

# **HOLZ-HER EPICON series**

For all applications in solid wood, stairs, doors & windows.

# EPICON 7245



Powerful 5-axis machining center with fully automatic machine table for frame and panel machining



# **EPICON 7245**



- 1 Intuitive machine operation
- 2 VarioDrive machine table
- 3 Automatic frame reclamping system
- 4 Powerful 18 kW 5-axis technology
  5 Guided chip flight incl. transportation
  6 Extensive changer options







# **MACHINING DIMENSIONS**

#### Strong dimensions

With a maximum processing height of 250 millimetres from the top edge of the vacuum cup (125 mm), the 7245 offers enough space for your projects.

The machine is available in five lengths from 3.68 m to 7.28 m and a processing depth of 1.65 m.

х	MACHINING DIMENSIONS	BETWEEN THE STOPS
315	max. 3680 mm	3150 mm
405	max. 4580 mm	4050 mm
495	max. 5480 mm	4950 mm
585	max. 6380 mm	5850 mm
675	max. 7280 mm	6750 mm
Y	max. 1650 mm	-
z	max. 250 mm	-



# **GANTRY DESIGN**

V2.0

The beams of the solid gantry construction are designed to meet the high requirements and loads of solid wood processing and have a reinforced design.

This offers even greater rigidity during dynamic driving movements.

The portal is precisely driven synchronously in the X direction on ground and hardened prismatic guides with helical toothed racks on both sides of the machine bed.







# MAXIMUM PROGRAMMABLE SPEED

Extreme acceleration values

Thanks to its sophisticated mechanical engineering, the EPICON achieves enormous acceleration values and a vector speed of up to 131 meters per minute.

Max. speed:

- in X: 80 m/min
- in Y: 100 m/min

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in Z: 25 m/min
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40 40 70 70 10

# **CAMPUS PACKAGE**

#### NC-HOPS

- Simple programming of even complex parts
- A wealth of existing macros
- Auxiliary functions such as Easy-Snaps, free planes & auxiliary geometries

#### ACADEMY

- Direct DXF import & assignment of the edits
- Quick construction of simple components

#### **MT-MANAGER**

- Clear tool management
- Creating 3D tools for 5-axis machining
- Locking tools

#### **BZ-MANUAL**

- Saving table assignments
- Variable adaptation of the components
- **3**D view of the consoles & vacuum cups







Q Turnet

10 10 10

....

R ball

10 States



# **CAMPUS 5-AXIS MODULES**

**3D Simulation Packages** 

#### **3D ABLATION SIMULATION**

Even in the basic version, all EPICON machines are supplied with the sophisticated 3D removal simulation BetterSim. The material is removed in the simulation on the basis of the stored tool profiles. This allows you to visually check the upcoming machining process.

#### HIGH-SPEED CURVE PERFORMANCE PACKAGE

For 5-axis power users, the High-Speed Curve Performance package supplied as standard offers additional advantages. This makes use of the firstclass performance of the 5-axis spindle for true highspeed milling with perfect results. The high-speed module is also ideal for increasing performance when connecting third-party CAD/ CAM software.

#### **UPGRADE OPTIONS**

- CAMPUS 3D machine simulation
- CAMPUS 5-axis simultaneous milling









# CAMPUS 3D MACHINE SIMULATION

For High Process Reliability Even before Machining

For even more safety in work preparation, workpieces can be processed virtually on the machine table. Any collisions with vacuum cups or rails can thus be detected and remedied at an early stage.

- Collision monitoring
- Three-dimensional simulation of machine movements and material removal from the workpiece.
- Graphic representation of machining head, tool and tool holder.
- Upgrade to the machine simulation with representation of the consoles, suction cups and clamping devices possible.





# CAMPUS 5-AXIS SIMULTANEOUS MILLING

Full Interpolation During Machining

With 5-axis simultaneous milling, the full performance spectrum of your CNC is unleashed. You can optimise the interaction of all 5 axes via predefined guide curves. This module is often a prerequisite when using external 5-axis CAD/CAM systems.

- Support of 5-axis interpolation by upper and lower guide curve (simultaneous processing).
- Two contours on defined layers are interpreted as 5-axis machining.



![](_page_9_Picture_1.jpeg)

# **3D MASTER SOFTWARE**

The perfect 5-Axis CAD/CAM Software Solution

The HOLZ-HER 3D Master software was developed in collaboration with DDX especially for wood and plastics machining and is optimally designed for working with HOLZ-HER CNC machines. It makes no difference whether the machining takes place in 3-, 4- or 5-axis operation. The CAD area of the software has all the usual drawing functions and enables the simple creation of both twodimensional and three-dimensional objects. The seamless integration of the postprocessor to the HOLZ-HER EPICON guarantees the transfer of all tool parameters from the tool data bank of the CAMPUS NCHops software. The integrated import filter for all standard CAD drawing formats makes it possible to easily open 3D drawings from third-party software and to provide them with processing parameters. Laser scans of workpieces, persons etc. are also supported by 3D-MASTER.

![](_page_9_Picture_5.jpeg)

![](_page_10_Picture_1.jpeg)

# **3D MASTER SOFTWARE**

Ten Arguments for Your CAD/CAM Software Solution

- Easy creation of even curved 2D and 3D components
- Import of all common CAD formats
- Including postprocessor and interface to the tool database (MT Manager)
- Automatic fitting of the components into the smallest possible raw material
- Automatic generation of the milling paths from the surfaces of 3D models
- **3**D graphics with photo-realistic representation
- Vectorisation from graphics Generation of NC programs
- Cost and time calculation
- **5**-axis simultaneous milling with cutters and saw blades

#### USEFUL ADDITIONS TO THE 3D MASTER SOFTWARE

- 3D simulation and collision check 3D replica of your HOLZ-HER machine
- Nesting nesting adaptable to your requirements
- Automatic CAM automation of processes from external data
- Import BTL BTL import for manual processing

#### STANDARD FUNCTION LIST

![](_page_10_Figure_19.jpeg)

Parametric constructions

![](_page_10_Picture_21.jpeg)

3D CAD surface functions

![](_page_10_Picture_23.jpeg)

5-axis simultaneous machining

![](_page_10_Picture_25.jpeg)

3D graphics and photorealistic visualisation

#### **OPTIONAL FUNCTION LIST**

![](_page_10_Picture_28.jpeg)

Management of several CNC machines

![](_page_10_Picture_30.jpeg)

BTL import

![](_page_10_Picture_32.jpeg)

3D simulation of the machine and collision control

![](_page_10_Picture_34.jpeg)

Table replica with clamping elements

![](_page_11_Picture_1.jpeg)

# VIACOCKPIT – HOLZ-HER MACHINE MONITORING

Full transparency for your future workshop

Productivity shown transparently on the master computer and also on your mobile device, monitor and analyze at anytime.

The WEINIG App-Suite and viaCockpit offer you the possibility to always keep an eye on your production flow and material management. The system enables the monitoring and evaluation of order data, increases production reliability through maintenance instructions and optimizes production. Thanks to open interfaces, the system is future-proof and can be seamlessly integrated into existing IT landscapes.

The viaConnector Edge is your link between the machine and the viaCockpit. It offers you convenient access to your machine data and makes it available locally or in the cloud at a destination that you define individually.

# EXPORT

For advanced data analysis, viaConnector Edge lets you export your collected data as a CSV file for transfer to ERP or SQL databases at the touch of a button.

![](_page_11_Picture_9.jpeg)

viaMonitor For monitoring and evaluation

![](_page_11_Picture_11.jpeg)

viaNotify Reports possible errors

![](_page_11_Picture_13.jpeg)

323 Auto

10 mar 8 400 8

Harmon

viaOrder Provides an overview of the order progress

![](_page_11_Picture_15.jpeg)

viaMaintain

Informs about due

maintenance

ADULT AT

![](_page_11_Picture_16.jpeg)

viaCondition Optimizes machine utilization

![](_page_12_Picture_1.jpeg)

# HANDHELD CONTROL UNIT FOR REMOTE CONTROL OF THE MACHINE

Everything Always Under Control

Whether when running in the programmes or for safety during machining, with the hand-held control unit you always have all the functions at hand.

#### **OPERATING FUNCTIONS:**

- Start / stop the machining programme
- Speed control of the machining cycles
- Reset button
- Manual feed / rapid traverse for all axes

![](_page_12_Picture_10.jpeg)

![](_page_12_Picture_11.jpeg)

![](_page_13_Picture_1.jpeg)

![](_page_13_Picture_2.jpeg)

# EASYSTART – THE CONVENIENT OPERATION

Short Distances and High Effectiveness

Allows you convenient operation and short distances thanks to additional start buttons on the machine bonnet. A must-have option, especially in pendulum machining!

#### **OPERATING FUNCTIONS:**

- Start / stop the machining programme
- Reset button

![](_page_14_Picture_1.jpeg)

# . . .

![](_page_14_Picture_3.jpeg)

![](_page_14_Picture_4.jpeg)

# **MACHINE CONTROL**

Ergonomic design at the workplace

The ergonomic design of your workplace is of increasing importance. HOLZ-HER offers as standard for all EPICON models a control panel equipped with a 21.5" and 16:9 multi-touch screen, providing you with perfect operator ergonomics. A continuous glass surface of the display ensures a long-lasting and pure image quality.

![](_page_15_Picture_1.jpeg)

# BARCODE SCANNER AND LABELS

Start your machining programs with just one barcode scan

When scanning, the file path stored in the code is opened and the corresponding program is called up automatically.

The operator no longer has to search for the CNC program. This means an enormous saving of time.

#### **2D BARCODE SCANNER**

- Fast and mobile reading of all common barcodes
- Selection of processing fields by barcode

![](_page_15_Picture_9.jpeg)

![](_page_16_Picture_1.jpeg)

# EASYLABEL LABEL PRINTER

Labels simplify your production

Expand your production with a label printer on the control panel.

The additional labeling not only identifies the workpiece but also enables clear allocation and tracking of individual components. Using the generated QR codes, edge banding machines from HOLZ-HER, for example, can automatically call up the appropriate stored program and convert to the respective component.

With the help of an editor, the structure of the label can be freely designed. Up to two codes can be integrated on one label. This allows processing steps to be sensibly separated from one another. The edge pattern can also be clearly read off the label.

- Label printer for generating workpiece labels
- Individual design of the labels with the label editor

![](_page_16_Picture_9.jpeg)

![](_page_16_Picture_10.jpeg)

![](_page_16_Picture_11.jpeg)

![](_page_17_Picture_1.jpeg)

# **TOUCH TOOL**

#### Tool length measuring system

Cylindrical standard tools with a diameter of up to 20 millimeters can be precisely measured and checked in length using the TouchTool.

After the tool change, a measurement is carried out and the tool length is checked for a possible tolerance.

The measured length is transferred directly to the tool database.

- Tool length measurement
- Measuring accuracy 0.1 mm
- Detection of tool breakage

![](_page_17_Picture_10.jpeg)

![](_page_17_Picture_11.jpeg)

![](_page_18_Picture_1.jpeg)

![](_page_18_Picture_2.jpeg)

# PRECISION MEASURING PROBE

Ball switch with data transfer

With a carbon ball tip, material thickness, depth and height can be determined. A check of the workpiece zero points and displacement is also possible. The measuring probe can also be used to detect workpiece rotation.

The probe is inserted into the HSK spindle holder like a normal tool. Appropriate macros must be used for programming.

- Check workpiece dimensions
- Check zero offset
- Check workpiece rotation

![](_page_19_Picture_1.jpeg)

# 18 KW 5-AXIS PRO TORQUE MILLING UNIT

Dynamics, power and performance

The centrepiece of the EPICON is the compact, gimbal-mounted 5-axis head, which can move freely in space. It ensures the precise production of furniture, staircases and moulded parts in elaborate designs. The compact, powerful and fully interpolating machining head operates at up to 24,000 revolutions per minute and is extremely resilient thanks to ceramic bearings and liquid cooling. The special feature of the 18 kW spindle is the PRO-TORQUE technology, which enables extremely high torques on the spindle thanks to software-controlled, mechanical fixing of the A and C axes. This makes it perfect for tools with large diameters and high metal removal rates.

#### **TECHNICAL DATA**

- A- and C-axis interpolating rotatable
   A-axis: +/- 180°
   C-axis: +/- 360°
- 18 kW PRO TORQUE power spindle (S6)
- Mechanical brakes in the A and C axes
- Active liquid cooling (cooling unit included)
- Ceramic ball bearing (hybrid bearing)
- Tool holder HSK 63 F with aggregate interface
- Z-stroke 565 mm, real 250 mm workpiece height from top edge of vacuum cup

![](_page_19_Picture_13.jpeg)

![](_page_19_Figure_14.jpeg)

![](_page_20_Picture_1.jpeg)

# BLUETOOTH MONITORING CHIP

Data acquisition and spindle monitoring

All milling units of HOLZ-HER CNC machining centers can be equipped with the "ChipControl" monitoring chip. Via Bluetooth, all monitored data is transmitted to the computer or to the viaCockpit app. If safety parameters are exceeded, an alarm is displayed on the machine monitor and on viaCondition or viaCockpit and the respective information is made available.

The new ChipControl

- Monitors bearing temperature during machining operations with high spindle load
- Reports overheating of the spindle or the bearing
- Redundant speed monitoring
- Enables preventive diagnostics for predictive maintenance

![](_page_21_Picture_1.jpeg)

![](_page_21_Picture_2.jpeg)

![](_page_21_Picture_3.jpeg)

# **CHIP DEFLECTOR**

Cleanliness and order

The 5-axis spindle of the EPICON is equipped with a chip deflector as standard.

The dust and chip jet generated during milling is efficiently directed to the extraction system, ensuring a clean working environment and clean workpieces.

The guide plate is fed in two pneumatic feed stages depending on the tool and processing height. Multi-stage tool sets and long tools are covered by the second extension stage.

The angle of rotation is controlled via the C-axis. This allows the flying chips to be intercepted at the correct angle of rotation.

Tools with a diameter of up to 250 mm can be used in conjunction with the chip deflector.

![](_page_22_Picture_1.jpeg)

# HORIZONTAL MILLING UNIT

Optional milling unit for door processing

The additional unit is mainly intended for milling lock cases in a horizontal position.

The device is mounted horizontally on the processing head and is automatically recognized by the program sequence based on the tool ID. For processing, the milling unit is fed precisely via linear guides using pneumatic cylinders and can therefore be used at any time. Integrated blowing nozzles then clean the milling pocket of chips.

- Additional milling unit type 7982
- Saves a tool change
- For lock case pockets horizontal

![](_page_22_Picture_9.jpeg)

![](_page_22_Picture_10.jpeg)

![](_page_22_Picture_11.jpeg)

![](_page_23_Picture_1.jpeg)

# INTEGRATED DRILL HEAD

With the integrated drilling heads, the EPICON is perfectly equipped

Drilling, sawing, milling, grooving - the drill heads of the EPICON series are multifunctionally equipped and perfectly equipped for the efficient production of simple and complex carcase parts in continuous operation.

#### STANDARD DRILL HEAD -THE 16-SPINDLE DRILL

The S-drill head, supplied as standard, is ideal for row drilling and back panel grooves in furniture and structural construction. Optionally, further horizontal drills can be added.

#### UPGRADE POSSIBILITIES -THE 21 & 31 SPINDLER

For series production, the L-drill head and XL-drill head for line drilling with even more flexible drill bits can be selected as an alternative. These drill heads can also be adapted precisely to your needs with additional options.

#### DRILL HEAD S | 16-SPINDLE

- 10 vertical spindles
- 6 horizontal spindles
- Integrated grooving saw in X direction
- 2 free spaces for extensions

![](_page_23_Picture_14.jpeg)

#### DRILL HEAD L | 21-SPINDLER

- 15 Vertical spindles
- 6 horizontal spindles
- Integrated grooving saw in X direction
- 3 free spaces for extensions

![](_page_23_Picture_20.jpeg)

#### DRILL HEAD XL | 31-SPINDLER

- 25 vertical spindles
- 6 horizontal spindles
- Integrated grooving saw in X direction
- 3 free spaces for extensions

![](_page_23_Picture_26.jpeg)

![](_page_24_Picture_1.jpeg)

# DRILL HEAD S | 16-SPINDLER

Perfect for construction building in the solid wood sector

#### SUPPLY

- Drilling unit with 10 vertical spindles
- 6 horizontal spindles
   (2 double drilling spindles in X-direction)
   (1 double drilling spindle in Y-direction)
- 32 mm grid
- Integrated grooving saw in X direction

#### POWER DRILL HEAD

- Drive power 3 kW
- N (max.) 1000 6250<sup>min-1</sup> infinitely variable
- L shape arrangement
- Direction of rotation: clockwise / counterclockwise alternating

#### POWER GROOVING SAW

N (max.) 1000 - 5650<sup>min-1</sup> infinitely variable

Tool holder:
 A = max. Ø = 125 mm
 I Ø = 20 mm
 B = max. 4.0 mm

![](_page_24_Picture_17.jpeg)

![](_page_25_Picture_1.jpeg)

# DRILL HEAD L | 21-SPINDER

The All-Rounder in Furniture and Structural Engineering

#### SUPPLY

- Drilling unit with 15 vertical spindles
- 6 horizontal spindles (extendable by third horizontal spindle in X-direction and second horizontal spindle in Y-direction)
- **3**2 mm grid
- Integrated grooving saw in X-direction (optional second grooving saw in Y-direction)

#### **POWER DRILL HEAD**

- Drive power 6 kW
- N (max.) 1000 6250 min-1 infinitely variable
- L-shaped arrangement
- Direction of rotation: clockwise / anticlockwise alternating

#### PERFORMANCE NUTSAW

N (max.) 1000 – 5650 min-1 infinitely variable

Tool holder:
 A = max. Ø = 125 mm
 I Ø = 20 mm
 B = max. 4.0 mm

![](_page_25_Picture_17.jpeg)

![](_page_26_Picture_1.jpeg)

# DRILL HEAD XL | 31-SPINDLER

Highest performance and absolute flexibility

#### SUPPLY

- Drilling unit with 25 vertical spindles
- 6 horizontal spindles

   (can be extended by third horizontal spindle in X and second horizontal spindle in Y direction)
- 32 mm grid
- Integrated grooving saw in X direction (optional second grooving saw in Y direction)

#### POWER DRILL HEAD

- Drive power 6 kW
- N (max.) 1000 6250<sup>min-1</sup> infinitely variable
- L shape arrangement
- Direction of rotation: clockwise / counterclockwise alternating

#### POWER GROOVING SAW

N (max.) 1000 - 5650<sup>min-1</sup> infinitely variable

Tool holder:
 A = max. Ø = 125 mm
 I Ø = 20 mm
 B = max. 4.0 mm

![](_page_26_Picture_17.jpeg)

![](_page_27_Picture_1.jpeg)

# VARIODRIVE MACHINE TABLE

Fully automatic, efficient and highly comfortable

With the fully automatic machine table, the EPI-CON 7245 offers a variable table concept for your entire range of applications.

The VarioDrive positions consoles and clamping fixtures fully automatically via synchronously driven Servotronic motors.

CNC-controlled reclamping of components enables complete machining of your workpieces from all sides.

Depending on the application, frame clamping elements such as vacuum suction cups can be converted to the machine table in a matter of seconds. This offers maximum flexibility and ease of use in both frame construction and panel processing.

![](_page_27_Picture_8.jpeg)

Figure: VarioDrive with vacuum cups

Figure: VarioDrive with frame tensioners

![](_page_28_Picture_1.jpeg)

# MULTI-FIELD PROCESSING

Working and setting up at the same time

The VarioDrive machine table offers you maximum flexibility in order processing thanks to a large number of attachment points. With the EPICON 7245, two-field pendulum machining is always possible.

Depending on the program and equipment, several workpieces can be placed and processed simultaneously in the Y-direction.

For example, in the left field (A) surface elements such as carcass sides, door leaves or kitchen worktops can be processed. In the right field (D), frames or lattice profiles for windows and doors are clamped and processed.

![](_page_28_Picture_7.jpeg)

![](_page_29_Picture_1.jpeg)

![](_page_29_Figure_3.jpeg)

**VARIODRIVE CONSOLES** 

Configuration

To further increase flexibility and quantity, the machine table is available in pairs with two additional consoles each.

From a machine length of 495, up to 12 consoles can be equipped.

	POSSIBLE NUMBER OF CONSOLES:	
315	6   8	
405	6   8	
495	6   8   10   12	
585	6   8   10   12	
675	6   8   10   12	

![](_page_29_Figure_7.jpeg)

![](_page_30_Picture_1.jpeg)

# CONSOLE EQUIPMENT CARRIAGE

High-precision positioning

Each console includes three fully automatic carriages for holding clamping and suction elements.

The pick-up carriages are also of solid gantry design. Driven by Servotronic motors, the clamping devices are positioned with high precision. Covered linear guides ensure low-maintenance operation.

The basic equipment of each console includes:

- **3**x carriages, fully automatic
- 1x vacuum cup 140 x 115 mm
- 2x sealing cap
- front stop pin
- rear stop pin
- two-stage loading aid

![](_page_30_Picture_13.jpeg)

![](_page_31_Picture_1.jpeg)

# CONSOLE EQUIPMENT STOPS

With electronic stop monitoring

Each console has two pneumatic stop pins as standard.

The round stop bolts are mounted in eccentrically adjustable, hardened guide bushes and thus guarantee permanently precise zero points.

For self-protection, all stops are equipped with an electronic safety device. Possible collisions are detected and prevented by the system.

- front stop pin
- rear stop pin

#### **UPGRADE OPTION:**

Necessary for the clamping process of two bar profiles in the Y-direction.

![](_page_31_Picture_12.jpeg)

Figure: Standard console

![](_page_31_Picture_13.jpeg)

![](_page_32_Picture_1.jpeg)

# CONSOLE EQUIPMENT ADDITIONAL CARRIAGE

Like all slides of the VarioDrive machine table, the additional slide can be equipped with both vacuum cups and frame clamping elements.

The additional holder increases the flexibility of your EPICON 7245 CNC, particularly in the area of panel workpieces.

- 1x additional carriage per console
- incl. one vacuum cup each 140 x 115 mm

#### Important!

For the processing of bars and frames, we recommend retaining 3 carriages for safe all-round processing with large tools due to the greater travel distances.

![](_page_32_Picture_9.jpeg)

![](_page_33_Picture_1.jpeg)

# FIELD B FIELD Ø T. • • 1.4 ŀ. FIELD A FIELD D 0

# MULTI-FIELD PROCESSING OF PANEL WORKPIECES

Additional carriage

With the upgrade of the additional carriage, efficient 4-field processing of panel workpieces is guaranteed.

With four vacuum suction cups in a Y-array, two flat components can be placed and processed simultaneously for pendulum machining.

Figure: 6 consoles with 4 carriages each

![](_page_34_Picture_1.jpeg)

# **AUTOMATIC RECLAMPING**

Circumferential machining Standard

#### 1. Inserting and clamping

The frame section is positioned at the attachment points and then held securely by the front frame clamps.

#### 2.Editing

After lowering the stops, the workpiece can be processed on the first side without interruption.

#### 3. Re-clamping process

To ensure maximum precision during subsequent processing, the workpiece remains permanently clamped in the same position. After milling, the middle frame clamp moves to the workpiece and takes over the clamping.

#### 4. Two-sided machining

The front clamping element now moves to a distance and machining of the opposite side is now enabled.

![](_page_34_Figure_12.jpeg)

![](_page_35_Picture_1.jpeg)

# **AUTOMATIC RECLAMPING**

Upgrade Middle Stop

#### 1. Inserting and clamping

Thanks to the additional middle stop, two bar profiles can be positioned and clamped at the stops at the same time. After positioning, the stops are lowered and the first longitudinal machining takes place.

#### 2. Clamping process

Immediately after milling, the front clamp positions itself in relation to the workpiece and clamps it. This technology ensures that the components remain exactly in position, guaranteeing all-round processing without tolerances.

#### 3. Reclamping process

The middle clamping element switches to the second workpiece and clamps it.

#### 4. Release

Finally, the rear clamp releases the workpiece and moves to the park position. The opposite side can now be edited.

![](_page_35_Figure_12.jpeg)

![](_page_36_Picture_1.jpeg)

![](_page_36_Picture_2.jpeg)

# **CONTINUOUS STOP BAR**

Laterally in X direction

Both processing areas (A and D) are equipped with continuous stop bars on the side of the X-axis as standard.

Especially when machining frames and bars, the continuous stop rail offers great added value when placing several workpieces.

The stops are delivered pneumatically as required. The fence is lowered to a safe position for machining.

![](_page_36_Picture_8.jpeg)

![](_page_36_Picture_9.jpeg)

![](_page_37_Picture_1.jpeg)

# TWO-STAGE FEEDING AIDS

### Comfortable and ergonomic

In order to position heavy and large workpieces efficiently and easily, two-stage pneumatic feeding aids are mounted on each console.

#### Position above:

The workpiece can be easily pushed over the clamping system.

#### Position middle:

The workpiece is on the same level as the clamping device and can be easily brought up to the stop pins.

#### Position below:

The feeding aid is completely lowered. The machine is in working or rest mode.

![](_page_37_Picture_11.jpeg)

![](_page_37_Picture_12.jpeg)

![](_page_37_Picture_13.jpeg)

![](_page_37_Picture_14.jpeg)

![](_page_38_Picture_1.jpeg)

![](_page_38_Picture_2.jpeg)

![](_page_38_Picture_3.jpeg)

Plenty of space for your toolsdifferent solutions for every area of application

The EPICON can be equipped with a variety of automatic tool change options for a wide range of applications. A quick tool change is crucial for the economical production of window profiles.

The traveling 18- or 24-position plate changers impress with a short chip-to-chip time for all tool changes. Or you can additionally opt for a travelling changer for saw blades up to 350 mm in diameter. You get even more tool positions with the lateral 14-cavity or 24-cavity tool changer. For tool-intensive applications, such as in window construction, the equipment can be supplemented with an additional shuttle changer with up to 60 tool positions.

![](_page_38_Picture_7.jpeg)

![](_page_38_Picture_8.jpeg)

![](_page_39_Picture_1.jpeg)

# **18-FOLD PLATE CHANGER**

Mounted as standard with plenty of space for your tooling

- Automatic traveling 18-place carousel tool changer
- Short chip-to-chip time

- When fully occupied Ø 80 mm
- When leaving secondary places free tools up to Ø 250 mm saw blades up to Ø 300 mm
- Max. Tool length incl. HSK holder: 250 mm
- Maximum tool weight: 5 kg

![](_page_40_Picture_1.jpeg)

# 24 COMPARTMENT PLATE CHANGER

Plenty of space for all tooling

 Automatically moving 24-position plate changer, instead of standard 18-position tool changer

and/or

- Additional second 24-place plate changer, as a fixed installation on the right-hand side of the machine
- Short chip-to-chip time

- When fully occupied Ø 80 mm
- When leaving secondary places free tools up to Ø 250 mm saw blades up to Ø 300 mm
- Max. Tool length incl. HSK holder: 250 mm

![](_page_40_Picture_12.jpeg)

![](_page_40_Picture_13.jpeg)

![](_page_41_Picture_1.jpeg)

![](_page_41_Picture_2.jpeg)

![](_page_41_Figure_3.jpeg)

# 14-FOLD LINEAR PICK-UP CHANGER

Linear Changer for Extensive Tooling

- Fixed installation right side of machine
- Even more space for your tools

- Place 1 6: Ø 110 mm
- Place 7 14: Ø 100 mm
- Maximum tool weight: 5 kg

![](_page_42_Picture_1.jpeg)

# •

# 24 COMPARTMENT PLATE CHANGER

Plenty of space for all tooling

Fixed installation - right side of machine

- When fully occupied Ø 80 mm
- When leaving secondary places free tools up to Ø 250 mm saw blades up to Ø 300 mm
- Max. Tool length incl. HSK holder: 250 mm
- Maximum tool weight: 5 kg

![](_page_43_Picture_1.jpeg)

![](_page_43_Picture_2.jpeg)

# **1-FOLD SAW BLADE CHANGER**

Especially for large saw blade diameters up to 350 mm

- Traveling saw pick-up changer
- Ideal for compound cuts and miters

- 📕 Ø 350 mm
- Maximum tool weight: 6 kg
- Minimum length HSK tool holder = 55 mm

![](_page_44_Picture_1.jpeg)

# AGGREGATE PICK-UP CHANGER

For Large/Heavy Alternating Aggregates that Otherwise have No Space

Even with a 5-axis CNC, changing units are needed for different applications. With the additional pick-up changer you also have a defined place for these units.

Available with one or two positions

![](_page_45_Picture_1.jpeg)

![](_page_45_Picture_2.jpeg)

# 40-/ 50-/ 60-FOLD SHUTTLE CHANGER

For Tool-Intensive Applications

- Automatically travelling in X-direction
- Pre-positioning
- Transfer to travelling disc changer
- Adaptation to different tool diameters through free positioning of the collet positions
- Expandable as 40-/ 50-/ 60-fold changer

![](_page_46_Picture_1.jpeg)

# EFFICIENT VACUUM TECHNOLOGY

Extremely high performance, efficient vacuum pumps ensure workpiece is held securely. These low maintenance, dry-running pumps are also distinguished by their low noise emissions and extremely low maintenance requirements.

When using several vacuum pumps, the intelligent vacuum control ECO VAC controls the required vacuum output based on the software and thus saves you valuable energy.

![](_page_46_Picture_5.jpeg)

![](_page_46_Picture_6.jpeg)

![](_page_47_Picture_1.jpeg)

# ROTARY VANE PUMPS DRY RUNNING

Highest Working Strength and Extremely Long Service Life

- Excellent efficiency
- Low energy consumption

![](_page_47_Picture_6.jpeg)

250 m³/h

![](_page_47_Picture_8.jpeg)

![](_page_47_Picture_9.jpeg)

![](_page_48_Picture_1.jpeg)

# **CLAW PUMPS DRY RUNNING**

Ideal for High Altitude Regions

- Very high efficiency
- Low noise
- Low maintenance due to wear-free claw technology

#### 275 m³/h

![](_page_48_Picture_8.jpeg)

![](_page_48_Picture_9.jpeg)

![](_page_49_Picture_1.jpeg)

![](_page_49_Picture_2.jpeg)

# LATERAL SAFETY SLATS

Pneumatically raised and lowered

Maximum process reliability thanks to pneumatically adjustable safety curtains on the side of the hood.

When inserting and reclamping the workpieces, the protective hood is raised so that the slat curtains cannot get caught under the frame clamps.

In addition, the operator has a better overview of the entire machine table. The protective curtain is automatically lowered for processing.

![](_page_49_Picture_8.jpeg)

![](_page_50_Picture_1.jpeg)

![](_page_50_Picture_2.jpeg)

![](_page_50_Picture_3.jpeg)

# VARIABLE SAFETY CONCEPTS

Safety combined with flexibility for the operator is the top priority. That's why at EPICON you have the freedom to choose between extremely robust multi-field safety mats, barrier-free light barriers or the contactless safety monitoring system Safe Detect.

![](_page_50_Picture_6.jpeg)

![](_page_51_Picture_1.jpeg)

![](_page_51_Picture_2.jpeg)

# **MULTI-FIELD SAFETY MATS**

The highly sensitive 3-field safety mat opens the door to a considerable increase in performance and great economic efficiency. This is because it allows workpiece removal and loading on one side while the workpiece continues to be machined on the other side of the machine table. The concept allows machining at maximum feed rate. In addition, the safety mat is completely maintenance-free and can be driven over with a forklift.

![](_page_51_Figure_5.jpeg)

![](_page_52_Picture_1.jpeg)

![](_page_52_Picture_2.jpeg)

# **LIGHT BARRIERS**

The standard light barriers in the front of the machine enable full feed speeds and unhindered access when loading the machine.

If the light curtain between the two elements is interrupted, the machine stops immediately. As soon as the operator has left the safety area, the program can be continued from the point at which it was previously stopped.

The loading area is fully integrated into the panel storage system and secured by safety fences. This ensures that the StoreMaster panel storage system can be loaded independently and fully automatically during flow-through operation.

![](_page_52_Figure_7.jpeg)

![](_page_53_Picture_1.jpeg)

# **SAFE DETECT**

State-of-the-art sensor technology offers safety and freedom of movement for the operator thanks to automatic person recognition with distance control. The optional SafeDetect technology makes the EPICON freely accessible.

Smooth and efficient pendulum operation is also ensured with maximum feed speed. For perfect all-round protection, both the space above the machine table and the environment in front of the machine are monitored. Accruing chips or dust do not pose a problem for the sensors.

Laser lines also show the operator the safety area of the moving machine bonnet. In addition, a modern safety fence protects access to the working area of the machining centre from the side and from the rear.

![](_page_53_Picture_6.jpeg)

 SAFE-ZONE ( > 1400 mm): Full feed rate of 70 m/min
 SLOW-ZONE ( < 1400 mm): Reduced feed rate of 30 m/min
 STOP-ZONE ( < 700 mm): Machine stop

![](_page_53_Picture_8.jpeg)

![](_page_53_Figure_9.jpeg)

![](_page_54_Picture_1.jpeg)

![](_page_54_Picture_3.jpeg)

### LASER POINTER For workpiece positioning

As an option to the ceiling laser, individual positions can be approached and marked with the laser pointer.

For example, workpiece zero points for positioning a round arch blank can be aligned using the laser.

![](_page_55_Picture_1.jpeg)

![](_page_55_Picture_2.jpeg)

# **CONTOUR LASER**

the comprehensive positioning solution

Contour lasers are the ideal addition for positioning and processing shaped parts such as arched windows.

Complicated shaped workpieces as well as round-arch blanks can be optimally positioned with the contour laser.

For this purpose, the complete workpiece contour is projected onto the component. The number of lines to be projected is not limited.

![](_page_55_Picture_8.jpeg)

![](_page_56_Picture_1.jpeg)

![](_page_56_Picture_2.jpeg)

# **CHIP CONVEYOR BELT**

A clean affair

As a lot of chips are produced during massive milling work, the machine bed has been optimized and the throughput height increased to 110 millimetres for the integrated conveyor belt. In addition, the conveyor belt is covered with a protective grid for sorting out larger pieces of waste.

The outlet can be either on the right or left.

With a chip catcher box at the outlet, any chips that arise are optimally caught and fed into the extraction system.

![](_page_56_Picture_8.jpeg)

![](_page_56_Picture_9.jpeg)

![](_page_57_Picture_1.jpeg)

![](_page_57_Picture_2.jpeg)

# FRAME CLAMPING SYSTEMS

Fully automatic clamping and reclamping system

Especially in the area of frame processing for window and door production, the clamping of block frames, strips and scantlings requires particularly safe and efficient handling.

With the VarioDrive machine table, the EPICON 7245 is ideally equipped for this.

![](_page_58_Picture_1.jpeg)

![](_page_58_Picture_2.jpeg)

![](_page_58_Picture_4.jpeg)

# and lock them mechanically.

**CLAMPING ELEMENTS** 

A bayonet lock is used to insert the clamping elements into the holder of the mounting slides

Tool-free conversion

To remove the clamping elements, they are pressurized with compressed air and can then be twisted and removed. There is also a separate small pressure line with coupling.

![](_page_59_Picture_1.jpeg)

# 45-130 mm

![](_page_59_Figure_3.jpeg)

![](_page_59_Picture_4.jpeg)

# FRAME CLAMP TYPE H

Double clamping system WS16

The technical design and an etched friction surface of the H-profile remove all degrees of freedom from the workpiece and ensure a secure hold even with small contact surfaces.

The automatically controlled frame clamps are versatile and have a very high clamping force. The alignment of the collet opening is defined in the X direction so that both sides can be clamped simultaneously or a profile can be reclamped.

The pneumatic clamping cylinders were adapted to the requirements of frame and bar processing. In addition, the clamping device is equipped with blow nozzles. After machining, chips are removed with compressed air.

#### Frame clamp dimensions:

- Clamping range: 45 130 mm
- Clamping depth: 56 mm
- Underride height: 146 mm

![](_page_60_Picture_1.jpeg)

![](_page_60_Picture_2.jpeg)

![](_page_60_Figure_3.jpeg)

![](_page_60_Picture_4.jpeg)

# CLAMPING LID TYPE-0

#### Ideal for round arches

Curved and bent molded parts are the premier class of milling and require special attention during machining.

Arched windows and bar profiles can be held down particularly well with the Type-O clamping cover.

An eccentric holder makes it possible to adapt the clamping plate to both the curved surface and the milling path.

The clamping plate can be mounted on the base body of the frame clamps.

Note: For the exact positioning of molded parts, arches, handrails, etc., a contour laser for zero point alignment is essential.

![](_page_61_Picture_1.jpeg)

# ROUND ARCH PROCESSING WITH GLAZING BEAD

Processing example

First, the blank is positioned in the collets according to the workpiece contour. To simplify matters, the use of a ceiling contour laser is highly recommended.

In the first processing step, the inside of the arch element can be formatted and profiled. The glazing bead is cut out using an end mill. A thin bar holds the slim profile to the frame.

The bar can be removed by the machine operator without tools as an intermediate step.

In the following processing, both front sides are cut to length and corner and dowel connections are completed. The automatic reclamping process of the VarioDrive allows the opposite side to be processed.

![](_page_61_Picture_8.jpeg)

![](_page_61_Picture_9.jpeg)

![](_page_61_Picture_10.jpeg)

![](_page_62_Picture_1.jpeg)

![](_page_62_Picture_2.jpeg)

![](_page_62_Picture_3.jpeg)

![](_page_62_Picture_4.jpeg)

# NARROW PARTS POSITIONING AID

For short workpieces

With this device, short workpieces that cannot be held by two frame clamps can be positioned and clamped on just one collet.

The positioning aid offers an adjustable twopoint stop for short workpieces, which is aligned parallel to the X-axis. This can be precisely adjusted using a Siko counter.

For loading, the console with the clamping device is positioned in the outer area of a processing field. The workpiece can be positioned to the zero point on the continuous stop bar.

![](_page_63_Picture_1.jpeg)

# VACUUM CUPS

Flexible Rotatable

The VarioDrive machine table can be equipped with various vacuum cups. The suction cups are simply pushed on, the special shape of the fitting ring ensures that the suction cups sit firmly and are held securely by the vacuum.

The suction cups can be inserted into the holder in a grid of 15°, which ensures a high degree of flexibility for molded parts or cut-outs.

All vacuum cups are equipped with a push-button valve for activation. Suction cups that are not required can therefore remain on the machine table without any loss of vacuum.

Variants:

(L. | B. | H. –without carriage)

- Vacuum cup 140 x 130 x 74 mm
- Vacuum cup 125 x 75 x 74 mm
- Vacuum cup 120 x 50 x 74 mm
- Vacuum cup 130 x 30 x 74 mm

![](_page_63_Picture_13.jpeg)

![](_page_63_Picture_14.jpeg)

![](_page_63_Picture_15.jpeg)

![](_page_63_Picture_16.jpeg)

![](_page_63_Picture_17.jpeg)

![](_page_64_Picture_1.jpeg)

# INTELLIGENT SOLID WOOD PROCESSING

Flexible Rotatable

The EPICON series offer almost unlimited possibilities in machining. Built for heavy-duty use, the solid and well thought-out design has a modern and application-oriented industrial design.

The VarioDrive console table of the CNC machining center is ideally prepared for processing long components for stairs, front doors, conservatories, handrails, etc. thanks to the extreme processing lengths in the X direction. Even large, heavy door elements can be processed highly efficiently and effortlessly in pendulum mode.

![](_page_64_Picture_6.jpeg)

![](_page_65_Picture_1.jpeg)

![](_page_65_Picture_3.jpeg)

![](_page_65_Picture_4.jpeg)

# INNOVATIVE EXCHANGE UNITS

Your head start for high product quality

A wide range of interchangeable units for various applications are available for all machines of the EPICON series. These range from conventional multi-spindle machines, lock case and tracing units to special applications such as hollow chisels and cutting units for processing foams, brushing units and much more.

In addition, ball probes ensure precise measurement of the workpiece length, workpiece depth and material thickness, including position correction of the workpiece in the processing program.

#### EPICON 7245 // Angular swivel gearbox

![](_page_66_Picture_1.jpeg)

![](_page_66_Picture_2.jpeg)

![](_page_66_Figure_3.jpeg)

120 130 140 150 160 170 180

- 11

![](_page_66_Figure_4.jpeg)

## 32 MM ↔

# ANGULAR SWIVEL GEAR 7853 3+1

Economical drilling

The angle gear allows corner bearing holes and dowel connections to be produced economically.

The drilling gear is picked up via the HSK mount of the 5-axis spindle and can be rotated 360° via the C-axis. Thus, every reference angle is covered.

The gearbox is available in two versions: Both are equipped with three drills in a row and a single drill on the opposite side.

#### Variants

- Drill hole spacing 22 mm
- Drill hole spacing 32 mm