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Originalfassung

DE BETRIEBSANLEITUNG

MINI DOPPELSCHLEIFER SET 110 STK.

Übersetzung / Translation

EN USER MANUAL

MINI BENCH GRINDER SET 110 PCS.

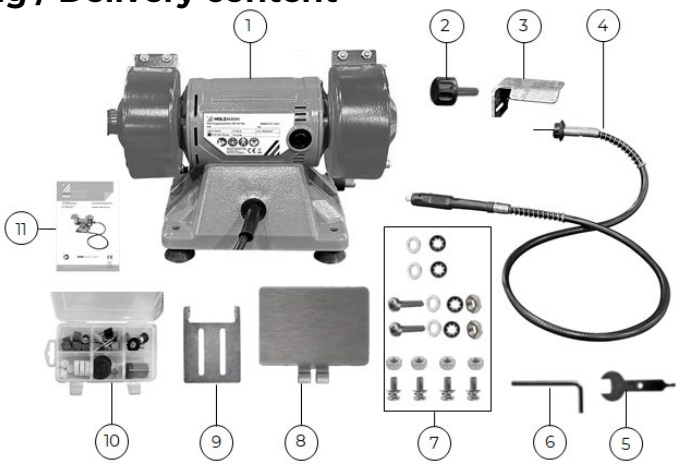
DSM75SET_230V

YOUR JOB. OUR TOOLS.

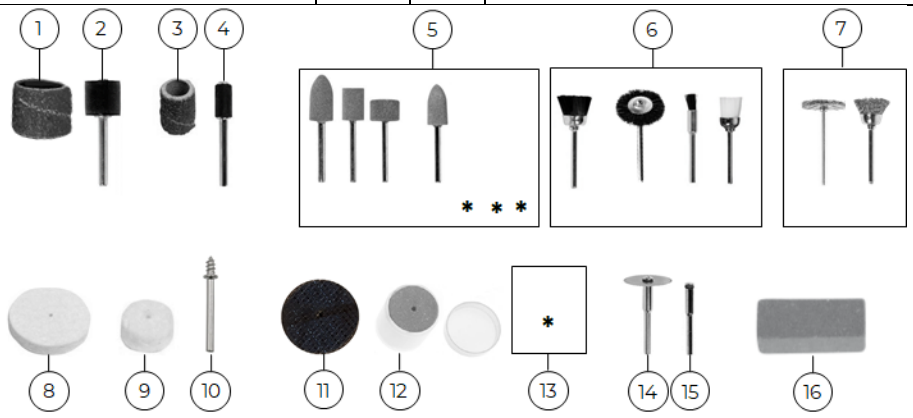
Edition: 29.05.2024 – Revision – 00 – TrT – DE/EN

3 TECHNIK / TECHNICS

3.1 Lieferumfang / Delivery content



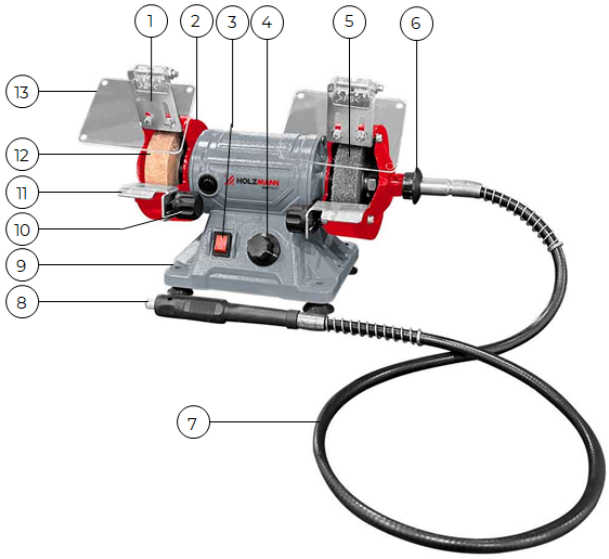
#	Beschreibung / Description	Qty.	#	Beschreibung / Description	Qty.
1	Maschine / machine	1	**7**	Montagematerial / mounting hardware	20
2	Fixierknauf Werkstückauflage tightening knob for tool rest	2	**8**	Schutzglas / eyeshield	2
3	Werkstückauflage verstellbar adjustable tool rest	2	**9**	Funkenschutz, einstellbar / adjustable spark protection	2
4	Flexible Welle / flexible shaft	1	**10**	Werkzeugsatz für flexible Welle 110 Stk. / tool kit für flexible shaft 110 pcs.	1
5	Schlüssel / wrench	1	**11**	Betriebsanleitung / user manual	1
6	Arretierstift / locking pin	1			



Werkzeugsatz für flexible Welle 110 Stk. / tool kit für flexible shaft 110 pcs.:					
1	Schleifrolle groß / big sanding circle	8	**9**	Filzpolierscheibe klein / small wool felt	6
2	Schleifwalze für Schleifrolle groß / rubber wheel for big sand circle	1	**10**	Spanndorn für Filspolierscheiben / wool self tapping rod	3
3	Schleifrolle klein / small sanding circle	8	**11**	Doppelmaschen Trennscheibe / dual mesh cutting blade	10
4	Schleifwalze für Schleifrolle klein / rubber wheel for small sand circle	1	**12**	Trennscheibe / cutting pieces	40
5	Schleifstifte / grinding head	7	**13***	Schleifscheibe / grinding wheel blade	10
6	Bürsten (Kunststoff) / brushes (synthetic material)	4	**14**	Spanndorn + Trennscheibe aus rostfreiem Stahl / connecting rod + stainless steel saw blade	2
7	Drahtbürsten / wire brushes	2	**15**	Spanndorn / connecting rod	1
8	Filzpolierscheibe groß / big wool felt	6	**16**	Schleifstein / whetstone	1

***) nicht abgebildet / not shown**

3.2 Komponenten / Components



	Beschreibung / Description		Beschreibung / Description
1	Funkenschutz, einstellbar / adjustable spark protection	**8**	Spannzangenhalterung / collet holder
2	Schleifscheibenabdeckung fix / static cover	**9**	Standfuß / machine base
3	EIN-AUS Schalter / ON-OFF-switch	**10**	Fixierknauf Werkstückauflage tightening knob for tool rest
4	Drehzahlregler / speed controller	**11**	Werkstückauflage verstellbar adjustable tool rest
5	Polierscheibe / polishing wheel	**12**	Schleifscheibe / grinding wheel
6	Überwurfmutter / union nut	**13**	Schutzglas / eyeshield
7	Flexible Welle / flexible shaft		

3.3 Technische Daten / Technical data

Spezifikation / Specification	
Spannung / voltage	230 V / 50 Hz
Motorleistung S1 (100 %) / motor power S1 (100 %)	120 W
Drehzahl / speed	0 - 9900 min^{-1}
Dimensionen Schleifscheibe / grinding wheel dimensions	Ø75 x 20 x Ø10 mm
Dimensionen Polierscheibe / polishing wheel dimensions	Ø75 x 20 x Ø10 mm
Länge flexible Welle / length felxible shaft	1m
Schutzart / degree of protection	IPX0
Schutzklasse / protection class	II
Maschinenmaße (LxBxH) / machine dimensions (LxWxH)	250 x 120 x 180 mm
Verpackungsmaße (LxBxH) / packaging dimensions (LxWxH)	276 x 220 x 226 mm
Gewicht Brutto / weight gross	2,5 kg
Gewicht Netto / weight net	2,3 kg
Schallleistungspegel L_{WA} / sound power level L_{WA}	95,8 dB(A).....k: 3 dB(A)
Schalldruckpegel L_{PA} / sound pressure level L_{PA}	82,8 dB(A).....k: 3 dB(A)

(DE) Hinweis Geräuschangaben: Die angegebenen Werte sind Emissionswerte und müssen damit nicht zugleich auch sichere Arbeitsplatzwerte darstellen. Obwohl es eine Korrelation zwischen Emissions- und Immissionspegeln gibt, kann daraus nicht zuverlässig abgeleitet werden, ob zusätzliche Vorsichtsmaßnahmen notwendig sind oder nicht. Faktoren, welche den am Arbeitsplatz tatsächlich vorhandenen Immissionspegel beeinflussen, beinhalten die Eigenart des Arbeitsraumes und andere Geräuschquellen, d. h. die Zahl der Maschinen und anderer benachbarter Arbeitsvorgänge. Die zulässigen Arbeitsplatzwerte können ebenso von Land zu Land variieren. Diese Information soll jedoch den Anwender befähigen, eine bessere Abschätzung von Gefährdung und Risiko vorzunehmen.

(EN) Notice noise emission: The values given are emission values and therefore do not have to represent safe workplace values at the same time. Although there is a correlation between emission and immission levels, it cannot be reliably deduced whether additional precautions are necessary or not. Factors influencing the actual immission level at the workplace include the nature of the workspace and other noise sources, i.e. the number of machines and other adjacent operations. The permissible workplace values may also vary from country to country. However, this information should enable the user to make a better assessment of hazard and risk.

11 PREFACE (EN)

Dear Customer!

This manual contains information and important notes for safe commissioning and handling of the mini bench grinder set 110 pcs. DSM75SET_230V, hereinafter referred to as “machine” in this document.

This manual is part of the machine and must not be removed. Save it for later reference and if you let other people use the machine, add this manual to the machine.

Please pay special attention to the chapter safety!
Before first use read this manual carefully. It eases the correct use of the machine and prevents misunderstanding and damages of machine.

Due to constant advancements in product design, construction, illustrations and contents may deviate slightly. If you notice any errors, please inform us.
We reserve the right to make technical changes!

Check the goods immediately after receipt and note any complaints on the consignment note when taking over the goods from the deliverer!
Transport damage must be reported to us separately to us within 24 hours.
HOLZMANN MASCHINEN GmbH cannot accept any liability for transport damage that has not been reported.

Copyright

Customer service contact

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12 SAFETY

This section contains information and important notes on the safe commissioning and handling of the machine.

For your safety, read this manual carefully before commissioning. This will enable you to handle the machine safely and thus prevent misunderstandings as well as personal injury and damage to property. Pay special attention to the symbols and pictograms used on the machine as well as the safety information and danger warnings!

12.1 Intended use of the machine

The machine is designed exclusively for the following activities:
The bench grinder is designed exclusively for tangential grinding and polishing work (= grinding or polishing a workpiece surface with the circumference of the tool) on metals, wood and plastic, within the prescribed technical limits. Materials that can generate flammable or explosive dust, such as aluminium or magnesium and their alloys, are excluded.
The flexible shaft is intended for drilling, cutting, grinding, sanding, engraving and polishing a variety of materials including wood, plastic, glass, non-ferrous alloys and metal, etc., within the prescribed technical limits.

NOTE

HOLZMANN MASCHINEN GmbH assumes no responsibility or warranty for any other use or use beyond this and for any resulting damage to property or injury.

12.1.1 Technical restrictions

The machine is designed for the work under the following conditions:

Relative humidity	max. 70 %
Temperature (operation)	+10 °C to +40 °C
Temperature (storage, transport)	-25 °C to +55 °C

12.1.2 Prohibited applications / Dangerous misuse

- Operating the machine without adequate physical and mental fitness.
- Operating the machine without knowledge of the manual.
- Modifying the machine design.
- Operating the machine outdoors.
- Operating the machine near flammable liquids, vapours or gases.
- Operating the machine outside the technical limits specified in this manual.
- Removing of the safety markings attached to the machine.
- Modifying, circumventing or disabling the safety devices of the machine.
- It is not permitted to use grinding wheels whose maximum permissible speed is lower than the maximum speed of the machine.

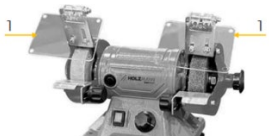
The non-intended use or the disregard of the explanations and instructions described in this manual will result in the expiration of all warranty claims and compensation claims for damages against HOLZMANN MASCHINEN GmbH.

12.2 User requirements

The machine is designed to be operated by one person. The prerequisites for operating the machine are physical and mental fitness as well as knowledge and understanding of the operating instructions. Persons who, due to their physical, sensory or mental capabilities, inexperience or lack of knowledge, are unable to operate the machine safely must not use the machine without supervision or instruction by a responsible person.
Please note that locally applicable laws and regulations determine the minimum age of the operator and may restrict the use of this machine!
Work on electrical components or equipment may only be carried out by a qualified electrician or under the guidance and supervision of a qualified electrician.
Put on your personal protective equipment before working on the machine.

12.3 Safety devices

The machine is equipped with the following safety devices:

	• The spark protection (1) and the tool rest (2) can be set to a distance of 2 mm from the grinding wheel.
	• Eyeshield

12.4 General safety instructions

To avoid malfunctions, damage and health impairments when working with the machine, the following points must be observed in addition to the general rules for safe working:

- Check the machine for completeness and function before starting. Only use the machine if the separating and other non-separating protective devices required for machining have are fitted.
- Make sure that the guards are in good working order and properly maintained.
- Select a level, vibration-free and non-slip surface as the installation area.
- Ensure sufficient space around the machine.
- Ensure sufficient lighting conditions at the workplace to avoid stroboscopic effects.
- Ensure a clean working environment.
- Keep the area around the machine free of obstacles (e.g. dust, chips, cut-off workpiece parts, etc.).
- Only use tools that are in perfect condition and free of cracks and other defects (e.g. deformations).
- Remove tool keys and other setting tools before switching on the machine.
- Never leave the running machine unattended. Switch off the machine before leaving the working area and secure it against unintentional or unauthorized restarting.
- The machine may only be operated, maintained or repaired by persons who are familiar and who have been informed about the dangers arising from this work.
- Ensure that unauthorized persons keep a safety distance from the machine and keep children away from the machine.
- Always work with care and the necessary caution and never use excessive force.
- Do not overload the machine.
- Hide long hair under hair protection.
- Wear close fitting protective work clothing and suitable protective equipment (eye protection, dust mask, ear protection and work gloves only).
- Never wear loose jewellery, loose clothing or accessories (e.g. tie, scarf).
- Do not work on the machine if you are tired, not concentrated or under the influence of medication, alcohol or drugs!
- Do not use the machine in areas where vapours of paints, solvents or flammable liquids represent a potential danger (danger of fire or explosion!).
- Shut down the machine and disconnect it from the power supply, before adjustment, changeover, cleaning, maintenance or repair work, etc. Before starting work on the machine, wait until all tools or machine parts have come to a complete standstill and secure the machine against unintentional restart.

12.5 Electrical safety

- Make sure that the machine is grounded.
- Only use suitable extension cables.
- A damaged or tangled cable increases the risk of electric shock. Handle the cable with care. Never use the cable to carry, pull or disconnect the power tool. Keep the cable away from heat, oil, sharp edges or moving parts.
- Proper plugs and outlets reduce the risk of electric shock.
- Water entry into the machine increases the risk of electric shock. Do not expose the machine to rain or moisture.
- The machine may only be used if the power supply is protected by a residual current circuit breaker.
- Before connecting the machine always make sure that the main switch is switched off.
- Use the machine only when the ON-OFF switch is in good working order.

12.6 Special safety instructions for this machine

- Only grind dry.
- Grinding dust can contain chemical substances that have a negative effect on the personal health. Work on the machine only in well ventilated rooms and with a suitable dust mask!
- Allow the grinding and polishing wheel and the flexible shaft tools to reach their maximum speed before starting to work.
- Adjust the eyeshield and spark protection so that you, as the operator, are protected from flying sparks.
- Always hold the workpiece with both hands.
- Do not reach into the running machine.
- Do not brake the grinding or polishing wheel with your hand or other objects.
- The workpiece heats up during processing. For this reason, never touch the workpiece where it was processed. Allow it to cool down sufficiently.
- The machine must stand firmly on a firm, stable, vibration-resistant base with rubber feet mounted.
- If the grinding wheel is worn, the tool rest and the spark protection must be readjusted!
- Protect grinding wheels from impacts, knocks etc ... Replace defective grinding wheels immediately. Whenever a grinding wheel is fitted, we recommend that it be fitted as accurately as possible in order to avoid imbalance and irregular wear. Additional unbalance checking, e.g. static is recommended.
- Never grind on the side surfaces of the grinding wheels. Grinding on the side surfaces can burst the grinding wheels and cause them to fly apart.
- Do not use damaged tools. Check tools such as grinding wheels before each use and pay special attention to be free of chippings and cracks. When you inspect the tool and put onto the machine allow the unit to run at maximum speed for 1 minute, keep necessary safety distance. Damaged tools usually break at this early stage.
- The permissible speed of the tool (e.g. grinding wheel) must be at least as high as the maximum speed indicated on the machine. Accessories that rotate faster than permitted can break and fly around.

12.7 Hazard warnings

Despite intended use, certain residual risk factors remain. Due to the structure and construction of the machine, hazardous situations may occur which are identified in this manual as follows:

DANGER
A safety instruction designed in this way indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING
A safety instruction designed in this way indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION
A safety instruction designed in this way indicates a possibly hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTE
A safety notice designed in this way indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Regardless of all safety regulations, your common sense and your appropriate technical aptitude/training are and remain the most important safety factors in the error-free operation of the machine. **Safe working depends on you!**

13 TRANSPORT

For proper transport, also observe the instructions and information on the transport packaging regarding centre of gravity, lifting points, weight, means of transport to be used as well as the prescribed transport position etc.
Transport the machine in its packaging to the place of installation. Ensure the correct body posture when lifting, carrying and setting down the load.

Lifting / Setting down

- When lifting/setting down, ensure that you are standing firmly (legs hip-width apart).
- Lift/set down load with knees bent and back straight.
- Do not lift/set down load with a jerk.

Carrying

- Carry load with both hands as close to body as possible.
- Carry load with straight back.
- When transporting the assembled machine, ensure to lift it only by the machine body and not by the attachments.

14 ASSEMBLY

14.1 Preparation

14.1.1 Check delivery content

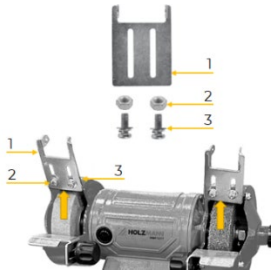
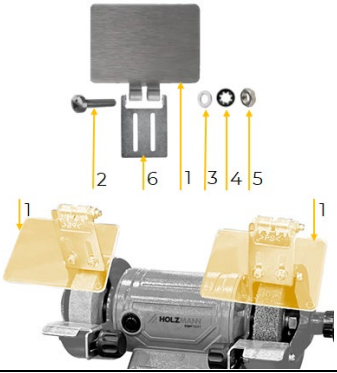
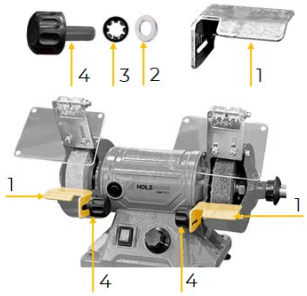
Check the delivery immediately for transport damage and missing parts. Report any damage or missing parts to your dealer or the shipping company immediately. Visible transport damage must also be noted immediately on the delivery note in accordance with the provisions of the warranty, otherwise the goods are deemed to have been properly accepted.

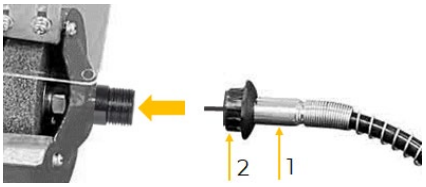
14.1.2 Requirements for the installation site

NOTE: The floor or worktable at the installation site must be able to bear the load of the machine. The minimum space required for the machine is determined by the dimensions of the machine plus a safety area around the machine. Select a flat, solid surface with appropriate space for installation. When setting up the machine, also take into account the working area required to process work-pieces.

14.2 Assemble

The machine comes pre-assembled, it is necessary to assemble the components dismantled for transport according to the following instructions and to make the electrical connection.

	**1. Mount spark protection** • Install the spark protection (1) on the static cover of the grinding wheel using a screw, spring washer and washer (3) and a nut (2). • Repeat this procedure with the second spark protection.
	**2. Mount eyeshield** • Attach the eyeshield (1) to the spark protection (6) using a screw (2), washer (3), spring washer (4) and a nut (5). • Repeat the process with the second eyeshield.
	**3. Mount tool rest** • Mount the tool rest (1) on the machine using the tightening knob (4), spring washer (3) and a washer (2). • Repeat the process with the second tool rest. **NOTE:** The inclined surfaces of the tool rest must face away from the grinding or polishing wheel.



4. Mount flexible shaft

- Insert the flexible shaft (1) with the into the shaft receptacle on the machine.
- Screw the union nut (2) of the flexible shaft onto the thread of the machine.

14.3 Electrical connection

WARNING

Dangerous electrical voltage!
Risk of injury due to dangerous electrical voltage!
→ The machine may only be connected to the power supply and the associated checks carried out by a qualified electrician or under the instruction and supervision of a qualified electrician!

- Check, whether the neutral connection (if existing) and the protective grounding function properly.
- Check, whether the supply voltage and the frequency correspond to the specifications of the machine.

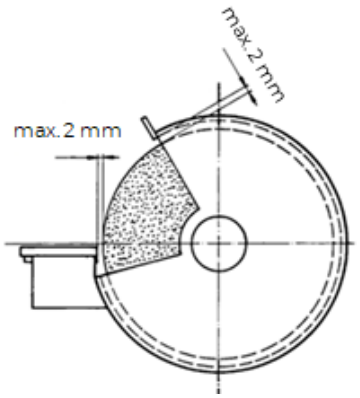
NOTE

Deviation of the supply voltage and frequency!
A deviation from the value of the supply voltage of ±5 % is permissible. A short-circuit fuse must be provided in the power supply system of the machine!

- Use a supply cable that fulfils the electrical requirements (e.g. H07RN, H05RN) and take the required cross-section of the supply cable from a current carrying capacity table. Pay attention to the measures for protection against mechanical damage.
- Make sure that the power supply is protected by a residual current circuit breaker.
- Connect the machine only to a properly grounded outlet.
- When using an extension cable, make sure that the dimension matches the connected load of the machine. The connection power can be found in the technical data, the correlation of cable cross-section and cable lengths can be found in the technical literature or obtain information from a specialist electrician.
- A damaged cable must be replaced immediately.

14.4 Settings

14.4.1 Adjust the spark protection and tool rest



The distances between spark protection, tool rest and grinding or polishing wheel change over time as a result of wear.
Check these distances regularly and readjust them according to the wear of the grinding and polishing wheel.

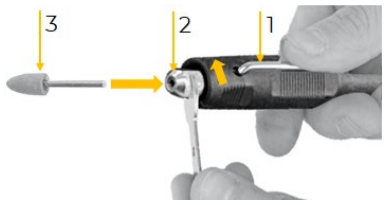
Spark protection:

- The distance between the spark protection and the peripheral edge of the grinding and polishing wheel must not exceed 2 mm (see illustration on the left).
- The spark protection can be adjusted vertically using elongated slots.

Tool rest:

- The distance between the tool rest and the peripheral edge of the grinding and polishing wheel must not exceed 2 mm (see illustration on the left).
- The tool rest can be adjusted horizontally using the elongated slot after loosening the tightening knob.
- Once the adjustment is completed, retighten the tightening knob.

14.4.2 Tool change on the flexible shaft

	• Insert the locking pin (1) into the hole in the flexible shaft and turn until it latches into place. • Open the collet holder (2) using a combination spanner. • Insert the desired tool (3) into the collet holder (2) as far as possible. • Tighten the collet holder (2) again.

15 OPERATION

Only operate the machine when it is in a perfect condition. Before each operation, a visual inspection of the machine must be carried out. Safety devices and operating elements must be checked carefully. Check screw connections for damage and tight fit.

15.1 Check before initial start-up

Before initial operation, check:

- whether the guards are in place, intact and in good condition.
- that the moving parts are functioning properly and that there are no damaged parts.
- whether the grinding and polishing wheel are intact.
- whether the machine is functioning properly when idle.

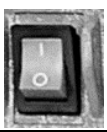
15.2 Operating instructions

- Let the grinding and polishing wheel as well as the tools on the wheel shaft come to full speed before you start working.
- When working with the flexible shaft, both eyeshields must rest completely on the tool rests to prevent accidental contact with the grinding or polishing wheel.
- When the flexible shaft is not in use, it should be dismantled to avoid injury.
- Do not overload the machine! A good approach to know when you overload the machine: When the grinding or polishing wheel loses speed due to workpiece pressure.
- Make it a habit to operate the machine in a position standing slightly next to the machine and not exactly in front of the grinding wheel. If a small particle etc. is ejected after the machine has started, you are not in the field of fire.
- Always check the tightening knobs of the tool rest if tightened well. Always check the gap between tool rest and grinding wheel. It should be at maximum 2 mm.
- When grinding dry or polishing, you should always wear safety goggles and safety gloves.
- Check the fixing nut of the grinding or polishing wheel regularly if tightened well.
- Secure small workpieces with a clamping device or vice.
- However, at least after each operation, clean the machine and the working environment with a vacuum cleaner to remove abrasive chips and metal dust to avoid that dust is whirled up. Wearing a protective mask is therefore highly recommended, especially during frequent operation.

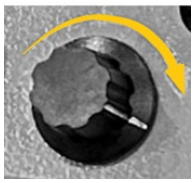
15.3 Handling

CAUTION	
	Avoid touching the grinding and polishing wheel as well as the workpiece immediately after use as they become very hot.

15.3.1 Switch the machine on and off

	**Switch on** Press the ON-OFF-Switch (I) **Switch off** Press the ON-OFF-Switch (0)

15.3.2 Adjusting the speed



- The speed is increased or decreased by turning the speed controller.

NOTE: The speed of the flexible shaft must be adapted to the tool used and to the material of the workpiece to be machined.

  - Small grinding head: high speed
  - Large grinding head: low speed

15.3.3 Grinding

Grinding is a science for itself! Different metal alloys, profile types, the correct grinding angle as well as the material and grain of the grinding wheel and the grinding speed have a decisive impact on grinding results. Each steel type requires an optimized grinding wheel for best results.
As a rough rule of thumb, single and multiply alloyed steel can be grinded with aluminium oxide grinding wheels with granularity K 80.
For grinding the blades of axes, pickaxes, spades etc. an aluminium oxide stone with granularity 40-60 can be sufficient.

15.3.4 Polishing

Press the workpiece against the polishing wheel in rotation direction and move it to the left and right in a pendulum motion.
Please note that polishing work must always be carried out in rotation direction of the polishing wheel.

16 CLEANING, MAINTENANCE, STORAGE, DISPOSAL

WARNING

Handling the machine with connected power supply may result in serious injury or death.

→ Always disconnect the machine from the power supply before cleaning, maintenance or repair work and secure it against unintentional reconnection.

16.1 Cleaning

Regular cleaning guarantees the long service life of your machine and is a prerequisite for its safe operation.

NOTE

Incorrect cleaning products can attack the finish of the machine. Do not use any solvents, nitro thinners or other cleaning products that could damage the machine's finish. Observe the specifications and instructions of the cleaning agent manufacturer.

- Do not use compressed air to remove machining chips.
- Do not immerse the machine in water and do not wash it with a jet of water.
- Use a clean, dry brush and cloth for all cleaning work!
- Do not use solvents or aggressive cleaning agents.
- Clean the machine and especially the static covers of the grinding and polishing wheel after each use or at least once a week to avoid accumulation of dust and chips!

16.2 Maintenance

The machine is low-maintenance and only a few parts need to be serviced. Malfunctions or defects that could affect your safety must be repaired immediately!

- Before each operation, check the perfect condition of the safety devices.
- Regularly check the perfect and legible condition of the warning and safety labels of the machine.
- Use only proper and suitable tools.
- Use only original spare parts recommended by the manufacturer.

16.2.1 Maintenance plan

The type and degree of machine wear depends to a large extent on the operating conditions. The following intervals apply when the machine is used within the technical limits:

Interval	Components	Action
before usage	• grinding / polishing wheel • power cord	• check for damage

after usage	• surfaces	• remove dust and dirt
if required	• grinding / polishing wheel	• change
	• carbon brushes	• check/change

16.2.2 Changing the grinding wheel

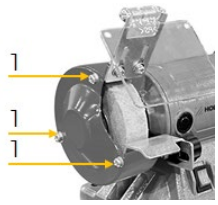
NOTE

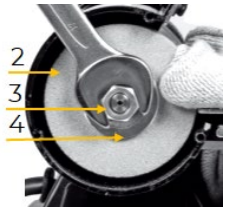
- Do not install a brush in the grinding wheel housing or vice versa.
- Always replace a grinding wheel with a model of the same size.
- Do not use damaged wheels.
- Only use "glazed" grinding wheel with an indicated speed (see imprint on the grinding wheel) equal to or greater than that indicated on the type plate of the machine.

Integrity check of a new disk:

Before mounting a new wheel, sound test it to check its general condition. To perform this test, the wheel must be dry and clean, otherwise the radiated sound may be attenuated.
To verify identity, lightly tap the side of the wheel with a non-metallic object (wooden handle of a screwdriver, rubber hammer).
An undamaged grinding wheel produces a clear sound, a damaged one a dull or rattling sound.

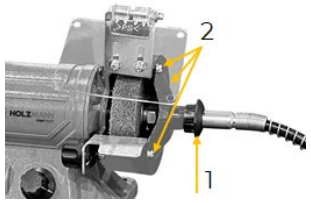
Grinding wheel exchange - procedure:

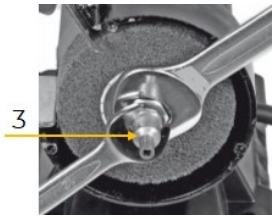




- Remove the static cover (red) of the grinding wheel by loosening the screws (1).
- Fix the grinding wheel (2) and loosen the fixing nut (3) and flange (4) on the arbour. Remove the fixing nut and the flange.
- Optionally, you can statically check the new grinding wheel for imbalance and balance it if necessary.
- Remove the old grinding wheel (2) and install the new one.
- Reinstall the flange (4), fixing nut (3) and the static cover of the grinding wheel.
- Now let the machine run in test mode for one minute and check the grinding wheel for any vibration, out-of-balance run, etc.

16.2.3 Changing the polishing wheel

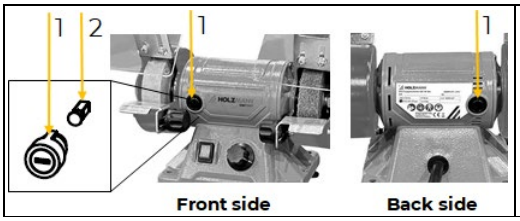




- If necessary, dismantle the flexible shaft. To do this, unscrew the union nut (1).
- Remove the static cover (red) of the polishing wheel by loosening the screws (2).
- Dismantle the connecting sleeve (3).
- Fix the polishing wheel (2) and loosen the fixing nut and flange on the arbour. Remove the fixing nut and the flange.
- Remove the old polishing wheel (2) and install the new one.
- Reinstall the flange, nut, connecting sleeve and the static cover of the polishing wheel.
- Now let the machine run in test mode for one minute and check the polishing wheel for any vibration, out-of-balance run, etc.

16.2.4 Check / changing carbon brushes

Check the carbon brushes after the first 50 hours of operation with a new machine or when new brushes are fitted. After carrying out the first check, repeat the check every 10 hours of operation.
If the carbon is worn down to a length of 6 mm, or if the spring or contact wire is burnt or damaged, it is necessary to replace both brushes. If it turns out that the brushes can be used after removal, it is possible to remount them.



- Open the two locks (1) on the back and front side counterclockwise.
- Remove the carbon brushes (2).
- Reinsert the carbon brushes (2) and close the locks (1).

16.3 Storage

Store the machine in a dry, frost-proof and lockable place when not in use. Disconnect the machine from the power supply. Make sure that unauthorised persons and especially children do not have access to the machine.

NOTE

Improper storage can damage and destroy important components. Only store packed or already unpacked parts under the intended ambient conditions!

A special feature of grinding tools is that they can undergo changes during storage due to unfavourable environmental conditions, which reduce their strength properties, so that safety is no longer guaranteed. Therefore, store the machine and its tools only in dry, evenly tempered, frost-free rooms. This prevents moisture absorption. Maintaining constant temperatures prevents the formation of stress cracks due to uneven heating or cooling.
For this very reason, protect the machine and its tools from direct sunlight. Especially with synthetic resin bonded tools, the ageing process can be accelerated during storage due to unfavourable ambient conditions.
Grinding wheels should be stored on a flat surface, for example on shelves. Care must be taken to avoid deflection of the grinding wheels and to ensure that the pressure on the lowest layers does not become too high when the grinding wheels are placed on top of each other. In both cases this can result in dangerous cracks. Therefore, the base must have sufficient stiffness to prevent deflection; the stack height must be limited in the case of superimposed grinding wheels. It is advisable to store the abrasives in a clearly arranged manner according to the type of abrasive tool so that they can be easily removed without having to be repositioned.

16.4 Disposal

Observe the national waste disposal regulations. Never dispose of the machine, machine components or operating equipment in the residual waste. If necessary, contact your local authorities for information regarding available disposal options. If you purchase a new machine or equivalent equipment from your specialist dealer, he is obliged in certain countries to dispose of your old machine properly.

17 TROUBLESHOOTING

WARNING

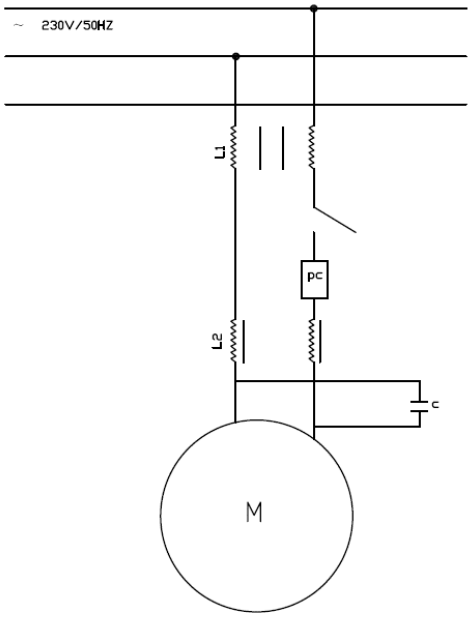
Danger due to electrical voltage!
Handling the machine with connected power supply may result in serious injury or death.
→ Disconnect the machine from the power supply before starting work to eliminate defects!

Many possible sources of error can be eliminated in advance if the machine is properly connected to the power supply. If you are unable to carry out the necessary repairs properly and/or do not have the required training, always consult a specialist to solve the problem.

Trouble	Possible cause	Solution
Machine cannot be switched on	• Mains plug is not plugged in	• Plug in the mains plug
	• ON-OFF-switch is defective	• Contact the Customer Service Center
Poor grinding performance	• Grinding wheel is worn out	• Replace grinding wheel

18 ELEKTRISCHER SCHALTPLAN / WIRING DIAGRAM

18.1 230 V / 50 Hz



19 ERSATZTEILE / SPARE PARTS

19.1 Ersatzteilbestellung / Spare parts order

(DE) Mit HOLZMANN-Ersatzteilen verwenden Sie Ersatzteile, die ideal aufeinander abgestimmt sind. Die optimale Passgenauigkeit der Teile verkürzen die Einbauzeiten und erhöhen die Lebensdauer.

HINWEIS

Der Einbau von anderen als Originalersatzteilen führt zum Verlust der Garantie! Daher gilt: Beim Tausch von Komponenten/Teile nur vom Hersteller empfohlene Ersatzteile verwenden.

Bestellen Sie die Ersatzteile direkt auf unserer Homepage–Kategorie ERSATZTEILE.
oder kontaktieren Sie unseren Kundendienst

- über unsere Homepage–Kategorie SERVICE–ERSATZTEILANFORDERUNG,
- per Mail an service@holzmann-maschinen.at.

Geben Sie stets Maschinentype, Ersatzteilnummer sowie Bezeichnung an. Um Missverständnissen vorzubeugen, empfehlen wir, mit der Ersatzteilbestellung eine Kopie der Ersatzteilzeichnung beizulegen, auf der die benötigten Ersatzteile eindeutig markiert sind, falls Sie nicht über den Online-Ersatzteilkatalog anfragen.

(EN) With original HOLZMANN spare parts you use parts that are attuned to each other shorten the installation time and elongate your products lifespan.

NOTE

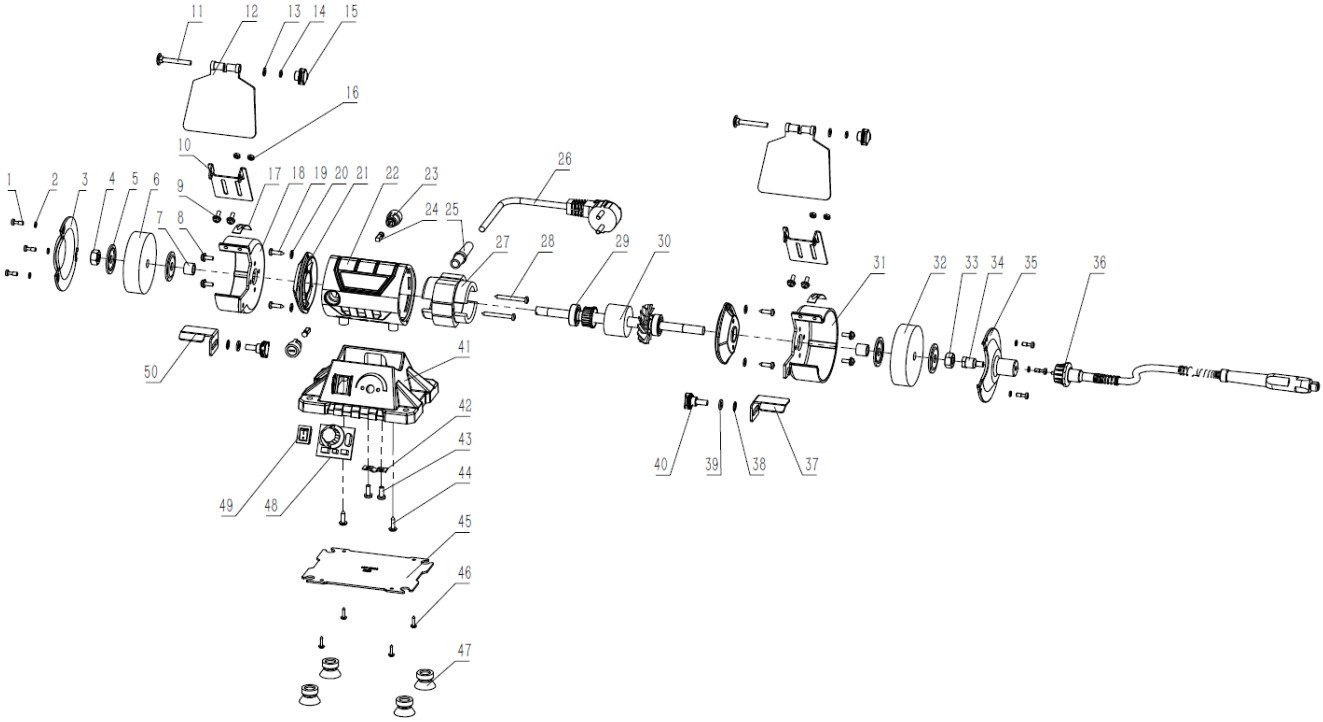
The installation of parts other than original spare parts leads to the loss of the guarantee! Therefore: When replacing components/parts, only use spare parts recommended by the manufacturer.

Order the spare parts directly on our homepage–category SPARE PARTS or contact our customer service

- via our Homepage–category SERVICE–SPARE PARTS REQUEST,
- by e-mail to service@holzmann-maschinen.at.

Always state the machine type, spare part number and designation. To prevent misunderstandings, we recommend that you add a copy of the spare parts drawing with the spare parts order, on which the required spare parts are clearly marked, especially when not using the online-spare-part catalogue.

19.2 Explosionszeichnung / Exploded view



19.3 Ersatzteilliste / Spare part list

No.	Description	Qty.
1	bolt	6
2	flat washer	6
3	left protective cover	1
4	nut	1
5	chuck	4
6	grinding wheel	1
7	shaft sleeve	2
8	screw	4
9	screw	4
10	bracket	2
11	coach screw	2
12	eyeshiled	2
13	flat washer	2
14	teeth gasket	2
15	nut	2
16	nut	4
17	label	2
18	left protective bottom	1
19	self-taping bolt	4
20	flat washer	4
21	end-cap	2
22	motor housing	1
23	brush nest	2
	brush cap	2
24	brush bracket components	2
25	outlet hose	1

No.	Description	Qty.
26	power cord+plug	1
27	stator	1
28	self-taping bolt	2
29	bearing	2
30	rotator	1
31	right protective bottom	1
32	polishing wheel	1
33	nut	1
34	connecting sleeve	1
35	right protective cover	1
36	flexible shaft	1
37	right workbench	1
38	flat washer	2
39	teeth gasket	2
40	handle	2
41	base	1
42	steel bridge	1
43	self-taping bolt	2
44	self-taping bolt	2
45	base cover	1
46	self-taping bolt	4
47	rubber	4
48	adjust-speed part	1
49	switch	1
50	left workbench	1