
DEWALT®

**XR FLEX
VOLT™**
LI-ION

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DCS520

Fig. A

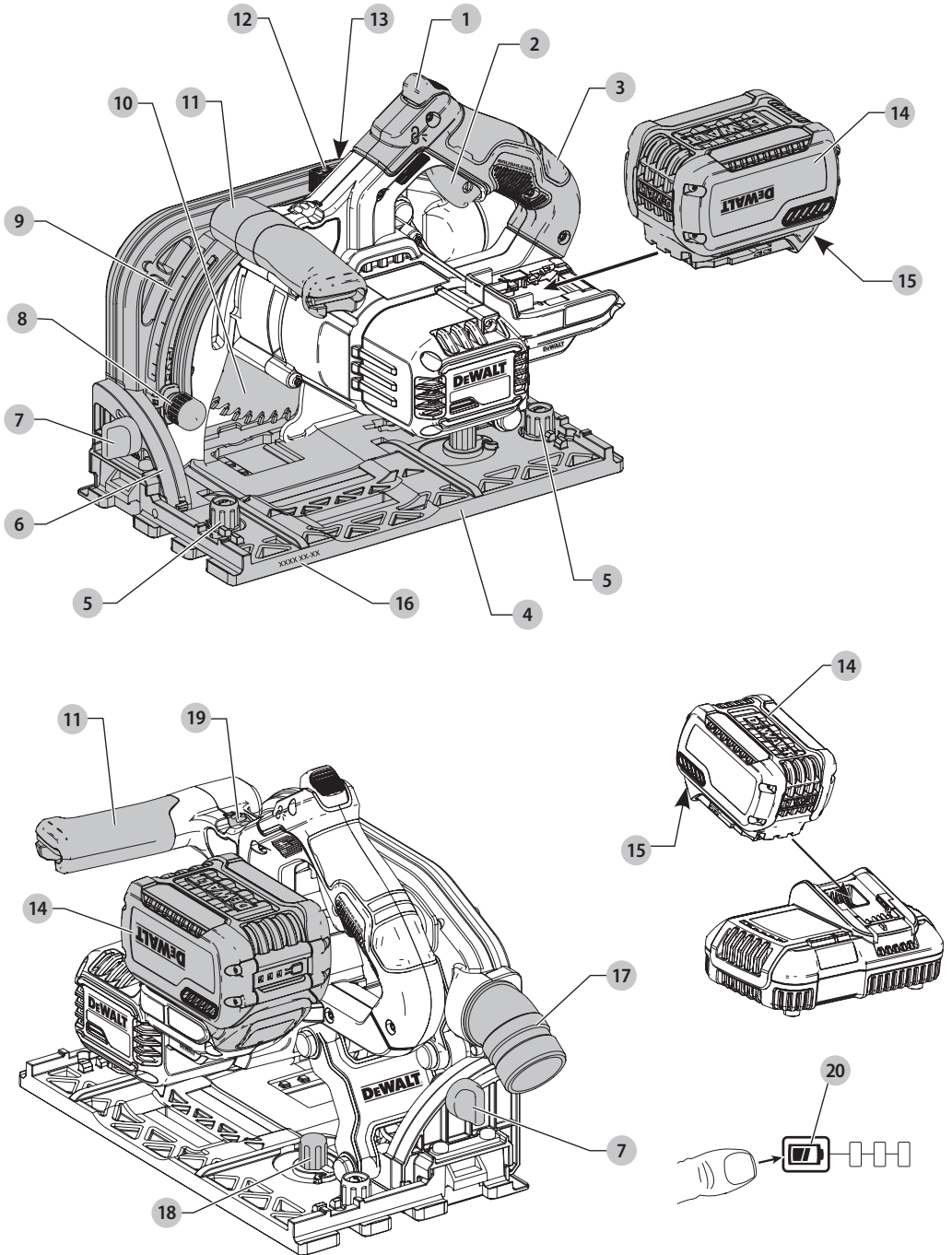


Fig. B

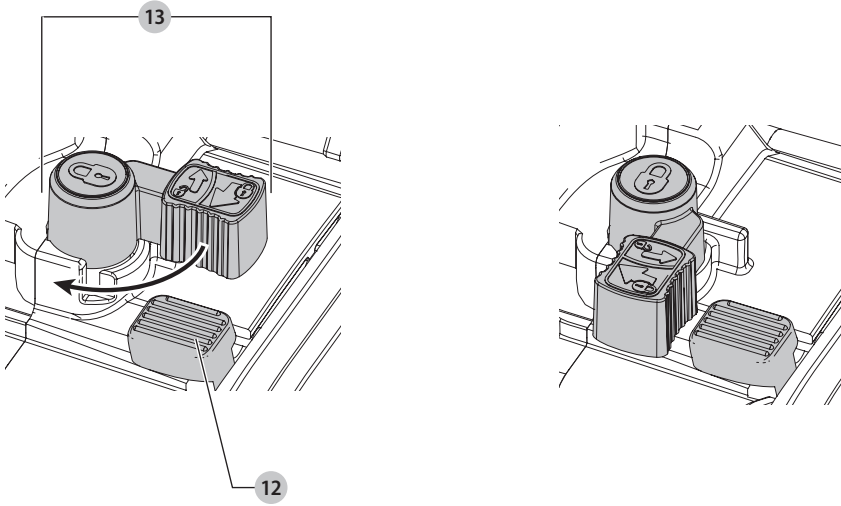


Fig. C

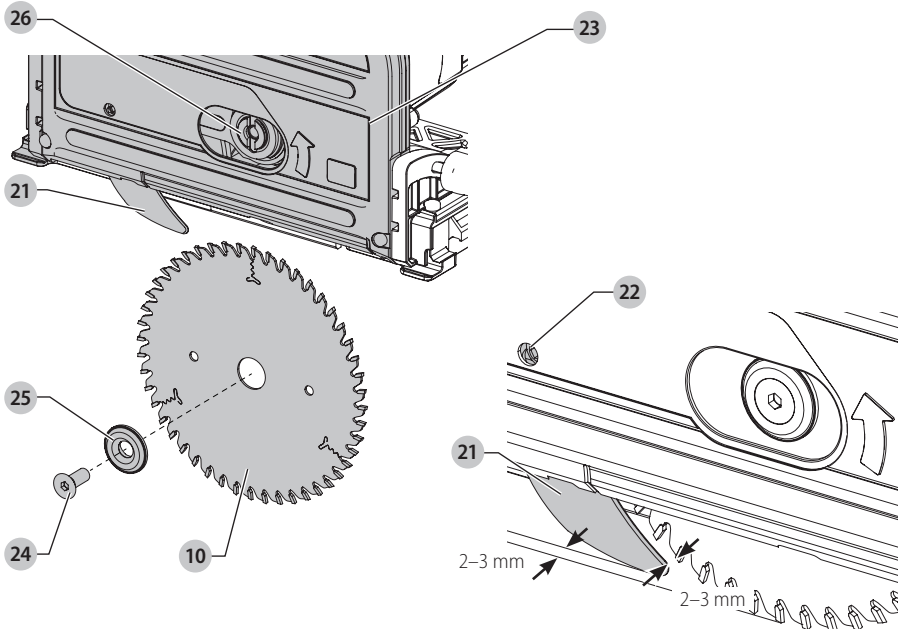


Fig. D

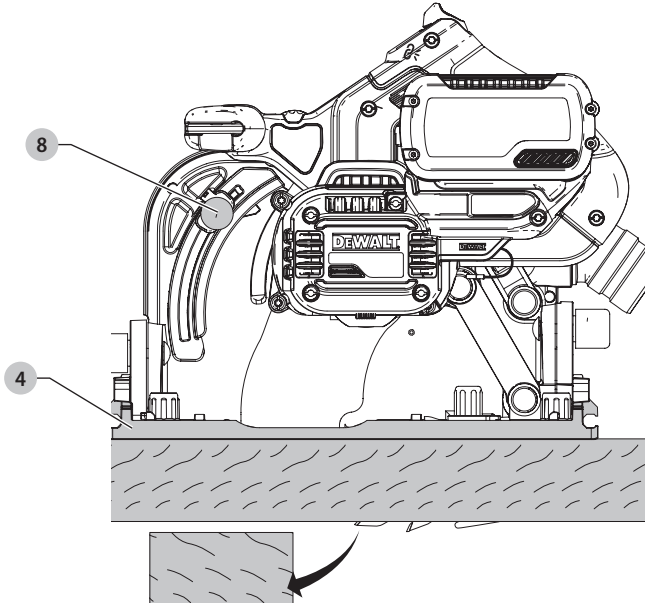


Fig. E

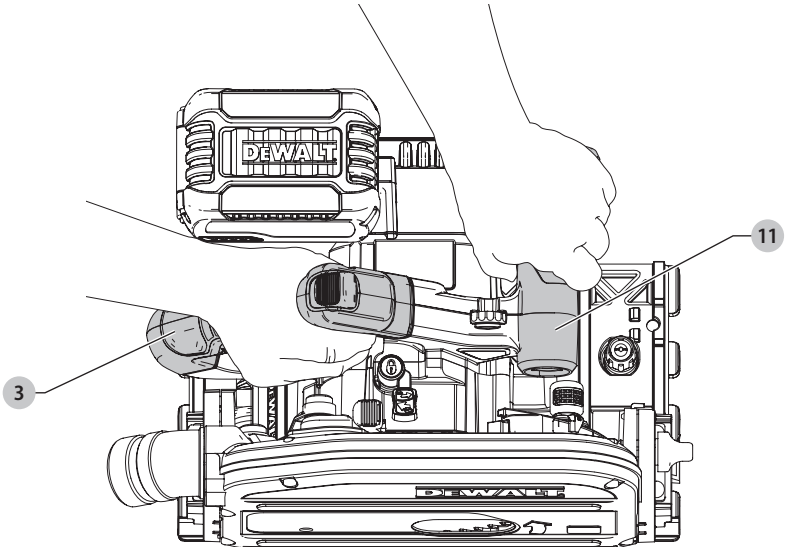


Fig. F

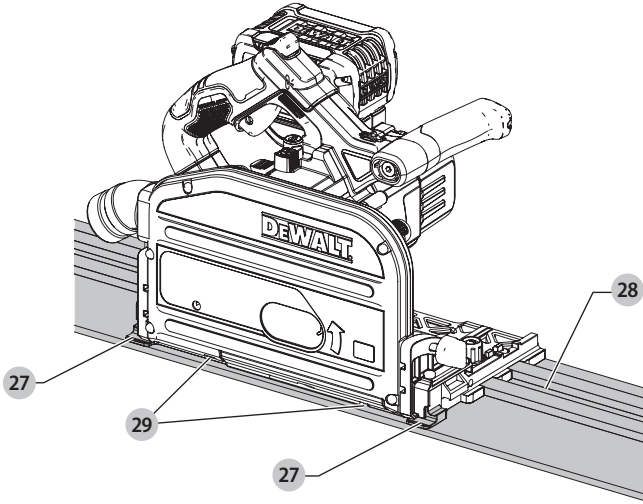


Fig. G

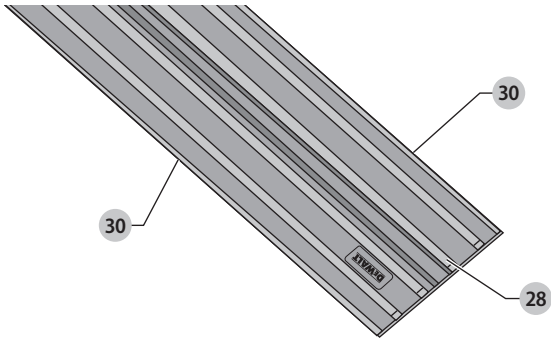


Fig. H

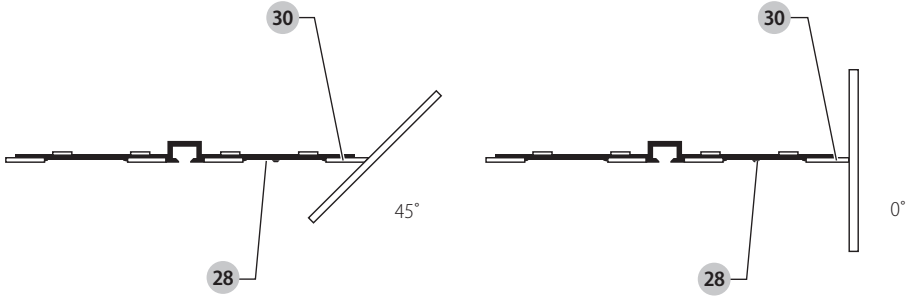
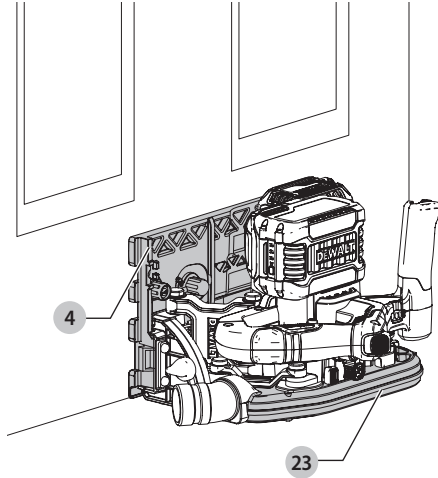


Fig. I



CORDLESS PLUNGE SAW

DCS520

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

		DCS520
Voltage	V _{DC}	54
Type		2
Battery type		Li-Ion
No-load speed	min ⁻¹	2500–4200
Blade diameter	mm	165
Maximum depth of cut		
90° (without guide rail)	mm	59
90° (with guide rail)	mm	55
Blade bore	mm	20
Bevel angle adjustment		47°
Weight (without battery pack)	kg	4.7

Noise values and/or vibration values (triaux vector sum) according to EN62841-2-5:

L _{PA} (emission sound pressure level)	dB(A)	93
L _{WA} (sound power level)	dB(A)	103
K (uncertainty for the given sound level)	dB(A)	3
Vibration emission value a _h =		
	m/s ²	< 2.5
Uncertainty K =		
	m/s ²	1.5

The vibration and/or noise emission level given in this information sheet has been measured in accordance with a standardised test given in EN62841 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure.

! **WARNING:** The declared vibration and/or noise emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or poorly maintained, the vibration and/or noise emission may differ. This may significantly increase the exposure level over the total working period.

An estimation of the level of exposure to vibration and/or noise should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period.

Identify additional safety measures to protect the operator from the effects of vibration and/or noise such as: maintain the tool and the accessories, keep the hands warm (relevant for vibration), organisation of work patterns.

EC-Declaration of Conformity

Machinery Directive and Radio Equipment Directive



Cordless Plunge Saw DCS520

DEWALT declares that these products described under **Technical Data** are in compliance with: 2006/42/EC, EN62841-1:2015, EN62841-2-5:2014.

These products also comply with Directive 2014/53/EU and 2011/65/EU. For more information, please contact DEWALT at the following address or refer to the back of the manual.

The undersigned is responsible for compilation of the technical file and makes this declaration on behalf of DEWALT.

Markus Rompel
Vice President of Engineering, PTE-Europe
DEWALT, Richard-Klinger-Straße 11,
D-65510, Idstein, Germany
14.10.2019



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.

Batteries				Chargers/Charge Times (Minutes)									
Cat #	V _{DC}	Ah	Weight (kg)	DCB104	DCB107	DCB112	DCB113	DCB115	DCB116	DCB117	DCB118	DCB132	DCB119
DCB546	18/54	6.0/2.0	1.05	60	270	170	140	90	80	40	60	90	X
DCB547	18/54	9.0/3.0	1.46	75*	420	270	220	135*	110*	60	75*	135*	X
DCB548	18/54	12.0/4.0	1.44	120	540	350	300	180	150	80	120	180	X

*Date code 201811475B or later

GENERAL POWER TOOL SAFETY WARNINGS



WARNING: Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1) Work Area Safety

- Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) Electrical Safety

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.

- When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

3) Personal Safety

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

- 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.

6) Service

- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
- b) **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

Additional Specific Safety Rules

Safety Instructions for All Saws

- a) **⚠ DANGER: Keep hands away from cutting area and the blade. Keep your second hand on auxiliary handle, or motor housing.** If both hands are holding the saw, they cannot be cut by the blade.
- b) **Do not reach underneath the workpiece.** The guard cannot protect you from the blade below the workpiece.
- c) **Adjust the cutting depth to the thickness of the workpiece.** Less than a full tooth of the blade teeth should be visible below the workpiece.
- d) **Never hold workpiece in your hands or across your leg. Secure the workpiece to a stable platform.** It is important to support the work properly to minimize body exposure, blade binding, or loss of control.
- e) **Hold power tool by insulated gripping surfaces 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 shock the operator.
- f) **When ripping always use a rip fence or straight edge guide.** This improves the accuracy of cut and reduces the chance of blade binding.
- g) **Always use blades with correct size and shape (diamond versus round) of arbour holes.** Blades that do not match the mounting hardware of the saw will run eccentrically, causing loss of control.
- h) **Never use damaged or incorrect blade washers or bolt.** The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.

Causes and Operator Prevention of Kickback

- Kickback is a sudden reaction to a pinched, bound or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator;
- When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator;
- If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.

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

- Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blade, but not in line with the blade.** Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.
- When blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur.** Investigate and take corrective actions to eliminate the cause of blade binding.
- When restarting a saw in the workpiece, centre the saw blade in the kerf and check that saw teeth are not engaged into the material.** If saw blade binds, it may walk up or kickback from the workpiece as the saw is restarted.
- Support large panels to minimise the risk of blade pinching and kickback. Large panels tend to sag under their own weight.** Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.
- Do not use dull or damaged blades.** Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.
- Blade depth and bevel adjusting locking levers must be tight and secure before making cut.** If blade adjustment shifts while cutting, it may cause binding and kickback.
- Use extra caution when sawing into existing walls or other blind areas.** The protruding blade may cut objects that can cause kickback.

Safety Instructions for Plunge-Type Saws

- Check guard for proper closing before each use. Do not operate the saw if guard does not move freely and enclose the blade instantly. Never clamp or tie the guard with the blade exposed. If saw is**

accidentally dropped, guard may be bent. Check to make sure that guard moves freely and does not touch the blade or any other part, in all angles and depths of cut.

- Check the operation and condition of the guard return spring. If the guard and the spring are not operating properly, they must be serviced before use.** Guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.
- Assure that the base plate of the saw will not shift while performing the "plunge cut."** Blade shifting sideways will cause binding and likely kickback.
- Always observe that the guard is covering the blade before placing saw down on bench or floor. An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path.** Be aware of the time it takes for the blade to stop after switch is released.

Additional Safety Instructions for All Saws with Riving Knife

- Use the appropriate saw blade for the riving knife.** For the riving knife to function, the body of the blade must be thinner than the riving knife and the cutting width of the blade must be wider than the thickness of the riving knife.
- Adjust the riving knife as described in this instruction manual.** Incorrect spacing, positioning and alignment can make the riving knife ineffective in preventing kickback.
- For the riving knife to work, it must be engaged in the workpiece.** The riving knife is ineffective in preventing kickback during short cuts.
- Do not operate the saw if riving knife is bent.** Even a light interference can slow the closing rate of a guard.

Additional Safety Instructions for Plunge-Type Saws

- **Wear ear protectors.** Exposure to noise can cause hearing loss.
- **Wear a dust mask.** Exposure to dust particles can cause breathing difficulty and possible injury.
- **Do not use blades of larger or smaller diameter than recommended.** For the proper blade rating refer to the technical data. Use only the blades specified in this manual, complying with EN 847-1.
- **Use only saw blades that are marked with a speed equal or higher than the speed marked on the tool.**
- **Never use abrasive cut-off wheels.**

Residual Risks

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

- Impairment of hearing.
- Risk of personal injury due to flying particles.

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

SAVE THESE INSTRUCTIONS

Chargers

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

Electrical Safety

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



Your DEWALT charger is double insulated in accordance with EN60335; therefore no earth wire is required.

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

Mains Plug Replacement (U.K. & Ireland Only)

If a new mains plug needs to be fitted:

- Safely dispose of the old plug.
- Connect the brown lead to the live terminal in the plug.
- Connect the blue lead to the neutral terminal.



WARNING: No connection is to be made to the earth terminal.

Follow the fitting instructions supplied with good quality plugs. Recommended fuse: 3 A.

Using an Extension Cable

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

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

Important Safety Instructions for All Battery Chargers

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

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



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



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



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



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

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

- **DO NOT attempt to charge the battery pack with any chargers other than the ones in this manual.** The charger and battery pack are specifically designed to work together.
- **These chargers are not intended for any uses other than charging DEWALT rechargeable batteries.** Any other uses may result in risk of fire, electric shock or electrocution.
- **Do not expose charger to rain or snow.**
- **Pull by plug rather than cord when disconnecting charger.** This will reduce risk of damage to electric plug and cord.
- **Make sure that cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.**
- **Do not use an extension cord unless it is absolutely necessary.** Use of improper extension cord could result in risk of fire, electric shock, or electrocution.
- **Do not place any object on top of charger or place the charger on a soft surface that might block the ventilation slots and result in excessive internal heat.** Place the charger in a position away from any heat source. The charger is ventilated through slots in the top and the bottom of the housing.
- **Do not operate charger with damaged cord or plug—** have them replaced immediately.
- **Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way.** Take it to an authorised service centre.
- **Do not disassemble charger; take it to an authorised service centre when service or repair is required.** Incorrect reassembly may result in a risk of electric shock, electrocution or fire.
- **In case of damaged power supply cord the supply cord must be replaced immediately by the manufacturer, its service agent or similar qualified person to prevent any hazard.**
- **Disconnect the charger from the outlet before attempting any cleaning. This will reduce the risk of electric shock.** Removing the battery pack will not reduce this risk.
- **NEVER attempt to connect two chargers together.**
- **The charger is designed to operate on standard 230V 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. A)







1. Plug the charger into an appropriate outlet before inserting battery pack.

2. Insert the battery pack **14** into the charger, making sure the battery pack is fully seated in the charger. The red (charging) light will blink repeatedly indicating that the charging process has started.
3. The completion of charge will be indicated by the red light remaining ON continuously. The battery pack is fully charged and may be used at this time or left in the charger. To remove the battery pack from the charger, push the battery release button **15** on the battery pack.

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

Charger Operation

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

Charge Indicators	
 Charging	
 Fully Charged	
 Hot/Cold Pack Delay*	

*The red light will continue to blink, but a yellow indicator light will be illuminated during this operation. Once the battery pack has reached an appropriate temperature, the yellow light will turn off and the charger will resume the charging procedure.

The compatible charger(s) will not charge a faulty battery pack. The charger will indicate faulty battery by refusing to light.

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

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

Hot/Cold Pack Delay

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

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

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

Electronic Protection System

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

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

Wall Mounting

These chargers are designed to be wall mountable or to sit upright on a table or work surface. If wall mounting, locate the charger within reach of an electrical outlet, and away from a corner or other obstructions which may impede air flow. Use the back of the charger as a template for the location of the mounting screws on the wall. Mount the charger securely using drywall screws (purchased separately) at least 25.4 mm long with a screw head diameter of 7–9 mm, screwed into wood to an optimal depth leaving approximately 5.5 mm of the screw exposed. Align the slots on the back of the charger with the exposed screws and fully engage them in the slots.

Charger Cleaning Instructions



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

Battery Packs

Important Safety Instructions for All Battery Packs


When ordering replacement battery packs, be sure to include catalog 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.

NOTE: Lithium-ion batteries should not be put in checked baggage.

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

In most instances, shipping a DEWALT battery pack will be excepted from being classified as a fully regulated Class 9 Hazardous Material. In general, only shipments containing a lithium-ion battery with an energy rating greater than 100 Watt Hours (Wh) will require being shipped as fully regulated Class 9. All lithium-ion batteries have the Watt Hour rating marked on the pack. Furthermore, due to regulation complexities, DEWALT does not recommend air shipping lithium-ion battery packs alone regardless of Watt Hour rating. Shipments of tools with batteries (combo kits) can be air shipped as excepted if the Watt Hour rating of the battery pack is no greater than 100 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.

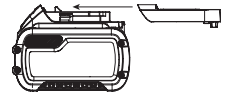
Transporting the FLEXVOLT™ Battery

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

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



Discard the battery pack with due care for the environment.

LI-ION



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 DCS520 operates on a 54 volt battery pack.

The DCB546, DCB547, DCB548 battery packs may be used. Refer to **Technical Data** for more information.

Package Contents

The package contains:

- 1 Plunge saw
- 1 Hex wrench
- 1 Li-Ion battery pack (T1 models)
- 2 Li-Ion battery packs (T2 models)
- 3 Li-Ion battery packs (T3 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 pictograms are shown on the tool:



Read instruction manual before use.



Wear ear protection.



Wear eye protection.



Maximum depth of cut



Blade diameter

Date Code Position (Fig. A)

The date code **16**, which also includes the year of manufacture, is printed into the housing.

Example:

2019 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 Plunge trigger
- 2 On/off switch
- 3 Main handle
- 4 Shoe
- 5 Rail adjustment knobs
- 6 Bevel scale
- 7 Bevel adjustment knobs
- 8 Depth adjustment knobs
- 9 Depth scale
- 10 Blade
- 11 Front handle
- 12 Spindle lock button
- 13 Spindle lock lever
- 14 Battery pack
- 15 Battery release button
- 16 Date code
- 17 Dust extraction outlet
- 18 Anti-kickback knob
- 19 Speed wheel
- 20 Fuel gauge

Intended Use

The DCS520 cordless plunge saw is designed for professional sawing of wood products.

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

This heavy-duty plunge saw is a professional power tool.

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

- **Young children and the infirm.** This appliance is not intended for use by young children or infirm persons without supervision.

- This product is not intended for use by persons (including children) suffering from diminished physical, sensory or mental abilities; lack of experience, knowledge or skills unless they are supervised by a person responsible for their safety. Children should never be left alone with this product.

ASSEMBLY AND ADJUSTMENTS



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



WARNING: Use only DEWALT battery packs and chargers.

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

NOTE: Make sure your battery pack **14** is fully charged.

To Install the Battery Pack into the Tool

- Align the battery pack **14** with the rails as shown in Figure A.
- Slide it in until the battery pack is firmly seated in the tool and ensure that you hear it snap into place.

To Remove the Battery Pack from the Tool

- Press the release button **15** and firmly pull the battery pack out.
- Insert battery pack into the charger as described in the charger section of this manual.

Fuel Gauge Battery Packs (Fig. A)

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 **20**. 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.

Bevel Adjustment (Fig. A)

The bevel angle can be adjusted between 0° and 47°.

- Loosen the bevel adjustment knobs **7**.
- Set the bevel angle by tilting the saw shoe **4** until the mark indicates the desired angle on the bevel scale **6**.
- Tighten the bevel adjustment knobs **7**.

Changing the Saw Blade (Fig. A–C)

NOTE: It is not necessary to remove the outer blade cover **23** to change the blade.

- Remove the battery pack.
- Press the spindle lock button **12**.

- Press the plunge saw down until it stops (blade change position).
- Turn the spindle lock lever **13** clockwise until it stops.
- Hold the spindle lock lever **13** down and using the hex wrench found in the front handle **11**, rotate the blade until the lock position is found.

NOTE: The blade **10** is now locked and cannot be turned by hand.

- Use the hex wrench to turn the blade clamping screw **24** counterclockwise to remove.
- Remove the outer flange **25** and used blade **10**. Place the new blade on the inner flange **26**.
- Replace the outer flange **25** and blade clamping screw **24**. Turn the screw clockwise by hand.

NOTE: The direction of rotation of the saw blade and the rotation of the plunge saw MUST be the same.

- Tighten the blade clamping screw firmly using the hex wrench.
- Release and turn the spindle lock lever **13** counterclockwise until it stops.
- Move the plunge saw back to top position.
- Push the plunge trigger **1** forward, to take the saw out of blade change mode.

Adjusting the Riving Knife (Fig. A–C)

For the correct adjustment of the riving knife **21**, refer to Figure C. Adjust the clearance of the riving knife after changing the saw blade or whenever necessary.

- Follow **Changing the Saw Blade** steps 1–5.
- Loosen the riving knife adjustment screw **22** with a hex wrench and set the riving knife as shown in Figure C.
- Tighten the riving knife adjustment screw **22**.
- Turn the spindle lock lever **13** counterclockwise until it stops.
- Move the plunge saw back to top position.
- Push the plunge trigger **1** forward, to take the saw out of blade change mode.

Depth of Cut Adjustment (Fig. D)

The cutting depth can be set at 0–59 mm without guide rail attached; with the guide rail attached: 0–55 mm.

- Loosen the depth adjustment knob **8** and move the pointer to obtain the correct depth of cut.
- Tighten the depth adjustment knob **8**.

NOTE: For optimal results, allow the saw blade to protrude from the workpiece by about 3 mm (Fig. D).



If this logo appears on your tool, your tool is equipped with Wireless Tool Control.

Wireless Tool Control (Fig. A) (Available on some units)



CAUTION: Read all safety warnings, instruction and specifications of the appliance which is paired with this tool.

This tool is equipped with a Wireless Tool Control transmitter which allows it to be wirelessly paired with another Wireless Tool Control device, such as a dust extractor.

To pair your tool using Wireless Tool Control, press and hold the on/off switch **2** and the Wireless Tool Control pairing button on the separate device. An LED on the separate device will let you know when your tool has been successfully paired.

OPERATION

Instructions for Use



WARNING: Always observe the safety instructions and applicable regulations.



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

Proper Hand Position (Fig. E)



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 front handle **11**, with the other hand on the main handle **3**.

Switching On and Off (Fig. A)

Press the on/off switch **2** to turn the plunge saw on.

Guiding the Tool (Fig. A, E, F)



WARNING:

- ALWAYS secure the workpiece in such a manner that it cannot move while sawing.
- ALWAYS push the machine forward. NEVER pull the machine backward towards you.
- ALWAYS use the plunge saw with both hands. Put one hand on the main handle **3** and the second hand on the front handle **11** as shown in Figure E.
- ALWAYS use the clamp to hold the rail to the workpiece.
- Use proper hand position to guide the saw properly.
- The cutting indicator **27** displays the cutting line for 0° and 47° cuts (without guide rail).
- The blade position indicator **29** shows the blade position for full plunge.
- For optimum results, clamp the workpiece bottom up.

Cutting

1. Place the machine with the front part of the saw shoe **4** on the workpiece.
2. Push the plunge trigger **1** forward, then press the on/off switch **2** to turn the saw on.
3. Press the saw down to set cutting depth and push it forward in the cutting direction.

Plunge Cuts



WARNING: To avoid kickbacks, the following instructions MUST be observed when plunge cutting:

- Place the machine onto the guide rail and release the anti-kickback knob **18** by turning it counterclockwise.
- Turn the machine on and slowly press the saw down onto the set cutting depth and push forward in the cutting direction. The cutting indicators **27** display the absolute front and the absolute rear cutting points of the saw blade (dia. 165 mm) at maximum cutting depth and using the guide rail.
- If kickback happened during the plunge cut, turn the anti-kickback knob **18** counterclockwise to release it from the rail.
- When you have finished the plunge cut, turn the anti-kickback knob **18** clockwise into the lock position.

Guide Rail System (Fig. A, F)

The guide rails **28**, which are available in different lengths, allow for precise, clean cuts and simultaneously protect the workpiece surface against damage.

In conjunction with additional accessories, exact angled cuts, mitre cuts and fitting work can be completed with the guide rail system.

Securing the workpiece with clamps ensures a secure hold and safe working.

The guide clearance of the plunge saw must be very small for best cutting results and can be set with the two rail adjustment knobs **5**.

1. Release the screw inside the rail adjustment knobs **5** to adjust the clearance.
2. Adjust the knob until saw locks on rail.
3. Rotate knob back until saw slides easily.
4. Hold the rail adjustment knob in position and lock the screw again.

NOTE: ALWAYS readjust the system for use with other rails.

Anti-Splinter Guard (Fig. G, H)

The guide rail **28** is equipped with an anti-splinter guard **30**, which has to be trimmed before the first use.

The anti-splinter guard **30** is situated on each edge of the guide rail (**28**, Fig. G). The purpose of this anti-splinter guard is to provide the user with a visible blade cut line while reducing the chipping that occurs along the workpiece cut edge during cutting.

IMPORTANT: ALWAYS read and follow the **Guide Rail System** instructions before cutting the splinterguard!

1. Set the speed of the plunge saw to level 7.
2. Place the guide rail **28** on a scrap piece of wood. Use a clamp to ensure that the guide rail is securely attached to the workpiece. This will ensure accuracy.
3. Set the plunge saw on 5 mm cut depth.
4. Place the saw on the rear end of the guide rail.
5. Turn the saw on, press it down to the set cutting depth and cut the anti-splinter guard **30** along the full length in one

continuous operation. The edge of the anti-splinter guard now corresponds exactly to the cutting edge of the blade.

To trim the anti-splinter guard on the other side of the guide rail, remove the saw from the rail and rotate the rail 180°. Repeat steps 1 through 4.

NOTE: If desired, the splinter guard can be bevelled to 45°, then repeat steps 1 through 4. This allows one side of the rail for cutting parallel cuts and the other side of the rail is tuned in for 45° bevel cuts (Fig. H).

NOTE: If the anti-splinter guard is trimmed for parallel cutting on both sides, then when the unit is bevelled, the blade will not run true to the edge of the anti-splinter guard. This is because the pivot point of the unit bevel is not stationary and the blade moves out when the unit is bevelled.

WARNING: To reduce the risk of injury, ALWAYS secure the guide rail with a clamp.

Speed Adjustment (Fig. A)

The speed can be regulated between 2500 and 4200 rpm using the speed wheel **19**. This enables you to optimise the cutting speed to suit the material. Refer to the following chart for type of material and speed range.

Type of Material to be Cut	Speed Range
Solid wood (hard, soft)	3–7
Chipboards	4–7
Laminated wood, blockboards, veneered and coated boards	2–7
Paper and carton	1–3

Door Cutting (Fig. I)

- Place the plunge saw with the outer guard **23** on a clean, flat floor.
- Press the shoe **4** with the front side on the door against the adjusted depth stop.

Dust Extraction (Fig. A)

WARNING: Risk of dust inhalation. To reduce the risk of personal injury, ALWAYS wear an approved dust mask.

Your tool is fitted with a dust extraction outlet **17**.

The Dust Extraction Adaptor allows you to connect the tool to an external dust extractor, either using the AirLock™ system (DWW9000-XJ), or a standard 35 mm dust extractor fitment.

WARNING: ALWAYS use a vacuum extractor designed in compliance with the applicable directives regarding dust emission when sawing wood. Vacuum hoses of most common vacuum cleaners will fit directly into the dust extraction outlet.

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.

Protecting the Environment



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



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

Rechargeable Battery Pack

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

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

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