

# VERMEIREN

## Turios

INSTALLATION MANUAL





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## Preface

To support you on the installation and repairs of this electric wheelchair, we provide you with this installation manual. Please read it carefully. If you still have questions after reading this manual, do not hesitate to contact Vermeiren.

The information in this manual applies to the following wheelchair(s):

- Turios

### **Important note**

Pictures of the product are used to clarify the instructions. Details of the shown product may deviate from your product.

### **Available information**

**On our website <http://www.vermeiren.com/> you will always find the most recent version of the information described in this manual. Please consult this website regularly for possible updates.**

Visually impaired people can download the electronic version of this manual and have it read out by means of a text-to-speech software application.



User manual  
For user and specialist dealer



User manual of applied operating console and battery charger.  
For user and specialist dealer



Installation instructions (Instructions for detail adjustments and (dis)assembly)  
For specialist dealer



Service manual for wheelchairs  
For specialist dealer



Drawings of (spare) parts  
For specialist dealer



EC declaration of conformity

# 1 This product



- |                      |                                  |
|----------------------|----------------------------------|
| 1. Backrest          | 8. Battery housing               |
| 2. Operating console | 9. Front wheels                  |
| 3. Armrest           | 10. Driving motors               |
| 4. Seat              | 11. Rear wheels / Driving wheels |
| 5. Footrest          | 12. Front lights (optional)      |
| 6. Footplate         | 13. Identification plate         |
| 7. Safety belt       |                                  |



## 2 Scope of delivery

The following items are part of the delivery:

- Framework with operator control, rear and front wheels, seat and backrest
- Armrests
- Footrests
- Batteries
- Battery charger
- Tools
- User manual of:
  - wheelchair
  - operating console
  - battery charger
- Accessories (if applicable)

Before use, check if everything is included and that no products are damaged.

Please note that the basic configuration may differ in different countries. Contact your specialist dealer.

## 3 Assembly and adjustments

**CAUTION**

Risk of injuries or damage

- The wheelchair needs to be (dis)assembled and adjusted by a specialist dealer according to the instructions in this chapter.
- Only use parts and tools described in this manual.
- Prevent bystanders from accessing the (dis)assembling area.
- Keep the (dis)assembling area clean and tidy, to prevent falling.
- Collect all small parts in a box or bag.
- While (dis)assembling and operating the wheelchair, make sure no objects or body parts get caught between moving parts. In particular, pay attention to the position of the cables.
- Turn the wheelchair off before you perform any mechanical adjustments and make sure that the free-wheel lever is in braking position.
- Make sure all screws are firmly secured before driving.
- Software changes are only allowed if executed by skilled personnel, taking into account the user and environment (stability, acceleration, indoor/outdoor, etc.).

**Important remarks**

- Read the user manual of this wheelchair.
- Be aware of the technical details and limits of intended use; see the user manual.
- For more information, contact Vermeiren.

### 3.1 Tools

To (dis)assemble and adjust the wheelchair, the following tools are needed:

- Wrench set no. 10, 13 and 17
- Allen keyset no. 4, 5 and 6
- Screwdriver Phillips head

## 3.2 Adjusting the wheelchair to the user

### 3.2.1 Seat inclination (manual version)



CAUTION

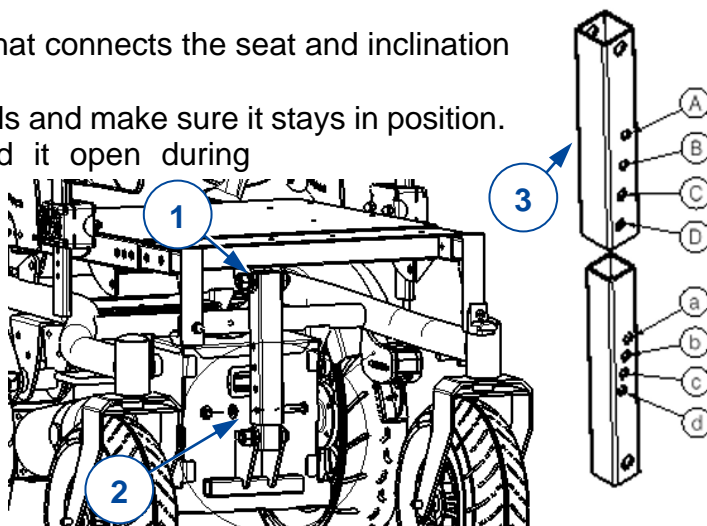
Risk of injuries or damage

- The frame with seat are heavy to handle. Ask help of an assistant.

The seat angle can be manually adjusted according to the following steps:

1. Remove the footrests.
2. Remove the bolt-nut connection (1) that connects the seat and inclination rod.
3. Tilt the seat frame with seat backwards and make sure it stays in position. If necessary, ask someone to hold it open during adjustment.
4. Remove the bolt-nut connection (2).
5. Slide the outer tube (3) up/down to the desired angle (see table).

Holes	Seat inclination
A, a	0°
B, b	2°
C, c	4°
D, d	6°

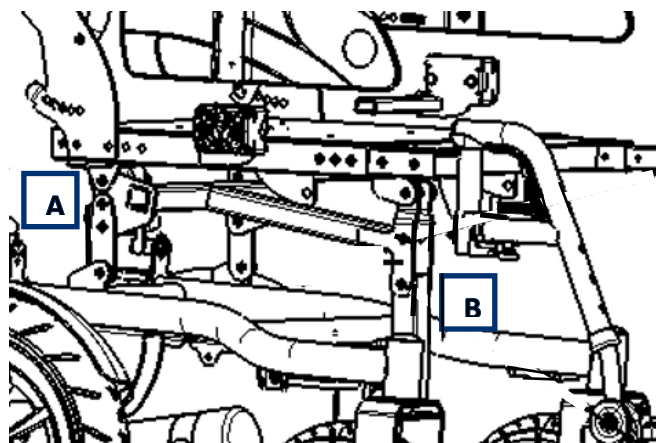
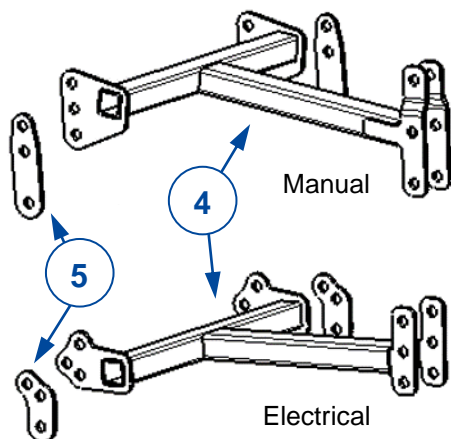


6. Replace the bolt-nut connection (2) and tighten firmly by hand.
7. Fold the seat frame forward again. Replace the bolt-nut connection (1) and tighten firmly by hand.
8. Replace the footrests.

### 3.2.2 Seat height (optional)

The seat height can be raised by placing an additional frame section between the lower frame and seat frame.

1. Remove the bolt-nut connections that connect the seat frame with the lower frame [A] and seat inclination mechanism/actuator [B].
2. To raise the seat
  - by 50 mm (manual) / 30 mm (electrical), use part (4).
  - by 100 mm (manual) / 60 mm (electrical), use parts (4) and (5).
3. Firmly tighten all screws connecting the seat frame, additional frame section and lower frame.





### 3.2.3 Seat depth

#### Manual version

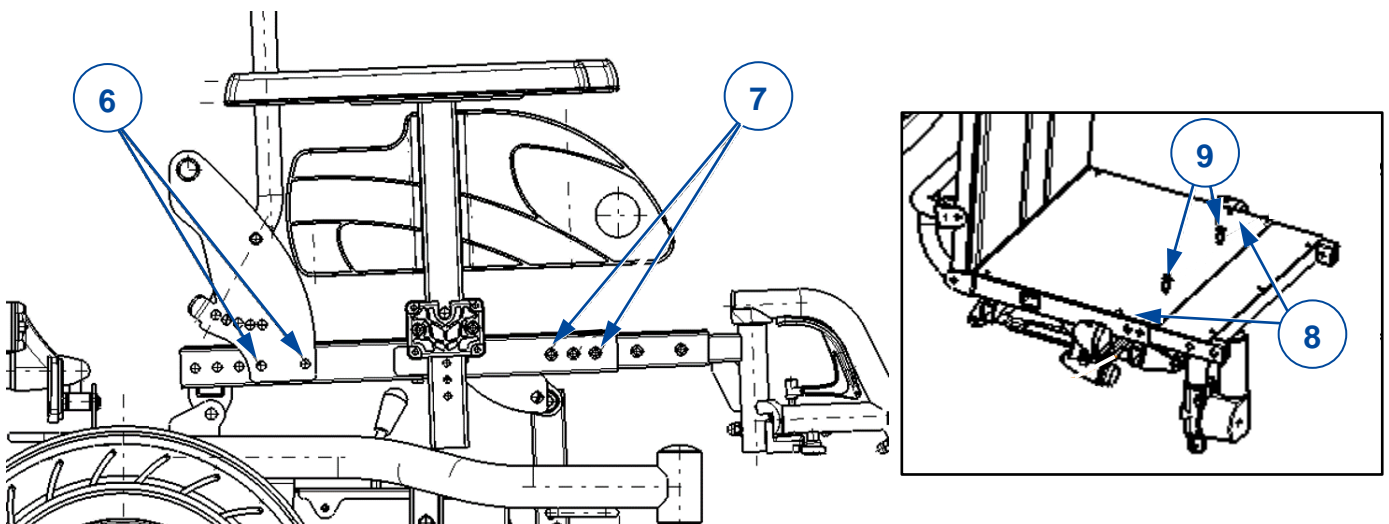
To adjust the seat depth, you can adjust the position of the backrest (60 mm, steps of 20 mm) and the position of the front frame with footrest supports (60 mm, steps of 20 mm). It is recommended to start by adjusting the backrest.

To adjust the backrest:

1. Remove the screws (6) on the side of the frame.
2. Slide the backrest attachment to the front/back until the desired position.
3. Replace both screws (6) and tighten firmly.
4. Make sure that both sides of the backrest are positioned identically.

To adjust the front frame with footrest supports:

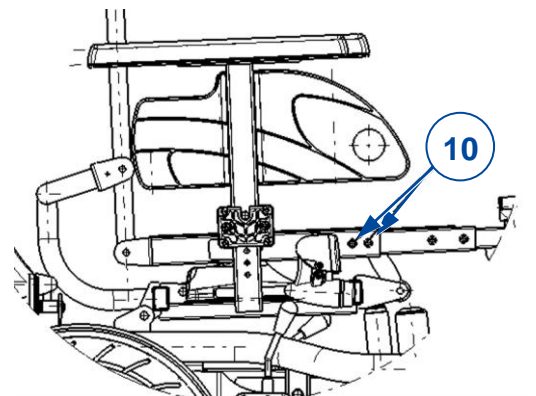
1. Remove the footrests.
2. Remove the screws (7) on the side of the frame.
3. Remove screws (8) and loosen screws (9) from the seating plate.
4. Slide the inner tube forward/backward until the desired position.
5. Replace and firmly tighten all screws (7+8+9). Make sure that both sides of the front frame are positioned identically.



#### Electrical version

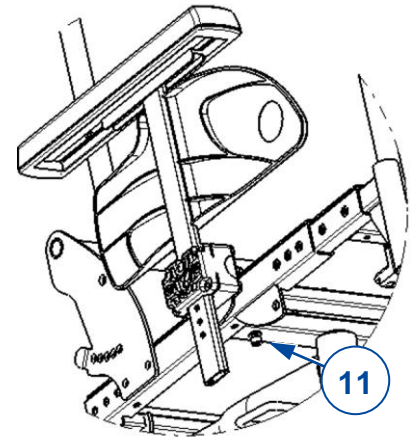
To adjust the seat depth (120mm, steps of 20mm):

1. Remove the screws (10) on the side of the frame.
2. Loosen screws (9) from the seating plate.
3. Slide the inner tube in/out of the outer tube until the desired position.
4. Replace and retighten the screws (9+10).
5. Make sure that both sides are positioned identically.



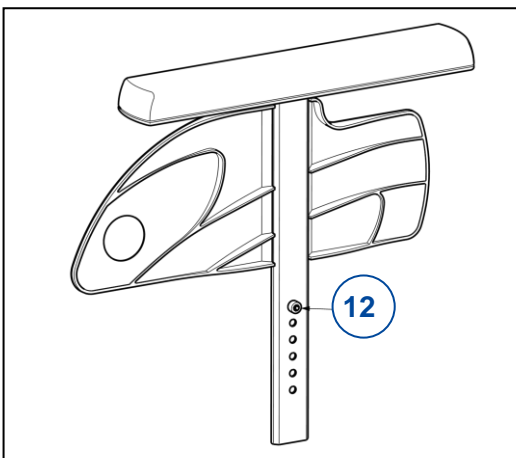
### 3.2.4 Width between armrests

1. Remove the armrest.
2. Loosen the screw (11) under the seat frame until the armrest support can be moved.
3. Slide the armrest support inwards/outwards in the support tube until the desired position (range 60 mm: step less).
4. Retighten the screw (11) properly.
5. Repeat instructions above for the other arm support.



Check that the arm supports are positioned identically on both sides and that they are fixed securely.

### 3.2.5 Armrest height



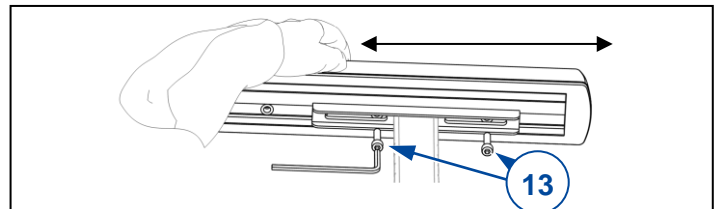
The height of the armrest can be adjusted in 6 positions, in steps of 15 mm:

1. Remove the armrest from the armrest holder.
2. Remove the bolt (12).
3. Place the bolt in the desired hole to adjust the height of the armrest.
4. Retighten the bolt (12).

### 3.2.6 Armpad depth

Adjust the depth of the armpad as follows (range 120 mm, stepless):

1. Remove or loosen both screws (13) under the arm pad.
2. Move the armpad to the front or rear with the grooves (42,5 mm) or mount the armpad in the other holes (2 positions, steps of 42,5 mm).
3. Remount and retighten both screws (13).



### 3.2.7 Operating control depth

The operating control can be adjusted in depth:

1. Loosen the screws (13) under the armpad.
2. Slide the operating control support to the front/back until the desired position.
3. Retighten the screws (13).

### 3.2.8 Operating console left/right

1. Loosen and remove the screws (13) under the armpad.
2. Take off the armpad and operating control support. Replace the armpad and fasten in place by tightening the two screws (13).
3. Loosen and remove the screws (13) under the other armpad.
4. Take off the armpad, place the operating control support and replace the armpad. Fasten everything into place by tightening the two screws (13).

### 3.2.9 Footrest length

**CAUTION**

Risk of damage

- Avoid that the footrests make any contact with the ground. Keep a minimum distance of 60 mm above the ground.

Adjust the length of the footrests as follows (3 possible positions on outer tube, steps of 35 mm ; 6 possible positions on inner tube, steps of 25 mm):

1. Remove the screw (14).
2. Adjust the length of the footrest to a comfortable length.
3. Replace the screw (14) and tighten firmly by hand.
4. Make sure that both footrests are adjusted to the same length.

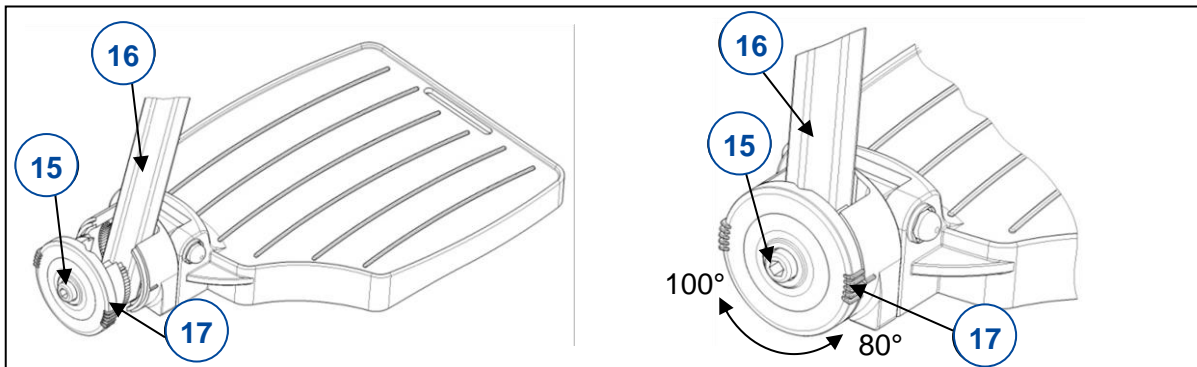


### 3.2.10 Adjusting the footplates

The footplates can be used in 2 positions. By default, they are installed with the base plate in the back position.

The footplates can be adjusted to the front by switching the left and right footplate.

### 3.2.11 Footplate angle



Adjust the angle of the foot plates as follows:

1. Loosen bolt (15).
2. Adjust the footplate (16) to the desired angle. The angle indication (80°-85°-90°-95°-100°) is according to the dashes (17).
3. Retighten the bolt (15).

## 3.3 Changing the battery



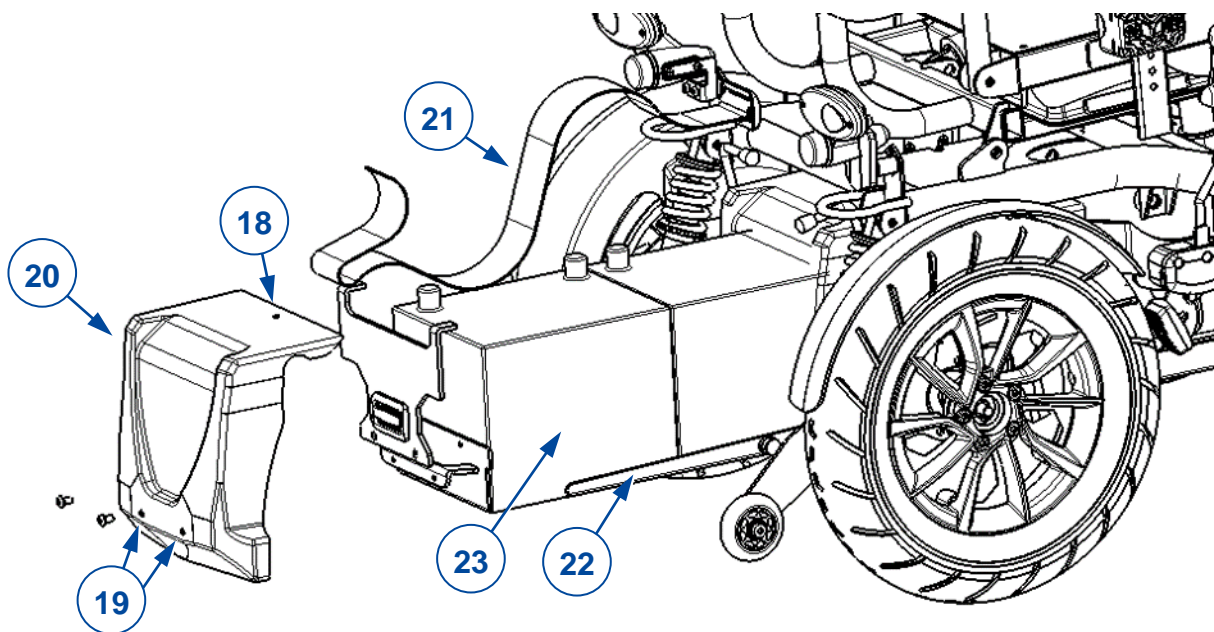
**CAUTION**

Risk of injuries and damage

- The batteries must only be replaced by trained personnel.
- Do not come into contact with the acid from the batteries.
- Replace the batteries in a well-ventilated room.
- Make sure that the ventilation holes of the battery housing are free from any contaminations.
- First read the charging instructions in the user manual before charging the batteries.
- Do not place fingers between the batteries and the battery housing.

**i** Replace both batteries at the same time and with the same type as the ones used in the wheelchair. If this is not possible, contact the nearest Vermeiren facility.

1. Switch OFF the wheelchair.
2. Remove the screw (18) on the top, and the two screws (19) on the bottom of the plastic battery box cover (20).
3. Remove the plastic cover.
4. Untie the strap (21) securing the battery.
5. Pull the inner drawer (22) with batteries (23) out of the battery box.
6. Disconnect the batteries, see §3.3.1. Remove them from the drawer.
7. Replace with the new batteries and connect them according to §3.3.1.
8. Carefully slide the inner drawer with batteries back into the battery box. Make sure that no wires are clamped between the batteries, drawer or battery box.
9. Tie the battery securing strap (21).
10. Place the battery box cover (20) and firmly tighten the two screws (19).
11. Replace the screw on top (18) and tighten firmly.
12. Switch ON the wheelchair to check if it works properly.



### 3.3.1 Battery connections

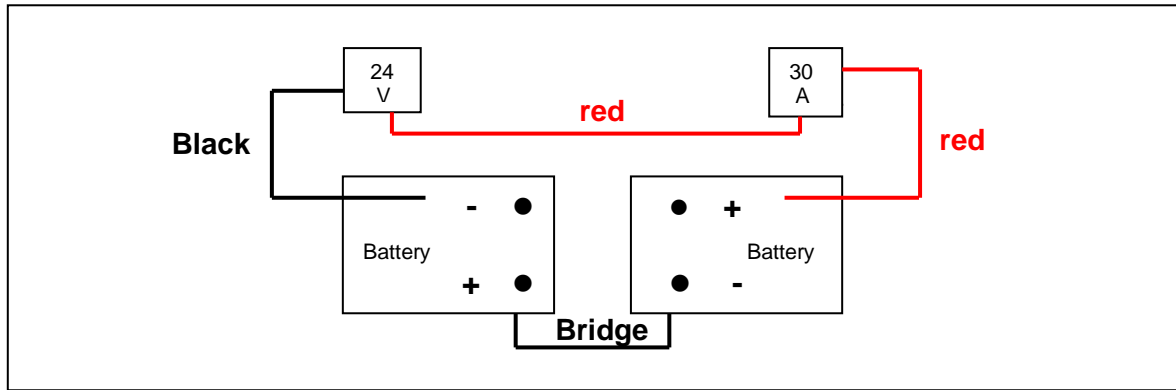
 CAUTION Risk of injuries and damage

- Check that no tools or other conductive objects come between the batteries poles, to avoid unintentionally current flows.
- Do not work in a humid environment with batteries and electronics.

The best way to disconnect the batteries:

1. Disconnect the main negative pole (-).
2. Disconnect the positive pole (+).
3. Disconnect the bridge.

To connect the batteries, use the reverse order.



### 3.4 Changing wheels or tyres

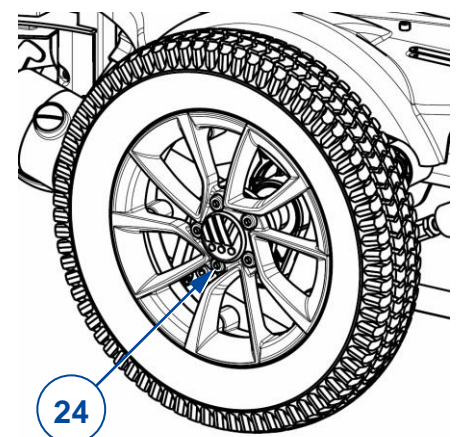
CAUTION Risk of injuries and damage

- Make sure that all air is released from the tyre, before removing it.
  - Use a wooden block and jack to lift the wheelchair. Always place the jack under the lower frame, never under any other parts.
  - Make sure that no body parts, the inner tube nor any other objects are pinched between tyre and rim.
  - Handle carefully to prevent damage to the rim.
  - Make sure all screws are firmly secured by hand before driving with the wheelchair.
1. Replace the inertube, and if necessary also the tyre.
  2. Inflate the tyre using inflating equipment which complies to regulations and with a pressure indication in “bar”.
  3. Make sure that the pressure is correct, see the pressure indication on the tyres.

#### 3.4.1 Driving wheels

**i** If a tyre needs to be replaced, first check the type of tyre that has been fitted. In case of a tyre with line profile, do not switch left and right tyre.

1. Lift the driving wheel from the ground using a jack.
2. Remove the socket screws (24) and take the wheel from the flange.
3. Open tyre valve and push it gently to release the air.
4. Loosen the 5 screws that connect both rim halves (on the inner rim half).
5. Separate the rim halves and remove the inner tube from the tyre.
6. Inflate the new or repaired inner tube partly.
7. Insert the inner tube into the tyre.
8. Place the two rim halves back on the tyre. Make sure that the tube valve pops out of the opening in the rim.
9. Connect the rim halves with the 5 socket screws. Tighten by hand.
10. Inflate the tyre at the correct pressure, see the indication on the tyre.
11. Remove grease and other contamination from the thread of the 5 flange socket screws. Apply screw adhesive (ex. Loctite) to these screws.
12. Mount the wheel on the flange.
13. Lower the jack.
14. Make sure the socket bolts are firmly secured.



### 3.4.2 Steering wheels

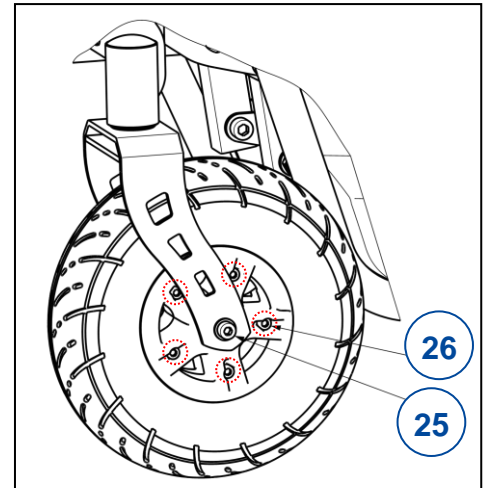
#### DISMANTLING

1. Loosen the screw on the steering wheel axle (25) and remove it from the steering wheel fork.
2. Let the air out of the steering wheel by lightly pressing the pressure pin on the valve.
3. Loosen the 5 screws that hold the split rim together (26).  
Now separate the rim sides.

#### ASSEMBLY

Insert the partly-filled inner tube into the tyre.

1. Connect the two sides of the rim through the tyres and use the 5 connecting screws to screw the rim together (26).
2. Make sure that the valve juts out of the valve opening in the rim.
3. Put the wheel back into the front wheel fork (25) and inflate the wheel.







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### **Instructions for specialist dealer**

This instruction manual is part and parcel of the product and must accompany every product sold.

Version: B, 2021-04

Basic UDI: 5415174 122127Turios 2P

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