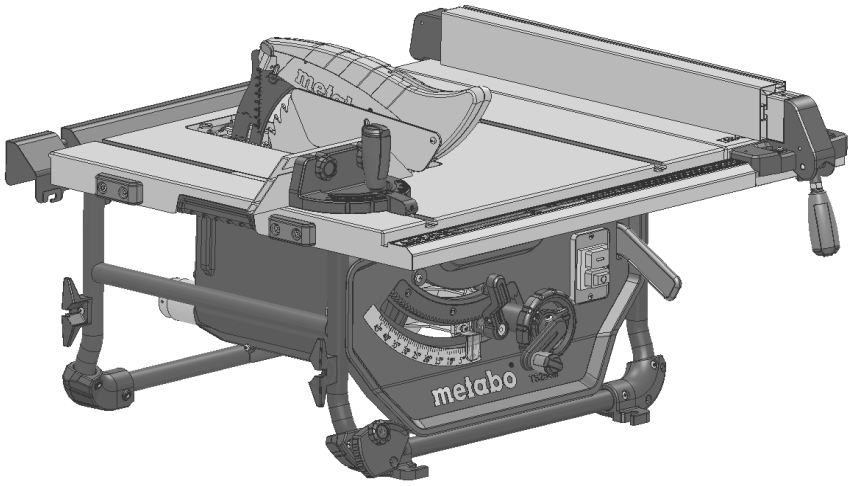
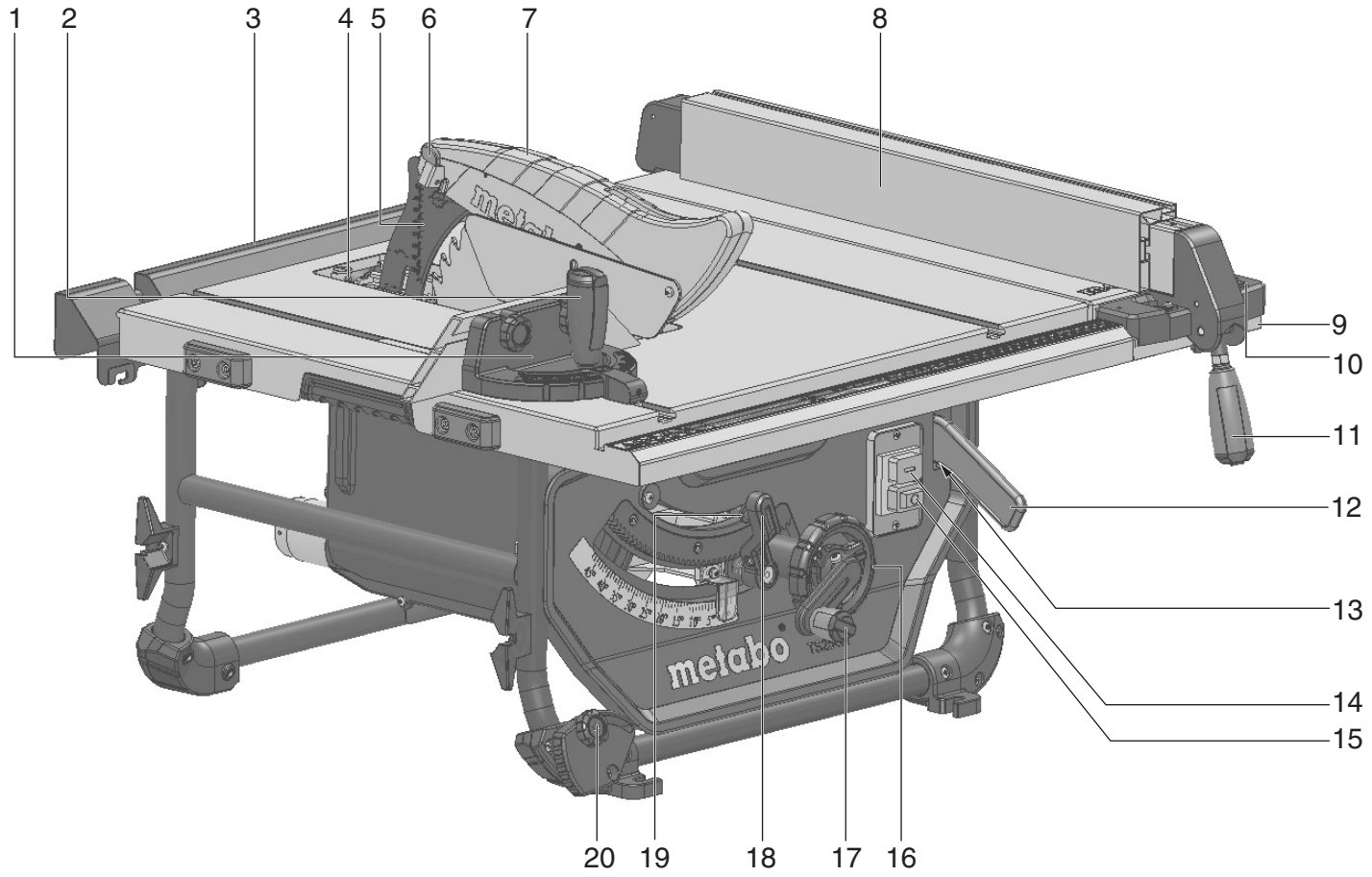
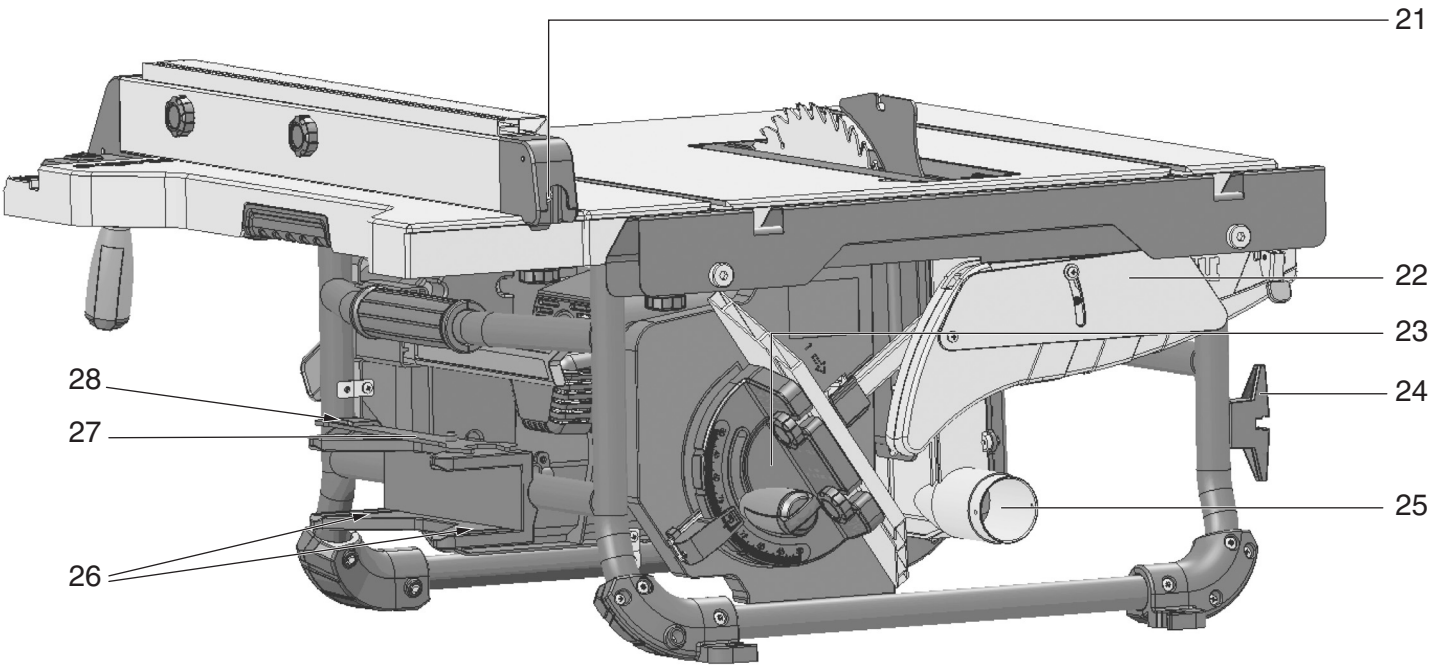
metabo®

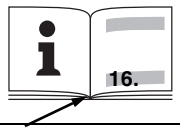
PROFESSIONAL POWER TOOL SOLUTIONS

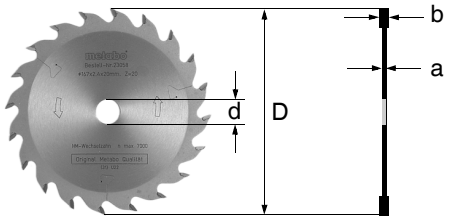
TS 254 M




1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
metabo


21
22
23
24
25
26
27
28

		**TS 254 M**	
*1) **Serial Number**		10254..	
U	**V**	220-240 (1~ 50-60 Hz)	110 (1~ 50-60 Hz)
P_1	**kW**	1,5 kW S1 100%	
I	**A**	7,1	14,6
F	**A**	T 16 A	-
IP	**-**	IP 20	
n_0	**/min, rpm**	4200	
v_0	**m/s**	56	
W	**mm**	2,3	
D	**mm (in)**	254	
d	**mm (in)**	30	
b	**mm (in)**	2,4	
a	**mm (in)**	1,6	
$T_{90°}$	**mm**	0...80	
$T_{45°}$	**mm**	0...48	
$S_{x°}$	**°**	-1,5...46,5	
L_P	**mm (in)**	520	
L_W	**mm (in)**	195	
A_1	**mm (in)**	669 x 748 x 334	
S_L	**mm (in)**	590 / 790	
S_B	**mm (in)**	588 / 885	
m	**kg**	24,4	
L_{pA}/K_{pA}	**dB(A)**	92 / 3	
L_{WA}/K_{WA}	**dB(A)**	105 / 3	



CE *2) 2011/65/EU, 2006/42/EC, 2014/30/EU
*3) EN 62841-1:2015, EN 62841-3-1:2014+A11:2017, EN IEC 63000:2018
*4) M6A 011699 0033 Rev. 00
*5) 0123, TÜV SÜD Product Service GmbH Ridlerstraße 65. D-80339 München Germany

2013-01-24, Bernd Fleischmann ppa. B. F.
Direktor Produktentstehung & Qualität (Vice President Product Engineering & Quality)
*6) Metabowerke GmbH - Metabo-Allee 1 - 72622 Nuertingen, Germany

Original instructions

Table of Contents

1. Declaration of Conformity

We, being solely responsible, hereby declare that these table-top circular saws, identified by type and serial number *1), meet all relevant requirements of directives *2) and standards *3). Test report *4), Issuing testing authority *5), Technical documents for *6) - see page 3.

For UK only:

UK CA We as manufacturer and authorized person o compile the technical file, see *6) on page 3, hereby declare under sole responsibility that these table-top circular saws, identified by type and serial number *1) on page 3, fulfill all relevant provisions of following UK Regulations S.I. 2016/1091, S.I. 2008/1597, S.I. 2012/3032 and Designated Standards see *3.

110 V: Approved Body No.: 0673; Technology International (Europe) Limited 56 Shrivenham Hundred Business Park Shrivenham, Swindon, SN6 8TY, UK; Certificate No.: TI(E) / SOMSR (08) – UKTE / 51 / 05112021.

220-240 V: Test report *4), Issuing testing authority *5) - see page 3.

2. Specified Conditions of Use

This table circular saw is intended for ripping and crosscutting grown timber, faced boards, chip board and wood-core plywood sheets, plastics and similar materials.

Metals can only be cut with the following restrictions:

– With suitable saw blade only (see chapter 13. Accessories")

– Only non-ferrous metals (no hard metal or hardened metal, no magnesium)

Do not cut round workpieces, since they could be turned by the rotating saw blade.

When sawing thin stock laid on its edge, a suitable guide must be used for firm support.

The tool must not be used for seaming and grooving.

The tool must not be used for slitting (groove ended in workpiece).

The tool must not be used for plunge cuts.

Any other use is considered to be not as specified and not allowed. The manufacturer assumes no liability for any damage caused by unspecified use.

Modification of the machine or use of parts not approved by the manufacturer can cause unforeseeable damage!

3. General Safety Information

For your own protection and for the protection of your electrical tool, pay attention to all parts of the text that are marked with this symbol!

WARNING – Reading the operating instructions will reduce the risk of injury.

Pass on your power tool only together with these documents.

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.*

Keep all safety instructions and information for future reference! *The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.*

3.1 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.*

3.2 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.** D*amaged 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.*

3.3 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 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 device 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.** U*se of dust extraction 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.*

3.4 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. 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 with care. 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, tool bits etc. in accordance with these instructions. Take 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.*

3.5 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.*

4. Special Safety Instructions

4.1 Safety instructions related to guards

a) **Leave the guards in place. Guards have to be in functional condition and mounted properly.** Loose, damaged or not properly functioning guards have to be repaired or replaced.

b) **Always use the guard and the splitting wedge for cuts.** For cuts where the saw blade cuts completely through the thickness of the workpiece, the guard and other safety devices reduce the risk of injuries.

c) **After finishing your work (e.g. seaming) where the guard and splitting wedge have to be removed, immediately reattach the protective system.** The guard and the splitting wedge reduce the risk of injury.

d) **Before switching on the power tool, make sure that the saw blade is not in contact with the guard, the splitting wedge or the workpiece.** Inadvertent contact of these components with the saw blade could cause a hazardous condition.

e) **Adjust the splitting wedge as described in this instruction manual.** Incorrect spacing, position and alignment are possible reasons for failure of the splitting wedge to effectively prevent kickback.

f) **So that the splitting wedge can work, it must be positioned in the saw gap.** The splitting wedge is ineffective when cutting

workpieces that are too short to be engaged with the splitting wedge. A kickback by the splitting wedge cannot be prevented under these conditions.

g) **Use the appropriate saw blade for the splitting wedge.** For the splitting wedge to function properly, the saw blade diameter must match the appropriate splitting wedge, the body of the saw blade must be thinner than the splitting wedge, and the tooth width has to be greater than the thickness of the splitting wedge.

4.2 Safety instructions for sawing procedures

a) **DANGER: Keep fingers and hands away from cutting area and the blade.** A moment of inattention while operating power tools or slipping might cause your hand to get near the saw blade and may result in serious personal injury.

b) **Feed the workpiece into the saw blade only against the direction of rotation.** Feeding the workpiece in the same direction that the saw blade is rotating above the table may result in the workpiece, and your hand, being pulled into the saw blade.

c) **Never use the mitre gauge to feed the workpiece for straight cuts and do not use the ripping fence as a length stop when cross cutting with the mitre gauge.** Guiding the workpiece with the ripping fence and the mitre gauge at the same time increases the likelihood of saw blade binding and kickback.

d) **When effecting straight cuts, always apply the workpiece feeding force between the fence and the saw blade. Use a push stick when the distance between the fence and the saw blade is less than 150 mm, and a push block when this distance is less than 50 mm.** Such "working aids" ensure that your hand remains at a safe distance to the saw blade.

e) **Use only the supplied push stick of the manufacturer.** The push stick provides sufficient distance of the hand from the saw blade.

f) **Never use a damaged or cut push stick.** A damaged push stick may break causing your hand to slip into the saw blade.

g) **Do not perform any operation"freehand". Always use either the ripping fence or the mitre gauge to position and guide the workpiece.** "Freehand" means using your hands to support or guide the workpiece, in lieu of a ripping fence or mitre gauge. Freehand sawing leads to misalignment, binding and kickback.

h) **Never reach around or over a rotating saw blade.** Reaching for a workpiece may lead to accidental contact with the moving saw blade.

i) **Provide auxiliary workpiece support to the rear and/or sides of the saw table for long and/or wide workpieces to keep them level.** Long and/or wide workpieces have a tendency to pivot on the table's edge, causing loss of control, saw blade binding and kickback.

j) **Feed the workpiece at a uniform speed. Do not bend or twist the workpiece. If the saw blade jams, immediately switch off the power tool, pull the mains plug and clear the jam.** If the workpiece causes the jamming of the saw blade, this could lead to kickback or stalling of the motor.

k) **Do not remove piece of cut-off material while the saw is running.** The material may become trapped between the saw blade and fence or in the guard and pull your fingers into the saw blade. Turn the saw off and wait until the saw blade stops before removing the material.

l) **Use an auxiliary fence for long cuts in workpieces with a thickness of less than 2 mm.** Thin workpieces may wedge under the fence and create kickback.

4.3 Kickback causes and related warnings

Kickback is a sudden reaction of the workpiece due to a pinched, bound saw blade or misaligned line of cut in the workpiece with respect to the saw blade or when a part of the workpiece binds between the saw blade and the fence or other fixed object.

During kickback, in most cases, the workpiece is lifted off the table by the rear portion of the saw blade and is propelled towards the operator.

Kickback is the result of incorrect or faulty use of the table circular saw. It can be prevented if suitable precautionary measures are taken as described below.

a) **Never stand directly in line with the saw blade. Always position your body on the same side of the saw blade as the fence rail.** Kickback may propel the workpiece at high velocity towards anyone standing in front and in line with the saw blade.

b) **Never reach over or in behind the saw blade to pull or support the workpiece.** Accidental contact with the saw blade may occur or kickback may drag your fingers into the saw blade.

c) **Never hold and press the workpiece that is being cut off against the rotating saw blade.** Pressing the workpiece being cut off against the saw blade will create a binding condition and kickback.

d) **Align the fence rail to be parallel with the saw blade.** A misaligned fence will pinch the workpiece against the saw blade and create kickback.

e) **Use a featherboard to guide the workpiece against the table and fence rail when making hidden cuts (e.g. seaming).** A featherboard helps to control the workpiece in the event of a kickback.

f) **Be particularly careful when sawing in areas of joined workpieces that you cannot see.** The plunging saw blade can saw into objects that could cause kickback.

g) **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.

h) **Use extra caution when cutting a workpiece that is twisted, knotted, warped or does not have a straight edge to guide it with a mitre gauge or along the fence rail.** A warped, knotted, or twisted workpiece is unstable and causes misalignment of the kerf with the saw blade, binding and kickback.

i) **Never cut more than one workpiece, stacked vertically or horizontally.** The saw blade could pick up one or more pieces and cause kickback.

j) **If you wish to restart a saw that is stuck in the workpiece, centre the saw blade in the kerf and check whether that the saw teeth are not caught in the workpiece.** If the saw blade binds, it may lift up the workpiece and cause kickback when the saw is restarted.

k) **Keep saw blades clean, sharp, and with sufficient set. Never use warped saw blades or saw blades with cracked or broken teeth.** Sharp and properly set saw blades minimise binding, stalling and kickback.

4.4 Safety instructions for the operation of circular table saws

a) **Turn off the circular table saw and unplug it when removing the table insert, changing the saw blade or making adjustments to the splitting wedge, anti-kickback device or saw blade guard, and after each completed cutting procedure.** Precautionary measures serve to avoid accidents.

b) **Never leave the circular table saw unattended when in operation. Turn if off and don't leave the tool until it has come to a complete stop.** An unattended running saw is an uncontrolled hazard.

c) **Locate the circular table saw in a well lit and level area where you can maintain good footing and balance.** It should be installed in an area that provides enough room to easily handle the size of the workpieces. Cluttered, dark areas, and uneven slippery floors invite accidents.

d) **Regularly clean and remove wood shavings and saw dust from under the saw table and/or the dust extraction unit.** Accumulated saw dust is combustible and may self ignite.

e) **Secure the circular table saw.** A circular table saw that is not properly secured may move or tip over.

f) **Remove tools, wood scraps etc. from the circular table saw before turning it on.** Distraction or possible jams can be dangerous.

g) **Always use blades of the right size and with the appropriate mounting hole (e.g. star-shaped or round).** 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 saw blade mounting means such as flanges, saw blade washers, bolts or nuts.** These mounting means were specially designed for your saw, for safe operation and optimum performance.

i) **Never stand on the circular table saw, do not use it as a stepping stool.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

j) **Make sure that the saw blade is installed to rotate in the proper direction. Do not use grinding discs or wire brushes on a circular table saw.** Improper saw blade installation or use of accessories not recommended may cause serious injury.

4.5 Additional Safety Instructions

– These operating instructions are intended for people with basic technical knowledge regarding the operation of a machine like this or similar electrical power tools. Inexperiencend persons are strongly advised to seek competent advise and guidance from an experienced person before operating this machine.

– The manufacturer assumes no liability for any damage caused by neglect of these operating instructions.

Information in these instructions is marked as under:

Danger!
Risk of personal injury or environmental damage.

Risk of electric shock!
Risk of personal injury by electric shock.

Entangelement hazard!
Risk of personal injury by body parts or clothing being drawn into the rotating saw blade.

Caution!
Risk of material damage.

Note:
Additional information.

- Please also observe the special safety instructions in the respective chapters.
- Where applicable, follow the legal directives or regulations for the prevention of accidents pertaining to the use of circular saws.

General hazards!

- Consider environmental conditions:
- When working long stock use suitable supports.
- The saw shall only be started and operated by persons familiar with circular saws and who are at any time aware of the dangers associated with the operation of such tools.
  Persons under 18 years of age shall use this machine only in the course of their vocational training, under the supervision of an instructor.
- Keep bystanders, particularly children, out of the danger zone. Do not permit other persons to touch the machine or power cable while it is running.
- Avoid overheating of the saw teeth.
- When sawing plastic, avoid melting of the plastic.
- Only saw wedges with the appropriate auxiliary limit stop.

Risk of electric shock!

- Do not expose the machine to rain.
  Do not operate the machine in a damp or wet environment.
  Prevent body contact with earthed objects such as radiators, pipes, cooking stoves, refrigerators when operating this machine.

- Do not use the power cable for any purpose it is not intended for.

Risks of personal injury and crushing by moving parts!

- Do not operate the machine without installed guards.
- Always keep sufficient distance to the saw blade. Use suitable feeding aids, if necessary. Keep sufficient distance to driven components when operating this machine.
- Wait for the saw blade to come to a complete stop before removing cutoffs, scrap, etc. from the work area.
- Do not attempt to stop the saw blade by pushing the workpiece against its side.
- Ensure that the device is separated from the mains power before you transport the machine or carry out any setting, retrofitting, maintenance or cleaning.
- Ensure that when switching on (e.g. after servicing) no tools or loose parts are left on or in the machine.

Cutting hazard, even with the cutting tool at standstill!

- Wear gloves when changing cutting tools.
- Store saw blade in such manner that nobody will get hurt.

Danger from workpiece kickback!

- Always work with a properly set splitting wedge.
- Do not jam any work pieces.
- Make sure the saw blade is suitable for the workpiece material.
- Cut thin or thin-walled workpieces only with fine-toothed saw blades.
- Always use sharp saw blades.
- If in doubt, check work piece for inclusion of foreign matter (e.g. nails or screws).
- Cut only stock of dimensions that can be safely held during cutting.

Entangelement hazard!

- Ensure that no parts of the body or clothing can be caught and drawn in by rotating components (**no** neckties, **no** gloves, **no** loose-fitting clothes; contain long hair with hairnet).
- Never attempt to cut any workpieces which contain
  - ropes,
  - strings,
  - cords,
  - cables or
  - wires, or to which any of the above are attached.

Hazard generated by insufficient personal protection gear!

- Wear hearing protection.
- Wear safety glasses.
- Wear dust mask.
- Wear suitable work clothes.
- When working outdoors wearing of non-slip shoes is recommended.

Risk of injury by inhaled wood dust!

- Some types of wood dust (e.g. beech, oak, ash) may cause cancer when inhaled. Work only with a suitable dust collector attached to the saw. The dust extraction unit must comply with the values stated in chapter 8.1.

Reducing dust exposure:

- Some of the dust created using this power tool may contain chemicals known to cause cancer, allergic reaction, respiratory disease, birth defects or other reproductive harm. Some examples of such substances are, lead (in paint containing lead), additives used for wood treatment (chromate, wood preservatives), some wood types (such as oak or beech dust).
- The risk from exposure to such substances will depend on how long the user or nearby persons are being exposed.
- Do not let particles enter the body.
- To reduce exposure to these substances: work in a well ventilated area and wear protective equipment, such as dust masks that are specially designed to filter out microscopic particles.
- Observe the relevant guidelines for your material, staff, application and place of application (e.g. occupational health and safety regulations, disposal).
- Collect the particles generated at the source, avoid deposits in the surrounding area.
- Use the supplied dust collection unit and a suitable extraction unit. In this way, fewer particles enter the environment in an uncontrolled manner.
- Reduce dust exposure with the following measures:
  - do not direct the escaping particles and the exhaust air stream at yourself or nearby persons or on dust deposits.
  - use an extraction unit and/or air purifiers.
  - ensure good ventilation of the workplace and keep clean using a vacuum cleaner. Sweeping or blowing stirs up dust.
  - Vacuum or wash the protective clothing. Do not blow, beat or brush.

Hazard generated by modification of the machine or use of parts not tested and approved by the equipment manufacturer

- Assemble the machine in strict accordance with these instructions.
- Use only parts approved by the manufacturer. This applies especially to:
  - saw blades (for order numbers, refer to chapter 13. Accessories);
  - Safety devices.
- Do not change any parts.

Hazard generated by machine defects!

- Keep the machine and accessories in good repair. Observe the maintenance instructions.
- Before every use check the machine for possible damage: before operating the machine all safety devices, protective guards or slightly damaged parts need to be checked for proper function as specified. Check to see that all moving parts work properly and do not jam. All parts must be correctly installed and meet all conditions necessary for the proper operation of the machine.
- Damaged protection devices or parts must be repaired or replaced by a qualified specialist. Have damaged switches replaced by a service centre. Do not operate the machine if the switch can not be turned ON or OFF.

Risk of injury by noise!

- Wear hearing protection.
- Make sure the splitting wedge is not bent. A bent splitting wedge will push the workpiece against the side of the saw blade, causing noise.

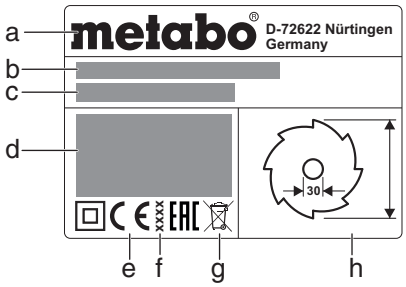
Danger from blocking workpieces or workpiece parts!

If blockage occurs:

1. switch machine off,
2. unplug mains cable,
3. wear gloves,
4. Clear the blockage using a suitable tool.

4.6 Symbols on the Machine

Information on the nameplate:



a Manufacturer
b Serial number
c Device designation
d Motor specifications (see also "Technical data")
e CE mark – This machine conforms to the EC directives as per Declaration of Conformity
f Year of manufacture
g Waste disposal symbol - the machine can be disposed of through the manufacturer
h Dimensions of permissible saw blades

Safety symbol

Danger!
Disregard of the following warnings may lead to serious personal injury or material damage.


Read instructions.


Never place hands into running saw blade.


Wear protective goggles
Wear ear protectors.


Never operate the tool in a damp or wet environment.

4.7 Safety Devices

Splitting wedge

The splitting wedge (5) prevents the workpiece from being caught by the rising teeth of the saw blade and being propelled against the operator.

Always have the splitting wedge installed during operation.

Blade guard

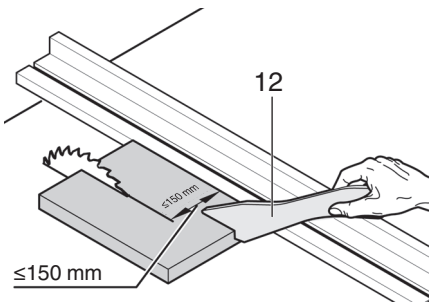
The blade guard (7) protects against unintentional contact with the saw blade and from chips flying about.

Always have blade guard installed during operation.

Push stick

The push stick (12) serves as an extension of the hand to guide the workpiece safely past the saw blade, and protects against accidental contact with the saw blade.

Always use push stick if distance between saw blade and ripping fence is less than 150 mm.



Guide the push stick at an angle of 20° … 30° against the saw table's surface.

If the push stick is not used, it has to be stored with the machine.

Replace push stick if damaged.

5. Overview

See page 2.

1 Mitre fence
2 Clamping lever for securing the mitre fence
3 Table extension
4 Table insert
5 Splitting wedge
6 Clamping lever for fastening the blade guard
7 Blade guard
8 Rip fence
9 Table extension
10 Knurled nut for fine setting of the parallel limit stop
11 Clamping lever for securing the ripping fence
12 Push stick
13 Push stick holder
14 On switch
15 Off switch
16 Handwheel for adjusting the angle of inclination
17 Crank for adjusting cutting depth
18 Clamping lever to lock the angle of inclination
19 Bevel limitation stop
20 Adjustable foot (to balance uneven floors)
21 Adjustment screw (clamping of the ripping fence)
22 Blade guard holder
23 Mitre fence holder
24 Cable winder
25 Extractor connection piece
26 Ripping fence holder
27 Open end wrench
28 Toolholder

6. Installation

Ensure firm footing and keep your balance at all times.

1. Lift tool with two persons out of packaging.
2. Place saw down on stable table or work bench.
3. Even out irregularities in the floor using the adjustable foot (20): Undo the screw, adjust the foot, tighten the screw up firmly.
4. Bolt saw firmly onto table or work bench.

7. Initial Operation

Note:

Rubber chips might fly around during initial commissioning. This depends on the design and is harmless.

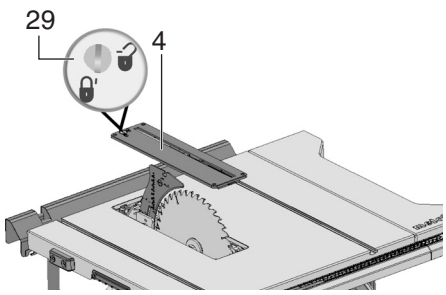
7.1 Assembly

Adjust splitting wedge (if required)

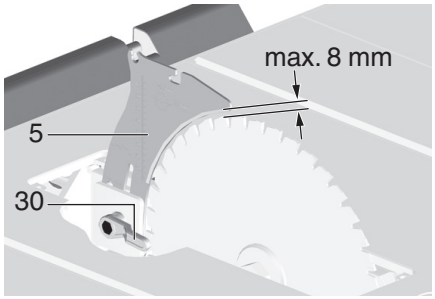
Note:

The splitting wedge (5) has been correctly set at the factory. Readjustment prior to initial operation is only required should the splitting wedge have become maladjusted in transit.

1. Raise saw blade fully.
2. Turn screw (29) anti-clockwise, lift table insert (4) and remove.



3. Release locking lever (30) (**turn anti-clockwise**!).
4. Pull the splitting wedge (5) out of the lower transport position upwards as far as the stop.



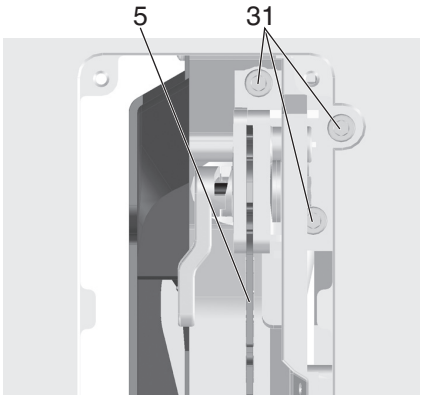
5. Checking the splitting wedge:
   – The distance between the saw blade's outer edge and the splitting wedge needs to be **3 to 8** mm.
   – The splitting wedge must be in alignment with the saw blade.

Danger!
The splitting wedge is one of the safety devices and must be correctly installed for safe operation.

6. Tighten locking lever (30) (**turn clockwise**!).

Set lateral alignment (if required):
Splitting wedge (5) and saw blade must be in true alignment.

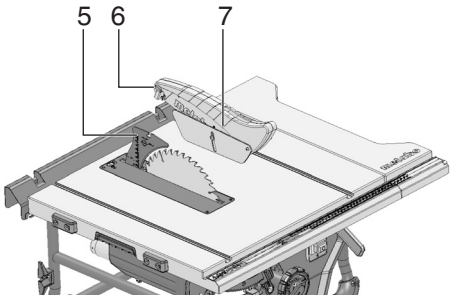
7. Release the three Allen screws (31).
8. Align the splitting wedge (5) flush with the saw blade.



9. Tighten the three Allen screws (31).
10. Fasten table insert (4) and lock with screw (29).

Blade guard installation

1. Raise saw blade fully.
2. Install the blade guard (7) at the splitting wedge (5).
3. Firmly tighten the blade guard with the lock lever (6).



Height adjustment of the table insert (if necessary)

The table insert (4) is set correctly when its surface is 0 mm to 0.7 mm below the table surface.

Adjust the 4 screws in the corners of the table insert (4) to adjust the height.

7.2 Connection to Power Mains

Danger! High voltage

- **Operate the device in dry surroundings only.**
- **Operate machine only on a power source meeting the following requirements (see also "Technical Specifications"):**
  - **outlets properly installed, earthed and tested;**
  - **mains voltage and system frequency conform to the voltage and frequency shown on the machine´s rating label;**
  - **Fuse protection by a residual current circuit breaker (RCCB) of 30 mA sensitivity;**

Note:
Check with your local Electricity Board or your electrician if in doubt whether your house service connection meets the requirements.

- **Make sure the power supply cable is out of the way, so that it does not interfere with the work and does not pose a tripping hazard or will get damaged.**
- **Protect the power supply cable from heat, aggressive liquids and sharp edges.**
- **Use only rubber-jacketed extension cables with sufficient lead cross-section.**
- **When working out of doors, only use extension cables that are also approved for outdoors.**
- **Do not pull on the power supply cable to unplug.**
- **Avoid accidental start-up: ensure that the on/off switch is switched off when inserting the plug in the socket.**

8. Operation

Risk of injury!
This saw may only be operated by one person at a time. Other persons shall stay only at a distance to the saw for the purpose of feeding or removing stock.

Before starting work, check to see that the following are in proper working order:

- **power cable and plug**
- **ON/OFF switch**
- **Splitting wedge**
- **Blade guard**
- **feeding aids (push stick, push block and handle).**

Use personal protection gear:

- **dust respirator;**
- **ear protection;**
- **safety goggles.**

Assume proper operating position:

- **at the front of the saw;**
- **in front of the saw;**
- **to the left of the line of cut;**
- **when working with two persons, the other person must remain at an adequate distance to the saw.**

If the type of work requires, use the following:

- **suitable workpiece supports – if otherwise workpiece would fall off the table after cutting;**
- **dust collector.**

Avoid typical operator mistakes:

- **Do not attempt to stop the saw blade by pushing the workpiece against its side. Risk of kickback.**
- **Always hold the workpiece down on the table and do not jam it. Risk of kickback.**

– **Never cut several work pieces at the same time – and also no bundles containing several individual pieces. Risk of personal injury if individual pieces are caught by the saw blade uncontrolled.**

Entanglement hazard!
Never cut stock to which ropes, cords, strings, cables or wires are attached or which contain such materials.

8.1 Dust extraction unit / all-purpose vacuum cleaner

Danger!
Dust of certain timber species (e.g. beech, oak, ash) can cause cancer when inhaled.

Use a suitable dust extraction unit when working in enclosed spaces.

In addition, use a dust mask, as not all saw dust is collected or extracted.

Operation without a suitable dust collector is only possible out of doors.

The dust extraction unit must meet the following requirements:

- Suitable for the diameter of the suction nozzles (chip box 35/44 mm);
- air flow volume ≥ 460 m^3/h;
- Underpressure at the saw's suction nozzle ≥ 530 Pa;
- Air speed at the saw's suction nozzle ≥ 20 m/s.

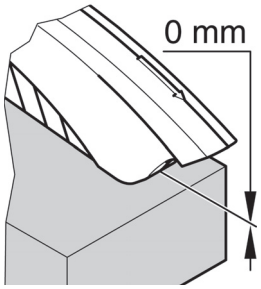
The suction nozzles (25) for extraction of the chips are located on the blade guard.

Observe the dust collector's operating instructions as well!

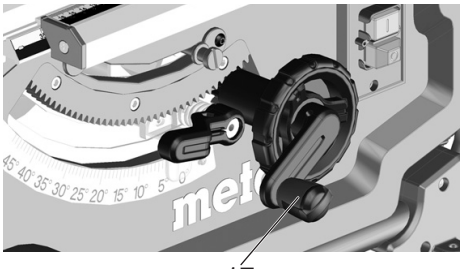
8.2 Setting the depth of cut

Danger!
Body parts or objects in the adjustment area can get caught by the running saw blade! Set depth of cut only with saw blade at standstill!

The saw blade's cutting depth needs to be adapted to the workpiece's height: the blade guard shall rest with its front edge on the workpiece.



- Adjust the cutting depth by turning the handwheel (17) as required.



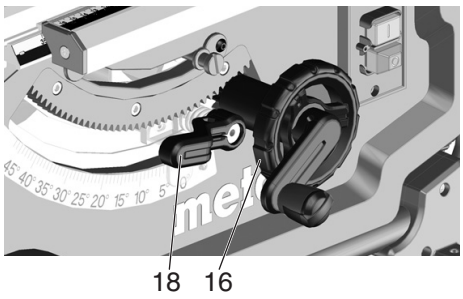
Note:
In order to balance eventual play in the adjustment of the cutting height, always move the saw blade from below into the desired position.

8.3 Setting the saw blade tilt

Danger!
Body parts, objects or machine parts in the adjustment area can get caught by the running saw blade! Set the depth of cut only with the saw blade at standstill!

The blade bevel angle can be adjusted between -1.5° and 46.5°.

1. Release clamping lever (18).
2. Set the desired saw blade inclination by turning the hand wheel (16).

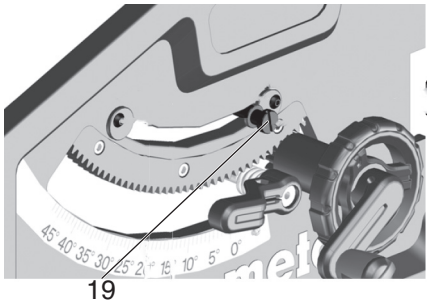


3. Lock the set inclination by tightening the clamping lever (18) (turn clockwise).

Setting for undercutting

The blade tilt setting has end stops at 0° and 45°. For special bevel cuts (undercutting) the bevel angle can be increased by 1.5° in both directions.

- Withdraw bevel angle limitation stop (19) and place over the right-hand cam plate = bevel angle of saw blade adjustable between –1.5° and 45°.
- Withdraw bevel angle limitation stop (19) and place over the left-hand cam plate = bevel angle of saw blade adjustable between 0° and 46.5°.



ON/OFF Switch

- switch on = press upper switch (14) for 1 - 2 seconds.
- switch off = press lower switch (15).

8.4 Adjusting ripping fence

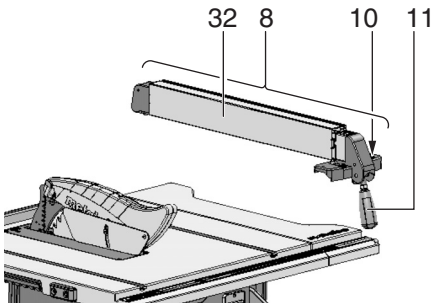
It is mounted on the guide extrusion at the front of the saw table.

– Position ripping fence (8) to the right of the saw blade.
The marking in the magnifying glass shows the set distance between the ripping fence and the saw blade on the scale.

– Release the clamping lever (11) of the ripping fence and shift the ripping fence until marking in the magnifying glass indicates the desired distance to the saw blade.

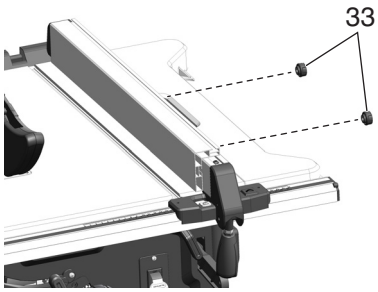
– Fine settings: By turning the knurled nut (10) (on the right-front of the clamping element) you can precisely adjust the cutting width.

Press the clamping lever (11) downwards to do this.



– The fence extrusion (32) must be, together with the ripping fence, parallel with the saw blade and locked in position by the clamping lever (11) during the sawing process. Press the clamping lever (11) downwards to do this.

– Knurled nuts (33) for attaching the fence extrusion. After loosening the two knurled nuts (33), the fence extrusion can be removed and shifted:



Small edge:

– for cutting thin stock;

– when the saw blade is tilted.

Wide edge:

– for cutting heigh workpieces.

8.5 Adjusting pointer on ripping fence

1. Align ripping fence with saw blade.
2. Loosen ripping fence pointer fixing screw.
3. Bring pointer on ripping fence and "0" on scale into alignment.
4. Retighten ripping fence pointer fixing screw.

Note:

To avoid the workpiece jamming when cutting along the ripping fence:
Slide ripping fence all the way to the right table edge and then back to the required cutting width.

Note:

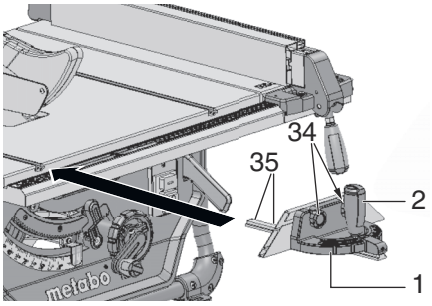
Adjust ripping fence (if necessary): To prevent the workpiece from jamming between parallel stop and saw blade, the ripping fence must be aligned to the saw blade,
or set to a max. of 0.3 mm opening to the rear. To adjust it, release the 2 screws on the upper side of the parallel stop and then tighten again.

Note:

Adjust the clamping force of the ripping fence (if required): In case the rear clamping piece should engage earlier or later than the front clamping piece, this can be set by turning the nut (21). Loosen the nut (21) so that the rear clamping piece clamps later. Tighten the nut (21) so that the rear clamping piece clamps earlier.

8.6 Setting mitre fence

The mitre fence (1) is inserted into the table slot from the table's front edge.



For mitre cuts the mitre fence turns to 60° in both directions.

For 45° and 90° miters positive stops are provided.

To set a mitre angle: loosen locking handle (2) by turning it counter-clockwise.

Risk of injury!
When cutting with the mitre fence the lock handle must be firmly tightened.

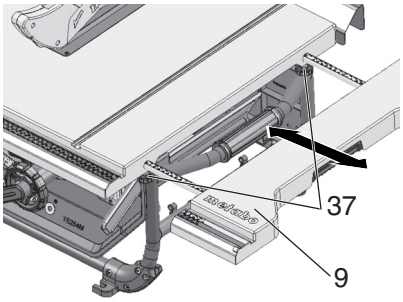
The auxiliary fence extrusion can be taken off and reversed after loosening knurled nut (34).

Note:

If necessary, the play of the mitre fence (1) can be set: Loosen the screws (35) on the plastic slider on the mitre fence guide rails, move the plastic slider, tighten the screws again.

8.7 Adjusting table width extension

The table width extension (9) extends the supporting surface, providing safe support for larger workpieces.



1. To pull out the table width extension (9), both knurled screws (37) must be released.
2. Pull out the table width extension (9) and set to desired distance.
3. Retighten both knurled screws (37) .

Risk of injury!
When cutting with the mitre fence the handle must be firmly tightened

Scale reading when using the ripping fence

On which scale the cutting width is read depends on how the fence extrusion is installed on the ripping fence:

– Wide edge =
scale with black numerals on white background.

– Small edge =
scale with white numerals on black background.

For small cutting widths the table side extension is not extended. The cuttings width is read on the respective right-hand scale at the ripping fence's pointer:

– Wide edge: cutting width from 0 to 35 cm.

– Small edge: cutting width from 0 to 29.5 cm.

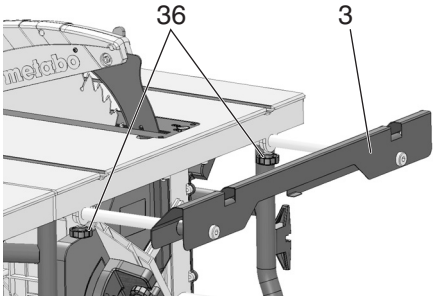
If larger workpieces are to be cut, the table width extension (9) needs to be extended.

1. Shift ripping fence to the end position on the scale.
2. Pull out table side extension and set ripping fence to desired cutting width. The cuttings width is read on the respective left-hand scale at the scale's pointer.

8.8 Adjusting table extension

The table length extension (3) extends the supporting surface, providing safe support for longer workpieces.

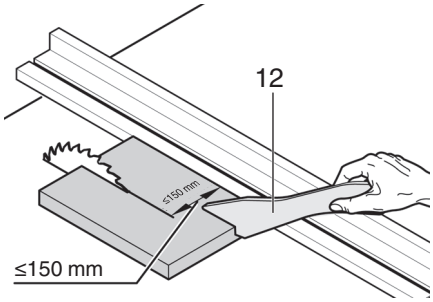
1. To pull out the table length extension, both knurled screws (36) must be released.



2. Withdraw table length extension and set to desired distance.
3. Retighten both knurled screws.

8.9 Sawing

Danger!
Always use push stick if distance between saw blade and ripping fence is less than 150 mm.

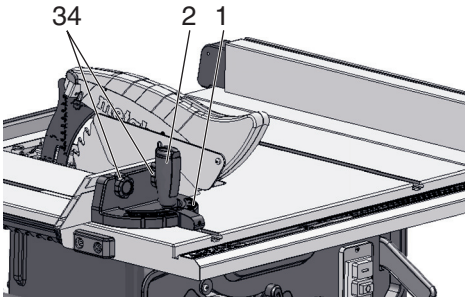


Straight cut

1. Set blade tilt and lock in position.
2. Set depth of cut. The blade guard must rest with its front edge on the workpiece.
3. With the saw blade inclined, fix the parallel guide to the left of the saw blade and set it.
4. Start saw.
5. Push the workpiece in a steady motion towards the rear and cut in a single pass.
6. Switch the machine off if no further cutting is to be done immediately afterwards.

Mitre cuts

1. The mitre fence (1) is inserted into the table slot from the table's front edge.
2. Set desired angle after loosening the mitre fence's clamping handle (2) and retighten clamping handle.
3. Adjust lateral distance between auxiliary fence and saw blade:
   - Release knurled nut (34) and move auxiliary fence as required.
   - Tighten knurled nut (34).



4. Hold the workpiece firmly against mitre fence.
5. Cut the workpiece by pushing the mitre fence forward.
6. Switch the machine off if no further cutting is to be done immediately afterwards.

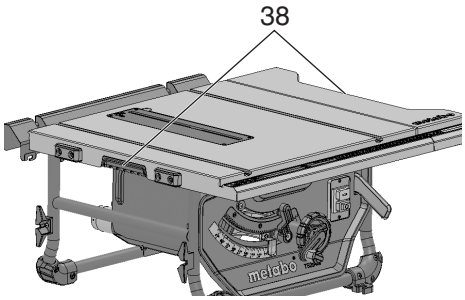
9. Transport

Danger!
Before every transport:

- **switch machine OFF;**
- **wait for saw blade to come to standstill.**
- **Unplug power cable;**
- Remove add-on parts (blade guard, dust extraction). Store blade guard at housing.
- Bring splitting wedge into transport position. Proceed as described in chapter 7.1, however slide the splitting wedge (5) downwards until the stop (transport position).
- Lower saw blade fully.
- Set saw blade inclination angle to 0° and lock with clamping lever.
- Wind up mains cable on cable reel.

Danger of crushing
Push in the table width extension fully and lock with the knurled screws.

Use the side handles (38) at the table to carry the machine.



Caution!
Do not carry the machine at the guards, table width extensions that are extended / not locked, or operating elements!

Caution!
Carry the machine with two persons (weight)!

10. Care And Maintenance

Danger!
Prior to all servicing:

1.switch machine OFF;

2.Wait until the saw has come to a complete stop.

3.Unplug power cable;

– Check to see that all safety devices are operational again after each service.

– Replace defective parts, especially of safety devices, only with genuine replacement parts. Parts not tested and approved by the manufacturer can cause unforeseen damage.

– Repair and maintenance work other than described in this section should only be carried out by qualified specialists.

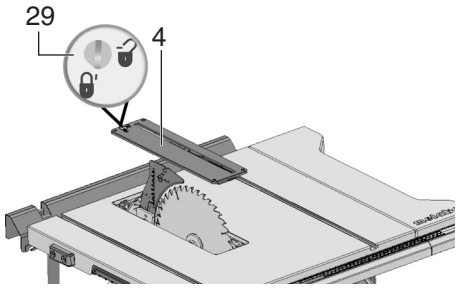
Danger!
With a damaged table insert there is a risk of small parts getting stuck between table insert and saw blade, blocking the saw blade. Replace damaged table inserts immediately!

10.1 Saw blade change

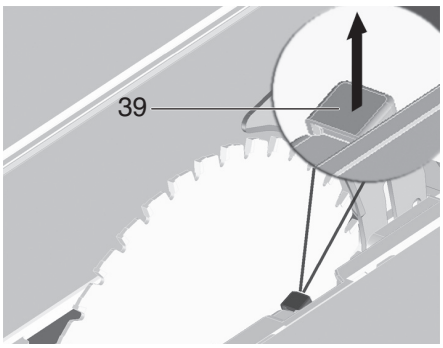
Danger!
Directly after cutting the saw blade can be very hot – burning hazard! Let a hot saw blade cool down. Do not clean the saw blade

with combustible liquids.
Risk of injury, even with the blade at standstill. Wear gloves when changing blades.
When fitting a saw blade, observe the direction of rotation!

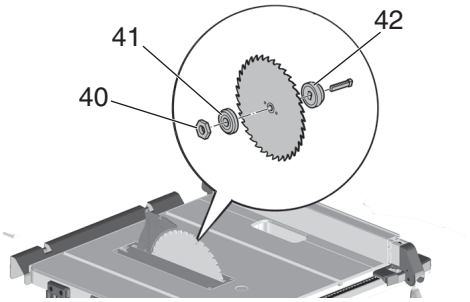
1. Raise saw blade fully.
2. Remove blade guard (7).
3. Turn screw (29) anti-clockwise, lift table insert (4) and remove.



4. Turn the clamping nut (40) of the saw blade using an open-jawed spanner (27) and, at the same time, pull the lever of the saw blade lock (39) upwards **,** until it engages.



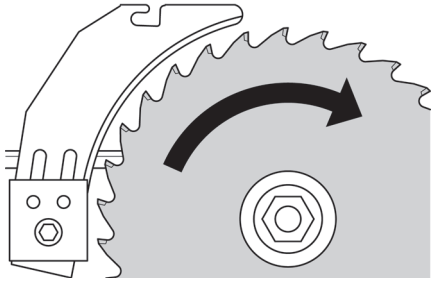
5. Hold the lever (39) firmly in position and unscrews the clamping nut (40) clockwise.
6. Remove clamping nut (40), outer blade flange (41) and saw blade from saw spindle.



7. Clean clamping surfaces of saw blade flange (41) and (42) and saw blade.

Danger!
Do not use cleaning agents (e.g. to remove resin residue) that could corrode the light metal components of the saw; the stability of the saw would be adversely affected.

8. Push inner saw blade flange (42) onto motor shaft.
9. Put on a new saw blade (observe direction of rotation!).



Danger!
Use only saw blades conforming to the technical specifications stated and to EN 847-1 – if unsuitable or damaged saw blades parts are used, parts can be ejected due to centrifugal force in an explosive-type manner.
Do not use:

- **saw blades which permissible maximum speed is below the rated no-load speed of the saw spindle (see "Technical Specifications");**
- **saw blades made of high speed steel (HS or HSS);**
- **Do not use any saw blades which have a smaller cutting width or a thicker saw blade body than the thickness of the splitting wedge.**
- **Saw blades with visible damage;**
- **cut-off wheel blades.**

Danger!

- **Mount saw blade using only genuine parts.**
- **Do not use loose-fitting reducing rings; the saw blade could work loose.**
- **Saw blades have to be mounted in such way that they do not wobble or run out of balance and cannot work loose during operation.**

10. Slide on outer blade flange (41).
11. Screw on clamping nut (40) (left-handed thread!). Turn clamping nut (40) with open-jawed spanner (27) and, at the same time, pull the lever of the saw blade lock (39) upwards until it engages.
12. Hold lever (39) firmly in position and tighten clamping nut **hand-tight** by turning anti-clockwise.

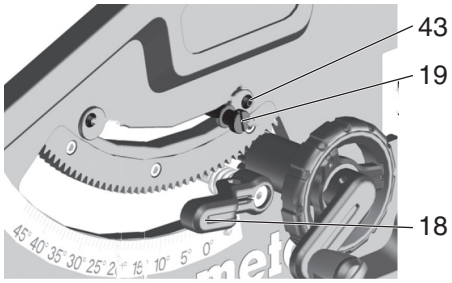
Danger!

- **Do not extend arbour bolt tightening wrench.**
- **Do not tighten arbour bolt by hitting the wrench.**

13. Adjust the splitting wedge according to the saw blade size.
(for splitting wedge setting, see 7.1)
14. Fasten table insert (4) and lock with screw (29).
15. Attach blade guard (7).

10.2 Adjusting the blade tilt stop

1. Set the blade tilt stop lever (19) for the angle range to 0° / 45°.



2. Lock the set angle of inclination by tightening the clamping lever (18).
3. Check angle of inclination:
   – 0° = at right angles to the saw table
   – 45° with separate mitre square.

If these angles are not achieved exactly:

4. Release cross-head screw (43) at respective cam disc and adjust cam plate until the blade bevel angle in relation to the saw table is exactly 0°,
(= right angles), or 45°, in the end positions.
5. Retighten cross-head screw at cam plate.
6. After adjusting the stop limitation, readjust angle scale at front side if necessary.

Note:
To set the bevel angle limitation of -1.5° to 46.5°, the blade tilt stop lever must be pulled out.

10.3 Machine storage

Danger!
Store the machine beyond the reach of children. Store the machine such that it cannot be put into operation by unauthorised personnel and such that the stationary machine cannot cause injury.

Caution!
Do not store the saw outdoors, in unprotected areas or in damp or wet locations.

10.4 Maintenance

Cleaning the Saw

- Remove chips and saw dust with vacuum cleaner or brush:
  – from saw blade setting guide elements;
  – from motor vent slots;
  – chip case.
  – Height adjustment
  – Swivel guide

Before switching ON
Visual check to see if
– distance between saw blade and riving knife is 3 to 8 mm.
– Splitting wedge is in line with saw blade.
Visual check of power cable and power cable plug for damage; if necessary have damaged parts replaced by a qualified electrician.

Every time the machine is switched off
Check whether the saw blade overrun exceeds 10 seconds; if the overrun is longer than this, have the motor replaced by a qualified electrician.

Monthly (if used daily)
Remove saw dust and chips with vacuum or brush; apply light coat of oil to guide elements:
– Threaded rod and guide rods of blade rise and fall mechanism;
– Swivel segments.

Every 150 hours of operation
Check all screwed joints, retighten if necessary.

11. Tips and Tricks

- Before cutting a workpiece to size make trial cuts on pieces of scrap.
- Always place a workpiece on the saw table in such way that it cannot tilt or rock (e.g. always place a curved board on the table with the convex side up).
- For efficient cutting of same-length cuts, use a length stop.
- Keep surface of table clean.

12. Troubleshooting Guide

Danger!
Before carrying out any fault service or maintenance work, always:
1.switch machine OFF;
2.Unplug power cable;
3.Wait for saw blade to come to standstill.
Check to see that all safety devices are operational after each fault service.

Motor does not run
The restart protection is active. If the mains plug is inserted with the machine switched on, or if the

current supply is restored following an interruption, the machine does not start up:

• Switch the machine off and back on again.

No mains voltage

• Check cables, plug, outlet and mains fuse.

Motor overheated, e.g. by a blunt saw blade or chip build-up in the chip case:

• Remove cause for overheating, let cool off for a few minutes. Then restart machine.

Speed is not reached

Overload protection: There is a MAJOR reduction in load speed.

• The motor temperature is too high! Allow the machine to run at idle speed until it has cooled down.

Overload protection: There is a SLIGHT reduction in load speed.

• The machine is overloaded. Reduce the load before continuing to work.

Specified maximum no-load speed is not reached - motor not receiving sufficient mains voltage:

• Use a shorter feed line or cable with larger cross section ($\geq 1.5\ mm^2$).

• Have power supply checked by a qualified electrician.

Loss of cutting performance

Saw blade blunt (possibly tempering marks on blade body):

• Replace saw blade (see chapter 10. Maintenance).

Chip ejection blocked

No dust collector connected or suction capacity insufficient:

• Connect extraction system or increase suction capacity (air speed ≥ 20 m/sec at chip ejection tube).

13. Accessories

Use only genuine Metabo accessories.

Use only accessories that fulfil the requirements and specifications listed in these operating instructions.

Saw blade Power Cut
Order no.: 6.28025

- For rough and medium-fine cuts with rapid movement and limited power requirements

- Good cutting results for longitudinal cuts in solid wood

Saw blade Precision Cut
Order no.: 6.28059

- Very wide range of applications in wood processing

- For very good, clean cutting results for straight and cross cuts in soft and hard wood

- Well suited for hard wood and plywood, untreated chipboards, coated or veneered, MDF, composite materials

Circular saw blade Multi Cut
Order no.: 6.28093

- Universal use for demanding materials

- When high cutting quality is required, e.g. laminate, plastic, thin-walled aluminium, copper, and brass profiles

- Ideally suited for many applications in interior construction

- Perfect cutting results also for cross cuts in solid wood, uncoated, coated or veneered chip board, MDF

Push stick (as replacement)
Order no.: 343433180

For a complete range of accessories, see www.metabo.com or the catalogue.

14. Repairs

Danger!
For safety reasons, repairs to power tools must be carried out by qualified electricians only using original spare parts!

A defective mains cable must be replaced only with a special, original mains cable from Metabo available from the Metabo service.

Please contact your Metabo service centre if you have Metabo devices that require repairs. See www.metabo.com for addresses.

You can download a list of spare parts from www.metabo.com.

15. Environmental Protection

Observe national regulations on environmentally compatible disposal and on the recycling of disused machines, packaging and accessories.

Packaging materials must be disposed of according to their labelling in accordance with municipal guidelines. Further information can be found at www.metabo.com in the “Service” section.

Only for EU countries: never dispose of power tools in your household waste! According to European Directive 2012/19/EU on Waste from Electric and Electronic Equipment and implementation in national law, used power tools must be collected separately and recycled in an environmentally-friendly manner.

16. Technical Specifications

Explanatory notes on the specifications on page 3.

Subject to change in accordance with technical progress.

U	=	mains voltage (~ alternating current)
P_1	=	Rated input power
I	=	Rated current
F	=	Min. fuse protection
IP	=	protection class
n_0	=	No-load speed
v_0	=	Max. cutting speed
W	=	thickness of splitting wedge
D	=	saw blade diameter (outer)
d	=	saw blade hole (inside)
b	=	cutting width
a	=	max. base body thickness of the saw blade
$T_{90°}$	=	cutting height with vertical saw blade
$T_{45°}$	=	cutting height with saw blade inclination of 45°
$S_{x°}$	=	saw blade swivel range
L_p	=	max. cutting width with ripping fence
L_W	=	max. cross-section with angle guide
A_1	=	dimensions without machine stand (lxwxh)
S_L	=	length of saw table
S_B	=	width of saw table
m	=	machine weight

Measured values determined in conformity with EN 62841.

~ AC power

The technical specifications quoted are subject to tolerances (in compliance with the relevant valid standards).

Emission values
These values make it possible to assess the emissions from the power tool and to compare different power tools. The actual load may be higher or lower depending on the operating conditions, the condition of the power tool or the accessories. Please allow for breaks and periods when the load is lower for assessment purposes. Arrange protective measures for the user, such as organisational measures based on the adjusted estimates.

Typical A-effective perceived sound levels:

L_{pa}	=	Sound-pressure level
L_{WA}	=	Acoustic power level
K_{pA}, K_{WA}	=	Uncertainty

Wear ear protectors!