++	++++	++++
	Cast basalt			+++	++++	++++
	ZAC			+++	++++	++++
	Glass ceramic			+++	++++	++++
	Stone ware			+++	++++	++++

Saw Blades Short Tooth

Available with silent core and normal core

Type	Core			No. of Segments (pcs.)	Length (mm)	Segment	
	Ø (mm)	Bore (mm)	Thickness (mm)			Width (mm)	Height (mm)
SO	350	60	2,2	30	25	3,5	12,5; 20
SO	350	60	2,2	34	25	3,5	12,5; 20
SO	400	60	2,5	35	25	3,5	12,5; 20
SO	400	60	2,5	40	25	3,5	12,5; 20
SO	450	60	2,8	39	25	3,8	12,5; 20
SO	450	60	2,8	44	25	3,8	12,5; 20
SO	500	60	2,8	44	25	3,8	12,5; 20
SO	500	60	2,8	50	25	3,8	12,5; 20
SO	550	60	3,5	54	25	4,6	12,5; 20
SO	600	60	3,5	54	25	4,6	12,5; 20
SO	600	60	3,5	60	25	4,6	12,5; 20
SO	625	60	3,5	62	25	4,6	12,5; 20
SO	650	60	4,0	64	25	5,0	12,5; 20
SO	700	60	4,0	60	25	5,0	12,5; 20
SO	700	60	4,0	66	25	5,0	12,5; 20
SO	800	60	4,5	70	25	5,6	12,5; 20
SO	800	60	4,5	76	25	5,6	12,5; 20
N	900	60	5,0	64	25	7,0	12,5; 14; 20
N	1000	100	5,0	70	25	7,0	12,5; 14; 20
N	1100	100	5,5	74	25	7,5	12,5; 14; 20
N	1150	100	5,5	74	25	7,5	12,5; 14; 20
N	1200	100	5,5	80	25	7,5	12,5; 14; 20
N	1300	100	6,0	88	25	8,0	12,5; 14; 20
N	1400	100	6,5	92	25	8,5	12,5; 14; 20
N	1500	100	6,5	100	25	8,5	12,5; 14; 20
N	1600	100	7,0	104	25	9,0	12,5; 14; 20

The segment widths for marble and sandstone are deviating. ■ lasered saw blades ■ brazed saw blades

Type	Core			No. of Segments (pcs.)	Length (mm)	Segment	
	Ø (mm)	Bore (mm)	Thickness (mm)			Width (mm)	Height (mm)
SO	350	60	2,2	42	20	3,5	12,5; 20
SO	400	60	2,5	48	20	3,5	12,5; 20
SO	450	60	2,8	52	20	3,8	12,5; 20
SO	500	60	2,8	60	20	3,8	12,5; 20
SO	550	60	3,5	64	20	4,6	12,5; 20
SO	600	60	3,5	72	20	4,6	12,5; 20
SO	625	60	3,5	72	20	4,6	12,5; 20
SO	650	60	4,0	78	20	5,0	12,5; 20
SO	700	60	4,0	80	20	5,0	12,5; 20
SO	800	60	4,5	92	20	5,6	12,5; 20

■ lasered saw blades ■ brazed saw blades

AXIS

Type	Core			No. of Segments (pcs.)	Length (mm)	Segment	
	Ø (mm)	Bore (mm)	Thickness (mm)			Width (mm)	Height (mm)
SO	350	60	2,3	28	30	3,6	20
SO	400	60	2,6	32	30	3,6	20
SO	450	60	2,9	36	30	3,9	20
SO	500	60	2,9	40	30	3,9	20
SO	550	60	3,6	42	30	4,7	20
SO	600	60	3,6	48	30	4,7	20

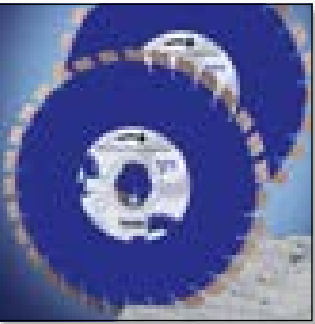
■ lasered saw blades

Please give the following details on your order:

Material for example: Granite
Segment height for example: 20 mm
Normal core or low core for example: low
Bore for example: 80 mm
Mounting holes for example: 3 pcs. Ø 10 mm on pitch circle Ø 110 mm



For different diameters special toothings are possible on request.





Saw Blades Long Tooth

Available with silent core and normal core

Type	Core			No. of Segments (pcs.)	Segment		
	Ø (mm)	Bore (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
SO	300	60	1,8	18	40	2,8	10; 12; 15; 20
SO	300	60	1,8	21	40	2,8	10; 12; 15; 20
SO	350	60	2,2	21	40	3,2	10; 12; 15; 20
SO	350	60	2,2	25	40	3,2	10; 12; 15; 20
SO	400	60	2,5	24	40	3,5	10; 12; 15; 20
SO	400	60	2,5	28	40	3,5	10; 12; 15; 20
SO	450	60	2,8	26	40	3,8	10; 12; 15; 20
SO	450	60	2,8	32	40	3,8	10; 12; 15; 20
SO	500	60	2,8	30	40	3,8	10; 12; 15; 20
SO	500	60	2,8	36	40	3,8	10; 12; 15; 20
SO	550	60	3,5	32	40	4,6	10; 12; 15; 20
SO	550	60	3,5	40	40	4,6	10; 12; 15; 20
SO	600	60	3,5	36	40	4,6	10; 12; 15; 20
SO	600	60	3,5	42	40	4,6	10; 12; 15; 20
SO	625	60	3,5	36	40	4,6	10; 12; 15; 20
SO	625	60	3,5	42	40	4,6	10; 12; 15; 20
SO	650	60	4,0	39	40	5,0	10; 12; 15; 20
SO	650	60	4,0	46	40	5,0	10; 12; 15; 20
SO	700	60	4,0	40	40	5,0	10; 12; 15; 20
SO	700	60	4,0	50	40	5,0	10; 12; 15; 20
SO	725	60	4,0	40	40	5,0	10; 12; 15; 20
SO	725	60	4,0	50	40	5,0	10; 12; 15; 20
SO	800	60	4,5	46	40	5,5	10; 12; 15; 20
SO	800	60	4,5	57	40	5,5	10; 12; 15; 20
N	900	60	5,0	46	40	6,5	10; 12; 15; 20
N	1000	100	5,0	70	40	6,5	10; 12; 15; 20
N	1100	100	5,5	74	40	7,5	10; 12; 15; 20
N	1200	100	5,5	80	40	7,5	10; 12; 15; 20
N	1300	100	5,5	84	40	7,5	10; 12; 15; 20
N	1400	100	6,0	92	40	8,0	10; 12; 15; 20; 30
N	1500	100	6,5	100	40	8,5	10; 12; 15; 20; 30
N	1600	100	7,0	104	40	9,0	10; 12; 15; 20; 30

The segment widths for marble and sandstone are deviating.

■ lasered saw blades ■ brazed saw blades



Please give the following details on your order:

Material for example: Granite
Segment height for example: 20 mm
Normal core or low core for example: low
Bore for example: 80 mm
Mounting holes for example: 3 pcs. Ø 10 mm on pitch circle Ø 110 mm

Saw Blades for Cross Cut- and Longitudinal Cut

Available with silent core and normal core

Type	Core			No. of Segments (pcs.)	Segment		
	Ø (mm)	Bore (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
SO	300	60	1,8	18	40	2,8	10; 12
SO	300	60	1,8	21	40	2,8	10; 12
SO	350	60	2,2	21	40	3,2	10; 12
SO	350	60	2,2	25	40	3,2	10; 12
SO	400	60	2,5	24	40	3,5	10; 12
SO	400	60	2,5	28	40	3,5	10; 12
SO	450	60	2,8	26	40	3,8	10; 12
SO	450	60	2,8	32	40	3,8	10; 12
SO	500	60	2,8	30	40	3,8	10; 12
SO	500	60	2,8	36	40	3,8	10; 12
SO	550	60	3,5	32	40	4,6	10; 12
SO	550	60	3,5	40	40	4,6	10; 12
SO	300	60	1,8	36	20	2,8	12,5; 20
SO	350	60	2,2	42	20	3,2	12,5; 20
SO	400	60	2,5	48	20	3,5	12,5; 20
SO	450	60	2,8	52	20	3,8	12,5; 20
SO	500	60	2,8	60	20	3,8	12,5; 20
SO	550	60	3,5	64	20	4,6	12,5; 20

■ lasered saw blades ■ brazed saw blades

Saw Blades for Splitting Saws

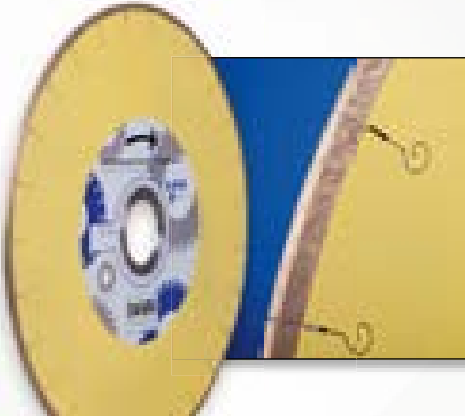
Type	Core			No. of Segments (pcs.)	Segment		
	Ø (mm)	Bore (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
N/ SO	350	60	3,5	21	40	5,0	10
SO	350	60	3,5	25	40	5,0	10
N/ SO	400	60	3,5	24	40	5,0	10
SO	400	60	3,5	28	40	5,0	10
N/ SO	450	60	3,5	26	40	5,0	10
SO	450	60	3,5	32	40	5,0	10
N/ SO	500	60	3,5	30	40	5,5	10
SO	500	60	3,5	36	40	5,5	10
N/ SO	550	60	4,0	32	40	6,0	10
SO	550	60	4,0	40	40	6,0	10
N/ SO	600	60	4,5	36	40	6,0	10
SO	600	60	4,5	42	40	6,0	10
N/ SO	625	60	4,5	36	40	6,0	10
SO	625	60	4,5	42	40	6,0	10
N/ SO	650	60	4,5	39	40	6,5	10
SO	650	60	4,5	46	40	6,5	10
N/ SO	700	60	4,5	40	40	6,5	10
SO	700	60	4,5	50	40	6,5	10
N/ SO	725	60	4,5	40	40	6,5	10
SO	725	60	4,5	50	40	6,5	10
SO	800	60	4,5	46	40	6,5	10
N	900	60	4,5	46	40	7,0	10
N/ SO	600	60	4,5	42	25	6,0	12,5; 14
N/ SO	650	60	4,5	46	25	6,5	12,5; 14
N/ SO	700	60	4,5	56	25	6,5	12,5; 14

■ brazed saw blades

Saw Blades Segmented – Continuous Rim

Type	Core			No. of Segments (pcs.)	Segment		
	Ø (mm)	Bore (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
KSO	300	60	1,8	21	40	2,8	8; 10
KSO	350	60	2,5	27	40	3,5	8; 10
KSO	400	60	2,5	31	40	3,5	8; 10

■ brazed saw blades





Block Saw Blades

Available with silent core and normal core



Type	Core			No. of Segments (pcs.)	Length (mm)	Segment	
	Ø (mm)	Bore (mm)	Thickness (mm)			Width (mm)	Height (mm)
N	1700	100	6,50	112	25	9,5 / 8,5	12,5; 14; 20; 30
N	1750	100	7,00	112	25	9,5 / 8,5	12,5; 14; 20; 30
N	1800	100	7,00	120	25	9,5 / 8,5	12,5; 14; 20; 30
N	2000	150	7,50	128	25	11 / 10	12,5; 14; 20; 30
N	2000	150	8,00	128	25	11 / 10	12,5; 14; 20; 30
N	2200	150	8,00	132	25	11 / 10	12,5; 14; 20; 30
N	2300	150	8,00	138	25	11 / 10	12,5; 14; 20; 30
N	2500	150	9,00	140	25	12 / 11	12,5; 14; 20; 30
N	2700	150	9,00	140	25	12 / 11	12,5; 14; 20; 30
N	3000	150	9,25	160	25	12 / 11	12,5; 14; 20; 30
N	3200	150	9,25	170	25	12,5 / 11,5	12,5; 14; 20; 30
N	3500	150	9,50	180	25	13 / 12	12,5; 14; 20; 30
N	1700	100	6,50	112	25	9,5	12,5; 14; 20
N	1750	100	7,00	112	25	10,5	12,5; 14; 20
N	1800	100	7,00	120	25	10,5	12,5; 14; 20
N	2000	150	7,50	128	25	11	12,5; 14; 20
N	2000	150	8,00	128	25	11,5	12,5; 14; 20
N	2200	150	8,00	132	25	11,5	12,5; 14; 20
N	2300	150	8,00	138	25	11,5	12,5; 14; 20
N	2500	150	9,00	140	25	12,5	12,5; 14; 20
N	2700	150	9,00	140	25	12,5	12,5; 14; 20
N	3000	150	9,25	160	25	12,5	12,5; 14; 20
N	3200	150	9,25	170	25	12,5	12,5; 14; 20
N	3500	150	9,50	180	25	13	12,5; 14; 20

The segment widths for marble and sandstone are deviating.

Our service for retipping will be available for you on call.



Please give the following details on your order:

Material for example: Granite
Segment height for example: 20 mm
Normal core or low core for example: low
Bore for example: 80 mm
Mounting holes for example: 3 pcs. Ø 10 mm on pitch circle Ø 110 mm

Multi Blade Saws

Normal Multi

Type	Core			No. of Segments (pcs.)	Length (mm)	Segment	
	Ø (mm)	Bore (mm)	Thickness (mm)			Width (mm)	Height (mm)
NM	1000	120	5,0	70	25	6,8 / 6,2	12,5; 14
NM	1200	120	5,5	80	25	7,3 / 6,7	12,5; 14
NM	1300	120	5,5	88	25	7,3 / 6,7	12,5; 14
NM	1600	120	5,5	104	25	7,3 / 6,7	12,5; 14

Scaletta

Type	Core			No. of Segments (pcs.)	Length (mm)	Segment	
	Ø (mm)	Bore (mm)	Thickness (mm)			Width (mm)	Height (mm)
NDM	800	120	5,5	64	25	7,3 / 6,7	12,5; 14
NDM	1200	120	5,5	80	25	7,3 / 6,7	12,5; 14
NDM	850	120	5,5	70	25	7,3 / 6,7	12,5; 14
NDM	1300	120	5,5	88	25	7,3 / 6,7	12,5; 14
NDM	1000	120	5,5	70	25	7,3 / 6,7	12,5; 14
NDM	1600	120	5,5	104	25	7,3 / 6,7	12,5; 14

Single Blade Block Tailor

Type	Core			No. of Segments (pcs.)	Length (mm)	Segment	
	Ø (mm)	Bore (mm)	Thickness (mm)			Width (mm)	Height (mm)
N	1000	120	5,0	70	25	8,0	12,5; 14
N	1200	120	5,5	80	25	8,5	12,5; 14
N	1300	120	5,5	88	25	9,0	12,5; 14
N	1600	120	5,5	104	25	9,5	12,5; 14

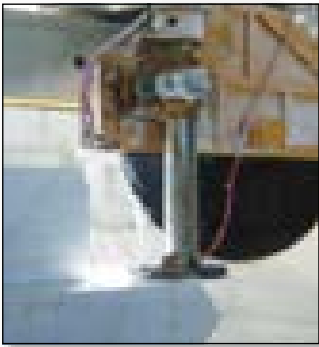
The segment widths for marble and sandstone are deviating.

Saw Blades for Horizontal Saws

Type	Core			No. of Segments (pcs.)	Length (mm)	Segment	
	Ø (mm)	Bore (mm)	Thickness (mm)			Width (mm)	Height (mm)
NH	350	50	8 / 3	21	40	4,6	10
NH	400	50	8 / 3	24	40	4,6	10
NH	350	60	3,5	21	40	5,0	10
SOH	350	60	3,5	25	40	5,0	10
NH	400	60	3,5	24	40	5,0	10
SOH	400	60	3,5	28	40	5,0	10
NH	450	60	3,5	26	40	5,0	10
SOH	450	60	3,5	32	40	5,0	10
NH	500	60	3,5	30	40	5,5	10
SOH	500	60	3,5	36	40	5,5	10
NH	600	60	4,5	36	40	6,0	10
SOH	600	60	4,5	42	40	6,0	10

Please give the following details on your order:

Material for example: Granite
Segment height for example: 20 mm
Normal core or low core for example: low
Bore for example: 80 mm
Mounting holes for example: 3 pcs. Ø 10 mm on pitch circle Ø 110 mm

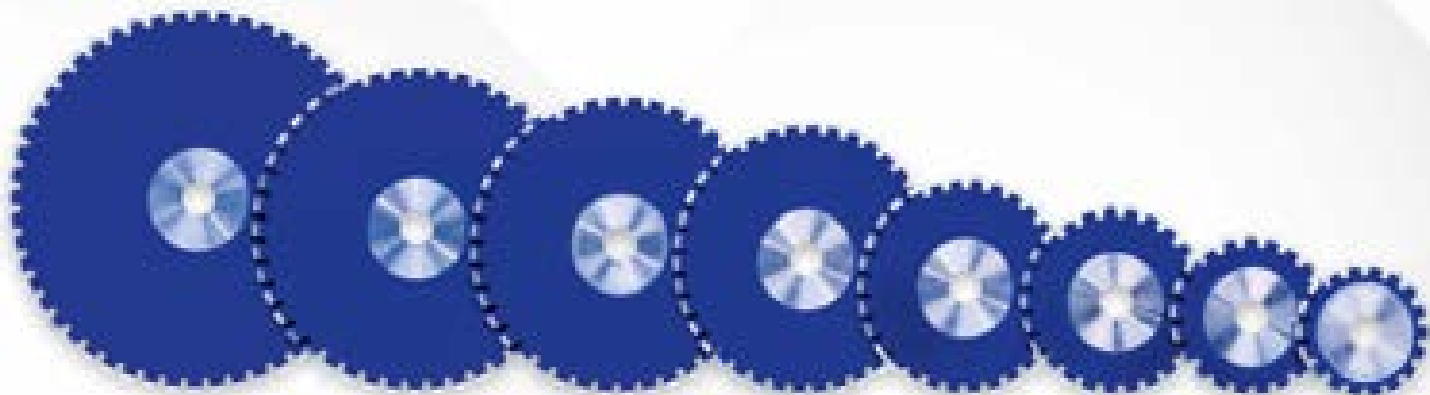




Core				No. of	Segment		
Type	Ø (mm)	Bore (mm)	Thickness (mm)	Segments (pcs.)	Length (mm)	Width (mm)	Height (mm)
NF	250	60	3,5; 4,5	18	25	4,6; 6	12,5
NF	300	60	3,5; 4,5	21	25	4,6; 6	12,5
NF	350	60	3,5; 4,5	25	25	4,6; 6	12,5
NF	400	60	3,5; 4,5	28	25	4,6; 6	12,5
NF	450	60	3,5; 4,5	32	25	4,6; 6	12,5
NF	500	60	3,5; 4,5	36	25	4,6; 6	12,5
NF	550	60	3,5; 4,5	38	25	4,6; 6	12,5
NF	600	60	3,5; 4,5	42	25	4,6; 6	12,5
NF	700	60	3,5; 4,5	48	25	4,6; 6	12,5
NF	750	60	3,5; 4,5	52	25	4,6; 6	12,5
NF	800	60	3,5; 4,5	56	25	4,6; 6	12,5
NF	900	60	3,5; 4,5	62	25	4,6; 6	12,5
NF	950	60	3,5; 4,5	66	25	4,6; 6	12,5
NF	1000	60	3,5; 4,5	70	25	4,6; 6	12,5
NF	1050	60	3,5; 4,5	72	25	4,6; 6	12,5
NF	1100	60	3,5; 4,5	76	25	4,6; 6	12,5
NF	1150	60	3,5; 4,5	76	25	4,6; 6	12,5

Type	Core			No. of Segments (pcs.)	Segment		
	Ø (mm)	Bore (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
NF	1200	100	4,5	80	25	6	12,5
NF	1250	100	4,5	84	25	6	12,5
NF	1300	100	4,5	88	25	6	12,5
NF	1350	100	4,5	88	25	6	12,5
NF	1400	100	4,5	92	25	6	12,5
NF	1450	100	4,5	96	25	6	12,5
NF	1500	100	4,5	100	25	6	12,5
NF	1550	100	4,5	102	25	6	12,5

Material	for example: Granite
Segment height	for example: 20 mm
Normal core or low core	for example: low
Bore	for example: 80 mm
Mounting holes	for example: 3 pcs. Ø 10 mm on pitch circle Ø 110 mm



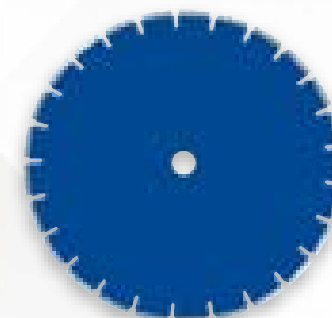
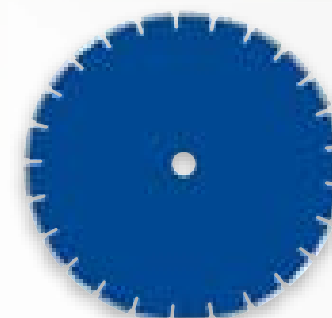
Core			No. of Segments (pcs.)	Segment		
Type	Ø (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
SO	250	1,6	17	40	2,4	10
SO	300	1,8	21	40	2,6	10
SO	350	2,2	25	40	3,2	10
SO	400	2,5	28	40	3,5	10
SO	450	2,8	32	40	3,5	10
SO	500	2,8	36	40	3,8	10
SO	600	3,5	40	40	4,6	10
SO	650	4.0	46	40	5.0	10

Core			No. of Segments (pcs.)	Segment		
Type	Ø (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
SO	250	1,6	17	40	2,4	10
SO	300	1,8	21	40	2,6	10
SO	350	2,2	25	40	3,2	10
SO	400	2,5	28	40	3,5	10
SO	450	2,8	32	40	3,5	10
SO	500	2,8	36	40	3,8	10
SO	600	3,5	40	40	4,6	10
SO	650	4,0	46	40	5,0	10

Type	Core		No. of Segments (pcs.)	Segment		
	Ø (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
SO	250	1,6	17	40	2,4	10
SO	300	1,8	21	40	2,6	10
SO	350	2,2	25	40	3,2	10
SO	400	2,5	24	40	3,5	10
SO	400	2,5	28	40	3,5	10
SO	450	2,8	32	40	3,5	10
SO	500	2,8	36	40	3,8	10
SO	600	3,5	40	40	4,6	10
SO	650	4.0	46	40	5.0	10

		Material	
Type		Abrasive cement	Asphalt
ALLSTAR	+		++
	++	+	+
ULTRA	++	+	+
STRATO H2	+	+	

Material	for example: Granite
Normal core or low core	for example: low
Bore	for example: 80 mm
Mounting holes	for example: 3 pcs. Ø 10 mm on pitch circle Ø 110 mm

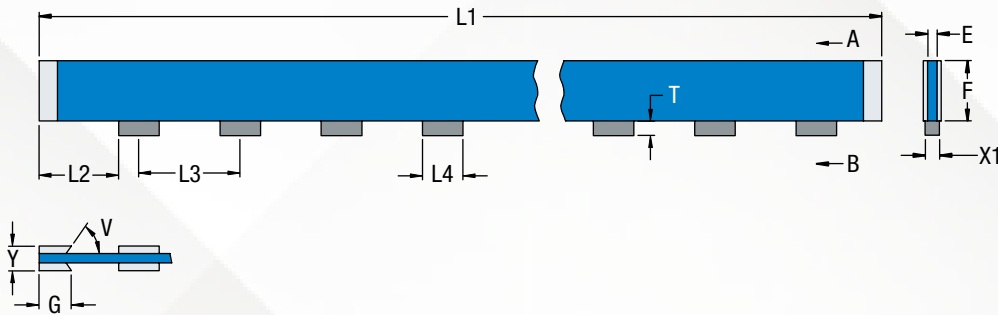




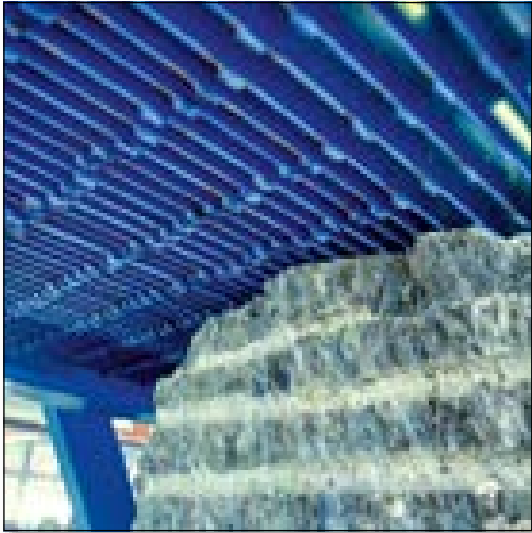
Gang Saw Blades

Type	Core			No. of Segments (pcs.)	Segment		
	Length L1 (mm)	Width F (mm)	Thickness E (mm)		Length (mm)	Width (mm)	Height (mm)
G	depending on type of machine	180	3,5	depending on type of machine	20; 25; 40	5,5 / 5,1	7,5; 10
G		180	2,0		20; 25; 40	3,5	7,5; 10
G		180	2,5; 2,8		20; 25; 40	4; 4,3	7,5; 10
G		180	3,0		20; 25; 40	4,6	7,5; 10

Blades are available in normal steel and high-grade steel.



- L1 ... Blade length
- L2 ... Distance to the first segments
- L3 ... Segment distance
- L4 ... Segment length
- E ... Blade thickness
- F ... Blade height
- Y ... Total width
- G ... Length
- V ... Connecting angle
- X1 ... Segment width
- T ... Segment height



Please give the following details on your order:

Materials (% each material)	for example: Beij 40%; hard marble 60%
Segment height + number of segments	for example: 10 mm + 32 segments
Blade length + blade thickness	for example: 4150 mm + 3.5 mm
Effective cutting length	for example: 3000 mm
No. of blades	for example: 45 pcs.





Dry-Cutting Saw Blades

We have been specialized in a diameter range of 230 – 350 mm in the dry-cutting sector as per your request.
No bulk goods but high performance tool made in Germany.
Also available with low noise cores.

PERFECT CRYSTAL DISTRIBUTION (PCD)*

Holds the segment width until the end for all types of granite and cement



Type	Core			No. of Segments (Pcs.)	Segment			Flange
	Ø (mm)	Bore (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)	
PCD	230	22,2	1,8 (2,3)	15	40	2,8	12	6/SK M5/64
PCD	230	22,2	1,8	15	40	3,0	12	
PCD	230	22,2	1,8	16	40	2,8	12	
PCD	230	22,2	1,8	16	40	2,8	12	
PCD	300	30	1,8	18	40	3,0	10	
PCD	300	30	1,8	21	40	3,0	10	
PCD	350	30	2,2	24	40	3,2	10	
PCD	350	30	2,2	24	40	3,2	10	

SHARK* Fast cutting with perforated core for all types of granite

Type	Core			No. of Segments (Pcs.)	Segment			Flange
	Ø (mm)	Bore (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)	
Shark	230	22,2	1,8	15	40	2,8	12	6/SK M5/64
Shark	230	22,2	2,3	15	40	3,2	12	
Shark	230	30	1,8	16	40	2,8	12	
Shark	230	50	2,3	15	40	3,2	12	
Shark	230	22,2	2,1	16	40	3,2	12	
Shark	230	22,2	1,8	16	40	2,8	12	
Shark	230	22,2	1,8	16	40	2,8	12	
Shark	300	30	1,8	18	40	3,0	12	
Shark	300	30	1,8	21	40	3,0	12	
Shark	350	30	2,2	24	40	3,2	12	
Shark	350	30	2,2	24	40	3,2	12	
Shark	350	30	2,2	24	40	3,2	12	
Shark	350	30	2,2	24	40	3,2	12	
Shark	350	30	2,2	24	40	3,2	12	
Shark	350	30	2,2	24	40	3,2	12	
Shark	350	30	2,2	24	40	3,2	12	

PREMIUM* Universally usable for all types of granite and cement

Type	Core			No. of Segments (Pcs.)	Segment			Flange
	Ø (mm)	Bore (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)	
Premium	230	22,2	1,8	16	40	2,8	10	4/SK M5/140
Premium	230	30	1,8	16	40	2,8	10	
Premium	230	35	1,8	16	40	2,8	10	
Premium	230	80	1,8	16	40	2,8	10	
Premium	300	30	1,8	21	40	3,0	12	
Premium	350	30	2,2	21	40	3,2	12	
Premium	350	30	2,2	21	40	3,2	12	
Premium	350	30	2,2	21	40	3,2	12	

PREMIUM SHORT TOOTH*

Universally usable with short-tooth technic and reinforced core for all types of granite, cement and sandstone

Type	Core			No. of Segments (Pcs.)	Segment			Flange
	Ø (mm)	Bore (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)	
Premium KZ	230	22,2	2,0	24	25	2,8	12,5	6/SK M5/64
Premium KZ	230	22,2	2,0	24	25	2,8	12,5	
Premium KZ	230	30	2,0	24	25	2,8	12,5	
Premium KZ	230	22,2	1,8	16	25	2,8	12,5	
Premium KZ	300	20	2,0	32	25	2,8	12,5	
Premium KZ	300	22,2	2,0	32	25	2,8	12,5	
Premium KZ	300	30	2,0	32	25	2,8	12,5	
Premium KZ	350	20	2,0	37	25	3,2	12,5	
Premium KZ	350	22,2	2,0	37	25	3,2	12,5	
Premium KZ	350	25,4	2,0	37	25	3,2	12,5	
Premium KZ	350	30	2,0	37	25	3,2	12,5	
Premium KZ	350	30	2,0	37	25	3,2	12,5	
Premium KZ	350	30	2,0	37	25	3,2	12,5	
Premium KZ	350	30	2,0	37	25	3,2	12,5	
Premium KZ	350	30	2,0	37	25	3,2	12,5	
Premium KZ	350	30	2,0	37	25	3,2	12,5	

* Bore 22,2 mm (300 mm – bore 30 mm) · All the mentioned segment heights have a foot of 2 mm without any diamonds.

Dry-Cutting abrasive

GRANIT UNIVERSAL, Type GRU*

Type	Core		No. of Segments (pcs.)	Segment		
	Ø (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
S	90	1,5	7	35	2,4	7y=5
S	115	1,5	8	35	2,4	7y=5
S	125	1,5	9	35	2,4	7y=5
S	150	1,5	11	35	2,4	7y=5
S	180	1,5	13	35	2,4	7y=5
S	200	1,5	13	40	2,6	7y=5
S	230	1,8	15	40	2,6	7y=5
S	230	1,8	16	40	2,6	7y=5
S	250	1,8	17	40	2,8	7y=5
S	300	1,8	18	40	2,8	7y=5
S	300	1,8	20	40	2,8	7y=5
S	350	1,8	21	40	2,8	7y=5
S	350	1,8	24	40	2,8	7y=5

Usage:

- Granite Universal



STANDARD, Type BSK*

Type	Core		No. of Segments (pcs.)	Segment		
	Ø (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
S	115	1,5	8	35	2,4	7y=5
S	125	1,5	9	35	2,4	7y=5
S	180	1,5	13	35	2,4	7y=5
S	230	1,8	15	40	2,6	7y=5
S	230	1,8	16	40	2,6	7y=5
S	300	1,8	18	40	2,8	7y=5
S	300	1,8	20	40	2,8	7y=5
S	350	2,2	21	40	3,2	7y=5
S	350	2,2	24	40	3,2	7y=5

Usage:

- Cement abrasive
- Chamotte
- Lime sandstone
- Sandstone



STANDARD with reinforced core, Type BSK*

Type	Core		No. of Segments (pcs.)	Segment		
	Ø (mm)	Thickness (mm)		Length (mm)	Width (mm)	Height (mm)
S	115	1,8	8	35	2,4	7y=5
S	125	1,8	9	35	2,4	7y=5
S	135	1,8	9	35	2,4	7y=5
S	150	1,8	11	35	2,4	7y=5
S	180	1,8	13	35	2,4	7y=5
S	230	2,2	16	40	3,2	7y=5

* Bore 22,2 mm (300 mm – bore 30 mm)

Usage:

- Cement abrasive
- Chamotte
- Lime sandstone
- Sandstone



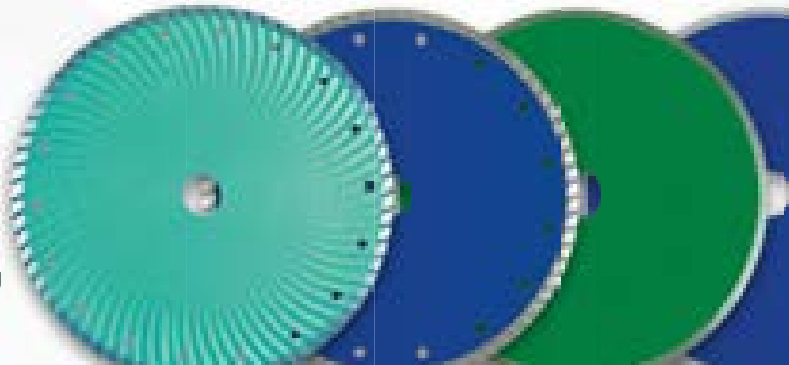
Different Aluminium flanges, available as single or mounted.

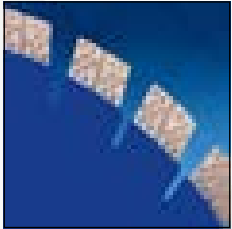
On request we will be pleased to quote various continuous rim saw blades with diameters of 115 – 350 mm:

To be used for:

- Floor tiles, glazed tiles, marble
- Floor tiles, glazed tiles with low core + reinforced flange
- Cement, granite, roof tiles with laterally inserted segment protection
- Combinated disc with lateral protection segments for separating and grinding

Please ask for our special price list.





Precautionary measures and working parameters

Storing of saw blades

Saw blades, which are not used straight away, must never be leant against a wall for storing. Instead they should be hung up by its bore.

Checking list for mounting saw blades

Before mounting

- Check cleanness of the spindle as well as the flange and, if necessary, remove existing remains of rust or old grease with a fine abrasive paper.
- Check condition of the flange edges and, if necessary, recondition with a fine file.
- Check the bore diameter; it is only allowed to deviate not more than 1/10 mm from the spindle diameter. Should the bore diameter be too big, an intermediate ring with the same thickness as the saw blade can be inserted. Is the bore diameter too small, then the tool has to be returned to DIABÜ® immediately.
- Under no circumstances enlarge an existing bore!
- Check the relief of the flange.
- Choose a flange which diameter matches the one of the saw blade (for flange sizes, please see table on the following pages).
- Choose the saw blade suitable for the material to be cut, since each material class has its own characteristics regarding hardness and abrasiveness. The wrong combination of saw blade and material can be fatal for the life and because of that the performance of the tool.

During and after mounting

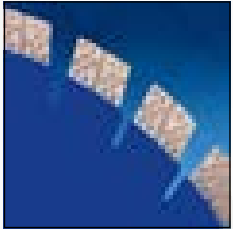
- Mount the saw blade in the correct direction of rotation marked with an arrow on the saw blade.
- If it can be foreseen, that the saw blade has to be changed often, then the position of the tool as well as the flange to the spindle should be marked.
- Check the radial run-out of the spindle (please see table on the following pages for permissible tolerances).
- Check the vertical position of the spindle to the table.
- Check the radial run-out of the flange (please see table on the following pages for permissible tolerances).
- Check radial run-out of the saw blade (please see table on the following pages for permissible tolerances).
- Check parallelism of table and feed direction of the saw blade.

Recommended Parameters Saw Blades Wet-Cutting

1. Peripheral speed

Dense, fine-grain and rich in quarz material	24 up to 28 m/s
Limestone and Marble	30 up to 40 m/s
Maximum	70 m/s

These details are indications, which can vary also outside the a.m. limits depending on the material being cut.



2. Traverse and vertical feed

- The deeper the cut is, the lower is the wear.
- High traverse feed and low down feed = flat cut ➤ increased wear of the diamond tool/segment.
- Low traverse feed and high down feed = deep cut ➤ increased danger, that the saw blade will get blunt.

3. Number of teeth

The lower the number of teeth with the same tool diameter is, the higher peripheral speeds can be carried out.

4. Cooling

The unrestricted supply of the coolant into the cutting slot has to be absolutely guaranteed. Clean cooling water reduces the wear of the tool. Therefore water treatment equipment with mud drying should be used in closed cycles. For the amount of coolant required, please see tables on the following pages.

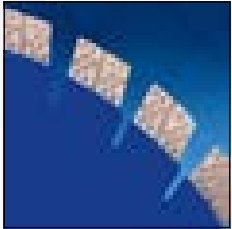
5. Material

The stone has a crucial influence on performance and life of the saw blade. Since the tool is designed for the use on a certain material, a frequent change of the material to be cut leads to increased wear. Accordingly the life of the blades decreases possibly quite drastically. The cut should always be made deepest possible. The setting of traverse speed and vertical feed have to be made correspondingly.

6. Accuracy of edges

Axial and radial runout tolerance of the saw blade have to be ensured. When cutting in steps, cut against the edge with reduced cutting speed during the last stage. Full cuts should also be worked contrarotating.

The recommended parameters are meant as guidance. They may vary on different machines, materials and other influencing factors.



Recommended Parameters
for Saw Blades Granite

Recommended parameters based on hardness class

Hardness class	Factor	Down feed (mm)	Traverse speed (m/min)	Peripheral speed (m/s)	Cutting rate (cm²/min)
1	1,0	10 – 30	2,0 – 3,5	30 – 40	500 – 800
2	1,4	8 – 25	2,0 – 3,5	30 – 40	500 – 700
3	1,8	7 – 20	2,0 – 3,5	25 – 35	375 – 500
4	2,5	5 – 12	2,0 – 3,5	25 – 35	375 – 500
5	4,0	4 – 10	2,0 – 3,5	20 – 35	200 – 300

Standard values as per diameter

Diameter Saw blade (mm)	Diameter Flange (mm)	Generated power (kW)	Amount of water (l/min)	RPM's at peripheral speed of						
				25 (m/s)	30 (m/s)	35 (m/s)	40 (m/s)	45 (m/s)	50 (m/s)	60 (m/s)
300	100	5,0 – 7,5	6 – 15	1590	1910	2230	2550	2860	3180	3820
350	120	5,0 – 7,5	10 – 15	1360	1640	1910	2180	2460	2730	3270
400	140	7,5 – 11	10 – 15	1190	1430	1670	1910	2150	2390	2860
450	140	7,5 – 11	15 – 20	1060	1270	1480	1700	1910	2120	2550
500	170	11 – 15	15 – 20	950	1150	1340	1530	1720	1910	2290
550	170	11 – 15	15 – 20	870	1040	1220	1390	1560	1740	2060
600	180	15 – 20	20 – 30	800	950	1110	1270	1430	1590	1910
625	180	15 – 20	20 – 30	760	920	1070	1220	1380	1530	1830
650	180	15 – 20	20 – 30	730	880	1030	1180	1320	1470	1760
700	200	20 – 30	30 – 40	680	820	950	1090	1230	1360	1640
725	200	20 – 30	30 – 40	660	790	920	1050	1190	1320	1580
800	230	25 – 35	30 – 40	600	720	840	950	1070	1190	1430
900	250	25 – 35	30 – 40	530	640	740	850	950	1060	1270
1000	250	30 – 40	40 – 50	480	570	670	760	860	950	1150
1100	250	30 – 40	40 – 50	430	520	610	690	780	870	1040
1150	300	25 – 40	40 – 50	420	500	580	660	750	830	1000
1200	300	30 – 40	50 – 60	400	480	560	640	720	800	950
1300	300	25 – 40	50 – 60	370	440	520	590	660	730	880
1350	300	30 – 40	50 – 60	350	420	500	570	640	710	850
1400	350	30 – 40	60 – 70	340	410	480	550	640	680	820
1500	350	35 – 45	60 – 70	320	380	460	510	570	640	760

Tolerances

Diameter (mm)	Axial run-out tolerance		Radial run-out tolerance		max. radial run-out		Parallelism Table guide (mm)
	Flange (mm)	Saw blade (mm)	Flange (mm)	Saw blade (mm)	Spindle (mm)	Saw (mm)	
300	0,03	0,15	0,04	0,15	0,02	0,20	0,02
350	0,03	0,15	0,04	0,15	0,02	0,20	0,03
400	0,03	0,15	0,04	0,15	0,02	0,20	0,03
450	0,03	0,20	0,04	0,20	0,03	0,25	0,05
500	0,03	0,20	0,04	0,20	0,03	0,25	0,05
550	0,03	0,20	0,04	0,20	0,03	0,25	0,05
600	0,03	0,20	0,04	0,20	0,03	0,25	0,06
625	0,03	0,25	0,04	0,20	0,03	0,25	0,06
650	0,03	0,25	0,04	0,20	0,03	0,25	0,06
700	0,03	0,25	0,04	0,20	0,03	0,25	0,07
725	0,03	0,25	0,04	0,20	0,03	0,25	0,07
800	0,03	0,25	0,04	0,20	0,03	0,25	0,07
900	0,03	0,25	0,04	0,20	0,03	0,25	0,09
1000	0,03	0,30	0,04	0,20	0,03	0,25	0,09
1100	0,03	0,30	0,04	0,20	0,03	0,25	0,10
1150	0,03	0,30	0,04	0,20	0,03	0,25	0,10
1200	0,03	0,50	0,04	0,25	0,03	0,25	0,10
1300	0,03	0,50	0,04	0,25	0,03	0,25	0,10
1350	0,03	0,50	0,04	0,25	0,03	0,25	0,10
1400	0,03	0,50	0,04	0,25	0,03	0,25	0,12
1500	0,03	0,50	0,04	0,25	0,03	0,25	0,15

All parameters are only to be considered as standard values and recommendations. They can vary depending on the machine type, material processed and other influencing parameters.

Recommended Parameters
for Block Saws Granite

Recommended parameters based on hardness class

Hardness class	Factor	Down feed (mm)	Traverse speed (m/min)	Peripheral speed (m/s)	Cutting rate (cm²/min)
1	1,0	10 – 15	2,5 – 3,5	24 – 32	250 – 525
2	1,4	8 – 12	2,5 – 3,5	24 – 32	200 – 420
3	1,8	6 – 10	2,5 – 3,5	24 – 32	150 – 350
4	2,5	5 – 8	2,5 – 3,5	24 – 32	125 – 280
5	4,0	4 – 6	2,5 – 3,5	24 – 32	100 – 210

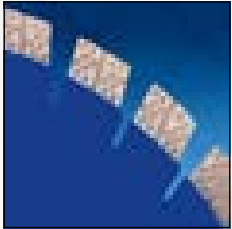
Standard values as per diameter

Diameter Saw blade (mm)	Diameter Flange (mm)	Generated power (kW)	Amount of water (l/min)	RPM's at peripheral speed of						
				25 (m/s)	30 (m/s)	35 (m/s)	40 (m/s)	45 (m/s)	50 (m/s)	60 (m/s)
1600	350	35 – 45	60 – 70	300	360	420	480	540	600	720
1700	400	40 – 50	60 – 70	280	340	395	450	505	560	675
1750	400	40 – 50	60 – 75	275	330	380	440	490	545	655
1800	400	40 – 50	70 – 80	270	320	370	420	480	530	640
2000	400	45 – 60	70 – 80	240	290	330	380	430	480	570
2200	400	45 – 60	70 – 80	220	320	305	350	390	435	520
2300	400	50 – 65	75 – 90	210	250	290	335	375	415	500
2500	400	55 – 75	80 – 100	190	230	270	310	340	380	460
2700	400	55 – 75	80 – 100	180	210	250	280	320	350	420
3000	400	75 – 100	80 – 120	160	190	220	250	290	320	380
3200	400	75 – 100	80 – 120	150	180	210	240	270	300	360
3500	400	75 – 100	80 – 120	140	160	190	220	250	270	330

Tolerances

Diameter (mm)	Axial run-out tolerance		Radial run-out tolerance		Parallelism Table guide (mm)
	Flange (mm)	Saw blade (mm)	Flange (mm)	Saw blade (mm)	
1600	0,03	0,50	0,04	0,25	0,15
1700	0,03	0,80	0,04	0,25	0,20
1750	0,03	0,80	0,04	0,25	0,20
1800	0,03	0,80	0,04	0,25	0,20
2000	0,03	0,80	0,04	0,25	0,20
2200	0,03	1,10	0,04	0,25	0,25
2300	0,03	1,10	0,04	0,25	0,25
2500	0,03	1,10	0,04	0,25	0,25
2700	0,03	1,30	0,04	0,25	0,25
3000	0,03	1,30	0,04	0,25	0,30
3200	0,03	1,30	0,04	0,25	0,30
3500	0,03	1,30	0,04	0,25	0,30

All parameters are only to be considered as standard values and recommendations. They can vary depending on the machine type, material processed and other influencing parameters.

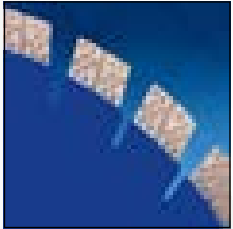


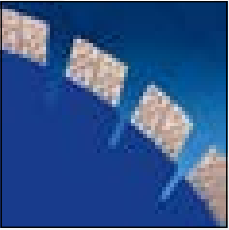
Trouble Shooting Saw Blades

Problem	Checks / measures for solution
Insufficient cutting speed, saw blades gets blunt	Increase traverse speed
When traverse speed is increased, the amperage increases excessively	Check peripheral speed Check if the machine power corresponds to the diameters of the saw blade Check cutting speed Increase traverse speed Sharpen saw blade in a soft, well-gripping material (soft Sandstone)
Cutting deviations	Check blade side run-out Check radial run-out of the spindle Check side run-out of the flange Check flange diameter Check fixing of the work piece Check tension of the saw blade Check condition of the segments Check vertical position of the flange Check, if the saw blade used is suitable for the material cut Check tension of the saw blade Check angularity of table and spindle as well as table and support
Inaccurate edges	Check the sawing method Check the tension of the saw blade Check blade side run-out Check radial run-out of the blade Check radial run-out of the spindle Check side run-out of the flange Check flange diameter Check vertical position of the flange Check tension of the saw blade Check angularity of table and spindle as well as table and support
Excessive wear of the diamond segments	Check cutting speed Check peripheral speed Check, if cooling is sufficient (see table on the previous page) Check flange diameter Check, if excessive vibrations do not develop inside the machine Check, if the saw blade used is suitable for the material sawn Check, if saw blade is hammering. If so, change to a deep cut with slow traverse to equalize immediately

Trouble Shooting Saw Blades

Problem	Checks / measures for solution
Exceeding lateral abrasion	Check if the water cooling is sufficient Check lateral runout of the saw blade Check parallelism Check radial runout of the spindle Check lateral runout of the flange Check vertical position of the flange Check angularity of table and spindle as well as table support
Whistling of the Saw Blade	Check if saw blade is blunt, if it is under too much stress Check the cover, eventually damping Check the tension of the saw blade
Steel core is rubbing during cutting	Check parallelism of vertical guide to saw Check parallelism of table guide to saw blade Check vertical position of the flange Check side clearance of the segments
Crack in the steel core	Perforate the steel core at the end of the crack (3 – 4 mm Ø drill) Apply only on a single crack of the core. If core has more than 2 cracks exchange the core for a new one
Blunt saw blade	Sharpening cut (low down feed, high traverse speed)
Radial run-out / hammering saw blade	Plain grinding (high down feed, low traverse speed)





Recommended Parameters
Diamond Gang Saw Blades

		Horizontal Gang Saw								Vertical Gang Saw		
		Slow-moving				High speed						
Length of stroke (mm)		360	400	500	600	500	540	700	750	800	400	500
Strokes/min		80	80	80	80	120	120	105	100 (105)	110	180	200
Blade velocity (m/s)		0,96	1,07	1,33	1,6	2	2,16	2,45	2,5 (2,63)	2,93	2,4	3,33
Generated power per blade (kW)	Segments/blade											
	20 – 30	1,0 – 1,5 kW				1,5 – 2,2 kW				2,0 – 3,0 kW		
	30 – 45	1,5 – 2,0 kW				2,0 – 2,8 kW				3,0 – 4,0 kW		
Down feed (cm/h)	Marble	10 – 15 (10 – 18) [15 – 20]				15 – 25 (20 – 35)				35 – 60 (30 – 45) [50 – 70]		
	Limestone	12 – 20 (12 – 25)				20 – 30				40 – 90 (35 – 50) [60 – 100]		
	Agglomerate	10 – 18 (13 – 20)				22 – 30 (25 – 35)				60 – 100 (60 – 90)		
Amount of cooling water per blade (l/min)		7 – 8				9 – 10				9 – 10		
Deflection (mm)												
Soft stone		1,5 – 3,5				1,8 – 4,0				0,3 – 0,6		
Hard stone		1,5 – 3,5				1,8 – 4,0				0,5 – 0,8		
Tension (kN) [t]		(80 – 90) [8 – 9]				(90 – 100) [9 – 10]				(50 – 70) [5 – 7]		

When starting to saw please only use 2/3 – 3/4 of the normal down speed!
Block lengths should correspond to the tipped length of the gang saw blade!

Deflection tolerance at the centre of the blade

Length of blade (mm)	Soft stone (mm)	Hard stone (mm)
2600 – 2800	1,8 – 2,0	2,1 – 2,2
2800 – 3000	2,0 – 2,1	2,2 – 2,4
3000 – 3200	2,1 – 2,3	2,4 – 2,6
3200 – 3400	2,3 – 2,4	2,6 – 2,7
3400 – 3600	2,4 – 2,5	2,7 – 2,9
3600 – 3800	2,5 – 2,7	2,9 – 3,0
3800 – 4000	2,7 – 2,8	3,0 – 3,2
4000 – 4200	2,8 – 3,0	3,2 – 3,4
4200 – 4400	3,0 – 3,1	3,4 – 3,5
4400 – 4600	3,1 – 3,2	3,5 – 3,7
4600 – 4800	3,2 – 3,4	3,7 – 3,8
4800 – 5000	3,4 – 3,5	3,8 – 4,0

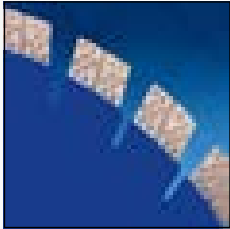
Trouble Shooting
Gang Saw Blades

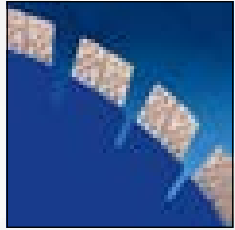
Defaults with sawn slabs

Problem	Checks / measures for solution
Cutting deviations	Check verticality of the blades
	Check parallelism of the blades to stroke direction
	Check deflection of the blades
	Check tension of the blades
	Check condition of the segments
Chatter marks	Sharpen blades
	Increase down feed
	Check amount of water
	Check deflection of blades, possibly increase
	Check tension of the blades
	Increase down feed slightly, especially when starting with new blades
	Segment-spacing (change graduation)

Defaults with the gang saw blades

Problem	Checks / measures for solution
Excessive wear at one end of the blade	Check horizontal fixing of the blades
Excessive wear at both ends of the blade	Increase deflection
	Increase segmented length or reduce block lengths
Excessive wear at the centre of the blade	Reduce deflection
	Choose smaller segment-spacing or use longer blocks
	Increase water supply
Insufficient output	Increase water supply
	Use longer blocks
	Choose smaller segment-spacing
	Damaging machine vibrations (contact machine manufacturer)
	Check fixing of the block





Assembling Recommendations Gang Saw Blades

Check if the blades are mounted correctly

- The blades should move in one level parallel to the saw level.

Fixing of the pre-tension screw

- Fixing in order to achieve a power of 5-7 tons.
- Make sure that the pre-tensioned blades are vertical and parallel.

Final tensioning

- As soon as each blade has been correctly mounted and controlled, so they have to be tensioned.

	Horizontal Frame	Vertical Frame
Soft stone	9 – 11 t	7 – 8 t
Hard stone	10 – 13 t	8 – 10 t
Blade Lateral Cut	180 x 3 oder 3,5 mm	180 x 3 mm

Hit softly with a hammer on the hangers, so that the final position can be achieved and the total tension will be transferred onto the blades!

Control of the parallel assembly of the blades

- Arrange a dial gauge on the middle height at one of the blade ends.
- Move the frame carefully, in order to measure the blade displacement.
- Repeat this procedure at the other end of the blade.
- Both measuring values should not deviate more than 0,1 mm from each other.
- If the deviation is more than 0,1 mm, it can be corrected by moving of the blade hanger.

Control if the blades are vertical

- Check with the water-level at the upper and lower point of the blade depth as well as at both ends of the blade.
- The measuring values should not deviate more than 0,03 m from each other.
- The blades have to be assembled such way that they have a positive deflection, as shown beside.

	Horizontal Frame	Vertical Frame
Soft stone	1,5 – 3,5 mm	0,3 – 0,6 mm
Hard stone	2,0 – 4,0 mm	0,5 – 0,8 mm

In case a blade shows a negative defelection, it has to be clamped again.

Finally the total width of the blade set has to be measured.

Control of the hangers

- The rotary heads have to be free movable.
- Lubrication of the joint as well as the seats of the fixing screws with a rust resistant lubricant.
- The inner surfaces of the hangers and fixing screws have to be kept absolutely clean and free of dirt and rust.
- Some control points are welded at the hanger clamping fixtures, whose width has to be at least more than 2 mm than the casing of the blade holder.

Control of the distance pieces

- Those have to be rust- and burr free.
- They have to be exactly 0,1 mm parallel.
- Mount only distance pieces of the same size on each blade.

Control of the hydraulic clamping fixtures

- Considering of the instruction which has been delivered with the clamping fixtures.
- Check the cocks before assembling the blades.
- Release the cocks and tensioning wedges with pressure (2 tons).
- Clean the upper and lower surfaces of the wedges with a steel brush.
- Use lubricants carefully.

Assembling of the blades

- Arrange the first blade on the side of the frame, at which the reference blade will be fixed.
- After having assembled the first blade, the blade and the frame have to be controlled correspondingly by a water-level, if they are horizontal.

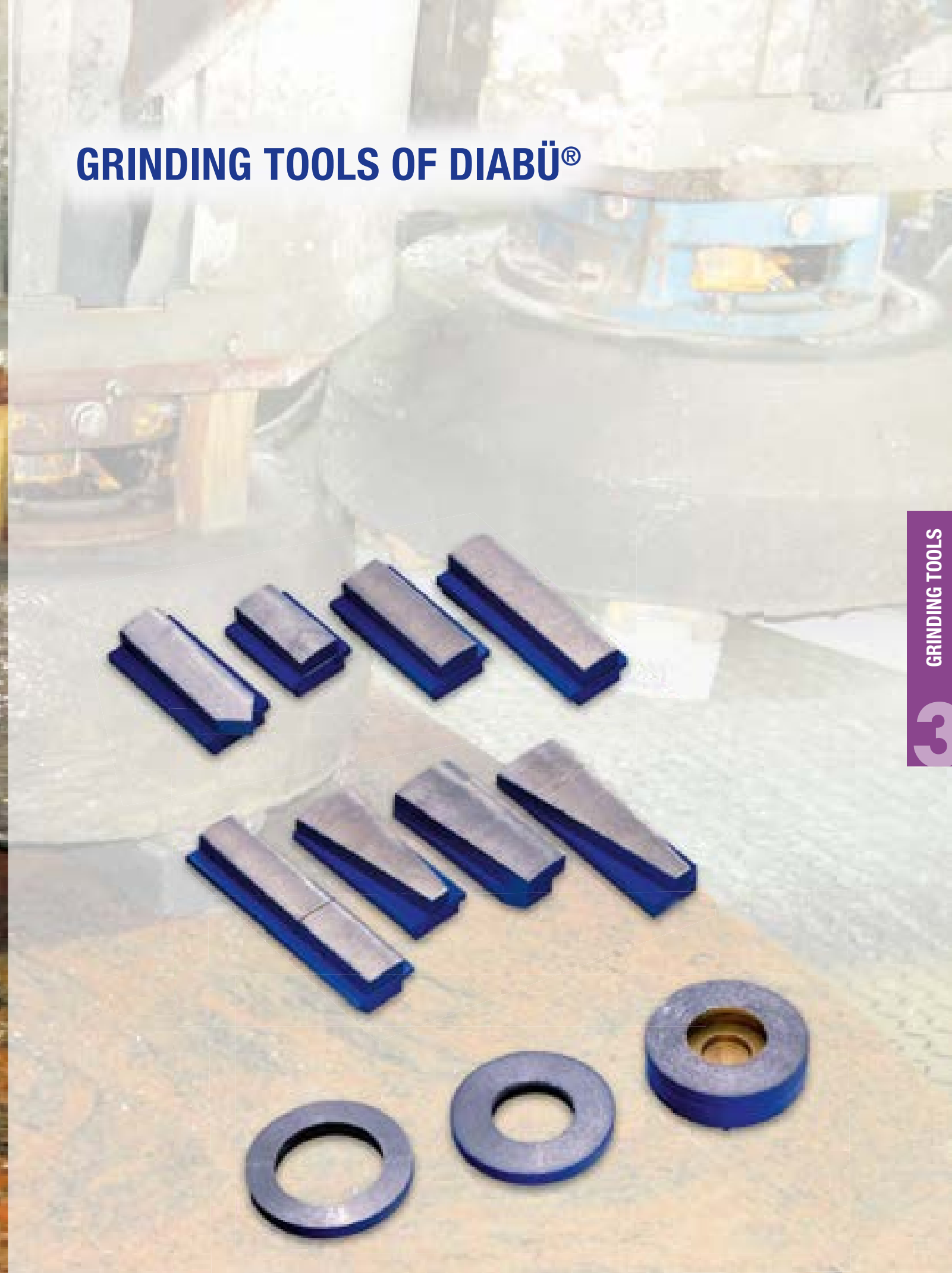
Adjustment of the blade position

- The hanger screw has to be adjusted such way that the blade axis is 9-10 mm above the hanger axis.
- After the adjustment of the first blade, assembling of the remaining blades the same way.
- Take care that the distance pieces and blades are clean.





GRINDING TOOLS OF DIABÜ®





Diamond Grinding Bricks
for grinding lines and grinding machines

Rough and medium grit

Grinding Brick			
Length (mm)	Width (mm)	Height (mm)	Used on
80	36	6; 10; 15; 20	Fickert
120	36	6; 10; 15; 20	Fickert
140	36	6; 10; 15; 20	Fickert, F&W, Thibaut
160	36	6; 10; 15; 20	Fickert, Meyer
200	36	6; 10; 15; 20	Fickert
130	55	6; 10; 15; 20	Universal
135	58 / 18	6; 10; 15; 20	Universal
140	60 / 45	6; 10; 15; 20	Universal
175	70 / 18	6; 10; 15; 20	Thibaut, F&W
175	70 / 45	6; 10; 15; 20	Thibaut, F&W

Other tool bodies on request.



Diamond Grinding Planets for grinding machines
Surface- and edge polishing machines, express heads

Rough and medium grit

Grinding Ring			
Ø Outside (mm)	Ø Inside (mm)	Height (mm)	Tool Bodies
100	50	4; 6; 8; 10	Bloc, M30, SF, FRF, Terzago
100	65	4; 6; 8; 10	Bloc, M30, SF, FRF, Terzago
120	30	4; 6; 8; 10	Bloc, M30, SF, FRF, Terzago
125	75	4; 6; 8; 10	Bloc, M30, SF, FRF, Terzago
130	30	4; 6; 8; 10	Bloc, M30, SF, FRF, Terzago
130	80	4; 6; 8; 10	Bloc, M30, SF, FRF, Terzago
160	140	4; 6; 8; 10	Bloc, M30, SF, FRF, Terzago

Other tool bodies on request.

Grit table

DIABÜ®	SIC	Colour Code	Used on
DIAFIX 20-7	16 – 20	Black	rough grit - surface polishing on single head polishers and grinding lines
DIAFIX 20-8	16 – 20	Light Blue	rough grit - radial arm polishers - single head polishers
DIAFIX 20-9	16 – 20	DIABÜ®-Blue	rough grit - soft type, especially for edge polishing with low grinding pressure
DIAFIX 40	30 – 36	Brown	rough grit
DIAFIX 85	90 – 110	Red	medium grit

Please give the following details on your order:

Material	for example: Granite
Segment Height	for example: 10 mm
Grit	for example: DIAFIX 20
Type of the grinding head	for example: Breton
Tool body	for example: Bloc



Grit table

DIABÜ®	SIC	Colour Code
DIAFIX 16	16	White
DIAFIX 20	16 – 20	Black
DIAFIX 30	24 – 30	DIABÜ®-Blue
DIAFIX 40	30 – 36	Brown
DIAFIX 50	36 – 45	Redbrown
DIAFIX 60	46 – 52	Light Blue
DIAFIX 70	80 – 100	Grey
DIAFIX 85	90 – 110	Red
DIAFIX 100	100 – 120	Orange
DIAFIX 120	120	Yellow
DIAFIX 140	140	Green

Diamond Grinding Rolls
for CNC contour grinding machines and radial arm polishers

Grinding and polishing with diamond to final gloss

Grinding Ring			
Ø Outside (mm)	Type	Grit (mm)	Height (mm)
100; 80	Segmented	Nr. 1	80; 160; 200; 240
100; 80	Sintered	Nr. 2	80; 160; 200; 240
100; 80	Ceravex	200	80; 160; 200; 240
100; 80	Ceravex	400	80; 160; 200; 240
100; 80	AG-Sheet	800	80; 160; 200; 240
100; 80	AG-Sheet	1500	80; 160; 200; 240
100; 80	AG-Sheet	3000	80; 160; 200; 240
100; 80	AG-Sheet	Polierer	80; 160; 200; 240

Special heights on request.
As an option galvanized rolls are available for No. 2 and No. 3



Advantages

- Complex contour grinding and polishing after the contour wire cut
- Efficient monument manufacturing
- Automated production is possible
- Re-tipping of the roll base bodies is possible
- Cost-efficient grinding procedure

Alternatively DIABÜ® reduced extremely the weight of the segmented pre-grinding rolls for the machining of profiled work pieces. This great weight reduction is possible by using now high grade construction plastic (Polyamid) as carrier material instead of conventional steel.

Our production demands a great deal on the concentric runout of the grinding rolls, so that we can achieve the highest standard of polishing quality. Furthermore we have a great reduced strain of the fixtures as well as the control rod. So your product quality will be increased and protect also your capital expenditures.

Arbors and clamping discs are available for all current and established roll grinding machines. Special sizes and special lengths are possible on request.

Please get in contact with us for a special quote as per your machine.





Ceravex Grinding Tools

Ceravex grinding tools have been developed, in order to replace conventional grinding tools by diamond tools with high durability regarding fine grit. These individual grits will be adapted to customers' request.

Ceravex Grinding Bricks

Grinding Brick			
Length (mm)	Width (mm)	Height (mm)	Used on
130	60 / 40	10; 20; 30	CO.MES.S, Breton, Thibaut, F&W
135	60 / 40	10; 20; 30	CO.MES.S, Breton, Thibaut, F&W
175	70 / 25	10; 20; 30	CO.MES.S, Breton, Thibaut, F&W



Ceravex Grinding Planets

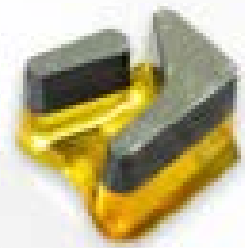
Used for: Edging machines and external grinding

Grinding Ring			
Ø Outside (mm)	Ø Inside (mm)	Height (mm)	Tool Bodies
100	50	5; 10; 20	SF, Klett, Tornado, SF+IG M24
120	30	5; 10; 20	SF, Klett, Tornado, SF+IG M24
120	50	5; 10; 20	SF, Klett, Tornado, SF+IG M24
150	50	5; 10; 20	SF, Klett, Tornado, SF+IG M24



Ceravex Type „Frankfurt“ for Surface Grinding

Grinding Ring		
Length (mm)	Width (mm)	Height (mm)
105	108 / 80	10; 20; 30

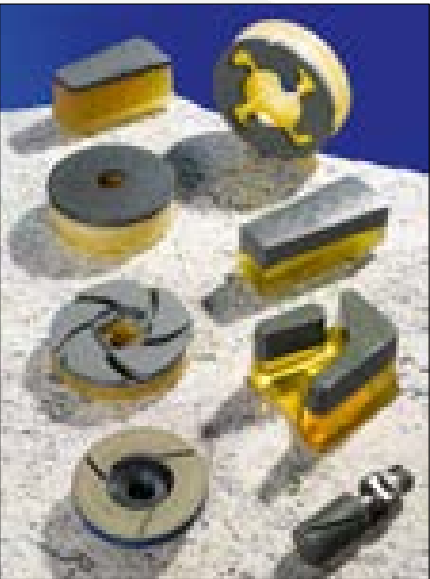


Grit table

Grit available for all types
K60
K80
K120
K180
K220
K280
K320
K400
K800
K1000
Further grits on request

Please give the following details on your order:

Material	for example: Granite
Segment Height	for example: 20 mm
Grit	for example: K120
Tool	for example: grinding planet
Tool body	for example: SF



Dry/Wet Diamond Grinding Cups

Grinding Ring				
Type	Ø Outside (mm)	Ø Inside (mm)	Height (mm)	Radius (mm)
HT-Turbo	100	60	4	flat
	130	90	4	flat
	150	110	4	flat
HT-continuous ring (slot types see picture below)	100	50	3	flat
HT-Poly	100	50	3	flat
HT-Steel	100	50	3	flat
HT-Pyramid Cup	100	50	3	flat
HT-closed ring with radius	100	50	2	r=15
	100	50	2	r=30



Grit table

Nr.	Mesh	Colour Code
0++	25 / 30	Brown
0+	30 / 40	Black
0	40 / 50	Light Blue
1	60 / 80	DIABÜ®-Blue
2	140 / 170	Yellow
3	230 / 270	Green

Available Tool Bodies
Thread M14
Thread M24
SF-fastener
Tornado
Bore 22,2
SF - M14 Kombi



NEW: Diamond Grinding Cup in Light Construction

- The grinding cups are very slim and screwed with the corresponding tool body, very easy handling



Please give the following details on your order:

Material	for example: Granite
Type	for example: HT-Turbo
Grit	for example: Nr 0++
Tool body	for example: M14



Dry/Wet DIAPADS



Type	Grinding Ring				Material
	Ø Outside (mm)	Strength (mm)	Application		
Premium (Pads also available in white for light materials)	75	3	Wet		Granite, Marble
	100	3	Wet		Granite, Marble
	125	3	Wet		Granite, Marble
	100	5	Wet		Granite, Marble
	125	5	Wet		Granite, Marble
Premium Dry	150	5	Wet		Granite, Marble
	200	10	Wet		Granite, Marble
	75	2,5	Dry		Granite, Marble
Premium Hybrid	100	2,5	Dry		Granite, Marble
	125	2,5	Dry		Granite, Marble
	100	3	Wet + Dry		Granite, Marble
Premium Engin	125	5	Wet + Dry		Granite, Marble
	100	3	Wet		Engineered Stone



Available Grits
#50
#100
#200
#400
#800
#1500
#3000

Available Tool Bodies
Inflexible hook-and-loop fastener
Flexible hook-and-loop fastener
Quick fastener



Perfect polishing also in only 4 steps

Type	Ø Outside (mm)	Application
Premium 4step wet	100	Wet
Premium 4step dry	100	Dry

Please give the following details on your order:

Material for example: Granite
Type for example: Premium
Diameter for example: 100 mm
Grit for example: 1 set completely # 50-3000+Buff
Tool Body for example: hook-and-loop fastener

Diamond Tools for processing on kitchen tops and bathroom basins – edges

Drain Board Milling Tools, usable on both sides

Grinding Ring			
Ø Outside (mm)	Ø Inside (mm)	Height (mm)	Tool Bodies
53	40	10; 20	R 1/2"
60	47	10; 20	R 1/2"
100	85	10; 20	R 1/2"
150	135	10; 20	R 1/2"

Other tool bodies on request.



Drain Board Milling Tools, segmented, usable on both sides

Segmented			
Ø Outside (mm)	No. of Segments	Height (mm)	Tool Bodies
80	12 + 12	7	R 1/2" / IG M14
87	12 + 12	7	R 1/2" / IG M14
95	14 + 14	7	R 1/2" / IG M14
120	16 + 16	7	R 1/2" / IG M14
150	16 + 16	7	R 1/2" / IG M14

Other tool bodies on request.



45° Drain Board Miller

Ø Outside (mm)	Finish	Height (mm)	Tool Bodies
100	Segmented	7	R 1/2" / IG M14 / Tornado
100	Sintered	7	R 1/2" / IG M14 / Tornado
100	Sintered	7	R 1/2" / IG M14 / Tornado
100	400	7	R 1/2" / IG M14 / Tornado
100	800	7	R 1/2" / IG M14 / Tornado
100	1500	7	R 1/2" / IG M14 / Tornado
100	3000	7	R 1/2" / IG M14 / Tornado
100	Burnisher	7	R 1/2" / IG M14 / Tornado

Other tool bodies on request.





Diamond Tools for the insides of kitchen tops and bathroom basins – outer edges

Profile milling- and grinding tools G3000

Type	Radius (mm)	Bore (mm)	Tool Piece (mm)	Grit	Colour
Rod	R 10	22,22	20	K1	Metallic
Rod	R 10	22,22	20	K2	Metallic
Rod	R 10	22,22	20	K2-3	Red
Rod	R 10	22,22	20	K3	Yellow
Rod	R 10	22,22	20	K4	White
Rod	R 10	22,22	20	K5	Blue
Rod	R 10	22,22	20	K6	Orange
Rod	R 15	22,22	30	K1	Metallic
Rod	R 15	22,22	30	K2	Metallic
Rod	R 15	22,22	30	K2-3	Red
Rod	R 15	22,22	30	K3	Yellow
Rod	R 15	22,22	30	K4	White
Rod	R 15	22,22	30	K5	Blue
Rod	R 15	22,22	30	K6	Orange
Rod	R 20	22,22	40	K1	Metallic
Rod	R 20	22,22	40	K2	Metallic
Rod	R 20	22,22	40	K2-3	Red
Rod	R 20	22,22	40	K3	Yellow
Rod	R 20	22,22	40	K4	White
Rod	R 20	22,22	40	K5	Blue
Rod	R 20	22,22	40	K6	Orange
1/4 Rod	R 10	22,22	20	K1	Metallic
1/4 Rod	R 10	22,22	20	K2	Metallic
1/4 Rod	R 10	22,22	20	K2-3	Red
1/4 Rod	R 10	22,22	20	K3	Yellow
1/4 Rod	R 10	22,22	20	K4	White
1/4 Rod	R 10	22,22	20	K5	Blue
1/4 Rod	R 10	22,22	20	K6	Orange
1/4 Rod	R 15	22,22	30	K1	Metallic
1/4 Rod	R 15	22,22	30	K2	Metallic
1/4 Rod	R 15	22,22	30	K2-3	Red
1/4 Rod	R 15	22,22	30	K3	Yellow
1/4 Rod	R 15	22,22	30	K4	White
1/4 Rod	R 15	22,22	30	K5	Blue
1/4 Rod	R 15	22,22	30	K6	Orange
1/4 Rod	R 20	22,22	40	K1	Metallic
1/4 Rod	R 20	22,22	40	K2	Metallic
1/4 Rod	R 20	22,22	40	K2-3	Red
1/4 Rod	R 20	22,22	40	K3	Yellow
1/4 Rod	R 20	22,22	40	K4	White
1/4 Rod	R 20	22,22	40	K5	Blue
1/4 Rod	R 20	22,22	40	K6	Orange

Please get in contact with us for a corresponding quote especially for your machine.

Different CNC Tools

Diamond Milling Cutter

Ø Outside (mm)	Segment Length (mm)	Colour	Tool Bodies	Usage
20	45	Silver	R 1/2"	Universal
23	35	Silver	R 1/2"	Universal
23	50	Silver	R 1/2"	Universal
23	35	Red	R 1/2"	Granite soft
23	50	Red	R 1/2"	Granite soft
23	65	Red	R 1/2"	Granite soft
23	70	Red	R 1/2"	Granite soft
23	85	Red	R 1/2"	Granite soft
23	35	Blue	R 1/2"	Granite hard
23	50	Blue	R 1/2"	Granite hard
23	65	Blue	R 1/2"	Granite hard
23	70	Blue	R 1/2"	Granite hard
23	85	Blue	R 1/2"	Granite hard
23	35	Gold	R 1/2"	Engineered Stone
23	50	Gold	R 1/2"	Engineered Stone



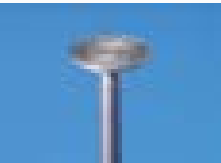
Diamond Milling Cutter with Ring Segment

Ø Outside (mm)	Height (mm)	Tool Bodies
20	20	R 1/2"
20	12	R 1/2"
20	20	Ravelli
20	12	Ravelli
20	20	Segment M12
20	12	Segment M12

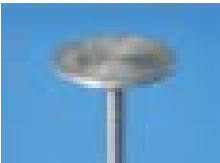


Sculpturing Tools

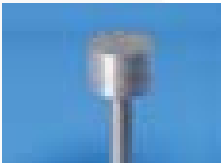
Profile No.	Ø Shaft (mm)	Ø Outside (mm)	Segment Height (mm)	Length (mm)
1	6	20	1	50
2	6	30	2	50
3	6	16	10	60
4	6	10	20	60
5	6	12	18	65
6	6	10	15	55
7	6	10	15	55
8	6	12	17	65
9	6	14	12	60
10	6	10	30	78



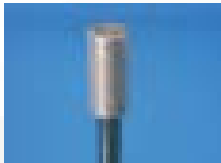
Profile 1



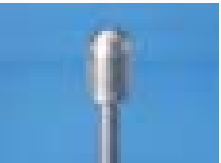
Profile 2



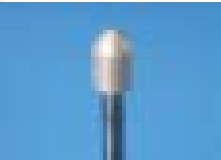
Profile 3



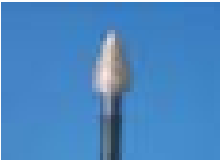
Profile 4



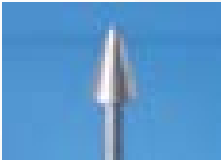
Profile 5



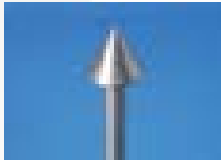
Profile 6



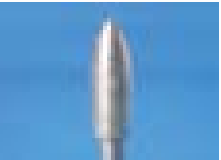
Profile 7



Profile 8



Profile 9



Profile 10



Different CNC Tools

Profile milling tools for different uses

Ø Outside (mm)	Thickness of tile (mm)	Bore (mm)	Profile
120	20 – 40 (50 – 60)	35	A, B, D, E, EC,
	20 – 40 (50 – 60)	35	ES, F, FG, FGS, FS,
	20 – 40 (50 – 60)	35	FV, H, L, O, OG, PE,
	20 – 40 (50 – 60)	35	Q, T, TP, TS, TV,
	20 – 40 (50 – 60)	35	U, V, X, Z

Overview of all the profiles please see below mentioned.



Profile milling tools for different uses

Station	Type	Step	Finish
0	segmented	pre-profiling	metal bond
1	sintered	pre-milling	metal bond
2	sintered	profiling	metal bond
3	sintered	grinding	metal bond
4	Winner	precision-grinding	Winner synthetic resin
5	Winner	polish	Winner synthetic resin
6	Winner	final polish	Winner synthetic resin
4	White	precision-grinding	vulcanized
5	Blue	polish	vulcanized
6	Orange	final polish	vulcanized
IV	Rough	polish	synthetic resin
V	Fine	final polish	synthetic resin



Please get in contact with us for a corresponding quote especially for your machine.

A

D

F

FGS

H

PE

TP 20&30

U

Z

A r15+3

E

FG

FS

L

Q

TP 40

V

B

EC

FG 33

FS r3

O

SK

TS

X

B r30+3

ES

FGS

FV

OG

T

TV

X 40/17

Surfacing Wheels

For further processing of sawn or milled surfaces on radial arm polishers or grinding automats.
Further information about dimensions, specification and recommended parameters are available on request.

Rough grit, pre-grit, medium grit

Ø Outside (mm)	Finish	Height (mm)	Tool Bodies
130	Segmented	10; 15; 20	as per request
150	Segmented	10; 15; 20	as per request
175	Segmented	10; 15; 20	as per request
200	Segmented	10; 15; 20	as per request
250	Segmented	10; 15; 20	as per request
300	Segmented	10; 15; 20	as per request
350	Segmented	10; 15; 20	as per request
400	Segmented	10; 15; 20	as per request

Alternative diameters as well as single segments are available on request.

Grit table

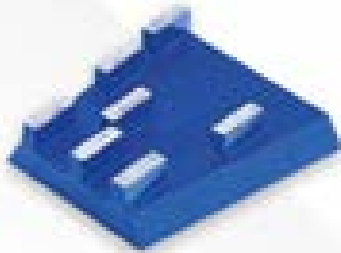
DIABÜ®	SIC	Colour Code	Usage
DIAFIX 20	16 – 20	DIABÜ®-Blue	rough grit
DIAFIX 40	30 – 36	Brown	pre-grit
DIAFIX 85	90 – 110	Red	medium grit

Further grits available on request.



Grinding tool type „Frankfurt“

Carrier body			No. of segments per carrier	Segment size		
Length (mm)	Width 1 (mm)	Width 2 (mm)		Length (mm)	Width (mm)	Height (mm)
105	108	80	7; 8; 9; 11; 12	25	8	12y10
105	108	80	5	40	10	10
105	108	80	8	Ø	14	10; 15



Half-moon segments

Carrier body			No. of segments per carrier	Segment size		
Length (mm)	Width (mm)	Height (mm)		Length (mm)	Width (mm)	Height (mm)
80	30	10	3	25	8	7; 12
95	30	15	3	25	8	7; 12
105	30	15	3	25	8	7; 12
120	32	15	3	25	8	7; 12

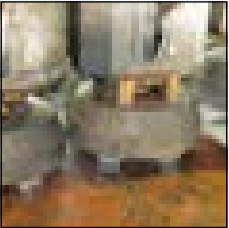


Please give the following details on your order:
Material for example: Granite
Segment height for example: 10 mm
Grit for example: Rough grit
Tool Body for example: 2 stud bolts M12 TK175



Recommended parameters of different grinding tools

Grinding Cups



Diameter (mm)	Rotations (min ⁻¹)	Peripheral speed (m/s)	Generated power (kW)	Amount of coolant (l/min)
100	1800 – 2000	Pneumatic	0,6 – 14	5
125	1500 – 1800	3 – 7		
130	1500 – 1800	Electric		
150	1200 – 1500	8 – 12		

Pay attention to sufficient cooling.
Use portable hand grinding machines with wet cutting equipment (isolating transformer).
A rubber coupling between machine and cup wheel should be used for damping of vibrations.

Recommendations for mounting and checking

- Clean thread and plane surface and check, if the plane surface fits closely.
Slightly oil thread and plane surface.
- The water supply has to be effected by the diving shaft.
- If low removal rate, sharpen cup wheel in fine limestone with generous supply of water.
- If uneven wear of the diamond tool, check machine coupling.

Diamond Surfacing Wheels

Diameter (mm)	Peripheral speed (m/s)	Generated power		Amount of coolant	
		Automatic (kW)	Radial Arm Polisher (kW)	Automatic (l/min)	Radial Arm Polisher (l/min)
175	6 – 12	10 – 20	2 – 8	3 – 4	8 – 10
200				3 – 4	8 – 10
250				4 – 5	10 – 15
300				4 – 5	15 – 20
350				5 – 6	15 – 20
400				6 – 8	20 – 25
450				8 – 10	20 – 25
500				10 – 12	25 – 30

Cooling:
Should be proportionated that way that the working surface is sufficiently cleaned from abrasive muds.
The supply of the coolant is effected by a hollow spindle.

Removal rate of material :
The material removal rate results from the contact pressure and the traverse speed of the surface grinder as well as the size of the diamond crystal and diamond concentration of the grinding tool.
Highly uneven slabs have to be grinded in several passes with low traverse speed.

Grinding tool type „Frankfurt“

Peripheral speed (m/s)
4 – 7

Recommended parameters of different grinding tools

Profile grinding tools as per page 66, Ø 120 mm CNC machines for granite, cast stone

Station	Type	Step	Traverse speed (mm/min)			Abrasion (mm/min)	Rotations (min ⁻¹)
			1 – 3		4 – 5		
			Rough	Granite Cast Stone	Fine		
0	Segmented	Pre-profiling	500 – 600		400 – 500	max 0,5	4500 – 4600
1	Sintered	Pre-milling	800 – 1000		700 – 900	0,3 – 0,4	4500 – 4600
2	Sintered	Profiling	1300 – 1500		1200 – 1400	0,2 – 0,3	4500 – 4600
3	Sintered	Grinding	800 – 1000		800 – 1000	0,1 – 0,15	4500 – 4600
4	Winner	Precision-Grinding		1200		0,05 – 0,1 NULL	2500
5	Winner	Polishing		1200		compacting	2500
6	Winner	Final Polish		1200		pressure	2500
4	White	Precision-Grinding		700 – 800		0,05 NULL	2500 – 2600
5	Blue	Polishing		800 – 900		compacting	2700 – 2800
6	Orange	Final Polish		900 – 1000		pressure	3000
IV	Rough	Polishing		1200 – 1500		0,1 – 0,2	1200 – 1500
V	Fine	Final Polish		1200 – 1500			1200 – 1500

Profile grinding tools as per page 66, Ø 120 mm CNC machines for marble

Station	Type	Step	Traverse speed (mm/min)	Abrasion (mm/min)	Rotations (min ⁻¹)
1	Electroplated with slot	Pre-milling	1000	max 1 mm	5000 – 5500
2	Electroplated bond	Profiling	1500	0,2 – 0,4	5000 – 5500
3	Electroplated bond	Grinding	1500	0,1 – 0,2	5000 – 5500
5	Winner synthetic resin	Polishing	900	0,05 – 0,1 NULL	2800
6	Winner synthetic resin	Final Polishing	1000	compacting pressure	3000
IV	Synthetic resin polishing	Polishing	800 – 1000	0,1 – 0,2	1200 – 1500



MILLING TOOLS OF DIABÜ®

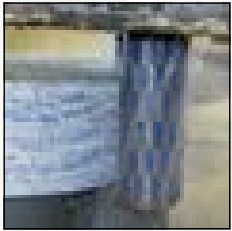




Diamond Peripheral Milling Tools

Poly / Steel

For bridge saws, radial arm milling machines and curve milling machines



Tool body		Segments	Segment			Bore
Ø Outside (mm)	Milling width (mm)	(pcs.)	Length (mm)	Width (mm)	Height (mm)	(mm)
150	35	18	35	8; 10	6; 9	60
150	40	18	40	8; 10	6; 9	60
300	35	32	35	8; 10	6; 9	60
300	40	32	40	8; 10	6; 9	60
350	25	36	25	8; 10	6; 9	60
350	30	42	30	8; 10	6; 9	60
350	35	36	35	8; 10	6; 9	60
350	40	32; 36; 40	40	8; 10	6; 9	60
400	20	48	20	10	6; 9	60
400	30	42	30	10	6; 9	60
400	40	42; 46	40	10	6; 9	60
400	50	40	50	10	6; 9	60
400	55	42	55	10	6; 9	60
400	60	42	60	10	6; 9	60
450	40	42	40	10	6; 9	60
500	40	42	40	10	6; 9	60
600	30	62	30	10	6; 9	60
700	60	55	60	10	6; 9	60
800	50	70	50	10	6; 9	60

Low vibrations, low noise and these milling tools can be re-tipped.
Single millers with side protection are available.

- Alternative bores and mounting hole configurations
- Segments are available for re-tipping by yourselves
- Different milling widths are available
- It's important to check the clamping width before ordering!



Polyamid core with steel ring at the circumference

Diamond Peripheral Milling Tools

Steel

For bridge saws, radial arm milling machines and curve milling machines

Tool body		Segments	Segment			Bore
Ø Outside (mm)	Milling width (mm)	(pcs.)	Length (mm)	Width (mm)	Height (mm)	(mm)
100	35	14	35	8; 10	6; 9	60
100	40	14	40	8; 10	6; 9	60
150	35	18	35	8; 10	6; 9	60
150	40	18	40	8; 10	6; 9	60
250	40	22	40	8; 10	6; 9	60
300	30	36	30	8; 10	6; 9	60
300	40	30; 32	40	8; 10	6; 9	60
300	50	24	50	8; 10	6; 9	60
300	60	30	60	8; 10	6; 9	60
350	15	25	15	20	6; 9	60
350	20	25	20	15	6; 9	60
350	25	36	25	8; 10	6; 9	60
350	30	40	30	8; 10	6; 9	60
350	35	25; 40; 45	35	8; 10	6; 9	60
350	40	40; 45	40	8; 10	6; 9	60
350	50	40	50	8; 10	6; 9	60
350	60	40	60	8; 10	6; 9	60
400	20	28	20	8; 10	6; 9	60
400	30	48	30	8; 10	6; 9	60
400	40	45; 46	40	8; 10	6; 9	60
400	50	40	50	8; 10	6; 9	60
400	70	43	70	8; 10	6; 9	60
500	40	50	40	10	6; 9	60
600	20	42	20	10	6; 9	60



Milling Tools with high cutting rate and they can be re-tipped.
Single millers with side protection are available.

- Alternative bores and mounting hole configurations
- Segments are available for re-tipping by yourselves
- Different milling widths are available

Milling package with spindle

Spindle		Miller	
Ø Shaft (mm)	Length (mm)	No. of (pcs.)	Width (mm)
60	120	3	40
60	140	4	35
60	160	4	40
60	175	5	35
60	200	5	40

Please give the following details on your order:
Material for example: Granite
Type for example: Poly / Steel
Diameter for example: 350 mm
Segment size for example: 35 mm milling width, 6 mm height
Bore for example: 60 mm
Mounting Holes for example: no





Millers, Calibrating Tools

Calibrating Rings

For milling/calibrating of workpiece surfaces

Ø Outside (mm)	Machine	Segment Length (mm)	Segment Width (mm)	Segment Height (mm)
112 to 1050	for example Hensel Löfler Karl Meyer Wassmer etc.	12; 20; 22; 24; 25	5 – 14	6 – 20



Also available with support segments for protection of the carrier body.

Further configuration of the tools such as

- Number of segments
- Segment width
- Segment height

will be adjusted individually.

Cup-shaped Millers

For milling/calibrating of workpiece surfaces

Ø Outside (mm)	Machine	Segment Length (mm)	Segment Width (mm)	Segment Height (mm)
100	for example	12,5	6	10
125	Hensel	20	10	10
200	Löfler	25	8	12,5
300	Karl Meyer etc.	25	10	10



Also available with support segments for protection of the carrier body.

Further configuration of the tools such as

- Number of segments
- Segment width
- Segment height

will be adjusted individually.

Surface Millers

Applicable from both sides; for drain boards and shower base

Grinding ring			
Ø Outside (mm)	Ø Inside (mm)	Height (mm)	Tool Bodies
53	40	10; 20	R 1/2"
60	47	10; 20	R 1/2"
100	85	10; 20	R 1/2"
150	135	10; 20	R 1/2"

Other tool bodies on request.



Milling Tools

Water Slot Cutter / Groove Miller

For milling of dripping grooves / For milling of reinforcement grooves

Ø Outside (mm)	Machine	Segment Length (mm)	Segment Width (mm)	Segment Height (mm)
125	Universal	20; 25	4; 6; 8; 10	8; 10; 12,5
130		20; 25	4; 6; 8; 10	8; 10; 12,5
150		20; 25	4; 6; 8; 10	8; 10; 12,5
160		20; 25	4; 6; 8; 10	8; 10; 12,5
200		20; 25	4; 6; 8; 10	8; 10; 12,5
250		20; 25	4; 6; 8; 10	8; 10; 12,5
300		20; 25	4; 6; 8; 10	8; 10; 12,5
350		20; 25	4; 6; 8; 10	8; 10; 12,5
400		20; 25	4; 6; 8; 10	8; 10; 12,5
450		20; 25	4; 6; 8; 10	8; 10; 12,5
500		20; 25	4; 6; 8; 10	8; 10; 12,5
550		20; 25	4; 6; 8; 10	8; 10; 12,5
625		20; 25	4; 6; 8; 10	8; 10; 12,5



Milling Package

For thickness calibrating or contour processing

Ø Outside (mm)	Machine	Segment Length (mm)	Segment Width (mm)	Segmen Height (mm)
115	Universal	20; 25; 40	2,6 – 3,5	8; 10; 12,5
200		20; 25; 40	2,6 – 3,5	8; 10; 12,5
250		20; 25; 40	2,6 – 3,5	8; 10; 12,5
300		20; 25; 40	2,6 – 3,5	8; 10; 12,5
350		20; 25; 40	2,6 – 3,5	8; 10; 12,5



Form, measurement and specification of the tools will be made on individual request.

Please give the following details on your order:

Material	for example: Granite
Type	for example: Water Slot Cutter
Diameter	for example: 350 mm
Segment size	for example: 25x8x10 mm
Bore	for example: 60 mm
Mounting Holes	for example: no



Recommended Parameters

Calibrating Rings

	Hard Stone	Soft Stone
Vertical feed	up to 2 mm per stage	up to 3 mm per stage
Traverse speed	up to 1,5 m/min	up to 2 m/min
Cross feed	1/4 – 1/2 of the tool diameter	
Peripheral speed	20 – 30 m/s	

Tool Diameter	Generated Power	Recommended Water Qty.	Axial run-out Tolerance	Radial run-out Tolerance
(mm)	(kW)	(l/min)	(mm)	(mm)
150	5 – 10	10 – 15	0,05	0,10
200	5 – 10	10 – 15	0,05	0,10
250	8 – 11	12 – 15	0,05	0,10
300	8 – 11	15 – 20	0,05	0,10
400	15 – 18	20 – 30	0,08	0,10
500	15 – 18	25 – 35	0,10	0,15
700	22 – 35	35 – 45	0,15	0,20

Cooling:

Amount of cleanness of the cooling water affects the tool performance. The supply of cooling water can be effected from the outside by a water ring or from the inside by a hollow spindle resp. water channels inside the tool.

Hollow spindle and water channels support a direct water supply by means of centrifugal force. Through this, the water reaches specifically the cutting surfaces of the diamond segments. A hollow spindle demands a distributing sheet, in order to guarantee a sufficient water supply during the initial shaping stage as well.

Diamond Peripheral Milling Tools

Tool Diameter	Generated Power	Recommended Water Qty.	Peripheral Speed	Traverse Speed	Verical Speed	Axial run-out Tolerance	Radial run-out Tolerance
(mm)	(kW)	(l/min)	(m/s)	(m/min)	(mm)	(mm)	(mm)
100 – 200	3 – 8	20 – 30	15 – 30	high quartz content 0,5 – 0,8	up to 20 mm per process	0,06	0,10
250	6 – 10	30 – 40				0,08	0,10
300	15 – 20	40 – 50				0,10	0,10
350	15 – 20	40 – 50		0,10		0,12	
400	15 – 20	50 – 60		low quartz content 0,8 – 1,2		0,15	0,10
500	30 – 35	60 – 70				0,15	0,15
700	35 – 40	60 – 70				0,15	0,20

Cooling:

Is effected by wide flat pipes at the circumference and in addition partly by centrifugal action, is most effective when coolant supply is done from both sides.

Down feed:

Depending on the type of stone the excess material can be removed in one or several stages.
Hard stones with a high quartz content can take a higher down feed compared to materials with a low quartz content.

All parameters are only to be considered as standard values and recommendations.
They can vary depending on the machine type, material processed and other influencing parameters.

Trouble Shooting Diamond Peripheral Milling Tools

Problem	Solution
Miller runs uneven	Check axial and radial run-out, check bore
Miller works hard	Change from materials with high quartz content to softer materials with a low quartz content
Inaccurate milling surface	Check axial and radial run-out Check bearings, replace if necessary
Grooves in milling direction	With double millers insert or remove distance washers
Uneven wear	Re-set miller frequently (milling package)





DRILLING TOOLS OF DIABÜ®





Drills

Blind Hole Drills / Diamond Drill for small holes

With crown



Tool body	Standard		
Type	depth of bore (mm)	Ø Outside (mm)	Height (mm)
Hexagon tool body / IG M12x1,5	20	5	10
Hexagon tool body / IG M12x1,5	40	6	10
Hexagon tool body / IG M12x1,5	60	8	10
Hexagon tool body / IG M12x1,5	60	10	10
Hexagon tool body / IG M12x1,5	60	12	10

Further tool bodies:

- Shaft
- Inside thread M14
- Outside thread R1/2"

Material	Colour
Granite	Blue
Marble	Green
Sandstone	Orange



Core Drills

With ring segment

Tool body	Standard	Ring Segment		
Type	depth of bore (mm)	Ø Outside (mm)	Width (mm)	Height (mm)
AG R1/2" / IG M14	60	8	1,5	10
AG R1/2" / IG M14	80	10	1,5	10
AG R1/2" / IG M14	100 / 150	12	1,5	10
AG R1/2" / IG M14	100 / 150	14	2	10
AG R1/2" / IG M14	100 / 150	15	2	10
AG R1/2" / IG M14	100 / 150	16	2	10
AG R1/2" / IG M14	100 / 150	18	2	10
AG R1/2" / IG M14	100 / 150	20	2	10
AG R1/2" / IG M14	100 / 150 / 200	22	2	10
AG R1/2" / IG M14	100 / 150 / 200	24	2	10
AG R1/2" / IG M14	100 / 150 / 200	25	2	10
AG R1/2" / IG M14	100 / 150 / 200	26	2	10
AG R1/2" / IG M14	100 / 150 / 200	27	2	10
AG R1/2" / IG M14	100 / 150 / 200	30	2	10
AG R1/2" / IG M14	100 / 150 / 200	35	2	10
AG R1/2" / IG M14	100 / 150 / 200	38	2	10
AG R1/2" / IG M14	100 / 150 / 200	40	2	10
AG R1/2" / IG M14	100 / 150 / 200	45	2	10
AG R1/2" / IG M14	100 / 150 / 200	50	2	10
AG R1/2" / IG M14	100 / 150 / 200	55	2	10
AG R1/2" / IG M14	100 / 150 / 200	60	2	10
AG R1/2" / IG M14	100 / 150 / 200	65	2	10
AG R1/2" / IG M14	100 / 150 / 200	70	2	10
AG R1/2" / IG M14	100 / 150 / 200	80	2	10

Core Drills: Also available in 2,5 and 3 mm ring width



Please give the following details on your order:

- Typefor example: Core drills with ring segment
- Diameterfor example: 50 mm
- Depth of borefor example: 200 mm
- Tool bodyfor example: AG R1/2" (if shaft is ordered please give diameter of shaft)
- Materialfor example: Granite

Drills

Core Drills

Segmented

Tool Body	Core Drill	Standard	Segments	Segment		
Type	Ø Outside (mm)	depth of bore (mm)	No. (pcs.)	Length (mm)	Width (mm)	Height (mm)
AG R1/2" / IG M14	25	200	3	18	3,0	7; 10
AG R1/2" / IG M14	30	200	3	18	3,0	7; 10
AG R1/2" / IG M14	35	200	3	18	3,0	7; 10
AG R1/2" / IG M14	40	200	4	18	3,0	7; 10
AG R1/2" / IG M14	50	200	5	18	3,0	7; 10
AG R1/2" / IG M14	61,5	200	5	22; 24	3,0	7; 10
AG R1/2" / IG M14	71,5	200	5	22; 24	3,5	7; 10
AG R1/2" / IG M14	81,5	200	5	22; 24	3,5	7; 10
AG R1/2" / IG M14	91,5	200	6	22; 24	3,5	7; 10
AG R1/2" / IG M14	101,5	200	6	22; 24	3,5	7; 10
AG R1/2" / IG M14	121,5	200	6	22; 24	3,5	7; 10
AG R1/2" / IG M14	151,5	200	6	22; 24	4,0	7; 10
AG R1/2"	202	200	8	22; 24	4,5	7; 10
AG R1/2"	252	200	8	22; 24	4,5	7; 10
AG R1/2"	302	200	10	22; 24	4,5	7; 10



Material	Colour
Granite	Blue
Granite easy cutting	Silver
Granite + Marble Combi	Yellow
Marble	Green
Sandstone	Orange

Please give the following details on your order:

- Typefor example: Core drills, segmented
- Diameterfor example: 101,5 mm
- Depth of borefor example: 200 mm
- Tool bodyfor example: AG R1/2" (if shaft is ordered please give diameter of shaft)
- Materialfor example: Granite



Segments / Rings for Drills

Crowns for Diamond Blind Hole Drills



Ø Outside (mm)	Height (mm)
5	10
6	10
8	10
10	10
12	10

Material
Granite
Marble
Sandstone



Ring Segments for Core Drills

Ring segment		
Ø Outside (mm)	Width (mm)	Height (mm)
8	1,5	10
10	1,5	10
12	1,5	10
14	2	10
15	2	10
16	2	10
18	2	10
20	2	10
22	2	10
24	2	10
25	2	10
26	2	10
27	2	10
30	2	10
35	2	10
38	2	10
40	2	10
45	2	10
50	2	10
55	2	10
60	2	10
65	2	10
70	2	10
80	2	10



Core Drills: Also available in 2,5 and 3 mm ring width

Segments for Core Drills

Drill hole Diameter (mm)	Segment		
	Length (mm)	Width (mm)	Height (mm)
25	18	3	7; 10
30	18	3	7; 10
35	18	3	7; 10
40	18	3	7; 10
50	18	3	7; 10
61,5	22; 24	3	7; 10
71,5	22; 24	3,5	7; 10
81,5	22; 24	3,5	7; 10
91,5	22; 24	3,5	7; 10
101,5	22; 24	3,5	7; 10
121,5	22; 24	3,5	7; 10
151,5	22; 24	4	7; 10
202	22; 24	4,5	7; 10
252	22; 24	4,5	7; 10
302	22; 24	4,5	7; 10

Material
Granite
Granite easy cutting
Granite + Marble Combi
Marble
Sandstone



Please give the following details on your order:
Finish for example: Segment
Size for example: 24x4,5x10 mm
Material for example: Granite

Recommended Parameters

Blind Hole Drills and Core Drills

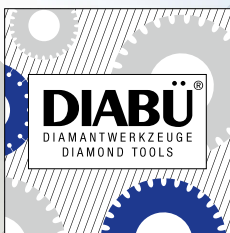
Diameter (mm)	Speed range at 2 – 4 m/s (U/min)	Speed range at 1 – 1,5 m/s (U/min)	Generated power (kW)	Amount of coolant (l/min)
6	6300 – 12500	3150 – 4800	1	2
8	5000 – 10000	2500 – 3600	1	2
10	4000 – 8000	2000 – 2900	1	3
12	3200 – 6400	1600 – 2400	1	3
14	2800 – 5500	1400 – 2100	1	3
16	2400 – 4800	1200 – 1800	1	3
18	2100 – 4250	1050 – 1600	1	3
20	1900 – 3800	950 – 1500	1	3
22	1750 – 3500	875 – 1300	1	3
24	1600 – 3200	800 – 1200	1	3
25	1500 – 3000	750 – 1200	1	3
26	1500 – 3000	750 – 1100	1	3
29	1300 – 2600	650 – 1000	1	3
30	1250 – 2500	625 – 950	1	3,5
35	1100 – 2200	550 – 850	1	3,5
40	1000 – 1900	500 – 750	1	3,5
45	850 – 1700	425 – 650	1	4
50	750 – 1500	375 – 600	1	4,5
60	650 – 1250	325 – 500	1,5	5,5
70	550 – 1100	275 – 425	1,5	6
75	500 – 1000	250 – 400	1,5	6,5
80	480 – 960	240 – 360	1,5	7
90	430 – 850	215 – 320	1,5	8
100	380 – 760	180 – 300	1,5	8,5
120	400	200 – 250	2	9,5
140	350	210	2	10,5
160	320	180	2	12
180	270	160	3	13
200	230	150	3	15
250	190	120	3	17
300	160	100	68	20

Peripheral speed

	Hard stone	Soft stone
Core drills	1 – 1,5 m/s	2 – 4 m/s
Blind hole drills	2 – 3 m/s	

Recommendations:

- Keep within the recommended speed range of the machine; that way the tools cut well and work economically.
- Pay attention to sufficient water supply; during working/cutting the water should permanently flow out of the bore hole.
- Do not work with high pressure.
- Interrupt traverse feed again and again for a short time; particularly important with deeper holes or extremely muddy/abrasive materials; too high or continuous drill pressure stop cooling and washing away of the abrasive mud.
- Recharge exhausted cooling water slots, because otherwise damages by insufficient supply of cooling water can occur.
- When cutting effects decreases, sharpen tools with a few drills in sandstone.



DIABÜ® Diamantwerkzeuge Heinz Büttner GmbH

Industriestraße 3 · 35713 Eschenburg · GERMANY

Phone: +49 (0) 27 70 - 91 33 - 0 · Fax: +49 (0) 27 70 - 91 33 - 25

info@diabue.com · **www.diabue.com**

DIABÜ® France S.A.

35780 La Richardais · FRANCE

Phone: +33 (0) 2 99 46 14 97

Fax: +33 (0) 2 99 46 60 83

E-Mail: direct@diabu.fr

DIABÜ® Diamond Tools India Pvt. Ltd.

Bangalore - 560 068 · INDIA

Phone: +91 (0) 80 25 73 12 56

Fax: +91 (0) 80 25 73 47 20

E-Mail: info@diabu.in

S. Tandberg A/S

1305 Haslum · NORGE

Phone: +47 (0) 67 83 06 00

Fax: +47 (0) 67 83 06 01

E-Mail: mail@s-tandberg.no