

## **KS50 (E,S)**

INSTRUCTIONS FOR USE. .... 4

### **WEKA Elektrowerkzeuge**

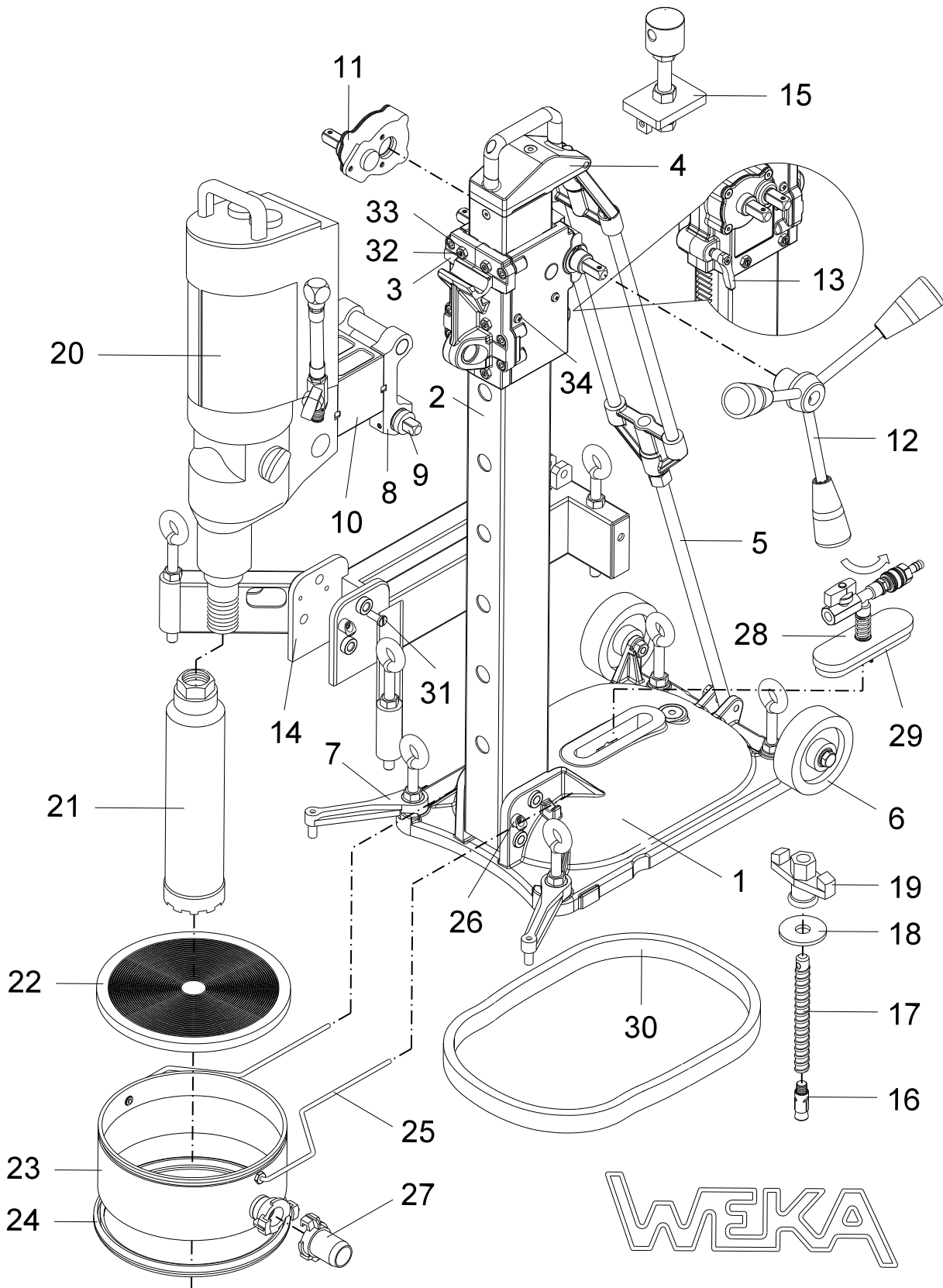
Auf der Höhe 20, D 75387 Neublach

Telephone: +49 7053 96816-0, Telefax: +49 7053 3138

Internet: [www.weka-elektrowerkzeuge.de](http://www.weka-elektrowerkzeuge.de)

Email: [weka@weka-elektrowerkzeuge.de](mailto:weka@weka-elektrowerkzeuge.de)

# KS 50 (E,S)



# SYMBOLS

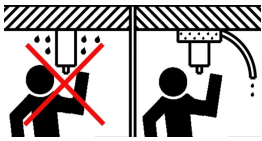
## Auf der Maschine - On the machine



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 gebruiksanwijzing 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 противозумные наушники.



Überkopfboren 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 päään 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, a 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!

# EN INSTRUCTIONS FOR USE - DIAMOND DRILL RIG KS 50

**Please read carefully before putting the drill rig into operation!**

With the WEKA drill rig, you own 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.**

### 1) Security of employment

- a) **Keep your working area clean and well illuminated.** Disorder or unilluminated working areas can cause accidents.
- b) **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) 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 kann 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 abnormal posture. Care for safe standing and keep the balance anytime.** Thus you can control the electric tool better in unexpected situations.
- d) **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.
- e) **If there is the possibility to assemble a dust exhaustor and collecting device, make sure that these are connected and used correctly.** The use of a dust exhaustor can reduce dangers by dust.

### 3) Use and handling of the device

- a) **Do not overload the device.**
- b) **Maintain the device 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 device is affected. Have damaged parts repaired before using the device.** Many accidents originate from bad maintained devices.
- c) **Keep the cutting tool sharp and clean.** Carefully maintained cutting tools with sharp edges do jam less and are easier to guide.
- d) **Use device, accessory, operation tools, etc. according to these instructions. Thereby consider the conditions of employment and the work to be done.** The use of devices for others than the intended task can result in dangerous situations.

### 4) 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. SPECIAL SAFETY PRECAUTIONS - Please note!

This drill rig is intended for commercial use only. It may only be used by trained personnel. It is intentional used as a stand for fixing diamond core drill for drilling rock, concrete and masonry.

For operation the relevant regulations have to be observed.

## 3. TECHNICAL DESCRIPTION

The KS 50 is a drill rig which is meant for fixing diamond core drills. The diamond drill rig can be fixed to the ground and to the wall by means of dowels, vacuum or quick bracing columns. The KS 50 is best suitable for the WEKA diamond core drills DK 32, SR 35, DK 42, and DK 52.

The core drill exists of a electric motor with step-down gear. Via the quick connect nipple water is supplied directly to the drilling tool (diamond core bit) (21). Thus the cutted material is flushed away and the tool is cooled (wet drilling).

The drilling tool (diamond core bit) (21) is a hollow drill (tube) which is fitted with soldered-on or welded-on segments impregnated with diamonds.

In the wet use, if necessary, the flushing water is extracted through a water collecting ring (23) by means of an all-purpose suction unit.



**Avoid wet drilling upwards (overhead drilling) (Überkopfbohrungen). If it is indispensable use a proper working water collecting ring.**

### 3.1 Technical data

Type		KS50	KS50E	KS50 S	KS50 ES
Total length	mm	1030	1030	1030	1030
Drill stroke	mm	630	630	630	630
Core bit diameter max.	mm	500	500	500	500
Inclination	deg	45	-	45	-
Machine fixture		Quick change plate			
Rig foot (LxB)	mm	425 x 280	425 x 280	475 x 387	475 x 387
Weight (without feed wheel)	kg	19,5	18,5	21	20,5

### 3.2 Scope of delivery

- KS50 - Drill rig (1), with brace (5), column head (4), fine feed (11), swing foot kit (7), wheel kit (6), feed wheel (12), operators manual
- KS50 E - Drill rig (1), with head plate and chuck head (15), operators manual
- KS50 S - like drill rig KS50, but with steel foot, operators manual
- KS50 ES - like drill rig KS50 E, but with steel foot, operators manual
- Accessories - Distance plate (10), Vacuum adaptor (28), water collection ring (23), machine adaptor (8)

## 4. PREPARATION

Make sure that the drill rig has not been damaged during transport. Check if all components are at hand.

### 4.1 Fixing the drill rig

The drill rig can depending on the surface of the underground be fixed with dowels, vacuum or a quick bracing column.

### 4.1.2 Fixing with dowels

Use only suitable steel dowels, resp. anchors with a drilling diameter of at least 16 mm and a thread bars of at least M12. Therefore consider the requirements of VDMA. Take care that the dowel is absolutely tight and the required tear out force are not exceeded. Always put the dowel as near as possible to the drill column. Adjust the drill rig by means of the attached water levels before you tighten it via the dowels.

### 4.1.3 Fixing with vacuum

For fixing the drill rig with vacuum, you need a KS50 vacuum kit and a vacuum pump with a throughput of at least 6 m<sup>3</sup>/h and a vacuum of at least 80%.

Take care that the drill rig is solidly fixed. Turn the jackscrews at the rig foot against the fixing surface until the sealing ring is released clearly.

On vacuum fixtures you have to take care, that the underground surface is not too rough and not porous.



**Attention: Vacuum fixing is not suitable on plaster or masonry. Never drill overhead with vacuum fixing.**

Before using the vacuum kit, check the seals (29, 30) on wear.

Fix the vacuum adaptor (28) by inserting and turning in the slot of the rig foot (1).

### 4.1.4 Fixing with quick bracing column

The drill rig can be fixed (braced) with a quick bracing column between rig foot and wall or ceiling. Only use suitable bracing columns.

## 4.2 Working positions

When working on floor areas of stories, the core can fall into the lower story when drilling through and cause serious injuries and damages. Ensure that nobody remains under the drilling area. Protect this area.

Before drilling in walls, you have to make sure that when drilling through, nobody can be injured.

Overhead drillings can only be made with suitable water collecting devices. Protect the drill rig additionally.

When drilling inclined, in the start of drilling phase a lower drilling pressure has to be chosen, for avoiding that the drill bit runs uneven.

## 4.3 Diamond core bit

Only use suitable high-quality diamond tools.

Ensure that the diamond segments are sufficiently larger than the inner and outer diameter of the drill bit tube.

Apply water-resistant grease to the tool thread so that the tool can be easily loosened.

Ensure that the radial run out at the diamond segments of the drill bit is no greater than 1 mm (eccentricity).

Only use suitable wrenches for changing the core bit. Thereby hold the drilling spindle with another wrench.



**Never use a hammer or something similar to open the core bit. If necessary elongate the wrench.**

## 4.4 Electrical connection of the drilling machine

Therefore please consider the relevant regulations of the manufacturer.

# 5. PUTTING INTO OPERATION

## 5.1 Adjusting the drilling angle (not on E versions)

Remove the lower hexagon head screw on the drill column from the rig foot. Loosen the hexagon head screw which is applied above and the clamping nut on the brace. Adjust the drill rig to the desired drilling angle and tighten the clamping nut and the hexagon head screw again.



**Attention: the drill rig may only be put into operation when clamping nut and hexagon head screw are again tightened.**

## 5.2 Assembling the diamond core drill

For assembling the diamond core drill to the drill rig, the machine has to be screwed first to the machine adaptor (8). Fix the machine adaptor as shown in the picture. Therefore absolutely use the supplied parallel keys and tighten the screws (M8x25-10.9).

Remove the eccentric shaft (9) as far as it will go and now apply the machine to the rig. Put the eccentric shaft in again and tighten it with the hand wheel (12).

For drilling over 350mm diameter a distance plate (10) is required which is applied between machine adaptor and core drill. If required this part has to be fixed with the supplied hexagon socket head screws (M8x105-10.9) tightly. Thereby the distance plate has to be applied in that way that the upper border of the machine adaptor and the distance plate run flush to each other.

## 5.3 Water collecting ring

For collecting the water which escapes from the drill hole when drilling wet, you need a water collecting ring (22) and an all-purpose suction unit. The water collecting ring is suitable for WEKA diamond core drills DK 22, DK 32, SR 35, DK 42, DK 52, SR 75.

Cut a hole with the required diameter into the sealing ring.

Apply the engaging sleeves (26) at the rig foot with hexagon socket head screws M5x12. At the steel foot, two additional cheese head screws (31) have to be applied.

Bring the water collecting ring into position and put the tension springs to the point of support. Press the tension springs via the chamfer of the engaging sleeve down until these engage.

Use a suitable hose coupling (27) for your water suction unit.

## 5.4 Drilling

When the drill rig if necessary with water collecting ring is fixed absolutely safe and rigid and is adjusted, open the water valve so that enough water for cooling and flushing is available. Choose the gear on the core drill which is most suitable for your drilling diameter and switch the machine on.

Choose the position of the hand wheel (12) which is most suitable for you (left, right, direct or via fine feed).

Start drilling by turning the feed wheel at the drill rig carefully. Thereby take care that the core bit does neither vibrate or shake heavily. When the core bit has centered itself after approx. 1 - 2 cm drilling depth, the feed force can be increased until the optimal feed power is reached, however only to the maximum power of the machine.

When you drill reinforcement you have to increase the feed force if necessary for ensuring an appropriate feed. Often it makes sense to change the gear on the machine to a lower speed.



**Ensure that you do not drill into or through a water pipe or even an electric mains. In case of doubt you should on principle check your drilling area with a line detector.**

## 5.5 General directions for drilling

Adjust the water quantity at the ball valve when drilling wet so that the cutted material is flushed from the drill hole completely.

You do not wash out enough material if mud occurs around the drilled hole.

Use sufficient contact pressure. If it is too low the diamonds tend to polish. This means that the feed speed becomes less until finally no material is cleared away any more.

In this case the segments are to "sharpen" again by means of a SiC-grindstone.

Take care that the core bit does not vibrate, otherwise the diamonds are detached by force from the core bit.

In case the tools gets stuck, do not try to loosen it by switching the machine on and off. Immediately switch off the machine and loosen the bit by turning an appropriate wrench to the left and right. At the same time, pull the machine out of the drilled hole carefully.

## 6. MAINTENANCE

Clean the machine after finishing the drilling. Thereby also clean the thread of the tool fixture and grease it.

Oil the threads of the lackscrews and the bearings of the feed and clamp shaft regularly.

Keep the toothed rack and the bearing surface of the column always clean.

## 6.1 Adjusting the guide slide bearings

For achieving good drilling results, the clearance between feed case (3) and rig column (2) has to be as low as possible. If the clearance is too big (>0,1mm) the guidance can be adjusted by proceeding as follows:

Loosen the four raised head screws and the ten hexagon nuts (33) at the feed case. Turn the ten thread pins (32) with a slotted screwdriver clockwise until the guide slide bearings rest to the rig column free of clearance. If the guiding behaviour is sufficient free of clearance however still free moving, tighten the four raised head screws and the ten hexagon nuts again.

## 6.2 Exchanging the guide angles (part no.: KS50708)

If the sliding surface of the guide angles is worn out, these have to be exchanged. Thereby proceed as follows:

Remove the column head, resp. head plate (4, 15). Tear the complete feed case off.

Remove the four raised head screws (34). Loosen the ten hexagon nuts (33) and turn the thread pins (32) back. Exchange the four guide angles and screw these in reversed order.

Push the complete feed case to the column again and adjust the clearance as described under 4.1.

## 6.3 Exchanging the holding plate (part no.: KS50728)

Remove the retaining ring and the washer. Remove the clamp shaft and exchange the holding plate. When assembling the clamping shaft again, ensure that the contact area are slightly greased. Apply the washer and the retaining ring again.

## 7. GUARANTEE

This product is covered by a guarantee for a period of 12 months from the date of purchase.

The guarantee covers all defects or damages of the product during the guarantee period evidently due the defaults in workmanship or material and is limited to repair and/or adjustment. The guarantee is not valid in case of normally wear and tear, if the product has been misused, used contrary to the instruction manual, or by using extraneous parts.

## 8. DECLARATION OF CONFORMITY

Description: Drill rig - for fixing core drilling machines  
Type: KS50 (and versions)  
from serial no.: 0110001

We hereby declare under our sole responsibility that this product conforms to the regulations of directive 2006/42/EG and 2011/65/EU.

WEKA Elektrowerkzeuge  
Auf der Höhe 20  
D 75387 Neubulach

Neubulach, 29.12.2009  
Wilhelm Wurster, Owner



## 9. 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 it is given back to us, resp. abroad to our distributors.

Original instructions - Subject to change without notice 0610