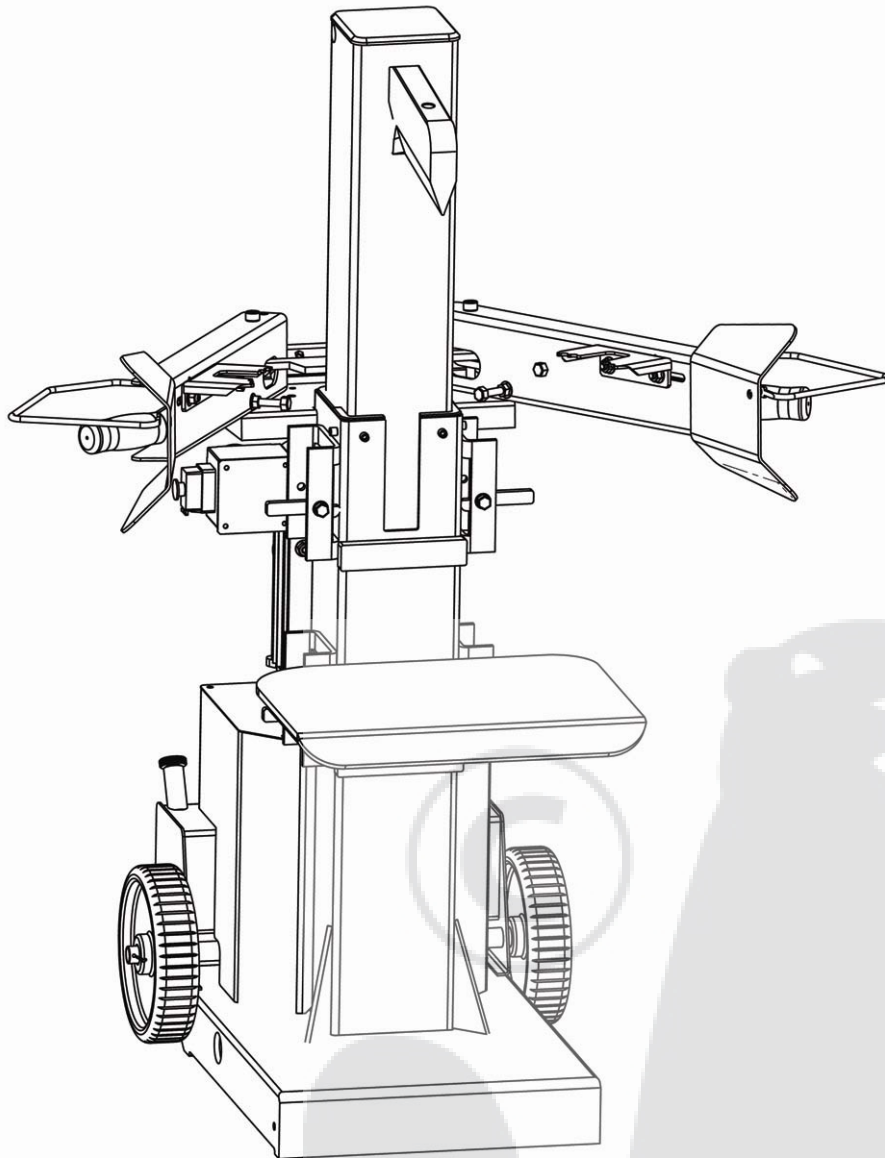


# Instruction Manual For Hydraulic Log Splitter



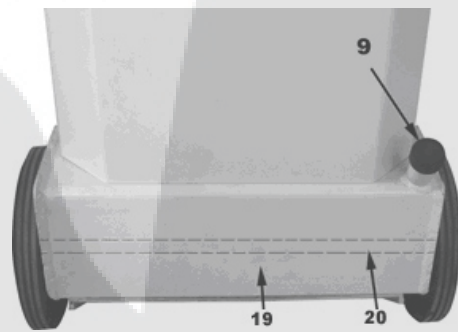
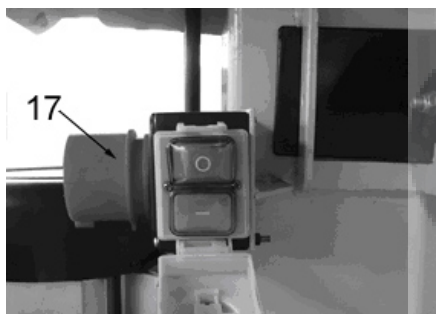
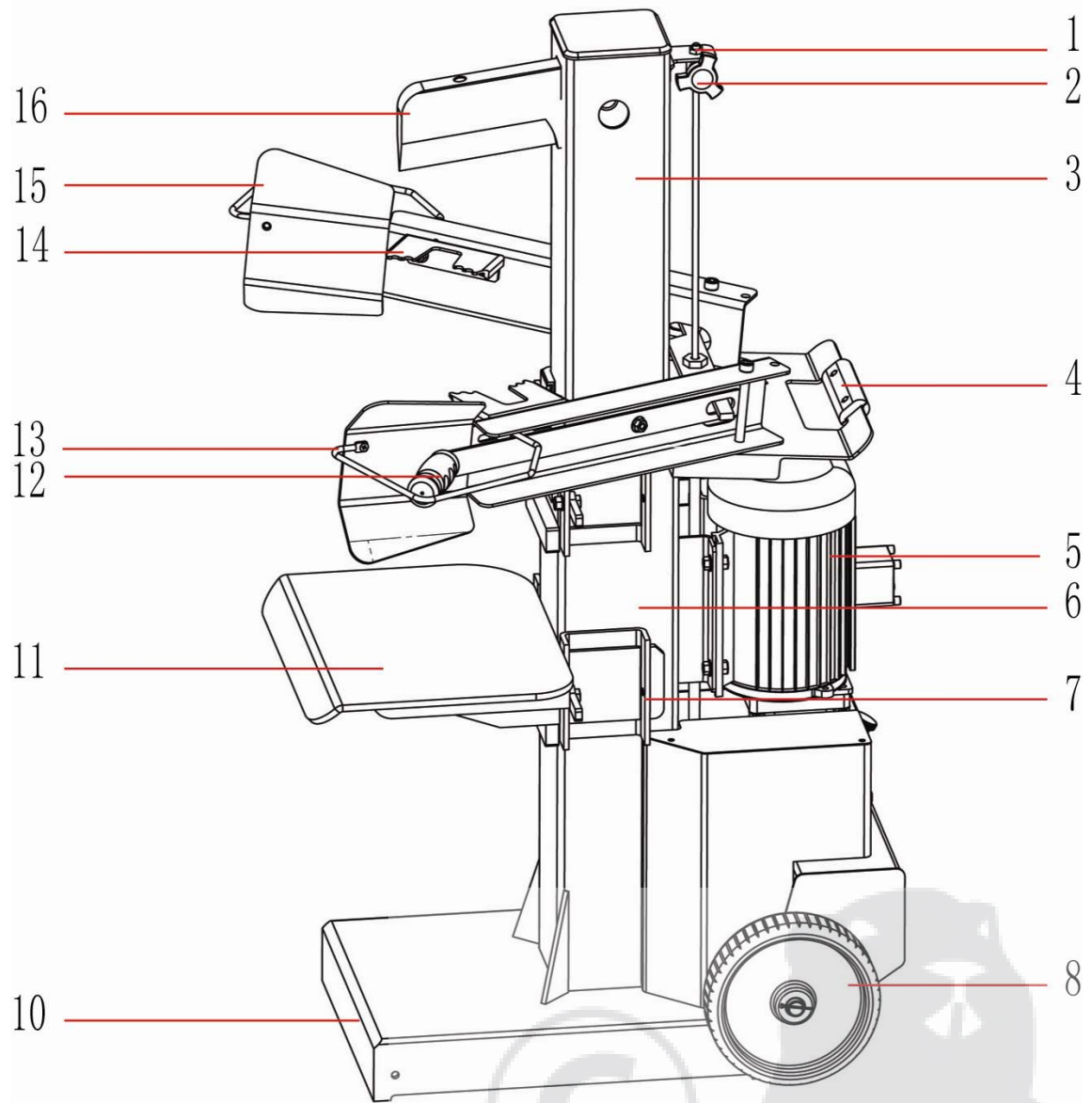
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**FOR YOUR SAFETY**

**READ AND UNDERSTAND THE ENTIRE MANUAL BEFORE  
OPERATING MACHINE**

Save This Manual for Future Reference

1



## Elements of machine

- | Upper carrying handle           | Main body column                  |
|---------------------------------|-----------------------------------|
| 1. Ram stroke control lever     | 12. Operation handle              |
| 2. Screw knob                   | 13. Retaining ring                |
| 3. Splitter column              | 14. Log catching claw             |
| 4. handle                       | 15. Handle guard                  |
| 5. Motor                        | 16. Cutter                        |
| 6. Working table                | 17. Switch                        |
| 7. Lock plate for working table | 18. Oil pipe (inside the housing) |
| 8. Wheel                        | 19. Oil tank                      |
| 9. Oil input plug               | 20. Wheel axel                    |
| 10. Basement                    |                                   |
| 11. working table               |                                   |

## 1 . Safety instructions

Do not install, repair , clean or handle the log splitter when the machine is still running and Without having securely clamped the wedge.

Severe personal injury or machine damages can result from not complying with operation, assembly, maintenance and repair instructions contained in this manual. Allow only adults to operate/maintain the log splitter after they have received sufficient training and have made themselves familiar with the machine. Make sure that full compliance is assured at all times with the general safety and health rules on the workplace as well as the applicable local traffic rules.

No one under the age of 18 should be allowed to operate the log splitter. However, young people in age of 16 or slightly more may work on the machine providing that they received adequate training, they carry all due personal protection safeties and that an adult supervisor keeps standing nearby.

Machine instability can result in injury or severe damages, To ensure stability during operation make sure to choose a flat, dry floor free from any tall grass, brush or other interferences. To avoid tripping, do not leave tools, logs, or other components laying around in the work area. Avoid slippery floor conditions by eventually scattering saw dust or wood pellets.

### **Following precautions must be taken at all times**

- NEVER** use your log splitter at night or without sufficient illumination.
- NEVER** operate your log splitter on slippery, wet, muddy, or icy surfaces.
- NEVER** let electrical works be carried out by unskilled staff.
- NEVER** operate the machine without wearing protective shoes, tight-fitting gloves and apparels.
- NEVER** remove from your log splitter the safety tools and devices mounted on the machine by the manufacturer.

**-NEVER** leave the machine unattended with the running motor.



Assure full compliance with all applicable and traffic and safety rules in your country and especially with applicable health and safety provisions on the workplace. Personal protection must be assured by wearing safety shoes and gloves, tight-fitting apparels and goggles during splitting.



Make sure to select a suitable place with sufficient clearance for proper operation of the machine as well as or safe handling of the split logs and eventual ancillary tools and equipment.

**To be operated by one person only!**

### **PREVENT FIRES**

Do not smoke or have open flames when operating or refilling the log splitter. Never operate the log splitter near a flame or spark.

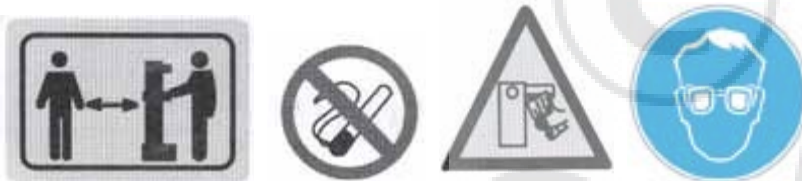
Oil is flammable and can explode.

### **PROTECT YOUR HANDS**

When the ram of the log splitter is in the return mode, keep your hands off the machine. Keep your hands away from splits and cracks which open in the log. They may close suddenly and crush or amputate your hands. Do not remove jammed logs with your hands.

### **PROTECT YOUR EYES AND FACE**

Any log splitter may throw foreign objects into the eyes. This can cause permanent eye damage. Always wear safety goggles. Everyday eyeglasses have only impact resistant lenses. They are not safety glasses.



### **1.1 Mandatory use and application**

The log splitter is strictly designed for one-man operation. Never allow more than one person approach and work on the machine at the same time.

This splitter is conceived for splitter short and long logs for firewood preparation only.

**BEWARE:** no grain splitting is permitted.

When placing the log on the log splitting make sure that the chunk rests entirely and safely on the riffled-plate table.

Any other use or splitting method is considered by the manufacturer as misuse. Please make sure to comply with these set-up operation and maintenance/ repair instructions in order to avoid any injury or dangerous condition.

**BEWARE: this unit has a log capacity of min 70 mm and max 400 mm diameter.**

**Danger! Keep clear of moving parts!**

## 1.2 APPLICATION CONDITIONS

This log splitter is designed for operating under ambient temperatures between +5°C and 40°C and for installation at altitudes no more than 1000m above M.S.L. The surrounding humidity should be less than 50% at 40°C. It can be stored or transported under ambient temperatures between -25°C and 55°C.

## 1.3

Never dismantle and reassemble the log splitter by yourself unless you are a professional engineer. Otherwise, the self-assembling may lead to some dangers as below:

- (1) Oil leak.
- (2) No pressure.
- (3) Motor & pump damage.
- (4) Pressure is too big for cylinder endurance etc.

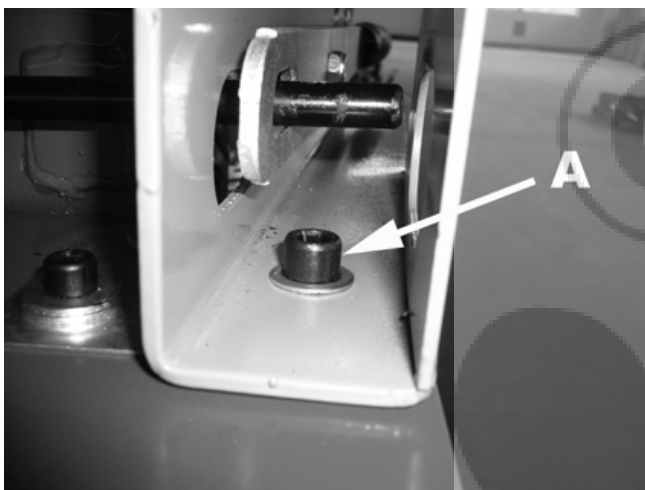
## 2. Operating instructions

### 2.1 Hand-guards assembly

Uncrate and assemble the special hand-guards on the hand control levers before first use and installation.

Hand control level and hand guard are assembled together in the package,

1. Please take out the assembly from the package Put on the arm in its position.
2. Fix Bolt A and the nut. Make sure to tight all screws after complete guard assembly



### Electrical specs

With 400 Volt~50Hz motor, the log splitter should be connected to standard 400V±10%/50Hz±1Hz

Connect the 400VAC motor using a power cable in a minimum section of 1.5mm<sup>2</sup>(cable specs 5 × 1.5). Power feeding is performed via a control switch electrically connected between a power source(plug) and the drive motor.

### **.2.3 Hydraulic specs**

The machine is equipped with own hydraulic oil tank located inside the base-stand and is supplied by the manufacture with a first oil fill.

BEWARE: A leaning splitter position during transport may result into oil leakage from the oil plug.

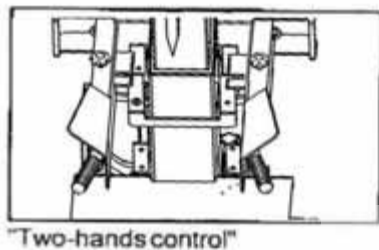
At low ambient temperature the oil in the hydraulic circuit will thicken. In this case, it is recommended to avoid sudden start-up (splitting without warming the motor up) that could result into damages and trouble of the hydraulic system..

To assure trouble free operation of the hydraulic system at low ambient temperature, let the motor run idle and cycle the unit several times till the oil in the hydraulic loop warms up.

Setting of the main control valve is done at manufacturer before shipping. The unit comes to you ready for service so that no other adjustment/installation work is required other than assembly of the hand-guards on the control levers.

### **2.4 Initial check (before operating)**

The log splitter is equipped with safety two-hands mechanical controls designed for the operating to keep both hands free from dander and from infringing the moving ram zone during the entire splitting cycle. It is strongly recommended to check the operation of the two-hand control every time before a new use.



"Two-hands control"

To do so, engage both hand levers and hold them down at the same time until the ram slides all the way down. If your system is duly set, the wedge stops upon releasing or just one of the two levers while the ram stops completing its up/down stroke at once.

On the other hand, the ram must recommence its upwards travel to the initial start position (all the way up) as soon as the other levers is also released.

Make sure that the ram does not travel down when operating only one single lever. Check that both lever springs back into their normal position when the hand pressure is released.

### **2.5 Start-up**

Before the first use, make sure that the log splitter is in good conditions and that no visual damages are there.

Check all hydraulic hoses, fittings and coupling and to detect and repair eventual oil leaks.

Make sure that all safeties and protections are duly assembled on the machine. Do not attempt to remove or by pass these safeties!

Make sure the that the log splitter will not be damaged or made unsafe by any operation, lubrication, maintenance, or repair procedures that you choose. Should any trouble or unusual behavior be detected, do not start splitting wood until these

have been fixed.

## 2.6 WARNING

The location you choose for your machine should be flat, dry, and solid. Check around log splitter for hazards. Make sure that the area is free of slippery surfaces and objects to over. Slippery and icy floor conditions must be duly treated to assure solid standing conditions.

Never reach with your hands at pinch points where they can get caught by the traveling wedge!

## 2.7 Ram travel adjustment

The ram travel is factory set the maximum log capacity before shipment .You just need to start the motor and the ram slides automatically up to the maximum travel stroke. Should your chunks be much shorter you're your capacity adjustment on the machine it is possible to adjust the ram stroke accordingly.

Stepless ram stroke adjustment is possible at all times.

RAM STROKE AND JUSTMENT PROCEDURE:



A: Grip-handle

B: Control rod

Let the ram slide down to the desired stroke length and shut the motor off. When you do this make sure to engage one of the control levers in order to prevent the ram from returning back to its upper start position. Now release the wing-nut on the rear grip-handle and pull up the control rod as much as possible. The ram travel is reduced by an equivalent stroke length as the pulled-up rod length.

Once the rod is pulled sufficiently up to obtain the desired ram stroke, tight the wing-nut back to the original torque. Now completing a shorter travel than the original full-stroke.

The ram travel adjustments to the original full-stroke length can be repeated at all times by simply releasing the wing-nut , pushing the rod back and tightening the wing-nut again.

## 2.8 Table height adjustment

The log splitter table can be hanged-up at three different levels (additional safety pins are available for table fixation on the upper level) Changing of the level can be easily performed without any additional tool or help

TO do this

- remove the safety lock pin on one side.
- slightly lift table up and it out towards you .

-slip the table onto the lower level mount, grip the front rim of the table and slightly lift it up ,and push it down to stop.

-now release grip on the front rim and let the table settle down making sure that the rear table hooks are well and firmly settle on the mounts

## **2.9 Operation**

Start the motor and switch the splitter on.

Load a chunk on the table, close the hand control levers until firmly securing the log by means of the clamps located on the levers.

Now push both levers down at the same time to start the cycle and engage the ram that will immediately start traveling down.

### **DO NOT RELEASE THE CONTROL LEVERS UNTIL THW CYCLE IS COMPLETELY OVER AND THE LOG SPLITTED.**

Should any emergency arise and stopping be required, simply set the control levers free from your grip. When doing this, the ram will immediately travel all the way back up.

As soon as the log is completely split, release both control levers and let the ram travel back to start position and be ready for a new cycle.

Do not attempt to catch the split wood or remove wood sticks from the table by hand until the cylinder rod stops at its maximum travel position.

Clear the table and remove chips and wood debris from the machine before starting a new cycle.

When loading chunks, make sure that logs sit central and firmly with its sawed end on the table. Never place your hands on top of the log when loading the log on the splitter.

Do not split wood chunks with lots of branches, first clean it and remove all branches. DANGER, crooked trunk pieces with green/dry branches may burst under wedge pressure!

Make sure to shut the motor off before leaving the area at work end.

## **2.10 Clearing procedure**

Depending on the type or wood being split, along may not always break into two pieces and fall to the ground, if a log sticks to the wedge, place the valve handle in the neutral position(stop the wedge from traveling), switch the splitter off and carefully remove or hammer the log off the wedge.

Allowing the log to remain attached to the wedge when it is fully retracted could lead to possible injury and/or damage to the log splitter.

## **3 Transport**

Before handing, moving or transporting the splitter make sure to cut the power off(unplug the machine).

This machine is conceived for very ergonomic easy handing thanks to the special wheel arrangement in the rear bottom part of the machine.

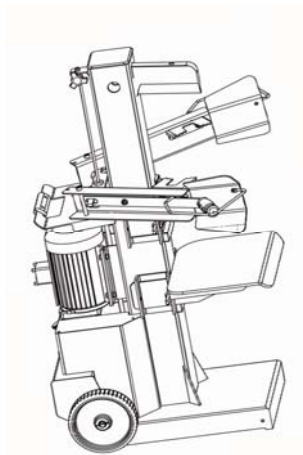
Before handing the machine around, make sure to tie up the two control handles together to prevent them from swinging out and accidentally injure/damage persons or other equipment standing nearby.

One man can easily handle the machine on side by himself.

Handing asset is leaned back on the wheel while the operator firmly holds it with one



hand on the handle of cover plate and the other hand on the cover plate above the motor.



## 4. Maintenance instructions

**Do not install, repair, clean or handle the log splitter when the machine is still running and without having securely clamped the wedge**

### 4.1 Daily maintenance

Make maintenance regular part of daily operation. The daily maintenance routine needs to include

- Cleaning of the machine and cleaning of all parts from residual wood debris, chips, dust, bark pieces and eventual other waster.
- Greasing of the sliding pads inside the sliding casing (ram)
- Hydraulic oil check and (in case of leakage)hydraulic hose and fittings check-up to detect eventual oil leaks
- Lubrication of all moving parts

### 4.2 Hydraulic oil

Periodically check the oil level inside the hydraulic oil tank. When doing so, accurately avoid contaminating the tank with dirt, wood chips, saw dust etc...

Make sure that the splitter never runs without oil or with low oil level. When this happens, air is likely to reach inside the hydraulic loop. Failure to maintain due oil or level may cause poor running and irregular splitter operation(very rough, back/forth or up/down motions)as well as major pump damages.

Please schedule your first oil change after approximately 25-30 operation hours and later ones after each 50operation hours or once a year.

The oil drain plug is location on the bottom tank side while the filler cap is on the upper right hand side of the tank.

The hydraulic system is a closed system with oil tank, oil pump and control valve. Check oil level regularly in inspection glass. Low oil levels can damage the oil pump. Oil Level should measure approx.1—2cm lower than the upper surface of the oil tank.

The oil should be completely changed once a year.

- Make sure moving parts stops and the log splitter is unplugged.
- Make sure that no dirt or debris finds its way into the oil tank.
- Collect used oil and responsibly recycle.
- Following an oil change, activate the log splitter a few times without actually splitting

Recommended oil type: DEA HD B46, Shell Tellus 10-46, Esso Nuto H 46

When changing the oil, never let used oil drop down on the ground, rather collect whole of it in a sealed container for due disposal. Oil disposal container should be of at least 7 liter capacity if you are using smaller container make sure to drain the more than one round to avoid spilling old oil out on the ground.

Used oil is very polluting and should

**Do not install, repair, clean or handle the log splitter when the machine is still running and without having securely clamped the wedge.**

Treat the disposal matters in accordance with local rules.

After refilling the tank with new oil, let the splitter cycle three or four times and let the air blow out of the hydraulic loop before closing the cap.

#### **4.3 Ram sliding pads**

Should irregular noisy knocks be heard while ram is sliding up and down, grease the plastic sliding pads located inside the sliding ram casing. Preferably use commercial grease available in your country.

Make a trial test before starting to work again. The noisy knock should disappear after greasing.

Should you detect an unusually large gap between sliding ram casing and the guide, sliding pads are likely to be worn out, if so replace them with brand new ones.

### **5. Technical specifications**

Log capacity [mm] 1060 (380/580/1060mm)

Min log diameter [mm] 70

Max log diameter [mm] 400

Splitting force [t] 8

Motor power [kw] 3.4 (input)

Voltage: 400V ~ 50Hz

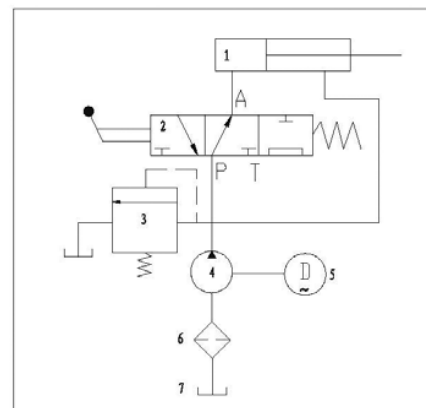
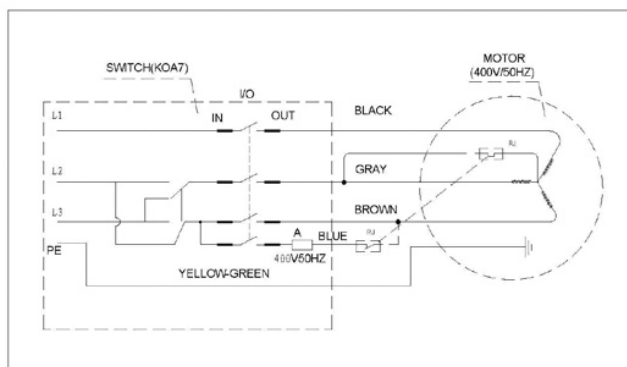
Weight [kgs] 129

Tank capacity [L] 6L

Noise emissions: LpA=75dB(A), LwA=86dB(A)



## 6 Electrical diagram and Hydraulic circuit principle diagram



**BEWARE: only let expert skilled staff do electric repair/maintenance works!**

As for all electric tools and equipment we strongly recommend use a portable residual current device (PRCD), unless you already have a residual current device (RCD) in your house assuring safety and Protection up to max 0.03A nominal fault current.

## 7. Risk factors

### 7.1 Mechanical dangers

The special two –hands control mechanisms minimizes risks and dangers related to moving parts on the machine.

An additional safety provided on the machine in order to prevent working with only one handle while the other one is being engaged (held down) by some mechanical tool or system.

DO NOT EVER ATTEMPT to remove or by-pass the two-hand control

Danger: operating the splitter without the safety two-hand control will increase your risk of having your hands pinched during the splitting cycle.

Do not remove any other safety and protection device the machine.

WARNING: splitting without due safety devices might result into serious injuries to the operator or the other person around the workplace.

Keep hands and fingers clear at all time. Many log-splitting accidents happen on the return portion of the stroke.

### 7.2 Electrical dangers

All machine parts staying under voltage are duly insulated or sealed inside a fixed casing to avoid accidental contact. For safety reasons fixed casings can be only removed using special tools and equipment.

WARNING: removing a fixed protection casing when the machine is running or without having priority cut the power.

## 8. Trouble shooting chart

Type of malfunction	Possible origins of the	Solutions
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	problem	
When the control hands is pushed down. The wedge doesn't tower	-Oil level is too low	-Fill oil in
Ram won't retract	See above	See above
Wedge moves slowly or Will not extend completely on normal log	-Oil level is too low -Wrong valve détente -Pump is broken -Cylinder gaskets are damaged	-Fill oil in -Adjust valve -Replace pump -Replace gaskets
Ram stops during splitting	-Log is too big, crogged or with lots of branches	-Turn/adjust log position
Hydraulic hoses heat-up excessively	-oil level too low -Pump is damaged -Wrong valve detente	-Fill oil in -Replace pump -Adjust valve
Motor won't start	-Faulty plug/socket -Faulty/damaged electrical cable	-Replace plug/socket -Replace cable
The electric motor heat-up excessively	- Cable section is too small - Motor winding is damaged	-Replace cable -Replace winding



**Waste electrical products should not be disposed of with household waste, please recycle where facilities exist, check with your local authority or retailer for recycling advice."**

