

User Manual Thuja




Contents

Manufacturer Contact Details	3
European Conformity (CE)	3
Introduction	4
Explanation of Symbols	4
Delivery	5
Indication	6
Intended Use	6
Safety Measures	6
Adjusting the Bicycle	10
Before First Use	13
Inremprocedure voor schijfremmen	14
Silent Electrical System	17
vanRaam e-bike app	27
Technical Specifications	28
Cleaning and Maintenance by Owner	29
Repairs and Maintenance by Dealer	30
Collection Point for Disposal	31
Transfer/Sale to a New Owner	31
Warranty	31
Frame Number	32
Maintenance Advice	33
Disclaimer	36
Copyright ©	36
Bicycle Delivery Service Form	37

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European Conformity (CE)

vanRaam Mobility B.V., as the manufacturer, declares that the Thuja, as described in this user manual, has been produced in accordance with Regulation (EU) 2017/745, risk class 1. The Thuja supplied with the Silent electrical system also complies with Directive 2006/42/EC, including the applicable sections of the EMC Directive 2014/30/EU and NEN-EN 15194:2017 Bicycles – Electrically power assisted cycles – EPAC Bicycles – part 4.2 Electrical requirements. The signed declaration of conformity can be found on the vanRaam website.



Introduction

Congratulations on the purchase of your Thuja bicycle!
This user manual provides important and essential information about the use of the Thuja.






We kindly ask you to read this user manual thoroughly before using the bicycle. Always follow the instructions as described in this manual. The most up-to-date version of the user manual can be found on the product page of the bicycle at www.vanraam.com.

For children and people with limited mental capacity, all safety and usage aspects of this manual must be explained in an understandable way by a responsible, supervising person.

Explanation of Symbols

Safety instructions and warnings in this user manual are indicated by means of symbols. The following symbols are used in this document:

Symbol	Description
 WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.
 CAUTION	CAUTION! indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury, or is a warning against unsafe situations.
	Important note indicates that a remark or tip follows which is important to know.

Delivery

The delivery must contain at least the following items, depending on the selected options:

- Bicycle with any packaging
- Start guide
- vanRaam Silent battery
- Charger
- (Spare) keys

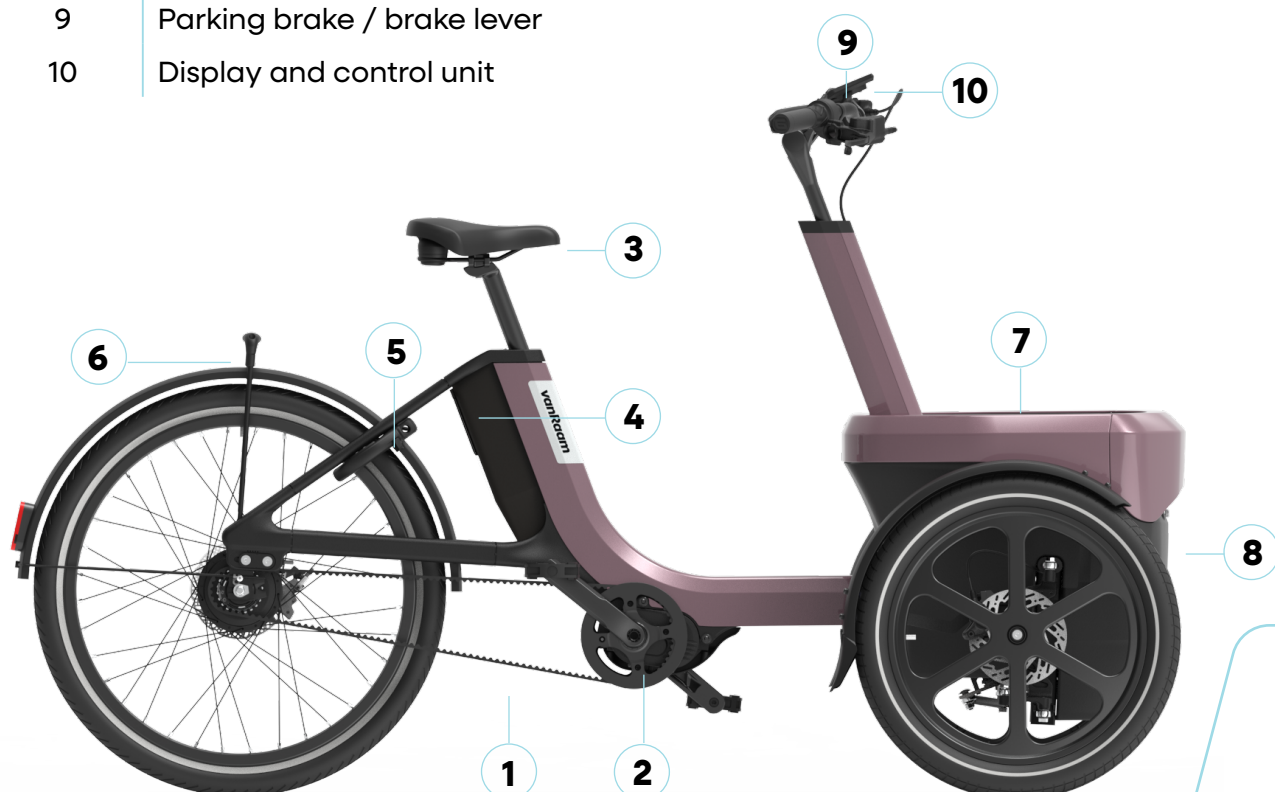


CAUTION

CAUTION! Check the delivery immediately upon receipt. In case of any damage or incomplete delivery, please contact your dealer immediately. Upon delivery, fill in the 'Bicycle Delivery Service Form' on the last page of this user manual together with your dealer.

Main Features:

Number	Feature
1	Belt or chain drive
2	Mid-drive motor
3	Saddle
4	Saddlebag
5	Lock
6	Handlebar grip
7	Cargo unit (including battery)
8	Integrated lighting system
9	Parking brake / brake lever
10	Display and control unit



Indication

Children or adults who, due to their disability, are unable to use standard bicycles or vehicles may still be able to ride these tricycles. The tricycles can be used by children or adults with a neuromuscular disorder (such as congenital brain injury, acquired brain injury, or muscular dystrophy). This also applies to those with coordination problems, balance disorders, or limited natural mobility. Supervision may be desirable if necessary.

Intended Use

The tricycles are designed for normal use on flat, solid surfaces. The usual caution required for cycling must always be observed. In addition, the safety instructions described in this user manual must be strictly followed. Local traffic regulations must also always be observed. The bicycle is intended for one person only. This user must be independently mobile and must not have severe visual or other impairments that would prevent responsible participation in traffic. The maximum user weight and luggage weight (as specified in the chapter 'Technical Specifications') must not be exceeded. Any other use, including any resulting damage or injury, is not the responsibility of the manufacturer.

Safety Measures

- Take immediate action if any part of the bicycle becomes loose, if you notice any play, or if you hear a strange noise while using the bike. If you cannot resolve the problem yourself, contact your Van Raam dealer. Pay particular attention to the wheels, handlebars, and seat.
- Only use the bicycle on a **solid and flat surface**.
- Cycling on a slope steeper than 10% is not recommended, as this poses an increased risk.
- It is recommended to **ride slowly on slopes**.
- If you have stopped on a slope, set off slowly and, if necessary, lean forward to prevent the front wheels from losing contact with the ground.
- If you are rolling backwards on a slope, brake gently to prevent the front wheels from losing contact with the road surface.
- **Be careful when braking hard:** the bicycle may tip forward. Never ride fast downhill and then brake suddenly and heavily—this can lead to loss of control and a fall.
- The following accessories may negatively affect stability on a slope: rollator holder, cane holder, wheelchair holder, or a loaded shopping basket.
- Make sure that no dangerous speed develops during descents. Brake in time and ride at a moderate speed.
- Be careful that wide trousers or loose, flapping clothing do not get caught in the chain, wheels, pedals, or other rotating/moving parts.
- Do not use a high-pressure or steam cleaner for cleaning.
- Use the parking brake when you park (and leave) the bicycle. Also engage the parking brake to prevent the bicycle from rolling away while getting on and off. See the chapter '**Before First Use**' for correct use of the parking brake.



Safety Measures (continued)

- Always lock the tricycle when leaving it unattended.
- Extra caution is required during pregnancy due to an increased risk of injury.
- Do not leave the bicycle in direct sunlight: the temperature of some parts may exceed 41°C. Contact with the skin may cause hypersensitivity.
- **Note:** Brake discs can become hot during braking. Do not touch the brake discs shortly after riding
- Practise using the pedal assist and start aid. Be careful not to accidentally activate the start aid while using the bicycle.
- If a charger is supplied with the bicycle, also carefully read the section 'Charger Safety Measures' in the chapter '**Silent Electrical System**'.



CAUTION

CAUTION! High speeds in corners and on uneven terrain, or taking a turn that is too sharp, can cause the tricycle to tip over sideways.



CAUTION

Extra attention is required if a child or an adult with limited cognitive abilities is using the bicycle.

Before a child or adult with limited cognitive abilities rides independently for the first time, they must first practice on the bicycle under supervision.

Pay particular attention to steering behaviour, as this can be a major source of danger. Also explain that the widest part of the bicycle is in front of the rider. Let the rider practice passing a few obstacles to get a sense of how wide the bicycle is.

Children or adults with limited cognitive abilities must **always** be reminded of the possible dangers of using the tricycle.

- Never leave them alone with the bicycle without supervision!
- Always have them wear a bicycle helmet! Make sure the helmet fits correctly.
- Have them wear highly visible, reflective clothing.
- It is recommended to attach a flag to the bicycle that extends above the rider.



Safety Measures (continued)

Tips for Safe Cycling

Make sure the bicycle is properly adjusted to the rider's body size; only then can the bicycle be used safely and comfortably.



CAUTION

CAUTION! A tricycle provides a different riding experience compared to a two-wheeled bicycle!

Important Safety Points for the Rider

- Ride with extreme caution during your first ride.
- Practice especially with steering through corners and braking, as a tricycle may respond differently than you expect.
- Keep your hands on the handlebars and your feet on the pedals while riding.
- Test the tricycle's handling at a moderate speed on uneven surfaces. This will help you better respond to unexpected movements of the bicycle and handlebars during use.
- Explore how the tricycle's tilting motion responds to your body posture. Lean into the inside of the turn. Take corners at an appropriate speed.
- Small obstacles should be crossed at a moderate speed.
- Avoid obstacles higher than five centimetres.
- Always ride straight and at low speed when going off a kerb or threshold.
- One of the brake levers operates the brake on the front wheel(s). Extra caution is needed here, as braking too hard can cause the front wheel to lock. Practice braking gently and gradually.
- Make sure the brake levers are easy to operate. They can be adjusted to the correct distance.

Check Before Every Ride

Contact your dealer and do not use the bicycle if you notice any irregularities during the check!

- Check that the brakes are working properly. The brakes must function correctly and you should feel resistance on the brake lever.
- Make sure the tyres are properly inflated. The tyres may be inflated up to the maximum pressure indicated on the side of the tyre. Tip for extra comfort: The front wheels do not need to be inflated to the maximum pressure, but always stay above the minimum indicated pressure.
- Check that the lights are working properly. See the chapter '**Before First Use**' for correct adjustment of the lights.
- Check that the seat and handlebars are securely fastened. See the chapter '**Adjusting the Bicycle**' for correct adjustment of the seat and handlebars.
- Make sure the battery is sufficiently charged.

As with all mechanical components, the bicycle is subject to wear and heavy loads. If a component fails, this can result in very dangerous situations and may cause damage or injury to the user. Any sign of cracks, scratches, or discoloration in heavily loaded parts of a component indicates that the part should be replaced.

Damaged or Worn Parts

Replacement and repair of parts (frame, front fork, lighting, brakes, drivetrain, and handlebars) must **always** be carried out by a dealer. Otherwise, the warranty will be void and the user will be responsible for any resulting damage.



CAUTION

CAUTION! Always replace safety-related parts with new components!



CAUTION

CAUTION! If there is any doubt about the function or condition of components on the bicycle, such as visible damage, play, or unusual noises, always consult an authorised vanRaam dealer.

Load

The maximum permissible load must not be exceeded. Refer to the information in the technical data table under the chapter 'Technical Specifications' in the user manual.



CAUTION

CAUTION! Luggage can significantly affect the handling of the bicycle, especially on slopes. No luggage should be carried on or attached to the handlebars that could restrict the operation of the bicycle.



Adjusting the Bicycle

Before using the bicycle, adjust it to the rider's body measurements. This is essential, especially for the seat and handlebars.



If optimal adjustment is not possible using the described instructions, you can contact your dealer for an appropriate solution.

The brakes are set correctly as standard and should only be checked and adjusted by the dealer during regular maintenance.



CAUTION

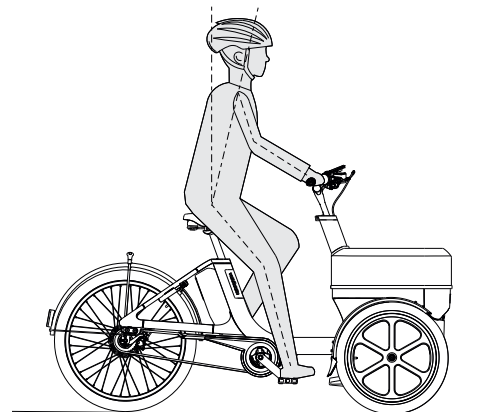
CAUTION! Make sure that fingers and other body parts do not get pinched when adjusting the tricycle.

Correct Cycling Position

A good cycling position is important. It improves your cycling performance and helps prevent injuries while riding. A dealer should ensure that the bicycle is properly adjusted for you.

Adjust the bicycle as follows:

- Saddle height;
Your leg should be fully extended with your heel on the pedal.
- Handlebar distance;
Your back should be slightly bent at a 60–70 degree angle, shoulders relaxed, and arms slightly bent. Rest your hands lightly on the handlebars without applying too much pressure.



Adjusting the Saddle Height

To adjust the saddle height, follow these steps:

1. Use a 4 mm Allen key to loosen the saddle clamp wedge.
2. Once the clamp is completely loosened, you can move the saddle to the desired height.

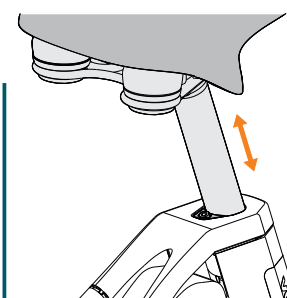
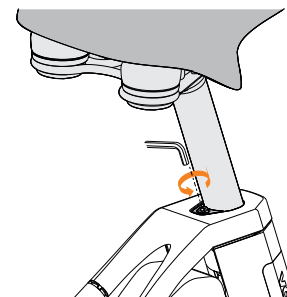


WARNING

WARNING!

Do not extend the seat post beyond the marking. If the tube is not inserted deep enough into the shaft, there is a risk of breakage, which can lead to serious injury.

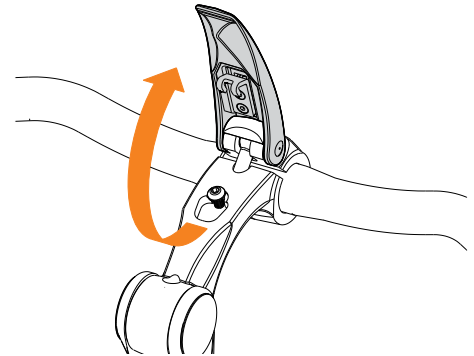
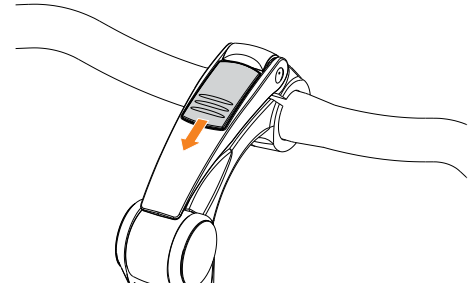
3. Tighten the saddle clamp wedge to 12 Nm.



Handlebar Height

To adjust the handlebar height:

1. Open the stem lever.



2. Tilt the stem forward so the hole aligns.

3. Insert a 6 mm Allen key into the hole and loosen the hex bolt a few turns.

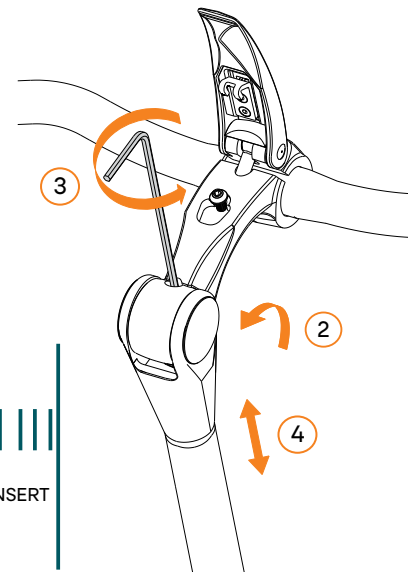
4. Set the stem to the desired height and tighten the hex bolt again to 23 Nm.



WARNING

WARNING! Do not extend the stem beyond the marking. If the tube is not inserted deep enough into the shaft, there is a risk of breakage, which can lead to serious injury.

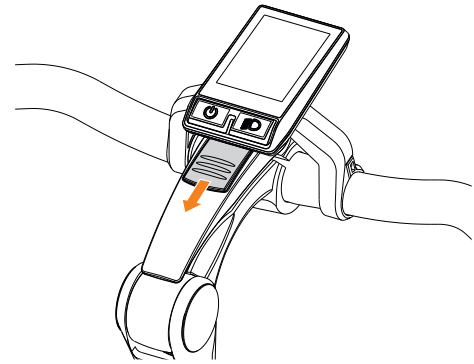
5. Set the stem angle and close the stem lever again.



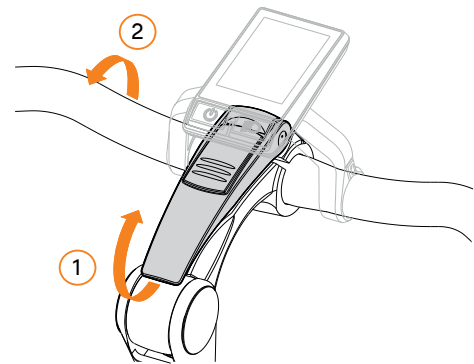
Adjusting the Handlebar Angle

To adjust your seating position on the bicycle, you can change the angle of the stem.

1. Unlock the stem lever.



2. Open the stem lever (1).
Set the stem to the desired angle (2).
After adjusting the stem angle, you may also need to slightly rotate the handlebars.



CAUTION

NOTE! If the display is mounted above the stem lever, you must first loosen the display bracket clamps on the handlebar using a 2.5 mm Allen key.

3. Close the stem lever and make sure it is locked in place.



CAUTION

NOTE! If the lever does not lock, the desired handlebar angle is not possible.

NOTE! If the display is mounted above the stem lever, you must also retighten the display bracket clamps after adjustment (tightening torque: 1 Nm).

Before First Use

The bicycle is equipped with either the Tektro or Alhonga parking brake system.

Tektro Parking Brake

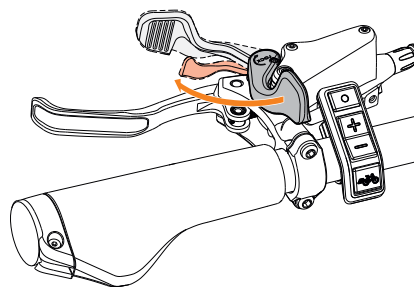


CAUTION

NOTE! Always use the parking brake when: mounting and dismounting, parking, and leaving the bicycle unattended. This ensures safe mounting and prevents the bicycle from rolling away. Always try to park the bicycle on a level surface. It is not recommended to park the bicycle on a slope steeper than 10%

Activating the Parking Brake

1. First, push the parking lever forward.



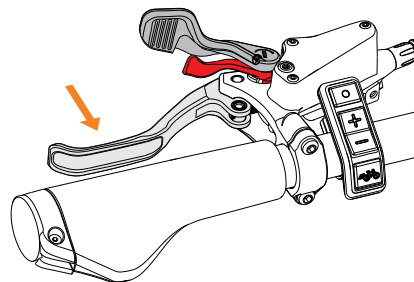
2. Then firmly squeeze the brake lever.



CAUTION

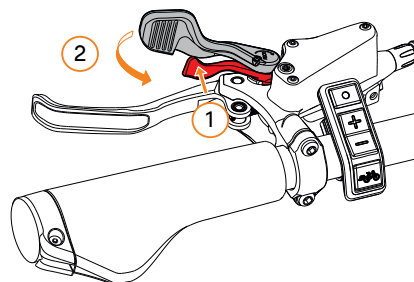
NOTE! Always squeeze the brake lever firmly to ensure the parking brake engages properly.

NOTE! After this, always check that the parking brake is correctly activated before leaving the bicycle.



Deactivating the Parking Brake

Push the red lever forward (1) and then pull both levers towards you (2).



Break-in Procedure for Disc Brakes

All new disc brake pads and rotors must be bedded in before the first ride. This bedding-in process ensures more powerful, quieter, and more consistent braking performance. During this process, the brakes and rotors heat up, allowing a uniform layer of brake material to be deposited onto the rotor. This layer significantly improves braking performance.



WARNING

Warning! You must brake firmly during the bedding-in process. Make sure you are familiar with the operation and power of disc brakes. Inexperienced use may result in falls with serious injury or worse. Have the bedding-in procedure performed by your dealer if you are not familiar with it yourself.

Remain seated on the saddle throughout the entire bedding-in procedure and ensure that the wheels do not lock up, so you can achieve the best and safest result

1. Accelerate the bike to a moderate speed, riding on a flat, safe, and obstacle-free surface.
2. Use the brake lever to reduce your speed to walking pace. Use only one brake lever at a time. Be cautious during this procedure. Apply the brake lever moderately, especially when bedding in the front brake.
3. Repeat steps 1 and 2 at least 20 times for both the front and rear brakes. Repeat this procedure more often to further increase braking power.

Alhonga Parking Brake

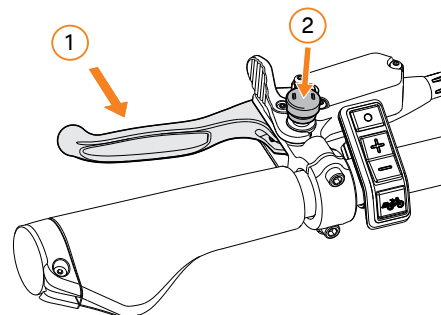


CAUTION

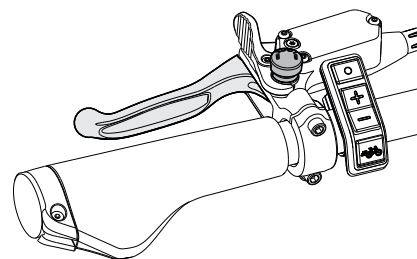
NOTE! Always engage the parking brake when mounting and dismounting, and when leaving the bicycle unattended. This makes getting on and off safer and prevents the bicycle from rolling away.

Activating the Parking Brake

1. Squeeze the lever (1) and press the button (2).



2. When the parking brake is engaged, the button remains pressed in.

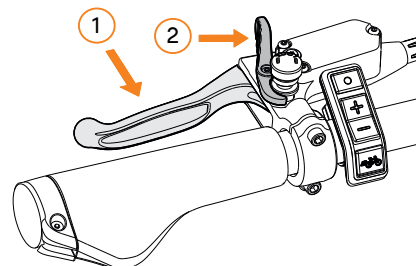


CAUTION

ATTENTION! Always check that the parking brake is properly engaged before leaving the bicycle.

Deactivating the Parking Brake

Squeeze the brake lever slightly (1).
Push the lever to the side to release the brake (2).



Lighting

The lights switch on automatically when the electrical system is activated.

Adjust the angle of the headlight so that the centre of the light beam is about ten metres in front of the bike. You can manually switch the lights on and off by briefly pressing the on/off button on the display. When the electrical system is switched off, the lights will also switch off automatically.



Always make sure there is a charged battery on the bike if you are going to cycle in the dark!

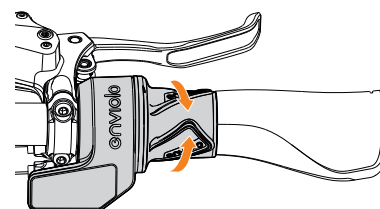
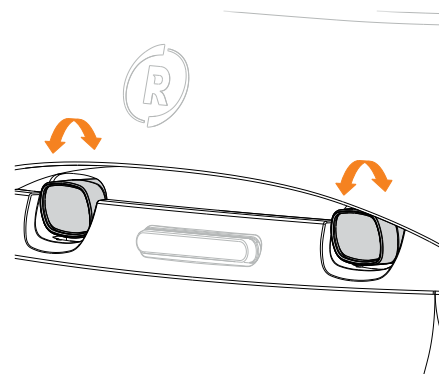
As soon as the battery is almost empty, the motor will no longer provide assistance while cycling. However, the switchable lights will still work on the remaining battery power.

Gearing and Drive

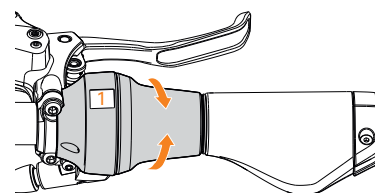
The Thuja is available in the following configurations:

- Continuously variable hub with belt drive.
- 5-speed hub with chain drive.

Both configurations feature a twist shifter, allowing you to easily change gears.



Enviolo continuously variable transmission



Shimano Nexus 5-speed gears



CAUTION

ATTENTION! Before you start cycling, read the Safety Measures chapter and make sure you understand it.



CAUTION

ATTENTION! Keep your pedals still while shifting gears.



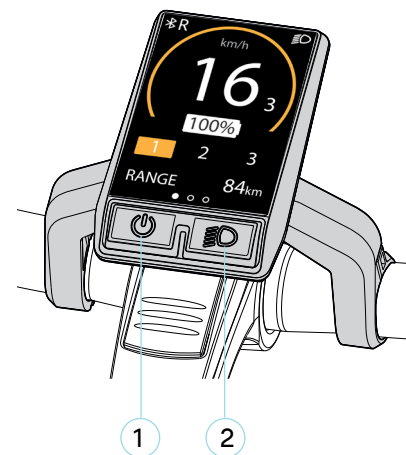
Silent Electrical System

The vanRaam Drive System VR75 is vanRaam's pedal assist system and consists of five components: display, control unit, battery, mid-drive motor, and speed sensor. The use of the first three components is explained in this manual.

Operating the Silent Smart Display

The Silent smart display provides you with cycling information, which will be explained in more detail later. The display is mounted to the handlebar with a bracket. The display does not need to be removed when leaving the bike.

- (1) On/off
Use this button to switch the electrical system on.
- (2) Bike lights
The lights on the bike switch on automatically when the electrical system is activated. By briefly pressing this button, you can switch the lights off (and on) manually.



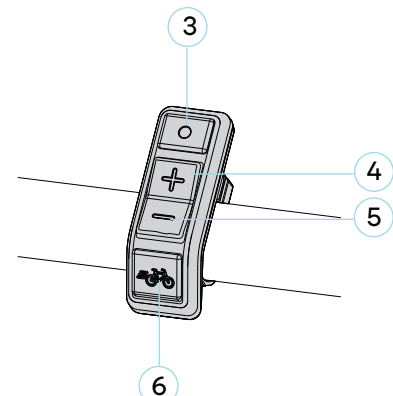
Operating the Control Unit

The control unit is mounted next to the handlebar grip. You use the control unit to operate the electrical system.



If needed, your dealer can mount the control unit on the other side of the handlebar.

- (3) Mode
Briefly press this button to switch between different mode screens.
- (4) Plus - Increase pedal assist
- (5) Minus - Decrease pedal assist
- (6) Powerstart
Press this button to accelerate the bike automatically for up to five seconds to approximately 6 km/h, without needing to pedal.

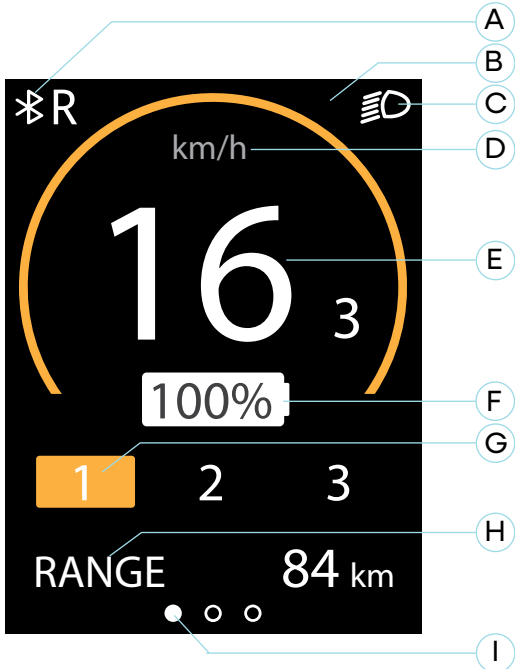


Information Screen

After starting the electrical system, the information screen is displayed. This screen shows current cycling information.

i The information screen only works when the electrical system is switched on.

Letter	Function
A	Bluetooth connection
B	Notification field
C	Bike lights
D	Speed unit indicator
E	Speed
F	Battery charge percentage
G	Assist level
H	Mode screens
I	Mode screen orientation bar



Mode Screens

With the mode button (3), you can set the mode screen (i). You can switch between the following three mode screens during use:

- 1. Range [RANGE] (default display)
This shows the number of kilometres you can still ride with the remaining battery capacity in the current assist level.



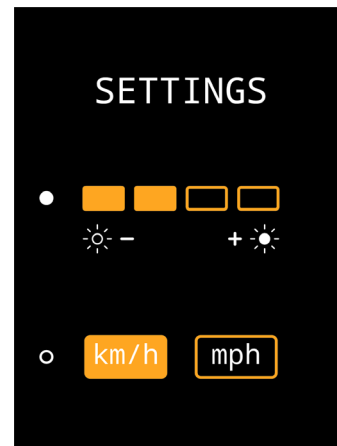
i The range depends on the assist level and is an estimate, so the actual range may differ from the displayed value. The range is influenced by various factors, including battery capacity, assist level, tyre pressure, riding speed, rider weight, load, and environment.

- 2. Trip distance [TRIP]
This shows the distance travelled since the last reset of the trip counter. By holding the mode button for one second, the trip counter is reset to 0.
- 3. Total distance [TOTAL]
This shows the total distance ridden with the electrical system switched on.









Settings Screen

In the settings screen, you can adjust the display brightness and the units for distance and speed. To access the settings screen, hold down the mode button (3) and the plus button (4) at the same time for one second. Use the mode button (3) to switch between settings. Use the plus and minus buttons (4, 5) to change the selected setting. To exit the settings screen, press and hold the mode button (3) for one second.



Notifications

Various symbols can be displayed on the information screen. The symbols are explained below. For more information about notifications, see the chapter "Possible Malfunctions."

Symbol	Notification
	The bike lights are activated
	A Bluetooth connection is active
	No communication with the battery
	The controller temperature is too high
	The voltage is too high
	Malfunction

Powerstart

With Powerstart, the pedal assist is activated up to a speed of 6 km/h without needing to pedal yourself. To use this function, hold down the start assist button (6). If you press the button again, the function is reactivated. The selected assist level determines the amount of support provided by Powerstart. The Powerstart button can be used for extra support when setting off.

Boost

If you press the Powerstart button while cycling, you get a “boost”. The “boost” provides a maximum speed of 10 km/h. The selected assist level determines the amount of support during the “boost”. The Powerstart button can be used for extra support when cycling up a slope.

Assist Levels

With assist levels 1, 2, and 3, you can set the amount of pedal assistance. You can switch assist levels while cycling.

1. Low assist, maximum range.
2. Medium assist, average range.
3. Maximum assist, reduced range.

Assist

This bike uses a mid-drive motor. To ensure optimal support, it's important to shift gears correctly. Always start cycling in first gear and shift up as needed. Remember to shift back down when you slow down or come to a stop. Use the lowest gear when cycling uphill.

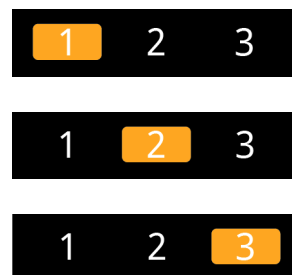
The power of the assist depends on the gear. In first gear, the assist provides the most power; in the highest gear, it provides the least power.

Assist Programs

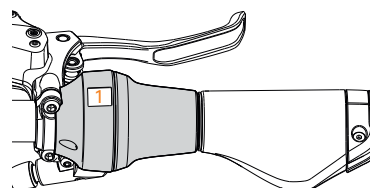
An assist program is a set of settings that determines the level of support. By loading a different program, the amount of support for all assist levels can be adjusted. Programs can be changed by the dealer or via the vanRaam app.

Use Without Battery

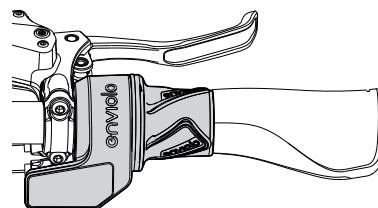
If the battery is empty or not present on the bike, you can still ride the bike and use the gears.



Shimano (in first gear)



Enviolo (in first gear)



Charging the Battery

Follow these steps to remove and charge the bike's battery:

1. Unlock the battery by turning the key a quarter turn.

2. Press and hold the lock button. Then, with your other hand, pull the battery out of the holder.

3. Take the battery indoors.

4. First, insert the charger's connector into the charging port on the battery.

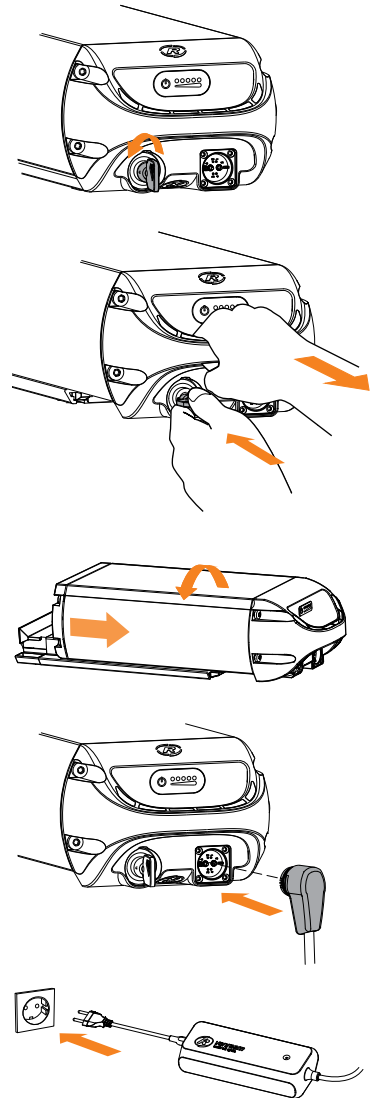
5. Then plug the charger into the wall socket. A green LED on the battery will start blinking and a red LED on the charger will light up to indicate that charging is in progress.



CAUTION




ATTENTION! If there is poor contact between the battery and the charger, the green LED on the charger will light up (standby mode). This may indicate insufficient connection. Unplug the charger from the wall socket and clean the charger connector with a dry cloth.

6. The charging time depends on the battery status. Charging takes about 2 hours for an 11.4 Ah/36 V battery and about 4.5 hours for a 23.5 Ah/36 V battery.
7. Once the battery is fully charged, the green LED will stay on continuously. First, unplug the charger from the wall socket.
8. Then remove the charger connector from the battery.
9. Place the battery back into the holder on the bike and lock it. Alternatively, the battery can also be charged directly while in the holder.



Charger Indicator Light

The status of the charger is shown by the coloured indicator light.

Status	Description
	If the indicator light is green, the charger is in standby mode or the battery is fully charged.
	If the indicator light is red, the charger is charging the battery.
	If the indicator light is flashing red, the charger is in error mode.



CAUTION





ATTENTION! Unplug the charger from the wall socket.

ATTENTION! Only use the charger when the ambient temperature is between 0 °C and 35 °C.

ATTENTION! It is better for the battery to charge it regularly rather than waiting until it is completely empty.

Battery Indicator Lights

The battery has an LED indicator that allows you to check the charge level. By briefly pressing the on/off button [A], you can read the battery's charge status. While charging, the indicator shows the charging progress:

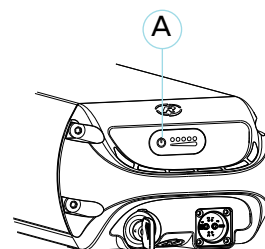
Indicator	Description
	The battery is fully charged. As the battery is used, the number of illuminated green lights will decrease.
	If two green lights are on, the battery is 50% charged.
	If only the left LED is still green, the battery is almost empty and should be charged or replaced with a charged battery.
	If the left LED starts flashing green, the battery is empty and the motor will soon stop providing assistance while cycling. The switchable lights will continue to work.



CAUTION

ATTENTION! Never store the bike with an empty battery.

ATTENTION! During winter, check the battery charge every month and re-charge it if fewer than three LEDs are lit.



Deep Sleep Mode Battery

When the battery is almost empty and has not been used for a week, it will enter a 'deep sleep mode'. In this mode, the battery uses as little energy as possible, which helps extend its lifespan.

When "deep sleep mode" is activated, the battery cannot be used. To wake the battery from deep sleep mode, press the on/off button [A] on the battery. The battery can then be used again. It is advisable to charge the battery before using it.

Charging and Maintenance of the Battery

Important safety warning:



CAUTION

ATTENTION! When using the battery for the first time, fully discharge it. This will allow the battery to make optimal use of its capacity. It is not necessary to discharge the battery in one go; this can be done over several rides.

After fully discharging, charge the battery completely. The battery can then be used as needed.

- For optimal battery condition and capacity, we recommend charging the battery indoors at room temperature.
- Never store the bike with an empty battery. We advise charging the battery as soon as possible when it is empty. The best storage charge for the battery is when three to five LEDs are lit.
- During winter, check the battery charge every month and recharge it if fewer than three LEDs are lit.
- Preferably store and use the battery between 5 °C and 20 °C; avoid higher and lower temperatures.
- Do not charge the battery in direct sunlight and make sure not to charge the battery at temperatures below 5 °C.
- Only use the charger in dry indoor areas; the charger must not get wet.
- Only use the supplied vanRaam battery.
- The casing of the battery and the charger must not be opened. In case of problems, contact your dealer!
- A vanRaam battery must not and cannot be refurbished due to safety and possible malfunction of the electrical system.
- Do not drop the battery, as this can cause both external and internal damage.
- If the bike has a malfunction, the battery must be disconnected from the bike.



Please note that the bike will provide less assistance at lower temperatures (0 °C and below) and the battery will drain faster. Charging the battery will also take longer at low temperatures.



CAUTION

Every battery will gradually lose its charge over time. This process is called 'self-discharge'. A battery that is empty and not recharged can suffer from deep discharge due to self-discharge, which may cause permanent damage. The warranty is void in case of deep discharge.



Keep in mind that every battery will wear out over time. The wear process is unavoidable and depends on several factors, such as usage, the number of complete charge and discharge cycles, and the ambient temperature. Even if the battery is not used, its capacity will decrease. A worn battery can still be used, but be aware that the range will be reduced.



Possible Malfunctions

- The system does not switch on:
 1. Check if the battery is properly connected.
 2. Check the battery status. If it is empty, charge the battery.
 3. If the above does not solve the issue, contact your dealer.
- If a red LED on the charger starts flashing, unplug the charger from the socket and stop using both the charger and the battery. In this case, contact your dealer.

Error Symbol/Code	Description	Consequence/Action
All support levels flashing	Controller temperature too high	System still provides support, but motor power is reduced.
Thermometer (symbol) + all support levels flashing	Controller temperature too high	System does not provide support, let the controller cool down.
Battery with cross (symbol) + all support levels flashing	No communication with battery	System still provides support. Contact your dealer.
Lightning bolt (symbol) + support levels off	Voltage too high	System does not provide support; voltage will drop automatically if you ride slower than the maximum support speed.
Exclamation mark (symbol)	Voltage too low	System does not provide support; check the connection between controller and battery. Check the battery charge level.
	Speed sensor not recognized	Check the position of the speed sensor.
	Communication error controller	System does not provide support. Contact your dealer.
The active support level is flashing	Current too high	System does not provide support. Contact your dealer.
The active support level is flashing	Motor sensor error	System still provides support. Contact your dealer.
All support levels are off	The battery is almost empty	Charge the battery.

Charging and Maintenance of the Battery

Important safety warning:

Charger Safety Precautions

- Only use the supplied charger to charge Van Raam Li-Ion batteries. Connect the charger only to a suitable socket (220-240 Volt AC 50-60 Hz). When the charger is not in use, unplug it from the socket and disconnect it from the battery.
- The charger should only be used by people who have read this manual and are familiar with the correct use of the charger. Keep the charger out of reach of children; they must not play with the charger.
- The charger is designed for use in a dust-free, dry, and well-ventilated environment. Do not expose the charger to water, heat sources, or direct sunlight. Keep the charger clean and dry.
- Do not charge batteries that feel hot. The battery must be at room temperature at most before charging. Stop charging if the battery becomes abnormally warm ($>40^{\circ}\text{C}$).
- Note! The charger itself can become warm during charging ($>50^{\circ}\text{C}$). Carefully check if you can touch the charger, as this temperature may cause sensitivity or a startle reaction upon skin contact.
- Do not use the charger if it is visibly damaged or modified. Do not attempt to repair the charger! Contact vanRaam. Never open the charger yourself!
- Always supervise the charger and battery while charging. When the battery is full, unplug the charger from the socket and disconnect it from the battery.



vanRaam e-bike app

The vanRaam e-bike app is a free smartphone app that you can use while riding your electric vanRaam bike.

The vanRaam e-bike app is available for free download from the **Google Play Store** or **Apple App Store**.

Google Play Store:



Apple App Store:



For more information about the vanRaam e-bike app, visit the vanRaam website: www.vanraam.com



WARNING

WARNING! As of July 1, 2019, it is no longer permitted to operate the app while cycling. The app may only be used when stationary. Using a mobile phone while cycling is prohibited by law.

Technical Specifications

Component	Specification
Inseam length (cm) standard seat post	Standard seat post: inseam 71.5 cm – 86 cm Long seat post: inseam 87.5 cm – 102 cm
Length (cm)	190 cm
Width (cm)	85 cm
Height (cm)	approx. 109 cm
Step-through height (cm)	35,5 cm
Front wheel size	20"
Rear wheel size	26"
Weight (bike configuration with battery)	58kg
Maximum user weight	100kg
Maximum cargo-unit load	30 kg (max. 15 kg on and 15 kg in the cargo unit)
Brake type, front	Hydraulic disc brakes
Brake type, rear	Hydraulic disc brakes



Cleaning and Maintenance by the Owner

Below are instructions for maintenance and adjustments you can regularly perform yourself. This will help keep your bike in optimal condition.

Cleaning and Disinfecting

The frame of the tricycle can be wiped down with a damp cloth. For dirty spots, you can use a mild cleaning agent.

The wheels can be cleaned with a damp brush with plastic bristles (do not use a wire brush!). The saddle, handlebars, and backrest can be disinfected with mild soap and water.



CAUTION

ATTENTION! Do not use a high-pressure or steam cleaner!

The Correct Lubricant

The chain should be cleaned and maintained regularly (approximately every three months). Only use special chain grease or Teflon spray. This is the only way to ensure that the chain runs smoothly, remains water-repellent, and does not rust.

1. Wipe the chain clean with a cloth.
2. Treat the chain with grease or spray.
3. Wipe off any excess lubricant with a cloth.

Other parts should not be treated with lubricant.

Inspection of the Tricycle

It is necessary for the tricycle to be inspected by a dealer at least once a year in order to maintain your warranty. Use the "Service, Maintenance and Modifications Form" found at the back of this manual for this purpose. The first service should be carried out after the first 200 kilometres or two months.

In case of malfunctions or defects, contact your dealer **immediately** for repairs.

The replacement of safety-related components (especially the frame, brakes, lighting, handlebars, fork, and drivetrain) must be carried out by your dealer.

If you still choose to replace components yourself, you are personally liable for any damage or injury resulting from incorrectly installed components.

Only use **original** vanRaam spare parts, which you can purchase from your dealer. Upon request, the dealer will provide the necessary information for repairs and maintenance.

Repair and Maintenance by Dealer

During the service, check the brakes, rims, lighting, chain tension, and spokes. Also check the tread depth of the tyres, which must be at least one millimetre. Worn tyres or any defective parts must be replaced. Check the operation of the parking brake. With the parking brake fully engaged, the tricycle must not move, even with the rider on it.

Rim Inspection

Due to the interaction between the brakes and the rims, not only the brake pads but also the condition of the rim is important. For this reason, the rim should be checked regularly, for example when inflating the tyre. The presence of fine cracks in the rim near the spoke nipples or deformation of the rim when the tyre pressure is increased indicates significant wear. In such cases, the rim must be replaced, as this can otherwise lead to reduced braking performance or even a broken rim, with all the associated dangers.

Repairs, maintenance, and modifications may only be carried out using original vanRaam parts.

Torque Settings

Component	Torque
Seat post bolt	12 Nm
Handlebar stem bolt	21-23 Nm
Handlebar clamp bolts	12-14 Nm
Display bracket handlebar clamp bolt	1 Nm
Button module handlebar clamp bolt	1 Nm
Headset bearing (handlebar)	Play-free
Headset bearing (fork)	Play-free
Motor bolts	35 Nm
Bottom bracket bolts	30 Nm
Crank bolts	37 Nm
Brake caliper bolts	6 Nm
Wheel bolts	30 Nm
Wheel nuts	37 Nm



Drop-off Point for Disposal

If you wish to dispose of the bicycle, please contact your dealer or your local waste management company. They will recycle the bicycle in accordance with the regulations in your country or region.

Battery Recycling

When the battery is defective or no longer in use, it must be recycled according to local laws and regulations. Please take the battery to an officially recognised battery collection point in your country. For more information about the correct collection points and procedures, you can contact the national authority responsible for battery recycling.

Transfer/Sale to a New Owner

If you transfer the tricycle to a new owner, it is important that you hand over all necessary technical documentation and spare keys, so that the new owner can use the bicycle safely.

If you use the vanRaam E-Bike App and have linked your bicycle to the app, make sure to disconnect the bicycle and battery from the app during the transfer or sale.

Warranty

The warranty covers all defects in the product where it has been proven that the cause is a material or manufacturing fault.

We provide a five-year warranty on the frame and front fork. For all accessories and other parts (excluding wear parts), we apply the legally required warranty period of two years. The warranty is only valid with normal use and maintenance of the bicycle, as described in this manual.



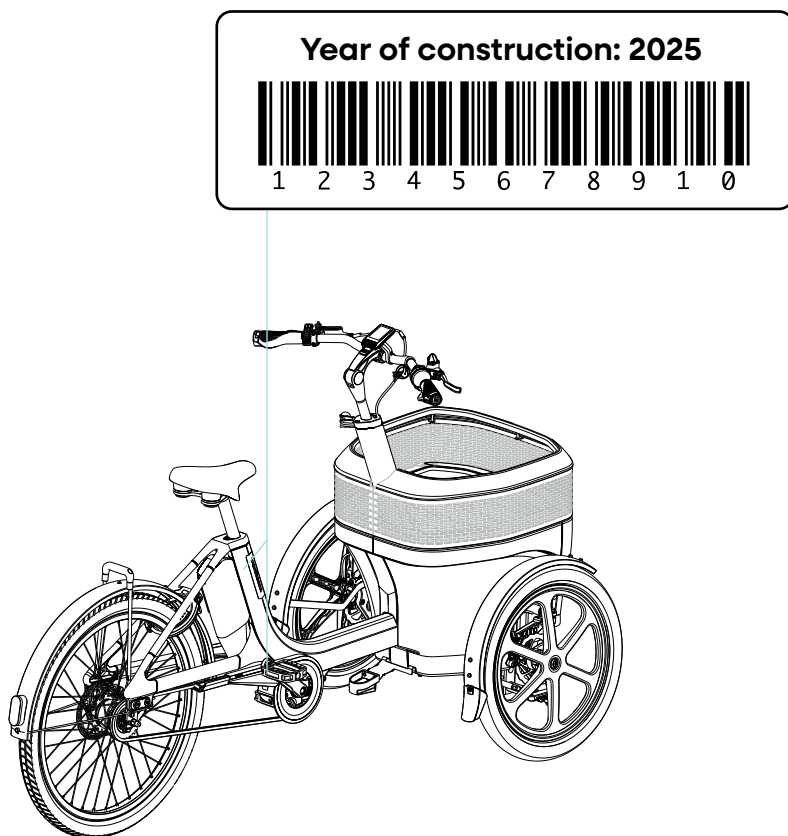
CAUTION

ATTENTION! Both the warranty and general product liability will become void if the instructions in this manual are not followed, if maintenance work has been carried out incorrectly, or if technical modifications or additions have been made to the bicycle using non-original vanRaam parts without the permission of vanRaam. Additionally, if modifications are made by third parties, the original CE declaration for the bicycle will become void. The absence of a CE declaration may lead to problems with insuring the bicycle and in the event of damage or liability.

Frame Number

You will find the frame number on the sticker. This sticker is attached to the frame, see images.

Example sticker:



Maintenance Advice

Proper maintenance will extend the lifespan of your bicycle. You can have maintenance carried out by one of the vanRaam dealers. The monthly and annual checks can usually be performed by yourself.

Overview:

What	When	Duration	By whom?
1st service	3 months/300 km	15 min	Dealer
2nd service	6 months/1,000 km	15-30 min	Dealer
3rd service	12 months/2,000 km	30-90 min	Dealer
Monthly check*	Every month	15 min	User
Annual check*	Every 12 months	60 min	User

* This is advice to help keep your bicycle in good condition for longer.
 Of course, you may also have your dealer perform these checks.

Monthly Check (15 minutes, including)	Annual Check (60 minutes, including)
Check and inflate tyres	Check and touch up paintwork
Check chain/belt tension and lubricate if necessary	Check wheels for trueness
Tighten bolts/nuts	Check spoke tension
Check lighting	Check steering functionality
Check brakes	Check lighting
Check/lubricate moving parts	Check seat module
Clean the bicycle	Check mounting of electrical components
	Check box, including lock and lid

1st Service (15–30 minutes, including)

Check and inflate tyres

Check spoke tension

Check and lubricate chain tension or check belt tension

Tighten bolts and nuts, including axle nut, motor, steering, and seat module

Check brake cables and brake pads

Check gears

Check/lubricate moving parts, including axles and sprockets

Check lighting

Clean the bicycle

Check wheel alignment

Check correct mounting of the box

2nd Service (30–90 minutes, including)

Same tasks as the 1st service, plus:

Check pedals and bottom bracket

Lubricate and secure the lock

Tighten and grease the handlebar stem

Check steering ball joints

Perform and complete the dealer tool test

3rd Service (60–120 minutes, including)

Same tasks as the 1st and 2nd service, plus:

Check paintwork

Inspect frame and front fork

Check upholstery parts

Check motor/hub for operation and unusual noises

Inspect reflectors for damage

Check mounting of electrical components

Perform and complete the dealer tool test + update firmware if necessary

Check box, including lock, lid, and battery tray



Service Plan

1st Service

- ☐ Yes/No Date:
- ☐ Dealer:
- ☐ Mechanic:

Comments:

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2nd Service

- ☐ Yes/No Date:
- ☐ Dealer:
- ☐ Mechanic:

Comments:

.....

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.....

3rd Service

- ☐ Yes/No Date:
- ☐ Dealer:
- ☐ Mechanic:

Comments:

.....

.....

.....

Annual Check

Date	Dealer	Mechanic	Comments

Additional Maintenance and Checks You Can Do Yourself

Would you like more tips to keep your vanRaam bike in top condition? Take a look at the article '10 tips for an adapted bike' on our website. This article offers advice on cleaning your bike, cleaning the upholstery, and how to best care for the battery of your electric vanRaam bike.



Disclaimer

vanRaam Mobility B.V. accepts no responsibility for damage or injury resulting from failure to follow these instructions carefully or from disregarding normal precautions when commissioning and using the bicycle. Due to our ongoing commitment to improvement, the product may differ in detail from what is described in this manual. For this reason, the instructions provided should only serve as a guideline for commissioning and use of the bicycle. This manual has been compiled with the utmost care, but vanRaam Mobility B.V. cannot be held liable for any errors in the manual or for their consequences.

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Delivery Service Form Bicycle

Congratulations on the purchase of your vanRaam bicycle. This bicycle has been manufactured with the utmost care. To ensure the highest quality, vanRaam Mobility B.V. produces its bicycles in accordance with ISO 9001:2015 quality standards. vanRaam Mobility B.V. is certified for this by DNV GL Business Assurance B.V.

You can enjoy your custom-made vanRaam bicycle to the fullest when it is adjusted to your specifications and the instructions in the user manual are followed. Be sure to pay attention to the service intervals prescribed in the manual.

To be eligible for service and warranty, you must always complete the forms at delivery and during service appointments. By signing this form, both the dealer and the end user confirm that the end user has received instructions on how to operate the bicycle, that the bicycle has been adjusted to the end user's requirements, and that the end user has received the original vanRaam user manual.

To be completed upon delivery of the bicycle

vanRaam bicycle type:	
Frame number:	
Key number:	
Delivered to:	
By dealer:	
Location:	
Date:	
Signature of bicycle user:	Signature of dealer:
If applicable, dealer stamp:	

Register Your Bike



service and warranty
arranged in just one minute



Manufacturer contact details

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www.vanraam.com



Version: 1.0
Date: 10-07-2025

Let's all cycle!