



Operating instructions

Version 1.4.2

Disc-type sander

OPTI grind[®]
TS 305

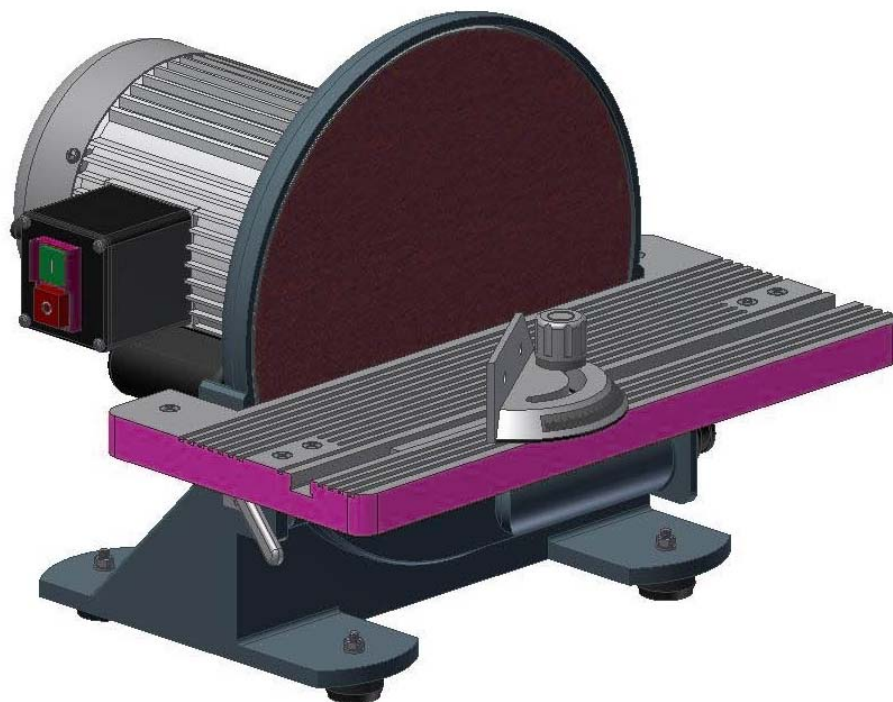




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Preface

Dear customer,

Thank you very much for purchasing a product made by OPTIMUM.

OPTIMUM metal working machines offer a maximum of quality, technically optimum solutions and convince by an outstanding price performance ratio. Continuous enhancements and product innovations guarantee state-of-the-art products and safety at any time.

Before commissioning the machine please thoroughly read these operating instructions and get familiar with the machine. Please also make sure that all persons operating the machine have read and understood the operating instructions beforehand.

Keep these operating instructions in a safe place nearby the machine.

Information

The operating instructions include indications for safety-relevant and proper installation, operation and maintenance of the machine. The continuous observance of all notes included in this manual guarantee the safety of persons and of the machine.

The manual determines the intended use of the machine and includes all necessary information for its economic operation as well as its long service life.

In the paragraph "Maintenance" all maintenance works and functional tests are described which the operator must perform in regular intervals.

The illustration and information included in the present manual can possibly deviate from the current state of construction of your machine. Being the manufacturer we are continuously seeking for improvements and renewal of the products. Therefore, changes might be performed without prior notice. The illustrations of the machine may be different from the illustrations in these instructions with regard to a few details. However, this does not have any influence on the operability of the machine.

Therefore, no claims may be derived from the indications and descriptions. Changes and errors are reserved!

Your suggestion with regard to these operating instructions are an important contribution to optimising our work which we offer to our customers. For any questions or suggestions for improvement, please do not hesitate to contact our service department.

If you have any further questions after reading these operating instructions and you are not able to solve your problem with a help of these operating instructions, please contact your specialised dealer or directly the company OPTIMUM.

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1 Safety

Glossary of symbols

	gives additional indications
	calls on you to get in action
	enumerations

This part of the operating manual

- explains the meaning and use of the warning references contained in the operating manual,
- explains how to use the disc-type sander properly,
- highlights the dangers that might arise for you and others if these instructions are not followed,
- tells you how to avoid dangers.

In addition to this operating manual please observe

- applicable laws and regulations,
- legal regulations for accident prevention,
- the prohibition, warning and mandatory labels as well as the warning notes on the disc-type sander.

Always keep this document close to the disc-type sander.

1.1 Type plate

<p>DE Tellerschleifer GB Grinding disc ES Afiladora de brocas FR Affûteuse IT Molatrice a disco CZ Bruska na vrtáky DK Borsliber FI Kärkihölkone GR ΤΡΟΧΟΣ ΤΡΥΠΑΝΙΩΝ HU Tányétköszörűgép NL Slijpsteenslijper PL Szlifierka PT Afiadora de Brocas RO Masina de slefuit cu disc SK Kolutni brusilnik TR Uç bıleyicisi</p>	 	<p>OPTIMUM[®] MASCHINEN - GERMANY</p> <p>TS 305</p> <p>Optimum Maschinen Germany GmbH Dr.-Robert-Pfleger-Str. 26 D-96103 Hallstadt</p>
		<p>NO. 331 0305 1420 U/min</p> <p> 900W SN J</p> <p> 230 V ~50 Hz</p> <p> 30 kg Year 20</p> <p>www.optimum-maschinen.de </p>

INFORMATION

If you are unable to solve a problem using this manual, please contact us for advice:

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1.2 Safety warnings (warning notes)

1.2.1 Classification of hazards

We classify the safety warnings into various levels. The table below gives an overview of the classification on symbols (pictograms) and warning labels for the specific danger and its (possible) consequences.

Pictogram	Alarm expression	Definition/Consequences
	DANGER!	Imminent danger that will cause serious injury or death to personnel.
	WARNING!	Risk: a danger that might cause serious injury or death to personnel.
	CAUTION!	Danger or unsafe procedure that might cause injury to personnel or damage to property.
	ATTENTION!	Situation that could cause damage to the disc-type sander or products and other types of damage. No risk of injury to personnel.
	INFORMATION	Application tips and other important or useful information and notes. No dangerous or harmful consequences for personal or objects.

In case of specific dangers, we replace the pictogram by





1.2.2 Further pictograms



Warning of extinguishable materials!



Put the mains plug!



Cleaning of clothes with compressed air forbidden!



Use the protective goggles!



Activation forbidden!



Use ear protection!



Use protective boots!



Use protective gloves!



Wear a safety suit!



Protect the environment!



Contact address

1.3 Proper use

The disc-type sander is designed and constructed to grind different materials. The disc-type sander should only be used for this purpose.

If the disc-type sander is used to grind health hazardous or dusty materials an appropriate suction plant needs to be installed.

If the disc-type sander is used in any way other than described above, modified without the authorisation of Optimum Maschinen Germany GmbH or operated with different process data, then it is being used improperly. Improper use!

We do not take any liability for damages caused by improper use.

We would like to stress that any modifications to the construction, or technical or technological modifications that have not been authorised by Optimum Maschinen Germany GmbH will also render the guarantee null and void.

It is also part of proper use that

- the maximum values for the disc-type sander are complied with,
- the operating manual is observed,
- inspection and maintenance instructions are observed.



WARNING!

Very serious injury.

It is forbidden to make any modifications or alterations to the operating values of the disc-type sander. They could endanger personnel and cause damage to the machine.



1.4 Possible dangers caused by the disc-type sander

The disc-type sander was built using the latest technological advances.

Nonetheless, there remains a residual risk, since the machine operate with

- high revolutions,
- rotating parts and tools,
- an abrasive disc-type sander,
- electrical voltage and currents.

We have used construction resources and safety techniques to minimize the health risk to personnel resulting from these hazards.

If the disc-type sander is used and maintained by personnel who are not duly qualified, there may be a risk resulting from incorrect or unsuitable maintenance.

INFORMATION

All personnel involved in assembly, commissioning, operation and maintenance must

- be duly qualified,
- follow this operating manual.

In the event of improper use

- there may be a risk to personnel,
- there may be a risk to the disc-type sander and other material property,
- the proper operation of the disc-type sander may be affected.

Disconnect the disc-type sander whenever cleaning or maintenance work is being carried out.

WARNING!

The disc-type sander may only be used with the safety devices activated.

Disconnect the disc-type sander immediately whenever you detect a failure in the safety devices or when they are not fitted!

All additional installations, exhaust systems must incorporate the prescribed safety devices.

As the machine operator, this will be your responsibility!



1.5 Qualification of personnel

1.5.1 Target group

This manual is addressed to

- the operators,
- users,
- maintenance personnel.

The warning notes therefore refer to both operation and maintenance of the disc-type sander.

Determine clearly and irrevocably who will be responsible for the different activities on the disc-type sander (operation, maintenance and repair).

Vague or unclear assignment of responsibilities constitute a safety hazard!

Disconnect the mains plug of the disc-type sander. In this way you will prevent unauthorized operation.





The qualifications of the personnel for the different tasks are mentioned below:

Operator

The operator is instructed by the operating company about the assigned tasks and possible risks in case of improper behaviour. Any tasks which need to be performed beyond the operation in the standard mode must only be performed by the operator if it is indicated in these instructions and if the operating company expressly commissioned the operator.

Electrical specialist

Due to his professional training, knowledge and experience as well as his knowledge of respective standards and regulations the electrical specialist is able to perform works on the electrical system and to recognise and avoid any possible dangers himself.

The electrical specialist is specially trained for the working environment in which he is working and knows the relevant standards and regulations.

Specialist personnel

Due to his professional training, knowledge and experience as well as his knowledge of relevant regulations the specialist personnel is able to perform the assigned tasks and to recognise and avoid any possible dangers himself.

Instructed persons

Instructed persons were instructed by the operating company about the assigned tasks and any possible risks in case of improper behaviour.

1.5.2 Authorized persons

WARNING!

Incorrect use and maintenance of the disc-type sander constitute a danger for personnel, objects and the environment.

Only authorized persons may operate the disc-type sander!

The technical personnel is authorized to operate and to maintain the disc-type sander. They are trained and instructed by employees, who work for the operator and the manufacturer.



The operator must

- train the personnel,
- instruct the personnel in regular intervals (at least once a year) on
 - monitoring all safety standards that apply to the machine,
 - maintaining the operation,
 - obtaining accredited technical guidelines,
- check the knowledge of the personnel,
- document training / instructions,
- require the personnel to confirm participation in training / instruction by means of a signature,
- check that the personnel is aware of safety and dangers in the workplace and that they observe the operating manual.

The user must

- have followed a training on the operation of the disc-type sander,
- know the function and mechanical operation,
- before operation
 - have read and understand the operating manual,
 - be familiar with all safety devices and regulations.



There are additional requirements for work on electrical components or equipment. This task shall only be carried out by a qualified electrician or a person working under the instructions and supervision of a qualified electrician.

INFORMATION

The mains plug of the disc-type sander must be freely accessible.



1.6 User's position

The user must stand in front of the disc-type sander.

1.7 Safety measures during operation

CAUTION!

Risk due to inhaling of health hazardous dusts and mist.

Dependent on the material which need to be processed and the used auxiliaries dusts and mist may be caused which might impair you health.

Make sure that the generated health hazardous dusts and mist are safely sucked off at the point of origin and is dissipated or filtered from the working area. Use an appropriate suction unit.



CAUTION!

Risk of fire and explosion by using flammable materials or cooling lubricants.

Take additional preventive measures in order to safely avoid health hazards before processing flammable materials (e.g. aluminum, magnesium) or before using flammable additives (e.g. spirit).



1.8 Safety devices

Operate the disc-type sander only with properly functioning safety devices.

Stop the disc-type sander immediately if there is a failure in the safety device or if it is not functioning for any reason:

It is your responsibility!

If the safety device has be activated, the disc-type sander must only be operated again when

- the cause of the failure has been removed,
- you have made sure that there is no existing danger for persons or objects.

CAUTION!

Dirty or eventually contaminated personal protective equipment might cause disease.

Clean your personal protective equipment

- after each use,
- regularly once a week.

Personal protective equipment for special work

Protect your face and your eyes: Wear a safety helmet with a face guard for every work, especially for any kind of work where your face and eyes are exposed to hazards.

Use protective gloves when lifting or handling pieces with sharp edges.

Wear safety shoes when fitting, dismanteling or transporting heavy components.



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1.9 Safety during operation

In the description of work with and on the disc-type sander we highlight the dangers specific for that work.

WARNING!

Before activating the disc-type sander, double check that this will not

- endanger other people,
- cause damage to equipment.



Avoid unsafe working practise:

- Make sure that your work does not endanger anyone.
- The instructions of this manual must be observed strictly during assembly, operation, maintenance and repair.
- Do not work on the disc-type sander, if your concentration is reduced, for example, if you are taking some kind of medication.
- Observe the regulations for the prevention of accidents issued by your association for the prevention of accidents and safety in the workplace or other inspection authorities.
- Inform the inspector of any danger or failure.
- Use the protective goggles!

WARNING!

Fire- or explosion hazard by flying sparks.

Do not operate the disc-type sander nearby combustible or explosive material.



1.10 Safety during maintenance

Inform operators timely on maintenance and repair work.

Report all safety relevant changes or performance details of the disc-type sander. Document all changes, have the operation changed accordingly and train the machine operators.

Report and document any changes

1.10.1 Disconnecting the disc-type sander and making it safe

Unplug the machine from the mains before beginning any maintenance or repair work.

Check that all machine components and hazardous voltages have been disconnected.

Place a warning sign on the machine.



1.10.2 Mechanical maintenance work

Remove all protection and safety devices before beginning maintenance work and re-install them once the work has been completed. These includes:

- Covers
- Safety indications and warning signs
- Earth (ground) connection

If you remove protection or safety devices, refit them immediately after completing the work.

Check that they are working properly!

1.11 Accident report

Inform your superiors and Optimum Maschinen Germany GmbH immediately in case of accidents, possible sources of danger and any actions which almost led to an accident ("near misses").

"Near misses" may have many possible causes.

The sooner they are notified, the faster these causes can be eliminated.



1.12 Electrical system

🔧 Maintenance on page 24

Have the machine and / or the electrical equipment checked / maintained regularly, i.e. at least every six months.

Eliminate immediately all defects such as loose connections, defective wires, etc.

A second person must be present during work on live components, to disconnect the power in case of an emergency.

Disconnect the disc-type sander immediately if there is a malfunction in the power supply!



2 Technical Data

The following data which give dimensions and weight are the manufacturer's authorised machine data.

2.1 Power connection	
Motor output	0,9 kW; 230V ~50Hz
Rotation [min ⁻¹]	1420
2.2 Grinding wheel	
Grinding wheel diameter [mm]	305
Grinding disc dimension [mm]	300
2.3 Dimensions	
📏 Dimensions on page 14	
Weight [kg]	30
Adjustment of the angle of stopper	± 60°
Grinding table (inclinable)	± 45°
2.4 Environmental conditions	
Temperature	5 - 35 °C
rel. humidity	25 - 80 %

2.5 Emissions

The emission of the disc sander is below 76 dB(A). If the disc-type sander is installed in an area where various machines are in operation, the acoustic influence (immission) on the operator of the disc-type sander may exceed 80 dB(A).

INFORMATION

This numeric value had been measured on a new machine under conventional operating conditions. Depending on the age or wear of the machine, the noise behavior of the machine might change.

Furthermore, the extent of the noise emission is also depending on manufacturing influence factors, such as speed, material and clamping conditions.



INFORMATION

The mentioned numerical value is an emission level and not necessarily a safe working level.

Unless the degree of noise emission and the degree of noise disturbance are depending on one another it is not possible to use it in order to reliably determine if it is necessary to take further preventive measures or not.



The following factors influence the actual degree of the noise disturbance of the operator:

- Characteristics of the working chamber, e.g. size or damping behavior,
- Other noise sources, e.g. the number of machines,
- Other processes proceeding nearby and the period during which the operator is exposed to the noise.



Furthermore, the admissible pollution level may be different from one country to another due to the national regulations.

This information regarding the noise emission should allow the operator of the machine to perform a better evaluation of the endangerments and risks.

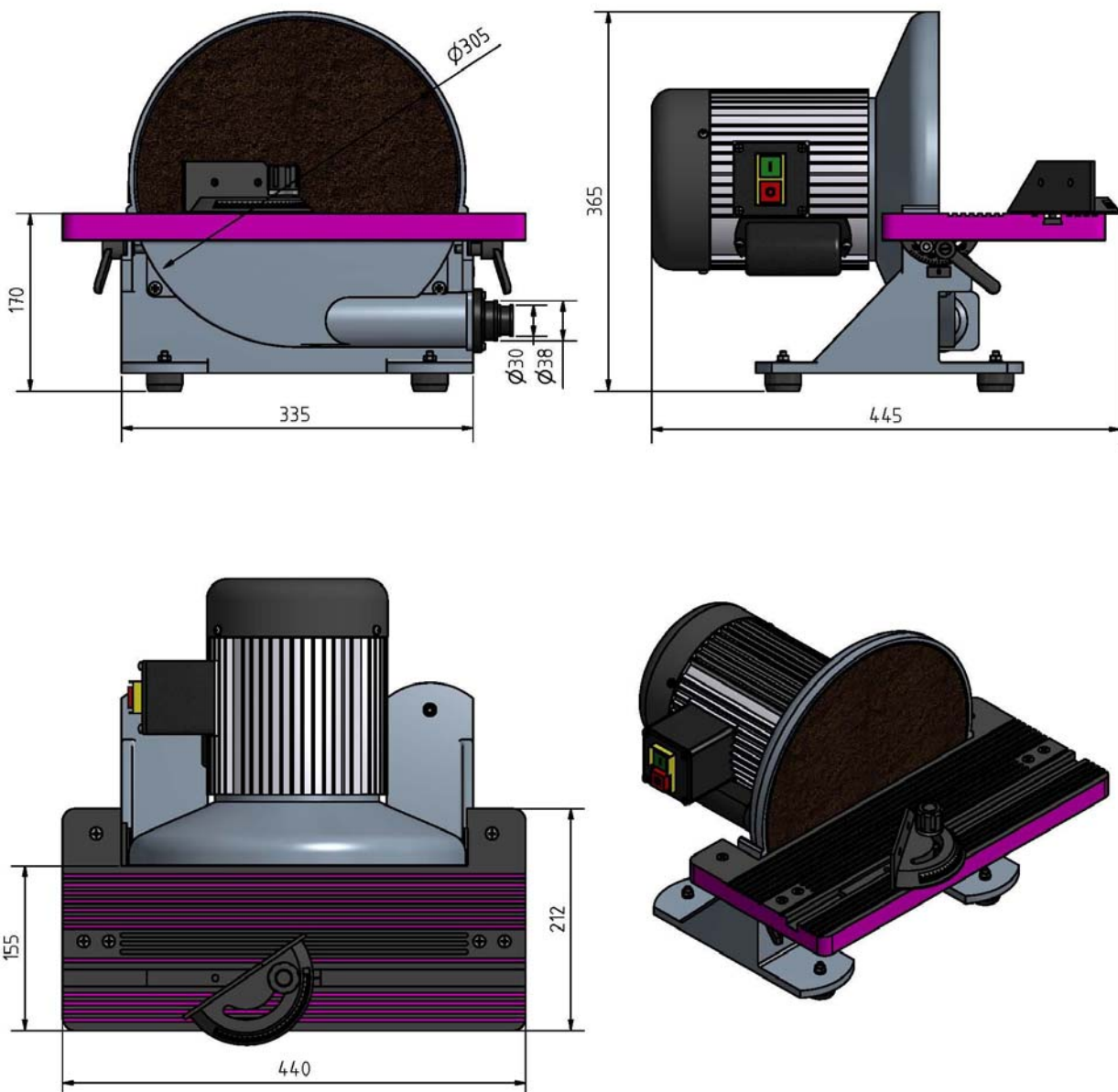
CAUTION!

The machine operator has to wear an appropriate ear protection depending on the overall stress caused by noise and on the basic limit values.

We generally recommend using a sound and ear protection.



2.6 Dimensions



Img.2-1: Dimensions

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3 Assembly

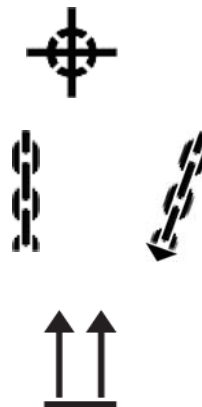
3.1 Delivery volume

Please check immediately that nothing had been damaged during transportation and that all components are complete. Compare the delivery volume to the attached packing list.

- Disc-type sander with worktable
- Angular fence
- Hexagon socket wrench
- Instruction manual

3.2 Transport

- Center of gravity
- Attachment positions (marking the positions for the attachment position gear)
- Prescribed transport position (marking the top side)
- Means of transportation to be used
- Weights



WARNING!

Machine parts which fall off forklift trucks or other transport vehicles could cause very serious or even fatal injuries. Follow the instructions and information on the box.



WARNING!

Use of unstable lifting and load suspension gear that breaks under load can cause very serious injuries or even death.

Check that the lifting and load suspension gear has sufficient load capacity and is in perfect condition. Observe the rules for preventing accidents issued by your association for the prevention of occupational accidents and safety in the workplace or other inspection authorities.

Hold the loads properly. Never walk under suspended loads!



3.3 Storage

ATTENTION!

Improper storage may cause important parts to be damaged or destroyed. Store packed or unpacked parts only under the following ambient conditions. Please follow the instructions and indications on the transportation box:





- Fragile goods (goods require careful handling)



- Protect against humidity and humid environments

📖 Environmental conditions on page 13.



- Prescribed position of the packaging box (marking the top side – arrows pointing upward)



- Maximum stacking height

Example: non-stackable – do not pile any further packaging boxes on top of the first packaging box



Consult Optimum Maschinen Germany GmbH if the disc-type sander and accessories have to be stored for a period of over three months or under different external conditions than those given here 📖 Information on page 5.

3.4 Unpacking and putting up

3.4.1 Unpacking

The machine will be dispatched ready for plug. Check the machine after receipt, if there are damages in transit. In case of this, inform the relevant haulier and your seller.

3.4.2 Requirements of installation site

Organise the work area so that the disc-type sander can function in accordance with the safety precautions.

The operating area for operation, maintenance and repair must not be obstructed.

INFORMATION

In order to provide for good functionality and high machining accuracy as well as long durability of the machine the site should fulfill certain criteria.

Observe the following items:

- The device must only be installed and operated in dry ventilated places.
- Provide for sufficient illumination (minimum value: 500 lux, measured at the tool tip). In case of little intensity of illumination provide for additional illumination i.e. by a separate workplace illuminator.





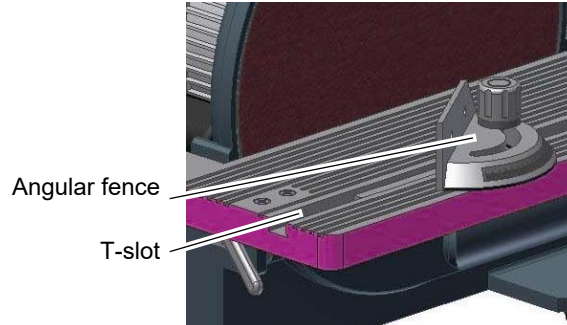
INFORMATION

The mains plug of the disc-type sander must be freely accessible.



3.4.3 Mounting of disc-type sander

- The disc-type sander is already pre-assembled.
- Push the angular fence into the T-slot of the working table.
- Remove the protective film from the motor cover, that the motor will be cooled enough and do not overheat.



Img.3-1: Mounting of disc-type sander

3.5 Cleaning of machine

For protection against corrosion, all bright parts of this machine are strong lubricated with protection greases and protection wax on work side. Before starting machine for the first time, clean it with right, ecofriendly cleansing agent. (We recommend paraffin for cleaning!). Do not use solvents, cellulose thinner or other cleansing agents, which can attack the lacquer. Pay attention to the instructions and comments from the manufacturer of cleansing agent. Make sure that the room is good ventilated during the cleaning, to avoid damage of health through poisonous vapour. After carefully cleaning of the machine, coat all bright machineparts with a light lubrication.

WARNING!

A lot of cleansing agents are combustibile and easy flammable. Its not allowed to smoke during the use of cleansing agents. Fire and open lights are forbidden!



INFORMATION

Oil, grease and cleansing agents are harmful to the environment, it isn't allowed to give they into sewage or the normal garbage. Remove this preparations suitable for environment. The clothes, which are soaked with oil, grease or cleansing agent, are easy flammable. Collect clothes and steel wool in a matching, closed container and give it to a waste disposal, suitable to environment – not into the garbage!





3.6 First use

3.6.1 Electric power supply

- Connect the mains plug of the disc-type sander to your power supply.
- Control the fuse protection (fuse) of the power supply according to the technical details for the power consumption of the disc-type sander.

WARNING!

Personnel and equipment may be endangered if the disc-type sander is first used by an untrained employee. We do not take any liability for damages caused by incorrect commissioning.



- Make sure that the sand disc can be turned easily and that the disc not brush against the working table.
- Check cables and all electrical parts of external errors. Just when all parts are already, the disc-type sander can be used.
- Consult your expert by obvious mistakes!

ATTENTION!

Just the specialist staff is permitted to repair, maintain and arm the unplugged machine (disconnect machine)!



- The push button On-Off must be in position „OFF“.
- Insert plug in a fitting socket.
- Switch the push button On-Off in position „ON“ and let the disc-type sander run for a minute.



4 Operation

Operate the disc-type sander only under the following conditions:

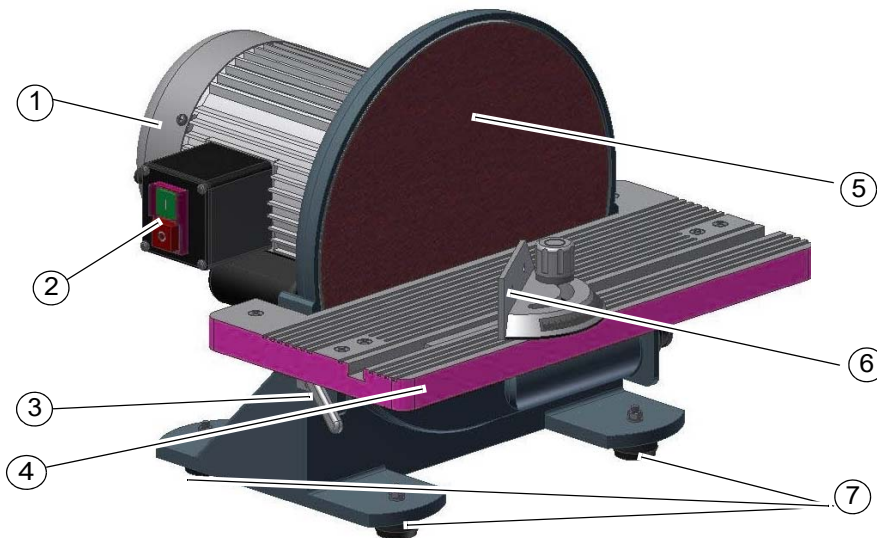
- The disc-type sander is in proper working condition.
- The disc-type sander is used as prescribed.
- The operating manual is followed.
- All safety devices are installed and activated.

Any malfunctions should be eliminated immediately. Stop the disc-type sander immediately in the event of any malfunction in operation and make sure it cannot be started up by accident or without authorization.

Notify the person responsible immediately of any malfunction.



4.1 Control and indicating elements



Img.4-1: Control and indicating elements

Pos.	Description	Pos.	Description
1	Motor	2	On-Of push button
3	Clamp bolts for table swivelling	4	Swivel bench
5	Grinding disc with sand disc	6	Adjustable angle
7	Feet (4 pcs.) / fixing possibility for fitting bases	8	

4.2 Before starting to work


Before starting to grind always check that the work piece is free from oil, grease and remains of paint. This will ensure that the abrasive disc does not become smeared over or dirty. Check the state of the abrasive disc. If it is dirty or defective it is to be replaced Transport on page 15.

Before starting with work, make following checks:

- ➔ Check all cables and plugs.
- ➔ Check the direction of sand disc.
- ➔ Make sure, that the bench is tighten well.

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- Notice that there are different sand disc grain sizes for different operations.
- Make sure that the sand disc can be turned freely and will not be braked or blocked by exposed workpieces.
- Consider the possible (shaded) operating range of the disc-type sander. A machining of workpiece in the not shaded range can lead to dangerous situations  Grinding with the grinding disk on page 22.

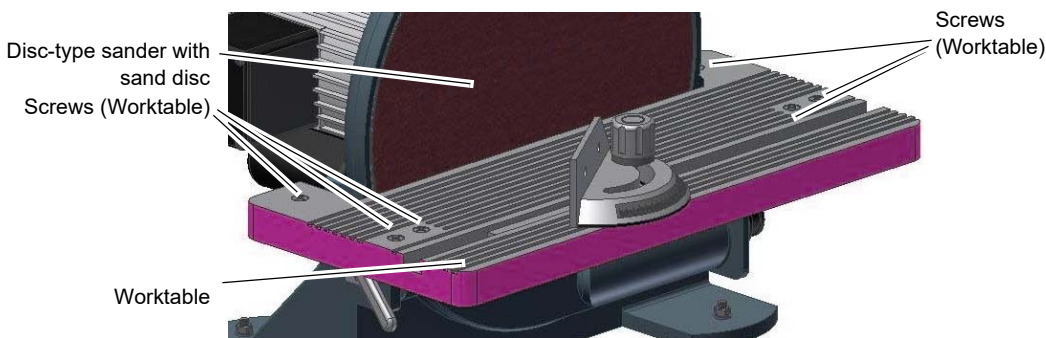
WARNING!

Rotating parts! Tackle work with good sense. Be careful what you do. Pay especially attention to rotating parts. Wear tight-fitting clothes. Be careful, that you don't get caught in rotating parts with hair or clothes! Wear a hair-net. Don't wear jewellery during the work with the machine.

Flying chips and hurled away parts! Wear protective goggles! Protect your eyes against chips, flying around, and other splinters.



4.2.1 Adjusting the distance between sand disc and working table



Img.4-2: Adjusting the distance

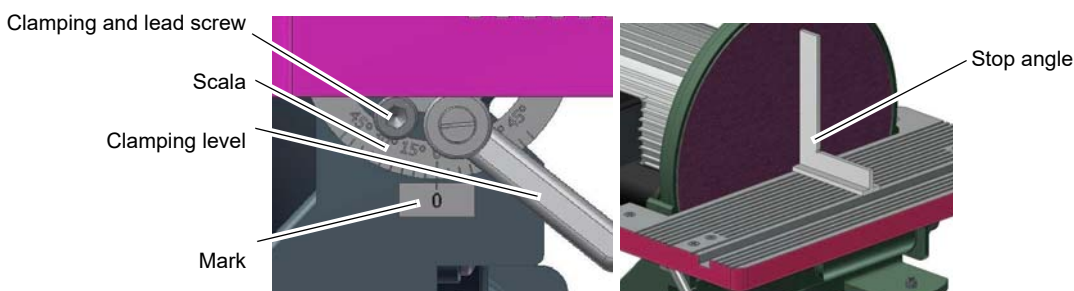
- Disconnect disc-type sander from power supply
- Loosen the 6 screws at the worktable.
- Post the worktable parallel and as near as possible to the sand disc. The sand disc must be turning freely and without brushing against the table. The equal distance size on both sides should not be bigger than 2mm.
- After finishing the adjustment, the worktable will be tightened with the screws and the disc-type sander can be connected to the power supply again.

ATTENTION!

The gap between worktable and disc-type sander may come to max. 2 mm, that the material won't be dragged into the gab.



4.2.2 Adjusting the squares of worktable to sand disc



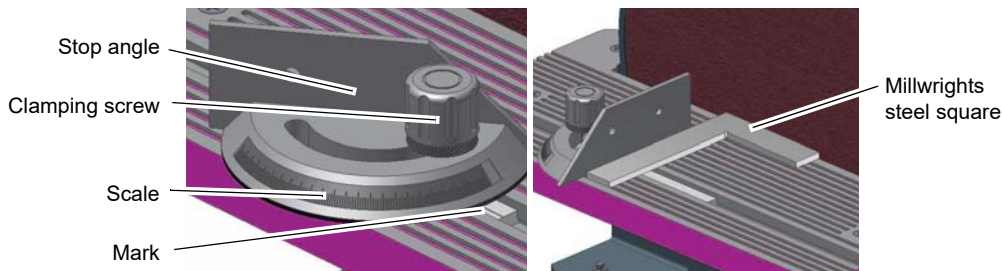
Img.4-3: Angle adjustment

- Disconnect disc-type sander from power supply (pull out plug).



- With help of the both clamping levers on the left and on the right, the worktable can be loosened.
- Likewise on both sides, there is a scale. Additional there is a marking on the left side. With help of the 0-marking you can adjust the wanted square value.
- ➔ Check the free-wheeling of the sand disc, after square adjustment.
- ➔ Tighten the clamp screw and lead screws in addition to any angular displacement of the table.
- ➔ Connect the disc-type sander with the power supply.
- For special square adjustments e.g. 90° could you use a back square too and align the sand disc against the worktable.
- These settings can only be regarded as approximate visual settings.

4.2.3 Adjusting the squares at the fence



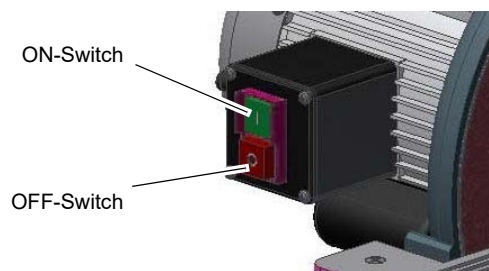
Img.4-4: Angle adjustment

- ➔ The back square at the worktable could be loosened about the clamp bolt.
- ➔ With the scale (3), the wanted angular degrees will be adjusted at the marking on the taper gib.
- ➔ After adjustment the clamp bolt will be tightened again and the back square will be clamped in the guide.
- For special square adjustments e.g. 90° could be used a millwrights steel square and align the back square against the sand disc.
- These settings can only be regarded as approximate visual settings.

4.3 Switching the machine on

WARNING!

The machine runs on even after pressing the OFF-switch up to 30 seconds.



Img.4-5: ON/ OFF- Switch

Advice for the grinding process

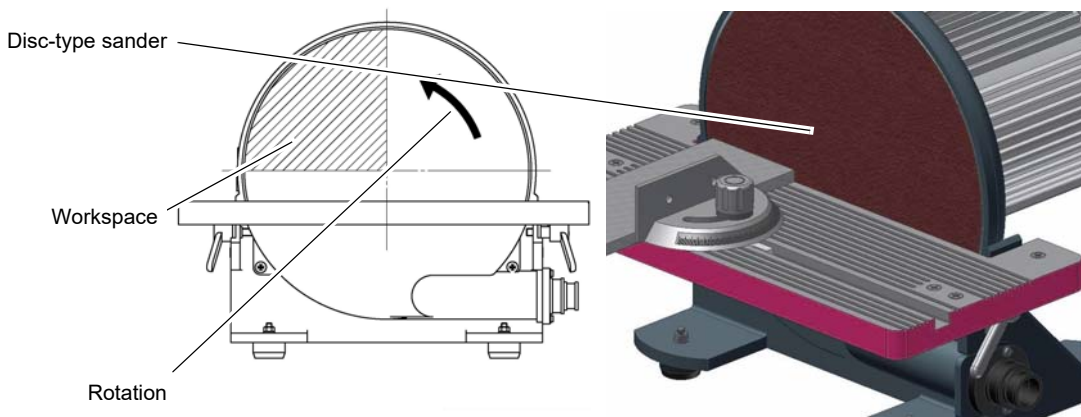
- ➔ Pay attention to the safety instructions and use the protective devices on the machine and your personal protective equipment (goggles, ear protection, safety shoes, etc.).
- ➔ Do not press the material too tightly against the grinding plate during the grinding process.
- ➔ Do not press the material too tightly against the grinding plate during the grinding process.



- ➔ Make sure that the gap between the work table and grinding wheel is not too large. Especially for thin workpieces (eg plates, chisels, ...) there is a risk that the workpiece moves into the gap!
- Since the machine does not have to tension it is important that your work piece rests are possible over the whole area and detained on the work table can!
- ➔ Maintain a healthy state of the exchange of used grinding wheels and grinding wheels made in time. Only with proper tools to achieve a good quality sanding!

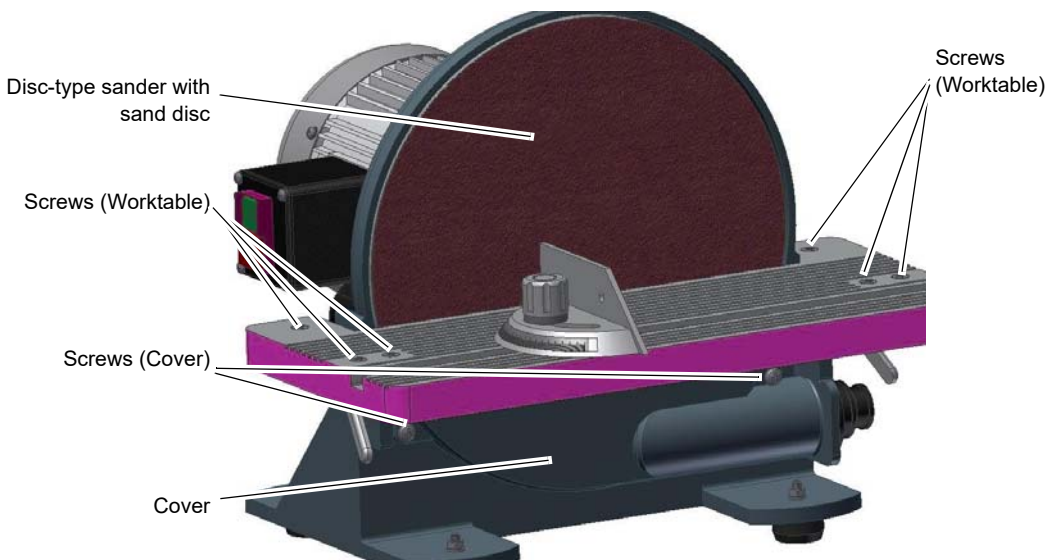
4.4 Grinding with the grinding disk

Consider the possible (shaded) operating range of the disc-type sander. A machining of workpiece in the not shaded range can lead to dangerous situations.



Img.4-6: Workspace

4.5 Change of grinding wheel



Img.4-7: Change of grinding wheel

- ➔ Disconnect the disc-type sander from the power supply (pull plug).
- ➔ Loosen the 6 screws and remove the worktable.
- ➔ Now remove the 2 screws and take off the front cover.
- ➔ Remove the spent grinding wheel from the sand disc.
- ➔ Clean the sanding pad from the adhesive residues and other soiling. Use a suitable solvent to remove. We recommend Nitro-Dilution. For particularly stubborn areas it is possible to use nail polish remover.





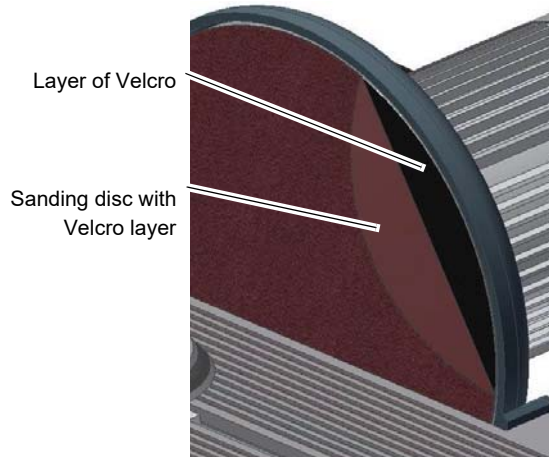
→ Always follow the instructions of the cleaning or solvent manufacturer.

WARNING!

A lot of cleansing agents are combustibile and easy flammable. It's not allowed to smoke during the use of cleansing agents. Fire and open lights are forbidden!



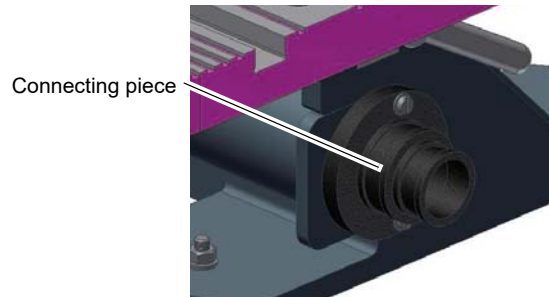
- Now you can on the new layer of Velcro. Make sure you glue the Velcro pad on an oil-and grease-free surface.
- Mount the grinding wheel (with Velcro) on the Velcro layer.
- Then mount the wheel cover or the bench again. Take care that the grinding plate is free-wheeling to work table (if necessary, adjust the distance).
- Connect the disc-type sander again.



Img.4-8: Mounting of Velcro pad and sanding disc

4.6 Connecting pieces for the connection of suction system

There is a connecting piece on the right side under the worktable for the connection on a suction system. The nominal width amounts to 30 (38) mm.



Img.4-9: Connecting piece



5 Maintenance

In this chapter you will find important information about

- Inspection
- Maintenance
- Repairs

of the disc-type sander.

ATTENTION!

Properly performed regular maintenance is an essential prerequisite for

- safe operation,
- fault-free operation,
- long service life of the bench grinder and
- the quality of the products you manufacture.

Installations and equipment from other manufacturers must also be in optimum condition.



5.1 Safety

WARNING!

The consequences of incorrect maintenance and repair work may include:

- Very serious injury to personnel working on the bench grinder
- Damage to the bench grinder

Only qualified personnel should carry out maintenance and repair work on the disc-type sander.



5.1.1 Preparation

WARNING!

Only carry out work on the disc-type sander if it has been unplugged from the mains power supply

🔧 Disconnecting the disc-type sander and making it safe on page 11

Position a warning sign.



5.1.2 Restarting

Before restarting run a safety check.

WARNING!

Before connecting the disc-type sander you must check that

- there is no danger for personnel,
- the disc-type sander is undamaged.



5.2 Inspection and maintenance

The type and extent of wear depends to a large scale on individual usage and service conditions. The disc-type sander is largely maintenance-free. The bedding of the disc reel in front and the bedding of the engine are pre lubricated.

- Clean the disc-type sander in regular intervals according to the use. Remove the dust and deposits in the housing and in the suction connections.
- Control the abrasive band regularly on wear and tear / fractions.



5.3 Repair

5.3.1 Customer service technician

Contact your specialist dealer if you do not have customer service's information or contact Stürmer Maschinen GmbH in Germany who can provide you with a specialist dealer's contact information. Optionally, the

Stürmer Maschinen GmbH

Dr.-Robert-Pfleger-Str. 26

D- 96103 Hallstadt

can provide a customer service technician, however, the request for a customer service technician can only be made via your specialist dealer.

If the repairs are carried out by qualified technical personnel, they must follow the indications given in these operating instructions.

Optimum Maschinen Germany GmbH accepts no liability nor does it guarantee against damage and operating malfunctions resulting from failure to observe these operating instructions.

For repairs only use

- faultless and suitable tools
- original parts or series components expressly authorized by Optimum Maschinen Germany GmbH.

5.4 Sanding disc

We recommend you to only use high quality genuine accessories from Optimum Maschinen Germany GmbH. Only with original accessories we guarantee an correct operation and optimum results.

 Transport on page 15

INFORMATION

The sandpaper consists of Binders made of aluminium oxide abrasive grains or glued silicon carbide. The grain size indicates whether the sandpaper is medium, fine or very fine. 100-180 grit for example, is a fine grit. The numbers (40, 60, 80, 120) indicate the number of stitches per length of 25.4 mm wire side of a vibrating screen. The mixture of abrasive grain is separated by vibrating screens by particle size.

The higher the grit number, the finer the sandpaper



6 Ersatzteile - Spare parts

6.1 Ersatzteilbestellung - Ordering spare parts

Bitte geben Sie folgendes an - Please indicate the following :

- Seriennummer - Serial No.
- Maschinenbezeichnung - Machines name
- Herstellungsdatum - Date of manufacture
- Artikelnummer - Article no.

Die Artikelnummer befindet sich in der Ersatzteilliste. *The article no. is located in the spare parts list.* Die Seriennummer befindet sich am Typschild. *The serial no. is on the rating plate.*

6.2 Hotline Ersatzteile - Spare parts Hotline



+49 (0) 951-96555 -118

ersatzteile@stuermer-maschinen.de



6.3 Service Hotline



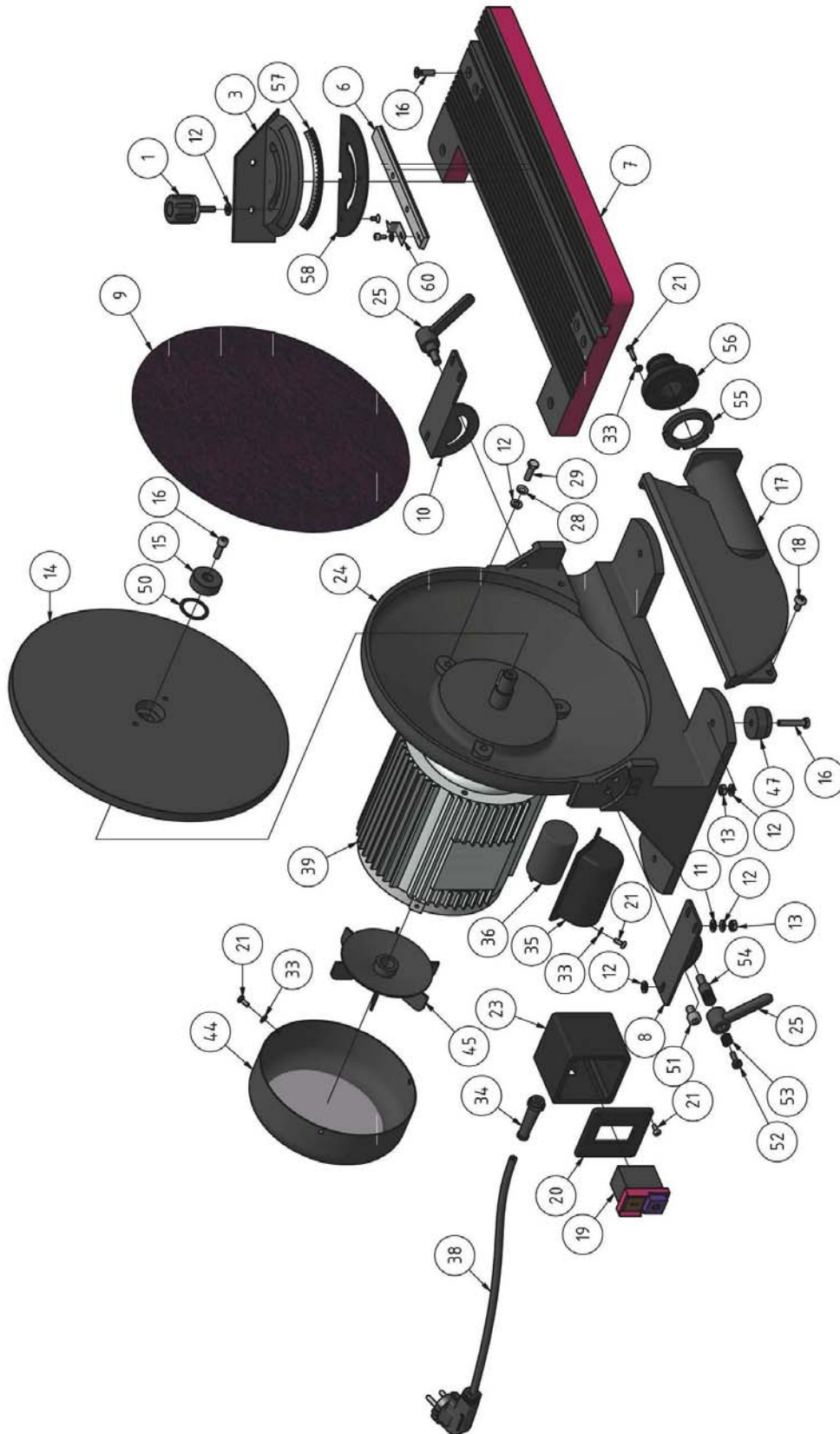
+49 (0) 951-96555 -100

service@stuermer-maschinen.de





6.4 Ersatzteilzeichnung - Spare parts drawing



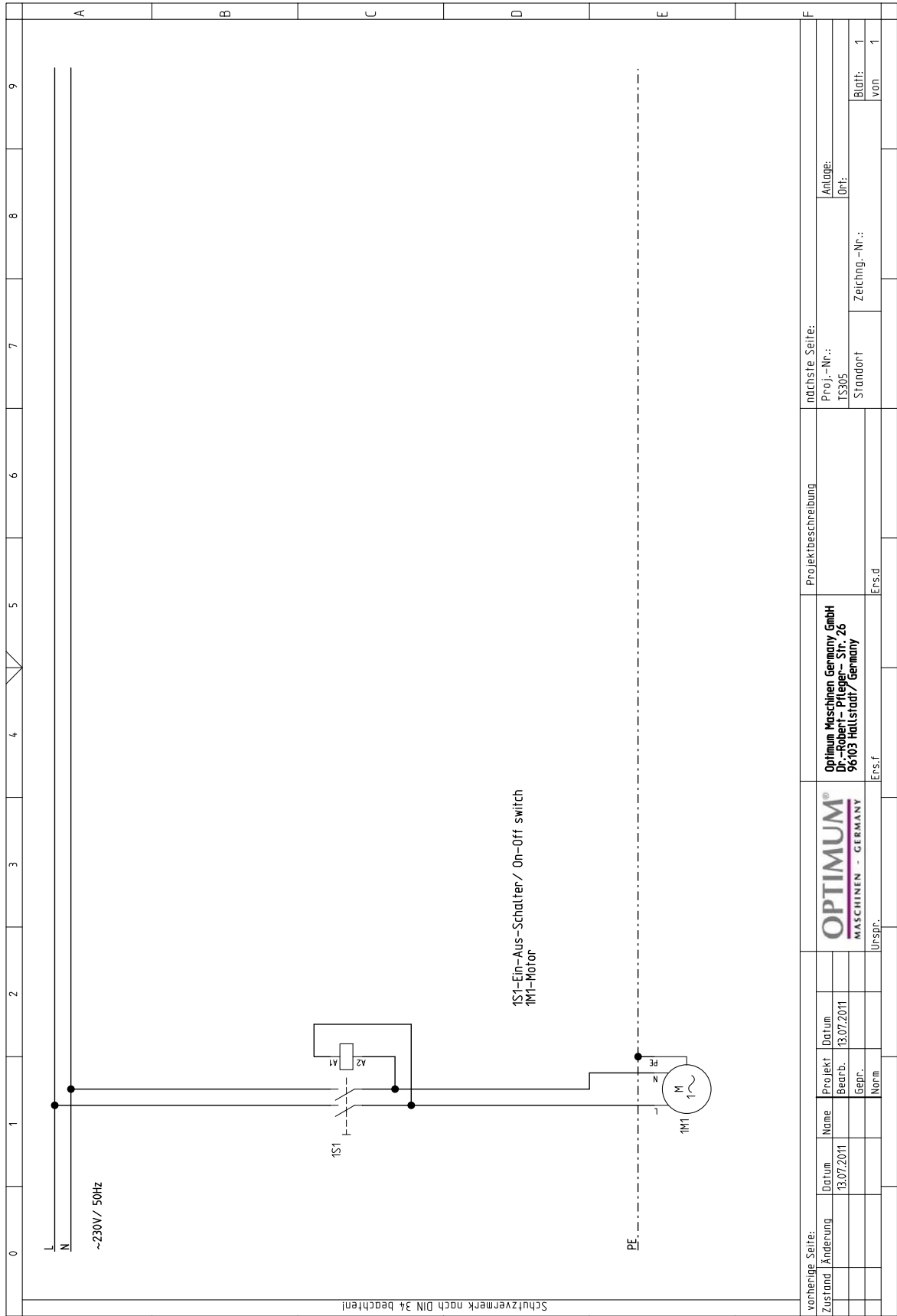
6-1: Ersatzteilzeichnung - Drawing spare parts



TS305 - Teileliste - Parts list					
Pos.	Bezeichnung	Description	Menge Qty.	Grösse Size	Artikelnummer Item no.
1	Handdrehknopf	Washer	1		0331030501
3	Winkelanschlag	Angular fence	1		0590030032
6	Führungsschiene	Guide plate	1		0590030032
7	Arbeitstisch	Worktable	1		0331030507
8	Einstellwinkel links	Plan angle left	1		0331030508
9	Schleifscheibe Ø 300mm	Grinding wheel Ø 300mm	1	Katalogware Catalog goods	
	Klettverschlussauflage Ø 300mm	Velcro fastener pad Ø 300mm	1	Katalogware, ohne Abbildung Catalog goods, without image	3357801
10	Einstellwinkel rechts	Plan angle right	1		0331030510
11	Unterlegscheibe	Washer	12	DIN 125/6	
12	Federring	Spring washer	12	DIN 128/6	
13	Sechskantmutter	Hexagon head screw	10	ISO4032/M6	
14	Schleifteller	Sand disc	1		0331030514
15	Scheibe	Washer	1		0331030515
16	Schraube	Screw	7	ISO 4017/M6x20	0331030516
17	Staubschutz	Dust protection	1		0331030517
18	Schraube	Screw	2	ISO 7045/M6x12	
19	Schalter	Switch	1		0460051
20	Schalterabdeckung	Switch cover	1		0331030520
21	Schraube	Screw	2	ISO 7045/M4x10	0331030521
23	Schaltergehäuse	Terminal box	1		0331030523
24	Grundgestell	Base	1		0331030524
25	Tischarretierung	Table arrest	2		0331030525
28	Federscheibe	Elastic washer	6	DIN 128/6	
29	Schraube	Screw	6	ISO 4017/ M6x20	
33	Unterlegscheibe	Washer	5	DIN 125/ 6	
34	Kabelschutz	Cable protection	1		
35	Kondensatorgehäuse	Capacitor box	1		0331030535
36	Kondensator	Capacitor	1		0331030536
38	Kabel mit Stecker	Cable with plug	1		
39	Stator	Stator	1		0331030539
CPL	Motor komplett	Motor complete	1		0331030539CPL
40	Lager	Bearing	1	6204-2Z	0406204ZZ
44	Lüftergehäuse	Fan housing	1		0331030544
45	Lüfterrad	Fan	1		0331030545
46	Motordeckel	Motor cover	1		0331030546
47	Gummifuß	Rubber pad	4		0331030547
48	Lager	Bearing	1	6203-2Z	0406203ZZ
51	Innensechskantschraube	Socket head screw	2	ISO 4762-M8x10	
52	Schraube	Screw	2		
53	Feder	Spring	2		
54	Bolzen	Bolt	2		
55	Gummiring	Rubber ring	1		0331030555
56	Absaugstutzen	Connecting piece	1		0331030556
57	Skala	Scale	1		
58	Platte	Plate	1		
59	Federscheibe	Spring washer	1		
60	Zeiger	Indicator	1		0331030560



6.4 Schaltplan - Wiring diagram



6-1: Schaltplan - Wiring diagram

TS305_parts.fm



7 Troubleshooting

Problem	Cause / possible consequences	Solution
Motor overloaded	Cooling air sucking of motor is hindered Contact pressure too high	Checking and Cleaning Work with lower contact pressure
The workpiece to be processed is pulled into the grinding disc.	Too big distance between grinding wheel and worktable	Reduce distance between grinding wheel and worktable
Low life of grinding wheel	Grinding wheel with too fine grain size	Use grinding wheel with coarser grain size
Bad quality of grinding	Grinding wheel with too coarse grain size	Use disc-type sander with too finer grain size
Grinding square doesn't fit	Adjusted squares at worktable or at back square do not fit	Check square and adjust it new if needed ☞ Adjusting the squares of worktable to sand disc on page 20 ☞ Adjusting the squares at the fence on page 21
Grinding wheel doesn't run optical round	Grinding wheel eccentric applied	Apply grinding wheel centric



8 Appendix

8.1 Copyright

This document is copyright. All derived rights are also reserved, especially those of translation, re-printing, use of figures, broadcast, reproduction by photo-mechanical or similar means and recording in data processing systems, whether partial or total.

The company reserves the right to make technical alterations without prior notice.

8.2 Liability claims for defects / warranty

Beside the legal liability claims for defects of the customer towards the seller the manufacturer of the product, OPTIMUM GmbH, Robert-Pfleger-Straße 26, D-96103 Hallstadt, does not grant any further warranties unless they are listed below or had been promised in the frame of a single contractual agreement.

- The processing of the liability claims or of the warranty is performed as chosen by OPTIMUM GmbH either directly or through one of its dealers. Any defective products or components of such products will either be repaired or replaced by components which are free from defects. The property of replaced products or components passes on to OPTIMUM GmbH.
- The automatically generated original proof of purchase which shows the date of purchase, the type of machine and the serial number, if applicable, is the precondition in order to assert liability or warranty claims. If the original proof of purchase is not presented, we are not able to perform any services.
- Defects resulting of the following circumstances are excluded from liability and warranty claims:
 - Using the product beyond the technical options and proper use, in particular due to overstraining of the machine
 - Any defects arising by one's own fault due to faulty operations or if the operating manual is disregarded
 - Inattentive or incorrect handling and use of improper equipment
 - Non-authorized modifications and repairs
 - Insufficient installation and safeguarding of the machine
 - Disregarding the installation requirements and conditions of use
 - Atmospheric discharges, overvoltage and lightning strokes as well as chemical influences
- The following items are as well not subject to the liability or warranty claims:
 - Wearing parts and components which are subject to a standard wear as intended such as e.g. V-belts, ball bearings, illuminants, filters, sealings, etc.
 - Non reproducible software errors
- Any services which OPTIMUM GmbH or one of its agents performs in order to fulfill in the frame of an additional guarantee are neither an acceptance of the defects nor an acceptance of its obligation to compensate. Such services do neither delay nor interrupt the warranty period.
- Place of jurisdiction among traders is Bamberg.
- If one of the above mentioned agreements is totally or partially inefficient and/or null, it is considered as agreed what is closest to the will of the warrantor and which remains in the framework of the limits of liability and warranty which are predefined by this contract.



8.3 Change information manual

Chapter	Short note	new version number
CE	Update of CE declaration	1.4.1
3.1.1 ; CE	Catalogue goods Accessories removed; CE declaration updated	1.4.2

8.4 Note regarding disposal / options to reuse

Please dispose of your device environmentally friendly by disposing of scrap in a professional way.

Please neither throw away the packaging nor the used machine later on, but dispose of them according to the guidelines established by your city council/municipality or by the corresponding waste management enterprise.

8.4.1 Decommissioning

CAUTION!

Used devices need to be decommissioned in a professional way in order to avoid later misuses and endangerment of the environment or persons



- Pull off the mains plug.
- Disconnect the connection cable.
- Remove all environmentally hazardous operating fluids from the used device.
- If applicable remove batteries and accumulators.
- Disassemble the machine if required into easy-to-handle and reusable assemblies and component parts.
- Supply the machine components and operating fluids to the provided disposal routes.

8.4.2 Disposal of the packaging of new devices

All used packaging materials and packaging aids of the machine are recyclable and generally need to be supplied to the material reuse.

The packaging wood can be supplied to the disposal or the reuse.

Any packaging components made of cardboard box can be chopped up and supplied to the waste paper collection.

The films are made of polyethylene (PE) and the cushion parts are made of polystyrene (PS). These materials can be reused after reconditioning if they are forwarded to a collection station or to the appropriate waste management enterprise.

Only forward the packaging materials correctly sorted to allow a direct reuse.

8.4.3 Disposing of the old device

INFORMATION

Please make sure in your own interest and in the interest of the environment that all component parts of the machine will be disposed of in the provided and admitted ways.

Please note that the electrical devices include lots of reusable materials as well as environmentally hazardous components. Account for separate and professional disposal of the component parts. In case of doubt, please contact your municipal waste management. If appropriate, call on the help of a specialist waste disposal company for the treatment of the material.





8.4.4 Disposal of electrical and electronic components

Please make sure that electrical components are disposed of in a professional way according to the legal requirements.

The device includes electric and electronic components and must not be disposed of with the rubbish. According to the European directive 2011/65/EU regarding electrical and electronic used devices and the execution of national rights used electrical tools and electrical machines need to be collected separately and be supplied to an environmentally compatible reuse.

Being the machine operator you should obtain information regarding the authorized collection or disposal system which applies for your company.

Please make sure that the batteries and/or accumulators are disposed of in a professional way according to the legal regulations. Please only throw discharged batteries in the collection boxes in shops or at municipal waste management companies.

8.5 Disposal

Disposal of used electric and electronic machines

(Applicable in the countries of the European Union and other European countries with a separate collecting system for those devices).



The sign on the product or on its packing indicates that the product must not be handled as common household waste, but that it needs to be delivered to a central collection point for recycling. Your contribution to the correct disposal of this product will protect the environment and the health of your fellow men. The environment and the health are endangered by incorrect disposal. Recycling of material will help to reduce the consumption of raw materials. Your District Office, the municipal waste collection station or the shop where you have bought the product will inform you about the recycling of this product.

8.6 RoHS , 2011/65/EU

The sign on the product or on its packing indicates that this product complies with the European guideline 2011/65/EU .



8.7 Product follow-up

We have a follow-up service for our products which extends even beyond shipment.

We would be grateful if you could send us the following information:

- Modified settings
- Experiences with the geared drill, which could be important to other users
- Recurring failures

Optimum Maschinen Germany GmbH

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D-96103 Hallstadt

Fax +49 (0) 951 - 96 555 - 888

E-Mail: info@optimum-maschinen.de



EC Declaration of Conformity

according to Machinery Regulation 2023/1230 Annex V Part A

**The manufacturer /
retailer:** Optimum Maschinen Germany GmbH
Dr.-Robert-Pfleger-Str. 26
D - 96103 Hallstadt

hereby declares that the following product,

Product designation: Disc-type sander

Type designation: TS 305

Disc-type sander for private persons as well as for craft and industrial plants which meets all the relevant provisions of the above mentioned Machinery Regulation as well as the other directives applied (below) including their amendments in force at the time of declaration.

The following additional EU directives have been applied:

EMC Directive 2014/30/EU ; Restriction of the use of certain hazardous substances in electrical and electronic equipment 2015/863/EU

The following harmonized standards were applied:

EN 60204-1:2019-06 Safety of machinery - Electrical equipment of machines - Part 1: General requirements

EN 50370-1:2006-02 Electromagnetic compatibility (EMC) - Product family standard for machine tools - Part 1: Emission

EN ISO 13849-1:2016-06 Safety of machinery - Safety-related parts of control systems

EN ISO 12100:2011-03 Safety of machinery - General principles for design - Risk assessment and risk reduction

Name and address of the person authorized to compile the technical file:

Kilian Stürmer, phone: +49 (0) 951 96555 - 800

Kilian Stürmer
(CEO, General manager)
Hallstadt, Hallstadt, 2023-11-07



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