Photo: GLUNZ

BIMA 310

Flexible production with a patented tool change system

IMA

BIMA 310: The machine that can do every job

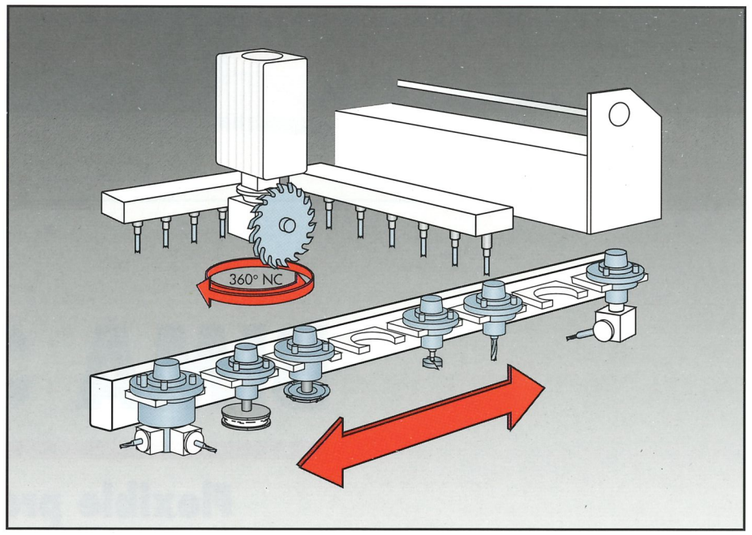
Defining new technology

Looking for complete processing automatically in one operation? Just machine your workpieces on the BIMA 310, and everything goes faster and more accurately: cutting, sizing, grooving (horizontal, vertical), fittings boring, mitre sawing, routing, sanding.

No matter if you are planning a complete new design or multiple machine tasks – we offer you a machine concept which meets all your expectations. Our machines are as flexible as they have to be for you.

Our machining centres ar prepared with your future in mind. BIMA 310 is a machining centre at a reasonable price incorporating know-how and patented state-of-the-art technology, such as a new tool changer moving along with the head assembly. Stability, reliability and safety in conjunction with the latest technology are offered to you by a partner on which you can rely at any time in the future.

A strong group supports us. And we will support you! Any time.



Easy panel loading made possible by pressure sensitive mats

4-axis machining centre

The standard equipment of BIMA 310 includes: 1 main spindle with 7.5 kW (10.0 hp), 1500 – 18000 rpm with an inte-grated C axis, rotatable through 360°. Vertical boring units with 5 spindles in X direction and 7 spindles in Y direction, programmable up to 9000 rpm, with individually selectable 32 mm spacing.

Mobile tool changer

The tool changer moving along with the head assembly enables two-panel loading, thus improving your panel throughput considerably in comparison to a machine with a fixed tool magazine.

Your advantages:

- considerably improved panel throughput (capacity increased by up to 80%)
- reduced cost of manufacturing
- easily accessible tool magazine
- quick tool change
- small tool change times made possible by short traverse paths.

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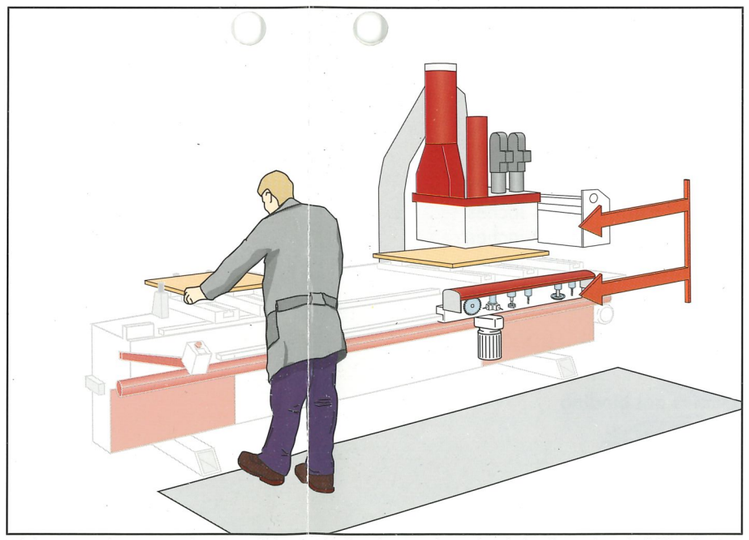
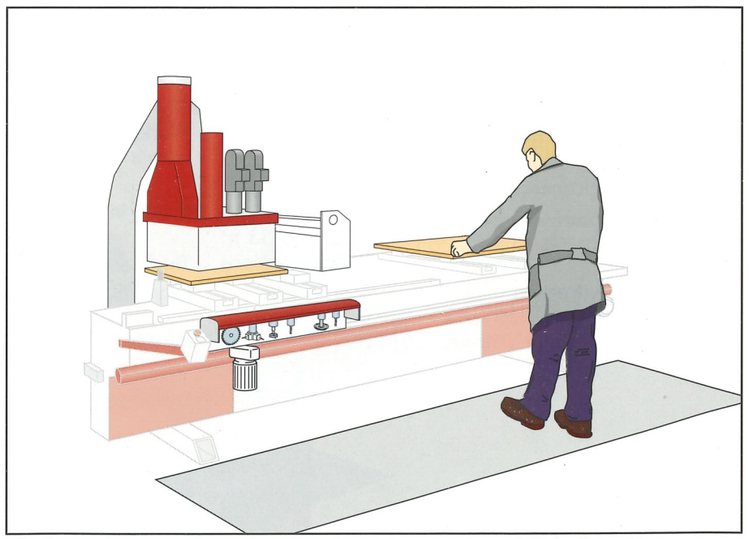
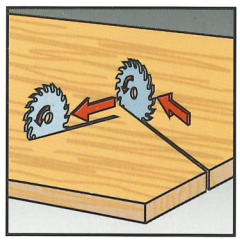


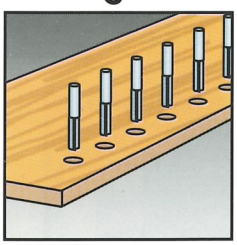
While one panel is processed on the right-hand side, the other panel can already be clamped on the left-hand side...

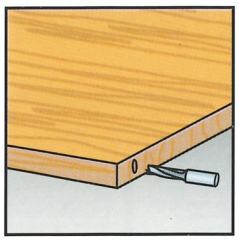


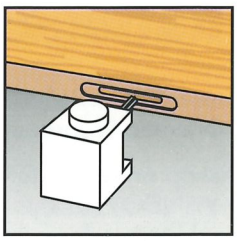
and, of course, the reverse is also true due to the tool magazine moving along with the head assembly.

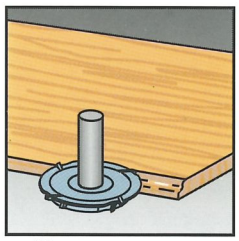
Machine functions at a glance

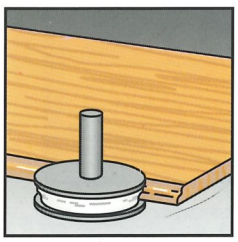

Sizing (pocketing)

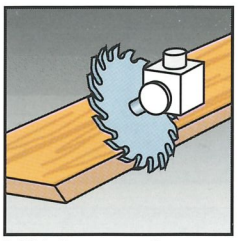

Row hole drilling

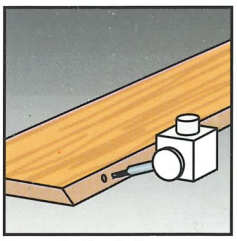

360° Horizontal boring

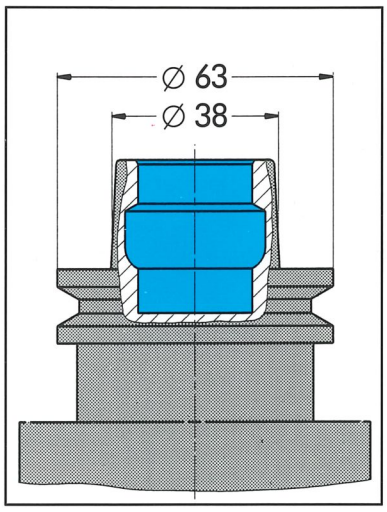

360° Horizontal routing


Profile cutting


360° Sanding


360° Compound Miter sawing


Hinge hole drilling



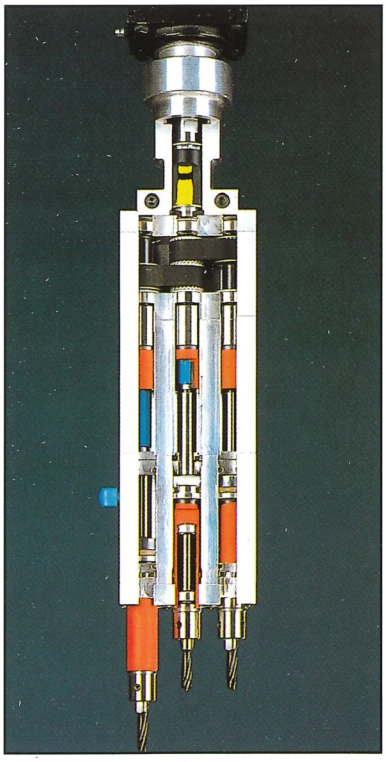
HSK 63 F tool holding system

No compromise on this important detail! Here, too, you can count on state-of-the-art technology i.e. the HSK 63 F tool holding system. The tools are held in the spindle with a force of 2473 lbs. in conjunction with a precision-machined contact surface

Your advantages:

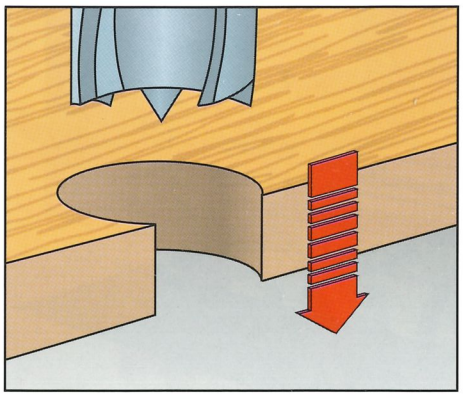
- maximum quality of the cut surface
- small tooling costs
- reduced cost of grinding
- maximum dimensional precision.

Vertical boring – constantly high quality



Drive

Precise holes accurately drilled, and even chip-free through-holes, are possible using these unique boring units. Each of the drill spindles turns in three bearings at a speed of up to 9000 rpm (the speed range is adjustable from 6000 to 9000 rpm) resulting in short boring cycles, which is another advantage. The units are maintenance-free, i.e. no lubrication is required.



Feed control

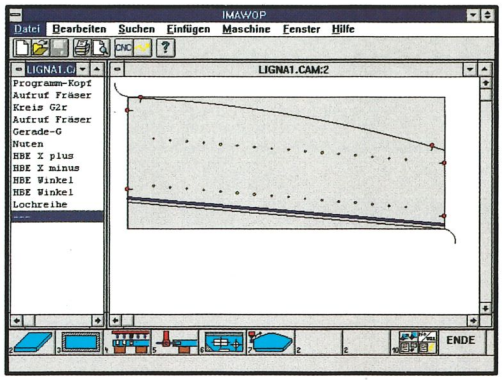
Chip-free through-holes are made possible by the programmable control of the Z axis. In practice, this means dropping at a programmable feed rate, offering both, clean-cut construction or through holes.

From manual to fully automatic creation of CNC programs

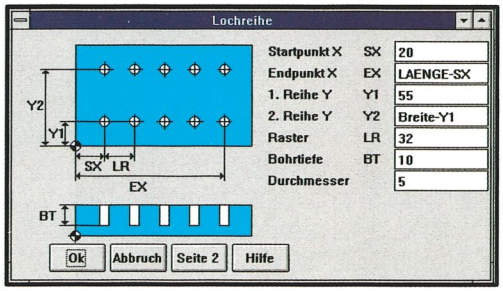
User comfort with IMAWOP for Windows (WOP – Workshop Oriented Programming):

IMAWOP is a workshop oriented user interface running under WINDOWS. This very user-friendly man-machine interface does not require any CNC knowledge by the operator. In addition, IMAWOP includes a wide range of macros for all types of machinings as well as a tool manager.

IMAWOP offers graphic representation of part programs. An integrated postprocessor generates an executable CNC program and optimizes all tool paths.



'Main menu' screen with graphic representation of the programmed part.



'Row hole drilling' macro

Possibilities in a network

IMAWOP
(external programming console)

Production planning and control system
e.g. OSD, Kuhnle, etc.

Server

Teleservice

IMA workstation

Modem

Access to PLC, CNC programs and status messages

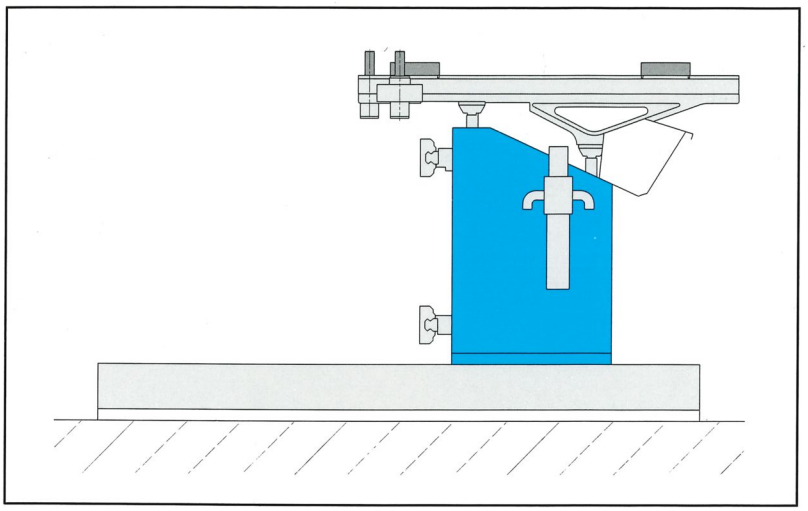
ISDN

IMA Object (3D)
Automatic program creation with 3-dimensional CAD/CAM

IMAWOP or IMA-CAD/CAM (2D)
Automatic program creation 2-dimensional

Bar code reader

Program call via bar code reader located on the machine



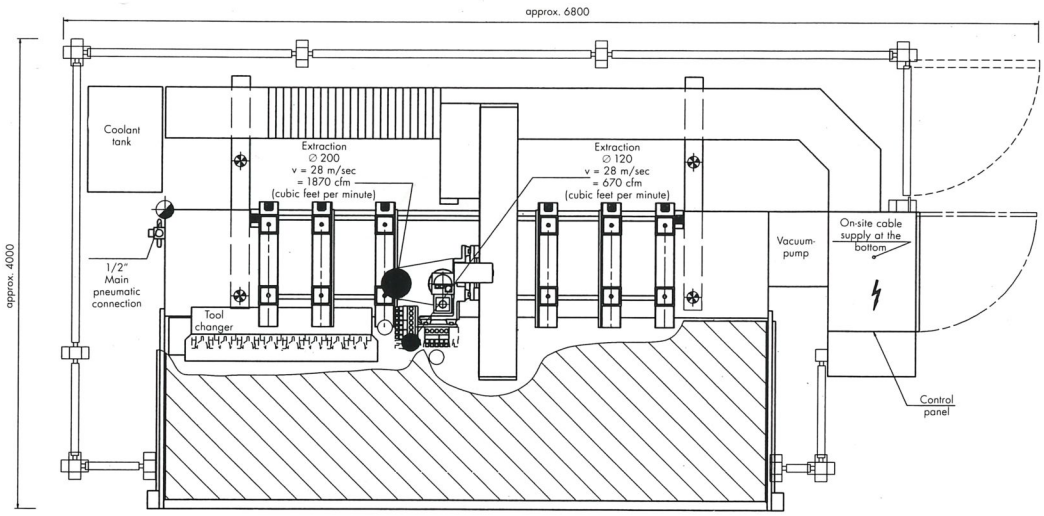
No unnecessary vibrations

To increase the high machining quality of the BIMA 310 even further, the machine bed is cast with a stabilizing retardant (reaction resin).

This results in:

- higher rigidity of the machine
- less internal vibrations
- greater thermal stability
- offering dimensional precision and improved machining quality.

Technical data - BIMA 310



Power supply
Line voltage . . . . . 400 VAC, 50 Hz.
Supply line . . . . . 6 mm²

Power consumption . . . . . approx. 24 kVA

Current consumption . . . . . approx. 29 A

Main fusing . . . . . 36 A

Compressed air
Main pneumatic connection ∅ . . . . . 1/2"
Min. pressure . . . . . 87 psi
Air consumption . . . . . approx. 0.35 – 0.53 ft³ per workpiece

Chip and dust extraction
Air requirement . . . . 3.200 m³/h approx. 112960 ft³/h
Air velocity . . . . . 28 m/s 5512.08 ft per minute

Traverse speeds
X axis . . . . . 50 m/min. 1968.50 inches/min.
Y axis . . . . . 50 m/min. 1968.50 inches/min.
Z axis . . . . . 25 m/min. 984.25 inches/min.

Acceleration . . . . . 5 m/s² 16,40 ft/s²

Workpiece dimensions
Length in x . . . . . 150 mm min. 5.91 inches
3.000 mm max. 118.11 inches
Width in y . . . . . 150 mm min. 5.91 inches
1.000 mm max. 39.3701 inches
Thickness . . . . . 60 mm max. 2.36 inches
Clamping height . . . . . 100 mm max. 3.93 inches

Weight . . . . . approx. 11.000 lbs

Dimensional and technical data is not binding

IMA

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