

Operating Instructions  
Angle Grinder

**Einhell**<sup>®</sup>

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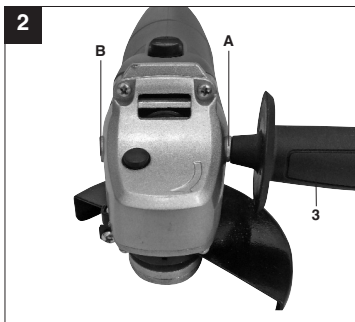
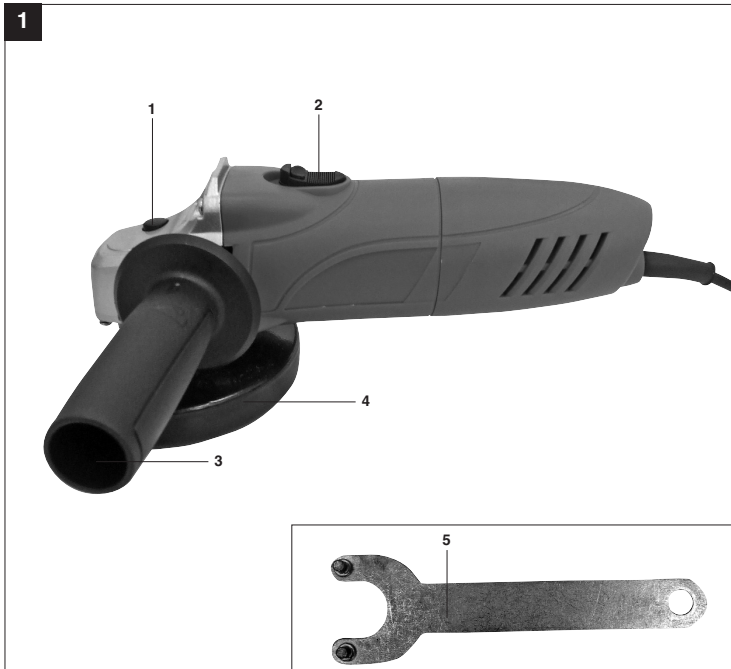


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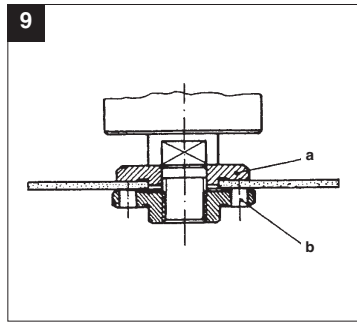
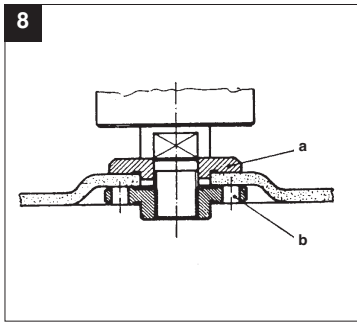
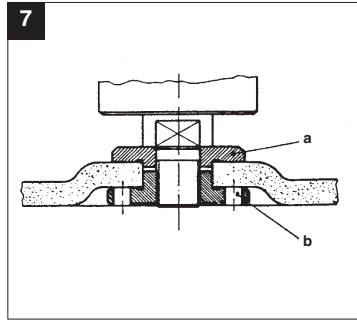
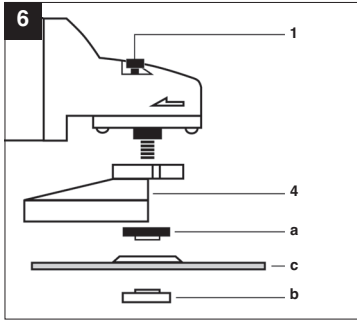
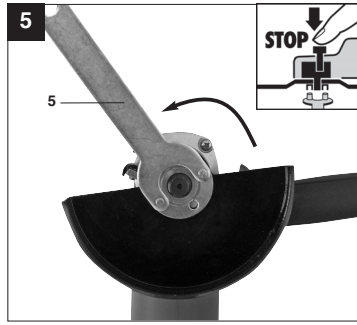
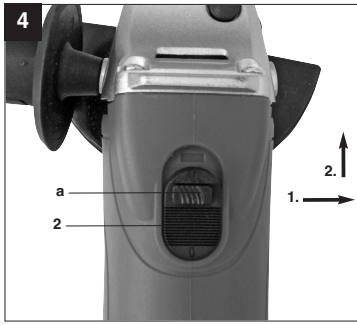
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BT-AG **850**



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**GB**



"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 information**

Please refer to the booklet included in delivery for the safety instructions.

**⚠ CAUTION!****Read all safety regulations and instructions.**

Any errors made in following the safety regulations and instructions may result in an electric shock, fire and/or serious injury.

**Keep all safety regulations and instructions in a safe place for future use.**

**2. Layout (Fig. 1)**

1. Spindle lock
2. ON/OFF switch
3. Additional handle
4. Guard
5. Flange nut wrench

**3. Proper use**

The angle grinder is designed for the cutting and rough grinding of metal and masonry using the appropriate cutting disk or rough grinding disk.

The machine 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.

**4. Technical data**

Mains voltage:	230 V ~ 50 Hz
Power input:	850 W
Idling speed:	11000 rpm
Max. wheel diameter:	115 mm
Mounting spindle thread:	M14
Protection class:	II /
Weight:	1.7 kg

**Sound and vibration**

Sound and vibration values were measured in accordance with EN 60745.

$L_{pA}$ sound pressure level	83.2 dB(A)
$K_{pA}$ uncertainty	3 dB
$L_{WA}$ sound power level	94.2 dB(A)
$K_{WA}$ uncertainty	3 dB

**Wear ear-muffs.**

The impact of noise can cause damage to hearing.

Total vibration values (vector sum of three directions) determined in accordance with EN 60745.

**Surface sanding/grinding**

Vibration emission value  $a_h = 4.90 \text{ m/s}^2$

K uncertainty =  $1.5 \text{ m/s}^2$

**⚠ Important!**

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

**5. Before starting the equipment**

Before you connect the equipment to the mains supply make sure that the data on the rating plate are identical to the mains data.

**5.1 Fitting the additional handle (Fig. 2)**

- The angle grinder must not be used without the additional handle (3).
- The additional handle can be secured in any of 2 positions (A, B).

**GB**

Tool side	Suitable for
Left (position A)	Right-handed users
Right (position B)	Left-handed users

### 5.2 Setting the guard (Fig. 3)

- Switch off the tool. Pull the power plug.
- Adjust the guard (4) to protect your hands so that the material being ground is directed away from your body.
- The position of the guard (4) can be adjusted to any specific working conditions. Undo the screw (a) and turn the cover (4) into the required position.
- Ensure that the guard (4) correctly covers the gear wheel casing.
- Retighten the screw (a).
- Ensure that the guard (4) is secure.

**⚠ Never use the angle grinder without the guard.**

### 5.3 TEST RUN FOR NEW GRINDING WHEELS

Allow the right-angle grinder to run in idle for at least 1 minute with the grinding or cutting wheel fitted in place. Vibrating wheels are to be replaced immediately.

## 6. Operation

### 6.1 Switch (Fig. 4)

The angle grinder comes with a safety switch which is designed to prevent accidents. To switch on, push the slide switch (a) to the right while at the same time pushing the ON/OFF switch (2) forwards and depressing. To switch off the angle grinder, depress the button (2) at the back. The switch (2) will jump back into its starting position.

**⚠ Wait until the machine has reached its top speed. You can then position the angle grinder on the workpiece and machine it.**

### 6.2 Changing the grinding wheels (Fig. 5)

Use the face spanner (5) supplied to change the grinding wheels.

#### Pull out the power plug.

- Simple wheel change by spindle lock:
- Press the spindle lock and allow the grinding wheel to latch in place.

- Open the flange nut with the face spanner. (Fig. 5)
- Change the grinding or cutting wheel and tighten the flange nut with the face spanner.

#### ⚠ Important!

**Only ever press the spindle lock when the motor and grinding spindle are at a standstill! You must keep the spindle lock pressed while you change the wheel!**

For grinding or cutting wheels up to approx. 3 mm thick, screw on the flange nut with the flat side facing the grinding or cutting wheel.

### 6.3 Flange arrangements when using grinding wheels and cutting wheels (Fig. 6-9)

- Flange arrangement when using a depressed-centre or straight grinding wheel (Fig. 7)
  - a) Clamping flange
  - b) Flange nut
- Flange arrangement when using a depressed-centre cutting wheel (Fig. 8)
  - a) Clamping flange
  - b) Flange nut
- Flange arrangement when using a straight cutting wheel (Fig. 9)
  - a) Clamping flange
  - b) Flange nut

### 6.4 MOTOR

It is vital for the motor to be well ventilated during operation. Be sure, therefore, to keep the ventilation holes clean at all times.

### 6.5 GRINDING WHEELS

- Never use a grinding or cutting wheel bigger than the specified diameter.
- Before using a grinding or cutting wheel, check its rated speed.
- The wheel's rated speed must be higher than the idle speed of the right-angle grinder.
- Use only grinding and cutting wheels that are approved for a minimum speed of 11000 rpm and a peripheral speed of 80 m/sec.
- Check the direction of rotation when you use diamond cutting wheels. The directional arrow on the diamond cutting wheel must point in the direction in which the tool rotates.

### 6.6 OPERATING MODES

#### 6.6.1 Rough grinding

For the best rough grinding results, hold the grinding wheel at an angle of between 30° and 40° to the workpiece surface and guide back and forth over the workpiece in steady movements.

#### 6.6.2 Cutting

When you use the right-angle grinder for cutting purposes, avoid tilting it in the cutting plane. The cutting wheel must have a clean cutting edge. A diamond cutting wheel is best used to cut hard stone.

**⚠ It is prohibited to use the machine on asbestos materials!**

**⚠ Never use a cutting wheel for rough grinding.**

### 7. Replacing the power cable

If the power cable for this equipment is damaged, it must be replaced by the manufacturer or its after-sales service or similarly trained personnel to avoid danger.

### 8. Cleaning, maintenance and ordering of spare parts

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

#### 8.1 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.

#### 8.2 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.

#### 8.3 Maintenance

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

#### 8.4 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 go to [www.isc-gmbh.info](http://www.isc-gmbh.info)

### 9. 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.



**Konformitätserklärung**

ISC-GmbH · Eschenstraße 6 · D-94405 Landau/Isar

- Ⓒ erklårt folgende Konformität gemäß EU-Richtlinie und Normen für Artikel
- Ⓓ declares conformity with the EU Directive and standards marked below for the article
- Ⓔ déclare la conformité suivante selon la directive CE et les normes concernant l'article
- Ⓚ verklaart de volgende conformiteit in overeenstemming met de EU-richtlijn en normen voor het artikel
- Ⓛ declara la siguiente conformidad a tenor de la directiva y normas de la UE para el artículo
- Ⓜ declara a seguinte conformidade de acordo com a directiva CE e normas para o artigo
- Ⓝ förklarar följande överensstämmelse enl. EU-direktiv och standarder för artikeln
- Ⓞ ilmoittaa seuraavaa Euroopan unionin direktiivien ja normien mukaista yhdenmukaista tuotetta
- Ⓟ erklærer herved følgende samsvar med EU-direktiv og standarder for artikkelen
- Ⓠ заявляет о соответствии товара
- Ⓡ следующим директивам и нормам ЕС
- Ⓢ izjavljuje sljedeću uskladenost s odredbama i normama EU za artikl.
- Ⓣ declarã urmãtoarea conformitate cu linia directoare CE și normele valabile pentru articolul.
- Ⓤ őrін le iglti olarak AB Yönetmelkleri ve Normları gereğince aşğıdaki uygınluk açıklı masını sunar.
- Ⓥ δηλώνει την ακόλουθη σύμφωνια σύμφωνα με την Οδηγία ΕΕ και τα πρότυπα για το προϊόν

- Ⓒ dichiara la seguente conformità secondo la direttiva UE e le norme per l'articolo
- Ⓓ attesterer følgende overensstemmelse i henhold til EU-direktiv og standarder for produkt
- Ⓔ prohlašuje následující shodu podle směrnice EU a norm pro výrobek.
- Ⓚ a következő konformitást jelenti ki a termékerek vonatkozó EU-irányvonalak és normák szerint
- Ⓛ pojasnjuje sledečo skladnost po smernici EU in normah za artikel.
- Ⓜ deklaruje zgodność wymienionego poniżej artykułu z następującymi normami na podstawie dyrektywy WE.
- Ⓝ vydáva nasledujúce prehlásenie o zhode podľa smernice EU a noriem pre výrobok.
- Ⓞ декларира следното съответствие съгласно директивите и нормите на ЕС за продукта.
- Ⓟ заявляе про відповідність згідно з Директивою СС та стандартами, чинними для даного товару
- Ⓠ deklareerib vastavuse järgnevale EL direktiivi dele ja normidele
- Ⓡ deklaruoja atitikti pagal ES direktyvas ir normas
- Ⓢ straiipsniui
- Ⓣ izjavljuje sledeći konformitet u skladu s odredbom EZ i normama za artikl
- Ⓤ Atbilstības sertifikāts apliecina zemāk minēto preču atbilstību ES direktīvam un standartiem
- Ⓥ Samræmisyfyrýsling staðfestir eftirfarandi samræmi samkvæmt reglum Evrópubandalagsins og stöðlum fyrir vörur

**Winkelschleifer BT-AG 850**

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EN 60745-1; EN 60745-2-3; EN 55014-1; EN 55014-2; EN 61000-3-2; EN 61000-3-3

Landau/Isar, den 12.08.2008

*[Signature]*  
Weichselgartner  
General-Manager

*[Signature]*  
Mayr  
Product-Management

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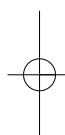
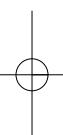
Ⓢ For EU countries only

Never place any electric tools in your household refuse.

To comply with European Directive 2002/96/EC concerning old electric and electronic equipment and its implementation in national laws, old electric tools have to be separated from other waste and disposed of in an environment-friendly fashion, e.g. by taking to a recycling depot.

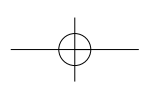
Recycling alternative to the demand to return electrical devices:

As an alternative to returning the electrical device, the owner is obliged to cooperate in ensuring that the device is properly recycled if ownership is relinquished. This can also be done by handing over the used device to a returns center, which will dispose of it in accordance with national commercial and industrial waste management legislation. This does not apply to the accessories and auxiliary equipment without any electrical components which are included with the used device.



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# **GUARANTEE CERTIFICATE**

## Dear Customer,

All of our products undergo strict quality checks to ensure that they reach you in perfect condition. In the unlikely event that your device develops a fault, please contact our service department at the address shown on this guarantee card. 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 guarantee claims can be made:

1. These guarantee terms cover additional guarantee rights and do not affect your statutory warranty rights. We do not charge you for this guarantee.
2. Our guarantee only covers problems caused by material or manufacturing defects, and it is restricted to the rectification of these defects or replacement of the device. Please note that our devices have not been designed for use in commercial, trade or industrial applications. Consequently, the guarantee is invalidated if the equipment is used in commercial, trade or industrial applications or for other equivalent activities. The following are also excluded from our 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 device or use of non-approved tools or accessories), failure to comply with the maintenance and safety regulations, ingress of foreign bodies into the device (e.g. sand, stones or dust), effects of force or external influences (e.g. damage caused by the device being dropped) and normal wear resulting from proper operation of the device.  
  
The guarantee is rendered null and void if any attempt is made to tamper with the device.
3. The guarantee is valid for a period of 2 years starting from the purchase date of the device. Guarantee claims should be submitted before the end of the guarantee period within two weeks of the defect being noticed. No guarantee claims will be accepted after the end of the 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, and no new guarantee will become active for the work performed or parts fitted. This also applies when an on-site service is used.
4. In order to assert your guarantee claim, please send your defective device postage-free to the address shown below. Please enclose either the original or a copy of your sales receipt or another dated proof of purchase. Please keep your sales receipt in a safe place, as it is your 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 our guarantee then your device will either be repaired immediately and returned to you, or we will send you a new device.

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