



scheppach DM460T Wood Turning Lathe Instruction Manual

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**DM460T Wood Turning Lathe
Instruction Manual**



DM460T

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DM460T Wood Turning Lathe

Wood Turning Lathe

Translation from the original instruction manual

- www.scheppach.com
- service@scheppach.com
- +(49)-08223-4002-99
- +(49)-08223-4002-58

Fig. 1.1

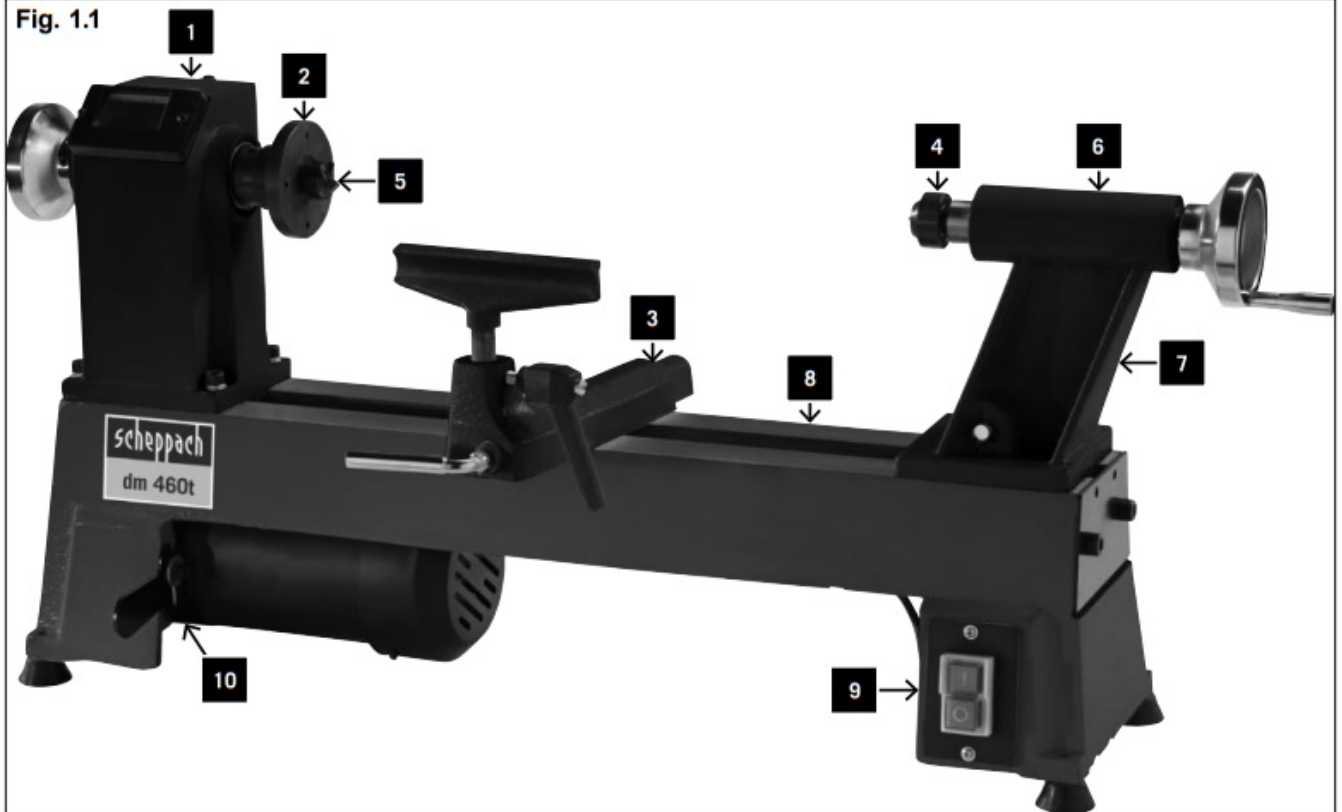


Fig. 2

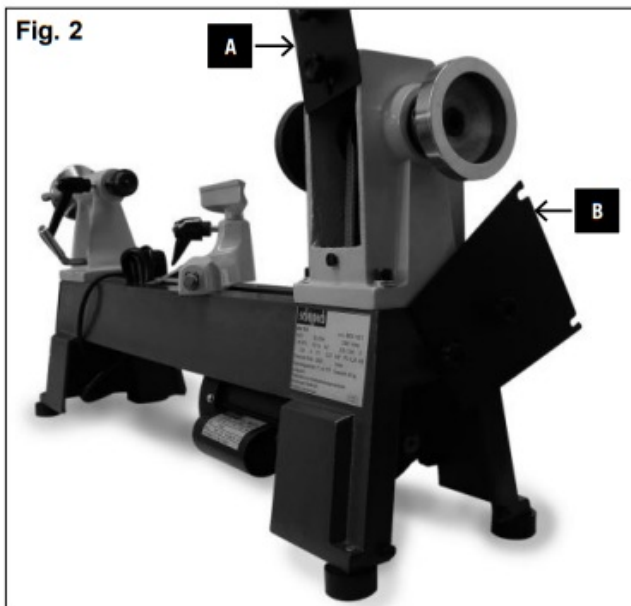


Fig. 3

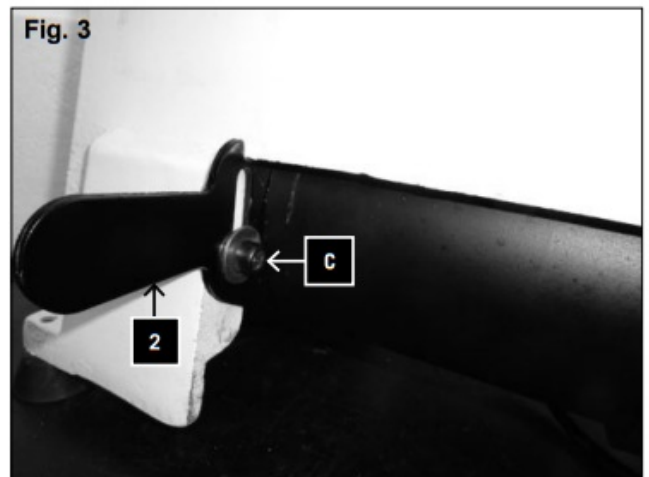


Fig. 4

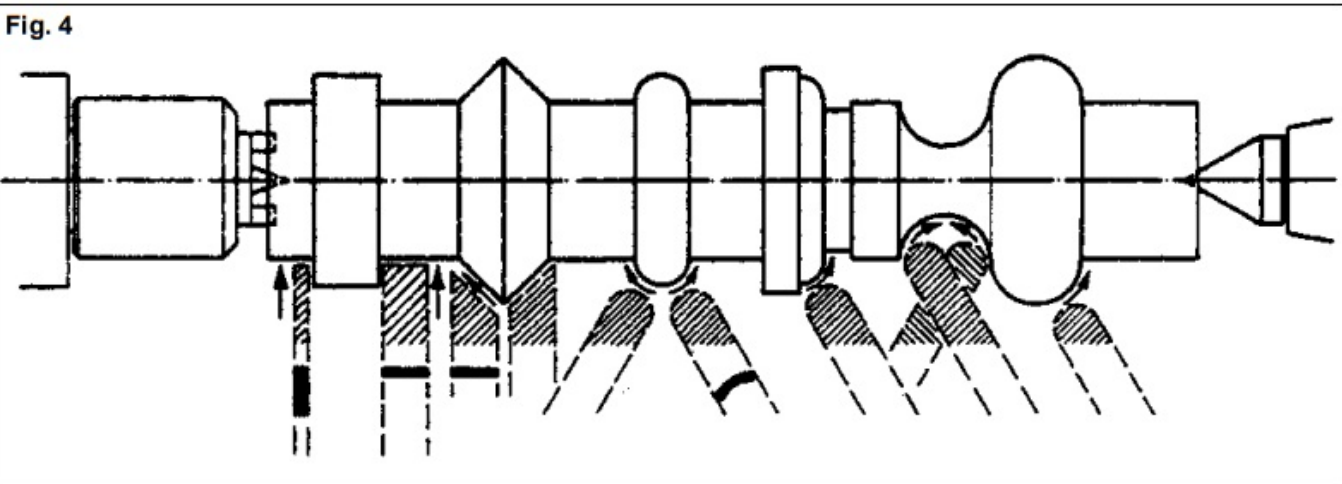


Fig. 5

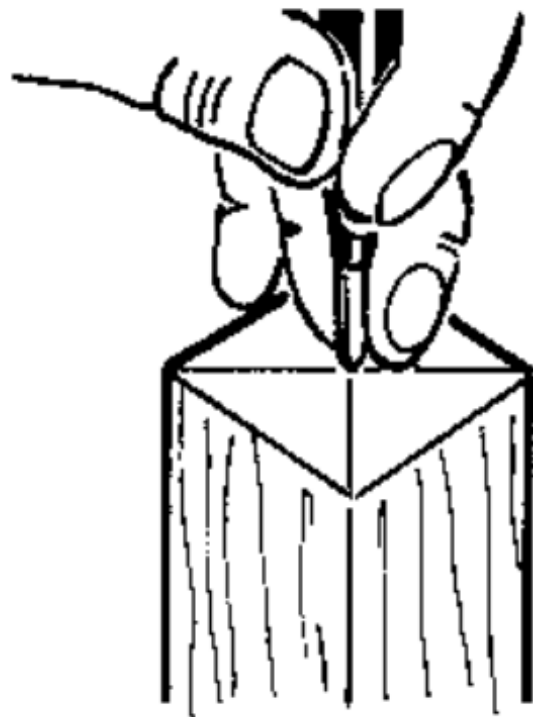
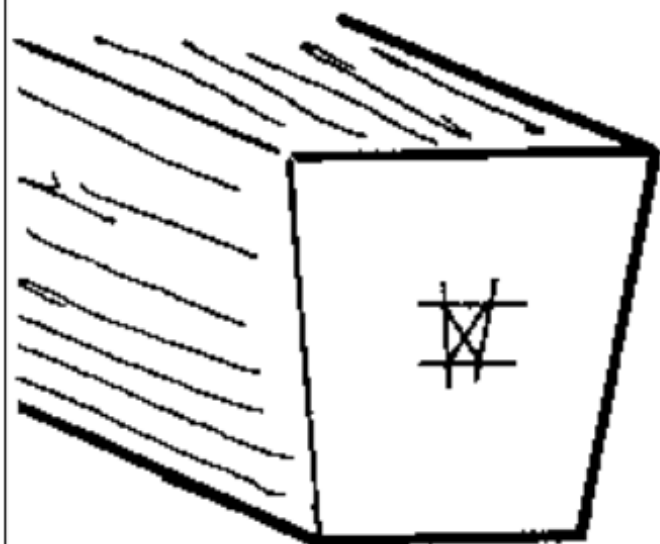
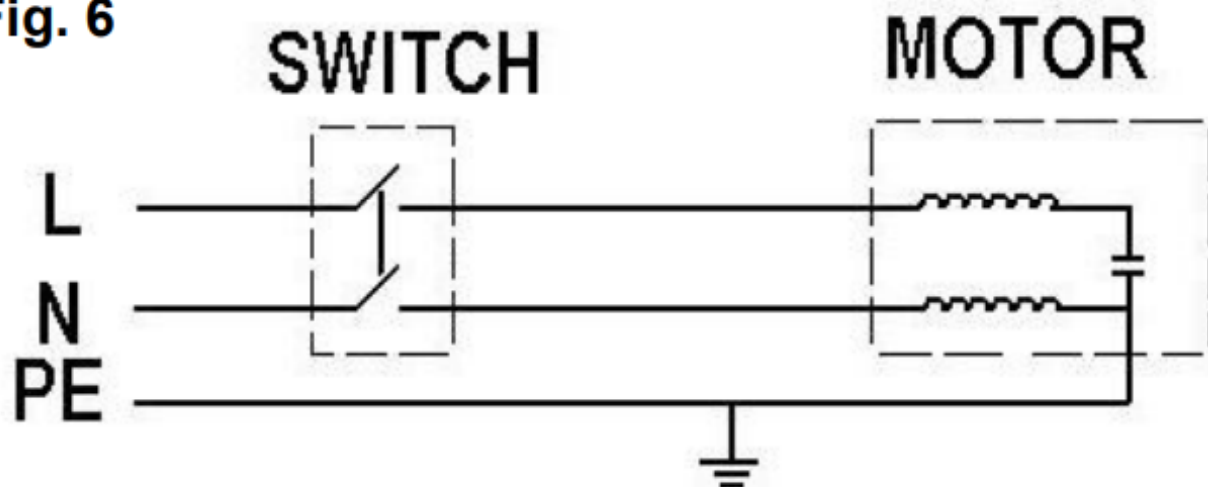


Fig. 6



Manufacturer

Scheppach

Fabrikation von Holzbearbeitungsmaschinen GmbH
Günzburger Straße 69
D-89335 Ichenhausen

Dear customer,

We wish you much pleasure and success with your new scheppach machine.

Note

In accordance with valid product liability laws, the manufacturer of this device shall not be responsible for damage to and from this device that results from:

- Improper care.
- Noncompliance with the Operating Instructions.

- Repairs made by unauthorized persons.
- The installation and use of any parts which are not original scheppach replacement parts.
- Improper use and application.
- Failure of the electrical system as a result of noncompliance with the legal and applicable electrical directives and VDE regulations 0100, DIN 57113 / VDE 0113.

We recommend that you read through the entire operating instructions before putting it into operation.

These operating instructions are to assist you in getting to know your machine and utilizing its proper applications. The operating instructions contain important notes on how you work with the machine safely, expertly, and economically, and how you can avoid hazards, save repair costs, reduce downtime and increase the reliability and service life of the machine.

In addition to the safety requirements contained in these operating instructions, you must be careful to observe your country's applicable regulations.

The operating instructions must always be near the machine. Put them in a plastic folder to protect them from dirt and humidity. They must be read by every operator before beginning work and observed conscientiously. Only persons who have been trained in the use of the machine and have been informed of the various dangers may work with the machine. The required minimum age must be observed.

In addition to the safety requirements contained in these operating instructions and your country's applicable regulations, you should observe the generally recognized technical rules concerning the operation of woodworking machines.



General notes

- After unpacking, check all parts for any transport damage. Inform the supplier immediately of any faults.
- Later complaints cannot be considered.
- Make sure the delivery is complete.
- Before putting it into operation, familiarize yourself with the machine by carefully reading these instructions.
- Use only original scheppach accessories, wearing or replacement parts. You can find replacement parts at your scheppach dealer.
- When ordering, include our item number and the type and year of construction of the machine.

DM460T

Included with delivery

- Wood turning machine
- Workpiece table
- Carrier
- Rotating tailstock center
- Independent chuck
- Mandrel
- Tappet
- Jaw spanner SW 32/41
- Hex driver 3/6/8
- Operating instructions

Technical data

Dimensions L x B x H mm	940 x 270 x 420
Bed height mm	190
Headstock thread	M 33
Headstock taper	MK 2
Height of centers above bed mm	152
Width between centers mm	457
Diameter above bed mm	305
Diameter between centers mm	240
Length of tool holder mm	150
	34,8
Woodturning spindle with a dust-proof precision grooved ball bearing	
Revolutions 1/min	650 / 1000 / 1450 / 2000 / 3000
Tailstock cone	MK 2
Tailstock drill hole (hollow spindle) ø mm	9,5
Tailstock sleeve adjustment mm	47
Drive	
Electric Motor	230–240V/50 Hz
Input P1 kW	0,55
Output P2 kW	0,30
Revolutions 1/min	1400
Motor protection	yes
Undervoltage release	yes
Operating mode	S1

Noise parameters

Acoustic power level in dB

Idling LWA = 74.3 dB(A),

Operating LWA = 91.7 dB(A)

The acoustic pressure level in dB

Idling LpAeq = 61.3 dB(A),

Operating LpAeq = 78.7 dB(A)

A measuring uncertainty coefficient (K = 3 dB) applies to the emission values listed above.

Subject to technical modifications!

Controls and features (Fig. 1.1)

1. Headstock
2. Faceplate
3. Tool rest with eccentric clamping and release handle
4. Tailstock tip
5. Carrier
6. Tailstock
7. Eccentric release handle (on the back of the tailstock)
8. Drilling bed
9. On/off switch
10. Lever and binding screw



General Safety Notes

- Please pass on safety notes and instructions to all those who work on the machine.
- Comply with all safety instructions and warnings on the machine.
- Keep all safety instructions and warnings on the machine fully legible.
- Check all power supply lines. Do not use defective lines.
- Make sure that the machine stands stable on firm ground.
- Caution when working: There is a danger to fingers, hands, and eyes.
- Keep children away from the machine when it is connected to the power supply.
- When working on the machine, all safety mechanisms and covers must be mounted.
- Operating personnel must be at least 18 years of age. Trainees must be at least 16 years of age but may only operate the machine under adult supervision.
- Persons working on the machine may not be diverted from their work.
- The working space on the machine must be free of chips and wood scrap.
- Wear only closefitting clothes. Remove rings, bracelets, and other jewelry.
- For the safety of long hair, wear a cap or hair net.
- Do not wear gloves.
- Wear goggles when working.
- Note the motor rotational direction – see the electrical connection.
- The safety mechanisms on the machine may not be removed or rendered unusable.
- Cleaning, changing, calibrating, and setting the machine may only be carried out when the motor is switched off. Pull the power supply plug and wait for the rotating tool to completely stop.
- Switch the machine off and pull the power supply plug when rectifying any malfunctions.
- Connection and repair work on the electrical installation may be carried out by a qualified electrician only.
- All protection and safety devices must be replaced after completing repair and maintenance procedures.
- Place the tool support as tightly as possible against the workpiece.
- The peripheral speed of wooden workpieces must not exceed 30 m/s. Note the spindle speed diagram!
- Provide workpieces with center bores before clamping between pivots.
- Work large and imbalanced workpieces at a reduced rotational speed; it may be necessary beforehand to cut accordingly with a band saw.

- Before switching on the machine, check that the workpiece is securely clamped.
- Remove the chuck key or spring dowel sleeve before turning the machine on.
- Always close the belt cover.
- Work with three- or four-jaw chucks may only be carried out with mounted jaw chuck shields.
- Never stop workpieces with the hand during running out. Never take measurements on a rotating workpiece.
- Work only with well-sharpened tools.
- Always use both hands when using the turning tool.
- Nicked tools may not be used.
- Note the correct rotational setting on the machine.
- When leaving the workplace, switch the motor off. Pull the power supply plug.
- Unplug the machine before moving, even if only slightly. Correctly connect the machine to the electrical source before operating again.

Warning! This electric tool generates an electromagnetic field during operation. This field can impair active or passive medical implants under certain conditions. In order to prevent the risk of serious or deadly injuries, we recommend that persons with medical implants consult with their physician and the manufacturer of the medical implant prior to operating the electric tool.

Proper use

- CE-tested machines meet all valid EC machine guidelines as well as all relevant guidelines for each machine.
- The machine must only be used in technically perfect condition in accordance with its designated use and the instructions set out in the operating manual, and only by safety-conscious persons who are fully aware of the risks involved in operating the machine. Any functional disorders, especially those affecting the safety of the machine, should therefore be rectified immediately.
- The machine has been constructed exclusively for use with wood.
- Any other use exceeds authorization. The manufacturer is not responsible for any damages resulting from unauthorized use; risk is the sole responsibility of the operator.
- The safety, work, and maintenance instructions of the manufacturer as well as the technical data given in the calibrations and dimensions must be adhered to.
- Relevant accident prevention regulations and other, generally recognized safety-technical rules must also be adhered to.
- The machine may only be used, maintained, and operated by persons familiar with it and instructed in its operation and procedures. Arbitrary alterations to the machine release the manufacturer from all responsibility for any resulting damages.
- The machine may only be used with original accessories and tools made by the manufacturer.

Please note that our equipment has not been designed for use in commercial, trade or industrial applications. Our warranty will be voided if the equipment is used in commercial, trade, or industrial businesses or for equivalent purposes.



Remaining hazards

The machine has been built using modern technology in accordance with recognized safety rules. Some remaining hazards, however, may still exist.

- Only process selected woods without defects such as: Branch knots, edge cracks, and surface cracks. Wood with such defects is prone to splintering and can be hazardous.
- Wood that is not correctly glued can explode when being processed due to centrifugal force.
- Trim the workpiece to a rectangular shape, and center, and correctly secure it before processing. Unbalanced workpieces can be hazardous.
- Injuries can occur when feeding workpieces if tool supports are not correctly adjusted or if turning tools are blunt. Sharp turning tools which are free of defects are necessary for professional turning.
- Long hair and loose clothing can be hazardous when the workpiece is rotating. Wear personal protective gear such as a hair net and tight-fitting work clothes.
- Sawdust and wood chips can be hazardous. Wear personal protective gear such as safety goggles and a dust mask.
- The use of incorrect or damaged main cables can lead to injuries caused by electricity.
- Even when all safety measures are taken, some remaining hazards which are not yet evident may still be present.
- Remaining hazards can be minimized by following the instructions in „Safety Precautions“, „Proper Use“ and in the entire operating manual.

Start-up

Observe the safety notes in the operating instructions before operating the machine.

Remove the tensioning spindle or the chuck from the spindle in addition to any step-up tools before first operating the machine!

Speed adjustment

The speed can only be adjusted once the machine has been unplugged.

The correct number of revolutions is visible on the speed diagram located on the headstock. The speed diagram is intended for medium-hard dry woods.

The appropriate speed is based on various factors such as:

- type and composition of woods
- seasoned, dry woods
- diameter and length of workpieces
- squared or unbalanced woods
- width of pre-worked, balanced workpieces
- woodturner tools and technique
- workpieces out of glued wood

Successful wood turning does not result from high speeds, but rather, from the correct use of the machine.

Guidelines for speed adjustment

Low speeds for:

- workpieces with large diameters
- hard workpieces with large diameters
- long, unbalanced workpieces
- glued pieces of wood

Speed adjustment (Fig. 2+3)

- Open the casing by rotating the lock screw of a revolution to the left.
- Loosen the socket-head screw (C).
- Using the lever, raise the electric motor and move the belt to the desired level. The belt must lie exactly in the grooves of the belt disc.
- Lower the electric motor into place and tighten the belt by applying light pressure to the lever (2). Tighten the socket-head screw (C).

NOTE: Extremely high belt tension causes rapid wear of the belt.

- Close the casing and lock it into place by turning the screw of a revolution to the right.
- When the cover is closed, read the adjusted speed from the viewing window.
- When working with highly unbalanced workpieces, select a speed at least one level lower.

Driver, Fig. 1.1, 5

The driver is used exclusively for work between both centers.

Faceplate, figure 1.1, 2

The face plate is used with flat larger tools.

Change of the clamping tools

- Loosen the grub screw on the shaft of the clamping tool.
- Retain the spindle with mandrel, and release the clamping tool with the hexagonal spanner.

Tailstock, Fig. 1.1, 6

- Once the eccentric clamp has been loosened, the tailstock can be moved over the entire length of the bed and can be secured at any distance from the headstock.
- To insert a workpiece between the centers, loosen the binder, and turn the sleeve approx. 20 mm outward and clamp.
- Slide the tailstock to the workpiece and place the tailstock center into the sunken point in the center of the workpiece.
- Screw out the tailstock sleeve until the tailstock center rests securely in the wood. Retighten the binder.
- Turn the workpiece to see if it rests securely between the two centers and can be rotated freely.

Tailstock center replacement, Fig. 1.1, 4

- Turn the tailstock spindle sleeve totally backward until the tip can be removed.

Tool holder, Fig. 1.1, 3

- The tool holder both ensures the safe use of wood-turning tools and at the same time serves as a support for the hand.

The height of the tool holder can be adjusted once the binder has been loosened. To turn further, pull in the direction indicated by the arrow.

- Place the tool holder at a distance of 1 – 3 mm from the workpiece. Check the adjustment in addition to rotating the workpiece by hand.
- Set the tool holder ca. 3 mm above the axis of the workpiece. Check the adjustment once again by rotating the workpiece by hand.

- Once the eccentric clamp has been loosened, the holder console can be moved along the entire length of the bed and in the direction perpendicular to the workpiece. Furthermore, the holder console can be tilted over approx. 45° to either side.
- To work with a plane surface, turn the tool holder 90° and place up against the surface to be worked. Depending on the wood-turning tool, place the tool holder up to 6 mm underneath the axis of the workpiece.

Use of woodturning tools, Fig. 4

Examples of how to use the tools when working with the most frequent forms. Once the machine has been plugged in, it is ready to be used. Observe the operating instructions n „Electrical connection“.

Operations

A perfect and sharp wood turner tool is a precondition for professional wood-turning.

Selection of materials

- Wood to be turned must be of good quality and without imperfections such as fissures against the grain, a marred surface, or knots. Faulty wood tends to split and becomes a risk for both the operator and the machine.
- Workpieces that have been glued together should only be processed by experienced craftsmen. Because the workpiece can explode as a result of developing centrifugal force, turning such wood demands careful gluing without weak points.

Note: Beginners should first master fundamental skills by working exclusively with solid material.

Preparation of the materials

- To turn long pieces of wood, the material must be cut into a square form beforehand.
- To turn a cross-arm, the material must be cut to size in its natural state as well. Saw out the rough form with a band saw. An octagonal form is recommended for the material so that vibrations are reduced.

Centering of the workpiece, Fig. 05

Centering the prepared workpiece is an important operation to be performed before placing it into the machine.

Centering consists of measuring the middle point of the workpiece and marking it with a center punch.

Make a depression of 1.5 to 2 mm in the middle point. If the workpiece has not been centered exactly, strong vibrations will develop as a result of the imbalance. It is possible that the workpiece could be hurled outward as a result.

NOTE:

The exact centering of the workpiece produces smooth concentricity. While working with the turner

- Work with a rough workpiece should be conducted at low speeds.
- Only after the wood has been pre-turned (the pre-turning operation is complete once the basic form of the workpiece as well as an even concentricity have been achieved) can the speed be raised.

TURN OFF AND UNPLUG THE MOTOR FIRST

- The live center must be readjusted from time to time with the hand wheel. This operation only should be performed when the motor has been turned off. The tailstock center should rest firmly in the wood.
- Turn the workpiece by hand to check if it rests securely.

Marking of the workpiece

Sometimes the workpiece has to be taken out before it has been completed. It is advantageous to mark the workpiece and the driver with a pencil first. When placing the workpiece back in the machine, match the marks on the workpiece and the driver.

Specialized literature

Specialized shops offer appropriate specialized literature

about woodturning. They can be a great help for beginners in their work as well as a source of ideas for experts.



Electrical connection

The installed electric motor is completely wired and ready for operation.

The customer's connection to the power supply system, and any extension cables that may be used, must conform with local regulations.

Important remark:

The motor is automatically switched off in the event of an overload. The motor can be switched on again after a cooling down period that can vary.

Defective electrical connection cables

Electrical connection cables often suffer insulation damage.

Possible causes are:

- Pinch points when connection cables are run through window or door gaps.
- Kinks resulting from incorrect attachment or laying of the connection cable.
- Cuts resulting from running over the connecting cable.
- Insulation damage resulting from forcefully pulling out of the wall socket.
- Cracks through the aging of insulation.

Such defective electrical connection cables must not be used as the insulation damage makes them extremely hazardous.

Check electrical connection cables regularly for damage. Make sure the cable is disconnected from the mains when checking.

Electrical connection cables must comply with the regulations applicable in your country.

Single-phase motor, Fig. 06

- The mains voltage must coincide with the voltage specified on the motor's rating plate.
- Extension cables up to a length of 25 m must have a cross-section of 1.5 mm², and beyond 25 m at least 2.5 mm².
- The connection to the mains must be protected with a 16 A slow-acting fuse.

Only a qualified electrician is permitted to connect the machine and complete repairs on its electrical equipment. In the event of inquiries please specify the following data:

- Motor manufacturer
- Type of current of the motor
- Data recorded on the machine's rating plate
- Data recorded on the switch's rating plate

If a motor has to be returned, it must always be dispatched with the complete driving unit and switch.

Maintenance

- Overhauls, maintenance work, cleaning, as well as the elimination of any malfunctions must only be undertaken after turning off the motor.
- All protective and safety equipment must be reinstalled immediately upon completion of any repair or maintenance work.
- Clean and lightly oil the spindle thread of the tool holder when changing tools.

- When possible, the tail stock sleeve should be removed by unscrewing it, cleaned, and then sprayed with a dry lubricant. Grease the threaded spindle.
- Check the eccentric clamp of the tailstock as well as the tool holder and adjust if necessary. In addition, tighten the hex nut under the bracket.
- Check the drive belt and replace it when necessary.

Accessories

Article	Art. No.
Turning lathe extension	4.9E+09
Additional tools 5er set	88002716
Additional tools 6er set	88002717
Screw chuck	7400 7200
Socket chuck Ø 30 mm	7400 8600
Socket chuck Ø 40 mm	7400 7300
Socket chuck Ø 60 mm	7400 8700
Driver plate Ø 80 mm	7400 8800
Three-jaw chuck Ø 100 mm	7400 8900
Four-jaw chuck Ø 125 mm	7400 7400
Drill chuck 3 – 16 mm cone mandrel MK-2	7400 7700

You can find other accessories in our current catalog or at www.scheppach.com.

Service Information

Please note that the following parts of this product are subject to normal or natural wear and that the following parts are therefore also required for use as consumables.

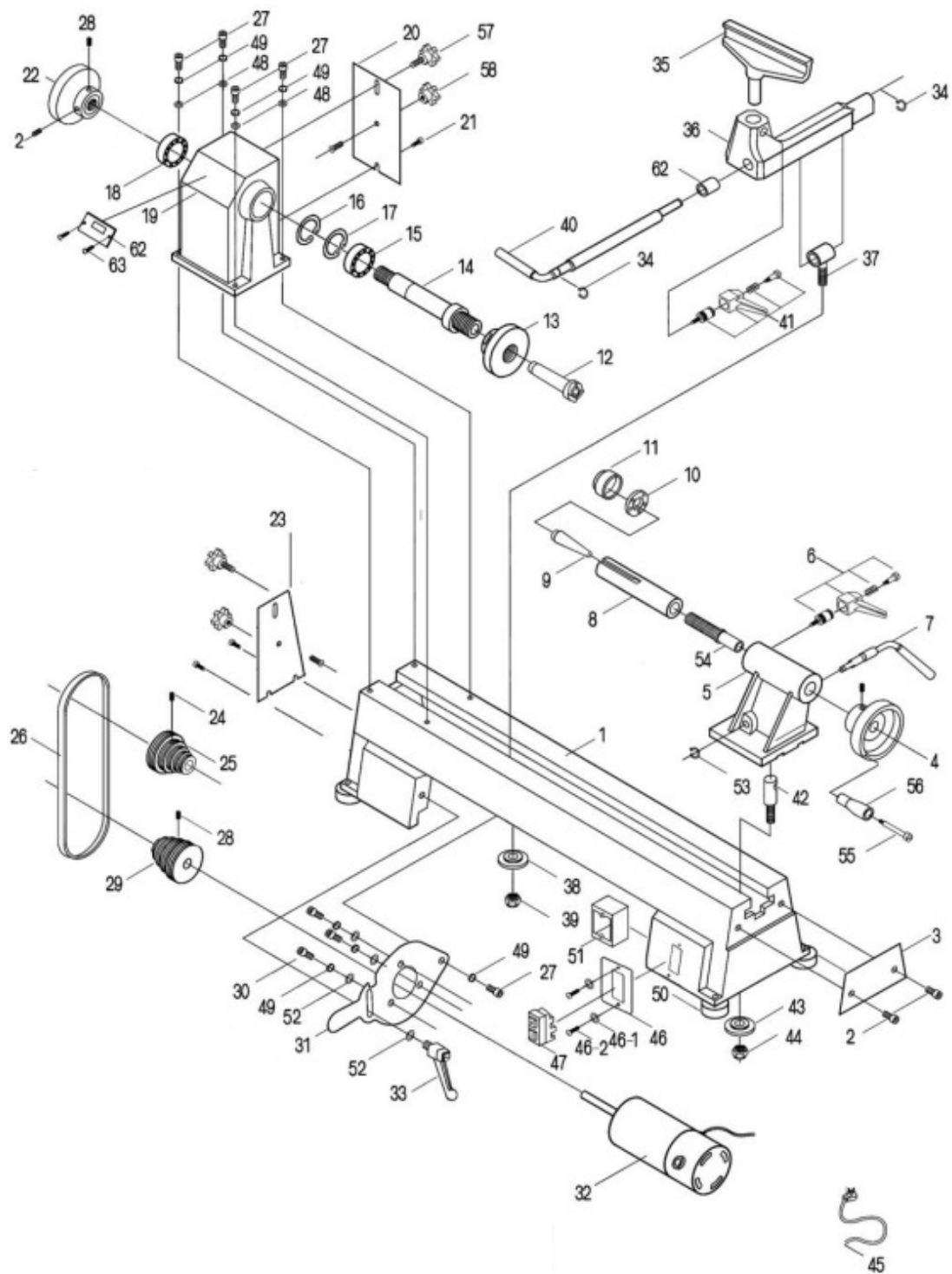
Wear parts*:

Carbon brushes, v-belt

* Not necessarily included in the scope of delivery!

Troubleshooting

Problem	Possible Cause	Help
The motor doesn't start	a)No electricity b)Defective switch, condenser c)Defective extension cord	a)Check the fuse b)Have an electrician inspect the unit c)Unplug the cord, inspect and replace, if necessary
Workpiece flatters while working	a)Working piece becomes loose while working b)Workpiece is not properly centered c)Rotational speed is too high	a)Follow the instructions in the operating manual b)Follow the instructions in the operating manual c)Select a lower rotational speed
Tool rest or tailstock cannot be clamped	Setting the eccentric clamping	Return the hexagonal nut at the bottom side about 1/4 rotation with the socket spanner

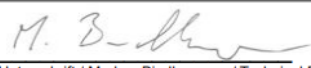


Hereby declares the following conformity under the
EU Directive and standards for the following article
Drehselmaschine – DM460T

<input type="checkbox"/> 2014/29/EU	<input type="checkbox"/> 89/686/EC_96/58/EC
<input checked="" type="checkbox"/> 2014/35/EU	<input checked="" type="checkbox"/> 2006/42/EC
<input type="checkbox"/> 2006/28/EC	Annex IV Notified Body: Notified Body No.:
<input type="checkbox"/> 2005/32/EC	<input type="checkbox"/> 2000/14/EC_2005/88/EC
<input checked="" type="checkbox"/> 2014/30/EU	Annex V
<input type="checkbox"/> 2004/22/EC	Annex VI Noise: measured L_{WA} = xx dB(A); guaranteed L_{WA} = xx dB(A) Notified Body: Notified Body No.:
<input type="checkbox"/> 1999/5/EC	<input type="checkbox"/> 2004/26/EC
<input type="checkbox"/> 2014/68/EU	Emission. No:
<input type="checkbox"/> 90/396/EC	
<input checked="" type="checkbox"/> 2011/65/EU	

Standard references: EN 61029-1; EN 61029-2-1; EN 55014-1; EN 55014-2; EN 61000-3-2; EN 61000-3-3

Ichenhausen, den 07.06.2016


Unterschrift / Markus Bindhammer / Technical Director

Art.-No. 4902301901
Subject to change without notice

Documents registrar: Andreas Pecher
Günzburger Str. 69, D-89335 Ichenhausen

Only for EU countries.

Do not dispose of electric tools together with household waste material! In observance of European directive 2012/19/EU on waste electrical and electronic equipment and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

Apparent defects must be notified within 8 days from the receipt of the goods. Otherwise, the buyer's rights of claim due to such defects are invalidated. We guarantee for our machines in case of proper treatment for the time of the statutory warranty period from delivery in such a way that we replace any machine part free of charge which provably becomes unusable due to faulty material or defects of fabrication within such period of time. With respect to parts not manufactured by us we only warrant insofar as we are entitled to warranty claims against the upstream suppliers. The costs for the installation of the new parts shall be borne by the buyer. The cancellation of the sale or the reduction of the purchase price as well as any other claims for damages shall be excluded.



scheppach Fabrikation von
Holzbearbeitungsmaschinen GmbH
Günzburger Str. 69
D-89335 Ichenhausen
www.scheppach.com

Documents / Resources



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4902301901, 4902301850, DM460T Wood Turning Lathe, DM460T, Wood Turning Lathe, Turni
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References

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