VID

GLASSPARTNER

The Synthetic Diamond Technology

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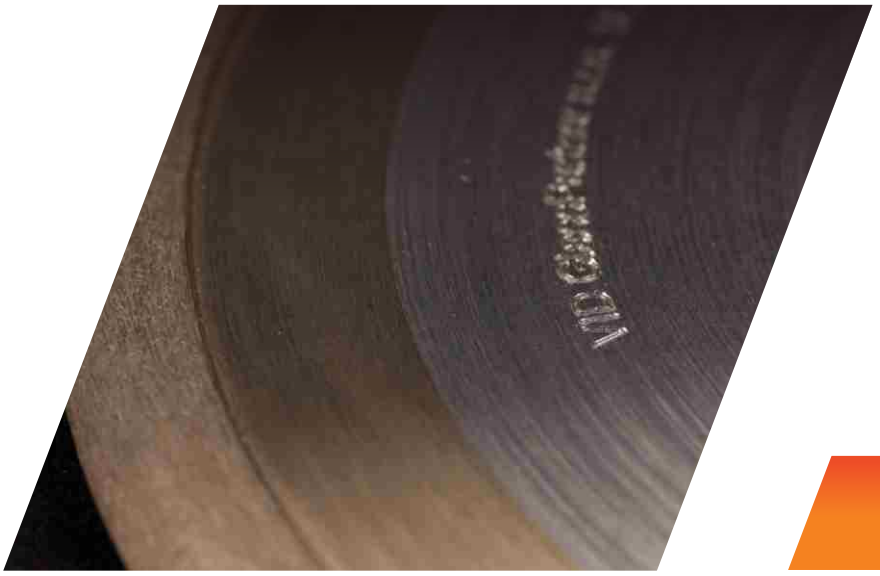
DIAMOND GRINDING WHEELS (metal bonded)
MACHINERY ACCESSORIES



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Diamond grinding wheels

Metal bonded synthetic diamond grinding surface

The assets and advantages of using the high quality synthetic diamond grinding wheels

- possibility of processing very hard as well as light materials
- high performance and quality of grinding
- high durability and constancy of the grinding wheel shape
- high efficiency
- favorable price and utility value proportion

About the sythetic diamond

The synthetic diamond originates through the action of high pressure and temperature on the natural graphite. Through various levels of pressure and temperature, different degrees of hardness of the synthetic diamond grain are achieved. The requested grit size is then achieved through crushing, grinding, sifting and rinsing.
Diamond is the hardest known material on earth and in the hardness scale it is assigned number 10. Besides hardness, this material is also exceptional for its good thermal conductivity and resistance to temperatures up to 700°C (1292°F) and resistance to all kinds of chemical effect at standard temperatures.

Other information

Grinding surface of all diamond tools is prepared by the producer to be used directly. If the grinding potential of the diamond tool decreases, we recommend to clean the working surface with an activating/revitalizing stone which we supply upon your request.
The standard diamond wheels have the admissible peripheral speed $30m^{-1}$.
Essential for the successful use of the diamond tool is a good technical condition of the machine and usage of appropriate coolants (Rotex, GS 600, water etc.)

Types of binding, grain size and examples of their use

Available is a wide range of grain size ranging from micro powder to very rough grain. The choice of the grain size cannot be categorized. When making the choice it is necessary to take into account the purpose of the tool usage. There are three basic operations: fining or frosting, fine grinding, rough grinding.

1) Fining or matting
   30-40, 20-30 μm small size grain, minimal roughness of the processed surface, minimal efficiency, minimal removal of material
2) Fine grinding
   270/325, 325/400 (MESH) medium size grain, standard grinding with medium roughness of the processed surface, medium efficiency, medium removal of material.
   The most frequently used grain size for the final processing of the surface prior to chemical polishing.
3) Rough grinding
   60/70, 70/80 (MESH) large size grain, rough grinding with maximal roughness of the processed surface, maximal efficiency, maximal removal of material.

Grain size	Efficiency	Roughness
30-40, 20-30 μm	min	min
270/325, 325/400 MESH		
60/70, 70/80 MESH	max	max

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Diamond grinding wheels

Metal bonded synthetic diamond grinding surface

The choice of bond depends on the type of the diamond wheel and the grain size

1) **Manual grinding:**

a) The basic bond type used at manual processing is M2
This bond (M2) can be successfully used for wheels of any type. However, for the wheels of the types 1E1, 1EE1, it is - in order to heighten the roughness - recommended to use different bond types (M3, M4), depending on the grain size. For the wheels of the type 6A2 with small size grain it is in order to prolong the time between trueing recommended to use the bond type M2.

Type of wheel	Grain size (µm) 30/40,20/30	Grain size MESH 270/325,325/400	Grain size MESH 60/70,70/80
1E1, 1EE1	M2 (M5)	M3	M4
1F1, 1FF1	M2	M2	M2
1A1	M2	M2	M2
6A2	M2	M2	M2

b) For conditioning of the surface for effective mechanical polishing (fining), or for final processing of the surface through frosting, the bond types MB1 and MB2 should be used.
The wheels with this kind of bond present a connecting link between common metal bonded diamond wheels and the electrocorundum wheels. In many cases they are a fully adequate substitute. The wheels with the bond type MB1 and MB2 allow for glass grinding (free of grinding burn) with higher efficiency than the common metal bonded wheels (M2), and they keep the shape (angle or radius) better than the electrocorundum wheels. Diamond wheels with these bond types are recommended for the following technologic operations:

The first technologic operation: grinding of glass with no further processing (the operation offrosting/matting). With this type of processing the surface remains frosted (non-transparent) - MB1.

The second technologic operation: grinding of glass with further mechanical polishing in order to achieve glass transparency (without acid polishing) - MB2.

Type of wheel	Grain size (µm) 40/50,30/40,20/30
1E1, 1EE1	MB1
1F1, 1FF1	MB2
1A1	MB2

For the operation of frosting the bond type MB1 is to be used. For the offer of the wheels with the bond type MB1 see page 21 of this catalogue.

2) **Machine processing:**

The highest efficiency of the diamond wheel designed for machine processing is achieved through the utilization of the bond type M1.

Type of wheel	Grain size (µm) 270/325,325/400
1E1, 1EE1	M1
1A1	M1 (t) hightend hardness

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Diamond grinding wheels

Metal bonded synthetic diamond grinding surface

Table of grain size of the synthetic diamond powder - fine grinding

FEPA ISO 6106	US Standard ASTM E 11 M	Dimension µm	DIN 848	ČSN 224015
M 1	0 - 1	0 - 1	0,7	1/0
M 1,6	1 - 2	1 - 2	1	2/1
M 2,5	1,5 - 3	1,5 - 3		3/2
M 4	2 - 4	2 - 4	3	4/2
M 6,3	3 - 6	3 - 6		5/3
M 10	4 - 8	4 - 8		7/5
	6 - 12	6 - 12	7	10/7
M 16	8 - 16	8 - 16		14/10
	10 - 20	10 - 20	15	20/14
	15 - 25	15 - 25		
M 25	15 - 30	15 - 30	25	28/20
	20 - 30	20 - 30		
M 40	20 - 40	20 - 40	30	40/28
	30 - 40	30 - 40		
	30 - 50	30 - 50		60/40
M 63	30 - 60	30 - 60		
D 39	400/500	28 - 40	35	36/25
D 46	325/400	38 - 45	45	40/36
D 54	270/325	45 - 53	50	50/40
D 64	230/270	53 - 63	55	63/50
D 76	200/230	63 - 75	65	80/63
D 91	170/200	75 - 90	90	
D 107	140/170	90 - 106	100	100/80
D 126	120/140	106 - 125	110	125/100

Table of grain size of the synthetic diamond powder - rough grinding

FEPA ISO 6106	US Standard ASTM E 11 M	Dimension µm	DIN 848	ČSN 224015
D 151	100/120	125 - 150	150	160/125
D 181	80/100	150 - 180	180	
D 213	70/80	180 - 212		200/160
D 251	60/70	212 - 250	220	250/200
D 301	50/60	250 - 300	280	315/250
D 426	40/45	355 - 425	350	400/315
D 426	35/40	425 - 500	450	500/400

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Diamond grinding wheels

Metal bonded synthetic diamond grinding surface

Concentration of the diamond powder

The concentration of the diamond powder presents the weight content of the diamond powder per 1 cm^3.
Primary is the concentration K 100 which presents the content of 0.88g of the diamond powder in 1 cm^3.

Concentration (K)	25	50	75	100	125	150	175	200
Content of diamond powder (g/cm^3)	0,22	0,44	0,66	0,88	1,10	1,32	1,54	1,76

Making an order

When making an order please mention the type of the diamond wheel (FEPA) and all technical parameters stated in the tables, the grain size (US Standard, μm) and its concentration (K).
If the requested type or dimension of the diamond wheel is not listed in our catalogue, it is possible to produce one to your order.

Example of order:

With a detailed specification of the tool, for instance:
1 pc 1E1 200 x 10 x 10 x 90 x 42 270/325 (US Standard) K 50 M03

Meaning of the figures

1pc: number of pieces
1E1: wheel type (FEPA)
200: 200 mm wheel diameter
10: 10 mm width of the wheel
10: 10 mm height of the grinding layer (bond)
90: 90° angle (the representation of the shape of the grinding layer)
42: 42 mm bore
270/325: requested grain size of the synthetic diamond powder (as stated in the grain size table)
K50: concentration of the synthetic diamond powder
M03: requested bond type (depending on the purpose of the wheel usage)

!!!When choosing the concentration "K" and the bond type, please consult our advisory service every time you are not certain about the choice suitable for the intended utilization of the tool!!!

Contact for the receipt of orders

Address: VID GlassPartner s.r.o., U nádraží 1297, 511 01 Turnov, Czech Republic
E-mail: info@vid-glasspartner.com

Charge-free advisory service

Besides suggesting the proper wheel shape and its specific grinding qualities (free of charge), we offer an advisory service as well as a thorough counseling in areas of individual technologic steps and the technologies of glass refining, according to the needs and order of our customers. Designing of such technologic steps will be charged after mutual consent and consultation with the sales department. The charge-free advisory service email account: info@vid-glasspartner.com.

Accessories of the diamond grinding wheels

The catalogue also includes accessories for the effective utilization and maintenance of the VID tools. These are mainly the activating/revitalizing stones of various shapes and grain sizes, clamps, and some other accessories.

Tool maintenance service

Our company, VID GlassPartner s.r.o., also offers custom modification and trueing/dressing of new as well as worn-out wheels. Details concerning this service can be obtained from the charge-free advisory service. If you wish to order this service, please, contact the sales department.

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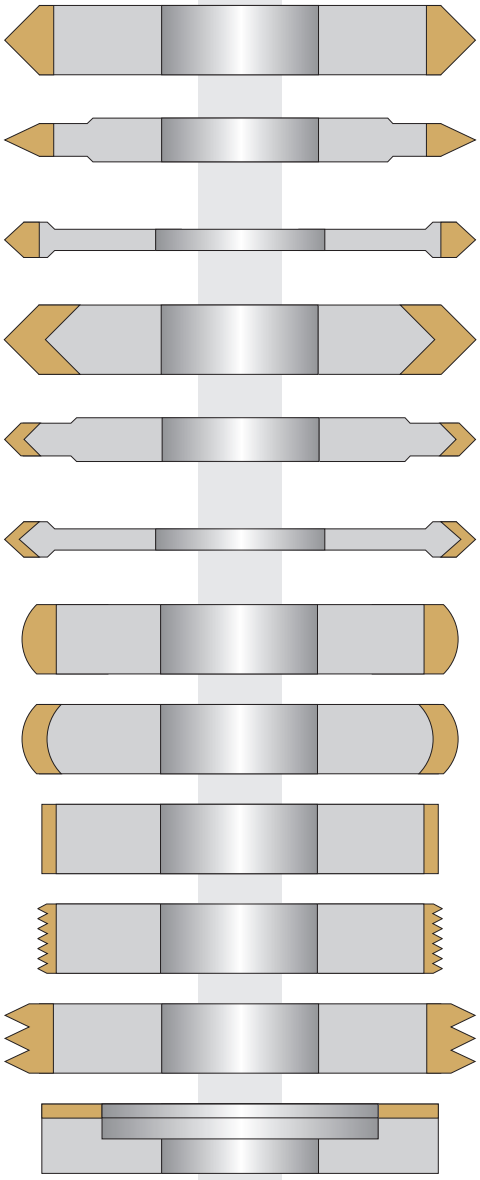
Diamond grinding wheels

Metal bonded synthetic diamond grinding surface



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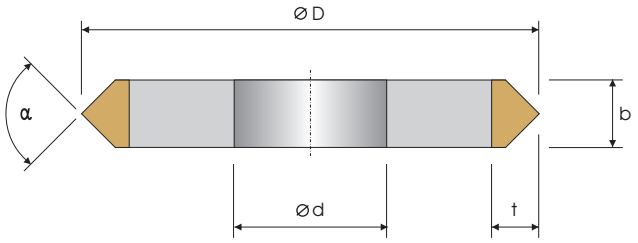
1E1

Angular diamond grinding wheel

Metal bonded synthetic diamond grinding surface

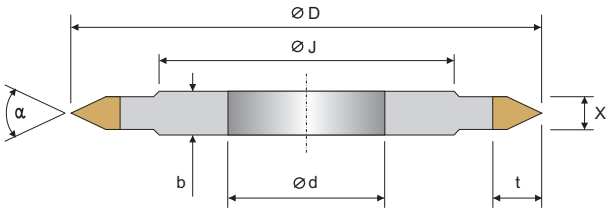


1) The height of the diamond layer "t" may change according to the chosen angle α°.

D mm	b mm	α°	d mm
40	3 - 10	70 - 145	16
50	3 - 13	70 - 145	16 - 24
60	4 - 20	70 - 145	16 - 32
80	3 - 20	70 - 145	16 - 42
100	3 - 22	70 - 145	16 - 60
120	3 - 30	70 - 145	16 - 60
150	3 - 30	70 - 145	16 - 60
200	3 - 40	170 - 145	16 - 60
250	5 - 30	70 - 145	16 - 60
300	5 - 30	70 - 145	16 - 60

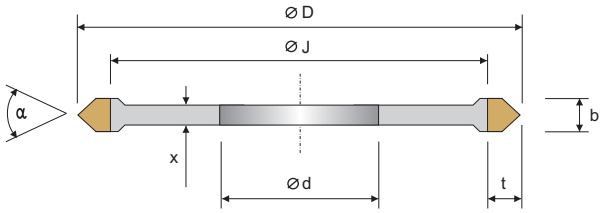
14E1

Angular diamond grinding wheel



9E1

Angular diamond grinding wheel



The basic dimension same as for 1EE1, need to be completed with:

J - diameter of
x - diameter of

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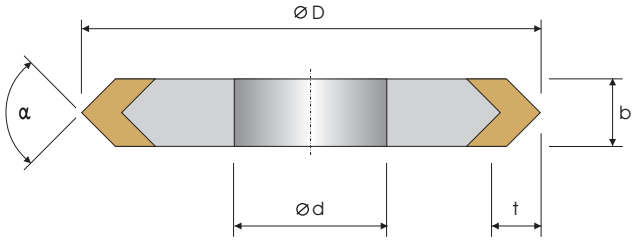
1EE1

Angular diamond grinding wheel

Metal bonded synthetic diamond grinding surface

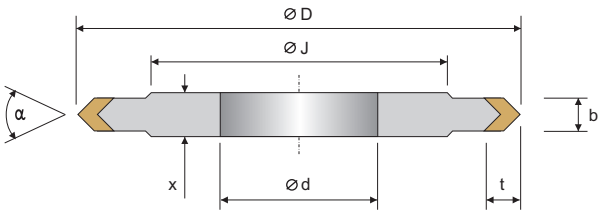


1) The height of the diamond layer "t" may change according to the chosen angle α°.

D mm	b mm	α°	d mm
65	12	120	16 - 32
100	15/20	115/140	16 - 60
110	10/15/25	90 - 115	16 - 60
150	4 - 13	85 - 120	16 - 60

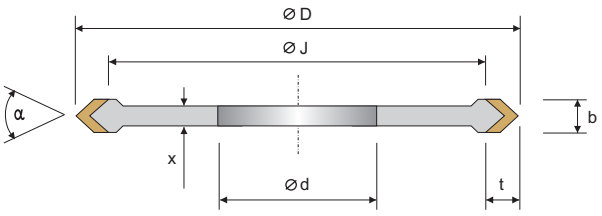
14EE1

Angular diamond grinding wheel



9EE1

Angular diamond grinding wheel



The basic dimension same as for 1EE1, need to be completed with:

J - diameter of
x - diameter of

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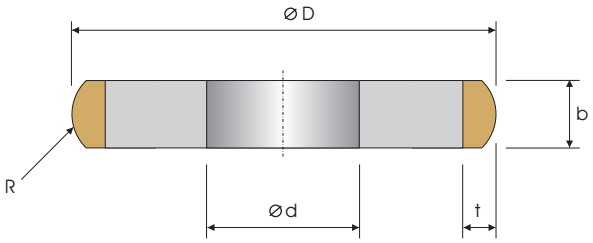
1F1 Radius diamond grinding wheel

Metal bonded synthetic diamond grinding surface

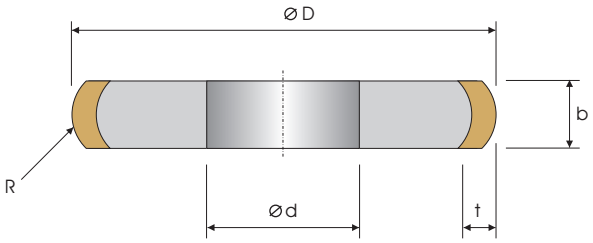


1) The height of the diamond layer "**t**" may change according to the chosen radius "**R**" .

D mm	b mm	R mm	d mm
40	5 - 20	5 - 90	16
50	6 - 25	5 - 90	16 - 24
60	5 - 30	5 - 90	16 - 32
80	6 - 30	70 - 145	16 - 42
100	10 - 30	5 - 90	16 - 60
120	13 - 30	7 - 90	16 - 60
150	12 - 40	7 - 90	16 - 60
200	9 - 40	8 - 90	16 - 60
250	16 - 30	10 - 90	16 - 60
300	13 - 40	8 - 90	16 - 60

1FF1 Radius diamond grinding wheel

Metal bonded synthetic diamond grinding surface



1) The height of the diamond layer "**t**" may change according to the chosen radius "**R**" .

D mm	b mm	R mm	d mm
80	16 - 30	15 - 45	16 - 42
100	18	10	16 - 60
150	12	7	16 - 60

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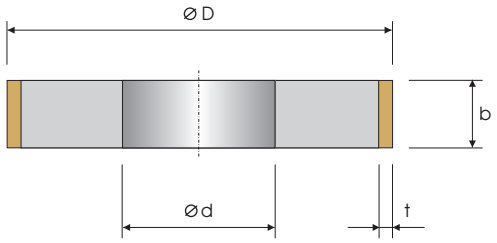
1A1 (FEPA) Cylindric diamond grinding wheel

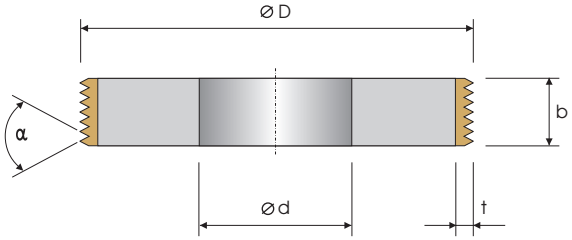
Metal bonded synthetic diamond grinding surface



D mm	b mm	t mm	d mm
40	4 - 30	5	16
50	5 - 30	5 - 10	16 - 24
60	10 - 30	5 - 10	16 - 24
80	10 - 30	8 - 17	16 - 42
100	5 - 35	5 - 20	16 - 60
110	10 - 15	5	16 - 60
120	10 - 40	5 - 12	16 - 60
150	10 - 40	5	16 - 60
200	10 - 40	5 - 18	16 - 60
250	10 - 30	5	16 - 60
290	20 - 30	5	16 - 60
300	10 - 40	10	16 - 60

1A1S (FEPA) Cylindric diamond grinding wheel

Metal bonded synthetic diamond grinding surface



The basic dimension same as for 1A1, need to be completed with:

- **number of nick**
- **angle of nick α**

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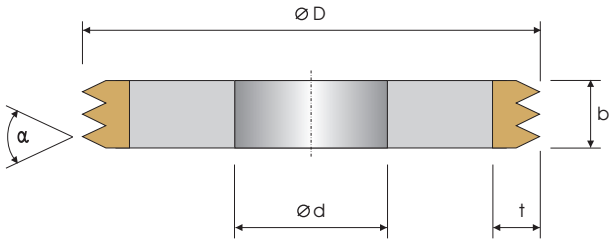
1AA3

Triple diamond grinding wheel

Metal bonded synthetic diamond grinding surface



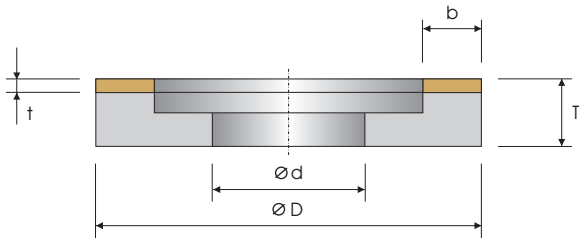
1) The height of the diamond layer "t" may change according to the chosen angle α°.

D mm	b mm	R mm	d mm
80	8 - 10	70 - 100	16 - 42
100	8 - 10	70 - 100	16 - 60
120	8 - 10	70 - 100	16 - 60
150	8 - 10	70 - 100	16 - 60
200	8 - 10	70 - 100	16 - 60

6A2

Surface diamond grinding wheel

Metal bonded synthetic diamond grinding surface



D mm	b mm	t mm	T mm	d mm
125	10	3	25	32
150	25	1,5	24,5	20
150	40	2	30	20
155	50	3	25	27
230	87,5	3	25	27
250	20/40	2,5/5	28/30 - 35	80/35
355	135	3	35	51

Machines

Horizontal Grinding Machine VID Decorator 03

VID Decorator 03 is a horizontal grinding machine designed for processing of flat surfaces of glass, ceramics, stone and similar materials. It is a universal machine, allowing for usage of free or bonded abrasive in a wide range of revolutions of the spindle. VID Decorator 03 can also be used with the modern diamond tools. Fundamental is its sturdy base, ensuring a perfect rigidity, in the center of which a precise spindle is placed. The drive of the machine is run by an asynchronous electromotor, placed in the rear part of the machine under a safety cowling. There is a downsloped steel tank placed on the top of the base, functioning as a splashguard. The revolutions are to be chosen according to the used grinding tool. The machine can be custom-equipped with a pair of belts with one or two stages of revolutions, or with an electronic revolution speed control within a certain range of revolutions. The lowest commonly used revolutions are 300 rpm and the fastest are 1500 rpm. The machine can also be equipped (if appropriate for the given grinding technique) with a water supply through the spindle, an additional plastic splashguard, a small tank for abrasives etc.

Technical Parameters of the Machine

Technical parameters		
Dimensions	Depth (mm)	1110
	Height (mm)	1030
	Width (mm)	880
Weight	(kg)	470
Height of the supporting plate	(mm)	870
Voltage system of the machine	3+PE AC	50Hz, 400V
The total input of the machine depends on the type of a given engine and the frequency convertor		

Machines

Vertical Grinding Machine VID Decorator 02

This machine has been designed for hand cutting of various decorative patterns on glass articles by using silicon carbide or diamond-impregnated tools. A solid concrete base ensures the perfect rigidity of the cutting machine. There is a cast-iron box on the supporting concrete base which holds the electrical wiring of the machine. The grinding machine is equipped with a spindle. The shaft (diameter 50 mm) rotates on bearings and supports a conical tip with an internal thread of M 12 (ratio 1 : 5). The grinding machine is driven by a two-speed asynchronous electromotor mounted in the rear section of the concrete base. Power transmission of the engine is carried out with a POLY V-belt that guarantees a transmission of sufficient power while having excellent dynamic qualities. Six-step cone pulleys are used. A low-voltage (24V) halogen lamp illuminating the grinding wheel is mounted in the rear part of the cast-iron box. The grinding machine is equipped with a worktable, a trough made of fiberglass reinforced plastic, a water distribution system, and a splashguard. If requested, the grinding machine can be equipped with a variable revolutions speed control.

Technical Parameters of the Machine

Basic technical parameters		
Dimensions	Depth/Height/Width (mm)	680/1360/890
Machine weight	(kg)	370
Dimensions of the machine base	(mm)	550x400
Maximum noise level	(dB(A))	80
Height of the spindle axis	(mm)	1250
Spindle revolutions	(rpm)	240-5000
Recommended diameter of the cutting disc	(mm)	max 500
Electric power system	3+PE AC	50Hz, 400V
Total input of the machine	(kVA)	3
Electric motor	Type	1LA7113-0AB60
	Output (kw)	1,4 / 1,9
	Revolution (rpm)	690 / 1410
	Model	IM B3

Worktable with trough
Its functions are as follows:
1) Holding the cooling water with splash covers and its collectionr
2) Regulation of water flow to the disc
3) Ergonomic position for the glassmaker

Machines

Vertical Grinding Machine VID Decorator 02

Vertical Grinding Machine VID Decorator 02

Worktable with trough

Machines

Glass cutting automat BM-Jack 1, type 1.3

VID-Snakesub arranges sales grinding machine BM - Jack1, which is produced by Bohemia Machine s.r.o., Světlá nad Sázavou.
BM-Jack 1, type 1.3, is designed for decoration of glass articles.
In fact, this machine brings a brand new innovation in glass cutting decoration. So far, the machine glass cutting has never been so close to the manual glass cutting decoration. The individual machine axes can move with servomotors. In total, there are seven servomotors mounted in the machine. The cutting wheel is driven with an asynchronous motor. An electric switchboard with all necessary electric components used to control the machine is a part of the machine too.
There is a touch-screen on the front side of the machine at which you can adjust some parameters necessary to tune up the cutting program. The cutting program uses a design software. You can get this software in the following way:

- Purchase from Horus
- File generation according to customer's wishes - this is convenient in the case of repeated orders
- Upgrading of an older Horus or Wincut program

The design software generates a data file that is subsequently loaded in the machine PC (situated in the machine switchboard). The machine computer repeatedly controls the whole cutting process then.
When cutting with more machines, just one design software is sufficient. It generates the data files for individual machines, e.g. different patterns can be cut at each position. This automatic machine is economical for as small batch as 60 - 100 article pieces. The data files can be loaded from the design software using the following way network data transfer, flash disc, CD, DVD or wireless data transfer.
The whole machine space demand does not exceed that of a single glasscutter. The machine is equipped with a closed cooling water circuit and water consumption is about 1000 litres a month. After adjustment, even an unqualified person can operate the machine. However, adjustment of the machine and the program maintenance should be performed by a qualified person and our company is ready to provide the training for your personal.

Key freatures

Modular system based on software upgrades. Full automatic operaiton so close "hand made" glass decoration.
Another obvious advantage of the machine is, the flexible element can be integrated with „sensitive servomotor" that can control the working pressure proportionally. There are the following advantages compared to the pneumatic working push:

- Crosscutting check - the machine stores the depth of the first cut and adjusts the depth of the remaining cuts in relation to this.
- The cutting tool moves in the cut much more smoothly, therefore it's possible to use higher cutting speed.

Technical Parameters of the Machine

Glass cutting automatic machine BM-Jack is designed for decoration of glass articles on one position.
The machine works with one product.

Basic technical parameters	
Maximum product diameter	420mm
Maximum product height	350mm (range of cutting head 300mm)
Product weight	up to 4kg (according to customer´s wishes)
Product shape	rotary (non-rotary and flat will coming soon)
Clamping	vacuum or mechanical (pneumatic)
Maximum wheel diameter	150mm
Wheel revolutions	200-6000rpm
Number of cutting wheel	1 (or 3)
Length of the machine	2 225mm (incl. control cabinet)
Width of the machine	600mm
Height of the machine	2 225mm

Machines

Three-position Glass-cutting Automatic Machine **BM-Jack 3**

VID-Snakesub arranges sales grinding machine BM - Jack1, which is produced by Bohemia Machine s.r.o., Světlá nad Sázavou.
Glass-cutting automatic machine BM-Jack is designed for decorating glassware.
As in the case of single-position machine, this machine is yet another revolutionary step in glass cutting. The machine is designed to cut three products at the same time. On request, we can mount three spindle-cutting heads, which will enable you to perform glassware decorating with different cutting tools in one single stage, without having to re-align the product.

Each individual machine cutting tool is driven by a servomotor. In total, there are eleven servomotors mounted in the machine. The cutting spindles are driven by asynchronous motors. Built into the machine is an electric circuit board with all the necessary components for controlling the machine. We can supply a transversal travel unit upon request. With this you can cut plane surfaces, such as decanters, plates or sheet glass. There is a touch-screen on the front side of the machine which allows you to adjust parameters necessary for tuning up the cutting program and to control manual movements and operations.

Design software is needed to run the cutting program, which can be obtained in one of the following ways:

- Purchasing from Horus.
- Generating a file according to the customer's specifications. This will be particularly convenient in the case of regular repeat orders.
- Upgrading an older Horus or Wincut program.

The design software will generate a data file, which will be downloaded into the machine computer (situated in the machine circuit board). The machine computer will control repeated cycles of the whole cutting process. When cutting with a number of machines, only one design software is needed. It will generate data files for individual machines, i.e. different patterns can be cut by different machines.

The data files can be downloaded from the design software using one of the following ways network data transfer, flash disc, CD, DVD or wireless data transfer.

The machine is equipped with a closed cooling water circuit and water consumption is about 1000 litres a month.
Even an untrained operator can work the machine after adjustments have been made.

However, adjustment of the machine and maintenance of the program has to be done by a qualified person, and Bohemia Machine s.r.o. is happy to provide the training for your personnel.

Key Characteristics

Another obvious advantage of the machine is, the flexible element can be integrated with „sensitive servomotor" which makes it possible to control the forward movement even by tiny increments.
The advantages of this, in comparison with pneumatic version, are:

- Being able to control cross cuts, with the depth of the first cut being stored in memory so that all subsequent cuts are adjusted to this.
- The cutting is done more smoothly, enabling higher cutting speeds.

Other advantages are, as follows:

- An extra wide product axis inclination of 45° to 70°.
- A transversal travel unit for cutting plane surfaces

Machines

Three-position Glass-cutting Automatic Machine **BM-Jack 3**

Technical data

Length/Width/Height of the machine	2200/1420/2240 mm
Weight of the machine	1850 kg
Cutting cycles	about 110 a minute, depending on the pattern
Maximum product diameter	250 mm
Maximum product height	450 mm (maximum cutting height 300 mm)
Product weight	up to 5 kg (according to customer's wishes)
Product shape)	rotary (non-rotary and flat on request)
Clamping	vacuum or mechanical (pneumatic)
Installed input	11 kW
Average input	2 kW
Control medium	Pressure air, vacuum (vacuum pump on request, input 0.8kW)
Maximum wheel diameter	150 mm
Wheel revolutions	650-6000 rpm
Number of cutting wheels	3 (3x3)
Range of product axis inclination	-45° to +70°
Cooling medium	water with emulsion

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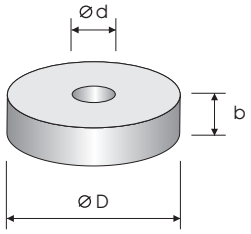
Revitalizing Stone

Wheel

Material: **Corundum**

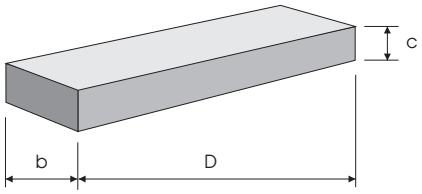


D mm	b mm	d mm	Grain µm
100	20	10	K80 - K320
100	20	10	
100	20	20	
100	20	20	
100	25	10	

Revitalizing Stone

Stick

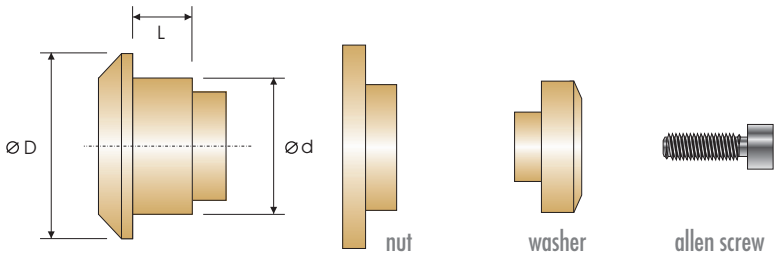
Material: **Corundum**



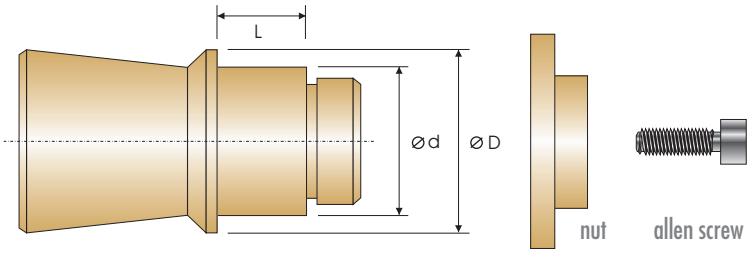
D mm	b mm	c mm	Grain µm
100	50	20	K80 - K320
150	25	6	
150	25	13	
150	20	20	
150	30	20	
150	32	20	
150	50	25	
150	85	25	
200	20	25	
200	32	12	
200	50	8	
200	50	25	

Clamps

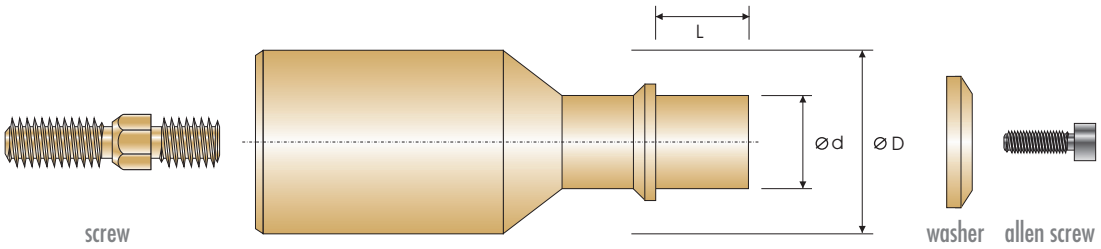
Material: **Brass**



D mm	d mm	L mm
50	42	4 - 30
56	42	4 - 40
63	42	5 - 35
80	42	10 - 30



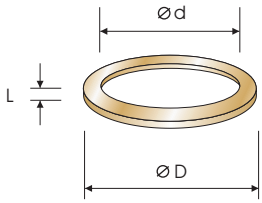
D mm	d mm	L mm
40	32	5 - 35



D mm	d mm	L mm
40	16	5 - 30
40	20	5 - 30
40	24	5 - 30

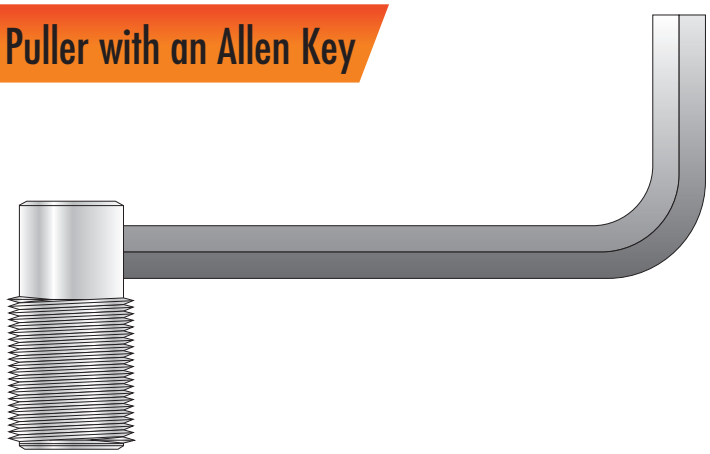
Clamp Washer

Material: **Brass**

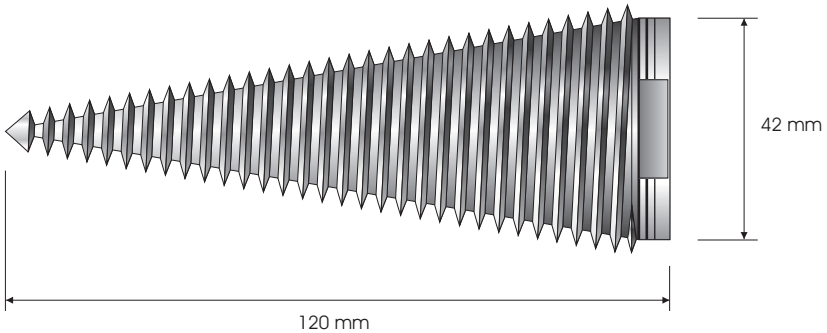


D mm	d mm	L mm
56	42	1 - 6
		1 - 9
40	32	1 - 6
30	20	1 - 6

Puller with an Allen Key



Cone



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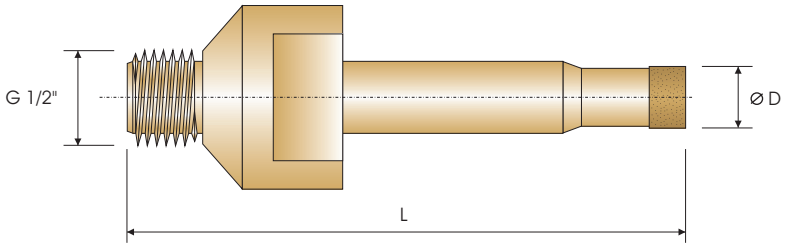
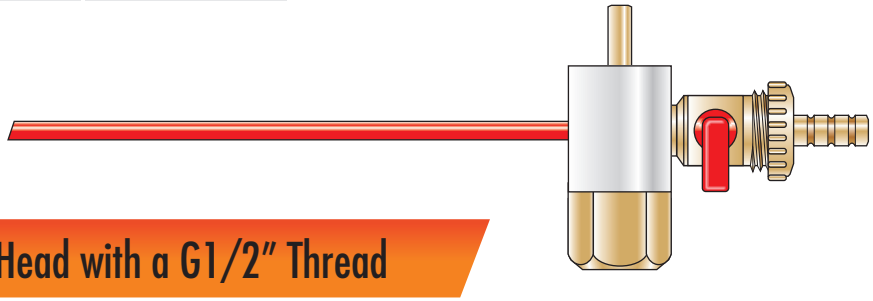
BzG1/2" Drill



D mm	L mm
4	85
5	85
6	85
7	85
8	85
9	85
10	85
11	85
12	85
13	85
14	85
15	85
16	85
17	85
18	85
19	85
20	85
22	85
23	85
24	85
25	85
26	70*
27	70*

D mm	L mm
28	70*
29	70*
30	70*
32	70*
35	70*
36	70*
38	70*
40	70*
42	70*
45	70*
50	70*
55	70*
60	70*
65	70*
70	70*
72	70*
75	70*
80	70*
85	70*
90	70*
100	70*

* 80mm option also possible



Drill Cooling Head with a G1/2" Thread

Description	Drill Shank Thread	Fixation Stick	Coolant	Shank Diameter for Drill Chuck
Cooling Head G1/2"	G1/2"	240 mm-other sizes also available	H2O, emulsion	12 mm
Inner cooling speeds up the drilling process and prolongs the life of the drill				

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Other Glass Grinding and Polishing Materials

GRINDING POWDER		Applications of manual grinding, polishing etc.			
SIC	Packaging 25 KG	SIC - black	Packaging 25 KG	SIC - green	Packaging 25 KG
Black silicon carbide 48C		F 14	ROUGH	F 24	ROUGH
Green silicon carbide 49C		F 16		F 30	MEDIUM
		F 20		F 36	
		F 24		F 40	
		F 30	MEDIUM	F 60	
		F 36		F 80	FINE
		F 40		F 100	
		F 60		F 120	
		F 80	FINE	F 150	
		F 100		F 180	
		F 120		F 220	VERY FINE (MICRO)
		F 150		F 240	
		F 180		F 280	
		F 220	VERY FINE (MICRO)	F 320	
		F 240		F 360	
		F 280		F 400	
		F 320		F 500	
		F 360		F 600	
		F 400		F 800	
		F 500		F 1000	
		F 600		F 1200	
		F 800		F 1500	
		F 1000		F 2000	
		F 1200			

PUMICE	polishing powder
Grain (basic assortment)	
0/1/2N	cca 10 - 300 µm
1/0N	cca 0 - 250 µm
2/0N	cca 0 - 210 µm
3/0N	cca 0 - 180 µm
FF.6	cca 0 - 100 µm
Origin	Italy
Packaging	50 kg

TRIPOL	polishing powder
Origin	Austria
Packaging	25 kg

CEROX 1650	**polishing powder** - highly efficient powder, suitable for manual as well as automatic polishing of domestic glass, mirrors and optic glass.
Origin	
France	

REGIPOL 506	**polishing powder** - universal powder for polishing of facets and cuts. Manual polishing of domestic lead glass.
Origin	
GB	