IT Congratulazioni per aver acquistato questo prodotto, che potrà soddisfare le vostre esigenze ed aspettative. Questo progetto nasce da ZUCCHETTI CENTRO SISTEMI S.p.A. (Azienda certificata UNI EN ISO 9001) software house che, dal 1982, ha consolidato la propria attività e la propria presenza sul mercato internazionale. Applicare soluzioni informatiche avanzate al settore dell'automazione industriale significa ottimizzare le attività produttive e semplificare le procedure di lavoro. E' proprio sulla base della costante attività di ricerca dei laboratori ZUCCHETTI che nasce questo prodotto.

EN Congratulations on having purchased this product, which we are sure will satisfy your requirements and meet your expectations. This is a ZUCCHETTI CENTRO SISTEMI S.p.A. project. Zucchetti (a UNI EN ISO 9001 certified company) is a software house which, since 1982, has consolidated its activity and presence on the international market. Applying advanced informatics solutions for the industrial automation means optimizing production activities and simplifying work procedures. This product derives from the constant research activity of the ZUCCHETTI laboratories.

FR Nous vous félicitons pour avoir acheté ce produit qui pourra satisfaire vos exigences et vos attentes. Ce projet a vu le jour chez ZUCCHETTI CENTRO SISTEMI S.p.A. (Entreprise certifiée UNI EN ISO 9001) maison de logiciel qui, à partir 1982, a consolidé son activité et sa présence sur le marché international. Appliquer des solutions informatiques évoluées au secteur de l'automatisation industrielle signifie optimiser les activités productives et simplifier les procédures de travail. C'est justement sur la base de la constante activité de recherche des laboratoires ZUCCHETTI que ce produit a vu le jour.

DE Wir gratulieren Ihnen zum Kauf dieses Produktes, das Ihre Bedürfnisse und Erwartungen mit Sicherheit erfüllen kann. Dieses Projekt wurde von der Firma ZUCCHETTI CENTRO SISTEMI S.p.A. (zertifiziert nach UNI EN ISO 9001) Software House entwickelt, die seit 1982 ihre Produktion und damit auch ihre Stellung auf dem internationalen Markt immer weiter ausbaut. Durch die Anwendung zukunftsweisender Software-Lösungen in der industriellen Automation werden die Produktion optimiert und die Arbeitsprozesse vereinfacht. Die Entwicklung dieses Produktes basiert auf den stetigen Forschungsaktivitäten der ZUCCHETTI-Labore.

ES Gracias por haber comprado este producto que podrá satisfacer sus exigencias y expectativas. Este proyecto nace de la experiencia de ZUCCHETTI CENTRO SISTEMI S.p.A. (empresa certificada de conformidad con la norma UNI EN ISO 9001), empresa de software que desde el año 1982 ha consolidado su propia actividad y presencia en el mercado internacional. Aplicar soluciones informáticas avanzadas al sector de la automatización industrial significa optimizar las actividades productivas y simplificar los procedimientos de trabajo. Este producto es fruto de la constante actividad de investigación de los laboratorios ZUCCHETTI.

NL Van harte gefeliciteerd met uw aankoop van dit product dat aan al uw eisen en verwachtingen zal voldoen. Dit project werd ontwikkeld door ZUCCHETTI CENTRO SISTEMI S.p.A. (UNI EN ISO 9001 gecertificeerd bedrijf) software house, sinds 1982 actief op de internationale markt waar het een sterke positie verworven heeft. Het toepassen van innoverende computeroplossingen in de sector van industriële automatisering leidt tot optimalisering van de productiewerkzaamheden en werkprocedures. Dit product is vrucht van de continu inspanningen van de vorsers van de ZUCCHETTI laboratoria.

DA Tillykke med dit nye produkt, som vi er overbevist om, vil tilfredsstille alle dine behov og forventninger. Dette projekt blev født hos ZUCCHETTI CENTRO SISTEMI S.p.A. (som er et selskab med UNI EN ISO 9001 certificering) og deres softwarehouse, som siden 1982 har konsolideret sine aktiviteter og sin tilstedeværelse på det internationale marked. Anvendelsen af avancerede it-løsninger indenfor industriel automatisering betyder en optimering af produktionsaktiviteterne og en forenkling af arbejdsprocedurerne.
Det er netop på grund af en konstant forskningsaktivitet hos ZUCCHETTI-laboratorierne, at dette produkt er blevet til.

FI Onnittelemme sinua tämän tuotteen hankkimisen johdosta. Olemme varmoja, että tuote täyttää tarpeesi ja odotuksesi. Tämän tuotteen on kehittänyt ZUCCHETTI CENTRO SISTEMI S.p.A (sertifioitu UNI EN ISO 9001), ohjelmistoalan yritys, joka on perustamisvuodestaan 1982 lähtien vahvistanut toimintaansa ja rooliaan kansainvälisillä markkinoilla. Pitkälle kehitettyjen ohjelmistoratkaisujen käyttö tehdasautomaatiossa tarkoittaa tuotantotoimintojen optimointia sekä työprosessin yksinkertaistamista. Tämä tuote on kehitetty ZUCCHETTIN tutkimuslaboratorioiden jatkuvan tutkimustyön tuloksena.

SV Tack för att ni har köpt denna produkt som kan tillfredsställa era behov och förväntningar.
Detta projekt kommer ursprungligen från ZUCCHETTI CENTRO SISTEMI S.p.A.(AB) programvaruhus (företag certifierat enligt UNI EN ISO 9001) som, sedan 1982, har befäst sin verksamhet och närvaro på den internationella marknaden. Tillämpning av avancerade IT-lösningar inom den industriella automationssektorn innebär en optimering av den produktiva verksamheten och en förenkling av arbetsprocedurerna. Det är just till följd av den konstanta forskningen som pågår i ZUCCHETTI's laboratorier som denna produkt har tillkommit.

IT: Dichiarazione di conformità / GB: Declaration of conformity / FR: Déclaration de conformité
DE: Konformitätsbestätigung / ES: Declaración de conformidad / NL: Verklaring van overeenstemming
DA: Overensstemmelseserklæring / FI: Vaatimustenmukaisuusvakuutus / SV: Konformitetsdeklaration

ZUCCHETTI Centro Sistemi S.p.A. Via Lungarno 305/A Terranuova B.ni (AR) ITALY

EN

IT Dichiara sotto la propria responsabilità che il prodotto modello L50BEU, L50BUS, L50DEU, L50DUS è conforme alle seguenti norme europee :
Sicurezza: CEI EN (50338: 2007-06) - (60335-1: 2008-07)
Compatibilità Elettromagnetica : CEI EN (55014-1: 2008 -01) - (55014-2: 1998 -10) - (55014-2/A1: 2002 -08) - (55014-2/A2: 2008 -12)
CEI EN (61000-3-2: 2007-04) - (61000-3-3: 1997-06) - (61000-3-3/A1: 2002-05)

E' conforme ai requisiti essenziali delle seguenti Direttive :
Direttiva Bassa Tensione 2006/95 CE - **Compatibilità Elettromagnetica** 2004/108 CE - **Rumore Aereo** 2006/42 CE

DE Erklärung in eigener Verantwortung: dieses Produkt der Modelle L50BEU, L50BUS, L50DEU, L50DUS entspricht folgenden europäischen Normen:
Sicherheit: CEI EN (50338: 2007-06) - (60335-1: 2008-07)
Elektromagnetische Konformität: CEI EN (55014-1: 2008 -01) - (55014-2: 1998 -10) - (55014-2/A1: 2002 -08) - (55014-2/A2: 2008 -12)
CEI EN (61000-3-2: 2007-04) - (61000-3-3: 1997-06) - (61000-3-3/A1: 2002-05)

Es entspricht im wesentlichen den Anforderungen folgender Richtlinien:
Niederspannungsrichtlinie 2006/95 EG – **Elektromagnetische Kompatibilität** 2004/108 EG – **Luftschall** 2006/42 EG

DA Erklærer på eget ansvar, at produktet model L50BEU, L50BUS, L50DEU, L50DUS er i overensstemmelse med følgende europæiske standarder :
Sikkerhed : IEC EN (50338: 2007-06) - (60335-1: 2008-07)
Elektromagnetisk kompatibilitet : IEC EN (55014-1: 2008 -01) - (55014-2: 1998 -10) - (55014-2/A1: 2002 -08) - (55014-2/A2: 2008 -12)
IEC EN (61000-3-2: 2007-04) - (61000-3-3: 1997-06) - (61000-3-3/A1: 2002-05)

Er i overensstemmelse med de væsentligste krav i følgende direktiver :
Lavstrømsdirektiv 2006/95 EC - **Direktiv for eletromagnetisk kompatibilitet** 2004/108 EC - **Direktiv for luftbåren støj** 2006/42 EC

EN Hereby declares under their full responsibility that the products, models L50BEU, L50BUS, L50DEU, L50DUS conform to the following European standards:
Safety: CEI EN (50338: 2007-06) – (60335-1: 2008-07).
Electromagnetic compatibility: CEI EN (55014-1: 2008-01) – (55014-2: 1998-10) – (55014-2/A: 2002-08) – (55014-2/A2: 2008-12) – CEI EN (61000-3-2: 2007-04) – (61000-3-3: 1997-06) – (61000-3-/A1: 2002-05)

They conform to the essential requirements of the following Directives:
Low Voltage Directive 2006/95 EC – **Electromagnetic Compatibility** 2004/108 EC – **Aerial Noise** 2006/42 EC

ES Declara bajo su propia responsabilidad que el producto modelo L50BEU, L50BUS, L50DEU, L50DUS es conforme a las siguientes normas europeas:
Seguridad: CEI EN (50338: 2007-06) - (60335-1: 2008-07)
Compatibilidad electromagnética: CEI EN (55014-1: 2008 -01) - (55014-2: 1998 -10) - (55014-2/A1: 2002 -08) - (55014-2/A2: 2008 -12)
CEI EN (61000-3-2: 2007-04) - (61000-3-3: 1997-06) - (61000-3-3/A1: 2002-05)

Es conforme a los requisitos esenciales de las siguientes Directivas:
Directiva de baja tensión 2006/95 CE - **Compatibilidad electromagnética** 2004/108 CE - **Ruido aéreo** 2006/42 CE

FI Vakuuttaa omalla vastuullaan, että tuote mallia L50BEU, L50BUS, L50DEU, L50DUS vastaa seuraavien eurooppalaisten standardien vaatimuksia:
Turvallisuus : CEI EN (50338: 2007-06) - (60335-1: 2008-07)
Sähkömagneettinen yhteensopivuus : CEI EN (55014-1: 2008 -01) - (55014-2: 1998 -10) - (55014-2/A1: 2002 -08) - (55014-2/A2: 2008 -12)
CEI EN (61000-3-2: 2007-04) - (61000-3-3: 1997-06) - (61000-3-3/A1: 2002-05)

Vastaa seuraavien direktiivien oleellisia vaatimuksia :
Pienjännitedirektiivi 2006/95/EY - **Sähkömagneettinen yhteensopivuus** 2004/108/EY - **Konedirektiivi** 2006/42/EY

FR Déclare sous sa responsabilité que le produit modèle L50BEU, L50BUS, L50DEU, L50DUS est conforme aux normes européennes suivantes :
Sécurité : CEI EN (50338: 2007-06) - (60335-1: 2008-07)
Compatibilité électromagnétique : CEI EN (55014-1: 2008 -01) - (55014-2: 1998 -10) - (55014-2/A1 : 2002 -08) - (55014-2/A2 : 2008 -12)
CEI EN (61000-3-2: 2007-04) - (61000-3-3: 1997-06) - (61000-3-3/A1 : 2002-05)

Est conforme aux conditions requises essentielles des Directives suivantes :
Directive Basse Tension 2006/95 CE - **Compatibilité Électromagnétique** 2004/108 CE - **Bruit Aérien** 2006/42 CE

NL Verklaart onder zijn verantwoordelijkheid dat het product model L50BEU, L50BUS, L50DEU, L50DUS conform de volgende Europese normen is:
Veiligheid: CEI EN (50338: 2007-06) - (60335-1: 2008-07)
Elektromagnetische Compatibiliteit: CEI EN (55014-1: 2008 -01) - (55014-2: 1998 -10) - (55014-2/A1: 2002 -08) - (55014-2/A2: 2008 -12)
CEI EN (61000-3-2: 2007-04) - (61000-3-3: 1997-06) - (61000-3-3/A1: 2002-05)

En conform de essentiële vereisten van de volgende Richtlijnen is:
Richtlijn Laagspanning 2006/95 EG - **Elektromagnetische Compatibiliteit** 2004/108 EG - **Lawaai** 2006/42 EG

SV Förklarar under eget ansvar att produktmodellerna L50BEU, L50BUS, L50DEU och L50DUS överensstämmer med följande europeiska standarder:
Säkerhet: CEI EN (50338: 2007-06) - (60335-1: 2008-07)
Elektromagnetisk kompatibilitet: CEI EN (55014-1: 2008 -01) - (55014-2: 1998 -10) - (55014-2/A1: 2002 -08) - (55014-2/A2: 2008 -12)
CEI EN (61000-3-2: 2007-04) - (61000-3-3: 1997-06) - (61000-3-3/A1: 2002-05)

Det överensstämmer med de nödvändiga kraven i följande direktiv:
Lågspänningsdirektivet 2006/95/EG - **Elektromagnetisk kompatibilitet** 2004/108/EG - **Luftburet buller** 2006/42/EG

Bernini Fabrizio - *Terranuova B.ni 06 April 2009*
(Amministratore delegato) - (Chief executive officer) - (Administrateur délegué) - (Geschäftsführer)
(Director general) - (Diracteur) - (Administrerende direktør) - (Pääjohtaja) - (Styrelseordförande)

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DETAILED INDEX

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GENERAL INFORMATION

PURPOSE OF THE MANUAL

- This manual forms an integral part of the appliance and was produced by the Manufacturer to provide the necessary information to people authorised to interact with it during its expected working life.
- Operators of the appliance must adopt correct working techniques and must carefully read and follow the instructions contained in this manual.
- This information is provided by the Manufacturer in its original language of Italian and may be translated into other languages for legal and/or commercial purposes.
- Carefully read the instructions in this manual to avoid unnecessary risks relating to personal health and safety and economic damages.
- Keep this manual in a safe and easily accessible place for quick reference.
- Some information and illustrations contained in this manual may not perfectly correspond to the appliance in your possession, however, this does not compromise its functioning.
- The manufacturer has the right to make changes without notice.
- The following symbols are used throughout this manual to highlight particularly important information or to indicate important specifications.

Danger - Attention

This symbol identifies situations of imminent danger, which, if ignored, could lead to serious bodily injury or death.

Warning - Caution

This symbol identifies situations where it is necessary to behave in a certain way to avoid serious bodily injury and to not cause damage to the appliance.

Important

This symbol identifies particularly important technical information, which , if not followed, could lead to damage to the robot.

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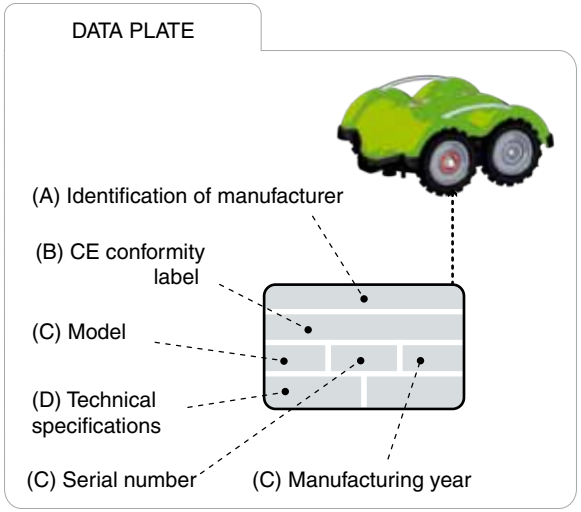
IDENTIFICATION OF MANUFACTURER AND APPLIANCE

The data plate shown is applied directly onto the appliance. It contains references to information which is essential for safely operating the machine.

A–Manufacturer Identification.
B–CE conformity label.
C–Serial model/number and manufacturing year.
D–Technical specifications.



REQUESTING TECHNICAL ASSISTANCE

For any technical requirement, please contact the Technical service centre of the Manufacturer or an authorised centre.
For technical assistance, indicate the data reported on the data plate, the approximate operating hours and the type of fault detected.

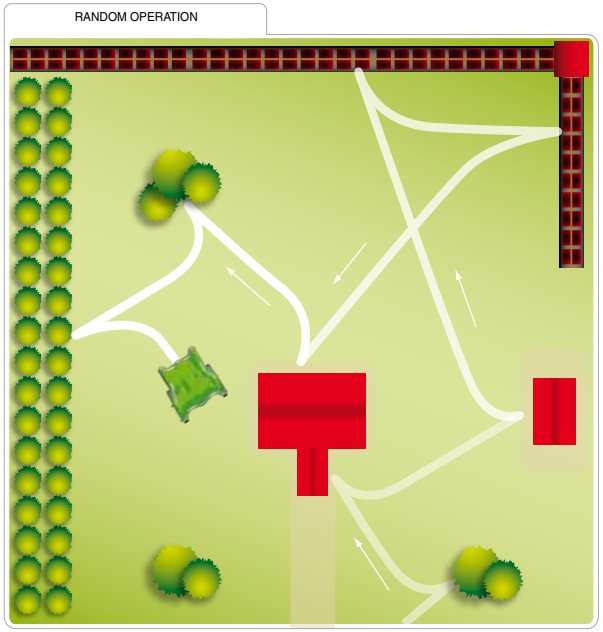
TECHNICAL INFORMATION

GENERAL DESCRIPTION OF THE APPLIANCE

The appliance is a robot designed and built to automatically cut grass in gardens and lawns at any time of the day.
It is small, compact, silent and easy to handle depending on the type of lawn that is being mowed.
During operation, the robot mows the area delimited by paving and/or barriers (fences, walls, etc.). When the robot detects that there is no grass or encounters an obstacle, it changes route in a random manner and starts mowing again in a new direction.
Based on its operating principle ("random"), the robot automatically mows the entire delimited area of the lawn (see figure).
The maximum lawn surface that the robot can mow depends on a series of factors, such as:

- the characteristics of the area (irregular perimeters, uneven surfaces, divided areas, etc.)
- the characteristics of the lawn (type and height of the grass, humidity, etc.)
- the condition of the blade (level of sharpness, grass or debris buildup, etc.)
- the model of the robot and type of batteries installed

The robot is available in multiple versions (L50BEU – L50BUS – L50DEU – L50DUS) versions, and has a lithium battery installed to guarantee long running time to mow areas up to 400 m2 (4300 sq. ft.).



MAIN COMPONENTS

A–Battery: supplies power to the blade and wheel motors
B–Power Supply Unit: used to recharge or keep the batteries charged (A).
C–Mother board: controls the automatic functions of the robot.
D–Control keyboard: used to set and display the operating modes of the robot.
E–Cutting blade: mows the lawn.
F–Electric motor: operates the cutting blade (E).
G–Electric motor: one operates the right wheel transmission unit, while the other operates the left wheel.
H–Sensors: used to recognise the characteristics of the ground on which the robot is operating.
I – Curb drop-off sensors: detect any holes or empty spaces. They are positioned in line with the wheels making it easy to change direction before any steps.

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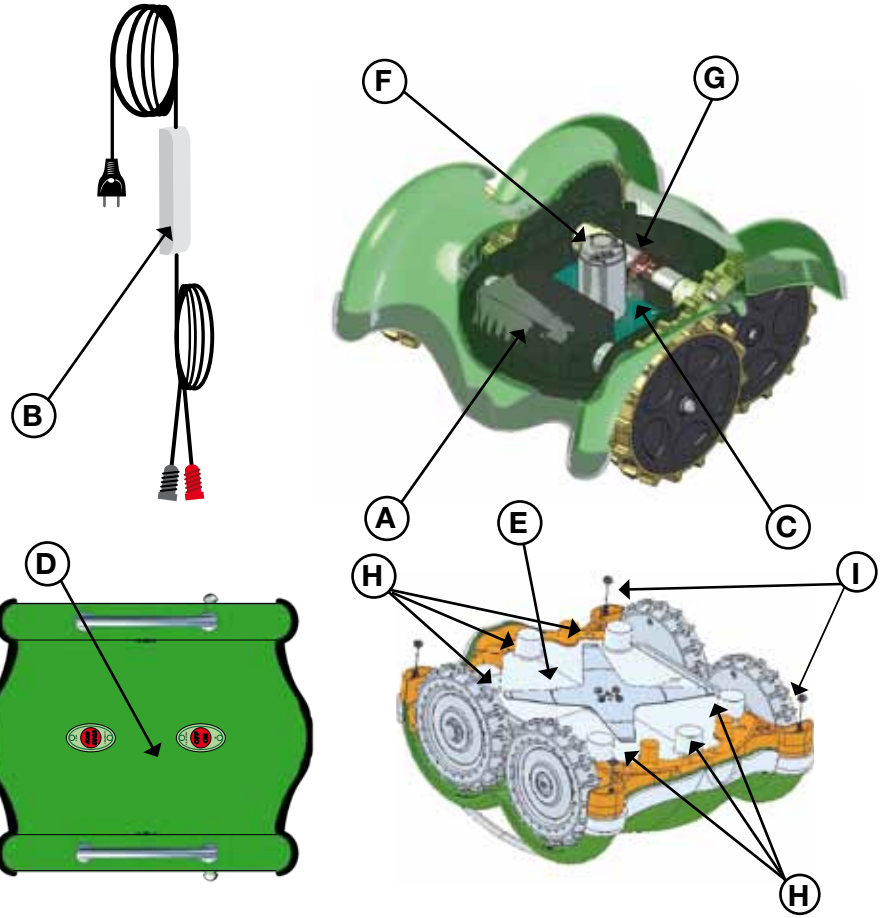

TECHNICAL DATA

Description		Model			
		L50BEU	L50DEU	L50BUS	L50DUS
Maximum recommended surface that can be mowed					
Each daily working cycle	m2 (sq ft)	400 (4300 sq ft)			
Characteristics					
Size (W x H x D)	mm (in.)	409 x 199 x 335 (16,10 x 7,83 x 13,19 in)		488 x 287 x 488 (19,21 x 11,30 x 19,21 in)	
Robot weight (inc. battery)	kg	7,9	8,2	10,3	10,6
Cutting height (Min-Max)	mm (in.)	34-40 (1,34-1,58 in) Adjustable with 1 6-mm spacer (0,24 in)		48-72 (1,88-2,84 in) Adjustable with 4 6-mm spacers (0,24 in)	
4-pronged blade diameter	mm (in.)	250 (9,84)			
Drive system		4WD			
Electric motors	V	cc (25,2V)			
Cutting blade speed	RPM	4000 Cut 2200 Maintenance			
Ground speed	Meters/ minute	16 (52,48 ft.)			
Suggested maximum slope	°	27° according to lawn condition			
Ambient working temperature		-10°(14 F.) (Min) +50° (122 F.) (Max)			
Measured sound output	dB(A)	72(Max) - 65(Lawn maintenance)			
Water protection class	IP	IP21			
Electric features					
Charger (for lithium batteries)		Classe 2 (Vin 90 - 264Vac) AC current (typ.) 1.2A/115Vac 0.7A/230Vac Input Frequency range 47 - 63Hz			
Battery type and charger					
Rechargeable Li-Ion battery	V-A	25,2V – 6,9Ah			
Charger	V-A	29,3 Vcc - 2,0 Ah			
Minimum recharging time and method		3 hours - manual			
Average working time *	Hours	3,5			

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Safety blade stop					
Anti-tilting sensor		Standard equipment			
Lifting sensor		Standard equipment			
Equipment					
Grass detection sensor (patented)	N.	6			
Curb drop-off sensors (Step) (Patented)		Optional	Standard equipment	Optional	Standard equipment
Blade modulation		Standard equipment			
Mowed lawn detection sensors (patented)		Standard equipment			
Border accessories		Optional			
8-pronged blade		Specifically for early season rapid growth and for lawns that need greater mowing power. Optional			
Cleaning disc (patented)		Disc that is fitted above the cutting blade. It helps keep the underbody clean. Specially indicated for areas where the grass is very wet. Optional			

* Based on the conditions of the grass and grassy surface.

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SAFETY INFORMATION

SAFETY REGULATIONS

- During the design and construction, the Manufacturer carefully considered the personal health and safety risks of those operating with the robot. In addition to respecting the applicable current laws, the Manufacturer adopted all the "regulations of good manufacturing techniques". The purpose of this information is to advise users on placing special attention to prevent risks of injury. However, prudence and caution is irreplaceable. Safety is also in the hands of operators who interact with the appliance.
- **When using the robot for the first time, it is recommended to carefully read the entire manual and to fully understand it, particularly any and all safety information.**
- Carefully read the instructions in this manual and those that apply directly to the machine, especially the safety information. Carefully study this manual to prevent injury or accidents. It is always too late to remember what you should have done after the fact.
- Lift and move the robot according to the information reported directly on the packaging, on the appliance and in the user instructions provided by the Manufacturer.
- Pay attention to the symbols that appear on the robot and in this manual; their shape and colour are important for safety purposes. Keep them legible and follow the instructions.
- The lawn mower can only be used by people who know how to operate it and who have read and understood the instructions in this manual.
- Only use the robot for the intended purposes specified by the manufacturer. Improper use of the robot may lead to serious injury or death.
- Before using the lawn mower, make sure that there are no objects on the lawn (toys, branches, clothing items, etc.).
- When using the robot, make sure the work area is clear of people (in particular, children, the elderly or disabled people) and domestic animals to prevent safety risks. To prevent this risk, it is recommended to operate the production activity of the robot in suitable times.
- Never allow people to sit on the robot.
- Never lift the robot to inspect the blade during operation.
- Do not place hands and feet under the robot at any time.
- Do not tamper with, sidestep, eliminate or bypass the safety devices installed.
  The non-observance of this requirement may cause serious personal injury or death.
- Keep the lawn mower in conditions of maximum efficiency by carrying out the maintenance operations provided for by the Manufacturer. Proper maintenance will allow obtaining the best performances and longer operating times.
- Before carrying out any maintenance and adjustments, disconnect the electric power supply. The user must ensure that all the necessary safety conditions are in place, especially when working on the lower part of the lawn mower, following the Manufacturer's procedures.
- Use the personal protection devices prescribed for by the Manufacturer, in particular, always wear gloves when working on the blades and cutting disc.
- **Before replacing the batteries, always remove the blade.**

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- Only qualified persons, having the necessary technical expertise and skill, should attempt to work on or repair this robot. Failure to observe these requirements could result in serious injury.
- The Manufacturer shall not be held liable if non-original spare parts are used.
- Replace worn parts with original spare parts to guarantee the functionality and safety level.
- Do not use the robot on too wet grass or when it is raining.
- **Never use and recharge the robot in explosive and/or flammable environments.**

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ROBOT SAFETY DEVICES

1. Lift sensor
In the event that the robot is lifted from the ground, the blade will stop rotating in less than two seconds.

2. Bumpers
The bumper sensor is activated when the mower strikes a solid object, which will stop the movement in that direction and reverse itself away from the obstacle.

3. Inclinometer
If the robot works on a slope which is steeper than the maximum limit, or tips over, the robot will stop the movement in that direction and reverse to avoid the slope.

4. Emergency stop switch
Located on the top outer surface of the robot, red in colour. Pressing this button at any time during operation will stop immediately all mower movements and stop the rotation of the blades within two seconds (< 2 seconds).

5. Over-current protection
Each of the motors (blade and wheels) are monitored continuously during operation for any situation that may cause these motors to overheat. If this occurs in the wheel motor, the robot will attempt to move in the opposite direction. If the over-current persists, the robot will stop and signal an error. If the cutting motor overheats, then there are two types of intervention. If the parameters fall within the first range, the robot will carry out the manoeuvre to unblock the cutting blade. If the over-current is below the protection range, the robot will stop and signal a motor error.

SAFETY FOR MAN AND THE ENVIRONMENT DURING DISPOSAL

- Do not disregard material into the environment. Dispose of the robot according to the applicable regulations.
- In reference to the WEEE Directive (Waste of Electrical and Electronic Equipment), during the phasing out of the machine, the user must separate the electrical and electronic components and dispose of them in special authorised waste collection centres, or take them back to the retailer when purchasing a new one.
- All the parts, which must be collected separated and disposed of in a specific manner, are marked with a special label.
- Unauthorised disposal of Waste of Electric and Electronic Equipment (WEEE) is punishable with sanctions regulated by the laws in force in the territory where the infraction has been verified.
- To implement the European directives (2002/95/CE, 2002/96/CE, 2003/108/CE) in the Italian territory, for example, a legislative decree was issued (No. 151 of 25 July 2005) which provides for an administrative fine of 2000÷5000 Euro.

Danger - Attention

Electric and Electronic Equipment may contain hazardous substances having potentially harmful effects on the environment and people. It is recommended to correctly dispose of this waste.

SAFETY SIGNALS

Attention! Do not use a water hose to clean or wash the robot.	
Read the instructions and ensure that you fully understand them before using the robot.	
The warnings and safety instructions given in this manual must be followed. Failure to do so could lead to machine breakage and/or serious bodily injury.	
Keep hands and feet well away from the cutting blade. Do not place your hands or feet beneath the body or close to the robot when it is working.	

EN

PACKING AND UNPACKING

The robot is delivered suitably packed. When unpacking, carefully remove it and check the integrity of the parts.

The contents contain all necessary equipment for operating the robot.

Packing contents

A–Robot

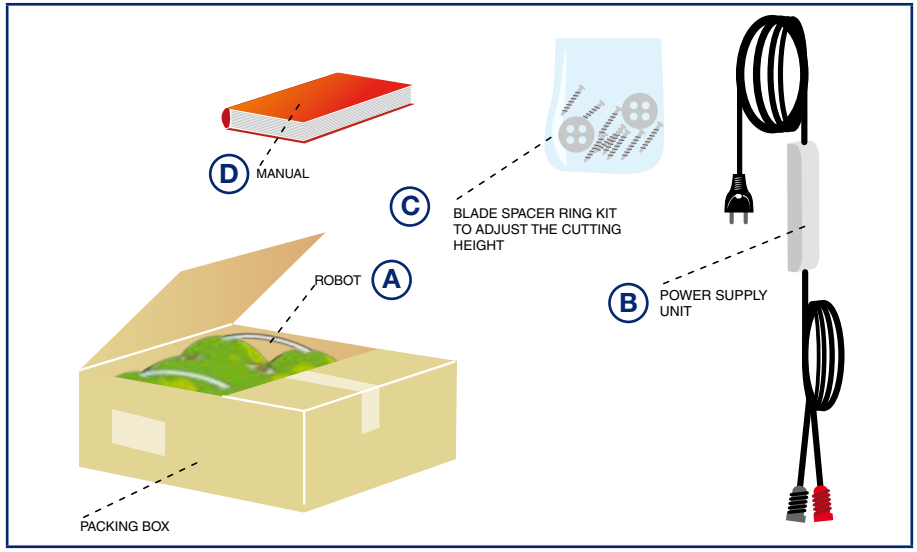
B–Power supply unit

C–Spacer-ring kit

D–User Manual

Important

- **The list only includes standard parts. Check the quantity and integrity of any optional accessories requested.**
- **Keep the packing materials for future use.**



The robot is not difficult to install, but requires some preliminary planning in order to define the best area for installing the power supply unit and the boundaries of the robot's work area.

Position the power supply unit in an easy to access zone.
– The power supply unit must be in a well-ventilated area, protected from direct sunlight and exposure to the elements.
– The power supply unit must not be in direct contact with the ground or humid environments.

Danger - Attention

Do not recharge the robot in explosive and/or flammable environments.

Warning - Caution

When connecting the electricity, it is necessary that a power outlet is positioned next to the installation area. Make sure that the connection to the mains power conforms to the applicable regulations and standards.

Important

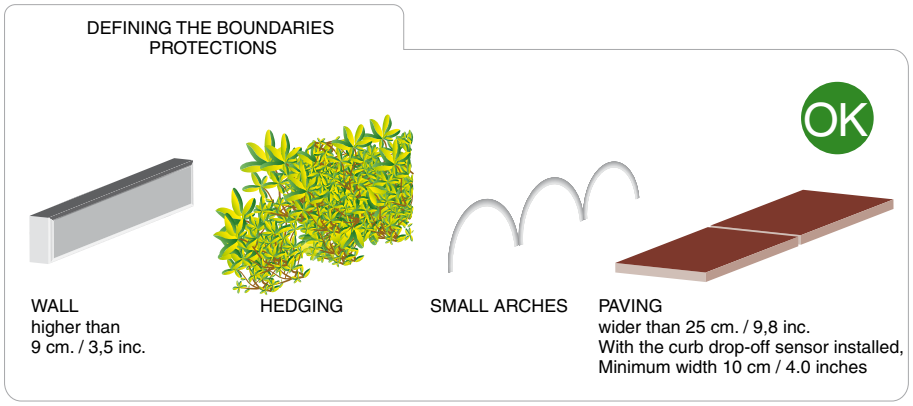
It is recommended to install the unit in a cabinet for electric components (for outdoor or indoor use), well-ventilated to maintain a correct air re-circulation and equipped with a key lock so that access to the power supply unit is only permitted to authorised personnel.

PREPARATION AND DEFINING THE BOUNDARIES OF THE WORK AREAS

Preparation of the lawn to mow

1. Make sure that the lawn to mow is even and does not contain holes, stones or other obstacles. Otherwise, prepare the lawn by filling in any holes and removing any obstacles. If some obstacles cannot be removed, it is necessary to properly define and protect the interested areas.
2. Check that all the areas of the lawn do not exceed the allowable slopes (see “Technical Specifications”, page 9).

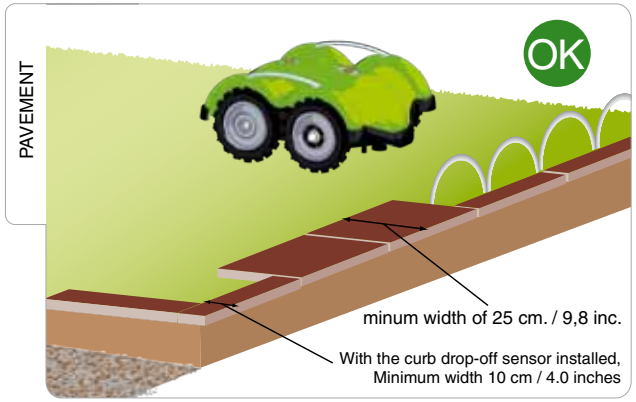
The sensors, which recognise the presence of the grassy surface, allow the robot to move freely inside the lawn. The lawn must be suitably checked and adjusted so that the robot has enough space for recognising when there is no grass. Carefully follow the below points for the correct and safe use of the robot.



Types of boundaries/protections that can be used for correctly defining the limits of the robot’s work area.

The robot requires at least 25 cm (9.84 in) without any grass for it to stop safely and change direction. For lawns with paths or curbs, they must be at least 25 cm (9.84 in.) wide. Any curbs that are less than 25 cm (9.84 in.) side, must be protected with paving or arches in the ground, as shown in the figure, so that the robot impacts with them.

The robot with the curb drop-off sensor installed needs 10 cm/4 inches) without any grass.



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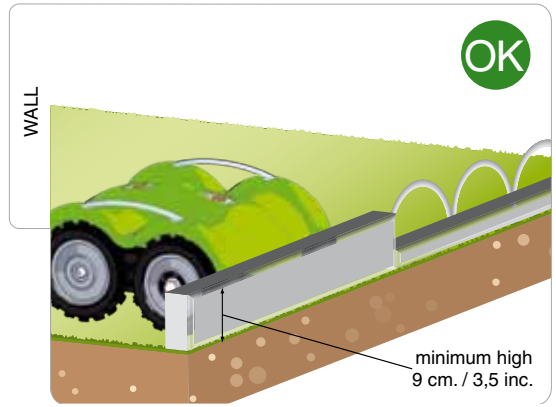
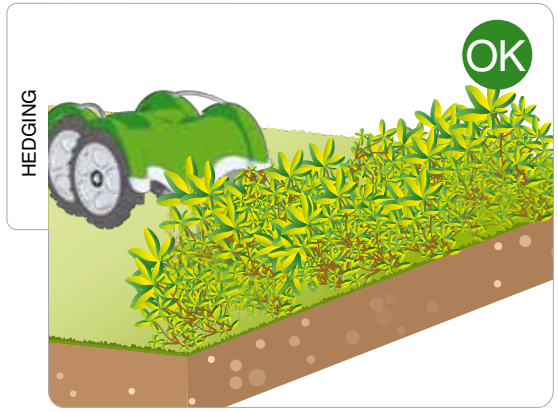
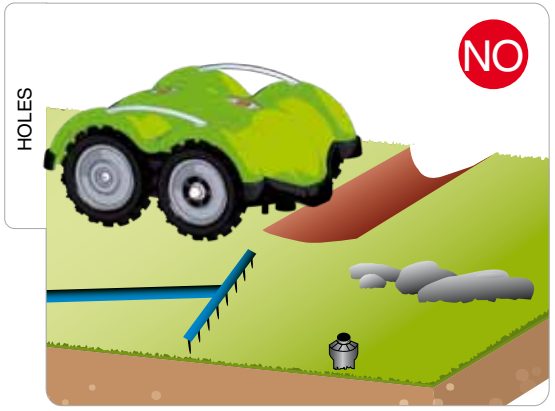
Perimeter wall, which defines the boundary of the work area at a height above 9 cm. (3.54 in.). If the walls are shorter, protect the area with arches or adequate paving.



The work area can also be effectively delimited by hedges.



The work area cannot be delimited by ditches or holes which must not be present inside the grassy area to mow. Before starting the robot, check that there are no objects on the lawn such as toys, small stones, branches or sprinklers protruding from the ground which could impede correct functioning or cause damage to the blade.



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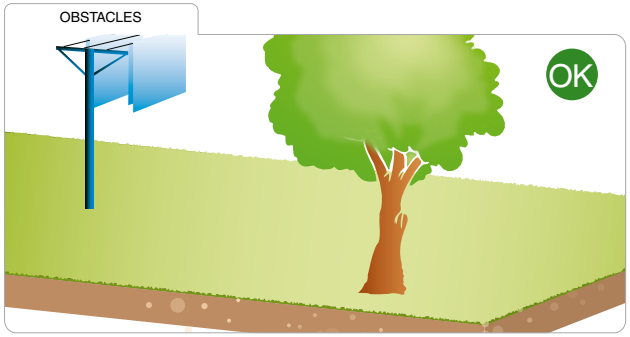
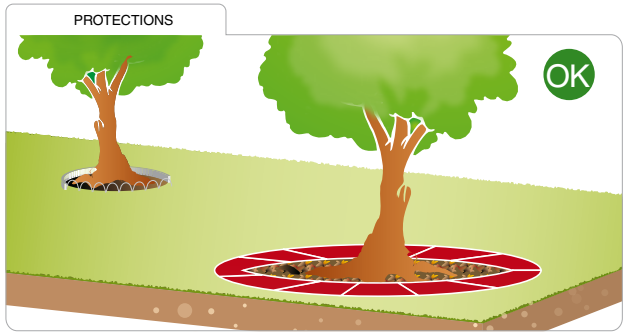
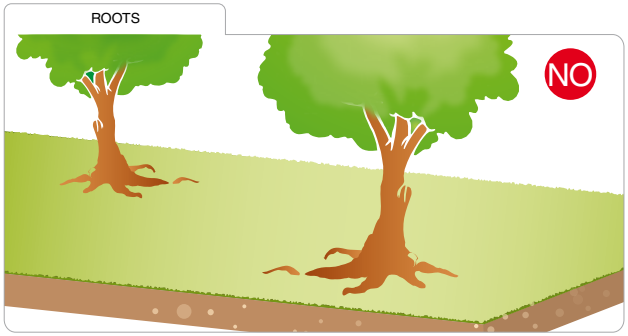
The illustrations show an example of the internal and peripheral elements of the correct work area. If elements such as tree roots or exposed wires are present, it is necessary to delimit the perimeter of these elements with paving, walls or barriers to prevent the malfunctioning of the robot. Elements (trees, poles, etc. ref. fig. obstacles) which do not impede the robot's normal functioning do not require delimiting.

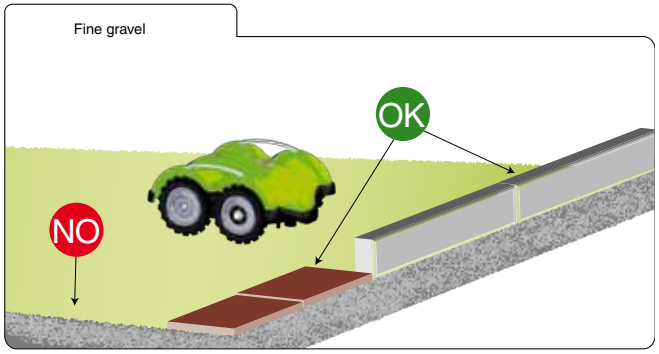




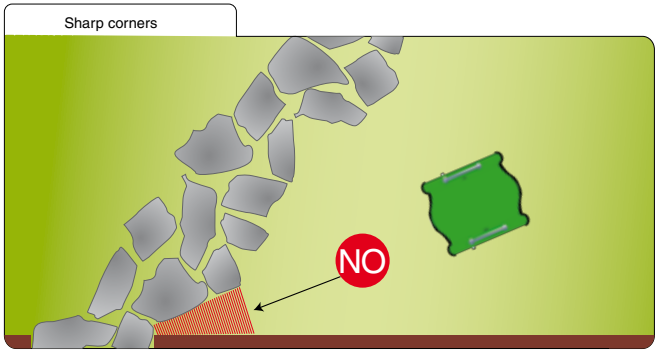
Do not, under any circumstance, leave areas which have not been delimited by barriers inside the work area, as these will prevent the robot from functioning properly (roots, external pipes, work tools, etc.).



Attention!
If fine gravel, leaves or small stones are used to border the lawn, they are not detected correctly by the robot. Protect the lawn with other borders.



Attention!
In areas of the lawn that end in narrow spaces as shown in the figure, the robot cannot move easily, therefore this part of the lawn must be excluded because the robot would exit the borders.



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SLOPES

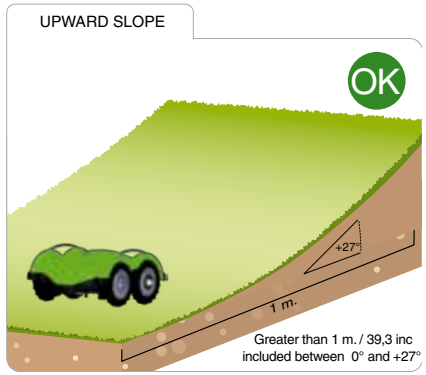
Check that all the areas of the lawn do not exceed the admissible slopes (see “Technical Specifications”, page 9).

Areas with steeper slopes or that are incompatible with the correct functioning of the robot (see following points) cannot be mowed. Steeper slopes must be delimited.

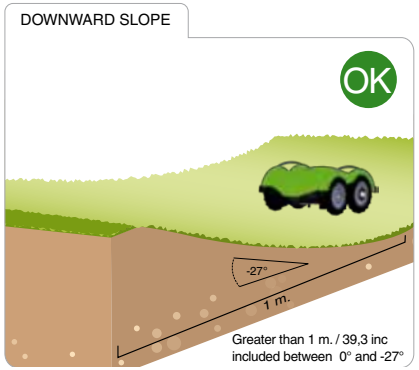
Important

The sensors of the robot can detect slopes greater than the robot can manage. The direction is reversed in order to prevent the robot from tipping over or malfunctioning. In addition, as a further protection, it is necessary to delimit the areas, which have slopes that cannot be managed.

It is recommended to test the robot when using for the first time on slopes that are at the limit of the specifications.



The robot can tackle height differences with a slope of up to 27° provided that they gradually slope down over a distance of more than one metre.

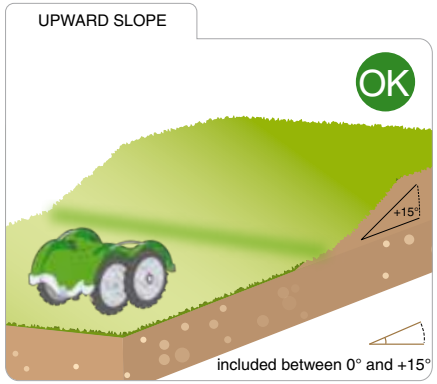


STEEP SLOPES

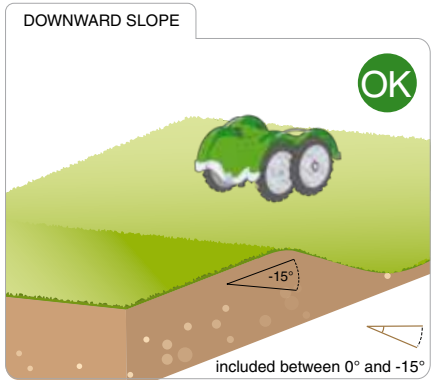
The robot’s safety system will interpret sudden changes in the slope (greater than 15°) as an anomaly and therefore, will reverse the direction and bring the robot back to safety continuing to mow the lawn. Tree trunks which gradually rise from the ground or stones positioned to mark the boundary of flower-strips which gently descend onto the grassy surface are also interpreted as slope changes.

Important

Check the robot when using for the first time on slopes that are at the limit of the specifications.



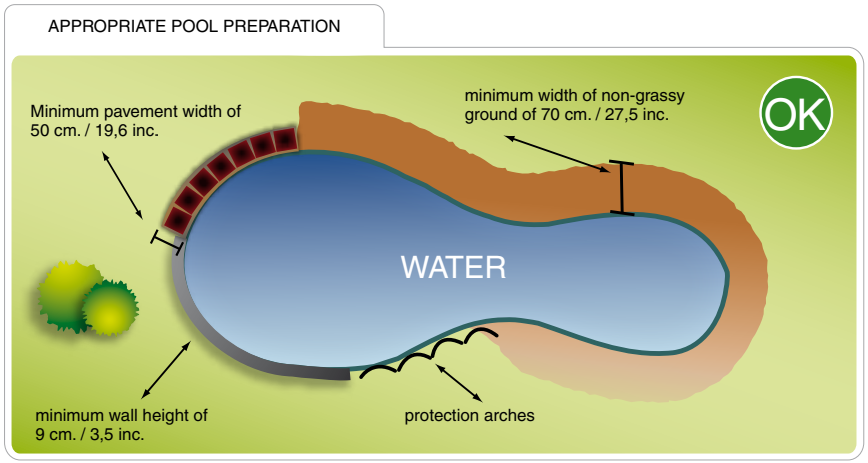
The robot can tackle height differences with slopes of up to 15° if they slope down suddenly.



Important

Areas with slopes greater than those specified cannot be mowed with the robot.

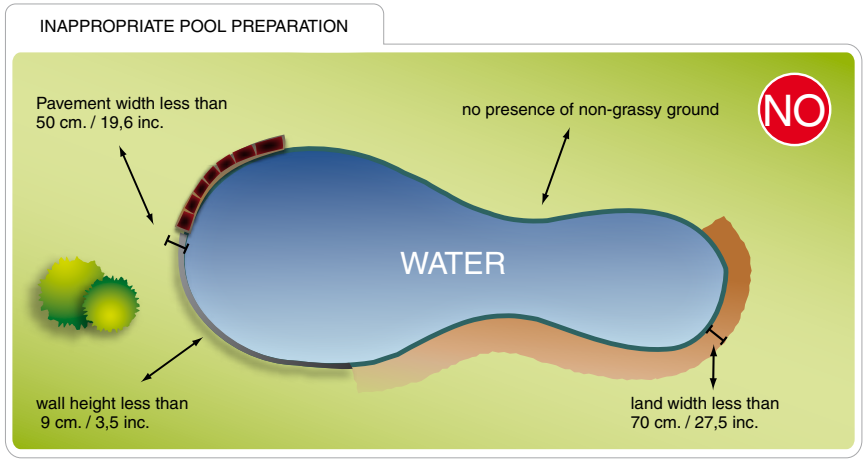
POSSIBLE ELEMENTS INSIDE THE WORK AREA AND RELATIVE SAFETY DISTANCES



The figure above shows a work area which has been correctly delimited for the correct functioning of the robot.

Important

Foliage is usually detected as grass. In case of foliage, we suggest to increase the distance from the edge by about 20 cm (7,88 inc).



The figure above shows a work area where the robot's operating areas have not been correctly delimited, thus preventing it from functioning properly.

BATTERY RECHARGE ON FIRST USE

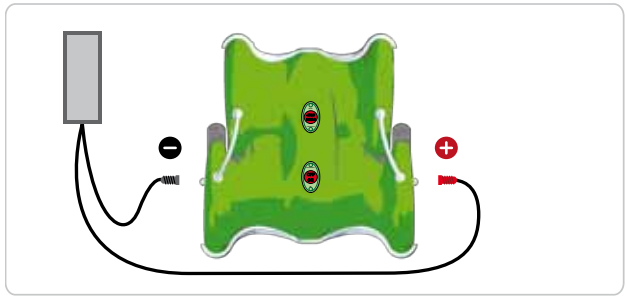
Position the robot next to the recharging zone.

1. Check that the power supply unit is connected to the electricity power (110V or 220V).
2. Connect the black plug to the wheel containing the black "-" symbol.
3. Connect the red plug to the wheel containing the red "+" symbol.

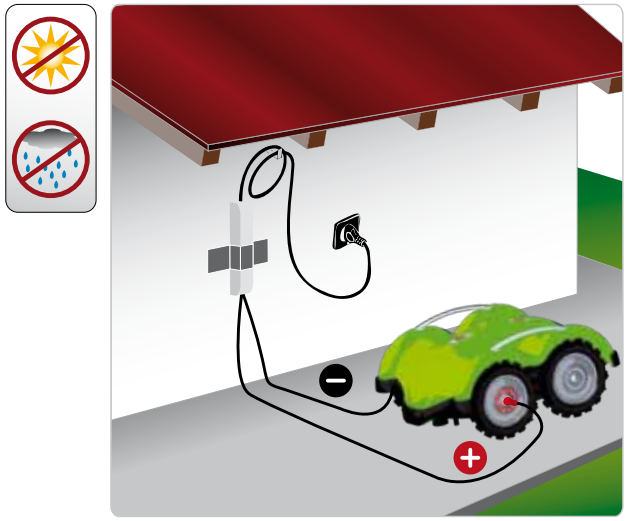
Once connected, the robot automatically turns on to show the recharging level of the batteries. (see "meaning of LED combination" on page 26).

At the end of the charging cycle, first disconnect the red cable and then the black one. Press the "OFF" key.

Correctly connect the recharging knobs to the nuts found on the wheels of the robot.



The figure shows the correct installation of the robot's recharging zone.



Important

On first recharge, the batteries be charged connected for at least 24 hours.

ADJUSTMENTS

RECOMMENDATIONS FOR ADJUSTMENTS

Important

• The user must follow the procedures described in this manual when making any adjustments. Do not make any adjustment which is not expressly indicated in this manual.
• Any special adjustments, not expressly indicated in this manual, must only be carried out by personnel from the Manufacturer's Authorised Service Centres.

ADJUSTMENT OF CUTTING HEIGHT

1 – Stop the robot safely by pressing the ON/OFF key (see "Robot safety stop", page 31).

2 – Turn over the robot and position it so as not to ruin the covering hood.

Important

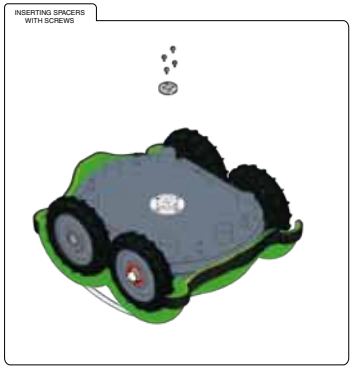
Use protective gloves to prevent injury to your hands.

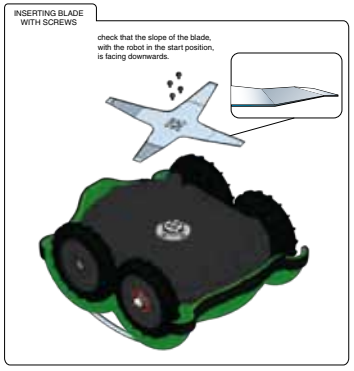
3 – Unscrew the screws to remove the blade.

4 – Insert one or more spacers to adjust the cutting height as shown in the table on page 9.

5 – Reposition the blade (see page 35) and fasten the screws.

6 – Turn the robot over to its operating position.





Important

Reduce the cutting height gradually. It is recommended to add the spacers every 2÷3 days in order to gradually reach the ideal height of the grassy surface.

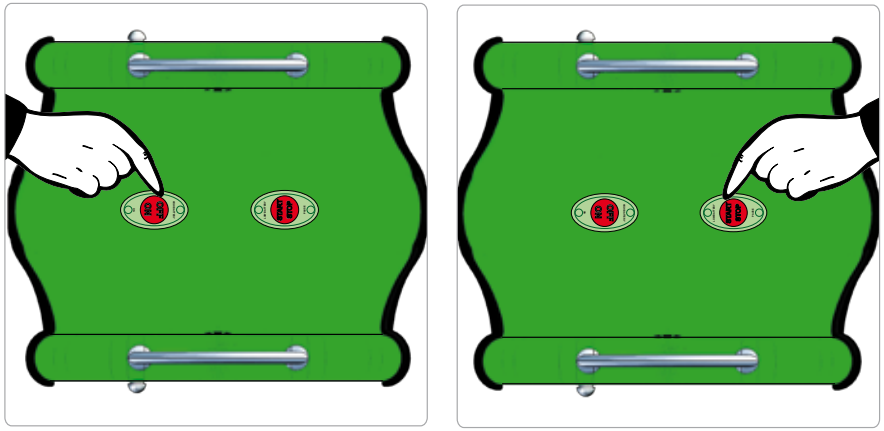
USE AND OPERATION

USER RECOMMENDATIONS

Important

- **When using the robot for the first time, it is recommended to carefully read the entire manual and to fully understand it, especially the safety information.**
- **Only use the robot for the uses intended by the Manufacturer and do not tamper with any device to obtain different performances.**

DESCRIPTION OF ROBOT COMMANDS



The illustration shows the position of the commands on the machine.

A – ON/OFF: press to turn the robot on and off.
B – START/STOP: press to start or stop the robot when it is on standby.

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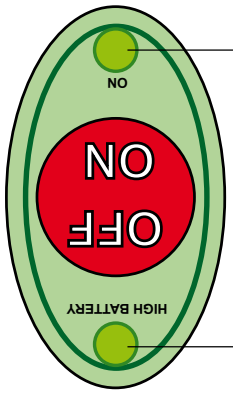
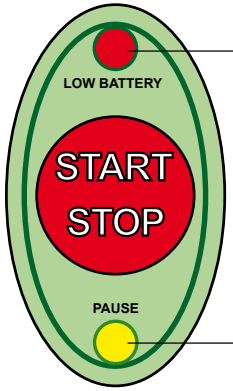
IN OPERATION



STEADY ON » robot in operation

STEADY ON » full battery level



1 1 FLASH » medium battery level

STEADY ON » low battery level

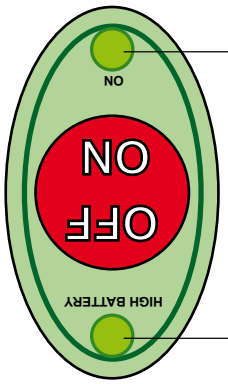
STEADY ON » in pause
in pause due to low battery

1 1 FLASH » the lawn has been mowed

2 2 FLASHES » no grass present

EN

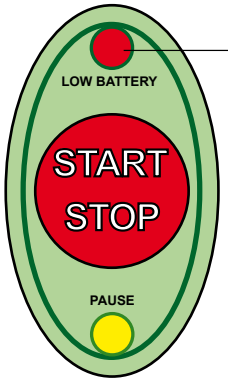
RECHARGING



STEADY ON » robot in operation

STEADY ON » full battery level

1 1 FLASH » medium battery level



STEADY ON » low battery level

INITIAL START-UP

1. Check that the grassy surface of the lawn to mow is at a height which is compatible with the proper functioning of the robot (see technical specifications on page 9).
2. Adjust the desired cutting height (see cutting height adjustment on page 24).
3. Check that the work area is correctly delimited and that there are no impediments to the correct functioning of the robot as indicated in the section “Preparation and defining the boundaries of the work areas” and following sections.
4. Disconnect the robot from the recharging area (page 23).
5. Position the robot inside the grassy surface in an area where the grass is at least 1 metre (40.0 in.) from any obstacle.
6. Press the OFF/ON key and wait a few seconds for the robot to turn on completely.
7. Press START/STOP key to start the robot.

Once the robot has stopped due to the reasons described in the chapter “Robot Stop”, activate the safety stop and reposition the robot inside the power supply unit for recharging (see page 23).

Important

For a better cutting performance and correct functioning of the recognition sensor, do not start the robot in case of rain or in very humid conditions. The best results are obtained in the middle of the day.

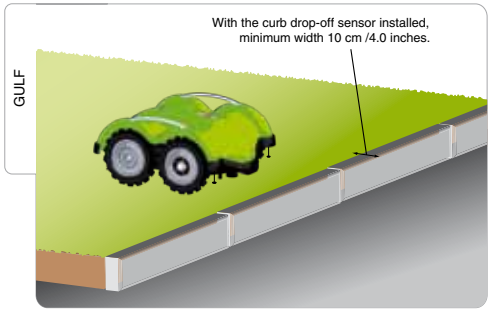
STARTING THE ROBOT WITH THE SENSORS TURNED OFF

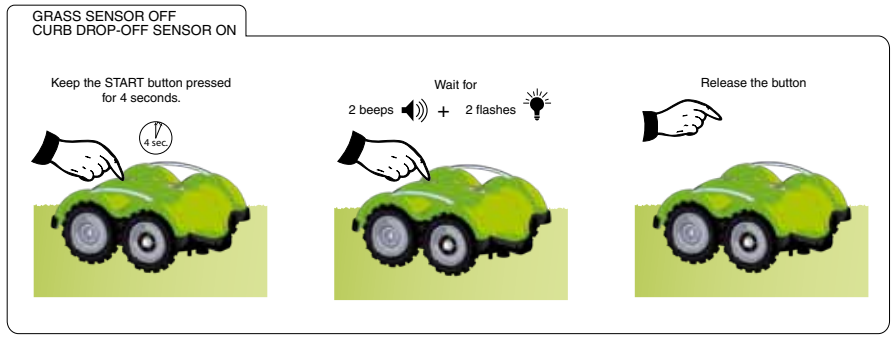
In certain lawn conditions, the robot can be started with the lawn and curb drop-off sensors deactivated, which means the robot can be started when lawn conditions are such that correct functions are not guaranteed, for example with very short or patchy grass.

This mode requires very special attention from the user, and the dealer should be consulted before attempting to operate in this mode.

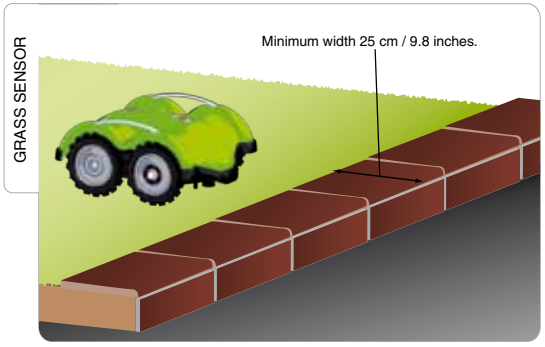
When the robot is on Pause, these modes can be activated following this procedure:

Grass Sensor Off – Curb drop-off sensor On:
Press the START/STOP button and keep it pressed for 4 seconds until 2 consecutive beeps are heard and the PAUSE led flashes twice. This mode must only be used on models with the curb drop-off sensor installed, and it allows working with just the 4 curb drop-off sensors. This mode is recommended in gardens where the lawn is lower than the sensors but still very uniform.

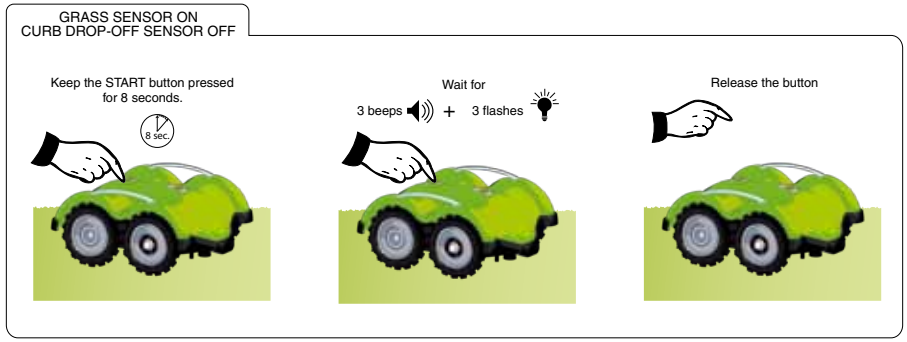




Grass Sensor On – Curb drop-off sensor Off:
Press the START/STOP button and keep it pressed for 8 seconds until 3 consecutive beeps are heard and the PAUSE led flashes three times. This mode must only be used on models with the curb drop-off sensor installed, and it allows working with just the front grass detector sensors. This mode is recommended with uneven surfaces with lots of sharp dips or sparse grass.

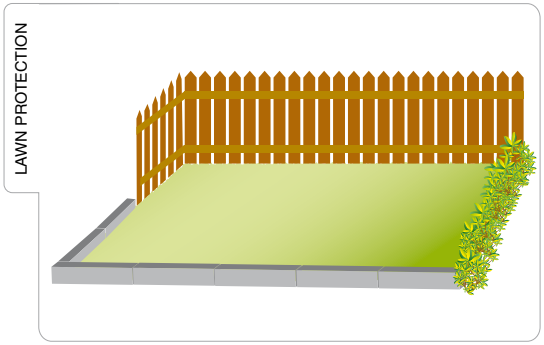


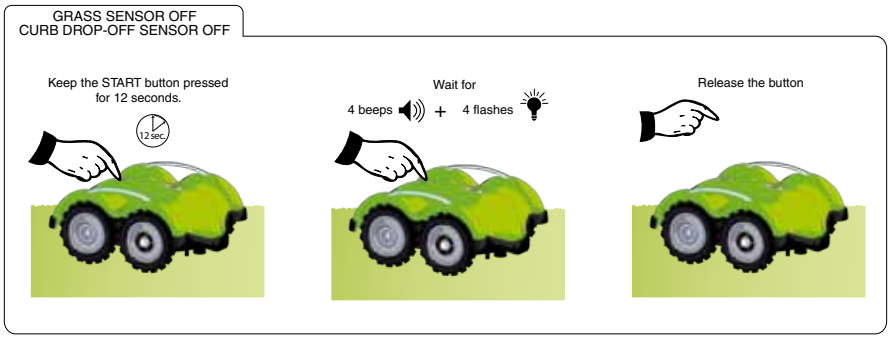
ATTENTION! The robot requires more space with this mode to change the direction. Respect the distances that are given for models without the curb drop-off sensor.



Grass Sensor Off – Curb drop-off sensor Off:

Press the START/STOP button and keep it pressed for 12 seconds until 4 consecutive beeps are heard and the PAUSE led flashes 4 times. This mode allows working without any sensors. It is useful in particular with poor lawn conditions. This mode should only be used if the lawn is protected by a wall, fence or hedge.





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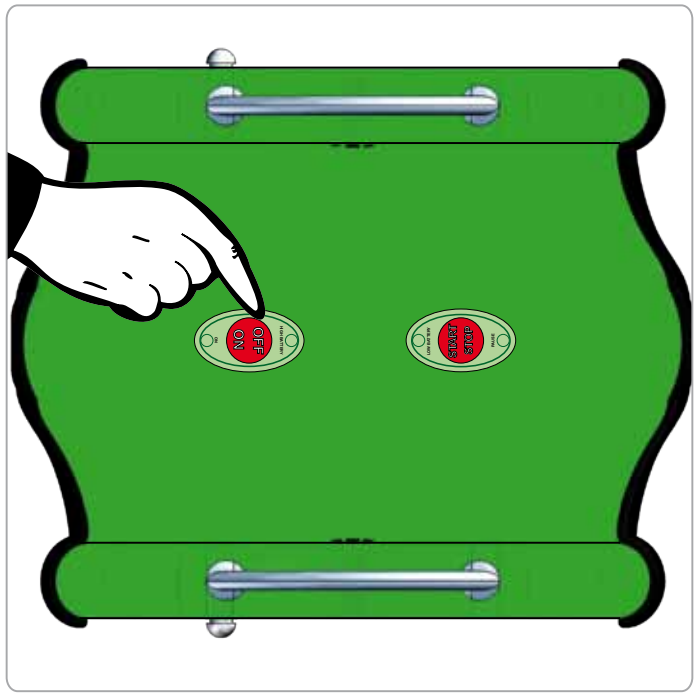
ROBOT SAFETY STOP

When using the robot, you may safely stop it at any time by pressing the “ON/OFF” key.



Important

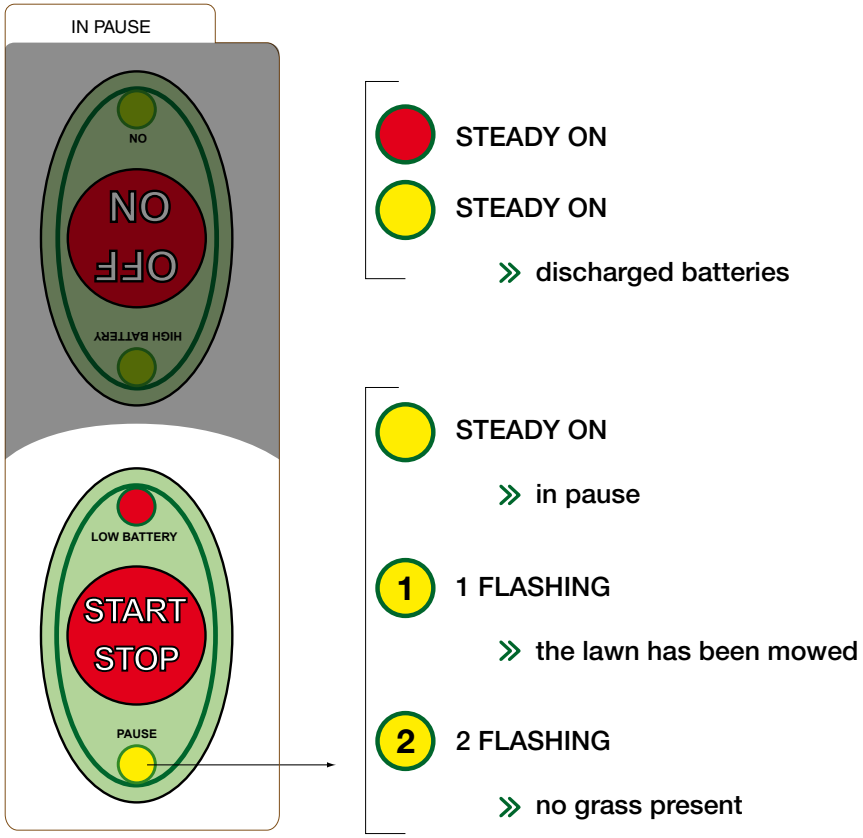
The robot safety stop is necessary when carrying out any maintenance and repairs (for example: cleaning, adjustments to cutting height, etc.).

EN

ROBOT STOP

The robot stops automatically if the following conditions are detected:

- **Lawn mowed:** The sensor has detected that the lawn has been mowed and therefore, does not require further mowing. Recharge the batteries and start the robot again after one or two days based on the growth of the grass.
- **No grass:** The grass-detection sensors have not detected the presence of grass for an extended period.
- **Discharged batteries:** The batteries have used up their operating capacity.
- **Batteries in protection:** When the batteries have reached a capacity which is lower than the level of the discharged batteries, the robot completely turns off without displaying any indication. In this case, connect the robot to the recharger. The robot will not turn on immediately, as normally occurs, but only after a few minutes.



PROLONGED INACTIVITY AND RESTARTING

If the robot has not been used for a long period of time, it is necessary to carry out a series of operations to guarantee the correct functioning at the time of its reuse.

1 – Accurately clean the robot (see "Robot Cleaning", page 35).

2 – Recharge the battery at least every 5 months for lithium batteries.

3 – Store the robot in a protected and dry location with an ambient temperature between 10° and 30 °C (50°F - 86°F), out of reach of children, animals, etc.

4 – Disconnect the power point from the power supply unit.

Restarting

Follow these procedures before restarting the robot after a long period of inactivity:

1 – Connect the plug of the power supply unit to the electrical outlet.

2 – Reactivate the main electrical power supply.

3 – Place the button of the power supply unit on "ON".

4 – Recharge the batteries of the robot for at least 12 hours.

5 – Once the recharging has been completed, operate the robot normally.

BATTERY RECHARGE AFTER PROLONGED INACTIVITY

Position the robot next to the recharging zone.

1. Check that the recharging nuts on the wheels are clean.
2. Check that the power supply unit is connected to the electrical power (110V or 220V).
3. Connect the black plug to the wheel containing the black "-" symbol.
4. Connect the red plug to the wheel containing the red "+" symbol.
5. Once connected, the robot automatically turns on to show the recharging level of the batteries. (see "meaning of LED combination" on page 26).

At the end of the charging cycle, first disconnect the red cable and then the black one. Press the "OFF" key.

Important

Recharge the battery at least every 5 months for lithium batteries.

OPERATING TIPS

Below are some helpful operating tips when using the robot.

- Even after being suitably informed on the use of the robot, simulate some test manoeuvres on first use to identify the commands and main functions.
- Check and secure the fastening screws of the main components.
- Mow the lawn frequently to avoid excessive growth of the grass.
- Do not use the robot to mow grass which is shorter than 3 cm (1.18 in.) in respect to the cutting blade.
- If the lawn is equipped with an automatic sprinkler system, make sure the robot finishes its work cycle at least one hour before the start of the watering to prevent damage to the robot itself and to the sprinklers.
- Check the slope of the ground and make sure the maximum values admissible are not exceeded so that the use of the robot does not cause dangers.
- When using the robot, make sure the area to mow is clear of people (in particular, children, the elderly, or disabled people) and domestic animals to prevent safety risks.
  To minimize chance of injury, operate the robot during times when the yard is not being used.
- Do not use the robot in case of rain or strong humidity. The best results are obtained in the middle of the day.

ORDINARY MAINTENANCE

MAINTENANCE RECOMMENDATIONS

Important

- **During maintenance operations, use personal protection equipment indicated by the Manufacturer, especially when working on the blade.**
- **Before carrying out any maintenance, make sure the robot is turned OFF (see "Robot Safety Stop", page 31).**

SCHEDULED MAINTENANCE TABLE

Frequency	Part	Type of maintenance	Reference
Weekly	Blade	Clean and check the efficiency of the blade	See "Robot Cleaning", page 35
		Replace the blade if bent due to an impact or if it is worn out.	See "Blade replacement",page 40
	Curb drop-off sensor	Remove any excess grass. Change the sensors if they are damaged.	See "Changing the curb drop-off sensors" page 41.
	Battery recharge knobs	Clean and remove any oxidations	See "Robot Cleaning"
Monthly	Robot	Clean the robot	See "Robot Cleaning"

ROBOT CLEANING

1 – Stop the robot safely (see "Robot safety stop", page 31).

Warning - Caution

Use protective gloves to avoid the risk of injury.

2 – Clean the outside surfaces of the robot with a sponge using warm water and mild detergent. Wring the sponge out well to remove any excess water before use.

Warning - Caution

Do not use a water hose to clean the robot.
Water could get inside the robot and damage the components.

3 – Do not use solvents or benzene so as not to damage the painted surfaces and plastic components.

4 – Do not wash the internal parts of the robot and do not use jets of pressurised water so as not to damage the electric and electronic components.

Warning - Caution

In order to not cause irreversible damage to the electric and electronic components, do not immerse the robot, in water because it is not watertight.

5 – Check the lower part of the robot (cutting blade area and wheels) and remove any deposits and/or residuals that may obstruct the correct functioning of the robot.

6 – To remove any deposits and/or other residuals from the blade, use a suitable brush.

7 – Clean the battery recharge knobs and remove any oxidations or residuals caused by electric contacts with a dry cloth and, if necessary, with fine abrasive paper.

8 – Check the level of sharpness of the cutting blade. If necessary, sharpen.

FAILURES, CAUSES AND REMEDIES

TROUBLESHOOTING

The information below is designed to help identify and correct any faults and/or malfunctions which may occur during operation.

Some failures can be resolved by the user; others require specific technical skills or special abilities and therefore must only be resolved by qualified personnel with certified experience gained in the specific field of intervention.

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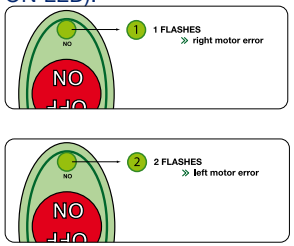
Problem	Cause	Remedy
The robot is very noisy	Cutting blade damaged.	Replace the blade with a new one (see “Blade Replacement”, page 40).
	Cutting blade fouled (tapes, ropes, plastic fragments, etc.).	Stop the robot safely (see “Robot safety stop”, page 31). Use protective gloves to avoid the risk of injury. Remove the debris from the blade.
	The robot was started too close to obstacles (less than 1 m. (40 in.) away) or in the presence of unexpected obstacles (fallen branches, forgotten objects, etc.).	Stop the robot safely (see “Robot safety stop”, page 31).
		Remove the obstacles and restart the robot.
	Electric motor failure	Have the motor repaired or replaced by the nearest authorised service centre.
	Too high grass.	Increase the cutting height (see “Cutting height adjustment” on page 24).
		Carry out a preliminary cutting of the area with a normal lawnmower.

Problem	Cause	Remedy
The work area is not completely mowed.	Not enough work hours	Extend the working times
	Cutting blade fouled with deposits and/or residuals	Stop the robot safely (see “Robot safety stop”, page 31). Use protective gloves to avoid the risk of injury. Clean the cutting blade.
	Cutting blade worn.	Replace the blade with original spare parts (see “Blade Replacement”, page 40).
	Work area is too big compared to the actual capacity of the robot	Adjust the work area (see “Technical Specifications”, page 9).
	The batteries are about to end their life cycle	Replace the batteries with original spare parts.
	The batteries do not recharge completely	Clean and remove any oxidizations from the contact points of the batteries (see “Robot Cleaning, page 35). Recharge the batteries for at least 12 hours.
The “wheel motor error” LED flashes. (1 or 2 flashes of the green ON LED). 	Uneven ground or ground with obstacles that impede movement	Check that the lawn to mow is even and does not have any holes, stones or other obstacles. If so, fill in any holes and remove any obstacles (see “Preparation and defining the boundaries of the work areas”, page 16).
	One or both wheel motors has a fault.	Have the motor repaired or replaced by the nearest authorised service centre

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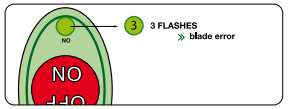
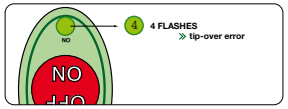
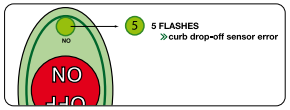
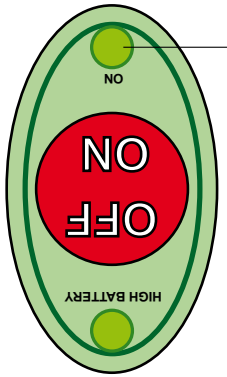
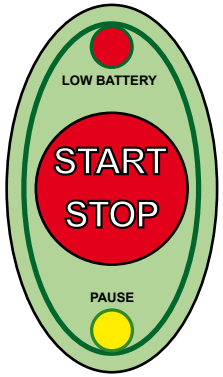
Problem	Cause	Remedy
The flashing of the LEDs signals a “motor/blade error”. 3 flashes of the green ON LED. 	Cutting blade damaged.	Replace the blade with a new one (see “Blade Replacement”, page 40).
	Cutting blade fouled (tape, ropes, plastic fragments, etc.)	Stop the robot safely (see “Robot Safety Stop”, page 31). Use protective gloves to avoid the risk of injury. Remove the cause of fouling of the blade.
	The robot was started too close to obstacles (less than 1 m. (40.0 in.) away) or in the presence of unexpected obstacles (fallen branches, forgotten objects, etc.).	Stop the robot safely (see “Robot safety stop”, page 31).
		Remove the obstacles and restart the robot.
	Electric motor failure	Have the motor repaired or replaced by the nearest authorised service centre.
	Too high grass.	Increase the cutting height (see “Cutting height adjustment,” page 24). Carry out a preliminary cutting of the area with a normal lawnmower.
The “tip-over error” LED flashes. 4 LEDs flashing consecutively. 	Ground with too much slope or with undefined borders.	Check the installation rules. “See page 16 and following pages.”
	Tip-over sensor failure.	Try to restart the robot. If the problem persists, have the robot repaired by the nearest authorised service centre.
The flashing led signals “Gulf error” Led (X) 5 consecutive flashes. 	When the robot is started it does not detect the curb drop-off sensor data correctly.	Clean the sensors and start the robot again. If the problem continues, decide whether to start the robot with the curb drop-off sensors off, otherwise contact the Authorised Service Centre closest to you.

The robot does not turn on.	Batteries in protection under the minimum level.	Connect the robot to the recharger and wait for up to 4 hours. If it still does not turn on, contact the nearest authorised service centre.
The power supply unit does not turn on.	No electricity.	Check that the power supply unit is correctly connected to the power outlet.
	Fuse interrupted. Have the fuse replaced by the nearest authorised service centre.	

ERROR SIGNALS





1 **1 FLASH** » **right motor error**

2 **2 FLASHES** » **left motor error**

3 **3 FLASHES** » **blade error**

4 **4 FLASHES** » **tip-over error**

5 **5 FLASHES** » **curb drop-off sensor error**

RECOMMENDATIONS FOR REPLACING PARTS

Important

Carry out the replacement operations and repairs according to the Manufacturer's instructions, or contact the Service Centre if these operations are not included in the manual.

BLADE REPLACEMENT

1 – Stop the robot safely (see "Robot safety stop", page 31).

Important

Use protective gloves to avoid the risk of cutting your hands.

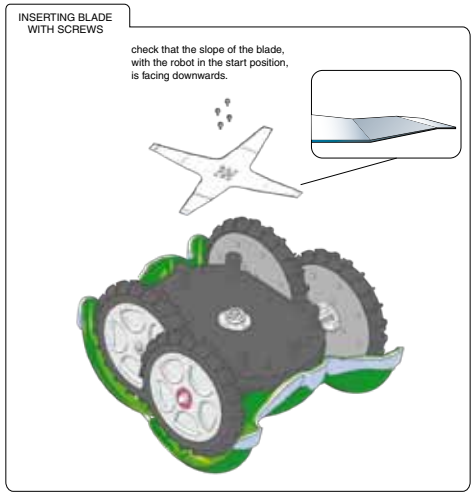
2 – Turn over the robot and position it so as not to ruin the covering hood.

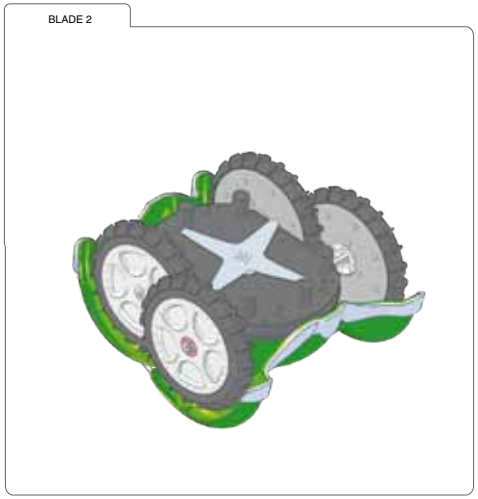
3 – Unscrew the screws to remove the blade.

4 – Insert a new blade and fasten the screws.

5 – Adjust the cutting height (see "Cutting height adjustment", page 22).

6 – Turn the robot over to its operating position.





CHANGING THE CURB DROP-OFF SENSOR

1. Stop the robot in safe conditions (see "Safely stopping the robot", page 31).

Important

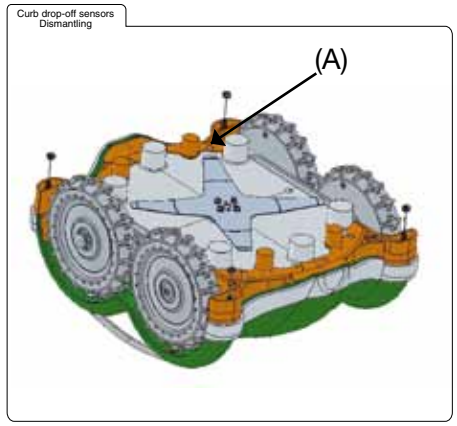
Use safety gloves to prevent risk of injury.

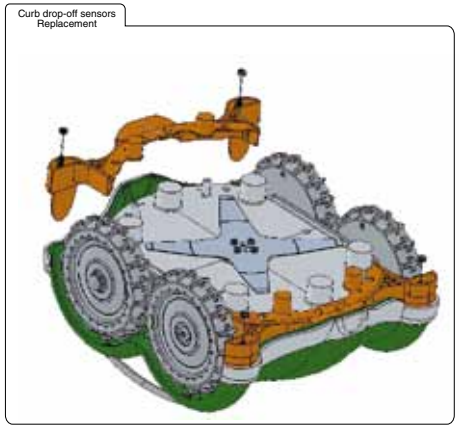
2. Turn the robot over and place it so that the cover is not damaged.

3. Unscrew the screws (A) to remove the curb drop-off sensor blocks**.**

4. Change the curb drop-off sensor block and tighten the screws.

5. Turn the robot back over to the working position.





ROBOT DISPOSAL

Danger - Attention

Do not pollute. Please dispose of old components in accordance with local laws.

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