

## TS40 Anna

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## SYMBOLS

### Auf der Maschine - On the machine



Betriebsanleitung vor Inbetriebnahme sorgfältig durchlesen!  
Please read operators manual carefully before putting the machine into operation!  
Notice d'utilisation à lire attentivement avant la mise en service de la machine!  
Leggere la manuale di istruzioni con attenzione prima dell'utilizzo della macchina!  
¡Estas instrucciones se deben leer atentamente antes de poner en marcha la máquina!  
Voor de ingebruikneming gebruiksaanwijzing a.u.b. zorgvuldig doorlezen!  
Læs betjeningsvejledningen omhyggeligt inden maskinen tages i drift!  
Läs noggrannt igenom denna anvisning innan maskinen tas i bruk!  
Les nøye gjennom instruksjonen i denne manualen!  
Lue tarkasti tämä ohje ennen koneen käyttöönottoa!  
Instrukcja obsługi, prosimy dokładnie przeczytać przed uruchomieniem maszyny!  
Перед вводом в эксплуатацию внимательно прочесть справочник по эксплуатации!



Tragen Sie beim Arbeiten mit dieser Maschine einen Gehörschutz.  
Wear ear protection when working with this machine.  
Portez un protège-oreilles lorsque vous travaillez avec cette machine.  
Durante il lavoro con questa macchina indossate una protezione dell'udito.  
Utilice una protección de los oídos durante los trabajos con la máquina.  
Draag bij het werken met deze machine gehoorbescherming.  
Husk at bruge lydæmpende ørebeskyttelse hvis De arbejder med maskinen.  
Använd hörselskydd vid användning av denna maskin.  
Bruk hørselsvern ved bruk av maskinen.  
Koneen kanssa työskennellessä on aina käytettävä kuulosuojaimia.  
Podczas wykonywania prac za pomocą tego urządzenia nosić środki ochrony słuchu.  
При работе с этими машинами используйте противושумные наушники.



Überkopfböhrn nur mit geeigneter Wasserfangeinrichtung.  
Overhead drilling only with appropriate water-collecting ring.  
Perçage au-dessus de la tête uniquement avec des collecteur d'eau.  
Trapanazione sopratesta deve essere effettuata solo con dispositivo di raccolta dell'acqua.  
Perforación de techos solamente se debe efectuar con instalación de recolección de agua.  
Alleen bovenhands booren met geschikte wateropvangvoorziening.  
Boring over hovedet må kun foretages med egnede indretning til opfangning af vand.  
Borring över huvudet får ske endast med vattensamlingsanordning.  
Over hodet kjerneboring må kun utføres med egnet vannsamlingsring.  
Yli pään poraus on oltava oikeat vedenkeräilylaite.  
Wiercenie nad głową można wykonywać wyłącznie z odpowiednimi urządzenie do wyłapywania wody.  
Вертикальное бурение «вверх через голову» только при соответствующем оснащении для водосбора.



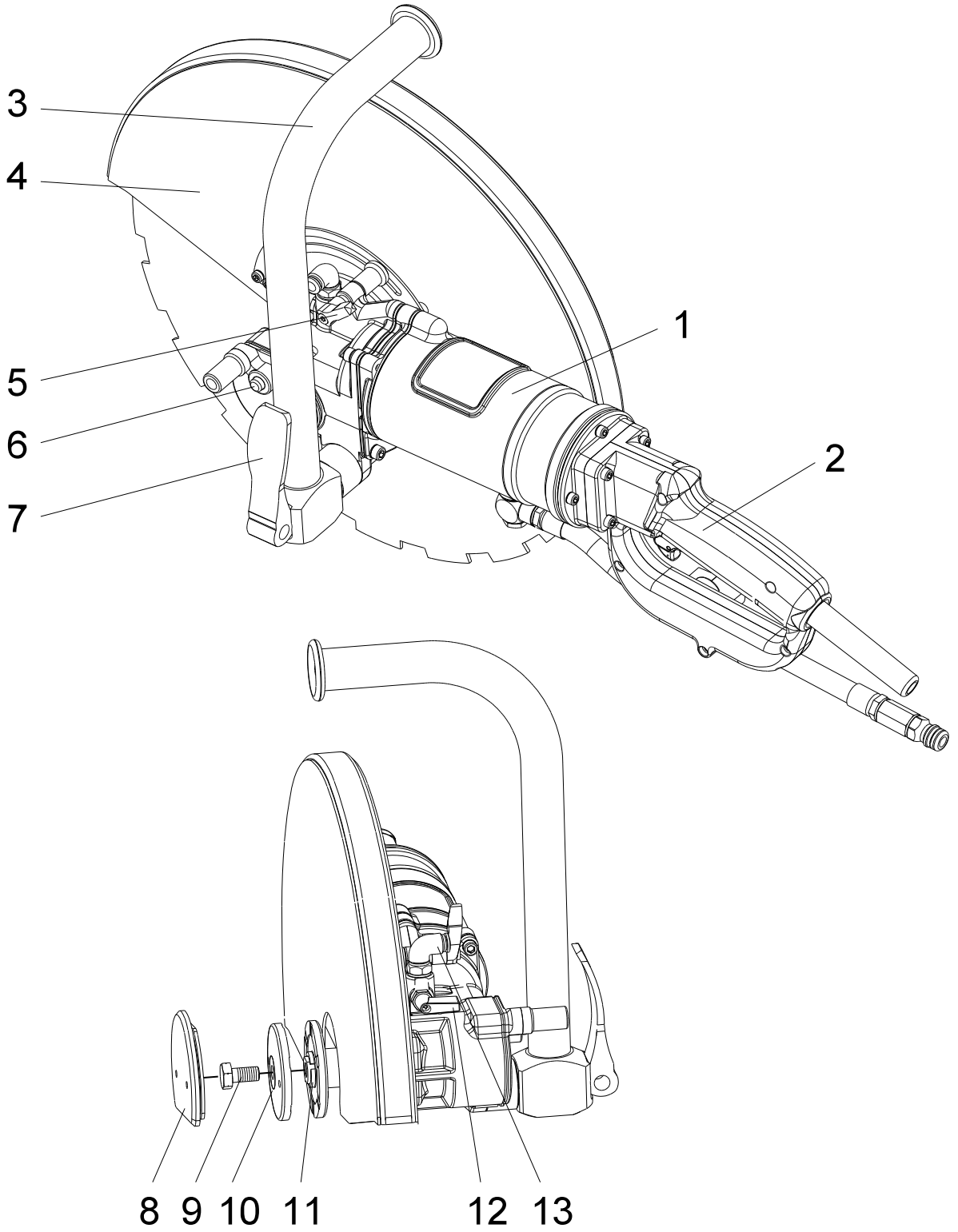
Dieses Produkt entspricht den geltenden EU Richtlinien.  
This product is in accordance with applicable EC directives.  
Ce produit est conforme aux directives CE en vigueur.  
Il presente prodotto è conforme alle vigenti direttive CEE.  
Este producto cumple con la directiva CE vigente.  
Dit product voldoet aan de geldende CE richtlijnen.  
Dette produkt er i overensstemmelse med gældende CE-direktiv.  
Denna produkt överensstämmer med gällande EG-direktiv.  
Dette produktet er i overensstemmelse med EU direktiver.  
Tämä tuote täyttää voimassa olevan Cedirektiivin vaatimukset.  
Produkt ten jest zgodny z odpowiednimi dyrektywami EC.  
Этот продукт соответствует действующим директивам ЕС.

### In der Bedienungsanleitung - In the operators manual

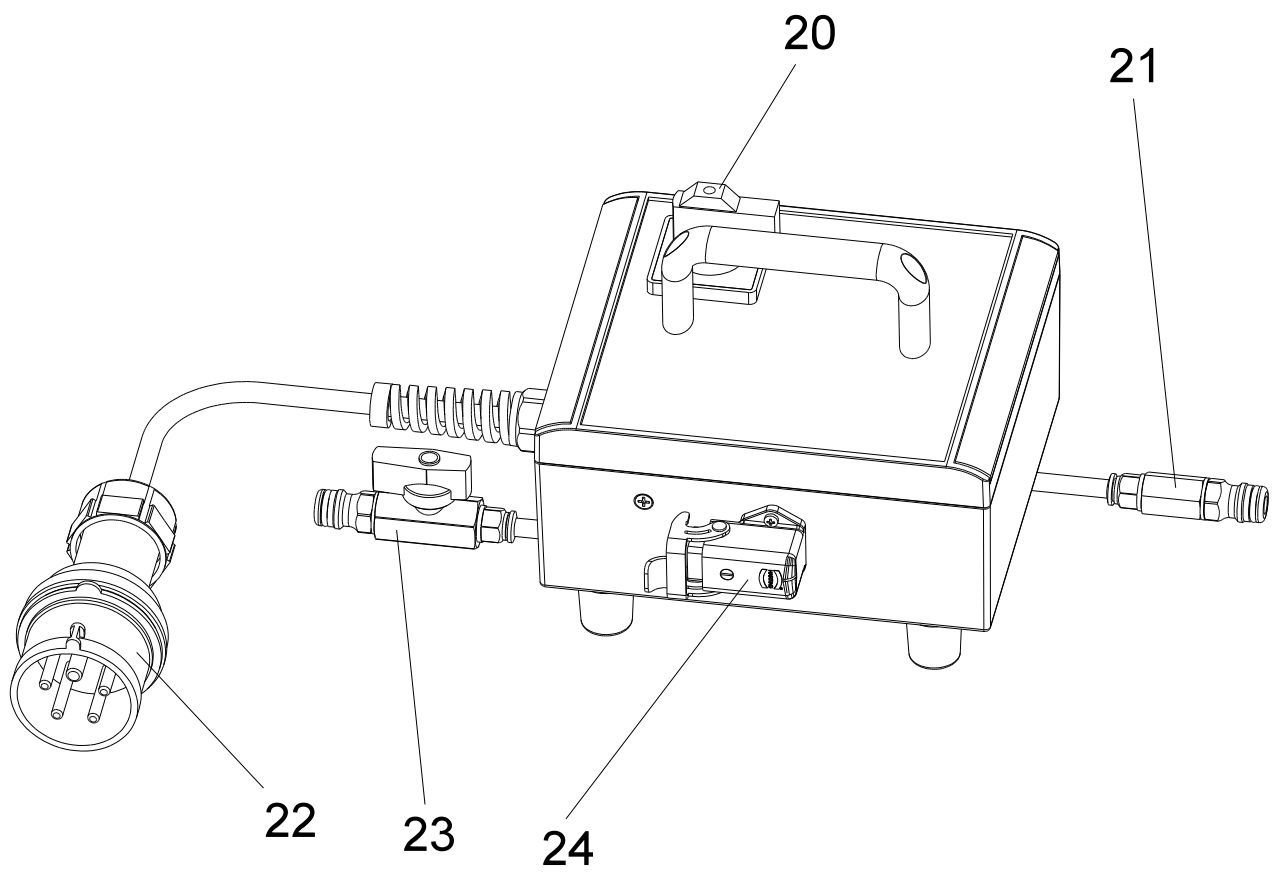


Sicherheitshinweis, bitte besonders beachten!  
Security advise, please take special care!  
Instruction de sécurité, à respecter particulièrement, s'il vous plait!  
Indicazione di sicurezza, considerare specialmente, per favore!  
Estas llamadas de atención se deben atender especialmente!  
Gelieve veiligheidsvoorschrift aandachtig te bestuderen!  
Sikkerhedsanvisning. Udvis størst mulige forsigtighed!  
Säkerhetsförslag, var extra försiktig!  
For din egen sikkerhet, vennligst vær ekstra forsiktig!  
Turvallisuusohje, ole hyvä ja noudata erityistä huolellisuutta!  
Wskazówka bezpieczeństwa, prosimy zachować szczególną ostrożność!  
Уделить особое внимание указаниям по технике безопасности!

# TS 40



# FU 6



# GB OPERATING INSTRUCTIONS - DIAMOND DISC SAW TS40

Please read these instructions carefully before starting up the machine!

In the WEKA diamond disc saw you have an outstanding quality product with which you will be very satisfied, provided you use it properly.

## 1. GENERAL SAFETY PRECAUTIONS



**WARNING! Read all safety precautions and instructions.** Failures in the compliance with these safety precautions and instructions can cause electric shock, fire and/or heavy injuries.

Please keep these safety precautions and instructions for the future.

The term “electric tool” used in the safety precautions corresponds to mains operated electric tools (with mains cord) and to battery operated electric tools (without mains cord).

### 1) Security of employment

- a) **Keep your working area clean and well illuminated.** Disorder or unilluminated working areas can cause accidents.
- b) **Do not work in explosive ambiances with the electric tool, in which there are flammable liquid, gases or dusts.** Electric tools generate sparks which can inflame the dust or vapors.
- c) **Keep children and other persons away from the electric tool while using it.** When being distracted, you can lose the control on the device.

### 2) Electrical safety

- a) **The mains plug of the electric tool must fit into the socket. The plug must not be changed in any kind. Do not use adapter plugs together with earthed electric tools.** Unmodified plugs and fitting sockets reduce the risk of electric shock.
- b) **Avoid body contact with earthed surfaces, like tubes, heatings, cookers and fridges.** There is a higher risk of electric shock when your body is earthed.
- c) **Keep your electric tool away from rain or wetness.** The infiltration of water into an electric tool increases the risk of an electric shock.
- d) **Do not divert the cord from its intended use from carrying or hanging up the electric tool, or for pulling the plugs from the socket. Keep the cord away from heat, oil, sharp edges or moving device parts.** Damaged or tangled cords increase the risk of an electric shock.
- e) **If you work outside with your electric tool, only use extension cords that are appropriate for outside use.** The use of a extension cord which is appropriate for outside use reduces the risk of an electric shock.
- f) **If the use of the electric tool in humid areas is inevitable, use a ground fault circuit interrupter (GFCI).** The use of a GFCI reduces the risk of an electric shock.

### 3) Personal safety

- a) **Be attentive, pay attention to what you do and go to work with the electric tool with reason. Do not use an electric tool when you are tired or under the influence of drugs, alcohol or pharmaceuticals.** One moment of carelessness while using an electric tool can cause serious injuries.
- b) **Wear personal protective equipment and always goggles.** The wearing of personal protective equipment, like dust mask, skid-proof shoes, protection helmet or hearing protection, depending on the kind and use of the electric tool reduces the risk of injuries.
- c) **Avoid unintended start up. Make sure that the electric tool is switched off before connecting it to the mains and/or the battery, picking it up or carrying it.** When you have your finger on the switch while carrying the electric tool or connect the device to the mains when it is switched on, this can cause accidents.
- d) **Remove adjusting tools or wrenches before switching on the electric tool.** A tool or wrench which is located on a turning device can cause injuries.

- e) **Avoid abnormal posture. Care for safe standing and keep the balance anytime. Do not work on a ladder.** Thus you can control the electric tool better in unexpected situations.
- f) **Wear suitable clothing. Do not wear wide clothing or jewelry. Keep hair, clothing and gloves away from moving parts.** Wide clothing, jewelry or long hair can be caught by moving parts.
- g) **If there is the possibility to assemble a dust exhauster and collecting device, make sure that these are connected and used correctly.** The use of a dust exhauster can reduce dangers by dust.

#### 4) Use and handling of the electric tool

- a) **Do not overload the device. Use the appropriate electric tool for your work.** With the appropriate electric tool you work better and saver in the declared range of performance.
- b) **Do not use an electric tool whose switch is damaged.** An electric tool which can not be switched on and off is dangerous and has to be repaired.
- c) **Unplug the plug from the socket and/or remove the battery before carrying out instrument settings, exchanging accessories or put the device aside.** This safety measure avoids the unintended start of the electric tool.
- d) **Keep unused electric tools out of reach of children. Do not allow persons to use the device who are not familiar with it or have not read these instructions.** Electric tools are dangerous if they are used by inexperienced persons.
- e) **Maintain electric tools with care. Check if movable parts function correctly and do not jam, if parts are broken or damaged in that way, that the function of the electric tool affected. Have damaged parts repaired before using the device.** Many accidents originate from bad maintained electric tools.
- f) **Keep the cutting tool sharp and clean.** Carefully maintained cutting tools with sharp edges do jam less and are easier to guide.
- g) **Use electric tool, accessory, operation tools, etc. according to these instructions. Thereby consider the conditions of employment and the work to be done.** The use of electric tools for others than the intended task can result in dangerous situations.

#### 5) Service

- a) **Have your tool only repaired by qualified personnel and only with original spare parts.** Thus it is assured that the safety of the electric tool is being obtained.

## 2. PARTICULAR INFORMATION - Please note

### 1) General

- a) **This diamond disc saw is only intended for industrial use and may only be operated by trained personnel.**
- b) **Proper use extends only to the sawing of rock, concrete and masonry.**
- c) **For operation the relevant regulations must be observed.**
- d) **Power tools must regularly (approx. 6 months) be checked on safety by a specialist according to BGV A3.**
- e) **Never deposit the disc saw until the saw blade has come to a complete stop.** The rotating saw blade can get into contact with the surface whereby you may loose control of the disc saw.
- f) **Do not operate the disc saw while you carry it.** Your clothes can be captured by accidental contact with the saw blade.

### 2) Blade guard and saw blade

- a) **Check that the guard of the maschine is correctly fitted and without any cracks or deformations before starting the machine.** The guard always has to be fitted to the machine during operation.

- b) **Check that the saw blade is fitted correctly and does not show signs of damage.** A damaged saw blade can cause personal injury.
- c) **Only use such saw blades that fulfil all requirements of this disc saw.**
- d) **Never use a saw blade at a lower speed rating than that mentioned on the disc saw and in this operating instructions.** Accessories that turn faster than permitted may be damaged.
- e) **When using a saw blade make sure that it rotates in the direction indicated by the arrow on the blade.** There is an arrow on the machine that indicates the shafts direction of rotation that the blade is mounted on.
- f) **Never use a cutting blade for any other materials than that it was intended.**
- g) **Do not transport the disc saw with the saw blade fitted. All blades should be removed from the disc saw after use.**

### 3) Cutting technique

- a) **Care for safe standing and keep the balance anytime. Always hold the machine in a firm grip with both hands.**
- b) **Check that the blade is not in contact with anything when the machine is started.**
- c) **Support the work piece in such a way that no unpredictable movement is possible, and so that the cut remains open while cutting.**
- d) **Avoid blocking of the saw blade by too high contact pressure, pressure from the side and too deep cuts.** Cut smoothly, allowing the machine to work without forcing or pressing in the blade. Feed down the machine in line with the blade. Pressure from the side can cause damage to material and personal injury.
- e) **Move the blade slowly forwards and backwards and avoid too deep cuts.** This ensures effective and low-wear cutting.
- f) **Never cut above head height.**
- g) **The guard for the cutting equipment should be adjusted so that spatter and sparks from the material being cut are then collected up by the guard and led away from the user.**

### 4) Kickback

The word kickback is used to describe a sudden reaction that causes the disc saw to be kicked uncontrollable into the direction of the user or away from the user depending on the direction of rotation. Kickback is caused by blocking of the saw blade. This uncontrollable movement can cause damages on material and personal injury. A kickback is the result of an incorrect or improper use of the disc saw.

- a) **Always hold the machine in a firm grip with both hands. Bring your body and arms in a position in which you can control the rebound forces.** The operator can control the rebound and reaction forces by appropriate precautions.
- b) **Never get your hand near the rotating saw blade.** The saw blade can touch your hand during a kickback.
- c) **Avoid the space in front of and behind of the rotating saw blade.** The disc saw is kicked in the opposite direction of the direction of rotation at the point of blocking.
- d) **Work carefully in the area of sharp edges, corners, etc. Avoid the saw blade being kicked back from the work piece and being blocked.** The rotating saw blade tends to be blocked at corners and sharp edges or if it is rebounded. This causes a loss of control or kickback.
- e) **Avoid blocking of the saw blade by too high contact pressure. Avoid too deep cuts.** Overstressing of the saw blade increases wear and the liability for blocking and therefore the possibility of a kickback or break of the abrasive body.
- f) **If the saw blade is blocked or if you stop work shut off the machine and keep it still until the saw blade has stopped completely. Never try to remove the rotating disc blade out of the cut as long as the saw blade is still moving, otherwise this may cause a kickback.** Detect and eliminate the reasons for blocking.

- g) **Do not switch on the disc saw as long as it is located in the workpiece. Only begin to move the saw blade in the cut when the saw blade has reached full speed.** Otherwise the saw blade can be blocked, rebounds from the workpiece or causes a kickback.
- h) **Support slabs or big workpieces in order to reduce the risk of a kickback as a result of a jammed saw blade. Big work pieces can bend under their own weight.** The work piece has to be supported at both sides of the saw blade both near the cut and at the edge.
- i) **Be very careful with “bag cuts” in existing walls or other non-visible areas.** The saw blade can cause a kickback when hitting a gas or water pipe, electric line or another objects.

### 3. TECHNICAL DESCRIPTION

Your TS40 is a full electrical disc saw which is only to be used for cutting masonry, asphalt, stone and concrete in industrial usage by trained personnel.

Water is absolutely required for cooling the motor.

The diamond saw blade consists of a prestressed metal disk which is at its circuit fixed with segments made of a sintered mixture of diamond grains and metal powder.

The sawing process is introduced by dipping the saw blade into the material, which is to be cut. Move the blade slowly forwards and backwards over the work piece in order to execute the cut.

The machine may not be used for a different purpose or with a different tool.

#### 3.1 Specifications

Rated Voltage	V	230	460
Rated Current	A	16	13,5
Power Input	W	3700	6500
Power Output	W	2700	4800
Frequency - Input	Hz	50 - 60	
Frequency - Output	Hz	930	
Speed (full load)	1/min	2500	
max. Cutting depth	mm	165	
Weight - Motor	kg	9,4	
Tool Fixture - Hole	mm	25,4	
max. Saw Blade Diameter	mm	400	
Strength of the saw blade core	mm	1,5 - 2,5	
Cooling water requirement at full load	l/min	1	
Water protection class		IP 55	

#### 3.2 Design

The complete sawing unit consists of the drive unit [1] with switching handle [2], adjustable handle [3] and adjustable blade guard [4]. A bypass valve [12] which is arranged at the gear is changed when sawing dry for changing the water flow away from the diamond saw blade. The TS40 is provided electrically via the frequency converter FU6. TS40 and FU6 are water proof, i.e. on intended use no water can enter the motor.

#### 3.3 Scope of delivery

Diamond hand saw with blade guard, ball valve and plug nipple, wrench SW 17, face spanner, adapter cable (CEE-socket/shock-proof plug) and operators manual.

#### 3.4 Noise emissions and vibration (EN 50144)

The typical A-rated sound pressure level is 86 dB(A).

The typical A-weighted sound capacity level is 99 dB.

The typical rated acceleration is 2,5m/s<sup>2</sup>.



## 4. PREPARATION

Be convinced that the machine has not been damaged in transit. Check that the nominal voltage is the same as the voltage indicated on the rating plate.

### 4.1 Electrical connection

#### 4.1.1 230 ~

Connect the TS40 via the frequency converter FU6 and via the adapter cable only on a properly earthed shockproof socket. If required use only high quality extension cords with sufficient cross section.

Up to 200' length - 12AWG

#### 4.1.2 460 3 ~

Connect the TS40 via the frequency converter FU6 only on a properly earthed shockproof socket. If required use only high quality extension cords with sufficient cross section.

Up to 200' length - 12AWG



**Take care that the extension cord is not rolled up on use for reaching a sufficient heat removal. Consider that the TS40 takes the maximal power from the electrical mains. Therefore do not connect other users to the concerning fuse, as the mains and the fuse will then be overloaded. Please take care that the TS40 is only connected to an earthed 16A CEE socket. If you operate the machine at a higher assured socket, you risk in case of any fault the total burning of the electronic. By the high leakage current the machine can electrify when touched, if the ground line is not connected correctly. In this case absolutely disconnect the mains plug immediately and check the ground wire.**

TS40 and FU6 can be used at a generator or a transformer provided by the construction site, if following conditions are kept:

- operating voltage within +5% and -10 % to nominal voltage
- integrated automatic voltage controller with start amplification
- frequency 50 – 60Hz; max. 65 Hz
- Generator, power output at least:
  - 230V ~ - 4 KW
  - 460V 3~ - 11 KW

Do not use any other devices at the generator/transformator at the same time. The switching on and off of other devices can cause undervoltage and / or over voltage peaks that can damage the machine.

### 4.2 Change between 230V~ und 460V ~3P

If you change the operation mode of the disc saw TS40 between 230V~ und 460V~3P the frequency converter FU6 has to be disconnected for approx. 2 minutes in order to discharge the intermediate circuit and re-initialize the controller.

### 4.3 Water connection

Connect the frequency converter via the plug-in nipple [23] to the water supply. The ball valve must at any time be on the side of the water supply. Now connect the FU6 with the disc saw via a water hose with a length of approx. 4,2 m (length of the cable).



**Attention: water pressure max. 3 bar. Water may only be connected to ball valve, as otherwise a damage on the casing may appear by upcoming water pressure.**

Please use a GARDENA coupling as the connecting piece to the machine and the frequency converter. This can be obtained from a garden center or builders' merchant made of plastics. A water coupling of brass of high quality can be received directly from WEKA.

Use only clean water, as dirty water will considerably disturb the heat exchange on the cooling surface and thereby the motor can be totally damaged.

Else the seals wear out very quickly.



**If water exits of the leakage hole at the gear, the water seals have to be exchanged immediately. This should only be done in an authorized repair station. Attention: Under full load there are at least 1 l of water per minute required. Open the ball valve after use, so that the cooling gap can empty. This is mainly required in the cold season - danger of frost.**

#### 4.4 Dry cutting and semi-dry cutting

If you intend to cut dry, the motor still has to be cooled sufficiently with water. On top of the gear a valve [12] is arranged. Turn the grip in the opposite direction of the blade guard and connect a hose (8 mm outer diameter) to the angle screwing [13] via which the water can flow out. If the valve is opened partially you are able to cut semi-dry. You just use the amount of water in order to bind the dust.

#### 4.5 Diamond saw blade (Cutting tool)

The saw blade diameter should be 400 mm. Smaller saw blades can be used also, but due to the fixed circumferential speed these are not so efficient. Bigger diameters must not be used. The hole of the saw blade has to be 25,4 mm (1"). The strength of the saw blade core shall be in the range of 1,5 - 2,5 mm. Use only appropriate and well cutting high quality diamond tools. Take care that the diamond segments overlap sufficiently over the blade body.

#### 4.6 Change the saw blade

In order to remove or change the saw blade, remove the blade guard cover [8] with the face spanner. Actuate the spindle lock [6] and loosen the hexagon screw [9] at the blade flange [10] simultaneously with the wrench SW17. **Caution, the screw is provided with left-hand thread.** Remove the blade flange and the hexagon screw. Remove the saw blade. Grease the bore of the saw blade and the flange hub [11], as well as the thread of the hexagon screw after having cleaned this area. Insert the new saw blade in the blade guard and put it on the flange hub of the spindle. Please proceed in reverse order and put the blade flange on the spindle. Take care that blade flange and spindle are connected positively and tighten the hexagon screw **counter-clockwise** by actuating the spindle lock simultaneously. Arrest the blade guard cover on the blade guard with the face spinner.

#### 4.7 Change the position of the adjustable handle

In order to change the position of the adjustable handle [3] open the cam lever [7] in a horizontal position. Adjust the handle in the requested position. Take care that the handle is caught in the requested position and close the cam lever in a vertical position.

#### 4.8 Change the position of the blade guard

Release the clamping lever [5] at the gear box and change the position of the blade guard in the requested position. After the required position has been set tighten the clamping lever firmly.



**Never work without blade guard.**

Handle the blades with care. If single segments are missing or the blade is bad stressed, afflicted with a fault in concentricity or wobble, dangerous unbalances can arise that can lead to damages on the saw or can endanger the operator.

Our distributors are specialists for these blades. Please be consulted fully bevor deciding for a saw blade.

**Use the saw blade always in the same turning direction.**

### 5. MAINTENANCE



**ATTENTION: Always remove the mains plug from the supply socket before starting maintenance or repair!**

Clean the machine once the sawing work has been completed. You can sprinkle the machine carefully with a soft jet of water. **Never use a high pressure cleaner or even a steam cleaner.**

Damaged cords and plugs have to be repaired or exchanged exclusively in an authorized repair station ([www.weka-elektrowerkzeuge.de](http://www.weka-elektrowerkzeuge.de)).

If water runs out of the overflow-hole on the gear or on a different place, stop the machine immediately and let it be repaired in an expert workshop.

The same is valid for the gear oil.

**Let the water completely flow out of the system especially in the cold seasons - Danger of frost!**

## 6. GUARANTEE

We will guarantee the WEKA hand saw for 12 months from the day of delivery. During this period we will rectify material and production defects free of charge. This warranty does not cover normal wear and tear, overloading, non-compliance with the operating instructions and intervention by unauthorized persons or the use of parts from other companies.

## 7. DECLARATION OF CONFORMITY

Description: Diamond hand saw - for cutting in concrete, stone and masonry  
Type: TS40 (and versions)  
from serial no.: 0110001

We hereby declare under our sole responsibility that this product conforms with the following standards: EN60204-1, EN55014-1:2006 + A1:2009 + A2:2011, EN55014-2:1997 + Corrigendum 1997 + A1:2001 + A2:2008, EN61000-3-2:2006 + A1:2009 + A2:2009, EN61000-3-3:2008, but leakage current is  $\leq 2\text{mA}$ , EN60745-1, DIN EN 60745-2-22 in accordance to the regulations of directive: 2006/42/EG, 2011/65/EU and 2004/108/EG.

WEKA Elektrowerkzeuge  
Auf der Höhe 20  
D 75387 Neubulach

Neubulach, 12.02.2013  
Wilhelm Wurster, Owner



## 8. RECYCLING



According to the European regulation 2002/96/EG we have to take back old machines for departing them by substance and for recycling (see sign on name plate). Please make sure that the old tool does not get into the unsorted municipal solid waste, but that they are given back to us, resp. abroad to our distributors.

Übersetzung der Originalbetriebsanleitung - Subject to change without notice 0713