

- (ES) MANUAL DE INSTRUCCIONES ORIGINAL
- (GB) ORIGINAL USER GUIDE
- (FR) MANUEL ORIGINAL D'UTILISATION

HALCÓN – 95 HALCÓN – 125

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1. GENERAL INFORMATION

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

SIMA S.A. thanks you for your trust in our products and for purchasing the HALCON POWER TROWEL model

This manual provides you with the necessary instructions to start, use, maintain and in your case, repair of the p resent m achine. A II a spects a s far a s t he sa fety and h ealth of t he u sers is concerned h ave been st ated. Respecting all instructions and recommendations assures safety and low maintenance. As such, reading this manual carefully is compulsory for any person responsible for the use, maintenance or repair of this machine.

As such, reading this manual carefully is compulsory for 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 where the machine is being used.

2. GENERAL DESCRIPTION OF THE MACHINE

- The POWER TROWELS are used to finish concrete surfaces for both small and large surfaces.
- Models HALCON is designed and constructed to smooth and finish horizontal surfaces of concrete through the rotary motion of four-bladed r ectangular no -wear s teel. T he motion is transmitted through a gearbox driven by a gasoline engine or electric, according to versions, and progress over the area to try is manually controlled by a single operator.
- Models HALCON have a wheel-driven mechanism, which regulates the inclination of the blades at all times to suit the characteristics of the surface being treated, the wheel is located on the handlebar height driving machine and the scope of the operator thereby facilitating the control of the inclination of the blades.
- Models HALCON be fitted with two types of blades in relation to the area to work, finishing blades when you need a blade finish and floats for the preparation or initial surface preparation work, these latest are mounted over the finishing blades.
- Transmission to generate the motion of the rotor is made by flexible belt and a clutch, the transmission is protected by a guard that prevents access to moving parts.
- They have a Standard Security System with automatic shutdown, integrated on the handlebar.

Floating discs. HALCON Power Trowel is designed to mount floating discs in the initial surface preparation work, this is mounted on the finishing blades without difficulty.

Any other use given to this machine is considered inappropriate and may be dangerous, so is expressly prohibited.

2.1 PICTOGRAMS

Pictograms included in the machine entail the following:



READ INSTRUCTIONS MANUAL



USE HELMET AND EYE AND AUDITIVE PROTECTION



USE SAFETY GLOVES



USE SAFETY BOOTS

3. TRANSPORT

The machine is packed in the factory on a pallet, easy to lift with forklifts or hand pallet trucks. Due to its dimensions and weight (See the technical features table in this manual), it is possible to transport it in light vehicles.

When it is needed to transport the machine for too long distances by vehicles, cranes or other means of elevation, the latter should be safe.

By lifting the machine with cranes or hoists, normalised slings must be used. These are chosen en function of the required work load limit, the way of use and the nature of the load. The choice is correct if special norms of use are respected.

ATTENTION: To avoid any possible danger, stay away from elevated loads and be careful with their possible displacement during transport, whether during lifting or mooring. Therefore, it is essential to choose the correct slings and remain particularly vigilant in sensitive operations (elevation, coupling, mooring or discharging).

IMPORTANT: During transportation of the machine is never to be reversed nor support on either side, must be supported by its base.

4. ASSEMBLING INSTRUCTIONS

When you open the package you will find the body of the machine with the handle removed, an instruction manual and warranty. Petrol engine versions will also include an instruction manual of the engine itself.

HALCON models are of use in all cases with a set of finished blades, engine oil and without fuel.

4.1 MOUNTING HANDLEBAR

Due packaging volume, the HALCON models leave the factory with the handle removed. The handlebar can be fold and once assembled, can be stored easily. Adjustable height adapting to the preferences of each user. To mount the handlebars and let the machine operating, proceed as follows:

1 Setting the handlebar to the body of the machine.





2 Setting blade control blades.





3 Throttle wire assembly.

The wire must be tightened so that the throttle on the ha ndlebar to b e e ffective thr oughout the ir journey. Check that the nut friction throttle lever in the engine V, Fig 6 is not pressed to ensure the free path of the throttle wire.





4 Connecting the stop electric wire.



5 Mounting the auxiliary reservoir.

Halcon models may include a water tank in order to moisten if necessary the concrete surface in which it is working.

This deposit has a valve release that is operated from the handlebar th rough a w ire and w ill ne ed to c onnect it o nce assembled.

The wire jacket is rolled next to the tank, this will pass under the metal strap that is at the top of the tail of the gearbox which serves for fixing the handlebar. Insert the wire through the hole that has handlebar lever to access the drive lever to that fixed by attaching the terminal based on its corresponding housing and tightening the setscrew on the wire.



To facilitate the entry and exit of the wire with its jacket by the holes in the handlebar, do not install cable terminals until the cable has not guided by the machine.

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4.2 ASSEMBLY OF HANDLEBARS FOR MACHINES WITH ELECTRICAL MOTOR

In this version of the POWER TROWELS HALCON, the handlebar is the same as for the machines with petrol engine. The only difference is that it is equipped with the appropriate electrical and wire material for the motor type that in addition incorporates a switch intake socket.

4.3 MACHINES WITH PETROL ENGINE.

HALCON models are supplied with engine oil and without fuel.

Must be read the manual of the engine itself.

Avoid fuel linking on the machine filling the tank due can be dangerous or affects some element of it. Before starting the engine check the oil level in the crankcase by placing the machine on a flat surface and the engine stopped, if necessary, fill to complete the level with the type of oil recommended by the engine manufacturer.

4.4 MACHINES WITH 3PHASE ELECTRIC MOTOR

These models are supplied with three-phase 230/400V electric motor with switch sockets. The extension cord used must have a minimum area from $4x^2$, 5 mm² up to 25 meters length. For a greater distance it will be $4x^4$ mm². At one end is placed the extender or air base that includes the machine in endowment, and the other an air jack which is compatible with the output of the switchboard where you go to plug.

The three-phase electric motor models leave the factory are always connected to work at 400V. If necessary connect the machine to a supply voltage of 230V, we change the position of the flat in the motor terminal box, as shown in the figure below:





5. INSTRUCTIONS FOR SETTING AND USE.

ATTENTION: Must follow all safety recommendations outlined and comply with regulations for the prevention of occupational hazards of each place.

It must also be read specific instructions petrol engine (Instruction book's own engine).

5.1 START-UP. STARTING AND STOPPING

• Check engine oil level. If it is below the minimum will not start.

Turn the engine switch to the **ON** position.





- Open the fuel valve engine.
- Close the throttle. (N ot necessary if the engine is hot or the temperature is high).
- Place the handlebar lever gas the beginning of his journey, during slight acceleration.

• With o ne ha nd safety lock lever pressing it a gainst the handlebar tube. With the other hand start the engine.

- Place the handlebar lever gas the beginning of his journey, during slight acceleration.
- Start the engine pulling the recoil starter handle.

STOP THE MACHINE

To stop the engine, release the safety lever. When you release the lever, the engine will stop. Turn the engine switch to OFF and close the fuel valve.

For details on operations in the engine, see instruction book's own engine.

HALCON models, NOT TO BE USED IN THE RAIN. ALWAYS WORK WITH GOOD LIGHT CONDITIONS.

5.2 REGULATION OF THE BLADES

HALCON Power trowel has a mechanism that regulates the inclination of the blades at all times to suit the characteristics of the surface being treated. This mechanism is at the wheel on the end of the handlebars and rotating it in either direction is obtained by varying inclination of the blades.







5.3 TROWELING PERFORMANCE.

We recommend the use of different blades as they are to carry out preparatory (floating) or finishing the surface to be treated.

SIMA SA manufactures different types of blades, preparatory (floating) and finishing. Floating blades are mounted paddles coupled on the finishing blades and taking into account the spin is in the sense of clockwise. To mount preparation (floating) blades is necessary for the Trowel has placed the finishing.

For gasoline-powered machines, once started the engine, the operator grasp the handle by pressing the safety lever untilities unlocked. Then, without releasing the lever, slowly accelerating the motor acting on the gas lever When the acceleration reaches a certain point, the blades begin to rotate commencing the planned work.

In general, the acceleration is adequate with the maximum engine speed, allowing the clutch to work in optimal conditions. While moving the Trowel, the operator must act on the regulatory mechanism to achieve the proper angle of the blades at all times.

ATTENTION: The stop lever is a main security component that works by stopping the engine automatically when it is released by a neglect or loss of control of the operator. As a result, you should be aware that once unlocked, and in normal working conditions, have to stay down on the handlebars.

When the concrete surface is too hard to be towelled, moisten it will be necessary to continue work in good condition.

For machines with electric motor, once the engine running, the operator grasp the handlebar lever pressing the idler pulley until the movement is transmitted to the blades. Keeping the lever pressed was scheduled to start on work by acting on the wheel of regulation when necessary to achieve the proper angle of the blades.

Releasing the lever will stop the blades while the engine is running.

Note that the blades should rotate in the same direction as clockwise. If not so, it will exchange between it two phase wires at the air base from one end or in the air plug the other end of extension cable.

5.4 SAFETY RECOMMENDATIONS

- For the first time use. The operator must extreme caution to the maximum until you gain some skill and know clearly the reactions of the machine.
- Before s tarting up the machine p lease r ead the instructions and make s ure s afety no rms a re respected. Learn how to stop the machine in a fast and safe way.
- Make sure to use this machine in perfect technical condition and fully operational.
- Do not operate the machine if you have not assembled all the protections and safeguards that have been designed.
- It is recommended to use safety glasses, safety boots, gloves etc. Please always use approved materials.
- Always us e Individual Pr otection E quipment (I PE) in a ccordance with the type of w ork y ou a re effectuating.
- Prohibit strangers to access the place of work of the machine.
- Work c lothes a re not s upposed t o ha ve l oose a rticles t hat c an c ling i nto m ovable parts of the machine.
- When moving the machine, always do so with the engine stopped.
- To use gasoline-powered machines, the workplace should always be well ventilated because the combustion gases emitted by the exhaust are toxic.
- Take care not to touch especially engine exhaust with the machine in operation as it reaches high temperatures can be maintained for several minutes after shutdown.
- Note also the safety recommendations by the engine manufacturer in his book of instructions. (Petrol engine).

SIMA, S.A. is not responsible for the consequences possibly generated but the inadequate use of the HALCON power trowel model.

6. MAINTENANCE

Maintenance operations should be performed by people who know the machine and its functioning. The most basic are summarized below and some recommendations for implementation:

Any machine handling should be done with the engine stopped and, if electrically powered machines, the power cord must be disconnected.

• Always consider the safety recommendations mentioned in this manual as well as appearing on the engine.

• Grease periodically arms of the blades through the four lubrication points located in the signature dish.



- Do not use pressurized water to clean circuits and electrical components.
- If the machine is not covered, cover it with waterproof material.
- Check the gearbox oil level through the viewfinder.

ATTENTION: the partial or total lack of oil in the gearboxes causes premature wear of its component parts. The oil to use in the gearbox must meet the following characteristics: Designation ISO VG 320 and CLP-320 according to DIN 51502. If necessary replace oil, remove the filler cap located on the left side of the gearbox and fill to complete the recommended oil level with good quality and specific for treat bronze elements, for example, those listed below:

FABRICANTE

REFERENCIA

FUCHS RENOLIN	MP 320
CASTROL	ALFHA SP 320
BP	GRXP 320
MOBIL	MOBILGEAR 632
SHELL	OMALA-320
REPSOL	SUPERTAURO 320

• For gasoline engines, control the level of engine oil by placing the machine in a horizontal surface. Engines mounted on the HALCON Power Trowel, are alarmed by low oil level, so that when the level falls below the minimum the engine will stop and does not start until you have added enough oil. Use oil SAE 15W-40

Necessary maintenance operations on the engine are described in its own book of instructions, and the frequency w ith w hich to perform the m. It is necessary to comply with all maintenance operations specified in the instruction books of the engine.

• Clean the machine as often as necessary, as the normal working process leads to an accumulation of dust and concrete. If water pressure is used careful not to direct it to the engine.

- Be sure to remove the machine tools and devices used in each maintenance operation.
- Replace as soon as any electrical wire breaks or it shows any kind of cuts.
- If anomaly is found, checking the malfunctioning machine must be done by a qualified technician as soon as possible.

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.

6.1 REPLACING THE BELT

The transmission belt **T** is an item that wears out and deteriorates with the normal use of the machine and it must be replaced periodically. So we will withdraw the guard of the pulleys **P** loosening its screws and make those changes. This operation is not difficult because the engine is stopped and the belt tension is loosening.

6.2 BLADE REPLACEMENT

HALCON P ower Tr owel b lades \mathbf{P} are m ade of special m aterial that supports the continuous wear friction with the concrete, but since this is a highly abrasive material, it will inevitably wear in normal use and it will necessary replace them every so often.

In order to extend the maximum duration, blades are designed to turn 180 degrees in the horizontal plane, which is given the option to wear the two edges of the blade.

To get around them or replace them, shall be loosening the screws T that fix the blades to the hexagonal arms of the machine and make the corresponding change back to tighten the screws again. In case it is also necessary to replace the screws, we recommend using DIN 931 M8x40 of 8.8 qualities.



7. SOLUTIONS TO MOST FREQUENT ANOMALIES

ANOMALY	CAUSE	SOLUTION	
	Low oil level alert is on.	Add oil	
Petrol engine does not start.	Fuel clock closed	Open fuel clock	
	Motor switch in OFF position	Turn to ON position	
	Safety handle open	Press and nail	
Electrical motor does not start	Loss of electrical supply	Check the general electrical outlet. Revise the correct position of the differential and thermal. Verify perfect state of extension cable and correct fit on both extremities.	
	Damaged switch	Replace	
	Petrol cable interlocked or loose	Revise lever and cable accelerator	
Gasoline engine does not accelerate	Engine problems	Revise by technician	
	Interlocked or damaged clutch.	Revise and replace if necessary	
Blades do not turn with the motor	Damaged belt	Replace	
	Reducer interlocked or damaged	Replace damaged elements.	
Machine b umps on the working surface	Dry concrete rests in the central plate.	Clean	
	Blades irregular worn	Change	
	Loose central plate	Tighten sufficiently	
	Bended arms	Replace.	

8. TECNICAL CHARACTERISTICS

DATE	HALCÓN-95		HALCÓN-125	
DATE	G5,5H	E3	G9H	G13H
ENGINE	HONDA GX160	Eléctrico trifásico	HONDA GX270	HONDA GX390
FUEL TYPE	Petrol		Petrol	Petrol
START UP	Manual retractable	Electrical	Manual retractable	Manual retractable
MAXIMUM POWER	5,5HP/4KW	3HP/2,2KW	9HP/6,6KW	13HP/9,6KW
ENGINE MAXIMUM R.P.M.	3600	2800	3600	3600
BLADE MAXIMUM R.P.M.	130	90	130	130
REGULATION DEGREE BLADE	Mechanical	Mechanical	Mechanical	Mechanical
Ø EXT RING mm	1048	1048	1248	1248
Ø DIAMETER DESCRIBED BY BLADES mm.	950	950	1150	1150
DIMENSIONS L x A x H mm	1500 x 610 x 1000		2089 x 1	248 x 990
WEIGHT Kg.	53	53	113	120









HALCON-90-E3, HALCON-120-E4



10. WARRANTY

SIMA, S.A. the manufacturer of light machinery for construction possesses a net of technical services "SERVI-SIMA".

Repairs under warranty made by SERVÍ-SIMA are subject to some strict condition to guaranty a high quality and service.

SIMA S. A. guarantees all its products against any manufacturing defect; to take into account the conditions stated in the attached document "WARRANTY CONDITIONS". The latter would cease in case of failure to comply with the established payment terms. SIMA S.A. reserves its right to bring modifications and changes to its products without prior notice.

11. SPARE PARTS

The spare parts for HALCON Power Trowel model, manufactured by SIMA, S.A. are to be found in the spare parts plan, attached to this manual.

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.

12. ENVIRONMENT PROTECTION



Raw materials have to be collected instead of throwing away residuals. Instruments, accessories, fluids and packages have to be sent into specific places for ecological reutilisation.



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

DECLARATIONS on noises

The acoustic level emitted by the MACHINE:

HALCÓN-95-G5,5H	LWA (dBa) 114
HALCÓN-95-3ET	LWA (dBa) 114
HALCÓN-125-G9H	LWA (dBa) 105
HALCÓN-125-4ET	LWA (dBa) 105

13. DECLARATIONS ON MECHANIAL VIBRATIONS

The level of vibrations transmitted to the hand-arm:

MODEL	LEFT HAND m/ s ²	RIGHT HAND m/ s ²
HALCÓN-95-G5,5H	16,71218824259	19,14867082807
HALCÓN-95-3ET	16,71218824259	19,14867082807
HALCÓN-125-G9H	11,94924537840	12,15789830188
HALCÓN-125-4ET	11,94924537840	12,15789830188