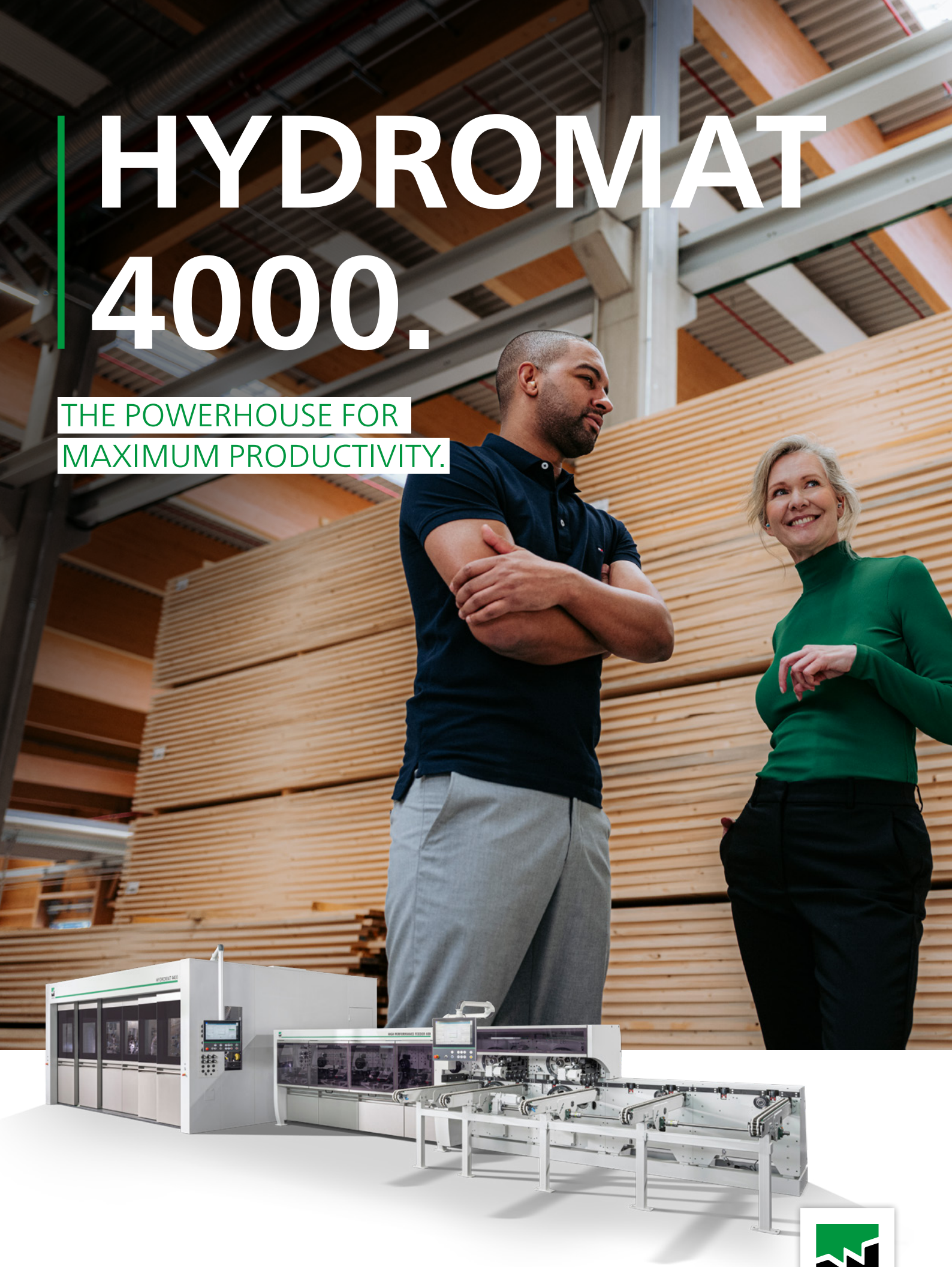
# HYDROMAT 4000.

THE POWERHOUSE FOR MAXIMUM PRODUCTIVITY.



WEINIG OFFERS MORE.

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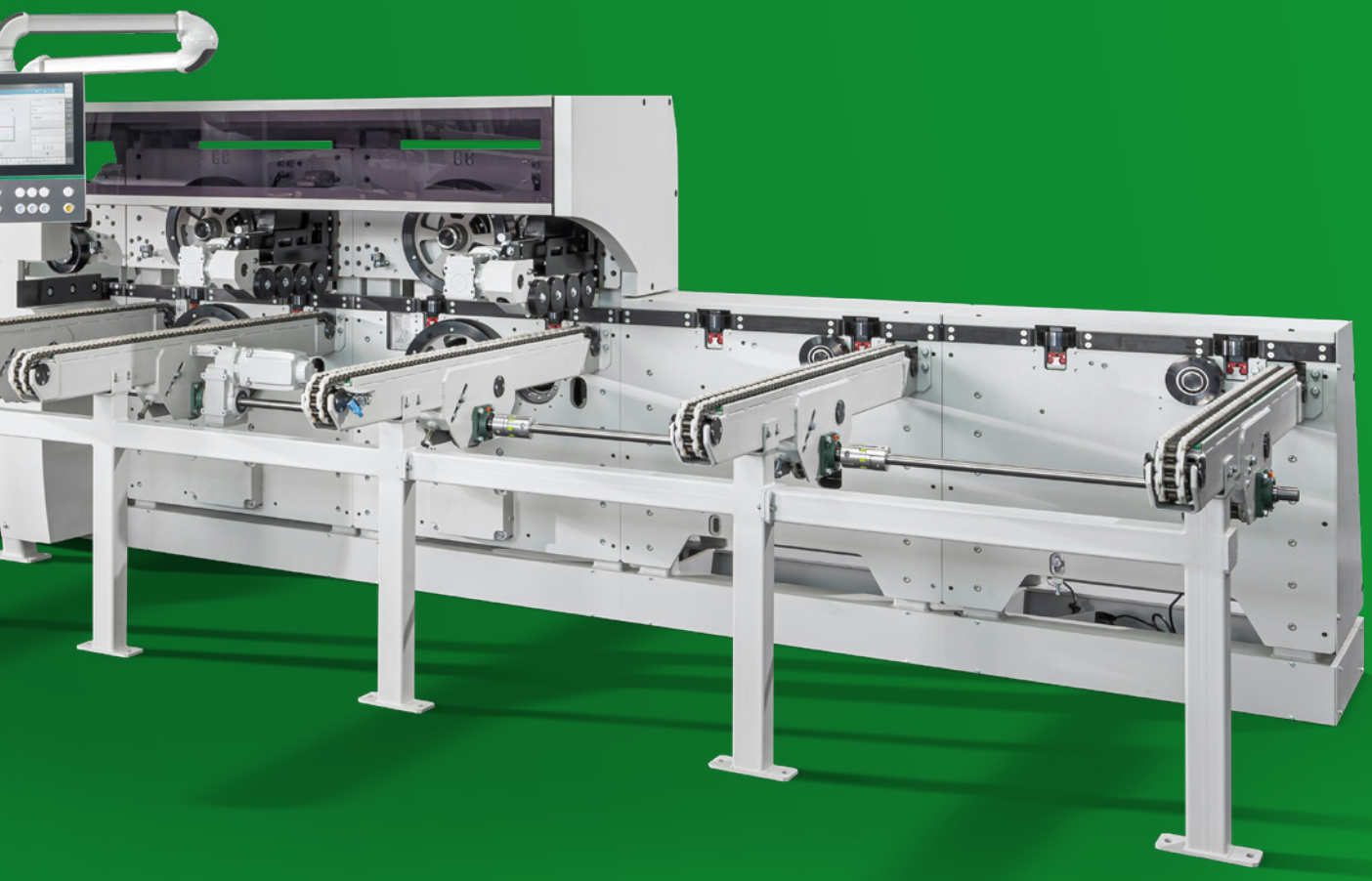
# THE HYDROMAT 4000 – FAST, RELIABLE AND ULTRA-EFFICIENT.


## CONTENTS

**The Hydromat 4000 combines all requirements for a high-speed machine: massive design, powerful feed system and excellent performance potential.**

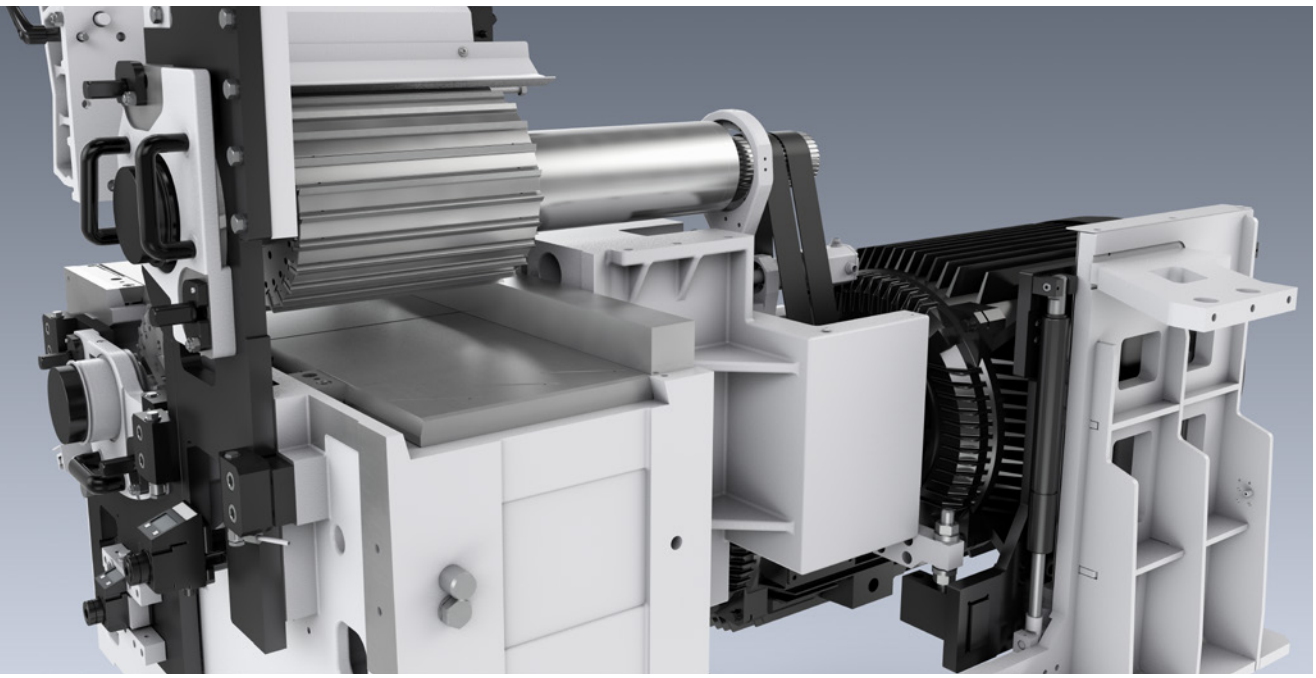
Stability and flexibility in outstanding combination guarantee perfect cost-efficiency with high productivity. The Hydromat 4000 can convert a stack of timber into high-quality workpieces without compromising on performance. The high-speed series is the top performance league in terms of design and processing. This means planing and profiling at feed speeds of up to 400 m/min with excellent surface quality, no less.

WEINIG high-speed planing also stands for efficient production, be it in large batches or production to order. In addition, you will benefit from safety based on strict quality standards, high ease of use and an unrivalled level of reliability.



# **THE HIGH-SPEED MACHINE** FOR PEERLESS INDUSTRIAL PERFORMANCE.

The new optimized Hydromat 4000 is robust, powerful and reliable for feed rates from 150–400 m/min. The modular design allows flexible equipment configurations and spindle arrangements for individual applications. The areas of application range, for example, from pre-planing with the requirement for maximum material yield to the production of diverse profiles with a correspondingly high level of flexibility. The customized combination of spindle arrangement, feed speed and other features make the Hydromat 4000 a true all-rounder for a wide range of applications.

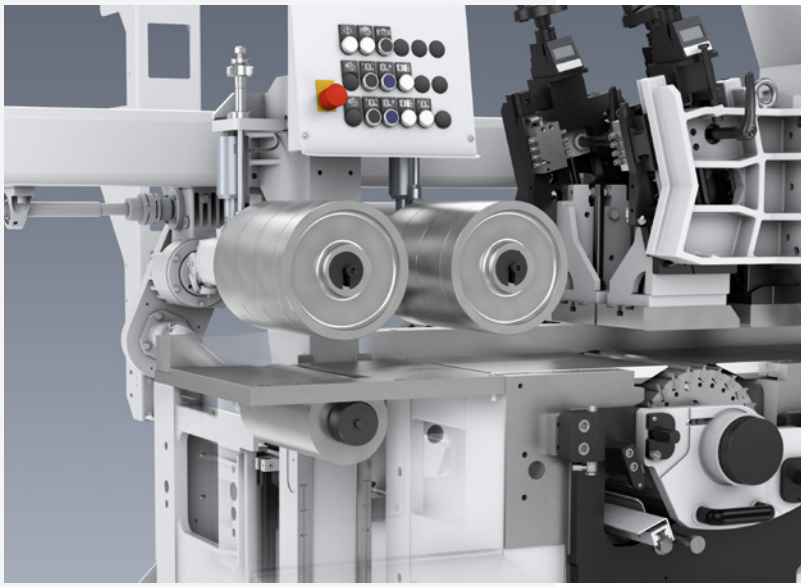


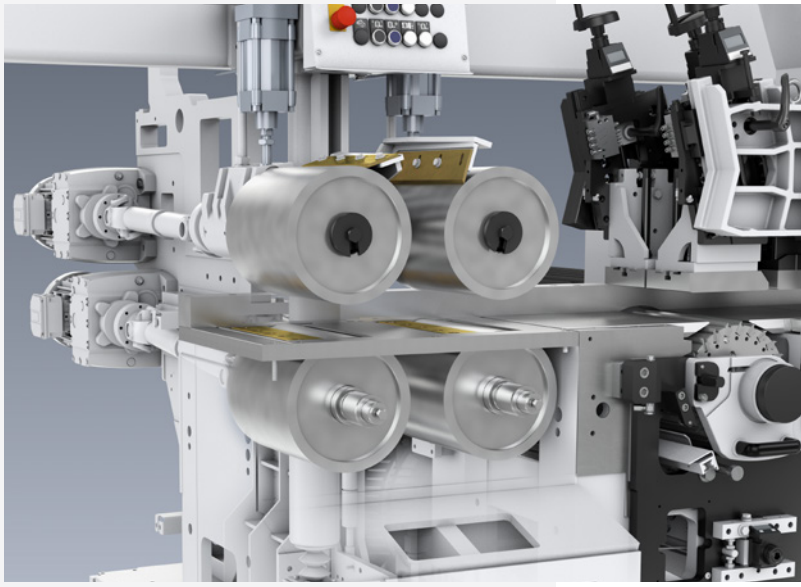
## PRECISION FEED SYSTEM.

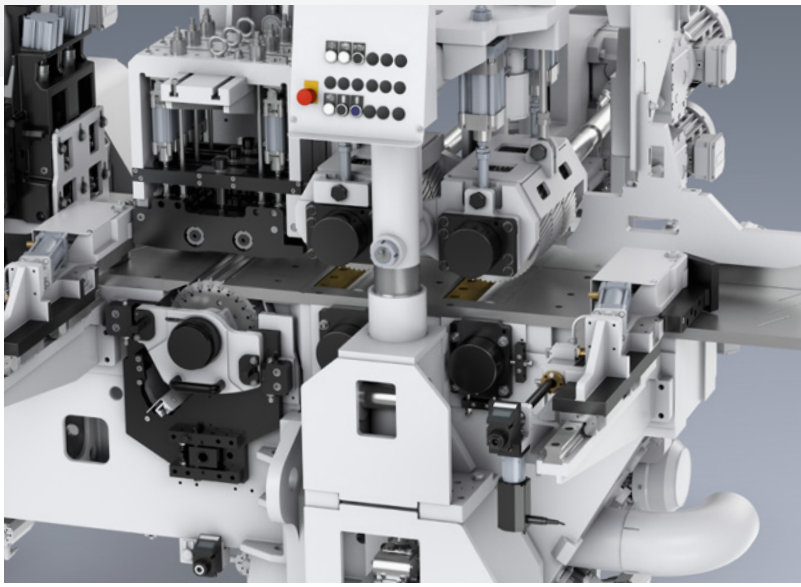
The Hydromat 4000 has four different feed rates: it offers the perfect performance rate to suit your needs and individual requirements.

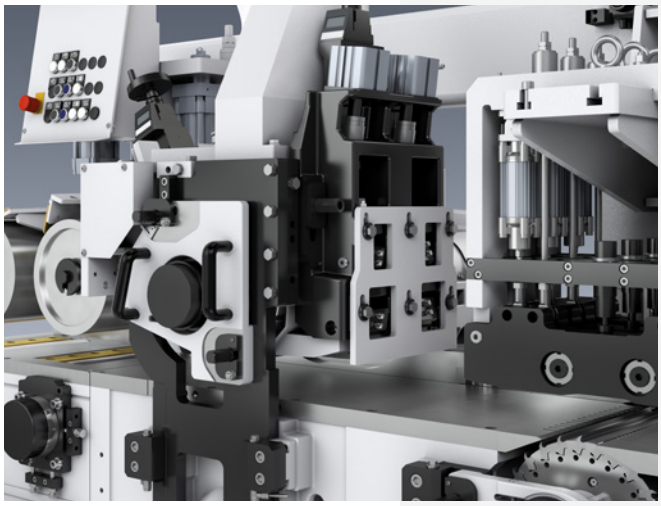
The double feed unit, consisting of two pairs of rollers, boosts the feed power even further, ensuring the workpiece is moved out of the machine safely at the outfeed and passed to the mechanization system, for instance.

- The main shaft with one central drive acts as an energy-efficient, economic solution for processing at speeds up to 150 m/min.
- From 200 m/min upwards, the feed speed is generated by single drives and the feed unit is supported with a robust column guide.
- Similarly, feed speeds of up to 300 m/min have single drives, too. They are reinforced for this output rate and also feature a column guide.
- At 400 m/min, a portal in the machine infeed offers additional rigidity for raw material with large or fluctuating oversize.







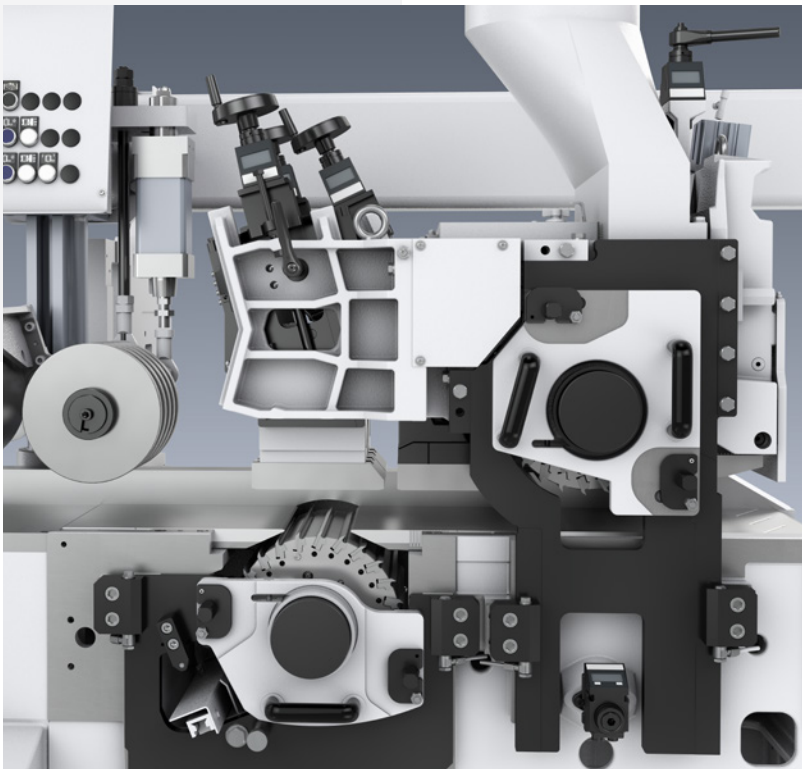


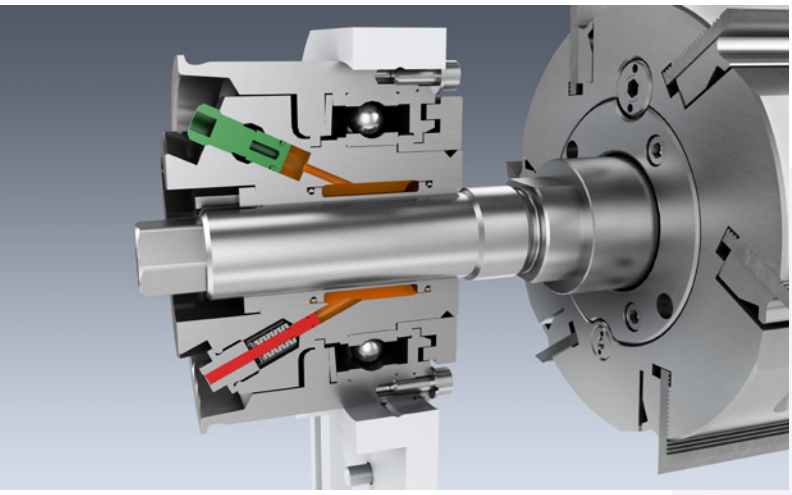
## HIGH WEAR RESISTANCE AND LONG SERVICE LIFE.

The longer a machine's service life, the more profitable it is. The construction of the Hydromat 4000 has been finetuned to guarantee a high level of stability and resistance to wear, as illustrated by the robust spindles, for instance, or the durable coating on the machine table, fences and pressure shoes. Regular maintenance is crucial to maximize a machine's service life. That's why the Hydromat 4000 has been constructed to make maintenance straightforward, with easy access from all sides.

## EXTREMELY SMOOTH RUNNING.

Guiding and controlling parts is crucial for smooth-running machines. This leads to precisely dimensioned lamellae and high-quality profiled goods. The pressure elements used in this process are durable so they can dampen the kinetic energy as best as possible.





## STRAIGHTFORWARD TOOL CHANGES.

It’s never been so easy and so convenient to change tools. Aids such as the integrated crane and practical lifting device make handling substantially easier. The innovative HydroLock system is revolutionizing the (dis)assembly of the outboard bearing and, by extension, tool changing.

## MAXIMUM SAFETY.

Safety is a top priority, especially in large production plants. The Hydromat 4000 comes with a safety cabin with sound insulation as standard. When the machine is running in automatic mode, this is securely locked and substantially reduces the sound emitted. Despite this, it leaves the machine highly accessible, which is crucial for setup. An integrated crane offers further support with tool changes.

# PERFECTLY PREPARED. **DESIGNED FOR THE VERY BEST QUALITY.**

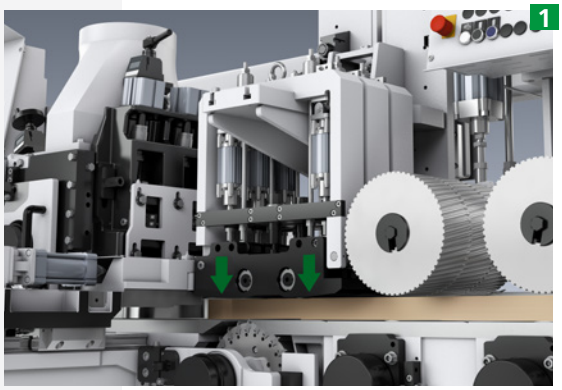
## WOOD SAVINGS.

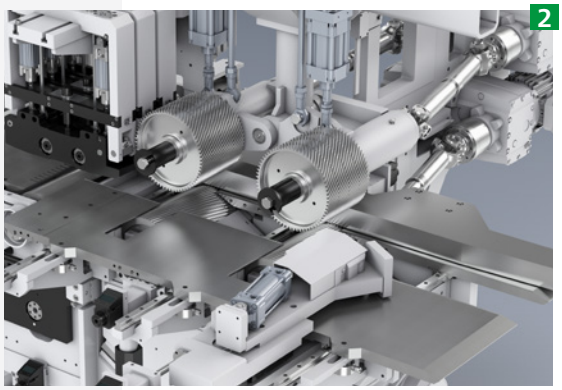
If the aim is to create a clean visible surface for scanners or a clear reference surface for subsequent processing, it is important to reduce chip removal to the bare minimum. The Hydromat 4000 can be kitted out with clever features to ensure the smallest possible amount of chips is removed:

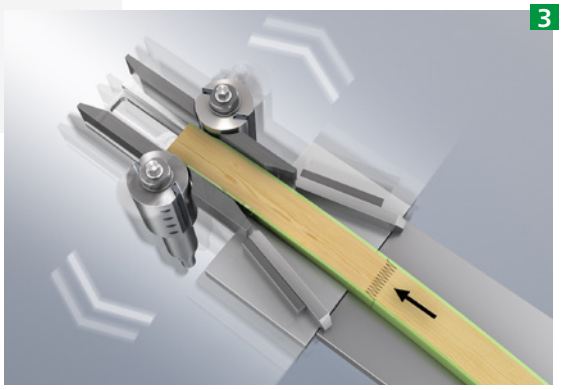
1. The heavy-duty pressure bars ensure safe guidance over the first bottom spindle, substantially reducing the risk of snaps and providing a clean reference surface. The pressure bars have a slanted inlet for optimum guidance; pressure can be applied to them separately.

2. With the Wood Saving System, the divided infeed table is adjusted to the particular width of the material. This minimizes the amount of chips removed, depending on the cupping for each part. In turn, the wood yield is increased and the risk of undersized workpieces is reduced.

3. The floating vertical spindles are highly dynamic and follow the bow of the wood. Consequently, the entire surface of the lamellae on the sides is processed, with minimal chip removal.



## SURFACE QUALITY.

Surface quality requirements differ depending on the application and the tool system used. Satisfying the most stringent quality standards calls for hydro-tools with knives jointed on the Hydromat 4000. There is no need for manual adjustment of the jointer when changing dimensions as the automatic positioning occurs together with the spindle. In addition, the regular jointing ensures a suitable cutting edge so the tool can attain a high service life. Alongside this, solid cutterheads can also be used on the Hydromat 4000

## PROCESS RELIABILITY.

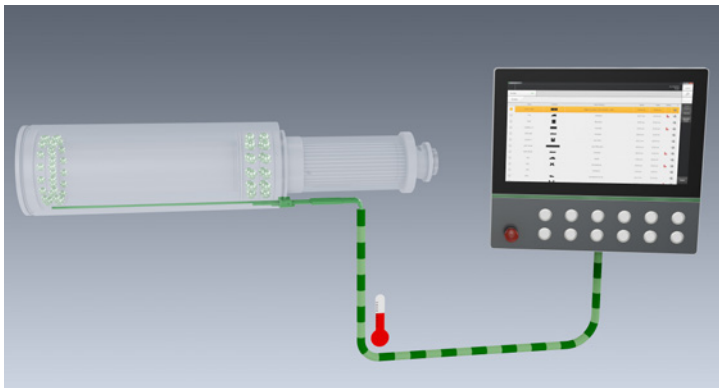
For industrial production to be as efficient and safe as possible, it is important to largely eliminate damage and downtime. The efficient monitoring in the Hydromat 4000 offers consistent risk prevention.

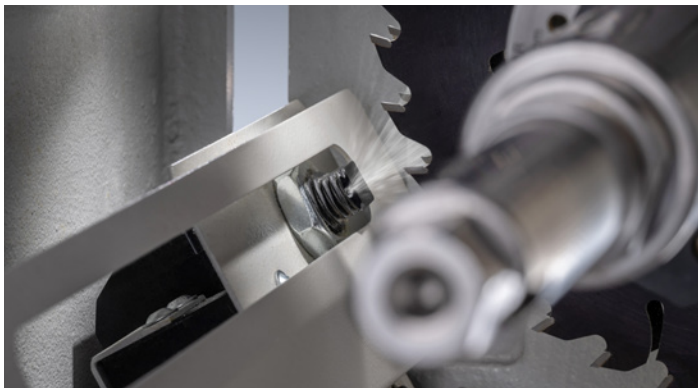
1. Temperature monitoring of spindle bearings: if the processing spindle reaches a critical state, this will first be expressed in the bearing load and, by extension, the bearing temperature. Thanks to ongoing monitoring by the machine control system, a warning is first issued in a critical situation, and, if necessary, the machine is subsequently stopped to avoid damage.

2. Sound monitoring: a microphone is set up on a spindle for monitoring purposes. It is helpful to detect critical sound levels during sawing, in particular. This is why the monitoring takes place on the spindle used for ripping.

3. Spraying device: the device moves axially so all the sawblades can be sprayed – and, by extension, cooled and cleaned – evenly. The spray intervals are managed via the machine's control panel.

To further enhance safety, the Hydromat 4000 can be kitted out with additional safety equipment, such as detectors for a spark extinguishing system.





# **ENHANCED DIGITIZATION** FOR SWIFTER PRODUCTION.

The efficient organization of the work environment plays an increasingly important role in the optimization of the production process. This is why WEINIG offers an end-to-end system that shifts all the preliminary work and ancillary processes from the machine to the grinding room or the office and links them together in a fully paperless way.

### CONTROL SUITE.

The WEINIG Control Suite represents the central control point for the production process and enables the machines in a line to be automatically controlled in real time. The master computer is used to centrally provide information about product changes to individual machines. In turn, this ensures the output of multiple machines in a line is neatly aligned, guaranteeing a continuous production flow.

### TOOL GRINDER.

The quality of the final product is dependent on the tool and the quality of the grinding process. A tool grinder means that quality is always in your own hands. This is crucial if you want to meet flawless requirements for jointing on the Hydromat 4000. With the Rondamat series, WEINIG offers the perfect grinding machine for each tool system, be it cutterheads with knives or solid cutterheads.

## WEINIG Machine Control (WMC).

WMC is the digital machine control system for the Hydromat 4000: clear and streamlined yet powerful.

- Intuitive operation via a central dashboard
- Short induction times and low training outlay for new operators
- Spindle position set via automatic data transfer from the tool measuring stand

The scope of the control system is tailored to your needs and can be expanded to offer these benefits:

- Digital maintenance plan for the machine
- Visual support for the operator during setup or adjustments thanks to tool and profile drawings in combination with Moulder Master
- Error avoidance thanks to the note function for setup information

## MOULDER MASTER AND TOOL MEASUREMENT.

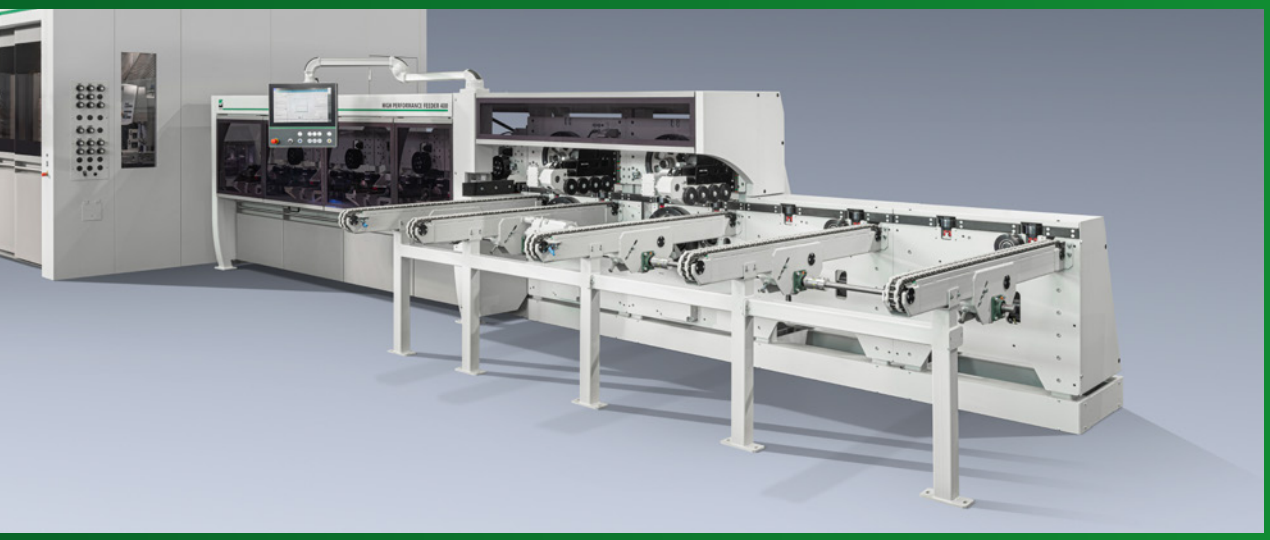
The Moulder Master software combines all processes upstream of production. It is used to create drawings of profiles and tools and assists with the virtual setup of the moulder. This information is passed on to downstream locations in the grinding room and in production. Errors are minimized, process reliability is increased and uniformly high production quality is ensured.

## VIACONNECTOR EDGE AND WEINIG APP SUITE.

The viaConnector Edge makes it possible to evaluate operating and machine data and to analyze this accordingly. Alternatively, this evaluation can be performed using the WEINIG App Suite. This depicts prepared data in diagrams. Thus, production processes can be further optimized.

# **PERFECT HARMONY:** SMOOTH SAILING WITH THE ACCELERATOR.

**The accelerator represents the crucial link between automation and the moulder. The flawless interplay between the accelerator and the moulder, from a single source, ensures the ultimate in process reliability and gentle feeding for both material and machine. Motorized accelerator adjustment and the control together with the machine ensure maximum uptime. Depending on the cycle rate required, the appropriate accelerator can be added to the Hydromat 4000 for feed rates from 150 m/min–400 m/min.**




**Do you need personal consultation?**
Contact your WEINIG expert or send an e-mail to
**sales@weinig.com**


# STANDARD FEATURES AND OPTIONS IN COMPARISON.

| | Standard | Optional |
|---|---|---|
| Working width min./max.* | 40–300 mm | |
| Working height min./max.* | 19–120 mm | 15–200 mm |
| Hydromat 4150 feed speed | 15–150 m/min | |
| Hydromat 4200 feed speed | 20–200 m/min | |
| Hydromat 4300 feed speed | 30–300 m/min | |
| Hydromat 4400 feed speed | 40–400 m/min | |
| Feed direction from left* | | ○ |
| WEINIG Machine Control (WMC) | ● | |
| CNC-controlled positioning of spindles | ● | |
| Spindle speed | 4,000–6,000 rpm | |
| Spindle diameter | 50 mm | 2 ⅛ " |
| Maximum tool diameter | 260 mm | |
| HydroLock outboard bearing at horizontal spindles | ● | |
| Straight jointer / profile jointer, fully automatic | | ○ |
| Min./max. horizontal spindle motor power | 37–110 kW | |
| Min./max. vertical spindle motor power | 22–60 kW | |
| Start and stop of all spindle drives via frequency converter | ● | |
| MarathonPowerCoating for machine table and fence | ● | |
| Infeed table 1.5 m with 4-roller infeed | ● | |
| Portal for 4-roller infeed* | | ○ |
| Double feed unit with two pairs of rollers | | ○ |
| Wood Saving System* | | ○ |
| Heavy-duty pressure bars on top of the first bottom spindle | | ○ |
| Temperature monitoring for all spindles | | ○ |
| Sound monitoring for one spindle | | ○ |
| Safety cabin with sound insulation | ● | |

*The system variations available may differ somewhat between the various feed rates.

# **WEINIG** OFFERS MORE.

Those who buy a WEINIG machine today know that they are optimally equipped for the future of their business.

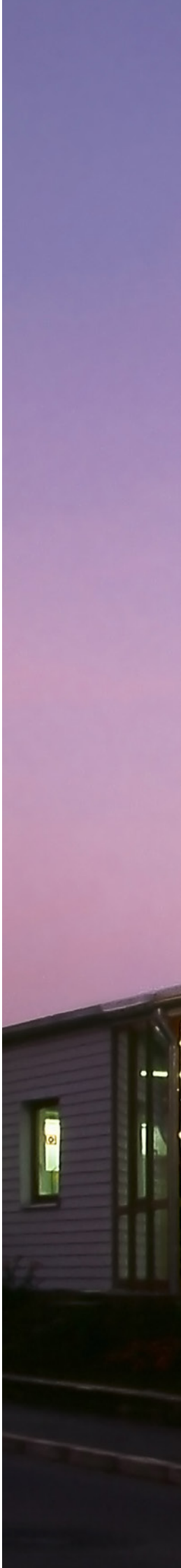
**100% quality** – WEINIG machines must satisfy the highest standards. That is why the greatest care in development and manufacturing is a traditional virtue at WEINIG. You benefit from this by the long service life of your valuable investment.

**Reliability** – The availability of a machine determines how profitable your business is. WEINIG's systems are known for their high standard. More than 80,000 machines from WEINIG are operating around the globe to the utmost satisfaction of our customers.

**Expert advice** – Whether you need the expertise of WEINIG for turnkey solutions or the know-how of a WEINIG expert at your door – you can always rely on our committed sales team. Ultimately you will have a customized solution that offers you maximum added value.

**Everything from a single source** – With WEINIG you have an experienced full service provider as your partner. From rough cutting to stacking, from a stand-alone machine to a fully automated turnkey production line. And, of course, including a comprehensive service package.

**LifeTime Services** – Reliability is reassuring. If worse comes to worst, our trained service engineers will be quickly on site. WEINIG maintains a unique closely woven service network worldwide. It is so closely woven that no customer can fall through!

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**Contact us!**
Let us determine with you in a personal conversation which feed rate of the Hydromat 4000 fits your individual requirements and which useful options are the perfect add-ons to your machine.

We will be happy to advise you!
Your WEINIG experts

**WEINIG GROUP**

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