Operator's Manual

RK-10E

DiaKat®

Joint cutter

&

Crack chaser

Read the operator's manual carefully and understand the contents before you use this equipment. Always use the machine in accordance with all the instructions contained in this manual, in order to ensure safe and efficient operation as well as longevity of the machine.

The manufacturer can not be held responsible for any damages or injury arising from the use of the machine not in accordance with the instructions contained in this manual.

CONTENTS

1. SAFETY INSTRUCTIONS

1.1.General safety instructions

1.1.1. Qualification requirements

Persons operating this machine must fulfil the following requirements:

1. The machine may be operated independently only by workers who are:

- older than 18- teen years (or as the law in the country of use prescribes)
- physically and mentally competent
- trained, who proved their ability to operate the machine safely

2. All workers who will operate this machine must make themselves familiar with all the instructions contained in this manual and must adhere to them.

3. The operator must make himself familiar with all the safety instructions pertinent for use of this machine (including those specific to the country of use) and must adhere to them. The familiarization must be documented and signed by the operator.

1.1.2. Duties of the entrepreneur:

The entrepreneur must:

- appoint the operator and provide his training
- insure safe conditions for the use of the machine by the operator
- provide regular checks and maintenance of the machine
- ensure adherence to legal requirements for the safety of the work
- regularly check observance of safety regulations
- regularly check if the operator is using the machine in conformity with the operator's manual

1.1.3. Duties of the operator:

Operator is a person which actually uses the machine to do the work for which the machine is designed. The operator must fulfil the requirements as set in 1.1.1.

Operator must:

- thoroughly familiarize himself with the Operator's manual and all safety instruction required for the work 5
- comply with all instructions and requirements set in this manual
- comply with all safety regulations set for work with machinery
- acquaint himself with the work environment including safety instructions
- pay full attention to operating the machine whilst working
- demand regular checks and maintenance of the machine as prescribed by this manual
- demand from his employer securing of conditions conductive to upkeep of safety regulations

secure the machine against accidental movement and out of reach of unauthorised persons when not working

1.1.4. Using the machine

When using the machine the operator must comply with the following instructions:

1. Check the machine before use.

2. Before commencing work check if it is safe to start the machine with out endangering the operator or other persons.

3. Use prescribed personal safety aids while working. (Helmet, earmuffs, safety shoes, goggles, respirator, gloves…).

4. While working monitor the machine for unusual sounds or smoke which may indicate defect. When defect is indicated immediately stop the machine and call for expert repair.

5. When finish working, switch off the motor and move the machine the secure place and insure against unauthorized use.

1.2.Prohibited activities

When using the machine it is forbidden:

1. Using the machine for work other then for which is designed.

2. Operating the machine in other manners then those described in this manual.

3. Using the machine under influence of alcohol, narcotics or drugs and medicaments.

4. Using the machine whilst its running may endanger the safety or persons, property or traffic.

5. Bring in to operation and work with the machine if any of the safety features are dismounted or damaged. (Tool cover, rubber cover etc.)

6. Leave running or unsecured machine with out safeguarding it against unauthorised use.

7. Cleaning the machine while it is running.

8. Cleaning the machine with high pressure water.

1.3.Hygienic instructions

The declared level of acoustic pressure A at the operators station L_{pAd} = (69 + 4) dB (measured accordingly to CSN EN ISO 11201, working conditions accordingly to ČCN EN 13862+A1).

Guarantied level of acoustic power A $L_{WA,G}$ = 85 dB
(measured accordingly to NV No.9/2002 Sb., attachment No.3, part B a CSN ISO 3744).

Given acceleration of vibrations transmitted to operators arms a_{hvd} is smaller then 2,5 $m.s^{-2}$ (measured accordingly CSN EN ISO 20643, working conditions ordained accordingly to CSN EN 13862 +A1, attachment F, when loaded).

1.4.Transporting the machine

Always transport the machine in a secured position on its transport wheels. hen transporting secure the machine against overturning, moving or falling off. Never transport the machine with the motor running!

Handle on a front part of the tool cover and the handlebar serve for loading, unloading and capturing and short-distance transferring of the machine.

1.5.Ecological instructions

Fuel, lubricants and operating media of various components of the machine (motor, gearbox etc.) are substances hazardous to environment. At the end of its useful lifetime they become hazardous waste. It is necessary to store, dispose or liquidate them in accordance with appropriate rules or legislation pertinent to the country where the machine is used.

1.6.Liquidating the machine at the end of its useful lifetime

When liquidating or disposing of the machine it is absolutely necessary to adhere to all rules or legislation pertinent to the country where the machine have been is used.

The manufacturer can not be held responsible for damages to health or environment in cases where all the above mentioned principles where not adhered to.

1.7.Safety instruction for work with RK-10E Joint cutter / Crack Chaser

When working with the machine it is necessary to adhere to the following safety instructions:

1. It is prohibited to work with the machine with out the tool cover.

2 No person except the operator is permitted within the danger perimeter of the machine.

3 Start the machine only in the safety, non working mode. Ensure that the tool is a safe distance off the ground.

4. Always change the tool with the machine in secure position and the motor switched off.

5. Observe all general rules of safe work.

2. TECHNICAL DATA AND DESCRIPTION OF THE MACHINE

2.1.Description of the machine

The RK 10E Joint cutter / Crack chaser is designed to cut expansion joints and wild cracks in concrete and asphalt with diamond wheel designated for dry cutting. For straight cuts it is used with rigid rear wheels, for wild cracks application rear wheels o a steering pivot are used.

!Attention! It is forbidden to carry out any alteration to the machine without the explicit agreement of the manufacturer.

RK 10E consist of an undercarriage with changeable wheels at the rear, driving head consisting of bearings, drive shaft, pulley, two flanges and M20 fastening nut. On the undercarriage is mounted a motor with pulley, two V belts and a cover. The motor mounting bolts are in slots in the undercarriage to facilitate belts tightening. The swivelling tool cover with a front traversing wheel is also mounted on to the undercarriage. The position of the tool is secured by a mechanical brace on a steel rod with threaded control close to the handlebars or hydraulic brace operated by a button. The handlebars are mounted on four flexible bocks.

2.2.Technical specifications and schematic wiring diagram

Dimensions (l x w x h)	900 x 500 x 950 mm
Weight	62 kg
Tool diameter	180 mm
Motor rpm	2905 rpm
Main spindle rpm	3680 rpm
Motor	SIEMENS
Type	3ph / 380V / 2-pole
Nominal power	4kW
Power supply	380V / 16A
Rated current	7,8 A
Required circuit breaker	16 A D min
Level of acoustic power A L_{wag}	103 dB

2.3.Primary operative parts of the machine

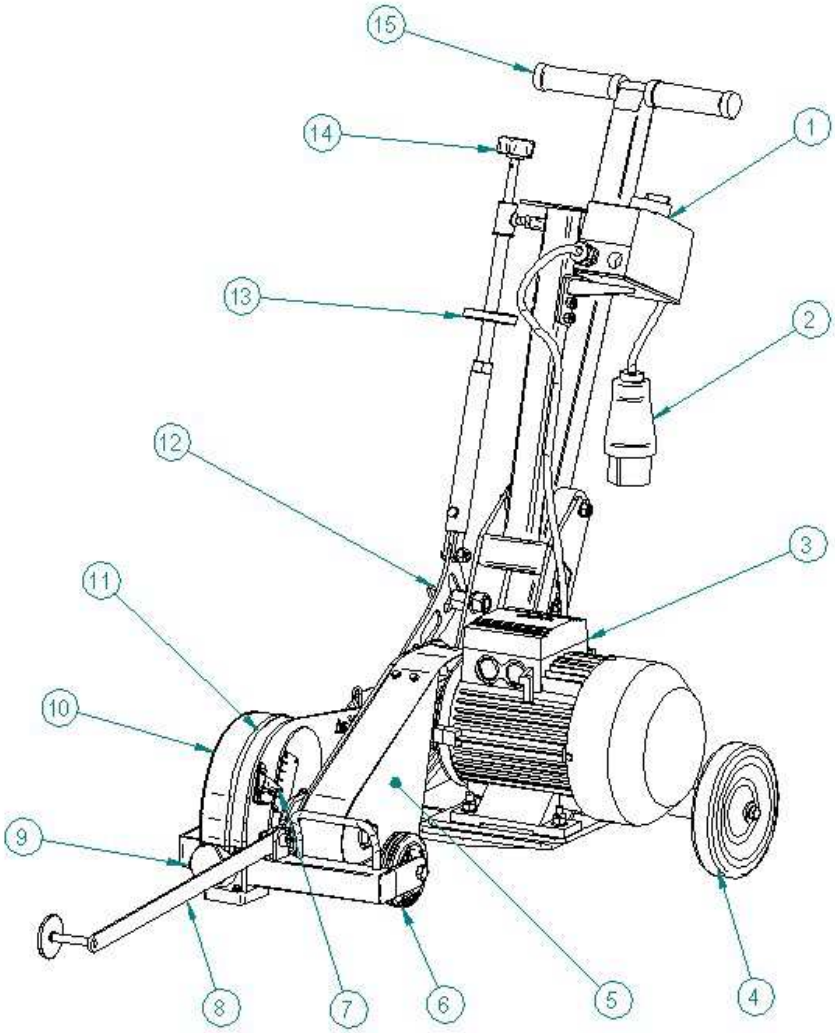


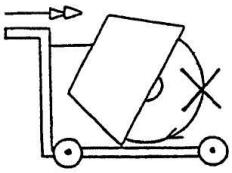
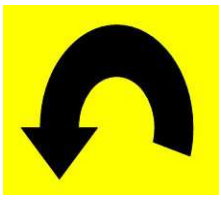
Fig. 2 Description of operative parts

1 – Main switch
2 – Mains connecting plug
3 – Motor
4 – Rear wheels
5 – V belts cover
6 – Front traversing wheel
7 – Depth of cut scale
8 – Pointer
9 – Dust port
10 – Tool cover
11 – Cut position indicator
12 – Quick rise mechanism
13 – Quick rise lock wheel
14 – Depth of cut setting knob
15 – Handlebars

2.4.Explanation of the symbols and pictograms used on the machine

The RK 10E is in accordance with the requirement of law No. 71/2000 Sb. (code of law) in the statutory text of law No. 22/1997 Sb. for technical requirements of products marked with safety symbols, information symbols and depictions whose appearance and design is given by technical norm.

The meaning of the symbols is described in the following table.

Symbol	Symbols meaning
	CAUTION! Read the manual before use and follow the instructions.
	CAUTION! The tool must be standstill while machine is transfered outside of the working area.
	ATTENTION! Operators are obliged to use respirator at work with the machine.
	ATTENTION! Operators are obliged to use ear protection at work with the machine.
	ATTENTION! Tool can cause slicing injury
	INFORMATION! The arrow shows tool sense of rotation

2.5.Machine identification

It is important to precise state type and serial number of the machine for identification, technical information, service, spare parts purchase and/or warranty purposes

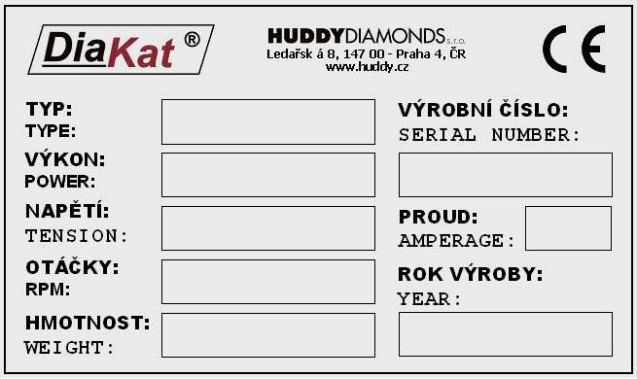


Fig. 3 Machine type label

3. BEFORE STARTING

3.1.Visual check up of the machine state

Regularly (before commencing work) check:

- all covers and safety features (overall state of machine)
- inside of the cover (check for fouling)
- all screwed joints
- state of tool's wear

Remedy all faults or fouling before commencing work!

4. WORKING WITH THE MACHINE

4.1.Mounting of the tool

!Attention! Never use a tool whose permitted working rpm are lower then 4560 rpm.

!Attention! Before any manipulation check if the machine is disconnected from the mains.

1. Check if the machine is disconnected, if needed bee disconnect it – i.e. unplug it from the mains.

2. Remove the two hairpin cotter pins from the quick rise mechanism and remove the mechanism from the studs on the frame, tilt the machine on to the handlebars, rise the tool cover.

3. Loosen the M 20 nut on the tool spindle and take off the outside flange.

4. Mount the tuck point or crack chaser with bore 25,4 mm on the spindle and remount the flange. Check the indicated sense of rotation.

5. Retighten the M20 nut., remount the Quick rise mechanism.

4.2.Calibration of the depth of cut scale.

1. Place switched of machine on to a level surface and bring it to a working position.

2. Loosen the Quick rise locking wheel and set the tool by the setting knob to its uppermost position. (Turn the knob counter clockwise)

3. Slowly lower the tool until it touches the floor.

4. Loosen the scale pointer screw and set it to "0 mm"

5. Retighten the screw and the scale is now recalibrated to the tools actual diameter..

The depth of cut setting is carried out by the setting knob with the machine in working position and running, the scale is showing actual depth. After the setting is done, tighten the Quick rise locking wheel.

4.3.Working with the machine

!ATTENTION! Never switch on the motor if the tool is touching the ground.

!ATTENTION! Before commencing work check if the sense of rotation corresponds with the arrow on the tool cover, if not change it by switching two phases in the machine plug.

!ATTENTION! For dustless operation connect the machine to dust remover or industrial vacuum cleaner and remove debris. If forced debris removal is not in use, use respirator.

1. Bring the machine in to nonworking position – push the handlebars toward to the ground. The machine frame (tool) if lifted to its upper position. The quick rise lug “clicks in” in the nonworking position and secures the machine against returning in to the cut.

2. Bring the machine above the intended cut. If necessary use the line of Cut position indicator for proper line up.

3. Connect the machine to the mains and if required to a dust collector. Make sure that the machine is not in working position (tool well above the ground) and switch on the motor.

4. Pull the handlebars and the rod (it will release the mechanical brace) and slowly lower the machine. Set depth of cut by the setting knob on the rod. Lock the rod in the set depth by the locking wheel.

5. Move the machine slowly and steadily forward.

6. When the cut is finished repeat step 1, move the machine to next cut, slightly tilt the machine and pull the rod, lower the machine in the cut, it will cut to the depth preset in step 4.

4.4.Termination of work

1. Switch of the motor and disconnect the machine from the mains.

2. Clean the machine including the inside of the tool cover and check the wear of the tool.

3. Store the chaser in safe and dry place.

5. MAINTENANCE

The basic steps of preventive maintenance described in this manual can be carried out by the operator appointed by the entrepreneur. We recommend that all repairs and adjustments beyond the scope of this manual are carried out by authorised service centre.

!ATTENTION! In the guarantee period it is prohibited to interfere with the motor and power transmitting components in any manner whatsoever!

5.1.Cleaning of the machine

Regular cleaning prolong the life of the machine its components and tools. After finishing work clean the machine from dust and dirt by wet cloth or air before storing. Never use pressurised water for cleaning.

5.2.Checking screw joints

Check the tightness of screw joints before every start of the machine. Regularly check the tightness of tool fastening nut.

5.3.Motor maintenance

See motor manual.

Take extra care about cleanness of the motor and its cooling fins. Dirty engine=short life.

5.4.Tool maintenance

Regularly check the wear and soiling of tools. If the diamond segments are almost worn off, change the tool.

5.5.Inspection of tautness of V belts

Regularly check the tautness of the V belts. The deflection of the V belt under the pressure of an index finger should be approximately 20 mm.

If the v belts needed to be drawn tauter proceed as follows:

Always carry this operation switched off motor and disconnected from the mains..

1. Loosen the four nuts oft the bolts by which the motor is mounted on the undercarriage.

2. Tighten the nut of the motor take up so that the deflection of the V belts is 20 mm max.
(You can check the tautness of the belts trough the hole in the V belt cover.)

3. Retighten the nuts.