
DEWALT®

XR LI-ION

www.DEWALT.com

DCG405F

English (*original instructions*)

3

简体中文

19

Fig. A
图 A

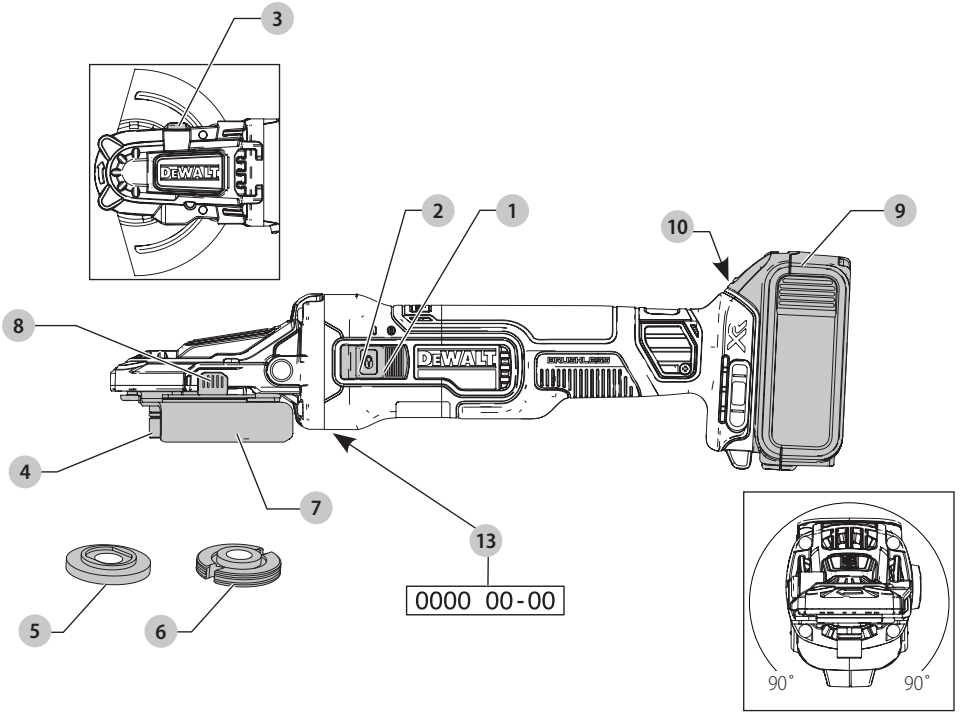


Fig. B
B

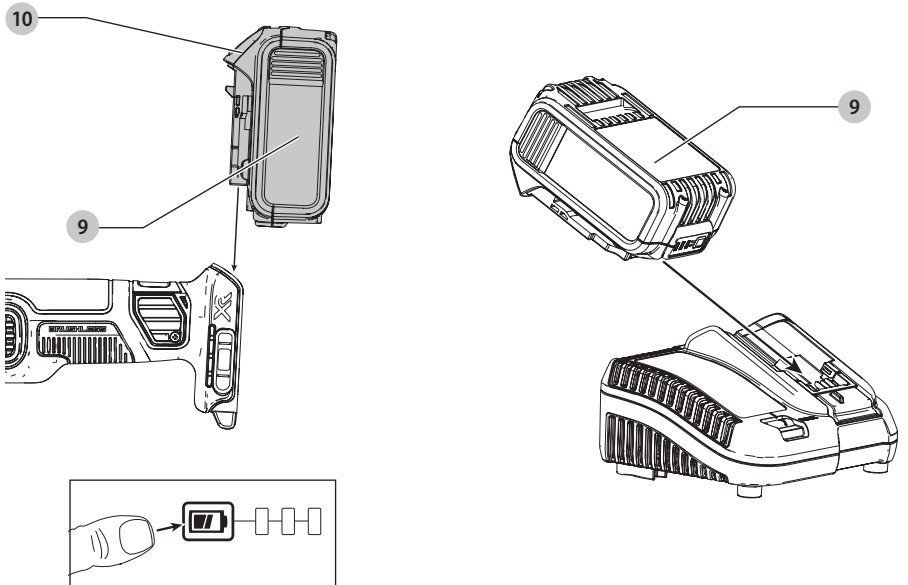


Fig. C
图 C

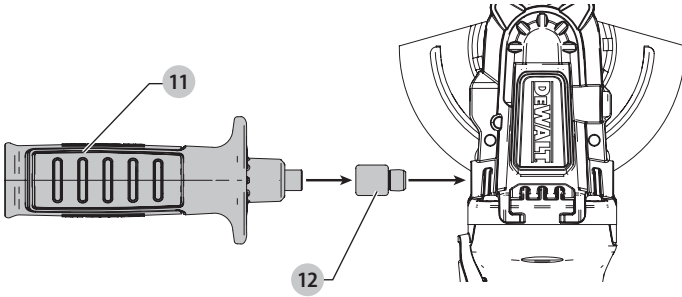


Fig. D
图 D

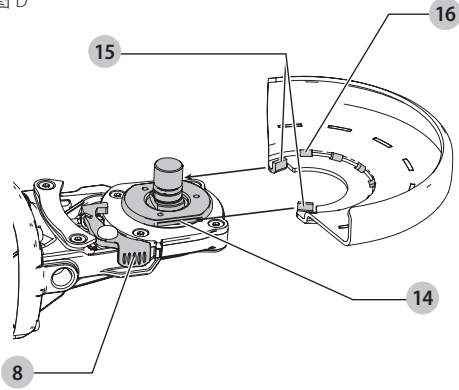


Fig. E
图 E

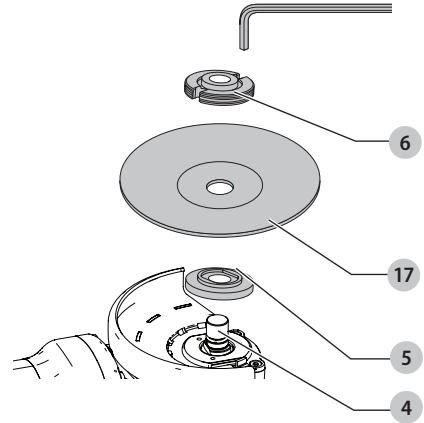


Fig. F
图 F

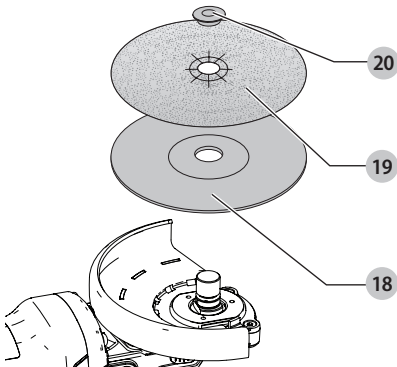
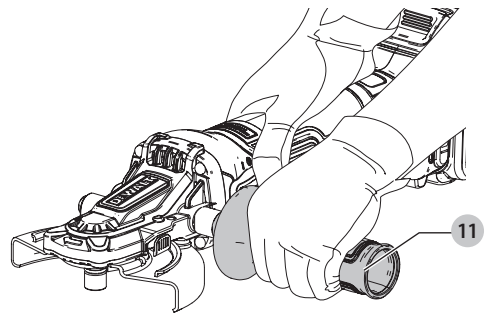


Fig. G
图 G



CORDLESS SMALL ANGLE FLAT-HEAD GRINDER

DCG405F

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

		DCG405F
Voltage	V _{DC}	18(20 Max)
Battery type		Li-Ion
No-load/rated speed	min ⁻¹	9000
Wheel diameter	mm	125
Wheel thickness (max)	mm	6
Spindle diameter		M14
Spindle length	mm	16
Weight (without battery pack)	kg	1.8



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

Batteries				Chargers / Charge Times (Minutes)***						
Cat#	V _{dc}	Ah	Weight(kg)	DCB104	DCB107	DCB112 DCB1102	DCB115 DCB1104	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/DCB609G	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/DCB184G/DCB205	18 (20 Max)	5.0	0.62	75/50**	240	150	75	75/50**	75/50**	75
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
DCBP520	18 (20 Max)	5.0	0.75	75/50**	240	150	75	75/50**	75/50**	75

*Date code 201811475B or later

**Date code 201536 or later

***Battery charge times matrix provided for guidance only; charge times will vary depending on temperature and condition of batteries.

switch or energising power tools that have the switch on invites accidents.

- d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- h) **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

- a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

- c) **Disconnect the plug from the power source and/or 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.
- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e) **Maintain power tools 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.
- d) **The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool.** Accessories running faster than their rated speed can break and fly apart.
- e) **The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool.** Incorrectly sized accessories can not be adequately guarded or controlled.
- f) **Threaded mounting of accessories must match the grinder spindle thread. For accessories mounted by flanges, the arbour hole of the accessory must fit the locating diameter of the flange.** Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- g) **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheel for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.** Damaged accessories will normally break apart during this test time.
- h) **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of protecting small abrasive or workpiece fragments.** The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.

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 authorised service providers.
- i) **Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.** Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
- j) **Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting tool may contact hidden wiring.** Contact with a "live" wire will also make exposed metal parts of the power tool "live" and could give the operator an electrical shock.
- k) **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.
- l) **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.

ADDITIONAL SPECIFIC SAFETY RULES

Safety Instructions for All Operations

- a) **This power tool is intended to function as a grinder, sander, 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 are not recommended 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 use accessories which are not specifically designed and recommended by the tool manufacturer.** Just because the accessory can be attached to your power tool, it does not assure safe operation.

- m) **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.
- n) **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
- o) **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

Causes and Operator Prevention of Kickback

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

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

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:

- a) **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up.** The operator can control torque 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 or toothed saw blade.** Such blades create frequent kickback and loss of control.

Safety Warnings Specific for Grinding and Abrasive Cutting-Off Operations

- a) **Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel.** Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.
- b) **The grinding surface of centre depressed wheels must be mounted below the plane of the guard lip.** An improperly mounted wheel that projects through the plane of the guard lip cannot be adequately protected.
- c) **The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator.** The guard helps to protect the operator from broken wheel fragments and accidental contact with wheel and sparks that could ignite clothing.
- d) **Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel.** Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
- e) **Always use undamaged wheel flanges that are of correct size and shape for your selected wheel. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage.** Flanges for cut-off wheels may be different from grinding wheel flanges.
- f) **Do not use worn down wheels from larger power tools.** Wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.

Additional Safety Warnings Specific for Abrasive Cutting-Off Operations

- a) **Do not "jam" the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut.** Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.
- b) **Do not position your body in line with and behind the rotating wheel.** When the wheel, at the point of 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 the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur.** Investigate and take corrective action to eliminate the cause of wheel binding.
- d) **Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut.** The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.

- e) **Support panels or any oversized workpiece to minimise 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.

Safety Warnings Specific for Sanding Operations

- a) **Do not use excessively oversized sanding disc paper. Follow manufacturer’s recommendations, when selecting sanding paper.** Larger sanding paper extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback.

Safety Warnings Specific 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 recommended 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.

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.

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 by a specially prepared cord available through the DeWALT 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.

SAVE THESE INSTRUCTIONS

Chargers

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

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)

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

1. Plug the charger into an appropriate outlet before inserting battery pack.
2. Insert the battery pack  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 Stage 1 charging blink indicator represents the charge process that charges the majority of the battery's capacity. Stage 2 charging blink indicator represents the remainder, or top off charge process, for the battery to reach full capacity.
4. The completion of charge for Stage 1 or Stage 2 will be indicated by the stage's light remaining ON continuously. The battery pack is fully charged when both Stage 1 and Stage 2 charging lights remain ON continuously, and it may be removed and used at this time or left in the charger.

NOTE: To remove the battery pack, some chargers require the battery pack release button  to be pressed.

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

Indicators			
	Stage 1 Charging		
	Stage 2 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 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.

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 Whr.

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.

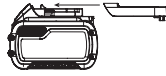
The information provided in this section of the manual is provided in good faith and believed to be accurate at the time the document was created. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with the applicable regulations.

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

Example of Use and Transport Label Marking



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.



LI-ION

Discard the battery pack with due care for the environment.



Charge DEWALT 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 DCG405F operates on a 18V(20V Max) battery pack.

Refer to **Technical Data** for battery information.

Package Contents

The package contains:

- 1 Angle grinder
- 1 Guard
- 1 Side handle
- 1 Backing flange
- 1 Locking flange
- 1 Li-Ion battery pack (C1, D1, L1, M1, P1, S1, T1, X1, E1, H1 models)
- 2 Li-Ion battery packs (C2, D2, L2, M2, P2, S2, T2, X2, E2, H2 models)
- 3 Li-Ion battery packs (C3, D3, L3, M3, P3, S3, T3, X3, E3, H3 models)
- 1 Instruction manual
 - 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 pictographs are shown on the tool:



Read instruction manual before use.



Wear ear protection.



Wear eye protection.

Date Code Position (Fig. A)

The date code **13**, which also includes the year of manufacture, is printed into the housing.

Example:

XXXX XX XX

Year of Manufacture

Description (Fig. A)



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

- 1 Slider switch
- 2 Lock-off lever
- 3 Spindle lock button
- 4 Spindle
- 5 Backing flange
- 6 Locking flange
- 7 Guard
- 8 Guard release lever
- 9 Battery pack
- 10 Battery release button

Intended Use

Your cordless angle grinder has been designed for professional cutting, grinding, sanding and wire brush applications.

DO NOT use grinding wheels other than centre depressed wheels and flap discs.

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

Your 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.

Features

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 will need to be released then depressed 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.

Anti-vibration Side Handle

The anti-vibration side handle offers added comfort by absorbing the vibrations caused by the tool.

Soft Start Feature

The soft start feature allows a slow speed build-up to avoid an initial jerk when starting. This feature is particularly useful when working in confined spaces.

No-Volt

The No-volt function stops the grinder restarting without the switch being cycled if there is a break in the power supply.

Electronic Clutch

The electronic torque limiting clutch reduces the maximum torque reaction transmitted to the operator in case of jamming of a disc. This feature also prevents the gearing and electric motor from stalling. The torque limiting clutch has been factory-set and cannot be adjusted.

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.

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

NOTE: Make sure your battery pack **9** is fully charged.

To Install the Battery Pack into the Tool Handle

1. Align the battery pack **9** 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 release button **10** 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. 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 Side Handle (Fig. C)



WARNING: Before using the tool, check that the handle is tightened securely.

Screw the side handle adapter **12** into one of the holes on either side of the gear case, then screw the side handle **11** into the adapter. **The adapter MUST be used together with the side handle.** If the adapter is missing, stop using the tool, find a nearest DEWALT service centre for a new adaptor. The side handle should always be used to maintain control of the tool at all times.

Rotating the Gear Case (Fig. A)

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 3.17 mm, the tool must be serviced and re-assembled by a DEWALT service centre. 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 12.5 in.-lbs. 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 authorized service centre.

NOTE: Edge grinding and cutting can be performed with Type 27 wheels designed and specified for this purpose; 6.35 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 1 guard must be used for any wheel where surface grinding is forbidden. Cutting can also be performed by using a Type 41 wheel and a Type 1 guard.

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

Adjusting and Mounting Guard (Fig. D)



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.

Adjustment Options

For guard adjustment, the guard release lever **8** engages one of the alignment holes **16** on the guard collar using a ratcheting feature.

Mounting Guard (Fig. D)



CAUTION: Prior to mounting guard, ensure the screw, lever, and spring are fitted correctly before mounting the guard.

1. With the spindle facing the operator, align the guard parallel to the mounting slot **14** in gearcase.
2. Slide the guard into the mounting slot with the guard tabs **15** riding along the 2 flat sides of the collar just above the mounting slot.
3. Press and hold the guard release lever **8** and rotate the guard around until the lever engages one of the alignment holes **16**.
4. Release the guard release lever.
5. To position the guard:

Press and hold the guard release lever **8**. Rotate the guard clockwise or anti-clockwise into the desired working position.

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 **16** on the guard collar. This ensures that the guard is secure.

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

Flanges and Wheels

Mounting Non-Hubbed Wheels (Fig. E)



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 and Type 42 grinding wheels and Type 41 cutting wheels. See the **Accessory Chart** for more information.



WARNING: A closed, two-sided cutting wheel guard is required when using cutting wheels.



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. See the **Accessory Chart** for more information.

Depressed centre Type 27 grinding wheels must be used with included flanges. Refer to **Accessory Chart** for more information.

1. Install the backing flange **5** on spindle **4** with the raised section (pilot) against the wheel. Be sure the backing flange recess is seated onto the flats of the spindle by pushing and twisting the flange before placing wheel.
2. Place wheel **17** against the backing flange, centring the wheel on the raised section (pilot) of the backing flange.
3. While depressing the spindle lock button, thread the locking flange **5** on spindle. If the wheel you are installing is more than 3.31 mm thick, place the locking flange on the spindle so that the raised section (pilot) fits into the centre of the wheel. If the wheel you are installing is 3.31 mm thick or

less, place the locking flange on the spindle so that the raised section (pilot) is not against the wheel.

- While depressing the spindle lock button, tighten the locking flange **6** by hand or using the wrench supplied. (Only use a locking flange if it is in perfect condition.) Refer to **Accessory Chart** to see flange details.
- To remove the wheel, depress the spindle lock button and loosen the locking flange with a wrench.

3.31 mm WHEELS >



Locking Flange



Backing Flange

3.31 mm WHEELS <



Locking Flange



Backing Flange

NOTE: If the wheel spins after the locking flange is tightened, check the orientation of the locking flange. If a thin wheel is installed with the pilot on the locking flange toward the wheel, it will spin because the height of the pilot prevents the locking flange from holding the wheel.

Mounting Sanding Backing Pads (Fig. A, F)

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 flange/ clamp nut/ wheel 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.

- Place or appropriately thread backing pad **18** on the spindle.
- Place the sanding disc **19** on the backing pad **18**.
- While depressing the spindle lock button **3**, thread the clamp nut **20** on the spindle, piloting the raised hub on the clamp nut into the centre of sanding disc and backing pad.
- 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.
- To remove the wheel, grasp and turn the backing pad and sanding pad while depressing the spindle lock button.

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



WARNING: Failure to properly seat the flange/ clamp nut/ 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. Undetectable damage could occur to

the accessory, causing wires to fragment from accessory wheel or cup.

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

- Place the tool on a table, guard up.
- Thread the wheel on the spindle by hand.
- Depress the spindle lock button **3** and use a wrench on the hub of the wire wheel or brush to tighten the wheel.
- 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 backing and locking flange are mounted correctly. Follow the instructions given in the **Accessory 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.



WARNING:

- Ensure all materials to be ground or cut are secured in place.
- Secure and support the workpiece. Use clamps or a vice to hold and support the workpiece to a stable platform. It is important to clamp and support the workpiece securely to prevent movement of the workpiece and loss of control. Movement of the workpiece or loss of control may create a hazard and cause personal injury.
- 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.

- Always wear regular working gloves while operating this tool.
- The gear becomes very hot during use.
- Apply only a gentle pressure to the tool. Do not exert side pressure on the disc.
- Always install the guard and appropriate disc or wheel. Do not use excessively worn disc or wheel.
- Be sure the inner and outer flange are mounted correctly.
- Make sure the disc or wheel rotates in the direction of the arrows on the accessory and the tool.
- Avoid overloading. Should the tool become hot, let it run a few minutes under no load condition to cool the accessory. Do not touch accessories before they have cooled. The discs become very hot during use.
- Never work with the grinding cup without a suitable protection guard in place.
- Do not use the power tool with a cut-off stand.
- Never use blotters together with bonded abrasive products.
- Be aware, the wheel continues to rotate after the tools is switched off.

Proper Hand Position (Fig. G)

! **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 side handle **11**, with the other hand on the body of the tool, as shown in Figure G.

Slider Switch (Fig. A)

! **CAUTION:** Hold the side 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.

! **WARNING:** Before inserting the battery pack into the tool, be sure the slider switch is in the off position by pressing the rear part of the switch and releasing. Ensure the slider switch is in the off position as described above after any interruption in power. 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.

Spindle Lock Button (Fig. A)

The spindle lock button **3** is provided to prevent the spindle from rotating when installing or removing wheels. Operate the spindle lock only when the tool is turned off, unplugged from the power supply, 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.

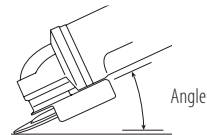
To engage the lock, depress the spindle lock button and rotate the spindle until you are unable to rotate the spindle further.

Surface Grinding, Sanding and Wire Brushing

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

To perform work on a 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
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 work piece.

- 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

- 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.
- 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

- 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.
- 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 NIOSH-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

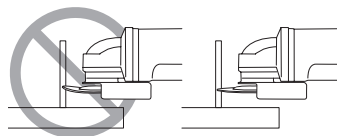
- All surfaces in the work area should be vacuumed and thoroughly cleaned daily for the duration of the sanding project. Vacuum filter bags should be changed frequently.
- Plastic drop cloths should be gathered up and disposed of along with any dust chips or other removal debris. They should be placed 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

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 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 guard type 1.

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.

Rough Grinding

Never use a cutting disc for roughing. Always use the guard type 27.

The best roughing results are achieved when setting the machine at an angle of 30° to 40°. Move the machine back and forth with moderate pressure. In this manner, the workpiece will not become too hot, does not discolour and no grooves are formed.

Cutting Stone

The machine shall be used only for dry cutting.

For cutting stone, it is best to use a diamond cutting disc.
Operate the machine only with additional dust protection mask.

Working Advice

Exercise caution when cutting slots in structural walls.

Slots in structural walls are subject to the country-specific regulations. These regulations are to be observed under all circumstances. Before beginning work, consult the responsible structural engineer, architect or the construction supervisor.

MAINTENANCE

Your DEWALT 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.



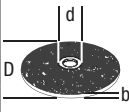
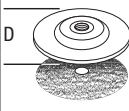
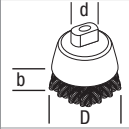
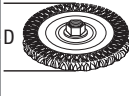
WARNING: Never use solvents or other harsh chemicals for cleaning the non-metallic parts of the tool. These chemicals may weaken the materials used in these parts. Use a cloth dampened only with water and mild soap. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

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.

	Max. [mm]		[mm]	Min. Rotation [min. ⁻¹]	Peripheral speed [m/s]	Threaded hole length [mm]
	D	b	d			
	115	6	22,23	11 500	80	–
	125	6	22,23	11 500	80	–
	150	6	22,23	9 300	80	–
	115	–	–	11 500	80	–
	125	–	–	11 500	80	–
	75	30	M14	11 500	45	20.0
	115	12	M14	11 500	80	20.0
	125	12	M14	11 500	80	20.0

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




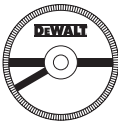



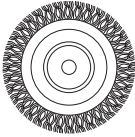

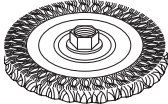





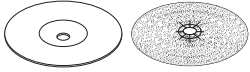

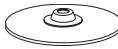


This long life battery pack must be replaced when it fails to produce sufficient power on jobs that were easily done before. At the end of its technical life, discard it with due care for our environment:

- 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.

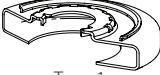
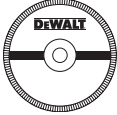
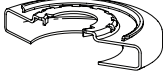




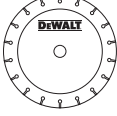


After Service and Repair

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.

Accessory Chart

Guard Type	Accessory	Description	How to Fit Grinder
 <p>Type 27 Guard</p>		Depressed centre grinding disc	 <p>Type 27 guard</p>
		Flap wheel	 <p>Backing flange</p>   <p>Type 27 depressed centre wheel</p>
		Wire wheels	 <p>Locking flange</p>
		Wire wheels with threaded nut	 <p>Type 27 guard</p>  <p>Wire wheel</p>
		Wire cup with threaded nut	 <p>Type 27 guard</p>  <p>Wire brush</p>
		Backing pad/ sanding sheet	 <p>Type 27 guard</p>  <p>Rubber backing pad</p>  <p>Sanding disc</p>  <p>Clamp nut</p>

Accessory Chart (cont.)

Guard Type	Accessory	Description	How to Fit Grinder
 <p>Type 1 Guard</p>		<p>Masonry cutting disc, bonded</p>	 <p>Type 1 guard</p>
		<p>Metal cutting disc, bonded</p>	 <p>Backing flange</p>
 <p>Type 1 Guard OR</p>  <p>Type 27 Guard</p>		<p>Diamond cutting wheels</p>	 <p>Cutting wheel</p>  <p>Locking flange</p>

锂电无刷角磨机

DCG405F

恭喜!

您选择了本款DEWALT工具。凭借多年的产品开发和创新能力，DEWALT已经成为专业电动工具用户最可靠的合作伙伴之一。

技术数据

		DCG405F
电压	V_{DC}	18 (最大20)
电池类型		Li-Ion
空载转速	min^{-1}	9000
转轮直径	mm	125
转轮厚度(最大值)	mm	6
主轴螺纹		M14
主轴长度	mm	16
重量(不含电池包)	kg	1.8



警告:为降低伤害风险,请阅读使用手册。

定义:安全指南

下列定义描述了各标志术语的严重程度。请仔细阅读本手册,并注意以下标志。



危险:表示存在紧急危险情况,如果不加以避免,将导致死亡或严重伤害。



警告:表示存在潜在的危险情况,如果不加以避免,可能导致死亡或严重伤害。



小心:表示存在潜在危险情况,如果不加以避免,可能导致轻度或中度伤害。



注意:表示存在不涉及人身伤害的情况,如果不加以避免,可能导致财产损失。



表示存在触电风险。



表示存在火灾风险。

电动工具通用安全警告



警告:请阅读本电动工具随附的所有安全警告、说明、图示和规定。未能遵照以下所列说明会导致电击、火灾和/或严重伤害。

保存所有警告和说明书以备查阅。

警告中的术语“电动工具”指市电驱动(有线)电动工具或电池驱动(无线)电动工具。

1) 工作场地的安全

- 保持工作场地清洁和明亮。杂乱和黑暗的场地会引发事故。

- 不要在易爆环境,如有易燃液体、气体或粉尘的环境下操作电动工具。电动工具产生的火花会点燃粉尘或气体。

- 操作电动工具时,远离儿童和旁观者。注意力不集中会使你失去对工具的控制。

2) 电气安全

- 电动工具插头必须与插座相配。绝不能以任何方式改装插头。需接地的电动工具不能使用任何转换插头。未经改装的插头和相配的插座将降低电击风险。

- 避免人体接触接地表面,如管道、散热片和冰箱。如果你身体接触接地表面会增加电击风险。

- 不得将电动工具暴露在雨中或潮湿环境中。水进入电动工具将增加电击风险。

- 不得滥用电源线。绝不能用电源线搬运、拉动电动工具或拔出其插头。使电源线远离热源、油、锐边或运动部件。受损或缠绕的电源线会增加电击风险。

- 当在户外使用电动工具时,使用适合户外使用的延长线。适合户外使用的电线将降低电击风险。

- 如果无法避免在潮湿环境中操作电动工具,应使用带有剩余电流装置(RCD)保护的电源。RCD的使用可降低电击风险。

3) 人身安全

- 保持警觉,当操作电动工具时关注所从事的操作并保持清醒。当你感到疲倦,或在有药物、酒精或治疗反应时,不要操作电动工具。在操作电动工具时瞬间的疏忽会导致严重人身伤害。

- 使用个人防护设备。始终佩戴护目镜。诸如适当条件下使用防全面具、防滑安全鞋、安全帽、听力防护等装置能减少人身伤害。

- 防止意外起动。在连接电源和/或电池包、拿起或搬运工具前,应确保开关处于关断位置。手指放在开关上搬运工具或开关处于接通时通电会导致危险。

- 在电动工具接通之前,拿掉所有调节钥匙或扳手。遗留在电动工具旋转零件上的扳手或钥匙会导致人身伤害。

- 请勿过分伸展。时刻注意立足点和身体平衡。这样能在意外情况下能更好地控制住电动工具。

- 着装适当。不要穿宽松衣服或佩戴饰品。让你的头发和衣服远离运动部件。宽松衣服、配饰或长发可能会卷入运动部件。

- 如果提供了与排屑、集尘设备连接用的装置,要确保其连接完好且使用得当。使用集尘装置可降低尘屑引起的危险。

- 不要因为频繁使用工具而产生的熟悉感而掉以轻心,忽视工具的安全准则。某个粗心的动作可能在瞬间导致严重的伤害。

电池				充电器 / 充电时间 (分钟)***		
型号	V _{DC}	电池容量 (Ah)	重量 (kg)	DCB112	DCB115	DCB118
				DCB1102	DCB1104	
DCB606	18/54 (最大 20/60)	6.0/2.0	1.05	170	90	60
DCB609/DCB609G	18/54 (最大 20/60)	9.0/3.0	1.46	270	135*	75*
DCB612	18/54 (最大 20/60)	12.0/4.0	1.44	350	180	120
DCB615	18/54 (最大 20/60)	15.0/5.0	2.12	450	230	125
DCB182	18 (最大 20)	4.0	0.61	120	60	60/40**
DCB203	18 (最大 20)	2.0	0.40	60	30	30
DCB184/DCB184G	18 (最大 20)	5.0	0.62	150	75	75/50**
DCB208	18 (最大 20)	8.0	0.95	240	120	70
DCBP034	18 (最大 20)	1.7	0.32	50	27	27
DCBP520	18 (最大 20)	5.0	0.75	150	75	75/50**

*日期码 201811475B 或以后

**日期码 201536 或以后

***电池包充电时间表仅供参考；实际充电时间将根据电池包的温度和状况而变化。

4) 电动工具使用和注意事项

- a) 切勿强制使用电动工具。根据用途使用合适的电动工具。选用合适的按照额定值设计的电动工具会使你工作更有效、更安全。
- b) 如果开关不能接通或关断电源，则不能使用该电动工具。不能通过开关来控制的电动工具是危险的且必须进行修理。
- c) 在进行任何调节、更换附件或贮存电动工具之前，必须从电源上拔掉插头和/或卸下电池包（如可拆卸）。这种防护性的安全措施降低了电动工具意外起动的风险。
- d) 将闲置不用的电动工具贮存在儿童所及范围之外，并且不允许不熟悉电动工具和不了解这些说明的人操作电动工具。电动工具在未经培训的使用者手中是危险的。
- e) 维护电动工具及其附件。检查运动部件是否调整到位或卡住，检查零件破损情况和影响电动工具运行的其他状况。如有损坏，应在使用前修理好电动工具。许多事故是由维护不良的电动工具引发的。
- f) 保持切削刀具锋利和清洁。维护良好地有锋利切削刃的刀具不易卡住而且容易控制。
- g) 按照使用说明书，并考虑作业条件和要进行的作业来选择电动工具、附件和工具的刀头等。将电动工具用于那些与其用途不符的操作可能会导致危险情况。
- h) 保持手柄和握持表面干燥、清洁，不得沾有油脂。在意外的情况下，湿滑的手柄不能保证握持的安全和对工具的控制。

5) 电池式工具使用和注意事项

- a) 仅使用生产者规定的充电器充电。将适用于某种电池包的充电器用到其他电池包时可能会发生着火危险。
- b) 仅使用配有专用电池包的电动工具。使用其他电池包可能会产生伤害和着火危险。

- c) 当电池包不用时，将它远离其他金属物体，例如回形针、硬币、钥匙、钉子、螺钉或其他小金属物体，以防电池包一端与另一端连接。电池包端部短路会引起燃烧或着火。
- d) 在滥用条件下，液体可能会从电池包中溅出，应避免接触。如果意外碰到液体，用水冲洗。如果液体碰到了眼睛，还应寻求医疗帮助。从电池中溅出的液体可能会发生腐蚀或燃烧。
- e) 不要使用损坏或改装过的电池包或工具。损坏或改装过的电池包可能呈现无法预测的结果，导致着火、爆炸或伤害。
- f) 不要将电池包暴露于火或高温中。电池包暴露于火或高于130°C的高温中可能会发生爆炸。
- g) 请遵循所有充电说明，请勿在说明中规定的温度范围以外的环境对电池包或工具充电。不当或在指定范围以外的温度下充电，可能导致电池损坏并增加火灾风险。

6) 维修

- a) 让专业维修人员使用相同的备件维修电动工具。这将保证所维修的电动工具的安全。
- b) 切勿维修损坏的电池包。电池包仅能由生产者或其授权的维修服务商进行维修。

其他具体安全规则

所有操作的安全说明

- a) 本电动工具的用途是作为角磨机、砂光机、钢丝刷或切割工具。请阅读本电动工具随附的所有安全警告、说明、图示和规定。未能遵照以下所列说明会导致电击、火灾和/或严重伤害。
- b) 不建议使用本电动工具进行抛光等操作。若非本电动工具的预期操作，可能会产生危险并造成人身伤害。
- c) 切勿使用不是由工具制造商专门设计和推荐的配件。因为该配件虽然可连接到您的电动工具上，但不能保证安全操作。

- d) 配件的额定速度必须至少等于电动工具上标记的最大速度。配件的运行速度超过其额定速度可能会导致断裂和飞散。
- e) 配件的外径和厚度必须在电动工具的额定容量内。尺寸不适合的配件无法得到充分保护或控制。
- f) 配件的螺纹安装必须与角磨机主轴螺纹相匹配。对于通过法兰安装的配件，配件的轴孔必须适合法兰的定位直径。与电动工具安装硬件不匹配的配件将导致失去平衡、过度振动并可能造成失控。
- g) 请勿使用损坏的配件。每次使用前检查转轮等配件是否有碎片和裂纹，衬垫是否有裂纹、撕裂或过度磨损，钢丝刷是否有钢丝松动或开裂。如果电动工具或配件掉落，请检查是否有损坏或重新安装一个完好无损的配件。检查和安装配件后，请您和旁观者远离旋转配件的平面，并以最大的空载速度运行电动工具一分钟。通常，受损的配件会在这个测试时间内破裂。
- h) 请佩戴个人防护装置。根据不同的应用，使用面罩、安全护目镜或安全眼镜。适当条件下，佩戴防尘面具、听力保护器、手套以及能够阻止小的磨料或工件碎片的车间围裙。护目镜必须能够阻止各种操作产生的飞行碎片。防尘面具或呼吸器必须能够过滤操作中产生的颗粒。长时间暴露于高强度的噪音中可能会导致听力损失。
- i) 旁观者与工作区保持安全距离。任何进入工作区的人必须佩戴个人防护装置。工件碎片或破损的配件可能会飞溅，并在操作区域以外造成伤害。
- j) 进行切割工具可能接触到隐蔽线路的操作时，仅可用绝缘的抓握面握住电动工具。接触到“带电”的电线可能会使电动工具的裸露金属部分“带电”，并导致操作人员触电。
- k) 在配件完全停止之前，切勿将电动工具放下。旋转的配件可能会抓住表面，导致电动工具不受控制。
- l) 当电动工具在身边时，切勿启动。意外接触到快速旋转的配件可能会勾住您的衣服，将配件拉到您的身体中。
- m) 定期清洁电动工具的通风口。电机的风扇会将灰尘吸入外壳内，过多的金属粉末堆积可能导致电气危险。
- n) 切勿在易燃材料附近操作电动工具。火花可能会点燃这些材料。
- o) 切勿使用需要液体冷却剂的配件。使用水或其他液体冷却剂可能导致触电或电击。

所有操作的详细安全说明

回旋的原因和操作员的预防措施

回旋是指旋转轮、背垫、刷子或任何其他配件被夹住或卡住时的突然反应。夹住或卡住会导致旋转的配件迅速停滞，因此又会导致不受控制的电动工具在连接点被迫向与配件旋转相反的方向转动。

例如，如果转轮被工件卡住或夹住，进入夹点的转轮边缘可能会挖进材料表面，导致转轮爬出或踢出。根据转轮在夹点处的运动方向，转轮可能会脱离或远离操作员。在这种情况下，转轮也可能断裂。

回旋是由于电动工具的误用和/或不正确的操作程序或条件造成的，可以通过采取以下适当的预防措施予以避免：

- a) 紧握电动工具，注意立足点和身体平衡，这样可以抵御回旋力。始终使用辅助手柄（如有），以最大限度地控制启动时的回旋或扭矩反应。如果采取了适当的预防措施，操作员就可控制扭矩反应或回旋力。
- b) 切勿将手放在旋转的配件附近。配件可能会回旋到您的手上。
- c) 如果发生回旋，请勿将身体放在电动工具移动的区域。回旋会使工具在卡住点向与转轮的运动方向相反的方向旋转。
- d) 在角落、尖锐边缘等处工作时要特别小心。小心反弹和卡住的配件。角落、尖锐边缘或反弹均有可能卡住旋转的配件，导致失控或回旋。
- e) 请勿安装锯齿木刻刀片或齿形锯片。这种锯片会造成频繁回旋和失控。

针对研磨和转轮切割操作的安全警告

- a) 仅使用针对电动工具推荐的转轮类型以及为所选转轮设计的特定防护罩。不适用于该电动工具转轮的防护罩无法得到充分防护，也不安全。
- b) 中心凹陷转轮的研磨表面必须安装在防护唇平面的下方。如果转轮安装不当，导致突出防护唇平面，则无法得到充分防护。
- c) 防护罩必须牢固地连接到电动工具上，并放置在最安全的位置，这样转轮对操作员的暴露程度最小。防护罩有助于防止操作员被破碎的转轮碎片伤害，并防止意外接触转轮和可能点燃衣物的火花。
- d) 切割轮仅可用于推荐用途。例如：切勿用切割轮的侧面进行磨削。转轮切割轮用于周边磨削，施加在切割轮上的侧向力可能会导致其破碎。
- e) 务必使用直径和形状与所选转轮直径一致且完好无损的转轮法兰。合适的转轮法兰可支撑转轮，从而降低转轮破碎的可能性。切割轮的法兰可不同于磨轮法兰。
- f) 切勿使用大型电动工具上磨损的转轮。用于大型电动工具的转轮不适合高速度的小型工具，因为可能会发生爆裂。

转轮切割操作的额外安全警告

- a) 切勿“卡住”转轮或施加过大的压力。切勿试图切割过深。对转轮过度施压会增加转轮在切割过程中的负荷和扭曲或捆绑的可能性，并有可能出现回旋或转轮断裂。
- b) 切勿将身体与旋转的转轮保持齐平或位于旋转的转轮之后。如果转轮在操作点时远离身体，万一发生回旋，可能会把旋转的转轮和电动工具直接推向您。
- c) 当转轮被捆绑或因任何原因中断切割时，应关闭电动工具并保持电动工具不动，直到转轮完全停止。当转轮处于运动状态时，切勿试图将转轮从切割中取出，否则可能会发生回旋。研究并采取纠正措施，从而消除转轮捆绑的原因。

- d) 切勿在工件中重新开始切割操作。转轮达到全速并小心地重新进入切割。如果电动工具在工件中重新启动，转轮可能会捆绑、向上旋或回旋。
- e) 支撑面板或任何过大的工件，尽可能减少转轮夹住和回旋的风险。大型工件在承受自身重量时容易凹陷。支架必须放置在靠近切割线的工件下方，并且靠近转轮两侧的工件边缘。
- f) 在现有墙壁或其他盲区进行“袋式切割”时要特别小心。凸出的转轮可能会切断煤气管或水管、电线或可能导致回旋的物体。

针对砂磨操作的安全警告

- a) 请勿使用过大的砂纸。选择砂纸时请遵循制造商的建议。尺寸大于砂磨垫的砂纸可能导致人员划伤，并可能导致砂磨盘绊住、撕裂或回旋。

针对钢丝刷操作的安全警告

- a) 请注意，即使在正常操作过程中，钢丝刷也会用出刷毛。请勿对钢丝刷施加过大的负荷，以免钢丝承受过大的应力。刷毛可轻松穿透轻薄的衣物和/或皮肤。
- b) 如果建议对钢丝刷使用防护罩，请勿让钢丝轮或刷子与防护罩发生任何干涉。作业和离心力可能导致钢丝轮或钢丝刷的直径扩大。

针对角磨机的额外安全规则

- a) 请勿在此工具上使用11型(展口杯)转轮。使用不合适的配件会导致人员受伤。
- b) 务必使用侧手柄。拧紧该手柄。应始终使用侧手柄来控制工具。

剩余风险

尽管遵守了相关的安全法规并采用了安全装备，某些剩余风险仍然是无法避免的。这些风险包括：

- 听力损伤。
- 飞溅颗粒造成的人身伤害风险。
- 使用时附件发热导致的灼伤风险。
- 长时间使用引起的人身伤害风险。

电气安全

电机只适用一种工作电压。请务必检查电池包的电压是否和铭牌上的电压一致。请务必检查电池包的电压是否和铭牌上的电压一致。



DEWALT充电器符合IEC60335双重绝缘要求，因此无需使用接地线。

如果电源线损坏，必须用DEWALT维修机构提供的专门准备的电源线进行替换。

使用延长线

除非绝对必要，否则请勿使用延长线。使用适合您的充电器输入功率的合格延长线(请参阅技术数据)。最小的导线尺寸为1 mm²；最大长度为30 m。

使用电缆卷筒时，请务必拉出所有的电缆。

请妥善保管好这些说明

充电器

DEWALT充电器无需做出任何调整，专为简易操作而设计。

针对所有电池充电器的重要安全说明

请妥善保管好这些说明：本手册包含重要的兼容电池充电器安全和操作说明(请参阅技术数据)。

- 在使用充电器之前，请先阅读所有说明以及充电器、电池包和使用电池包的产品上的警告标记。



警告：电击危险。请勿让任何液体进入充电器，否则可能会导致触电。



警告：我们建议使用漏电保护额定电流为30毫安或以下的漏电保护装置。



小心：烧伤危险。为降低人身伤害风险，请仅使用DEWALT充电式电池充电。使用其它类型的电池可能会引起爆裂，并导致人身伤害和损害。



小心：应看管好儿童，以确保他们不将此设备当做玩具来玩。


注意：在某些情况下，当充电器的插头插入电源插座时，充电器内部裸露的充电接触点可能因为外来物件而短路。请勿让能导电的异物靠近充电器腔，这些外来物件包括但不限于钢棉、铝箔或任何金属颗粒的堆积物。充电器内没有电池包时，请断开充电器与电源的连接。清洗前，务必拔掉充电器。


- 请勿试图使用本手册指定的充电器以外的其他任何充电器为电池包充电。充电器和电池包都是专门设计的，互相配合使用。
- 这些充电器不适合用于为DEWALT充电式电池充电以外的任何其他用途。否则，可能会导致火灾、触电或电击。
- 请勿将充电器暴露于雨中或雪中。
- 断开充电器连接时，应捏住插头将其拔出，而非通过拉拽电源线拔出插头。这将降低对插头和电线的损害风险。
- 确保电源线布置在不易踩踏、踢绊、拉扯或会受到损害或压力的位置。
- 除非绝对必要，否则请勿使用延长线。使用不正确的延长线可能导致火灾、触电或电击的风险。
- 请勿将任何物件放在充电器上面，或是把充电器放在可能会堵住通风槽的柔软表面，导致充电器的内部过热。请把充电器放置在远离任何热源的地方。充电器通过外壳顶端和底端的槽进行通风。
- 请勿使用电源线或插头已损坏的充电器，请立即更换这些充电器。
- 如果充电器受到强烈重击、掉落或出现其他损坏情况，请勿使用充电器。请将损坏的充电器送到授权服务中心。
- 请勿自行拆卸充电器。请将需要检修或修理的充电器送到授权服务中心。重装不正确可能导致触电、电击或火灾风险。
- 必须立即将已损坏的电源线交由制造商、服务代理或类似的合格人员进行更换以防止安全隐患。
- 清洁前，请先断开充电器和插座的连接，以降低触电风险。取出电池包不会降低此风险。
- 不得将两个充电器连接在一起。

- **充电器是为220-240V的标准家用电源而设计。请勿试图在任何其他电压下使用充电器。此规则不适用于车载充电器。**

为电池充电 (图B)











注意:为了确保锂离子电池的效能和使用寿命最大化,在首次使用电池包之前必须将其完全充电。

1. 插入电池包前,先将充电器的插头插到相应的电源插座上。
2. 将电池包  插入充电器,确保电池包在充电器中完全就位。红色(充电中)指示灯将不断闪烁,表示充电过程已经开始。
3. 第1阶段充电闪烁指示器表示为大部分电池容量充电的充电过程。第2阶段充电闪烁指示器表示电池达到满容量的剩余电量或充电过程。
4. 第1阶段或第2阶段的充电完成后,对应阶段的指示灯将常亮。第1阶段和第2阶段的充电指示灯常亮时,表示电池包已充满电,此时可取出电池包使用,或将其留在充电器中。

注意:在拆卸电池包时,部分充电器需要按住电池包释放按钮 。

关于电池包的充电状态,请参阅以下指示灯说明。

指示灯

	第1阶段充电		
	第2阶段充电		
	已完全充电		
	热/冷电池包 延迟*		

*红色指示灯会继续闪烁,但黄色指示灯在本次操作过程中会亮起。电池包达到适当温度后,黄色指示灯会熄灭,充电器将恢复充电程序。

兼容充电器不会对故障电池包充电

充电器指示灯不亮时表示电池有故障。

注意:这可能也表示充电器有问题。

如果充电器提示存在故障,请将充电器和电池包送到授权的服务中心进行测试。

热/冷电池包延迟

当充电器检测到电池包过热或过冷时,它会启动热/冷电池包延迟模式,暂停充电,直到电池包达到适当的温度。然后,充电器会自动切换到电池包充电模式。此功能可确保电池包拥有最长的使用寿命。

冷电池包充电速度比热电池包充电速度慢。电池包在整个充电周期的充电速度都会较慢,即使电池包升温也不会恢复到最大速度。

DCB118充电器配备了内部风扇,用于冷却电池包。当电池包需要冷却时,该风扇会自动启动。如果风扇无法正常工作或通风槽被堵塞,切勿操作充电器。请勿让异物进入充电器的内部。

电子保护系统


XR锂离子电池工具采用了电子保护系统设计,可防止电池包过载、过热或过度放电。

如果电子保护系统处于运作状态,该工具将自动停止操作。如果发生这种情况,请将锂离子电池包放在充电器上,直至其完全充满电。

壁挂式安装

这些充电器设计为可以安装在墙上,也可以直立在桌面或工作台上。如果安装在墙上,请确保充电器的位置可以连接到电源插座,并且远离墙角或其他可能妨碍空气流通的障碍物。将充电器背面作为在墙上安装螺丝的位置模板。使用至少25.4毫米长、螺丝帽直径至少7-9毫米的石膏板螺丝(单独购买)牢牢固定充电器,将螺丝最大限度钉入木材,预留约5.5毫米露在墙外。将充电器背面的安装槽对准露出的螺丝,完全放置到位。

充电器清洁说明

 **警告:电击危险。清洁前,请将充电器从交流电源插座上拔下。**可用布或非金属软刷清除充电器外部的污垢和油脂。请勿使用水或任何清洁剂。不得让任何液体渗入工具,不得让工具的任何部件浸在液体中。

电池包


针对所有电池包的重要安全说明


在订购更换电池包时,请务必附上目录型号和电压。

包装箱内的电池包并未完全充电。使用电池包和充电器之前,请阅读下列安全说明,然后遵循所述的充电程序。

请阅读所有说明

- 请勿在易爆环境,如有易燃液体、气体或粉尘的环境中充电或使用电池。在充电器中插入或取出电池时可能会点燃粉尘或气体。
- 不得强行将电池放进充电器。请勿以任何方式改装电池包并将电池包插入不兼容的充电器,这种操作可能会导致电池包破裂,造成严重的人身伤害。
- 只使用DeWALT充电器为电池包充电。
- 请勿给电池包喷洒水或其他液体或将其浸泡在水或其他液体中。
- 请勿在温度可能达到或超过40°C (104°F)的地方(如夏天户外的棚子或金属建筑物中)存储或使用工具和电池包。
- 即使电池包严重受损或完全损坏,也请勿焚化电池包。电池包在火中会发生爆炸。锂离子电池包在燃烧时会释放有毒气体和物质。
- 如果电池液体接触到皮肤,请立即以中性肥皂和清水冲洗接触的地方。如果电池液体不慎进入眼睛,应睁开眼睛并用清水冲洗至少15分钟或直到刺激感消失。如果需要医疗救助,请告知医护人员。电池电解质由液状有机碳酸盐和锂盐的混合物组成。
- 已打开电池的内部物质可能导致呼吸道刺激。请保持空气流通。如果症状持续存在,请就医。

 **警告:烧伤危险。**电池液如果接触到火花或火焰可能会燃烧。

 **警告:**不得以任何理由试图打开电池包。电池包外壳破裂或损坏时,请勿将电池包插入充电器。

请勿挤压、掉落或损坏电池包。请勿使用受过强烈冲击、掉落、碾压或以任何其它方式(如被钉子穿破、受到锤子的重击、踩踏)受损的电池包或充电器。否则可能会引起触电或电击。损坏的电池包应送回服务中心进行回收。



警告：火灾危险。请勿在存储或搬运电池包时让金属物品接触暴露的电池两极。例如，请勿将电池包放在围裙、口袋、工具箱、产品套件盒、抽屉等可能与散钉、螺丝、钥匙等物品接触的地方。



小心：不使用时，应将工具侧放在稳定的表面上，以免造成绊倒或坠落的危险。一些带有大型电池包的工具可以直立在电池包上，但可能很容易被撞倒。

运输



警告：火灾危险。电池运输途中，如果电池两极意外接触导电材料，可能会引发火灾。运输电池时，务必保护电池两极，确保与可能接触电池导致短路的材料良好绝缘。

DEWALT 电池符合所有适用的行业和法律标准规定的运输规范，包括《联合国危险品运输建议规章范本》(UN Recommendations on the Transport of Dangerous Goods)、《国际航空运输协会(IATA)危险品规则》(International Air Transport Association (IATA) Dangerous Goods Regulations)、《国际海运危险品(IMDG)规则》(International Maritime Dangerous Goods (IMDG) Regulations)和《欧洲危险货物国际公路运输协定》(European Agreement Concerning The International Carriage of Dangerous Goods by Road) (ADR)。离子电池和电池包已遵循《联合国危险品运输建议规章范本手册》第38.3节关于测试和标准的说明通过测试。

大多数情况下，发运DEWALT 电池包不属于完全管制的9类危险品。一般情况下，只有当运输包含一个能量等级大于100瓦时(Wh)的锂离子电池时，才需要作为完全管制的9类危险品发运。所有锂离子电池外壳上均标注有瓦时等级。此外，由于法规比较复杂，无论瓦时等级是多少，DEWALT 都不建议单独空运锂离子电池包。发运包含电池的工作(组合套件)时，如果电池包的能量等级不大于100瓦时(Wh)，则可以按计划空运。

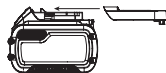
无论发运是否纳入完全管制范围内，运输公司均有责任遵循最新法规中关于包装、标签/标记和单据的要求。本手册本节的信息是出于善意提供，且认为在编制文档时准确无误。不提供明示或暗示的担保。购买方负有确保其行为遵守适用法规的责任。

运输FLEXVOLT™ 电池

DEWALT FLEXVOLT™ 电池有两种模式：**使用**和**运输**。

使用模式：当FLEXVOLT™ 电池单独使用或置于DEWALT 18V (20V Max) 产品中时，将作为18V (20V Max) 电池运行。当FLEXVOLT™ 电池在54V (60V Max) 或108V (120V Max) (两块54V (60V Max) 电池) 产品中时，其将作为54V (60V Max) 电池运行。

运输方式：当盖子连接到FLEXVOLT™ 电池时，电池处于运输模式。盖住盖子以便进行运输。



处于运输模式时，断开电池包的电源会产生3个瓦特小时额定值(Wh) 较低的电池，和1个瓦特小时额定值较高

的电池。这种增加的3个瓦特小时额定值较低的电池可使电池包免于遵守某些对高瓦特小时电池施加的运输规定。

例如，运输Wh额定值可能表示为3x36 Wh，即每节36 Wh 的3节电池。使用Wh额定值可能表示108 Wh (1个电池)。

使用和运送标签标记示例



存放建议

1. 最好将电池存放在阴凉、干燥、远离阳光直射、不会过热或过冷的地方。为了获得最佳的电池性能和使用寿命，请您在不使用电池包时将其存储在室温下。
2. 长期存储时，建议将已完全充电的电池包从充电器取出，存储在阴凉、干燥的地方，以达到最佳效果。

注意：电池包不应在电池已完全耗尽的状态下存放。使用电池包之前，必须重新为电池包充电。

充电器和电池包上的标签

除了在本手册中所使用的标志，充电器和电池包的标签还包括：



使用前请阅读使用手册。



如需了解充电时间详细信息，请参阅**技术数据**。



请勿使用导电物体戳刺。



请勿对损坏的电池包充电。



请勿将其暴露于水中。



应立即更换有缺陷的电线。



请只在4°C和40°C之间的温度下充电。



只能在室内使用。



弃置电池包时，请妥善处理以保护我们的环境。

LI-ION




只能用指定的DEWALT 充电器给DEWALT 电池包充电。使用DEWALT 充电器为非DEWALT 电池充电可能会导致电池爆炸或出现其他危险情况。



请勿焚化电池包。



使用(不含运输盖)示例: Wh额定值表示108 Wh (1个108 Wh 的电池)。

 运输 (带内置运输盖) 示例: Wh 额定值表示 3 x 36 Wh (3 个 36 Wh 的电池)。

电池类型

DCG405F 使用 18V (20V Max) 的电池包。

电池信息请参考 **技术数据**。

包装内的物品

包装中包含:

- 1 角磨机
 - 1 防护罩
 - 1 侧面把手
 - 1 背衬法兰
 - 1 锁紧法兰
 - 1 锂离子电池包 (C1、D1、L1、M1、P1、S1、T1、X1、E1、H1 型号)
 - 2 锂离子电池包 (C2、D2、L2、M2、P2、S2、T2、X2、E2、H2 型号)
 - 3 锂离子电池包 (C3、D3、L3、M3、P3、S3、T3、X3、E3、H3 型号)
 - 1 使用手册
- 检查工具、部件或附件是否在运输过程中损坏。
 - 操作前, 请抽空仔细阅读并掌握**使用手册**。

工具上的标记

工具上印有下列图形:



使用前请阅读使用手册。



请佩戴听力保护器。



请佩戴护目装备。


日期代码位置 (图A)

包含制造年份的日期码 **13**, 打印在工具外壳上。

示例:

XXXX XX XX
制造年份

说明 (图A)

 **警告:** 不得改装本电动工具或其任何部件, 否则可能会导致损坏或人身伤害。

- 1 滑动开关
- 2 锁闭杆
- 3 主轴锁定按钮
- 4 主轴
- 5 背衬法兰
- 6 锁紧法兰
- 7 防护罩
- 8 防护罩释放杆
- 9 电池包
- 10 电池释放按钮

设计用途

本锂电角磨机适用于专业的切割、打磨、砂磨和钢丝刷应用。

请勿使用除中心凹陷转轮和瓣盘之外的砂轮。

请勿在潮湿环境中, 或在存在易燃液体或气体的环境中使用本工具。

本锂电角磨机是一种专业的电动工具。

请勿让儿童接触本工具。缺乏经验的操作员需要在监督下使用本工具。

- **儿童和体弱者。** 在没有他人监督的情况下, 儿童或体弱者不适宜使用本产品。
- 本产品不适合体力、感官或智力不足以及缺乏经验、知识或技能的人员 (包括儿童) 使用, 除非一旁有能为他们的安全负责的监督人员。不得在无人监管的情况下让儿童接触本产品。

特征

断电™过载保护

在电机发生过载时, 对电机的供电将会减少。如果电机持续过载, 工具将关闭。如需重启工具, 释放该开关然后再按下即可。只要当前负载达到过载电流值 (电机烧毁点), 工具将断电。如果持续发生过载停机, 在工具上施加较小的力/重量, 直至工具能够在无过载啮合的情况下运行。

防振侧面手柄

防振侧面手柄可吸收工具产生的振动, 从而提升舒适度。

软启动功能

软启动功能可实现缓慢加速, 以避免启动时的初始冲击。该功能尤其适合在密闭空间内操作的场景。


断电保护

如果电源中断, 断电保护功能会在重新通电后防止角磨机意外启动。

电子离合器

研磨盘卡住时, 电子扭矩限制离合器可减少传递给操作员的最大扭矩反作用力。该功能还可防止传动装置和电机失速。扭矩限制离合器在出厂时已设定, 无法调整。

组装与调整

 **警告:** 为降低严重的人身伤害风险, 在进行任何调整或取出/安装附件或配件之前, 请关闭工具并断开电池包连接。意外启动工具可能会造成伤害。

 **警告:** 仅使用 DEWALT 电池包和充电器。

插入或取出工具上的电池包 (图B)

注意: 确保您的电池包 **9** 已经充满电。

要将电池包安装到工具手柄中

1. 将电池包 **9** 对准工具手柄内的轨道 (图B)。
2. 将电池包滑入手柄内, 使其牢牢地固定在工具内, 并确保您听到其锁定到位的声音。

从工具中取出电池包

1. 按下释放按钮 **10**，将电池包从工具握柄中稳稳地拉出。
2. 按手册充电器部分所述将电池包插入充电器中。

电池包电量计(图B)

一些DEWALT电池包带有一个包含三个绿色LED指示灯的电量计，用于指示电池包内的剩余电量。

按下电量计按钮不松开，即可启动电量计。三个绿色LED指示灯将以组合方式亮起，以指示剩余电量。当电池内的电量低于可用限制时，电量计将不会亮起，电池将需要重新充电。

注意：电量计仅指示电池包的剩余电量。它并不表示该工具的功能，且将根据产品组件、温度和最终使用者的使用情况而有所不同。

安装侧面手柄(图C)

警告：使用工具前检查该手柄是否拧紧。

将侧面手柄适配器 **12** 拧入齿轮箱任一侧的一个孔中，然后将侧面手柄 **11** 拧入适配器中。**该适配器必须与侧面手柄搭配使用。**如果适配器丢失，应停止使用工具，并找到最近的DEWALT服务中心更换新的适配器。应始终使用侧手柄来保持对工具的控制。

旋转齿轮箱(图A)

为了提高用户舒适度，齿轮箱将旋转90°进行切割操作。

1. 拆下将齿轮箱连接到电机外壳的四个角螺钉。
2. 在不将齿轮箱从电机外壳上分离的情况下，将齿轮箱盖旋转至所需位置。

注意：如果齿轮箱和电机外壳分离超过3.17 mm，必须由DEWALT服务中心对工具进行维修和重新组装。若不维修该工具，可能会导致电机和轴承故障。

3. 重新安装螺钉，将齿轮箱固定到电机外壳上。将螺钉拧紧至12.5 IN.-LBS.扭矩。过紧会导致螺钉脱落。

防护罩

小心：所有磨轮、切割轮、砂磨翻盖砂轮、钢丝刷和钢丝轮都必须使用防护罩。只有在使用传统的砂磨盘进行砂磨时，可以在没有防护罩的情况下使用该工具。请参考图A，查看设备随附的防护罩。对于有些应用，可能需要从当地经销商或授权服务中心购买适用的防护罩。

注意：边缘研磨和切割可使用专为该用途设计和指定的27型转轮进行；6.35 mm厚的转轮适用于表面研磨，而较薄的27型转轮需要检查制造商标签，以确定其是否可用于表面研磨或仅用于边缘研磨/切割。禁止进行表面研磨的任何转轮必须使用1型防护罩。也可以使用41型转轮和1型防护罩进行切割。

注意：参见**配件表**，选择合适的防护罩/配件组合。

调节和安装防护罩(图D)

警告：为降低严重的人身伤害风险，在进行任何调整或取出/安装附件或配件之前，请关闭工具并断开电池包连接。意外启动工具可能会造成伤害。

调节选项

进行防护罩调节时，防护罩释放杆 **8** 使用棘轮功能接合到防护罩轴环上的一个对准孔 **16**。

安装防护罩(图D)

小心：安装防护罩之前，确保螺钉、手柄和弹簧安装正确。

1. 使主轴面向操作员，将防护罩与齿轮箱中的安装槽 **14** 平行对齐。
2. 将防护罩滑入安装槽，使防护罩锁片 **15** 沿着安装槽正上方套环的两个平面滑动。
3. 按住防护罩释放杆 **8** 并旋转防护罩，直到手柄嵌入其中一个对准孔 **16**。
4. 松开防护罩释放杆。
5. 定位防护罩：按住防护罩释放杆 **8**。顺时针或逆时针旋转防护罩至所需的工作位置。

注意：防护罩主体应该位于主轴和操作者之间，以便为操作者提供最大程度的保护。

防护罩释放杆应卡入防护罩套环上的一个对准孔 **16** 中。这可确保防护罩固定牢固。

6. 拆卸防护罩时，按相反的顺序执行这些说明中的步骤1-3即可。

法兰和转轮

安装无轮毂转轮(图E)

警告：法兰和/或转轮未正确就位会导致严重的人身伤害(或造成工具或转轮损坏)。

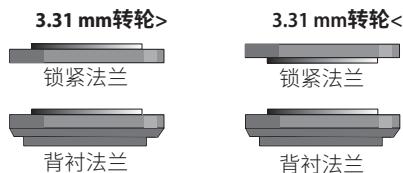
小心：随附的法兰必须与中心凹陷27型和42型磨轮以及41型切割轮搭配使用。更多信息见**配件图**。

警告：使用切割轮时需要使用封闭的双面切割轮防护罩。

警告：使用损坏的法兰或防护罩或未使用正确的法兰和防护罩会因转轮破损和转轮接触而导致人身伤害。更多信息见**配件图**。

中心凹陷27型磨轮必须与随附的法兰搭配使用。更多信息请参考**配件图**。

1. 将背衬法兰 **5** 安装到主轴 **4** 上，使凸起部分(导孔)抵着转轮。放置转轮前，推动和扭转法兰，确保背衬法兰凹槽位于主轴平面上。
2. 将转轮 **17** 靠在背衬法兰上，使转轮在背衬法兰的凸起部分(导孔)上居中。
3. 按下主轴锁定按钮的同时，将锁紧法兰 **5** 拧到主轴上。如果要安装的转轮厚度超过3.31 mm，将锁紧法兰放在主轴上，使凸起部分(导孔)与转轮中心相吻合。如果要安装的转轮厚度等于或小于3.31 mm，将锁紧法兰放在主轴上，使凸起部分(导孔)不抵着转轮。
4. 按下主轴锁定按钮的同时，用手或使用提供的扳手拧紧锁紧法兰 **6**。(仅在锁紧法兰完好无损的情况下使用。)参考**配件图**查看法兰细节。
5. 如需拆下转轮，按下主轴锁定按钮并用扳手松开锁紧法兰。



注意:如果锁紧法兰拧紧后转轮空转,请检查锁紧法兰的方向。如果安装了薄转轮,且锁紧法兰上的导孔朝向转轮,由于导孔的高度阻止锁紧法兰固定住转轮,因此转轮会旋转。

安装砂磨衬垫(图A、F)

注意:不要求将防护罩与使用衬垫的砂磨盘(通常称为纤维树脂盘)结合使用。由于这些配件不需要防护罩,使用防护罩时防护罩可能会也可能不会正确吻合。

警告:未正确固定法兰/夹紧螺母/转轮可能会导致严重的人身伤害(或损坏工具或转轮)。

警告:砂磨应用完成后,必须为砂轮、切割轮、砂磨翻盖砂轮、钢丝刷或钢丝轮应用重新安装合适的防护罩。

1. 将衬垫 **18** 放在主轴上或用螺丝适当固定到主轴上。
2. 将砂磨盘 **19** 放在衬垫 **18** 上。
3. 在按下主轴锁定按钮 **3** 的同时,将夹紧螺母 **20** 拧到主轴上,将夹紧螺母上凸起的轮毂引导到砂磨盘和衬垫的中心。
4. 用手拧紧夹紧螺母。然后在转动砂磨盘的同时按下主轴锁定按钮,直到砂磨盘和夹紧螺母紧密贴合。
5. 如需拆下转轮,按住主轴锁定按钮,抓住并转动衬垫和砂磨盘。

安装钢丝杯刷和钢丝轮(图A)

警告:未正确固定法兰/夹紧螺母/转轮可能会导致严重的人身伤害(或损坏工具或转轮)。

小心:为了降低人身伤害风险,在处理钢丝刷和转轮时请戴上工作手套。它们非常锋利。

小心:为了降低工具损坏的风险,安装或使用时,转轮或钢丝刷不得接触防护罩。配件可能会发生无法察觉的损坏,导致钢丝从配件转轮或杯上脱落。

钢丝杯刷或钢丝转轮直接安装在螺纹主轴上,无需使用法兰。仅使用配有螺纹轮毂的钢丝刷或钢丝轮。这些配件可从您当地的经销商或授权服务中心处付费购买。

1. 将工具放在工作台上,盖好防护罩。
2. 用手将转轮用螺钉固定在主轴上。
3. 按下主轴锁定按钮 **3**,并使用扳手或刷子在钢丝转轮轮毂上拧紧钢丝转轮。
4. 拆卸转轮时按与上述步骤相反的顺序执行即可。

注意:为了降低损坏工具的风险,在启动工具前正确安装轮毂。

操作前

- 安装防护罩和适用的磨盘或转轮。请勿使用过度磨损的磨盘或转轮。
- 确保背衬和锁紧法兰安装正确。遵循**配件图**中提供的说明。
- 确保磨盘或转轮按照配件和工具上的箭头方向旋转。
- 请勿使用损坏的配件。每次使用前检查转轮等配件是否有碎片和裂纹,衬垫是否有裂纹、撕裂或过度磨损,钢丝刷是否有钢丝松动或开裂。如果电动工具或配件掉落,请检查是否有损坏或重新安装一个完好无损的配件。检查和安装配件后,请您和旁观者远离旋转配件的平面,并以最大的空载速度运行电动工具一分钟。通常,受损的配件会在这个测试时间内破裂。

操作

使用说明

警告:务必遵守安全指示和适用法规。

警告:为降低严重的人身伤害风险,在进行任何调整或取出/安装附件或配件之前,请关闭工具并断开电池包连接。意外启动工具可能会造成伤害。

警告:

- 确保将所有待磨削或切割的材料固定牢固。
- 固定并支撑工件。使用夹具或台钳将工件固定并支撑在稳定的平台上。必须牢固夹紧和支撑工件,以防止工件移动和失控。工件的移动或失控可能会造成危险并导致人身伤害。

- 支撑面板或任何过大的工件,尽可能减少转轮夹住和回旋的风险。大型工件在承受自身重量时容易凹陷。支架必须放置在靠近切割线的工件下方,并且靠近转轮两侧的工件边缘。

- 操作该工具时务必戴上普通的工作手套。
- 齿轮在使用过程中温度变得极高。
- 仅对工具施加轻微的压力即可。请勿在磨盘上施加侧压力。

- 务必安装防护罩和适当的磨盘或转轮。请勿使用过度磨损的磨盘或转轮。

- 确保内法兰和外法兰安装正确。
- 确保磨盘或转轮按照配件和工具上的箭头方向旋转。

- 避免过载。如果工具变热,使其在空载条件下运行几分钟,让配件冷却。在配件冷却之前请勿触摸。磨盘在使用过程中的温度会变得非常高。

- 如果没有合适的防护罩,切勿使用研磨杯。

- 请勿将电动工具与切割台搭配使用。

- 切勿将吸墨纸与粘合磨料产品一同使用。

- 请注意,工具关闭后,转轮会继续旋转。

正确的双手放置位(图G)

警告:为了减低严重人身伤害的风险,请务必如图示那样正确放置双手。

警告:为了减低造成严重人身伤害的风险,预期有突然反作用力时**务必握紧**。

如图G所示,正确的手位置是一只手放在侧面手柄 11 上,另一只手放在工具的主体上。

滑动开关(图A)

小心:握紧工具的侧面手柄和主体,在启动和使用过程中保持对工具的控制,直到转轮或配件停止旋转。放下工具前确保转轮完全停止。

注意:为了减少意外的工具移动,请勿在负载条件下启动或关闭工具。在接触工作面之前,使角磨机达到全速运转。关闭工具前从表面提起工具。放下工具前让工具停止旋转。

警告:将电池包插入工具之前,按下开关的后部然后松开,以此确保滑动开关处于关闭位置。电源中断后,确保滑动开关处于上述关闭位置。如果接通电源时滑动开关锁定,工具将意外启动。

如需启动工具,向工具前部滑动开/关滑动开关 1。如需停止工具,请释放开/关滑动开关。

如需连续运行,将开关滑向工具的前部,并将开关的前部向内按压。如需在连续模式下停止工具,请按下滑动开关的后部,然后松开。

主轴锁定按钮(图A)

主轴锁定按钮 3 用于在安装或拆卸转轮时防止主轴旋转。只有当工具关闭、从电源上拔下并完全停止时,才能操作主轴锁。

注意:为了降低损坏工具的风险,请勿在工具运行时使用主轴锁。这会导致工具损坏,而且连接的配件可能脱落,从而可能造成人身伤害。

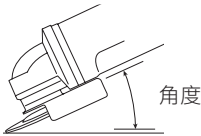
如需锁定,按下主轴锁定按钮并旋转主轴,直到无法继续旋转主轴。

表面磨削、砂磨和用钢丝刷清理

小心:务必按照本手册中的说明使用正确的防护罩。

如需在工作表面上执行工作:

1. 在工具接触工作面之前,让工具达到全速。
2. 对工作面施加尽可能小的压力,使工具高速运转。当工具高速运转时,材料去除率最大。



3. 让工具和工作面呈适当的角度。根据特定功能参考图表。

功能	角度
磨削	20°-30°
用翻盖砂轮打磨	5°-10°
用衬垫打磨	5°-15°
用钢丝刷清理	5°-10°

4. 使转轮边缘和工作面之间保持接触。

- 如果进行磨削,通过翻盖砂轮打磨或钢丝刷清理连续地向前和向后移动工具,以避免擦伤工作面。
- 如果用衬垫砂磨,请沿直线不断移动工具,以防止工作面烧损和打转。

注意:如果让工具停留在工作面上而不移动,则会损坏工件。

5. 关闭工具前,将工具从工作面上取下。放下工具前,让工具停止旋转。

小心:在边缘作业时应力格外小心,因为角磨机可能会突然剧烈晃动。

处理涂漆工件时应采取的预防措施

1. 由于难以控制脏污的灰尘,因此不建议使用砂纸打磨或钢丝刷来处理含铅涂料。铅中毒对儿童和孕妇的危害最大。
2. 由于不进行化学分析很难确定油漆是否含铅,因此我们建议在砂磨任何油漆时采取以下预防措施:

人身安全

1. 在所有清理工作完成之前,儿童或孕妇不得进入正在进行油漆砂磨或钢丝刷清理的工作区域。
2. 所有进入工作区域的人员都应佩戴防尘口罩或呼吸器。过滤器应每天更换,或在佩戴者呼吸困难时更换。
注意:只能使用适合处理含铅油漆粉尘和烟雾的防尘面具。普通喷漆面具无法提供这种保护。请咨询您当地的硬件经销商,以获取经NIOSH认可的合适面具。
3. 不得在工作区域饮食或吸烟,以防止吸入被污染的油漆颗粒。工作人员在饮食或吸烟之前应该进行洗手和清理。不应将食品、饮料或吸烟物品留在工作区,否则会落满灰尘。

环境安全

1. 应以尽量减少灰尘的方式清除油漆。
2. 发生脱漆的区域应该用厚度4密耳的塑料薄膜密封。
3. 砂磨时应减少工作区域外油漆粉尘的痕迹。

清洁和处理

1. 在砂磨项目期间,应对工作区域的所有表面每天进行吸尘和彻底清洁。真空滤袋应经常更换。
2. 应将塑料抹布收集起来,与任何灰尘碎片或其他清除碎片一同处理。应将其放在密封的垃圾箱中,并通过常规的垃圾收集程序进行处理。清理过程中,儿童和孕妇应远离直接工作区域。
3. 儿童使用的所有玩具、可洗家具和用具在再次使用前应彻底清洗。

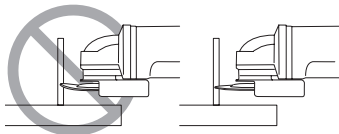
边缘磨削和切割

警告:切勿将边缘磨削/切割转轮用于表面磨削,因为该工具并非设计用于表面磨削时所遇到的侧压力。可能会导致转轮破损和损伤。

小心:在使用转轮进行边缘磨削和切割时,如果使用工具的同时转轮发生弯曲或扭曲,可能会断

裂或回旋。在所有磨削/切割操作中，防护罩的开口侧必须远离操作者。

注意：如果要使用27型砂轮进行边缘磨削/切割，必须仅限于浅切割和开槽—新砂轮的深度小于13 mm。随着转轮磨损，应减少切割/开槽的深度，使其等于转轮半径的减少量。更多信息见**配件图**。使用41型砂轮进行边缘磨削/切割时，需要使用1型防护罩。



1. 在工具接触工作面之前，让工具达到全速。
2. 对工作面施加尽可能小的压力，使工具高速运转。当工具高速运转时，磨削/切割速率最大。
3. 请调整您自己的位置，使转轮的开口底面背向你。
4. 开始切割并在工件上形成切口后，请勿改变切割的角度。改变角度会导致转轮弯曲，并可能导致转轮断裂。边缘磨削转轮无法承受弯曲造成的侧压力。
5. 关闭工具前，将工具从工作面上取下。放下工具前，让工具停止旋转。

切割金属

使用**粘合磨料**切割时，请始终使用**1型防护罩**。

切割时，根据被切割的材料选择适当的进给量。请勿在切割盘上施加压力，倾斜或摆动机器。

请勿通过施加侧向压力来降低切割盘的运行速度。

机器必须始终以逆转向磨削的方式工作。否则可能不受控地推出切口。

切割型材和方钢时，最好从最小的横截面开始。

粗磨

切勿使用切割盘进行粗磨。

务必使用**27型防护罩**。

将机器设置在30°到40°的角度时，可以获得最佳的粗磨效果。施加适度的压力来回移动机器。这样会防止工件过热、变色，也不会形成凹槽。

切割石材

该机器只能用于**干式切割**。

切割石材时，最好使用**金刚石切割盘**。仅在带额外防尘面具的情况下操作机器。

工作建议

在**结构墙上切割槽**时应小心

在结构墙中开槽应遵守特定国家的法规。在任何情况下都必须遵守这些法规。开始工作前咨询负责的结构工程师、建筑师或施工监理。

维护

您的DeWALT电动工具设计精良，可以长期使用，仅需极少维护。若要持续令人满意的工作效果，则需对工具进行适当的保养和定期清洁。

警告：为降低严重的人身伤害风险，在进行任何调整或取出/安装附件或配件之前，请关闭工具并断开**电池包**连接。意外启动工具可能会造成伤害。

充电器和**电池包**无法维修。



润滑

本电动工具无需另行润滑



清洁

警告：一旦看到通风口及其周围积聚了尘屑，请用干燥的空气将灰尘和尘屑从主机外壳内吹出。执行此过程时，需戴上经认可的护目装备和防尘面具。

警告：不得使用溶剂或其它刺激性化学制品来清洁工具的非金属部件。这些化学物质可能会削弱这些部位使用的材料。请用布蘸温和的肥皂水擦拭。不得让任何液体渗入工具，不得让工具的任何部件浸在液体中。

可选配件

警告：由于除DeWALT提供的配件外，其他配件没有经过本产品的测试，因此将这些配件与本工具一起使用可能会有危险。为了减少受伤的风险，本产品仅可使用DeWALT推荐的配件。

请向您的经销商咨询更多关于合适附件的信息。

	最大		最小 旋转	圆周 速度	螺纹孔 长度	
	[mm]	[mm]				
	D	b	d	[min. ⁻¹]	[m/s]	[mm]
	115	6	22,23	11 500	80	-
	125	6	22,23	11 500	80	-
	150	6	22,23	9 300	80	-
	115	-	-	11 500	80	-
	125	-	-	11 500	80	-
	75	30	M14	11 500	45	20.0
	115	12	M14	11 500	80	20.0
	125	12	M14	11 500	80	20.0

保护环境



分类回收。由此符号标记的产品和电池不得与普通家庭垃圾一起处理。

产品和电池包含可恢复或回收的材料，从而降低对原材料的需求。请根据当地规定回收电子产品和电池。要获得更多信息，请参看www.2helpU.com。

充电式电池包

本电池包使用寿命长，不能提供顺利完成工作所需的电力时，必须进行更换。电池技术寿命结束时，请妥善处理以保护环境：



- 耗尽电池包的电力，然后将其从工具上拆下。

- 锂离子电池可回收。请将它们送往您的经销商处或当地的回收站。回收的电池包将被妥善循环使用或处理。


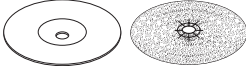




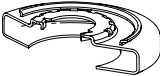
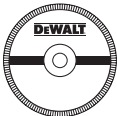
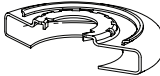




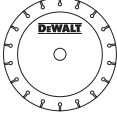
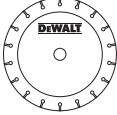


售后服务和维修

DEWALT维修中心拥有经过培训的人员，能够为顾客提供充分、可靠的产品服务。如果您通过未获授权的维修中心进行维修，我们不会承担任何责任。您可以参见产品包装中的“联系中心定位器”宣传单页，通过热线电话、网站或社交媒体联系我们，找到距离您最近的DEWALT服务中心。

配件图

防护罩类型	配件	描述	如何安装角磨机
 <p>27型防护罩</p>		中心凹陷磨盘	 <p>27型防护罩</p>
		翻盖砂轮	 <p>背衬法兰</p>
		钢丝轮	 <p>27型中心凹陷转轮</p>  <p>锁紧法兰</p>
	带螺母的钢丝轮		 <p>27型防护罩</p>
		带螺母的钢丝杯	 <p>钢丝轮</p>
			 <p>27型防护罩</p>  <p>钢丝刷</p>

配件图 (续)

防护罩类型	配件	描述	如何安装角磨机
 <p>27型防护罩</p>		<p>衬垫/打磨片</p>	 <p>27型防护罩</p>  <p>橡胶衬垫</p>  <p>砂磨盘</p>  <p>夹紧螺母</p>
 <p>1型防护罩</p>		<p>砖石切割盘， 粘合</p>	 <p>1型防护罩</p>
 <p>1型防护罩</p> <p>或</p>  <p>27型防护罩</p>		<p>金属切割盘， 粘合</p>	 <p>背衬法兰</p>
		<p>金刚石切割轮</p>	 <p>切割轮</p>  <p>锁紧法兰</p>

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