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Ⓜ **Operating Instructions
for Grinding and Engraving Set**

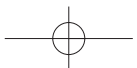


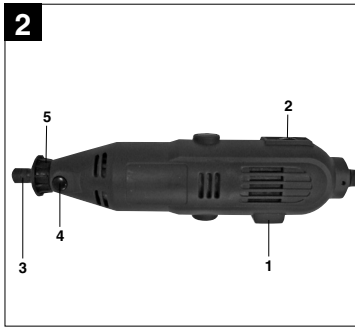
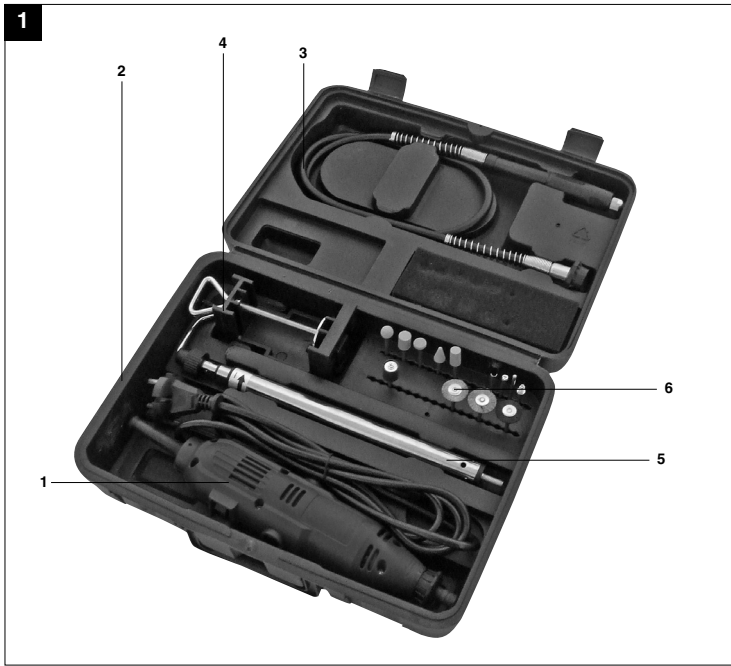
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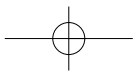
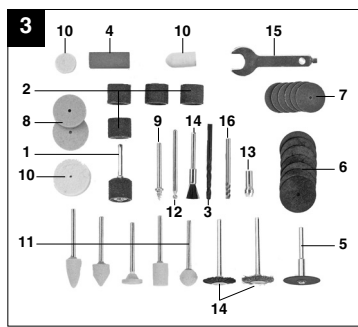
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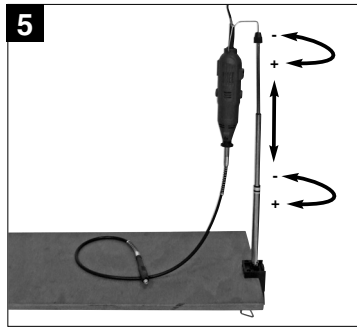
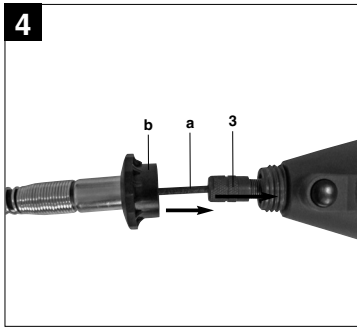
BMG 135 Kit





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"Caution - Read the operating instructions to reduce the risk of injury"



Wear ear-muffs.
The impact of noise can cause damage to hearing.



Wear a breathing mask.
Dust which is injurious to health can be generated when working on wood and other materials.
Never use the device to work on any materials containing asbestos!



Wear safety goggles.
Sparks generated during working or splinters, chips and dust emitted by the device can cause loss of sight.

⚠ Important!

When using equipment, a few safety precautions must be observed to avoid injuries and damage. Please read the complete operating manual with due care. Keep this manual in a safe place, so that the information is available at all times. If you give the equipment to any other person, give them these operating instructions as well. We accept no liability for damage or accidents which arise due to non-observance of these instructions and the safety information.

1. Safety regulations

The corresponding safety information can be found in the enclosed booklet.

⚠ Warning!

Read all safety regulations and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. **Save all warnings and instructions for future reference.**

2. Items supplied (Fig. 1)

- 1 Drive unit
- 2 Case
- 3 Flexible shaft
- 4 Table clamp
- 5 Telescopic stand rod
- 6 Set of accessory parts

3. Layout (Fig. 2)

- 1 ON/OFF switch
- 2 Speed controller
- 3 Collet chuck nut
- 4 Locking knob for collet chuck
- 5 Cover


4. Proper use

The Grinding and Engraving Set is designed to perform drilling, grinding, deburring, polishing, engraving, cutting, milling and cleaning jobs on wood, metal and plastic in model-making, workshop and household applications. Use the tool and accessories only for those applications described.

The equipment is to be used only for its prescribed purpose. Any other use is deemed to be a case of misuse. The user / operator and not the manufacturer will be liable for any damage or injuries of any kind caused as a result of this.

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

5. Technical data

Operating voltage of the drive unit:	230V ~ 50 Hz
Power input:	135 W
Idle speed n_0 :	max.8000 - 32,000 min ⁻¹
Chuck size:	Ø3.2 mm
Disc size:	Ø35 mm
grinding wheel thickness max.:	3 mm
Protection class:	II / 
Weight:	0.65 kg

Sound and vibration

Sound and vibration values were measured in accordance with EN 50144.

L_{pA} sound pressure level	71.8 dB(A)
K_{pA} uncertainty	3 dB
L_{WA} sound power level	82.8 dB(A)
K_{WA} uncertainty	3 dB

Wear ear-muffs.

The impact of noise can cause damage to hearing.

Total vibration values determined in accordance with EN 50144.

Vibration emission value $a_h \leq 2,11 \text{ m/s}^2$

K uncertainty = 1.5 m/s²

⚠ Important!

The vibration value changes according to the area of application of the electric tool and may exceed the specified value in exceptional circumstances.

6. Before starting the equipment**6.1. Inserting the various tools (Fig. 2)**

⚠ Before inserting a tool (and before each tool change) switch of the drive unit and pull the power plug.

1. Press the locking knob (4) and turn the collet chuck until the bolt locks into place.
2. Undo the collet chuck nut (3).
3. Insert the required tool into the sleeve and tighten the collet chuck nut (3).

6.1. Installing the flexible shaft (Figs. 2/4)

- Unscrew the cover (5) from the front of the equipment.
- Undo the collet chuck nut (3).
- Insert the internal shaft (a) of the flexible shaft into the collet chuck (3).
- Tighten the collet chuck nut (3).
- Now tighten the ring (b) on the multi-tool.

6.3 Using the stand (Fig. 5)

- Fit the stand to a workbench
- The stand is adjustable in height and can be adjusted as shown in Fig. 5.
- The multi-tool can now be attached to the stand.

7. Using the tool for the first time

- Make sure that the drive unit is switched off.
- Check that the mains voltage specified on the rating plate of the power supply unit is the same as your mains supply. Only then should you insert the plug of the power supply unit into a socket-outlet.

7.1. ON/OFF switch (Fig. 2)

Switch on the drive unit with the power switch (1).

7.2. Speed selector (Fig. 2)

The required speed can be set with the speed control (2).

The correct speed depends on the tool used and the type of material being processed.

7.3 Directions for use

- With small milling cutters / grinding pins: Use a high speed.
- With large milling cutters / grinding pins: Use a low speed.
- Precision work / engraving: Hold the drive unit like a pen.
- Rough work: Hold the drive unit like a hammer.

7.4 Tips

- Exert only moderate pressure on the workpiece and allow it to be processed at uniform speed.
- You will not finish your work sooner by exerting heavy pressure. On the contrary, heavy pressure will cause the drive unit to slow down or stop and will overload the motor.
- For your own safety, use a vise or screw clamp to secure small workpieces.

8. Accessories (Fig. 3)

- 1 Grinding head
- 2 Grinding head caps
- 3 HSS drill bit
- 4 Whetstone
- 5 Clamping spindle for grinding and cut-off wheels
- 6 Cut-off wheel
- 7 Sanding disk
- 8 Grinding wheel
- 9 Holder for felt polishing pad
- 10 Polishing felt
- 11 Grinding pins
- 12 Engraving pins
- 13 Sleeve
- 14 Brushes
- 15 Collet chuck
- 16 Cutter

Description of the accessories:**Cutting disks:**

For cutting metal and plastic.
Insert the cutting wheel onto the clamping spindle.

Grinding pins:

In various grinding head shapes.
For grinding and deburring metal and plastic.

HSS bits:

For drilling work on non-ferrous metals, wood, plastic and printed circuit-boards.

Grinding wheels:

For cleaning and sharpening blades and tools. Insert the grinding wheel onto the clamping spindle.

Grinding paper:

For grinding and deburring wood and plastic.

Engraving pins:

For engraving decorations and identification marks in glass and metal

Polishing felt

For polishing brass, tin, copper, etc. Also for use with polishing pastes.

Whetstone:

For sharpening tools.

Wire brushes:

For cleaning stone, metal, aluminium, etc.

Sleeves:

Various sizes for mounting different accessory tools.

Cutters:

For cutting plastic, wood and soft metal

Collet chuck key

For mounting accessory tools

9.3 Maintenance

There are no parts inside the equipment which require additional maintenance.

9.4 Ordering replacement parts:

Please quote the following data when ordering replacement parts:

- Type of machine
- Article number of the machine
- Identification number of the machine
- Replacement part number of the part required

For our latest prices and information please call 1300 922 271

10. Disposal and recycling

The unit is supplied in packaging to prevent its being damaged in transit. This packaging is raw material and can therefore be reused or can be returned to the raw material system.

The unit and its accessories are made of various types of material, such as metal and plastic. Defective components must be disposed of as special waste. Ask your dealer or your local council.

9. Cleaning, maintenance and ordering of spare parts

Always pull out the mains power plug before starting any cleaning work.

9.1 Cleaning

- Keep all safety devices, air vents and the motor housing free of dirt and dust as far as possible. Wipe the equipment with a clean cloth or blow it with compressed air at low pressure.
- We recommend that you clean the device immediately each time you have finished using it.
- Clean the equipment regularly with a moist cloth and some soft soap. Do not use cleaning agents or solvents; these could attack the plastic parts of the equipment. Ensure that no water can seep into the device.

9.2 Carbon brushes

In case of excessive sparking, have the carbon brushes checked only by a qualified electrician. Important! The carbon brushes should not be replaced by anyone but a qualified electrician.

The guarantee provided in this Guarantee Certificate is given by Einhell Australia Pty Limited
ACN 134 632 858 of 6/166 Wellington Street, Collingwood, Victoria (Telephone number 1300 922 271)
(Einhell Express Guarantee).

GUARANTEE CERTIFICATE

Dear Customer,

All of our products undergo strict quality checks. In the unlikely event that your device develops a fault, please contact our service department at the address shown on this guarantee certificate. Of course, if you would prefer to call us then we are also happy to offer our assistance under the service number printed below. Please note the following terms under which claims under the Einhell Express Guarantee can be made:

1. The benefits conferred by the Einhell Express Guarantee are in addition to all rights and remedies which you may be entitled to under the Australian Consumer Law, and any other statutory rights you may have under other applicable laws. This Einhell Express Guarantee does not exclude, restrict or modify any such rights or remedies.
We do not charge you for the Einhell Express Guarantee.
2. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
3. The Einhell Express Guarantee only covers problems caused by material or manufacturing defects, and our liability under the Einhell Express Guarantee is limited, at our discretion, to the rectification of these defects or replacement of the product. Please note that the product has not been designed for use in commercial, trade or industrial applications. Consequently, the Einhell Express Guarantee will not apply if the product is used in commercial, trade or industrial applications or for other equivalent activities.
4. The following are also excluded from the Einhell Express Guarantee: compensation for transport damage, damage caused by failure to comply with the installation/assembly instructions or damage caused by unprofessional installation, failure to comply with the operating instructions (e.g. connection to the wrong mains voltage or current type), misuse or inappropriate use (such as overloading of the product or use of non-approved tools or accessories), failure to comply with the maintenance and safety regulations, ingress of foreign bodies into the product (e.g. sand, stones or dust), effects of force or external influences (e.g. damage caused by the product being dropped) and normal wear resulting from proper operation of the product. The Einhell Express Guarantee will also not apply if any attempt is made to tamper with the product.
5. The Einhell Express Guarantee is valid for a period of 2 years starting from the purchase date of the product. Claims made under the Einhell Express Guarantee should be submitted before the end of this guarantee period and within two weeks of the defect being noticed. No claims under the Einhell Express Guarantee will be accepted if submitted after the end of this guarantee period. The original guarantee period remains applicable to the device even if repairs are carried out or parts are replaced. In such cases, the work performed or parts fitted will not result in an extension of the guarantee period for the Einhell Express Guarantee, and the Einhell Express Guarantee will not apply for the work performed or parts fitted. This also applies when an on-site service is used.
6. To make a claim under the Einhell Express Guarantee, please send the relevant product postage-free to the address shown below and enclose either the original or a copy of your sales receipt or another dated proof of purchase. It would help us if you could describe the nature of the problem in as much detail as possible. If the defect is covered by the Einhell Express Guarantee, your product will be repaired immediately and returned to you, or we will send you a new device (at our election).

Any costs incurred by you in making a claim under this Einhell Express Guarantee, unless specified otherwise in this guarantee certificate, must be borne by you.

Of course, we are also happy to offer a chargeable repair service for any defects which are not covered by the scope of the Einhell Express Guarantee or for products which are no longer covered by the Einhell Express Guarantee. To take advantage of this service, please send the product to our service address.

EINHELL AUSTRALIA PTY LTD
6/166 Wellington Street
Collingwood VIC 3066
Australia
Phone: 1300 922 271

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