

Operator's Manual



RSD-500

DiaKat®

Floor Saw

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.

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1. SAFETY INSTRUCTIONS

1.1. Safety symbols

The following safety symbols are used in this manual:



Attention! Possible danger of injury or material damage if instructions described in this manual are not adhered to.

1.2. General safety instructions

1.2.1. 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 familiarisation must be documented and signed by the operator.

1.2.2. Duties of the entrepreneur

Entrepreneur is a physical or legal entity who undertakes the work with this machine. The entrepreneur is the guarantor of the safe use of the machine.

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

1.2.3. 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 1.2.1.

Operator must:

- thoroughly familiarise himself with the Operator's manual and all safety instruction required for the work
- 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 conducive to upkeep of safety regulations
- secure the machine against accidental movement and out of reach of unauthorised persons when not working

1.2.4. Using the machine**When using the machine the operator must comply with the following instructions:**

1. Check the machine before use.
2. Check if it is safe to start the machine with out endangering the operator or other persons before commencing work.
3. Use prescribed personal safety aids while working. (Helmet, earmuffs, safety shoes, goggles, respirator, gloves...).
4. It is necessary to provide an adequate supply of fresh air for the operator, when using the machine in enclosed areas (tunnels etc.).
5. 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.
6. When finish working, switch off the motor and move the machine the secure place and insure against unauthorized use.

1.2.5. Checkups, maintenance, service and repair

- regularly check the technical state of the machine.
- if fault or damage is discovered ensure expert repair.
- repair or service may be carried out only by qualified personnel from a manufacturer's service organisation.
- it is prohibited to carry repairs or service at places where the safety of work is not ensured and can be affected by outside impingement, such as falling objects, collision with other machinery etc.
- changes and alteration to the machine can be carried out only with the explicit agreement of the manufacturer!

1.3. Prohibited activities

When using the machine it is forbidden:

1. Using the machine for work other than for which is designed.
2. Operating the machine in other manners than those described in this manual.
3. Using the machine under influence of alcohol, narcotics or drugs and medicaments.
4. Using the machine when its running may endanger the safety of persons, property, traffic or cause damage to underground utilities.
5. Bring in to operation and work with the machine if any of the safety features are dismantled or damaged. (Tool cover, rubber cover etc.).
6. Leave running or unsecured machine without safeguarding it against unauthorised use.
7. Use the machine if there is an oil or fuel leakage.
8. Cleaning the machine while it is running.
9. Cleaning the machine with high pressure water.

1.4. P Transporting the machine



Never transport the machine when the motor (engine) is running!

Always transport the machine on its wheels in a secured position. The machine must be adequately secured against overturning or falling of the transport platform.

For lifting by lifting equipment there is a lifting eye on the upper part of the frame.

1.5. H Hygienic information

With respect to guaranteed level of acoustic pressure affecting the operator and the amount of vibration transferred to the his hands, the operator must use effective personal safety aids in accordance with the laws and regulations of the country where the machine is used, taking into consideration the levels stated by the manufacturer.

Measurand	Level	Standard used
Level of acoustic pressure A affecting the operator L_{pAd}	90 + 4 dB	ČSN EN ISO 11201
Guaranteed level of acoustic power A $L_{WA,G}$	116 dB	2000/14/EC ČSN ISO 3744
Level of accelerating vibrations transferred to the hands of operator a_{hvd}	24,3 + 9,7 $m.s^{-2}$	ČSN EN ISO 20643

1.6. Ecological instructions

Fuel, lubricants and operating media of various components of the machine (engine, 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.

1.7. 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.

1.8. Safety instruction for work with RSD-500 DiaKat

When working with the machine the following instructions must be complied with:

1. It is prohibited to work with the machine with out the tool cover. The front part of the cover may be detached only when the engine is off and the machine is in secured position. Using the machine with out the front part of the tool cover is permitted only for the specific operations for which it was designed (close to wall or kerbing). The front part must be attached by the clips and secured by the pins.
2. No person except the operator is permitted within the danger perimeter of the machine.
3. Start the machine only in secure non working position. Ensure that the tool is a safe distance off the ground.
4. Always put the machine in to a secured non working position when changing the tool. The engine must be 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 RSD-500 DiaKat Floor Saw is designed to cut concrete and asphalt surfaces by using a wet cut diamond blades.

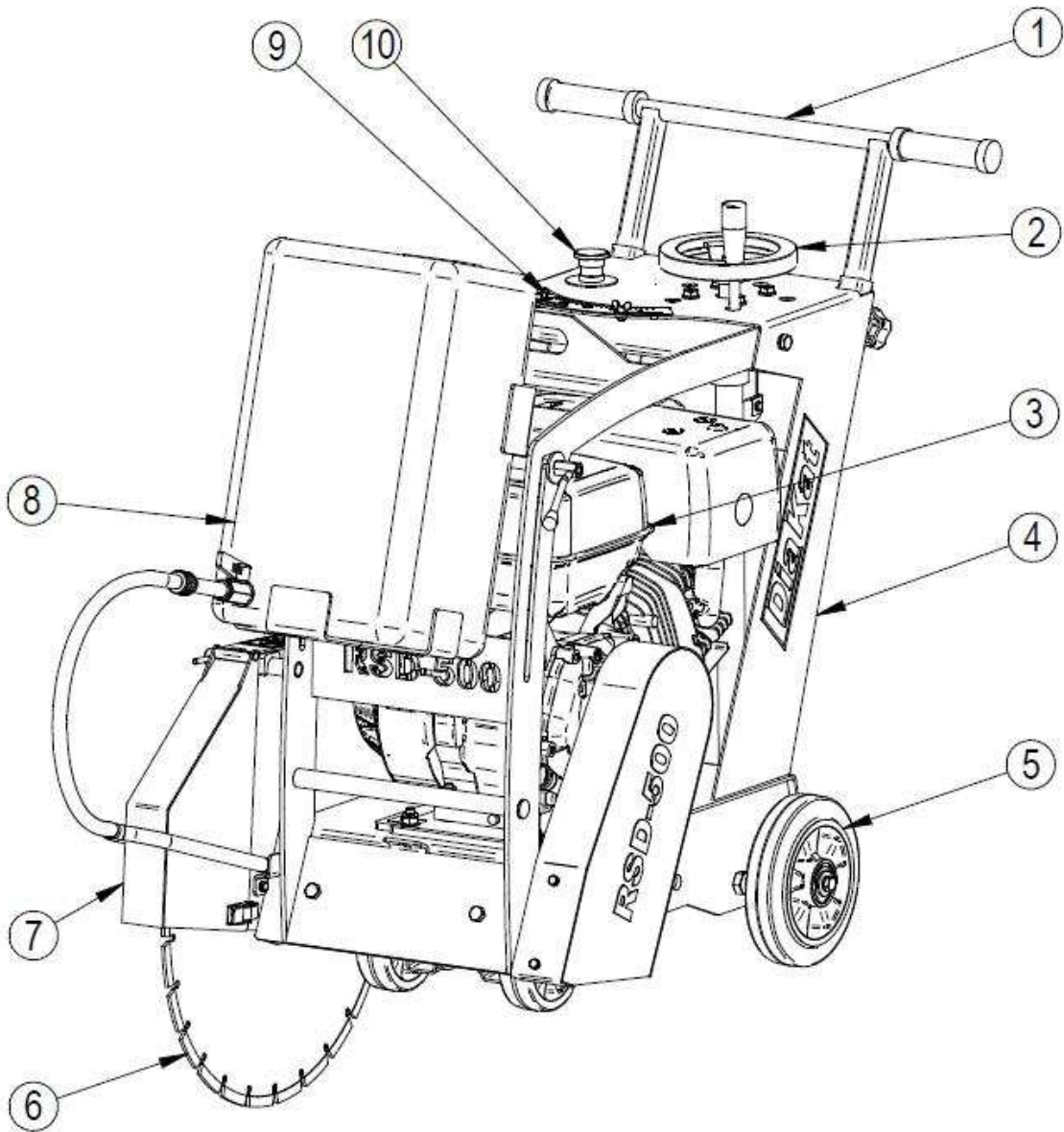
!ATTENTION! It is strictly forbidden to made to the machine any alteration whatsoever with out a written permission of the manufacturer. **!ATTENTION!**

The RSD-500 DiaKat Floor Saw (further only saw) is assembled from an undercarriage and a sturdy frame. The tool spindle is mounted to the front of the frame and is powered by single cylinder four stroke petrol engine which is mounted on an engine mounting plate. To facilitate tensioning of driving V belts a sliding mounting is used on the power unit. The blade is mounted on the spindle and is secured by inner and outer flange and a M20 nut. The blade is lowered in to the cut together with the whole frame by means of hand depth setting wheel which is located at the top of the frame. The tool cover with a detachable front (for cutting close to walls) is mounted on the frame on a pivot. Water tank or/and connection to external source is provided for cooling and flushing water. The saw equipped with depth of cut scale. The handle bars of the machine are height adjustable.

2.2. Technical specifications

Technical specifications, version RSD-500 DiaKat	
Type of machine:	RSD-500
Engine:	HONDA 11HP
Type of engine:	GX390
Nominal power:	9.6 kW
Max. dia. of blade:	500 mm
Water tank capacity:	20l
Dimensions (h x w x l):	930 x 610 x 1060 mm
Weight:	98 kg
Engine rpm.:	3 600
Spindle rpm.:	3 030
Level of acoustic output Lwa:	116 dB

2.1. Primary operative parts of the machine




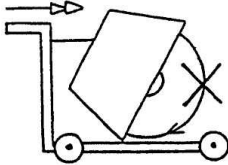



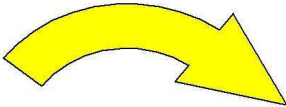
Pic. 1 Description of operative parts

- | | |
|------------------------------|----------------------------|
| 1 – Adjustable handlebars | 6 – Blade |
| 2 – Blade setting hand wheel | 7 – Split blade cover |
| 3 – HONDA engine | 8 – Water tank |
| 4 – Frame | 9 – Depth of cut scale |
| 5 – Undercarriage | 10 – Emergency stop button |

2.2. Meaning of labels and pictograms used on the machine.

The saw is labelled in accordance with the Czech legislation which is on par with the EU regulations.

The meaning of the labels is described in the following table:

Symbol / Label	Meaning
	Warning! Read the manual and adhere to it!
	Warning! All transfers of the machine when not cutting must be done with the blade not turning!
	!Attention! The operator must use a respirator when working with the machine. (Only in case that the machine is no connected to a powerful industrial dust remover)
	!Attention! Operator must wear ear protection when working with the machine.
	!Attention! Danger of an injury by the blade exists.
	Information! Arrow indicating the sense of rotation.

2.3. Identification of the machine

For the purpose of identifying the machine when requesting technical information, servicing the machine, ordering spare parts, claiming against the guarantee it is necessary to quote correct type and serial number of your machine. Those information are displayed on the machine identification tag which is placed on the machine frame.

		HUDDYDIAMONDS s.r.o. Ledařská 8, 147 00 - Praha 4, ČR www.huddy.cz	
TYP: TYPE :	<input type="text"/>	VÝR.ČÍSLO: SERIAL NUMBER:	<input type="text"/>
VÝKON: POWER:	<input type="text"/>	ROK VÝROBY: YEAR:	<input type="text"/>
OTÁČKY: RPM:	<input type="text"/>		
HMOTNOST: WEIGHT:	<input type="text"/>		

Pic. 2 Identification tag

2.4. Visual check up of the machine state

Regularly (before commencing work) check:

- all covers and safety features (overall state of the machine)
- check and clean inside the covers (prevents clogging)
- all screwed joints
- state of blade's wear and soiling



Fix all eventual faults prior commencing work!

3. WORKING WITH THE MACHINE

3.1. Mounting the tool (blade)



Never use tools with permitted working revs lower than 4000 rpm!

1. Make sure that the engine is switched off.
2. Unscrew the cover fixing bolt, disconnect the water quick coupling and tilt the cover back. The cover will rest on the rear wheel.
3. Using spanners 30 and 36 remove the M20 nut.
4. Take off the washer and outer flange.
5. Mount a blade of dia.500 max bore 25,4 (1") . Check the sense of rotation.
6. Put back the flange, washer and retighten the M20 nut. Re-tilt the cover and secure it with the bolt, reconnect water.

3.2. Calibration of the depth of cut scale.



The diameter of the blade changes do to the wear of the cutting segment.

For accurate reading of the depth of the cut scale it is necessary to adjust it prior cutting.

Calibrating, zeroing of the scale:

1. Place the machine, with the engine off, on level ground.
2. Make sure that the blade is at maximum elevation and start the engine.
3. Lower the blade by slow turning of the blade setting wheel anticlockwise until it touch the floor.
4. Loosen the scale holding screws and set it to reed 0. Retighten the screws. Now you have the scale set for the blade in use.

Setting of the depth of cut is achieved by turning hand wheel with the engine running until the desired depth is reached (the scale is showing the actual depth). When the desired depth is reached let drop the pin in the handle in a hole in the frame, this will prevent spontaneous change of the depth of cut.

3.3. Starting and working wit the machine.



Never start the engine if the blade is touching the ground.



The saw is designed for wet cutting, make sure that enough water is delivered to the blade be it from the tank on the machine or from external source.

1. Lift the blade to maximum elevation (safe distance off the ground). Start the engine (follow the instructions in the manual supplied with then engine), let it idle for 5 minutes to reach working temperature.
2. Move the machine over the intended cut.
3. Open the throttle fully and open the water tape, make sure that there is adequate amount of water flowing to the blade.
4. Slowly lover the blade in to the cut by turning the setting wheel anticlockwise until you reach the desired depth indicated on the scale.
5. Make the cut by smoothly moving the saw forward. Move the machine only at such a pace which would not lead to lowering of the revs and overloading of the engine.
6. The saw is designed for straight cutting if change of direction is required withdraw the blade from the cut, align the machine for a new direction and start again as per paragraph 4.
7. At the end of the cut withdraw the blade from cut and set the throttle to idling.

3.4. After work has ended

1. Set the machine it to a non working position (blade safely of the ground).
2. Switch off the engine.
3. Clean the machine particularly the inside of the blade cover, check the blade's state.
4. Store the saw in safe weatherproof place.

4. 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.



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

4.1. 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.



If you use pressurised water for cleaning make sure that the jet do not touch the engine, spindle bearings, wheel bearings and other moving parts of the machine!

Noncompliance may lead to damage or shortening of “life” of the machine!

4.2. Checking screw joints

Check the tightness of screw joints before every start of the machine. Regularly check the tightness of the tool securing screws.

4.3. Engine maintenance

Clean the engine regularly, also regularly check and clean the air filter, check the oil levels and top it if necessary. Follow the manual for Honda petrol engine!

4.4. Tool maintenance

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

4.5. 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. Never make the belts to taut! To taut belts cause undue overload and overheating of bearings, spindle and engine thus reducing they lifespan.

If necessary, loosen then 4 nuts holding the engine base to the frame and make the belts tauter using the tensioner at the rear of the frame. Retighten the nuts.