

DEWALT®

XR®

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DCG409VS

Fig. A
圖 A

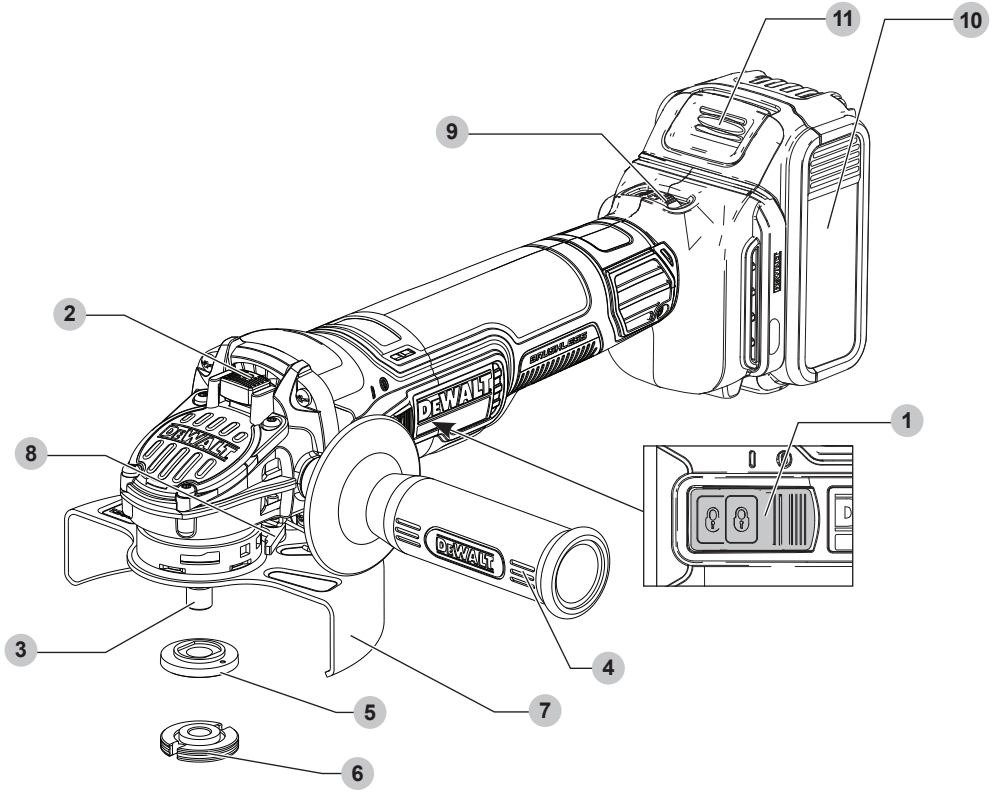


Fig. B
圖 B

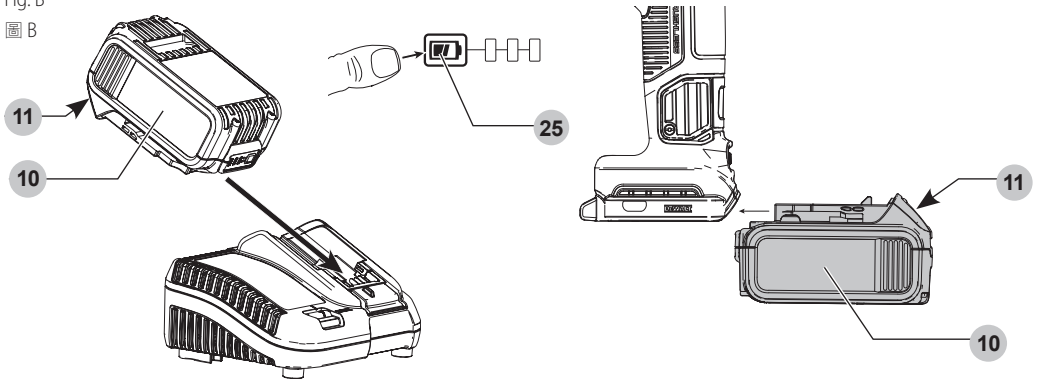


Fig. D
圖 D

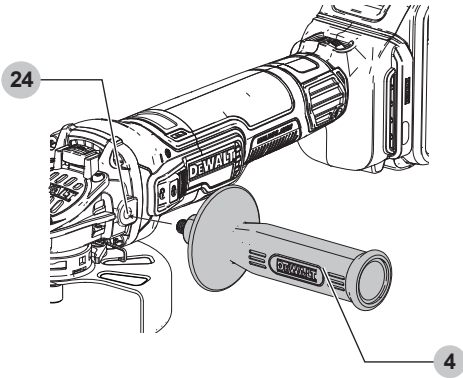


Fig. E
圖 E

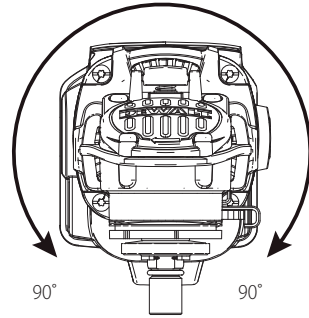


Fig. F
圖 F

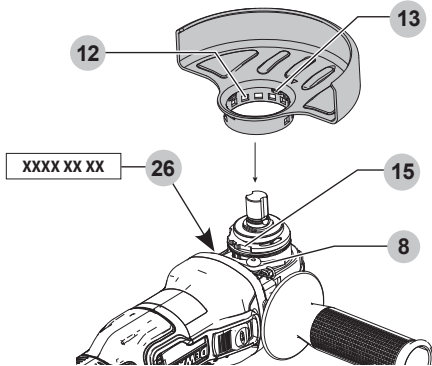


Fig. G
圖 G

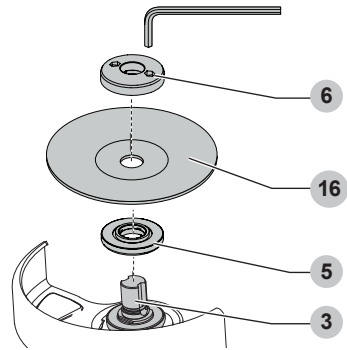


Fig. H
圖 H

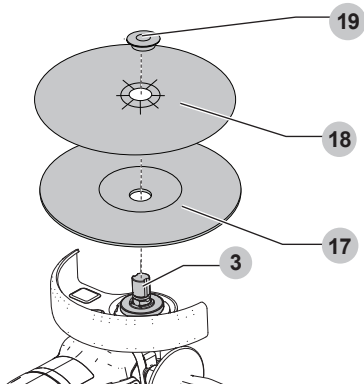


Fig. I
圖 I

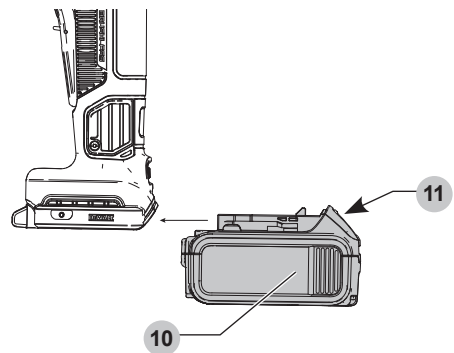


Fig. J
圖 J

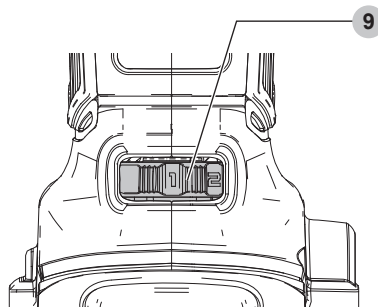


Fig. K
圖 K

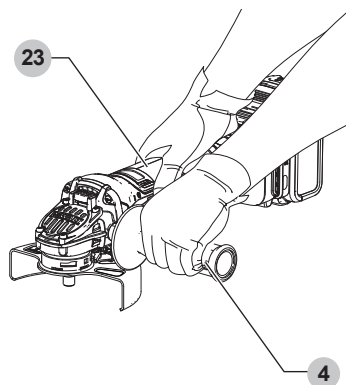


Fig. L
圖 L

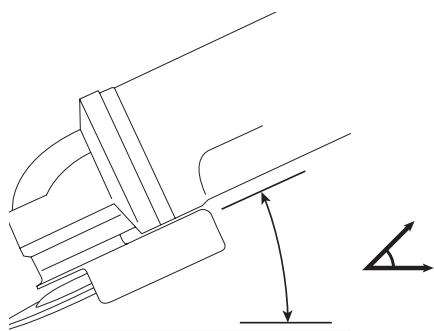


Fig. M
圖 M

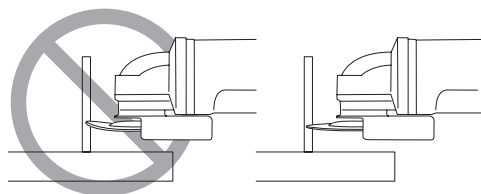
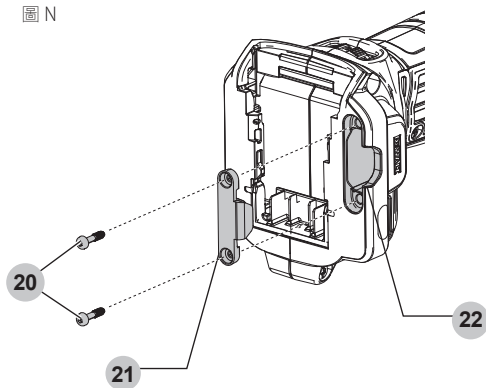


Fig. N
圖 N



SMALL ANGLE GRINDER

DCG409VS

Congratulations!

You have chosen a DEWALT tool. Years of experience, thorough product development and innovation make DEWALT one of the most reliable partners for professional power tool users.

Technical Data

| | | DCG409VS-B1 | DCG409VS-TW | DCG409VS-KR |
|-------------------------------|-------------------|-------------|-------------|-------------|
| Voltage | V _{DC} | 18 (20 Max) | 18 (20 Max) | 18 (20 Max) |
| Battery type | | Li-Ion | Li-Ion | Li-Ion |
| Max. Power Output | W | 1450 | 1450 | 1450 |
| Max. Rated speed | min ⁻¹ | 9000 | 9000 | 9000 |
| Wheel diameter | mm | 100 | 125 | 125 |
| Wheel thickness (max) | mm | 4 | 6 | 6 |
| Spindle diameter | | M10 | M14 | M10 |
| Spindle length | mm | 16 | 21.5 | 16 |
| Weight (without battery pack) | kg | 1.85 | 1.85 | 1.85 |

| Batteries | | | | Chargers / Charge Times (Minutes) | | | | | | |
|---------------|-------------------|----------|------------|-----------------------------------|--------|--------|--------|-------------------|---------|--------|
| Cat# | V _{DC} | Ah | Weight(kg) | DCB104 | DCB107 | DCB112 | DCB115 | DCB117 DCB1112 | DCB118 | DCB132 |
| DCB546/DCB606 | 18/54 (20/60 Max) | 6.0/2.0 | 1.08 | 60 | 270 | 170 | 90 | 40 | 60 | 90 |
| DCB547/DCB609 | 18/54 (20/60 Max) | 9.0/3.0 | 1.46 | 75* | 420 | 270 | 135* | 60 | 75* | 135* |
| DCB548/DCB612 | 18/54 (20/60 Max) | 12.0/4.0 | 1.46 | 120 | 540 | 350 | 180 | 80 | 120 | 180 |
| DCB549/DCB615 | 18/54 (20/60 Max) | 15.0/5.0 | 2.12 | 125 | 730 | 450 | 230 | 90 | 125 | 230 |
| DCB180 | 18 (20 Max) | 3.0 | 0.62 | 45 | 140 | 90 | 45 | 45 | 45 | 45 |
| DCB181 | 18 (20 Max) | 1.5 | 0.35 | 22 | 70 | 45 | 22 | 22 | 22 | 22 |
| DCB182/DCB204 | 18 (20 Max) | 4.0 | 0.61 | 60/40** | 185 | 120 | 60 | 60/40** | 60/40** | 60 |
| DCB183/DCB203 | 18 (20 Max) | 2.0 | 0.40 | 30 | 90 | 60 | 30 | 30 | 30 | 30 |
| DCB184/DCB205 | 18 (20 Max) | 5.0 | 0.62 | 75/50** | 240 | 150 | 75 | 75/50** | 75/50** | 75 |
| DCB185 | 18 (20 Max) | 1.3 | 0.35 | 22 | 60 | 40 | 22 | 22 | 22 | 22 |
| DCB187 | 18 (20 Max) | 3.0 | 0.54 | 45 | 140 | 90 | 45 | 45 | 45 | 45 |
| DCB189/DCB240 | 18 (20 Max) | 4.0 | 0.54 | 60 | 185 | 120 | 60 | 60 | 60 | 60 |
| DCB186 | 18 (20 Max) | 6.0 | 0.95 | 60 | 270 | 170 | 90 | 60 | 60 | 90 |
| DCB208 | 18 (20 Max) | 8.0 | 0.95 | 70 | 360 | 240 | 120 | 70 | 70 | 120 |
| DCBP034 | 18 (20 Max) | 1.7 | 0.32 | 27 | 82 | 50 | 27 | 27 | 27 | 27 |

*Date code 201811475B or later

**Date code 201536 or later



WARNING: To reduce the risk of injury, read the instruction manual.

Definitions: Safety Guidelines


The definitions below describe the level of severity for each signal word. Please read the manual and pay attention to these symbols.




DANGER: Indicates an imminently hazardous situation which, if not avoided, **will** result in **death** or **serious injury**.



WARNING: Indicates a potentially hazardous situation which, if not avoided, **could** result in **death** or **serious injury**.

 **CAUTION:** Indicates a potentially hazardous situation which, if not avoided, **may** result in **minor or moderate injury**.

NOTICE: Indicates a practice **not related to personal injury** which, if not avoided, **may** result in **property damage**.

 Denotes risk of electric shock.

 Denotes risk of fire.

GENERAL POWER TOOL SAFETY WARNINGS

 **WARNING:** Read all safety warnings, instructions, illustrations and specifications provided with this power tool. 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.

1) Work Area Safety

- Keep work area clean and well lit.** Cluttered or 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 fumes.
- Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) 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 electric 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.
- 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.
- 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.
- 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

- 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.
- Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- 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.
- 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.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- 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.
- Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

4) Power Tool Use and Care

- 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.
- 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.
- Disconnect the plug from the power source and/or remove the battery pack, if detachable, 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.
- 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.
- Maintain power tools and accessories. 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.
- h) **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

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.
- e) **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- f) **Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130 °C may cause explosion.
- g) **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

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.
- b) **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

ADDITIONAL SPECIFIC SAFETY RULES

Safety Warnings Common for Grinding, Sanding, Wire Brushing, Polishing or Cutting-Off Operations

- a) **This power tool is intended to function as a grinder, wire brush or cut-off tool. Read all safety warnings, instructions, illustrations and specifications provided with this power tool.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
- b) **Operations such as polishing, sanding or hole cutting are not to be performed with this power tool.** Operations for which the power tool was not designed may create a hazard and cause personal injury.
- c) **Do not convert this power tool to operate in a way which is not specifically designed and specified by the tool manufacturer.** Such a conversion may result in a loss of control and cause serious personal injury
- d) **Do not use accessories which are not specifically designed and specified by the tool manufacturer.** Just because the accessory can be attached to your power tool, it does not assure safe operation.
- e) **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.
- f) **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.
- g) **The dimensions of the accessory mounting must fit the dimensions of the mounting hardware of the power tool.** 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.
- h) **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.
- i) **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 the particular operation. Prolonged exposure to high intensity noise may cause hearing loss.

- j) **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.
- k) **Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electrical shock.
- 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.

FURTHER SAFETY INSTRUCTIONS FOR ALL OPERATIONS

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 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 with both hands on the power tool and position your body and arms 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 reaction 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, segmented diamond wheel with a peripheral gap greater than 10 mm or toothed saw blade.** Such blades create frequent kickback and loss of control.

Safety Warnings Specific for Grinding and Cutting-Off Operations

- a) **Use only wheel types that are specified 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 specified 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.** A wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.
- g) **When using dual purpose wheels always use the correct guard for the application being performed.** Failure to use the correct guard may not provide the desired level of guarding, which could lead to serious injury.

Additional Safety Warnings Specific for 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 operations, 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 it 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.
- g) **Do not attempt to do curved cutting.** 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, which can lead to serious injury.

Additional Safety Instructions for Wire Brushing Operations

- a) **Be aware that wire bristles are thrown by the brush even during ordinary operation. Do not overstress the wires by applying excessive load to the brush.** The wire bristles can easily penetrate light clothing and/or skin.
- b) **If the use of a guard is specified for wire brushing, do not allow any interference of the wire wheel or brush with the guard.** Wire wheel or brush may expand in diameter due to work and centrifugal forces.

Additional Safety Rules for Grinders

- a) **Do not use Type 11 (flaring cup) wheels on this tool.** Using inappropriate accessories can result in injury.
- b) **Always use side handle. Tighten the handle securely.** The side handle should always be used to maintain control of the tool at all times.

- c) **When using segmented diamond wheels, use only diamond wheels with a peripheral gap not greater than 10 mm and negative rake angle.** (refer to **Additional Information for Guards and Accessories chart**).

Residual Risks

In spite of the application of the relevant safety regulations and the implementation of safety devices, certain residual risks cannot be avoided. These are:

- Impairment of hearing.
- Risk of personal injury due to flying particles.
- Risk of burns due to accessories becoming hot during operation.
- Risk of personal injury due to prolonged use.

SAVE THESE INSTRUCTIONS

Chargers

DEWALT chargers require no adjustment and are designed to be as easy as possible to operate.

Electrical Safety

The electric motor has been designed for one voltage only. Always check that the battery pack voltage corresponds to the voltage on the rating plate. Also make sure that the voltage of your charger corresponds to that of your mains.



Your DEWALT charger is double insulated in accordance with IEC60335; therefore no earth wire is required.

If the supply cord is damaged, it must be replaced only by DEWALT or an authorised service organisation.

Using an Extension Cable

An extension cord should not be used unless absolutely necessary. Use an approved extension cable suitable for the power input of your charger (see **Technical Data**). The minimum conductor size is 1 mm²; the maximum length is 30 m.

When using a cable reel, always unwind the cable completely.

Important Safety Instructions for All Battery Chargers

SAVE THESE INSTRUCTIONS: This manual contains important safety and operating instructions for compatible battery chargers (refer to **Technical Data**).

- Before using charger, read all instructions and cautionary markings on charger, battery pack, and product using battery pack.



WARNING: Shock hazard. Do not allow any liquid to get inside charger. Electric shock may result.



WARNING: We recommend the use of a residual current device with a residual current rating of 30mA or less.



CAUTION: Burn hazard. To reduce the risk of injury, charge only DEWALT rechargeable batteries. Other types of batteries may burst causing personal injury and damage.



CAUTION: Children should be supervised to ensure that they do not play with the appliance.

NOTICE: Under certain conditions, with the charger plugged into the power supply, the exposed charging

contacts inside the charger can be shorted by foreign material. Foreign materials of a conductive nature such as, but not limited to, steel wool, aluminum foil or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power supply when there is no battery pack in the cavity. Unplug charger before attempting to clean.

- **DO NOT attempt to charge the battery pack with any chargers other than the ones in this manual.** The charger and battery pack are specifically designed to work together.
- **These chargers are not intended for any uses other than charging DEWALT rechargeable batteries.** Any other uses may result in risk of fire, electric shock or electrocution.
- **Do not expose charger to rain or snow.**
- **Pull by plug rather than cord when disconnecting charger.** This will reduce risk of damage to electric plug and cord.
- **Make sure that cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.**
- **Do not use an extension cord unless it is absolutely necessary.** Use of improper extension cord could result in risk of fire, electric shock, or electrocution.
- **Do not place any object on top of charger or place the charger on a soft surface that might block the ventilation slots and result in excessive internal heat.** Place the charger in a position away from any heat source. The charger is ventilated through slots in the top and the bottom of the housing.
- **Do not operate charger with damaged cord or plug—** have them replaced immediately.
- **Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way.** Take it to an authorised service centre.
- **Do not disassemble charger; take it to an authorised service centre when service or repair is required.** Incorrect reassembly may result in a risk of electric shock, electrocution or fire.
- **In case of damaged power supply cord, the supply cord must be replaced immediately by the manufacturer, its service agent or similar qualified person to prevent any hazard.**
- **Disconnect the charger from the outlet before attempting any cleaning. This will reduce the risk of electric shock.** Removing the battery pack will not reduce this risk.
- **NEVER attempt to connect two chargers together.**
- **The charger is designed to operate on standard 220-240V household electrical power. Do not attempt to use it on any other voltage.** This does not apply to the vehicular charger.

Charging a Battery (Fig. B)










1. Plug the charger into an appropriate outlet before inserting battery pack.
2. Insert the battery pack **11** into the charger, making sure the battery pack is fully seated in the charger. The red (charging) light will blink repeatedly indicating that the charging process has started.

3. The completion of charge will be indicated by the red light remaining ON continuously. The battery pack is fully charged and may be used at this time or left in the charger. To remove the battery pack from the charger, push the battery release button **11** on the battery pack.

NOTE: To ensure maximum performance and life of lithium-ion battery packs, charge the battery pack fully before first use.

Charger Operation

Refer to the indicators below for the charge status of the battery pack.

| Charge Indicators | | |
|---|----------------------|--|
|  | Charging |   |
|  | Fully Charged |   |
|  | Hot/Cold Pack Delay* |   |

*The red light will continue to blink, but a yellow indicator light will be illuminated during this operation. Once the battery pack has reached an appropriate temperature, the yellow light will turn off and the charger will resume the charging procedure. The compatible charger(s) will not charge a faulty battery pack. The charger will indicate faulty battery by refusing to light.

NOTE: This could also mean a problem with a charger.

If the charger indicates a problem, take the charger and battery pack to be tested at an authorised service centre.

Hot/Cold Pack Delay

When the charger detects a battery pack that is too hot or too cold, it automatically starts a Hot/Cold Pack Delay, suspending charging until the battery pack has reached an appropriate temperature. The charger then automatically switches to the pack charging mode. This feature ensures maximum battery pack life.

A cold battery pack will charge at a slower rate than a warm battery pack. The battery pack will charge at that slower rate throughout the entire charging cycle and will not return to maximum charge rate even if the battery pack warms.

The DCB118 charger is equipped with an internal fan designed to cool the battery pack. The fan will turn on automatically when the battery pack needs to be cooled. Never operate the charger if the fan does not operate properly or if ventilation slots are blocked. Do not permit foreign objects to enter the interior of the charger.

Electronic Protection System

XR Li-Ion tools are designed with an Electronic Protection System that will protect the battery pack against overloading, overheating or deep discharge.

The tool will automatically turn off if the Electronic Protection System engages. If this occurs, place the lithium-ion battery pack on the charger until it is fully charged.

Wall Mounting

These chargers are designed to be wall mountable or to sit upright on a table or work surface. If wall mounting, locate the charger within reach of an electrical outlet, and away from a corner or other obstructions which may impede air flow. Use

the back of the charger as a template for the location of the mounting screws on the wall. Mount the charger securely using drywall screws (purchased separately) at least 25.4 mm long with a screw head diameter of 7–9 mm, screwed into wood to an optimal depth leaving approximately 5.5 mm of the screw exposed. Align the slots on the back of the charger with the exposed screws and fully engage them in the slots.

Charger Cleaning Instructions



WARNING: Shock hazard. Disconnect the charger from the AC outlet before cleaning. Dirt and grease may be removed from the exterior of the charger using a cloth or soft non-metallic brush. Do not use water or any cleaning solutions. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

Battery Packs

Important Safety Instructions for All Battery Packs

When ordering replacement battery packs, be sure to include catalogue number and voltage.

The battery pack is not fully charged out of the carton. Before using the battery pack and charger, read the safety instructions below. Then follow charging procedures outlined.

READ ALL INSTRUCTIONS

- **Do not charge or use battery in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Inserting or removing the battery from the charger may ignite the dust or fumes.
- **Never force battery pack into charger. Do not modify battery pack in any way to fit into a non-compatible charger as battery pack may rupture causing serious personal injury.**
- Charge the battery packs only in DEWALT chargers.
- **DO NOT splash or immerse in water or other liquids.**
- **Do not store or use the tool and battery pack in locations where the temperature may fall below 4 °C (39.2 °F) (such as outside sheds or metal buildings in winter), or reach or exceed 40 °C (104 °F) (such as outside sheds or metal buildings in summer).**
- **Do not incinerate the battery pack even if it is severely damaged or is completely worn out.** The battery pack can explode in a fire. Toxic fumes and materials are created when lithium-ion battery packs are burned.
- **If battery contents come into contact with the skin, immediately wash area with mild soap and water.** If battery liquid gets into the eye, rinse water over the open eye for 15 minutes or until irritation ceases. If medical attention is needed, the battery electrolyte is composed of a mixture of liquid organic carbonates and lithium salts.
- **Contents of opened battery cells may cause respiratory irritation.** Provide fresh air. If symptoms persists, seek medical attention.



WARNING: Burn hazard. Battery liquid may be flammable if exposed to spark or flame.



WARNING: Never attempt to open the battery pack for any reason. If battery pack case is cracked or damaged, do not insert into charger. Do not crush, drop or damage battery pack. Do not use a battery pack or charger that has received a sharp blow, been dropped, run over or damaged in any way (i.e., pierced with a nail, hit with a hammer, stepped on). Electric shock or electrocution may result. Damaged battery packs should be returned to service centre for recycling.



WARNING: Fire hazard. Do not store or carry the battery pack so that metal objects can contact exposed battery terminals. For example, do not place the battery pack in aprons, pockets, tool boxes, product kit boxes, drawers, etc., with loose nails, screws, keys, etc.



CAUTION: When not in use, place tool on its side on a stable surface where it will not cause a tripping or falling hazard. Some tools with large battery packs will stand upright on the battery pack but may be easily knocked over.

Transportation



WARNING: Fire hazard. Transporting batteries can possibly cause fire if the battery terminals inadvertently come in contact with conductive materials. When transporting batteries, make sure that the battery terminals are protected and well insulated from materials that could contact them and cause a short circuit. **NOTE:** Lithium-ion batteries should not be put in checked baggage.

DEWALT batteries comply with all applicable shipping regulations as prescribed by industry and legal standards which include UN Recommendations on the Transport of Dangerous Goods; International Air Transport Association (IATA) Dangerous Goods Regulations, International Maritime Dangerous Goods (IMDG) Regulations, and the European Agreement Concerning The International Carriage of Dangerous Goods by Road (ADR). Lithium-ion cells and batteries have been tested to section 38.3 of the UN Recommendations on the Transport of Dangerous Goods Manual of Tests and Criteria.

In most instances, shipping a DEWALT battery pack will be excepted from being classified as a fully regulated Class 9 Hazardous Material. In general, only shipments containing a lithium-ion battery with an energy rating greater than 100 Watt Hours (Wh) will require being shipped as fully regulated Class 9. All lithium-ion batteries have the Watt Hour rating marked on the pack. Furthermore, due to regulation complexities, DEWALT does not recommend air shipping lithium-ion battery packs alone regardless of Watt Hour rating. Shipments of tools with batteries (combo kits) can be air shipped as excepted if the Watt Hour rating of the battery pack is no greater than 100 Wh. Regardless of whether a shipment is considered excepted or fully regulated, it is the shipper's responsibility to consult the latest regulations for packaging, labeling/marketing and documentation requirements.

The information provided in this section of the manual is provided in good faith and believed to be accurate at the time the document was created. However, no warranty, expressed or

implied, is given. It is the buyer's responsibility to ensure that its activities comply with the applicable regulations.

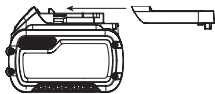
Transporting the FLEXVOLT™ Battery

The DEWALT FLEXVOLT™ battery has two modes: **Use** and **Transport**.

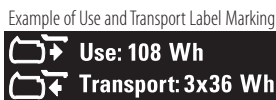
Use Mode: When the FLEXVOLT™ battery stands alone or is in a DEWALT 18V (20V Max) product, it will operate as an 18V (20V Max) battery. When the FLEXVOLT™ battery is in a 54V (60V Max) or a 108V (120V Max) (two 54V (60V Max) batteries) product, it will operate as a 54V (60V Max) battery.

Transport Mode: When the cap is attached to the FLEXVOLT™ battery, the battery is in Transport mode. Keep the cap for shipping.

When in Transport mode, strings of cells are electrically disconnected within the pack resulting in 3 batteries with a lower Watt hour (Wh) rating as compared to 1 battery with a higher Watt hour rating. This increased quantity of 3 batteries with the lower Watt hour rating can exempt the pack from certain shipping regulations that are imposed upon the higher Watt hour batteries.



For example, the Transport Wh rating might indicate 3 x 36 Wh, meaning 3 batteries of 36 Wh each. The Use Wh rating might indicate 108 Wh (1 battery implied).



Storage Recommendations

1. The best storage place is one that is cool and dry away from direct sunlight and excess heat or cold. For optimum battery performance and life, store battery packs at room temperature when not in use.
2. For long storage, it is recommended to store a fully charged battery pack in a cool, dry place out of the charger for optimal results.

NOTE: Battery packs should not be stored completely depleted of charge. The battery pack will need to be recharged before use.

Labels on Charger and Battery Pack

In addition to the pictographs used in this manual, the labels on the charger and the battery pack may show the following pictographs:



Read instruction manual before use.



See **Technical Data** for charging time.



Do not probe with conductive objects.



Do not charge damaged battery packs.



Do not expose to water.



Have defective cords replaced immediately



Charge only between 4 °C and 40 °C.



Only for indoor use.



Discard the battery pack with due care for the environment.



Charge battery packs only with designated DEWALT chargers. Charging battery packs other than the designated DEWALT batteries with a DEWALT charger may make them burst or lead to other dangerous situations.



Do not incinerate the battery pack.



USE (without transport cap). Example: Wh rating indicates 108 Wh (1 battery with 108 Wh).



TRANSPORT (with built-in transport cap). Example: Wh rating indicates 3 x 36 Wh (3 batteries of 36 Wh).

Battery Type

The following tools operate on a 18 volt (20V Max) battery pack: DCG409VS

These battery packs may be used: DCB180, DCB181, DCB182, DCB183, DCB184, DCB203, DCB204, DCB205, DCB185, DCB186, DCB187, DCB189, DCB208, DCB240, DCBP034, DCB546, DCB547, DCB548, DCB549, DCB606, DCB609, DCB612, DCB615. Refer to **Technical Data** for more information.

Package Contents

The package contains:

- 1 Angle grinder
- 1 Guard (Type B)
- 1 Side handle
- 1 Wrench
- 2 Li-Ion battery pack (T2, X2 models)
 - 1 Li-Ion battery pack (C1, D1, L1, M1, P1, S1, T1, X1, Y1 models)
 - 1 Li-Ion battery packs (C2, D2, L2, M2, P2, S2, T2, X2, Y2 models)
 - 1 Li-Ion battery packs (C3, D3, L3, M3, P3, S3, T3, X3, Y3 models)
- 1 Instruction manual

NOTE: Battery packs, chargers and kitboxes are not included with N models. Battery packs and chargers are not included with NT models. B models include Bluetooth® battery packs.

NOTE: The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth®, SIG, Inc. and any use of such marks by DEWALT is under license. Other trademarks and trade names are those of their respective owners.

- Check for damage to the tool, parts or accessories which may have occurred during transport.

- Take the time to thoroughly read and understand this manual prior to operation.

Markings on Tool

The following pictograms are shown on the tool:



Read instruction manual before use.



Wear ear protection.



Wear eye protection



Always operate with two hands.



Do not use the guard for cut-off operations.

Date Code Position (Fig. F)

The date code **26**, which also includes the year of manufacture, is printed into the housing.

Example:

2022 XX XX

Year and Week of Manufacture

Description (Fig. A)



WARNING: Never modify the power tool or any part of it. Damage or personal injury could result.

- 1 Slide switch
- 2 Lock-off lever
- 3 Spindle
- 4 Side handle
- 5 Backing flange
- 6 Locking flange
- 7 Type B guard (do not use for cut-off operations)
- 8 Guard release lever
- 9 Variable speed dial
- 10 Battery pack
- 11 Battery release button

Intended Use

The DCG409VS cordless angle grinder have been designed for professional cutting, grinding, sanding and wire brush applications.

DO NOT use under wet conditions or in the presence of flammable liquids or gases.

This cordless angle grinder is a professional power tool.

DO NOT let children come into contact with the tool. Supervision is required when inexperienced operators use this tool.

- **Young children and the infirm.** This appliance is not intended for use by young children or infirm persons without supervision.
- This product is not intended for use by persons (including children) suffering from diminished physical, sensory or mental abilities; lack of experience, knowledge or skills

unless they are supervised by a person responsible for their safety. Children should never be left alone with this product.

ASSEMBLY AND ADJUSTMENTS



WARNING: To reduce the risk of serious personal injury, turn tool off and disconnect battery pack before making any adjustments or removing/installing attachments or accessories. An accidental start-up can cause injury.



WARNING: Use only DEWALT battery packs and chargers.

Features

E-Clutch™

This unit is equipped with an E-Clutch™ (Electronic Clutch), which in the event of a high-load the unit will be shut off to reduce the reaction torque to the user. The switch needs to be cycled (turned on and off) to restart tool.

Kickback Brake™

When a pinch, stall, or bind-up event is sensed the electronic brake engages with maximum force to quickly stop the wheel, reduce the movement of the grinder, and shut the grinder off. The switch needs to be cycled (turned on and off) to restart the tool.

Power-Off™ Overload Protection

The power supply to the motor will be reduced in case of motor overload. With continued motor overload, the tool will shut off. The switch needs to be cycled (turned on and off) to restart tool. The tool will power off each time the current load reaches the overload current value (motor burn-up point). If continued overload shutdowns occur, apply less force/weight on the tool until the tool will function without the overload engaging.

Electronic Soft Start

This feature limits the initial start up speed, allowing the tool to build up to full speed gradually over a 1 second period.

Inserting and Removing the Battery Pack from the Tool (Fig. B)

NOTE: Make sure your battery pack **10** is fully charged.

To Install the Battery Pack into the Tool Handle

1. Align the battery pack with the rails inside the tool's handle (Fig. B).
2. Slide it into the handle until the battery pack is firmly seated in the tool and ensure that you hear the lock snap into place.

To Remove the Battery Pack from the Tool

1. Press the battery release button **11** and firmly pull the battery pack out of the tool handle.
2. Insert battery pack into the charger as described in the charger section of this manual.

Fuel Gauge Battery Packs (Fig. B)

Some DEWALT battery packs include a fuel gauge which consists of three green LED lights that indicate the level of charge remaining in the battery pack.

To actuate the fuel gauge, press and hold the fuel gauge button **25**. A combination of the three green LED lights will illuminate designating the level of charge left. When the level of charge in the battery is below the usable limit, the fuel gauge will not illuminate and the battery will need to be recharged.

NOTE: The fuel gauge is only an indication of the charge left on the battery pack. It does not indicate tool functionality and is subject to variation based on product components, temperature and end-user application.

Attaching the Auxiliary Handle (Fig. D)



WARNING: This handle **SHOULD BE USED AT ALL TIMES** to maintain complete control of the tool. Always make sure the handle is tight.

Screw the auxiliary handle **4** tightly into one of the threaded mounting holes **24** of the gear case.

Rotating the Gear Case (Fig. E)

To improve user comfort, the gear case will rotate 90 ° for cutting operations.

1. Remove the four corner screws attaching the gear case to motor housing.
2. Without separating the gear case from motor housing, rotate the gear case head to desired position.

NOTE: If the gear case and motor housing become separated by more than 3 mm, the tool must be serviced and re-assembled by a DeWALT service center. Failure to have the tool serviced may motor and bearing failure.

3. Reinstall screws to attach the gear case to the motor housing. Tighten screws to 1.4 Nm torque. Overtightening could cause screws to strip.

Guards



CAUTION: Guards must be used with all grinding wheels, cutting wheels, sanding flap discs, wire brushes, and wire wheels. The tool may be used without a guard only when sanding with conventional sanding discs. Refer to Figure A to see guards provided with the unit. Some applications may require purchasing the correct guard from your local dealer or authorised service centre.



CAUTION: When using a Type A (cut-off) wheel guard for facial grinding, the wheel guard may interfere with the workpiece causing poor control.



CAUTION: When using a Type B (grinding) wheel guard for cutting-off operations with bonded abrasive wheels, there is an increased risk of exposure to emitted sparks and particles, as well as exposure to wheel fragments in the event of wheel burst.



CAUTION: When using a Type A (cut-off), Type B (grinding) wheel guard for cutting-off and facial operations in concrete or masonry, there is an increased risk of exposure to dust and loss of control resulting in kickback.

NOTE: Edge grinding and cutting can be performed with Type 27 wheels designed and specified for this purpose; 6 mm thick wheels are designed for surface grinding while thinner Type 27 wheels need to be examined for the manufacturer's label to

see if they can be used for surface grinding or only edge grinding/cutting. A Type A (cut-off) wheel guard must be used for any wheel where surface grinding is forbidden. A Type A (cut-off) (previously called type 1/41) wheel guard must be used for any dual purpose (combined grinding and cutting-off abrasive) wheels. Cutting can also be performed by using a Type 1/41 wheel and a Type A cut-off wheel guard previously called Type 1/41 guard.

NOTE: See the **Accessory and Guard Applications Chart** to select the proper guard / accessory combination.

Mounting and Adjusting the One-Touch™ Guard (Fig. E)



WARNING: To reduce the risk of serious personal injury, turn tool off and disconnect battery pack before making any adjustments or removing/installing attachments or accessories. An accidental start-up can cause injury.

Adjusting the Guard

For guard adjustment, the guard release lever **8** engages one of the alignment holes **12** on the guard collar using a ratcheting feature.

The engaging face is slanted and will ride over to the next alignment hole when guard is rotated in a clockwise direction (spindle facing user) but self-locks in the anti-clockwise direction.

Mounting the Guard (Fig. E)

1. Press the guard release lever **8**.
2. While holding the guard release lever open, align the lugs **13** on the guard with the slots **15** on the gear case.
3. Keeping the guard release lever open, push the guard down until the guard lugs engage and rotate them in the groove on the gear case hub. Release the guard release lever.
4. With the spindle facing the operator, rotate the guard clockwise into the desired working position. Press and hold the guard release lever **8** to rotate the guard in the anti-clockwise direction.

NOTE: The guard body should be positioned between the spindle and the operator to provide maximum operator protection.

The guard release lever should snap into one of the alignment holes **12** on the guard collar. This ensures that the guard is secure.


5. To remove the guard, follow steps 1–3 of these instructions in reverse.

Flanges and Wheels





WARNING: To reduce the risk of serious personal injury, turn unit off and remove the battery pack before making any adjustments or removing/installing attachments or accessories. An accidental can cause injury.

Mounting Non-Hubbed Wheels (Fig. G)

 **WARNING:** Failure to properly seat the flanges and/or wheel could result in serious injury (or damage to the tool or wheel).

 **CAUTION:** Included flanges must be used with depressed centre Type 27/42 grinding wheels and Type 1/41 cutting wheels. Refer to the **Accessory and Guard Applications Chart** for more information.


 **WARNING:** A closed, two-sided cutting wheel guard is required when using abrasive cutting wheels or diamond coated cutting wheels, referred to as a Type A cut-off wheel guard.


 **WARNING:** Use of a damaged flange or guard or failure to use proper flange and guard can result in injury due to wheel breakage and wheel contact. Refer to the **Accessory and Guard Applications Chart** for more information.

1. Place the tool on a table, guard up.
2. Place wheel **16** against the backing flange **5**, centring the wheel on the raised centre (pilot) of the backing flange.
3. While depressing the spindle lock button and with the hex depressions facing away from the wheel, thread the threaded locking flange **6** on spindle so that the lugs engage the two slots in the spindle.
4. While depressing the spindle lock button, tighten the threaded locking flange **6** using a hex wrench.
5. To remove the wheel, depress the spindle lock button and loosen the threaded locking flange.

Mounting Sanding Backing Pads (Fig. A, H)

NOTE: Use of a guard with sanding discs that use backing pads, often called fiber resin discs, is not required. Since a guard is not required for these accessories, the guard may or may not fit correctly if used.

 **WARNING:** Failure to properly seat the clamp nut and/or pad could result in serious injury (or damage to the tool or wheel).

 **WARNING:** Proper guard must be reinstalled for grinding wheel, cutting wheel, sanding flap disc, wire brush or wire wheel applications after sanding applications are complete.

1. Place or appropriately thread backing pad **17** on the spindle.
2. Place the sanding disc **18** on the backing pad **17**.
3. While depressing spindle lock button **2**, thread the sanding clamp nut **19** on spindle, piloting the raised hub on the clamp nut into the centre of sanding disc and backing pad.
4. Tighten the clamp nut by hand. Then depress the spindle lock button while turning the sanding disc until the sanding disc and clamp nut are snug.
5. To remove the wheel, grasp and turn the backing pad and sanding pad while depressing the spindle lock button.

Mounting and Removing Hubbed Wheels (Fig. A)

Hubbed wheels install directly on the spindle. Thread of accessory must match thread of spindle.


1. Thread the wheel on the spindle **3** by hand.


2. Depress the spindle lock button **2** and use a wrench to tighten the hub of the wheel.


3. Reverse the above procedure to remove the wheel.

NOTICE: Failure to properly seat the wheel before turning the tool on may result in damage to the tool or the wheel.

Mounting Wire Cup Brushes and Wire Wheels (Fig. A)

 **WARNING:** Failure to properly seat the brush/wheel could result in serious injury (or damage to the tool or wheel).

 **CAUTION:** To reduce the risk of personal injury, wear work gloves when handling wire brushes and wheels. They can become sharp.

 **CAUTION:** To reduce the risk of damage to the tool, wheel or brush must not touch guard when mounted or while in use. When using a Type A (cut-off), or Type B (grinding) wheel guard with a wheel-type wire brush with a thickness greater than the maximum thickness as specified in the **Accessory and Guard Applications Chart**, the wires may catch on the guard leading to breaking of the wires.

Wire cup brushes or wire wheels install directly on the threaded spindle without the use of locking flange. Use only wire brushes or wheels provided with an M14 threaded hub. These accessories are available at extra cost from your local DEWALT dealer or authorised DEWALT service centre.

1. Place the tool on a table, guard up.
2. Thread the wheel on the spindle **3** by hand.
3. Depress spindle lock button **2** and use a wrench on the hub of the wire wheel or brush to tighten the wheel.
4. To remove the wheel, reverse the above procedure.


NOTICE: To reduce the risk of damage to the tool, properly seat the wheel hub before turning the tool on.

Prior to Operation

- Install the guard and appropriate disc or wheel. Do not use excessively worn discs or wheels.
- Be sure the threaded locking flange are mounted correctly. Follow the instructions given in the **Accessory and Guard Application Chart**.
- Make sure the disc or wheel rotates in the direction of the arrows on the accessory and the tool.
- 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.

OPERATION

Instructions for Use

 **WARNING:** Always observe the safety instructions and applicable regulations.

! **WARNING:** To reduce the risk of serious personal injury, turn tool off and disconnect battery pack before making any adjustments or removing/installing attachments or accessories. An accidental start-up can cause injury.

Proper Hand Position (Fig. K)

! **WARNING:** To reduce the risk of serious personal injury, ALWAYS use proper hand position as shown.

! **WARNING:** To reduce the risk of serious personal injury, ALWAYS hold securely in anticipation of a sudden reaction.

Proper hand position requires one hand on the main handle **23** and the other hand on the auxiliary handle **4**, as shown in Fig. K.

Switches

! **CAUTION:** Hold the auxiliary handle and body of the tool firmly to maintain control of the tool at start up and during use and until the wheel or accessory stops rotating. Make sure the wheel has come to a complete stop before laying the tool down.

NOTE: To reduce unexpected tool movement, do not switch the tool on or off while under load conditions. Allow the grinder to run up to full speed before touching the work surface. Lift the tool from the surface before turning the tool off. Allow the tool to stop rotating before putting it down.

Slider Switch (Fig. A)

DCG409VS

! **WARNING:** Before connecting the tool to a power supply, be sure the slider switch is in the off position. Ensure the slider switch is in the off position after any interruption in power supply to the tool, such as the activation of a ground fault interrupter, throwing of a circuit breaker, accidental unplugging, or power failure. If the slider switch is locked on when the power is connected, the tool will start unexpectedly.

To start the tool, slide the ON/OFF slider switch **1** toward the front of the tool. To stop the tool, release the ON/OFF slider switch.

For continuous operation, slide the switch toward the front of the tool and press the forward part of the switch inward. To stop the tool while operating in continuous mode, press the rear part of the slider switch and release.

Variable Speed Dial (Fig. A)

The variable speed dial **9** offers added tool control and enables the tool to be used at optimum conditions to suit the accessory and material.

- Turn the variable speed dial **9** to the desired level. Turn the dial upward for higher speed and downward for lower speed.

Spindle Lock (Fig. A)

The spindle lock button **2** is provided to prevent the spindle from rotating when installing or removing wheels. Operate the spindle lock only when the tool is turned off, the battery is removed and has come to a complete stop.

NOTICE: To reduce the risk of damage to the tool, do not engage the spindle lock while the tool is operating. Damage to the tool will result and attached accessory may spin off possibly resulting in injury.

To engage the lock, depress the spindle lock button and rotate the spindle until you are unable to rotate the spindle further.

Surface Grinding, Sanding and Wire Brushing (Fig. L)

! **CAUTION:** Always use the correct guard per the instructions in this manual.

To perform work on the surface of a workpiece:

1. Allow the tool to reach full speed before touching the tool to the work surface.
2. Apply minimum pressure to the work surface, allowing the tool to operate at high speed. Material removal rate is greatest when the tool operates at high speed.
3. Maintain an appropriate angle between the tool and work surface. Refer to the chart according to particular function.

| Function | Angle \angle |
|--------------------------|----------------|
| Grinding | 20°-30° |
| Sanding with Flap Disc | 5°-10° |
| Sanding with Backing Pad | 5°-15° |
| Wire Brushing | 5°-10° |

4. Maintain contact between the edge of the wheel and the work surface.
 - If grinding, sanding with flap discs, or wire brushing, move the tool continuously in a forward and back motion to avoid creating gouges in the work surface.
 - If sanding with a backing pad, move the tool constantly in a straight line to prevent burning and swirling of work surface.

NOTE: Allowing the tool to rest on the work surface without moving will damage the workpiece.

5. Remove the tool from work surface before turning tool off. Allow the tool to stop rotating before laying it down.

! **CAUTION:** Use extra care when working over an edge, as a sudden sharp movement of grinder may be experienced.

Precautions To Take When Working on a Painted Workpiece

1. Sanding or wire brushing of lead based paint is NOT RECOMMENDED due to the difficulty of controlling the contaminated dust. The greatest danger of lead poisoning is to children and pregnant women.
2. Since it is difficult to identify whether or not a paint contains lead without a chemical analysis, we recommend the following precautions when sanding any paint:

Personal Safety

1. No children or pregnant women should enter the work area where the paint sanding or wire brushing is being done until all clean up is completed.
2. A dust mask or respirator should be worn by all persons entering the work area. The filter should be replaced daily or

whenever the wearer has difficulty breathing.

NOTE: Only those dust masks suitable for working with lead paint dust and fumes should be used. Ordinary painting masks do not offer this protection. See your local hardware dealer for the proper approved mask.

- NO EATING, DRINKING or SMOKING should be done in the work area to prevent ingesting contaminated paint particles. Workers should wash and clean up BEFORE eating, drinking or smoking. Articles of food, drink, or smoking should not be left in the work area where dust would settle on them.

Environmental Safety

- Paint should be removed in such a manner as to minimize the amount of dust generated.
- Areas where paint removal is occurring should be sealed with plastic sheeting of 4 mils thickness.
- Sanding should be done in a manner to reduce tracking of paint dust outside the work area.

Cleaning and Disposal

- All surfaces in the work area should be vacuumed and thoroughly cleaned daily for the duration of the sanding project. Vacuum filter bags should be changed frequently.
- Plastic drop cloths should be gathered up and disposed of along with any dust chips or other removal debris. They should be placed in sealed refuse receptacles and disposed of through regular trash pick-up procedures.
During clean up, children and pregnant women should be kept away from the immediate work area.
- All toys, washable furniture and utensils used by children should be washed thoroughly before being used again.

Edge Grinding and Cutting (Fig. M)



WARNING: Do not use edge grinding/cutting wheels for surface grinding applications because these wheels are not designed for side pressures encountered with surface grinding. Wheel breakage and injury may result.



CAUTION: Wheels used for edge grinding and cutting may break or kick back if they bend or twist while the tool is being used. In all edge grinding/cutting operations, the open side of the guard must be positioned away from the operator.

NOTICE: Edge grinding/cutting with a Type 27 wheel must be limited to shallow cutting and notching—less than 13 mm in depth when the wheel is new. Reduce the depth of cutting/notching equal to the reduction of the wheel radius as it wears down. Refer to the **Accessory and Guard Application Chart** for more information. Edge grinding/cutting with a Type 41 wheel requires usage of a Type 1 guard.

- Allow the tool to reach full speed before touching the tool to the work surface.
- Apply minimum pressure to the work surface, allowing the tool to operate at high speed. Grinding/cutting rate is greatest when the tool operates at high speed.
- Position yourself so that the open-underside of the wheel is facing away from you.
- Once a cut is begun and a notch is established in the workpiece, do not change the angle of the cut. Changing

the angle will cause the wheel to bend and may cause wheel breakage. Edge grinding wheels are not designed to withstand side pressures caused by bending.

- Remove the tool from the work surface before turning the tool off. Allow the tool to stop rotating before laying it down.

Cutting Metal

For cutting with bonded abrasives, always use the Type A guard.

When cutting, work with moderate feed, adapted to the material being cut. Do not exert pressure onto the cutting disc, tilt or oscillate the machine.

Do not reduce the speed of running down cutting discs by applying sideward pressure.

The machine must always work in an upgrinding motion. Otherwise, the danger exists of it being pushed uncontrolled out of the cut.

When cutting profiles and square bar, it is best to start at the smallest cross section.

MAINTENANCE

Your power tool has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper tool care and regular cleaning.



WARNING: To reduce the risk of serious personal injury, turn tool off and disconnect battery pack before making any adjustments or removing/installing attachments or accessories. An accidental start-up can cause injury.

The charger and battery pack are not serviceable.



Lubrication

Your power tool requires no additional lubrication.



Cleaning



WARNING: Blow dirt and dust out of the main housing with dry air as often as dirt is seen collecting in and around the air vents. Wear approved eye protection and approved dust mask when performing this procedure.



WARNING: Never use solvents or other harsh chemicals for cleaning the non-metallic parts of the tool. These chemicals may weaken the materials used in these parts. Use a cloth dampened only with water and mild soap. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

Optional Accessories



WARNING: Since accessories, other than those offered by DeWALT, have not been tested with this product, use of such accessories with this tool could be hazardous.

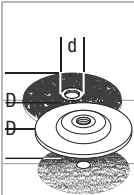
To reduce the risk of injury, only DEWALT recommended accessories should be used with this product.

Consult your dealer for further information on the appropriate accessories.

The capacity of this tool is 125 mm diameter x 6 mm thick grinding or cutting wheels. It is important to choose the correct guards, backing pads and flanges to use with grinder accessories. See the **Accessory and Guard Applications Chart** for information on choosing the correct accessories.

WARNING: Accessories must be rated for at least the speed recommended on the tool warning label. Wheels and other accessories running over their rated accessory speed may fly apart and cause injury. Threaded accessories must have a M14 hub. Every unthreaded accessory must have a 22 mm arbor hole. If it does not, it may have been designed for a circular saw. Use only the accessories shown in the **Accessory and Guard Applications Chart** of this manual. Accessory ratings must always be above tool speed as shown on tool nameplate.

WARNING: Handle and store all abrasive wheels carefully to prevent damage from thermal shock, heat, mechanical damage, etc. Store in a dry protected area free from high humidity, freezing temperatures or extreme temperature changes.



| | Max. [mm] | | [mm] | Min. Rotation [min. ⁻¹] | Peripheral speed [m/s] | Threaded hole length [mm] |
|--|-----------|---|-------|-------------------------------------|------------------------|---------------------------|
| | D | b | d | | | |
| | 125 | 6 | 22.23 | 10500 | 80 | – |
| | 125 | – | – | 10500 | 80 | – |

Tool Connect™ Chip (Fig. N)

WARNING: To reduce the risk of serious personal injury, turn unit off and remove the battery pack before making any adjustments or removing/installing attachments or accessories. An accidental start-up can cause injury.

Your tool is Tool Connect™ Chip ready and has a location for installation of a Tool Connect™ Chip.

Tool Connect™ Chip is an optional application for your smart device (such as a smart phone or tablet) that connects the device to utilize the mobile application for inventory management functions.

Refer to **Tool Connect™ Chip Instruction Sheet** for more information.

Installing the Tool Connect™ Chip

1. Remove the retaining screws **20** that hold the Tool Connect™ Chip protective cover **21** into the tool.
2. Remove the protective cover and insert the Tool Connect™ Chip into the empty pocket **22**.

3. Ensure that the Tool Connect™ Chip is flush with the housing. Secure it with the retaining screws and tighten the screws.
4. Refer to **Tool Connect™ Chip Instruction Sheet** for further instructions.

Protecting the Environment



Separate collection. Products and batteries marked with this symbol must not be disposed of with normal household waste.

Products and batteries contain materials that can be recovered or recycled reducing the demand for raw materials. Please recycle electrical products and batteries according to local provisions. Further information is available at www.2helpU.com.

Rechargeable Battery Pack

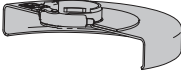


This long life battery pack must be recharged when it fails to produce sufficient power on jobs which were easily done before. At the end of its technical life, discard it with due care for our environment:

- Run the battery pack down completely, then remove it from the tool.
- Li-Ion cells are recyclable. Take them to your dealer or a local recycling station. The collected battery packs will be recycled or disposed of properly.

After Service and Repair

DEWALT service centers are staffed with trained personnel to provide customers with efficient and reliable product service. We do not take any responsibility when you have repaired in unauthorized service center. You can refer to the leaflet of CONTACT CENTER LOCATOR in product package and contact us through hotline, website or social media to find the nearest DEWALT service center around you.

Guard Types for DCG409VS

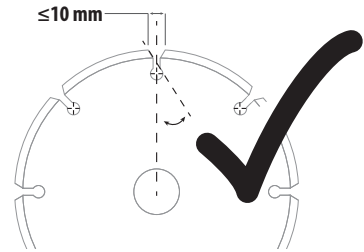
| Type B (Grinding) | Type A (Closed cut off) | Type E (Diamond surface grinding wheel guard) |
|---|---|---|
|  |  |  |

! Type A (Type 41) guards are intended for use with Type 41 (1A) cutting wheels and Type 42 (27A) wheels marked for cutting only. Grinding with wheels other than Type 27 and Type 29 require different accessory guards. Always use the smallest proper guard possible that does not contact the accessory.

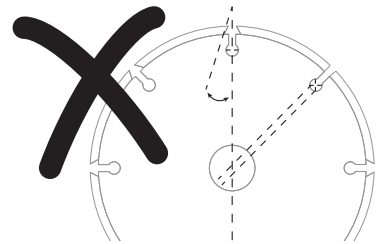
NOTE: Type A (cut-off) and Type B (grinding) wheel guards where previously referred to as Type 1 and Type 27 wheel guards.

Additional Information for Guards and Accessories for DCG409VS

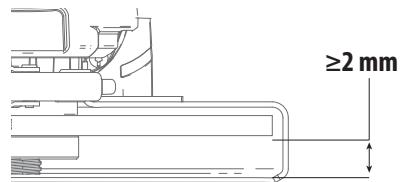
When using segmented diamond wheels, use only diamond wheels with a peripheral gap not greater than 10 mm and negative rake angle.



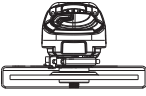


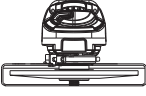


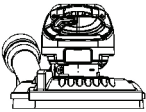


DO NOT USE
segmented diamond wheels with a peripheral gap greater than 10 mm and/or a positive rake angle.





For all grinding, sanding, and wheel type wire brushing accessories, the lowest portion of the accessory must be contained within the guard enclosure with 2mm or greater clearance to the bottom lip of guard



| | Accessory Type | Accessory | Guard | Correct Assembly |
|------------------|--|---|---|---|
| Surface Grinding | Wheel Type 27 |  |  Type B (Grinding) |  1 |
| | | | ¹ Maximum wheel thickness, 6 mm. | |
| | Wheel Type 29 |  |  Type B (Grinding) |  1 |
| | | | ¹ Maximum wheel thickness, 6 mm. | |
| | Diamond Grinding Wheel (masonry/concrete) |  |  Type E (Diamond surface grinding wheel guard) |  3 |
| | | | ³ Type E guard available at additional cost from your local DEWALT dealer or authorised DEWALT service centre. | |

| | Accessory Type | Accessory | Guard | Correct Assembly |
|--|--|---|--|------------------|
| Cutting Off | Wheel Type 41 (1A) (metal) | | Type A (Closed cut off) | |
| | Wheel Type 42 (27A) (metal) | | Type A or Type F (Closed cut off or masonry/concrete cut off wheel guard) | |
| | Wheel Type 41 (1A) (masonry/concrete) | | Type A or Type F (Closed cut off or masonry/concrete cut off wheel guard) | |
| | Diamond Cutting Wheel (metal) | | Type A (Closed cut off) | 4 |
| | Diamond Cutting Wheel (masonry/concrete) | | Type A (Closed cut off) | 4 |
| | Abrasive Wheels For Materials Other Than Metal Or Masonry/Concrete | | Type A (Closed cut off) | 4 |
| Dual Purpose (combined cut-off and grinding) | Dual Purpose Abrasive Wheel | | Type A (Closed cut off) | 1 |
| | | | 1 Maximum wheel thickness, 6 mm. | |
| Sanding | Flap Disc (Type 27 / Type 29) | | Type B (Grinding) | 2 |
| | 2 Type B guard available at additional cost from your local DeWALT dealer or authorised DeWALT service centre. | | | |
| | Flexible Abrasive (e.g. sandpaper) (supported by a flexible backing pad) | | Guard not required | 6 |
| | | 6 Rubber backing pad and sanding clamp nut (included with rubber backing pad) available at additional cost from your local DeWALT dealer or authorised DeWALT service centre. | | |

Guidelines for Guards and Accessories for DCG409VS

| | | |
|----------------------------------|--|---|
| Non-approved Wheels for DCG409VS | Type 11 / T11 |  |
| Hubbed Wheel Wrench | Hubbed wheel wrench available at additional cost from your local DEWALT dealer or authorised DEWALT service centre |  |

無碳刷砂輪機

DCG409VS

恭喜!

感謝您選購 DeWALT 工具。憑藉多年的經驗、完善的產品開發與創新，DeWALT 已成為專業電動工具使用者最可靠的合作夥伴之一。請注意！各地區上市產品/配件不盡相同，請依台灣繁體中文說明書的內容為主。

技術資料

| | | DCG409VS-B1 | DCG409VS-TW | DCG409VS-KR |
|-----------|-------------------|-------------|-------------|-------------|
| 電壓 | V _{DC} | 18 (20 Max) | 18 (20 Max) | 18 (20 Max) |
| 電池類型 | | 鋰電池 | 鋰電池 | 鋰電池 |
| 最大輸出功率 | W | 1450 | 1450 | 1450 |
| 最大額定速度 | min ⁻¹ | 9000 | 9000 | 9000 |
| 砂輪直徑 | mm | 100 | 125 | 125 |
| 砂輪厚度(最大) | mm | 4 | 6 | 6 |
| 主軸直徑 | | M10 | M14 | M10 |
| 主軸長度 | mm | 16 | 21.5 | 16 |
| 重量(不含電池組) | kg | 1.85 | 1.85 | 1.85 |

| 電池 | | | | 充電器/充電時間(分鐘) | | | |
|---------|------------------|----------|--------|--------------|--------|---------|---------|
| 類別# | 伏特 _{直流} | 安时 | 重量(kg) | DCB107 | DCB115 | DCB1112 | DCB118 |
| DCB606 | 18/54(20/60 Max) | 6.0/2.0 | 1.08 | 270 | 90 | 40 | 60 |
| DCB609 | 18/54(20/60 Max) | 9.0/3.0 | 1.46 | 420 | 135* | 60 | 75* |
| DCB612 | 18/54(20/60 Max) | 12.0/4.0 | 1.46 | 540 | 180 | 80 | 120 |
| DCB203 | 18(20 Max) | 2.0 | 0.40 | 90 | 30 | 30 | 30 |
| DCB205 | 18(20 Max) | 5.0 | 0.62 | 240 | 75 | 75/50** | 75/50** |
| DCB240 | 18(20 Max) | 4.0 | 0.54 | 185 | 60 | 60 | 60 |
| DCBP034 | 18(20 Max) | 1.7 | 0.32 | 82 | 27 | 27 | 27 |

*日期碼 201811475B 或以後

**日期碼 201536 或以後

20V Max 為最大初始電壓、標稱電壓為 18V · 60V Max 為最大初始電壓、標稱電壓為 54V



警告：為了降低受傷的風險，必須仔細閱讀使用手冊。

定義:安全指南

以下定義描述了每一個詞彙的嚴重程度。請閱讀本手冊並注意這些符號。



危險：表示緊急危險狀況，若未能避免，將導致死亡或嚴重傷害。



警告：表示潛在危險情況，若未能避免，可能導致死亡或嚴重傷害。



小心：表示潛在危險情況，若未能避免，可能導致輕微或中度傷害。

注意：表示一種非人身傷害的行為，若未能避免，可能導致財產損失。



表示觸電風險。



表示火災危險。

電動工具一般安全警告



警告：請閱讀本電動工具隨附的所有安全警告、指示、圖示和規格。不遵循下列的所有指示可能會導致觸電、火災及/或嚴重傷害。

請妥善保存所有警告及指示以備將來查閱。

警告中的名詞「電動工具」是指電源驅動(插電)電動工具,或者電池驅動(充電)電動工具。

1) 工作場地安全

- 請保持工作場地清潔明亮。混亂或昏暗的場地會引發事故。
- 請勿在易爆環境,如有易燃液體、氣體或粉塵的環境中操作電動工具。電動工具產生的火花會點燃粉塵或氣體。
- 請等待兒童和旁觀者離開之後才操縱電動工具。分心會導致工具控制。

2) 電氣安全

- 電動工具插頭必須與插座相符。不得以任何方式改裝插頭。需接地的電動工具不能使用任何配接器插頭。未經改裝的插頭和相符的插座可以減少觸電風險。
- 避免人體接觸接地表面,如管道、散熱片、爐灶和冰箱。若您的身體接地,會增加觸電風險。
- 請勿將電動工具暴露在雨中或潮濕環境中。水進入電動工具會增加觸電風險。
- 請勿濫用電線。請勿使用電線來搬運、拉動電動工具或拔出插頭。請讓電線遠離油、熱、銳邊和轉動部件。受損或纏繞的電線會增加觸電風險。
- 若要在戶外使用電動工具,請使用適合戶外環境的延長電線。適合戶外環境的電線將降低觸電風險。
- 若必須在潮濕場合使用電動工具,請使用漏電保護器(RCD)。使用 RCD 可降低觸電風險。

3) 人身安全

- 保持警覺;在操作電動工具時,請集中精力並按照一般的程式執行。請勿在疲倦或受到藥品、酒精或治療影響時使用電動工具。操作電動工具時,注意力分散會導致嚴重的人身傷害。
- 請使用個人防護裝置。請始終佩戴護目裝置。防護裝置,例如在適當條件下使用的防塵面具、防滑安全鞋、安全帽或聽力保護等裝置可減少人身傷害。
- 防止意外啟動。連接電源及/或電池組、舉抬或搬運電動工具之前,請確定開關處於關閉位置。若搬運電動工具時將手指搭在開關上,或者在電動工具開關開啟的狀態下接通電源,這兩種行為都會引發事故。
- 啟動電動工具之前,請卸下所有的調整鑰匙或扳手。遺留在電動工具轉動部件上的扳手或鑰匙會導致人身傷害。
- 請勿過度伸展雙手。時刻注意腳下與身體的平衡。如此即可在發生意外的情況下更好地控制電動工具。
- 適當穿著。請勿穿寬鬆衣服或佩戴飾品。請讓頭髮、衣服和手套遠離轉動部件。寬鬆衣服、佩飾和長髮可能會捲入轉動部件。
- 若配備用於連接除塵和集塵設備的裝置,請務必正確連接和使用這些裝置。使用集塵設備可減少與粉塵有關的危險。
- 請勿因頻繁使用工具,對其十分熟悉,而忽略工具的安全原則。粗心操作可以在片刻間造成嚴重傷害。

4) 電動工具的使用與注意事項

- 請勿超負荷使用電動工具。請根據不同應用需求選用合適的電動工具。若使用的電動工具正確無誤,該工具能以設計額定值更有效、更安全地執行工作。
- 若開關不能開啟或關閉電源,請勿使用該電動工具。若開關無法控制電動工具,則電動工具存在危險,必須予以維修。
- 在執行任何調整、更換配件或儲存工具之前,必須從電源上拔掉插頭及/或卸下電池組。這類防護性措施可降低電動工具意外啟動的風險。
- 請將閒置的電動工具存放在兒童無法接觸的地方,請勿讓不熟悉電動工具或對這些使用指示不瞭解的人員操作電動工具。電動工具在未經過培訓的使用者手中會發生危險。
- 維護電動工具。檢查轉動部件是否存在未對準或卡住、破損的情況以及是否存在影響電動工具運行的其他情況。若有損毀,必須在使用之前修理電動工具。許多事故都是由於電動工具欠缺維護所導致。
- 保持刀具鋒利和清潔。妥善維護的帶利刃的切割工具不會輕易卡住並可更輕鬆控制。
- 使用電動工具、配件和工具刀頭等時,請遵循這些指示使用,且指示須包含工作環境和所要執行工作的注意事項。不按照設計目的使用電動工具會導致危險。
- 手柄和握持面都應保持乾燥、清潔,不油膩。滑膩的手柄和握持面讓您無法在意外情況下安全地操控工具。

5) 電池工具的使用與注意事項

- 僅用製造商指定的充電器為設備充電。將適用於一種電池組類型的充電器為另一種類型的電池組充電,可能會引發風險。
- 請使用原廠的電動工具電池組。若使用任何其他電池組,可能會引發受傷和火災風險。
- 在不使用電池組時,請將其遠離能夠接通電池兩極的其他金屬物體,例如回形針、硬幣、鑰匙、釘子、螺釘或其他小型金屬物體。短接電池端子可能會引發燃燒或火災。
- 濫用電池的情況下,液體會從電池中噴出;避免與液體接觸。如果不慎接觸到電池液,請用水沖洗。如果電池液接觸到雙眼,請就醫。從電池中噴射出來的電池液可能會引起發炎或灼燒。
- 請勿使用已經損壞或改動的電池組或工具。損壞或改動的電池可能表現出不可預計的行為,導致火災、爆炸或傷害風險。
- 請勿讓電池組或工具暴露於火中或過高溫度的環境中。暴露於火中或溫度超過 130 °C 的環境中可能導致爆炸。
- 請遵循所有充電說明,請勿在說明中規定的溫度範圍以外的環境對電池組或工具充電。不當充電或在指定範圍以外的溫度下充電,可能導致電池損壞並增加火災風險。

6) 維修

- 必須由合格的維修人員維修本電動工具,而且只能使用完全一致的更換件。這樣將確保電動工具的安全。
- 不得維修損毀的電池組。電池組的維修應僅由製造商或授權服務提供商執行。

附加安全規則

安全警告普遍適用於研磨、打磨、刷光、拋光或切割操作

- 本電動工具設計用作打磨機、砂光機、鋼絲刷或切割工具。請閱讀本電動工具隨附的所有安全警告、指示、圖示和規格。不遵循下列的所有指示可能會導致觸電、火災及/或嚴重傷害。
- 不得用該工具進行例如拋光、打磨或控孔等操作。將電動工具用於非專用的操作會引發危險並導致人身傷害。
- 請勿改裝該工具以用於廠商設計和規定範圍以外的操作。這種改裝可能會導致工具失控，造成嚴重的人身傷害。
- 請勿使用廠商設計和規定範圍以外的配件。配件可被安裝到電動工具上不代表它能夠安全運行。
- 配件的額定速度至少應等於電動工具上標記的最大速度。轉速超過額定速度的配件會破碎並飛濺出去。
- 配件的外徑和厚度必須在電動工具額定值以內。防護罩無法為尺寸不當的配件提供充分防護，同時您也難以對其實現有效操控。
- 配件尺寸必須與電動工具的安裝硬件尺寸匹配。如果配件與電動工具的安裝硬件不匹配，工具就會失衡，產生劇烈震動，可能導致失控。
- 請勿使用受損配件。每次使用前，請檢查配件，例如檢查砂輪是否有破裂和裂縫，檢查支撐墊是否有裂縫、撕裂或過度磨損，檢查鋼絲刷是否鬆動或鋼絲是否斷裂。若電動工具或配件跌落，請檢查是否損毀，或立即安裝未破損的配件。檢查並安裝配件後，讓自己和旁觀者遠離配件的旋轉範圍，並讓電動工具以最大的空載速度運行一分鐘。受損配件一般會在此測試過程中碎裂。
- 佩戴個人防護裝置。根據適用情況，使用面罩、安全護目鏡或防護眼鏡。若適用，請佩戴防塵面具、聽力保護器、手套及能阻擋細小磨料或工件碎片的工作圍裙。護目裝備必須能夠擋住各種操作所產生的飛屑。防塵面具或口罩必須能夠過濾各種操作所產生的顆粒。長期暴露於高強度噪音中可能會使聽力受損。
- 讓旁觀者與工作場地保持一定安全距離。任何進入工作場地的人員都必須佩戴個人防護裝置。工件或受損配件的碎片可能會飛出並導致緊靠著操作區域的旁觀者受到傷害。
- 若在執行操作時鋸切工具可能會接觸隱藏的電線，請僅從絕緣手柄表面握住電動工具。若接觸到「帶電」導線，工具金屬部件表面就會「帶電」，從而導致操作人員觸電。
- 直到配件完全停止運動才放下電動工具。旋轉的配件可能會抓住表面並拉動電動工具，讓您失去對工具的控制。
- 攜帶電動工具時不要啟動它。意外接觸旋轉配件可能會纏繞您的衣服，使配件傷害您的身體。
- 定期清理電動工具的通風口。電動機風扇會將灰塵吸進機殼，過多的金屬粉塵沉積可能會導致電氣危險。
- 請勿在易燃材料附近操作電動工具。火星可能會點燃這些材料。
- 請勿使用需要冷卻液的配件。用水或其他冷卻液可能會導致觸電或觸電致死。

所有操作的進一步安全說明

回彈及相關警告

回彈是正在轉動的砂輪、襯墊、刷子或任何其他配件被卡住時突然出現的反作用。如果轉動的配件被卡住，就會造成快速堵轉，迫使失控的電動工具在被卡住的位置與配件轉動的方向相反前進。

例如，如果研磨砂輪被工件卡住，那麼進入夾點的砂輪邊緣就會切入材料表面，導致砂輪爬出或回彈。之後，砂輪會在操作人員所在方向的正面或反面彈起，具體方向取決於砂輪在夾點的運動情況。研磨砂輪在這種情況下也會破碎。

回彈是由於工具使用不當和/或錯誤操作或環境造成的。可按照以下指示採取適當防護措施，避免回彈：

- 雙手握緊工具並站穩，以便抵禦這種反作用力。在啟動電動工具時，務必使用輔助手柄（如提供）以充分控制回彈或扭矩反應。如已採取適當的預防措施，操作人員便可控制扭矩反應和回彈力度。
- 不得將手靠近轉動的配件。配件可能會回彈並打傷手部。
- 請讓自己處於安全位置，避開工具在回彈情況下可能會到達的區域。回彈會在夾點迫使工具逆著與砂輪的轉動方向前進。
- 在處理拐角、銳邊等部位時，請多加小心，避免讓砂輪彈起，夾住配件。拐角、銳邊或彈起的配件會夾住轉動的配件，導致工具失控或回彈。
- 請勿安裝鋸鏈、木工刀片、周邊間隙大於 10 公釐的拼合金剛石砂輪或帶鋸齒的鋸片。這種鋸片會導致頻繁的回彈並讓工具失控。

針對研磨和砂輪切割操作的安全警告

- 僅使用適合您工具的砂輪型號以及為選定砂輪設計的專用防護罩。防護罩無法完全遮蓋不適用於該工具的砂輪，因此它們不安全。
- 中央凹陷的砂輪的研磨表面必須位於防護罩層板平面之下。如果砂輪安裝不當，高出防護罩層板平面之上，就無法獲得充分保護。
- 必須將防護罩牢固地安裝在電動工具上，確保足夠安全，將砂輪暴露在外且朝向操作人員的部分降到最低。防護罩有助於保護操作人員，使其不被砂輪碎片打到，不會意外觸碰砂輪，避免火花引燃衣物。
- 僅在特定應用場景中使用砂輪。例如：請勿將切割砂輪的側面用於研磨。研磨切割砂輪適用於周邊研磨。向這些這種砂輪的側面施加壓力會使其破碎。
- 務必為選定的砂輪選用完好無損、尺寸合適且形狀契合的砂輪法蘭。適當的砂輪法蘭能為砂輪提供支持，降低砂輪破損的可能性。適用於砂輪的法蘭可能不同於適用於研磨輪的法蘭。
- 請勿使用從大功率工具上取下的磨損砂輪。適用於大功率工具的砂輪不適合小功率工具上高速轉動的環境，可能會爆裂。
- 如果使用兩用砂輪，請務必根據實際的應用場景，選用適當的防護罩。如果選用了不當的防護罩，就無法實現理想的防護效果，從而導致嚴重傷害。

針對切割操作的額外安全警告

- 請勿“卡住”切割砂輪或施加過大壓力。請勿試圖切割過深。向砂輪施加過大壓力會增加負荷，使其在切割時更易扭曲或卡住，還會增加砂輪回彈或破碎的可能性。
- 請站在與轉動砂輪呈一條直線的方向以及砂輪後方。在操作時，如果砂輪轉動並離你而去，那麼可能發生的回彈會將砂輪和工具直接朝你推來。
- 如果砂輪被卡住，或因任何原因導致切割中斷，請關閉電動工具並讓工具保持不動，直到砂輪完全靜止為止。不得在砂輪仍在轉動時嘗試將其拆除，否則會導致回彈。請認真檢查並採取正確做法，消除砂輪被卡住的原因。
- 請勿在工件中重啟切割操作。先讓砂輪全速轉動，再慢慢地重新切入工件。當電動工具卡在工件中時，如不將其取出便直接重啟，就會導致砂輪被卡住、爬出或回彈。
- 支撐板或任何尺寸過大的工件會將砂輪被夾住和回彈的風險降到最低。大型工件容易因為自身重量而下垂。必須在砂輪兩側的工件下方、靠近切割線和工件邊緣處放置支撐。
- 當您在已有牆面或其他盲區進行“挖空切割”時，請務必多加小心。伸出的砂輪可能會切到天然氣管道或水管、電線或可能會導致回彈的物體。
- 請勿嘗試進行曲線切割。向砂輪施加過大壓力會增加負荷，使其在切割時更易扭曲或卡住，還會增加砂輪回彈或破碎的可能性，從而導致嚴重人身傷害。

針對刷光操作的額外安全說明

- 請注意，即使是普通操作，鋼絲刷毛也會從刷子中被甩出。請勿向刷子施加過大壓力，致使鋼絲承壓。鋼絲刷毛能夠輕易穿透較薄的衣物和/或皮膚。
- 如果要求在刷光時使用防護罩，請勿讓鋼絲輪或刷子干擾防護罩。由於工件和離心力的影響，鋼絲輪或鋼絲刷會不斷變大。

面向砂輪機的額外安全規則

- 請勿在該工具上使用 11 號（杯形）砂輪如果使用不合適的配件。可能會造成人身傷害。
- 務必使用側手柄。請將手柄安裝牢固。應始終使用側手柄來控制工具。
- 如要使用砂輪片，請僅使用周邊間隙不超過 10 公釐且帶有負傾角的砂輪片。（參閱針對防護罩和配件表的額外信息。）

其他風險

即使應用有關的安全規定並採用安全設備，仍然還有一些無法避免的其他風險。危險包括：

- 聽力受損。
- 飛散顆粒引起的人身傷害風險。
- 操作過程中配件變熱引起的灼傷風險。
- 長時間使用引起的人身傷害風險。

請保留說明手冊

充電器

DeWALT 充電器無需調節，專為盡可能輕鬆使用而設計。

電氣安全

電動機只適用一種電壓。請務必檢查電池組電壓是否與銘牌一致，並且確充電器的電壓與電源電壓一致。



您的 DeWALT 充電器根據 IEC60335 進行了雙重絕緣，因此無需使用接地線。

如果電源線損壞，必須由 DeWALT 或授權的維修機構負責更換。

使用延長電纜

如非絕對必要，否則請勿使用延長電纜。請使用與充電器的輸入功率相配的認可延長電纜（請參閱技術資料）。導體的最小橫截面尺寸為 1 公釐²，最長為 30 米。

使用電纜捲筒時，每次必須把電纜完全展開。

所有電池充電器之重要安全指示

妥善保存這些安全指示：本手冊包含有關相容電池充電器的重要安全及操作指示（請參閱技術資料）。

- 在使用充電器之前，請先閱讀所有指示以及充電器、電池組和使用電池組的產品上的警告標記。



警告：觸電風險。請勿讓任何液體進入充電器，這可能會導致觸電。



警告：建議使用漏電流額定值不超過 30 毫安的漏電流保護裝置。



小心：燒傷危險。為降低人身傷害的風險，只可使用 DeWALT 充電電池。其他非原廠電池可能會爆裂，導致人身傷害和損壞。



小心：應看管好兒童，確保他們不會將此設備當做玩具來玩。

注意：在某些情況下，當充電器的插頭插入電源插座時，充電器內部裸露的充電接觸點可能因為異物而短路。請勿讓能導電的異物靠近充電器腔，這些異物包括但不限於鋼棉、鋁箔或任何金屬顆粒的堆積物。在電池腔內沒有電池時，務必切斷充電器的電源。請先拔掉電源插頭後再清潔充電器。

- 請勿嘗試使用本手冊未提到的充電器替電池組充電。充電器與電池組專為搭配使用而特別設計。
- 除了為 DeWALT 可充電電池充電之外，這些充電器不可以用於其他用途。若將其用作其他用途，可能會造成火災、觸電或電擊致死風險。
- 請勿將充電器暴露在雨、雪之中。
- 中斷充電器的電源時，請拔除插頭而非拉扯電線。這樣會降低電源插頭及電線損壞的風險。
- 請確保電線的位置不會遭踐踏、令人絆倒，或引起其他方式的損壞或受壓。
- 除非必要，否則請勿使用延長線。使用不適當的延長電線會引起火災、觸電或觸電致死。
- 請勿將任何物件放在充電器上面，或是把充電器放在可能會堵住通風槽的柔軟表面，導致充電器的內部過熱。請將充電器置於遠離任何熱源的地方。充電器通過頂部的通風槽和外殼的底部進行通風散熱。
- 請勿使用電線或插頭損壞的充電器——請立即予以更換。

- 如果充電器受到重擊、墜落或出現其他損壞情況，請勿使用充電器，並拿到授權維修中心修理。
- 請勿自行拆卸充電器。需要維護或修理時，請拿到授權維修中心。不當的重新組裝可能會導致觸電、電擊致死或火災。
- 若電源線損壞，必須由製造商、服務代理或類似合格人員立即更換以避免發生危險。
- 在進行任何清潔前，先將充電器從插座上拔下。這會降低觸電風險。取出電池組不會降低該風險。
- 不得試圖將兩個充電器連接在一起。
- 充電器被設計在標準的 110V 家用電源上工作。請勿試圖在任何其他電壓環境中使用該充電器。這一點不適用於車載充電器。










為電池充電 (圖 B)

1. 將充電器插入適當的插座中，然後再插入電池組。
2. 將電池組 **10** 插入充電器，確保將電池組安裝到位。紅燈 (充電中) 會重複閃爍，這表示充電程序已經開始。
3. 紅燈常亮，表示充電完成。此時，電池組的電力全滿，可以立即使用或是留在充電器裡。若要從充電器中取出電池組，請按下電池組上的電池釋放按鈕 **11**。

注意：為了確保理電池組的效能及使用壽命最大化，在第一次使用電池組之前必須完全充電。

充電器操作

如需瞭解電池組的充電狀態，請參閱以下指示燈。

| 充電指示燈 | | |
|---|---|---|
|  充電中 |  |  |
|  電量已充滿 |  |  |
|  電池組熱/冷延遲* |  |  |

*紅燈會繼續閃爍，但在執行此操作期間黃色指示燈將亮起。電池組達到適當溫度後，黃色指示燈將熄滅，充電器將恢復充電程序。此兼容充電器不能為故障的電池組充電。充電器會透過不亮燈來表示電池組故障。

注意：亦有可能是充電器發生故障。

如果充電器提示存在故障，請將充電器和電池組送到授權的服務中心進行測試。

熱/冷電池組延遲

當充電器檢測到電池組過熱或過冷，就會自動開啟熱/冷電池組延遲，暫停充電，直到電池組恢復到適當溫度為止。然後，充電器將自動切換到電池組充電模式。該特色功能可以最大程度地延長電池組的使用壽命。

冷電池組的充電速度大約是暖電池組的一半。在整個充電週期，電池組會以較慢的充電速度進行充電，即使電池組變暖，充電速度亦不會恢復至最大充電速度。

DCB118 充電器配備了一個內置風扇，可冷卻電池組。該風扇會在電池組需要冷卻時啟動開啟。如果風扇運轉異常或通風槽被堵塞，不得使用充電器。請勿讓異物進入充電器內部。

電子保護系統

XR 鋰離子工具的設計具有電子保護系統，可保護電池組，避免過載、過熱或深度放電。

如果電子保護系統介入，則該工具將自動關閉。如果出現此情況，請將鋰電池組放進充電器直到電力全滿。

牆面安裝

這些充電器被設計可以安裝在牆面上，或可以直立於桌面或作業表面。若要安裝於牆面，請將充電器置於能夠接觸到電源插座的範圍內，同時要遠離牆角或能阻擋氣流的其他障礙。將充電器的背面作為在牆面上螺釘安裝位置的模板。使用至少 25.4 公釐長、螺釘帽直徑至少 7.9 公釐的石膏板螺釘 (單獨購買) 牢牢固定充電器，將螺釘最大限度釘入木材，預留約 5.5 公釐露在牆外。將露出的螺釘與充電器背面的槽對齊，並完全接合到槽中。

充電器清潔說明

警告：觸電風險。在清潔之前，請將充電器的插頭從 AC 電源插座上拔掉。使用軟布或非金屬軟刷，去除充電器外部的污垢和油脂。請勿使用水或任何清潔劑。不得讓任何液體滲入工具，不得讓工具的任何部件浸在液體中。

電池組

面向所有電池組的重要安全說明

購買更換電池組時，務必附上目錄號和電壓資料。

電池組的電量在出廠時並非全滿。在使用電池組和充電器之前，請先閱讀以下安全指示，並遵循所列的充電程序。

請閱讀所有說明

- 請勿在易爆環境，如有易燃液體、氣體或粉塵的環境中進行充電或使用電池。將電池組放進充電器或拆除電池可能會點燃粉塵或氣體。
- 不得強行將電池放進充電器。請勿以任何方式改裝電池組並將電池組插入不相容的充電器，這種操作可能會導致電池組破裂，造成嚴重的人身傷害。
- 請僅使用指定的 DEWALT 充電器為電池組充電。
- 請勿將水分或其他液體飛濺到電池組或將電池組浸沒。
- 請勿在溫度可能低於 4 °C (39.2 °F) (如冬天戶外的棚子或金屬建築物中)，或在溫度可能達到或超過 40 °C (104 °F) 的地方 (如夏天戶外的棚子或金屬建築物中) 存放或使用工具和電池包。
- 即使電池組嚴重受損或電量完全用壞，也請勿將其焚燒。電池組在火中可能會爆炸。燃燒鋰電池組時會產生有毒氣體和物料。
- 如果電池內容物接觸到皮膚，請立即用溫和的肥皂和清水沖洗。若電池液體進入眼睛，請睜開眼睛，用清水沖洗 15 分鐘或直到不適感消失為止。如果需要立即就醫，請知悉，電池的電解液由液體有機碳酸鹽和鋰鹽混合而成。
- 被打開的電池的內容物可能刺激呼吸道。提供新鮮空氣。如果症狀持續，請尋求醫療協助。
- 警告：燒傷危險。**電池液如果接觸到火花或火焰可能會燃燒。
- 警告：**不得以任何理由嘗試拆開電池組。如果電池組的外殼破裂或損壞，請勿放進充電器。請勿撞擊、摔落或損壞電池組。請勿使用受到重擊、墜落或出現其他損壞情況的電池組或充電器 (例如釘子刺穿、以鎚子敲打或踐踏)。否則可能會引起觸電或電擊致死。損壞的電池組應該送回維修中心進行回收。



警告：火災危險。請勿在儲存或搬運電池組時讓金屬物件接觸暴露的電池兩極。例如，請勿將電池組放在圍裙、口袋、工具盒、產品套件盒、抽屜等可能與散釘、螺釘、鑰匙等物品接觸的地方。



小心：不使用工具時，請將工具放在穩定的表面上，以免導致絆倒或墜落等危險。一些具有大型電池組的工具可以直立但可能會輕易被撞倒。

運輸



警告：火災危險。電池運輸途中，若兩極意外接觸導電材料，可能會引發火災。運輸電池時，確保電池兩級受到保護並與可能接觸兩級並導致短路的材料隔絕。**注意：**鋰電池不應放在託運行李中。

DeWALT 電池符合行業和法律標準（包括聯合國危險貨物運輸建議書、國際航空運輸協會 (IATA) 危險物品處理規則、國際海運危險物品 (IMDG) 處理規則以及國際公路運送危險物品歐洲協議 (ADR)。規定的所有適用運輸規章。鋰電池和電池組已遵循《聯合國危險品運輸建議規章範本手冊》第 38.3 節關於測試和標準的說明通過測試。

大多數情況下，發運 DeWALT 電池組不屬於完全管制的 9 類危險品。一般只有在運輸中包含額定能量大於 100 瓦時 (Wh) 的鋰電池時，才會將其分歸為完全管制的第 9 類危險品。所有鋰電池外殼上均標註有瓦時等級。此外，由於規章的複雜性，DeWALT 不建議對鋰電池組單獨採用空運，不論其額定能量是多少瓦時，都是如此。若電池組的額定能量不超過 100 瓦時，可以同時空運工具與電池組（組合套件）。無論運輸是否納入完全管制範圍內，運輸方均有責任諮詢瞭解針對包裝、標籤/標記及單據要求的最新規定。

手冊本節資訊基於良好商譽原則提供，在編製文件時被視為準確無誤，但不提供任何明示或暗示的保證。買方負有確保其行為遵守適用法規的責任。

運輸 FLEXVOLT™ 電池

DeWALT FLEXVOLT™ 電池有兩種模式：**使用與運輸。**

使用模式：若 FLEXVOLT™ 電池單獨使用或在 DeWALT 18 伏特（最大 20 伏特）產品中使用時，將作為 18 伏特（最大 20 伏特）的電池運作。若 FLEXVOLT™ 電池用於 54 伏特（最大 60 伏特）或 108 伏特（最大 120 伏特）（兩個 54 伏特（最大 60 伏特）電池）的產品時，將作為 54 伏特（最大 60 伏特）的電池運行。

運輸模式：將防護罩連接至 FLEXVOLT™ 電池時，電池將處於運輸模式。在運輸時，請將保護蓋留在電池上。

在運輸模式下，若將電池組內的一連串電池中斷電氣連接，會導致 3 個電池各自的瓦時 (Wh) 額定值低於 1 個電池組的瓦時額定值。這樣電池數量雖然增加到 3 個，但瓦時額定值更低，因此能避開針對較高瓦時電池的運輸規章。

例如，若運輸瓦時額定值為 3 x 36 瓦時，表示運輸 3 個電池，每個電池的額定值為 36 瓦時。使用瓦時額定值可能為 108 瓦時（表示 1 個電池）。

存放建議

- 最好將電池存放在陰涼、乾燥、遠離陽光直射、不會過熱或過冷的地方。為了獲得最佳的電池性能和使用壽命，請您在不使用電池組時將其存放在室溫下。

- 長期存放時，建議將完全充電的電池組從充電器取出，存放在陰涼、乾燥的地方，以達到最佳效果。

注意：電池組不應在電池已完全耗盡的狀態下存放。使用電池組之前，必須重新為電池組充電。

充電器和電池組上的標籤

除了在本手冊中所使用的標誌，充電器和電池組的標記還包括：



請在使用前閱讀使用手冊。



如需瞭解充電時間詳細資訊，請參閱**技術資料**。



請勿使用導電物體戳刺。



請勿對損壞的電池組充電。



請勿將其暴露於水中。



應立即更換受損電線



請只在 4°C 和 40°C 之間的溫度下充電。



僅在室內使用。



棄置電池組時，請妥善處理以保護我們的環境。



僅使用指定的 DeWALT 充電器為電池組充電。使用 DeWALT 充電器對 DeWALT 指定的電池以外的電池組充電會爆裂或導致其他危險情形。



請勿焚化電池組。



使用（無電池蓋）。示例：瓦時額定值為 108 瓦時（1 個 108 瓦時的電池）。



運輸（有內置電池蓋）。示例：瓦時額定值為 336 瓦時（3 個 36 瓦時的電池）。

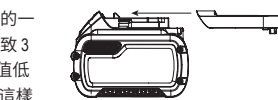
電池類型

以下工具需要使用 18 伏特（最大 20 伏特）的電池組：DCG409VS 可以使用以下電池組：DCB180, DCB181, DCB183, DCB184, DCB203, DCB205, DCB240, DCBP034, DCB606, DCB609, DCB612。如需瞭解更多資訊，請參閱**技術資料**。

包裝內的物品

包裝內的物品包括：

- 砂輪機
- 防護罩 (B 型)
- 側手柄
- 扳手



使用示例和運輸標籤標記



Use: 108 Wh
Transport: 3x36 Wh

- 2 鋰電池組 (T2, X2 型號)
- 1 鋰電池組 (C1, D1, L1, M1, P1, S1, T1, X1, Y1 型號)
- 2 鋰電池組 (C2, D2, L2, M2, P2, S2, T2, X2, Y2 型號)
- 3 鋰電池組 (C3, D3, L3, M3, P3, S3, T3, X3, Y3 型號)
- 1 使用手冊

注意：電池組、充電器和工具箱沒有隨 N 型號附送。電池組和充電器沒有隨 NT 型號附送。B 型號包括 Bluetooth® 電池組。

注意：Bluetooth® 標誌和徽標是註冊商標，歸 Bluetooth®, SIG, Inc. 所有，而且 DeWALT 對該標誌的任何使用均獲得許可。其他商標和商品名稱歸其各自所有者所有。

- 檢查工具、部件或配件有否在運送途中損壞。
- 操作前，請抽空仔細閱讀並理解本手冊的內容。

工具上的標記

工具上印有下列圖形：



請在使用前閱讀使用手冊。



請佩戴聽力保護裝置。



請佩戴護目裝置



務必使用雙手操作。



在切割操作時，請勿使用防護罩。

日期碼位置 (圖 F)

日期碼 **26** 也包含製造年份，會被印在外殼上。

示例：

2022 XX XX
製造年份和週

說明 (圖 A)



警告：不得自行改動電動工具或其中的任何部分。這樣可能會導致損壞或人身傷害。

- 1 側開關
- 2 鎖定桿
- 3 主軸
- 4 側手柄
- 5 支撐法蘭
- 6 鎖定法蘭
- 7 B 型防護罩 (請勿用於切割操作)
- 8 防護罩轉動桿
- 9 可調速轉盤
- 10 電池組
- 11 電池釋放按鈕

設計用途

這款 DC6409VS 無碳刷砂輪機適用於專業的切割、研磨、打磨和刷光操作。

請勿在潮濕或存在易燃液體或氣體的環境下使用該工具。

該無線角磨機是專業電動工具。

請勿讓兒童接觸本工具。缺乏經驗的操作人員需要在監督下使用本工具。

- **兒童和體弱者。**在沒有他人監督的情況下，兒童或體弱者不適用使用本產品。
- 本產品不適合體力、感官或智力不足以及缺乏經驗、知識或技能的人員 (包括兒童) 使用，除非一旁有能為他們的安全負責的監督人員。不得讓兒童單獨接觸本工具。

組裝與調整



警告：為降低嚴重人身傷害的風險，在進行任何調整或卸下或安裝配件或附件之前，切記關掉工具的電源並取出電池組。意外啟動工具可能會造成傷害。



警告：僅使用 DeWALT 電池組和充電器。

功能部件

E-Clutch™

該工具帶有 E-Clutch™ (電子離合器)。如果工具負載過大，該裝置將關閉工具，降低作用於用戶的反應扭矩。需要循環按壓開關 (開啟並關閉) 以重啟工具。

Kickback Brake™

如果檢測到卡主、堵轉或夾住的情況，電子制動裝置會施加最大應力，快速停止砂輪，減少研磨機的移動幅度並將其關閉。需要循環按壓開關 (開啟並關閉) 以重啟工具。

Power-Off™ 過載保護

如果電機過載，將減少供給電機的電量。如果工具持續過載，工具將關閉。需要循環按壓開關 (開啟並關閉) 以重啟工具。每當電流載荷打到過載電流值 (電機燒毀點)，工具就會關閉。如果持續過載導致工具關閉，請向工具施加較少壓力/重量，直到工具能夠不過載的情況下運行為止。

電子軟啟動

該特色功能可限制工具的初始啟動速度，使得工具可用 1 秒鐘達到全速運轉的狀態。

插入或取出工具上的電池組 (圖 B)

注意：確保電池組 **10** 充滿電。

如需將電池組安裝到工具手柄中

- 1 將電池組與工具手柄內的軌道對齊 (圖 B)。
- 2 將電池組滑入手柄內，使其牢牢地固定在工具內，並確保您聽到其鎖定到位的聲音。

如需從工具中取出電池組

1. 按下釋放按鈕 **11**，將電池組從工具握柄中穩妥地拉出。
2. 按本手冊充電器部分所述，將電池組插入充電器中。

電量計電池組 (圖 B)

一些 DeWALT 電池組帶有一個包含三個綠色 LED 指示燈的電量計，用於指示電池組內的剩餘電量。

若要啟用電量計，請按下並按住電量計按鈕 **25**。三個綠色 LED 指示燈將以組合方式亮起，以指示剩餘電量。當電池內的電量低於可用限制時，電量計將不會亮起，電池將需要重新充電。

注意：電量計僅指示電池組的剩餘電量。它並不表示該工具的功能，且將根據產品組件、溫度和最終用戶的使用情況而有所不同。

安裝輔助手柄 (圖 D)

警告：贏始終使用該手柄，確保用戶能夠完全控制該工具。務必確保緊握工具。

將輔助手柄 **4** 安裝到齒輪箱的某個螺紋安裝孔 **24** 中並擰緊。

轉動齒輪箱 (圖 E)

為提升用戶舒適度，齒輪箱將轉動 90° 以便進行切割操作。

1. 拆除 4 個將齒輪箱固定在電機蓋上的角螺釘。
2. 在不將齒輪箱從電機蓋上拆除的情況下，轉動齒輪箱，使其指向理想位置。
注意：如果齒輪箱和電機蓋之間的距離超過 3 公釐，則必須維修工具並由 DeWALT 服務中心進行重現組裝。如果未能送修，那麼電機和軸承可能會出現故障。
3. 重新安裝螺釘，將齒輪箱固定到電機蓋上。擰緊螺釘，讓扭矩達到 1.4Nm。過度擰緊會造成螺釘滑絲。

防護罩

小心：必須將防護罩與研磨砂輪、切割砂輪、打磨平面砂輪、鋼絲刷和鋼絲輪搭配使用。僅當使用常規砂輪打磨時，方可無需安裝防護罩。請參閱圖 A，查看隨工具一同提供的防護罩。在某些應用中，可能需要從當地經銷商或授權服務中心購買適合的防護罩。

小心：當使用 A 型 (切割) 砂輪防護罩進行表面研磨時，砂輪防護罩可能會影響到工件，使得用戶難以控制工具。

小心：當將 B 型 (研磨) 砂輪防護罩與固結研磨砂輪搭配使用，進行切割操作，用戶暴露在飛濺火花和顆粒中的風險增加。如果砂輪破裂，被砂輪碎片打中的風險也會增加。

小心：如在混凝土和磚石材料中，使用 A 型 (切割)、B 型 (研磨) 砂輪防護罩進行切割和表面研磨操作，那麼用戶暴露在粉塵中的風險會更高，同時工具失控，導致回彈的風險也會增加。

注意：如需進行邊緣研磨和切割，可使用專門為此設計的 27 號砂輪；6 公釐厚的砂輪適用於表面研磨，而在使用更薄的 27 號砂輪時，需要檢查廠商的標籤，看它能否被用於表面研磨，或是只能被用於邊緣研磨/切割。如果禁止進行表面研磨，則必須為所有砂輪加裝一個 A 型 (切割) 砂輪防護罩。對於任何兩用 (將研磨和切割相結合) 砂輪，必須加裝一個 A 型 (切割) (曾被稱為 1/41 號) 砂輪防護罩。還可使用 1/41 號砂輪搭配 A 型切割砂輪防護罩 (曾被稱為 1/41 號) 完成切割操作。

注意：請參閱**配件和防護罩應用表**，選用合適的防護罩/配件組合。

安裝和調整 One-Touch™ 防護罩 (圖 E)。

警告：為了降低造成嚴重人身傷害的風險，在進行任何調整，卸下或安裝配或附件之前，切記關掉工具的電源並取出電池組。意外啟動工具可能會造成傷害。

調整防護罩

如需調節防護罩，可使用棘輪功能，使得防護罩轉動桿 **8** 可與防護罩套環上的某個對齊孔 **12** 接合。

當順時針轉動防護罩 (將主軸朝向用戶)，粘介面會傾斜並滾動到下一個對齊孔，但如果朝逆時針轉動，則防護罩會自鎖。

安裝防護罩 (圖 E)

1. 按壓防護罩轉動桿 **8**。
2. 讓防護罩轉動桿保持打開狀態，同時將防護罩上的凸耳 **13** 與齒輪箱上的溝槽 **15** 對齊。
3. 讓防護罩轉動桿保持打開狀態，按下防護罩，直到凸耳接合，然後在齒輪箱輪殼的溝槽中轉動凸耳。鬆開防護罩轉動桿。
4. 讓主軸面對操作人員，順時針轉動防護罩，使其達到理想的作業位置。按壓防護罩轉動桿 **8**，逆時針轉動防護罩。
注意：應將防護罩安裝在主軸和操作人員之間，為操作人員提供最充分的保護。
應將防護罩轉動桿卡入防護罩套環的某個對齊孔 **12** 中。這樣可確保防護罩足夠牢固。
5. 如需拆除防護罩，請按照說明中的第 1 到 3 步反向操作即可。

法蘭和砂輪

警告：為降低嚴重人身傷害的風險，在進行任何調整或卸下/安裝附件或配件之前，切記關掉工具的電源並取出電池組。意外啟動工具可能會造成傷害。

安裝無輪殼砂輪 (圖 G)

警告：如果未能妥善安裝法蘭和/或砂輪，就會造成嚴重的人身傷害 (或損壞工具或砂輪)。

小心：隨工具一同提供的法蘭必須與中央凹陷的 27/42 型研磨砂輪和 1/41 號切割砂輪搭配使用。請參閱**配件和防護罩應用表**，了解更多信息。

警告：如使用研磨切割砂輪或帶有塗層的金剛石切割砂輪，就要加裝一個封閉、雙面的切割砂輪防護罩，這被稱為 A 型切割砂輪防護罩。

警告：使用已損壞的法蘭或防護罩，或未能使用合適的法蘭或防護罩，就會因為砂輪破裂和砂輪觸碰而導致人身傷害。請參閱**配件和防護罩應用表**，了解更多信息。

1. 請將工具置於直面上並將防護罩朝上。
2. 將砂輪 **16** 抵住支撐法蘭 **5**，讓砂輪處於支撐法蘭的中央凸起處。
3. 按壓主軸鎖定按鈕，同時將六角凹陷背朝砂輪，將帶有螺紋的鎖定法蘭 **6** 旋入主軸，使得凸耳與主軸中的兩個溝槽接合。
4. 按壓主軸鎖的同時，用六角扳手擰緊螺紋鎖定法蘭 **6**。
5. 如需拆除砂輪，請按壓主軸鎖按鈕，鬆開螺紋鎖定法蘭。

安裝砂紙襯墊 (圖 A, H)

注意：無需使用帶有需要襯墊 (常被稱為纖維樹脂盤) 的打磨盤的防護罩。由於這些配件無需防護罩，那麼如果安裝防護罩，或有可能無法匹配。



警告:如果未能妥善安裝夾緊螺母和/或襯墊,就會造成嚴重的人身傷害(或損壞工具或砂輪)。



警告:完成打磨後,必須為研磨砂輪、切割砂輪、打磨平面砂輪、鋼絲刷或鋼絲輪重新安裝適當防護罩。

1. 將螺紋襯墊置於主軸上,或將其 **17** 旋上主軸。
2. 將打磨盤 **18** 置於襯墊 **17** 上。
3. 在按壓主軸鎖定按鈕 **2** 的同時,將打磨夾緊螺母 **19** 旋上主軸,將夾緊螺母的凸起輪殼穿入砂輪和襯墊的中央。
4. 手動擰緊夾緊螺母。然後,按壓主軸鎖定按鈕,同時轉動打磨砂輪,直到砂輪和夾緊螺母卡扣在一起為止。
5. 如需拆除砂輪,請握住並轉動襯墊和砂紙墊,同時按壓主軸鎖鈕。

安裝和拆除輪殼砂輪(圖 A)

可將輪殼砂輪直接安裝在主軸上。配件螺紋必須與主軸螺紋相匹配。

1. 手動將砂輪旋上主軸 **3**。
2. 按壓主軸鎖定按鈕 **2**,同時使用扳手擰緊砂輪的輪殼。
3. 如需拆除砂輪,請按照以上步驟逆向操作即可。

注意:如果未能在開啟工具前妥善安裝砂輪,就會損壞工具或砂輪。

安裝圓形鋼絲刷和鋼絲輪(圖 A)



警告:如果未能妥善安裝刷子/砂輪,就會造成嚴重的人身傷害(或損壞工具或砂輪)。



小心:為降低人身傷害的風險,請在處理鋼絲刷和鋼絲輪時穿戴工作手套。它們會變得十分鋒利。



小心:如需降低工具、砂輪或刷子損壞的風險,不得在安裝或使用時觸碰防護罩。當將 A 型(切割)或 B 型(研磨)砂輪防護罩於圓形鋼絲刷搭配使用時,而且該圓形鋼絲刷的厚度超過配件和防護罩應用表規定的厚度,那麼其鋼絲可能會刮到防護罩,導致鋼絲斷裂。

圓形鋼絲刷或鋼絲輪可直接安裝在螺紋主軸上,無需使用鎖定法蘭。僅使用帶有螺紋輪殼的鋼絲刷或鋼絲輪 M14。您需要支付額外費用,向當地的 DeWALT 經銷商或授權 DeWALT 服務中心購買這些配件。

1. 請將工具置於直面上並將防護罩朝上。
2. 手動將砂輪旋上主軸 **3**。
3. 按壓主軸鎖鈕 **2** 並用扳手旋轉鋼絲輪或鋼絲刷的輪殼,將砂輪擰緊。
4. 如需拆除砂輪,請按照以上步驟逆向操作即可。

注意:為降低工具損壞的風險,請先脫焊安裝砂輪輪殼,再啟動工具。

操作之前

- 安裝防護罩和合適的砂盤或砂輪。請勿使用過度磨損的砂盤或砂輪。
- 請確保正確安裝螺紋鎖定法蘭。請按照**配件和防護罩應用表**的說明進行操作。
- 請確保砂盤或砂輪能夠按照配件和工具上標出的箭頭方向轉動。

- 請勿使用已經損壞的配件。每次使用前,請進行檢查,例如砂輪傷有無碎屑或裂痕,襯墊傷有無裂痕、拉扯或過度磨損、鋼絲刷是否存在掉絲或開裂的情況。如果電動工具或配件掉落,請檢查其損壞情況或重新安裝一個完好無損的配件。在檢查並安裝好配件後,請讓自己和圍觀人員遠離轉動配件的平面,然後讓工具達到最大無負荷轉速並持續一分鐘。受損配件一般會在這種測試時破碎。

操作

使用說明



警告:務必遵守安全指示和適用的規則。



警告:為了降低造成嚴重人身傷害的風險,在進行任何調整,卸下或安裝配或附件之前,切記關掉工具的電源並取出電池組。意外啟動工具可能會造成傷害。

正確的雙手放置位置(圖 K)



警告:為降低嚴重人身傷害的風險,請務必如圖所示,正確放置雙手。



警告:為降低造成嚴重人身傷害的風險,在預期有突然反作用力時務必握緊工具。

正確的雙手放置位置要求一手握住主手柄 **23**,一手握住輔助手柄 **4**,如圖 K 所示。

開關



小心:請在啟動時和使用過程中,用力握緊輔助手柄和工具主體,牢牢控制住工具,直到砂輪或配件完全停止轉動為止。請確保砂輪完全停止,再將工具放下。

注意:為減少工具的意外移動,請勿在工具承受負載的情況下啟動或關閉工具。先讓研磨機達到全速運行的狀態,再將其解除工件表面。先將工具從工件表面抬起,再關閉工具。請先等待砂輪完全停止,再將工具放下。

滑塊開關(圖 A)

DCG409VS



警告:在為工具接通電源前,請先確保滑塊開關處於關閉位置。在工具電源出現任何中斷後,例如觸發接地故障斷路器、跳閘、電源插頭意外脫落或停電,請確保滑塊開關處於關閉位置。如果為工具接通電源時,滑塊開關被鎖定在開啟位置,那麼工具會意外啟動。

如需啟動工具,請向前推動滑塊開關 **1**。如需關閉工具,請鬆開滑塊開關。

如需持續操作,請向前推動開關並按壓開關的前半部分。如需關閉處於連續模式的工具,請按壓滑塊開關的後半部分並鬆開。

可調速轉盤(圖 A)

可調速轉盤 **9** 將讓您更好地控制工具並讓工具達到最優狀態,與配件和材料完美配合。

- 將可調速轉盤 **9** 調整到理想設定。向上撥動轉盤,獲得理想轉速。

主軸鎖(圖 A)

工具帶有主軸鎖按鈕 **2**，以防止在安裝或拆除砂輪時，主軸轉動。僅在關閉工具，拆除電池且工具完全停止的情況下，才可操作主軸鎖。

注意：為降低工具損壞的風險，請勿在工具運行時接合主軸鎖。這會損壞工具，而且安裝的配件會脫落，造成人身傷害。如需接合主軸鎖，請按壓主軸鎖按鈕並將主軸轉動到底。

表面研磨、打磨和刷光(圖 L)

小心：務必根據本手冊的說明，使用合適的防護罩。

如需在工件表面進行作業：

1. 先讓工具全速運轉，再讓其接觸工件表面。
2. 向工件表面施加最小壓力，讓工具能夠高速運行。當工具高速轉動時，才能達到最高的物料移除率。
3. 請在工具和工件表面之間維持適當的夾角。請參閱圖表，了解特定功能。

| 功能 | 角度 \angle |
|---------|-------------|
| 研磨 | 20°-30° |
| 用平面砂輪打磨 | 5°-10° |
| 用襯墊打磨 | 5°-15° |
| 刷光 | 5°-10° |

4. 請讓砂輪邊緣與工件表面保持接觸。
 - 如果進行研磨、用平面砂輪打磨或刷光操作，請不斷沿前後方向移動工具，避免在工件表面形成凹槽。
 - 如果使用襯墊打磨，請不斷沿直線移動工具，防止灼燒和工件表面出現轉動。

注意：如讓工具置於工件表面且不移動，將會損壞工件。

5. 先將工具從工件表面抬起，再關閉工具。請先等待工具完全停止，再將工具放下。

小心：當處理邊緣時，請多加小心，研磨機可能會出現突然、劇烈的移動。

在處理塗漆工件時需要採取的防護措施

1. 不建議對鉛基塗料進行打磨或刷光操作，因為很難控制操作過程中產生的有害粉塵。鉛中毒對兒童和孕婦的危險最大。
2. 如果不進行化學分析，就難以鑒別油漆中是否含鉛。因此，我們在工作任何塗料時都要採取以下防護措施：

人身安全

1. 兒童或孕婦不得進入打磨或刷光塗料的工作區域，直到完成所有清潔工作為止。
2. 所有進入工作區域的人員都應佩戴防護面具或呼吸機。應每日更換過濾器，或只要佩戴者感覺難以呼吸，就要更換過濾器。**注意：**只應使用能夠過濾鉛基塗料粉塵的防護面罩。不同的塗料面罩無法提供相應保護。請諮詢當地硬件經銷商，購買獲得批准的合適面罩。

3. 不得在工作區域就餐、喝水或抽煙，以防吸入被污染的塗料顆粒。工作人員應先進行徹底清洗，再就餐、喝水或抽煙。不得將餐飲或抽煙的相關物品留在工作區域，否則粉塵會落在這些物品上。

環境安全

1. 移除油漆時應將產生的塵埃量減到最少。
2. 移除油漆的區域應使用 4 公釐厚的塑料片密封。
3. 打磨時應儘量減少工作區域外油漆粉塵的痕跡。

清潔和處理

1. 在執行打磨作業期間，應每天對工作區域中所有表面進行真空清掃和徹底清潔。應經常更換真空過濾袋。
2. 滴塑布應該與塵埃或其他碎片收集在一起並處理。應該將它們放入密封的垃圾容器內，並透過常規垃圾收集程序進行處理。清理期間，兒童和孕婦應該遠離工作區域。
3. 所有玩具、可清洗之家具及兒童用具應徹底清洗，然後再使用。

邊緣打磨和切割(圖 M)

警告：請勿將邊緣打磨/切割砂輪用於表面打磨，因為這些砂輪的設計無法承受表面打磨所遇到的側壓力。可能導致砂輪斷裂和人身傷害。

小心：若在使用工具時用來邊緣打磨和切割的砂輪出現彎曲或扭曲，則可能發生碎裂或反衝。在所有邊緣打磨/切割操作中，防護罩開口側不得朝向操作人員。

注意：使用 27 號砂輪的邊緣打磨/切割範圍必須限制為淺挖和開槽——新砂輪的深度小於 13 公釐。隨著砂輪磨損，砂輪半徑會縮短，切割/開槽深度也會減小。如需詳細資訊，請參閱**配件和防護罩應用表**。使用 41 號砂輪進行邊緣打磨/切割需要使用 1 號防護罩。

1. 先讓工具全速運轉，再讓其接觸工件表面。
2. 向工件表面施加最小壓力，讓工具能夠高速運行。當工具高速轉動時，打磨/切割率最大。
3. 請勿讓自己處於砂輪開口的下側。
4. 一旦開始切割並在工件留下缺口，請勿改變切割角度。改變角度會造成砂輪彎曲並可能導致砂輪斷裂。邊緣打磨砂輪的設計無法承受彎曲造成的側壓力。
5. 先將工具從工件表面抬起，再關閉工具。請先等待工具完全停止，再將工具放下。

切割金屬

若要使用固結研磨砂輪切割，請務必使用 A 型防護罩。

切割時，使用適量的進料，並根據被切割材料做出相應調整。請勿向切割盤施壓，使機器傾斜或擺動。

請勿透過施加側向壓力來降低切割盤的轉速。

機器必須始終以逆向研磨的方式運轉。否則，它就有被推出切割位置並失控的危險。

切割型材和方棒時，最好從最小橫截面開始切割。

維護

工具採用卓越的設計，只需簡單保養，即可長期使用。若要維持理想性能，需進行正確維護並定期清潔。

警告：為降低嚴重人身傷害的風險，在進行任何調整或卸下或安裝配件或附件之前，切記關掉工具的電源並取出電池組。意外啟動工具可能會造成傷害。

充電器和電池組不可維修。



潤滑

本電動工具毋需額外潤滑。



清潔



警告：一旦通風口及其周圍積聚可見的粉塵，請立即使用乾燥的壓縮空氣吹掃主機外殼內的粉塵和灰塵。執行此步驟時，請佩戴經認可的護目裝備和防塵面罩。



警告：不得使用溶劑或其他刺激性化學製品來清潔工具的非金屬部件。這些化學品可能會削弱這些部位使用的材料。請用布蘸溫和的肥皂水擦拭。不得讓任何液體滲入工具，不得讓工具的任何部件浸在液體中。

可選配件



警告：由於配件（除DEWALT提供的配件外）尚未與本產品一同接受測試，所以將這些配件與該工具搭配使用會產生危險。為降低受傷風險，僅可將DEWALT推薦的配件與本產品搭配使用。

請諮詢經銷商，了解有關適當配件的更多資訊。

該工具能夠安裝直徑 125 公釐 x 厚度 6 公釐的研磨或切割砂輪。請選用可與研磨配件搭配使用的合適的防護罩、襯墊和法蘭。請參閱**配件和防護罩應用表**，了解選擇合適配件的更多信息。



警告：配件的額定速度至少要達到工具警告標籤上給出的建議速度。如果砂輪和其他配件的轉速超過其額定速度，就可能飛出，導致人身傷害。螺紋配件必須有一個 M14 輪轂。每個螺紋配件必須有一個 22 公釐的心軸孔。如果沒有，那麼它可能適用於圓鋸。僅使用本手冊中**配件和防護罩應用**展示的配件。配件額定速率必須始終高於工具銘牌上給出的速率。



警告：請小心使用和存放研磨砂輪，防止其因熱衝擊、高溫、機械損壞而被損壞。請將工具存放在乾燥、安全處，避免濕度過高、低溫或極端溫度變化。

| | 最大 | | 最低轉速 | 圓周速度 | 螺紋孔長度 | |
|--|------|------|-------|-----------------------|-------|------|
| | [mm] | [mm] | | | | [mm] |
| | D | b | d | [min. ⁻¹] | [m/s] | [mm] |
| | 125 | 6 | 22.23 | 10500 | 80 | - |
| | 125 | - | - | 10500 | 80 | - |

Tool Connect™ 芯片 (圖 N)



警告：為降低嚴重人身傷害的風險，在進行任何調整或卸下/安裝附件或配件之前，切記關掉工具的電源並取出電池組。意外啟動工具可能會造成傷害。

您的工具已經帶有 Tool Connect™ 芯片，而且預留了安裝該芯片的位置。

Tool Connect™ 芯片是您的智能設備（例如只能手機或平板電腦）的一種可選應用。它可讓設備聯網，使用移動應用程序，以便進行庫存管理。

請參閱**Tool Connect™ 芯片說明表**，了解更多資訊。

安裝 Tool Connect™ 芯片

- 拆下將 Tool Connect™ 芯片保護蓋 **21** 固定在工具上的固定螺釘 **20**。
- 拆下保防護罩，將 Tool Connect™ 芯片插入空槽中 **22** 中。
- 確保 Tool Connect™ 芯片與防護罩齊平。用固定螺釘將其固定並擰緊螺釘。
- 請參閱**Tool Connect™ 芯片說明表**，查看更多說明。

保護環境



分類回收。帶有此標誌的產品和電池必須與一般家庭廢物分開處置。

產品和電池包含可重複使用或回收的材料，可降低對原材料的需求。請根據當地法規回收電氣產品和電池。更多資訊，請造訪 www.2helpU.com

可充電的電池組

本電池組使用壽命長，當不能提供順利完成工作所需的電力時，必須進行充電。電池技術壽命結束時，請妥善處理以保護環境：

- 耗盡電池組的電力，然後將其從工具上拆下。
- 鋰電池是可回收的。請將它們送往您的經銷商處或當地的回收站。回收的電池組將被妥善循環使用或處理。

售後服務和維修

DEWALT 服務中心均配有訓練有素的工作人員，能為顧客提供高效、可靠的電動工具服務。如果您通過未獲授權的維修中心進行維修，我們不會承擔任何責任。您可參閱產品包裝中的“聯繫中心定位器”宣傳單頁，通過熱線電話、網站或社交媒體聯繫我們，找到距離您最近的 DEWALT 服務中心。

進口商:新加坡商百得電動工具(股)公司台灣分公司

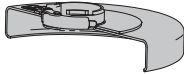
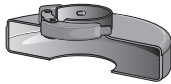
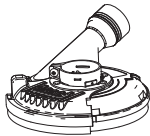
地址:台北市士林區德行西路33號2樓

電話:02-28341741

總經銷商:永安實業股份有限公司

地址:新北市三重區新北大道二段137號

服務電話:02-29994633

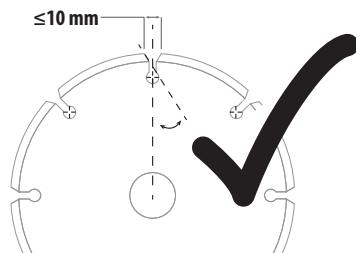
| B型(研磨) | A型(封閉切割) | E型(金剛石表面研磨砂輪防護罩) |
|---|---|---|
|  |  |  |

! A型(41號)防護罩僅適合與41號(1A)切割砂輪和用於切割的42號(27A)砂輪搭配使用。使用非27號和29號砂輪進行研磨需要加裝不同的配件防護罩。務必使用合適且尺寸最小的防護罩，使其避免與配件接觸。

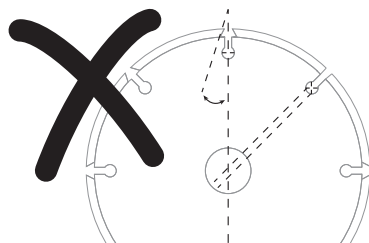
注意:A型(切割)和B型(研磨)砂輪防護罩，之前被稱為1號和27號砂輪防護罩。

適用於防護罩和配件的指南 DCG409VS

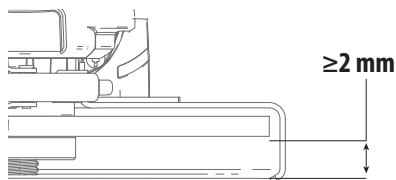
如要使用拼合金剛石砂輪，請僅使用周邊間隙不超過10公釐且帶有負傾角的金剛石砂輪。



請勿使用
周邊間隙大於10公釐和/或帶有正傾角的拼合金剛石砂輪。



對於所有的研磨、打磨和砂輪型刷光配件，配件的最低部分必須被包含在防護罩內，而且與防護罩下層板之間的間隙要大於等於2公釐。




DCG409VS 配件和防護罩應用

| | 配件類型 | 配件 | 防護罩 | 正確安裝 |
|------|---------------------|---|---|---|
| 表面研磨 | 27 號砂輪 |  |  B 型 (研磨) |  1 |
| | 29 號砂輪 |  |  B 型 (研磨) |  1 |
| | 金剛石研磨砂輪 (磚石/混凝土) |  |  E 型 (金剛石表面研磨砂輪防 護罩) |  3 |

¹ 最大砂輪厚度, 6 mm¹ 最大砂輪厚度, 6 mm³ 您需要支付額外費用, 向當地 DeWALT 經銷商或授權 DeWALT 服務中心購買 E 型防護罩。

| | 配件類型 | 配件 | 防護罩 | 正確安裝 |
|------------|---------------------------------|----|--|------|
| 切割 | 41 號砂輪 (1A) (金屬) | | A 型 (封閉切割) | |
| | 42 型砂輪 (27A) (金屬) | | A 型或 F 型 (封閉切割或磚石/混凝土切割砂輪防護罩) | |
| | 41 號砂輪 (1A) (磚石/混凝土) | | A 型或 F 型 (封閉切割或磚石/混凝土切割砂輪防護罩) | |
| | 金剛石切割砂輪 (金屬) | | A 型 (封閉切割) | 4 |
| | 金剛石切割砂輪 (磚石/混凝土) | | A 型 (封閉切割) | 4 |
| | 適用於除金屬或磚石/混凝土以外材料的研磨砂輪 | | A 型 (封閉切割) | |
| 兩用 (切割和研磨) | 兩用研磨砂輪 | | A 型 (封閉切割) | 1 |
| | | | 1 最大砂輪厚度, 6 mm | |
| 打磨 | 柔性研磨 (例如, 砂紙) (由柔性襯墊提供支撐) | | 無需防護罩 | 6 |
| | | | 6 您需要支付額外費用, 向當地 DeWALT 經銷商或授權 DeWALT 服務中心購買橡膠襯墊和打磨夾緊螺母 (與橡膠襯墊一同提供)。 | |

適用於防護罩和配件的指南 DCG409VS

| | | |
|----------------------|---|---|
| 面向 DCG409VS 的未經批准的砂輪 | 11 / T11號 |  |
| 輪殼砂輪扳手 | 您需要支付額外費用向當地 DEWALT 經銷商或授權 DEWALT 服務中心購買輪殼砂輪扳手。 |  |

