

# User manual



Twiny



Twiny Plus



Kivo



Van Raam BV  
Aaltenseweg 56  
7051 CM Varsseveld  
The Netherlands 06.13

## Contents

Contents .....	
Contact details manufacturer.....	
Conformity .....	
Introduction.....	
Delivery .....	
Intended usage.....	
Safety measures .....	
Delivery inspection .....	
Adjustment of the bicycle.....	
Accessories .....	
Before first use .....	
Technical details.....	
Maintenance and adjustments to be done by owner .....	
Repairs and maintenance to be done by dealer .....	
Disposal.....	
Handover/sale to a new owner .....	
Guarantee .....	
Frame number.....	

## Contact details manufacturer

Van Raam BV  
Aaltenseweg 56  
7051 CM Varsseveld  
The Netherlands

Tel. : +31 (0)315 257370  
E-mail : [info@vanraam.nl](mailto:info@vanraam.nl)  
Internet : [www.vanraam.nl](http://www.vanraam.nl)

## Conformity

Van Raam declares as manufacturer that the Tandem bicycles have 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 manuals (s)
- possible charger (s), depending on options

## Intended usage

The tandem 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.



**Extra attention** is essential if a child is using the bicycle!

- **Never** leave a child alone with the bicycle without supervision!
- **Always** have the child wear a bicycle helmet! Make sure the helmet fits correctly!
- If children or people with limited mental perception or a mental handicap join the bike ride, there should **always** be a responsible supervising person as the main driver of the bike. This main driver is always responsible for the safe use of the bike.

## Load

The maximum load should not be exceeded. See information in the index of technical details on page 20. By permitted load we mean the total load, including the 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 cyclists. This is of great importance, especially the saddles and the handlebars.

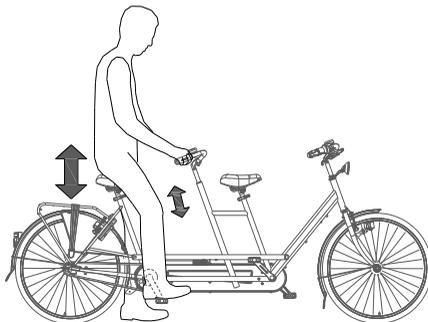


*If an optimal adjustment of the bicycle, as defined in the instructions, is not possible, you can contact your dealer for a fitting solution.*

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:

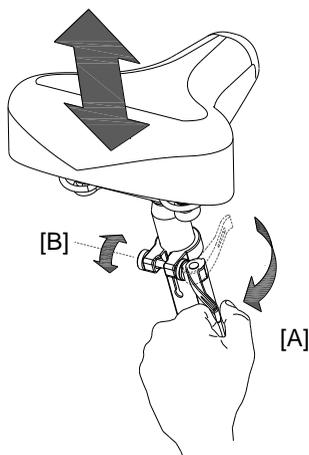
1. Open the quick-clamp [A].
2. Slide the saddle to the correct height.
3. Close the quick-clamp.



*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.

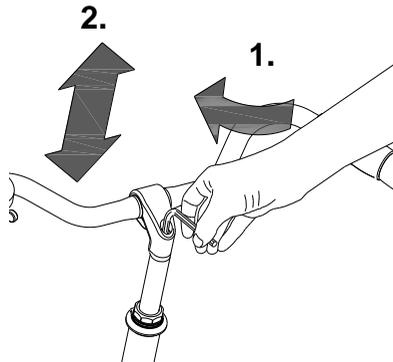


## Handle bar height

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.

Om het stuur te verstellen:

1. Draai de schroef met een inbussleutel enkele slagen los.
2. Schuif de stuurstang naar de juiste hoogte en draai de schroef weer stevig vast.



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.

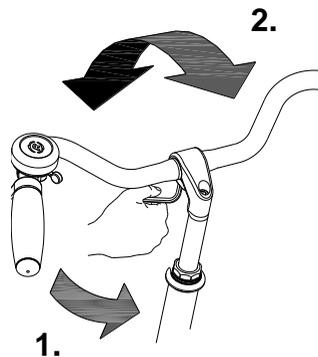


## Position handle bars

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:

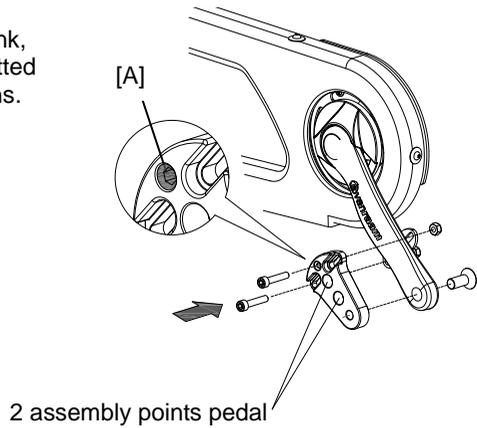
1. Slightly loosen the screw with an Allen key.
2. Put the handle bars in the desired position and then tighten the screw very firmly again.



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

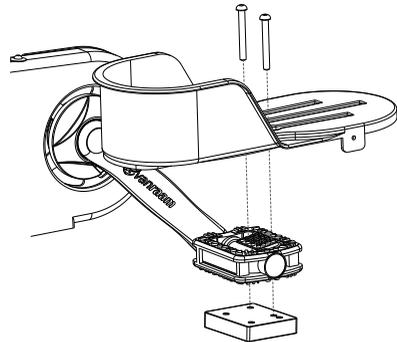
### Crank shortener

The crank shortener is fitted to the crank, as illustrated. The pedal can then be fitted into the crank shortener at two positions. With the socketed screw (A) the crank shortener should be aligned with the crank.



### Foot support

The foot support is fitted to the pedal with a balance block.

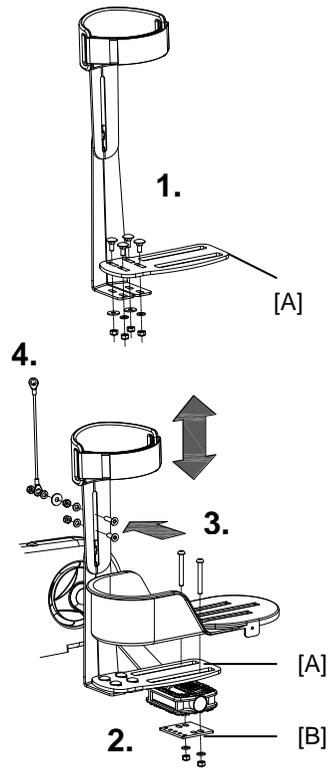


## Lower leg support

To fit the lower leg support:

1. First fit the lower leg support to the metal plate (A).
2. The lower leg support is then fitted to the foot support. Make sure that plate (B) is under the pedal and plate (A) is between the pedal and the foot support.
3. Adjust the height of the lower leg support in such a way that it matches the lower leg of the cyclist.
4. Fit the elastic to a point on the frame, so that the lower leg support stays upright in stationary position. Determine by yourself which point is best.

Use the velcro to secure the lower leg.



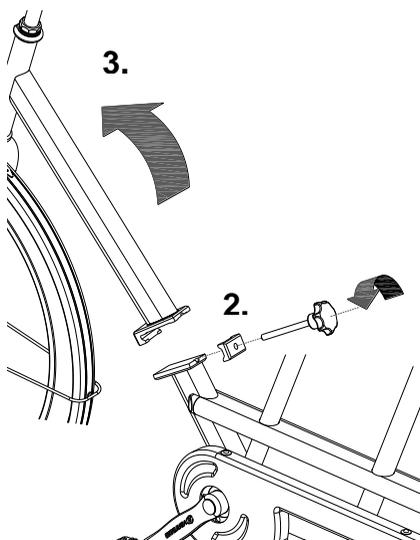
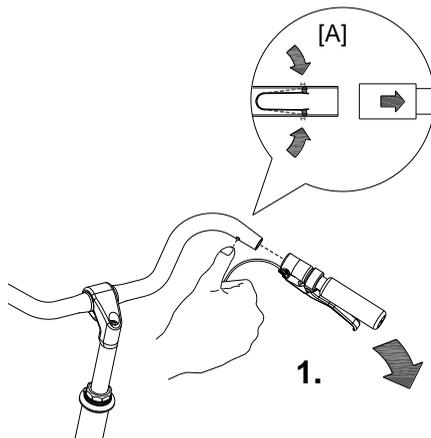
## Dividable frame

The bicycle can be divided into 2 parts.

To divide the frame:

1. Put the bicycle on the standard and remove the grip from the handle bars. Push the pellets of the small spring (A) so that the grip can be removed from the handle bars.
2. Loosen the knob.
3. Remove the front part out of the coupling.

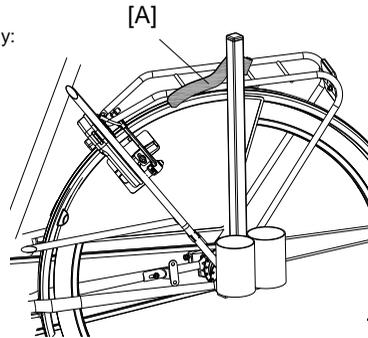
To assemble the bicycle again, follow these steps in reverse order.



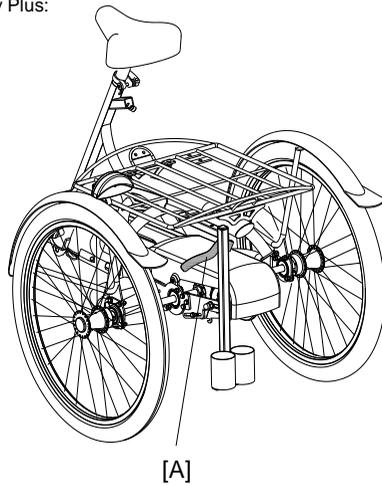
## Walking-stick holder

The walking-stick holder is fitted under the luggage rack. The walking-stick should be fastened with velcro (A).

Walking-stick holder Twinny:



Walking-stick holder Twinny Plus:

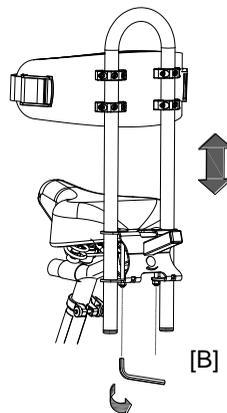
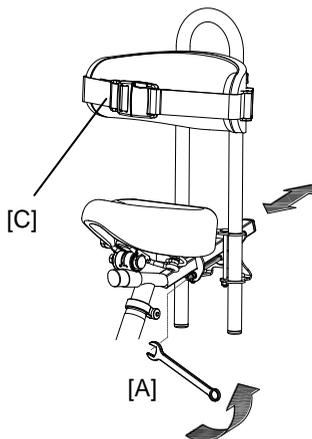


## Back support

Adjust the right depth, by loosening nut (A), putting the back support in the right position and then tighten the nut again.

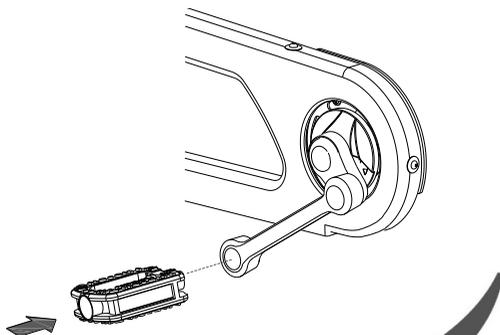
Then adjust the right height by loosening the 2 nuts (B), sliding the support in the correct position and then tighten the nuts again.

The back support can be fitted with a belt (C). Use the fastening device to open and close the belt.



## Eccentric crank

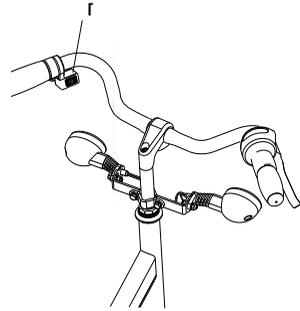
The bicycle can be fitted with an eccentric crank on the left and/or right side.



## Flashing light system

To use the flashing lights press the switch to left or right.

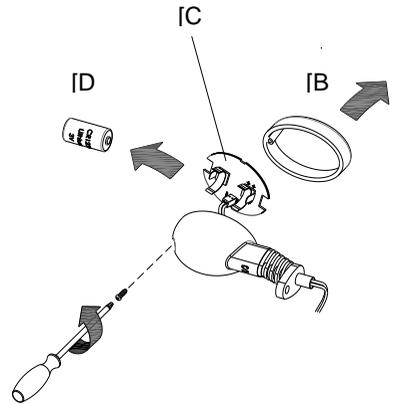
If you want to switch off the flashing light system, put the switch in the middle position.



The lights work on a battery.

To replace the batteries, turn the screw on the cap and take the orange cap [B] away. Then remove the PCB [C] from the holder. You can now replace the battery [D].

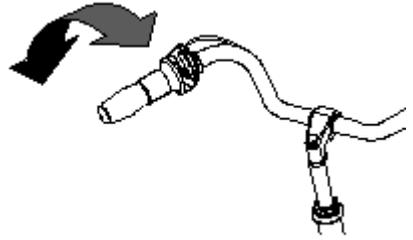
This is a 3-volt lithium battery, CR123A.



### Speed hub co-driver

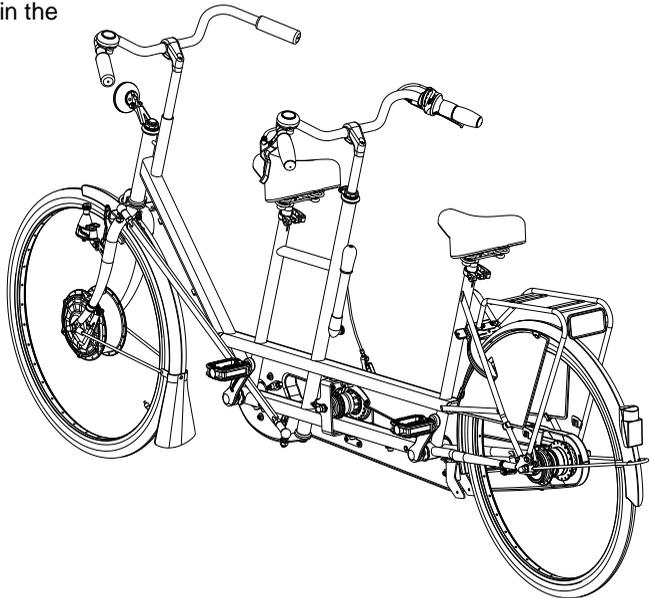
The main driver can adjust the co-biking of the co-driver with the speed hub. There are three positions:

1. The pedals of the co-driver are moving together with the pedals of the main driver. The co-driver has to cycle also.
2. The pedals of the co-driver move independently from the pedals of the main driver. The co-driver can cycle also. (this option is only possible for rear steering, see the paragraph below)
3. The pedals of the co-driver move independently of the pedals of the main driver. The pedals move free and the co-driver can not cycle.



### Rear steering

The person in the rear steers the bicycle, the handlebars in the front are fixed.



## Electric motors

The tandems can be equipped with an electric Silent motor system or Heinzmann

### Silent Electric motor

The Electric motor has the following Functions:

- Pedal assistance while cycling
- Launch control
- Backwards pedaling with assistance (only three wheel versions)

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

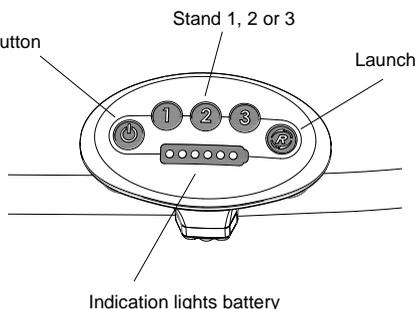
Level 1 provides light support. Level 3 provides optimum support. You can change the level while cycling.

The engine has launch control. This allows the driver to accelerate without pedaling 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 gear 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 motor.

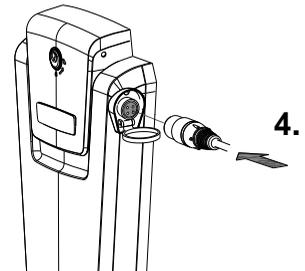
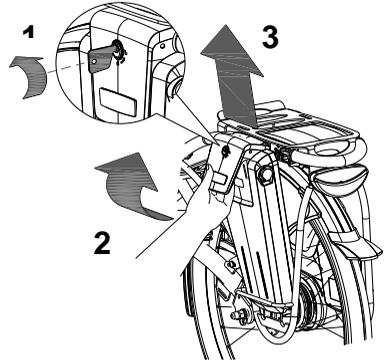
When the motor is not used for several days, the battery switches into the sleeping mode. This to protect the batteries. To activate it, you must connect the battery to the charger for a few seconds or cycle the bike forwards and push the on/off button to activate the system.

### Charging 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.

To charge the battery:

- 1  
Open the little lock by turning the key a quarter (to the right)
- 2  
Pull the handle forward.
- 3  
Take the battery pack into the house. Plug the charger into the plug contact of the battery.
- 4  
Connect the charger plug into the socket. The red light on the charger will light up.
- 5  
Depending on the battery level, the charging time is about 3 hours. If the green light is on, the battery is charged.



6  
Once the battery is charged, pull the plug  
from the socket first..

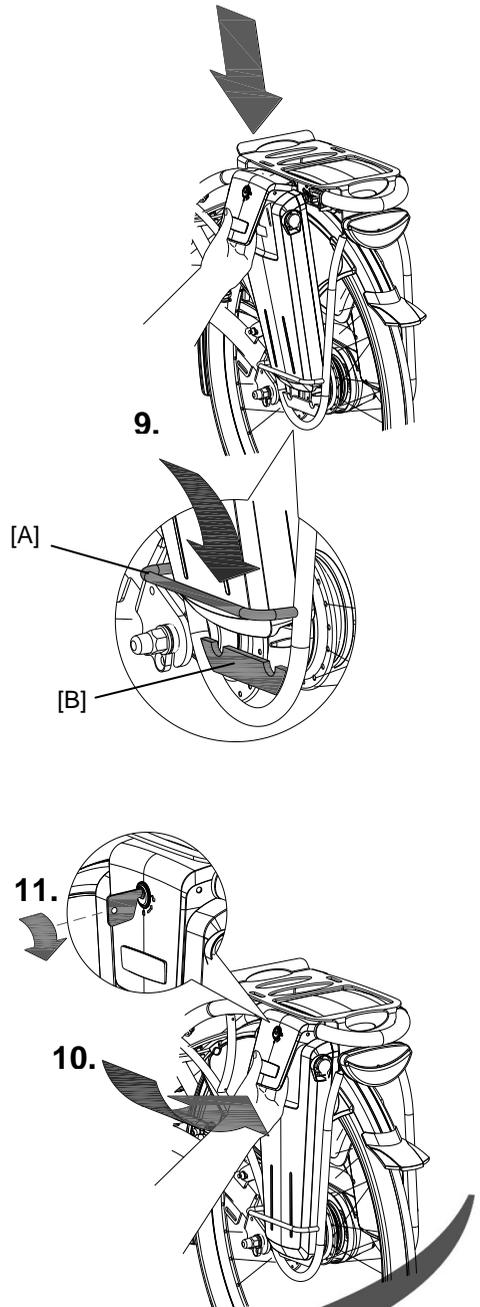
7  
Then pull the connector from the battery.

8  
Put the battery back in the holder, behind A on  
B

9  
Pull the handle backwards and push the  
battery on the top to the connector as shown  
in the drawing and close the lock.

10  
Push the handle forward and  
11  
close the lock.

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





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!



After charging, always remove the charger cable from the battery.

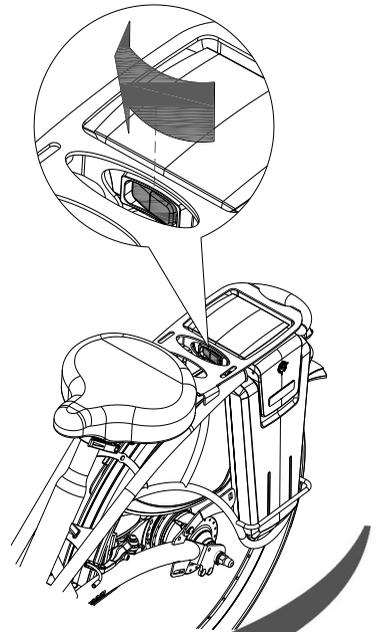


Ensure that the battery is always pushed straight into the holder.

#### Backup battery (optional)

The bike can be supplied with a second battery.

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



## Heinzmann electric motor

The bicycle can be supplied with an electric Heinzmann motor. There are 2 types available.

### Accelerator:

The electric motor is operated by using the accelerator. By using the cockpit you start the motor and determine the power of the motor. This motor accelerates and drives with a speed up to 6 km/h maximum. For more speed the cyclist has to pedal as well.

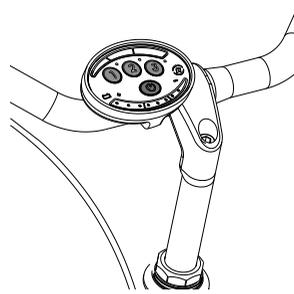
### Pas-Vario:

The electric motor is operated by the cockpit. With this cockpit you switch the engine on/off and you can also determine the power of the motor. This motor only supports the cycling and does not accelerate.

### Use of the cockpit (same in both types):

Press one of the buttons, 1, 2 or 3 to start the electric motor. With these buttons you can determine the power of the motor, also during cycling.

With the red button you shut down the system. If the system is not used, it will automatically shut itself down after a period of time.



*When walking backwards with the bicycle, always turn off the motor.*

### Charging the battery:

**Beware:**

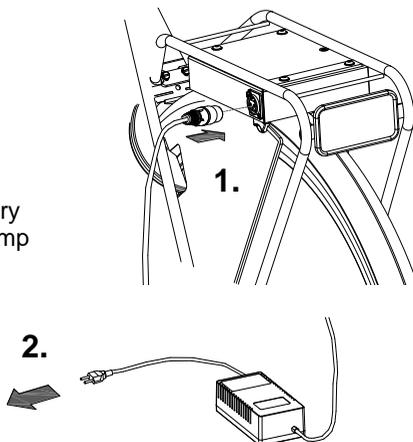
- Charge the battery until the green lamp lights up.
- **Never** interrupt the charging process.
- For the lifespan of the battery it is better to charge the battery when it is almost discharged.
- It is damaging for the battery if it is not used for more than 2 months. In that case charge the battery every now and then.
- The case of the charger may not be opened by the buyer. In the event of problems go to your dealer!
- Only use the charger in non-humid indoor spaces.
- Below 5 degrees Celsius the charger will not function properly. In that case it is advisable to charge the batteries indoors.

### Charging the battery:

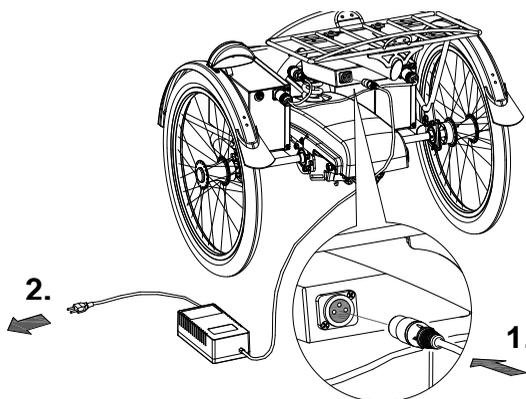
The charging point is situated under the luggage rack. To charge the battery:

1. **First** connect the charger plug to the charging point under the luggage rack.
2. Put the charger plug in the wall socket.
3. Depending on the state of the battery, it needs 4 to 12 hours to charge. The battery is completely charged when the green lamp lights up.
4. As soon as the battery is charged, **first** take the plug from the wall socket and then disconnect the charger from the bicycle.

### Charging point Twinny:



### Charging point Twinny Plus:

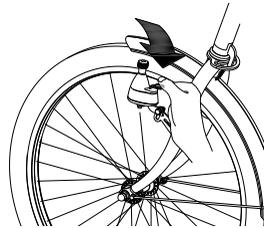


When charging, **first** connect the plug to the charging point on the bicycle and **then** put the plug in the wall socket!  
When charged, **first** take the plug from the wall socket and **then** disconnect the charger from the bicycle!

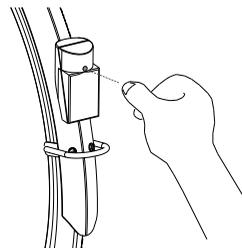
Extra accessories are available at your dealer.

**Illumination**

The front light works on the dynamo. Push the button so that the dynamo moves against the tyre. To turn off the light push the dynamo back again.

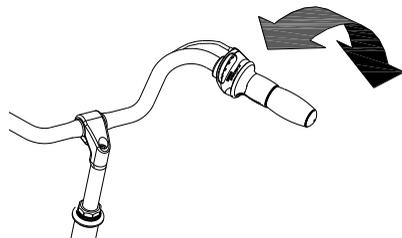


The back light works on batteries. Push the button to switch the light on and off.



**Gears**

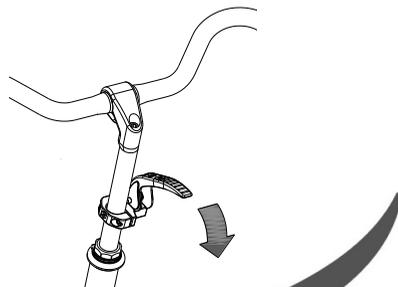
Your bicycle has 8 gears.  
The gears are used by turning the grip. **Do not use the pedals** when turning the grip.



**Parking brake**

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

If you are using the Twinny Plus, use the parking brake when you get on or off the bicycle.



### **Check before every ride:**

- the brakes (including the parking brake)
- the tyre pressure
- the illumination
- 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.

### **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.
- Small obstacles should be cycled over with appropriate speed.
- Obstacles higher than 5 cm should be avoided.

### **Extra safety points for the Twiny Plus**



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 back 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.

## Technical details

	Twinnny	Twinnny Plus	Kivo (xl)	
Frame height (cm)	52	52	H50 V 24 (Vxl 34)	
Length (cm)	255	250	235 (xl 247)	
Width (cm)		71	66	
Boarding height (cm)	39	39	H 41 V 26	
Front wheel	26"	26"	20"	
Back wheel	26"	24"	24"	
Weight (kg)	Von 35	Von 35	ca 27	
Max. load luggage rack (kg)	20	20	20	
Total max. load (kg)	260	260	240	
Brakes, front	Cantilever brakes	Cantilever Brakes	Cantilever Brakes	
Brakes, back	Cantilever brakes	Disc brakes	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.

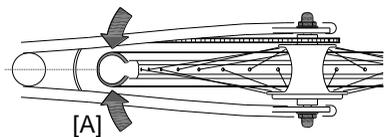
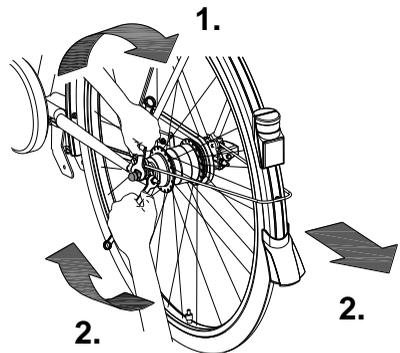
### The correct tension of the chains

There are two chains on the bicycle. The chains should not be too tight. They should hang loose. Without effort you should be able to move the chain up and down, half a centimetre approximately.

#### Chain Twinnny:

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

1. Slightly loosen the nuts of the back wheel axle, so that the back wheel can move backwards and forwards.
2. Tension the nuts on the two chain-tensioners, so that the wheel slides backwards and the chain gains tension. Do this in such a way that the chain hangs loosely, like described earlier.  
**Note:** Tension the nuts the same amount of turns, so that the wheel is straight and positioned in the centre of the frame, as illustrated. Not to the left or right, see figure (A).
3. Slightly tighten the nuts of the back wheel axle.
4. Check whether the chain tension is correct and whether the wheel is straight and in the centre of the frame.
5. Tighten the nuts thoroughly.

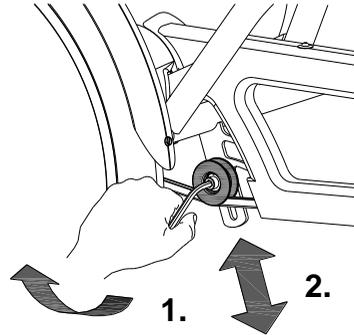


### Chain Twinny Plus:

To keep the chain tension correct, a special tensioning wheel is fitted on to the bicycle, as an integrated chain tensioner. Follow the instructions below to adjust the chain tension:

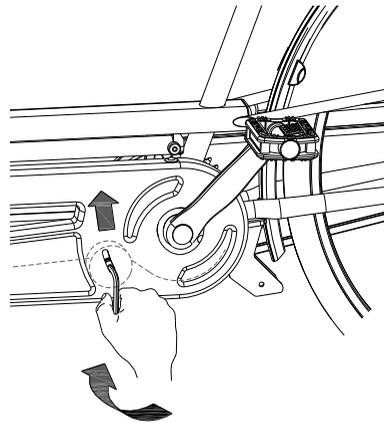


1. Slightly loosen the screw. Hold the nut at the back tight with a socket wrench to stop the screw from slipping.
2. Shift the tensioning wheel in such a way that the chain hangs loose, as described earlier.
3. Tighten the screw again.



To keep the tension of the chain at the front correct, you can adjust the special tension wheel by the rear crank shaft. To do this:

1. Slightly loosen the screw. Hold the nut at the back tight with a socket wrench to stop the screw from slipping.
2. Shift the tensioning wheel in such a way that the chain hangs loose, as described earlier.
3. Tighten the screw again.



## 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 grips and the saddles 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 right lubricant

The chains 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:



Frame number

Position of sticker:

Twinny



on the back of the  
saddle tube

Twinny Plus



on the back of the  
saddle tube

Kivo



on the back of the  
saddle tube