



ELECTRIC WELDER



USER GUIDE

MODEL NUMBER BT-EW 150

AFTER SALES SUPPORT

TEL: 1300 922 271

EMAIL: service.australia@einhell.com

✓ N26704

Electric Welder

What your 1 year warranty means

Great care has gone into the manufacture of this product and it should therefore provide you with years of good service when used properly. In the event of product failure within its intended use over the course of the first 1 year after the date of purchase, we will remedy the problem as quickly as possible once it has been brought to our attention. In the unlikely event of such an occurrence, or if you require any information about the product, please contact us via our after sales support services, details of which can be found in this manual and on the product itself.

Welcome Section

Congratulations on choosing to buy a TAURUS® product.

All products brought to you by TAURUS® are manufactured to the highest standards of performance and safety, and, as part of our philosophy of customer service and satisfaction, are backed by our comprehensive 1 Year Warranty.

We hope you will enjoy using your purchase for many years to come.

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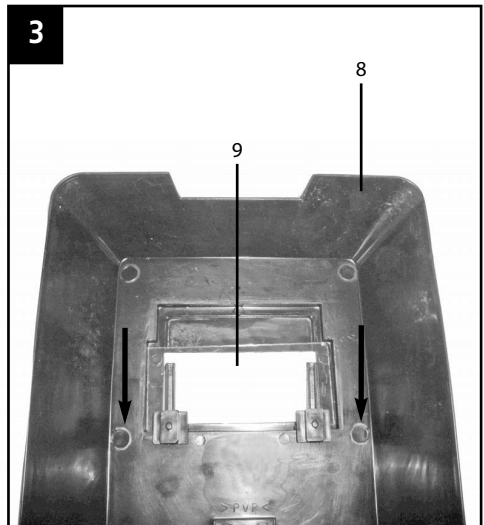
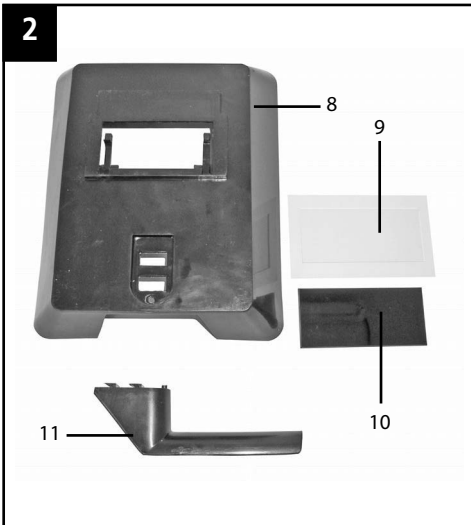
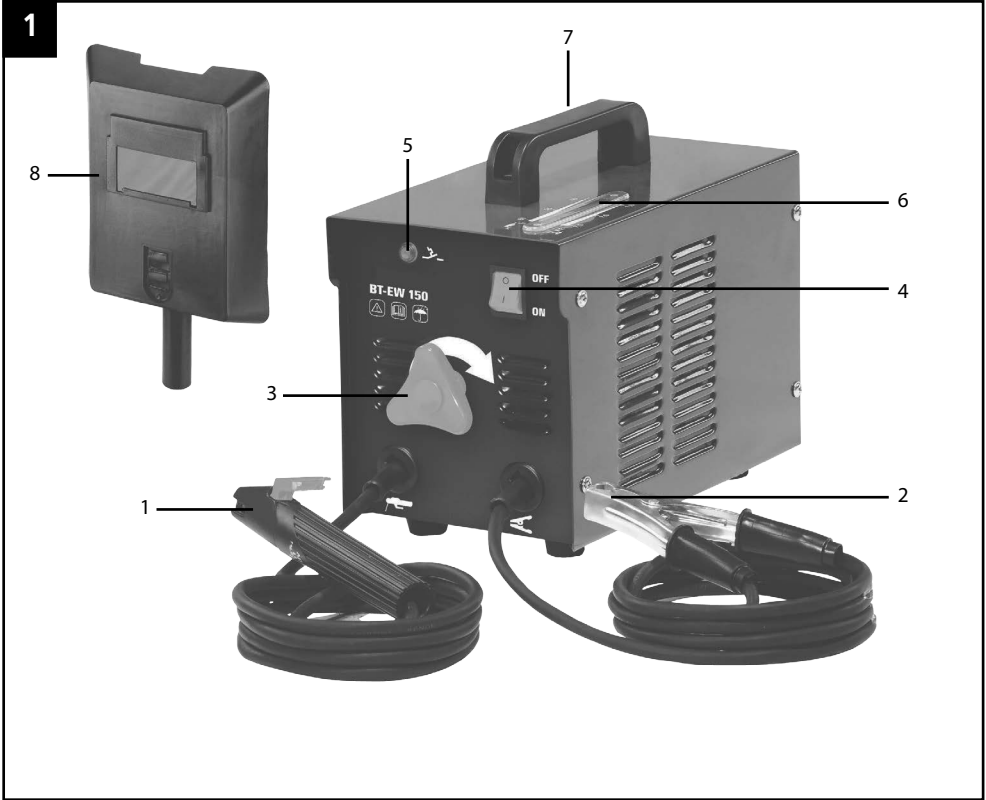
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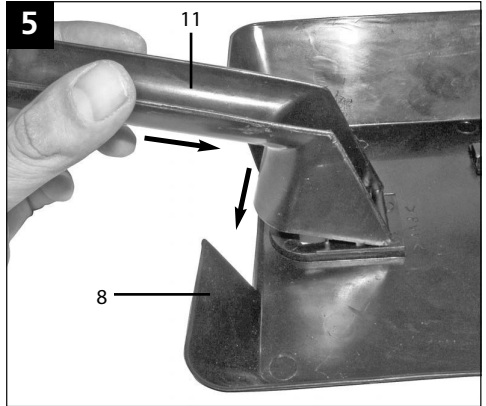
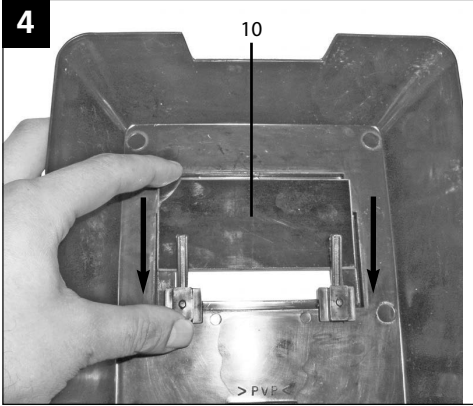
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1. General Safety Rules

WARNING! Read all safety warnings 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.

The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1. Work area safety

- a. **Keep work area clean and well lit.** Cluttered and dark areas invite accidents.
- b. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- c. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2. Electrical safety

- a. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- b. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- c. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f. **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

3. Personal safety

- a. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- b. **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or

hearing protection used for appropriate conditions will reduce personal injuries.

- c. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- d. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to rotating part of the power tool may result in personal injury.
- e. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- g. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust-related hazards.

4. Power tool use and care

- a. **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- f. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g. **Use the power tool, accessories and tool bits etc. in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

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5. Service

- a. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** *This will ensure that the safety of the power tool is maintained.*

6. Recommendation

We recommend that the tool always be supplied via residual current device with a rated residual current of 30 mA or less.

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.

2. Layout (Fig. 1)

1. Electrode holder
2. Earth terminal
3. Adjustment wheel for welding current
4. ON/OFF switch
5. Control lamp for overheating
6. Welding current scale
7. Carrying handle
8. Welding screen

3. Items Supplied

- Welding set
- Welding screen
- Steel wire brush

4. Important information

Please read the directions for use carefully and observe the information provided. It is important to consult these instructions in order to acquaint yourself with the machine, its proper use and safety precautions.

Important!

Only use this appliance for the purpose for which it is designed and as described in these instructions: Manual arc welding with coated electrodes.

Handling this system incorrectly may be hazardous for persons, animals and property. The user of this system is responsible for his/her own safety and for the safety of others.

Read these operating instructions and follow all the regulations.

- Repairs and/or maintenance work may only be carried out by qualified personnel.
- Use only the power cables and welding cables supplied.
- Ensure that the appliance is looked after properly.
- To ensure that sufficient air can be drawn in through the ventilation slits, the appliance should not be constricted or placed next to a wall while it is operating. Make sure that the appliance is correctly connected to the mains supply (see 5).
- Do not subject the mains lead to any tensile stress. Unplug the appliance before you change its position.
- Check the condition of the welding cables, the electrode tongs and the earth terminals (-); wear on the insulation and the live parts may result in dangerous conditions and reduce the quality of the welding work.
- Arc welding generates sparks, molten metal particles and smoke, so the following is required:
- Remove all inflammable substances and/or materials from the working area.
- Ensure that there is adequate ventilation.
- Do not weld on tanks, vessels or pipes that have contained inflammable liquids or gases. Avoid all direct contact with the welding circuit; the idling voltage between the electrode tongs and the earth terminal (-) may be dangerous.
- Do not store or use the appliance in wet or damp conditions or in the rain.
- Protect your eyes with specially designed goggles (DIN level 9-10), which you can attach to the supplied safety shield. Wear gloves and dry safety clothing that are not contaminated by any oil or grease to ensure that your skin is not exposed to ultraviolet radiation from the arc.

Note!

- The radiation from the arc can damage your eyes and cause burns on skin.
- Arc welding generates sparks and droplets of molten metal; the welded workpiece may start to glow and will remain very hot for a relatively long period of time.
- Arc welding releases vapors that may be harmful.
- Every electric shock is potentially fatal.
- Do not approach the arc within a radius of 15 m unprotected.
- Protect yourself (and others around you) against the possible hazardous effects of the arc.
- **Warning!** Depending on the mains connection conditions at the connection point of the welding set, other appliances connected to the mains may suffer faults.

Important!

If the supply mains and circuits are overloaded, other appliances may suffer interference during the welding work. If you have any doubts, contact your electricity supply company.



Proper use

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.

Sources of danger during arc welding

Arc welding results in a number of sources of danger. It is therefore particularly important for the welder to comply with the following rules so as not to place himself or others in danger and to avoid endangering people and equipment.

1. Have all work on the mains voltage system, for example on cables, plugs, sockets, etc., performed only by trained electricians. This particularly applies to configuring intermediate cables.
2. If an accident occurs, disconnect the welding power source from the mains immediately.
3. If electric touch voltages occur, switch off the welding set immediately and have it checked by an expert.
4. Always check for good electrical contacts on the welding current side.
5. Wear insulating gloves on both hands for welding. These offer protection from electric shocks (idling voltage in the welding circuit), harmful radiation (Heat and UV radiation) and from glowing metal and slag spatter.
6. Wear firm, insulated footwear. Open-toed footwear is not suitable since falling droplets of glowing metal will cause burns.
7. Wear suitable clothing, do not wear synthetic clothes.
8. Do not look into the arc with unprotected eyes, use only a welding safety shield with the proper safety glass in compliance with DIN standards. In addition to light and heat, which may cause dazzling and burns, the arc also gives off UV radiation. Without proper protection, this invisible ultraviolet radiation causes very painful conjunctivitis, which will only be noticeable several hours later. In addition, UV radiation will cause sunburn-type symptoms on unprotected parts of the body.
9. Personnel or assistants in the vicinity of the arc must also be notified of the dangers and provided with the required protection; if necessary install safety walls.

10. Ensure adequate ventilation for welding, particularly in small rooms since the process causes smoke and harmful gases.
11. Do not carry out any welding work on tanks that have been used to store gases, fuels, mineral oil or the like, even if they have been empty for a lengthy period of time, since any residue will result in a danger of explosion.
12. Special regulations apply in areas where there is a potential risk of fire and/or explosion.
13. Welds that are exposed to large stresses and must comply with safety requirements may only be completed by specially trained and approved welders. Examples of such welds include pressure vessels, rails, trailer hitches, etc.
14. **Note:** It must be noted that the protective conductor in electrical systems of appliances may be destroyed by the welding current in the event of negligence, for example if the earth terminal is placed on the welding set casing to which the protective conductor of the electrical system is connected. The welding work is completed on a machine with a protective conductor connection. It is therefore possible to weld on the machine without having connected the earth terminal to it. In this case the welding current will flow from the earth terminal through the protective conductor to the machine. The high welding current may cause the protective conductor to melt.
15. The fuses on the supply cables to the mains sockets must comply with the relevant regulations (VDE 0100). To comply with these regulations, only fuses or circuit breakers suitable for the cross-section of the cables may be used (for earthing contact sockets max. 16 A fuses or 16 A circuit breakers). The use of too high a fuse may result in the cable burning and fire damage to the building.

Constricted areas

When working in constricted or hot areas, use insulating supports and intermediate layers as well as slip-on gloves made of leather or other non-conductive materials to insulate your body against the floor, walls, conductive parts of the machine and the like.

If you use small welding transformers for welding in places with an increase electrical risk, for example in constricted areas with conductive walls, (tanks, pipes, etc.), and in hot areas (perspiration on work clothes), the output voltage of the welding set when idling must not exceed 42 V (effective value). Therefore, the appliance may not be used for these purposes because its output voltage is higher than this.



Safety clothing

1. While working, the welder must protect his entire body from radiation and burns by wearing suitable clothing and a face guard.
2. Slip-on gloves made of a suitable material (leather) must be worn on both hands. They must be in perfect condition.
3. Suitable aprons must be worn to protect clothing from sparks and burns. A safety suit and, if necessary, head protection must be worn if required by the type of work in question, e.g. overhead welding.
4. The protective clothing used as well as all accessories must be in compliance with the "Personal safety equipment" EU Directive.

Protection from radiation and burns

1. Provide information about the risk to eyes at the working site in the form of a poster with the wording "Caution – do not look at the flames". Workplaces are to be screened off wherever possible so that personnel in the vicinity are protected. Unauthorized persons are to be kept away from the welding work.
2. The walls in the immediate vicinity of stationary workplaces should not have a light color or a sheen. Windows up to head height are to be protected against radiation passing through them or reflecting off them, for example by coating them with a suitable paint.
3. Please note this equipment must not be used for commercial, trade or industrial applications.



Do not store or use the equipment in wet conditions or in the rain. Use the equipment only in dry condition indoors.

5. Symbols and Technical Data

EN 60974-6 European standard for arc welding sets and welding power supplies with limited on time (Part 6).



Symbol for welding power supplies which are suitable for welding in environments with increased electrical danger.

~ 50 Hz Alternating current and rated frequency value [Hz]

U_0 Rated idling voltage [V]

80 A/ 21.2 V Maximum welding current and the corresponding standardized operating voltage [A/V]

\varnothing Electrode diameter [mm]

I_2 Welding current [A]

t_w Average load time [s]

t_r Average reset time [s]



1 ~ 50 Hz

Line input; number of phases, the alternating current symbol and the rated frequency value

U_1 Line voltage [V]

I_{1max} Highest rated value of the line current [A]

I_{1eff} Effective value of the highest line current [A]

IP 21 S Protection type

H Insulation class

Mains connection:	240 V ~ 50 Hz
Welding current (A) at $\cos \varphi = 0.73$:	40 - 80

\varnothing (mm)	1.6	2.0	2.5
I_2	40	55	80
t_w (s)	224	120	69
t_r (s)	918	1119	1310

Idling voltage (V):	48
Power input:	4 kVA at 80 A $\cos \varphi = 0.73$
Fuse (A):	16

6. Assembling the welding screen (Fig. 2-5)

Insert the safety glass (9) and then the welding glass (10) in the welding screen (8). Now fasten the welding screen holder (11) to the welding screen, as shown in Fig. 5.

7. Welding preparations (Fig. 1)

Important! Extension leads must not be used with the welder.

Connect the earth terminal (-) (2) direct to the part to be welded or to the support on which the part is resting.

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Ensure that the earth terminal (-) is in direct contact with the part to be welded. You should therefore avoid coated surfaces and/or insulated materials. The electrode holder (1) cable has a special clamp at one end, which is used to secure the electrode. The welding screen (8) must be used at all times for welding. It protects your eyes from the radiation emitted by the arc and nevertheless enables you to watch the welding process.

8. Welding (Fig. 1)

After you have made all the electrical connections for the power supply and for the welding circuit, you can proceed as follows:

Insert the unshathed end of the electrode into the electrode holder (1) and connect the earth terminal (-) (2) to the part you wish to weld. Ensure that a good electric contact is made. Switch on the welding set at the ON/OFF switch (4) and set the welding current using the adjustment wheel (3) to suit the electrode you wish to use. Hold the welding screen (8) in front of your face and rub the tip of the electrode on the part you wish to weld as if you were striking a match. This is the best method of igniting the arc. Check that you have the correct electrode and current strength on a test part.

Electrode (Ø mm):	Welding current (A)
1.6	40 A
2	40 - 80 A
2.5	60 - 80 A

Important!

Do not dab the workpiece with the electrode since it could be damaged, making it more difficult to ignite the arc.

As soon as the arc has ignited, keep it a distance from the workpiece equivalent to the diameter of the electrode.

This distance should be kept as constant as possible during the welding process. The angle of the electrode in the direction in which you are working should be 20–30°C.

Important!

Always use tongs to remove spent electrodes and to move parts that you have just welded. Please note that the electrode holder (Fig. 1/Item 1) must always be put down so that it is insulated after you have completed the welding work.

Do not remove the slag until the weld has cooled. If you want to continue a weld after an interruption, the slag from your initial attempt must first be removed.

9. Overheating guard

The welding set is fitted with an overheating guard that

protects the welding transformer from overheating. If the overheating guard trips, the control lamp (Fig. 1/Item 5) on your set will be lit. Allow the welding set to cool for some time.

10. Maintenance

Remove dust and dirt from the machine at regular intervals. Cleaning is best carried out with a fine brush or a cloth.

11. Ordering spare parts

Please quote the following data when ordering replacement parts: (information can be found on the warranty certificate of the product)

- Type of machine
- Model number of the machine
- Product number of the machine

Please call our After Sales Support Number on 1300 922 271.

12. Disposal and recycling

The unit is supplied in packaging to prevent it from being damaged in transit. This packaging is raw material and can therefore be reused or recycled.

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. Please contact your local council for further guidance on how to dispose of this material correctly.



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1 SARGENTS ROAD
MINCHINBURY NSW 2770
AUSTRALIA
www.aldi.com.au

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