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Originalfassung

DE BETRIEBSANLEITUNG

Übersetzung / Translation

EN USER MANUAL

ES MANUAL DE INSTRUCCIONES

FR MODE D'EMPLOI

CZ NÁVOD K POUŽITÍ

DOPPELSCHLEIFMASCHINE

BENCH GRINDERS

ESMERILADORAS

TOURETS

DVOJITÁ KOTOUČOVÁ BRUSKA



DSM150_230V



DSM175_230V



DSM200_230V



DSM250_230V
DSM250_400V





2 SICHERHEITSZEICHEN / SAFETY SIGNS

DE	SICHERHEITSZEICHEN BEDEUTUNG DER SYM- BOLE	EN	SAFETY SIGNS DEFINITION OF SYMBOLS	ES	SEÑALES DE SEGU- RIDAD DEFINICIÓN DE SÍM- BOLOS
FR	SIGNALISATION DE SÉ- CURITÉ DÉFINITION DES SYM- BOLES	CZ	BEZPEČNOSTNÍ SYM- BOLY VÝZNAM		



DE	CE-KONFORM: Dieses Produkt entspricht den EU-Richtlinien.
EN	EC-CONFORM: This product complies with the EC-directives.
ES	CONFORME-CE: Este producto cumple con las Directivas CE
FR	CE-CONFORME! - Ce produit est conforme aux Directives CE
CZ	CE-SHODA: Tento výrobek odpovídá směrnici ES

BETRIEBSANLEITUNG LESEN! Lesen Sie die Betriebs- und Wartungsanleitung Ihrer Maschine aufmerksam durch und machen Sie sich mit den Bedienelementen der Maschine gut vertraut, um die Maschine ordnungsgemäß zu bedienen und so Schäden an Mensch und Maschine vorzubeugen.

READ THE MANUAL! Read the user and maintenance carefully and get familiar with the controls in order to use the machine correctly and to avoid injuries and machine defects.

¡LEA EL MANUAL! Lea el manual de uso y mantenimiento cuidadosamente y familiarícese con los controles con el fin de utilizar la máquina correctamente, para evitar lesiones y defectos de la máquina.

LIRE LE MANUEL! Lire le manuel d'utilisateur et de maintenance avec soin et vous familiariser avec les contrôles en vue d'utiliser la machine correctement et pour éviter les blessures et les défauts de l'appareil.

PŘEČTĚTE SI NÁVOD K PROVOZU! Přečtěte si pozorně návod k použití a údržbě stroje a dobře se seznámte s jeho ovládacími prvky, abyste mohli stroj správně ovládat, čímž zabráníte škodám na zdraví osob i poškození stroje.



DE	Schutzausrüstung tragen!
EN	Wear protective equipment!
ES	¡Usar equipo de protección!
FR	Porter équipement de protection individuelle!
CZ	Používejte ochranné pomůcky

DE	Maschine vor Wartung und Pausen ausschalten und Netzstecker ziehen!
EN	Stop and pull out the power plug before any break and engine maintenance!
ES	Pare y desenchufe el cable de alimentación antes de cualquier rotura y mantenimiento del motor!
FR	Arrêtez et retirez la fiche d'alimentation avant tout entretien de rupture et le moteur!



CZ Zastavte a před každým přerušením a motorů údržba vytáhněte zástrčku ze zásuvky!

DE **Warnschilder und/oder Aufkleber an der Maschine, die unleserlich sind oder entfernt wurden, sind umgehend zu erneuern.**

EN **Missing or non-readable security stickers have to be replaced immediately.**

ES **¡Las señales de advertencia y/o etiquetas en la máquina que son ilegibles o que se hayan retirado deben reemplazarse inmediatamente!**

FR **Les signes d'avertissement et/ou les étiquettes illisibles ou retirés de la machine doivent être remplacés immédiatement!**

CZ **Varovné štítky a/nebo samolepky, které jsou nečitelné nebo chybí, ihned nahradte**



3 TECHNIK / TECHNICS

DATOS TÉCNICOS/DONNÉES TECHNIQUES / TECHNIKA

3.1 Lieferumfang / Delivery content

Contenido de la entrega/ Contenu de la livraison/ Obsah dodávky

DSM150 / DSM175



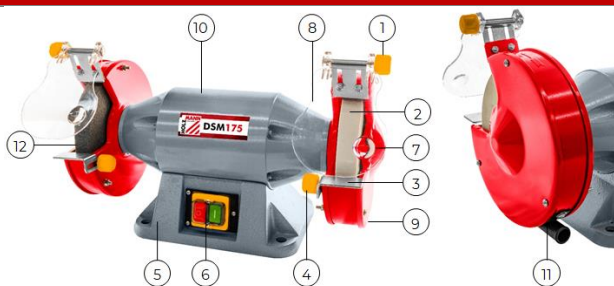
DSM200 / DSM250

**(DE)** 2 x Schleifscheiben: 1x K36, 1x K80**(EN)** 2 x grinding wheels: 1xK36, 1x K80**(ES)** 2x muelas, 1x K36, 1x K80**(FR)** 2x meules, 1x K36, 1x K80**(CZ)** 2x brusný kotouč, 1x K36, 1x K80

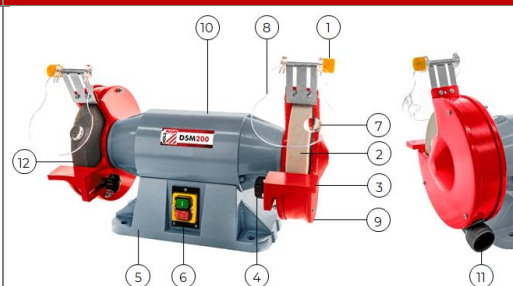
3.2 Komponenten / Components

Componentes / Composants / Části stroje

DSM 150 | DSM175



DSM200 | DSM250

**1** Fixierknopf Schutzglas
tightening knob for eyeshield
Bloqueo del plexiglás de seguridad
Verrouillage de sécurité du plexiglas
Aretace ochranného skla**7** Lupe
Loupe
Lupa
Loupe
Lupa**2** Schleifscheibe K 80
grinding wheel K80
Muela K 80
Meule K 80
Brusný kotouč K 80**8** Schutzglas
eyeshield
Plexiglás de seguridad
Plexiglas de sécurité
Ochranné sklo**3** Werkstückauflage verstellbar
adjustable tool rest
Soporte ajustable de herramientas
Support d'outil réglable
Přestavitelná podložka**9** Schleifscheibenabdeckung fix
static cover
Cubierta estática
Couvercle statique
Pevný kryt brousícího kotouče**4** Fixierknopf Werkstückauflage
tightening knob for tool rest
Pomo de ajuste del soporte de herramientas
Bouton de réglage du support d'outil
Aretační šroub podložky**10** Maschinenkörper
machine body
Cuerpo de la máquina
Corps de la machine
Tělo stroje**5** Standfuß mit 4 Bohrungen
machine base with 4 holes
Base de la máquina con 4 agujeros
Base de la machine avec 4 trous
Stojánek se 4 otvory**11** Absauganschluss
dust collector plug
bocas d'aspiración
buses d'aspiration
odsávací hubice**6** EIN/AUS Schalter
ON/OFF Switch
Botón encendido/apagado
Interrupteur démarrage / arrêt
Vypínač**12** Schleifscheibe K 36
grinding wheel K36
Muela K 36
Meule K 36
Brusný kotouč K 36

3.3 Technische Daten / Technical data

datos técnicos / caractéristiques techniques / technická data

		DSM150	DSM175	DSM200	DSM250
Spannung (Frequenz) voltage (frequency)	V (Hz)	230 (50)	230 (50)	230 (50)	230 (50) 400 (50)



Voltaje (Frecuencia) Voltage / Fréquence Napětí / kmitočet					
Motorleistung (S1/S6) motor power (S1/S6) Potencia nominal del motor (S1/S6) Puissance nominale du moteur (S1/S6) Výkon motoru (S1/S6)	W	300 / 520 S6(15%)	300 / 520 S6(15%)	600 / 900 S6(15%)	900
Leerlaufdrehzahl / idle-speed Velocidad en ralentí / Vitesse de ralenti Otáčky naprázdno	min ⁻¹	2950	2950	2950	2950
Schleifscheiben ø / grinding wheel ø Diámetro max. de muela Diamètre max. de la meule Ø brusných kotoučů	mm	150	175	200	250
Max. Breite Schleifscheibe max. width grinding wheel Ancho máx. de la muela Largeur max. de la meule Max. šířka brusného kotouče	mm	24	24	32	32
Bohrung Schleifscheibe bore grinding wheel Diámetro del eje de la muela Diamètre de l'arbre de la meule Upínací průměr	mm	32	32	32	32
Absauganschluss ø dust collector port ø bocas d'aspiración ø buses d'aspiration ø odsávací hubice ø	mm	21	21	45	45
Gewicht netto / weight net Peso (neto) / Poids (net) Hmotnost (netto)	kg	15,5	16,5	27,5	35
Gewicht brutto / weight gross Peso (bruto) / Poids (brut) Hmotnost (brutto)	kg	16,5	17,5	28,5	36
Maschinenmaße (LxBxH) machine dimension (LxWxH) Medidas (LxAxA) / Dimensions (LxIxH) Rozměry (d x š x v)	mm	470x260x260	470x260x260	530x320x310	540x350x320
Verpackungsmaße (L x B x H) packaging dimensions (L x W x H) Dimensiones del embalaje Dimensions de l'emballage Rozměry balenia	mm	471x261x254	471x261x254	526x320x310	540x350x315
Schalldruckpegel L _{PA} sound pressure level L _{PA} Nivel de presión sonora L _{PA} Niveau de pression acoustique L _{PA} Hladina akustického tlaku L _{PA}	dB(A)	82 k = 3			
Schallleistungspegel L _{WA} sound power level L _{WA} Nivel de potencia de sonido L _{WA} Niveau de puissance acoustique L _{WA} Akustický výkon L _{WA}	dB(A)	95 k = 3			

(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.

(ES) Aviso sobre los valores de ruido: Los valores indicados son valores de emisión y, por lo tanto, no representan necesariamente al mismo tiempo valores seguros en el lugar de trabajo. Aunque hay una correlación entre los niveles de emisión y los de immisión, no se puede deducir con certeza si es necesario adoptar medidas de precaución adicionales o no. Entre los factores que influyen en el nivel de immisión real en el lugar de trabajo, se encuentran la naturaleza del espacio de trabajo y otras fuentes de ruido, es decir, el número de máquinas y otros procesos de trabajo adyacentes. Asimismo, los valores admisibles en el lugar de trabajo pueden variar de un país a otro. No obstante, esta información debe capacitar al usuario a evaluar mejor los peligros y los riesgos.

(FR) Avis Données sur le bruit: Les valeurs indiquées sont des valeurs d'émission et ne représentent donc pas nécessairement des valeurs de sécurité sur le lieu de travail. Bien qu'il existe une corrélation entre les niveaux d'émission et d'immission, il est impossible de déduire de manière fiable si des mesures de précaution supplémentaires sont nécessaires ou non. Les facteurs influençant le niveau d'immission réellement présent sur le lieu de travail comprennent les caractéristiques de la salle de travail et d'autres sources de bruit, c'est-à-dire le nombre de machines et d'autres processus de travail adjacents. Les valeurs autorisées sur le lieu de travail peuvent également varier d'un pays à l'autre. Toutefois, ces informations devraient permettre à l'utilisateur de mieux évaluer le danger et le risque.

(CZ) Oznámení - údaje o hlukosti: Uvedené hodnoty jsou emisní hodnoty, a proto nemusejí současně představovat i bezpečné hodnoty na pracovišti. Přestože existuje korelace mezi hladinami emisí a imisí, nelze z ní spolehlivě odvodit, zda jsou nutná další preventivní opatření, či nikoli. Mezi faktory, které ovlivňují skutečnou hladinu imisí na pracovišti, patří charakter pracovního prostoru a další zdroje hluku, tj. počet strojů a dalších sousedních pracovních procesů. Přípustné hodnoty na pracovišti se rovněž mohou v jednotlivých zemích lišit. Tato informace však má uživateli umožnit lépe posoudit ohrožení a riziko.



11 PREFACE (EN)

Dear Customer!

This manual contains information and important notes for safe commissioning and handling of the bench grinders DSM150_230V, DSM175_230V, DSM200_230V, DSM250_230V and DSM250_400V, 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.

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The place of jurisdiction is the regional court Linz or the court responsible for 4170 Haslach is valid.

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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:
for grinding of Blades, cutting profiles, the edges of tools, workpieces.

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)	+5 °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 improper use or disregard of the versions and instructions described in this manual will result in the voiding of all warranty and compensation claims against HOLZMANN MASCHINEN GmbH.

12.2 User requirements

The machine is designed for operation by one person. The physical and mental aptitude as well as knowledge and understanding of the operating instructions are prerequisites for operating the machine. Persons who, because of their physical, sensory or mental abilities or their inexperience or ignorance, are unable to operate the machinery safely must not use it without supervision or instruction from a responsible person.

Please note that local laws and regulations may determine the minimum age of the operator and restrict the use of this machine!

Put on your personal protective equipment before working on the machine.

Work on electrical components or equipment may only be carried out by a qualified electrician or under the instruction and supervision of a qualified electrician.

12.3 General safety instructions

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

- Before start-up, check the machine for completeness and function.
- Choose a level, vibration-free, non-slip surface for the installation location.
- Ensure sufficient space around the machine!
- Ensure sufficient lighting conditions at the workplace to avoid stroboscopic effects.
- Ensure a clean working environment.
- Only use perfect tools that are free of cracks and other defects (e.g. deformations).
- Remove tool keys and other adjustment tools before turning on the machine.
- Keep the area around the machine free of obstacles (e.g. dust, chips, cut parts, etc.).
- Never leave the running machine unattended. Switch off the machine before leaving the working area and secure it against unintentional or unauthorised restart.
- The machine may only be operated, maintained or repaired by persons who are familiar with it and who have been informed of the dangers arising in the course of this work.
- Ensure that unauthorised persons maintain an appropriate safety distance from the machine and keep children away from the machine.
- When working on the machine, never wear loose jewellery, loose clothing, ties or long, open hair.
- Hide long hair under hair protection.
- Wear close-fitting protective clothing and suitable protective equipment (eye protection, dust mask, ear protection, work gloves).



- Always work with care and the necessary caution and never use excessive force.
- Do not overload the machine!
- Shut down the machine and disconnect it from the power supply before carrying out any adjustment, retrofitting, cleaning, maintenance or repair work. Before starting any work on the machine, wait until all tools or machine parts have come to a complete standstill and secure the machine against unintentional restarting.
- Do not work on the machine if it is tired, not concentrated or under the influence of medication, alcohol or drugs!

12.4 Electrical safety

- Make sure that the machine is earthed.
- Only use suitable (extension-)cables. Do not use the cable to pull the plug out of the socket. Protect the cable from heat, oil and sharp edges.
- The machine may only be used in humid environments if the power source is protected by a residual current circuit breaker.
- Protect yourself from electric shock. Avoid body contact with earthed parts.
- A damaged cable must be replaced immediately!

12.5 Special safety instructions for this machine

- Only grind dry.
- Do not reach into the running machine.
- Do not brake the grinding wheel with your hand or other objects.
- Do not use the machine if the grinding wheel is damaged.
- The machine must stand firmly on a firm, stable, vibration-resistant base with rubber feet mounted. For stationary operation, we recommend that the machine be fixed to the ground (e.g. stable workbench) or to a suitable machine stand (e.g. DSMMS1).
- If the grinding wheel is used up, the workpiece support and the protective glass must be readjusted! Protect grinding wheels from shocks, impacts etc. Replace defective grinding wheels immediately. Whenever a grinding wheel is fitted, we recommend that it be fitted as accurately as possible to avoid imbalance and irregular wear, in order to ensure a long service life of the wheel. Additional unbalance checking, e.g. static is recommended.

12.6 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.

Irrespective of all safety regulations, your common sense and appropriate technical suitability/training are and will remain the most important safety factor for error-free operation of the machine.

Safe working primarily 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.



14 ASSEMBLY

14.1 Preparation

14.1.1 Check delivery content

Always note visible transport damage on the delivery note and check the machine immediately after unpacking for transport damage or missing or damaged parts. Report any damage to the machine or missing parts immediately to your retailer or freight forwarder.

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 workpieces. The base of this unit has mounting holes that allow it to be attached to a workbench/machine stand (e.g.: Holzmann DSMMS1) to prevent it from moving during operation and causing accidental injury or damage.

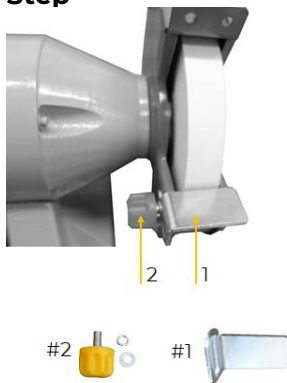


(DSMMS1)

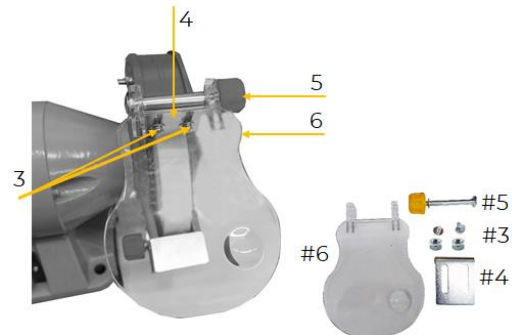
14.2 Assemble

DSM150, DSM175

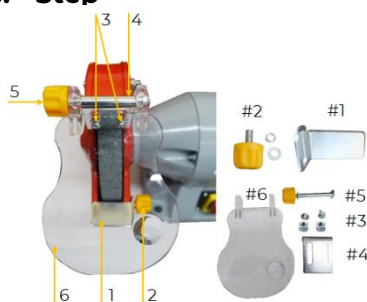
1. Step



2. Step



3. Step

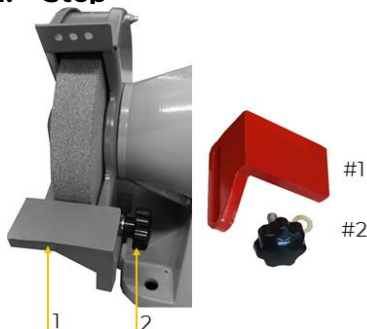


Machine completed

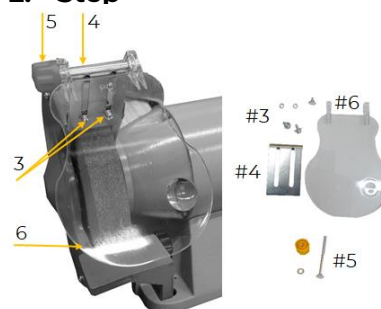


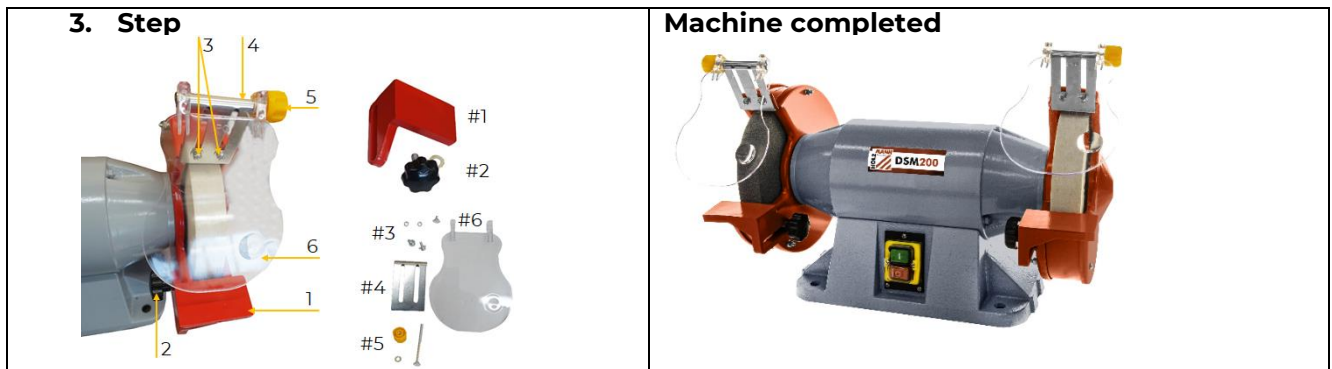
DSM200, DSM250

1. Step



2. Step





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 $\pm 5\%$ 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.

14.3.1 Setting up a 400 V machine (for DSM250_400V)

- The grounding conductor is yellow-green.
- Connect the supply cable to the corresponding terminals in the input box (L1, L2, L3, N and PE). If a CEE plug is available, the connection to the power supply is made through an appropriately powered CEE coupling (L1, L2, L3, N and PE).

Plug connection 400V:	5-wire: with N-conductor	4-wire: without N-conductor
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- After the electrical connection, check the correct running direction. If the machine runs in the wrong direction, swap two conductive phases, e.g. L1 and L2, at the connection plug.

NOTE



Operation is only permitted with residual current device (RCD) with maximum residual current of 30 mA.

15 OPERATION

15.1 Operating instructions

- Let the grinding wheel come to full speed before beginning the grinding process.
- Do not overload the machine! A good approach to know when you overload the machine: When the grinding wheel loses speed due to workpiece pressure.
- DO NOT USE THE MACHINE FOR ANY KIND OF CUTTING OPERATIONS!
- 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.
- 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 1,5 mm.



- When grinding dry, you should always wear safety goggles and safety gloves.
- Check the fixing nut of the grinding wheel regularly if tightened well.
- If the machine is used frequently, we strongly advice to connect the grinding machine to a dust collection system suitable for collecting metal dust.

15.2 Handling

CAUTION



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

15.2.1 Switch the machine on and off



You can switch the machine on and off with the on/off switch.

Turn it on: Press button (1)

Turn it off: Press button (2)

15.2.2 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.

16 CLEANING, MAINTENANCE, STORAGE, DISPOSAL

WARNING



Danger due to electrical voltage! Handling the machine with the power supply up may result in serious injury or death.

→ For this reason, always disconnect the machine from the power supply before cleaning, servicing or maintenance work and secure it against accidental start-up!

16.1 Cleaning

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

NOTE



Wrong cleaning agents can attack the varnish of the machine. Do not use solvents, nitro thinners, or other cleaning agents that could damage the machine's paint. Observe the information and instructions of the cleaning agent manufacturer!

- Keep the surfaces and ventilation slots of the machine free of dust and dirt.
- For cleaning, use a soft cloth and a mild soap solution and, if necessary, a damp-free jet of compressed air.

16.2 Maintenance

The machine is low-maintenance and only a few parts have to be serviced. Nevertheless, malfunctions or defects which could impair the safety of the user must be rectified immediately!

- Regularly check that the warning and safety labels on the machine are in perfect and legible condition.
- Only use perfect and suitable tools.
- Only use original spare parts recommended by the manufacturer.

16.2.1 Maintenance and servicing plan

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

Interval	Components	Action
Before every start of work	• grinding wheel	• check for damage
	• power cord	
Each time after completion of work	• surfaces	• remove dust and dirt
As required	• grinding wheel	• replace

16.2.2 Replacing the grinding wheels

WARNING



Danger due to electrical voltage!

Before opening the cover, make sure that the machine is disconnected from the power supply and secured against accidental start-up. If you have just used the machine, wait a few minutes before opening it until the grinding wheel and machine have cooled down.



- Remove the red protection cover with a screwdriver.
- Fix the grinding wheel and loosen the fixing nut on the arbour.
- Remove the fixing nut and the flange.
- Remove the old grinding wheel and install the new one, place the flange onto the stone and fix it with the nut. Install the red protection cover back.
- Let the machine now run in test mode for one minute and check the stone for any vibration, out-of-balance run.

16.3 Storage

When not in use, store the machine in a dry, frost-proof and lockable place to prevent the formation of rust on the one hand and to ensure that unauthorised persons and in particular children have no access to the machine on the other hand.

NOTE



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

16.4 Disposal



Observe the national waste disposal regulations. Never dispose of the machine, machine components or equipment in residual waste. If necessary, contact your local authorities for information on the disposal options available.
If you buy a new machine or an equivalent device 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!

Manipulating the machine with the power supply up may result in serious injury or death.

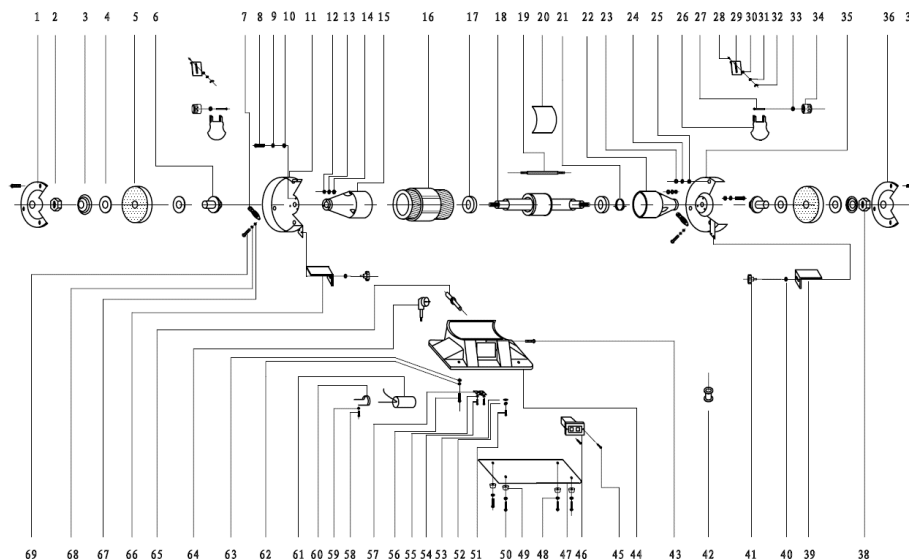
→ Before carrying out any troubleshooting work, always disconnect the machine from the power supply and secure it against unintentional recommissioning!

Many possible sources of error can be excluded in advance if the machine is properly connected to the mains. If you are unable to carry out 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 • Dress grinding wheel



39.2 Explosionszeichnung / Exploded view



39.3 Ersatzteilliste / Spare part list

No.	Description	Qty.	No.	Description	Qty.
1	Left Outer Cover	1	36	Right Outer Cover	1
2	Wheel Lock Nut	1	37	Bolt	6
3	Outer Wheel flange	2	38	Wheel Lock Nut	1
4	Nameplate of wheel	4	39	Right Tool Rest	1
5	Wheel	2	40	Washer	2
6	Inner Wheel flange	2	41	Knob Nut	2
7	Ash Tube	2	42	Cable protector	1
8	Bolt	6	43	Bolt	3
9	Washer	6	44	Base	1
10	Flat washer	6	45	Bolt	2
11	Left Inner Cover	1	46	Switch	1
12	Screw	6	47	Base plate	1
13	Washer	6	48	Washer	4
14	Flat washer	6	49	Rubber Feet	4
15	End cover	1	50	Bolt	4
16	Stator	1	51	Bolt	1
17	Bearing	2	52	Washer	1
18	Rotor	1	53	Tooth Washer	1
19	Bolt	3	54	Bolt	2
20	Label	1	55	Flat washer	2
21	Waved Spring	1	56	Bolt	2
22	End Cover	1	57	Cord Bushing Plate	1
23	Screw	6	58	Bolt	1
24	Washer	6	59	Flat Washer	1
25	Flat Washer	6	60	Capacitor clip	1
26	Eyeshield	2	61	Capacitor (only 230V)	1
27	Square Neck Screw	2	62	Washer	2
28	Square Neck Screw	2	63	Flat washer	2
29	Eyeshield Bracket	2	64	Plug & Cord	1
30	Washer	2	65	Cable Adaptor	1
31	Flat washer	2	66	Left Tool Rest	1
32	Wing Nut	2	67	Flat washer	2
33	Flat washer	2	68	Washer	2
34	Knob Nut	2	69	Bolt	2
35	Right Inner Cover	1			

40 ZUBEHÖR / ACCESSORIES

(DE) Optionales Zubehör finden Sie online auf der Produktseite, Kategorie EMPFOHLENES ZUBEHÖR ZUM PRODUKT.

(EN) Optional accessories can be found online on the product page, category RECOMMENDED PRODUCT ACCESSORIES.

(ES) Los accesorios opcionales se encuentran en la página del producto en internet, en la categoría ACCESORIOS RECOMENDADOS PARA EL PRODUCTO.

(FR) Des accessoires en option sont disponibles en ligne sur la page produit, catégorie ACCESSOIRES RECOMMANDÉS POUR LE PRODUIT.

(CZ) Volitelné příslušenství najdete na internetu na stránce výrobku, kategorie DOPORUČENÉ PŘÍSLUŠENSTVÍ K VÝROBKU.