sima

(ES) MANUAL DE INSTRUCCIONES ORIGINAL

(GB) ORIGINAL USER GUIDE

(FR) MANUEL ORIGINAL D´UTILISATION

HANDY 350

C/ Albuñol, par.250
Pol. Ind. Juncaril,
18220 ALBOLOTE (Granada) ESPAÑA
Telf: (+34)958 490 410
Fax: (+34) 958 466 645
info@simasa.com
www.simasa.com

ÍNDICE

1. GENERAL INFORMATION

WARNING: Pease read and understand perfectly the present instruction before using the machine.

This user's manual, together with the quick reference guide attached, provides you with the necessary instructions to start, maintaining and, if necessary, repairing the machine.

All aspects related to the user's safety and health while carrying out any of the aforementioned process have been stated. Respecting all instructions and recommendations assures safety and low maintenance. Reading carefully this manual is mandatory to any person responsible for the use, maintenance or repair of this machine.

It is recommended to have always this manual in an easily accessible place close to where the machine is being used.

2. GENERAL DESCRIPTION OF THE MACHINE.

SIMA cutting table saws are designed and manufactured to be used at building sites for cutting masonry materials, stone and any mineral and compound building materials with at least one bearing side (tile, terrazzo, brick, marble, granite, concrete or ceramics shingle, stoneware...) The cutting tool is a diamond blade powered by an electric motor. The blade can be used to dry cut or to water cooled cutting. The progress of the blade is handled manually by moving the rolling cart holding the material to cut towards the rotating blade. The Handy model is manufactured using high quality materials.

Any use other than the machine has been designed for is considered inappropriate and can be dangerous; therefore, it is expressly prohibited.

- The cutting blade can be lifted or lowered for different cutting depth.
- The cutting lenght can be adjusted by approaching the cutting blade to the material to cut.
- The rolling cart moves on wheels rolling on a 'U' shaped rail, to ensure perfect scrolling.
- Four adjustable legs allow leveling the machine.
- The Rolling cart features a graduated ruler for angle cutting.
- The blade is protected with a guard including grooves for water cooling.
- The electrical components of this machine comply with EU norms.
- For transportation safety, the rolling cart is supplied with a bolt to lock it during transportation.
- The rolling cart is designed with an anti-overturn system to avoid the cart from falling or turning when the materials to cut exceed the cart dimensions and are not supported elsewhere.
- The machine features a dust collecting system assisted by vacuum cleaner.
- This machine model is built according to EU directives.
- All motor bearings are mounted with a degree of sealing to ensure long life to its elements

2.1 PICTOGRAMS

The pictograms included in the machine entail the following meaning:

- USE SAFETY BOOTS
- USE HELMET AND EYE AND AUDITIVE PROTECTION
- READ INSTRUCTIONSMANUAL
- USE SAFETY GLOVES.
- SOUND POWER LEVEL ISSUED BY THE MACHINE.

Machine connected to 110V.

Machine connected to 230V.

Machine connected to a 400V.

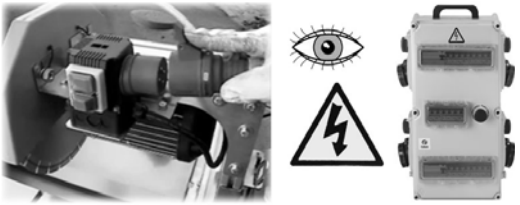
3 TRANSPORTATION

After removing the cardboard packaging, the machine can be taken from one place to another by just one person.

4 ELECTRICAL PLUGING AND ADJUSTING THE DISK DIRECTION OF ROTATION.

Upon receipt of the machine, make sure the network electrical tension is adequate before plugging the machine. The electrical tension is to be found on the voltage indication next to the switch of the machine.

WARNING: Never plug the machine to the main supply without making sure that the power tension is compatible with the machine specifications. Otherwise the motor would suffer irreparable damages.



Once you have gone through the previous steps it is necessary to check and adjust the rotation of the motor axis correctly: you have to plug the machine to the main supply and start it up, making sure that the blade rotates clockwise.

If necessary, you can change the rotation direction swapping the two phase wires in the aerial or in the peg of the feeding extension cord. Please do it with the machine unplugged.

WARNING: Never manipulate power supply cables or any other electrical equipment on the machine before making sure that the machine is totally unplugged from the electricity supply.

WARNING: Unplug the machine from the network before proceeding to change the position of the bridge plates on the engines. You should also proceed to change the stickers indicating the supply voltage, so there will always be indicated on the machine rated voltage.

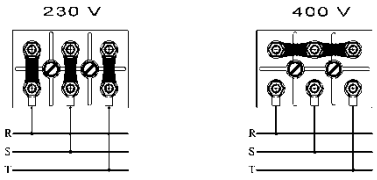
5 ELECTRICAL SCHEME.

The electrical equipment of the table saws has an IP54 protection degree.

The switch of this machine is equipped with an under voltage trip device to prevent an unwanted start of the machine. In case of a supply cut or a voltage drop causing the machine to stop, once the power supply has been restored the machine will not get started again until the start green button is pushed.

WARNING: The three phase cutters are prepared to operate at 400 V by default.

WARNING: Should it be necessary to use a three phase power input of 230 V, please, connect the bridge plates in the motor terminal box as in the picture below.



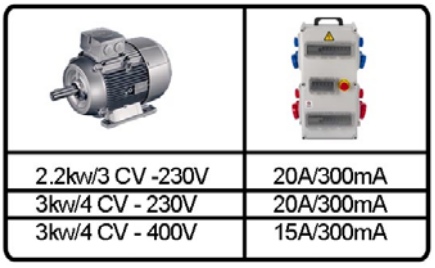
WARNING: when using an extension cable to feed the machine, this cable should have a minimum section as in the table below.

MOTOR	CONEXIÓN	0 - 10 m	10 - 20 m	20 - 30 m
1,5 Kw	1 Phase/ Mono. 110V 50/60Hz	2,5 mm2	4 mm2	6 mm2
	1 Phase/ Mono. 230V 50/60Hz	2,5 mm2	2,5 mm2	4 mm2
	3 Phase/ Trif. 230V 50/60Hz	2,5 mm2	2,5 mm2	2,5 mm2
	3 Phase/ Trif. 400V 50/60Hz	2,5 mm2	2,5 mm2	2,5 mm2

MOTOR	CONEXIÓN	0 - 10 m	10 - 20 m	20 - 30 m
2,2 Kw 3 kw	1 Phase/ Mono. 110V 50/60Hz	2,5 mm2	6 mm2	10 mm2
	1 Phase/ Mono. 230V 50/60Hz	2,5 mm2	2,5 mm2	4 mm2
	3 Phase/ Trif. 230V 50/60Hz	2,5 mm2	2,5 mm2	4 mm2
	3 Phase/ Trif. 400V 50/60Hz	2,5 mm2	2,5 mm2	2,5 mm2

6 SAFETY RECOMMENDATIONS.

All machines with an electric motor must be always plugged in a standardized electric board equipped with a magneto thermal switch and a differential switch in accordance with the motor features. Please, refer to the table below.

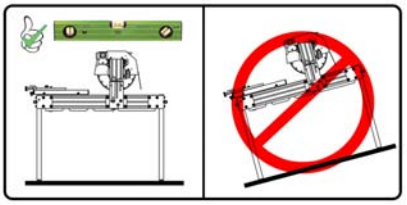


2.2kw/3 CV -230V	20A/300mA
3kw/4 CV - 230V	20A/300mA
3kw/4 CV - 400V	15A/300mA

VERY IMPORTANT: Always use earth plugs before starting-up the machine.

- Use normalized cables.
- Make sure the feeding voltage is in accordance with the voltage indicated in the adhesive label on the machine.
- Make sure that the extension cords are not in contact with points of high temperature, oil, water, sharp edges.
- Do not use high pressure water to clean circuits or electrical elements.

- The damaged electrical cables should be urgently replaced.
- Mantengan en su posición los elementos y protecciones de seguridad.
- Always use approved protective items (gloves, helmet, goggles, boots ... ..)
- Turn the machine on the network and do not handle or operate on the mechanical and electrical machine with the engine running.
- Cutting table machines should be used by people who are familiar with its operation.
- It´s not allow to access and manipulation of the machine to people who are not familiar with the machine before.
- Work clothes should not include loose clothing that could get caught in moving parts of the machine.
- Before starting the machine, read the instructions carefully and observe compliance with safety standards. Learn well how to stop the machine quickly and safely.
- Place the machine on a flat and well lit and you do not switch the machine on until it´s got a balance position.



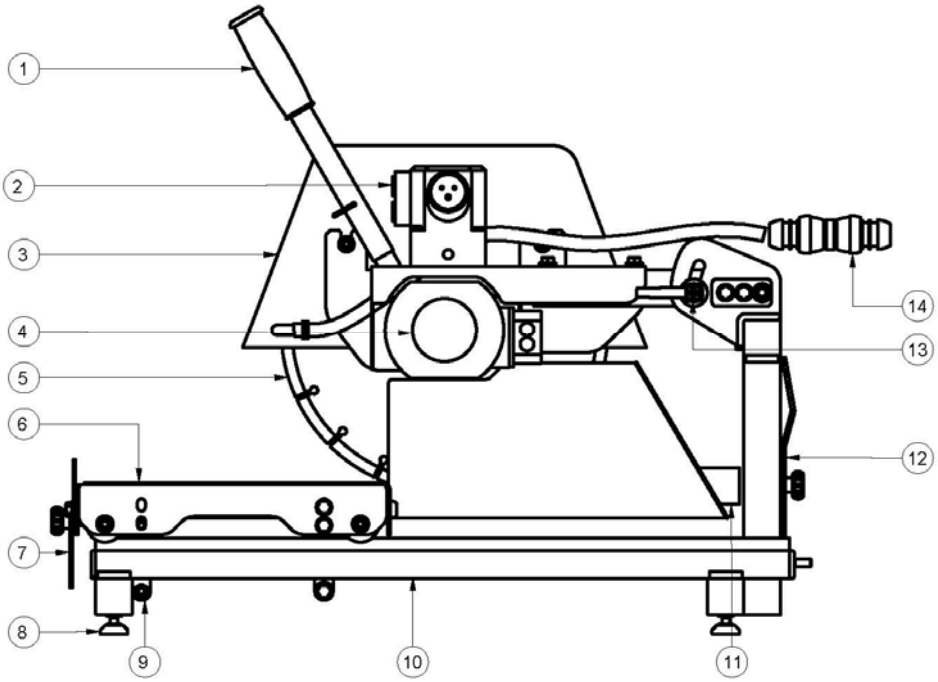
- Make sure the machine is in perfect technical condition and fully operational.
- Do not operate the machine if all the protections and safeguards are assembled which have been designed for that purpose.
- When moving the machine, always verify that engine and moving parts are blocked.
- Use only diamond blades specified in this manual.

This machine **MUST NOT BE USED IN THE RAIN**. Cover with waterproof materials. If the machine has been exposed in the rain check before connecting the electrical parts are not wet. **Always work with good lighting conditions.**

Warning: You must follow all safety recommendations outlined in this manual and comply with regulations for the prevention of occupational hazards of each place.

SIMA, S.A. is not responsible for the potential consequences of inadequate use of the table saws.

7 MACHINE PARTS



1. Handle
2. Start switch.
3. Blade guard.
4. Motor.
5. Blade.
6. Rolling cart
7. Rolling cart locking bolt.
8. Adjustable legs.
9. Anti-overturn system.
10. Chassis.
11. Vacuum cleaner feed.
12. Tools
13. Height adjustment lock handle.
14. Water feed pipe.

8 CUTTING BLADE ASSEMBLY AND DISASSAMBLY.

This cutting machine has been designed to use either segmented or continuous rim diamond blades with either Ø300 or Ø350 mm. Depending on the materials to cut the choice of the right blade will help to increase their endurance and performance while obtaining a better cutting.

Please, make sure that the máximum turns per minute indicated on the blade are higher than the maximum turns per minute of the machine motor.

The cutting blade is one of the key elements in a cutting machine. A blade in good conditions is Paramount to achieve an optimal performance from the machine. It will need to be substituted when it goes worn, twisted or cracked.

Do not use any type of blade other than the ones specified in this manual, and make sure that it has the required features related to maximum diameter, bore diameter and maximun speed (t.p.m.)

Please bear in mind that there are different types diamond blades that must be used depending the material that needs cutting. Always choose the one that suits better to that material.

SIMA always recommends to use original SIMA blades that comply with the norms in their technical and safety features. SIMA offers a wide range to cover all most extended types of cutting, therefore ensuring the right choice.

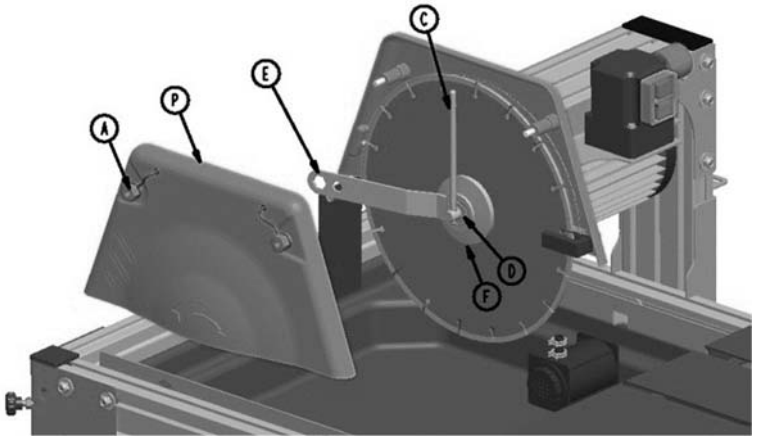
8.1 MOUNTING OR REPLACING A BLADE.

To mount or replace a blade, please follow the instructions below:

- Check that the electric supply cable is not plugged in the machine.
- Remove the blade guard (**P, Fig.3)** from the machine cutting head by loosening the locking nuts **(A, Fig.3)**
- Insert the hexagonal spanner (**E Fig. 3)** in the nut **(D Fig. 3).** Block the blade shaft from turning by inserting the straight key in the housing at its end **(C, Fig.3),** loosen up the nut in the shaft and remove the outer flange **(F, Fig.3). WARNING:** the nut turns clockwise to loosen up.
- Place the blade on the motor shaft making sure that it is well centered and perfectly inserted to the end of the shaft. Once more, make sure that the blade will turn on the right direction. The arrow embossed on the blade must coincide the direction of the arrow engraved on the blade guard. Then, put the external flange back into place and tighten up the shaft nut using the same keys again.
- Check the perfect coupling of the blade and flanges before completely tightening the nut up.
- Replace the blade guard in its right position and tighten up the nuts to fix it to the cutting head.
- To remove the blade, proceed all the way around.

WARNING: make sure that all the tools used to set the machine up have been duly removed from the working area before connecting the machine, checking that all the machine parts have been placed in the right position.

Now, you can plug the machine to the power supply.



9 STARTING-UP AND USING INSTRUCTIONS.

9.1 POSITION OF THE MACHINE AND THE OPERATOR; CONNECTION AND DISCONNECTION

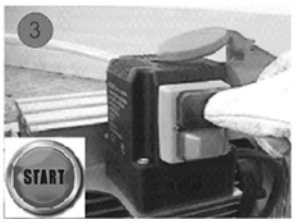
The machine must be installed on an even and stable Surface, free from obstacles and well lightened.

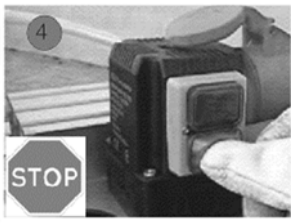
Before getting the machine started we need to check all the necessary elements (electrical connection, stability, protective elements) as described in the previous sections.

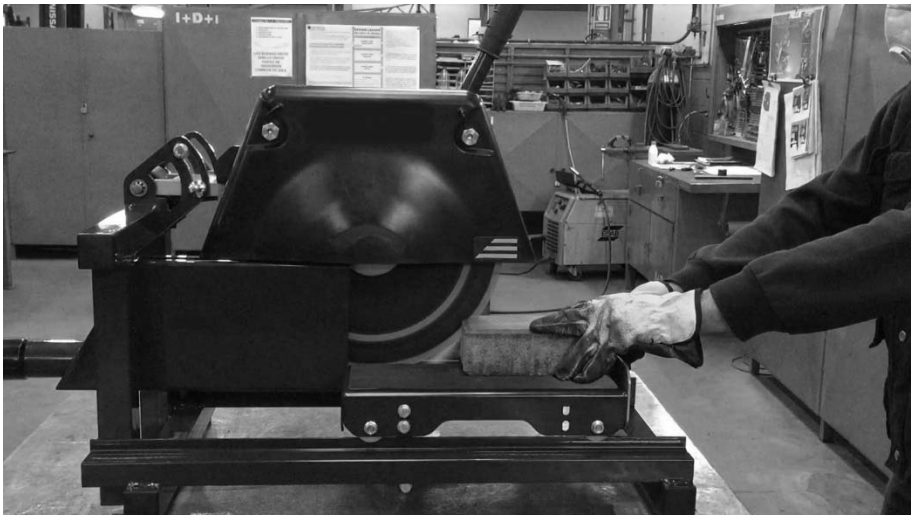
The machine must be installed on an even surface, completely horizontal, and on stable and hard ground.

To start cutting, the operator must stand in front of the machine. In that position he will be able to easily move the rolling cart with the piece to cut on top, and the electric supply switch will remain at hand.

Once the power supply cable is plugged in the motor will get started by pushing the Green start button.
When the red button is pushed the machine stop.





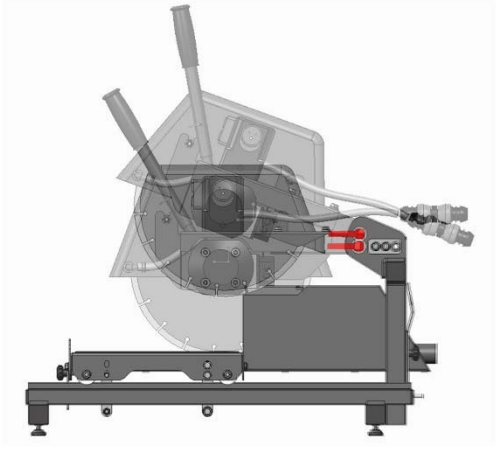


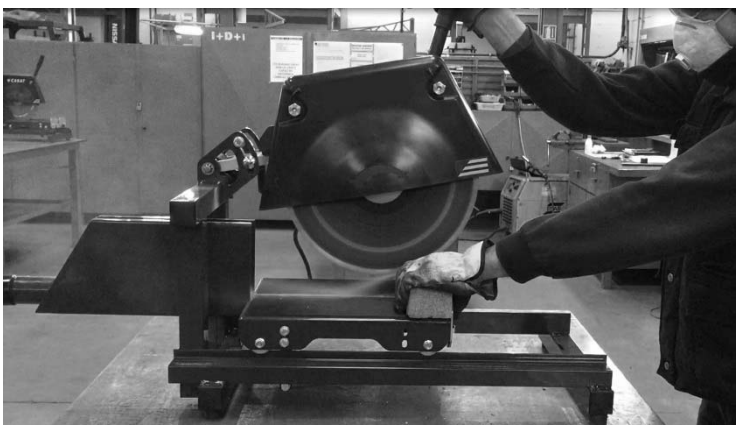
9.2 CUTTING BY TILTING THE CUTTING HEAD.

The machine can perform cuttings maintaining the Rolling cart fixed and tilting the cutting head down to cut. This is how it should opérate for instance to cut interior windows in just one piece.

To perform this cut, the handle must be loosening up until the whole head is loose. The strain caused by the spring will keep the cutting head up to the top. Then, the rolling cart with the material to cut will be pushed forward until the material is under the blade: then use the handle to pull the head down to cut.

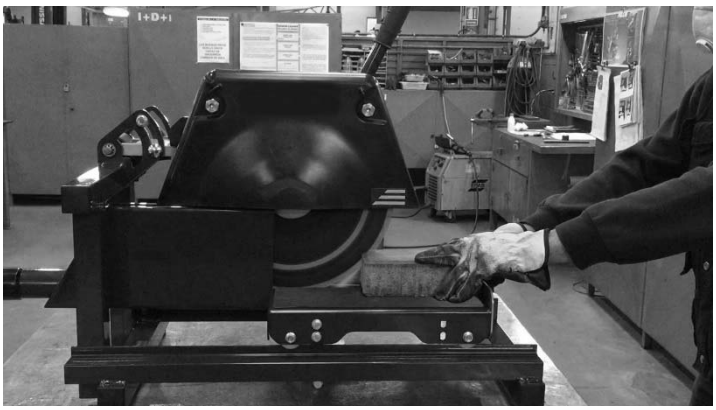
The strength used to push will depend on the hardness of the material and the cutting depth.





9.3 FRONT CUTTING.

First, block the cutting head by tightening up the crank. Then, push the cart with the piece to cut on top until it gets close to the running blade. Keep pushing accordingly to the material hardness and the cutting depth.

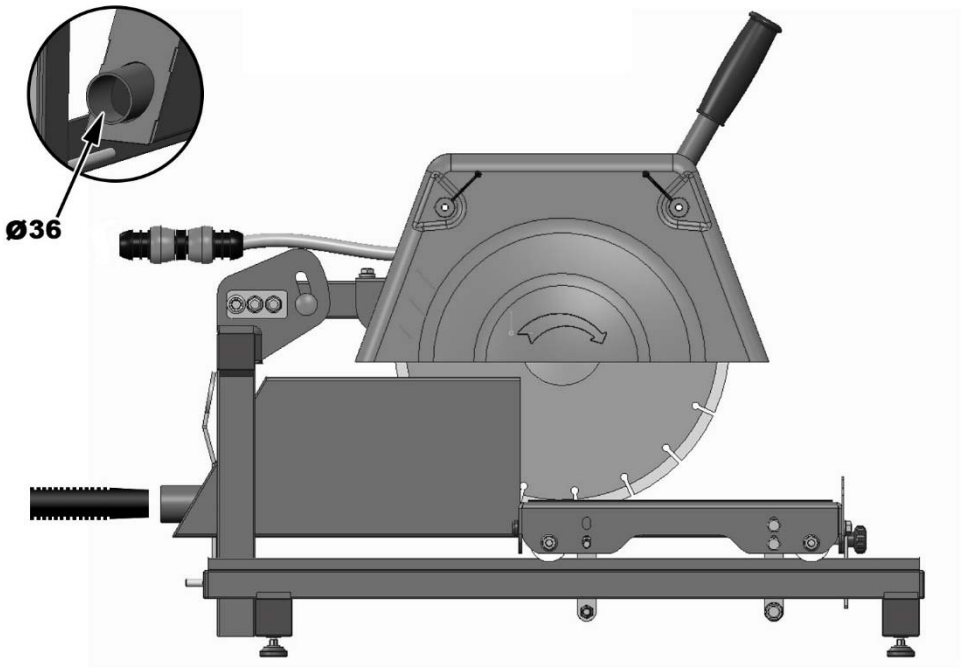


9.4 VACUUM CLEANER CONNETION.

The machine is equipped with a nozzle to connect it to a vacuum cleaning system, in order to collect and get rid of the dust and other waste caused by the cutting.

ONLY DUST VACUUM CLEANER: Do not cut with water if your vacuum cleaner is just for dust.

DUST AND LIQUID VACUUM CLEANER: You can use it for both, dry and wet cutting.



9.5 GETTING STARTED.

1. Place the machine on a flat well illuminated location. Use the adjustable legs to ensure the estability while using the machine.
2. Mount the handle and secure it with the bolt.
3. Mount the blade as previously described.
4. Release the rolling cart from the brake.
5. Set the right cutting depth with the rotation lock handle.
6. Plug the machine in the power supply socket and check that the blade runs in the right direction.
7. Connect the flexible hose of the vacuum cleaner to the waste socket of the machine and to the power supply.
8. Connect the machine to the water supply if a wet cutting is needed.
9. Start cutting.

10 MAINTENANCE

The table saws requires simple maintenance as described below:

- Carfully remove all waste and dirt from the rolling card rails.
- Replace as soon as possible electrical cables that cause power cuts, breaking or any other disrepair.
- If the machine is not under cover, wrap it with an impermeable cloth.
- At the end of each day, unplug the machine.

Maintenance should be undertaken by operators that know the how the machine works.

Before performing any maintenance or cleaning operations, make sure that the electricity cable is unplugged.

In case you observe any anomalies or mal functioning, let a technician check the machine.

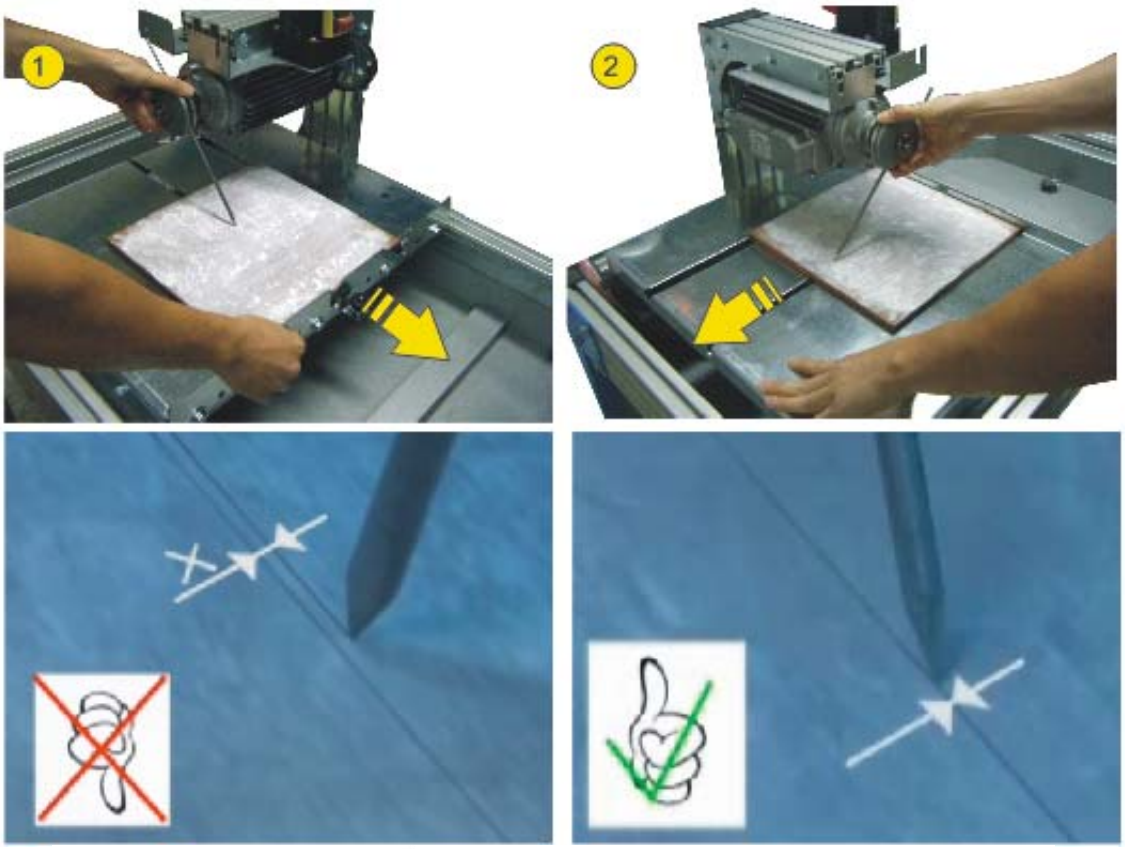
Take into account the safety recommendations mentioned in this manual.

It is prohibited to independently make any change in some parts, components or characteristics of the machine. SIMA, S. A. shall in no case be responsible for the consequences that may derive from a breach of these recommendations.

10.2 ALIGNING THE BLADE WITH THE RAILS.

This operation will require using a rod of Ø 4 to 5 mm and 250 mm long, with one end sharpened like a pencil. A piece of ceramic tile and White chalk will be needed too. Then, proceed as followes:

o Unplug the machine from the power source.
o Remove the guard and the blade.
o Put the tile on the rolling cart (the enamel side downwards), and draw a line with chalk on other tile side, dividing it in two halves.
o Put the rod between the blade clamps so the sharpened point meets the chalk line drown on the back of the tile piece. Tighten up the nut on the motor shaft.
o Push the Rolling cart so the rod will trace a straight line on the lile.
o Then turn the motor shaft to shift the rod to the opposite side and pull the cart back to draw a new line, which should match the first one. If both lines would not match, then loosen up the screws that hold the motor, tap on the motor shaft on the side that demands correction and repeat the process until the two lines drawn by the rod coincide. Then tighten up the screws of the motor.
o Replace the blade and the blade guard.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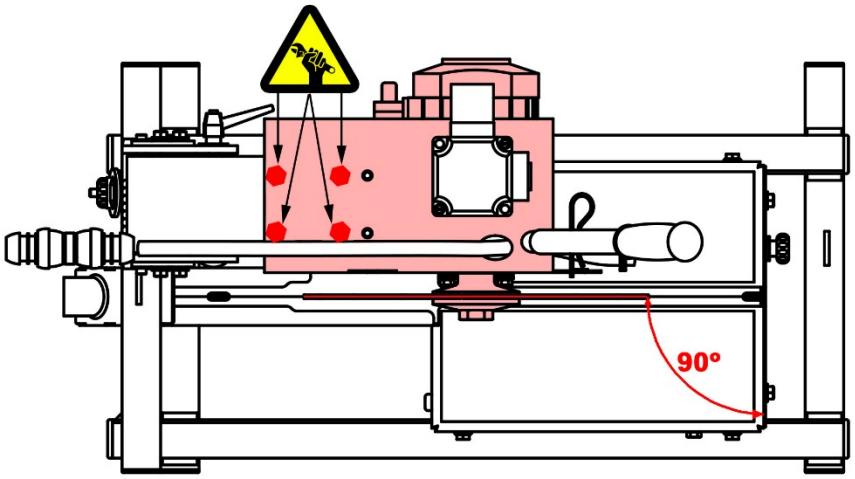
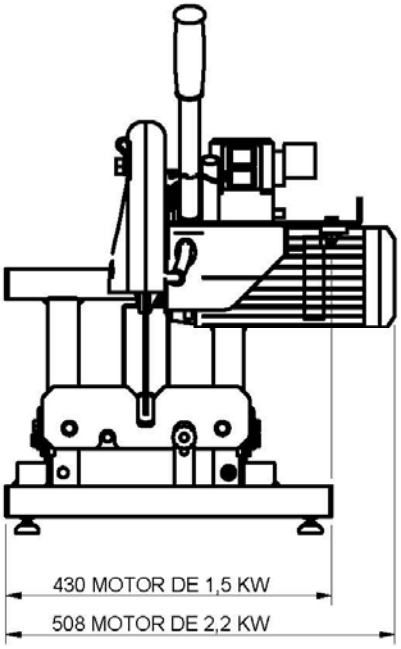

90°

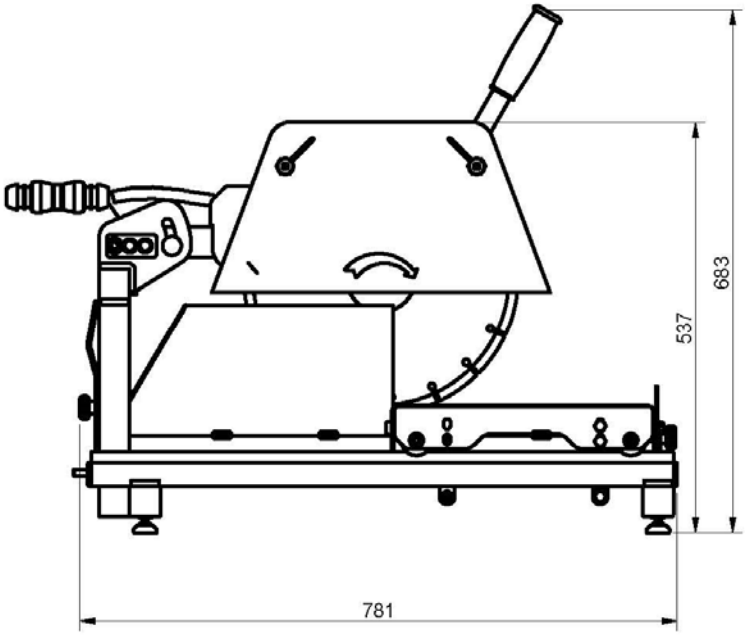
11 TROUBLE SHOOTING

ANOMALY	POSSIBLE CAUSE	SOLUTION
The motor does not start	Power failiure	Check the power supply in the switch board. Check the position of the thermal magnet and the differential in the switch board.
		Make sure the extension cable is in a good state and well plugged in both ends.
	The thermal protection trips (single phase models)	Wait the motor to cool down and restart the thermal protection.
	Damaged switch	Replace it
	Blocked blade	Remove obstacles preventing the disk from turning.
Motor starts up very slowly and takes long to reach its revolutions	Damaged condenser. (Single phase motors)	Replace it
Insufficient cutting power	Bluntness in the disk segments or diamond rims.	Perform some cuts on abrasive material (sandstone, concrete, emery stone)
	Inappropriate blade	Use the appropriate blade for the material to cut.
	Low motor power	Let the motor be checked by a profesional service technician.
The cooling water does not reach the disk	Low tray water lever	Fill in water to level
	Pump blocked	Dismount the tape filter and clean it
	Pump damaged	Replace pump
	The pump water tap is closed	Open the water tap
Blade worn to fast	Refrigeración insuficiente	Revisar refrigeración
	Excessive pushing pressure on the cutting	Release pushing pressure
	Inappropriate blade	Use the appropriate blade for the material to cut.
Faulty Cutting	The machine is not properly aligned	Align as indicated on this instructions book.
	Blade deteriorated or worn-out	Change the blade.
	Inappropriate blade	Use the appropriate blade for the material to cut.
Vibrations occurrence	Blade runs unbalanced	Check the state of the disc and mount it correctly
	Faulty blade fastening	Make sure the blade clamps and the motor shaft are properly secured. Tighten well the nut.
	Warped blade	Change the blade.
Polvo excesivo	Filtro aspirador atorado	Limpiar el filtro del aspirador con frecuencia.

12 TECHNICAL FEATURES

Feature	110V V 50/60Hz	230V V 50/60Hz	
Motor Power	1,5Kw	1,5 Kw	2,2 Kw
Motor Voltage	110V~	230V~	
Motor turns per minute		2800 R.P.M.	
Cooling pump Amps		50W	
Cooling pump voltage	110V~	230V~	
Máximun Blade diameter	350 mm	350 mm	
Boer diameter	25,4 mm	25,4 mm	
Cutting Lenght	260 mm		
Cutting Depth	110 mm	100 mm	
Net Weight	28 Kg	30 Kg	





13 WARRANTY

The manufacturer, operates a technical service. Repairs done under guarantee by net are subject to highly demanding rules, in order to ensure the highest quality and the best service.

The manufacturer guarantees all its products for any manufacturing defect, according to the conditions stated in the attached document “Warranty conditions”. These warranty conditions will not be applicable in case of failure to comply with the established payment terms.

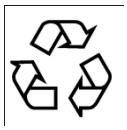
The manufacturer reserves its right to bring modifications and changes to its products without prior notice.

14 SPARE PARTS

The spare parts for the table saws are to be found in the spare parts plan, attached to this manual and viewed throughout our B2B boutique.

To order any spare part, please contact our alter-sales service clearly indicating the **serial number** of the machine, **model, manufacturing number and year of manufacturing that show on the characteristics plate.**

15 ENVIRONMENTAL PROTECTION



Raw materials must be collected instead of dumped. Instruments, accessories, fluids and packages have to be sent into specific places for ecological recycling. Plastic components are marked for selective recycling.

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R.A.E.E. Residuals arising of electrical and electronic instruments have to be stored into specific places for selective collection.

16 DECLARATION ON NOISES.

Weighted sound power level released by the machine..

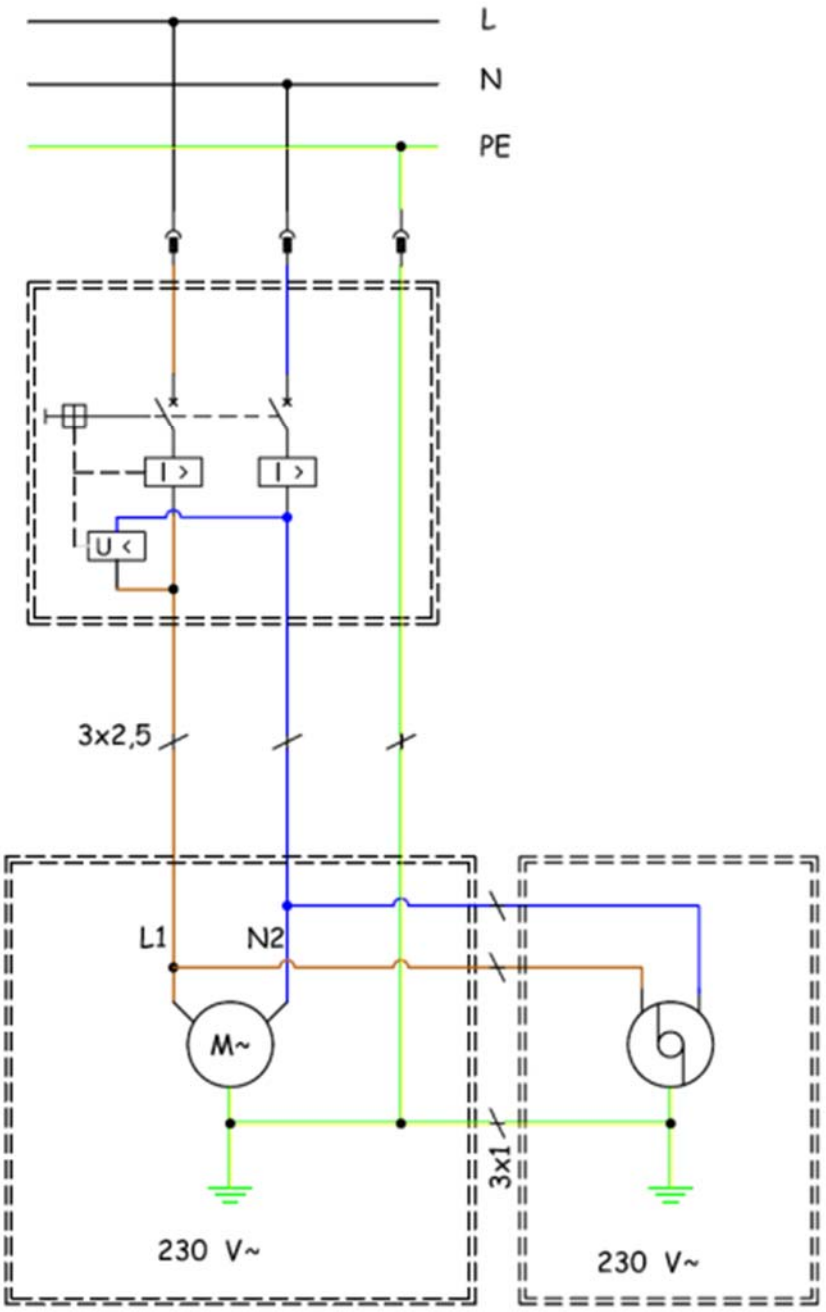
LWA (dBa) 122

17 DECLARATION ON MECHANICAL VIBRATIONS.

The level of vibrations transmitted to the hand-arm is:

LEFT HAND m/s²	RIGHT HAND m/s²
5,71220387313	4,71851454008

18 ELECTRICAL CONNECTIONS DIAGRAM.



SOCIEDAD INDUSTRIAL DE MAQUINARIA ANDALUZA, S.A.

POL. IND. JUNCARIL, C/ALBUÑOL, PARC. 250

18220 ALBOLOTE (GRANADA)

Telf.: 34 - 958-49 04 10 – Fax: 34 - 958-46 66 45

FABRICACIÓN DE MAQUINARIA PARA LA CONSTRUCCIÓN

SPAIN