



CORDLESS ANGLE GRINDER

CT1646



ORIGINAL INSTRUCTION



SAVE THESE INSTRUCTIONS AND PRECAUTIONS.

Please read the entire instruction manual before using the product and then save it for future reference. We reserve the right for any errors in text or images and any necessary changes made to technical data. If you have any questions regarding technical problems please contact our Customer Services.





Cannon Tools Limited

Address: 20 Station Road, Rowley Regis, West Midlands, B65 0JU.U.K.


WARNING! For your own safety, read this manual and the general safety instructions carefully before using the appliance. Your power tool should only be given to other users together with these instructions.

1. SYMBOLS

The following symbols are used in this manual and/or on the machine:

	<p>Denotes risk of personal injury or damage to the tool</p>		<p>WARNING – To reduce the risk of injury, user must read instruction manual”</p>
	<p>In accordance with essential safety standards of applicable European directives</p>		<p>Mandatory use of eye protection Wear ear protection</p>
	<p>Wear a mask in dusty conditions</p>		

2. GENERAL POWER TOOL SAFETY WARNINGS

 **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 or 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 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 dust collection 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 tool's 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, 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.

5) Battery tool use and care

a) Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

b) Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.

c) When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.

d) Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

6) 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.

SAFETY WARNINGS COMMON FOR GRINDING OR ABRASIVE CUTTING-OFF OPERATIONS:

a) This power tool is intended for grinding and cutting, Read all safety warnings, instructions, illustrations, and specifications provided with this tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury

b) Polishing is not recommended with this power tool. The use of this power tool to perform tasks for which the tool was not intended, can lead to

- danger and personal injury.
- c) Do not use accessories which are not specifically designed and recommended by the tool manufacturer. Just because the accessory can be attached to your power tool, it does not assure safe operation.
 - d) The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart.
 - e) The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.
 - f) Threaded mounting of accessories must match the grinder spindle thread. For accessories mounted by flanges, the arbour hole of the accessory must fit the locating diameter of the flange. Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
 - g) Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time.
 - h) Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
 - i) Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.

- j) Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- k) Position the cord clear of the spinning accessory. If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
- l) Never lay the power tool down until the accessory has come to a complete stop. The spinning accessory may grab the surface and pull the power tool out of your control.
- m) Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
- n) Regularly clean the power tool's air vents. The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
- o) Do not operate the power tool near flammable materials. Sparks could ignite these materials.
- p) Do not use accessories that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock.

KICKBACK AND RELATED WARNINGS

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding.

For example, if an abrasive wheel is snagged or pinched by the workpiece the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating

procedures or conditions and can be avoided by taking proper precautions as given below.

- a) Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken.
- b) Never place your hand near the rotating accessory. Accessory may kickback over your hand.
- c) Do not position your body in the area where power tool will move if kickback occurs. Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.
- d) Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- e) Do not attach a saw chain woodcarving blade or toothed saw blade. Such blades create frequent kickback and loss of control.

Safety Warnings Specific for Grinding and Abrasive Cutting-Off Operations:

- a) Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel. Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.
- b) The grinding surface of centre depressed wheels must be mounted below the plane of the guard lip. An improperly mounted wheel that projects through the plane of the guard lip cannot be adequately protected.
- c) The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator. The guard helps to protect the operator from broken wheel fragments, accidental contact with wheel and sparks that could ignite clothing.
- d) Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel. Abrasive cut-off wheels are

intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.

- e) Always use undamaged wheel flanges that are of correct size and shape for your selected wheel. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges.
- f) Do not use worn down wheels from larger power tools. Wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.

Additional Safety Warnings Specific for Abrasive Cutting-Off Operations:

- a) Do not “jam” the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut. Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.
- b) Do not position your body in line with and behind the rotating wheel. When the wheel, at the point of operation, is moving away from your body, the possible kickback may propel the spinning wheel and the power tool directly at you.
- c) When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding.
- d) Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut. The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
- e) Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback. Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
- f) Use extra caution when making a “pocket cut” into existing walls or other blind areas. The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

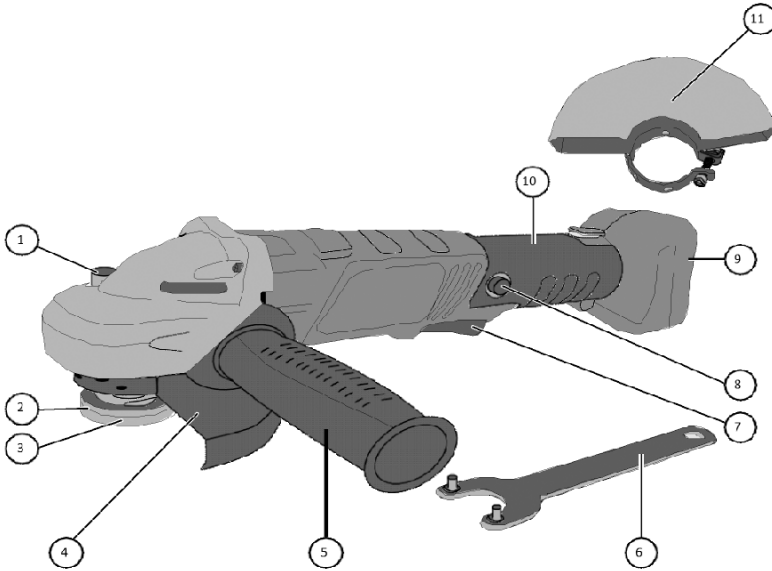
3. TECHNICAL DATA

Rated Voltage	18V d.c
Rated speed	6500/min
Wheel/disc capacity	115mm
Wheel size	115*22*6mm
Spindle thread	M14
Noise level	LpA: 82.2 dB (A) K= 3dB(A)) LwA: 93.2 dB (A) K= 3dB(A))
Vibration level	a _h : 2.151 m/s ² K=1.5 m/s ²
Battery pack	CT2858 SAMSUNG Li-ion battery pack
Rated	18Vd.c. 4.0Ah
Battery Charger	CT2859
Input voltage	100-240V AC, 50Hz, 75W
Output voltage	18V d,c, 2500mA
Charging time	100 mins
Class	II

4. KNOW YOUR TOOLS



5. PRODUCT DESCRIPTION



1.	Spindle lock	7.	On/Off switch
2.	Inner flange	8.	Safety switch
3.	Outer flange	9.	Battery pack
4.	Grinding guard	10.	Rubber-clad handle
5.	Side handle	11.	Cutting-off guard (extra accessory, not included)
6.	Spanner		

6. OPERATING INSTRUCTIONS

Important: Always remove the battery pack from the power tool before adjusting, servicing or repairing it.

GRINDING GUARD

Note: The grinding guard must always be attached when the machine is used. For cutting with discs made of bound abrasive material, a special cutting-off guard is required.

1. Press A and use wrench to loose part B.
2. If the grinding guard isn't assembled, use the hex key to put the grinding guard(C) on the machine first.
3. Install the disc.
4. Press A and use wrench to tight part B.
5. Remove the disc as installing step.



ATTACHING THE SIDE HANDLE

Ensure the tool is switched off.

Identify the threaded hole on two positions of the grinder head (fig.2)

Screw the side handle firmly into one of them.

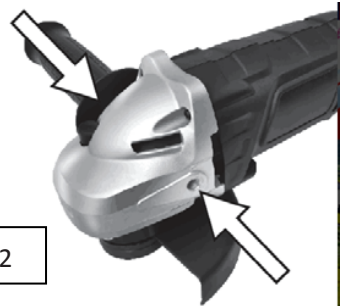


Fig 2

ON/OFF SWITCH

Note: Carefully read all the safety instructions and warnings above before operating the angle grinder.

1. Hold the safety switch in.
2. Press the on/off switch to turn the angle grinder on.
3. Release the on/off switch to turn the angle grinder off.

7. BATTERY PACK AND BATTERY CHARGER

CAUTION:

- Always switch off the tool before installing or removing of the battery pack.
- Only use the battery pack with the power tools, using other batteries can lead to injury or fire.
- Keep unused batteries away from staples, coins, keys, nails, screws or other metal objects that could bridge the contacts on the battery pack. A short circuit between the battery pack contacts can lead to burns or fire.

- Keep the battery charger away from rain or moisture. Exposure of an electrical device to water increases the risk of an electric shock.
- Hold the tool and the battery pack firmly when installing or removing battery pack avoid any injury.

1. Assemble and removing the battery pack.
 Slide the machine into the battery pack to assemble the battery pack.
 To remove the battery pack, press the battery pack release button (A) and pull the battery pack out of the handle.



2. Charging the battery pack
 Slide the battery pack onto the charger.
 Connect the charger to a suitable mains socket. The charger may become warm and buzz slightly during charging. This is normal and does not indicate a fault.



3. When the charger is plug in ,the green light will light up.
 When the battery pack is charging the red light will blink. When the battery pack is fully charged, the red light will stop blinking and remain lighted up



4. After charging, unplug the charger from the wall outlet.

⚠ CAUTION

The battery pack can become warm if the machine is subject to heavy use. Always allow the battery pack to cool down before re-charging.

8. CLEAN AND MAINTENANCE

Maintenance

Always remove the battery pack from the power tool before adjusting, servicing or repairing it.

The contacts on the battery pack and the charger must be kept clean. All replacement parts must be replaced by a trained electrician or an authorized service centre unless stated otherwise in this manual

Cleaning

Clean the angle grinder using a lightly moistened cloth. Only use mild cleaning agents, never solvents or corrosive chemicals

9. TROUBLESHOOTING GUIDE

Problem	Possible cause	Solution
The angle grinder will not switch on.	Battery pack discharged.	Recharge the battery pack.
	The battery pack is overheated.	Let the battery pack cool down.
	The safety switch is not held in.	Hold in the safety switch and then press the on/off switch.
The angle grinder is sluggish and/or shuts off.	Too much pressure applied.	Decrease applied pressure.
	Battery pack discharged.	Recharge the battery pack.
	The battery pack is overheated.	Let the battery pack cool down.
	The motor is overheated.	Let the motor cool down.
Heavy vibrations.	Faulty brushes.	Contact our Customer Services.
	Grinding disc/accessory is damaged.	Check and replace if necessary.
	Grinding disc/accessory is loose.	Check and replace if necessary.

DISPOSAL

This product should be disposed of in accordance with local regulations. If you are unsure how to proceed, contact your local authority

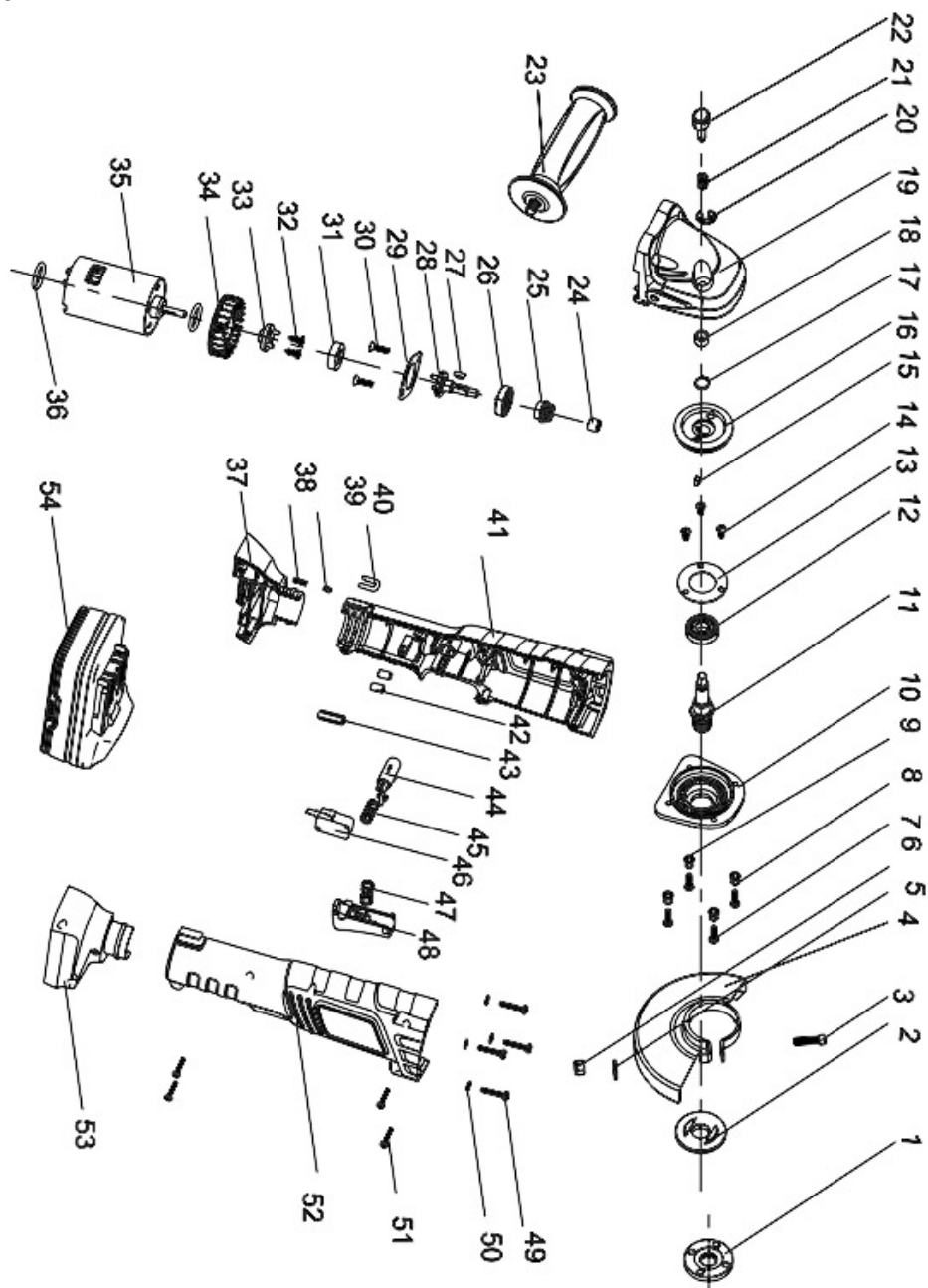
ENVIRONMENT



Should your appliance need replacement after extended use, do not discard it with the household rubbish but dispose of it in an environmentally safe way.

Waste produced by electrical machine items should not be handled like normal household rubbish. Please recycle where recycle facilities exist. Check with your Local Authority or retailer for recycling advice.

10. EXPANDED VIEW



11. SPARE PARTS LIST

No.	Name of part	Qty
1	Clamp	1
2	Clamp	1
3	Allen screw	1
4	Shatter guard for grinding	1
5	Nut	1
6	Locknut	1
7	Screw	4
8	Elastic ring	4
9	Gasket	4
10	Cover board	1
11	Output shaft	1
12	Bearing	1
13	Clamp	1
14	Screw	3
15	Woodruff key	1
16	Gear wheel	1
17	Retaining ring	1
18	Sleeve	1
19	Head cover	1
20	Retaining ring	1
21	Spring	1
22	Lock shaft button	1
23	Handle	1
24	Bearing	1
25	Gear wheel	1
26	Bearing	1
27	Woodruff key	1

28	Shaft	1
29	Clamp	1
30	Screw	2
31	Drive connection plate	1
32	Screw	2
33	Motor connector	1
34	Blade	1
35	D.C.Motor	1
36	O-ring	2
37	Left foot houseing	1
38	Spring	2
39	Round pin	2
40	U-Clamp	1
41	Right foot houseing	1
42	Toroidal ring	2
43	Resistance	4
44	Lock button	1
45	Lock button spring	1
46	Switch	1
47	Switch spring	1
48	Switch button	1
49	Screw	4
50	Gasket	4
51	Screw	9
52	Right houseing	1
53	Left foot houseing	1
54	Battery package	1

EC DECLARATION OF CONFORMITY

We **CANNON TOOLS LTD**

20 Station road, Rowley Regis, West Midlands, B65 0JU.U.K.

Declare that the following machine complies with the appropriate basic safety and health requirements of the EC Directive based on its design and type, as brought into circulation by us.

In case of alteration of the machine, not agreed upon by us, this declaration will lose its validity.

Product description: CORDLESS ANGLE GRINDER

Model: CT1646

Applicable EC Directives:

EC Machinery Directive 2006/42/EC

EC Directive of Electromagnetic Compatibility 2014/30/EU

Harmonized standards

EN 60745-1, EN 60745-2-3, EN 55014-1, EN 55014-2

20 Station Road, Rowley Regis, West Midlands, B65 0JU.U.K.

Mr. Gurcharan Tony Singh Sanghera

Managing Director

CANNON TOOLS LTD



2016-06-20



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Made in China