

## Models: Toadi & Toadi Pro European instruction manual



### WARNING



Read Instruction Manual thoroughly before use and follow all safety precautions – improper use can cause serious or fatal injury.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance during mowing or while the mowing motor is activate.

## **Content**

<b>1. Introduction</b>	<b>4</b>
<b>2. Main parts</b>	<b>5</b>
<b>3. Safety symbols</b>	<b>6</b>
<b>4. Important safety instructions</b>	<b>7</b>
4.1 Intended use	7
4.2 Personal protective equipment	7
4.3 Personal operator	8
4.4 Worker Robot	8
4.5 Integrated Battery	10
4.6 Using the worker robot	12
4.6.1 Before operation	12
4.6.2 Working Conditions	12
4.6.3 Operating Instructions	14
<b>5. Docking Station</b>	<b>16</b>
5.1 Introduction	16
5.2 Warnings and Instructions	17
<b>6. Maintenance, Repair and Storage</b>	<b>19</b>
6.1 Warnings and instructions	19
<b>7. Operating principal</b>	<b>22</b>
<b>8. Safety Features</b>	<b>22</b>
8.1. Stop button	22
8.2. Disabling device	23
8.3. Autopilot advanced safety	23
8.4. Artificial Intelligence safety	23
8.5. Lifting protection	23
8.6. Tilt sensor	23
8.7. Anti-theft alarm	23
8.8. Safety flaps	24
<b>9. Installing the worker robot</b>	<b>24</b>
9.1 Prepare the lawn	24
9.2 Installing the Toadi app on your smartphone	24
9.3 Installing the Docking Station	25
9.4 Setup the digital perimeter	28
9.4.1 grass border	29
9.4.2 fixed digital perimeter	29
<b>10. Charge the worker robot</b>	<b>30</b>
10.1 Automatic charging	30

10.2 Starting charging manually	30
<b>11. Active working time</b>	<b>31</b>
11.1 Mowing time	31
11.2 Active safeguarding time	31
<b>12. During operation</b>	<b>31</b>
<b>13. Adjusting the mowing height</b>	<b>32</b>
13.1 manual height adjustment	32
<b>14. Transporting your worker robot</b>	<b>33</b>
<b>15. Storing the worker robot and the docking station</b>	<b>34</b>
<b>16. Cleaning</b>	<b>35</b>
<b>17. Inspection and maintenance</b>	<b>36</b>
17.1 Inspection and maintenance intervals	36
17.2 Inspect the mowing blades.	37
17.3 Replace the mowing blades.	38
<b>18. Troubleshooting Guide</b>	<b>40</b>
18.1 Messages	40
18.2 Worker robot	41
18.3 Eyes	42
<b>19. Specifications</b>	<b>44</b>
19.1 Toadi	44
19.2 Toadi Pro	44
19.3 Docking station	45
19.4 Symbols used on the worker robot and docking station	45
19.5 Declaration of Conformity	45
<b>20. Replacement parts and equipment</b>	<b>46</b>
<b>21. Disposal</b>	<b>47</b>
<b>22. Limited Warranty</b>	<b>47</b>
<b>23. Addresses</b>	<b>47</b>

## 1. Introduction

Thank you for your purchase. The information contained in this manual will help you receive maximum performance and satisfaction from your Toadi worker robot and, if followed, reduce the risk of injury from its use.

### **IMPORTANT**

#### **READ CAREFULLY BEFORE USE**

#### **KEEP FOR FUTURE REFERENCE**

Because one of the worker robot its task is to mow it can activate its high-speed cutting tool, designed for operation independent from the active control or supervision of an operator, special safety precautions must be observed to reduce the risk of personal injury.

Read this instruction manual thoroughly before setting up your worker robot and periodically thereafter. Follow all safety precautions. Careless or improper use of the worker robot can cause serious or fatal injury.

Discuss setup and operation of your worker robot with your authorized Toadi Center Partner. Toadi recommends having an authorized Toadi Center Partner set up your worker robot.

Do not lend or rent your worker robot without this instruction manual. Allow only persons who fully understand the information in this manual to set up, operate or maintain the worker robot. The operator must be familiar with the worker robot's controls before starting work. The operator is responsible for accidents or hazards occurring to other people or their property.

For further information, or if you do not understand any of the instructions in this manual, contact your authorized Toadi Center Partner.

This manual contains safety information that requires your special attention. Such information is introduced with the following symbols and signal words:



#### **DANGER**

Indicates a hazardous situation that, if not avoided, will result in death or serious injury.



#### **WARNING**

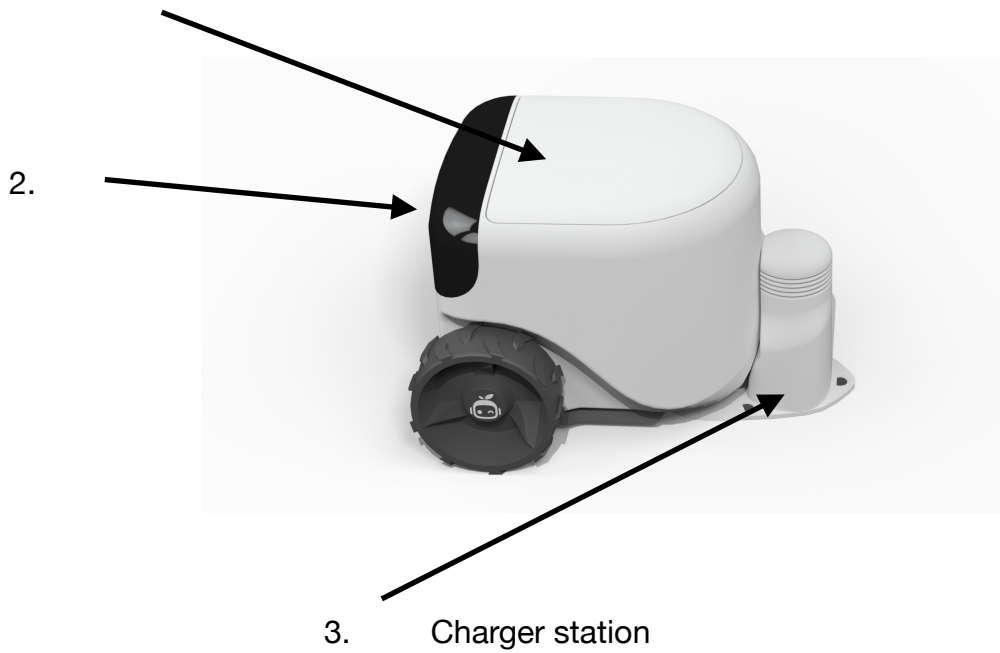
Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

#### ***NOTICE***

Indicates a risk of property damage, including damage to the machine or its individual components.

## 2. Main parts

### 1. Toadi / Toadi Pro



### 2. The front screen, containing:

- The worker robot's eyes, one left and one right eye.
- The emergency button to disable the device. Located between the eyes, in the middle.
- 

### 4. The mower disc & blades are located on the bottom:



## #Rating Plate

Contains electrical information and the product's serial number.

## Installation material



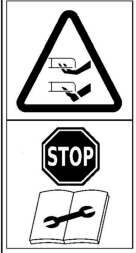

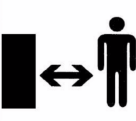


Docking station stakes, used to secure the docking station.



Toadi products must not be disposed of in the household trash, but only in accordance with local, state and federal laws and regulations and as provided in this manual.

## 3. Safety symbols

The following safety symbols are found on the worker robot:

	<p>To reduce the risk of injury, follow the specified safety precautions.</p>
	<p>Read and follow all safety precautions in the instruction manual. Improper use can lead to serious or fatal personal injury or property damage.</p>
	<p>To reduce the risk of laceration injuries, keep hands, feet and other body parts away from the mowing blade. Never put hands or feet under the worker robot, particularly during operation. Never attempt to clear clippings or debris from the mowing blade or worker robot without first disabling it by laying your hand on the middle of the front screen (between the eyes of the robot) to stop it and repeat the handling a second time for 3 seconds.</p>
	<p>The rotating cutting attachment may throw or fling foreign objects directly or by ricochet. To reduce the risk of personal injury from thrown objects, inspect the mowing area and remove stones, pieces of metal, glass, wire and other objects that could be thrown by the cutting attachment.</p>
	<p>To reduce the risk of personal injury, keep other persons, especially children, and animals away from the worker robot during operation. Do not operate the mowing function of the worker robot when children or pets are or may be in the mowing area or vicinity.</p>
	<p>Never stand on, sit on or attempt to ride the worker robot or allow others to do so. Serious personal injury and damage to the worker robot could result.</p>
	<p>Always disable the worker robot by laying your hand on the middle of the front screen (between the eyes of the robot) to stop it, take your hand of and repeat the handling a second time for 3 seconds before lifting, transporting, inspecting, cleaning or servicing.</p>

## 4. Important safety instructions

### 4.1 Intended use



#### **WARNING**

- This worker robot is intended for autonomously performing work tasks: surveillance, monitoring, observing and mowing. Use for other purposes may increase the risk of personal injury and property damage.
- The model Toadi is intended for performing surveillance in yards up to approximately 1.8 acre (7500 m<sup>2</sup>).  
The model Toadi Pro is intended for performing surveillance in yards up to approximately 3.6 acre (15.000 m<sup>2</sup>).
- The model Toadi is intended for cutting grass in yards up to approximately 0.6 acre (2400 m<sup>2</sup>).  
The model Toadi Pro is intended for cutting grass in yards up to approximately 1.02 acre (4.200 m<sup>2</sup>).
- The WCAWR docking station is designed for charging the integrated battery of the worker robot. Use of the WCAWR docking station for any purpose not authorised or intended may result in serious injury or death.
- Improper or unauthorised use of the worker robot, its integrated battery or the docking station could result in personal injury or property damage. Use the docking station, the worker robot and its integrated battery only as described in this manual.

### 4.2 Personal protective equipment



#### **WARNING**

- To reduce the risk of personal injury, always wear proper clothing and protective apparel when:
  - installing the docking station and setting up the worker robot for operation;
  - entering the mowing area or approaching the worker robot while in operation;
  - replacing the mowing blade;
  - inspecting or cleaning the worker robot;
- To reduce the risk of eye injury:  
Wear goggles or close-fitting protective glasses with adequate side protection that are

impact-rated and marked as complying with ANSI Z87 "+" when setting up the docking station and worker robot, inspecting or cleaning the mower, replacing the mowing blade and any time you are in the mowing area during operation.

- Good footing is very important. To help maintain a secure footing and reduce the risk of injury. Always wear substantial footwear with non-slip soles. Do not wear sandals, flip-flops, open-toed or similar footwear.
- To improve your grip and help protect your hands: Always wear heavy-duty, non-slip work gloves made of leather or another wear resistant material when setting up the docking station and worker robot, inspecting or cleaning the mower, replacing the mowing blade and any other time you are handling the worker robot.
- To reduce the risk of personal injury:
  - Wear overalls or long pants when approaching the worker robot while in operation. Do not wear shorts.
  - Secure hair above shoulder level before performing any installation, setup, inspection, service, maintenance or cleaning activities, and before approaching the worker robot while in operation.

#### 4.3 Personal operator



#### **WARNING**

- According to The Toadi Order's current information, the electric motor of this worker robot should not interfere with a pacemaker. However, persons with a pacemaker or other implanted medical device should consult their physician and device manufacturer before operating this worker robot.

#### 4.4 Worker Robot



#### **WARNING**

If the moving mowing blade contacts you, it will result in serious laceration injuries. To reduce the risk of such injuries:

- Keep hands, feet and other parts of your body away from the mowing blade.
- Never touch the moving mowing blade with your hand or any other part of your body.



—> To reduce the risk of personal injury to the operator and bystanders:



– Always activate the disabling device by laying your hand on the middle of the front screen (between the eyes of the robot) to stop it (emergency stop). Repeat the handling a second time by removing your hand and laying it on the middle of the front screen (between the eyes of the robot) for 3 seconds until you see OFF on the eyes for several seconds before assembling, transporting, adjusting, inspecting, cleaning, servicing, maintaining or storing.

– Never lift the worker robot or reach under the hood to clear clippings or debris, or for any other reason, without first activating the disabling device and confirming that the mowing blade has come to a complete stop.

– Although certain unauthorised attachments may fit The Toadi Order worker robots, their use may be extremely dangerous. Only attachments supplied by The Toadi Order or expressly approved by The Toadi Order for use with the specific Toadi model are recommended.

– Use only attachments supplied or expressly approved by The Toadi Order.

– Never modify this worker robot or its software in any way.

– Never attempt to modify or override the worker robot's controls or safety devices in any way.

– Never use a worker robot that has been modified or altered from its original design.

If the worker robot is dropped or subjected to similar heavy impacts:

– Check that it is undamaged, in good condition and functioning properly before continuing work.

– Check that the controls and safety devices are working properly.

– Check the mobile application for error messages.

– Never work with a damaged or malfunctioning worker robot.

– Never use or charge a worker robot if the housing is cracked, deformed or excessively hot or if battery fluid is leaking from the worker robot. A damaged battery increases the risk of personal injury and property damage from short circuit, fire or explosion. In case of doubt, have the worker robot checked by your authorized Toadi Center Partner before using it.

If the worker robot is damaged, not working properly or has been immersed in water or other liquids, its components, including its integrated battery, may no longer function properly and safety devices may be inoperative. To reduce the risk of personal injury and property damage: Take the worker robot to your authorized Toadi Center Partner to be checked before further use.

Genuine Toadi replacement parts are specifically designed to match your worker robot and meet safety and performance requirements. Use of parts that are not authorized or approved by The Toadi Order may cause serious or fatal injury or property damage. The Toadi Order recommends that only identical Toadi replacement parts be used.

#### 4.5 Integrated Battery



#### **WARNING**

Use of an unauthorised charging device can damage the battery inside the worker robot and result in fire, explosion and personal injury and property damage.

Charge the worker robot only with a genuine WCAWR docking station. The worker robot integrated battery contains safety features and devices which, if damaged, may allow it to generate heat, rupture, leak, ignite or explode.

Be alert for signs that the battery may be damaged: never use or charge a worker robot if the housing is cracked, deformed or excessively hot, if battery fluid is leaking from the worker robot, or if the worker robot is otherwise damaged. A damaged battery increases the risk of personal injury and property damage from short circuit, fire or explosion.

The battery is integrated into the worker robot and should not be removed by the operator. Have the integrated battery removed by a Toadi Center Partner when the battery is depleted or the worker robot reaches the end of its useful life. Never attempt to remove the battery or open or disassemble the worker robot for any reason.

Never subject the worker robot to heavy impacts or attempt to crush, drop or otherwise damage it.



Never heat the worker robot above 150 °F (66 °C) or place it on or near fires, stoves or other high-temperature locations.

Never expose the worker robot to microwaves or high pressures.

Never insert foreign objects into the worker robots openings.

High temperatures may cause the worker robot's integrated battery to generate heat, rupture, leak, ignite or explode, resulting in severe or fatal personal injury and property damage. Exposure to temperatures outside the recommended temperature range may also damage the battery and reduce its useful life.



Use the worker robot only within an ambient temperature range of 26.6°F to 113°F (-3°C to 45°C).



Store the worker robot only within an ambient temperature range of 32°F to 122°F (0°C to 50°C).

Never store the worker robot inside a vehicle in hot weather.

To reduce the risk of personal injury and property damage in the event the worker robot emits smoke, an unusual smell or feels unusually hot while using, charging or storing: – Immediately discontinue using or charging the worker robot and prepare to contact the authorities in the event of fire or explosion.

To reduce the risk of electric shock:



- Never immerse the worker robot in water or other liquids.
- Do not attempt to repair, open or disassemble the worker robot. There are no user-serviceable parts inside.

If the integrated battery is damaged, battery fluid can leak from the worker robot. Leaking battery fluid can cause skin and eye irritation or chemical burns.

- Avoid contact with skin and eyes.
- Use an inert absorbent such as sand on spilled fluids or liquids.
- In the event of accidental contact with battery fluids or liquids, immediately rinse the contact area thoroughly with mild soap and water.
- If battery fluids or liquids get into your eye(s): Do not rub. Rinse water over the open eye(s) for at least 15 minutes and seek medical attention.

A battery fire can be dangerous. To reduce the risk of severe personal injury and property damage in the event of fire:

- Evacuate the area. Fire can spread rapidly. Stay clear of any vapors generated and maintain a safe distance.
- Contact the fire department.
- Although water can be used to put out a battery fire, use of a multi-purpose, dry chemical fire extinguisher is preferable.
- Consult the fire department regarding proper disposal of the burned battery.

## 4.6 Using the worker robot

### 4.6.1 Before operation



#### **WARNING**

Misuse or unauthorized use may result in personal injury and property damage.

- Use the worker robot only as described in this instruction manual.

Using a worker robot that is damaged, improperly adjusted or maintained, or not completely and securely assembled can lead to a malfunction and increase the risk of serious personal injury or death.

- Never operate a worker robot that is damaged, improperly maintained or not completely and properly assembled.
- Always check your worker robot for proper condition and operation before starting work.
- Never attempt to modify or override the controls or safety devices in any way.
- If your worker robot or any part is damaged or does not function properly, take it to your authorized Toadi Center Partner. Do not use the worker robot until the problem has been corrected.

To help reduce the risk of serious personal injury or death from unintentional starting:



- Always activate the disabling device by laying your hand on the middle of the front screen (between the eyes of the robot) to stop it. Repeat the handling a second time by removing your hand and laying it on the middle of the front screen (between the eyes of the robot) for 3 seconds until you see OFF on the eyes before assembling, transporting, adjusting, inspecting, cleaning, servicing, maintaining or storing the worker robot.

### 4.6.2 Working Conditions



#### **WARNING**

Sparks generated from operation of the worker robot may be capable of igniting combustible gases, liquids, vapors, dusts or other combustible materials and substances. To reduce the risk of fire and explosion:

- Never operate the worker robot in a location where combustible gases, liquids, vapors, dusts or other combustible materials and substances are present.
- Read and follow recommendations issued by government authorities for identifying and avoiding the hazards of combustible gases, liquids, vapors, dusts or other combustible materials and substances.

If a rotating metal blade strikes a rock or other hard object, sparks may be created, which can ignite flammable materials under certain circumstances. Flammable materials can include dry vegetation and brush, particularly when weather conditions are hot and dry.

- When there is a risk of fire or wildfire, do not use the worker robot around flammable materials or around dry vegetation or brush.
- Contact your local fire authorities if you have any question about whether vegetation and weather conditions are suitable for the use of a metal blade.

Use of this worker robot can generate dust and other substances containing chemicals known to cause respiratory problems, cancer, birth defects and other reproductive harm.

- Consult governmental agencies and other authoritative sources on hazardous materials if you are unfamiliar with the risks associated with the particular substances you are cutting or with which you are working.

Inhalation of certain dusts, especially organic dusts such as mold or pollen, can cause susceptible persons to have an allergic or asthmatic reaction. Substantial or repeated inhalation of dust or other airborne contaminants, especially those with a smaller particle size, may cause respiratory or other illnesses.

- Control dust at the source where possible.
- To the extent possible, operate the worker robot so that the wind or operating process directs any dust, mist or other particulate matter raised by the worker robot away from the operator.
- When respirable dust or other particulate matter cannot be kept at or near background levels, always wear a respirator that is approved by NIOSH and rated for worksite-specific conditions. Follow the recommendations of governmental authorities and occupational and trade associations.

If the vegetation being cut or the surrounding ground is coated with a chemical substance, such as a pesticide, fertilizer or herbicide: Read and follow the instructions and warnings that accompanied the substance coating the vegetation or surrounding ground.

### 4.6.3 Operating Instructions



#### WARNING

In the event of an emergency: – Activate the disabling device by laying your hand on the middle of the front screen (between the eyes of the robot) to stop the worker robot and its cutting attachment.

The mowing blade continues to rotate for a short period after the motor is switched off. This is known as the "flywheel effect." To reduce the risk of serious personal injury from contact with the cutting attachment: Activate the disabling device and wait for the mowing blade to stop before lifting or carrying the mower. Never attempt to lift or tilt the worker robot while it is running.

The rotating mowing blade may throw or fling foreign objects directly or by ricochet. Objects that are thrown or flung, including broken mowing blades, may result in serious or fatal injury to the operator or bystanders. To reduce the risk of severe personal injury:



- Inspect the mowing area. Remove stones, pieces of metal, glass, broken mowing blades, wire or other objects that could be thrown or flung by the cutting attachment, damage the cutting attachment or cause damage to property (e.g., parked vehicles, windows).

- Remove objects from the mowing area such as toys, balls, lawn furniture, landscape ornaments, flower pots, garden hoses, lawn equipment and anything else that could impede the proper operation of the worker robot or become entangled in its mowing blade.

- Keep bystanders, especially children, and animals away from the mowing area during the worker robot's active mowing times and any other time the worker robot is in operation. Any person who enters the mowing area during operation of the mower must wear proper eye protection and proper protective equipment as specified in this instruction manual.

Never allow children or anyone else to ride on, approach or play with the worker robot. Keep children and other bystanders out of the working area while the worker robot is in operation.

Never allow the worker robot to operate if you know that animals or persons are or may be in the mowing area.

When you lay your hand on the middle of the front screen (between the eyes of the robot) the, operation of the mower will stop and the mowing blade will come to a stop after a few moments. The worker robot will display sad eyes. To activate the disabling device repeat the handling a second time by removing your hand and laying it back on the middle of the front screen (between the eyes of the robot) for 3 seconds until you see OFF

on the eyes before assembling, transporting, adjusting, inspecting, cleaning, servicing, maintaining or storing the worker robot.

To reduce the risk of injury from contact with the mowing blade, always activate the emergency stop:

- Before adjusting the cutting height.
- Before removing or replacing a blade.
- Before cleaning the blades.

Lay your hand on the middle of the front screen (between the eyes of the robot) for 3 seconds, after you activated the emergency stop, to activate the disabling device:

- Before lifting, carrying or transporting the worker robot.
- Before removing blockages or objects near the mower deck or mowing blade.
- Before mounting, removing, inspecting or cleaning the mowing blade.
- Before reaching under the mower for any reason.
- Before checking or cleaning the worker robot.

Stop and inspect the worker robot for damage if it hits a foreign object or exhibits unusual operating behavior, such as abnormal vibration. After disabling the worker robot, inspect the cutting assembly (mowing blade, blade shaft and blade mount). If the unit continues to function abnormally, take it to an authorized Toadi Center Partner for service before restarting and allowing the worker robot to operate.

To reduce the risk of severe personal injuries from unintentional starting:

– Never touch the mowing blade with your hands, feet or any other part of your body without first de-activating the machine. Lay your hand on the middle of the front screen (between the eyes of the robot) for 3 seconds and confirm that the mowing blade has stopped.

A damaged or loose mowing blade may vibrate, crack, break or come off the worker robot, which may result in serious or fatal injury.

- Make sure the mowing blades are undamaged and properly tightened before starting work.
- If a mowing blade loosens after being properly tightened, stop work immediately and have the worker robot repaired by your authorized Toadi Center Partner.
- Never use a worker robot with a loose or damaged mowing blade.

## 5. Docking Station

### 5.1 Introduction

This section contains the general safety warnings and instructions prescribed for the docking station and power supply. Additional important warnings and instructions are provided in subsequent sections of this manual.

READ AND FOLLOW ALL SAFETY INSTRUCTIONS.



#### **WARNING**

When using the docking station and power supply, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury and property damage, including the following:

- 1) READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
- 2) Read and follow all instructions that are on the docking station and power supply or provided with the docking station or power supply.
- 3) Do not use an extension cord.
- 4) Reference the National Electrical Code, specifically for the installation of wiring and clearances from power and lighting conductors.
- 5) Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- 6) Do not install or use within 19.5 feet (6 meter) of a swimming pool.
- 7) Do not use in a bathroom.
- 8) **WARNING: Risk of Electric Shock.** When used outdoors, install only to a covered Class A GFCI protected receptacle that is weatherproof with the power supply connected to the receptacle. If one is not provided, contact a qualified electrician for proper installation. Ensure that the power supply and cord do not interfere with completely closing the receptacle cover.
- 9) **WARNING: Risk of Electric Shock.** Do not use metal objects near the docking station, at least not in the range of 6 cm near the docking station.
- 10) **WARNING: Risk of Fire.** Installation involves special wiring methods to run wiring through a building structure. Consult a qualified electrician.
- 12) **WARNING: Not for use with receptacles that are weatherproof only when the receptacle is covered (attachment plug cap not inserted and receptacle cover closed).**



SAVE THESE INSTRUCTIONS – This manual contains important safety and operating instructions for the WCAWR Docking Station.

## 5.2 Warnings and Instructions



### WARNING

To reduce the risk of fire, electric shock and other personal injury or property damage:

- Read and follow all cautionary markings on the docking station and worker robot and all instructions in this manual before using the docking station.
- Use the docking station only for charging the Toadi worker robot. Using the docking station for other purposes is prohibited and may lead to fire, explosion or electric shock, resulting in serious or fatal personal injury and property damage.
- Never use a damaged or improperly functioning docking station.
- Never use or charge a worker robot if the housing is cracked, deformed or excessively hot, if battery fluid is leaking from the worker robot, or if the battery is otherwise damaged. A damaged battery increases the risk of personal injury and property damage from short circuit, fire or explosion.
- Connect the power supply cord only to a properly covered Class A Ground Fault Circuit Interruptor (GFCI) receptacle that has an enclosure that is weatherproof with an attachment plug cap inserted or removed. Do not use with receptacles that are weatherproof only when the receptacle is covered (attachment plug cap not inserted and receptacle cover closed).
- Never plug the docking station into a power strip or an extension cord.
- Never use metal objects near 6 cm to the docking station.
- Do not operate a docking station or power supply that has received a sharp or heavy blow, has been dropped or is otherwise damaged or not functioning properly in any way.
- Do not attempt to repair, open or disassemble the docking station. There are no user-serviceable parts inside.

The docking station and power supply heat up during the charging process. To reduce the risk of fire:

- Use the docking station only within an ambient temperature range of 26 °F to 110 °F (-3 °C to 45 °C).

- Do not operate the docking station on a combustible surface (e.g., paper, cardboard, textiles) or in a combustible environment.
- Allow the docking station and power supply to cool down normally. Do not cover them.

The docking station can produce sparks which may ignite combustible gases, liquids, vapors, dusts or other combustible materials. To reduce the risk of fire and explosion:

- Do not operate in a location where combustible gases, liquids, vapors, dusts or other combustible materials are present.

Using a damaged power supply cord or plug may result in fire, electric shock and other serious personal injury or property damage. To reduce these risks:

- Check the power supply cord and plug before use and regularly thereafter for damage. If damaged, immediately disconnect from the electrical outlet.
- Unplug the power supply from the electrical outlet when the docking station is not in use.
- Never jerk the power supply cord to disconnect it from the electrical outlet. To unplug, grasp the plug, not the power supply cord.
- Do not use the power supply cord for any other purpose, e.g., for carrying or hanging up the power supply.
- Make sure the power supply cord is located or marked so that it will not be stepped on, tripped over, come in contact with sharp objects or moving parts, or otherwise be subjected to damage or stress.

In case of fire, or if the docking station or power supply emits smoke, an unusual smell, feels hot or appears abnormal in any other way:

- Immediately disconnect the power supply from the outlet and prepare to contact the authorities in the event of fire or explosion.
- Have the docking station and power supply inspected and repaired by an authorized Toadi Center Partner before use.



## WARNING

To reduce the risk of fire, electric shock and other personal injury or property damage:

- Insert the power supply only into a covered Class A GFCI receptacle that has an enclosure that is weatherproof with an attachment plug cap inserted or removed. Do not

use with receptacles that are weatherproof only when the receptacle is covered (attachment plug cap not inserted and receptacle cover closed.)

- Never plug the power supply into a power strip or extension cord.

To reduce the risk of personal injury or property damage:

- Return the worker robot to the docking station and disconnect the power supply from the power receptacle if there is a threat of lightning strikes in the vicinity.



## DANGER

Using a damaged power supply cord or plug may result in fire, electric shock and other personal injury or property damage. To reduce the risk of electrocution:



- Check the power supply cord and plug regularly for damage. If they become damaged, immediately disconnect from the electrical outlet. Never use a damaged power supply cord or plug.

– Do not abrade, crush, jerk, or otherwise abuse or misuse the power supply cord or plug. Protect it from heat, oil and sharp edges.

- If the power supply cord or plug becomes damaged, replace the power supply.

- Unplug the power supply cord when the docking station is not in use.

– Never yank or jerk the power supply cord to disconnect. To unplug, grasp the plug, not the power supply cord.

– Make sure the power supply cord is positioned and secured or marked so that it will not be stepped on, tripped over, come in contact with sharp objects, moving parts, or otherwise be subjected to damage or stress.

## 6. Maintenance, Repair and Storage

### 6.1 Warnings and instructions



## WARNING

There are no user-authorized repairs for the worker robot, docking station or power supply. To reduce the risk of fire, electric shock or other personal injury and property damage:

- Users may carry out only the cleaning and maintenance operations described in this manual. Users must not attempt any other cleaning, maintenance or repair.
- Strictly follow the cleaning and maintenance instructions in the appropriate sections of this instruction manual.
- The Toadi Order recommends that all repair work be performed by authorized Toadi Center Partner.
- Maintain and replace warning and instruction labels as necessary.

Unintentional starting may result in personal injury or property damage. To reduce the risk of personal injury and property damage from unintentional starting:

- Always activate the disabling device by laying your hand on the middle of the front screen (between the eyes of the robot) to stop it (emergency stop). Repeat the handling a second time by removing your hand and laying it on the middle of the front screen (between the eyes of the robot) for 3 seconds until you see OFF on the eyes for several seconds before assembling, transporting, adjusting, inspecting, cleaning, servicing, maintaining or storing. assembling, transporting, adjusting, inspecting, cleaning, servicing, maintaining or storing the worker robot.

The mowing blade is the only user-serviceable part on the worker robot.

- Wear heavy-duty, non-slip work gloves made of leather or another wear resistant material when handling the mowing blade.
- Replace the mowing blades when it becomes worn or damaged.
- Tighten all nuts, bolts and screws after replacing the mowing blades.

Use of parts that are not authorized or approved by The Toadi Order may cause serious or fatal injury or property damage.

- The Toadi Order recommends that only authorized Toadi replacement parts be used for repair or maintenance.

To reduce the risk of electric shock:

- Unplug the power supply from the electrical outlet before inspecting the docking station.
- Regularly check the docking station and ensure that the insulation of the power supply cord and plug are in good condition and show no signs of aging (brittleness), wear or damage.
- Replace the charging station if its power supply cord or plug is damaged.

Improper storage can result in unauthorized use, damage to the worker robot, its integrated battery and docking station, and an increased risk of fire, electric shock and other personal injury or property damage.

- Lay your hand in the middle of the front screen, between the eyes, for 5 seconds to activate the disabling device.
- Allow the worker robot to cool down for approximately 5 minutes before storing.
- Before storing, always unplug the docking station from the electrical outlet.
- Store the worker robot and docking station indoors in a dry, secure place that cannot be accessed by children or other unauthorized users.
- Store the worker robot only within an ambient temperature range of 32 °F to 122 °F (0 °C to 50 °C).

# **SAVE THESE INSTRUCTIONS**

## 7. Operating principal

Toadi and Toadi Pro are worker robots, designed for autonomously performing work tasks. More specifically tasks such as guarding (a property, a yard), observing (flowers, birds...), seeking, analysing, mowing. New work tasks can be provided via a software update.

In order to detect the borderline of your yard you need to show the border to your worker robot by walking around your yard while your worker robot is following you (see installation instructions).

Your worker robot will either use the path your walked on as the perimeter, or when walking on grass autonomously detect the end of the grass within maximum 6 meter and use the grass border as the perimeter. It is possible to configure the worker robot to always use the walked path as the perimeter, even on grass where there is no visible border.

## 8. Safety Features



### WARNING

The worker robot is equipped with several devices to help reduce the risk of personal injury or property damage during use. If a safety device has a malfunction, do not operate the worker robot and take it to an authorized Toadi Center Partner to be repaired.

### 8.1. Stop button

If you lay your hand on the front of the screen, between the eyes, the worker robot and its mowing blade (if active) will stop and the eyes will show 'sad eyes', as well as you will receive a message in the Toadi app in case your worker robot has internet access. The worker robot cannot be operated while the sad eyes are displayed.

To continue automatic operation:

Press 'Continue' in the app.

Or place your worker robot on the charger station. When placed correctly on the charger station your worker robot will resume automatic operation.



Please have a look at following video to see how you can activate the Stop button: <https://www.youtube.com/watch?v=hWfAT2U6IFA>

As well as following video on how to deactivate the emergency stop button: <https://www.youtube.com/watch?v=YlrXu-mcPzk>

## 8.2. Disabling device

To activate the disabling device, activate the Stop button, remove your hand from the stop button and lay your hand a second time on the Stop button (front of the screen, between the eyes), for 3 seconds. The worker robot will now display 'OFF' on the eyes for several seconds.

To deactivate the disabling device:

Place your worker robot on the charger station. When done correctly your worker robot will deactivate the disabling device and resume automatic operation. The worker robot will show 'happy eyes'.

## 8.3. Autopilot advanced safety

To prevent the worker robot from hitting or driving over objects / persons / animals the autopilot detects objects / humans / animals in front of the worker robot and safely navigates away from them. Nevertheless, do not attempt to place objects, persons or animals in front of the worker robot during operation.

## 8.4. Artificial Intelligence safety

Your worker robot mows only above grass. To prevent the worker robot from mowing on non-grass surfaces or objects your worker robot detects and recognises grass by using its Artificial Intelligence technology. The mower motor is only active when the worker robot is driving on grass.

## 8.5. Lifting protection

If you attempt to lift the worker robot during operation, its lift detection software will be activated and will stop the mowing blade if active, within a short period. Nevertheless, do not attempt to lift or reach under the worker robot for any reason without first activating the disabling device and ensuring that the mowing blade has stopped.

## 8.6. Tilt sensor

If the worker robot exceeds the permissible incline of more than 24.24° (45 %), the worker robot will turn and continue mowing in a different direction. Exclude such inclines from the mowing area and trim the excluded area with a suitable line trimmer or other tool. In the event of a rollover, the wheel drive stops and the mowing blade will stop within a short period.

## 8.7. Anti-theft alarm

The anti-theft alarm is activated when the worker robot is removed from your yard.

- An alarm signal sounds (Optional for Toadi's with serial number below 900).

- A message is sent to your smartphone, including a picture, in case your worker robot has internet access.
- Every 30 seconds the position of the worker robot is sent to your app in case the worker robot has internet access. For example when you have a 3G/4G data subscription plan in place.
- Contact [support@toadi.com](mailto:support@toadi.com) if you require more information about the 3G/4G option or about the alarm sound option.

If you replace the docking station or worker robot after completing the initial setup, you will need to inform your worker robot via the Toadi app on your smartphone before your worker robot will operate again.

### 8.8. Safety flaps

There are safety flaps installed on the bottom side of the worker robot to prevent reaching under the worker robot. Do not remove the safety flaps for any reason. The safety flaps are installed to ensure your safety. Nevertheless, do not attempt to lift or reach under the worker robot for any reason without first activating the disabling device and ensuring that the mowing blade has stopped.

### 8.9 Mows only while driving forward

The worker robot safety measurements are at its best when driving forward (due to the camera position), for this, the worker robot only activates the mowing motor when driving forward.

## **9. Installing the worker robot**

The Toadi Order recommends having an authorized Toadi Center Partner set up your worker robot.

### 9.1 Prepare the lawn

Mow the lawn using a conventional lawn mower. An ideal grass height to start with your worker robot is 1.6 in. (4 cm).

### 9.2 Installing the Toadi app on your smartphone

1. Download and install the app via the app store on your smartphone.





2. Open the app after installation and follow the procedure in the app:

- Enter your email-adres (= your unique ID for your worker robot).
- Verify your email-adres by activation the verification email.
- Enter your WiFi network information.
- Show the generated QR code to the worker robot. Show your smartphone to the worker robot between her eyes, at about 5 cm away from your worker robot.



For an example of the app installation and activation, please have a look at following video:

<https://www.youtube.com/watch?v=wosKV4n2Jxs>

If you would like to see how you can show the QR code to your worker robot, please have a look at following video:

<https://www.youtube.com/watch?v=wfCoDZ-aMHs>

### 9.3 Installing the Docking Station



WARNING

To reduce the risk of injury during installation and operation, read and follow the docking station safety precautions and instructions in this manual. To reduce the risk of eye injury, always wear close-fitting protective eyewear when installing the docking station.



WARNING

To reduce the risk of fire and electric shock, install the docking station's power cord in a waterproof power socket and ensure that there is no risk that it may be immersed in water or other liquids. Always install the docking station on a stable surface.



WARNING

Since the docking station the charging process, do not operate the docking station on a

combustible surface or in a location where combustible gases, liquids, vapors, dusts or other materials and substances are present.



## WARNING

To reduce the risk of fire and electric shock, connect the docking station only to a covered Class A GFCI receptacle that has an enclosure that is weatherproof with an attachment plug cap inserted or removed. Do not use with receptacles that are weatherproof only when the receptacle is covered (attachment plug cap not inserted and receptacle cover closed). Ensure that the docking station is located in sufficient proximity to reach a covered Class A GFCI receptacle with the power supply cord. Do not use an extension cord. Use of extension cords are not authorized and increase the risk of electric shock and fire. Always ensure that the power supply cord is out of the cutting path of the worker robot.

There are 2 options to install the docking station:

1) Install the docking station on your terrace or non-grass, hard and flat surface (preferred installation method):

- Place the docking station on the terrace or non-grass, hard and flat surface.
- Make sure there is a half circle with 12 feet or 3 meter radius of clearance in front of the docking station.
- Plugin the charger station power cord.

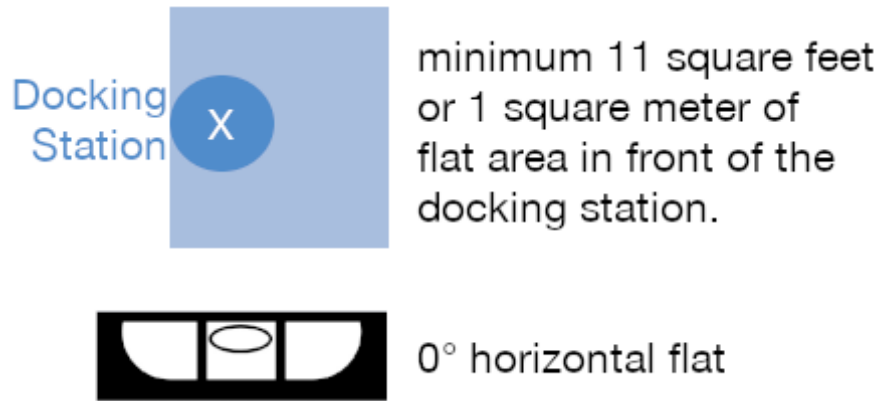
We recommend you to install the docking station on your terrace.

2) Install the docking station on the grass, in your mowing area:

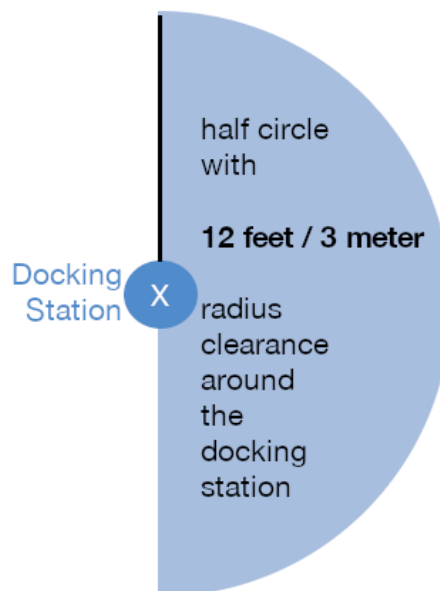
- Place the docking station on the grass, at the edge of the grass.
- Make sure there is a half circle with 12 feet or 3 meter radius of clearance in front of the docking station.
- Secure the docking station by inserting the 3 pins.
- Plugin the charger station power cord.

For any of the chosen installation option, make sure:

- The docking station is installed on a flat surface, with minimum 11 square feet or one square meter of flat area in front of the docking station. The flat surface needs to be 0° horizontal flat.



- That there is a half circle with 12 feet or 3 meter radius of clearance in front of the docking station, at all times during operation. As shown in following illustration:



- Make sure there is always a free path (no obstacles) to the grass in front of the docking station.
- For longer service life, Toadi recommends installing the docking station in a protected, shady location.



- For ease of working and to receive the software updates at all times, Toadi recommends installing the docking station in a location with a strong WiFi reception.

#### To charge the worker robot:

- Lift the worker robot and place it 50 cm before the charger, with its back towards the charger.

- Push the worker robot backwards, into the docking station.  
The eyes of your worker robot light up after docking.



Please see following video on how to charge the worker robot:  
<https://www.youtube.com/watch?v=YlrXu-mcPzk>

#### 9.4 Setup the digital perimeter

Your worker robot uses a digital perimeter to define her working area.

Your worker robot uses a map to navigate in your yard. On that map your worker robot uses a digital perimeter to understand where her borders are located.

When she arrives at your home your worker robot doesn't has a map.  
To create a map you need to show your worker robot her working area.

After installing the docking station you will be able to show your worker robot the way around your yard.

Place your worker robot on the docking station and go stand 3 meter in front of her.  
You will see her eyes scanning for a person.

Once she sees you during 2 seconds she will drive towards you.

You can now start to walk around your yard while your worker robot follows you.

Stay at a distance of 4 to 6 meter in front of your worker robot.

Walk round your yard and stay about 2 meter away from your borders. Your worker robot will automatically detects the borders afterwards.

Since you control your worker robot (she follows you), make sure there are never obstacles or steps higher than 2 cm between you and your worker robot.



#### WARNING

Your worker robot will always drive in a straight line towards you. Be sure there are no obstacles, water, pits or steps higher than 2 cm between you and Toadi.

Once you completed a tour around your yard walk back to your docking station.

It is recommended that you walk towards the docking station, in front of the docking station, in a straight line for at least 3 meter in front of the station. Walk in straight line towards the station and go stand above the station, with the docking station between your legs, visible for your worker robot.

Your worker robot will automatically dock on the station. Once your worker robot starts to dock you can move away from the station.

Once your worker robot is docked she will automatically create her map, this may take up to several hours or days, depending on the complexity of your yard.

In case your worker robot encounters an error during the process, your worker robot will stop and show 'sad eyes'. You need to restart the procedure when this happens. You can restart your worker robot by placing your worker robot on the docking station.

If all goes well she will start to mow after a few hours or the next day, depending on the time of the day you installed the digital perimeter.

The digital perimeter can be used in 2 ways:

#### 9.4.1 grass border

By default your worker robot will cross the digital perimeter to search for the grass border within maximum 6 meter of the path you walked on and have shown to your worker robot. The grass border will be the final perimeter for your worker robot. Your worker robot will automatically adjust her map.

#### 9.4.2 fixed digital perimeter

Any part of the digital perimeter can be set to become the final perimeter for your worker robot. When you set a part of the digital perimeter as the final perimeter your worker robot will not cross that digital perimeter.



#### WARNING

When using a fixed digital perimeter please take into account that the fixed digital perimeter has an accuracy of 90cm. Your worker robot will only go over the fixed digital perimeter with maximum 90 cm, nevertheless, to reduce the risk of your worker robot mowing out of the fixed digital perimeter we advise you strongly to take 150cm safety margin into account when using the fixed digital perimeter function.



Please see following video on how to setup the digital perimeter:  
<https://www.youtube.com/watch?v=Z6JmY7jyuzc>

To activate the fixed digital perimeter function contact the Toadi customer support desk at [support@toadi.com](mailto:support@toadi.com)

## 10. Charge the worker robot

Read and follow the worker robot and docking station safety precautions and instructions in this manual. Be alert for signs that the integrated battery may be damaged. To reduce the risk of personal injury from short circuit, fire and explosion, never use or charge a worker robot if the hood or housing is cracked, deformed or excessively hot, if battery fluid is leaking from the battery compartment, or if the battery is otherwise damaged.



### WARNING

To reduce the risk of electric shock, charge the worker robot only in the docking station. Do not remove the battery or attempt to charge it using an external power supply.

#### 10.1 Automatic charging

The worker robot will begin charging automatically when it docks in the docking station at the end of the mowing operation and its energy level is below a certain value.

#### 10.2 Starting charging manually

- Lift the worker robot and place it 50 cm before the charger, with its back towards the charger.
- Push the worker robot backwards, into the docking station.  
The eyes of the worker robot light up after docking.



Please see following video on how to charge the worker robot manually:  
<https://www.youtube.com/watch?v=YlrXu-mcPzk>

During charging the worker robot will show the battery status via eye animations.

Charging time depends on a number of factors, including battery condition and the ambient temperature. Exposure to direct sunlight can lead to increased temperatures inside the machine and battery compartment, which can increase battery charging times.

## 11. Active working time

### 11.1 Mowing time

After initial setup your worker robot automatically calculates the needed mowing time. This depends on the size of the mowing area. Your worker robot will only mow the required work hours to maintain your lawn.

Your worker robot will not mow when it is raining because that will damage your grass. Your worker robot automatically takes rain hours into her calculation and updates her mowing schedule automatically.

### 11.2 Active safeguarding time

Your worker robot safeguards your yard when she is at the docking station. Your worker robot automatically activates her safeguard functionality at 10 pm (22h) and deactivates it at 6 am (6h).

During the safeguard time your worker robot will activate her infrared vision and search for people. When she detects a person during that timeframe she will capture a photo and send it to the Toadi application on your smartphone.

The Toadi application will receive an alert message and ring a notification to you. You will be able to see the picture via your Toadi application.

## 12. During operation



### WARNING

Keep bystanders away from the mowing area during active times. Never allow children to approach or play with the worker robot during active mowing times. Keep children out of the mowing area while the mower is in operation. Never allow the worker robot to mow if you know that animals or persons are or may be in the mowing area or vicinity.

The worker robot independently leaves the docking station and mows the lawn during the active mowing times. The mowing plan is determined based on the size of the mowing area calculated during installation or during the creation of a new mowing plan.

When the battery is discharged, the worker robot automatically returns to the docking station.

### 13. Adjusting the mowing height

There are two different Toadi and Toadi Pro versions, one with a manual mowing height adjusting system and one with an electronic mowing height adjusting system, called the Da Vinci's Pencil. Toadi's from serial number 600 onwards have the Da Vinci's Pencil.

#### 13.1 manual height adjustment

To adjust the mowing height you need to replace the mowing disc. There are following disc available:

- For a mowing cutting height of 1.53 inch or 3,9 cm.
- For a mowing cutting height of 1.77 inch or 4,5 cm (installed by default).
- For a mowing cutting height of 1.97 inch or 5,4 cm.



#### WARNING

To reduce the risk of serious personal injury or death, always disable the device before adjusting the cutting height of the mowing blade.

#### NOTICE

To avoid overloading the motor, avoid setting the cutting height too low in tall grass. If the motor speed begins to slow, raise the cutting height.

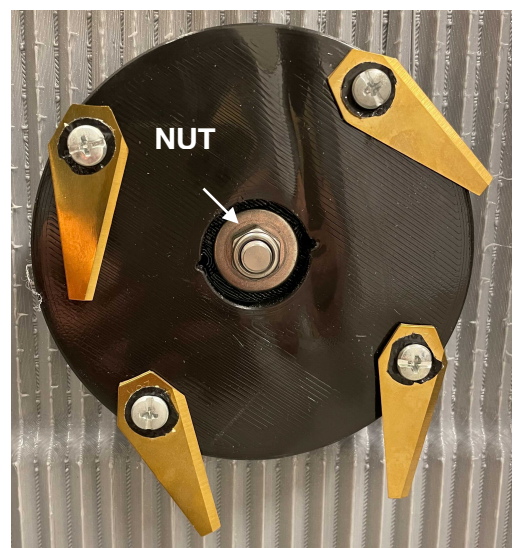


#### WARNING

Always wear heavy-duty, non-slip work gloves made of leather or another wear resistant material when adjusting the mowing height.

#### How To?

1. Hold the mowing disc with one hand (! Always wear heavy-duty gloves) and unscrew the nut in the centre of the mowing disc with your other hand.
2. Remove the nut and the mowing disc. Make sure the pin stays inside the mowing motor shaft.
3. Place the new disc and align the pin so that the pin goes inside the mowing disc.
4. Hold the mowing disc with one hand (! Always wear heavy-duty gloves) and screw the nut in the middle of the mowing disc with your other hand.





## 14. Transporting your worker robot

When transporting the worker robot:

- Always disable the worker robot by laying your hand on the middle of the front screen (between the eyes of the robot) to stop it, take your hand off and repeat the handling a second time for 3 seconds until you see OFF in the eyes for a few seconds.
- When transporting the worker robot by hand, hold it side handles (above the wheels) with the mowing blade pointing away from you.
- When transporting the worker robot in a vehicle, position and secure the worker robot to prevent turnover, impact and damage. Fasten the machine using suitable fastening materials (straps, ropes).
- Secure components being transported (e.g. docking station, small components) to prevent turnover, impact and damage.

### *A Note on Battery Transport*

The battery inside this worker robot complies with the requirements set forth in UN-Manual ST/SG/AC.10/11/ Rev.5/Part III, Subsection 38.3.

Commercial air, vessel and ground transportation of lithium ion cells and batteries contained in equipment is regulated. The battery inside this worker robot is classified as a UN 3481, Class 9, packaging group II product. Shipping it requires compliance with all applicable shipping regulations. Check with the ground, vessel, air cargo or passenger airline to determine if transport is prohibited or subject to restrictions or exemptions prior to shipping or travel.

Normally, no further conditions have to be met by the user in order to transport this worker robot by road to the operating site. Check and comply with any special regulations that may apply to your situation.

## 15. Storing the worker robot and the docking station

Both the worker robot and the docking station are designed to stay out all-year long while the worker robot is in operation. The worker robot is not a seasonal machine as conventional lawn mowers / robotic mowers for example, because the worker robot performs more functions than mowing alone. For example safeguarding.



### WARNING

Any time the worker robot is not available for operations, store the worker robot indoors in a dry, secure place that is inaccessible to children and other unauthorized users. Improper storage can result in unauthorized use and damage to the worker robot. Never place or store objects on the worker robot.



### WARNING

High temperatures may cause the integrated battery to generate heat, rupture, leak, ignite or explode, resulting in severe or fatal personal injury or property damage. Use and store the worker robot only within an ambient temperature range of 32 °F to 122 °F (0 °C to 50 °C). Never store the worker robot inside a vehicle in hot weather.

When storing the worker robot for three months or longer:

- Charge the battery fully.
- Activate the disabling device.
- Clean the worker robot.
- Store the worker robot and docking station indoors in a dry and secure location, out of the reach of children and other unauthorized persons.

### NOTICE

Charging the battery fully before storage will help prevent damage and prolong its useful life.

## 16. Cleaning



### WARNING

To reduce the risk of personal injury from unintended activation, activate the disabling device. Disconnect the power supply from the electrical outlet before carrying out any cleaning work. Users of this worker robot should carry out only the cleaning described in this manual. To help prevent injuries, always wear heavy-duty work gloves when handling the mowing blade.

To clean the worker robot and the docking station:

- Activate the disabling device.
- Place the worker robot on a firm, level and flat surface for cleaning the upper side of the worker robot. Protect the worker robot by using a protection means by laying cardboard or fabric on the flat surface.
- To clean the underside of the machine (mowing blade, mowing deck), tilt the worker robot onto its front screen. Make sure the screen rests on fabric or cardboard to avoid scratches on the screen. Scratches on the screen may hamper the working of the device.
- Remove accumulated clipping deposits in the housing and in the mowing deck.
- Clean off dirt with a brush or a cloth. Do not use detergents or harsh solvents, which may damage or weaken polymer components.
- Clean the docking station with a brush, a slightly dampened cloth or resin solvent. Do not use detergents.
- Remove grass residues.
- Never use a hose or a pressure washer to clean the worker robot or docking station or spray them with water or other liquids.

### *NOTICE*

Never use a hose or a pressure washer to clean the worker robot or docking station. Spraying the mower or docking station with water or other liquids could lead to permanent damage.

## 17. Inspection and maintenance



### WARNING

Never use a dull or damaged mowing blade. Working with a dull blade leads to increased vibration, unsatisfactory cutting results and increased wear, in particular if you use the worker robot on sandy ground or use it frequently under dry conditions. A damaged mowing blade may vibrate, crack, break or come off the worker robot, which may result in serious or fatal injury or property damage. Make sure the mowing blade is sharp and in good condition before starting work.



### WARNING

Never attempt to sharpen the mowing blade. The mowing blade must be replaced when it becomes dull, or every 200 operating hours, whichever occurs first. Toadi recommends having your Toadi's mowing blade replaced by an authorized Toadi Center Partner to reduce the risk of severe or fatal injury from an improperly mounted mowing blade.



### WARNING

Always wear heavy-duty, non-slip work gloves made of leather or another wear resistant material.

### 17.1 Inspection and maintenance intervals

The following maintenance intervals are examples and apply

in standard operating conditions. Actual use and your experience will determine the frequency of inspection and maintenance.

#### On days with active times:

- Visually inspect the general condition of the machine and the docking station.
- Inspect the mowing area. Remove stones, pieces of metal, glass, wire or other objects that could be thrown or flung by the cutting attachment or interfere with the operation of the mower. Examples of common objects that could interfere with mowing or damage the mowing blade include garden furniture, balls, garden hoses, landscape ornaments, flower pots, toys and other lawn equipment. Objects hidden or buried in the turf (e.g., sprinkler heads, water valves, electrical wires) must be avoided. Ensure that these objects are not in the mower's path before starting operation of the worker robot.
- Check that the battery is charged.

### Weekly:

- Clean the worker robot and the docking station.
- Visually inspect the mowing blades, blade fastening and mowing deck for damage (notches, cracks, fractures, etc.) and wear

### Every 200 hours:

- Replace the mowing blade. A reminder will appear in the display.

### Annually:

- Have the worker robot and the docking station inspected and maintained by an authorized Toadi Center Partner after the mowing season ends.

## 17.2 Inspect the mowing blades.



### WARNING

The mowing blade has sharp edges. If it contacts your flesh, it will cut you, even if it is not moving. Always wear heavy-duty work gloves when mounting or otherwise handling the mowing blade.

To inspect the mowing blades (always use heavy-duty gloves):

- Activate the disabling device.
- Place the worker robot on a firm, level and flat surface for cleaning the upper side of the worker robot. Protect the worker robot by using a protection means by laying cardboard or fabric on the flat surface.
- Tilt the worker robot onto its front screen. Make sure the screen rests on fabric or cardboard to avoid scratches on the screen. Scratches on the screen may hamper the working of the device.
- Carefully clean the mowing deck and mowing blade (always use heavy-duty gloves).
- Take a regular A4-paper and slide it along each blade and see if the blade cuts through the paper or not.
- Replace the blade if it doesn't cut through the paper.

### 17.3 Replace the mowing blades.



WARNING

A cracked, damaged or worn out mowing blade may shatter at high speeds and cause serious or fatal injury. To reduce risk of injury from broken parts, check condition of each mowing blades before mounting at regular short intervals thereafter. Do not mount a worn, broken or damaged mowing blade.

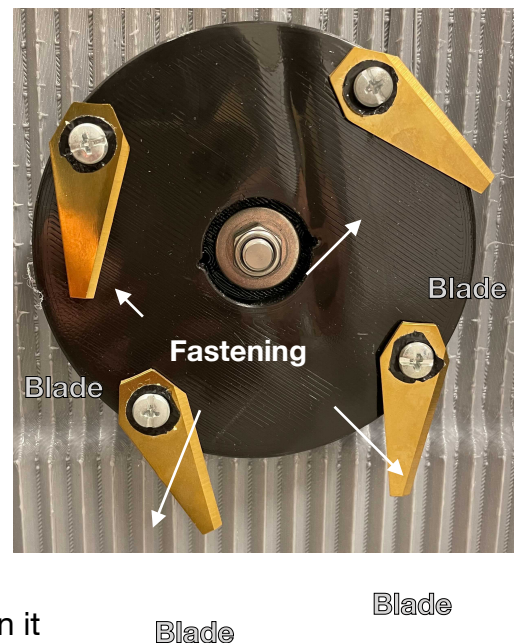


WARNING

Each mowing blade has sharp edges. If it contacts your flesh, it will cut you, even if it is not moving. Always wear heavy- duty work gloves when mounting or otherwise handling the mowing blade.

To replace one of the mowing blades (always use heavy-duty gloves):

- Activate the disabling device.
- Place the worker robot on a firm, level and flat surface for cleaning the upper side of the worker robot. Protect the worker robot by using a protection means by laying cardboard or fabric on the flat surface.
- Tilt the worker robot onto its front screen. Make sure the screen rests on fabric or cardboard to avoid scratches on the screen. Scratches on the screen may hamper the working of the device.
- Hold the mowing disc with one hand (always use heavy-duty gloves).
- Remove the fastening screw of a blade with your other hand.
- Remove the blade, including the fastening screw.
- Mount the new blade.
- Use a new fastening screw to fixate the blade. Turn the fastening screw until it is fixated and you cannot turn it anymore with normal force.





## 18. Troubleshooting Guide

### 18.1 Messages

Messages provide information on active errors, faults and recommendations. They are displayed in the application on your smartphone.

You will receive a notification for each message. You can view the message on the message wall of your Toadi application.

Message	Possible cause	Remedy
Please place your worker robot in the range of your WiFi.	Your worker robot needs to update its software.	Place your worker robot in the range of your WiFi. Or install a 'More Connectivity' package, contact <a href="mailto:support@toadi.com">support@toadi.com</a> for more information.
Your worker robot has been updated.	Your worker robot installed a software update.	Read more about the software update in the message.
Emergency stop.	The emergency button was used to disable the device.	Open the message and tap 'continue' in the message. OR Manually place your worker robot on the Docking station.
Battery too low.	Your worker robot didn't reach the docking station on time.	Place your worker robot manually on the Docking station.
Temperature too high.	The temperature in your worker robot is too high.	Allow your worker robot to cool down. Place your worker robot on the docking station or place your worker robot in the shadow to cool down.
Temperature too low.	The temperature in your worker robot is too low.	Let your worker robot warm up at ambient temperature.
Camera blocked.	There is dirt on the screen of the camera.	Clean the screen.
Stuck.	Your worker robot has become stuck.	Level out any uneven areas (holes, depressions) in the mowing area.  Clean the worker robot.  Open the message and tap 'continue' in the message. OR Manually place your worker robot on the Docking station.



Message	Possible cause	Remedy
Lift detection.	your worker robot has been lifted.	Place the worker robot on the ground.  Open the message and tap 'continue' in the message. OR Manually place your worker robot on the Docking station.
Rollover.	A rollover has been detected.	Place the worker robot on the ground.  Open the message and tap 'continue' in the message. OR Manually place your worker robot on the Docking station.
Rain detected.	Rain has been detected.	No action needed, your worker robot will return to the charging station if not yet docked.
Heavy rain detected.	Heavy rain has been detected.	No action needed, your worker robot will stop the operation and wait until the rain stops to return back to the docking station.


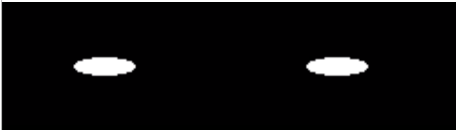


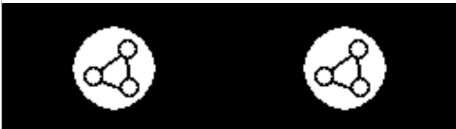
## 18.2 Worker robot




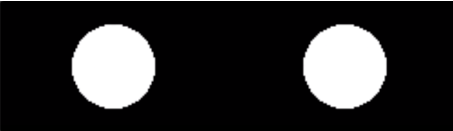


Always activate the disabling device before carrying out any inspection, cleaning or maintenance.

Condition	Possible cause	Remedy
The worker robot doesn't connect to the WiFi during the initial setup.	Wrong WiFi network name (SSID) or wrong password.	Start over, enter the correct WiFi settings. Be aware that WiFi settings are case sensitive.
The worker robot drives into my flower bed or gets stuck in the border.	your worker robot doesn't recognise the flower bed or grass border.	Clean weeds and grass out of the border.  Contact <a href="mailto:support@toadi.com">support@toadi.com</a> to capture images from your flowerbed and have Toadi trained to recognise the flowerbed.
The worker robot drives over obstacles.	your worker robot doesn't recognise the obstacle.	Contact <a href="mailto:support@toadi.com">support@toadi.com</a> to capture images from the obstacle and have Toadi trained to recognise the flowerbed.
The worker robot doesn't return to the docking station.	your worker robot has wrong data in its map, or the charging station has been moved.	Reset the map via the app and create a new map.

### 18.3 Eyes

By looking at your worker robot's eyes you can see following message:

Display - Eyes	Condition	Possible remedy
	<p>Your worker robot is showing 'Sad Eyes'. This means that the previous process went wrong.</p> <p>A) In case this happens during initial setup it might mean:</p> <ol style="list-style-type: none"> <li>1. That your worker robot couldn't connect to the WiFi.</li> <li>2. That your worker robot couldn't follow you during the setup of the digital perimeter.</li> </ol> <p>B) In case this happens during operations it means that your worker robot generated a safety stop.</p>	<p>A)</p> <ol style="list-style-type: none"> <li>1. Verify your WiFi settings and retry. Be aware that WiFi settings are case sensitive.</li> <li>2. Manually place your worker robot on the docking station and retry.</li> </ol> <p>B) Manually place your worker robot on the docking station or tap 'continue' via the Toadi application on your smartphone.</p>
	<p>Your worker robot is searching for:</p> <p>A) A QR code incase you are setting up your app / WiFi connection.</p> <p>B) You, or a human to follow around the yard to determine the digital perimeter.</p>	<p>A) Show the QR code.</p> <p>B) Go stand in front-of Toadi, at +- 4 meter distance.</p>
	<p>Your worker robot has read the QR code and is now trying to connect to the WiFi.</p>	<p>Wait until your worker robot finish.</p>
	<p>Your worker robot is successfully connected to your WiFi. Your worker robot is now setting up the connection with the Toadi server.</p>	<p>Wait until your worker robot finish.</p>
	<p>Your worker robot is connected to the Toadi server and is now ready to install the digital perimeter.</p>	<p>Wait until your worker robot starts to scan the environment. Go stand in front of your worker robot.</p>

Display - Eyes	Condition	Possible remedy
	<p>Your worker robot is on the docking station and charging. Your worker robot is charged between 0% and 20% of the total battery capacity.</p>	<p>-</p>
	<p>Your worker robot is on the docking station and charging. Your worker robot is charged between 20% and 50% of the total battery capacity.</p>	<p>-</p>
	<p>Your worker robot is on the docking station and charging. Your worker robot is charged between 50% and 75% of the total battery capacity.</p>	<p>-</p>
	<p>Your worker robot is on the docking station and charging. Your worker robot is charged between 75% and 100% of the total battery capacity.</p>	<p>-</p>
	<p>These are Toadi's Happy Eyes. This means all is well.</p> <p>In case your worker robot is on the docking station it means the battery is fully charged.</p> <p>In case your worker robot is following you to make the digital perimeter it means all is well.</p> <p>In case your worker robot is at work it means all operations are perfect.</p>	<p>-</p>
	<p>When you activate the disabling device your worker robot will completely shutdown. During shutdown you will see OFF in the eyes of Toadi.</p> <p>Once the message has disappeared your worker robot is completely shutdown.</p>	<p>Manually place your worker robot on the docking station to revive your worker robot.</p>

## 19. Specifications

### 19.1 Toadi

- Maximum mowing area size: 0.6 acre (2400 m<sup>2</sup>)
- Cutting width: 7.09 in. (18 cm)
- Cutting height: 1.41 in. to 2.13 in. (36 mm to 54 mm)
- Speed of mowing blade: 4200 RPM
- Weight: 26.5 lbs. (12 kg)
- Insulation: Class III
- Protection rating: IPX4 (protected against spraying or splashing water from all directions)



- Permissible ambient temperature range during use: 26.6°F to 113°F (-3°C to 45°C).
- Permissible ambient temperature range during storage: 32°F to 122°F (0°C to 50°C).

### 19.2 Toadi Pro

- Maximum mowing area size: 1.06 acre (4200 m<sup>2</sup>)
- Cutting width: 7.09 in. (18 cm)
- Cutting height: 1.18 in. to 1.97 in. (39 mm to 54 mm)
- Speed of mowing blade: 4200 RPM
- Weight: 28.7 lbs. (13 kg)
- Insulation: Class III
- Protection rating: IPX4 (protected against spraying or splashing water from all directions)
- Permissible ambient temperature range during use: 26.6°F to 113°F (-3°C to 45°C).
- Permissible ambient temperature range during storage: 32°F to 122°F (0°C to 50°C).

### 19.3 Docking station

- Input Voltage: 100 V to 240 V
- Frequency: 50/60 Hz
- Insulation: Class II (Double Insulation)
- Protection rating for power body: IPX4 (protected against spraying or splashing water from all directions)
- Permissible ambient temperature range during use: 26.6°F to 113°F (-3°C to 45°C).
- Permissible ambient temperature range during storage: 32°F to 122°F (0°C to 50°C).

### 19.4 Symbols used on the worker robot and docking station



The Toadi Order products must not be disposed of in the household trash, but only in accordance with local, state and federal laws and regulations and as provided in this manual.

Symbol	Explanation
V	Volt
Hz	Hertz
A	Ampere
Ah	Ampere hour
W	Watt
Wh	Watt hour
AC	Alternating current
IP	Degree of electrical protection

### 19.5 Declaration of Conformity

Type / Model	Toadi-2020 and Toadi Pro-2020
Brand	Toadi
Lot	Serial number from 900 onwards

Complies with the following EU directives:

Directives number:	Description
2011/65/EU	RoHS directive
2014/53/EU	Radio equipment directive
2006/42/EU	Machine directive

and that the following harmonised standards and / or technical specifications have been applied:

ETSI EN 300 328 V2.2.2  
 ETSI EN 301 893 V2.1.1  
 ETSI EN 303 417 V1.1.1  
 ETSI EN 303 413 V1.2.0 (DRAFT)  
 ETSI EN 301 511 V12.5.1  
 ETSI EN 301 908-2 V13.1.1  
 ETSI EN 301 908-13 V13.1.1  
 ETSI EN 301 908-1 V13.1.1  
 ETSI EN 301 489-17 V3.2.4  
 ETSI EN 301 489-19 V 2.2.0 (DRAFT)  
 ETSI EN 301 489-52 V 1.1.2 (DRAFT)  
 ETSI EN 301 489-1 V2.2.3

## 20. Replacement parts and equipment

Consult an authorized Toadi Center Partner for help.

Do not change or modify this product in any way unless specifically allowed in this manual, since this could void your authority to operate it.

The Toadi Order recommends the use of genuine Toadi replacement parts. Genuine Toadi parts can be identified by the Toadi part number, the Toadi logo and, in some cases, by the Toadi parts symbol.

Replacement parts:

- Mowing blades.
- Mowing disc: H36, H45 or H54.

Accessories:

- 'FindMyToadi': 3G/4G modem + anti-theft search location option.
- 'More Connectivity': 3G/4G mobile data connection.

## 21. Disposal



Disposal of the Worker Robot and the Docking Station.



**WARNING**

Even if believed to be discharged, the lithium ion battery integrated into the worker robot may never totally discharge and still may deliver a dangerous short circuit current. Handle a discharged/depleted battery carefully. If damaged or exposed to high temperatures, it may leak, generate heat, catch fire or explode.

Toadi products must not be thrown in household trash or disposed of except as outlined in this manual.

- Take the Toadi to an authorized Toadi Center Partner to have its integrated battery removed and recycled.
- Take the docking station, accessories and packaging to an approved disposal site for environmentally friendly recycling.
- Observe all federal, state and local disposal rules and regulations.
- Contact your authorized Toadi Center Partner for the latest information on disposal and recycling.

## 22. Limited Warranty

This product is sold subject to the Toadi Order warranty policy, available at [https://www.toadi.com/en\\_US/general-terms](https://www.toadi.com/en_US/general-terms).

## 23. Addresses

The Toadi Order BV  
Eugène Bekaertlaan 61  
B-8790 Waregem  
Belgium