

# User manual



**vanraam**  
Let's all cycle



Velo Plus<sup>2</sup>



Van Raam BV  
Aaltenseweg 56  
7051 CM Varsseveld  
The Netherlands

Version 14.10

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## Contact details manufacturer

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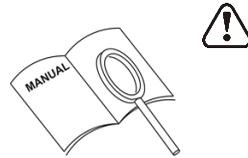
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## Conformity

Van Raam declares as manufacturer that the Velo-Plus<sup>2</sup> bicycle has been produced in accordance with the 93/42/EEG guidelines.

## Introduction

This user manual gives important and necessary information about the use of your bicycle. We ask you to go through the manual thoroughly before using the bicycle.



**READ  
THOROUGHLY!**

## Delivery

- bicycle with possible packaging
- user manual(s)
- possible charger(s), depending on options

## Intended usage

The bicycle is designed for normal use on level and solid ground. The usual bicycle caution should always be taken into consideration. At the same time all safety instructions as described in this manual should be complied with explicitly. Also the local traffic rules should always be complied with.

All other use, including damage or physical injuries due to this, are not the manufacturer's responsibility.

## Safety measures

- Ensure the bicycle is in good condition each time before using it.
- Check before **each** ride that the brakes are in order.
- Check the lights and reflectors.
- Regularly check whether all screw joints are tight.
- Regularly check whether the wheels, the handlebars and the saddle are secure.
- Make sure there is sufficient air in the tyres.
- Only use the bicycle on a **solid and level surface**.
- Make sure that wide trousers or loose hanging clothing don't get caught in the chain, spokes or pedals.
- Do not use a pressure washer or a steam cleaner for the cleaning of the bicycle.
- Use the parking brake if the wheelchair is driven on or off the ramp.
- **Never** place your feet or other limbs under the ramp. You can be hit by moving parts and suffer from bruises.
- Always place the wheelchair in the driving direction.
- In case that the bicycle is equipped with the Silent electric motor system, make sure that you get used to riding with electric support. Beware when you turn on the system and make sure you don't get startled by unexpected behaviour because you turned on the electric support.
- Make sure that no dangerous speed develops when driving downhill and entering tunnels. Brake on time and don't ride faster than 30 kilometres per hour.

## Load

The maximum load should not be exceeded. See information in the index of technical details on page 21. By permitted load we mean the total load, including the wheelchair and load on the luggage rack.

Make sure that the permitted load on the luggage rack is not exceeded.

## Damaged or worn out parts

The replacement and repair of parts (frame, forks, illumination, brakes, drive mechanism and the handle bars) should **always** be performed by a dealer. If not, the guarantee ceases to be valid and you will be personally responsible in the event of possible damage.



Specific safety parts should **always** be replaced by new parts!

## Delivery inspection

Check the delivery immediately after receiving it.

In the event of damage or incomplete delivery we ask you to contact your dealer immediately.

## Adjustment of the bicycle

Before using the bicycle, adjust it to the measurements of the cyclist. This is of great importance, especially the saddle and the handlebars.

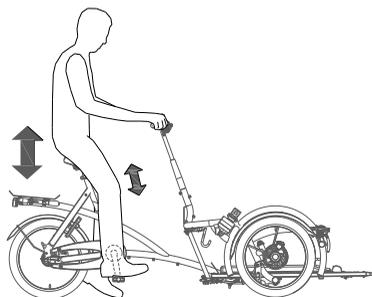


*If an optimal adjustment of the bicycle, as defined in the instructions, is not possible, you can contact your dealer for a fitting solution.*

The brakes are correctly adjusted as standard and can only be adjusted by the dealer during periodic maintenance.

## Saddle height

When the cyclist is sitting on the bicycle and can put a foot on the pedal in the lowest position, the saddle height is correct. Adjust the saddle height in such a way that the leg is stretched but relaxed in that position.



To adjust the saddle:

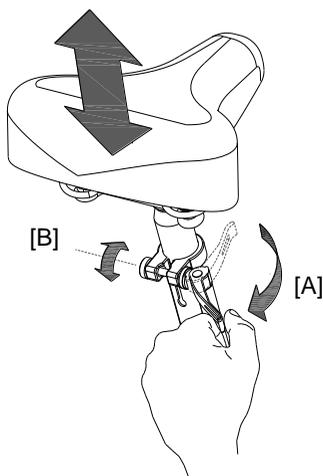
1. Open the quick-clamp [A].
2. Slide the saddle to the correct height.
3. Close the quick-clamp.



*Make sure clothing cannot get caught in the clamp!*



*If the clamp closes too easily, the clamping force is too low. In this case, open the clamp and tighten the nut (B) a bit more. If a lot of force is necessary to close the clamp, the nut should be loosened slightly.*



Do not pull out the saddle pin **further** than the marking. The tube will not go into the shank deep enough and will risk coming off. This can lead to serious injuries.

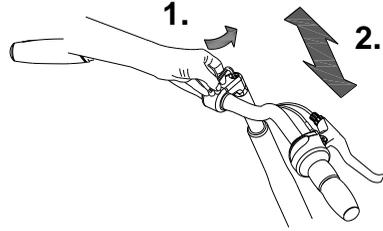


## Handle bar height

The height of the handle bars affects the comfort of the ride. It determines the pressure on the hands and the position of the back. Determine your own most comfortable height by using the bike.

To adjust the handle bars:

1. Slightly loosen the screw by using an Allen key.
2. Slide the handle bars to the correct height and tighten the screw very firmly again.



Do **not** pull out the handle bars **further** than the mark. Otherwise the tube will not be deep enough in the shaft and will risk coming off, which can lead to serious injuries.

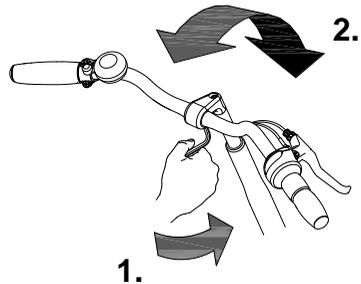


## Position handle bars

You can tilt the handle bars. This influences the distance from the handle bars to the upper body. Determine your own most comfortable position by using the bike.

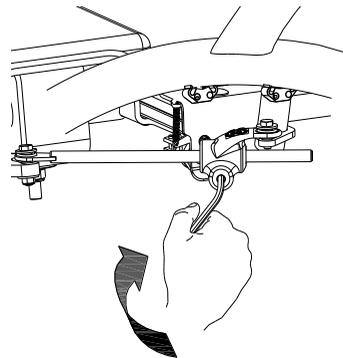
To tilt the handle bars:

1. Slightly loosen the screw with an Allen key.
2. Put the handle bars in the desired position and then tighten the screw very firmly again.



## Steering damper

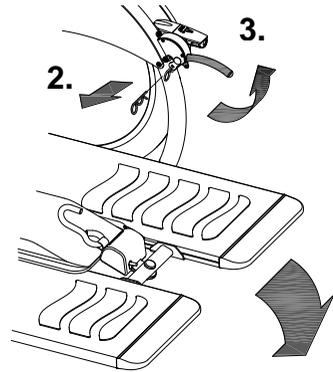
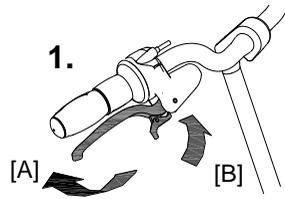
The steering damper affects the stability during steering. By adjusting the screw, steering gets more rigid and stability will increase. Determine your own most comfortable setting for using the bike.



## Wheelchair transport

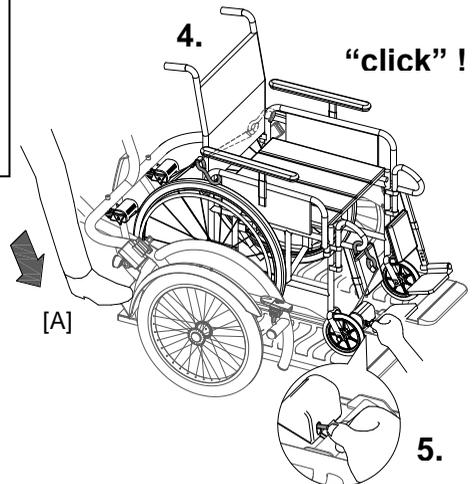
If you want to transport a wheelchair on the Velo-Plus<sup>2</sup>, follow the instructions below.

1. Attach the parking brake to the bike by squeezing the right brake [A] and lock it with the pin [B].
2. Remove the safety pin.
3. Pull the handle up so the ramp unlocks and falls down.
4. Push the wheelchair backwards on the ramp. Push the wheelchair until the ramp is tilting and locks itself automatically with a clear noticeable click.
5. Attach the wheelchair with the three belts. Push the button to release the belt and attach the hooks to the wheelchair.

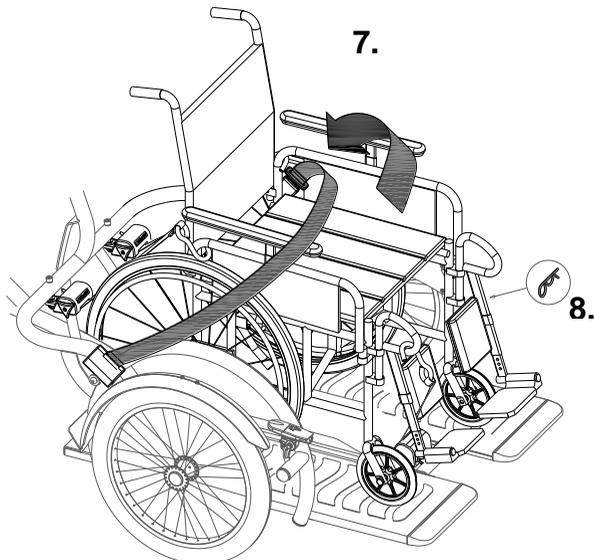
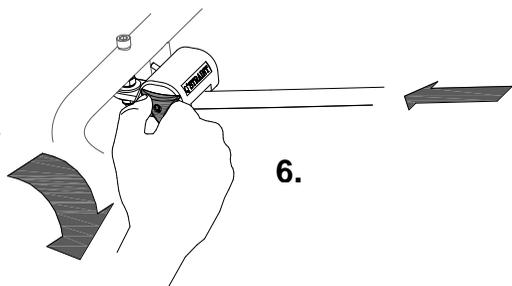


### **Be sure that the ramp is locking!**

Failing to do so may result in serious injuries.  
If the ramp does not lock properly then use your foot [A] to push until the ramp locks.



6. Next, turn the star knob to tighten the belts.
7. Finally fasten the safety belt of the passenger.
8. Replace the safety pin in the coupling.



To remove the wheelchair from the bike, follow these steps in reverse order.



**Caution:** Stop the wheelchair when you release the hooks so that it will not roll off the ramp.

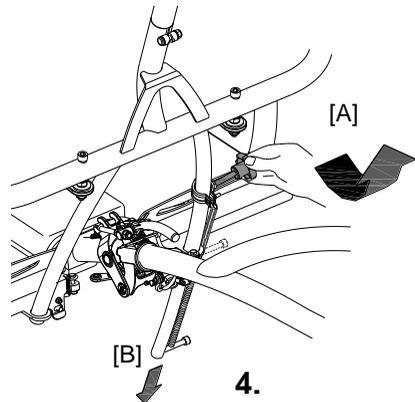
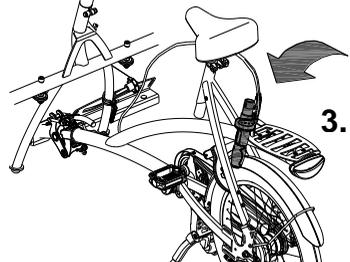
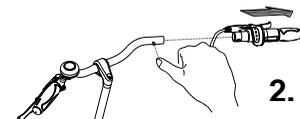
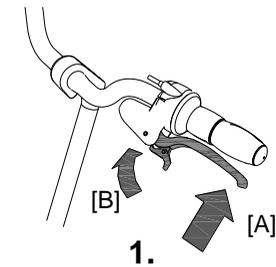
Depending on your order, you can use the accessories as described below.

### Dividable frame

The ramp can be disconnected from the bike, which can be convenient if, for example, you want to store the bike.

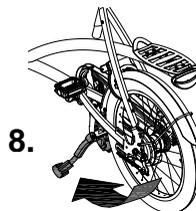
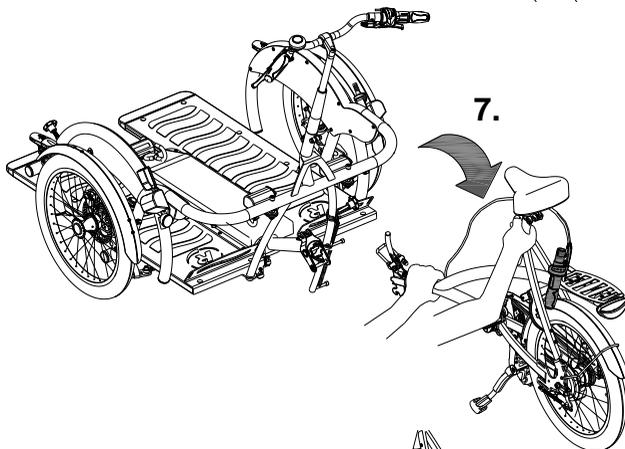
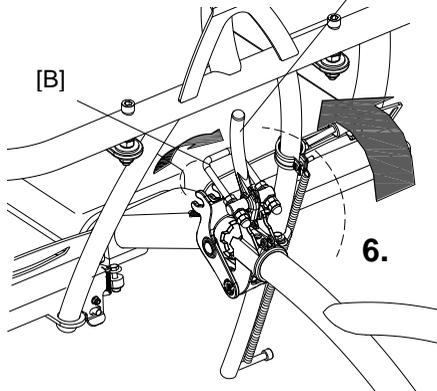
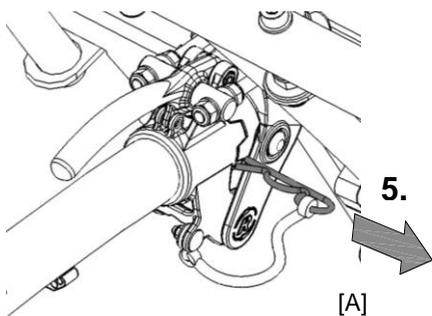
To disconnect the ramp:

1. Use the parking brake by pressing the left brake [A] and securing the brake with the pellet [B].
2. Remove the grip (with the gear) from the handle bars. Push the pellet of the small spring so the grip can be removed from the handle bars.
3. Hang the grip together with the brake handle on the luggage rack or other suitable parts.
4. Lower the support. Loosen knob [A], push down support [B] with your hand or foot and then fasten the knob again



5. Remove the safety pin.
6. Pull the lever [A] up. Detach the bracket [B] and pull the lever back.
7. Remove the bike apart from the coupling.  
**Caution:** this is heavy! Hold the frame firmly in both hands and place the rear part on the stand.
8. Place the bike on the stand.

To reassemble the bike, follow these steps in reverse order.



Extra accessories are available at your dealer.

## Silent electric motorsystem

The electric motor has the following functions:

- Pedal assistance while cycling
- Start assist
- Backwards pedalling with assistance

Press the on/off button to turn on the system. After the system is turned on, the electric motor is active in level 1.

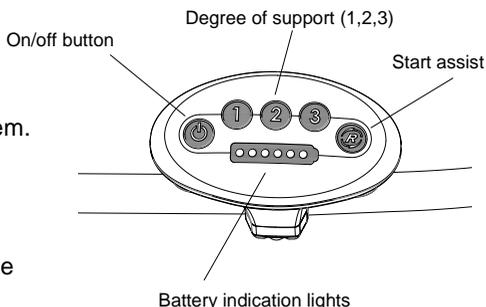
Level 1 provides light support. Level 3 provides optimum support. You can change the level while cycling.

The Silent electric motor has a start assist. This allows the driver to accelerate without pedalling up to a speed of 5 km/h. To accelerate, press the launch button and keep it pressed down. The motor is activated after 2 seconds.

The reverse mode is activated by pedalling back from a standing position. Within a few seconds the motor is activated and the tricycle cycles at a speed of about 3KM/h backwards when you start to pedal backwards.



Do not be frightened by an unexpected noise of the electric motor. If you e.g. wait for the traffic light and you play with the pedals by moving them backwards the reverse gear is activated and the tricycle cycles backwards.



With the on/off button, you can turn off the system. When the system is not used, it will automatically turn off after a certain time.

You can see the battery level at the indication lights at the coloured display. If only the red light is on, the battery is almost empty and needs to be recharged or replaced by a new, fully charged battery.

When the last red light flashes, the battery is empty and the engine will not support you any longer while cycling.



*When you push the bicycle, turn off the system.*



*When the motor is not used for several days, the battery switches into the sleeping mode. This to protect the batteries. To activate it, you must connect the battery to the charger for a few seconds or cycle the bike forwards and push the on/off button to activate the system.*

To charge the battery:

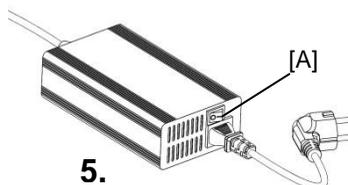
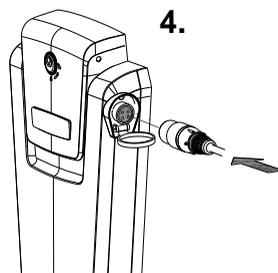
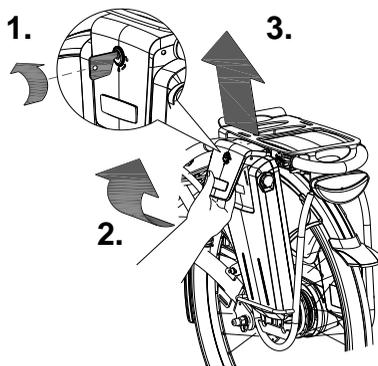
For the best performance and to prolong the life of the battery, we recommend that you charge the battery at home at room temperature.

1. Open the little lock by turning the key a quarter (to the right).
2. Pull the handle forward.
3. Take the battery pack from the holder.
4. Take the battery inside. Plug the charger into the plug contact of the battery.
5. Connect the charger plug into the socket. Turn the switch [A] 'on'. A green LED light on the charger will start to blink fast.



**Beware!** If the battery is not connected properly, the green LED light blinks fast.

6. Depending on the battery level, the charging time is about 1,5 hour. If the green LED light stays on, the battery is fully charged.
7. Once the battery is charged, pull the plug from the socket first or turn switch [A].
8. Then pull the connector from the battery.



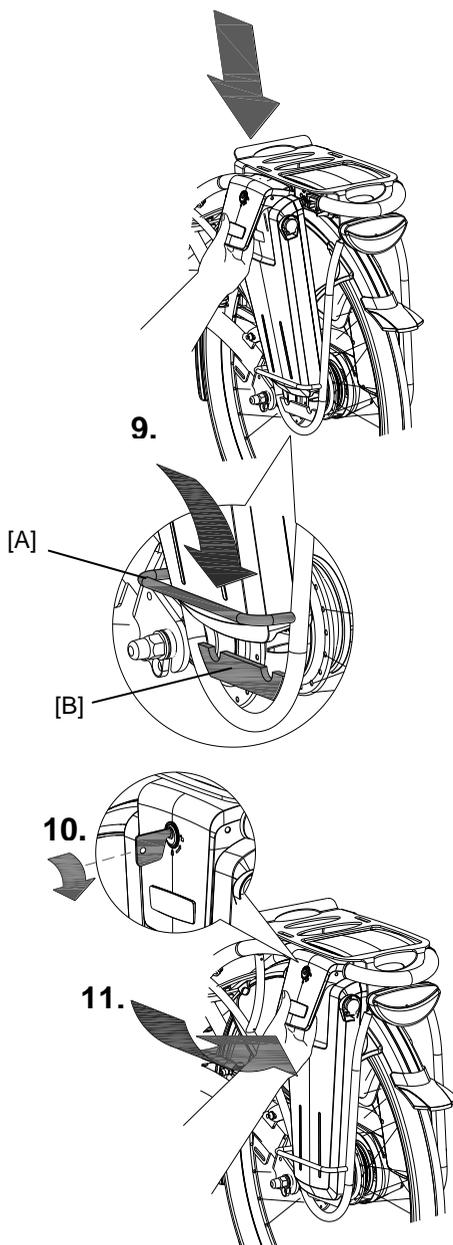
When charging the battery, **first** connect the charging point and **then** insert the plug into the socket!  
After being charged, **first** disconnect the socket and only **then** remove the charger from the tricycle!



If a red LED light on the charger starts blinking, remove the plug from the socket and don't use the charger any more. Contact your dealer.

9. Put the battery back in the holder. Slide it behind bar [A] and press it firmly on strip [B].
10. Pull the handle backwards and push the battery on the top to the connector as shown in the drawing and close the lock.
11. Push the handle forward and close the lock.

It is also possible to charge the battery while it is still in the holder.



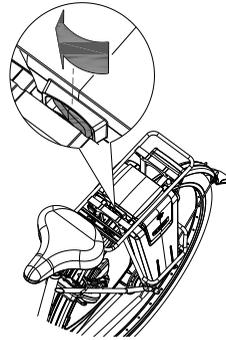
Ensure that the battery is always pushed straight into the holder.



Make sure that the switch is set to the side the battery is placed.

Backup battery (optional)  
The bike can be supplied with a second battery.

To activate the second battery (when the first battery is empty) turn the switch under the luggage carrier to the right sight in order to activate the second battery.



*Keep in mind that your bike provides less support when it's cold (-10°C and less) and the battery will discharge faster. Charging also takes more time at lower temperatures.*



*The action radius depends on a lot of different factors and is strongly influenced by: capacity and voltage of the battery, degree of support that is used, temperature, wind speed, tyre pressure, cycling speed, weight of the user and the luggage, use of gearing etcetera.*

## Charging and maintenance tips for the battery



*Every battery discharges automatically over time. This process is called self-discharge. A battery that is empty and not charged, will self-discharge and within two months will be deep discharged. The battery can be permanently damaged during this process. In case of deep discharge, the warranty will be voided.*

### **Beware:**

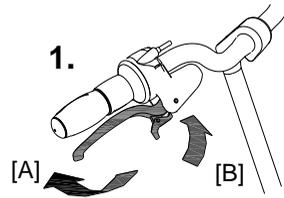
- Never stall the bike with an empty battery. We advise to charge the battery as soon as possible when it's totally empty.
- Only charge the battery with the supplied charger!
- Make sure that the battery is not charged at a temperature lower than 5°C. We advise to charge the battery at room temperature.
- Only use the charger in non-humid indoor environments, the charger may not get wet.
- Charge the battery until the green light on the charger continues to stay on.
- The battery housing and charger housing may never be opened! When there is a problem, contact your dealer.
- Don't charge the battery in full sunshine.
- Don't drop the battery, this can cause damage.

### **Parking brake**

Always use the parking brake if you park the bicycle and leave it behind.

To operate the parking brake, squeeze the right brake [A] and lock it with the pin [B].

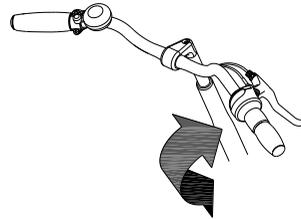
By squeezing the brake again it will unlock itself.



### **Gears**

Standard the bicycle has 8 gears. The gears are used by turning the grip. **Do not use the pedals** when turning the grip.

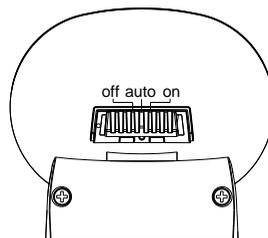
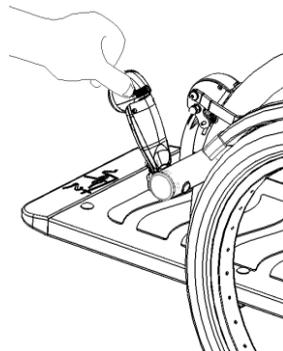
**Option:** When your bike has an electric motor, there are 6 gears.



## Lights

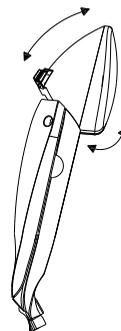
### Headlight

The two headlights have a switch (sliding switch) with 3 positions: **Off- Auto-On**. The headlight can be manually switched on or off with the "On/Off" position. In the "Auto" position, the headlight turns on or off automatically with the help of light & movement sensors. When the bicycle stands still for a while, the light will automatically turn off.



### Adjusting the headlight

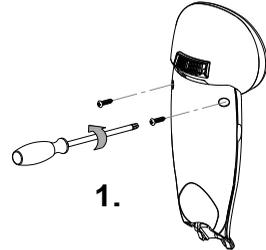
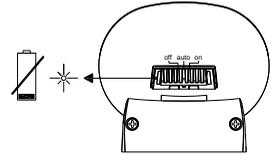
Set the angle of the headlight such that the centre of the light beam falls approximately 10 m ahead of the bike.



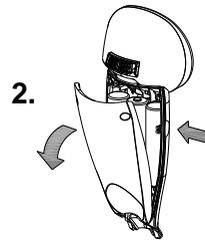
## Replacing batteries

The headlight works on batteries. When the batteries are almost empty, a red LED light flashes on the headlight. Follow the next steps to replace the batteries.

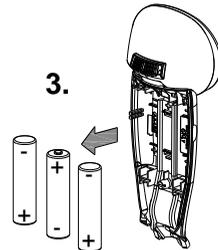
1. Remove the 2 screws at the back of the front light.



2. Dismantle the rear cover by pressing with the thumb and index finger at the cavity on both sides of the front cover and pulling the rear cover back.



3. Replace the alkaline batteries (1.5 V - 1500 mA) and assemble the rear cover.



*Batteries cause environmental pollution.  
Follow the local regulations  
during disposal.*

## Rear light

The rear light has three options which you can choose by pressing the button repeatedly: **On-Auto- Off**.

The setting is as follows:

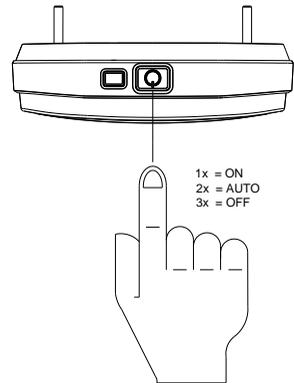
Press **1x**: light is on

Press **2x**: lighting is automatic

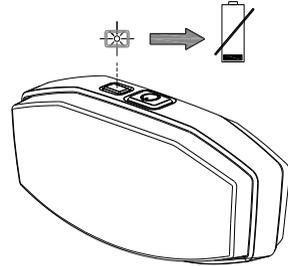
Press **3x**: light is off

With the “On” or “Off” mode, the rear light can be manually switched on and off.

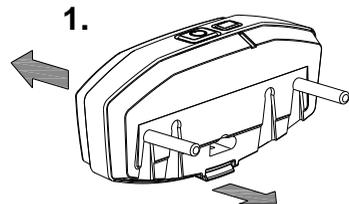
With the “Automatic” mode the rear light automatically turns on and off with the help of light- and movement sensors. If no movement is signalled for more than a few minutes, the light automatically turns off.



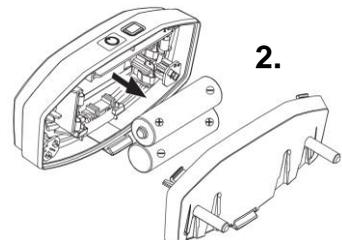
The rear light works on batteries. When the batteries are almost empty, a red LED light on the top starts blinking. To replace the batteries, follow the next steps:



1. Dismantle the cover of the holder by pressing in the lip at the bottom of the light.



2. Replace the alkaline batteries (1,5 V - 1500 mA) and assemble the cover.



*Batteries cause environmental pollution.  
Follow the local regulations  
during disposal.*

### Check before every ride:

- the brakes (including the parking brake)
- the tyre pressure
- the lights
- that all parts are secure

Contact your dealer and do not use your bicycle if you identify any irregularities!

As with all mechanical parts, the bicycle is subject to wear and tear and high loading. If a component fails, it can lead to very dangerous situations. This can lead to damage or injuries to the user of the bicycle. Any form of tearing, scratching or changing of colour is an indication that the part should be replaced.

### Points of interest during cycling

After you have adjusted the bicycle to the measurements of the cyclist and the passenger, you can start using the bike.



The tricycle gives a very different ride experience than a bicycle with two wheels!

Practice, in particular, with bends and braking, because a tricycle can react contrary to what you would expect. It may happen that the front wheel comes off the ground on the inside when going round a bend. To avoid this the rider leans towards the inside of the bend with his body.



High speeds in the bends, driving on rough ground, and sharp bends can lead to the tricycle **falling over!**

### Important safety points for the cyclist

- Go very carefully during the first ride.
- When riding the bicycle hold both hands firmly on the handle bars and feet on the pedals.
- Test the riding style of the bicycle on rough ground at moderate speed. This way the cyclist learns how to react to unexpected movements of the bicycle and the handle bars during use.
- Explore how the tilting movements of the bicycle react to body posture. Tilt to the inside of the bend.
- Small obstacles should be cycled over with appropriate speed.
- Obstacles higher than 5 cm should be avoided.

## Technical details

Length (cm)	240
Width (cm)	109
Boarding height (cm)	52
Front wheel	20"
Back wheel	20"
Weight (kg)	From 49
Max. load luggage rack (kg)	20
Total max. load (kg)	220
Brakes, front	Disk brakes
Brakes, back	Cantilever brakes

## Maintenance and adjustments to be done by owner

Below you can find the instructions for maintenance and adjustments that you can do yourself on a regular basis, which will keep your bicycle in top condition.

### Cleaning

The frame of the bicycle can be cleaned with a damp cloth. For areas that are dirtier you can use a mild detergent. The wheels can be cleaned with a damp brush with plastic hairs (not a wire brush!) The saddle and the grips can be cleaned with mild soap and water.



Do not use a pressure washer or a steam cleaner!

### Inspection of the bicycle

After 200 kilometres or after a period of 2 months the bicycle should be inspected. Check the brakes, the illumination and the spokes. Also check the tyre tread depth. This should be at least 1 mm. Worn out tyres or possible faulty parts should be replaced.

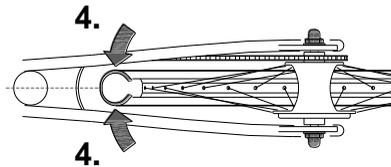
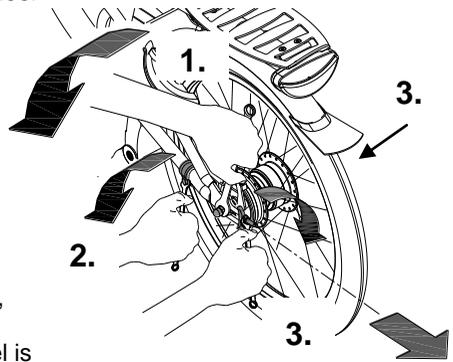
Also check the parking brake. With the parking brake pulled up, the bicycle should not ride away with the cyclist.

## The correct tension of the chain

The chain should not be too tight. It should hang loose. Without effort you should be able to move the chain up and down, half a centimetre approximately.

To keep the chain tension correct, the back wheel axle is adjusted. Follow the instructions below:

1. Slightly loosen the nuts of the back wheel axle, so that it can move backwards and forwards.
2. Slightly loosen the nut of the bracket, so it can also move.
3. By tightening the adjusting nuts **at both sides**, the back wheel slowly moves backwards. Tighten the adjusting nuts in such a way that the chain is hanging loose, as described above.
4. At the same time, make sure that the wheel is straight and positioned in the centre of the frame, as illustrated. Not to the left or to the right.
5. Slightly tighten the nuts of the back wheel axle.
6. Check whether the chain tension is correct and whether the wheel is straight and in the centre of the frame.
7. Tighten all the nuts again.



## The right lubricant

The chain should be cleaned and maintained at regular intervals (every 3 months approximately). Only use special chain grease or Teflon spray. This is the only way to make sure that the chain will run smoothly, will stay water resistant and will not rust. Wipe the chain with a cloth, treat it with grease or spray and remove any excess lubricant with a rag.

Other parts should not be treated with a lubricant.

## Checking the rim

Due to the combined action of the brake and the rims, not only the brake lining but also the condition of the rim is important. For this reason the rim should be checked at regular intervals, for example when you inflate the tyres. The presence of fine cracks in the spoke punches or deformation of the rim when there is higher air pressure, indicate more serious wear and tear. In that case the rim should be replaced, because it can lead to loss of brake function or even a crack in the rim, which can lead to all kinds of dangerous consequences.

## Repairs and maintenance to be done by dealer

It is recommended that the bicycle has a yearly inspection carried out by the dealer. In the event of technical trouble or faults, the bicycle should be taken to the dealer for repairs **immediately**.

The replacing of safety-related components (especially frame, brakes, illumination, handle bars, front fork and actuation) should be performed by the dealer.

If you still decide you want to replace components yourself, you are responsible for damage or harm due to incorrectly fitted components.

Only use **original** spare parts, which you can buy at you dealer. If requested the dealer will make the necessary information on repair and maintenance available.

## Disposal

If you want to dispose your bicycle, contact your dealer. You can also contact the local waste disposal company. They will dispose the bicycle according to the regulations of your town.

## Handover/sale to a new owner

When you hand over your bicycle to a new owner it is important that you also hand over all necessary technical documentation so that the new owner can use the bicycle safely.

## Guarantee

The guarantee is valid for all faults in the product, which are proven to be caused by material or manufacturing error.

For our bicycles we give a guarantee of 5 years on the frame and the front fork. For the paint, all accessories and other parts (except wear parts) we provide a 2 year guarantee, as legally regulated.

### **Beware!**

The guarantee as well as the product liability in general expires if the instructions stated in this manual are not followed. This is also the case if unauthorized maintenance is carried out or if technical changes or additions are made without permission of Van Raam.

## Frame number

The frame number is printed on the sticker. This sticker is located on the frame, see the image below.

Example sticker:



Position of sticker:



Please fill in the details of your bike:

Date	. . . . .
Manufacturer	Van Raam
Type of bicycle	Velo Plus <sup>2</sup>
Frame number	
Key number	