

fiorenttini

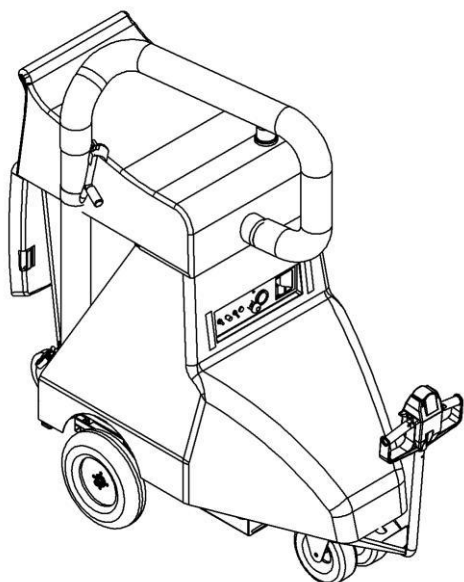
CE

rev.00



**Operating
instructions**

**ASPIRIK
Battery version**



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1 Safety Guidelines

This document contains important safety information regarding the appliance, together with a guide for correct use. This instruction manual should be read carefully and in full before starting up the appliance for the first time. Keep the instructions for further reference.

1.1 Symbols used to distinguish the instructions

DANGER



An imminent hazard that can cause serious or irreversible injuries, or even death.

WARNING



A potential hazard that can lead to serious or irreversible injuries, or even death.

CAUTION



A potential hazard that can lead to minor injuries.

1.2 General instructions

If any damage due to transport is discovered when unpacking, you should immediately inform your dealer.

Read the operating manual before using the machine and pay particular attention to the safety guidelines.

The warning labels on the machine provide important information for safe use.

In addition to the operating instructions and mandatory regulations for the prevention of accidents in the country of use, general rules for safety and correct use should be observed.

1.3 Driving procedures

DANGER



Risk of tipping over on steep slopes.

- When in driving mode, do not drive or manoeuvre on gradients steeper than 10%.

For short straight runs, gradients of over 30% may be negotiated with the waste container empty (e.g. truck ascent ramps). In any case, avoid manoeuvring on gradients steeper than 10%.

DANGER



Risk of tipping over while turning at speed.

- Take bends at reduced speed.

DANGER



Risk of tipping over on unstable ground.

Only drive the machine on stable paved surfaces.

DANGER



Risk of tipping over due to excessive lateral inclination.

- Do not drive diagonally across gradients steeper than 10%.
- Comply with the general rules, regulations and provisions applicable to motor vehicles.
- The operator must use the machine in accordance with its intended use. When driving, you should be aware of the conditions in your surroundings and pay attention to third parties (particularly children) while using the machine.
- The machine should only be used by personnel trained in its use or with proven capability of using it and expressly appointed to do so.
- Prior to use, the appliance should be given a test run in a non-public area.
- it is prohibited for children or minors to use the machine.
- Transport of people is not permitted.
- To prevent the appliance from being used by unauthorised persons, remove the ignition key.
- The operator must only leave the machine after having switched it off, immobilised it, applied the parking brake and removed the ignition key.

1.4 Equipment with an electric motor

CAUTION



Before starting the machine for the first time, read the operating manual provided by the manufacturer Ing.O.Fiorentini S.p.A.

Pay particular attention to the instructions

regarding safety.

DANGER



Risk of explosion.

- Smoking or use of naked flames is prohibited.

1.5 Compliant and Intended Use

This light waste vacuum cleaner must only be used in accordance with the instructions given in this operating manual.

Before use, ensure that the machine and work equipment are in perfect condition and operating safely. If not, the machine must not be used.

Before starting work, the operator must ensure that all safety devices are properly in place and functioning.

In the standard version (with a coarse filter) the machine is suitable for vacuuming light waste (e.g. beverage cans and bottles, cigarette packets etc.).

This machine is designed for vacuuming dirty surfaces in outdoor areas.

The machine is not suitable for vacuuming and collecting dust that is harmful to health.

No changes may be made to the machine.

Never vacuum explosive liquids, flammable gases, or acids and solvents. This includes petrol, paint thinners and diesel oil, which can combine with the air intake to form explosive vapours or mixtures, as well as acetone, acids and solvents, which can corrode the machine materials.

Reactive metal powders (e.g. aluminium, magnesium and zinc) can form explosive gases if combined with strongly alkaline and acidic detergents.

Do not vacuum burning or smouldering objects.

It is prohibited to stop in hazardous areas.

It is prohibited to use the machine in potentially explosive environments.

Keep the machine away from all highly inflammable substances.

Protect the machine from frost.

Any other use is considered improper use. The manufacturer accepts no liability for any damage caused by such use. Any such use is exclusively at the user's own risk. Proper use includes operation, maintenance and appropriate repairs as specified by the manufacturer.

1.6 Symbols displayed on the machine

The following symbols are displayed by means of adhesive labels on the external surfaces of the machine. Their presence is essential to ensure its safe use.

The operator is responsible for the replacement of any labels that are missing, damaged or illegible due to wear. A description of the symbols is given below, together with codes for ordering the respective labels.

Code ET054



Risk of crushing. Keep hands away from moving machine parts or wait until all moving parts have stopped.

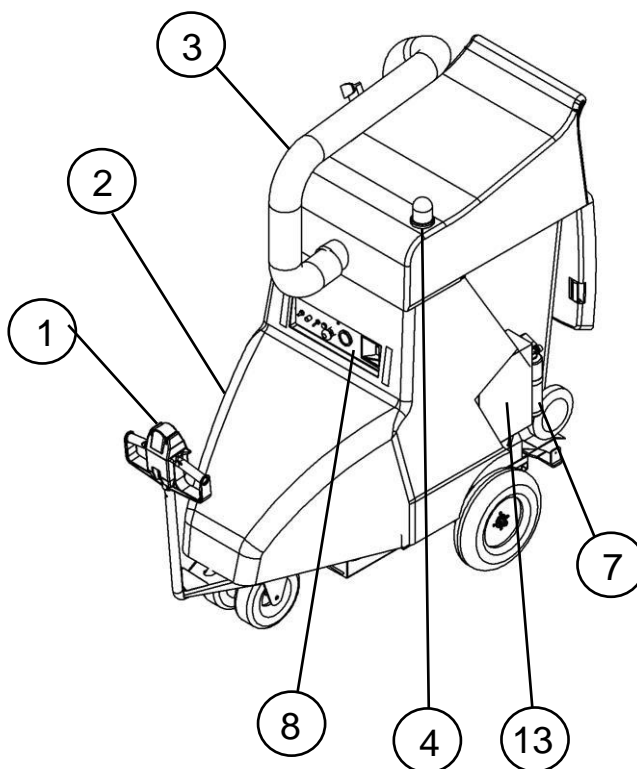
Code ET065

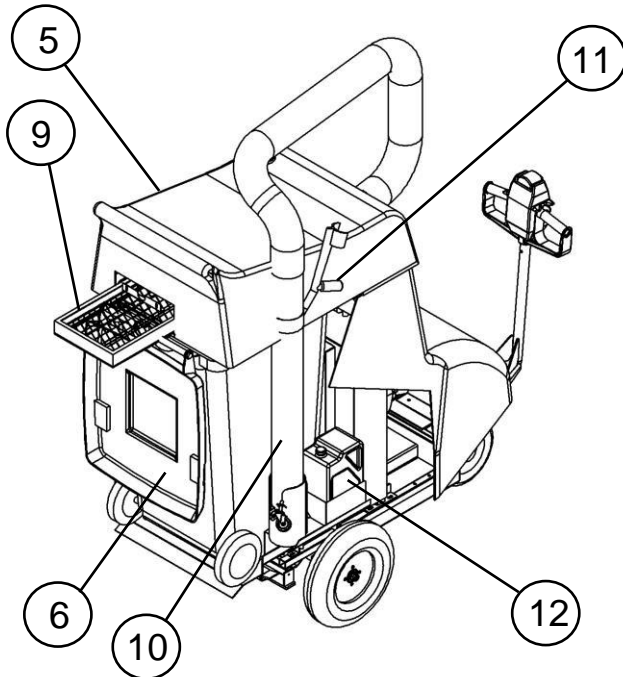


Risk of fire. Do not smoke or use naked flames near the machine. Keep all highly inflammable materials and substances away from the machine.

Description

2.1 Controls and functions





1. Control arm
2. Bonnet
3. Flexible vacuum hose
4. Flashing beacon
5. Vacuum head
6. Waste container
7. Extinguisher
8. Dashboard
9. Air intake filter
10. Rigid vacuum tube
11. Handle
12. Dust suppression water tank
13. Storage compartment

2.2 Identification Plate

ING. O. FIORENTINI spa Loc. Rombola 50030 - Piancaldoli (FI) Tel. 0558173610 - Fax. 055817144		MADE IN ITALY	CE
A.E.E.n.IT12010000007391			
Mod. ASPIRIK	S.N. 160600536	X	
V 24	Hz -	2	
Unladen Mass 300 kg	A 92 W 2200	0	
		1	
160600536		6	

The machine is identified by means of a self-adhesive plate on the bonnet displaying indelible details related to "CE" marking.

The plate must never be removed and should always be kept legible. In case of damage, a duplicate should be ordered. The machine may not be sold without the plate.

3 Before Putting into Service

3.1 Unloading the machine

DANGER



Risk of injury and damage.

Do not use any forklift device to unload the machine. Proceed as follows:

- Open the cardboard packaging.
- The machine is fixed to a wooden platform with strapping and chocks to immobilise the wheels.
- Cut the straps and remove the chocks. The machine can then be moved and pushed down from the platform.
- The machine can be moved in two ways: with or without the drive mechanism engaged.

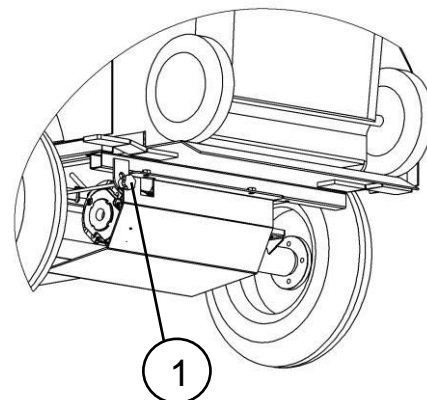
DANGER



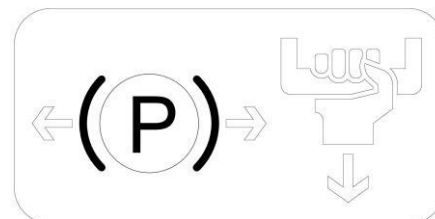
Risk of injury and damage.

Before releasing the drive mechanism, hold the appliance firmly so that it cannot move accidentally.

The knob for the releasing the electric brake is at the bottom left at the rear of the machine (see figure below item 1). Pull the knob towards you.



A label with the symbol P has been placed on the chassis to help you locate the exact position.



This allows the machine to move freely.

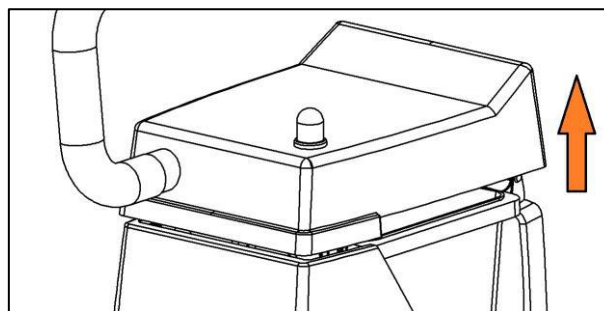
Do not move the machine with the drive disengaged for long stretches or at speeds of more than 6 km/h.

3.2 Drive Engaged

Start the machine and move it using its electric drive (see following paragraph).

Carefully descend from the packaging platform.

The machine should only be moved using its drive if unpacked in an open space.



4 Putting into Service

WARNING

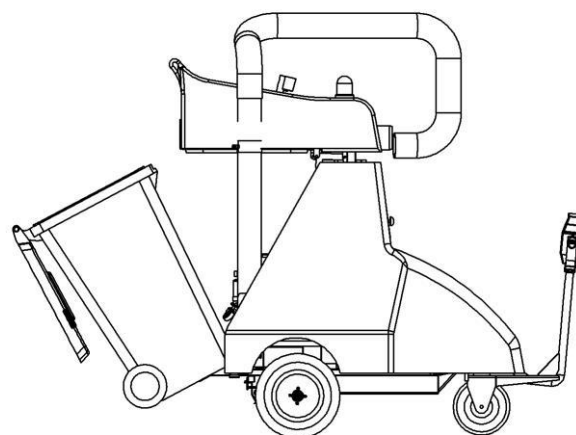


Position the machine on a level surface.

4.1 Checks

See the "Care and Maintenance" chapter for performing the following checks.

Empty the waste container.



4.2 Positioning the Waste Container

WARNING



The waste container must be positioned while the machine is stationary.

To insert and remove the DIN EN 840-1 standard waste container, the vacuum head must be raised.

Press the button on the control panel to move the head.

The electric control for the head is only enabled when the ignition key is in the ON position.

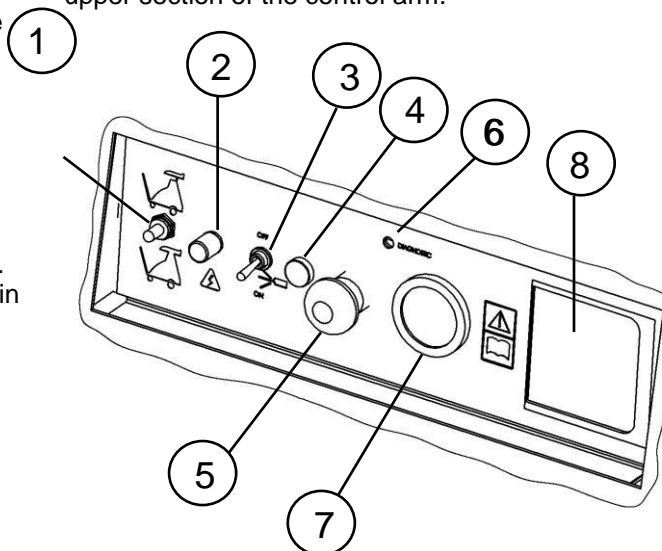
The head cannot be raised or lowered while the motor is running. The motor can start only if the head is properly engaged on the waste container. In any case, the waste container must be placed in position with the engine off.

When positioning the waste container below the vacuum head, ensure that the gasket on the head fits snugly around the edge of the bin.

5 Operation

5.1 Starting the machine and dashboard instruments

The machine is started by turning the key on the upper section of the control arm.



When the machine is turned on, the flashing beacon and time meter are activated.

If the battery level is at minimum, the board intervenes by locking the drive and displaying the error through the LED flashing on the dashboard.

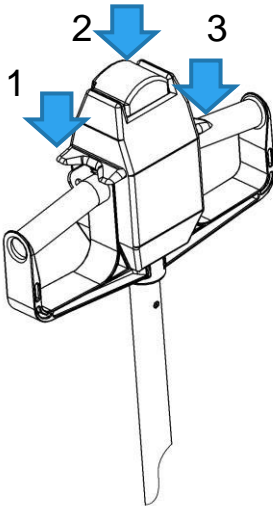
The dashboard is positioned in front of the operator and contains the devices for managing the vacuum cleaner:

1. Switch for raising/lowering the top cover
2. Motor protector
3. On/off switch for the dust suppression water pump
4. Green machine-on light
5. Emergency button
6. Diagnostics LED
7. Battery level indicator + time meter
8. Battery charger 220V-24V 14A

5.2 Driving

To reverse the machine, press the lever on the rear section (1), and to go forward, press the lever on the front section (3).

On top of the control arm is a red crush-prevention device (2), which allows the operator to not be overwhelmed by the industrial vacuum cleaner; when it is pressed, the machine moves forward a couple of metres.



Guide the machine in the desired direction by turning the control arm to the left or right while remaining always in front of the machine: it is advisable to guide the machine with the left hand and hold the vacuum tube in the right.

DANGER



Do not attempt to pass over fixed obstacles higher than 50 mm.

Maintain a balanced position and avoid standing on unstable supports when



using the appliance.

Do not point the vacuum towards persons or animals.

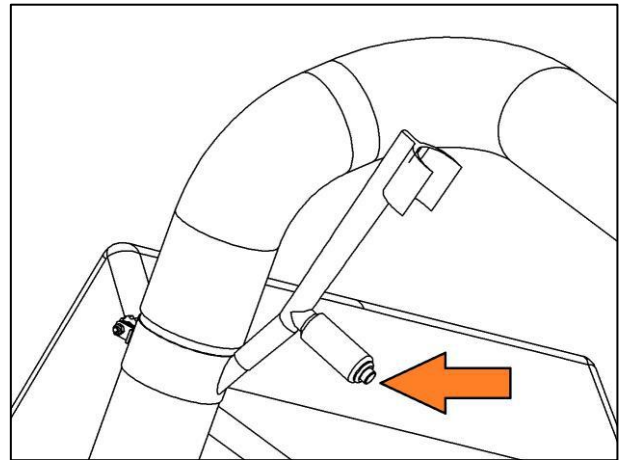


5.3 Vacuuming

During use, empty the waste container or replace it with an empty one at regular intervals.

Remove the vacuum hose from its support and hold it by the handle.

Press the button on the handle to start the vacuum flow. When it is released, the vacuum fan ceases to operate.



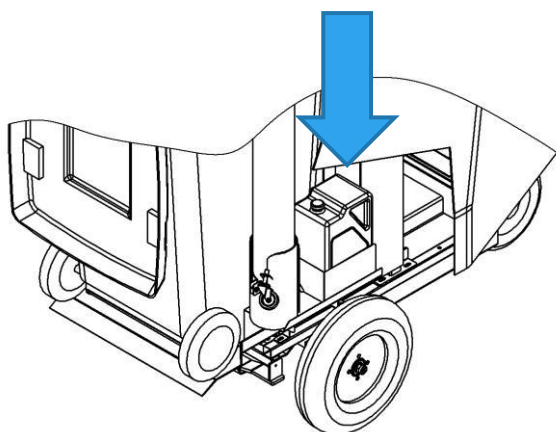
Replace the vacuum hose in its support after vacuuming.

5.4 Dust Suppression

The dust suppression function is enabled by the switch on the dashboard. The green light indicates that the function is enabled.

Each time the vacuum button is pressed, a nozzle inside the vacuum head sprays a small quantity of water for about three seconds. The duration of the spray is independent from the length of time the vacuum button on the vacuum hose handle is pressed.

Fill the water tank located on the vacuum tube support at regular intervals (see figure below).

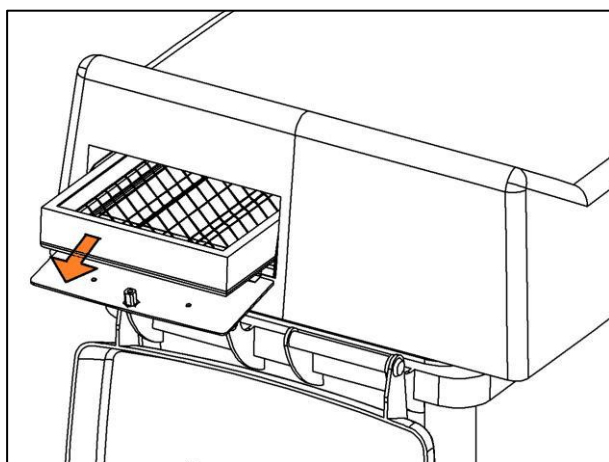


5.5 Cleaning the Filter

Clean or replace the filter whenever there is a decrease in vacuum power.

Open the filter door on the rear of the vacuum head.

Remove the filter and clean it with compressed air and by shaking it or replace it if the filter material is excessively dirty.



5.6 Stopping

The machine can be stopped by releasing the lever on the rudder, which puts it into neutral.

When the ignition key is turned to OFF and removed, the drive motor also stops.

WARNING



If none of the above actions stop the machine, it can be halted by pressing the red emergency button on the dashboard.

If the device is not to be used for some time, the following steps should be taken:

- Place the machine on a level surface;
- Lock the drive by applying the parking brake.
- Check the battery connection cables
- Turn the ignition key to OFF and remove it.
- Clean the inside and outside of the machine.
- Store it in a sheltered and dry location.
- Disconnect the battery.
- Charge the battery about every 2 months.

5.7 Transport

DANGER



Make allowance for the weight of the machine during transport.

DANGER



For transport on vehicles, secure the appliance in accordance with current regulations so that it cannot slide or overturn.

Ensure that the appliance is immobilised by securing it with belts and ropes.

The ropes must pass through the tubes on the machine chassis, which protrude from beneath it.

Block the wheels with wedges.

The machine must not be lifted by means of belts. For loading and unloading, provide a ramp and use the drive of the machine itself.

5.8 LED Diagnostics

The flashing code of the diagnostics LED on the dashboard is as follows; count the number of flashes until the first long pause. The flashing stops when the cause of the alarm is removed or, in certain cases, when the key is switched off and on again.

No. of flashes	Label	Description
1	Hardware	Fault in the regulator

2	Low battery	The battery voltage has dropped below the minimum of 18 volts required for the regulator to function	9	Alarm memory defect	Error in the parameter settings, in this case the default settings will be restored the next time the machine is switched on
3	Max temp. limit	The temperature of the device has reached 90°	10	Field overcurrent	The current in the field exceeds the set limit
4	Potentiometer error	During the initial check, the potentiometer was found to be out of calibration or to have a terminal disconnected	11	Lifting overcurrent	The lifting current exceeds the set limit
5	Defective current sensor or abnormal field current	Abnormal field current reading, possible field power cable connection error.	12	Armature overcurrent	The current in the armature exceeds the set limit
6	Motor in gear	When the key is switched on, the drive motor is detected as being in gear, check the wiring and gear contacts.	13	Field disconnected	During the initial checks, the drive motor field was found to be disconnected, check the wiring and the condition of the field winding.
7	Micro pump switched on	When the key is switched on, an activated raise or lower command is detected.	14	Armature disconnected	During the initial checks, the armature of the drive motor was found to be disconnected, check the wiring and that there are no interruptions inside the motor.
8	Sensor current failure or abnormal armature current	Abnormal current reading on the armature, possible field power cable connection error.			

15	Pump disconnected	During the initial checks, the lifting motor was found to be disconnected, check the wiring and that there are no interruptions inside the motor.
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- Clean the gasket on the vacuum head.
- Check the readability and presence of the CE plate and the warning stickers on the machine body.
- Clean the filter

Weekly maintenance:

- Check that the moving parts move freely.
- Clean the machine.
- Check that the vacuum fan rotates properly.
- Check the tightness of the fan hub.
- Check the running of the electric motors, ensuring that there is no hissing and/or abnormal noises.

6 Care and Maintenance

6.1 General Guidelines

Before cleaning and servicing the machine or replacing components, turn it off and remove the ignition key.

Disconnect the battery when working on the electrical system.

Repairs should only be performed by authorised service centres or by qualified personnel who are familiar with all relevant current safety regulations.

6.2 Cleaning

WARNING



Do not clean the machine with a high-pressure water spray (risk of short circuit or other electrical failures).

DANGER



Wear a dust mask and safety goggles.

Remove the bonnet from the machine for internal cleaning. Clean with a compressed air blower.

The outside of the machine should be cleaned with a soft cloth and a mild detergent. Do not use aggressive detergents.

6.3 Maintenance intervals

WARNING



The operating time meter indicates the maintenance intervals.

The customer is responsible for the following maintenance tasks:

Daily maintenance:

- Check that all the controls are working.

WARNING



All servicing and maintenance under the customer's responsibility must be performed by a qualified technician.

The following maintenance operations are to be carried out by the customer support service:

- A first inspection after 20 hours.
- Maintenance every 100 hours of operation.

For warranty purposes, all servicing and maintenance during the warranty period should be carried out by the *Ing. O. Fiorentini S.p.A.* authorised service.

6.4 Battery maintenance

DANGER



Risk of explosion.

Never place tools or other objects on the battery, the terminals or the battery element connections. If they are conductive, they could cause a short circuit and trigger an electric arc.

Provide adequate ventilation during charging to dispel possible explosive

gases produced by the battery.

Always follow the instructions for the battery charger.

The machine is equipped with four 6V gel batteries connected in series.

The batteries must be completely removed from the machine for replacement. Gel batteries are sealed and therefore cannot be refilled with electrolyte.

Raise the vacuum head.

Remove the waste container.

Remove the main bonnet from the machine.

Disconnect the batteries from the electrical system by removing the cables from the battery terminals.

Remove them from the support shelf.

Place the batteries on a level surface. To charge the battery, use the battery charger on the machine after carefully reading the instruction booklet.

It should be noted that the four batteries are connected in series and that the system has a rated voltage of 24 Volts.

7 Disposal



All the packaging is recyclable. The packaging must not be disposed of as domestic waste but delivered to the proper collection centres.

Decommissioned machines contain valuable recyclable materials and should be delivered to the proper collection centres. Batteries, oil, and similar substances must not be discarded in the environment. You are therefore requested to dispose of decommissioned machines through segregated collection systems.

8 Warranty

The warranty is valid for 12 months

The manufacturer cannot be held liable in any way for damages resulting from unauthorised modifications made to the machine, the use of unsuitable accessories or usage of the machine other than that which is intended.

9 Accessories and Spare Parts

Only use accessories and spare parts approved by the manufacturer. Original accessories and spare parts ensure that the machine can be used safely and without malfunctions.

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10 Troubleshooting

FAULT	SOLUTION
The vacuum turbine does not work, the electric motor does not start.	Check the electrical connections
	Charge the batteries.
	Replace the fuses.
	Inform the support service.
Insufficient vacuum power.	Check the gasket on the vacuum head.
	Empty the bin.
	Check and clean the vacuum head filter.
	Inform the support service.
Noisy operation.	Lubricate the moving parts.
	Remove or replace the fan and check its fixing.
	Tighten the fan screws.
	Inform the support service.
	Inform the support service.

11 Technical Specifications

General Machine Specifications		
Length x Width x Height	mm	2000 x 940 x 1780
Unladen weight	Kg	300
Total permitted weight	Kg	350
Maximum forward speed	Km/h	4.5
Maximum reverse speed	Km/h	2.7
Maximum negotiable slope	%	30
Waste container volume	l	240
Protection rating	--	IPX3
Power supply		
Gel batteries	--	4x6V = 24V / 240Ah
Tyres		
Front dimensions	mm	2 x Ø260x85
Front wheel pressure	bar	Solid rubber
Rear dimensions	--	8" – 3.50
Rear wheel pressure	bar	Solid rubber
Vacuum System		
Standard version filter surface	m ²	0.23
Fine dust version filter surface	m ²	1.2
Maximum depression	hPa	22.5
Maximum flow rate	l/s	470
Environmental Conditions		
Temperature	°C	0..40
Humidity, non-condensing	%	0..90
Vacuum tube vibrations	m/s ²	0.2
Noise emission at 3 metres	dB(A)	69

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