# **115MM ANGLE GRINDER**

DPB095GRD

# **SAFETY AND OPERATING MANUAL**









Congratulations on your purchase of a <u>DIRECTPOWER</u> power tool from Direct Power (UK) Ltd. We want you to continue getting the best performance from it so this handbook includes information on safety, handling and care. Please retain this handbook in case you need to refer to any of the information in the future.

Your **DIRECTPOWER** power tool comes with a 12-month guarantee, so should it develop a fault within this period contact your retailer.

### **GUARANTEE**

This **DIRECTPOWER** product carries a guarantee of 12 months. If your product develops a fault within this period, you should, in the first instance contact the retailer where the item was purchased.

This guarantee specifically excludes losses caused due to:

- Fair wear and tear
- Misuse or abuse
- Lack of routine maintenance
- Failure of consumable items (such as batteries)
- Accidental damage
- Cosmetic damage
- Failure to follow manufacturer's guidelines
- Loss of use of the goods

This guarantee does not affect your statutory rights. This guarantee is only valid in the UK.

For further technical advice, spare parts or repair service (outside of guarantee) please contact the customer helpline number on 0845 607 6380.

DPB095GRD

## SAFETY INSTRUCTIONS



**WARNING!** Read all instructions. Failure to follow all instructions listed below 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.

#### SAVE THESE INSTRUCTIONS

#### 1. Work area.

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 safety equipment. Always wear eye protection. Safety 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 plugging in 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 a 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.** Poorly maintained power tools cause many accidents.

**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 intended could result in a hazardous situation.

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.

#### **HEALTH ADVICE**

**WARNING!** When drilling, sanding, sawing or grinding, dust particles will be produced. In some instances, depending on the materials you are working with, this dust can be particularly harmful to you (e.g. lead from old gloss paint).

DPB095GRD

You are advised to consider the risks associated with the materials you are working with and to reduce the risk of exposure. You should:

- Work in a well-ventilated area.

-Work with approved safety equipment, such as those dust masks that are specially designed to filter microscopic particles.

## **ADDITIONAL SAFETY RULES FOR YOUR ANGLE GRINDER**

1.If the supply cord is damaged have it replaced by a qualified person.

2.Check that speed marked on the wheel is equal to or greater than the rated speed of the grinder.

3.Ensure that the wheel dimensions are compatible with the grinder.

4. Abrasive wheels must be stored and handled with care.

5. Inspect the grinder wheel before use. Do not use chipped, cracked or otherwise defective products.

6. Ensure that mounted wheels/discs are fitted in accordance with these instructions.

7. Ensure that the abrasive product is correctly mounted and tightened before use and run the tool at no-load for 30 seconds in a safe position. Stop immediately if there is considerable vibration or if other defects are detected. If this condition occurs, check the machine to determine the cause.

8. If a guard is supplied with the tool never use the tool without the safety guard installed.

9. Do not use separate reducing rings or adaptors to adapt the bore size of the disc.

10. For tools intended to be fitted with a threaded hole, ensure that the thread in the wheel is long enough to accept the spindle length.

11. Check that the work piece is properly supported.

12. Do not use cutting wheels for grinding or grinding wheels for cutting.

13. Ensure that sparks resulting from use do not create a hazard e.g. do not hit persons, or ignite flammable substances.

14. Ensure that ventilation openings are kept clear when working in dusty conditions. If it should become necessary to clear dust, first disconnect the tool from the mains supply.

15. Always use eye and ear protection. Other personal protective equipment such as dust mask. gloves, helmet and apron should be worn.

16. The wheel continues to rotate after the tool is switched off.

17. Always check walls to avoid hidden power cables and pipes. A metal detector can be obtained from any good DIY store for this purpose.

18. Do not touch the workpiece immediately after grinding as it will be very hot.

19. Do not hold unsecured work in your hand.

20. Do not use the grinder as a fixed tool.

21. Do not try to cool the grinding disc with water.

22. ALWAYS hold the angle grinder with both hands when the angle grinder is in use.

23. Always use the appropriate safety equipment that is required for the product. e.g. Goggles / Safety Spectacles, Ear defenders (essential with tools with a noise rating of over 85 dB(A), Gloves and face masks. In all cases ensure that the safety equipment is in good condition.

## VIBRATION

The European Physical Agents (Vibration) Directive has been brought in to help reduce hand arm vibration syndrome injuries to power tool users. The directive requires power tool manufacturers and suppliers to provide indicative vibration test results to enable users to make informed decisions as to the period of time a power tool can be used safely on a daily basis and the choice of tool.

Further Advice can be found at www.hse.gov.uk

Vibration total values (triax vector sum) determined according to EN 60745:	
Work mode description 1	Vibration emission value ah = 4.74m/s <sup>2</sup>
	Uncertainty K = 1.5m/s <sup>2</sup>

The declared vibration emission value should be used as a minimum level and should be used with the current guidance on vibration.

Calculating the actual period of the actual period off use can be difficult and the HSE website has further information.

The declared vibration emission been measured in accordance with a standardised test stated above and may be used to compare one tool with another

The declared vibration emission value may also be used in a preliminary assessment of exposure.

**Warning:** The vibration emission value during actual use of the power tool can differ from the declared value depending on the ways in which the tool is used dependant on the following examples and other variations on how the tool is used:-How the tool is used and the materials being cut or drilled.

The tool being in good condition and well maintained

The use of the correct accessory for the tool and ensuring it is sharp and in good condition.

And the tool is being used as intended by its design and these instructions.

# This tool may cause hand-arm vibration syndrome if its use is not adequately managed

**Warning:** identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).NoteThe use of other tools will reduce the users' total working period on this tool.

Helping to minimise your vibration exposure risk.

ALWAYS use sharp chisels, drills and blades

Maintain this tool in accordance with these instructions and keep well lubricated (where appropriate)

DPB095GRD

If the tool is to be used regularly then invest in anti vibration accessories. Avoid using tools in temperatures of 10C or less Plan your work schedule to spread any high vibration tool use across a number of days.

Health Surveillance

All employees should be part of an employer's health surveillance scheme to help identity any vibration related diseases at an early stage, prevent disease progression and help employees stay in work.

## SYMBOLS



Read the manual



Warning



Wear gloves



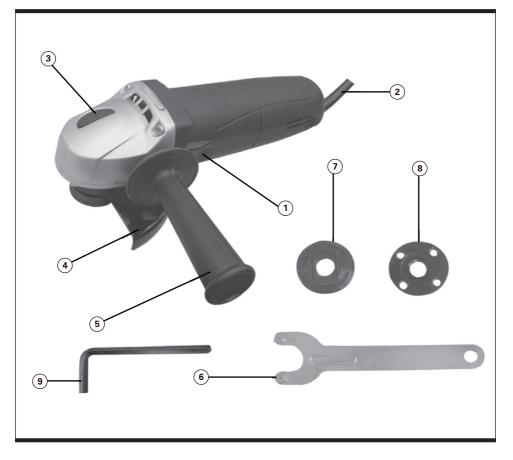
Wear dust mask,eye & ear protection



Double insulation



WEEE marking



### **COMPONENT LIST**

- 1. On/Off switch
- 2. Power cord
- **3. Spindle locking button**
- 4. Wheel guard
- 5. Auxiliary handle
- 6. Spanner
- 7. Inner flange
- 8. Outer flange
- 9. Allen key

# **115MM ANGLE GRINDER**

## **TECHNICAL DATA**

Voltage	230-240V~50Hz
Input power	900W
No load speed	11,000min <sup>-1</sup>
Maximum disc diameter	115mm
Spindle size	M14
Disc bore	22.2mm
Protection class	□ /II
Machine weight	1.8kg

## **TECHNICAL DATA**

Sound pressure level:	90.3 dB(A)
Sound power level:	101.3 dB(A)

## ACCESSORIES

Auxiliary handle	1рс
Spanner	1рс
opanici	ipo

## **OPERATION INSTRUCTIONS**

**NOTE:** Before using the tool, read the instruction book carefully.

#### 1. INSTALLING THE AUXILIARY HANDLE (See Fig A)

An auxiliary handle is supplied with the unit and can be fixed to the left or right hand side of the gearcase as shown in Fig A

**Note:** This handle should be used at all times to maintain complete control of the tool.

#### 2. ADJUSTING WHEEL GUARD (See Fig B)

To move the guard you must release the guard lock bolt using the Allen key. The guard can then be rotated to provide maximum protection against sparks and debris. Finally, tighten the guard bolt.



Fig A

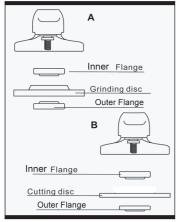


DPB095GRD

Fig B



Fig C1



#### Fig C2



Fig C3

### 3. FITTING THE DISCS (See Fig C1&C2&C3)

Put the inner flange onto the tool spindle. Ensure it is located on the two flats of spindle (see C1). Place the disc on the tool spindle and inner flange. Ensure it is correctly located. Fit the threaded outer flange making sure it is facing in the correct direction for the type of disc fitted. For grinding discs, the flange is fitted with the raised portion facing towards the disc. For cutting discs, the flange is fitted with the raised portion facing away from the disc (see C2). Press in the spindle lock button and rotate the spindle by hand until it is locked.Keeping the spindle lock button pressed in, tighten the outer flange with the spanner provided. (See C3)

Warning: Never use discs with the Max specified rotation speed lower than 13,300rpm (80m/s). Discs made to EN 12413 with a red strip across the blade are 80 m/s but if in doubt check with the disc supplier

### 4. ON/OFF SWITCH (See Fig D)

To start the grinder, push the On/Off switch (1) forward. To turn the tool off, press the rear of the switch, the spring action returns the switch to the off position.

#### 5. GRINDING WITH THE ANGLE GRINDER GRINDER (See Fig E)

Attention: Do not switch the grinder on whilst the disc is in contact with the work piece. Allow the disc to reach full speed before starting to grind.

Hold the angle grinder with one hand on the main handle and the other hand firmly gripping the auxiliary handle.

Always position the guard so that as much of the exposed disc as possible is pointing away from you.

Be prepared for a stream of sparks when the disc touches the metal.

For best tool control, material removal and minimum overloading, maintain an angle between the disc and work surface of approximately 15° -30°.

Exert light pressure on abrasive discs for efficient operation. Pushing too hard will cause a drop in speed and may result in motor overload and damage.

Use caution when working into corners as contact with the intersecting surface may cause the grinder to jump or twist.

When grinding is complete allow the work piece to cool. Do not touch the hot surface.

#### 6 CUTTING WITH THE ANGLE GRINDER Attention: Do not switch the grinder on whilst the disc is in contact with the work piece. Allow the disc to reach full speed before starting to cut.

Hold the angle grinder with one hand on the main handle and the other hand firmly gripping the auxiliary handle.

Always position the guard so that as much of the exposed disc as possible is pointing away from you.

Be prepared for a stream of sparks when the disc touches the metal.

For best tool control, material removal and minimum overloading, please keep the disc vertical to the work piece (See Fig F). Never



Fig D



Fig E



Fig F

# **115MM ANGLE GRINDER**

change the cutting angle - this will stall the unit and damage the cutting disc.

Exert light pressure on abrasive disc for efficient operation. Pushing too hard will cause a drop in speed and may result in motor overload and damage.

When cutting is complete, do not touch the hot cutting surface before the workpiece cooling down.

#### 7. OVERLOAD

Overloading will cause damage to the motor of your angle grinder. This can happen if your angle grinder is subjected to heavy use for prolonged periods of time.

In any circumstances, do not attempt to exert too much pressure on your angle grinder to speed up your work.

If your angle grinder becomes too hot, run your angle grinder under no load for 2-3 minutes until it has cooled to normal operation temperature.

## WORKING HINTS FOR YOUR ANGLE GRINDER

1.Your angle grinder is useful for both cutting through metals, i.e. for removing screw heads, and also for cleaning / preparing surfaces, i.e. before and after welding operations.

2.Different types of wheel/cutter will allow the grinder to meet various needs. Typically,grinding wheels&cutting disc's are available for mild steel, stainless steel, stone and brick. Diamond impregnated discs are available for very hard materials.

3.If the grinder is used on soft metals such as aluminum the wheel will soon clog and will have to be changed.

4.At all times, let the grinder do the work, do not force it or apply excessive pressure to the wheel/disc.

5.If cutting a slot ensure that the cutter is kept aligned with the slot, twisting the cutter may cause the disc to shatter. If cutting through thin sheet materials, excessive penetration can increase the chance of causing damage.

6.If cutting stone or brick, it is advisable to use a dust extractor.

### MAINTENANCE

#### WARNING: Ensure the grinder is disconnected from the mains power supply before attempting any maintenance.

1. Keep the grinder ventilation slots clean and free from obstructions. If available, blow compressed air into the vents to clear any internal dust (safety goggles must be worn when undertaking this process).

2. Keep the outer case of the grinder clean and free from grease. Do not wash with water or use solvents or abrasive. Use only mild soap and a damp cloth to clean the tool. Never let any liquid get inside the tool. Never immerse any part of the tool into a liquid.

3. Your angle grinder requires no additional lubrication. There are no user serviceable parts in your power tool.

4. Always store your power tool in a dry place.5. If you see some sparks flashing in the ventilation slots; this is normal and will not damage your power tool.

6 If the supply cord of this power tool is damaged, it must be replaced by a specially prepared cord available through the service organization.

## TROUBLESHOOTING

- Although your new angle grinder is really very simple to operate, if you do experience problems, please check the following:
- 1. If your grinder will not operate check the power at the main plug.
- If your grinder wheel wobbles or vibrates, check that outer flange is tight; check that the wheel is correctly located on the flange plate.
- 3. If there is any evidence that the wheel is damaged do not use as the damaged wheel may disintegrate, remove it and replace with a new wheel. Dispose of old wheels sensibly.
- 4. If working on aluminum or a similar soft alloy, the wheel will soon become clogged and will not grind effectively.

# **115MM ANGLE GRINDER**

## **ENVIRONMENTAL PROTECTION**



Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. For further information visit www.recycle-more.co.uk

### **PLUG REPLACEMENT**

The fuse in the main plug of your power tool should always be replaced with one of identical rating.

Check the voltage given on your power tool matches the supply voltage.

The power tool is supplied with a fitted plug, however if you should need to fit a new plug follows the instruction below.

#### IMPORTANT

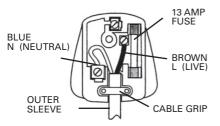
The wire in the mains lead are coloured in accordance with the following code:

### Blue ---Neutral

#### Brown ---Live

The wire that is coloured **blue** must be connected to the terminal that is marked with the letter **N**. The wire that is coloured **brown** must be connected to the terminal that is marked with the letter **L**.

A 13AMP (BS1363 or BS1363/A) plug must be used and a 13 AMP fuse must be fitted.



# **115MM ANGLE GRINDER**



### **Declaration of Conformity**

We, Importer **Direct Power (UK) Ltd BA22 8RT** 

Declare that the product **115mm ANGLE GRINDER** DPB095GRD

Complies with the essential health and safety requirements of the following directive:

Machinery Directive 98/37/EC

Low Voltage Directive 2006/95/EC Electromagnetic Compatibility Directive 2004/108/EC Restrictions of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment 2002/95/EC

Standards and technical specifications referred to:

EN60745-1:2006 EN60745-2-3:2007 EN55014-1:1998+A1:2002+A2:2003 EN55014-2-3:2002+A1:2002+A2:2003 EN55014-1:2006 EN55014-2:1997+A1:2001 EN61000-3-2:2006 EN61000-3-3:1995+A1:2001

**Authorised Signatory** 

Date:

01/03/08 Signature: P.C. Hamies

Name: Peter Harries Direct Power (UK) Ltd **Quality Manager** 



2008

# **115MM ANGLE GRINDER**

