GLASSPARTNER

The Synthetic Diamond Technology

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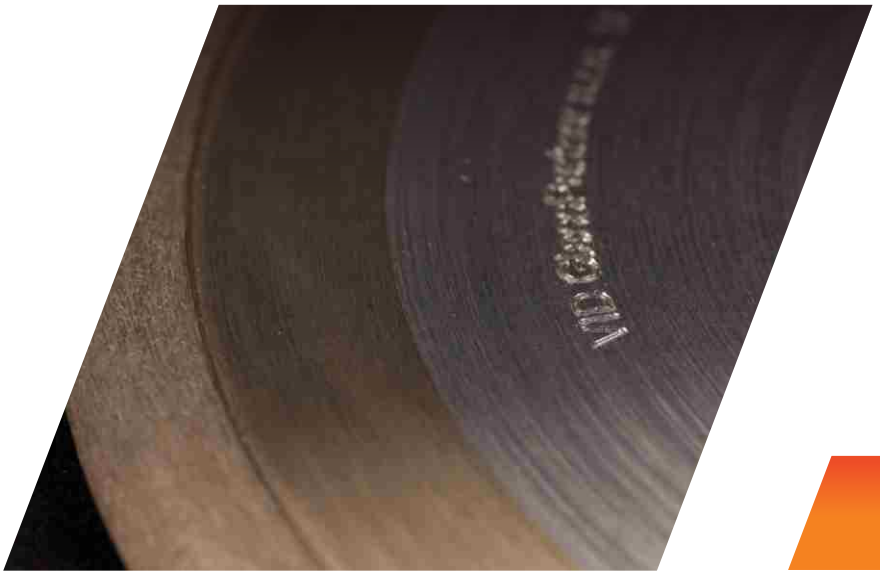
MACHINERY



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