

INSTRUCTIONS FOR

Cordless Drills

Stock No.40762 40763 40764 Part No.CD144V2 CDH145V2 CD182V2

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS PRODUCT.



CDH145V2 SHOWN



GENERAL INFORMATION

Read all these instructions before operating this product and save these instructions.

This manual has been compiled by Draper Tools and is an integrated part of the product with which it is enclosed and should be kept with it for future references.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation or, before performing any kind of adjustment to the product and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself. All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product. Whilst every effort has been made to ensure accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.



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GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England. Telephone: (023) 8026 6355.

A proof of purchase must be provided with the tool.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee period covering parts/labour is 12 months from the date of purchase. The guarantee is extended to 24 months for parts only. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the Terms of Warranty, repair and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the quarantee period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights. Draper Tools Limited.

Note: This tool is intended for domestic use only.



SPECIFICATION

The Draper Tools policy of continuous improvement determines the right to change specification without notice.

Stock No	. 40762	40763 40764
Part No	. CD144V2	. CDH145V2 CD182V2
Battery:		
Type	. NiCd	NiCd NiCd
Rated Voltage	. 14.4V 	14.4V == 18V ==
Rating	. 1.2Ah	1.2Ah 1.2Ah
Charger:		
Rated Voltage		
Rated Frequency	. 50Hz	50Hz 50Hz
Rated Power Input		
Rated D.C. Output Voltage		
Rated D.C. Output Current	. 400mA	400mA 450mA
Construction	. Class II	Class II Class II
Drill Capacities:		
Wood	. 20mm	20mm 25mm
Mild Steel		
Masonry		
Maximum Torque	. 14Nm	14Nm 18Nm
Revolutions Per Minute (no load)	. 550min ⁻¹	550min ⁻¹ 900min ⁻¹
Impact Rate		
Chuck Capacity		
Spindle Thread		
Sound Presure Level		
Sound Power Level	. 95.0dB(A)	. 112.7dB(A) 95.0dB(A)
Vibration Level		
Weight	. 1.62Kg	1.70Kg 1.75Kg

ALWAYS WEAR AN APPROVED DUST MASK, SAFETY GOGGLES AND EAR DEFENDERS.



GENERAL SAFETY INSTRUCTION

WARNING: Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

1. Work Area

- Keep work area clean and well lit. Cluttered and dark areas invite accidents.
- 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 firmes
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety

- 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 electrical shock.
- 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.
- 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.

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. Avoid accidental starting. Ensure the switch is in the off position before plugging in. 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.
- 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 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 intended could result in a hazardous situation.

5. Battery Tool Use and Care

- a. Ensure the switch is in the off position before inserting battery pack. Inserting the battery pack into power tools that have the switch on invites accidents.
- b. 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.
- Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- d. 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.
- 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

 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

ADDITIONAL SAFETY INSTRUCTIONS FOR DRILLS AND IMPACT DRILLS:

- Wear ear protectors with impact drills.
 - Exposure to noise can cause hearing loss.
 - Use auxiliary handles supplied with the tool.
 Loss of control can cause personal injury.

ADDITIONAL SAFETY INSTRUCTIONS FOR BATTERY CHARGERS:

- Before charging, read the instructions.
- For indoor use. Do not expose to rain.
- Do not charge non-rechargeable batteries.
- The battery charger is only suitable for charging rechargeable Ni-Cd batteries having 12 cells† (14.4V) or 15 cells† (18V) as applicable.
 Any other application is considered misuse.
 † 1.2V Cells.



ADDITIONAL SAFETY INSTRUCTIONS

General Instructions for Battery Powered Tools & Chargers Good Working Practices/Safety

The following suggestions will enable you to observe good working practices, keep yourself and fellow workers safe and maintain your tools and equipment in good working order.

WARNING!! LEAKING BATTERY PACKS

The electrolyte in the battery packs is corrosive, if a battery pack is damaged and leaking, avoid contact with the skin; if contact is made, flush the area with running water, pat dry and seek medical attention and advice at the earliest opportunity, inform the medical service that the contaminant was a "high alkaline, corrosive liquid". If the electrolyte comes into contact with the eyes, flush with copious amounts of water only, seek medical attention immediately, relaying the information above.

WARNING!! KEEP TOOLS AND EQUIPMENT OUT OF THE REACH OF YOUNG CHILDREN

Battery Powered Tools

Workplace/Environment

The tools are not designed for sub-aqua operation, do not use when or where they are liable to get soaking wet. If tools are set up in the open and it starts to rain, cover them up or move them into the dry. If tools do get wet; dry them off as soon as possible, with a cloth or paper towel. Keep the tools clean, it will enable you to see more easily any damage that may have occurred. Clean the tools with a damp soapy cloth if needs be, do not use any solvents or cleaners, as these may cause damage to the plastic parts or to the electrical components. Keep the work area as uncluttered as is practical, this includes personnel as well as material.

Under no circumstances should CHILDREN be allowed in work areas.

It is good practice to leave the tool and the battery pack separated until work is about to commence; if this is not practical do not carry tools around with fingers near the trigger switch, and engage the stop-lock of the tool if one is available. It is preferable to move small tools e.g. drills and jigsaws to the work area in their carrying/storage cases; if this is not possible it is advisable that you do not mount the blades or drill bits into the tool until you reach the work area (they make effective stabbing tools if you trip or stumble).

If you are working from ladders or towers, ensure they are securely fixed/braced, and always maintain a balanced, comfortable working posture; do not over-reach, or perform simian agility exercises to get the work done, the extra time required to move the ladder or tower is a good trade off against injuries sustained from a fall. Similarly non-slip footwear and non-slip surfaces are a good investment.

If the work you are carrying out is liable to generate flying grit, dust, swarf or chips, wear the appropriate safety clothing, goggles, gloves, masks etc - if the work operation appears to be excessively noisy, wear ear-defenders. If you wear your hair in a long style, wearing a cap, safety helmet, hairnet, even a sweatband, will minimise the possibility of your hair being caught up in the rotating parts of the tool, likewise, consideration should be given to the removal of rings and wristwatches, if these are liable to be a hazard.

Do not work with cutting tools of any description if you are tired, your attention is wandering or you are being subjected to distraction. A deep cut, a lost finger tip or worse, is not worth it!

Do not use the tools within the designated safety areas of flammable liquid stores or in areas where there may be volatile gases. There are very expensive, very specialised tools for working in these areas, THESE ARE NOT THE TOOLS FOR THESE AREAS.

Do not discard old batteries, or old cutting tools of any description, into general rubbish; the cutting tools may still be sharp enough to inflict an injury, and old batteries if overheated or are part of rubbish that is to be disposed of by burning, are an explosion hazard. Similarly, do not dispose of old battery packs into clean water run-offs; if they eventually leak, they will become a pollutant hazard.

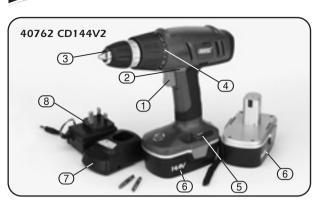
Check that cutting tools are undamaged and are kept clean and sharp, this will maintain their operating performance and lessen the loading on the tool.

Safety Instructions for Mains Powered Battery Pack Chargers

- 1. The charger is for INDOOR use only.
- 2. Prior to plugging the charger in to the supply, check that the plug and the cable are in good repair. If either are damaged, have the defective item replaced immediately by a suitably qualified person. If the casing of the battery charger is damaged, it is good policy to have the charger checked over by a suitably qualified person.
- Only use a correctly rated mains outlet to provide power, do not plug into site generators, attach to engine generators or D.C. sources. Do not use a mains socket outlet that is not switched.
- 4. Only use the charger that was supplied with the battery pack, and vice versa.
- 5. Do not attempt to charge battery packs that are too hot (over 40°C) or too cold (under 10°C); if these conditions apply set the battery aside to "normalise" before proceeding with the charging operation.
- 6. Set up the charger and cable in a safe place where it won't be knocked, tripped over, stepped on, etc. and where it is well ventilated; make sure the ventilation slots in the charger case are not obstructed, plug the charger into the socket outlet.
- 7. Inspect the battery pack for damage; if it is undamaged, plug it into the charger, ensuring the correct orientation. (Most chargers and batteries have 'keys' etc, to make sure the battery is not inserted incorrectly, if you are having to 'force' the battery into the charger, the chances are you have it the wrong way round, check and try again.)
- 8. Switch the charger on and check that the correct indicators illuminate, allow the battery pack to charge (see the specific instructions for your charger). Once charging is complete, switch the charger off, remove the battery pack and store, repeat the procedure if you have more than one battery to charge. Note that some RAPID chargers require a "rest" period between charges, read the instruction manual concerning your specific charger to see if this is the case. After charging is complete, unplug the charger from the socket outlet by pulling on the plug. Do not pull on the cable. Store the charger in a dry secure place.
- 9. If, when the charger was switched on, the correct indications did not occur, leave for two or three minutes to allow the charger to stabilise; if the correct indications occur, allow the charging cycle to proceed as normal. If no indication appears at all, switch off, remove the battery pack, unplug the charger, check that the charger contacts and the battery contacts are clean and repeat the process; if there is still no indication, switch off, remove the battery pack, unplug the charger and check the fuse. If the fuse is blown, replace and repeat the process; if the fuse blows again, or if the fuse was intact, attempt no further action. Refer the charger to a suitably qualified person for assessment/repair.

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GETTING TO KNOW YOUR CORDLESS DRILL



- (1) Variable speed trigger switch.
- (2) Forward/Reverse selector.
- (3) 10mm Keyless chuck.
- (4) Torque collar.
- (5) Bit storage compartment.
- (6) 14.4V = 1.2Ah battery pack x2.
- (7) Charger stand.
- (8) Transformer charger.



- (1) Variable speed trigger switch.
- (2) Forward/Reverse selector.
- (3) 10mm Keyless chuck.
- (4) Torque collar.
- (5) Hammer rotary selector.
- 6 Bit storage compartment.
- (7) 14.4V = 1.2Ah battery pack x2.
- 8 Charger stand.
- (9) Transformer charger.



- 1) Variable speed trigger switch.
- (2) Forward/Reverse selector.
- 3 10mm Keyless chuck.
- (4) Torque collar.
- (5) Bit storage compartment.
- (6) 18V = 1.2Ah battery pack x2.
- (7) Charger stand.
- (8) Transformer charger.
- (9) 25mm Screwdriver bits x6
- (10) 1/4" Screwdriver bit holder.
- (11) Drill bits x6.

- UNPACKING:

After removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. If in doubt, do not use the product and contact the dealer from whom it was purchased.

The packaging materials (plastic bags, polystyrene, etc.), must be disposed of in an appropriate refuse collection container. These materials must not be left within the reach of children as they are potential sources of danger.

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OPERATION AND USE

BATTERY CHARGING:

To charge the battery pack, it must first be removed from the drill. To release the battery pack, squeeze the grips located on either side of the battery casing and gently pull the battery pack from the housing. (Fig. 1). Plug the adaptor unit into the charger base and into a 230V/A.C. 13amp, three pin socket. The green LED (A) will illuminate. Slide the battery into the charger as shown (Fig. 2).

Do not force, ensure the battery is inserted correctly. The red LED (B) on the charger will now illuminate to show that the battery is charging.

The battery will be fully charged after the 3-5 hour charging period. Do not charge the battery for more than 6 hours. The battery pack can then be removed and the red LED will extinguish. To refit the battery pack to the drill, push firmly until the battery pack locates and clips into place.

NOTE: The battery was discharged after manufacturing and will therefore require five to ten charges/discharges before it reaches its full capacity.



A correctly fitted dust mask, suitable for the activity and in accordance to the relevant standard must be worn.

Swarf produced by metal drilling is extremely sharp. Take precautions when clearing swarf. The burr left on the hole is also sharp and should be removed with a suitable tool.

Always wear safety goggles.

WARNING: Drill bit will be hot after use.

INSTALLING AND REMOVING BITS (Fig. 3):

The drill is fitted with a keyless chuck, this means that a chuck key is not required to secure the drill or screwdriver bit. Place the drill bit shoulder into the chuck as far as it will go, then hand tighten.

Short screwdriver bits need only be inserted to the depth of the hexagon shank before tightening chuck by hand.

- FORWARD/REVERSE SELECTOR (Fig.4):

The switch determines the direction of rotation of the chuck, i.e. clockwise or anticlockwise.

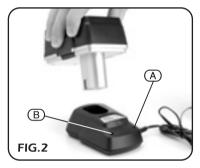
To alter the direction of rotation, stop the drill and push switch ① to the left or right. When the direction switch is pushed to the left, the chuck will rotate clockwise. When the switch is pushed to the right, the chuck will rotate anticlockwise. Before operation, check that the switch is set in the required position. Do not change the direction of rotation until the chuck comes to a complete stop.

When the drill is not in use move the direction switch to the neutral position (the middle setting) to lock the trigger out.

- TRIGGER:

When the trigger is depressed, the chuck will rotate (provided the direction switch is set in the forward or reverse position). This trigger switch is electronic which enables the user to vary the speed continuously. The speed varies according to how far the trigger switch is depressed. The further it is depressed, the faster the chuck will rotate. The lighter it is depressed, the slower it will rotate









DRAPER

OPERATION AND USE

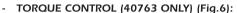
- TORQUE CONTROL (40762 & 40764) (Fig.5):

By turning the collar \bigcirc it is possible to adjust the amount of torque.

In the "twist drill" setting **LLD**, the drill/screwdriver has full torque.

Settings 1-16 provide a facility for setting the torque to the required level. For example, this means that repetitive driving of screws of the same size will be driven into the material to the same torque, thus giving the same fixing strength, or in the case of countersunk screws, these will all be driven to the same depth in the material.

The torque control prevents the heads of small diameter screws being twisted off when correctly set.



By turning the collar (E) it is possible to adjust the amount of torque.

Settings 1-16 provide a facility for setting the torque to the required level. For example, this means that repetitive driving of screws of the same size will be driven into the material to the same torque, thus giving the same fixing strength, or in the case of countersunk screws, these will all be driven to the same depth in the material.

The torque control prevents the heads of small diameter screws being twisted off when correctly set.

By turning the collar (F) it is possible to switch between rotary and percussion drilling. Set the "twist drill" setting ___, for rotary drilling/screwdriving, in the "hammer drill" setting ____, the percussion feature will come into action. This is intended or drilling into masonry, etc.

- SCREWDRIVER BIT HOLDER (Fig.7):

The drill comes equipped with a bit holder **(G)** on the left side of the housing to hold the two screwdriver bits supplied.

HOLDING THE DRILL (Figs.8 & 9):

The drill casing is designed to be held comfortably in two ways, 1. By the handle.

2. Or by the in-line support grip.

DRILLING WOOD AND PLASTIC:

To prevent splitting around the drill holes on the reverse side, place a piece of scrap timber under the material to be drilled.

DRILLING METAL:

Metals such as sheet steel, aluminium and brass may be drilled. Mark the point to be drilled with a centre punch to help the drill bit tip to locate. A drop of oil on the area will aid cutting and help prolong the life of the bit.

DRILLING MASONRY (40763 ONLY):

Start drilling at a low speed to prevent the drill bit from wandering. Once penetration is achieved, fully depress the trigger to achieve maximum speed and hammer power.











OPERATION AND USE

SCREWDRIVING:

To prevent slip or damage to the screwhead, match the screwdriver bit to the screwhead size. To remove screws, move the direction switch to the reversing position and apply pressure to the screwhead and depress the trigger slowly). Screwdriver bits are a consumable items.

Before drilling check that there are no hidden hazards such as electrical cables, water or gas pipes running below the surface use a metal/voltage detector.

Do not expose either the drill or charger to rain or water. Do not overcharge the battery (more than six hours) as this could damage the battery cells.





MAINTENANCE & PARTS REPLACEMENT

- Regular inspection and cleaning reduces the necessity for maintenance operations and will keep your tool in good working condition. The motor must be correctly ventilated during tool operation. For this reason avoid blocking the air inlets. After use disconnect the tool from the power supply and vacuum the ventilation slots.
- If the cord is damaged the transformer shall be scrapped. If the non-self-resetting protective device is activated due to short circuit or an overload the transformer shall be scrapped.
 - This transformer charger is only suitable for charging rechargeable nickel cadmium batteries having 12 cells (14.4V) or 15 cells (18V) as applicable. Any other application is considered misuse.



OPTIONAL ACCESSORIES

- See your local Draper stockist for a range of accessories.



TROUBLE SHOOTING

WARNING:

For your own safety always turn the main switch on the machine "off" and remove the plug from the power supply before carrying out any maintenance or trouble shooting.

Problem	Cause	Remedy
Drill does not work.	Flat battery. Forward/Reverse not selected.	Charge battery. Select forward or reverse.
Chuck does not close or grip.	lock screw loose. Swarf in chuck.	Open chuck fully and tighten screw (left hand thread). Clean inside chuck with cleaning fluid.



DISPOSAL OF POWER TOOLS

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
 - Contact your local authority for details of collection schemes in your area.
 - In all circumstances:
 - Do not dispose of power tools with domestic waste.
 - Do not incinerate.
 - Do not abandon in the environment.
 - Do not dispose of WEEE* as unsorted municipal waste.
 - *Waste Electrical & Electronic Equipment.





General: Do not put in fire or mutilate - cells may burst or release toxic materials.

Do not short circuit cells, may cause burns.

The battery must be removed from the appliance before it is scrapped.

The battery shall be disposed of safely.

Do not mutilate batteries, corrosive electrolyte will be released.

Do not incinerate - danger of explosion and release of toxic fumes.

Do not dispose of batteries or cells in a charged condition.

Expired nickel-cadmium batteries must be recycled/disposed of in accordance with the appropriate regulation or legislation. They should be returned to your local warranty agent/stockist.

*Waste Electrical & Electronic Equipment.



EXPLANATION OF SYMBOLS/PICTOGRAMS



Class II construction (Double insulated).



Do not dispose of WEEE* as unsorted municipal waste.



For indoor use only. Do not expose to rain.



Battery must be recycled or disposed of properly. Contains heavy metal - separate collection.



Non-Self-Resetting protective device.



Short-circuit-proof safety isolating transformer.



Polarity indication.

* Waste Electrical & Electronic Equipment.



CONTACTS

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Service/Warranty Repair Agent

For aftersales servicing or warranty repairs, please contact the Draper Tools Helpline for details of an agent in your local area.



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