

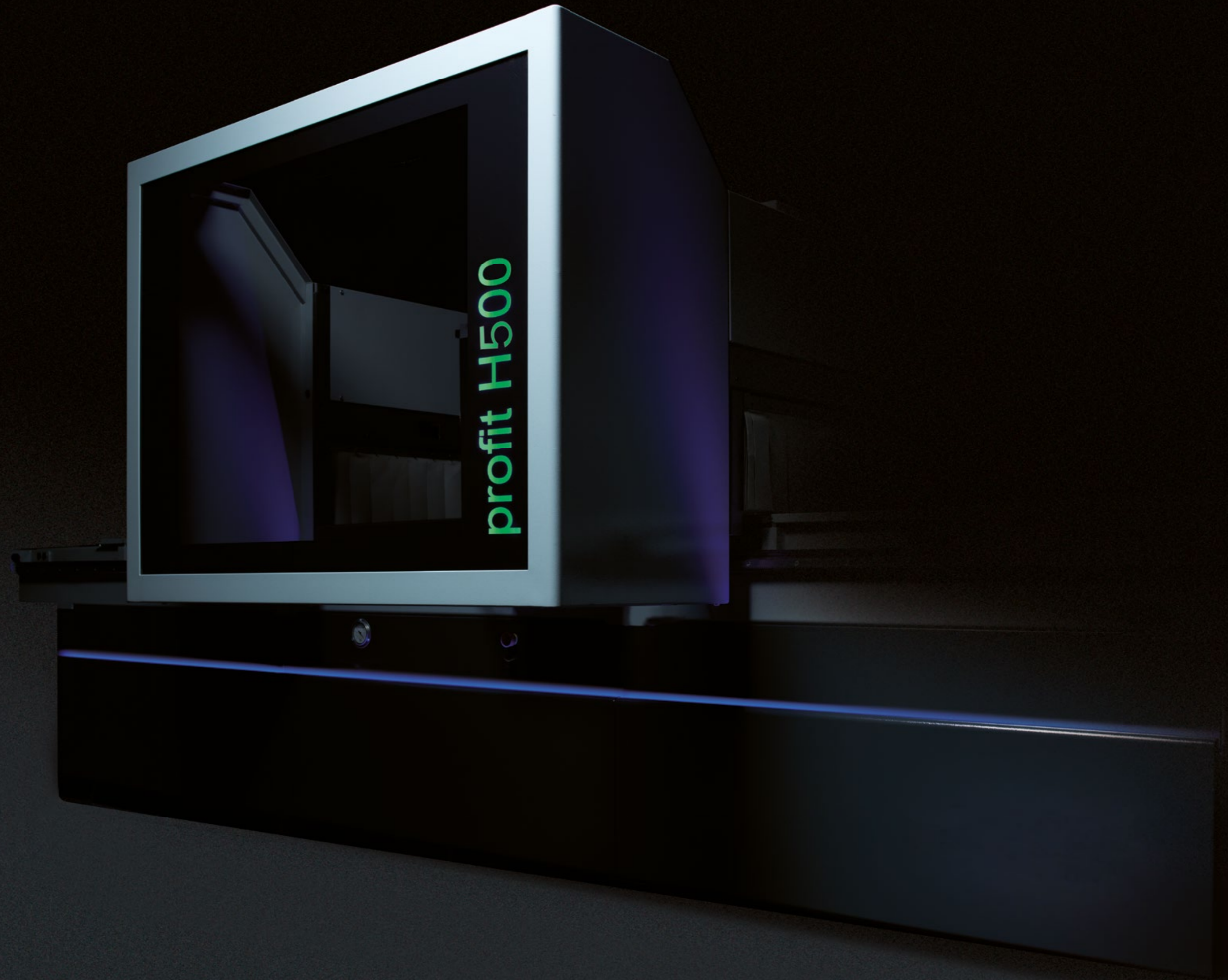
FORMAT 4®

profit H500R

ONE MACHINE, FIVE AXES,
LIMITLESS CREATIVITY



FORMAT 4®



One machine, five axes, limitless creativity



profit H500R

- » Heavy-duty 5-axis milling spindle with liquid-cooled 15kW motor
- » Drawing = programming, intuitive operating software
- » "F4®Integrate" software including "F4-Design" 3D cabinet software for presentations, parts list, and connection to the machine
- » Possibility of 5 axes processing with "F4 Solid" powered by AlphaCam
- » The drilling head covers the whole working field
- » High quality dual circuit vacuum clamping system with 3 15/16" (100 mm) vacuum pod height
- » 4-sided door and window processing with automatic delivery; s-motion console
- » Workpiece thickness up to 9 7/8" (250 mm)
- » F4®Solutions^{ready}

It is universal workshops in particular, where the individual processing of various materials is becoming increasingly important. The most up-to-date 5 axes CNC technology guarantees limitless creativity, and at the same time reduces the initial investment cost and subsequent costs for special aggregates and tools. Customized workpiece design and fully automated production at a low level of investment – Format4 is making the future of component manufacturing affordable with its profit H500R series. The high-performance milling spindle guarantees excellent results at every angle regardless of the material. Together with 18 individually selectable drilling spindles and the integrated grooving saw unit, the profit H500R boasts boundless machining diversity and realizes the shortest production cycles.

In the new, completely reengineered design, the CNC machining centers from Format4 display dynamics, power and high end technology from the first glance.

- » Hose-free Format4 dual circuit system with vacuum pod height of 3 15/16 in (100 mm)
- » 2 CNC controlled Z-axes for the shortest of production cycles
- » s-motion: Automatic console and vacuum pod positioning

FORMAT4 Premium Machines for Premium Requirements

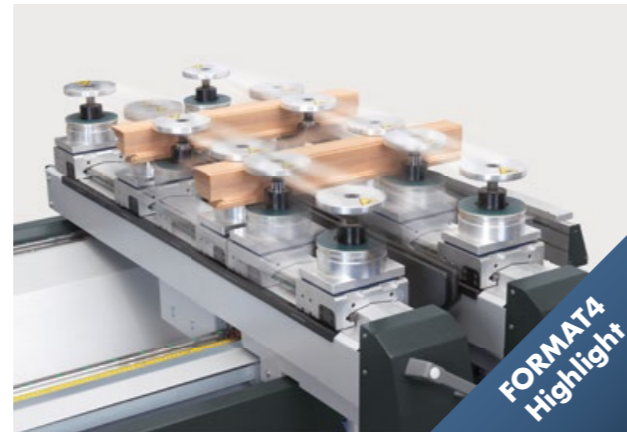
- » Constantly high performance in industrial continuous operation
- » Customer specific optimized production solutions
- » Solid design with premium components
- » Wide range of configuration packages with high-tech solutions
- » Complete engineering precision
- » Premium user comfort
- » Quality and precision from AUSTRIA
- » Uncompromising productivity
- » Perfect service package before, during and after the purchase
- » Tailor made financing solutions
- » Mechanical engineering experience since 1956

The most important highlights at a glance



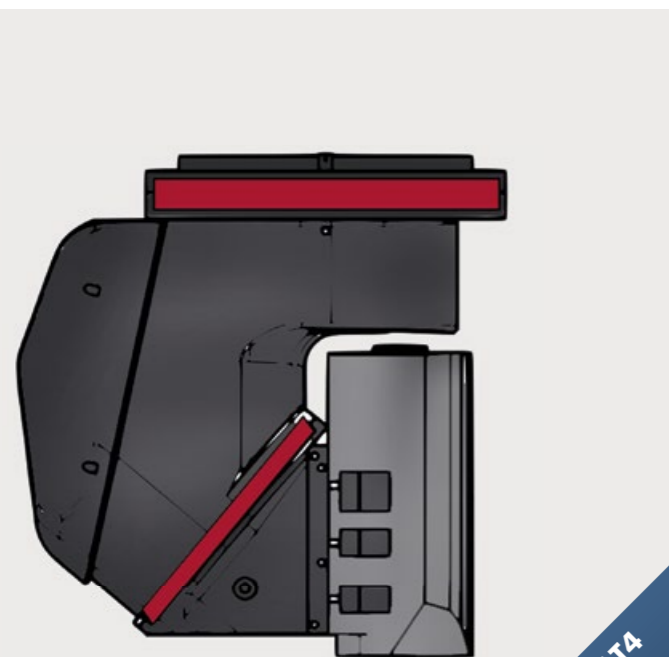
lightPos – LED vacuum pods positioning, revolutionarily simple & precise

More than 6000 LEDs indicate the suction cup size, position, orientation as well as the console positions down to the millimeter. Thanks to a sophisticated color management system, each vacuum type and its orientation is displayed in well-defined colors. RGB LEDs on the X-axis give information about the processing status. LEDs along the X- and Y-axis visualize the position and the dimension of the workpiece.



The “s-motion” consoles

The fully automatic s-motion consoles enable you to completely process door and window components extremely quickly and with first class quality.

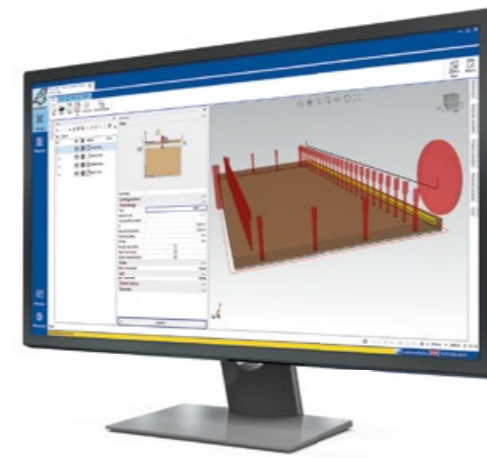


Mechanical Axis Lock System

The mechanical locking of the C and A axes increases the service life of the spindle and at the same time improves the surface finish of the finished component.

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Details



F4®Integrate: The pioneering CNC software

For the highest demands, all inclusive – tool library, programming section and an operator control panel on the machine with a consistent and intuitive user interface. F4®Integrate is a software developed by Format4®. Developed from practical experience for practical use in cooperation with our CNC customers, F4®Integrate meets the highest demands in modern CNC machining.

Enjoy the comfort of a state-of-the-art and well-coordinated user interface. Tool library (F4Toolbox), programming section (CAM area with integrated CAD area, F4Create) and machine operation control (F4Operate) all packed into just one single screen, with a consistent and intuitive user interface.

F4Integrate is based on G-Code, so external industry programs can be easily connected and the transfer of programs smoothly organized.



Rows of stops

For this purpose, the H500R series is equipped with rear and center fence rows. An additional front stop row is also available as an option. The solid cylinder stops allow flexible component referencing of small, medium and large workpieces on the work area.



Maintenance opening.

For quick access to change the drill or maintenance work, the hood can be easily opened on all CNC machining centers.



**The main spindle:
5 axes – no restrictions**

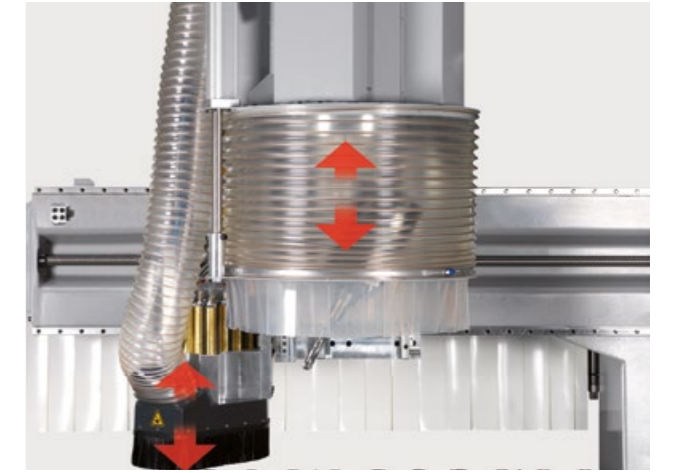
The high performance 5 axes spindle with 12 or optionally 15 kW motor guarantees excellent results when milling, drilling and cutting at every angle. The special liquid cooling and high quality ceramic bearings ensure durable precision and processing smoothness of every material. An inverter regulates the speed up to 24,000 rpm.

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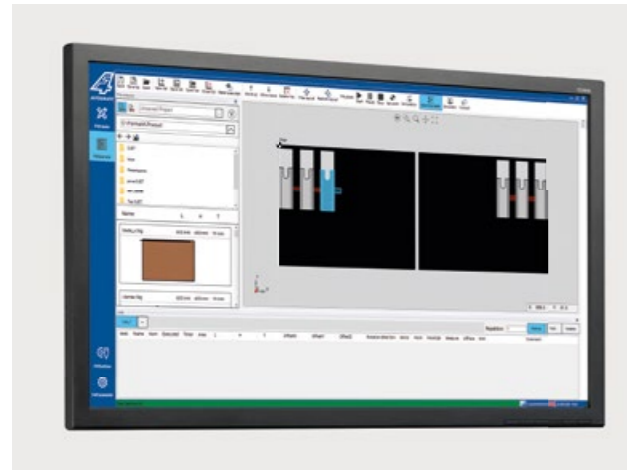
Longitudinal measurement system

The automatic length measuring unit determines the tool length with an accuracy of one hundredth of a millimeter directly within the machine. This eliminates measuring errors by the machine operator.



Aggregate carrier with two Z-axes

The aggregate carrier with two Z axes enables the quick, varying use of drilling head and main spindle. The travel distance of the Z axis is 19 11/16" (500 mm), ensuring that long tools can be used even on high workpieces.



Intuitive touch-screen control on a 24" monitor

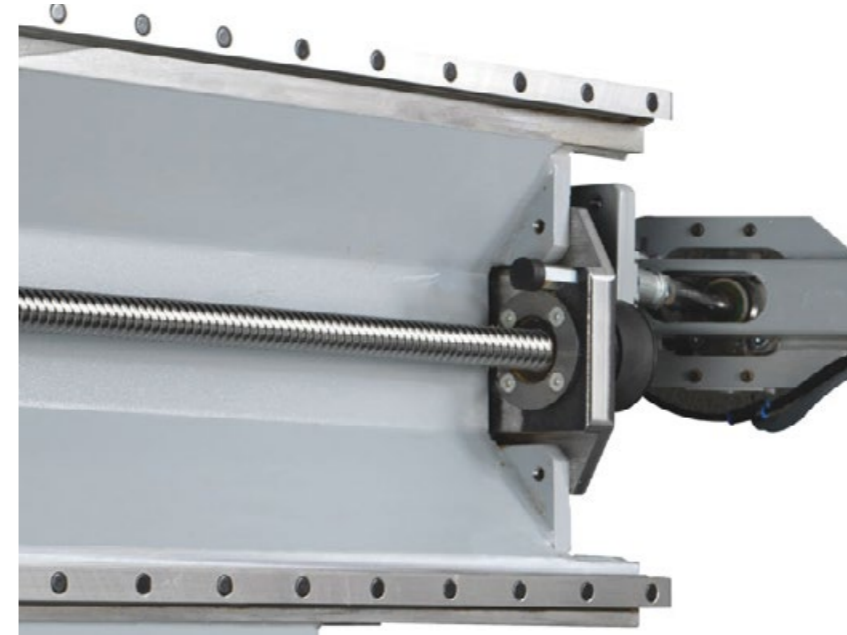
The advanced and intuitive touch-screen control concept guarantees maximum user friendliness. The clearly structured and self-explanatory user interface allows you to operate the machine with ease and ensures maximum productivity. The machine controls are clearly displayed graphically and various programs, set-points and commands can be executed quickly, easily and accurately at the touch of a button.



**Unlimited processing possibilities
with the Format4 drilling unit**

The drilling head with 18 drilling spindles

- » 12 vertical drilling spindles, 32 mm distance between spindles: each can be used individually
- » 6 horizontal drilling spindles, spaced at 32 mm: 4 in the X and 2 in the Y axis, each can be used individually
- » Integrated slot cutter in the X-axis
- » Inverter driven motor up to 7,500 rpm
- » Highlight: The drilling unit covers the entire working area in both vertical and horizontal machining. As an option, the machine can be equipped with a DH28 6H 1S drilling head, which then boasts 34 spindles and a grooving saw.



Linear guides

X-axis guiding system:

Positioning is carried out by recirculating ball bearings running along hardened and polished linear guides. The X-axis is positioned via a cambered rack and pinion gear.

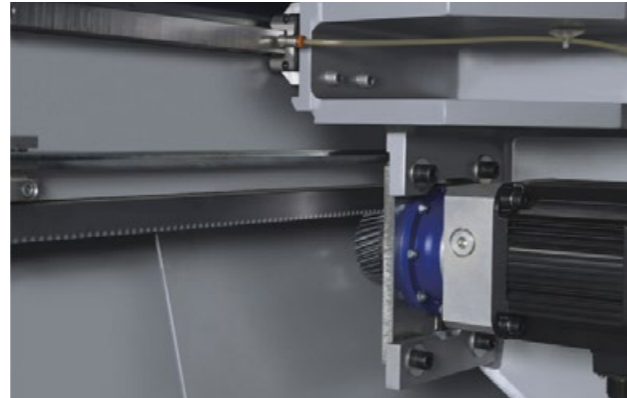
Y- and Z-axis guiding system:

Positioning is carried out by recirculating ball bearings running along hardened and polished linear guides. The Y- and Z-axis is positioned by a polished recirculating ball spindle.



Rotary tool changer, mounted to the outrigger

The rotary tool changer with 18 tool positions is mounted to the back of the outrigger and moves with the outrigger along the X-axis. The 18 position rotating tool changer, keeps tool changing times to the bare minimum. This makes the Format4 machining center even more powerful!



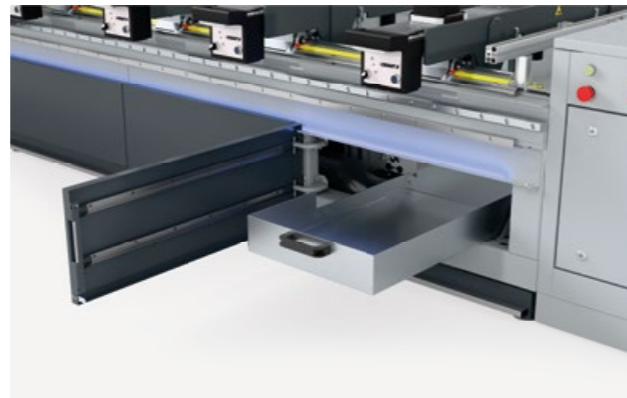
Maximum travel speed without tolerance X-axis via rack and pinion drive

The high-quality rack and pinion gear of the X-axis with obliquely cambered tooth form guarantees the highest precision at maximum traversing speed. The reduction gear ensures maximum repeatability. Encapsulated bearing: the ball bearing jaws run on hardened and polished linear guides, ensuring durability and absolute precision.



Automatic central lubrication system:

All moving axes are automatically lubricated at all times, ensuring low-maintenance reliability and constant operational readiness. The lubricant is delivered pneumatically to the lube points on the X, Y, and Z axis guides in a time-controlled manner. The lubrication cycle is preset via the axis control.



Chip conveyor belt for scrap pieces and residual swarf

With the chip conveyor belt integrated into the work area, the profit H500 ensures a clean workplace without time-consuming machine cleaning. The chip removal can be controlled manually and occurs on the left side of the machine.

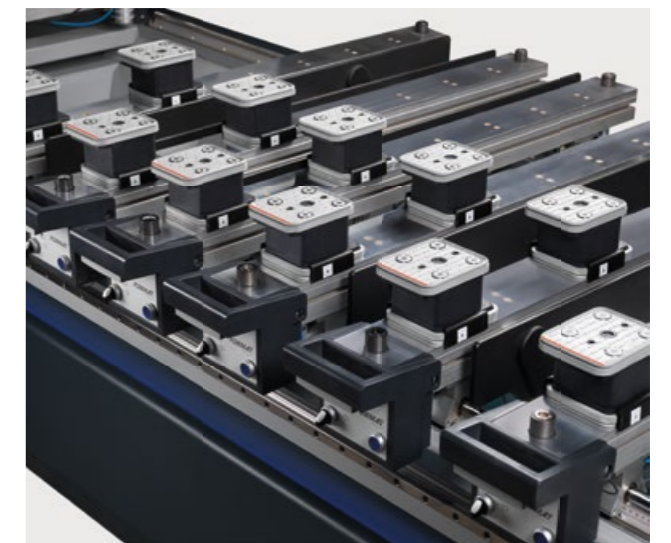
Complete customized maintenance packages

The continuous availability of modern woodworking machines is a significant influencing factor on the productivity and profitability of a company. Continuous, preventive maintenance procedures ensure the operational readiness of your machine and guarantee constant precision. With our individual maintenance packages, you benefit from long-term consistent high quality of the finished products. In addition to a comprehensive machine maintenance, all electrical, pneumatic, and mechanical components as well as all safety devices are checked. Furthermore, you will also benefit from our complimentary hotline service and receive special terms on software, training, and replacement parts. Find out more about your individual maintenance package now and enjoy perfect woodworking results for years to come!



Flexible and unrestricted use of clamping devices

A variety of vacuum pod shapes guarantee the secure positioning of any kind of workpiece shape. In addition, the number of vacuum suction pads and clamping devices can be used flexibly on the entire console without restriction.



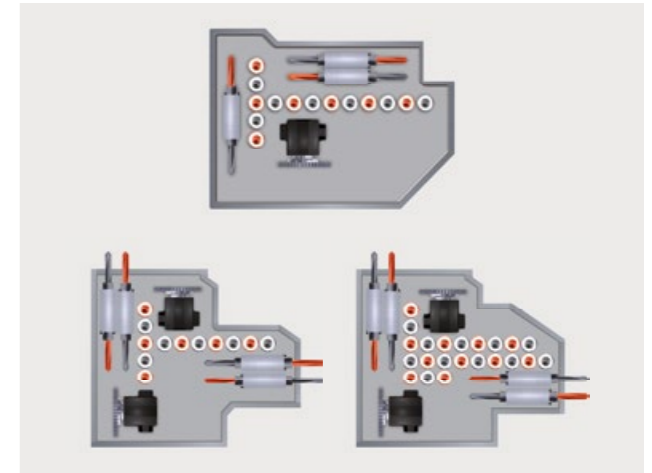
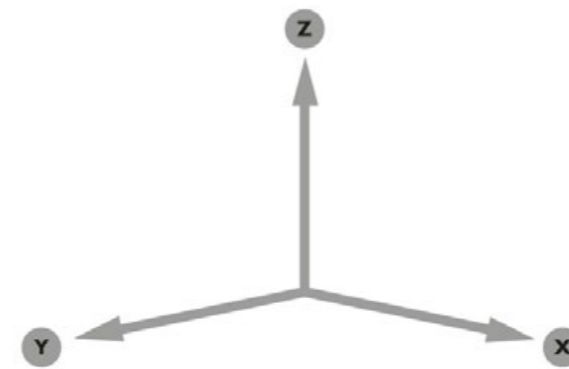
Position display of the workpiece supports and vacuum pods

In the standard configuration, the workpiece, the workpiece supports and the vacuum suction pads are displayed simultaneously on the CNC board. This guarantees, that the workpiece is securely positioned and that there can be no collision between the tool and vacuum pod. The exact position of the vacuum pods on the consoles is shown using a laser. The lightPos system is available as an extension to our standard positioning aid.



Chip deflector

A chip deflector mounted to the spindle controlled by the C-axis enables the unrestricted use of existing tools. When processing workpiece edges, the dust and chips are directed towards the extraction canal.



Individual drill head configuration

Regardless of whether the machine will only be used for cabinet manufacturing or as an all-rounder, you can decide which drilling head configuration is the right one for you. Choose between, a drilling head with only vertical spindles or one with spindles and a grooving saw for vertical and horizontal processing. Inverter driven motor up to 7,500 rpm

Two working field size options for individual requirements

profit H500 16.38

X= 12 ft 3 1/4 in (3740 mm)

Y = 1505 mm

Z= 1 ft 1 25/32 in (350 mm) (clearance height starting from bracket height)

profit H500 16.56

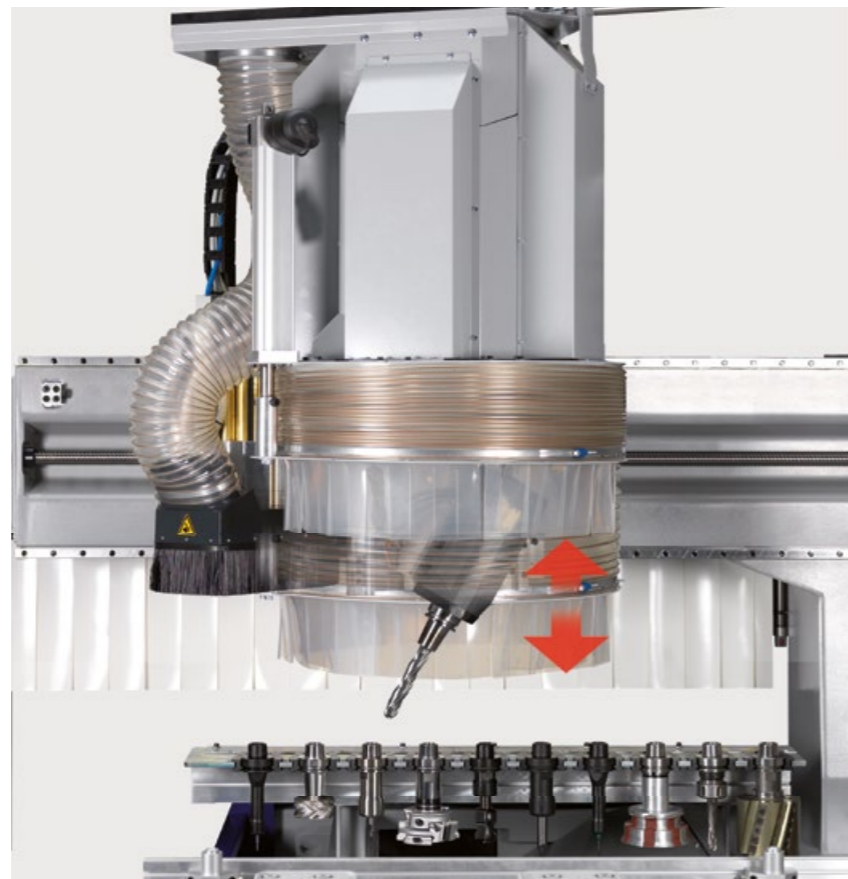
X = 5540 mm

Y = 1505 mm

Z= 1 ft 1 25/32 in (350 mm) (clearance height starting from bracket height)

Variable position controlled extraction hood

The extraction hood adjusts itself fully automatically to the workpiece height which significantly reduces the dust and noise emissions.



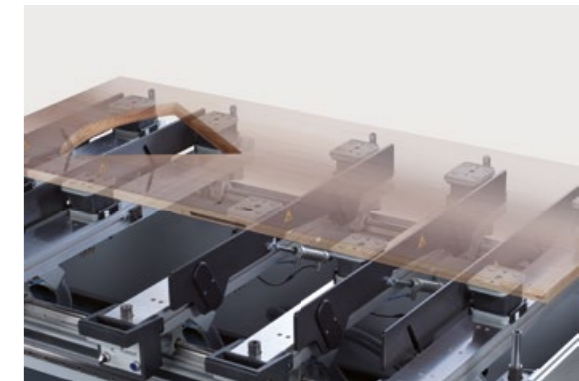
Status display

The changing colors of the innovative lighting system display the various machine statuses. This makes it possible to keep up-to-date on the current status of your profit CNC Machining Center.



Workpiece stop for veneered panels

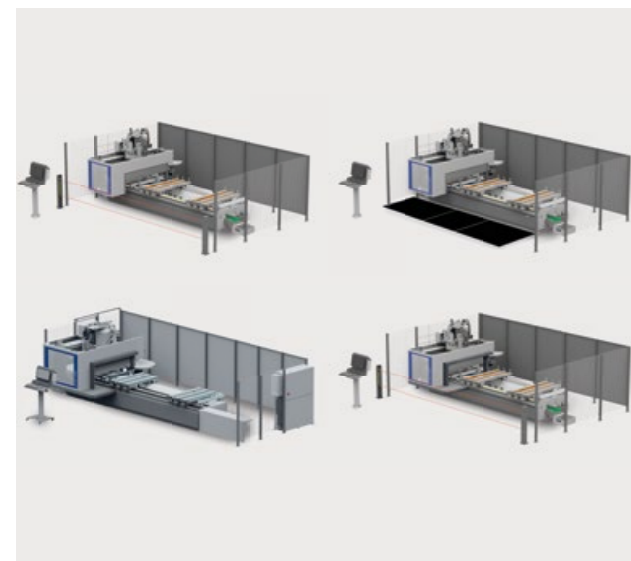
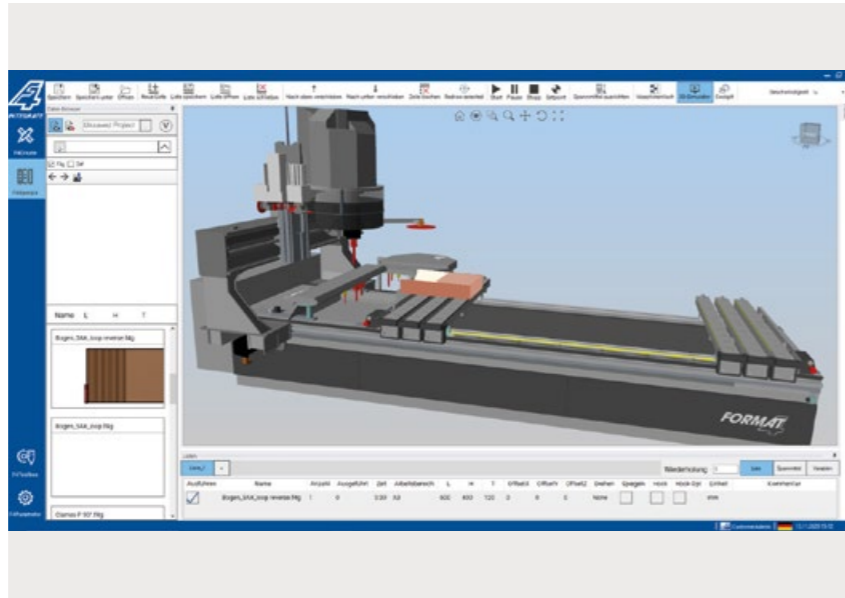
Additional to the workpiece fence cylinders there are also separate fences available for the processing of veneered surfaces with a projecting edge or laminated panels.



The Format4 console table – adaptable to any requirement

Depending on the application, the work table can be equipped with 6 or 8 consoles. Choose from console systems with varying degrees of automation that have been tried and tested over many years, ensuring perfect adaptation to a wide range of workpiece sizes and shapes.

3D simulator with collision control
 The 3D simulator accurately displays travel distances, feed speeds, travel heights, and optional equipment such as the 5-motion unit, the chip deflector, all rotary tool changers, or drill heads, and determines precise working times. The collision check tests whether any collisions could happen and guarantees the working safety on the machine. Through the allocation of the tool DXF profile, the contour of your router can be shown on the workpiece. Even when calibrating new tools, the DXF profile can be used which helps to reduce the amount of material use.



Flexible Processing of Extra-Long Components
 In order to be able to offer our customers different advantages (user-friendliness, productivity, space requirement,...), the machine is available with several safety concepts:
 » Light barrier
 » Foot mat
 » Bumper



Comfort Footswitch Bar
 At the front of the machine, a foot switch bar is integrated in the pedestal along the entire length of the working area. This eliminates the need to search for or move the foot pedal during workpiece positioning. The simple construction blends into the coherent design of the machine.

Product range



Sliding Table Panel Saws



Shaper Spindles

Planers



Edgebanders

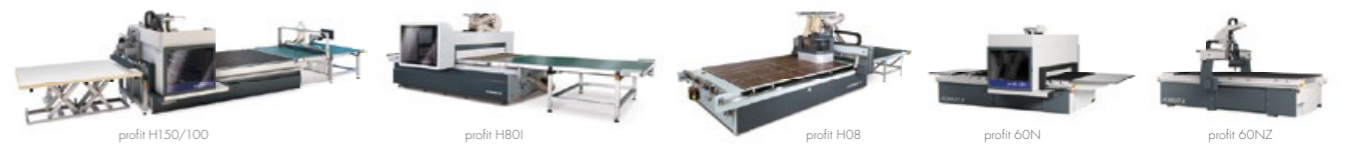


Wide Belt Sanding & Brushing Machines

Heated Veneer Presses



CNC Machining Centers



Nesting-CNC Machining Centers



Beamsaw Vertical saw



Vacuum panel lifter, Return systems & Feeding Units

FORMAT 4®

FORMAT4 Uncompromising expertise for the highest of requirements

The Felder Group premium brand has met the highest standards of professional users since 2001. The customized high-performance solutions are uncompromisingly innovative, offer maximum operating comfort and complete productivity.

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