

MIDI PRO

Woodturning Lathe

Original User Manual



© Drechselbedarf Schulte
Original-User Manual Version 2020-V1.0_ENG
MIDI-PRO





Dear Customer,

Thank you for choosing the **MIDI PRO** lathe.

The **MIDI PRO** is a lathe that combines innovation with tried-and-true methodologies.

The result of the cooperation of experienced woodturners and engineers is a great woodturning lathe, suitable for beginners, advanced turners, professionals, and artists alike, at an extremely good price / performance ratio. Continuous support is important to us. If you have any questions concerning our products or service, please call us or send us an e-mail.

We are happy to hear from you. Your experience enables us to further improve the quality of our lathes.

Yours Sincerely!

Please note:

Due to a continuous improvement process, the manufacturer reserves the right to make changes to the technical specifications at any time without prior notice and without incurring obligations on the manufacturer. No part of this document may be reproduced or transmitted in any form without express written permission, regardless of the means of doing so.

Drechselbedarf K. Schulte

Fachhandel für Drechselbedarf
Meppener Str. 111
DE-49744 Geeste – Gr. Hesepe

Tel.: +49(0)5937/913234 | Fax: +49(0)5937/913233
Mail: kontakt@drechselbedarf-schulte.de

www.drechselbedarf-schulte.de



EG-Directives

- EG Machinery Directive 2006/42/EG
- EG Directive on electromagnetic compatibility (EMC) 2004/108/EG
- EU Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) 2001/65/EU

Applied harmonised standards:

EN 62841-1:2015 + AC:2015;
EN 55014-1:2006+A1:2009+A2:2011; EN 55014-2:1997+A1:2001+A2:2008;
EN 61000-3-2:2014; EN 61000-3-3:2013; EN 50581:2012

Table of Contents

1 Warranty	4
2 Basic Health and Safety Instructions	4
3 Health and Safety Instructions for Woodturning Lathes	5
4 Safety Equipment	6
5 Inverter (FU)	7
6 Information on Noise Emission	7
7 Specifications.....	8
8 Functional Description	9
9 Installation Site Requirements	9
10 Lathe Description.....	10
11 Transport Packaging Contents.....	10
12 Assembly	11
13 Operating the lathe.....	12
14 Guidelines for Rotating Speeds	14
15 Lathe Spindle with Unwind-Protection-System (ASR-EUROLOCK)	16
16 Accessories (optional)	17
17 Working on Workpieces.....	18
18 Ergonomics	20
19 Care and Maintenance	21
20 Terms of Warranty.....	21
21 Decommissioning.....	22
22 Troubleshooting	22
23 EC – Declaration of Conformity	23
24 Exploded view.....	24
25 Partlist.....	25
26 Assembly bed extension (option)	26
27 Assembly of the ER25 quill (optional).....	27

Explanation of Symbols

	Wear eye protection		Wear a dust mask		Important Note
	Wear ear protection		Environmentally hazardous substances		Do not dispose together with domestic waste.
	Wear protective footwear		Imminent danger of health and serious injuries		
	Damage and/or danger to persons, lathes, material, or environment		Tips for economic use of lathe		

Introduction

This manual contains instructions for assembly, safety instructions, general operating instructions, maintenance instructions, and spare parts lists.

The design and construction of the **MIDI PRO** is designed to give you years of failure-free service, in consideration of the recommendations in this manual.

1 | Warranty

The product is subject to the implied warranty according to Austrian law at the time of delivery.

There is no basic claim for replacement or conversion.

In case of a complaint, we are available on weekdays (Monday to Friday) at our regular opening times.

2 | Basic Health and Safety Instructions



Please Note:

Failure to read and disregard of this instruction may result in serious injury. As with all machinery, operating a grinding machine can lead to dangerous situations. Careful use and handling can significantly reduce the risk of injury. On the other hand, neglecting basic precautions inevitably leads to user injury. The machine is designed exclusively for the recommended use. Therefore, the user is strongly advised not to carry out any work with the machine that is not intended by the manufacturer, or to make any changes whatsoever. If you have any questions regarding the use of the machine you cannot find an answer to, please contact your dealer.

Workplace Safety

- a. **Keep your workplace clean and well lit.** Messy or unlit workplaces can lead to accidents.
- b. **Do not use power tools in potentially explosive environments where flammable liquids, gases, or dusts are present.** Power tools may produce sparks which can ignite the dust or vapors.
- c. **Keep children and other people away while using the power tool.**
Distraction can cause you to lose control of the power tool.

Electrical Safety

- a) **The plug of the power tool must fit into the socket. The plug must not be changed in any way. Do not use adapter plugs together with electrically grounded power tools.** Unmodified plugs and matching sockets reduce the risk of an electric shock.
- b) **Avoid body contact with earthed or grounded surfaces such as pipes, heaters, stoves, and refrigerators.** There is an increased risk of an electric shock if your body is earthed or grounded.
- c) **Keep power tools away from rain or moisture.** Water entering a power tool increases the risk of an electric shock.
- d) **Do not misuse the power cord to carry the power tool, hang it up, or unplug it from the power outlet. Keep the cord away from heat, oil, sharp edges, or moving parts.** Damaged or entangled cords increase the risk of an electric shock.
- e) **If operating the power tool in a damp environment cannot be avoided, use a ground fault circuit interrupter.** Using a ground fault circuit interrupter reduces the risk of an electric shock.

Safety of Persons

- a. **Be attentive, pay attention to what you are doing, and use common sense when operating a power tool. Do not use a power tool when you are tired or under the influence of drugs, alcohol, or medication.** A moment of carelessness when using a power tool can cause serious injury.
- b. **Use personal protective equipment. Always wear eye protection.** Wearing personal protective equipment such as a dust mask, non-skid safety shoes, hard hat, or ear protection, depending on the type and use of the power tool, reduces the risk of personal injury.
- c. **Prevent unintentional starting. Ensure the power tool is switched off before connecting to power source and/or battery pack, picking up or carrying the tool.**
Carrying power tools with your finger on the switch or plugging power tools into the socket that have the switch on can cause accidents.
- d. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key attached to a rotating part of the power tool may result in personal injury.
- e. **Avoid an abnormal posture. Ensure secure footing and maintain balance at all times.** This enables better control of the power tool in unexpected situations.
- f. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewellery, or long hair can be caught in moving parts.
- g. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and used properly.** Using a dust extractor can reduce dust-related hazards.

- h. **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can lead to serious injuries within a fraction of a second.
- i.

Power Tool Use and Care

- a. **Do not overload the power tool. Use the appropriate power tool for your work.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b. **Do not use a power tool where the switch is defective.** A power tool that cannot be turned on or off is dangerous and must be repaired.
- c. **Disconnect the plug from the socket and / or remove the removable battery pack before making any adjustments to the device, changing the tool bits, or putting the power tool away.** This precaution prevents the unintentional start of the power tool.
- d. **Store idle power tools out of the reach of children, and do not allow persons unfamiliar with the power tool or its instructions to operate the power tool.** Power tools are dangerous when used by inexperienced people.
- e. **Maintain power tools and accessories with care. Check whether moving parts are working properly and are not jammed, and whether parts are broken or damaged to the extent that the function of the power tool is impaired. Have damaged parts repaired before using the power tool.** Many accidents are caused by poorly maintained power tools.
- f. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to jam, and easier to control.
- g. **Use the power tool, accessories, and tool bits, etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** The use of power tools for other than its intended applications can lead to dangerous situations.
- h. **Keep handles and gripping surfaces dry, clean, and free from oil and grease.** Slippery handles and gripping surfaces do not allow for safe handling and control of the tool in unexpected situations.
- i. Only connect the safety plug of the machines to a grounded power outlet. **Do not** turn on the machine if it is not earthed.

Service

- a. **Only have your power tool repaired by qualified personnel and only with original spare parts.** This ensures that the safety of the power tool is maintained.

3 | Health and Safety Instructions for Woodturning Lathes

- a. Use **personal protective equipment (PPE)**.



Ear protection: Wear ear protection for longer work. Various materials can produce an increased noise level during woodturning.



Eye Protection / Face Protection: Always wear protective goggles when working on the lathe. Always use full eye and face protection. Normal eyeglasses are usually only shock resistant and goggles only protect the eyes. A face shield protects eyes and face.



Respiratory Protection: Different types of wood, exotic wood-based materials, or other harmful substances, as well as certain applications such as sanding, sawing, drilling can produce dusts that are harmful to health. Therefore, operate the machines only in well-ventilated areas and wear respiratory protection (PPE). Use also a suitable dust extraction and / or filtration of the circulating air.

If you are using the woodturning lathe commercially, there must be a BG*-approved automatically switchable chip and dust segregation available. (*BG stands for German worker's safety board)

- b. **Make sure you understand the instructions before attempting to use the lathe.** If you are unfamiliar with the function of a lathe, get professional support. An instruction by an experienced and trained lathe operator is strongly recommended.
- c. **Minimum age.** The minimum age to use a lathe is 16 years.
- d. **Wear suitable clothing.**



Rotating parts can be dangerous. Do not wear loose clothing. Take off scarves, rings, bracelets, or other jewellery and clothing that may get caught in the rotating parts. Wear safety footwear and make sure the floor is non-slip. Wear a headgear / hairnet that protects long hair. Avoid wearing gloves that can catch during turning.

- e. **Do not work in damp and dangerous environment.** The lathe is designed exclusively for indoor use. Protect the lathe from hazy or damp locations. Do not expose the lathe to wet conditions. Ensure adequate lighting and ventilation of the workplace. Avoid areas with explosive atmospheres. Failure to comply with the rules may result in guarantee and warranty loss.
- f. **Keep your workplace clean.** Cluttered workplaces and tables cause accidents. Do not switch on the lathe until all objects (tools, pieces of wood, etc.) have been removed from the lathe. Keep the immediate work area and floor free from dirt and leftover debris. Sawdust is a fire and accident risk.
- g. In case of **power failure**, the workpiece is no longer slowed down. Run-down time may be longer.
- h. **Avoid unintentional starting.** Make sure that the main switch is in the "OFF" position when connecting the lathe to a safety socket.
- i. **Do not leave the lathe running unattended.** Do not leave the lathe until the power is turned off, and the machine has come to a complete stop.
- j. **Use appropriate tools.** Use only suitable tools or accessories for woodturning. Avoid unnecessary force of the tool. Keep the tools in good condition. Sharp and clean tools guarantee best and safe results. Ensure that the tool is in the correct position to the workpiece.
- k. **Working on the lathe.** When the electrical voltage is switched off, check the spindle by turning it with your hand to see whether the workpiece can move freely.
Check that the workpiece is not damaged to prevent a break-out of the workpiece during turning.

When using adhesives, even cyanoacrylate superglues, bear in mind that they can still be liquid in voids or wide cracks even after hours of drying. During turning it could leak due to the centrifugal forces, and fly in the direction of the chip flight, i.e. in the direction of the turner, posing a risk to injury or health.

Always check that the correct speed is set before switching on the lathe.

Use the lowest speed on new or out-of-balance workpieces.

Always turn at the recommended speed. For more information see page XXX.

Do not try to slow down workpieces by hand.

Place the tool rest as close as possible (about 5-10 mm) to the workpiece. Before each start, rotate the workpiece by hand to make sure that it runs freely. From time to time, turn off the lathe to reset the tool rest.

- l. Pay attention to secure footing (foot position, balance).
- m. Make sure there is enough work space around the lathe. Untidy work surfaces and floors can lead to injuries.
- n. Use only original accessories and follow the steps in the Instruction Manual. Using accessories from other manufacturers may result in injuries.

4 | Safety Equipment

Safety equipment serves to protect persons and property. Without intact safety equipment serious injuries could follow.



Danger!

The lathe may only be operated with functioning safety devices. Switch off the lathe immediately if you discover that a safety device is faulty or disassembled! All additionally installed systems must be equipped with the prescribed safety devices.

Warning signs on the lathe

All warning signs on the lathe are for your safety. Always keep them readable and pay attention to their meaning.



Overview of further safety equipment

The lathe has various safety devices:



1. Electrical earth conductor, which is connected to the local power supply system via the safety plug.
2. Cover plate on the pulley drive. Access only possible with tools.
3. Covers on the electric motor.
4. Emergency stop button on the mobile switch unit.

EMERGENCY STOP / ON and OFF Button

The lathe has a red combination switch (0), which can trigger an **EMERGENCY STOP**, as well as can be turned off normally. By pressing the **red** button (0) all lathe functions are stopped.

To restart, press the **green** ON button (I). The toggle switch activates the reverse rotation. Use the potentiometer to control the engine speed.



The main control box has a magnetic back enabling it to be positioned anywhere on the lathe bed or flat metal surfaces.



Caution!

Use the reverse rotation when using a chuck, face plate, etc. only with an unwind-protection system (ask your specialist dealer if necessary).

5 | Inverter (FU)



The inverter is very quiet and programmed ready for use. Do not make any changes to the inverter yourself. The knurled screw or programming screw on the rear of the drive may only be operated by qualified personnel. Speed changes on the lathe by the user or turner may only be made using the potentiometer on the mobile control box with the magnetic base.

The inverter (FU) is programmed with a soft start and stop. You cannot shorten the ramp-down time with the handwheel, just let the workpiece come to a stop after turning off the machine.

6 | Information on Noise Emission

The measurement is carried out in accordance to the standards DIN EN ISO 3744: 1995-11 and DIN EN ISO 11203: 1996-07.

Although there is a link between the different emission levels, it cannot reliably be used to determine whether further precautionary measures are needed. Factors influencing workplace noise may include duration of work, workshop size, and other sources of noise (such as the number of concurrently powered machines, or noisy work carried out at the same time). The acceptable exposure rates may vary from country to country. For all these reasons, we recommend the user to use appropriate ear protection while working with the machine.

7 | Specifications

Dimensions

Length x Height x Width1,160 mm x 470 mm x 420 mm

Weight

Lathe..... ca. 67.0 kg

Distance between Centres

Distance between centres with bed extension 230 mm (optional) ca. 450 mm

Distance between centres with bed extension 2x 230 mm (optional) ca. 680 mm

Distance between centres with bed extension 2x 230 mm (optional) ca. 910 mm

Centre height..... ca. 178 mm

Headstock

Spindle threadM33 x 3.5 mm

Spindle taperSpindle Taper MT 2 with 10 mm through hole in the headstock

Indexing system 24-step (each 15 Grad)

Drive

..... ~230 Volt, three-phase asynchronous motor, IP54, 1,420 rpm, 50 Hz 750 W

Speed control is infinitely variable through the potentiometer on the electronics.

Power Supply

.....230 Volt ~ 1/N/PE 50 Hz

Speed (rpm on the spindle)

..... step L 60 – 1,000 rpm

..... step M 150 – 1,900 rpm

..... step S 350 – 3,700 rpm

by changing the poly-V-belt

Tailstock

Boring Tailstock Taper MT 2 with 9 mm through hole

Quill travel.....100 mm with scale

Toolrest

..... 250 mm with 1" shaft (25.4 mm)

Emission Sound Pressure Level

..... <79 dB (A)

Basic Equipment

250 mm toolrest, 80 mm face plate, live centre MT2, 25 mm 4-prong spur centre, open-ended wrench for loosening the face plate, knock-out bar and English instruction manual.

Optional Accessories:

- Interchangeable quill for ER25 collets
- Lathe bed extension (230 mm)
- Quick-change system

Typschild

Modell / type	MIDI PRO (1417N-INV)
Motor / power	3 ~ 230V 50 Hz 750W / 1PS
Techn. Daten / specification	0 – 3.700 U/min (RPM) / M33 x 3.5 mm / MK2 / MT2
Baujahr / year	
Gewicht / weight	67 kg
Seriennummer / serial number	
Hersteller / manufacturer	Drehsselbedarf Schulte Meppener Str. 111 DE-49744 Geeste - Gr. Hesepe Germany

8 | Functional Description

A lathe is a machine used to turn mostly cylindrical or prismatic pieces of wood. For this, the workpieces are clamped with special fixing devices between the headstock and tailstock, or with special clamping devices (chuck, faceplate, etc.), and driven via an electric motor.

The lathe is powered by the electric motor via pulleys on the spindle. There are three speed steps (transmissions) on the **MIDI PRO** that you can select. The engine speed is fine-tuned with an inverter, which is controlled by a potentiometer (POT) on the mobile control box, so that you can infinitely adjust the engine speed in the respective speed group. This helps you to choose the appropriate peripheral speed to the workpiece diameter. This improves the security during turning and the quality of the workpiece surface.

To switch on the drive unit, you have to plug-in the main cable into a grounded socket. Switch on the motor from the mobile control box and adjust the engine speed on the potentiometer.

Automatic Shutdown

The **MIDI PRO** is equipped with a zero-voltage switch, which shuts down the lathe in the event of a power failure and prevents a restart when power is restored. The rotating can also be turned off on the inverter in the event of an overload during turning. In any case, the cause must be eliminated in order to restart the lathe. In the event of a power failure, the power supply must be restored and in case of an overload, the speed must be reduced or a pulley with lower speed specification must be selected.

The turning tools are guided by hand to the workpiece with the support of the tool rest, which holds a risk of injury, as the cutting forces that occur must be absorbed by the operator.

In order to deflect the resulting forces, the turning knives must constantly rest firmly on the tool rest.

It is important that you carefully read the operating instructions before using the lathe for the first time in order to familiarize yourself with the dangers that may arise from operating the machine (in particular rotating parts, forces, and risks of injury).

If you do not have any experience in turning yet, familiarize yourself with the lathe before starting to work. Ask professional turners and let them instruct you.

Various dealers offer basic courses and advanced turning courses.

9 | Installation Site Requirements

Requirement	Recommendation
Lathe Installation Site	Place the lathe near a power source (grounded outlet). Make sure the ground is level, firm, and has sufficient load capacity. Leave enough space around the lathe. Make sure there is enough room for the rotating headstock, the bed extension, optional accessories, and / or an outboard turning device. Other machines installed in the workshop must not influence the operation of the lathe.
Lighting and Ventilation	Pay attention to good lighting (illumination levels according to DIN 5035) and ventilation. In addition, use adjustable lighting for your work area on the lathe, so that shadows are not cast on the workpiece. We recommend the installation of a light source with a value of at least 300 LUX, better 500 LUX, at the cutting edge of the tool. If possible, place the lathe near a window.
Electrical Equipment	In order to operate the lathe, a suitable household 230 V socket protected by a 16 amp fuse is required. Electrical cables and sockets must comply with local electrical codes. In case of doubt ask your electrician. Avoid using an extension cord.
Ventilation	Ventilate your workplace adequately. The degree of ventilation depends on the size of the workshop and the number of finished workpieces. The use of dust extractors and filters reduces your health risk.
Working Height	The lathe must be positioned at a working height so that the centre of the spindle is at the level of the user's elbow.
Working Space	When fixing the lathe to the table or ground, free space of at least 80 cm around the lathe is required for repair and maintenance work.
Lathe Stand (optional)	The lathe is intended to use without a stand, the operator must select a suitable installation area.

10 | Lathe Description



1 Headstock		2.3	Threaded holes for bed extension
1.1 Headstock wheel		2.4	Magnetic cover
1.2 Motor pulley access panel		2.5	Rubber feet, adjustable
1.3 Spindle with M33 thread and ASR Groove		3 Tailstock	
1.4 Faceplate (is mounted on the lathe spindle)		3.1 Tailstock wheel	
1.5 Spur centre		3.2 Ratched knob for quill-fixing (backside)	
1.6 Motor		3.3 Quill	
1.7 Stretcher for pulley (backside)		3.4 Live centre	
1.8 Ratchet knob for motor fixing		3.5 Tailstock locking handle (backside)	
1.9 Digital rpm-readout			
1.10 Inverter			
2 Lathe bed		4 Toolrest Banjo	
2.1 Carrying handles		4.1 Banjo lock handle	
2.2 Mobile control box		4.2 Toolrest lock	
		4.3 Toolrest	

11 | Transport Packaging Contents



- A** Lathe bed with headstock, tailstock, tool rest banjo
- B** Inverter
- C** Protective case for inverter
- D** 80 mm faceplate with M33 x 3.5 mm thread and two 5 mm grub screws
- E** 25 mm MT2 4-prong spur centre and MT2 live centre and double-sided MT2
- F** mobile control box with magnetic back

Accessories, packed in the top cover

- G** Knock-out bar
- H** Carrying handles with screws
- I** Magnetic locking pin (for spindle and 24-step indexing ring)
- J** 3/8" x 50 mm height-adjustable rubber feet
- K** 3/8" x 50 mm screws for fixed screwing
- L** Toolrest 250 mm with 1"-shaft (25.4 mm)
- M** Open-ended wrench for releasing the faceplate from the spindle
- N** Magnetic cover for front bed-opening
- O** Stretcher for pulley with spring washer
- P** Hex key #3 and #4



12 | Assembly

Caution!



- Pay attention to the weight of the individual components and handle these carefully to avoid injury.

- Make sure that all screw connections are tightened firmly but not over-tightened. After eight operating hours, all screw connections must be checked for tightness.

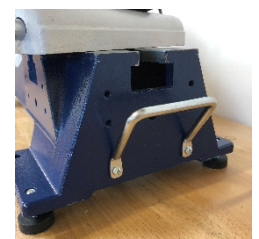
Lathe Assembly

Lift the **MIDI PRO** lathe out of the polystyrene packaging onto a sufficiently stable surface, with help of a second person. Pay attention to the already connected cables of the inverter and mobile control box.

Assembly of the rubber feet and the 2nd carrying handle

Ideally you start the assembly with the rubber feet and the 2nd carrying handle. For all further steps you can move the machine better and more comfortable and do no damage to surfaces.

The carrying handle and necessary parts can be found in a compartment of the upper styrofoam shell.



Assembly of the inverter (FU)

The inverter has its place at the back of the spindlestock. Remove screw „a“ and loose screw „b“ (Fig. 9). Now you can place in the inverter on the lower screw (b), the upper screw (a) goes through the drilling and will fixed loosely on the spindlestock. There should remain a clearance of 4-5 mm (Fig. 10). Slide in the protective case on the inverter from the upper side. The housing gets clamped between spindle stock and inverter (Fig. 11 + 12). Now tighten both screws to its final tightness (Fig. 13 + 14).

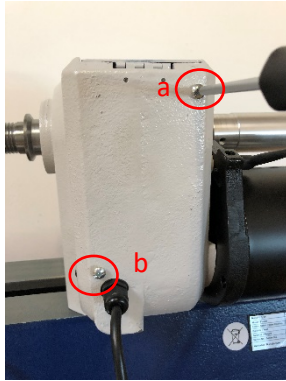


Fig. 9



Fig. 10



Fig. 11



Fig. 12



Fig. 13



Fig. 14

Finally mount the pulley-stretching handle with the spring washer on the motor-flange. The spring washer prevents it from getting loose.



Fig. 15



After 8-10 hours of operation, check all screw connections again and retighten them if necessary.

13 | Operating the lathe

Headstock

The headstock consists of the drive unit (electric motor) with the motor locking handle and tensioning lever for loosening the belt, the belt pulleys with transmission, the spindle with M33 x 3.5 mm thread, as well as a Morse taper 2 (MT2), a spindle locking pin (locks at 45 ° and 90 °), a 24-step indexing pin (engages every 15° degrees), the motor pulley access panel with window for 24-step indexing, a locking handle for access panel, the headstock wheel, a headstock locking handle, a digital speed indicator in rpm on the spindle, and the headstock pivot lock.



Morse Taper

The Morse taper is a standardized tool taper. Different attachments are friction-locked in the spindle and quill. For woodturning lathes the common sizes are MT1 (small turning lathes), MT2 (small, medium, and larger lathes), and MT3 (larger lathes).



Decisive for the best possible power transmission is a clean fit of the taper in the hollow shaft. Even the slightest contamination can lead to injuries in the shaft (of the headstock / quill). Therefore, make sure to clean both the taper and the hollow shaft of the spindle / quill at **each** tool change. Use a dry, clean rag or bottle brush and avoid oils and greases as these will reduce the friction locking.

It is sufficient to hand-drive tools into the shaft. It does not require any additional impact.

Changing the 4-prong spur centre

With the supplied knock-out bar, the 4-prong spur centre can be pushed out from behind through the hollow spindle shaft. First try to eject the 4-prong by slowly pushing it, while carefully holding the spur centre on the outside with your other hand. Do not hold the 4-prong at the tip, as injuries would be the result.



Changing the live centre

The live centre can be ejected by turning the tailstock wheel counter clockwise. Alternatively, it can also be ejected from behind with the knock-out bar.

To prevent tools from falling off, hold them on the outside with your free hand.

Tailstock

Never loosen the tailstock quill or the tailstock itself, as long as the workpiece is rotating. The tailstock is equipped with an MT2 quill. The quill guide is equipped with a quick locking handle, which must always be locked with the wheel after clamping the workpiece. Next to the quick release lever is a nut for readjusting the quill. At the rear of the tailstock, the handle for locking the tailstock is mounted on the lathe bed. It can be removed by loosening the lock ring and, if desired, can be placed on the front of the tailstock.



Regularly make sure that the tailstock is firmly locked on the lathe bed. The tailstock guarantees a perfect alignment between the live and spur centres. This guarantees low-vibration when turning and is the best prerequisite for exact drilling with the tailstock.

To move the tailstock along the lathe bed, loosen the locking handle and move the tailstock to the desired position and lock it there again.

To turn the quill of the tailstock in or out, loosen the quick locking handle of the quill and turn the tailstock wheel. The quill can be used with live centres and tools with an MT2 taper. To mount the tool, quickly and firmly insert it into the quill shaft by hand. Do not bang accessories (e.g. live centres, drill chucks) into the shaft.

Make sure that the tools you are using sit firmly in the MT. There are tools available with a longer Morse taper. – here it is very likely, that the tool is not held by the cone at scale "0". In those cases wind the quill until the taper is held tightly.

Caution: There is a potential risk from the live centre if not in usage.

Always remove the live centre if not in use.

Tool Rest

After loosening the banjo locking handle, the tool rest banjo can be moved to the desired position on the lathe bed and is locked there again.

Move the tool rest close to the workpiece. Each turner will choose their most favourable setting. Before switching on the lathe, turn the workpiece by hand to make sure there is no contact with the tool rest. When turning, the lathe should be stopped at intervals to readjust the tool rest.



Danger!

- As long as turning tools are in contact with the workpiece, they must rest firmly on the tool rest.
- To avoid pinching the fingers during grinding or polishing, the tool rest must be moved away from the workpiece.

Locking the spindle

The lathe is equipped with an 80 mm face plate. Before loosening the faceplate, open the two hexagon socket screws, which serve as an unwind protection device.

To block the spindle, insert the spindle locking bolt into the hole on the spindle.

With the help of the open-end wrench, you can now loosen the face plate.



Make sure that you do not turn on the engine during the locking process.



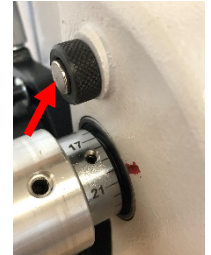
24- step indexing system

By inserting the magnetic pin (red arrow), the 24-step indexing system engages. This allows a uniform division of 15° steps during one rotation of the spindle.

With this system, the spindle can be divided 24, 12, 8, 6, 4, and 2 times per rotation.



Make sure that the mains plug is disconnected. Do not turn on the engine during the locking process.



The respective fixing you can read either on the large pulley-wheel inside, or from the hand-wheel outside.

Adjusting Device (Eccentric Clamp)

If the headstock, tailstock or tool rest banjo cannot be firmly fixed to the lathe bed, an adjustment of the eccentric clamp is required. Pull the headstock, tailstock or tool rest banjo to the end of the lathe bed and slightly tighten the check nut.



14 | Guidelines for Rotating Speeds

The following information is approximate and must not necessarily be adhered to. The type of wood and hardness, different density, moisture content, longitudinal or cross grain, etc. are particularly important for rotating speeds.

Workpiece diameter	Roughing rpm	Turning rpm	Final sanding rpm
up to 5 cm	1500	2500 – 3200	2500 – 3200
5 – 10 cm	750	1600	1600 – 2400
10 – 15 cm	500	1000	1000 – 1650
15 – 20 cm	350	800	800 – 1200
20 – 25 cm	300	650	650 – 1000
25 – 30 cm	250	500	500 – 830
30 – 35 cm	220	450	450 – 710

For the above reasons we cannot extend any warranty for the accuracy of the speed information. If you have questions about the lathe and the topic "woodturning" please do not hesitate to contact us.

Recommended speed range for general woodturning work

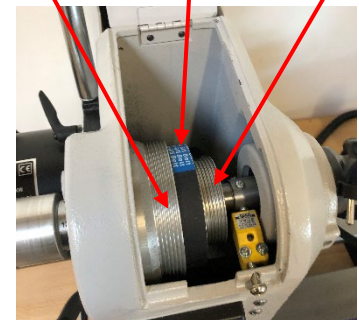


Speed range via belt pulley change

The motor drives the pulleys of the spindle via three belt pulleys using poly-V-belts.

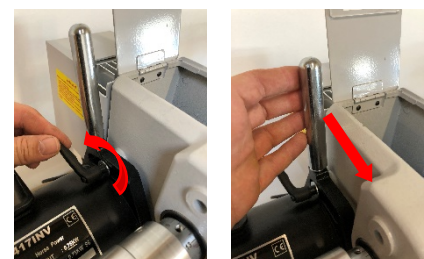
A slower belt speed is needed when working with larger workpiece diameters to maintain optimum torque. This means, if you have been turning e.g. a spinning top or similar, on the fast belt speed and then want to turn a bowl with a diameter of 30 cm or more, the engine power can decrease under heavy use. In this case another speed range must be selected.

Step L Step M Step S



Under the access panel on the headstock there are three belt pulleys with which you can choose between the three speed ranges.

1. Disconnect the power plug and then open the access panel on the headstock.
2. Release the locking handle on the motor flange. Pull the motor to the front. This will release the tension of the poly-V-belt.
3. Now place the belt on the corresponding belt pulleys on the motor and spindle.



The following speeds result from:

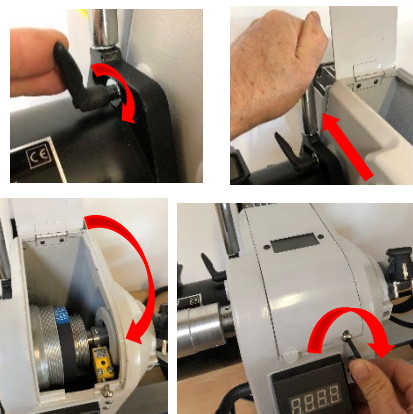
- Step L for 60 – 1,000 rpm
- Step M for 150 – 1,900 rpm
- Step S for 350 – 3,700 rpm

4. Then push the motor back using the locking handle to tighten the belt pulley.

Secure this position again with the motor locking handle.

5. Close the access panel of the spindle head and secure the hexagon socket screw with the hexagon wrench.

Now you can plug in the mains plug again. The new speed range is available.



Aligning spindle- and tailstock.

To turn the spindlestock, open the fixing knob at the frontside and pull it towards you. With the left hand unlock the spindle stock on the clamping lever left and turn it that way to get it aligned with the tailstock.

Place the double-sided MT2 tool (H) into the tailstock and push it gently into the spindle. This should effect without resistance.

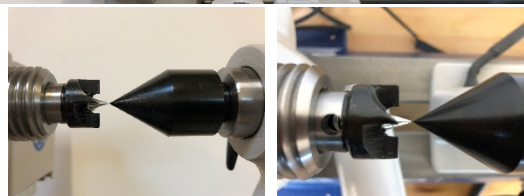


Align spindle- and tailstock. Once quill and spindle are in line, fix the tailstock with the clamping lever.

Push the fixing lever slowly down and take care, the spindle stock shall not turn during this procedure.



Of course, you can align spindle- and tailstock also with 4-prong spur centre and live centre. Therefore you release the spindle stock as described above and align both tips as shown. After adjusting tighten the spindle stock.



Attention!

Above described procedure has to be done after **every** time you turned the spindle stock, for example after using the bed extension.

15 | Lathe Spindle with Unwind-Protection-System (ASR-EUROLOCK)

ASR-EUROLOCK Locking Ring

In order to meet future safety standards, your woodturning lathe has already been designed with an ASR-EUROLOCK spindle.

When used with ASR-EUROLOCK accessories, a fixed clamping of spindle and accessories is enabled. Especially when working on larger workpieces, this effectively protects the accessories from unwinding from the spindle thread.



Fig. ASR-EUROLOCK Locking Ring # 035980



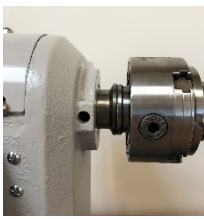
Fig. Accessory with unwind-protection-system



Fig. Form fit



Fig. Secured locking ring.



16 | Accessories (optional)

MIDI PRO Bed extension 230 mm

[035154]

This compact casted bed extension can get mounted on both sides of the main-bed as well as on the front cut-out.

Length: 230 mm

Once mounted to the front, the stability of the lathe increases significantly.

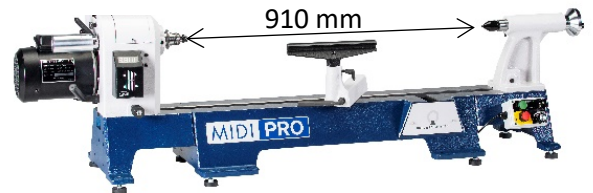
The special construction of the lathe bed allows easy movement of the banjo in all directions. An ergonomic working position is guaranteed.



When using the additional bed you can extend the distance between centres by 230 mm, or the footprint.



When using two additional beds you can extend the distance between centres by 460 mm.



- Fix the bed extension loosely to the lathe bed. Use the delivered washer and spring washer for permanent tightness.
- Place the bed extension at its position and tighten all screws by hand.

Attention: For an easy movement of the tailstock over the joint, a perfect alignment is crucial.

Note: Before you fix the bed extension with the lathe bed, slide the tailstock over the joint and clamp it down with the clamping lever. This aligns bed extension and lathe bed.

- If some force is required for alignment, use a nylon hammer or a standard hammer with a wooden board to align bed extension and lathe bed. Do not use a metal hammer on the bed or bed extension.
- Finally tighten all screws to its final tightness and take care the alignment remains.

Quick changing system „EASY“ for MIDI PRO

[035160]

This handy system enables a quick change of the mounting position of the bed extension.

It contains 2 pcs. receiving plates for the lathe bed and one hooked plate for the bed extension.

The system comes with all necessary screws and parts.

Tailstock quill for ER25 collet system

[035170]

The quill-quick change system on the tailstock for MIDI 2 and MIDI PRO enables the user to utilize high-grade ER25 collets.

Drillbits, Forstnerbits and other tools with straight shafts can be clamped directly in the tailstock with ER25 collets. No usage of drill-chucks is necessary, no shortage of distance between centres.



ASR-EUROLOCK Locking Ring

[035980]

A lathe with M33 x 3.5 thread WITH ASR-EUROLOCK flange, as well as accessories (chuck, face plate, etc.) also with ASR-EUROLOCK counter-flange are the preconditions for the usage of the Locking Ring!

Function:

The mounted ring physically connects the flange on the spindle with the counter-flange on the accessories and prevents unwinding during operation or during ramp-down phase.



Working on Workpieces

Danger!



- Always wear eye protection
- Make sure the workpiece is securely mounted. Always start with a slower engine speed and increase it to the optimum rotating speed.
- Out-of-balance workpieces can unwind from the lathe at too high engine speeds and seriously injure you.
- After the EMERGENCY STOP button has been pressed, the lathe slowly slows down the speed to zero. Do not try to stop the workpiece by hand during the ramp-down phase. High risk of injury from splinters and overheating!
- Fingers could get pinched between workpiece and tool rest.

Caution!



- In case of power failure, the workpiece is no longer slowed down. Ramp-down time may take longer.
- The 4-prong spur centre must hold the workpiece securely. Use the 4-prong spur centre and a mullet to pre-mark the workpiece.
- Use an intermediate support (steady rest) for long and thin, or long workpieces, especially when the workpiece starts vibrating.
- Use the woodturning tools carefully. Make sure to rest the tools on the tool rest before moving them towards the workpiece.
- When working with dangerous types of wood, always use an extraction device or respiratory mask, and wear eye protection.
- Do not use heavy, out-of-balance workpieces. Immediately switch off the lathe when vibrations occur.



- Do not use any workpieces with cracks or insufficient strength (e.g. due to rot)
- Mount the workpiece securely.
- Select the chuck according to the state-of-the-art.
- Select the turning speed according to the diameter of the workpiece. Use the recommendations based on the provided engine speed table (see page 14/15)

Pay special attention to the mounting of the workpiece. It has to be as safe as possible. There are different possibilities for this. Consult specialist books, look for training opportunities, or attend a woodturning class.

Pay particular attention to safety and out-of-balance workpieces. Use a balanced speed, clamp the workpiece securely, and try to remove the imbalance of the workpiece as far as possible before mounting it.

Mounting blanks for spindle turning between centres

Optimal centring is indispensable, especially for larger workpieces, to minimize the imbalance. A deep drive of the 4-prong also increases the secure hold of the workpiece during turning.

Take a square piece of timber and first find the centre at both ends. To do this, connect the endpoints with a diagonal pencil line. Alternatively, centre finders are commercially available.

Then place the timber on a solid surface and hit the 4-prong exactly in the middle of the timber with a wood, rubber, or Teflon hammer. This gives you 4 deep marks at one end of the timber, where the 4-prong can easily drive into the workpiece and hold it safely without slipping.

Insert the 4-prong into the spindle and make sure it is tightly mounted. Fit the marked timber into the 4-prong, push the tailstock towards the timber and lock it firmly on the lathe bed with the locking handle on the back. By turning the tailstock wheel, drive the live centre into the middle of the other end of the timber. Finally, lock the quill with the quill locking handle.

Do not push the workpiece on to the 4-prong with the tailstock, as this puts unnecessary pressure on the tail- and headstock, and unnecessarily impedes the drive of the 4-prong into the timber, particularly when using hard wood.

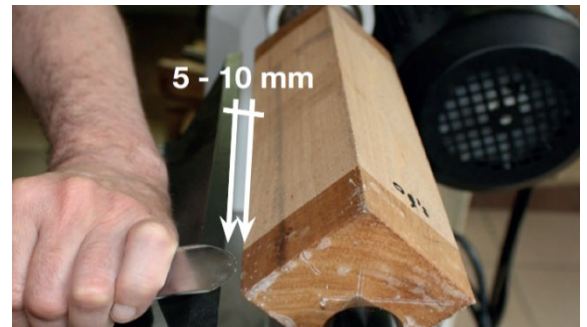
Your blank is now expertly clamped and ready for turning.



Adjusting the tool rest

The tool rest banjo is fixed in front of the workpiece with the locking handle. Adjust the tool rest so that the wood can rotate freely. The gap between the workpiece and the tool rest should be approx. 5-10 mm. Lock it with the tool rest lock.

As a general rule, the wood should be cut with the tool. If a too low speed is selected, the wood will "hammer" against the tool and tear out, and considerable forces will be exerted on the tool and workpiece. This can lead to dangerous situations. Therefore, it is better to choose a suitable speed (see p.15), which will give you a better cut and less force on the workpiece. Compare it to working with a planer. If the planer is guided very slowly, it is much more difficult to cut the fibres.



Roughing Gouge, "German" form

With the roughing gouge a square or slightly rectangular spindle blank can be cut into the cylindrical shape. We distinguish the English "U-shape" and the German "flat-forged" roughing gouge. The English roughing gouge is used only for spindle blanks, while the German form can also be used for bowl blanks on the top and bottom.

Spindle Gouge

The spindle gouge is used for shaping large and small shapes such as coves, beads, ogees, etc. and for the last cut on spindle work.

Changes in the diameter of the workpiece are partly compensated by adjusting the forearm.

Spindle gouges always cut the spindle slightly above the centre of the workpiece. Spindle gouges are almost always used slightly vertically and they always cut ONLY with the underside, near the front curve, the cutting edge. Also, bevel contact must be maintained when cutting with the spindle gouge.

The "German" form roughing gouge can be used for bowl turning on the bottom of the workpieces, however, nowadays bowl turning gouges are almost exclusively used for this. See also the video "Einführung in die Grundlagen des Drehselns" (Introduction to the basics of woodturning) (Art. DS914841).

Position of the tool rest for spindle blanks

When roughing, set the tool rest slightly below the spindle centre so that the tool can engage slightly above the centre. The roughing gouge is used until the unbalance is removed.

To shape the blank, a roughing or spindle gouge is used. It engages clearly above the centre of the workpiece.

Cylindrical shapes can be smoothed with the skew. Again, the skew engages clearly above the centre of the workpiece. So-called "flats" are turned with the beading or parting tool.

The tool initially engages again above the middle.



Mounting bowl-turning blanks on a faceplate

Bowl blanks must be pre-shaped as round as possible with a band saw before mounting on the lathe. This facilitates the start of the turning and reduces vibrations. To mount a pre-shaped blank on a faceplate or a chuck, you need a flat surface. Hollow or curved surfaces may need to be planed. Faceplates are screwed onto the blank with at least 6 wood screws. Especially for larger workpieces, the faceplate is the safer method for initial mounting.

Modern chucks allow mounting by means of wormwood screws or corresponding drill holes. When using chucks, read the instruction manual of the respective chuck.



Standard and Oval Skew

Standard skews are traditional tools and have always been used for particularly fine surfaces for spindle turning.

Oval skews have only been available since the late 1970s and were developed for cutting elongated coves. Skews are held at a lateral angle of about 45° to the workpiece. The middle third of the cutting edge does the work. Again, bevel contact must be maintained.



Beading and Parting Tools

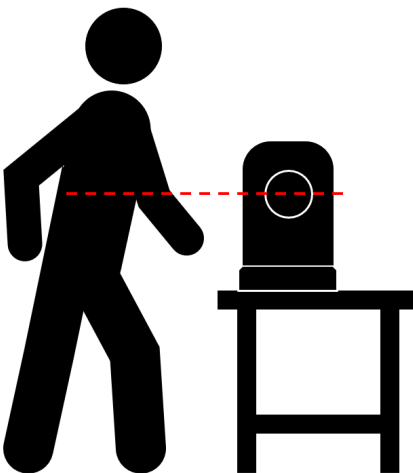
When parting, the tool is placed on the upper third line of the workpiece and cuts in an arc to the centre.

Turning a flat on spindle work is the same procedure, but only up to the desired diameter. For more information, visit a woodturning course, watch "Grundlagen des Drechsels" (The Basics of Woodturning) from our range of DVDs, read a textbook, or have your dealer explain it to you.

Recommended Turning Speed

The speed, in rpm, depends mainly on the size of the workpiece. But other features such as imbalance, weight, hardness, different density, etc. determine a safe speed. Too slow speeds usually do not allow for producing of a smooth surface. Select too high speeds and the lathe will start to vibrate, possibly causing the workpiece to unwind and causing serious injury or damage.

18 | Ergonomics



Correct placement of your lathe will reduce fatigue and induce safer tool-handling.

It supports you in tool-guidance and helps you in shaping the objects.

The ideal placement of the lathe presents the centres (4-prong centre and live centre) in the same height as your elbows are in an upright standing position.

Place the lathe whenever it is possible next to a natural source of light.

If you have to use artificial light, it should come from above and shouldn't dazzle you.

19 | Care and Maintenance

Maintenance / Machine Care

The lathe should be protected after each use, especially in high humidity. Use suitable wax, silicone spray, or any other rust protection on all corrosive areas such as lathe bed, spindle thread with MT2 and quill with MT2, as well as several screw threads.

After each use, clean the lathe bed, head- and tailstock taper and the M33 spindle thread with a cloth soaked in alcohol or a commercial solvent. Store or dispose of the used cloths properly.

Especially when working with green wood it is necessary to **immediately** clean and impregnate all uncoated areas.

After each use, check the pulleys for dust and dirt deposits and clean them if necessary.

Under high use conditions due to drilling, the threaded spindle in the tailstock must be greased at least once a year or as needed. To do this, the quill must be completely removed with the tailstock wheel. This gives access to the spindle for greasing.



Remove the quick locking handle, M8 nut and the hex-screw.

Then unscrew the quill completely out of the tailstock.

You now have access to the quill thread for cleaning and greasing.

To re-assemble follow the reverse order. First put the quill on the thread and turn the tailstock wheel until the quill is retracted again. Then loosely screw on the threaded bolt - it should not jam the quill, only secure

against twisting. The threaded bolt is secured by the M8 nut. It is best to hold the threaded bolt with the aid of a hexagonal wrench. Finally, turn the quick locking handle into place (closer to the tailstock wheel!) And place the tailstock back on the lathe bed.

All bearings are encapsulated and do not require maintenance.

Repairs!



Danger!

- Do not work on electrical system components unless the line disconnecter is disconnected and the power plug is unplugged. Do not leave the power plug unattended and secure it before reinserting it.
- Work on the electrical system should only be carried out by qualified electricians.

20 | Terms of Warranty

This product comes with a five-year manufacturer's warranty, beyond the legal warranty, from the date of purchase.

If the intended use of the **MIDI PRO** causes defects in workmanship or material, these will be repaired or replaced by your responsible sales partner at their expense and choice. The prerequisite for this is that the customer sends the lathe within the warranty period – proof by sales receipt with advance payment of transport costs, to an authorized service center, and the service centre has sufficient opportunity to examine the alleged defect. The costs for the return transport are assumed by the respective service center. However, if it is determined that the complaint lies outside of the granted warranty conditions, the customer must assume the costs of storage and return themselves.

The Distributor cannot be held liable for any alleged defects arising from normal wear and tear, improper use, network overloads, mains overvoltage, or machine modifications not performed by an authorized workshop. In no event shall the Distributor be liable for incidental, special, indirect, consequential or other damages, including any loss of profit or lack of machine use. There are no other warranty claims, whether written or oral, expressed or implied, statutory, commercial, user-specific, or otherwise, including merchantability, fitness for a purpose, or otherwise. This does not apply to claims which the customer is entitled to under consumer protection regulations or other legal provisions.

It should be noted that distributors may have their own warranty terms with respect to this product. The conditions may differ from the above. Therefore, contact your local dealer if this is the case.

21 | Decommissioning

You must observe the following notes on preparing for final decommissioning:



- When the machine is taken out of service, the applicable laws and regulations for disposal must be adhered to.
- The machine does not belong in the household waste.
- Dispose of all parts of the machine so that health and environmental damage is excluded. It makes sense to check which materials can be recycled and do so with consideration for our environment.



- Oils, greases, solvents, and cleaning agents are hazardous to the environment and must not be allowed to reach sewage or normal household waste. Dispose of them via local delivery points.

Cleaning rags or polishing wool soaked in oils, greases, solvents, and cleaning agents are **flammable**. Collect them in suitable closed metal containers.

Linseed oil-soaked cleaning rags or polishing wool tend to **spontaneously ignite** and must be stored and disposed of separately.

Of course, you can also bring your defective machine to your local dealer. They will ensure proper recycling.

22 | Troubleshooting

Symptom	Possible Cause	Possible Remedy
Motor will not start	Not connected to power supply	Check connection to power supply
	Faulty motor, switch, or fuse	Contact an electrician
	Spindle lock oder 24-step indexing system locked	Release the lock
Machine switches off	Inverter switched off	Wait approx. 10 minutes, then turn it on again
		Push red switch „STOP / reset“
Machine vibrates	Workpiece out-of-balance	Balance out workpiece, reduce speed
	Workpiece not clamped securely	Improve clamping length or diameter, support tailstock end, use steady rest
	Blunt cutting tool edge	Sharpen or replace tool
	Cutting pressure too high	Reduce depth of cut or feed
	Workpiece clamped off-centre	Clamp workpiece centrally
	Speed too high	Reduce speed
	Pulleys are loose	Tighten pulleys
	Machine positioned on uneven floor	Level the floor
	Faulty rear bearing	Check bearing and replace if necessary
	Faulty motor bearing	Have motor inspected and replaced if necessary
Machine chatters	Tool rest, tailstock, or headstock not locked securely	Check and secure, tighten self-locking nut on the bottom
	Main bearing has clearance	Have bearings replaced
	Feed too large or fast/ Workpiece surface too rough	Reduce feed
	Woodturning tool blunt	Sharpen woodturning tool
	Tips are not aligned	Re-align headstock
Low spindle drive power	Woodturning tool vibrate	Move tool rest closer to workpiece
	Workpiece too large	Reduce belt speed
	Poly-V-belt loose	Retighten belt

Heavy, out-of-balance and/or large workpieces



During work with swivelled-out spindlestock, with out-of-balance and/or large workpieces, the lathe must be secured against slipping or tilting. Therefore, you can use the additional threaded holes in the lathebed and bolt it to your workbench.

If the bed extension is mounted on the front outlet of the lathe bed, the stability of the entire machine is significantly better. Furthermore, you gain a better handling for your hand-guided tools due to a more comfortable tool rest placement.



EC – Declaration of Conformity

For Machines (according EC-Directive 2006/42/EG)

No. of Declaration of Conformity:	Neu-DM-193-111-EN
Distributor:	Drechselbedarf K. Schulte Meppener Str. 111 D-49744 Geeste – Gr. Hesepe
Responsible person for technical documentation:	Kornelia Schulte Meppener Str. 111 D-49744 Geeste – Gr. Hesepe
Subject of the declaration:	Woodturning Lathe
Product name:	MIDI PRO
Technical name:	<i>1417N-INV; 1417 MIDI PRO</i>

The serial number, crucial technical information and marks of conformity can be found on the rating plate of each machine.

All responsibility for issuing of this EC Declaration of Conformity bear the distributor.

The named object of this Declaration of Conformity is conform with the essential requirements of the relevant European Directives:

- Machinery Directive 2006/42/EC
- Electromagnetic Compatibility Directive 2014/30/EU

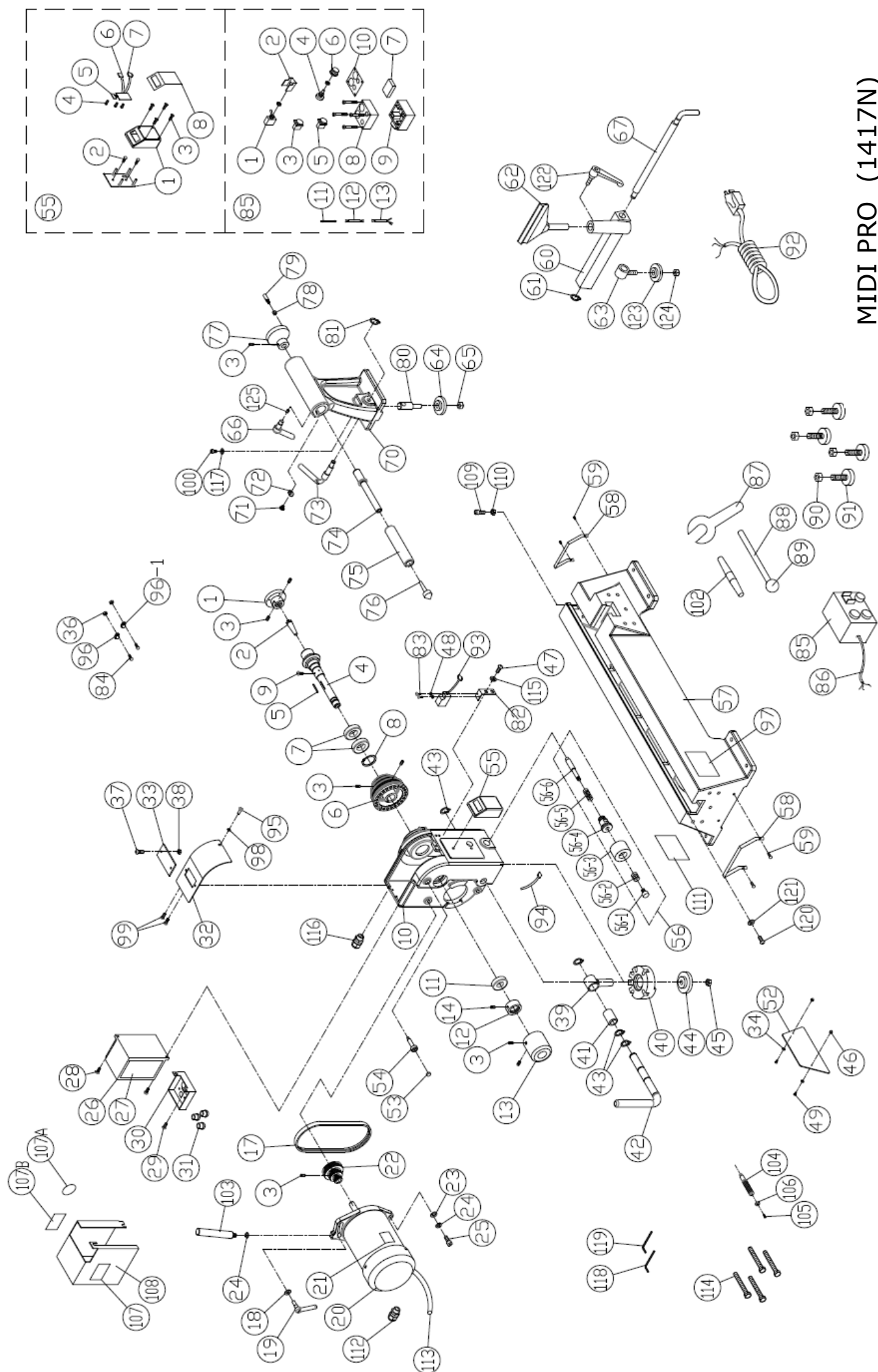
Mounting and connecting instructions defined in catalogues and technical construction files must be respected by the user.

They are based on following standards:

EN ISO 12100:2010	Safety of Machinery Generic principles for design Risk Assessment and Risk reduction
EN 60204-1:2006	Safety of Machinery Electrical equipment of machines – part 1: General requirements
EN 61000-6-2:2005	Electromagnetic compatibility (EMC) Generic immunity standard
EN 61000-6-4:2007 + A1:2011	Electromagnetic compatibility (EMC) Generic emissions standard Part 2

Mrs. Kornelia Schulte
Drechselbedarf K. Schulte
Meppener Str. 111
D-49744 Geeste – Gr. Hesepe

Geeste, 2019.12.01
Kornelia Schulte (Owner)

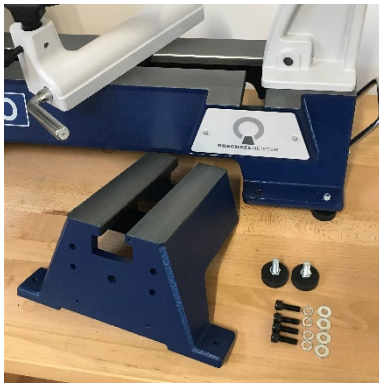


MIDI PRO (1417N)

	Part no.	Description	Specification
85-11	1417N-85-11	3x wire 1	
85-12	1417N-85-12	1x wire 2	
85-13	1417N-85-13	1x wire 3	
86	1417N-86	1x Cable, control box	
87	1417N-84	1x Face plate wrench	
88	1417N-88	1x Schaft	
89	1417N-89	1x Knob	
90	1417N-90	4x Foot pad nut	3/8"
91	1417N-91	4x Foot pad	3/8"
92	1417N-92	1x Power cable	
93	1417N-93	1x Sensor cable, single	
94	1417N-94	1x Sensor cable, double	
95	1417N-95	1x Round head screw	
96	1417N-96	1x Strain relieve	
96-1	1417N-96-1	1x Strain relieve	
97	1417N-97	1x Sticker „MIDI PRO“	
98	1417N-98	1x Washer	M6
99	1417N-99	2x Round head screw	M3 x 8
100	1417N-100	1x Cap screw	
102	1417N-102	1x Double taper	
103	1417N-103	1x Motor handle	
104	1417N-104	1x Lock pin	
105	1417N-105	1x Flat head screw	M3 x 8
106	1417N-106	1x Magnet	
107	1417N-107	1x Sticker „Warning“	
107A	1417N-107A	1x Sticker „Ear-protection“	
107B	1417N-107B	1x Sticker „Power plug“	
108	1417N-108	1x Inverter cover	
109	1417N-109	1x Cap screw	M6 x 20
110	1417N-110	1x Washer	M6
111	1417N-111	1x Label	
112	1417N-112	1x Strain relieve	
113	1417N-113	1x Motor wire	
114	1417N-114	4x Hex screw	3/8" – 16 UNC x 2"
115	1417N-115	2x Washer	M4
116	1417N-116	1x Strain relieve	M16
117	1417N-117	1x Washer	1/4"
118	1417N-118	1x Hex key #3	3
119	1417N-119	1x Hex key #4	4
120	1417N-120	1x Round head screw	M6 x 12
121	1417N-121	1x Washer	M6
122	1417N-122	1x Lock handle	3/8"
123	1417N-123	1x Clamp	
124	1417N-124	1x Nylon nut	3/4" x 10 UNC
125	1417N-125	1x Brass insert	

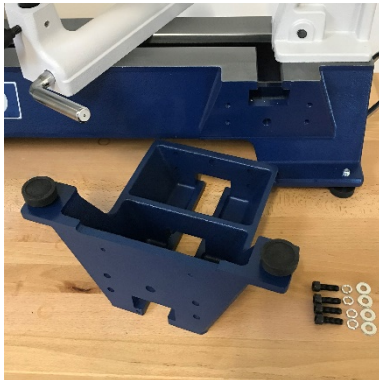
	Part no.	Description	Specification
49	1417N-49	2x Flat head screw	M3 x 8
52	1417N-52	1x Brand plate	
53	1417N-53	1x Magnet	
54	1417N-54	1x Lock pin	
55	1417N-55	1x R.P.M. readout set (assembly)	
56	1417N-56	1x Positioning group (assembly)	
57	1417N-57	1x Bed	
58	1417N-58	2x Handle	
59	1417N-59	4x Round head screw	
60	1417N-60	1x Toolrest base (banjo)	
61	1417N-61	1x C-Ring	S-18
62	1417N-62	1x Toolrest	25 cm 25,4 mm
63	1417N-63	1x Clamp bolt	
64	1417N-64	1x Clamp	
65	1417N-65	1x Nylon nut	M10 x 1,5P
66	1417N-66	1x Locking lever	5/16" x 20 mm
67	1417N-67	1x Clamping shaft	
70	1417N-70	1x Tailstock	
71	1417N-71	1x Socket head screw	#10-32 x 5/8"
72	1417N-72	1x Key	
73	1417N-73	1x Clamping shaft	
74	1417N-74	1x Lead screw	
75	1417N-75	1x Oil	
76	1417N-76	1x Live centre	
77	1417N-77	1x Handwheel	
78	1417N-78	1x Nut	1/4"
79	1417N-79	1x Handle	
80	1417N-80	1x Clamp bolt	
81	1417N-81	1x C-Ring	S-10
82	1417N-82	1x Bracket	
83	1417N-83	2x Round head screw	M3 x 20
84	1417N-84	2x Round head screw	M4 x 20
85	1417N-85	1x Control box	
85-1	1417N-85-1	1x Few/Rev switch	
85-2	1417N-85-2	1x Switch guard	
85-3	1417N-85-3	1x ON – Switch	
85-4	1417N-85-4	1x VR Control	
85-5	1417N-85-5	1x OFF – Switch	
85-6	1417N-85-6	1x VR Knob	
85-7	1417N-85-7	1x Magnet	
85-8	1417N-85-8	1x Control box (housing)	
85-9	1417N-85-9	1x Strain relieve	PG9
85-10	1417N-85-10	1x Label	

	Part no.	Description	Specification
1	1417N-01	1x Face plate	80 mm M33
2	1417N-02	1x 4-prong spur centre	MK 2
3	1417N-03	9x Setscrews	1/4" x 1/4"
4	1417N-04	1x Spindel	M33 x 3,5 mm
5	1417N-05	1x Key	5 x 5 x 25
6	1417N-06	1x Pulley	3 Stufen
7	1417N-07	2x Bearing	6005
8	1417N-08	1x C-Ring	S-25
9	1417N-09	4x Cross-round head screw	
10	1417N-10	1x Spindelstock	
11	1417N-11	1x Bearing	
12	1417N-12	1x Clamping ring	
13	1417N-13	1x Handwheel	
14	1417N-14	3x Setscrews	#10 x 1/4"
17	1417N-17	1x Belt	6P1432 170J
18	1417N-18	1x Washer	5/16"
19	1417N-19	1x Lock handle	5/16"
20	1417N-20	1x Motor	3/4HP
21	1417N-21	1x Sticker „Motor“	
22	1417N-22	1x Motor-Pulley	3 steps
23	1417N-23	1x Washer	3/8"
24	1417N-24	2x Spring washer	3/8"
25	1417N-25	1x Setscrew	3/8" x 1 1/4"
26	1417N-26	1x Inverter (RU)	
27	1417N-27	1x Sticker „Warning“	
28	1417N-28	2x Round head screw	#10-24UNC x 3/4"
29	1417N-29	3x Round head screw	M3 x 10
30	1417N-30	1x Junction box	
31	1417N-31	3x Strain relieve	
32	1417N-32	1x Pulley cover	
33	1417N-33	1x Window pulley cover	
34	1417N-34	2x Magnet	
36	1417N-36	2x Nut	M4
37	1417N-37	2x Round head screw	M4
38	1417N-38	2x Nylon nut	M4
39	1417N-39	1x Threaded bolt spindle stock	
40	1417N-40	1x Position-base	
41	1417N-41	1x Bushing	
42	1417N-42	1x Spindelstock-clamping lever	
43	1417N-43	4x C-ring	
44	1417N-44	1x Clamp	
45	1417N-45	1x Nylon nut	M14 x 2
46	1417N-46	2x Cap nut	M3
47	1417N-47	2x Round head screw	M4 x 15
48	1417N-48	2x Washer	M3



Content:

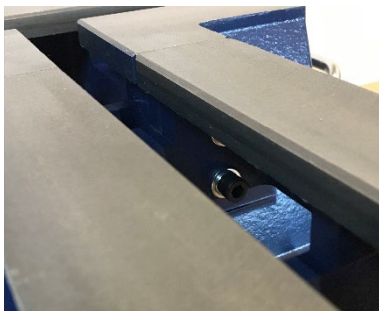
- Bed extension 230 mm
- 2x Foot pad for height adjustment
- 4x Hex screws
- 4x Spring washer
- 4x Washer



◀ At first assemble the rubber feet.

- 1)
If you use the frontside flange, remove the magnetic cover sheet.
- 2)
If you use any of the lathe bed sides, disassemble the carrying handle.

1) Mount at the front



2) Mount as bed extension

Dismount the carrying handle ▶



◀ Fix the bed extension loosely ▶
with the 4 screws supplied



◀ Use the tailstock as guidance for alignment of bed/bed extension ▶

For this slide the tailstock over the connection and clamp it. The integrated guidance rail of the tailstock will align bed and bed extension automatically.

Fix all 4 screws at this stage to their final tightness.



The bed extension is mounted.





◀ Turn the handwheel of the tailstock as long as the quill comes free.



◀ Pull out the quill towards the front opening.



Brassblock:

Depending on the execution of your lathe, there might be a brassblock between the ratchet knob and quill inside the thread.

Open the locking lever as far as possible and take care, the brassblock will remain in its position.
If necessary push back the part into the threaded hole.



Insert now the ER25 quill into the opening of the tailstock until it gets in contact with the lead screw.

By turning the handwheel clockwise you fix the quill and get it on the „0“-position.

The ER25 quill is now ready for use.

(Symbolic picture! ER25 nut and collet are optional and not included in delivery)