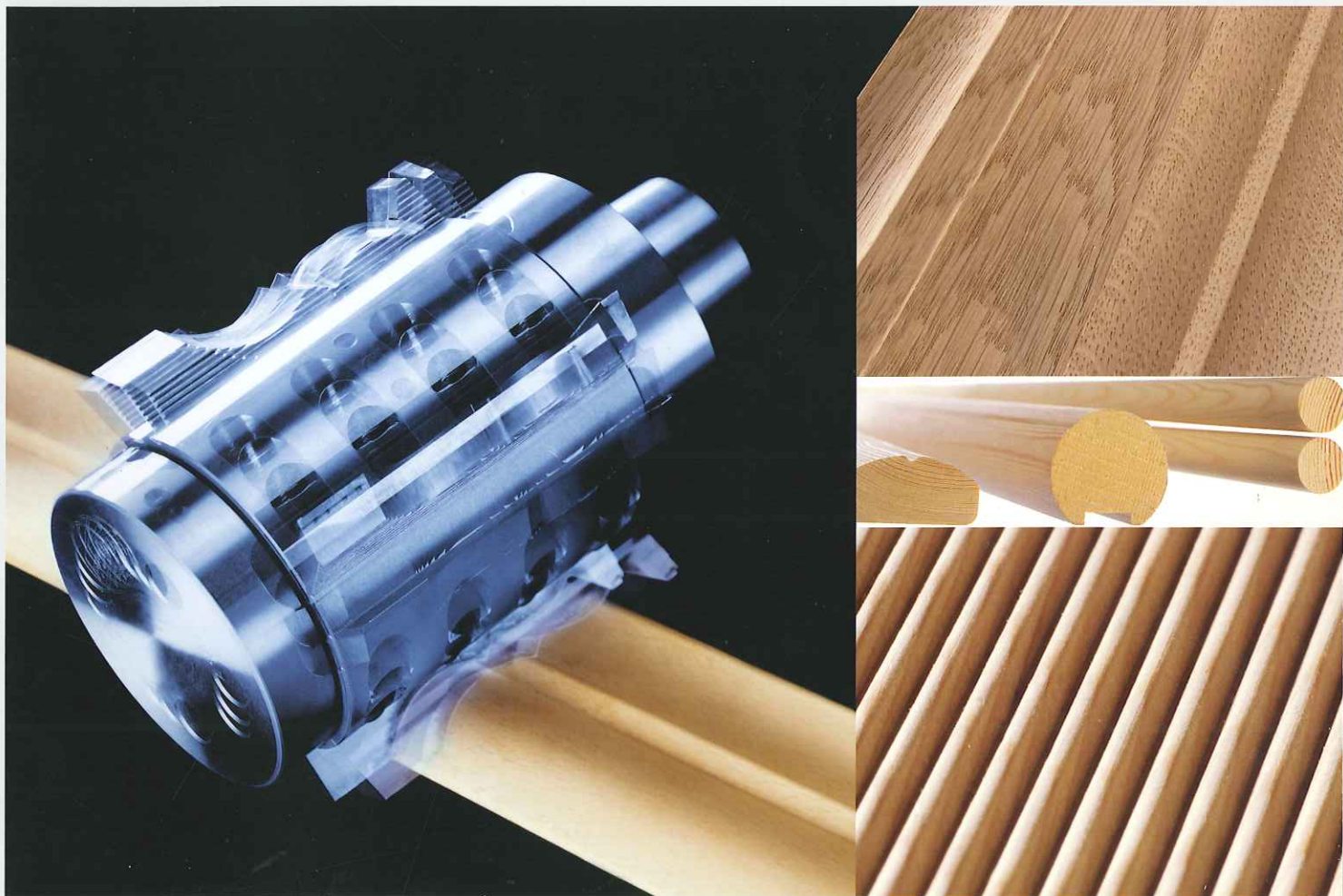


Powermat Series

The revolutionary machine concept
for the modern company



WEINIG presents: The new generation of moulders

Incredibly fast machining of solid wood or other materials such as plastic or MDF; profitable even with short runs. Rational and profitable. Fast, easy set-up. Handy, compact tool. As easy to use as a telephone. And with surface quality superior to anything previously possible. A dream? No, the new WEINIG Powermat series. Revolutionary technology for industry and small shops.



What do you need? It's up to you. Select from a complete program. From the Powermat 400 to the fully automatic power package Powermat 3000 and you can set up your own support system around the moulder. Cutterheads, measuring systems, setting aids, knife grinders and material handling. All from one source. All from WEINIG. Maximum productivity. Simple to operate; makes short work of your daily production.

- The Powermat-**
trumps the competition:
- excellent performance
 - unsurpassed surface quality
 - extremely short setup times
 - high repetitive accuracy
 - optimum solution for every requirement
 - fast, simple setting
 - convenient and easy to operate
 - maximum safety
 - easy integration into existing productivity improving WEINIG system solutions

WEINIG PowerLock System: Short set-up times and simple operation

Forget the old fashioned spindle! Now, there is the new patented WEINIG PowerLock System that incorporates the "spindle" into the cutterhead. The easy-to-use, compact cutterheads are changed in a matter of seconds. No spindle. No spacers. No spindle nut. No wrenches. No mistakes. Cutterhead speeds up to 12,000 rpm (only feasible with PowerLock) make it possible to double the feed rates in comparison to conventional machines. With PowerLock, the higher feed speed significantly reduces the cost per unit and cuts delivery times. The WEINIG PowerLock System opens up opportunities never before dreamed of in moulding operations.



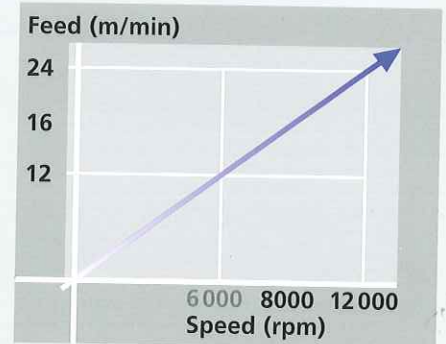
Change a cutterhead by pressing a button

Unclamp tool by pressing a button, remove. Insert new tool, clamp in place by pressing a button. Done! It makes no difference whether it is a WEINIG PowerLock tool, a cutterhead with PowerLock design on, your conventional cutterhead, insert tool or saw blade mounted on a PowerLock adapter-so fast, easy and comfortable with the WEINIG PowerLock System. Never before has a cutterhead been so easy to change on a moulder.

WEINIG Powermat:

Our formula for first-rate surface finishes and fast, simple set-ups

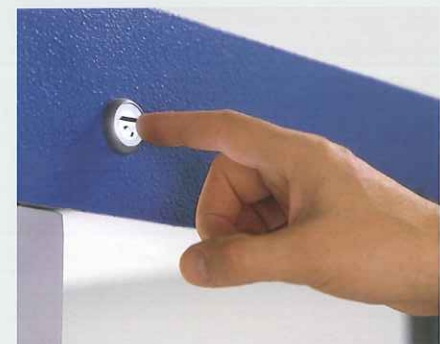
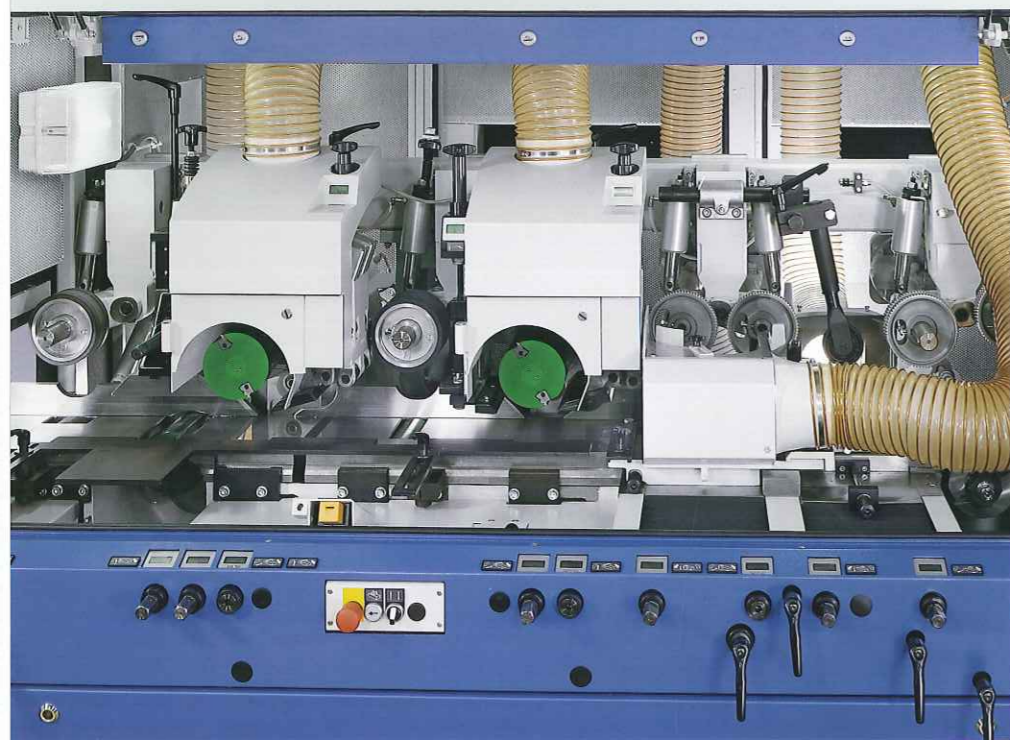
Competition is getting tougher and tougher, delivery time demands shorter and shorter, and the need for higher quality ever increasing. WEINIG Powermat moulders successfully address all your requirements. Cutterhead speeds up to 12,000 rpm are possible with the Powermat. A performance which is inconceivable with conventional machines. And certainly not with top quality. Tool and tool holder clamp solidly with tremendous rigidity, no imbalance, no vibrations! Add in the advantage of a lighter cutterhead, and the end result is a moulder that will outperform any conventional moulder in any market on any product.



WEINIG Powermat 400: Versatile and simple to operate

The Powermat 400 starts out with the latest technology. Equipped with the WEINIG memory system and PowerLock technology, it can be set up quickly and easily. A great solution for small runs. It convinces with superior feed speeds, an excellent surface finish and can be equipped with CNC tool positioning. Operated with PowerLock or conventional cutterheads, it is the ideal introduction to the latest technology.

- **NEW: Speed 8,000 rpm** (only with PowerLock!) 33% more productivity due to the optional speed increase.
- **WEINIG PowerLock System** (p. 5)
- **Memory System** (p. 14)
- **Frequency-controlled feed** continuously adjustable from 5 - 30 m/min.
- **Pneumatic pressure for the feed rollers**
Constant pressure even with different workpiece thickness.
- **Maximum cutting circle of the moulding spindles: 200 mm**
Up to 35mm profile depth possible.
- **Adjustable table plates on the vertical spindles**
Optimally adjustable to the tool cutting circle. Control and dimensional accuracy even with small workpiece dimensions.
- **Feed roller before the 1st bottom spindle**
Up / Down positioning by a switch on the control panel.



Set-up at the push of a button!

The new dual tool combines a greater workpiece diameter with low weight and impresses with high run-out accuracy.

WEINIG Powermat 500: Latest moulder technology with many options

A proven WEINIG model using the latest technology. With the Powermat 500 you leap into a different performance level. Tool holders with up to 10,000 rpm bring 66% more productivity with an excellent surface finish. Set up in no time using PowerLock technology and WEINIG Memory System. Simple operation. PowerLock or conventional cutterheads can be used... and many interesting options!

- **NEW: Speed 10,000 rpm** (only with PowerLock!) 66% more performance due to the optional increase in cutterhead rpm.
- **WEINIG PowerLock System** (p. 5)
- **Memory System** (p. 14)
- **Frequency-controlled feed**
- **Heavy cast iron construction**
- **Pneumatic pressure for the feed wheels**
- **Feed roller before the first bottom spindle**
- **2 pressure rollers before the first left spindle**
Excellent control of short parts and small cross sections
- **Maximum cutting circle of the profiling spindles: 200 mm**
Up to 35 mm moulder depth possible
- **Sawing with a bottom spindle**
up to a thickness of 60 mm



With an additional bottom sawing spindle timber can be split up to a thickness of 95 mm

High performance sawing unit using right and left spindles



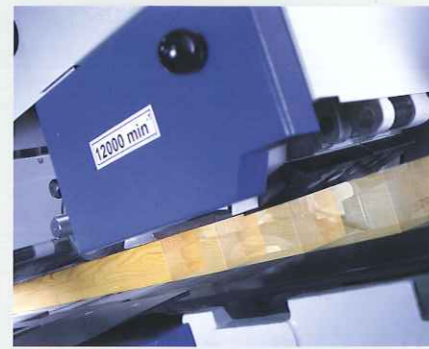
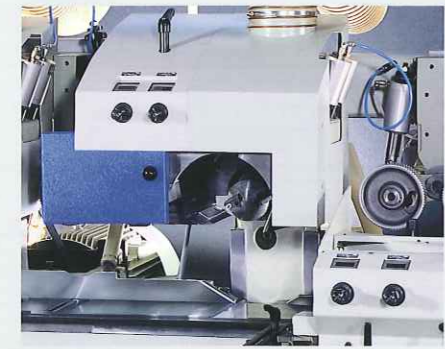
- **WEINIG PowerLock System** (p. 5)
- **Up to 12,000 rpm**
(only with PowerLock!)
Doubling of the feed speed in comparison with conventional machines.
- **PowerCom system** (optional)
With the PowerCom system you can decide which spindles you want to position automatically, which production data you want to capture and which work processes you want to organize. PowerCom guides you comfortably using on-screen prompts.



**WEINIG Powermat 1000:
The new definition of "perfection"**

The Powermat 1000 has all the advantages of our new moulder generation and offers great performance and flexibility. With up to 11 spindle positions, this moulder can be customized to handle the most ambitious demands of your operation. Simple operation using the PowerCom touch screen gets your production started in seconds. The new VARIO hood technology puts the finishing touches to quality and set-up time.

- **Vario Hoods** (p. 24)
Every time the tool diameter changes the hoods and pressure shoes of the Powermat are automatically adapted to the new dimensions.
- **Frequency-controlled feed**
- **Cast iron construction**
- **Pneumatic pressure for the feed rollers**
- **2 pressure rollers before the 1st left spindle**



New VARIO hood technology
Up to 12,000 rpm!



- **WEINIG PowerLock System** (p. 5)
- **10,000 or 12,000 rpm**
(only with PowerLock!)
Increase in feed speed in comparison with conventional machines. Higher tool RPM means fewer knives in the cutterhead, reducing tool and tool sharpening costs.
- **Powermat with jointing system:**
Top surface quality even at high feed speed. Only from WEINIG!

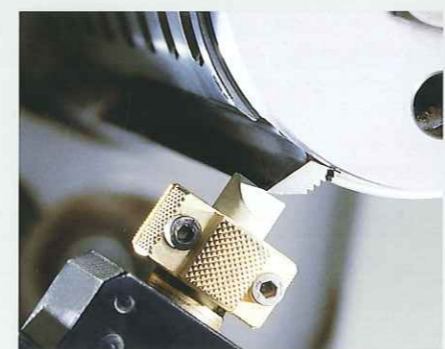


**WEINIG Powermat 2000:
Small and large runs--no problem!**

With conventional spindle moulders, you really need two different machines, one for long runs and one fast-change moulder for short runs. Now, a Powermat 2000 is all you need. It can handle the most difficult tasks without effort. Fast and economical with short set-up times. As an option, the Powermat 2000 is available as a jointed version with 10,000 rpm. This is unique! Outstanding workpiece quality up to 100 m/min.

The PowerLock system with its extremely precise tool clamping complements our proven jointing technology.

- **PowerCom system**
- **Frequency-controlled feed**
- **Cast iron construction**
- **Pneumatic pressure for the feed rollers**
- **Maximum cutting circle of the moulder spindles: 250 mm**



Fully automatic straight jointer
Automatic profile jointer



- WEINIG PowerLock System (p. 5)
- 12,000 rpm

(only with PowerLock!)

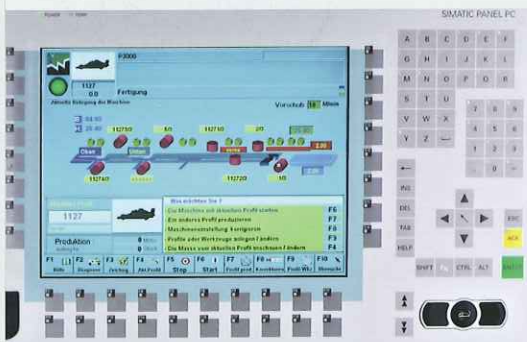
Doubling of the feed speed in comparison with conventional machines. Due to the high cutterhead rpm, there are fewer knives in the cutterhead, reducing knife and knife sharpening costs.

- CNC control

Short set-up times and quick cutterhead changes. Fully automatic positioning of the tools, pressure shoe, chip breaker and pressure elements. Select your next run on the screen, confirm. The ultimate moulder when just-in-time production is required and small batch sizes must be produced economically.

WEINIG Powermat 3000: Fully automatic profile center

For the highest demands of modern, "lean" production. Select the next run on the screen, confirm – and produce. The ultimate machine for just-in-time production and cost-effective manufacturing of short runs and "one-off" production. The Powermat 3000 automatically positions cutterheads, fences, chip breakers, pressure shoes, and more.



Easy to use Powermat controls: It is simple to master high-tech

The times when only specialists were able to operate an advanced machine are gone. WEINIG controls are simple and at the same time extremely efficient. On-screen guidance and large memory storage for tool and profile data. The perfect control center for your Powermat.

Memory System

With the Memory System, you set up conventionally, store your profile data, and retrieve them again by pressing a button when you want to repeat a profile. No long set-up. No trial and error. The moulder is set up fast and efficiently. Chip-breaker and pressure-shoe positions can be connected to the Memory System. It's as easy as using the re-dial on your phone.



PowerCom System

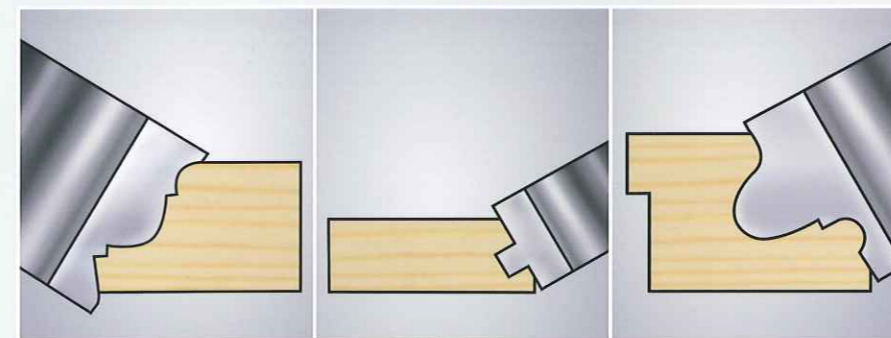
The PowerCom System offers the advantages of the Memory System plus almost unlimited memory for profiles and tooling measurements. With the easy-to-use touch screen, you are guided through every decision. Best of all, WEINIG has solved the problem of making a fast and accurate set-up of a profile you have never run before.



CNC-controlled positioning of the tool holders in connection with Memory or PowerCom System. Controlled axes move automatically, simultaneously and precisely into position. CNC Axes are possible for all tool holder adjustments and feed height. Follow the arrow on the readout to move your cutterheads into position manually or use the optional motorized spindle system to position automatically.

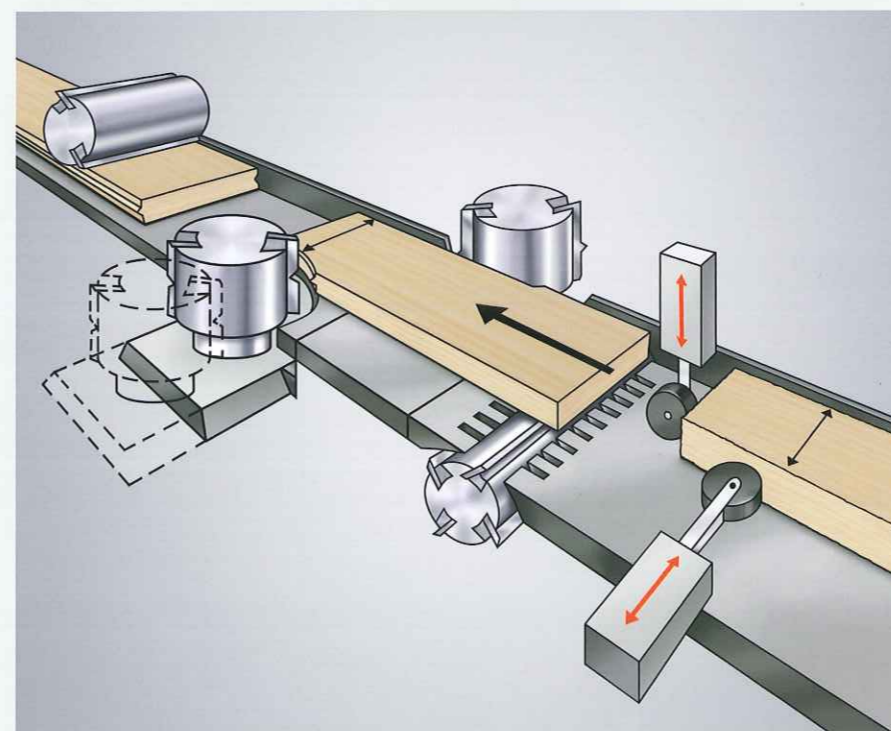
Additional options for the Powermat: Our clever solutions help create profits for you

Modern production means more and more small batches and requirements for fast deliveries. We can show you how to customize your Powermat to match your market requirements.

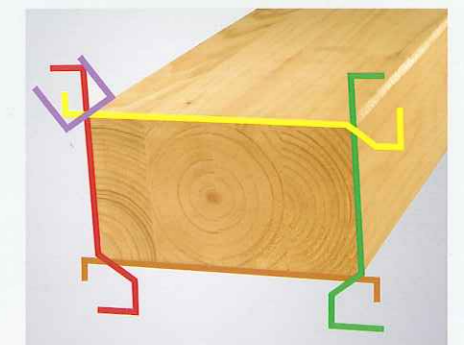


The universal spindle is needed for certain profiles and grooves which must be made at an angle. Useable a full 360°, this enables you to produce even the most complicated profiles in one run.

The mobile spindle makes your work considerably easier if you wish to prepare raw material of random widths for edge gluing. A unique option that can automatically sense the new incoming material width, adjusts itself to the new width, and processes the workpiece.



The chamfer unit is used if you want to chamfer workpieces of different dimensions in one pass on four sides. No tool change is necessary when changing over from chamfered to unchamfered workpieces!



Planing, profiling and sawing with the Powermat – in one operation

The **right and left vertical sawing unit** turns your Powermat into a high performance saw for the manufacture of lamellas for multilayer flooring, three-ply boards and much more. Minimum tolerances of 0.1 mm with saw blades with a kerf of 1.2 mm (depending on the working width) speaks for itself! A spray device increases the blade life by up to 20%.



Bottom horizontal Sawing Unit

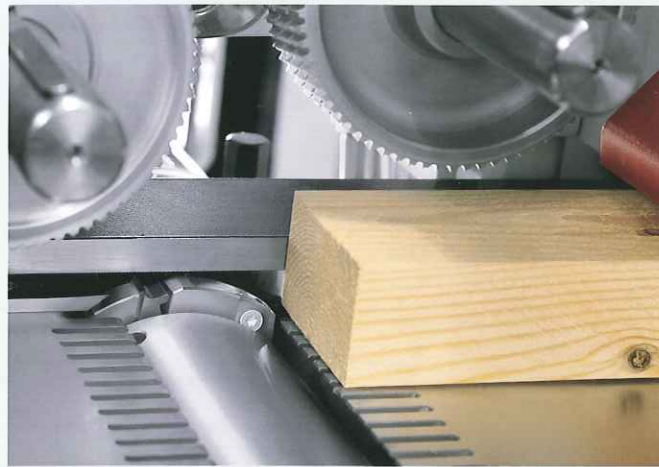
Sawing of workpieces up to a height up to 95 mm thickness. Additional modular unit with a tool diameter of 320 mm. Equipped in standard with a 30 HP motor. Table plates with wooden insert and anti-kick back in front of the spindle. 4 feed wheels above the tool holder (spindle) ensure safe and smooth feeding of the workpieces. Precise production of slats for window mini blinds.



Table plate and pressure shoe—with wooden insert—above the bottom tool holder.

Material being sawn is fully supported. Precise guiding of the sawn strips between the saws. Reduced tear-out. Short parts cannot drop down into the table opening. The pressure shoe helps support sawn material, reducing tear out and increasing sawing accuracy. Short parts are supported on the table throughout the length of the machine. Inserts are made of wood or other materials and allow deep cuts.

Pressure elements and guides— adaptable to any application



Rebate cutter and rebate fence on the first bottom tool holder
High accuracy for parts with small cross sections and short parts. The workpieces are supported and guided by the rebate fence for perfect control.



Table plate with riving knife
Helps provide control of short or narrow parts in the area of the vertical tool holders. The workpiece is stabilized and guided.



Adapter plate when using replaceable counter profiles.
Control of profiles with great differences in height within a profile. This means that workpieces with complicated shapes are held securely for the best surface finish and tolerances. This is a great advantage for difficult to control profiles such as dowels: high surface quality! No surface finish problems caused by movement when workpieces are separated.

Powermat with groove guide: Maximum precision and dimensional control

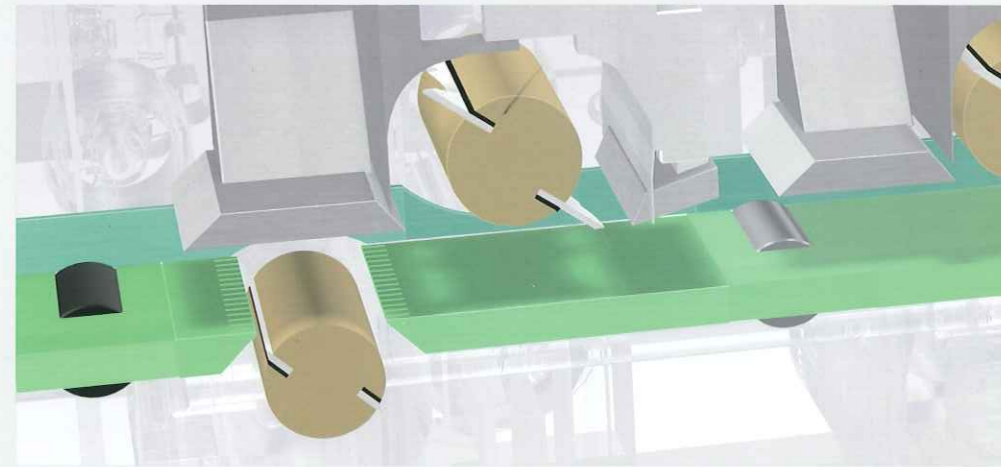
The ideal option for straightening short, and twisted parts and edge preparation of workpieces that vary in width or workpieces without square ends. The advantages:

- Straight workpieces
Precise parallelism.
- Glueable workpieces.
- Reduces or eliminates "snipe"
- Securely holds rough twisted workpieces.
- Short, out of square components can be planed or profiled.
- Twisted workpieces are straightened and machined to the proper thickness and width.



Powermat with WEINIG MarathonCoating: increases table plate life and decreases friction

WEINIG MarathonCoating is an environmentally friendly manufacturing process which protects table plates, fences, and pressure shoes against wear much better than conventional chrome plating. The coating adheres strongly to the table plate, resisting flaking found with chrome plated table plates. In addition, it is very resistant to corrosion, reduces friction and has a higher resistance to abrasion than chrome.



Powermat with cassette pressure shoe system: Precise workpiece control even with complicated profiles

Cassette system for replaceable counter profile hold down shoes

The cassette system ensures even, secure pressure over the entire profile contour. This brings advantages such as a better surface quality and a tremendous saving in set-up time because the cassette can be exchanged quickly, easily and accurately due to a stop bolt referencing system. The stop bolt allows fast, precise positioning of the cassette.

One set of adjustable pressure bars

(3 pieces) for profile depths 0 - 5 mm, 5 - 15 mm, 15 - 35 mm. This pressure system is flexible and easily adjustable to different profiles. The advantages: Better surface quality by precise positioning of the pressure bar on the profile and saving on set-up time by pre-set and easily exchangeable cassettes. The reference height can be found again easily by the reference bar that always contacts the highest point of the profile.

Chip breakers in front of the top spindle - receding away from the tool

The chip breaker in front of the top spindle is mounted on 2 pivots so that the pressure shoe not only adjusts upwards but also away from the tool cutting circle in an arc adjusting to thickness variations in the material being machined. The receding motion of the chip breaker maintains contact with the workpiece without allowing contact with the knives. The chip breaker is divided in the center so that pressure is maintained evenly in the case of edge to edge thickness variation in the material. This helps prevent the tool from being damaged by oversized wood.

Powermat with WEINIG feed system: Continuously through the entire machine

Chrome-plated feed rollers

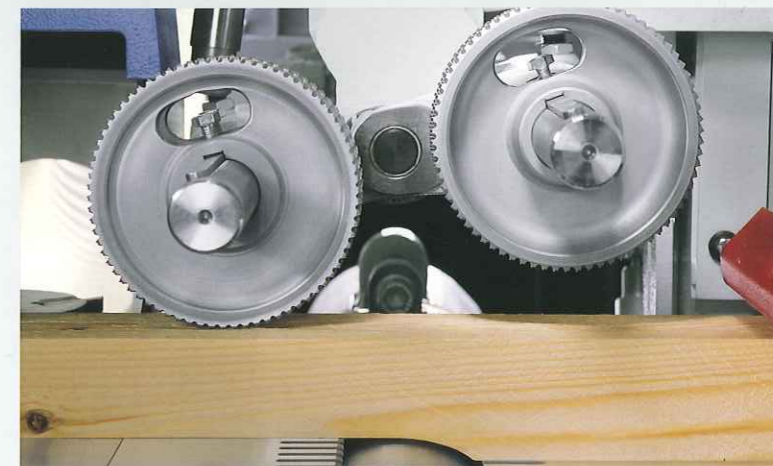
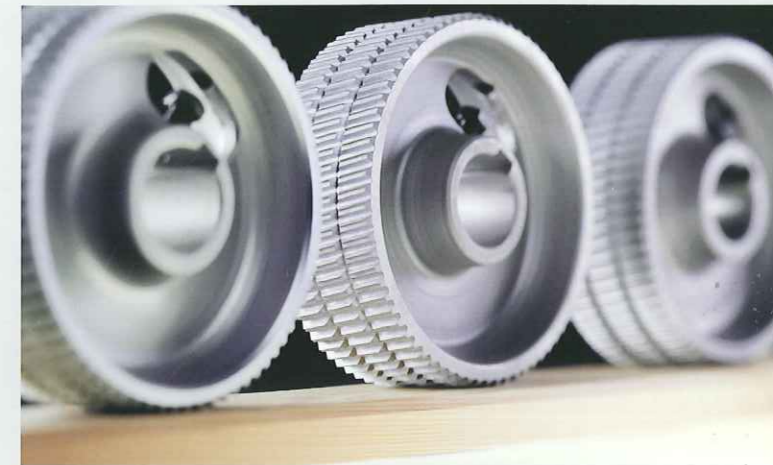
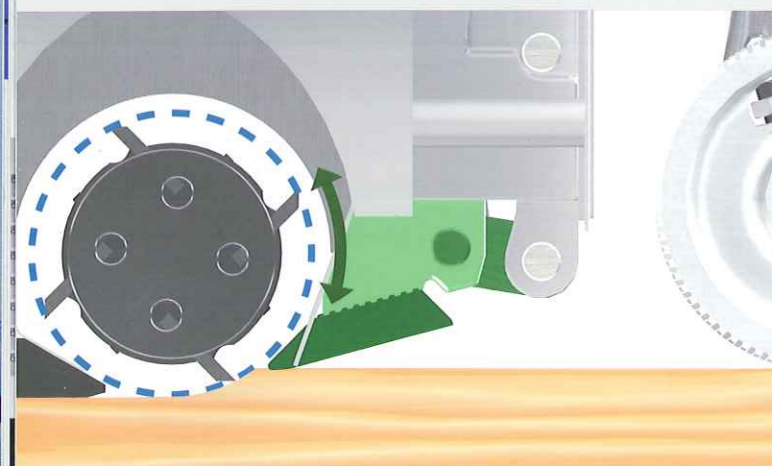
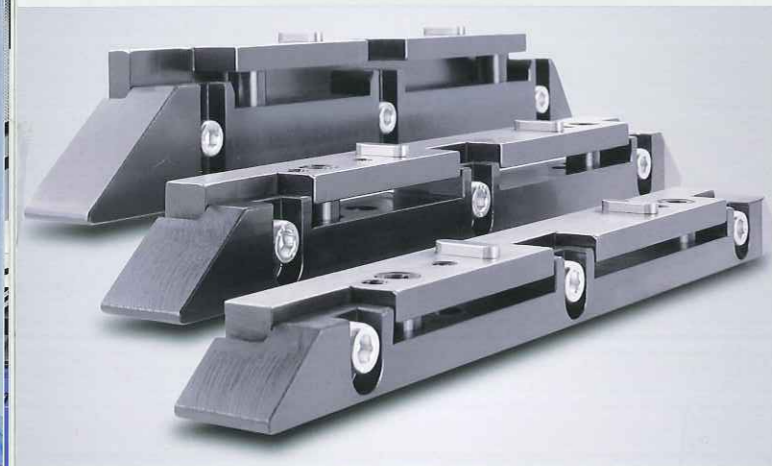
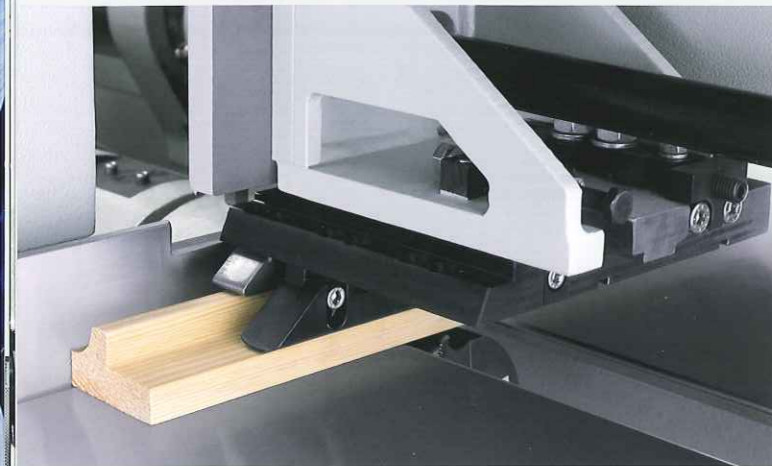
Whether machining wood, MDF or plastic, the WEINIG feed system ensures that you always get smooth, positive feeding of the material being machined. Special, patented depth limiting tooth design, chrome-plated feed rollers above the table and variable implementation of driven rollers in the table ensure a constant workpiece transport. The chainless cardan feed is robust, long lasting and virtually maintenance-free.

Pneumatic up/down controlled feed wheel before the 1st bottom cutterhead

A switch on the control panel positions this feed wheel depending whether the workpiece is to be straightened or planed. Straighten: Position "A" feed wheel raised—The wood is pushed by hand without pressure from above over the first bottom spindle. Planing: Position "B" feed wheel is down—The workpiece is contacted by the feed wheel and transported into the machine. The wood is pushed through and planed with a pre-set chip removal. The workpieces are only planed to dimension.

Reduced spacing of feed roller axes

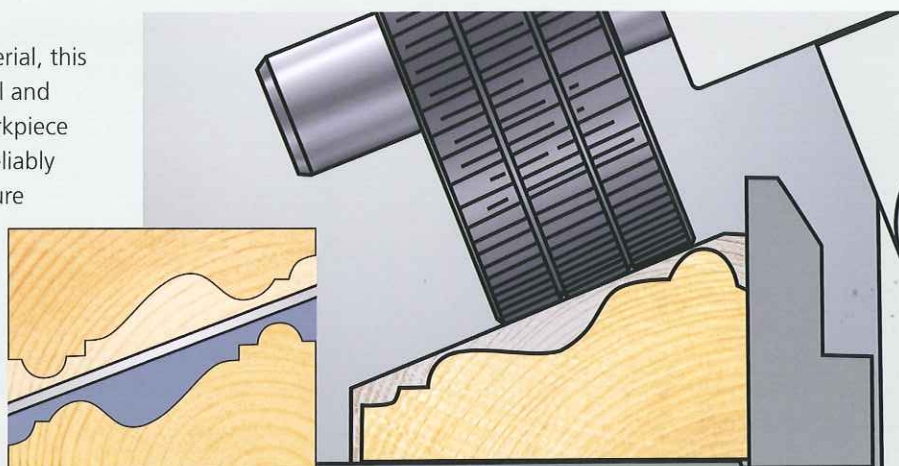
in the area of the top tool holder, including additional feed rollers in front of the right tool holders. Reduced distance feed unit by the right spindle. Permits positive feeding of short or narrow work pieces.



WEINIG Powermat Feed System: Safely through the entire moulder

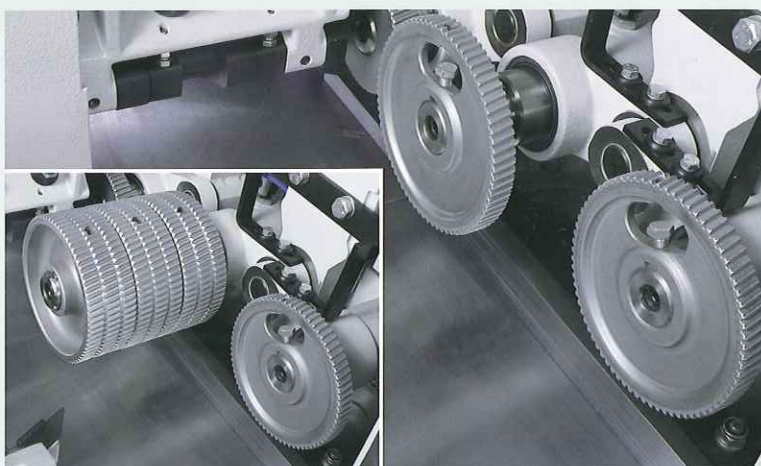
Tilt feed

When processing resawn or stepped edge-glued material, this technique saves an enormous amount of raw material and increases profit. In many instances, an additional workpiece can be gained by resawing. The workpieces are fed reliably through the machine. Tilting chip breakers and pressure shoes are all part of this system.



Adjustment of the feed wheel

Opposite the left tool holder, the axial adjustment of 35 mm. Controlled pressure on the workpieces directly in front of the left tool holder. Set-up time is saved because feed rollers are no longer bolted onto the machine. Fast, easy replacement of feed rollers of different widths (for narrow and wide parts). Note: The feed roller shaft can be extended to 150 mm.



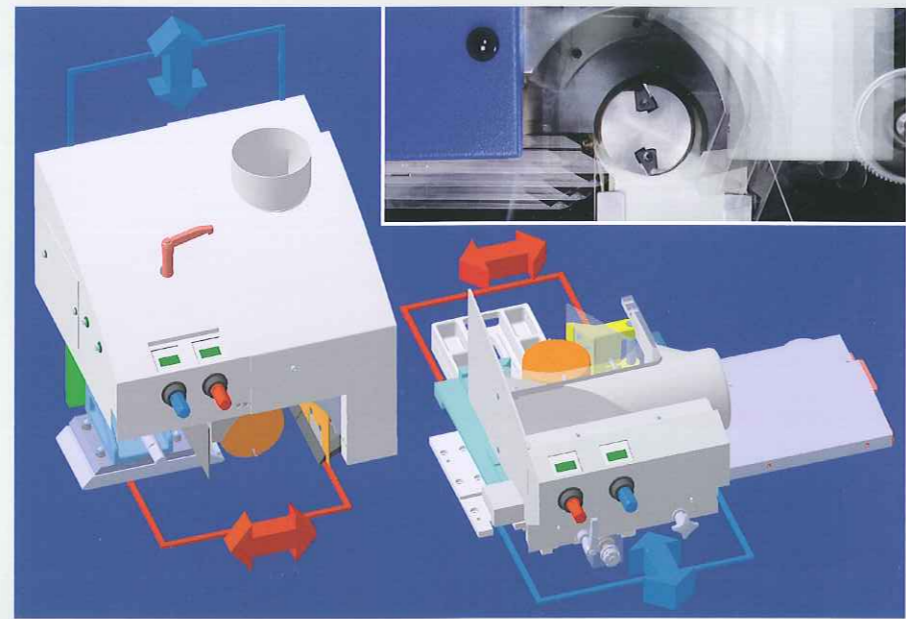
Driven table roller(s)

The rollers are located in the machine table directly below the driven feed rollers. All feed rollers and driven table rollers are powered by cardan drive shafts; all gears, no chains! The table roller has a scraper beneath the table for continuous cleaning to prevent foreign matter (such as resin and chips) accumulating on the roller and marking the finished surface. Safe transportation even if the wood is twisted: Reduces friction on the table, no wear on the roller.



Powermat with WEINIG hoods: Another advantage for the quality and set-up time

Forget the elaborate and time-consuming adjustment of the chip breaker and pressure shoes. Every time the tool diameter changes the hoods and pressure shoes of the Powermat are automatically adapted to the new dimensions. When the pressure elements are set correctly, surface quality is first-rate and chip removal is improved.



Powermat with improved noise protection: Quiet, safe working atmosphere

The improved sound insulation of the full safety enclosure means a considerable reduction in noise escaping into your factory. The wall thickness of the enclosure is approx. 85 mm with sheet metal on the outside and perforated steel on the inside. This construction dramatically reduces noise level. No additional space is required and ease of operation of the machine is not hampered.

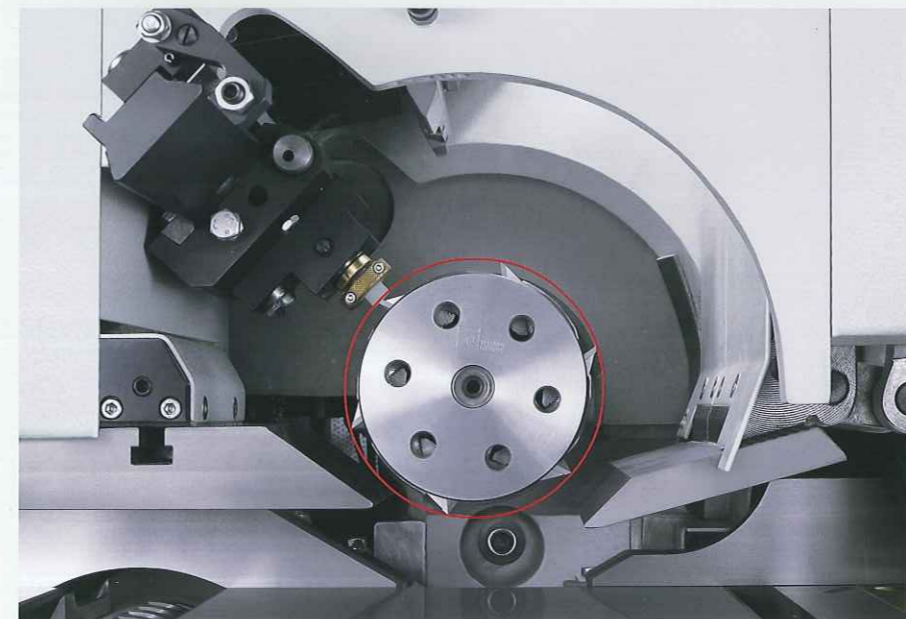


Powermat with 300 mm working width: Extended working width without the need for an outboard bearing



The Powermat offers you an extremely wide range of applications with minimum set-up times. This Powermat option makes it the most flexible machine for moulding both narrow and wide profiles. The high rigidity of the PowerLock system makes it possible.

Powermat with jointing system: Top quality with high feed speed



All knives in the cutterhead must be in exactly the same cutting circle for a superior surface finish at high feed speeds. The WEINIG Jointing System makes this happen. The PowerLock System with its extremely precise tool clamping works with WEINIG's superior jointing technology to produce the best surface finish in the industry.

WEINIG offers you a complete package: The right accessories to get the maximum return from your Powermat investment

WEINIG's concept consists of more than just the Powermat moulder. We offer tool room and moulder accessories to increase productivity and reduce the chance for mistakes. All together, the result is a complete solution that increases production and prepares you for the challenges of the future.



Measuring tools

By pre-measuring your cutterheads you save set-up time. Determine the tooling measurements with the WEINIG OptiControl measuring stand. Then the machine can be set up with one of WEINIG's control systems (Memory or PowerCom). It's as easy as 1...2...3!



Pre-setting the pressure shoe

To produce high quality profiles, you need control and solid support of the wood. Usually, this means a counter profile pressure shoe. WEINIG offers a cassette system that enables you to pre-set the counter profile in the tool room and then quickly lock it into position in the moulder. Fast, simple, and accurate.



Grinding, sharpening, profiling with the Rondamat

If you are able to offer quick delivery, you have a clear advantage. Custom-make and maintain your own profile or straight knives quickly. WEINIG has the right grinder for every requirement, from manual to fully automatic.



Jointer presetting

With this fixture, you are able to preset the jointing stones for the next run in an easily removable cassette in the tool room, while your Powermat continues to run on the current profile. When ready, take this cassette, with the pre-set jointing stone, to the moulder, secure it in place, joint the head. Fast, simple, and accurate!



Material handling with WEINIG HighMech

You need efficient material handling to maximize the enormous potential of the Powermat. We have the optimal solution for every requirement, from the feeding of the boards to the packaging of the final product.

Overview of the Powermat Series: Standards and options

This table shows the distinguishing features between the individual models. Your WEINIG expert will be pleased to provide you with even more detailed information when taking your individual requirements into consideration.



	Powermat 400	Powermat 500	Powermat 1000	Powermat 2000	Powermat 3000
Working height min./max.	8/120 mm	8/120 mm	20/160 mm	10/160 mm	10/160 mm
Working width min./max.	20/230 mm	20/230 mm	8/230 mm	20/230 mm	20/230 mm
Number of spindles	5 – 8	5 – 8	5 – 11*	5 – 11*	5 – 11
6.000 rpm PowerLock tool holder	●	—	—	—	—
8.000 rpm PowerLock tool holder	○	●	●	—	—
10.000 rpm PowerLock tool holder	—	○	—	○	—
12.000 rpm PowerLock tool holder	—	—	○	●	●
4.000 – 12.000 rpm PowerLock tool holder	—	—	○	○	○
Joining system in connection with 10,000 rpm	—	—	—	○	—
Memory system	●	●	—	—	—
PowerCom system	○	○	●	●	—
PowerCom plus	○	○	○	○	—
Electronic readouts	●	●	●	○	—
Fully automatic set-up	—	—	—	—	●
CNC-controlled spindle positioning	○	○	○	○	●
Receding chipbreaker in front of top tool holder	○	○	○	●	●
Vario hoods with centrally adjustable pressure elements (2 axes)	—	—	●	—	—
Vario hoods with automatically adjustable pressure elements (2 axes)	—	—	—	—	●
Max. tool diameter horizontal (not 1st bottom)	200 mm	200 mm/2nd bottom 225 mm	200 mm/2nd bottom 225 mm	250 mm	200 mm/2nd bottom 225 mm
Max. tool diameter vertical	200 mm	200 mm	200 mm	250 mm	232 mm
1 PowerLock tool holder, position of choice	●	●	●	—	—
Completely equipped with PowerLock tool holder	○	○	○	●	●
Universal tool holders (option)	1	1	2	2	1
300 mm working width without outboard bearing only in conjunction with PowerLock and max. 8,000 rpm	○*	○	○	○*	—
Frequency-controlled feed speed (standard)	5 – 30 m/min	5 – 30 m/min	5 – 30 m/min	6 – 36 m/min	6 – 36 m/min
Frequency-controlled feed speed (option)	—	6 – 36 m/min	6 – 36 m/min	60/80/100 m/min	—
Marathon coating for machine table	○	○	●	●	●
Max. motor HP on vertical spindle (standard – option)	5.5 – 15 KW (7.5 - 20 HP)	5.5 – 15 KW (7.5 - 20 HP)	5.5 – 15 KW (7.5 - 20 HP)	7.5 – 15 KW (10 - 20 HP)	7.5 – 15 KW (10 - 20 HP)
Max. motor HP on horizontal spindle (standard – option), 1st bottom spindle max. 18.5 KW (25 HP) (except P 400)	5.5 – 37 KW (7.5 - 50 HP)	4 – 15 KW (5.5 - 20 HP)	5.5 – 37 KW (7.5 - 50 HP)	7.5 – 37 KW (10 - 50 HP)	7.5 – 37 KW (10 - 50 HP)
Improved sound enclosure	○	○	○	●	●

Subject to technical modifications. The information and illustrations in this brochure also contain special equipment which is not part of the standard scope of delivery.

Protective covers have been partly removed to take the photographs.

*Special series on request

● Standard ○ Option

Powermat Series



MICHAEL WEINIG AG
Weinigstrasse 2/4
97941 Tauberbischofsheim
Germany

Phone +49 (0) 93 41 / 86-0
Fax +49 (0) 93 41 / 70 80
E-mail info@weinig.de
Internet www.weinig.com