

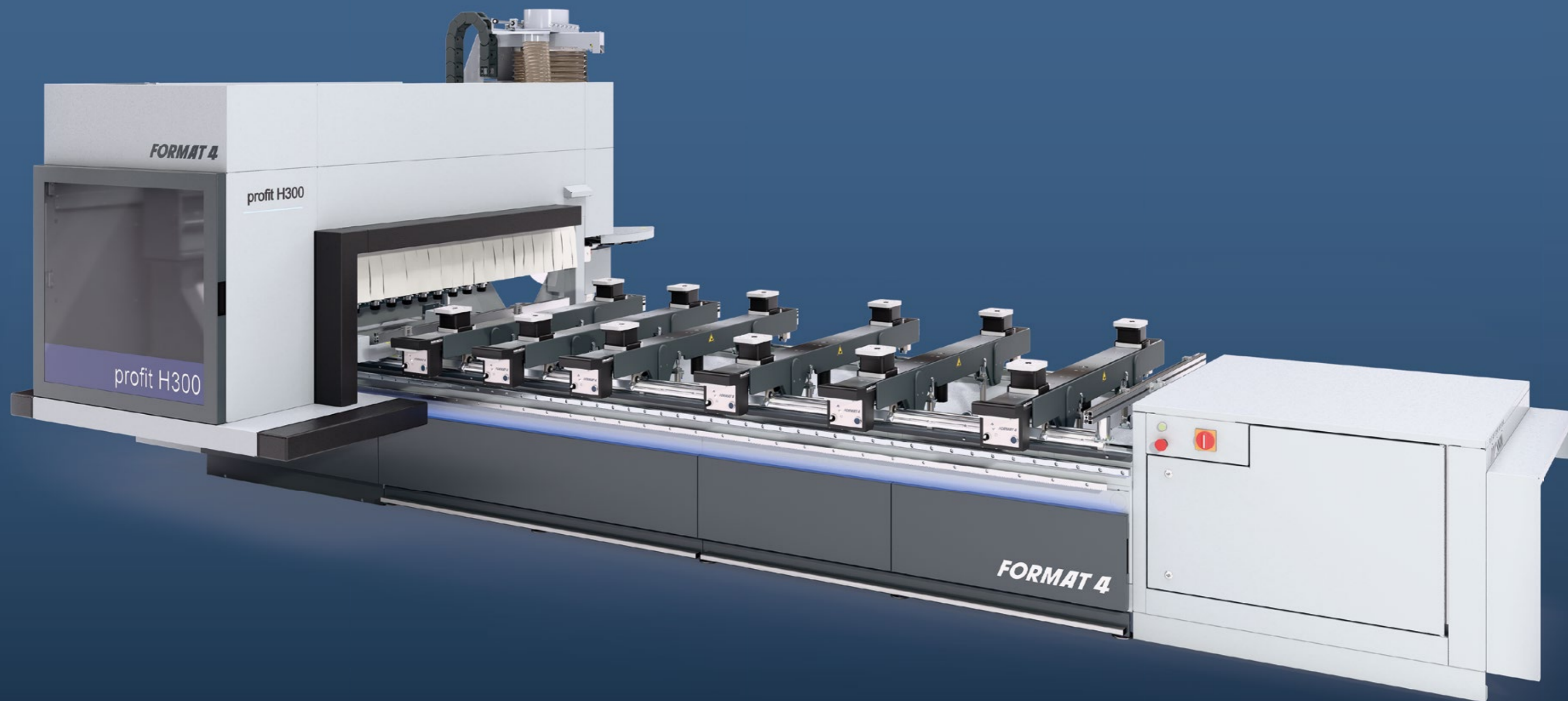
FORMAT 4®

profit H300R

THE ALL-ROUNDER WITH XL
PROCESSING CAPACITY



FORMAT 4®



The all-rounder with XL processing capacity



profit H300R

- » Small footprint - minimal space requirement!
- » Drawing = programming, intuitive operating software
- » CNC software incl. 3D cabinet software "F4-Design" for presentations, parts list and connection to machine
- » Gantry design, synchronized drive, solid construction for maximum performance
- » The drilling head covers the whole working field
- » High quality dual circuit vacuum clamping system with 100 mm vacuum pod height
- » Large Y dimensions for maximum processing depth
- » **F4[®]Solutions^{ready}**

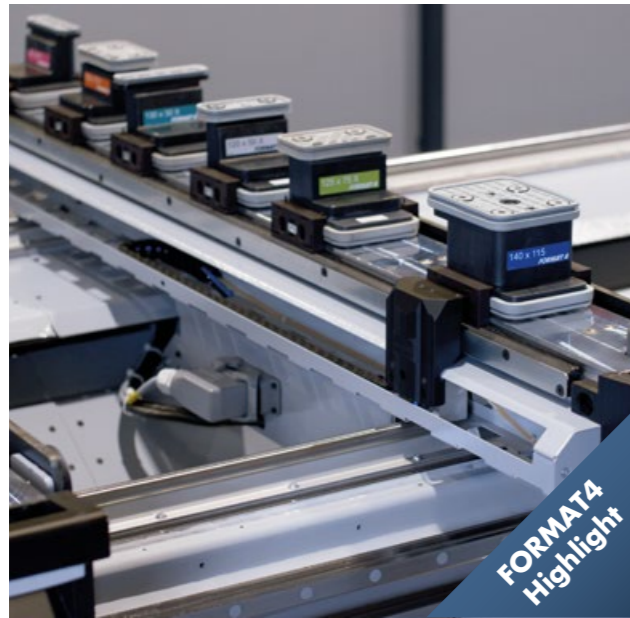
The increasing demand for custom-made products in furniture, door and window production is providing a challenge for all workshops, especially smaller companies: Diverse profiles have to be produced with flexibility, efficiency and in several thicknesses, to be able to keep up with larger manufacturers in the market. With a large working area in Y, the profit H300R offers virtually endless possibilities for processing panels and solid wood. Standard and special applications can be flexibly covered with the wide range of products and numerous configuration options available. To ensure a productive work process, the machine and software must be in perfect harmony, numerous interfaces from various suppliers often make this interaction difficult. The everything-from-a-single-source solutions from Format-4 provide the customer with a perfectly matched complete package for the toughest demands.

The c-tech product line offers specially designed equipment options for processing plastics and composite materials.

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



FORMAT4
Highlight

autoPos automatic console and vacuum pod positioning
autoPos automatic console and vacuum cup positioning for quick and precise positioning of the console in the X direction and vacuum cups or frame clamps on the console in the Y direction.

For positioning in the X direction, each console is equipped with an independently controlled motor, which reliably and accurately moves the consoles to the respective position defined in F4 Operate.

For positioning in the Y direction, the clamping devices are lifted on both sides by means of lifting bars. The integrated blow-off device on the belt-driven driver ensures that the console is always properly cleaned, preventing any residual dust from accumulating between the console and the clamping device. Another highlight is the automatic positioning of up to 6 vacuum suction cups per console – or alternatively 2 frame clamps. Depending on the equipment, repositioning during oscillating operation is also possible. Recommended software feature: 'Advanced vacuum pod positioning'



FORMAT4
Highlight

lightPos – LED vacuum pods positioning, revolutionarily simple & precise

Vacuum pods and consoles are positioned visually, quickly and precisely with lightPos. 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 visualise the position and the dimension of the workpiece.



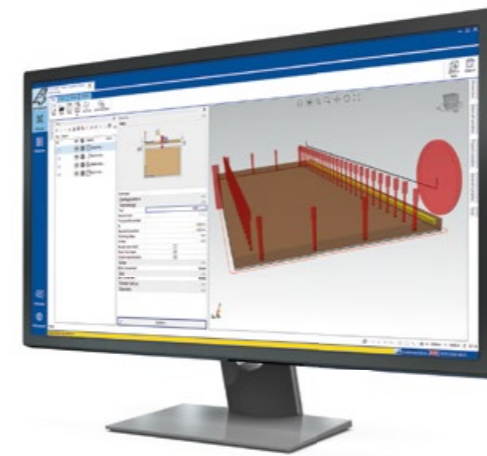
FORMAT4
Highlight

Console activation

Specially designed for use with compressed air controlled frame clamp systems, this function offers new possibilities and enormous clamping strength when it comes to the processing of solid wood. The ability to be able to deactivate the consoles individually makes it possible to remove offcuts without having to release the vacuum that is holding the workpiece. This ensures that the workpiece stays in exactly the right position for the next working process (inner profiles etc.).

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Details

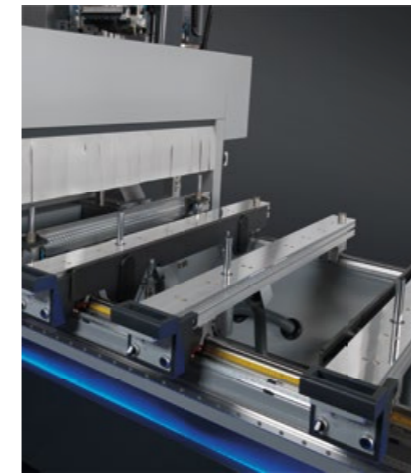


F4®Integrate: The pioneering CNC software

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 H200 series is equipped with rear and center fence rows. The solid cylinder stops allow flexible component referencing of small, medium and large workpieces on the work area.



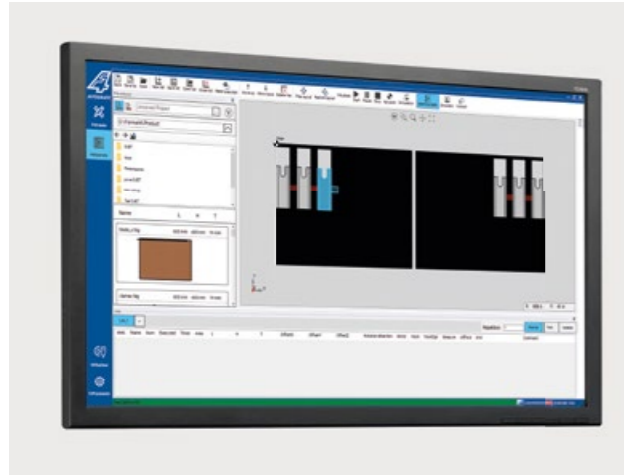
Maintenance opening

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



Horizontal milling motor

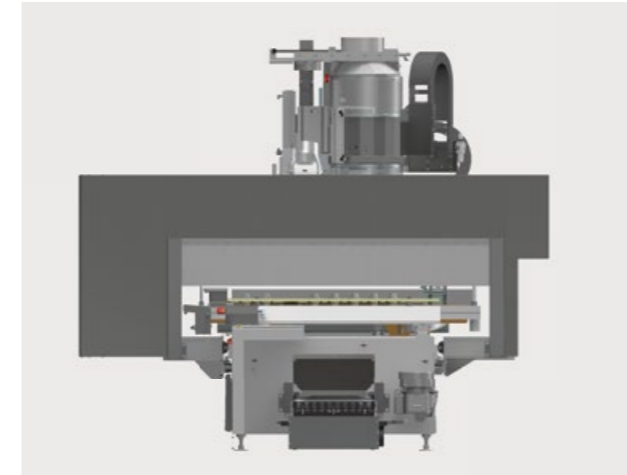
The horizontal spindle motor has an ER25 collet chuck on the right and an ER32 collet chuck, with integrated extractor for perfect extraction results during lock box machining, on the left side. The infinitely variable speed of up to 18,000 rpm and the pneumatic swivel range of 0°–7° (ideal for door hinge processing) enable flexible application options.

FORMAT 4[®]**Intuitive touch-screen control on a 24" monitor**

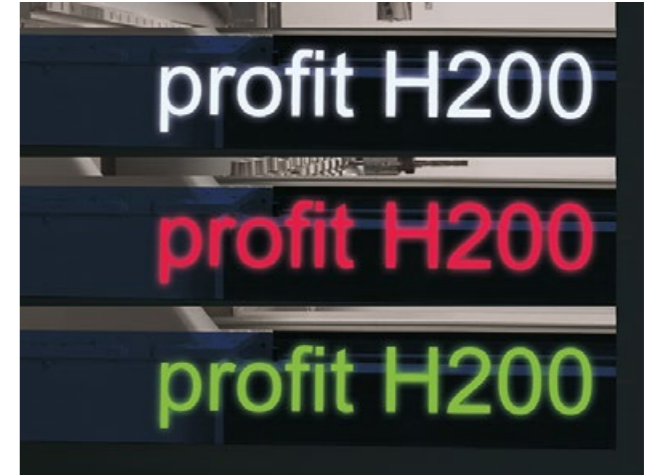
The advanced and intuitive touch-screen control concept guarantees maximum user friendliness. The clearly structured and self-explanatory user interface allows you to operate the machine with ease and ensures maximum productivity. The machine controls are clearly displayed graphically and various programs,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

**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.

**CNC machining center with gantry design**

The machine chassis of the Profit H300 1.5.33 is made from thick-walled, electrically-welded shaped tubes.

**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.

**Position display of the workpiece supports and vacuum pods**

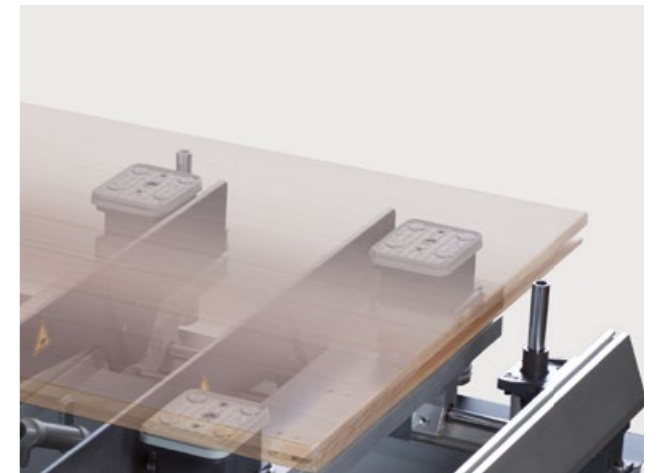
In the standard configuration, the workpiece, the workpiece supports and the vacuum suction pads are displayed simultaneously on the CNC board. This guarantees, that the workpiece is securely positioned and that there can be no collision between the tool and vacuum pod. The exact position of the vacuum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

**Frame processing**

Not only vacuum suction pads but also frame clamping devices can be used for the processing of frame components. In contrast to vacuum suction pads, frame clamping devices use compressed air to generate their clamping force. This allows a significantly higher clamping force to be achieved. The compressed air connections are located on the bottom of the console.

**Template milling**

There is a separate connection available, for template routing. Using templates makes it possible to fix complex components in place, that cannot be processed using vacuum pods.

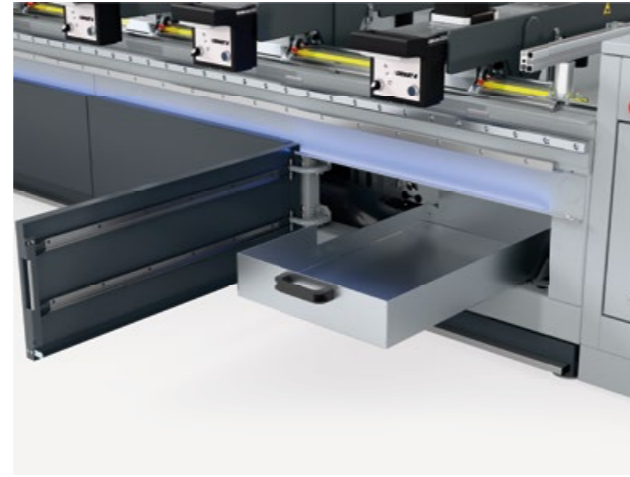
**Workpiece loading supports**

Loading supports assist in the simple loading and unloading of large or heavy workpieces. A major advantage is that they enable you to operate the machining center with one person.



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.



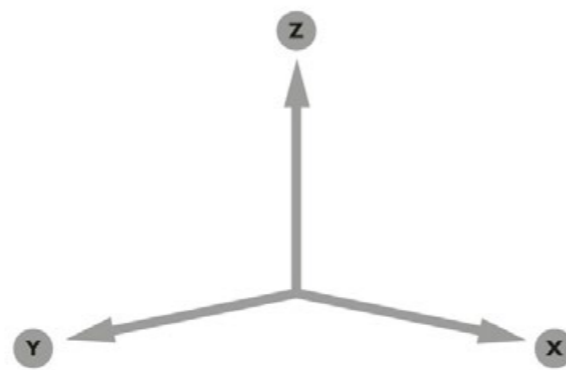
Chip conveyor

Chip conveyor for waste pieces and residual chips and dust: For the removal of offcuts and chips from the machine chassis (right hand side). At the end of the conveyor or belt they are separated using a separating slide and then extracted. The offcuts are collected in a container.



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.



Two working field size options for individual requirements

profit H300 16.33

X= 10 ft 9 59/64 in (3300 mm)
 Y= 5 ft 2 13/64 in (1580 mm)
 Z= 9 27/32 in (250 mm) (clearance height starting from bracket height)

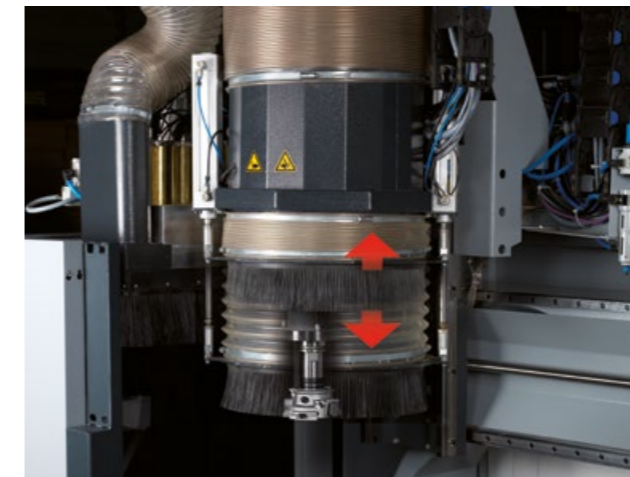
profit H300 16.53

X= 17 ft 4 21/32 in (5300 mm)
 Y= 5 ft 2 13/64 in (1580 mm)
 Z= 9 27/32 in (250 mm) (clearance height starting from bracket height)

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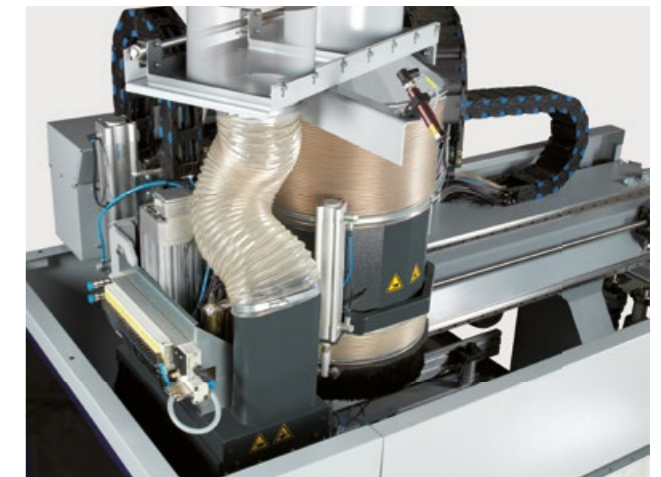
Spindle

With a motor power of 12 and 15 kW and up to 24,000 rpm, the main motor is controlled using an inverter and is attached directly to the support module of the drilling head in the Z axis. Dual linear guides guarantee highly precise vertical guiding. The main motor is positioned using ground ball screws. The HSK F63 tool clamping is done automatically. The clamping of the tool is checked using sensors, which then confirm that it is safe to start the operation. The tool holder is cleaned automatically. The C-axis is optionally available as the fourth axis and is interpolating (360°) with a compressed air interface for the units.



Controlled extraction hood

The extraction hood positions itself fully automatically to one of 3 positions in relation to the workpiece height which significantly reduces the dust and noise emissions.



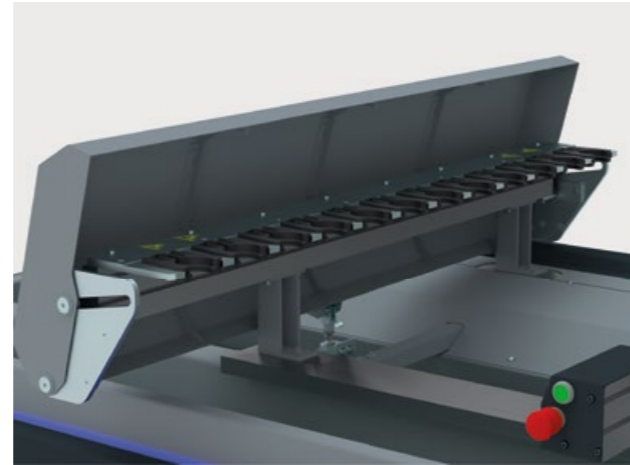
Extraction connection

With the automatic control of the extraction connection, the full extraction capacity is moved between the drilling head and main spindle, depending on what is being used at the time.



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.



12 position linear tool changer

The 12-position linear tool changer on the left side of the machine stand also offers the option of storing up to 3 units. In addition, the frontmost unit storage position can be used as a pick-up station for hard-to-reach tool changing stations.

The cover optimally protects the high-precision HSK tool adaptors from dust and chips.



Compressed air nozzle/spraying unit

Mounted onto the main spindle to optimize routing. Comfortably controlled with solenoid valve directly with the control software.



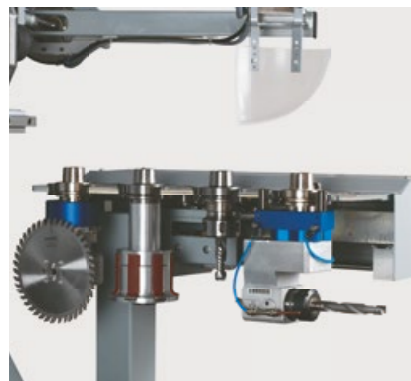
Safety Concepts can be Freely Selected.

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

Automatic central lubrication system:

The lubrication is applied as and when required to the guide carriages of the X, Y and Z axis as well as the bearing spindles in Y and Z. Lubrication is carried out automatically after a preset time.



4 position linear tool changer moving in the X-axis direction

Tool changer for 4 tools or aggregates, mounted to the gantry. Ensures quick tool changes even when working in pendulum operation.



18 position rotary tool changer mounted to the gantry

The rotary tool changer with 18 positions is mounted to the back of the gantry and moves together with the gantry along the X-axis. The 18 position rotating tool changer, keeps tool changing times to the bare minimum.



12x linear tool changer mounted on machine outtrigger

The tool changer with 12 tooling positions improves productivity and creates more space for additional tools on the machine.

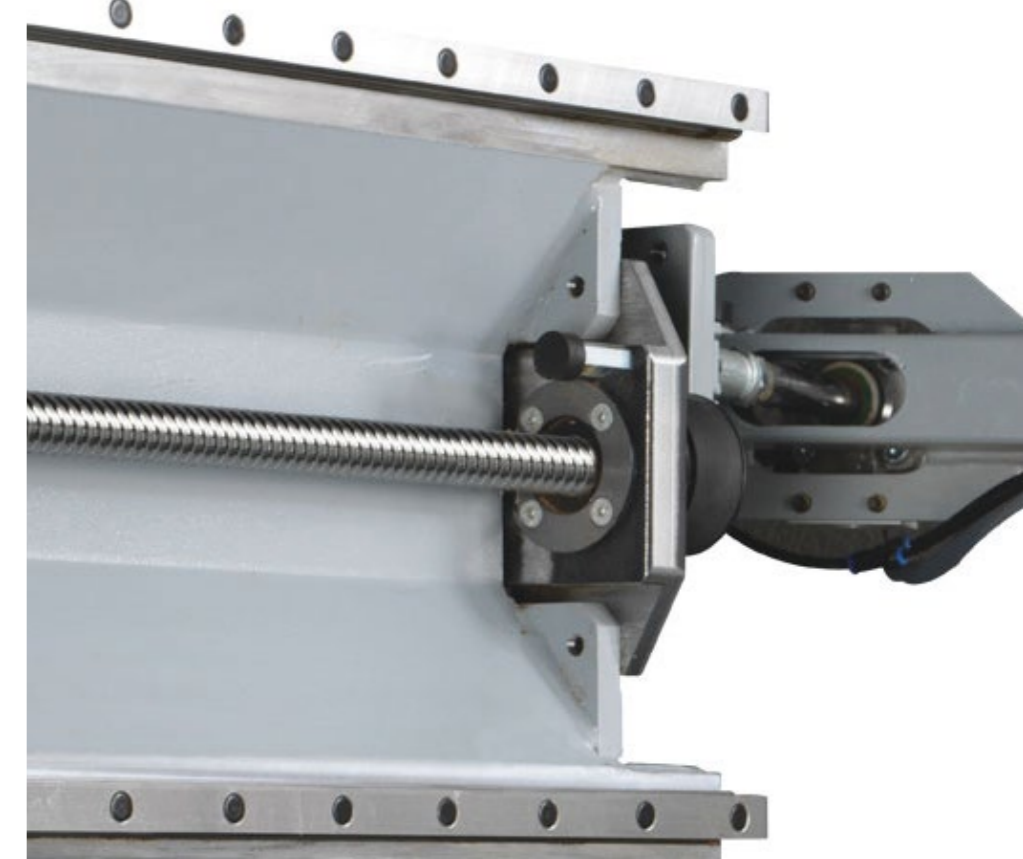
Linear guides

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.

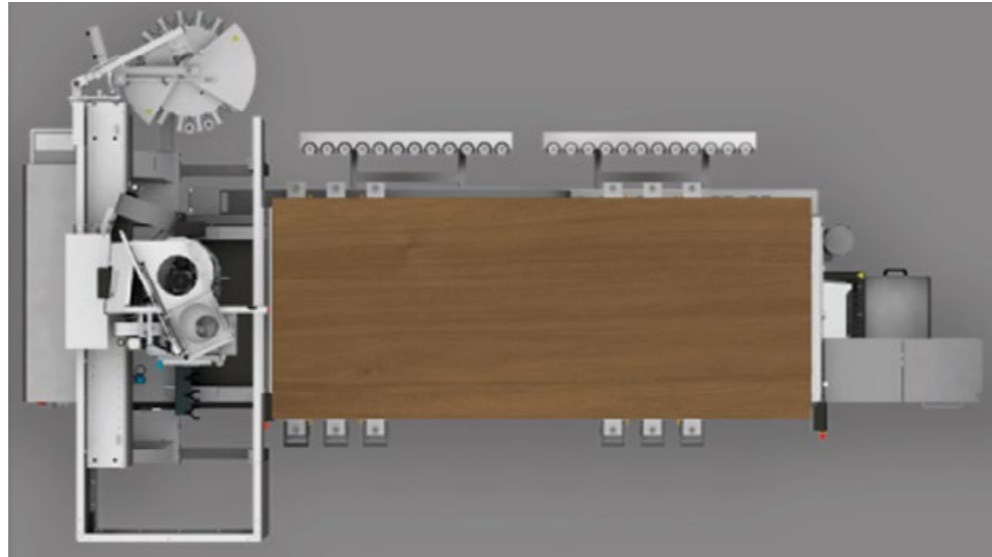
Y- and Z-axis guiding system:

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.



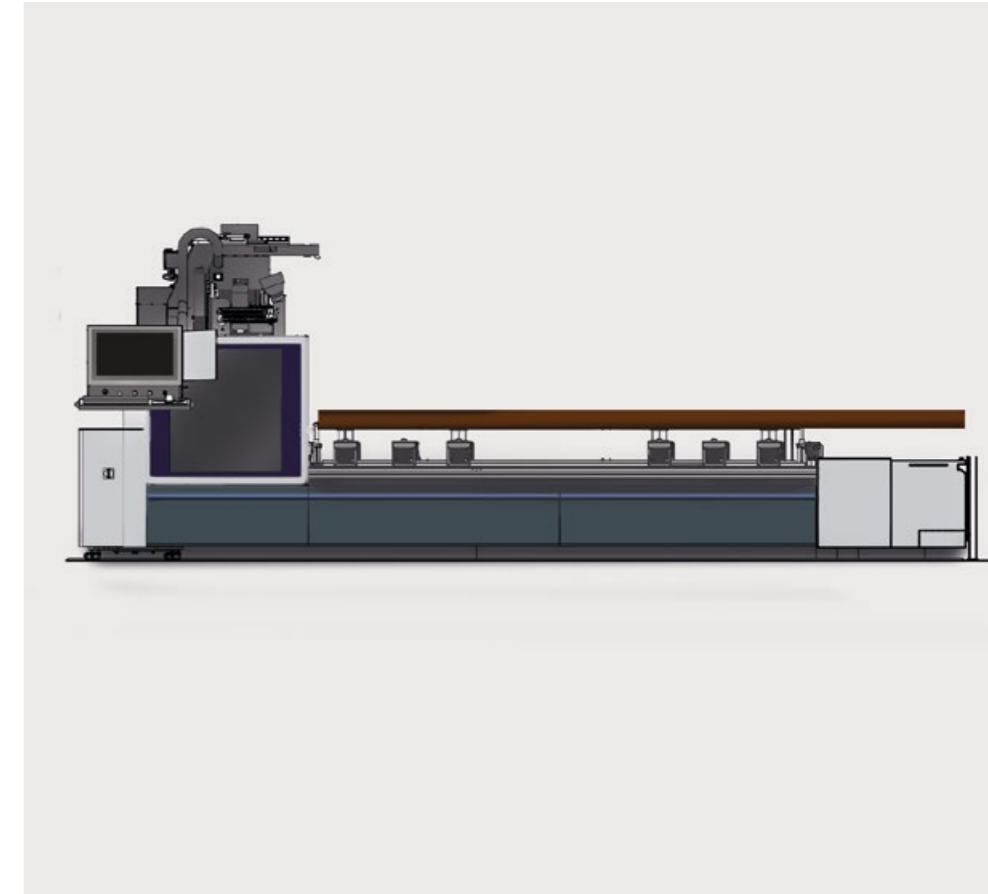
Free Working Area due to Hood Park Positioning

If the hood is in parking position, the entire working area is freely accessible. The machine operator therefore has no operational restrictions during workpiece positioning.



Flexible Processing of Extra-Long Components

Tool changer and control cabinet are located below the zero level of the working area. This allows extra-long components to be flexibly clamped and processed in two steps.



100 millimeters Suction Pad Height

Our machines are equipped with vacuum suction pads of 3 15 / 16" in height. Because of the increased distance between the console and the workpiece, the machining restrictions on the workpiece underside are significantly minimized, as well as when using aggregates on the lateral surfaces.



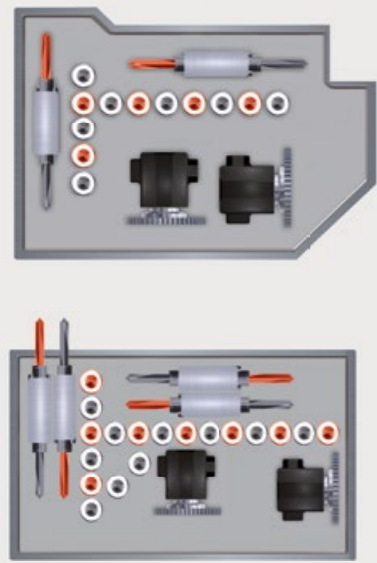
2-Circuit Vacuum Management

Thanks to the 2-circuit vacuum management on our consoles, the clamping devices are locked before the workpiece is positioned. The vacuum suction pads can therefore no longer be moved and process reliability is considerably increased.

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.



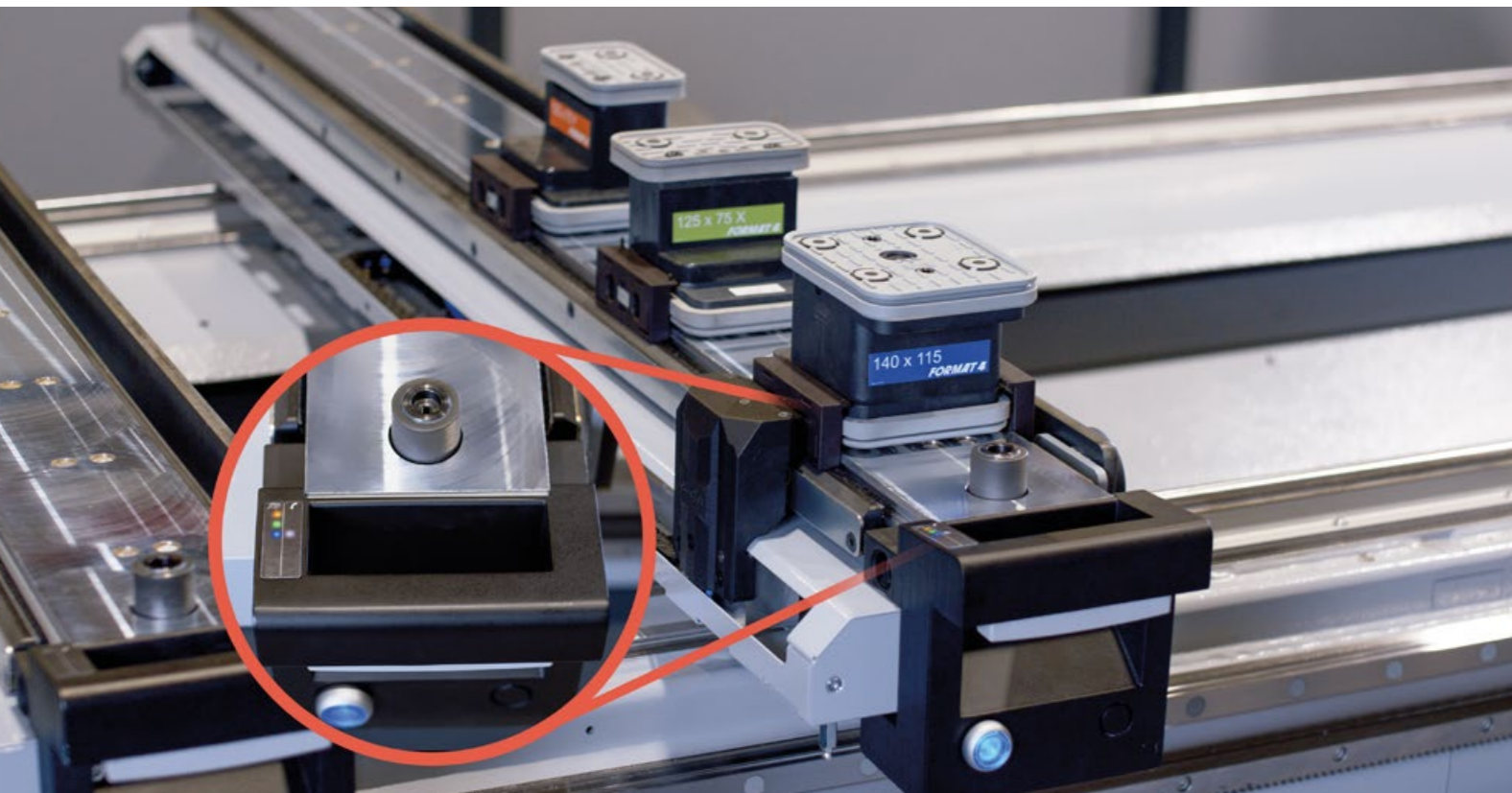


Individual drill head configuration

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 controlled motor up to 7500 rpm

LED-vacuum pod indicator integrated into the console handle

The type and position of the vacuum pods on the workpiece are defined in F4Operate. The LEDs integrated into the console handle allow easy reading of the sequence and type of clamping devices on each console. Different colors indicate the type of vacuum pod and its orientation (0 or 180).



Product range



Sliding Table Panel Saws



Shaper Spindles

Planers



Edgebanders

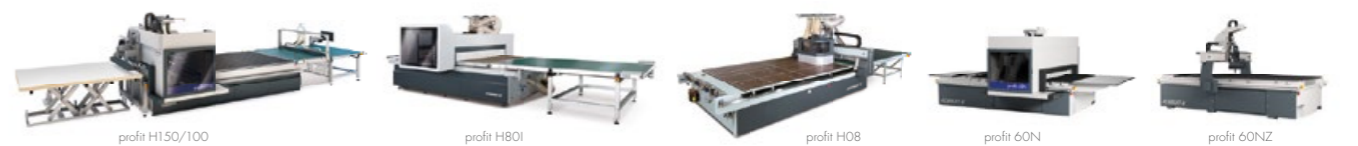


Wide Belt Sanding & Brushing Machines

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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