



Innovation in timber engineering

Joinery Machine K2i

The high-performance machine for all timber construction companies

www.hundegger.de

 **Hundegger**



The pinnacle of timber processing

Processing timber without measurement, without marking, without setup times: The K2i is the basis machine for all timber construction companies – from carpentry joinery to log house construction. The K2i can also transport and process rounder timbers, log house profiles, T-profiles or multiple layers without retooling.

Its strengths:

- Maximum productivity
- Wide variety of different processing possibilities
- Maximum precision

For cross-sections from 20 x 50 mm to
300 x 450 mm / 650 mm / 1250 mm



Maximum flexibility with the modular system

Whether a one-man company or an industrial enterprise:
The use of a K2i does not depend on the size of the company.
It is not without reason that the K2i is the world's best-selling
joinery machine – after all, it combines maximum throughput
with proven flexibility.

Every machine is precisely adapted to the individual needs
of the customer – from a simple joinery machine to a fully
equipped production line. You want to keep your options
open? The modular design means that the standard
machine can be extended at any time and equipped
with additional units.



Cost-effective in series production and one-off production



Secure your competitiveness

The fully automatic systems from Hundegger with their high precision and performance will increase the profitability of your timber construction company. The high-performance machine K2i is the most efficient and most comprehensive solution for solid wood processing and for construction timber and glulam timber joinery.

Suitable for all applications

The K2i is suitable for processing operations of all types: from conservatories with small cross-sections to laminated girders and laminated timber elements measuring 300 x 1250 mm.

Processing timber quickly and gently

- Loading cross conveyor with broad flat slatband chains
- Rubberised infeed grippers
- Highly precise slide and roller conveyor
- Clamping and guide wagon
- Discharge table with plastic slide rails

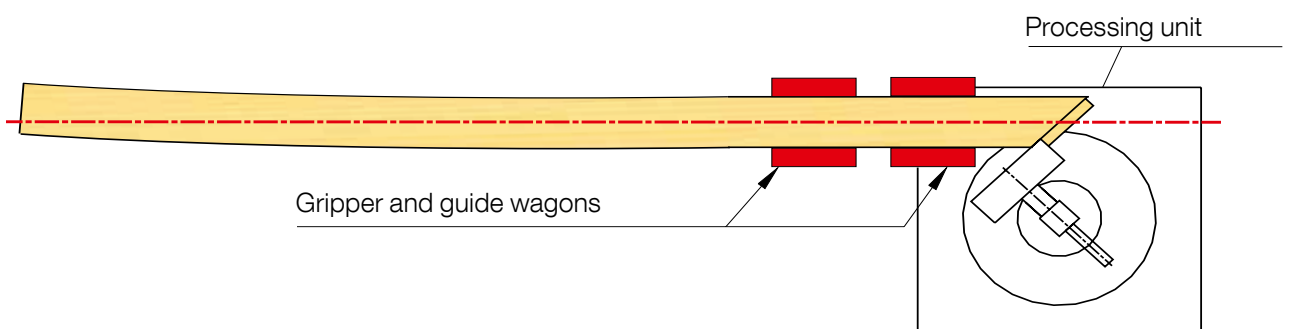




The HUNDEGGER system – unrivalled accuracy

A revolutionary handling system with two gripper and guide wagons guarantees maximum precision during processing – even with warped and twisted beams.

The timber is fixed directly to the machine. As a result, warping and twisting has no effect whatsoever on processing accuracy.



K2i – the all-round talent for every application



All drilling patterns:
horizontal and vertical



End-face drilling



Oblique mortises



Heart and
hip rafter birdsmouths



Rafter heads



Stair stringers



Channelling or hip ridge
cuts without rest wood



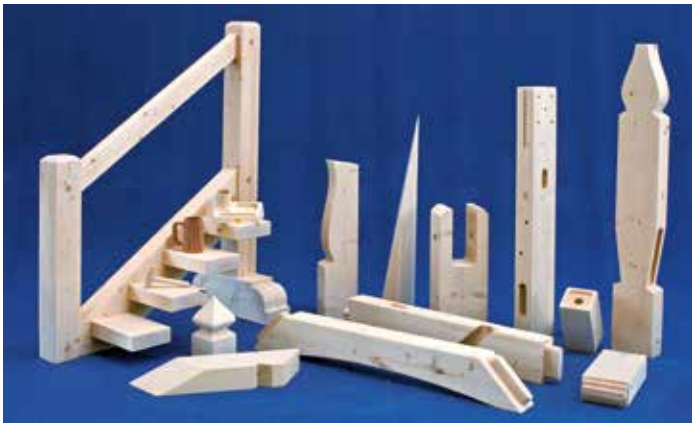
Dovetail joints on jack rafter



End-face drilling



Concealed slots



Cost-effective in carpentry joinery

Even the basis machine can produce most of the parts that are required in carpentry joinery. If more advanced tasks are to be performed, the K2i can be freely equipped with additional units and extended as required at any time.



... in timber frame construction

The K2i can perform all cutting and milling operations required in timber frame construction in the shortest possible time – even special operations such as dovetail milling to allow elements to be assembled more easily.



Longitudinal, angle, compound cuts

... in half-timber house construction

Efficiently mastering all processing types in half-timber house construction – special units enormously improve the throughput time per part.



All tenon types



Tenon with chamfer



Blocking grooves



Milling from above



Double milling



Round arch



Stepped tenon



Tenon



Developed for log house construction

The K2i will give your log house production the decisive boost!

Log house unit

With two vertical and two horizontal milling units for quadruple rabbeting of log house planks. Available up to 4 x 22 kW, depending on the version.

One unit with many possibilities: Performing two opposing milling operations at the same time – or allowing the four milling units to operate independently of each other, set to the desired milling depth. This also allows rabbeting to be performed on one, two or three sides. The stroke is effected hydraulically.

Hundegger manufactures the profile milling cutters for the log house unit according to the specific needs of the customer.





Perfect for glulam joinery

With a processing width of 1250 mm, this is a highly productive solution for joining laminated girders and laminated timber panels. Equipped with specially developed units, e.g. a vertical or horizontal turret mill, a horizontal saw, an angled deep-hole drill unit or special slot cutters, this machine is ideal for meeting the demands of constructional timberwork.



Automatic infeed system also for glulam panels



360° pivoting deep-hole drill unit up to 1250 mm



Processing on both sides



Saw cut



Recessing



Window cut-out



Conical parts



Horizontal slots



Turret mill



Guided slot cutter



Undertable pivoting saw

The standard variant of the K2i is equipped with a high-performance saw, a universal mill and drill units. A wide variety of units and accessories can be added to the machine as required and at any time.

Jack rafter cuts, hex cuts, regenerative cuts or diagonal cuts: This saw unit performs all types of saw cuts fully automatically and with millimetre precision – at any angle, at any inclination and in all lengths. Even channelling, hip ridge cuts and grooves in any length are possible as well as blocking grooves in any width and at any angle.

Limitless variety thanks
to modular system



Universal mill with 4 or 5 axes

4-axis universal mill

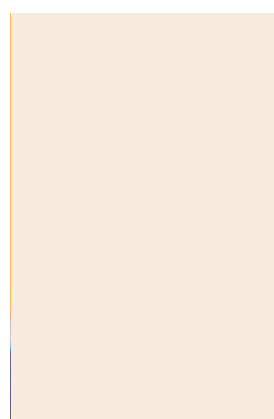
Three different tools can be mounted on this universal mill at the same time. A cylindrical mill, an end mill and a dovetail mill are available for milling tenons and mortises, recesses, profiles, birdsmouths, dovetail joints, and so on.

5-axis universal mill

The 5-axis milling unit provides even more flexibility: With an additional inclination axis, this unit allows milling operations for rising birdsmouths and oblique drill holes as well as trimming and valley cuts without offcuts.

The advantages of the 5-axis mill are particularly noticeable in the case of complicated wood joints: For example, only this type of mill allows a conical dovetail tenon to be made on a jack rafter cost-effectively. The 5-axis mill can make dovetail joints at any angle and inclination.

Convenient feature: The speed of the unit adapts automatically to the tool being used.





You can't get more versatile than this: Full power with the 6-axis robot unit

The ROBOT unit with a power output of 12 kW and infinitely variable speed from 0 to 12000 rpm caters for every need. The magazine of the tool changer can hold 16 different tools with a length of up to 295 mm. In combination with HSK-63-F tool holders, the tool changer can change over saw blades, drill bits, end mills, plate cutters, dovetail mills, cylindrical mills and markers for labelling parts in seconds.

The tools are selected and managed in the Hundegger production program CAMBIUM. Depending on the type of processing to be performed, the machine automatically selects the appropriate tool from the magazine. Apart from the type, diameter, length and tool position in the magazine, the characteristic data of the milling and drilling tools also includes the optimal speed. The speed is called up automatically when the respective tool is used.





Combi-support for vertical tools

Mounting up to five milling and drill units to the vertical combi-support – apart from through holes, this unit also makes possible all types of blind

holes, countersinks or ring dowel milling. Using the end mill it is possible to process any kind of profile, even freely definable profiles.



End mill

Equipped with an end mill and a slot mill, this tool that operates from below can perform all milling tasks – mortises, drill holes, countersinks, ring dowels, profiles, etc.



Drill units

The drills are guided in a turret drill bushing directly under the part. A more powerful drive unit with hydropneumatic or hydraulic feed is available for larger drill diameters.



Special mill

With a plate cutter it is possible to make perfect longitudinal grooves – cleanly and quickly.

Special mills allow other geometries to be produced without problem.



Combi-support for horizontal tools

The horizontal support is used to mount two drill units, a slot cutter as well as a marker and an inkjet marking system.

Drill units

The support can be equipped with two different drill units. Here the drills are always guided in a turret drill bush directly on the part. A special deep-hole drill unit is available for drill holes up to 1250 mm.

Angled drill unit

The angled unit allows precise side drilling up to an angle of 45°.

Inkjet system

From labelling to barcodes – the parts are labelled automatically with the stored information.





Slot cutters

With slot chains in different widths it is possible to process parts on four sides; even concealed slots can be made. Available in various versions: for slots up to 1250 mm deep. The slot cutter can be mounted on the stop side or operator side, or even on both sides.

Guided slot cutter

During through slotting, the bar is fixed on the operator side fully automatically and the wood is moved continuously in longitudinal direction. This minimises the processing time. Even concealed slots are possible by means of the piercing function.

Marking and labelling systems

The marker is used to make diagonal marks and labels on the part – on the stop side or from underneath. Other marking devices are available for making marks on all sides of the part.

Units for special applications



Vertical turret mill

The unit with four tool holders enables processing on the end faces as well as from above or below. In combination with the vertical end mill, the workpiece can even be processed from two sides simultaneously.



Horizontal turret mill

This mill can be rotated through 360° and can hold up to four tools. For processing operations at the end faces and sides – oblique holes, special processing operations or recessing are also possible.



Top end mill

The end mill processes parts from above without them having to be rotated. Depending on the diameter and the length of the end mill being used, all operations such as recessing, mortises, drill holes, longitudinal milling or blocking grooves are possible.



Universal drill unit

The 3-axis, 360° pivoting unit allows through holes and blind holes to be made at any angle on both longitudinal sides and end faces up to a maximum depth of 1250 mm.



Vertical slot cutter

The vertically mounted slot cutter is mainly used in log house construction and in panel processing for window cut-outs. The unit can be pivoted automatically up to 180°.

Longitudinal and cross groove mill

The angled longitudinal and cross groove mill allows blocking and longitudinal grooves to be made efficiently at any angle.

Horizontal saw

The horizontal saw can process parts on four sides, on the sides or end faces. It cuts slots up to a depth of 350 mm cleanly and quickly.

Universal slot cutter

An angled unit for making side and end-face slots which has automatic chain lubrication and can be pivoted through 360°.



Impressive package to boost performance

Making and processing dowel elements

This additional unit transforms the K2i into a fully fledged stacking machine.

The slats required for the respective element width are placed individually on the cross conveyor, packetised automatically and fed to the drilling and dowel station.

There the drill holes stored in the control program are made and the wooden dowels in the magazine are inserted hydraulically.

The dowelled elements up to a width of 600 mm can now either be planed or transported further for finishing on the K2i.



Positioning



Transport



Dowel station





Convenient accessories for optimum workflow

Label printer

For labels with various, freely selectable details such as company name, part number, cut grade, etc. The data can also be imported from joinery and CAD programs.



Dimensional measurement

Automatic checking of the raw timber cross-section prior to processing allows processing operations to be precisely adapted to the part cross-section.

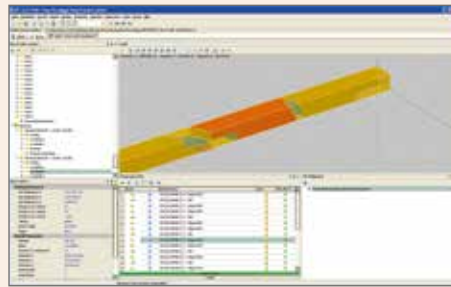


Rotating device

For processing operations on all six sides of the part. The part is permanently fixed in place by the device so that precise processing is guaranteed even with round timber parts.



The software that grows with the tasks you perform



One software package for all machines and for all tasks

The element that connects all Hundegger machines is CAMBIUM, the completely new software developed by Hundegger. With CAMBIUM, the entire production process from design, through job preparation, right up to the finished part is mapped using a single software package.

This makes interface problems a thing of the past and also completely eliminates the need for additional training as well as the high costs associated with the acquisition and maintenance of multiple systems.

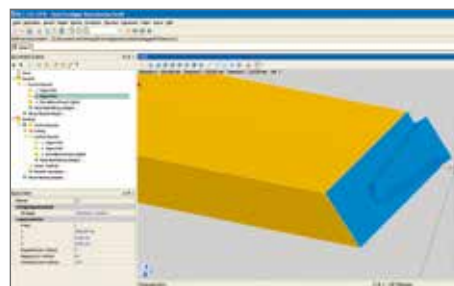
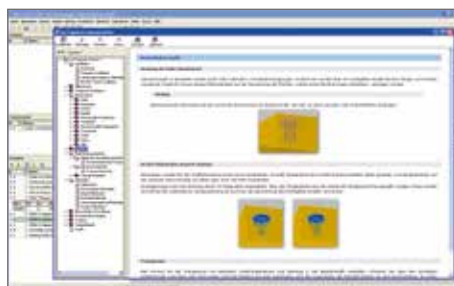
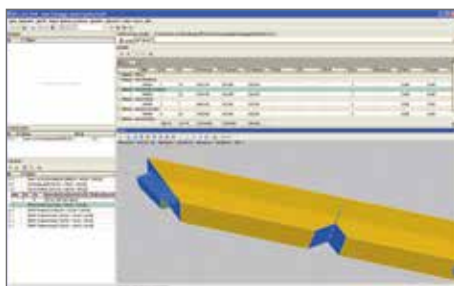
CAMBIUM has been developed specially for the demands of modern timber construction – this ensures maximum investment security along with extremely simple operation.

CAMBIUM is truly flexible and fully automatic. No matter what your processing variant may be, CAMBIUM provides an effective and reliable solution for any task without the need for additional programming.

Free software updates ensure that you benefit from continuous dynamic further development of the software throughout the service life of the machine.

CAMBIUM

made by Hundegger



Language

- Configured and supplied in the required language

Uniform for all Hundegger machines

Job preparation

- Automatic data transfer from all commonly used CAD systems
- Waste optimisation
- Material ordering
- Calculation
- Real-time simulation

Uniform for all Hundegger machines

Production

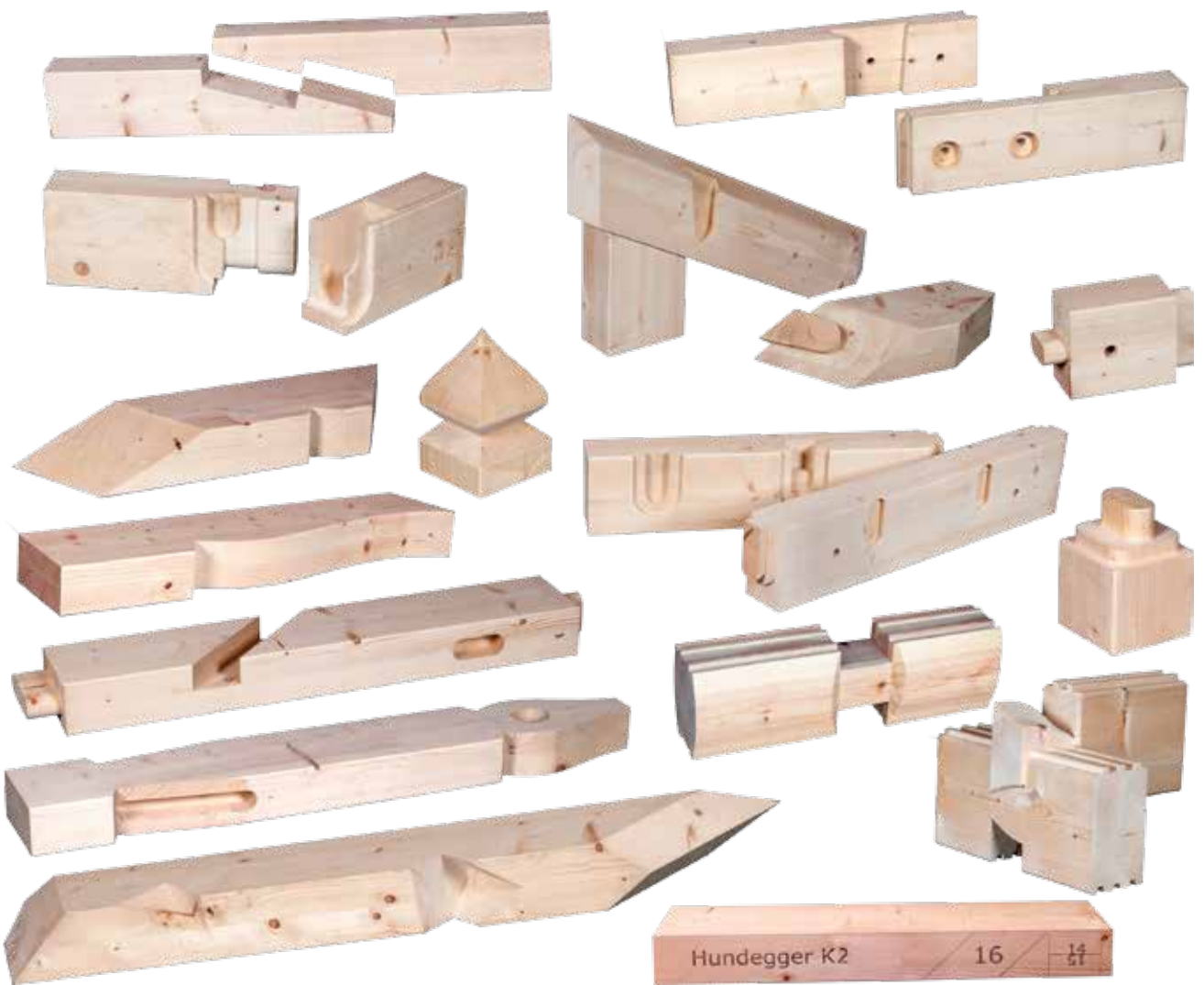
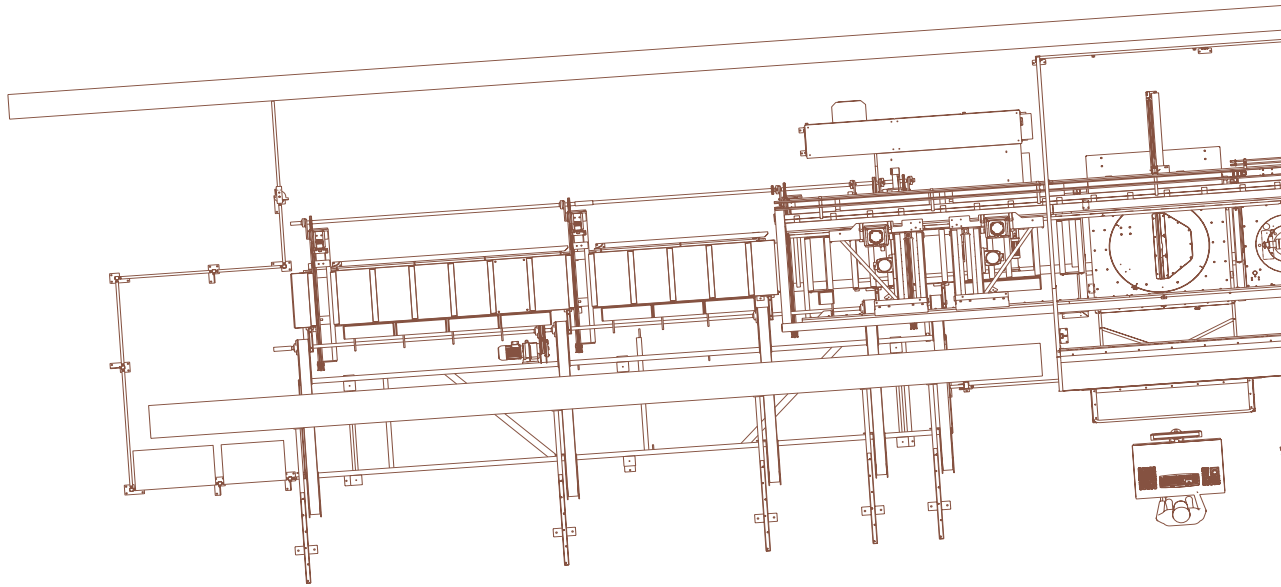
- Same user interface for job preparation and production
- Automatic generation and optimisation of the machine program (CAM)
- Integrated control system (CNC)
- Production data acquisition

Uniform for all Hundegger machines

Other highlights

- Comprehensive reporting
- Standard interface for integration in in-house IT
- Integration of warehouse and automation systems

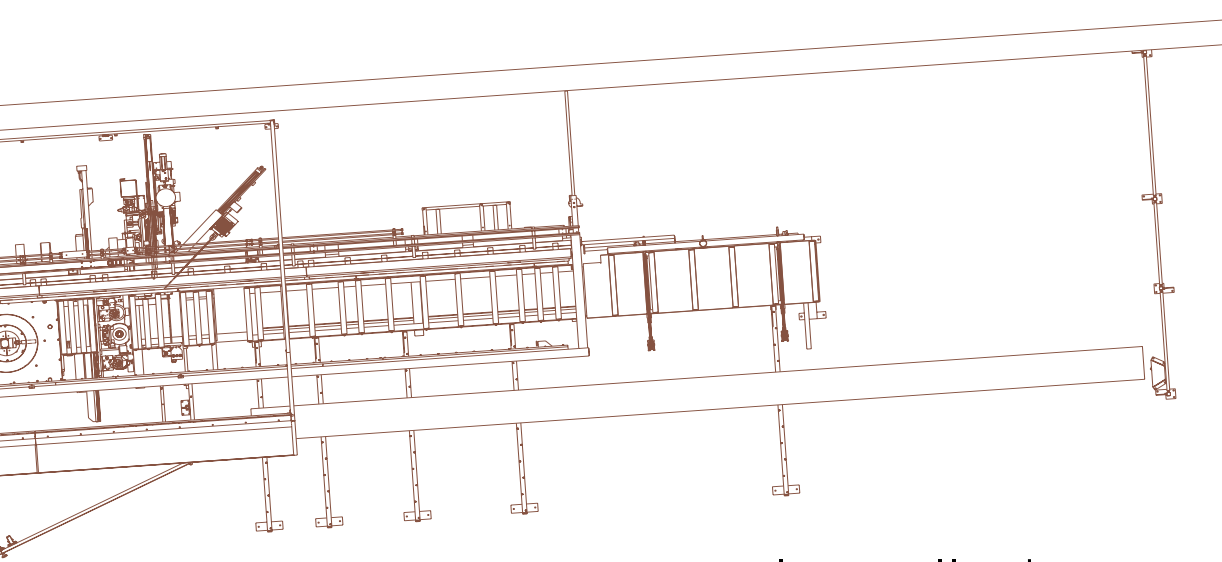
Uniform for all Hundegger machines



Hundegger K2

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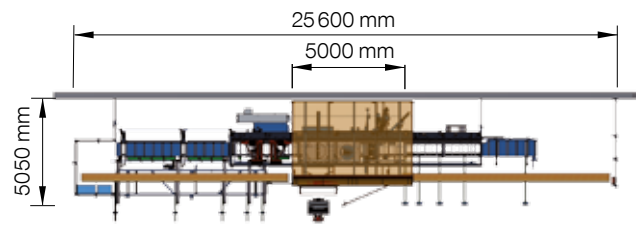




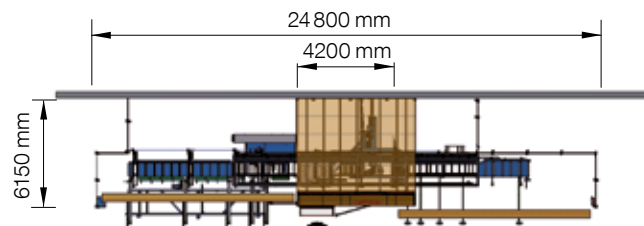
Installation variants

From CAD to the finished part
 Unlimited variety – precise, fast, flexible

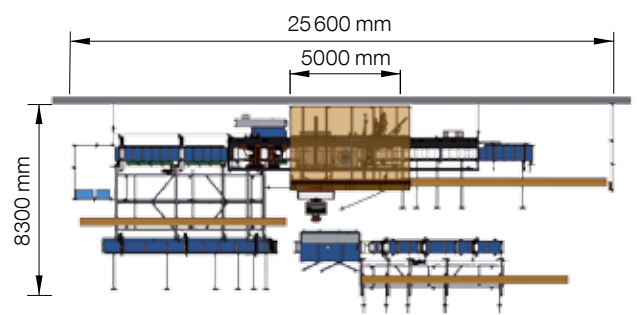
Installation examples and dimensions of joinery machines with or without planer



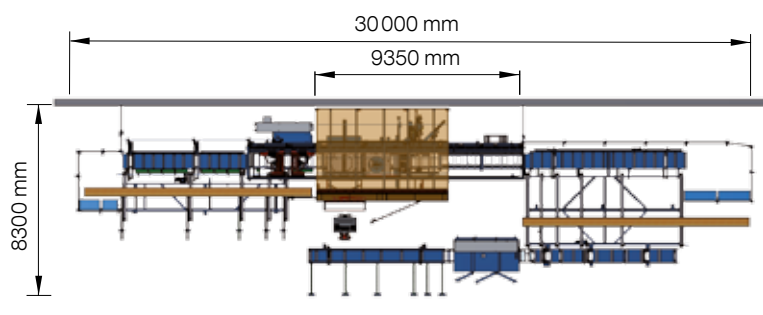
Joinery machine with max. timber length of 10.00 m (at infeed and outfeed end)*



Joinery machine with robot unit and max. timber length of 10.00 m (at infeed and outfeed end)*



Joinery machine with planing prior to joining and max. timber length of 10.00 m (at infeed and outfeed end)*



Joinery machine with planing prior to joining and max. timber length of 10.00 m (at infeed and outfeed end)*

* can be extended to any length

Note regarding the information given in this brochure: Subject to technical modifications. The illustration can also contain accessories or special equipment that is not included in the standard scope of delivery. To improve clarity, some of the illustrations do not show the standard safety equipment.



Hundegger – Advantages

- Experience from more than 4700 machines installed worldwide
- Precise adaptation of the machines to the requirements of the customer thanks to the modular system and expert advice
- High degree of flexibility owing to in-house software development
- Continuous further development and free software updates
- State-of-the-art interface compatible with all leading timber construction AD programs
- Convenient machine operation specially developed for the demands of timber construction
- Qualified training and courses at the Hundegger training centre
- Close cooperation with leading institutes and colleges, particularly with regard to vocational further education
- Extensive warranties
- Service and spare parts availability guaranteed worldwide
- Round-the-clock service as a cornerstone of Hundegger's corporate philosophy
- Unrivalled price/performance ratio

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