ELEKTRA BECKUM®

(D) **Betriebsanleitung**
Tischkreissäge

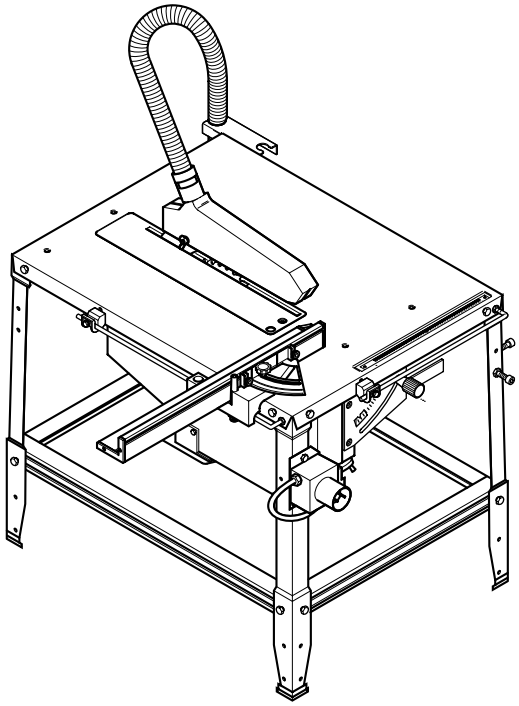
(GB) **Operating Instruction**
Circular saw

(F) **Instructions d'utilisation**
Scie circulaire de table

English only

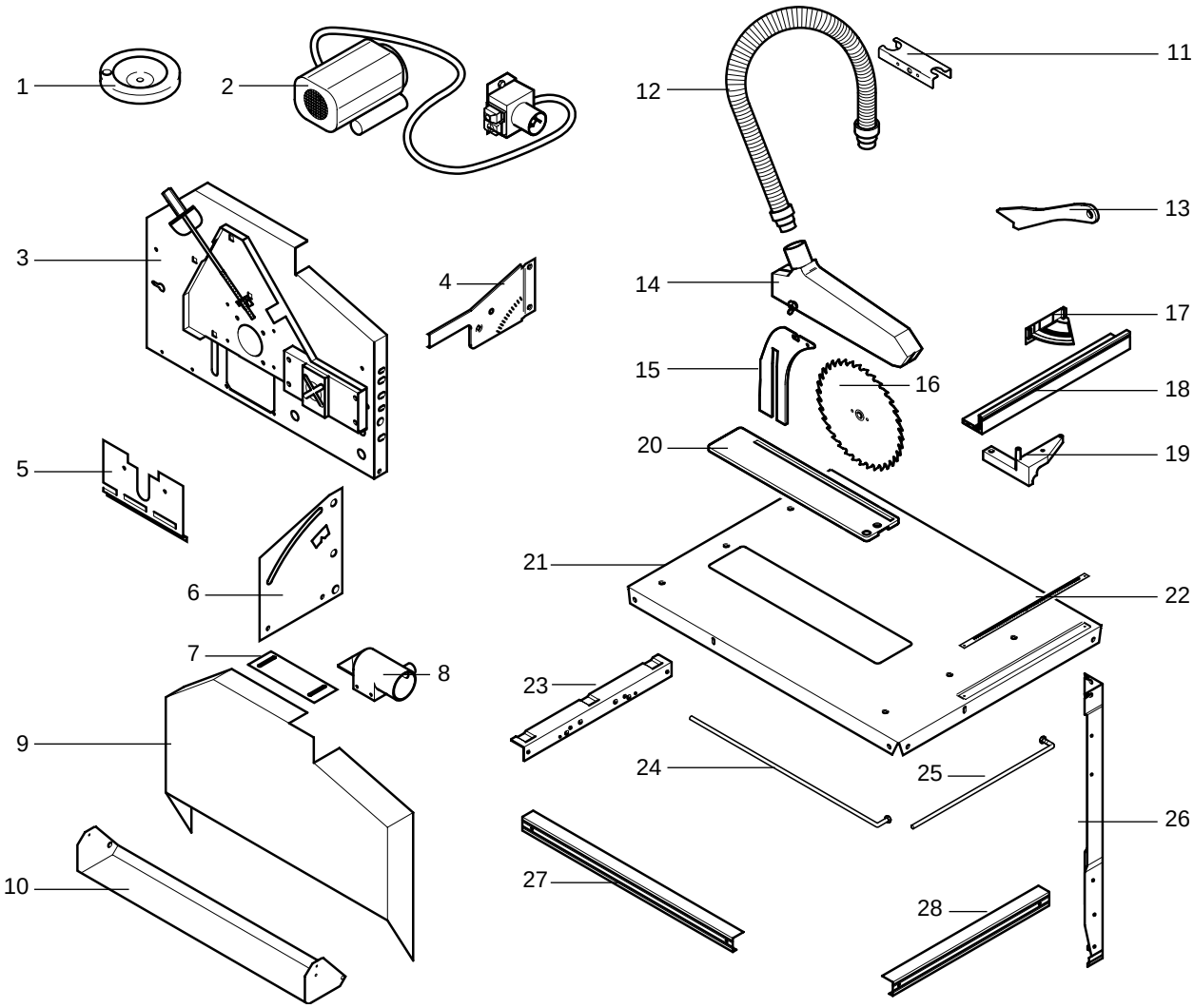
TopLine

TKHS 315 E



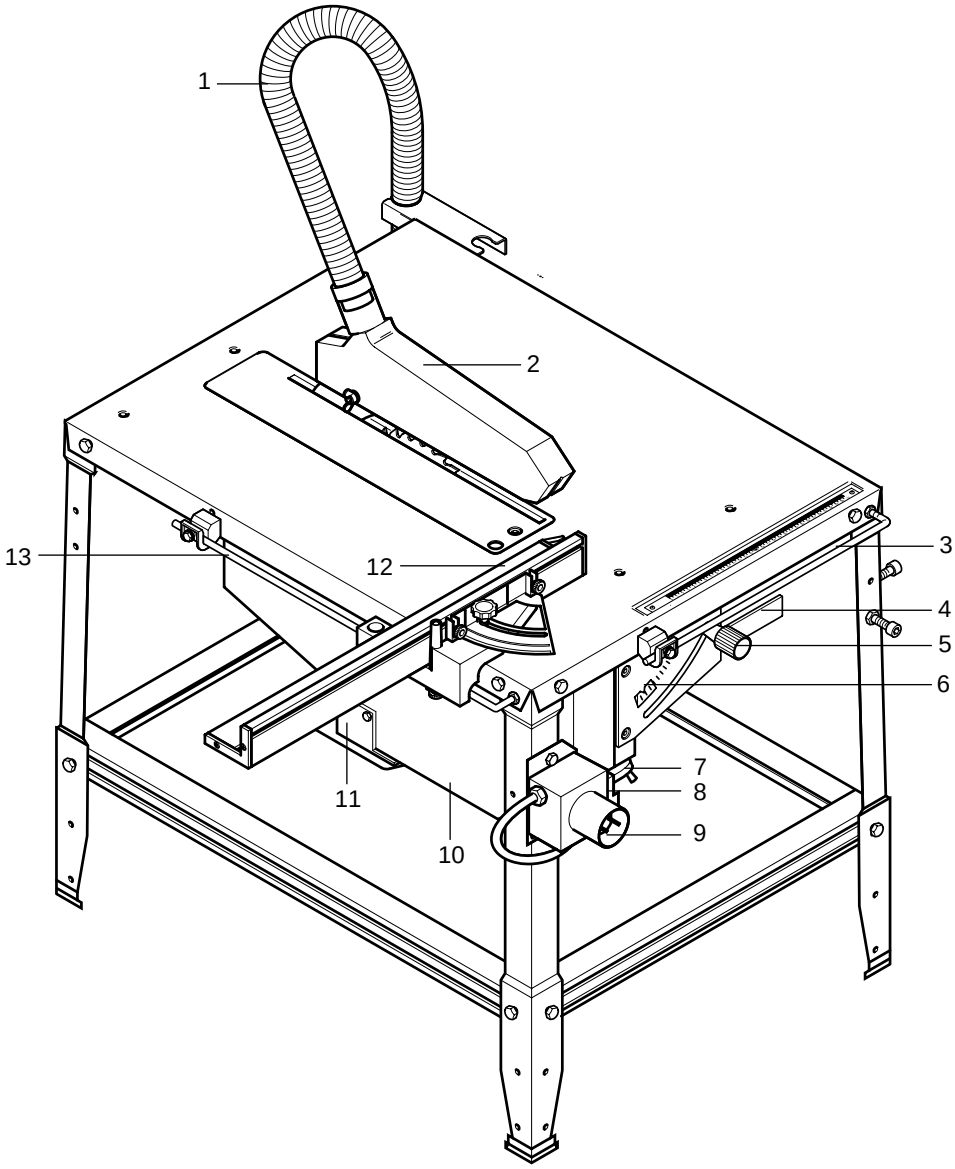
D **Deutschland**	Die beiliegende Garantiekarte senden Sie bitte an uns zurück. Den Kaufbeleg bitte aufbewahren! Ein Anspruch auf Garantieleistungen besteht nur gegen Vorlage des Kaufbelegs. Die Adresse Ihrer nächstgelegenen Werksvertretung finden Sie auf der hinteren Umschlagseite.	**1.**
GB **Great Britain**	Please return the enclosed warranty card to us. Retain proof of purchase! You are only entitled to claim warranty against proof of purchase. Please see back cover for manufacturer representative´s address nearest you.	**2.**
F **France**	SVP, retournez-nous la carte de garantie jointe. Conservez le reçu d'achat! La garantie ne peut être accordée que sur présentation de ce reçu. Vous trouverez l'adresse de votre représentant le plus proche à la dernière page de couverture.	**3.**

Scope of delivery



1 Handwheel
2 Motor c/w switch
3 Motor carrier unit
4 Blade tilt lever
5 Guard plate
6 Swivel arm plate
7 Sliding plate
8 Dust extraction port for chip case
9 Chip case assembly
10 Cover
11 Hose carrier
12 Suction hose
13 Push stick / feeding aid
14 Blade guard
15 Riving knife
16 Saw blade
17 Stop rule, upper
18 Fence extrusion
19 Stop rule, lower
20 Table insert extrusion
21 Table panel
22 Scale
23 Fastening bracket (2 no.)
24 Guide bar, long
25 Guide bar, short
26 Leg (4 no.)
27 Stanchion, long (2 no.)
28 Stanchion, short (2 no.)
Hardware bag (3 no.)

Saw components and controls



1 Suction hose

2 Saw blade guard with dust extraction port

3 Guide bar for rip fence

4 Blade tilt lever

5 Turning knob for locking the blade tilt angle

6 Bevel tilt scale

7 Handwheel for setting the depth of cut

8 On/off switch with emergency stop

9 Mains connection

10 Sliding plate (on the underside)

11 Dust extraction port of chip case assembly

12 Fence extrusion

13 Guide bar for crosscut/mitre fence

Please read first!

- Assemble the saw in strict accordance with these instructions. Only if you follow the instructions exactly does the saw conform to the safety regulations and can be safely operated.
- Read instructions before commissioning, especially the safety information.
- If you notice transport damage while unpacking, notify your supplier immediately. In this case do **not** assemble and operate the machine!
- Dispose of the packing in an environmentally friendly manner. Take to a proper collecting point.
- Keep these instructions for reference on any issues you may be uncertain about.
- If you lend or sell this machine be sure to have the instructions to go with it.

Safety information

Specified conditions of use

This machine is intended for ripping and crosscutting of solid timber, faced board, particle board, wood-core plywood and similar wood-derived materials.
Do not cut round stock without a suitable fixture, as the rotating saw blade could turn the workpiece.

Any other use is considered to be not as specified and not allowed. Damages caused by unspecified use are not covered by the manufacturer's liability.

Modification of the machine or use of parts not tested and approved by the equipment manufacturer can cause unforeseeable damage.

General safety information

Follow the basic safety requirements for the operation of power tools, to keep the risk of

- personal injury
- fire
- electric shock

as little as possible.

Please note in particular:

A circular saw is a dangerous tool which can, due to operator carelessness, cause serious personal injury. It is therefore recommended you follow the safety information given below, and know and follow the legal regulations pertaining to the operation of circular saws.

Danger!
The circular 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 tool.

Persons under 16 years of age shall use this saw only under the supervision of an instructor in the course of their vocational training.
The following residual risks do principally exist with circular saws, and can not, even by employing safety devices, completely eliminated:

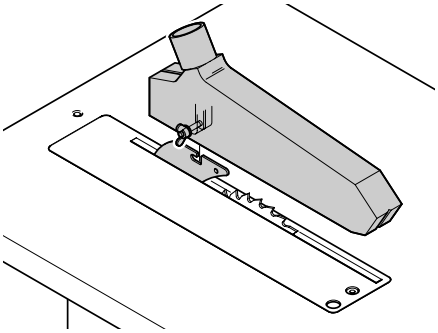
- Risk of injury by touching the revolving saw blade: Keep sufficient distance to the saw blade when sawing. Use push stick if necessary.
  Prevent adverse body positions. Ensure firm footing, and keep your balance at all times.
- Risk of injury by touching the saw blade at standstill: Lower the saw blade after sawing until the blade guards rest on the table. Wear gloves when changing blades.
- Hazard by cluttered work area (e.g. by cut-offs on the floor):
  always keep your work area tidy.
- Hazard by objects being caught by the revolving saw blade (e.g. if tools are left on the saw table; metal parts hidden in the workpiece or if several workpieces are cut at the same time):
  keep the saw table clean. If in doubt check workpiece for inclusion of foreign matter. Always cut one workpiece at a time.
- Risk of kickback (workpiece is caught by the saw blade and thrown against the operator):
  Always work with a properly set riving knife. Keep blade sharp and do not jam.
- Hazard generated by environmental influences:
  Do not operate the circular saw in rain or in damp environment. Ensure sufficient lighting. Do not operate the circular saw near inflammable liquids or gases.
- Danger to other persons in the work area:
  Keep bystanders, particularly children, out of the danger zone.
- Hazard generated by overloading:
  Use circular saw within its limits, and only as specified.
- Danger by machine faults:
  Check the circular saw for damage before every use. Before switching ON check to see that keys or setting tools are removed. Do not operate the saw with a damaged ON/OFF switch. Keep knobs and handles free of oil and grease.

Safety devices

Riving knife

The riving knife prevents the workpiece from being caught by the rising teeth of the saw blade and being thrown against the operator.

Always have riving knife installed during operation.



Blade guard

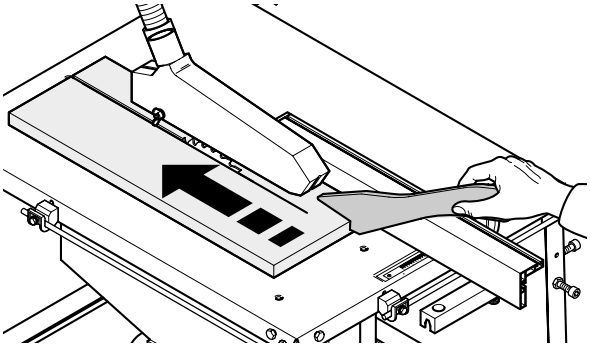
The blade guard protects against accidental contact with the blade and keeps chips from flying about.

Always have blade guard installed during operation.

Push stick

The push stick serves as an extension of the right hand and protects against accidental contact with the saw blade.

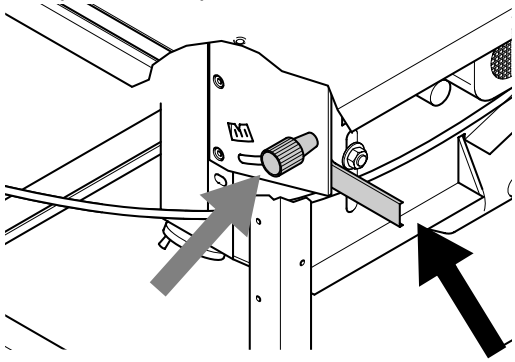
Always use push stick if distance
saw blade is less than 120 mm.



An undervoltage relay trips in the event of a voltage failure, to prevent a restarting of the saw when the power is restored. To restart the saw the green ON button must be depressed again.

Blade tilt for bevel cuts

The saw blade can be steplessly tilted with the blade tilt lever (black arrow) from 0° to 45°.

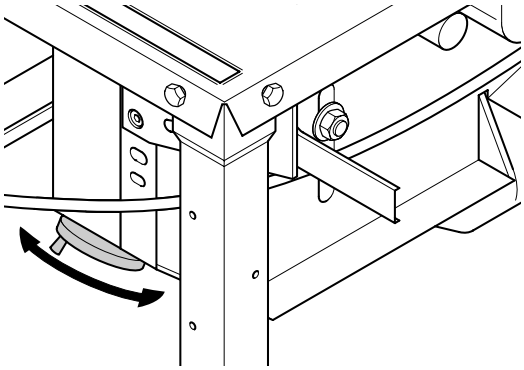


In order for the blade angle not to change during cutting, the blade is locked in position with the turning knob (grey arrow).

To utilise the full setting range of 45°, the depth of cut must be reduced accordingly.

Handwheel for setting the depth of cut

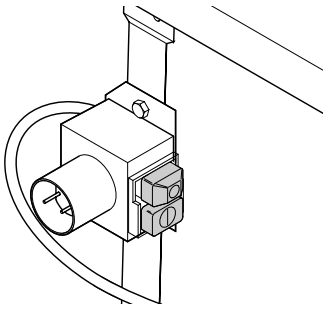
The depth of cut can be adjusted by turning the handwheel



Operating controls

On/off switch with emergency stop

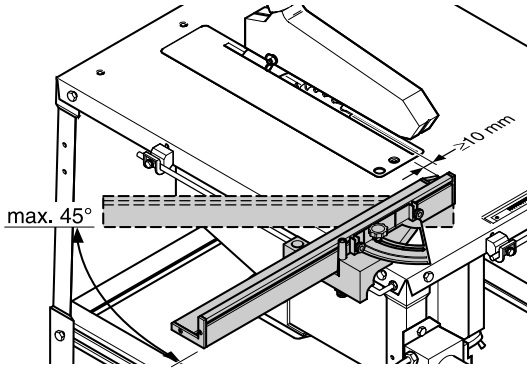
- To switch ON = depress green button.
- To switch OFF = depress red button.



Fence assembly

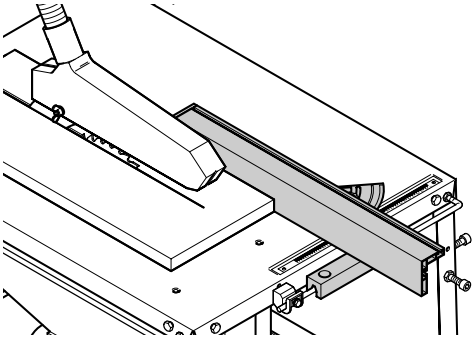
The fence assembly offers two application ranges:

– Crosscut fence (for crosscutting). It is fitted to the long guide bar on the left-hand side of the saw.

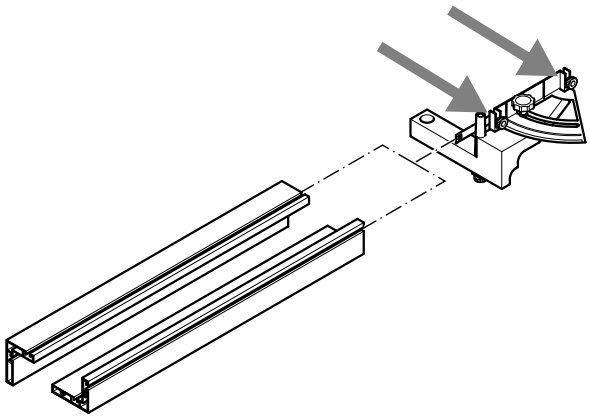


When used as crosscut fence the fence extrusion can be turned though 45° for mitre cuts.

– Rip fence (for ripping). It is fitted to the short guide bar on the front of the saw.



The fence extrusion can be removed after loosening the two knurled nuts (arrow) and fitted as required:



- wide edge:
  – for cutting high workpieces.
- Low guide edge:
  – for cutting thin stock;
  – when the saw blade is tilted.

Assembly

Danger!

Modifications of the saw or the use of parts not tested and approved by the equipment manufacturer can lead to unforeseen damage during operation!

– Assemble the saw in strict accordance with these instructions.
– Use only the parts supplied as standard delivery.
– Do not modify any of the parts.

Only if you follow the instructions exactly does the saw conform to the safety regulations and can be safely operated.

If you observe the following information as well, the assembly will not present any problem:

- Read instructions for each step before executing it.
- Lay out the corresponding parts required for each step.
- The instructions' item numbers correspond with those of the spare parts list.

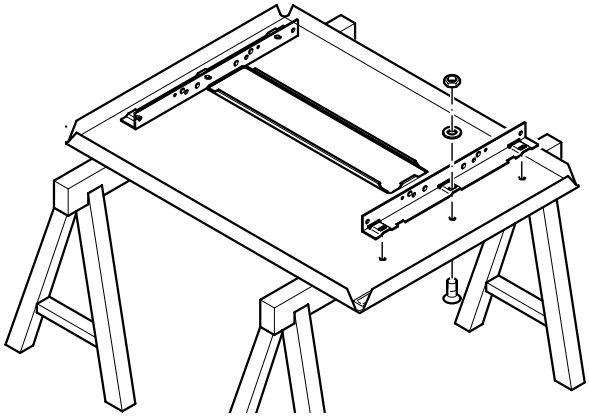
Required tools:

– Allen key 4 mm
– Allen key 5 mm
– Allen key 6 mm
– Spanner 7 mm
– Spanner 8 mm (2 no.)
– Spanner 10 mm (2 no.)
– Spanner 13 mm (2 no.)
– Spanner 17 mm
– Spanner 19 mm (2 no.)
– Spanner 24 mm
– Flat bit screw driver
– Philips bit screw driver

Fastening brackets installation

Qty.	Description	Item
1	Table panel	81
2	Fastening bracket	10
6	Hexagon socket countersunk head screw M8 x 25	39
6	Washer B8.4 x 25	49
6	Hexagon nut M8	4

1. Place the table panel grooves up on a sturdy support.



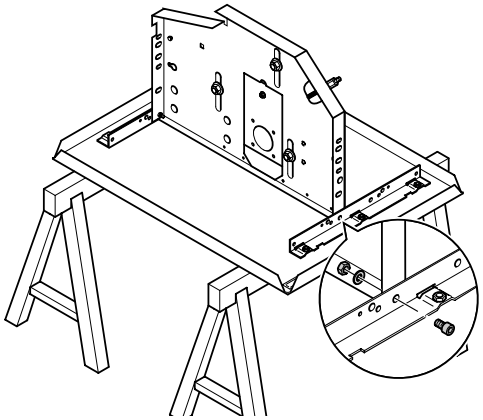
2. Attach the fastening brackets with the countersunk screws, washers and hexagon nuts to the underside of the table panel:
   - folded side pointing towards the table's centre;
   - fingertight only, as the fastening brackets need to be aligned later.

Motor carrier unit installation

Qty.	Description	Item
1	Motor carrier unit	25
2	Hexagon socket head cap screw M8 x 16	27
2	Washer A8.4 x 17	6
2	Hexagon nut M8	4

The motor carrier unit is supported by the two fastening brackets to allow for tilting. As pivot points serve the heads of two cap screws, fitted to the motor carrier unit.

1. Install one cap screw with washer and hexagon nut on the motor carrier unit (washer on the inside).
2. Place the motor carrier unit between the two fastening brackets. The heads of the cap screws must be fitted into the 13.5 mm holes of the fastening brackets closest to the centre of the table panel.

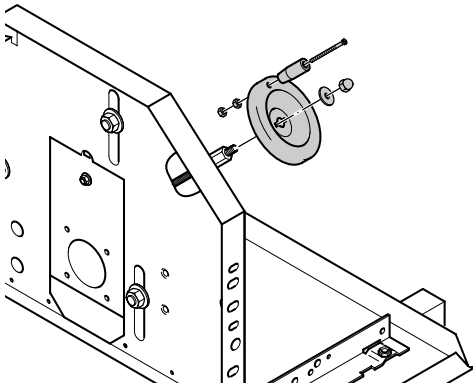


3. Install the second cap screw likewise with washer and hexagon nut to the motor carrier unit.

Handwheel installation

Qty.	Description	Item
1	Turning tang	19
1	Handwheel	21
1	Slotted cap screw M6	18
2	Hexagon nut M6	20
1	Washer B10.5 x 30	23
1	Cap nut M10	24

1. Put turning tang onto cap screw and screw on a hexagon nut so far that the turning tang can still be easily turned.

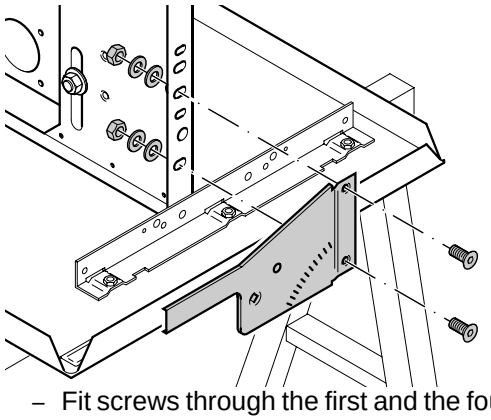


2. Attach the so prepared turning tang with the second hexagon nut to the handwheel and lock with the other hexagon nut.
3. Fit handwheel to the threaded spindle of the motor carrier unit and secure with washer and cap nut – to hold up hold hexagon nut on the threaded spindle.

Blade tilt lever installation

Qty.	Description	Item
1	Blade tilt lever	16
2	Hexagon socket countersunk head screw M6 x 16	15
2	Hexagon nut M6	20
4	Washer R6.6 x 21	26

- Attach the blade tilt lever loosely with countersunk screws, washers and hexagon nuts to the motor carrier unit as illustrated.

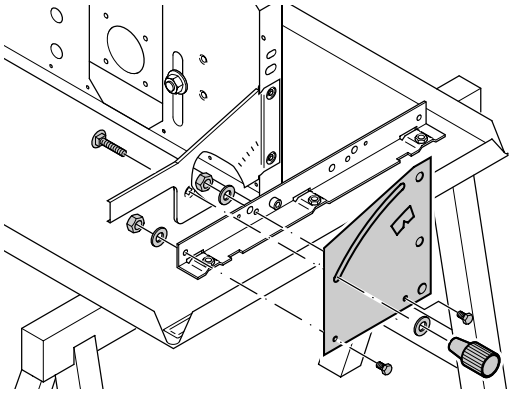


   - Fit screws through the first and the fourth hole from the bottom.
   - Fit two washers under each hexagon nut.

Swivel arm plate installation

Qty.	Description	Item
1	Swivel arm plate	11
2	Hexagon head screw M8 x 20	2
2	Hexagon nut M8	4
2	Washer A8.4 x 17	6
1	Cup square neck screw M8 x 20	17
1	Turn handle, red, M8	12
1	Washer A8.4 x 17	49

1. Attach the swivel arm plate to the fastening bracket with two each hexagon head screws, washers and hexagon nuts as illustrated.



2. Fit the cup square neck screw through the blade tilt lever and the oblong hole of the swivel arm plate. Put the washer on the screw and screw on the turn handle.
   – If necessary adjust the blade tilt lever so that the cup square neck screw can freely move in the oblong hole.
3. Screw down the blade tilt lever to the motor carrier unit.

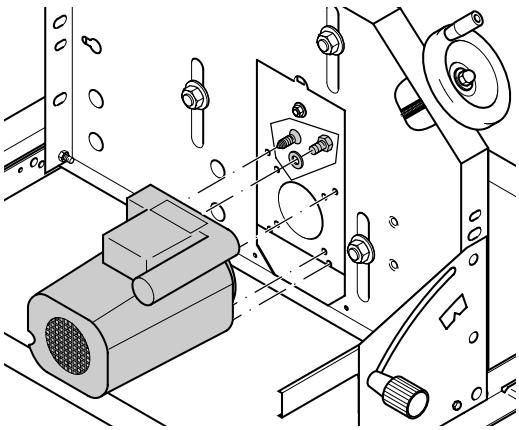
Motor and cover plate installation

Motor 1.7 WNB:
Install motor first, then the cover plate!
Motor 2.2 WNB and 2.8 DNB:
Install cover plate first, then the motor!

Motor installation

Qty. (1.7 WNB)	Qty. (2.2 WNB and 2.8 DNB)	Description	Item
1	1	Motor	112
3	4	Hexagon head screw, prevailing torque type M6 x 16	
3	–	Pan-head tapping screw	
3	4	Washer A6.4	

1. Fasten motor with hexagon head screws and washers to the motor carrier unit.



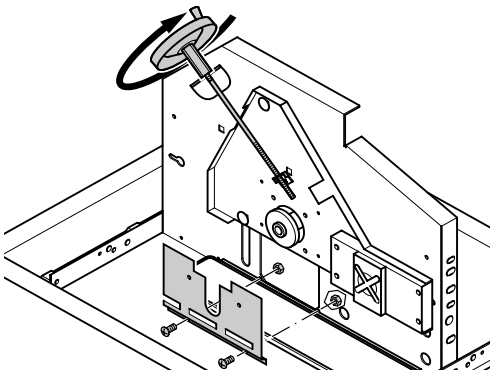
(motor 1.7 WNB shown in the illustration)

2. Fasten motor enclosure with three pan-head tapping screws to the motor carrier unit (motor 1.7 WNB only).

Cover plate installation

Qty.	Description	Item
1	Guard plate	45
2	Cross recessed raised cheese head screw M4 x 12	48
2	Washer A4.3 x 9	46
2	Hexagon nut M4	47

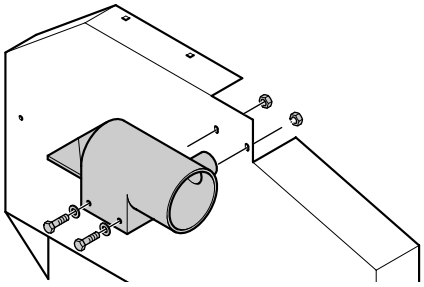
1. Raise the motor with the handwheel upwards as far as possible.
2. Fasten the cover with cheese head screws, washers and hexagon nuts to the motor carrier unit.



Dust extraction port installation to the chip case

Qty.	Description	Item
1	Chip case	57
1	Dust extraction port	53
2	Hexagon head screw M5 x 16	60
2	Washer A5.3	54
2	Hexagon nut M5	55

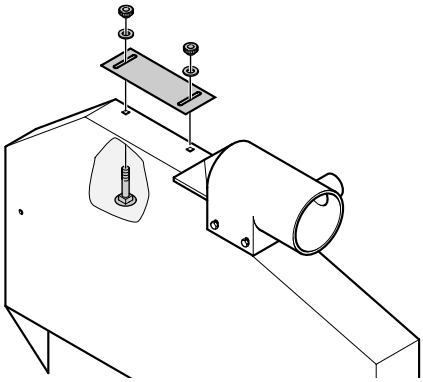
– Attach the dust extraction port with two each hexagon screws, washers and hexagon nuts to the outside of the chip case as illustrated.



Sliding plate installation to the chip case

Qty.	Description	Item
1	Sliding plate	59
2	Cup square neck screw M5 x 16	58
2	Washer A5.3	54
2	Knurled nut M5	56

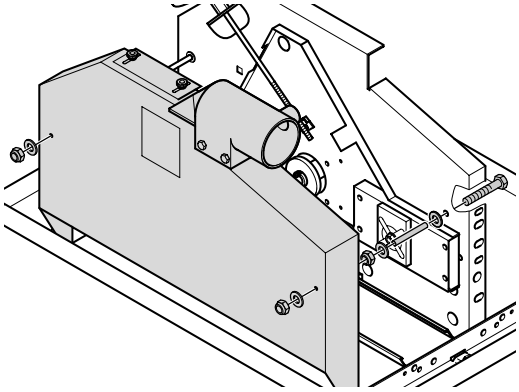
– Attach the dust extraction port with two each hexagon screws, washers and hexagon nuts to the outside of the chip case as illustrated.



Chip case installation to the motor carrier unit

Qty.	Description	Item
2	Hexagon head screw M6 x 80	30
6	Washer A6.4	65
2	Spacer sleeve 6.4 x 60	73
4	Hexagon nut, prevailing torque type M6	68

1. Put one each hexagon head screw from the motor side into the motor carrier unit.



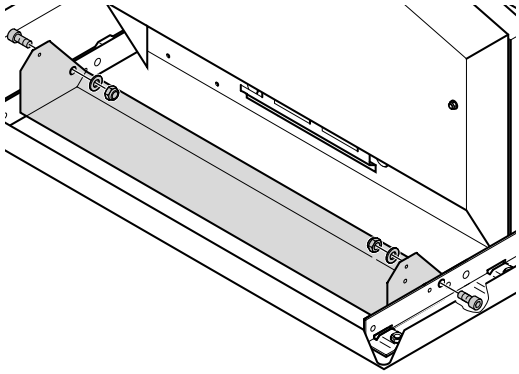
2. From the saw blade side, fit a washer, spacer sleeve and another washer to the hexagon head screws and secure with the prevailing torque type hexagon nuts.
3. Slide the pre-assembled chip case onto the two hexagon head screw and secure with one each washer and prevailing torque type hexagon nut.

Chip case cover installation

Qty.	Description	Item
1	Cover	63
2	Hexagon socket head cap screw M6 x 12	64
2	Washer A6.4	65
2	Hexagon nut M6	20

The chip case cover is – like the motor carrier unit – attached to the two fastening brackets to allow for tilting. The heads of the two cap screws, fitted to the chip case cover, serve as pivot points.

1. Attach one cap screw with washer and hexagon nut to the chip case cover (washer on the inside).

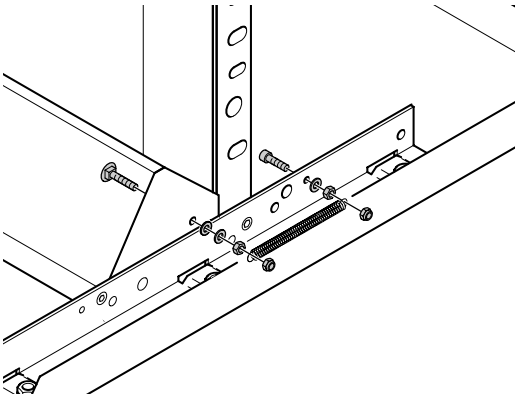


2. Place chip case cover between the two fastening brackets. The heads of the cap screws must be fitted into the 10.5 mm holes of the fastening brackets.
3. Attach the second cap screw to the chip case cover.

Tension spring installation

Qty.	Description	Item
1	Cup square neck screw M5 x 16	58
2	Washer A6.4	65
2	Hexagon nut M5	55
1	Hexagon head screw M5 x 16	60
1	Washer A5.3	54
1	Tension spring	66
2	Hexagon nut, prevailing torque type, M5	67

1. Fit the cup square neck screw from the inside through the larger hole of the chip case cover.
2. From the outside fit two washers 6.4 mm to the cup square neck screw and secure with a hexagon nut..

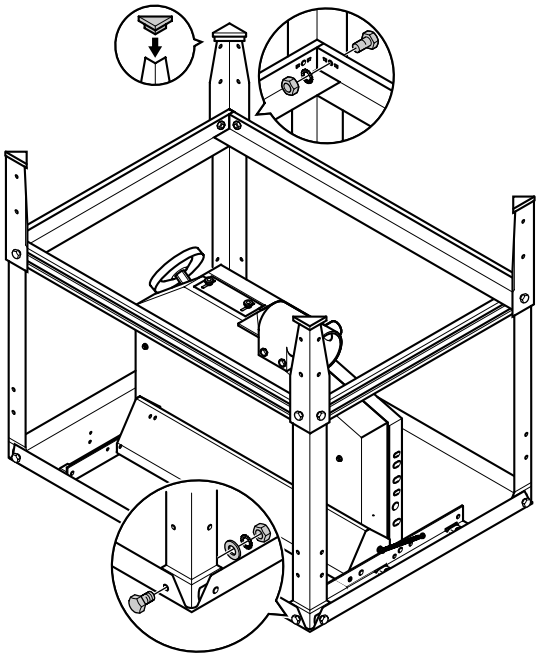


3. Fit a hexagon head screw from the inside through the fastening bracket as illustrated. Fit a washer 5.3 mm from the opposite side and screw down with a hexagon nut.
4. Hook the tension spring with one end to the cup square neck screw in the chip case cover and the other end to the hexagon head screw in the fastening bracket.
5. Secure the tension spring at both ends with one each prevailing torque type hexagon nut.

Stand assembly

Qty.	Description	Item
4	Leg	7
2	Stanchion, short	1
2	Stanchion, long	34
20	Hexagon head screw M8 x 20	2
8	Washer A8.4 x 17	6
20	Serrated lock washer 8.4	3
20	Hexagon nut M8	4
4	Rubber foot	111

1. Attaching the four leg to the inside of the table panel's corners:
   - fit hexagon head screws into holes from the outside;
   - put on washers from inside;
   - put on serrated lock washers and
   - screw on hexagon nuts – fingertight only at this stage.



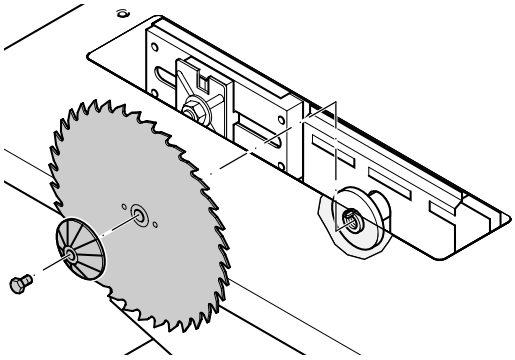
2. Attaching the stanchions between the legs:
   - the wide side of the stanchions face the table panel;
   - the nibs and recesses must fit into one another;
   - fit hexagon head screws into holes from the outside;
   - put on serrated lock washers from inside and
   - screw on hexagon nuts – fingertight only at this stage.
3. Screwing up the stanchions with one another:
   - fit hexagon head screws;
   - put on serrated lock washers from the other side and
   - screw on hexagon nuts – fingertight only at this stage.
4. Push rubber feet on the legs.
5. With the help of a second person stand the saw on its feet.
6. Tighten all screwed connections

Saw blade installation

Qty.	Description	Item
1	Saw blade	36
1	Lock bar	102

Danger!
Risk of cuts from the saw blade: wear gloves when installing the saw blade.

1. Raise saw blade fully.
2. Unscrew the arbour bolt from the motor shaft (left-hand thread!) and take off the outer blade flange.
3. Put on the saw blade, observing the direction of rotation.



4. Put on the outer blade flange (the tappet on the inner blade flange must fit into the recess in the outer blade flange).
5. Screw the arbour bolt into the motor shaft (left-hand thread!) and tighten it. To hold up the saw blade:
   - use the lock bar for 2.2 WNB and 2.8 DNB motors;
   - for the 1.7 WNB motor, arrest the saw blade with a wooden block.

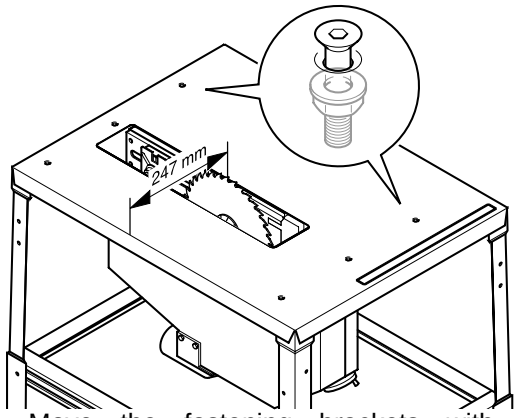
Caution!
Arrest the saw blade only with the lock bar or a block of wood and not by any other means (e.g. with pliers), otherwise the saw blade may be damaged.

Risk of injury!
Remove the lock bar immediately after the saw blade is fitted! A forgotten lock bar left in the motor shaft can cause personal injury and property damage when the motor is started.

Saw blade alignment

1. Raise the saw blade fully if necessary and check its alignment.
   The saw blade must be aligned:
   - exactly parallel with the side edges of the saw table;
   - so that the distance between the blade and the left-hand side edge of the saw table is 247 ˚mm.

   To correct the alignment:
   - Loosen the six hexagon nuts on the two fastening brackets below the saw table approx. one turn.



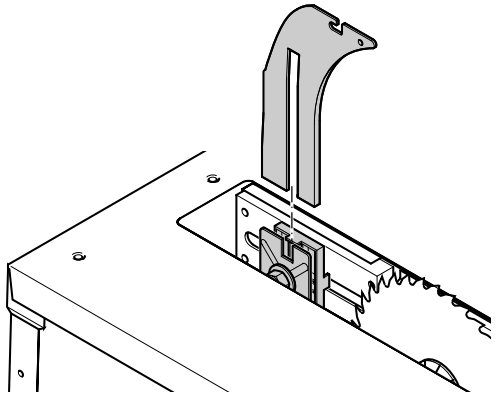
   - Move the fastening brackets with the attached motor carrier unit/chip case assembly as required, until the alignment is correct.
   - Tighten the six hexagon nuts on both fastening brackets.

Riving knife installation

Qty.	Description	Item
1	Riving knife	69

The riving knife belongs to the safety devices and must be properly installed for a safe operation.

1. Loosen hexagon nut (= Keps nut; grey arrow) on the pressure plate by approx. two turns.
2. Slide riving knife between riving knife carrier and pressure plate as illustrated.
3. Align riving knife (see below) and tighten Keps nut.

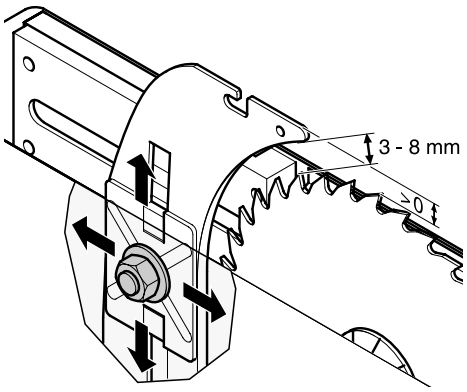


Riving knife alignment

In order to match the riving knife exactly with the saw blade, its position can be adjusted in two planes:

- in the distance to the saw blade;
- in its lateral alignment.

Distance to the saw blade:
The distance between the saw blade's peripheral edge and the riving knife shall be between three and eight mm.
The riving knife must project at least the same distance over the saw table as the saw blade.



1. If necessary, loosen the Keps nut on the riving knife one turn.
2. Adjust distance of the riving knife to the saw blade.
3. Tighten the Keps nut.

Lateral alignment:
riving knife and saw blade must be perfectly in line.

- turning the four hexagon socket head cap screws on the motor carrier unit below the saw table clockwise = riving knife is moved to the right.
- turning the four hexagon socket head cap screws on the motor carrier unit below the saw table counter-clockwise = riving knife is moved to the left.

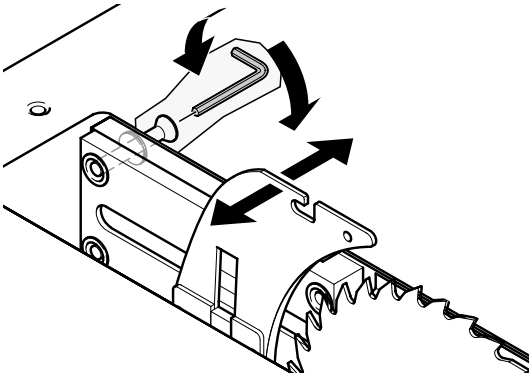
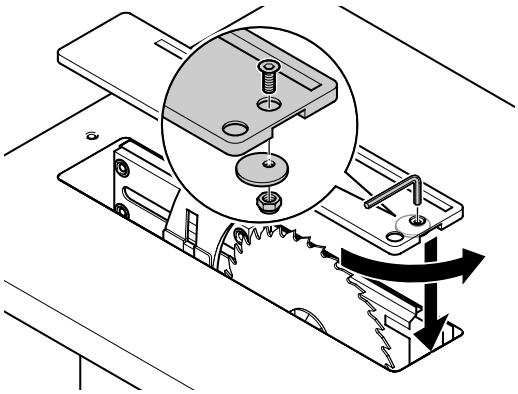


Table insert extrusion installation

Qty.	Description	Item
1	Table insert extrusion	97
1	Hexagon socket countersunk head screw M6 x 16	15
1	Cam plate Ø 25 mm	98
1	Hexagon nut, prevailing torque type M6	68

1. Fit the countersunk screw from the top through the hole in the table insert extrusion.
2. From the underside, put the cam plate onto the screw and screw down with the prevailing torque type hexagon nut – the cam plate remains rotatable.
3. Turn the countersunk screw clockwise (when seen from the top) against the stop, and insert the table insert extrusion flush into the slot of the saw table.

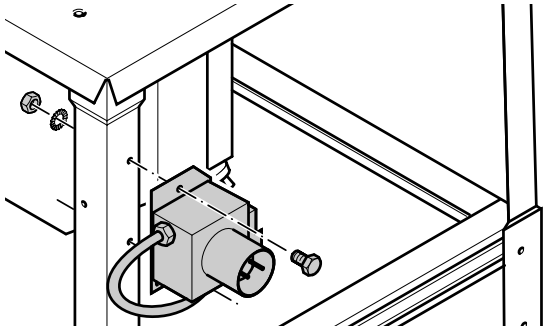


4. Turn the countersunk screw counter-clockwise against the stop; the cam plate engages in the saw table's recess and locks the table insert extrusion in place.

Switch enclosure installation

Qty.	Description	Item
2	Hexagon head screw M8 x 16	13
2	Serrated lock washer 8.4	3
2	Hexagon nut M8	4

- Attach the switch plate with two each hexagon head screws, serrated lock washers and hexagon nuts to the left-hand front leg. The switch buttons must point to the right-hand side.

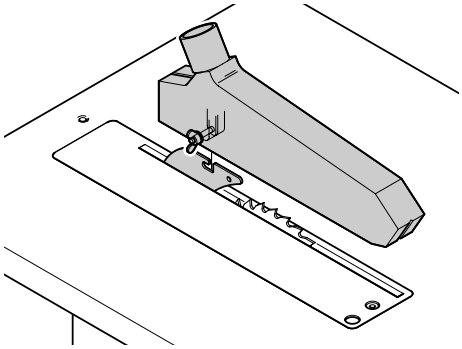


Caution!
Pay attention that the cable does not run over sharp edges and is not bent.

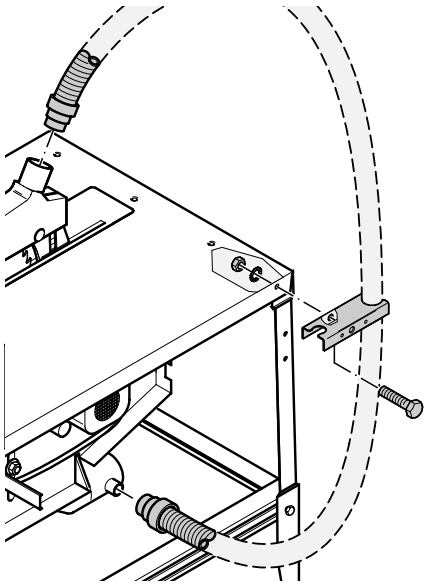
Installing the dust collection gear

Qty.	Description	Item
1	Blade guard	99
1	Suction hose	110
1	Hose carrier	103

1. Fit blade guard to riving knife.
   The lower edge of the blade guard should be in a horizontal position.



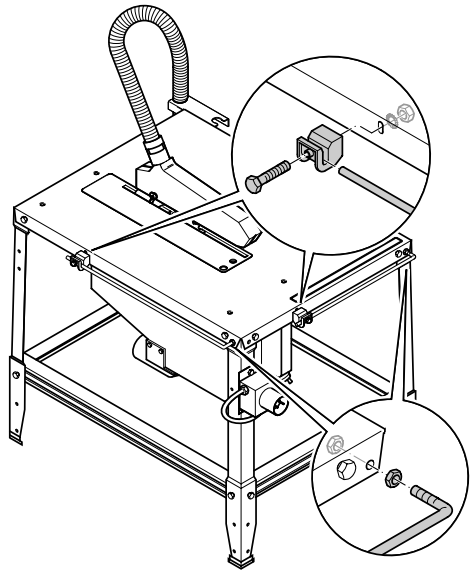
1. Fit the saw blade guard to the riving knife.
   The underside of the saw blade guard must be in a horizontal position.
2. Push the suction hose onto the saw blade guard's dust extraction port.
3. Push the suction hose onto the dust extraction port of the chip case assembly.
4. Screw the hose carrier, with the larger opening pointing to the rear, to the saw table. To do so, loosen the screws of the right-hand rear leg and tighten again with the hose carrier in position.
5. Hook the suction hose into the hose carrier.
6. Connect a suitable dust collector to the dust extraction port on the chip case assembly.



Guide bar installation

Qty.	Description	Item
1	Guide bar, short	76
1	Guide bar, long	83
4	Hexagon thin nut M12	78
2	Hexagon head screw M6 x 50	74
2	Serrated lock washer 6.4	77
2	Hexagon nut M6	20
2	Guide bar bracket	75

1. Screw one hexagon thin nut onto each guide bar.
2. Fitting the guide bars:
   - short guide bar to the right-hand side of the saw table's front edge;
   - long guide bar to the front of the left-hand side edge of the table.

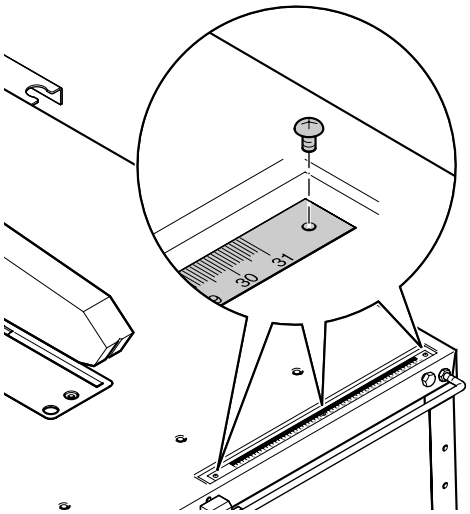


3. Screw on another hexagon thin nut onto the guide bar.
4. Put a hexagon head screw from the narrower side through a guide bar bracket and slide the guide bar bracket onto a guide bar.
5. Attach the guide bar bracket with a serrated lock washer and hexagon nut to the saw table.
6. Adjust the hexagon thin nut on the guide bar to set the guide bar parallel with the table's edge.
7. Tighten the hexagon thin nuts against each other

Scale installation

Qty.	Description	Item
1	Scale	79
3	Cross recessed pan head tapping screw St 3.9 x 9.5	80

1. Attach the scale with three pan head tapping screws into the saw table's recess – do not yet fully tighten the screws: the scale needs to be set according to the position or thickness of the saw blade.



2. Hold a straight edge to the side of the saw blade.

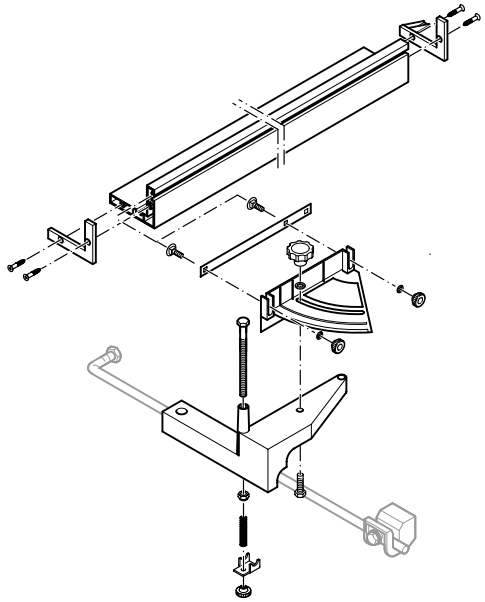
Since the blade's teeth are bend alternately to the outside (= set of saw teeth), ensure that the straight edge does not touch a tooth set to the right, else the straight edge will not be exactly parallel with the saw blade.

3. Setting the scale: The scale's "0" mark must be exactly under the left edge of the straight edge.
4. Tighten the pan head tapping screw carefully and remove the straight edge.

Combination rip/crosscut fence assembly

Qty.	Description	Item
1	Stop rule, upper	91
1	Stop rule, lower	87
1	Hexagon head screw M6 x 130	88
1	Hexagon nut, prevailing torque type M6	68
1	Pressure spring	86
1	Clamping pad	85
3	Knurled nut M6	84
1	Hexagon head screw M8 x 30	89
1	Washer A8.4 x 17	6
1	Starknob nut M8	90
2	Cross recessed flat head screw St 4.8 x 22	96
2	Cup square neck screw M6 x 30	93
1	Fence extrusion	94
1	Fence extrusion end piece	95
2	Washer A6.4	65
1	Spacer plate	92

1. Put the hexagon head screw M6 x 130 from the top into the guide tube of the lower stop rule.



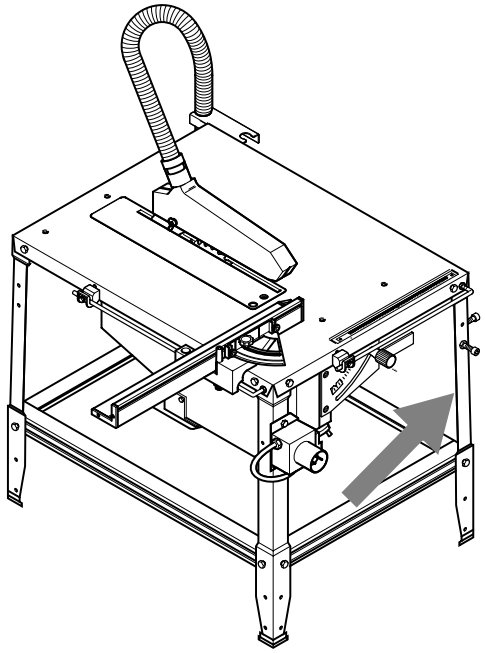
2. Screw on a prevailing torque type hexagon nut for at least 65 mm.
   The best way to screw on the nut is to turn the hexagon head screw, pulling it up at the same time. This way the nut is held in the guide tube.
3. Put the pressure spring and clamping pad onto the hexagon head nut as illustrated and screw on the knurled nut M6.
4. Put the upper stop rule with the round stud into the corresponding hole in the lower stop rule.
5. Put the hexagon head screw M8 x 30 from below into the lower stop rule: the threaded end of the screw must reach through the oblong hole in the upper stop rule.
6. Put a washer on the hexagon head screw M8 x 30 and screw on the starknob nut M8.
7. Fit the end piece to the fence extrusion and secure in place with the two flat head screws.
8. Put both cup square neck screws through the spacer plate as illustrated and slide them, with the spacer plate, into the outer groove of the fence extrusion.
9. Attach the fence extrusion with the two knurled nuts and washers to the upper stop rule.
10. Attach the lower stop rule to one of the two guide bars by tightening the knurled nut:
    - short guide bar – rip fence
    - long guide bar – crosscut/mitre fence

Accessory storage hook installation

Qty.	Description	Item
2	Hexagon socket head cap screw M8 x 30	5
4	Hexagon nut M8	4
1	Push stick	100

As a last assembly step two cap screws are attached to the right-hand front leg, to hold the push stick and fence assembly when they are not in use:

1. Screw a hexagon nut for approx. 10°mm onto each of the two cap screws.
2. Put one cap screw into the hole on the front of the right-hand front leg and secure in place with another hexagon nut.
3. Attach the other cap screw likewise the right-hand side of the right-hand front leg.



Tightening the screwed connections

- Check the saw's screwed connections. Tighten the screwed connections hand-tight on:
  - legs and stanchions of the stand
  - fastening bracket for the motor carrier unit.

Mains connection

Danger! Electrical Hazard
Operate saw in dry environment only.
Operate saw only on a power source matching the following requirements (see also "Technical specifications"):
- Fuse protection by a residual current operated device (RCD) of 30 mA sensitivity;
- Outlets properly grounded;
- Outlets for 3-phase circuits with neutral lead.

Position power supply cable so it does not interfere with the work and is not damaged.

Protect power supply cable from heat, aggressive liquids and sharp edges.

Use only rubber-jacketed cable of sufficient lead cross-section.

Do not pull on power supply cable to unplug.

Change of direction of rotation!
(only for machines with three-phase motor)
Depending on phase sequence it is possible that the saw blade turns in the wrong direction. This can lead to the workpiece being thrown about when attempting to make a cut. Always check direction of rotation after every connection to another outlet or circuit.**With a wrong direction of rotation the phase inverter on the power supply cable's plug must be set:**

1. After the saw is assembled, with all guards and safety devices operational, connect it to the power supply.
2. Raise saw blade fully.
3. Start saw and switch off immediately.
4. Watch the blade's direction of rotation from the left-hand side of the saw. **It must turn clockwise.**
5. If the blade turns counter-clockwise, disconnect power supply cable from the saws combination switch/plug.
6. With a flat bit screwdriver push the plug's phase inverter in and turn by 180°.

Caution! Do not turn the phase inverter by the contact pins!

Operation

- Check the following for proper operation before starting work:
  - emergency stop switch;
  - riving knife;
  - blade guard;
  - push stick.
- Use personal protection gear:
  - dust respirator;
  - hearing protection;
  - safety glasses.
- Assume proper work position:
  - in front of the saw on the infeed side;
  - frontal to the saw;
  - to the left of the line of cut.
  - If working with two persons the second person should stand at a rear table extension.
- Use if required for the type of work:
  - rear table extension (accessory) if working with two persons, or if otherwise workpiece would fall off the saw table;
  - dust extraction kit (accessory);

Danger!
Replace dull blades without delay. Risk of kickback if a dull tooth gets caught in the workpiece's surface.

- Do not stop the saw blade by exerting lateral pressure against it. Risk of kickback.
- Always push the workpiece down on the saw table, do not jam. Risk of kickback.
- Smooth finish cuts in solid timber and chip/ particle board– Electrical connection

Dress code!
Do not wear loose clothing, jewellery or gloves that can get caught in moving parts.
Confine long hair with hairnet.
Mount saw blade properly

- Replaces carbon brushes.
- Replace a dull blade at once.
- By this means the cutting angle is adjusted against the guide edge for mitre cuts.
- Hazard generated by machine faults:
- Dust collection bag or dust collector;

The safety lock blocks the retractable blade guard:

Dust collection

Danger!
Some types of wood dust (e.g. of oak and ash) can cause cancer when inhaled: Use a suitable dust collector when working in enclosed spaces (air speed at the saw's dust extraction port ≥ 20 m/s).

The dust extraction ports are located on the chip case assembly and on the saw blade guard.

Also observe the dust collector's instructions!

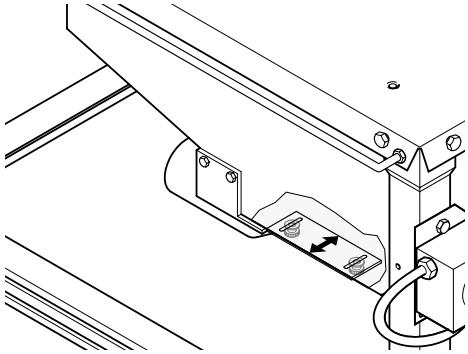
An operation without a dust collector is only possible

- outdoors;
- at short-term operation (up to max. 30 minutes of operation);
- with a dust mask.

Caution!
If no dust collector is hooked up the sliding plate on the chip case must be opened, otherwise chips and saw dust build up inside the chip case.

To open the sliding plate:

1. Loosen both knurled thumb screws on the underside of the chip case slightly.

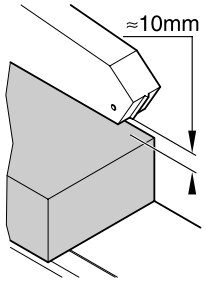


2. Slide sliding plate all the way to the side.
3. Tighten the knurled thumb screws.

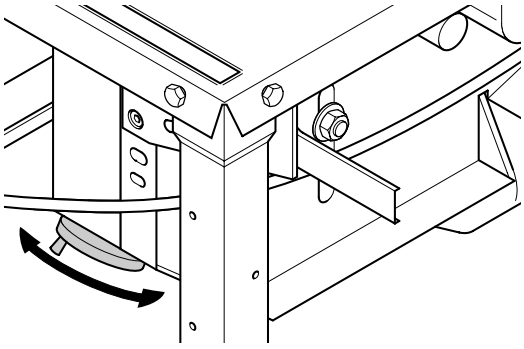
Setting the depth of cut

Danger!
Parts of the body or objects in the setting range can be caught be the running saw blade! Set the depth of cut only with the saw blade at standstill!

The saw blade's depth of cut needs to be adjusted to the workpiece height: The blade guard should be set to approx. 10 mm above the workpiece.



- Set the depth of cut by turning the handwheel on the chip case.



To compensate for possible play in the blade height setting mechanism, always raise the blade to the desired position.

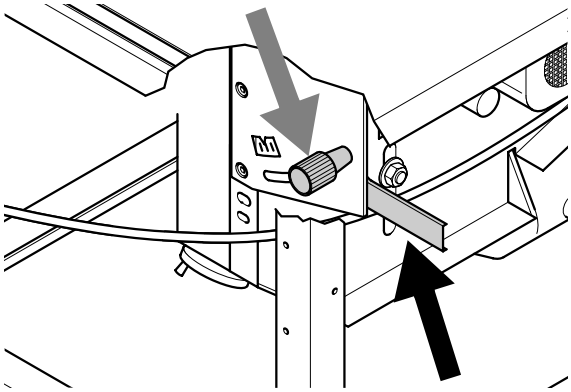
Setting the saw blade tilt

Danger!
Parts of the body or objects in the setting range can be caught be the running saw blade! Set the depth of cut only with the saw blade at standstill!!

The saw blade's tilt can be steplessly set between 0° and 45°.

In order to utilise the full setting range of 45°, the depth of cut must be reduced accordingly.

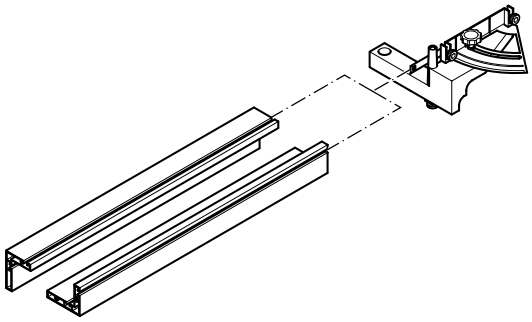
1. If necessary lower saw blade to a max. depth of cut of 30 mm.
2. Loosen turning knob (grey arrow) by approx. one turn.



3. Set required blade tilt with the blade tilt lever (black arrow).
4. Lock the set bevel angle by tightening the turning knob.

Rip cuts with rip fence

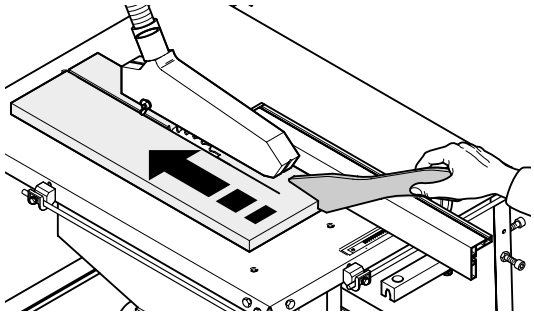
1. Adjust the fence extrusion to the workpiece height:



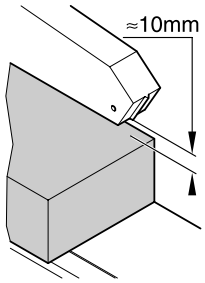
- high guide edge = for cutting high workpieces
- Low guide edge = for cutting low workpieces

2. Screw the rip fence to the front guide bar.

Danger!
Use push stick if distance between rip fence and saw blade is less than 120 mm.



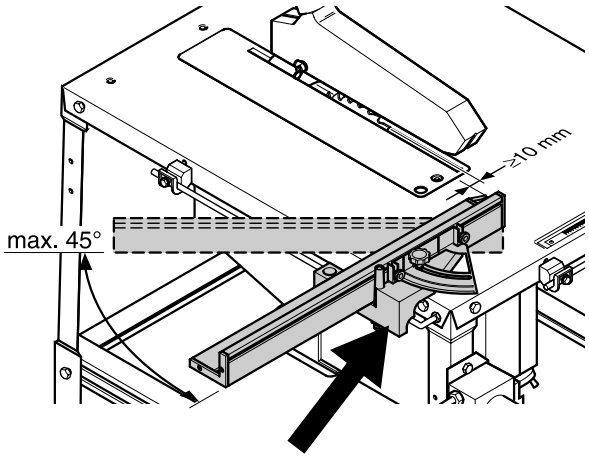
3. Set depth of cut of the saw blade. The blade guard should be set to approx. 10 mm above the workpiece.



4. Set and lock the blade's bevel tilt.
5. Start the motor.
6. Cut workpiece in a single pass.
7. Switch machine off if no further cutting is to be done immediately afterwards.

Sawing with the mitre fence

1. Adjust the fence extrusion to the workpiece height.
2. Hook fence assembly to the left guide bar – tighten the knurled nut (arrow) only so much that the fence assembly slides smoothly on the guide bar.



3. Set and lock the required mitre angle.

Caution!
The fence extrusion must be at a distance of at least 10 mm from the line of cut.

4. Set the depth of cut of the saw blade.
5. Set and lock the blade's bevel tilt.
6. Start the motor.
7. Cut workpiece in a single pass.
8. Switch machine off if no further cutting is to be done immediately afterwards.

Care and maintenance

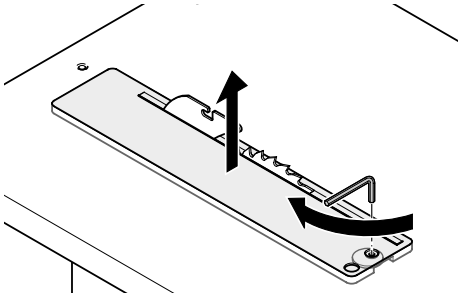
Danger!
Prior to all servicing:
- Switch machine OFF.
- Unplug power cable.
- Wait until the saw has come to a complete stop.

- Check 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 equipment maker can cause unforeseen damage.
- Repair and maintenance work other than described in this section should only be carried out by qualified specialists.

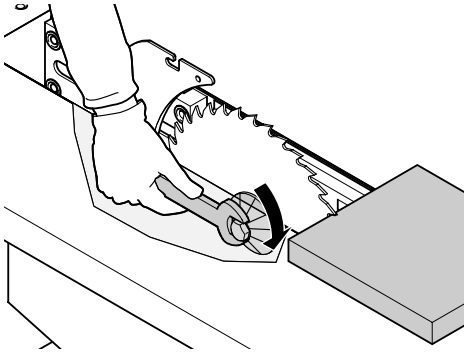
Saw blade change

Danger!
Directly after cutting the saw blade my be very hot – risk of burns. Let the blade cool down. Do not clean the saw blade with combustible liquids.
Risk of cuts from the saw blade: Wear gloves when changing blades.
On re-assembly observe direction of rotation of saw blade and blade collar!

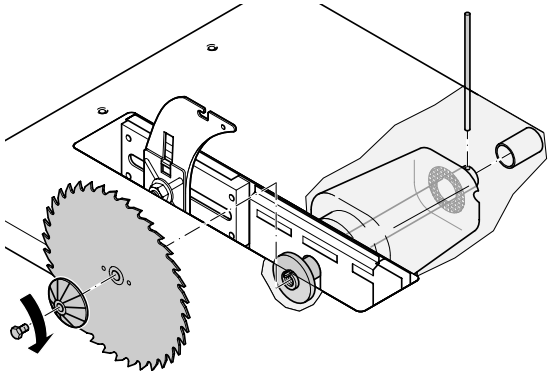
1. Turn the flat head screw of the table insert extrusion clockwise by 1/4 turn and remove the table insert.



2. Raise saw blade fully.
3. Remove blade guard.
4. Hold up the saw blade:
   - with the motor 1.7 WNB arrest the saw blade with a wooden block

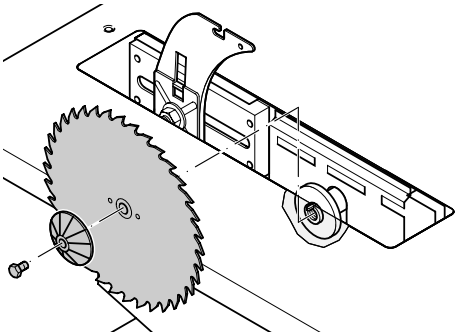


   - with the 2.2 WNB and 2.8 DNB motors remove the plastic cap and put the lock bar through the motor shaft.



5. 5. Unscrew the arbour bolt from the motor shaft (left-hand thread!).

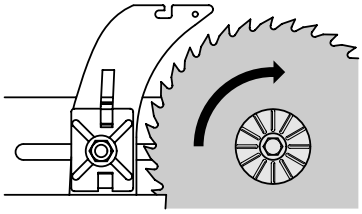
6. Take outer blade collar and saw blade off the saw spindle.



7. Clean clamping surfaces of saw spindle 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. Put on a fresh saw blade (observe direction of rotation!).



Danger!
Use only suitable saw blades (see „Technical specifications“) – when using unsuitable or damaged blades parts could be explosive-like hurled from it by the centrifugal force.
Do not use:
- saw blades made of high speed steel (HSS);
- saw blades with visible damage;
- cut-off wheel blades.

Danger!
- Mount saw blade only using 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 can not work loose during operation.

9. Slide outer blade collar onto saw spindle. The tappet on the inner blade flange must fit into the recess in the outer blade flange.
10. Screw on the arbour bolt (left-hand thread!) Tighten hand-tight only with the tool supplied.

Danger!
- Do not tighten arbor bolt by hitting on the wrench.
- **After tightening the arbour bolt do not forget to remove the lock bar/wooden block!**

11. Fit table insert extrusion flush into the saw table's slot.
12. Turn flat head screw counterclockwise by 1/4 turn to lock the table insert extrusion in position.

Saw cleaning and lubrication

1. Remove chips and saw dust with vacuum cleaner or brush:
   - the saw blade's rise and fall mechanism;
   - the chip case;
   - from motor vent slots
2. Apply a light coat of oil to the saw blade's rise and fall mechanism.

Machine transportation

- Lower saw blade completely.
- Dismount any add-on parts, projecting over the saw.
- Carry saw with two persons; hold at saw table.
- If possible, pack in the original carton for shipping.

Saw storage

Danger!
Store saw so that
- it can not be started by unauthorized persons and
- nobody can get hurt by the stored machine.

Caution! Do not store machine unprotected outdoors or in damp environment.

Service plan

Before switching ON	
Chip case (if used without dust collector)	Visual check if unobstructed by chips.
Riving knife	Visual check if distance saw blade – riving knife is 3...8 mm.
Power cable	Check for damage, if necessary have replaced by a qualified electrician.

Monthly (if used daily)	
Clean guide elements for saw blade setting – threaded spindle for rise and fall; – swivel segments.	– Remove chips with vacuum cleaner or brush; – apply light coat of oil to guide elements.

Every 300 hours of operation	
All screwed connections	Check, tighten if necessary (except guide screws of saw blade rise and fall mechanism).

Troubleshooting

Danger!
Before carrying out any fault service or maintenance work always:
- Switch machine OFF.
- Unplug power cable.
- Wait for saw blade to come to standstill.

Check that all safety devices are operational again after each fault service.

Motor does not run	
Undervoltage relay tripped by power failure.	Switch on again.
No supply voltage.	Check cables, plug, outlet and mains fuse.

Motor does not run	
Motor überhitzt, z.B. durch – a dull saw blade – too high a feed rate – sawdust build-up in housing.	Eliminate cause for overheating, wait for a few minutes, then start saw again.

Reverse rotation of saw blade (three-phase motor only)	
Phases in supply plug twisted.	Interchange phases (see „Assembly and connection“

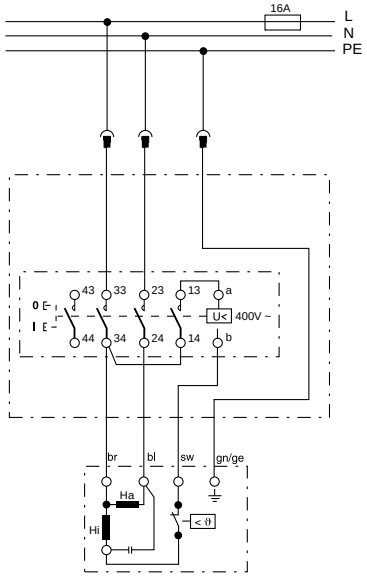
Loss of cutting performance	
Saw blade dull (possibly burns marks on the blade body).	Replace saw blade (see section „Maintenance“).

Technical specifications

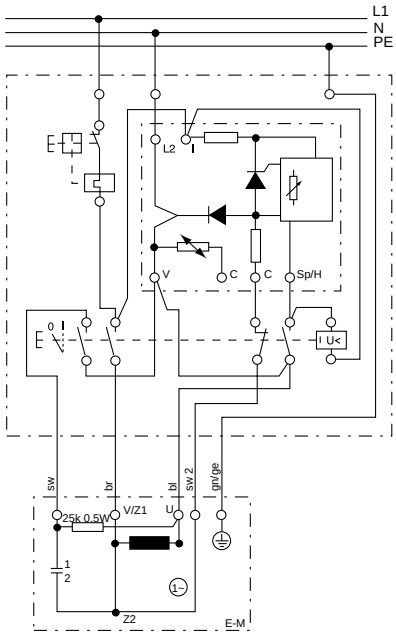
			TKHS 315 E 1.7 WNB	TKHS 315E 2.2 WNB	TKHS 315 E 2.8 DNB
Voltage		V	1 (230~ 50 Hz)	1 (230~ 50 Hz)	3 (400~ 50 Hz)
Rated current		A	5,8	7,6	4,2
Fuse protection min.		A	16 (time-lag)	16 (time-lag)	16 (time-lag)
Protection class			IP 54	IP 44	IP 44
Motor speed		min^{-1}	2800	2800	2800
Motor capacity	input capacity P1 output capacity P2	kW kW	1,3 kW S3 60% –	1,8 kW S6 40% 1,1 kW S1 100%	2,8 kW S6 40% 1,8 kW S1 100%
Saw blade cutting speed		m/s	46	46	46
Saw blade diameter (outer)		mm	315	315	315
Saw blade arbor bore		mm	30	30	30
Depth of cut saw blade vertical saw blade at 45° bevel tilt		 mm mm	 0 ... 85 0 ... 80	 0 ... 85 0 ... 80	 0 ... 85 0 ... 80
Dimensions	saw table length saw table width saw table height overall height	mm mm mm mm	800 600 850 1150	800 600 850 1150	800 600 850 1150
Weight complete approx.		kg	64	64	64
Noise emission values according to DIN 45 635 no-load under load		 dB (A) dB (A)	 74,8 85,0	 74,8 85,0	 74,8 85,0

Wiring Diagrams

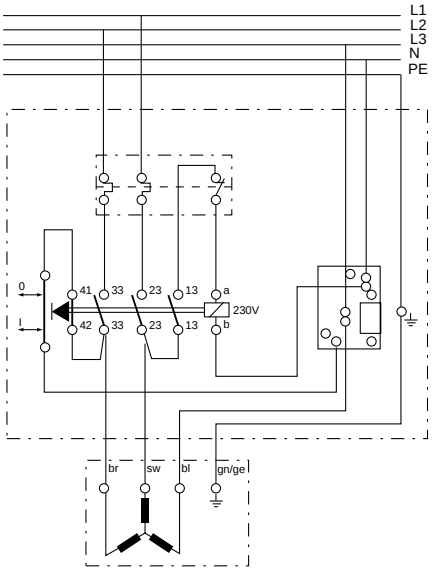
TKHS 315 1,7 WNB



TKHS 315 2,2 WNB



TKHS 315 2,8 DNB



br	bl	sw	sw2	gn/ge	E-M
brown	blue	black	black 2	yellow/green	electric motor

ELEKTRA BECKUM

Aktiengesellschaft
Postfach 13 52, D-49703 Meppen

CE

EG-Konformitätserklärung - *EC conformity declaration* - Déclaration de conformité CEE
EG-verklaring van overeenstemming* - EF-overensstemmelsesattest - *EG-försäkran om överensstämmelse
EF-konformitetserklæring - *EY-vaatimuksenmukaisuusvakuutus* - Dichiarazione di conformità CE
***Declaración de conformidad-UE* - Declaração de conformidade CE**

Wir erklären, daß die Bauart der Maschine/des Gerätes - *We declare that the design of the machine/appliance*
Nous certifions que le type de la machine/de l'appareil - *Wij verklaren dat de constructie van de machine/het apparaat*
Vi erklærer, at konstruktionen af maskinen/apparatet - *Härmed försäkrar vi att maskin/apparat* - Vi erklærer, at maskinens/apparatets konstruksjon
Vakuutamme, että allamainittu kone - Dichiariamo che il modello della macchina/dell'apparecchio
Declaramos, que el modelo de la máquina/aparato - Declaramos que o tipo de construção da máquina/do aparelho

TKHS 315 E - 1,7 WNB
2,2 WNB
2,8 DNB

Art.-Nr. - *Stock-no.* - N° d' article - *art.-nr.* - art.-nr. - *Art.-nr.* - art.-nr. - *tuotenumero* - N° Art. - *Art.N°* - artigo n°:
010 066 3163

folgenden einschlägigen Bestimmungen entspricht - *corresponds with the following relevant regulations*
est conforme aux règlements applicables suivants - *aan de volgende terzake geldende voorschriften voldoet* - opfylder følgende gældende bestemmelser
är i överensstämmelse med följande gällande föreskrifter - oppfyller følgende gjeldende bestemmelser
vastaa seuraavia asiaa koskevia määräyksiä - corrisponde alle seguenti norme in materia
se ajusta a las siguientes directrices correspondientes - se enquadra com as seguintes disposições pertinentes:

EG-Maschinenrichtlinie - *EC machine directive* - directive CEE pour les machines - *EG-machinerichtlijn* - EF maskindirektiv - *EG maskindirektiv*
EF maskindirektiv - *Koneita koskeva EY-direktiivi* - Direttiva CE per macchinari - *Directriz de máquinas-UE* - Directiva CE para máquinas
89/392/EWG
91/368/EWG

EG-Richtlinie Elektromagnetische Verträglichkeit - *EC-directive electro-magnetic compatibility* - directive CEE sur la conformité électromagnétique
EG-richtlijn elektromagnetische compatibiliteit - EF-direktiv vedr. elektromagmetisk fordragelighed - *EG-direktiv för elektromagnetisk kompatibilitet*
EF-direktiv om elektromagnetisk kompatibilitet - *EY:n sähkömagneettista yhteensopivuutta koskeva direktiivi* - Direttiva CE compatibilità elettromagnetica
Directriz-UE Compatibilidad electromagnética - Directiva CE sobre compatibilidade electromagnética
89/336/EWG

EG-Niederspannungs-Richtlinie - *EC-Low voltage directive* - Directive CEE de basse tension
EG-laagspanningsrichtlijn - EF-lavspændingsdirektiv - *EG-direktiv för lågspänning*
EF-direktiv for lavspenning - *Pienjännitettä koskeva EY-direktiivi* - Direttiva CE per bassa tensione
Directriz para baja tensión-UE - Directiva CE sobre baixa tensão
73/23/EWG

Angewendete harmonisierte Normen - *Applied harmonized standards* - normes harmonisées appliquées - *Toegepaste geharmoniseerde normen*
Anvendte harmoniserede standarder - *Tillämpade harmoniserande direktiv* - Anvendte tilpassede normer - *Sovelletut harmonisoidut normit*
Norme armonizzate applicate - *Normas armonizantes aplicadas* - Normas harmonizadas aplicadas:
EN 55014, EN 60555 Teil 2, EN 60555 Teil 3, EN 55014, EN 50082 Teil 1 (1992)

Angewendete nationale Normen - *Applied national standards* - normes nationales appliquées - *Toegepaste nationale normen*
Anvendte tyske standarder - *Tillämpade nationella direktiv* - Anvendte nasjonale standarder - *Sovelletut kansalliset normit* - Norme nazionali applicate
Normas nacionales aplicadas - Normas nacionais aplicadas
DIN VDE 0530; ISO 7960 Anhang A, DIN EN 23746, DIN EN 31202

Die Baumusterprüfung wurde von folgender gemeldeter Stelle durchgeführt - *The type test was carried out by the following registered location*
L'homologation a été effectuée par l'office suivant - *De constructiemodel-keuring werd door de volgende officiële instantie uitgevoerd*
Typemønsterprøven er gennemført af følgende registrerede institut - *Mönsterprovet utfördes på följande auktoriserad institution*
Prototypen ble testet av følgende registrerte institusjon - *Mallikappaleen tarkastuksen on suorittanut seuraava rekisteröity laitos*
L'omologazione è stata effettuata dal seguente ufficio - *El ensayo de la muestra constructiva ha sido realizada por la siguiente institución autorizada*
A inspecção do modelo de construção foi realizada pela seguinte autoridade:
TÜV-Rheinland, Postfach 910351, D-51101 Köln

Nummer der EG-Baumusterprüfbescheinigung - *Number of the EC type test certificate* - Numméro d'homogolation CEE
Nummer van het EG-constructiemodel-certificaat - EF-typemønsterprøveattestens nummer - *EG-provintygets nummer*
Nummeret på EF-prototyptestsertifikatet - *EY-mallikappaletarkastustodistuksen numero* - Numero del certificato di omologazione CE
Número de la Certificación-UE de la muestra constructiva - Número do certificado de inspecção CE para o modelo:
9410359 02

(Rugen)

Technischer Leiter - *Technical Manager* - Le responsable technique - *Chef techniek* - Teknisk leder - *Teknikansvarig*
Teknisk leder - *Tekninen johtaja* - Direttore teccnico - *Director técnico* - O director técnico

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