



Read this instructions manual before using  
the floor power trowel!



## **USE AND MAINTENANCE MANUAL**

**ATTENZIONE****Read this manual before use**

**Before you start using the power trowel read the instructions. The guarantee of the good operation and safety of power trowel is closely dependent on the application of all of the instructions contained in this manual.**

**PERICOLO****Use forbidden to children  
under 18 years**

**The power trowel is a dangerous device, it can be used only by adults who have a high level of concentration.**

*We guarantee the conformity of the power trowel to specifications and technical instructions described in this Manual at the time of its issue, listed on this page; on the other hand, the power trowel could in future undergo relevant technical changes, without an update of the Manual. Consult Isoplam S.r.l. for information about any variations put into place.*

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## **1 PREFACE**

### **1.1 General Information**

This manual is an integral and essential part of the Power trowel for concrete floors L030001 and must be delivered to the user together with the Declaration of conformity.

Before commissioning, it is essential that users read, understand and follow carefully the provisions that follow.

*The manufacturer is not liable for any damages caused to people or things, or to the power trowel, if it is used incorrectly in relation to the provisions stated.*

In view of the continuous technological development, the manufacturer reserves the right to modify the power trowel without notice and without an automatic update of the manual.

#### **1.1.1 Conservation of the manual**


The use and maintenance manual is an integral part of the power trowel; Therefore you must keep it intact and in a safe during the whole life of the machine. This manual must always be available to the user.


#### **1.1.2 Manufacturer and Customer Service**

If you have any problems or questions, please contact Customer Service without hesitation, it is constituted by qualified and specialized staff, and provides specific equipment and original spare parts.

### 1.1.3 *Graphics of safety warnings*

To identify the safety messages in this manual, the following signalling graphic symbols will be used. They are intended to draw the reader's attention for a **correct and safe** use of the power trowel.

	<b>ATTENZIONE</b>	<b>Pay attention</b>
<b>It highlights behavioral rules to adopt to avoid damage to the power trowel and/or the occurrence of hazardous situations.</b>		

	<b>PERICOLO</b>	<b>Residual risks</b>
<b>It highlights the presence of hazards that cause risks to which the user must pay attention in order to avoid personal injury or property damage.</b>		

## 2 SAFETY INFORMATION

### 2.1 General safety rules



**ATTENZIONE**

#### Using the power trowel

Every user must first read the instruction manual; in particular, the chapter on indications relating to safety.



**ATTENZIONE**

#### Risks related to the use of the power trowel

- Despite the implementation of safety devices, for safe use of the power trowel you should take note of all the requirements for the prevention of accidents reported in this manual.
- Always stay concentrated during use and **DO NOT** underestimate the risks associated with the use of the power trowel.

Even if you are already expert in the use of power trowel for concrete floors, you must follow the instructions below, in addition to general precautions to be observed when using portable tools engines. In particular:

- Acquire complete knowledge of the power trowel operation and of the floor working techniques.
- Read this manual carefully to learn about the functioning, the safety devices and all necessary precautions. The above to ensure a safe use.
- Wear appropriate clothing and use appropriate personal protective equipment (PPE).
- Keep the power trowel with care.

### 2.2 Responsibilities

Non-compliance with the operating instructions and the safety instructions contained in this manual exempts the manufacturer from any liability. If maintenance of the power trowel is performed not in accordance with the instructions provided, with non-original parts or in such a way as to compromise the integrity or change its characteristics, the manufacturer is relieved from any liability concerning the safety of persons and the malfunction of the power trowel.

**ATTENZIONE****Unauthorized modifications**

- **Do not modify the power trowel in any way. Any attempt in this respect, further to void warranty, can compromise the operation, cause malfunctions or accidents. Extraordinary maintenance works on the power trowel shall be performed only by qualified and authorized personnel.**
- **If you hear any unusual noises, or something strange, stop the power trowel immediately. Carry out a check and, if necessary, contact the customer service.**

For any data that are not included or not deducible from this manual, please consult the customer service directly.

### **2.3 Warnings for users**

1. **The power trowel for concrete pavements KE KC is a dangerous appliance.**
2. **Use is prohibited for children under 18 years and persons incapable of understanding or with mental health problems.**
3. Do not take alcohol or drugs prior to use the power trowel, do not use when you are tired or have taken medicines that cause drowsiness, however when you are not able to have a sufficient degree of attention and use the power trowel safely.
4. Avoid starting the endothermic engine indoors or with poor air circulation. Exhaust fumes are poisonous.
5. Always use the power trowel wearing the appropriate personal protective equipment: anti-slip shoes, gloves, visor for the face or glasses, work overalls, ear muffs.
6. Do not use the power trowel when the ground is slippery or when there are other conditions that prevent the operator a stable posture.
7. Do not use the power trowel at night, in case of dense fog or low visibility in the area where you are working.
8. Do not use the power trowel in the rain, during storms, especially if with lightning, in the presence of wind gusts, of strong wind and adverse weather conditions.



9. Before using this appliance for the first time, learn the way of working together with an experienced operator.
10. Always use the techniques described in this manual.
11. Tiredness, digestion of too abundant food and the physical or psychological discomfort decrease levels of attention, a small distraction can lead to a serious accident.
12. Keep the manual handy for future reference.
13. In case of sale, rental, transfer of the power trowel to third parties provide this operating and maintenance manual too.
14. Replace worn and/or damaged parts, check that the seals are functioning correctly before use. Eventually, if necessary, have the power trowel checked by Customer Service.
15. Workers responsible for use of this machine must have all necessary information and education and must receive appropriate training about safety with reference to:
  - the conditions of use of the equipment;
  - foreseeable abnormal situations pursuant to art. 73 Lgs. Decree 81/08.

## 2.4 Preparations for the work

The user must minimize potential risks by wearing the proper equipment.

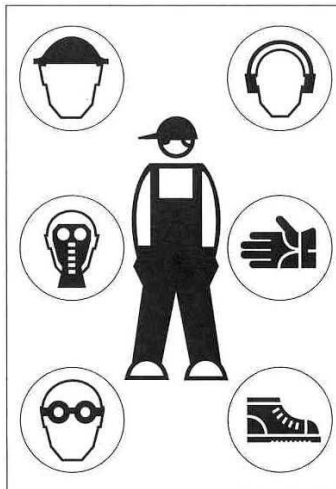


**ATTENZIONE**

Personal Protective Equipment (PPE)

Before you use the power trowel, always wear appropriate personal protective equipment, such as:

- dust mask;
- protective visor for the face – or goggles;
- gloves;
- accident prevention and anti-slip shoes with steel tip classified S5 (EN ISO 20345);
- ear muffs;
- full work suit.



## Fuel conservation

The engine of the power trowel works with gasoline: this is a flammable liquid! Store fuel in appropriate containers tightly closed and in appropriate places, away from heat sources, possible triggers of fire (sparks, flames, etc.).

During moving and transfer of fuel it is forbidden to smoke or approach naked flames, always clean and dry any fuel spillage.

### 2.5 Instructions for maintenance

1. Any maintenance operation must be carried out with the engine stopped, the power trowel off firmly placed on a suitable work surface.
2. During each stage of maintenance operators must be equipped with the necessary safety equipment (gloves, goggles, working clothes).
3. Utensils used for maintenance must be suitable and of good quality.
4. Always keep the area dedicated to servicing clean and dry, in particular eliminating any patches of fuel or oil.
5. Do not allow children under 18 years to intervene on power trowel.
6. Never insert your fingers or limbs in the openings without guards of the power trowel.
7. Do not use gasoline or inflammable solvents as detergents, but always use non-flammable and non-toxic solvents.
8. Minimise the use of compressed air (max. 2 bar) and protect yourself with goggles with lateral protection.
9. Never use naked flames as a means of lighting when you carry out verification or maintenance operations.
10. For specific operations on endothermic engine, consult the manufacturer's manual.



**ATTENZIONE**

Original spare parts

- **Use Breakers S.r.l. original spare parts only**
- **It is excluded any responsibility of the manufacturer for damages or losses of functionality caused as a result of the use of non-original parts and accessories.**

**ORIGINAL INSTRUCTIONS**

11. After each maintenance or adjustment ensure that no tools or foreign objects remain among the moving parts, in order to avoid damage to the power trowel and/or injury to users.

## **2.6 Other provisions**

The first thing to do when you begin use, it's to control the presence and integrity of all parts of the power trowel and the functioning of the safety devices.

*If any fault is detected do not use the power trowel for concrete floors L030001!*



Guards

**Therefore it is strictly forbidden to modify or remove the guards, the power trowel command and description plates.**

## 3 POWER TROWEL DESCRIPTION

### 3.1 Plates

Make sure stickers and labels are legible. Otherwise, apply new ones after requesting them to *Isoplam S.r.l.*

#### 3.1.1 EC Marking

In the EC plate applied on the power trowel the following data are provided:

- Type.
- Registration number.
- Year of construction.
- Unladen mass (in kg).
- Engine power (in kW).
- Blade diameter (in mm).

TIPO	<input type="text"/>	MATR.	<input type="text"/>
ANNO	<input type="text"/>	PESO kg	<input type="text"/>
POTENZA kW	<input type="text"/>	Ø MAX min	<input type="text"/>

### 3.2 Pictograms and signals

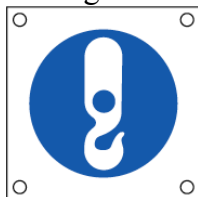
The pictograms below indicate the correct behaviours to follow and what to do when using the machine, ie.: the operations to be carried out before using the machine, in particular reading of the use and maintenance manual and using personal protective equipment (PPE).



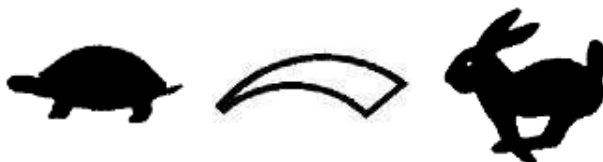
Above the exhaust silencer there is a warning sticker that recalls the danger of burns on the hot silencer.



Near the top handle for lifting there is the symbol that indicates the gripping point for mechanical lifting.



In versions with endothermic engine, near the accelerator there is the symbol that explains the operation of the accelerator lever.



Close to the endothermic engine commands there are the symbols for switching off, the fuel tap and the starter commands .

For more information about the commands of the engine you should consult the manufacturer's manual.

### 3.3 General description

The Power trowel for concrete pavements L030001 is designed and built for the smoothing of concrete substrates. The rudder for steering can be folded to reduce the encumbrance of the machine. During smoothing operations, the tools, consisting of 4 blades, follow a rotary movement with vertical axis. The blades are equipped with screw-down device for adjusting the angle of the blades, thus allowing different kinds of processing on concrete with different degree of humidity and therefore hardness.

	<b>PERICOLO</b>	Endothermic engine
<b>The endothermic engine emits exhaust gases harmful to health. Avoid using it in closed or poorly ventilated environments.</b>		

The machine is particularly suitable for smoothing of concrete substrates for laying of hardwood floors, linoleum, carpeting and the preparation of wear resistant surface. Particularly suitable to operate inside apartments, garages, on sidewalks and small courtyard areas.


The idle upper disk allows to almost reach the walls of the room in which you operate with smoothing blades, without damaging either the

machine or the wall.

The working environment must be free from the risk of explosion.

**The Power trowel is a device that can cause serious injury if not used properly, it can be used only by adults who have a high level of concentration.**



	<b>PERICOLO</b>	<b>Misuse and misapplication</b>
<p><b>Use is prohibited to children under 18 years and persons incapable of understanding or with mental health problems. The Power trowel for concrete pavements L030001 is designed and manufactured for the use specified above; a different use and non-observance of the technical parameters laid down by the manufacturer, may be a condition of danger for users or third</b></p>		

### **Blades**

For this type of machine only finishing blades are provided; these are fixed by simple screws.

*Finishing blade:* built with special carbon steel is suitable to perform the last step to get an optimal smoothing. It is recommended that you use it after smoothing the surface previously with the smoothing or substrates disc.

### **Smoothing disc**

It is built in anti-wear steel is suitable for running of the first steps as a plastering trowel; It must be applied over the blades of the machine and is dragged by them in rotation thanks to special joints: so preparing the surface to further steps with other blades. It also provides some protection against wear of the blades during machine movements on the ground.

It can be required in galvanized version or for substrates.

### **Moving**

The machine can be dragged to the ground, preferably with the smoothing disk mounted, with one or two people who can grasp by the front handle and by the rudder. It is also possible to use a special lifting machine with a chain attached to the handle and the rudder.

To make movement more convenient it is possible to fold the rudder on itself, unlocking the handle shown in the picture on the side first.





**Table 1 – Main parts of power trowel**

<b>N°</b>	<b>Description</b>	<b>N°</b>	<b>Description</b>
1	Tank cap	6	Blades and protection grid
2	Engine	7	Blade adjustment knob
3	Exhaust silencer	8	Accelerator
4	Air filter	9	Deadman lever
5	Drive belt guard	10	Joint for rudder folding

### 3.3.1 *Safety devices*

This section presents various safety devices installed on the machine, their operation and how to perform basic checks and maintenance in order to use the machine safely.



**ATTENZIONE**

Safety devices

**Do not use the power trowel with the safety devices removed, disconnected, broken or malfunctioning.**

**Carry out the instructions for the inspection, repair and maintenance contained in this manual.**



**ATTENZIONE**

Maintenance

**It is necessary to have a specific preparation to perform the maintenance and repair of power trowel.**

**If your machine does not meet the controls listed below, take it immediately to an authorised repair workshop before its use.**

### ***OFF SWITCH***

The machine is equipped with a switch that turn it on and off.

The switch must be used to turn off the engine completely. In the version with the Honda engine OFF is marked with 0 and ON with 1.



## ***DRIVE BELT AND BLADE GUARDS***

The drive belt guard and the guard around the blades are the safety devices of the machine to avoid accidental contact between moving bodies and the operator during processing.

The guards are mounted in such a way as to prevent the operator's limbs, especially the feet, can come into contact with moving blades of the machine. Also the protection of the transmission belt prevents contact of the fingers with the belt in motion, for example during checks after a maintenance.

	<b>ATTENZIONE</b>	Fixed transmission guards
<b>Always check that the drive belt guard and the blade guard are properly mounting before turning the machine on</b>		

	<b>ATTENZIONE</b>	Processing
<b>During processing, workers must take the power trowel with both hands, it is forbidden to take handles with one hand only.</b>		

## ***MAN LEVER***


Under the rudder left knob there is a deadman lever; it operates with maintained action. In this way the machine use is subject to proper handle from the operator: if the lever is not pressed with fingers, the engine turns off.



## ***EXHAUST SILENCER***

The exhaust silencer in combustion engine makes it possible to reduce noise and conduct the exhaust gases away from operator.

Outgoing gases from the exhaust system reach extremely high temperatures and may create sparks which in turn could create outbreak of fire.

	Burn
<p><b>During use of the machine the exhaust muffler reaches very high temperatures keeping them for a short time even after switching the machine off, it is therefore forbidden to touch the exhaust silencer during and after processing.</b></p>	

### 3.4 Technical data sheet

Table 3 – Technical specifications	
Manufacturer	<i>Isoplam S.r.l.</i>
Model	L030001
Endothermic engine	Single-cylinder Otto cycle
Cooling	air
Brand/Model	Subaru EX 17 Honda GX 160
Power (kW)	4.2 3.6
Working diameter (mm)	600
Security circle diameter (mm)	600
Number of blades	4
Blade rotation direction	clockwise
Blades rotation speed (RPM)	110
Mass (kg)	47
Value of hand-arm system vibration (m/s <sup>2</sup> ) (Subaru engine)	
Sound pressure level at the driver's seat (dB(A)) (Subaru engine)	
Value of hand-arm system vibration (m/s <sup>2</sup> ) (Honda engine)	3.7
Sound pressure level at the driver's seat (dB(A)) (Honda engine)	61

### 3.5 *Power trowel controls*

Here follows an explanation of the commands for the start up of the engine: in the various engine types mounted, only the location and shape of the various commands change. For more information, please consult the user manual of the engine manufacturer.

#### ***On/off switch***

The switch controls the power of the spark plug. It has two positions: the ON position (I) permits start-up and OFF position (0) shuts down the engine. On the side is shown the switch of a Honda engine.



#### ***Starter handle***

The engine start takes place via a pull string starter at the side of the engine.

Pull the Starter rope until you feel some resistance, then pull hard to start the engine.

#### ***Accelerator***

The lever on the right side of the rudder controls the speed of rotation of the engine.

With your thumb, push the accelerator to decrease the engine speed and, consequently, the speed of the blades. Pull the lever to increase the speed of rotation of the motor. The symbols near the accelerator recall the position to accelerate the engine and bring it back to the minimum.



**ATTENZIONE**

Safety precautions

**For the operation of the engine is necessary to properly grip both the handles of power trowel and keep the lever under the left handle pulled**

**ORIGINAL INSTRUCTIONS**

## ***Fuel tap***

It is necessary to open the fuel tap to allow the flow of fuel to the engine. We recommend that you close the fuel flow when the machine is not in use.

### ***Starter control***

The starter must be activated before starting a cold engine: it is used to increase the enrichment of fuel/air mixture and help set in motion. Once started the engine, you must remove the enrichment of gasoline/air mixture. In general, for start when the engine is already warm or in hot climate, it is not necessary to use the starter.

### ***Deadman lever***

Under the rudder left knob there is a deadman lever; it operates with maintained action. In this way the machine use is subject to proper handle from the operator: if the lever is not pressed with fingers, the engine turns off.



### ***Blade inclination adjustment screw***

Continuous adjustment of the inclination of the blades for different characteristics of smoothing is obtainable through the screw attached to the knob located in the central part of the rudder.

By turning the adjustment screw through the top knob, you can adjust the angle of the 4 blades so that their surface of

sliding on the concrete is satisfactory for the type of surface to be obtained. The inclination of blades can be increased by turning the knob clockwise.





## **3.6 Conditions of use and environment provided**

### **3.6.1 *Intended use***

Power trowel for concrete pavements L030001 is designed and built to perform smoothing of concrete substrates, for laying wooden floors, linoleum, carpeting and the preparation of wear resistant surface. During the smoothing operation the blades follow a clockwise rotation. The machine should be used only on horizontal soil when the concrete substrate is of sufficient strength to support the weight of the operator. The use must be made with both hands grasping the handles provided on the machine body.

*Each modification of the construction state may jeopardize safety, behaviour and operation of the power trowel and can lead to a serious accident.*

*Other types of use, or the expansion of use beyond that intended, do not match the destination attributed by the manufacturer and therefore the same cannot assume any liability for any damage resulting.*

### **3.6.2 *Usage environment***


Power trowel may be used only and exclusively on the horizontal ground. Given the presence of the endothermic engine, the machine can be used inside only with adequate room ventilation. Outdoors the machine must be used in absence of adverse weather conditions (rain, hail, snow, strong wind, etc.). Do not use the power trowel when the substrate is not capable of supporting the operator or when there are other conditions that prevent the operator a stable posture. Do not use the power trowel at night, in case of dense fog or low visibility in the area where you are working. Do not use the power trowel in the rain, during storms, especially if with lightning, in the presence of gusts of wind, of strong wind and adverse weather conditions.


Maximum temperature: +40° C

Minimum temperature : +0° C

Maximum permissible humidity: 80%

For works in public areas secure the work area while maintaining a lateral distance of at least 2 m.

	<b>PERICOLO</b>	Misuse and misapplication
<ul style="list-style-type: none"><li>• <b>IT IS ABSOLUTELY FORBIDDEN to start the endothermic engine of the power trowel indoors without proper ventilation. In fact, the exhaust gases produced by the engine contain carbon monoxide and other toxic volatile substances, which, if inhaled, can lead to death.</b></li><li>• <b>If you must use the endothermic engine inside, do it for a short time (a few minutes) and guaranteeing a large and constant air exchange: for example, by forced ventilation, opening of doors, etc.</b></li></ul>		

	<b>ATTENZIONE</b>	Prohibited environments of use
<b>Power trowel for concrete pavements L030001 should not be used:</b>		
<ul style="list-style-type: none"><li>• <b>in areas prone to risk of fire or explosion;</b></li><li>• <b>in environments with corrosive and/or chemically active atmosphere;</b></li><li>• <b>in dimly lit environments.</b></li></ul>		

### 3.6.3 *Improper use and contraindications*

The actions described below, which of course cannot cover the entire range of potential possibilities of "misuse" of the power trowel, are **absolutely prohibited**.



**ATTENZIONE**

Prohibited operations

- **The execution of prohibited operations voids the warranty.**
- **The manufacturer declines all responsibility for any damage to things and persons caused by the execution of prohibited operations.**

**PERICOLO****IT IS ABSOLUTELY FORBIDDEN**


- *Use by children under 18 years old and persons incapable of understanding or with mental health problems.*
  - Taking alcohol or drugs before using the power trowel.
  - Mounting blades of different types simultaneously.
  - Adjusting the blades incorrectly with respect to the type of floor to be smoothed.
  - Using the power trowel when you are tired or took medicines that cause drowsiness, and anyway when you are not able to have a sufficient degree of attention and use the power trowel safely.
  - The extended use of the machine indoors with little air for prolonged periods; the exhaust gases are poisonous!
  - Using the power trowel without wearing the proper personal protection equipment: ear-muffs, goggles, and non-slip shoes, gloves and suitable working clothes.
  - Using the power trowel when the substrate has not sufficient consistency to support the mass of the operator or when there are other conditions that prevent the operator a stable posture.
  - Using the power trowel at night, in case of dense fog or low visibility in the area where you are working.
  - Using the power trowel in the rain, during storms, especially if with lightning, in the presence of gusts of wind, strong wind and adverse weather conditions.
  - Using this appliance without the necessary experience.
  - Smoothing materials different from those referred to (concrete substrate).
- Smoothing floors using techniques other than those described in this manual.
  - Tampering with the use and safety controls of the machine.

## 4 LIFTING AND TRANSPORT

### 4.1 Lifting and transport

During every kind of transport the power trowel should be off. The weight of each concrete floor Power trowel L030001 is shown on the identification label and is equal to 57 kg; it can be dragged to the ground by one or two people, preferably with the smoothing disk mounted. This machine, under 60 kg can be lifted manually by two people.

For lifting with a mechanical means, such as a hoist or crane, you can fasten the machine to the front handle and the driving tiller.

	<b>PERICOLO</b>	Crushing and impact
<b>During lifting it is necessary to act with extreme caution to avoid personal injury and damage to property.</b>		

The machines are shipped from the factory blocked on their disk.  
*The manufacturer is not liable for breakage due to lifting and/or carrying of power trowel after delivery.*

## 5 COMMISSIONING

### 5.1 Running in

The first few hours of operation are essential to make the endothermic engine and other moving parts arrange in their games with each other. Therefore a prudent use policy is recommended, without using the endothermic engine at high speeds.

### 5.2 Refuelling

The cap of the fuel tank is located above the tank of the machine. The tank must be filled with suitable fuel (unleaded petrol). The tank cap is screwed: for opening you must rotate it counter-clockwise (as shown in the figure), then remove the cap.



**ATTENZIONE**

**Refuelling**

**When refuelling, be careful not to spill the fuel. Spilled fuel or fuel vapors may ignite. If fuel is spilled, wipe the affected part immediately.**

After refuelling, screw, , the tank cap turning it clockwise and make sure it is closed properly. At the start of the engine move away from fuel tanks.



**PERICOLO**

**Danger of burns**

**During fuelling:**

- **Turn off the engine.**
- **Do not approach naked flames or other heat sources.**
- **Do not smoke.**



**Contact/inhalation hazard**

**During refuelling, avoid prolonged or repeated contact of fuel with skin and do not inhale its vapours.**

### **5.3 Checks before starting the engine**

Check the work place, the floor and the direction to follow. The substrate must have a consistency that allows the operator to walk across, leaving only a small footprint.

Never start work without having a clean workspace, a space to stay and an escape route clear of obstacles in the event of errors. Keep people and animals at least 2 m away from the work area.

Inspect the power trowel looking for signs of wear, loosening, or damaged parts. Never use the power trowel in case of visible damage, incorrect repairs or lack of parts.

### **5.4 Preliminary functional checks**

Before each use, the operator must check the safety state of the power trowel. Therefore, carry out the following inspections before getting into the command post.

- Check that all the elements of the machine are fitted correctly.
- Check that all screws and other blade fasteners are properly tightened.
- Check for any damage and the wear of the blades of the power trowel, the cruise, the frame and clamping screws.

Check the efficiency and the good condition of all commands, in particular:

- That the accelerator is working and that the engine switches off when the man lever is released.
- That the protections around the wheel and the drive belt are correctly fastened, in order to avoid the risk of contact with moving parts.
- Check that the handles of the machine are clean and there are no residues of oil, fuel, grease, dirt, etc.
- Make sure there is no dirt or foreign bodies deposits on electrical



connections.

- Make sure there is no dirt or other impurities on the engine.
- That the off switch stops the engine when activated.

**ATTENZIONE****Functional checks**

**Do not use the machine if any abnormalities are detected during the preliminary functional checks. Any faults found must be remedied by an authorised repairer.**

## 6 USE OF THE POWER TROWEL

The Power trowel for concrete pavements L030001 is designed and built for the smoothing of concrete substrates. The rudder for steering can be folded to reduce the encumbrance of the machine. During smoothing operations, the tools, consisting of 4 blades, follow a rotary movement with vertical axis. The blades are equipped with screw-down device for adjusting the angle of the blades, thus allowing different kinds of processing on concrete with different degree of humidity and therefore hardness.


***The Power trowel is a device that can cause serious injury if not used properly, it can be used only by adults who have a high level of concentration.***

1. **Power trowel for concrete pavements L030001 is a dangerous appliance.**
2. **Use is prohibited for children under 18 years and persons incapable of understanding or with mental health problems.**
3. Do not take alcohol or drugs prior to use the power trowel, do not use when you are tired or took medicines that cause drowsiness, however when you are not able to have a sufficient degree of attention and use the power trowel safely.
4. Avoid starting the endothermic engine indoors or with poor air circulation. Exhaust fumes are poisonous.
5. Always use the power trowel wearing the appropriate personal protective equipment: anti-slip shoes, gloves, visor for the face or glasses, work overalls, ear muffs.
6. Do not use the power trowel when the ground is slippery or when there are other conditions that prevent the operator a stable posture.
7. Do not use the power trowel at night, in case of dense fog or low visibility in the area where you are working.
8. Do not use the power trowel in the rain, during storms, especially if with lightning, in the presence of gusts of wind, of strong wind and adverse weather conditions.
9. Before using this appliance for the first time, learn the way of


working together with an experienced operator.

10. Always use the techniques described in this manual.
11. Tiredness, digestion of too abundant food and the physical or psychological discomfort decrease levels of attention, a small distraction can lead to a serious accident.
12. Keep the manual handy for future reference.
13. In case of sale, rental, transfer of the power trowel to third parties provide this operating and maintenance manual too.

14. Replace worn and/or damaged parts, check that the seals are functioning correctly before use. Eventually, if necessary, have the power trowel checked by Customer Service.
15. Workers responsible for use of this machine must have all necessary information and education and must receive appropriate training about safety with reference to:
  - the conditions of use of the equipment;
  - foreseeable abnormal situations pursuant to art. 73 Lgs. Decree 81/08.

	<b>ATTENZIONE</b>	Precautions for use and security policy
<p><b>The Power trowel for concrete pavements L030001 is not intended for uses other than those listed! Any malfunctions or premature wear of the blades due to incorrect use, are not to be attributed to manufacturing defects of the device.</b></p>		

Before starting it, make all the checks indicated in the previous chapter and keep yourself always concentrated during use, for your safety and the safety of other people.

	<b>PERICOLO</b>	Injury hazard
<p><b>Before starting the Power trowel for concrete floors L030001:</b></p> <ul style="list-style-type: none"><li>• <b>Check that all commands are perfectly functional.</b></li><li>• <b>Wear the appropriate personal protective equipment (PPE) such as gloves, headset, goggles, overalls and working boots.</b></li><li>• <b>Check that blades are resting on the ground.</b></li></ul>		

## 6.1 Starting the engine

Before starting the engine, move away from containers of liquids or flammable materials.

Every first use, to start the engine you must:

1. Check that the tank is full of fuel and open the fuel tap.
2. Check that the power switch is in the ON position (I) to allow the engine start.
3. Check that there are no objects between the blades.
4. When starting from cold, pull the starter control (if any). So the engine will remain slightly accelerated.
5. Keep the power trowel stopped on the ground while in driving position.
6. Pull the man lever with the fingers of the left hand.
7. Start the engine by pulling the starter rope (on the engine side) until you feel some resistance, then pull hard.



**ATTENZIONE**

**Starter rope**

**Do not allow the rope knob to return suddenly and beat against the starter. Bring it back slowly into position so as to prevent damage to the starter mechanism.**

8. After start-up, allow the engine speed to stabilize for about 1 minute, then remove the starter's command, if inserted.
9. After the engine has warmed up, the power trowel is ready for operation. At minimum the centrifugal clutch is opened and the blades do not rotate, then with engine acceleration, the clutch engages and the blades begin to rotate dragged by the drive belt.

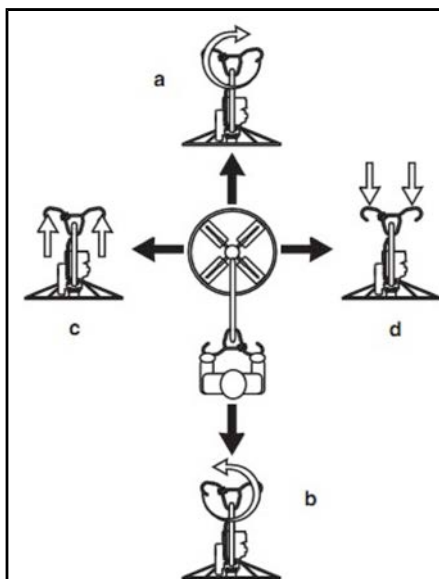
**PLEASE NOTE:** In case of non-start, try up to 10 times. If the engine has not started, remove the starter and wait for a few minutes, then try again. With the hot engine may not be necessary to insert the starter.

## 6.2 Engine shutdown

The engine shutdown is made by moving the switch to the OFF (0) position once you have brought back the rpm to the minimum.

### 6.3 Moving the machine during operation

During use with rotating blades the machine can be moved easily in all directions following the instructions shown in the following figure.



To move the power trowel forward, turn the handlebars clockwise (a). To move backward, turn the handlebars counter-clockwise (b).

To move the power trowel leftward slightly raise the handlebars (c). To move to the right, press down gently on the handlebars (d).

### 6.4 Preparation of the work area

In the case of work on public land, open to the movement of pedestrians and vehicles, it is necessary to delimit the work area with barriers or roadblocks, at least 2 m away from the area to be treated.

Prepare the concrete as for a manual smoothing and make sure you have a well levelled surface. When the concrete has become so hard to allow the operator to walk over it, leaving only a small footprint, you can start the roughing operation if desired after mounting the smoothing disk to have the effect of plastering trowel.

## 6.5 Smoothing disk mounting

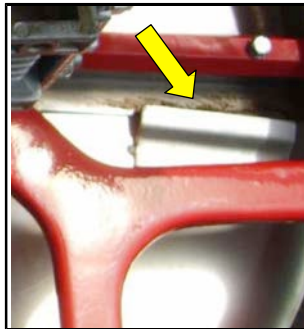


**ATTENZIONE**

**Dangerous movements**

**Mounting and dismounting of the smoothing disk must be carried out with the machine turned off. The rapid rotation of the blades before fitting may result in damage to the disk system.**

1. Before assembling the smoothing disc adjust the blades horizontally, i.e. resting on the ground.
2. Place the disc on the ground with the smooth and flat part on the floor.
3. Manually move the power trowel over the disc and fit the four blades in the special joints present on the disk.
4. Make a small move on the floor to make sure that the disk and the blades are correctly joined.



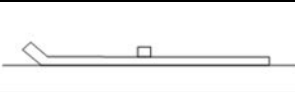
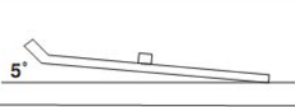
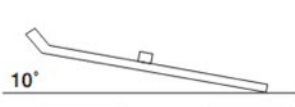
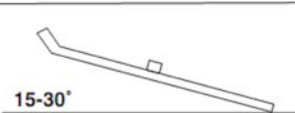
Disassembly is obtained by unlocking the blades from joints and removing the power trowel from above the disk.



## 6.6 Inclination of the blades

When you are not using the smoothing disc you can set the angle of the blades by turning the adjustment screw clockwise to increase the angle and counter clockwise to decrease it.


The recommended inclination for smoothing steps are shown in the following illustration.

1	
2	
3	
4	

- |                                    |                                |
|------------------------------------|--------------------------------|
| 1 Wet surface                      | → no inclination               |
| 2 From wet to plastics             | → minimum inclination (5°)     |
| 3 Plastic work                     | → medium inclination (10°)     |
| 4 Semi hard to hard finishing work | → maximum inclination (15-30°) |

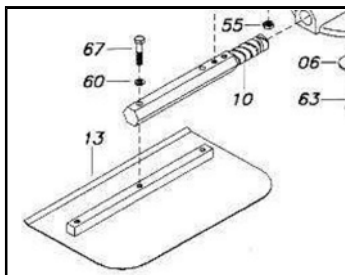
## 6.7 Blade replacement

The machine comes complete with 4 blades already fitted on the machine; it is possible to order additional blades to run a different kind of work or for replacement due to wear.

	PERICOLO	Injury hazard
<ul style="list-style-type: none"> <li>• The replacement of the blades must be carried out with the engine switched off and disconnected from its power source.</li> <li>• The machine also must be supported so that it cannot fall when raised for the operation.</li> </ul>		

A finishing blade is available: built with special carbon steel is suitable to perform the last step to get an optimal smoothing. It is recommended to use it after smoothing the surface previously with the smoothing disk.

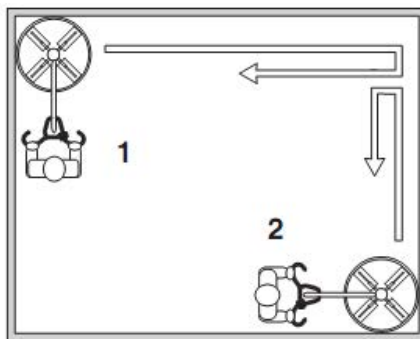
1. Overturn the shutdown machine so that the blades are easily accessible.
2. By unscrewing the screw 67 on each blade, these can be removed from the machine.
3. Place the new blades and secure them with the screw 67.




- Finishing blade: it can be used on both sides, so it is recommended that you use them both before replacing it
- Smoothing disk: it is mounted under the blades and dragged in rotation by 4 large hooks . Make sure that the blades are inserted into the hooks before starting work.

## 6.8 Using the power trowel

1. Start the engine of the machine as described previously.
2. Depending on the surface to be treated it is necessary to adjust the angle of the blades, or mount the smoothing disk, as explained above until you reach the required blade angle.
3. To move the machine follow its movements as mentioned previously, keep always at reasonable distance from the moving blades.
4. It is recommended that each series of passes is made at  $90^\circ$  with respect to the previous series. In this way it is easier to avoid the formation of bumps on the surface of the floor. The following illustration shows that the second pass (2) was made at  $90^\circ$  in relation to the first one (1).




5. The first phase of work, as soon as the floor is accessible, is roughing, it is performed by holding the blades flat. It is preferable to slightly tilt the blades by rotating the hand wheel clockwise during the last pass to avoid frictional effects that create during the straightening of a still damp pavement. The working speed to be used is the lowest allowed by machine.
6. Then the finishing phase is done: it starts when the floor is slightly hardened. It is necessary to tilt the blades more, as explained above, and then increase the inclination after each pass and increase the speed of rotation.

	<b>PERICOLO</b>	Injury hazard
<ul style="list-style-type: none"> <li>• <b>While the engine is running hold the handles with both hands.</b></li> <li>• <b>Keep the power trowel running away from your body and from other people.</b></li> <li>• <b>Do not touch the silencer and the engine at the top of the power trowel when the engine starts and immediately after switching off: these parts reach high-temperature!</b></li> <li>• <b>Always switch off the engine before cleaning and inspection.</b></li> </ul>		

7. After work is finished, stop the engine, move the machine away from the floor just finished and provide an accurate cleaning of the blades.

### 6.9 Washing and cleaning

It is essential to wash the blades and the grid immediately after use to prevent concrete tracks can scale on metal parts. So with the machine turned off it is necessary to wash with copious amounts of water the parts dirty of concrete, especially the underside of the blades. At the end of the cycle dry as much as possible the machine to avoid possible corrosion starts.


	<b>PERICOLO</b>	Injury hazard
<ul style="list-style-type: none"> <li>• <b>Cleaning must be performed with the machine turned off.</b></li> <li>• <b>In case of inclination of the machine to clean the underside of the blades, make sure to support it so that it cannot fall.</b></li> <li>• <b>Do not touch the silencer and the engine at the top of the power trowel, immediately after switching off: these parts reach high-temperature!</b></li> </ul>		

In order not to damage or impair the functioning of the various components, especially of electrical parts, the external cleaning of the rest of the machine must be done with a rag or a bucket and a sponge. It

is absolutely forbidden to direct jets of water under pressure to the electrical parts, the engine, the carburettor, air filter, silencer outlet and the tank cap. Before starting the power trowel, dry it completely and check that there is not residual moisture on electrical components.


## 7 MAINTENANCE

### 7.1 General Information

	<b>PERICOLO</b>	Injury hazard
<p><b>During all maintenance work, follow the appropriate security measures. In this respect see the indications on page 11.</b></p> <p><b>All maintenance operations must be performed with the engine off and cold and with the power trowel resting on a stable shelf.</b></p>		

To maintain full functionality of the power trowel for concrete pavements L030001 for a long period, it is necessary to carry out maintenance as prescribed, with propriety and professional skills. The failure caused by insufficient or inadequate maintenance can lead to extremely high repair costs and long periods of inactivity of the machine.

After each maintenance intervention it is required to check the perfect operation of all commands.

	<b>ATTENZIONE</b>	Negative check
<ul style="list-style-type: none"><li>• <b>If even a single check is negative, DO NOT USE the Power trowel for concrete pavements L030001.</b></li><li>• <b>Immediately activate all the measures to run a proper repair, and if necessary, contact the Customer Service.</b></li></ul>		

Due to the different conditions of service it is not possible to determine in advance the frequency needed for wear state control, inspection, maintenance and repair. On the basis of operating conditions it is necessary to define a proper inspection procedure. It is advisable however a complete inspection at least once a year; the Isoplam S.r.l. service is at your disposal to provide additional advice.

This manual does not examine information concerning disassembly and

maintenance, since these operations will be done always and exclusively by the customer service staff of Isoplam S.r.l.

Moreover this manual, does not speak about the endothermic engine maintenance, explained in the manufacturer's manual.

The Customer Service is able to provide all information and to respond to all requests to treat and maintain concrete floor power trowel L030001 perfectly efficient.

In case of installation of non-original parts the guarantee loses validity!

## **7.2 Maintenance and checks before each use**

### *7.2.1 Control of the labels and pictograms*

Check the readability and the presence of the CE label and warning stickers applied to the power trowel bodywork.

### *7.2.2 Operating control*

1. Check proper operation of all parts of the power trowel; in particular of use and emergency commands.
2. Also check the tightening of all bolts of the machine, in particular those of the guards of the transmission belt and blades.
3. Check the wear of the blades and of the protection grid.
4. Check the possible presence of foreign bodies on the blades.

### *7.2.3 Refuelling*

1. Unscrew the tank cap by turning it counter-clockwise, then remove the cap.
2. Check the fuel level.
3. If the fuel level is low, refill the tank with unleaded petrol.
4. Completed refuelling, screw the fuel cap and make sure it is closed properly.





**ATTENZIONE**

Refuelling


**During refuelling, make sure not to spill it. Spilled fuel or fuel vapors may ignite. If fuel is spilled, wipe the affected part immediately.**



	<b>PERICOLO</b>	Danger of burns
<b>During refuelling:</b>		
<ul style="list-style-type: none"><li>• <b>Stop the engine;</b></li><li>• <b>Do not approach naked flames or other heat sources.</b></li><li>• <b>Do not smoke</b></li></ul>		

	<b>PERICOLO</b>	Contact/inhalation hazard
<b>During refuelling, avoid repeated or prolonged contact with the skin and avoid inhaling vapours.</b>		

### 7.3 Control of transmission belt

	<b>ATTENZIONE</b>	Safety during maintenance of the machine
<b>Before starting any intervention on the belt, completely turn off the machine and insure against accidental ignitions. Put the machine in a stable position, resting it on the ground.</b>		

The drive belt is located behind a plastic cover to protect it from dust and dirt, located in the left front of the machine. The toothed belt is tensioned automatically when inserting the centrifugal clutch.

Every 50 hours of work check the status of the belt that must not have frayed, damaged parts and small missing pieces and, if necessary, contact the customer service for replacement.

## 8 TECHNICAL ASSISTANCE AND SPARE PARTS

If you need technical assistance or urgent delivery of spare parts, please quote the following information:

- Power trowel type;
- Registration number;
- Year of construction;
- Quality and quantity desired.



**ATTENZIONE**

Original spare parts

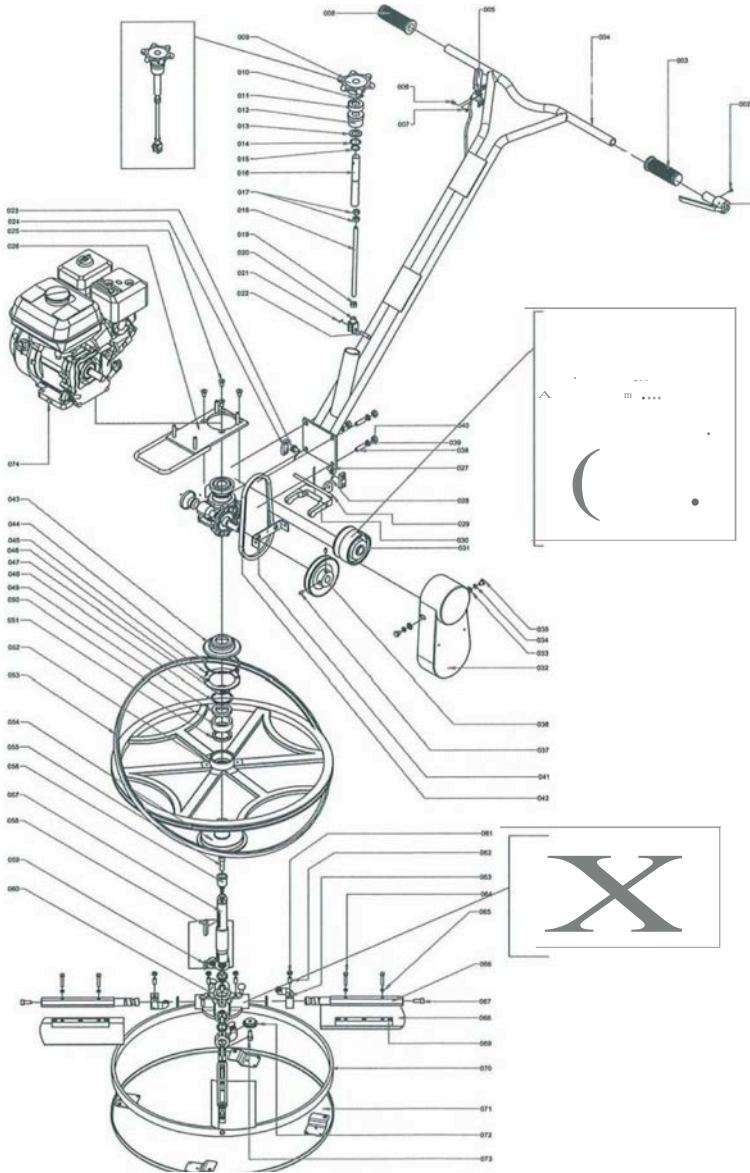
**The manufacturer is exempt from all responsibility for damage of any nature caused by the use of non-original spare parts.**

### 8.1 Wiring diagrams

TELEMECANIQUE  
GV2 M16 9-14A  
230V 1 PHASE

TELEMECANIQUE  
GV2 M10 4-6.3 A  
400V 3 PHASES

## 8.2 Spare Parts



## **9 WAREHOUSE STORE**

In the event that the power trowel should be stored and conserved for long periods of inactivity, do the following:

- Repair it in dry and ventilated place, then cover it with a protective non plastic cloth.
- Perform a general cleaning of power trowel and blades.
- Close the silencer exhaust hole with a rag to prevent moisture and remove the fuel from the tank, also remove the spark plug, clean it, then screw it back.
- Protect the exposed electrical contacts with antioxidant products.
- Grease all surfaces not protected by paints or anti-corrosion treatments.

## 10 DISPOSAL OF MATERIALS AND COMPONENTS



**ATTENZIONE**

Disposal of materials

The disposal of packaging, waste, of parts replaced, of the power trowel as a whole at the end of its planned life, must be carried out in respect for the environment; avoid polluting soil, water and air, respecting in any case national and local legislation in force on this matter.

### *Indications for the treatment of waste:*

- Ferrous materials, aluminium, copper: they are recyclable materials to deliver to an authorised collection point ;
- Plastics, fibreglass, seals: they are materials to deliver to landfills or to fit recycling centre;

Divide materials according to their nature, delivering them to specialized companies authorized for disposal, according to what is prescribed by law.



## 11 WARRANTY RULES

Power trowel for concrete pavements L030001 is guaranteed for 24 months from the date of purchase. The guarantee provides for free replacement of any defective or prematurely worn out part provided that all the requirements have been met and there is no misuse of the power trowel. The manufacturer's obligations are limited to the replacement of defective parts.

General wear and tear materials are not covered by the warranty except in case of initial manifest defects: ex. the smoothing blades.

*Isoplam S.r.l.* does not assume any responsibility for damages to objects and persons caused by improper use of the **power trowel**.

## 12 TROUBLESHOOTING

The following table shows the main problems that may occur during operation.

<b>Table 4 – Faults/Diagnostics</b>		
<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>
The endothermic engine does not start.	A) Lack of fuel B) Power switch on 0 C) Dirty spark plug. D) Air or fuel filter clogged E) Flooded engine  F) Present man switch	A) Check tank level. B) Move switch to 1.  C) Clean or replace the spark plug D) Clean or replace the filter  E) Remove the spark plug and then vaporize the fuel from inside the cylinder F) Make sure that the present man lever is pressed
The endothermic engine tends to shut down.	A) The engine floods and shuts down while accelerating B) Air or fuel filter clogged C) Silencer clogged  D) Fuel shortage	A) Remove the starter B) Clean the clogged filter C) Contact Customer Service for replacement D) Check reservoir level
The endothermic engine does not	A) Accelerator Lock	A) Check the cable path
Blades rotate even at minimum rpm of the engine	A) Minimum RPM too high B) Centrifugal clutch damaged	A) Check the RPM and bring it back to the value provided by the manufacturer B) Contact Customer Service for replacement
The machine sends an excessive vibration	A) Imbalance caused by the bending of an arm of the cruise	A) Contact Customer Service for replacement
Noisy operation	A) Defective bearing. B) Bad toothed belt tension C) Silencer damaged  D) Faulty engine	A) Contact Customer Service for replacement. B) Check and correct belt tension C) Contact Customer Service for replacement D) Contact Customer Service for replacement

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