



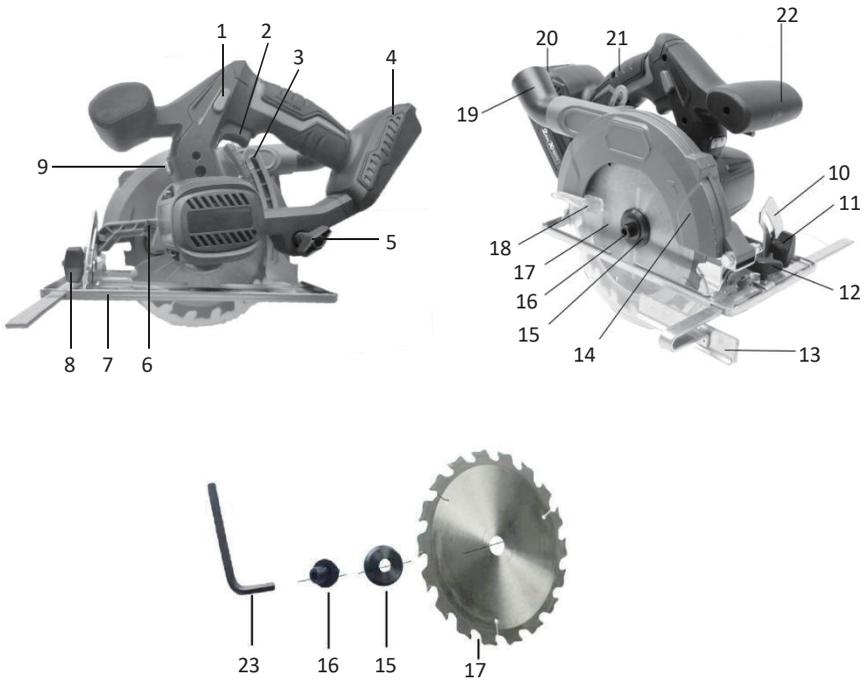
**TRUTEK**<sup>TM</sup>  
CONSTRUCTION FASTENING SYSTEMS



**TCWS165**  
**BRUSHLESS CIRCULAR SAW**

**[WWW.TRUTEKFIXINGS.CO.UK](http://WWW.TRUTEKFIXINGS.CO.UK)**  
**[WWW.TRUTEK.COM.PL](http://WWW.TRUTEK.COM.PL)**

# 1. PARTS DESCRIPTION



- 1. Safety switch
- 2. Power switch
- 3. Saw depth scale
- 4. Battery compartment
- 5. Locking screw for the saw depth
- 6. Spindle lock
- 7. Base plate
- 8. Guide bar holder
- 9. LED worklight
- 10. Cutting angle scale
- 11. Locking screw for cutting angle
- 12. Locking screw for the guide bar
- 13. Guide bar
- 14. Upper blade guard
- 15. Clamping flange for the saw blade
- 16. Mounting bolt for the saw blade
- 17. Saw blade
- 18. Lower blade guard with retracting lever
- 19. Adapter for the dust extraction
- 20. Battery
- 21. Main handle
- 22. Front handle
- 23. Hex key

Model No.	TCWS165
Rated voltage	20 Vdc
No load speed	4000 /min
Max. cutting depth	55 mm (90°), 42 mm (45°)
Cutting angle	0°- 45°
Saw blade	Ø165 x Ø20 x 1.6 mm (18T)

## 2. PACKAGE CONTENT LIST

- |                                     |                        |
|-------------------------------------|------------------------|
| 1 x Circular saw                    | 1 x Hex key            |
| 1 x 165mm saw blade (pre-installed) | 1 x Instruction manual |
| 1 x Guide bar                       |                        |

- Remove all packing materials
- Ensure all parts on the content list are present
- Check the appliance, and all accessories for transportation damages



**WARNING! Packaging material are not toys! Children must not play with plastic bags! Danger of suffocation!**

## 3. SYMBOLS

The following symbols are used in this manual and/or on the circular saw.

	Denotes risk of personal injury or damage to the tool		Australian Regulatory Compliance mark
	Read the instruction manual before use		Dispose of appliances according to the regulation and requirements of the local council
	Wear hear protection		Wear protective gloves
	Wear protective glasses		Wear breathing protection

## 4. 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.*

### 4.1 Work area safety

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

### 4.2 Electrical safety

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*
- b) **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** *There is an increased risk of electric shock if your body is earthed or grounded.*
- c) **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*
- f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** *Use of an RCD reduces the risk of electric shock.*

### 4.3 Personal safety

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

### 4.4 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.*

#### 4.5 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.*

#### 4.6 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.*

#### 4.7 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 piece being cut 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 could give the operator an electric shock.*
- 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 off-centre, 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.*

#### 4.8 Further safety instructions for all saws

##### Kickback causes and related warnings

- 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.

- a) **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.*
- b) **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.*
- c) **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 is binding, it may walk up or kickback from the workpiece as the saw is restarted.*
- d) **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.**
- e) **Do not use dull or damaged blades.** *Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.*
- f) **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.*
- g) **Use extra caution when making a "plunge cut" into existing walls or other blind areas.** *The protruding blade may cut objects that can cause kickback.*

#### 4.9 Safety instructions for saw's lower guard

- a) **Check lower guard for proper closing before each use. Do not operate the saw if lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position.** *If saw is accidentally dropped, lower guard may be bent. Raise the lower guard with the retracting handle and make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.*
- b) **Check the operation of the lower guard spring. If the guard and the spring are not operating properly, they must be serviced before use.** *Lower guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.*

- c) **Lower guard may be retracted manually only for special cuts such as "plunge cuts" and "compound cuts."** Raise lower guard by retracting handle and as soon as blade enters the material, the lower guard must be released. *For all other sawing, the lower guard should operate automatically.*
- d) **Always observe that the lower 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.*

#### **4.10 Residual risks**

Additional residual risks may arise when using the tool which may not be included in the safety warnings. These risks can arise from misuse, prolonged use etc. Even with the application of the relevant safety regulations and the implementation of safety devices, certain residual risks cannot be avoided. These included:

- a) Injuries caused by touching any rotating/moving parts.
- b) Injuries caused when changing any parts, blades or accessories.
- c) Injuries caused by prolonged use of a tool. When using any tool for prolonged periods ensure you take regular breaks.
- d) Impairment of hearing.
- e) Health hazards caused by breathing dust developed when using your tool (example: working with wood, especially oak, beech and MDF).

## 5. ASSEMBLY



**WARNING:** Always remove the battery before making any adjustment, replacing the saw blade or attaching any accessories.



**WARNING:** Do not use any abrasive wheels.

### 5.1 Changing the saw blade (Fig. 1)

- Set the saw depth to 0 mm and the saw angle to 0°.
- Push in the spindle lock (6) to prevent the saw blade (17) from rotating.
- Loosen the mounting bolt (16) for the saw blade (17) using the hex key (21).
- Release the spindle lock (6) and remove the mounting bolt (16) and the clamping flange (15) for the saw blade.
- Open the lower blade guard (18) and remove the saw blade (17).
- Fit the new saw blade and fasten it with the clamping flange (15) and mounting bolt (16). Make sure that the specified direction of rotation of the saw blade (17) corresponds to the direction of rotation indicated on the circular saw.
- Push in the spindle lock (6) and tighten the mounting bolt (16) with the hex key (21).
- Check that the saw blade (17) is secure.



Fig. 1

### 5.2 Adjusting the cutting depth (Fig. 2)

- Loosen the locking screw for the saw depth (5).
- Adjust the saw depth so that almost an entire sawtooth will be visible on the underside of the workpiece.
- Fasten the locking screw for the saw depth (5).



Fig. 2

### 5.3 Adjusting the cutting angle (Fig. 3)

- a) Loosen the locking screw for the cutting angle (11).
- b) Adjust the angle 0- 45°.
- c) Tighten the lock screw for the cutting angle (11).

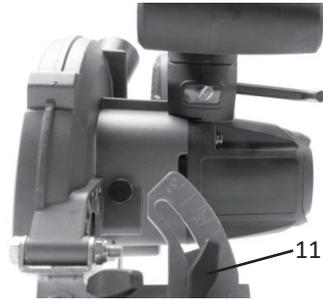


Fig. 3

### 5.4 Mounting the guide bar (Fig. 4)

- a) Loosen the locking screw for the guide bar (12).
- b) Insert the guide bar (13) into the guide bar holder (8). Make sure the markings are facing upward.
- c) Move the guide bar to the desired position and tighten the locking screw for the guide bar (12). Be sure to select the cutting angle first before positioning the guide bar.

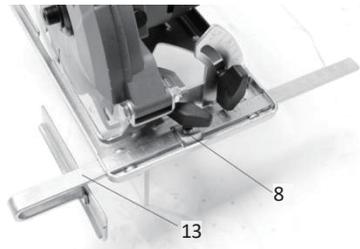


Fig. 4

## 6. OPERATION

### 6.1 Inserting and removing the battery pack (sold separately)



**WARNING: Before inserting and removing the battery pack, make sure the circular saw is turned off**

- a) To insert the battery pack, align the battery pack with the circular saw's battery compartment and slide the battery pack into the circular saw, so that the battery pack is locked in position.
- b) To remove the battery pack, press the battery's release button and pull the battery pack off at the same time.

### 6.2 Turning on and off (Fig. 5)

- a) Start the circular saw by first pressing the safety switch (1) and then the power switch (2).
- b) The lower blade guard (18) opens automatically when the saw is pushed forward. Do not open the lower blade guard (18) manually.
- c) Turn off the circular saw by releasing the power switch (2).



Fig. 5

### 6.3 General cutting

- a) Check and make sure the workpiece is held securely. If the workpiece is a large sheet must be supported to prevent bends or sags. Otherwise, the saw blade (17) will tend to bind and causing kickback.
- b) Hold the main handle (21) with one hand and the front handle (22) with the other hand.
- c) Turn on the circular saw.
- d) Put the base plate (7) against the workpiece.
- e) When the saw blade (17) reaches full speed, cut the workpiece slowly.
- f) Release the power switch (2) to turn off the circular saw.

### 6.4 LED worklight



**WARNING! Do not stare directly at the light beam.**



**WARNING! Never aim the beam at any person and ensure that it is not directed to the eye.**

- a) The LED worklight (9) will be on when the circular saw is turned on.
- b) The LED worklight (9) will be off when the circular saw is turned off.

### 6.5 Dust extraction

A vacuum cleaner can be connected to the adapter for dust extraction (19) to collect the sawdust.

## 7. CLEANING, MAINTENANCE AND STORAGE



**WARNING:** Always remove the battery before carrying out any cleaning, maintenance and storage.



**WARNING:** The circular saw shall only be repaired by an authorised service centre.

### 7.1 *Cleaning*

- a) Keep the ventilation slots free from dust and dirt to prevent overheating
- b) Regularly clean the circular saw's housing with a soft cloth, preferably after each use. If the dirt does not come off, use a soft cloth moistened with soapy water.
- c) Never use solvents such as petrol, alcohol, ammonia water etc. These solvents may damage the plastic parts.

### 7.2 *Maintenance*

- a) The circular saw has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper care and regular cleaning.
- b) Before each use, check the lower blade guard (18) can close correctly and does not go sluggishly due to damaged parts, gummy deposits or debris.
- c) Change the saw blade if the blade is dull.
- d) The circular saw shall only be repaired by an authorised service centre.

### 7.3 *Storage*

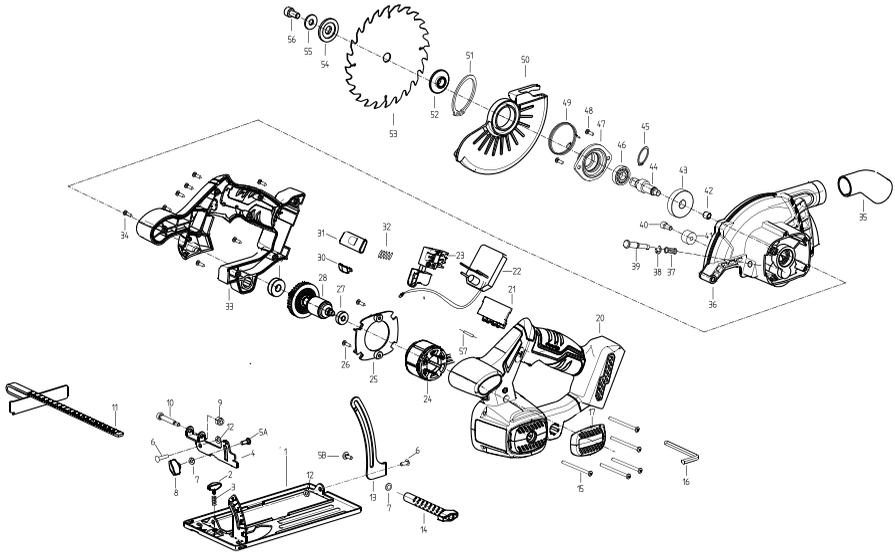
- a) Thoroughly clean the circular saw and its accessories before storage.
- b) Store the circular saw out of the reach of children in a stable and secure place.

## 8. DISPOSAL



Dispose of appliances according to the regulations and requirements of your local council. If appliances are disposed of in landfills or dumps, hazardous substances may leak into the groundwater and get into the food chain, damaging your health and well-being.

# Spare parts and list



No.	Name	No.	Name
1	Base Plate	30	LED Light Cover
2	Spring	31	Anti-Lock Button
3	Scale Knob	32	Anti-Lock Spring
4	Angle Bracket	33	Housing Handle Cover (DJ Foot Plate Type)
5A	Round Head Square Neck Bolt (M6x12 Full Thread)	34	Cross Pan Head Self-Tapping Screw (St2.9*13)
5B	Round Head Square Neck Bolt (M6x20 Full Thread)	35	Dust Collection Pipe
6	Hollow Rivet (6X8)	36	Fixed Guard (165mm)
7	Flat Washer (6)	37	Shaft Lock Spring
8	Angle Adjustment Knob	38	Circlip (6)
9	Hex Self-Locking Nut (M6)	39	Shaft Lock Pin
10	Pivot Bolt	40	Hex Socket Head Cap Screw (M6x12)
11	Scale Assembly	41	Retaining Ring (PVC)
12	Flat Washer (6)	42	Needle Bearing (HK0808)
13	Lifting Bracket	43	Gear
14	Lifting Knob	44	Output Shaft
15	Hex Key	45	Shaft Circlip (28)
16	Pan Head Screw with Spring Washer & Flat Washer (M4x30)	46	Bearing (6001)
17	Rear Cover	47	Gearbox Cover
20	Housing Handle (DJ Foot Plate Type)	48	Cross Countersunk Head Screw (M5x12)
21	DJ Plug Foot	49	Retractable Guard Return Torsion Spring
22	Brushless Circular Saw Controller	50	Retractable Guard (165mm)
23	Switch (JC12-1 24V DC 20A 5E4)	51	Shaft Circlip (34)
24	Brushless Stator Assembly (5235)	52	Inner Flange
25	Air Guide Cover	53	Saw Blade
26	Cross Pan Head Self-Tapping Screw (St2.9*10)	54	Outer Flange
27	Bearing (607)	55	Large Washer (8)
28	Brushless Rotor Assembly (5235)	56	Hex Socket Head Cap Screw (M8x16)
29	Bearing (6000)	57	Resistor (200K)



Trutek Fasteners Polska Ul Wojska Polskiego 3 Mielec 39-300 Polska  
Trutek Fastening Systems New Hall Hey Road Rawtenstall BB4 6HL, UK