

5 axes for maximum flexibility

PRO-MASTER 7225



PRODUCTIVITY AND PRECISION



The power package in the 5-axis class

Our new PRO-MASTER 7225 opens up a completely new dimension in our production line for craft shops and industry for machining wood and plastics. The heart is the compact, articulated 5-axis head, allowing completely free motion. Drives and control equipment for each state-of-the-art generation ensure use in nearly unlimited applications. The HOLZ-HER module system allows custom adaptation of the machine to specific shop requirements.

Superior efficiency and perfection

Investments in modern 5-axis equipment pay off. Because this is the only way to efficiently produce complex curved and vaulted parts such as stair railings and special furniture. The time savings in comparison to manual production is 90% and higher.



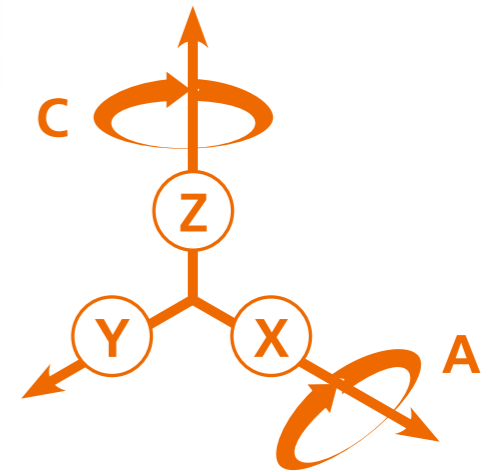
The rigidity of the moving stand on the PRO-MASTER 7225 has been optimised using the "Finite Element Method" and is therefore laid out for above average loads such as the values experienced during extreme acceleration.

Illustrations may contain optional features.

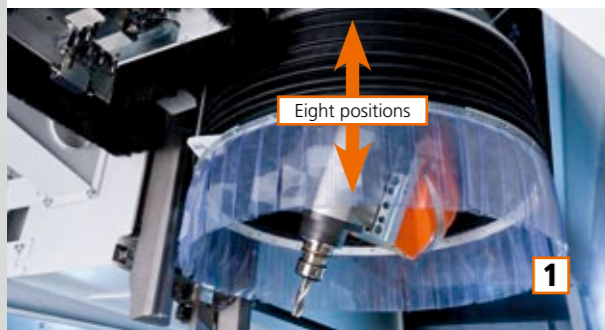
Production in the 5th dimension

The heart is the machining head; with its freely moving axes it can machine curved parts in all dimensions. The powerful 5-axis machine is also perfect for panel-shaped workpieces – particularly the economy aspect is interesting here.

- 5-axis head, A and C-axes interpolating, pivoting.
A-axis: +/- 180°, C-axis +/- 320°.
- Powerful: 10 kW jointing cutter unit.
- Fast and flexible: Infinitely adjustable speed from 1000 to 24 000 RPM, HSK 63 F tool holder.
- 5-axis head, liquid cooled for maximum service life even under heavy loads.
- Long service life: Solid design with ceramic bearings on both sides for high load-bearing capacity.
- Z-stroke 565 mm, workpiece height 300 mm.
- Optional 17-kW motor for heavy work with solid wood.
Infinitely adjustable speed from 1000 to 24 000 RPM
PRO-TORQUE LOCK: Locks quickly in any position for A and C-axis, maximum rigidity for cutting under high loads with perfect results.



5 – AXIS HEAD



Flexible evacuation –

on 5-axis head, with eight programmable positions for positioning hood perfectly to workpiece height. This guarantees optimum chip evacuation [Fig. 1].



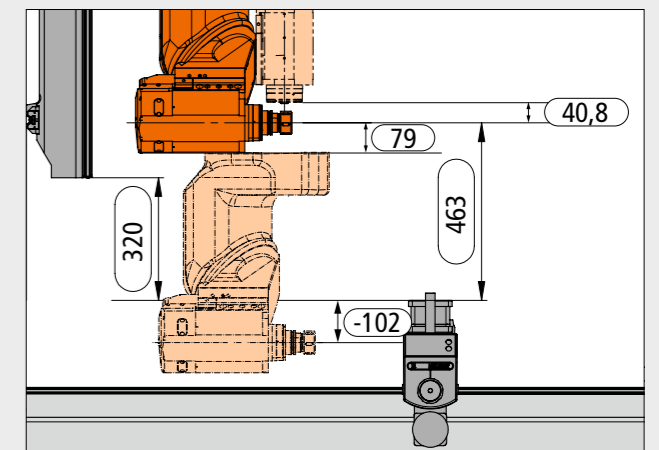
High performance chip conveyor (optional) –

for removing large quantities of chips when machining solid wood. Keeps workplace around CNC machine clean [Fig. 2].

Compact design and cardanic movement, i. e. in all directions. For optimum implementation of custom designs.

Complex 5-axis applications possible –

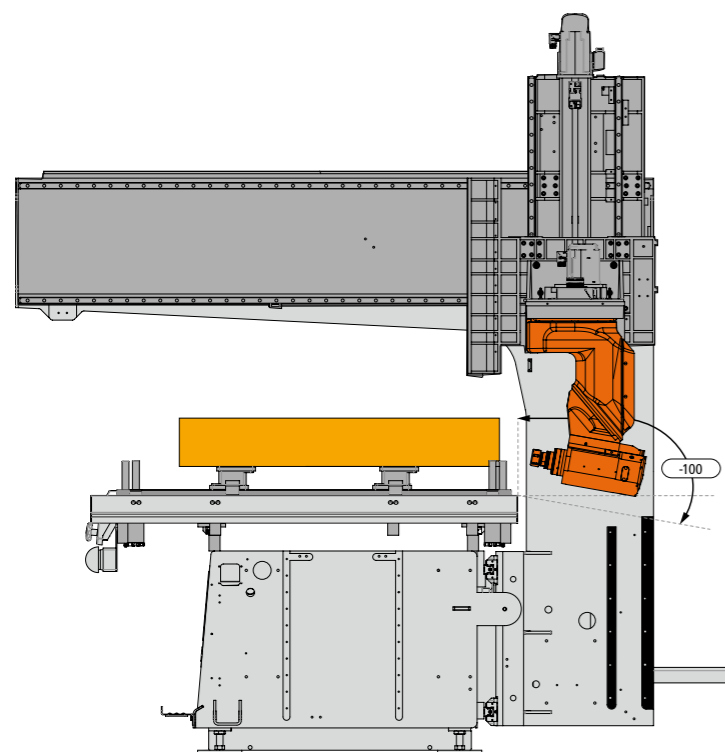
565 mm Z stroke and 300 mm workpiece height.



Extremely rigid and hardened linear guides: Precision guaranteed



The base frame for the console machine and the one-armed stand – both designed as welded structures – guarantee superior stability. Together with the ground and hardened prismatic guides this provides the basis for precision work. The rack-and-pinion drive has helical gearing in the X and Y directions, guaranteeing maximum precision at high acceleration rates and speeds.



- Solid consoles with single circuit vacuum system, six easy moving cross members – can be clamped pneumatically in X direction [Fig. 1]. Measuring tape in X direction for quick console positioning. Additional consoles available as options.
- Individually switchable vacuum zones to prevent vacuum losses.
- High performance vacuum pumps – 100 m³/h. Optional: Vacuum pumps with capacities of 140 m³/h and 250 m³/h.
- Energy efficient vacuum pump control with automatic switch-off.
- Moving stops, eccentric in hardened guide bushings. Stops can be lowered pneumatically.
- Central lubrication minimizes maintenance work and ensures long component life.
- Automatic central lubrication (optional).
- Hand-held control unit for remote control of machine.

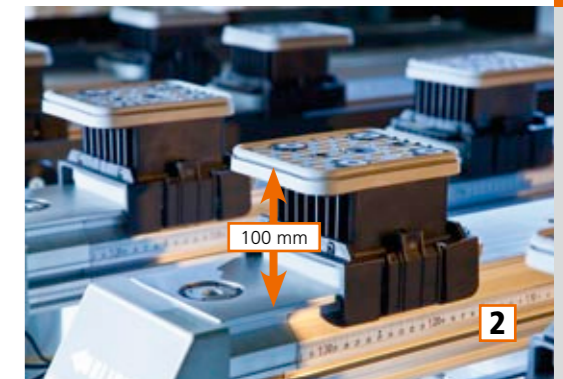
Optimum arrangement of 5-axis cutting spindle and 100° motion –

for complete utilization of cutting paths – allows machining from below – without touching consoles.

Illustrations may contain optional features.

Coordinated performance profile

- Addition machining fields for high capacity [Fig. 1].
- 100 millimetre high suction unit provides 5-axis head sufficient clearance from below. Measuring tape for quickly and simply positioning suction unit in Y direction [Fig. 2].
- Four pneumatically operated charging aids can be raised and lowered to position heavy work easily [Fig. 3]. Additional charging aids available as options.
- Large selection of frame clamping systems [Fig. 4].
- Laser pointer for exact positioning of vacuum suction pads or tracing workpiece contour, attached on right and left sides of machining head (optional) [Fig. 5].
- Contour laser – projects entire work contours and all required vacuum suction pads simultaneously as well as all console positions without limitation for number of lines to be projected (optional).
- Two large push buttons for clamping [Fig. 6].
- Side consoles for storing vacuum suction pads when not in use.
- Nesting table with grid (optional) [Fig. 7].



Top Performance: Control

The HOLZ-HER machine control system is an integral part of the machine's design. The equipment includes the CAMPUS package (office and machine licence) with integrated CabinetControl software. This package provides all prerequisites for effective machining and convenient operation, such as barcode interface, hand-held control and import capabilities. The open software architecture allows simple linkage to third-party software for transferring models to the 5-axis machining centre.

CAMPUS – with integrated CabinetControl software

- **CAMPUS aCADEmy** [Fig. 1] is a fully fledged, high-performance CAD/CAM software package with versatile import features.
- In addition to variable programming, 3D views and simulations, the **CAMPUS NC-Hops-Editor** [Fig. 2] offers full Z-axis interpolation and a text editor. – “Easy snaps”, adjustable parameters and well-conceived macros additionally simplify and speed up program control.
- The **CAMPUS WorkCenter** shows the occupancy of the machine table. Tools, drilling heads and routes are automatically optimised over the workpiece as a whole and the machining times are calculated [Fig. 3].
- The **CAMPUS MT-Tool-Manager** allows clear, graphic set-up using »Drag & Drop« [Fig. 4].
- Open software architecture allows uncomplicated incorporation of existing data and connection to a wide range of branch, design and CAD/CAM software [Fig. 6].



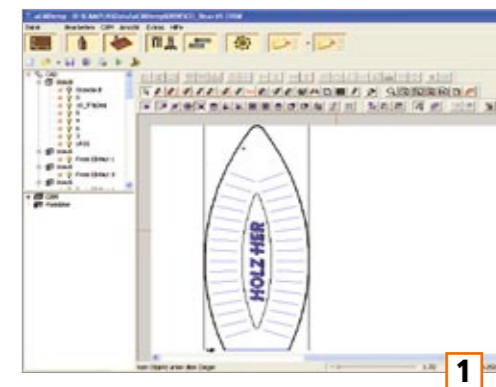
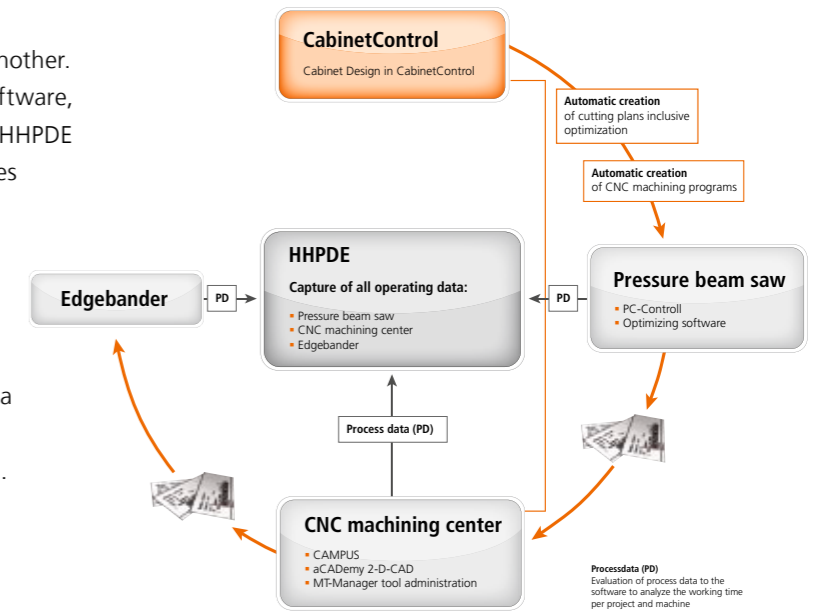
Large 17" or 19" monitor (optional) for simple operation.

HPHDE – network-compatible software for all HOLZ-HER machines

All HOLZ-HER machines can be linked with one another. Digital workflow between the CabinetControl software, saws, edgebanders, CNC machining centres and HHPDE software (HOLZ-HER process data capture) ensures efficient production. HHPDE offers the following features:

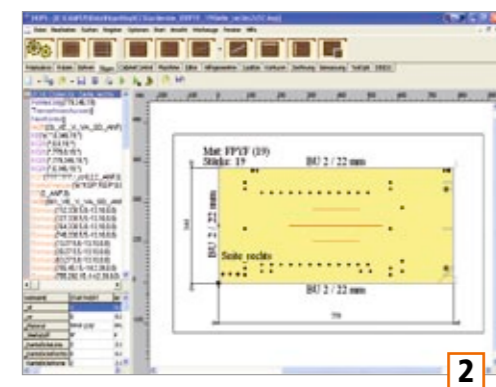
- Capture of all operating data
- Time and cost planning for jobs
- Exact evaluation of job-related production data

HHPDE provides the basis for efficient calculation.



CabinetControl software for simple furniture design [Fig. 5]

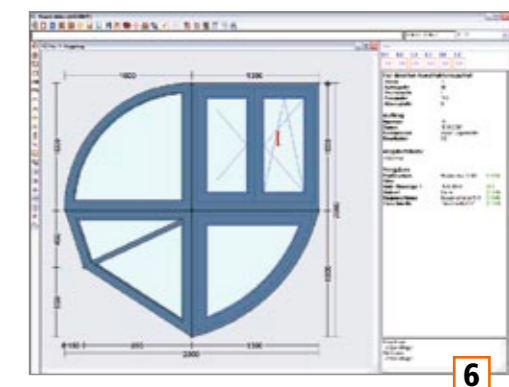
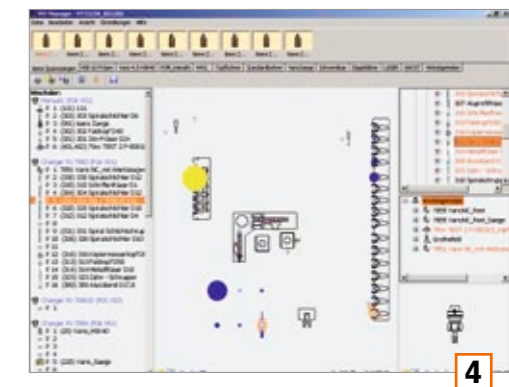
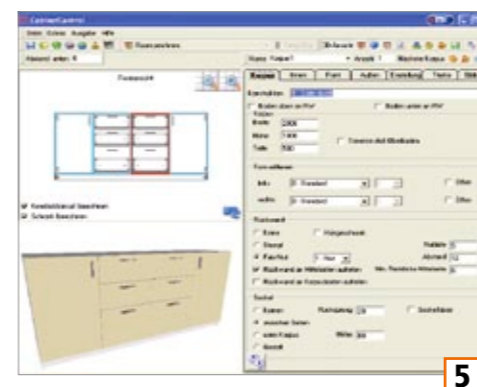
- Design of carcass furniture.
- 2-D or 3-D views.
- Quick adaptation to tailor-made desires of furniture buyer.
- Perfect presentation of furniture.
- Automatic generation of cutting plans.
- Automatically creates CNC machining program at the touch of a button.

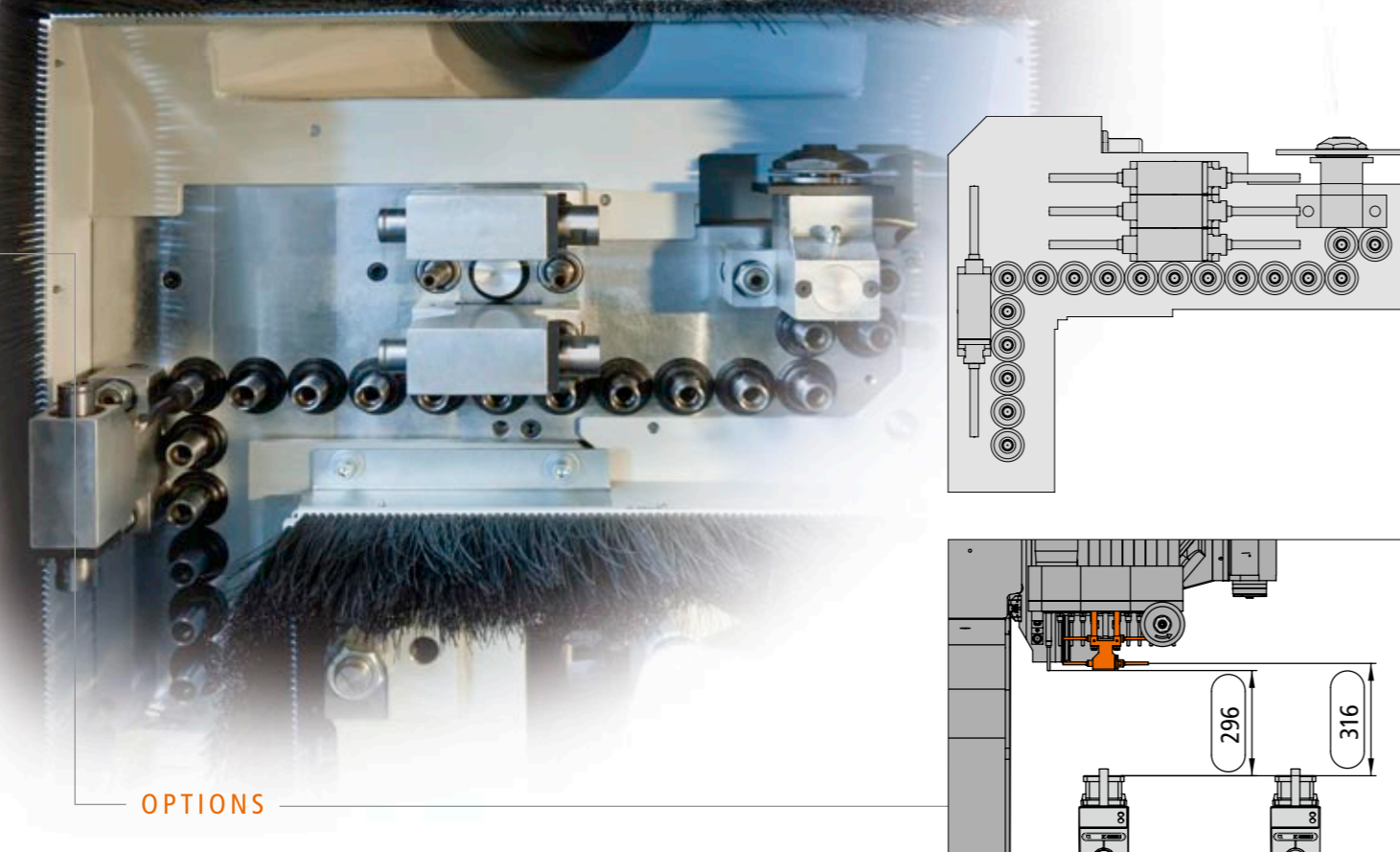


CAMPUS 5-axis module for simultaneous cutting

This supplement module for NC-HOPS supports interpolating 5-axis machining in many applications, for example:

- 5-axis simultaneous cutting.
- Support of 5-axis interpolation with top and bottom guide curves (simultaneous machining).
- Two contours on defined layers are interpreted as 5-axis machining.

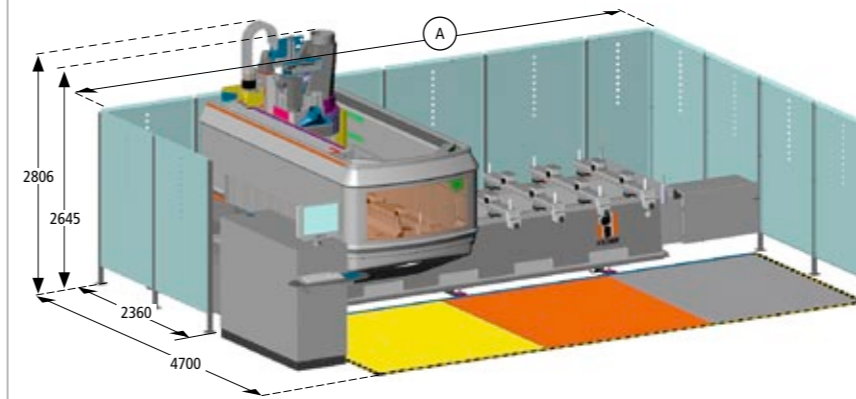




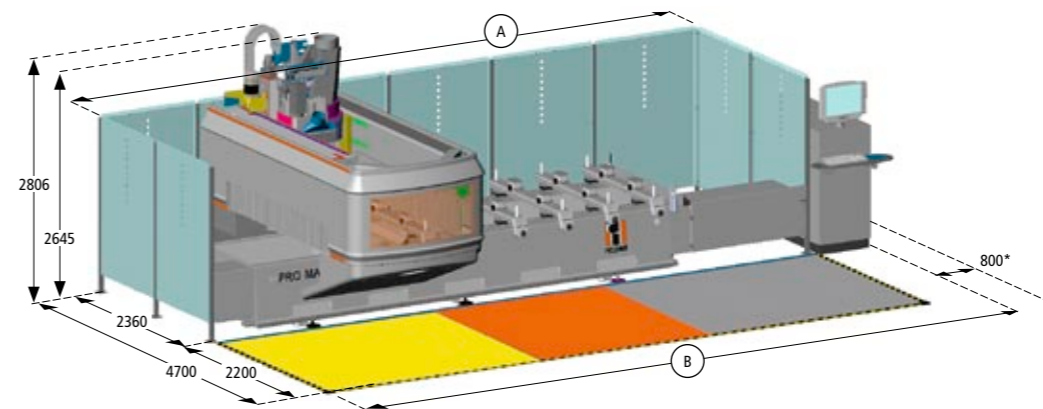
OPTIONS

DIMENSIONS

Switch cabinet on left-hand side of machine



Switch cabinet on right-hand side of machine



Pendular machining for safety and efficiency

The 3-field safety foot mat opens the door to a considerable increase in efficiency and a high level of profitability. The reason for this is that workpieces can be removed and loaded on one side while the machining centre continues to machine the work on the other side of the machine table. The safety foot mat even withstands driving over with a fork lift (manufacturer's patent).

A selective foot mat divided up into 5 fields is available as an option.

Multifunctional for everyday use

- The PRO-MASTER 7225 is perfectly equipped with the optional integrated drilling head.
- Drilling unit 7881 with 18 vertical spindles (X = 11 + 2 / Y = 6), six horizontal spindles (two double drilling spindles in X direction / one in Y direction).
- Can be upgraded with grooving saw and third, double drilling spindle in X direction.
- Optimum arrangement of 5-axis cutting spindle and optional drilling head allow the entire cutting path to be grooved in all applications.
- Holes can be drilled in a row in the X direction up to 1,140 mm from the front row of stops.
- Optional pressure booster for even more drilling unit power.

Switch cabinet on left-hand side of machine

All dimensions in mm	A
PRO-MASTER 315 K	6712
PRO-MASTER 405 K	7612
PRO-MASTER 495 K	8512
PRO-MASTER 585 K	9412
PRO-MASTER 675 K	10.312

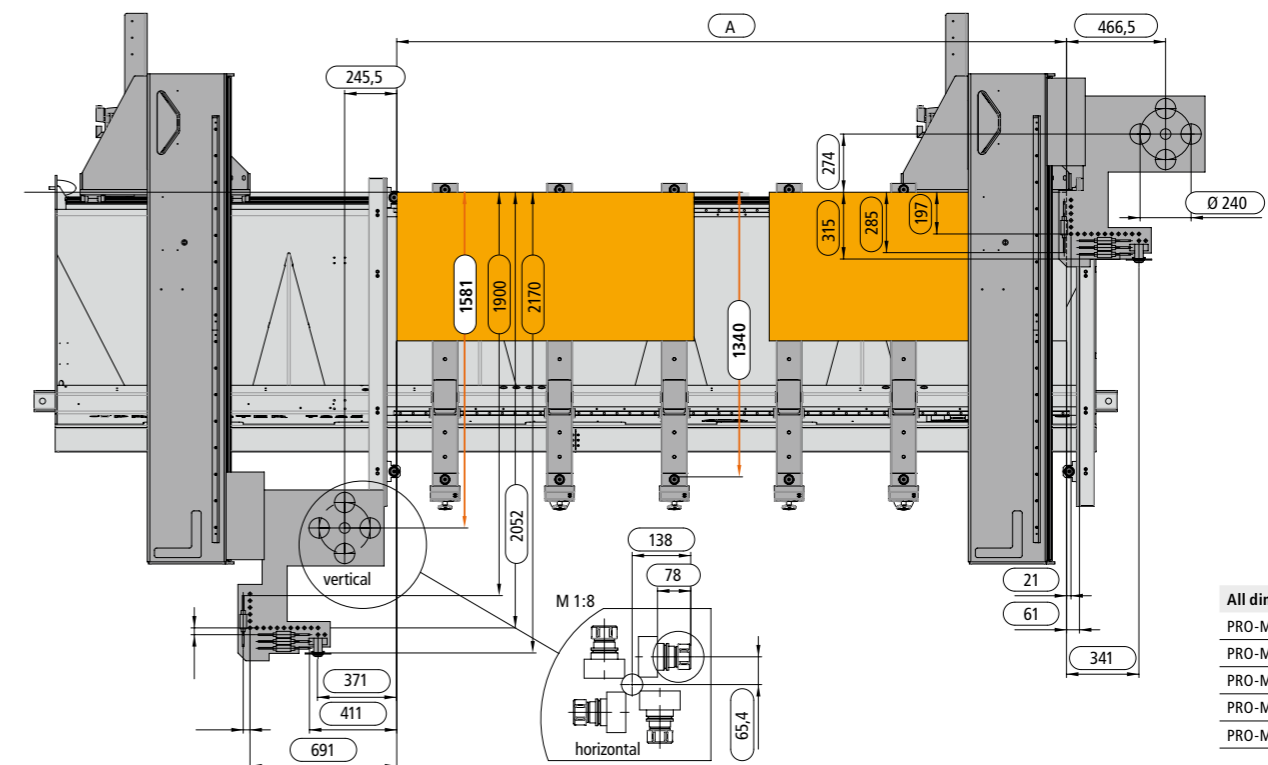
Switch cabinet on right-hand side of machine

All dimensions in mm	A	B
PRO-MASTER 315 K	7138	7720
PRO-MASTER 405 K	8038	8620
PRO-MASTER 495 K	8938	9520
PRO-MASTER 585 K	9838	10.420
PRO-MASTER 675 K	10.738	11.320

■ = Footmat active
 ■ = Footmat always active
 * = Door opened

Three tool changers

- The pick-up tool changer with double magazine is available for large mitre gears and long tools. It is installed on the left in the machine frame and is raised pneumatically (optional).
- Variable equipment for rational machining. The tool changer with 6, 8, 12 or 18 tool spaces moves along in the X direction automatically, ensuring short set-up times and high productivity (optional).
- 16-fold pick-up unit for permanent installation on right side of machine (optional).



All dimensions in mm	A
PRO-MASTER 315 K	3155
PRO-MASTER 405 K	4055
PRO-MASTER 495 K	4955
PRO-MASTER 585 K	5855
PRO-MASTER 675 K	6755

Product brochures and many
videos are available at
www.holzher.com

Technical data

	PRO-MASTER 7225
Drives, basic machine	
Motor output, 5-axis head, cardanic (kW) (S6)	10
Motor output, 5-axis head, cardanic (optional) (kW) (S6)	17
Rotary speed, 5-axis head, cardanic (infinite control)(RPM)	1000 – 24000
Max. displacement speed X-axis (m/min)	100
Max. displacement speed Y-axis (m/min)	100
Max. displacement speed Z-axis (m/min)	25
Max. vector speed (m/min)	142
Drilling unit model 7881 (optional)	
Total number of drilling spindles	24 (optional + 2)
Number of bits in X direction, vertical	11 + 2
Number of bits in Y direction, vertical	6
Number of horizontal spindles	6 (optional + 2)
Grid interval (mm)	32
Rotary speed (rpm)	1000 – 5710
Power (kW)	3
Grooving saw (optional)	
Diameter (mm)	125
Electronic connection values	
Connection voltage (Volts)	3 x 400
Mains frequency (Hz)	50/60
Power (depending on equipment) (kW)	22
Compressed air	
Operating pressure (bars)	6
Permissible limit pressure (bars)	8
Compressed air requirement (l/min)	300
Dust extraction	
Dust extraction rate (m ³ /h)	5300
Static vacuum (Pa)	2500 – 3000
Dust extraction rate at connector (m/sec)	30
Machining head connector dia. (mm)	250
Drilling unit connector dia. (mm)	140
Vacuum pumps	
Vacuum pump (m ³ /h)	100
Vacuum pump (optional) (m ³ /h)	140
Vacuum pump (optional) (m ³ /h)	250

The technical data specified is intended for reference only. HOLZ-HER woodworking machines are subject to constant development and are therefore subject to modification without prior notice. The illustrations are therefore not binding. Some of the machines shown also contain special equipment not included as a standard feature. For clarity, some of the machines are shown without protective hood.

UK – HOLZ-HER 3092 30 – Printed in Germany/Imprimé en Allemagne
Printed on: 23.05.2011 – First Edition: 23.05.2011

Your authorised HOLZ-HER Dealer



HOLZ-HER GmbH
D-72622 Nürtingen

Tel.: +49 (0) 7022 702-0
Fax: +49 (0) 7022 702-101
www.holzher.com