ENG

# Loop[SORG] RS

## Service Record

**In the following all individual adjustments of the wheelchair are described. These adjustments require tools and specialised knowledge. Please leave the adjustments to a qualified rehab consultant.**

MADE IN GERMANY

*Besondere Menschen, besondere Lösungen.*

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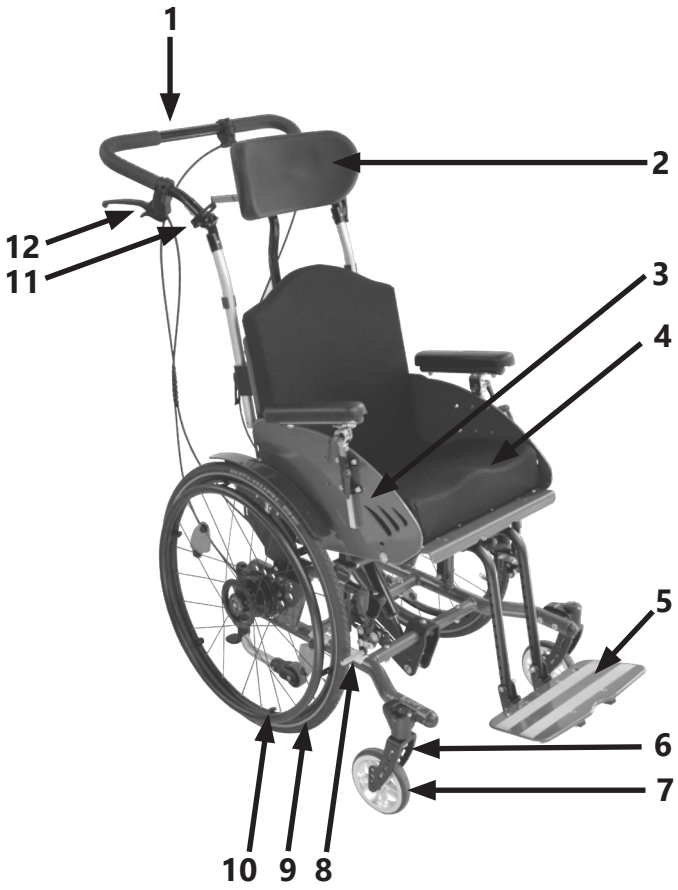
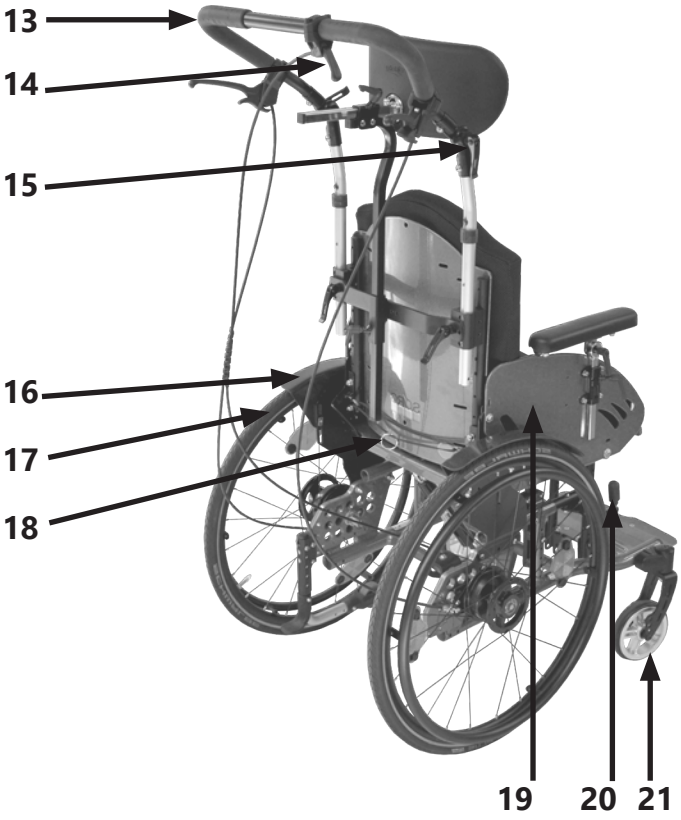
# 1 Wheelchair overview




**1** push handle
**2** headrest
**3** side guard
**4** seat cushion
**5** foot plate
**6** caster fork
**7** caster
**8** brake block
**9** rear wheel
**10** handrim
**11** Clamping lever height adjustment push handle
**12** brake lever




**13** push handle
**14** triggering lever tilting
**15** Eccentric tensioner for angle adjustment of the push handle
**16** wheel cover
**17** rear wheel
**18** Triggering for adjustment of the back angle
**19** Side guard
**20** brake lever
**21** caster

# 2 General information

## 2.1 General indications

In the following all individual settings, adjustments and repairs as well as the yearly inspection of the wheelchair are described. These adjustments require tools and specialised knowledge. Please leave the adjustments to a qualified rehab consultant.

Should questions or suggestions come up then please contact your medical supply store or our team (+49 7254 9279-0).

## 2.2 Documentation indications

Please note:

- Information about before sale can be found in the instructions for use
- Infomation for the user can be found in the instructions for use
- For maintenance instructions see: Chapter 4 (Repair & Maintenance)

## 2.3 Required torques and tools

*For the following screws needed torque:*

- M5: 5 Nm;
- M6: 7 Nm;
- M6 (axle plate) 10 Nm
- M8: 20 Nm;
- M10 (nut): 25 Nm; (caster)
- quick release axle fitting 40 Nm

*Needed tools:*

- torque wrench (5-50 Nm)
- open end wrench
- flex ratchet handle with socket wrench inserts
- hexagon screw driver
- Phillips screw driver
- flat head screw driver
- plastic mallet
- side cutter
- threadlocker (fluid)
- bicycle inner tube repair kit
- work bench/jaw vise with rubber pads

## 2.4 Explanation of symbols

**ATTENTION!** Warnings for personal Safety aspects that are of the utmost importance.

**CORRECT** safety adjustment/ use

**WRONG** adjustment/ use

**NOT ALLOWED**

**References** to additional/continuing reading.

important detail

correct or proper use/setting

incorrect or improper use/setting

**(A); (B)**

reference from text to detail

### Use

push/ pull/ insert / move/

Push in specific direction

Setting or adjusting the angle

open/ close

Turn clockwise

Turn counter-clockwise

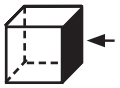
steps to be done at the same time

steps to be done after each other

steps to be done on both sides

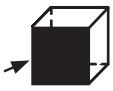
point of view

view from top



view from the side

view from the bottom



view from the front

view from the back

fasten parts

remove parts

## 2.5 General safety instructions

⚠ **Before each use be sure to check:**
- frame, back tubes, attachments and accessories for visible damage, bends, cracks or missing/loose scews,
- wheels/quick release axles for firm fit,
- sufficient tire pressure, tire tread,
- functionality of the brakes,
- firm fit of the angle adjustment elements/ eccentric clamps,
- firm fit of the seat plate/ the back/ the foot plate,
- functionality of the anti-tipper/ seat and back straps,
- if all previously disassembled parts are re-inserted or firmly locked.

⚠ There is a risk of injuries (e. g. such as bruising) on all rotating or folding parts, including adjustments, repairs and transport.

⚠ All wheelchair parts are to be handled with care. Do not throw or drop removable parts.

⚠ Before repairs or adjustments are made, clean/didinfect the wheelchair and secure it from tipping over and/or falling down.

⚠ Only use original spare parts.

⚠ Safety nuts may only be used once. Lossened safety nuts must be replaced by new ones.

⚠ Only the regular maintenance of all safety-relevant parts on the wheelchair by a qualified rehab workshop protects against damage and maintains our manufacturer's warranty.

⚠ If the vehicle is delivered without drive wheels and/or if third-party wheels are fitted, the specialist dealer is obliged to check safety-relevant settings such as the function of the brakes or caster wheels and adjust them if necessary before delivery.

*Lifespan*

⚠ Use beyond the specified lifespan increases the residual risks and should only be carried out after careful, qualified consideration by the operator. If the useful life is reached, the user or a responsible person should contact the specialist dealer. There you can be informed about the possibility of reprocessing the product.

*Combination with products from other manufacturers*

⚠ The wheelchair may only be combined with the electrical auxiliary drives approved by the manufacturer. The responsibility of restrictions or adjustmens as well as the attachment itself lies with the supplier of the additional system or the specialized retailer. Please ask about the conditions with the manufacturer of the auxiliary drives.

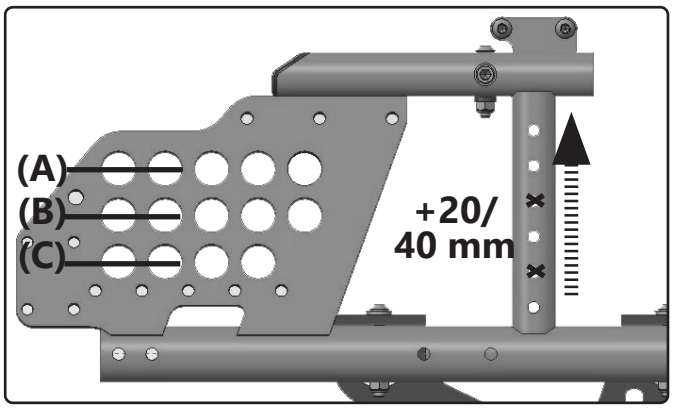
⚠ In combination of wheelchair and electric auxiliary drive, certain strains occur that can lead to damage to the wheelchair. Slowly approach abstacles and carefully overcome them so that little force is applied to the casters, rear wheels and the wheelchair as a whole.

### 3.1.1 Position rear wheel

⚠ After changing the position, check the tilt stability of the Loop[SORG]RS with the patient at full tilt and, if necessary, modify the position!

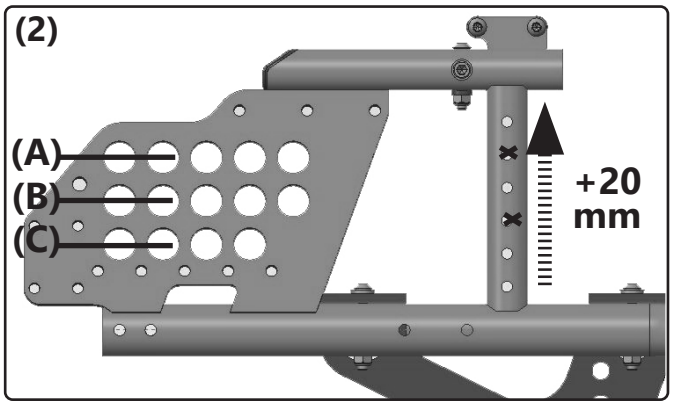
**(1+2)** The position of the drive wheels is adjusted depending on the desired seat height.

The seat height can be additionally changed by vertical displacement of the seat plate.




**(1)** Seat height adjustment Seat depth 300-400 mm

| | **20“** | **22“** | **24“** |
|---|---|---|---|
| **A** | 410 | 435 | 460 |
| **B** | 435 | 460 | 485 |
| **C** | 460 | 485 | 510 |



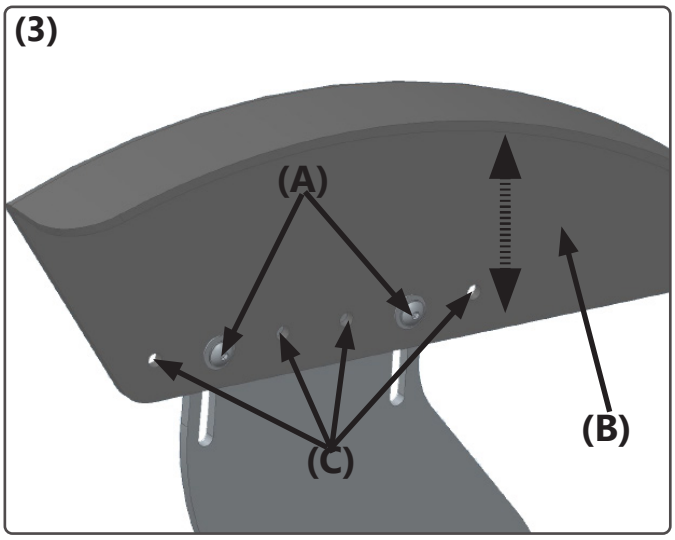

**(2)**Seat height adjustment Seat depth 420-480 mm

| | **20“** | **22“** | **24“** |
|---|---|---|---|
| **A** | 435 | 460 | 485 |
| **B** | 460 | 485 | 505 |
| **C** | 485 | 505 | 530 |

### 3.1.2 Adjustment of height and position of the wheel guard for rear wheel position changes

**(3)** For vertical adjustment:

- Remove drive wheel,
- Loosen screw connections **(A)** on wheel guard
- and push the wheel guard **(B)** all the way up.
- Adjust the wheel position.
- Replace the drive wheel
- and push the wheel guard **(B)** down so that there is a gap of 50 mm / 5 cm between the wheel guard **(B)** and the drive wheel.
- Then remove the drive wheel again
- and tighten the screws **(A)** on the wheel guard **(B)** again.



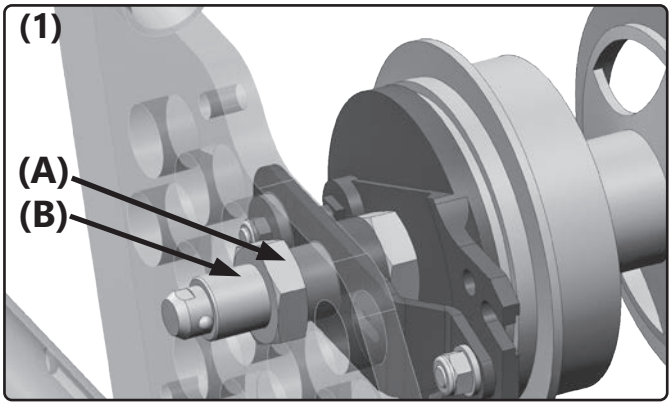

For horizontal adjustment:

- Remove drive wheel,
- Remove fitting **(A)** on wheel guard **(B)**.
- Place the wheel guard **(B)** in the alternative holes **(C)** according to the desired position of the wheel and screw it on slightly so that the wheel guard can still be screwed in at the height.
- Then proceed according to the vertical adjustment.

### 3.1.3 Displacing the wheels without a camber adapter (20",22",24")

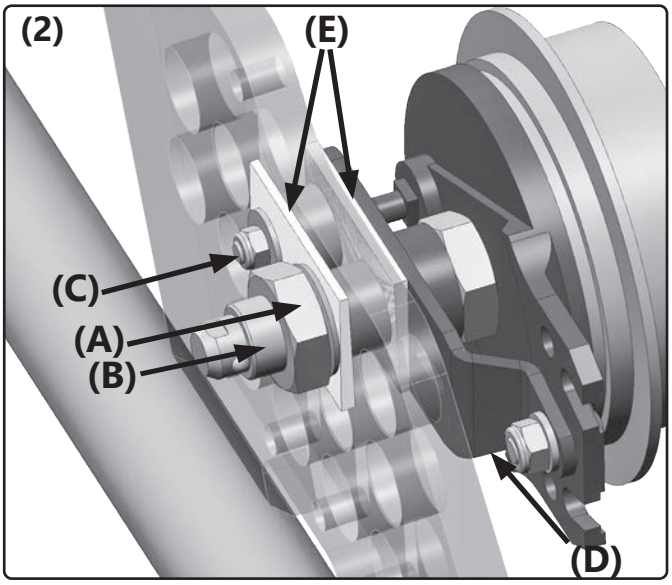
- **(1)** Remove the wheels,
- remove the hexagon nut **(A)** of the quick-release axle fitting **(B)**,
- place the fitting **(B)** in the new hole,
- put the hexagon nut **(A)** back on, tighten it and
- place the wheels back on.

⚠ Correct the position of the knee lever brake and be sure that it functions properly.




### 3.1.4 Displacing the wheels with a camber adapter (20",22",24")

- **(2)** Remove the wheels,
- remove the hexagon nut **(A)** of the quick-release axle fitting **(B)**,
- remove the nut **(C)** from the brake arm **(D)** including the inner shell,
- remove both camber adapters **(E)** and place them in front of the new position.
- Fixate both camber adapters **(E)** with the fitting **(B)** and the shell in the new position,
- replace the hexagon nut **(A)** and tighten it,
- replace and tighten the nut **(C)** from the spacer.



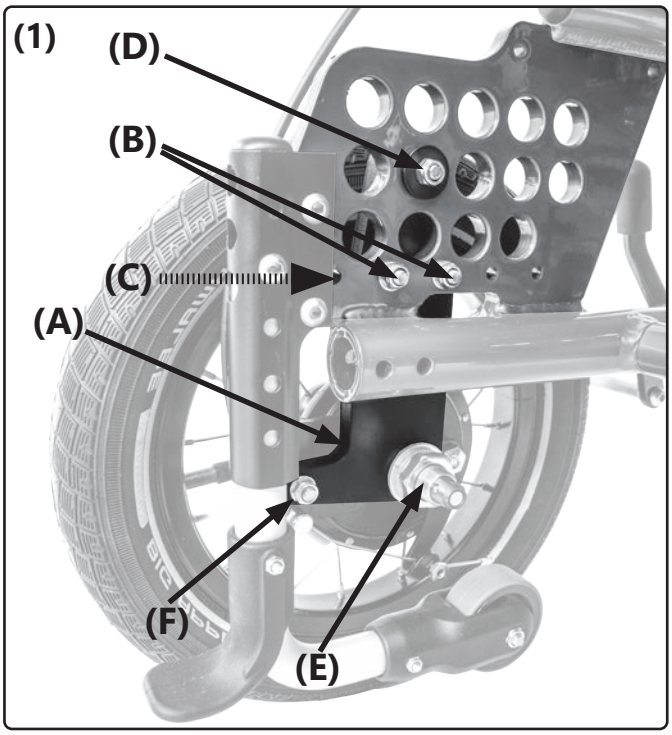

⚠ The Camber adapters must always be mounted opposite. At 0°: inner surface= thick end facing up.

⚠ Correct the position of the knee lever and be sure that it functions properly.

### 3.1.5 12"-wheels

Changing to 12" wheels subsequently:

- **(2)** Remove the big wheels including the brake pad, fitting and drum brake arm,
- mount the adapter **(A)** for the 12" wheels with the screws **(B)** in the bottom hole row **(C)**
- mount the screw **(D)** with the delivered discs in the proper hole.
- Mount the quick-release axle fitting **(E)** with the brake pad and the drum brake arm **(F)** analogously as described above and
- put the 12" wheels on.




⚠ Be sure that the drum brake functions properly and if necessary establish its functionality (see drum brake).

⚠ Whe using a knee lever brake, this must be displaced (see knee lever brake). Correct the position and be sure that if functions properly.

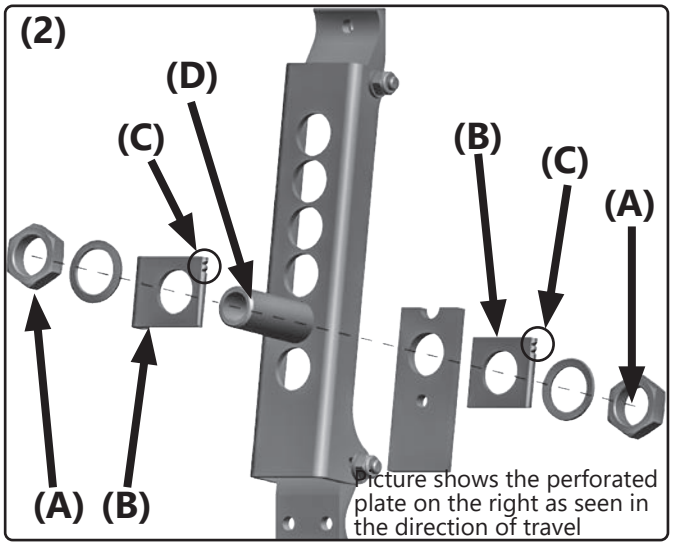
To change the camber to 0°, please proceed as described.

### 3.1.6 Track compensation rear wheels

*Version till 02/2017*

If you want to change the camber and / or the seat inclination, you will need to mount corresponding wedge wheels for the track compensation to avoid the so-called eraser effect.

- For replacing / inserting the wedges:
- **(2)** remove the screw connection **(A)** of the plug-in axle fitting **(D)** (also on the inside),
- insert the required wedge disc (s) **(B)**,
- the mounting notches **(C)** must point forward in the direction of travel,
- put all the other discs back in
- and tighten the screw connection **(A)** of the plug-in axle fitting **(D)** (also on the inside) again (torque 35Nm).




Picture shows the perforated plate on the right as seen in the direction of travel

Refer to the following table::

| Camber | without seat tilting | Normal seat tilting (< 5°)* | strong seat tilting (> 5°)* |
|---|---|---|---|
| 2° | disk 0° | disk 0° | wedge disc 0,5° |
| 4°-8° | disk 0° | wedge disc 0,5° | wedge disc1° |
| 11° | disk 0° | wedge disc 1° | wedge disc 1°** |

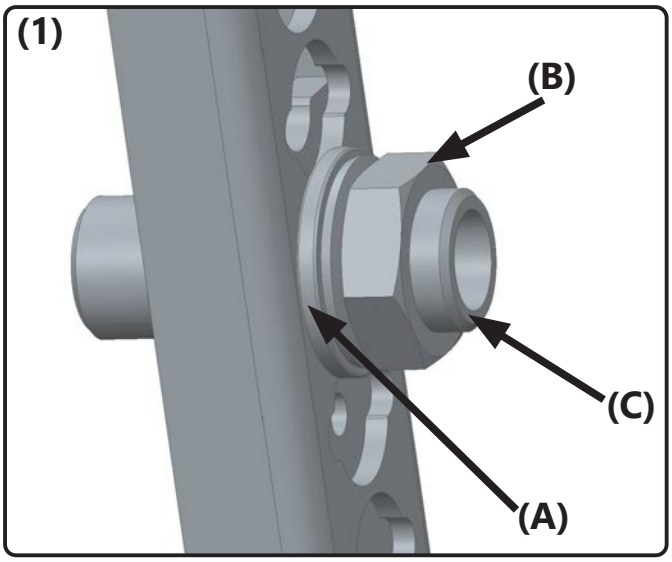
**if necessary assemble 2 disc sets (2x inner disc mounted inside, 1x outer disc + 1x inner disc mounted outside)

⚠ Then check the functionality of the knee lever brake and restore it if necessary.

# 3.1 Assembly Group Wheels

*Version since 02/2017*

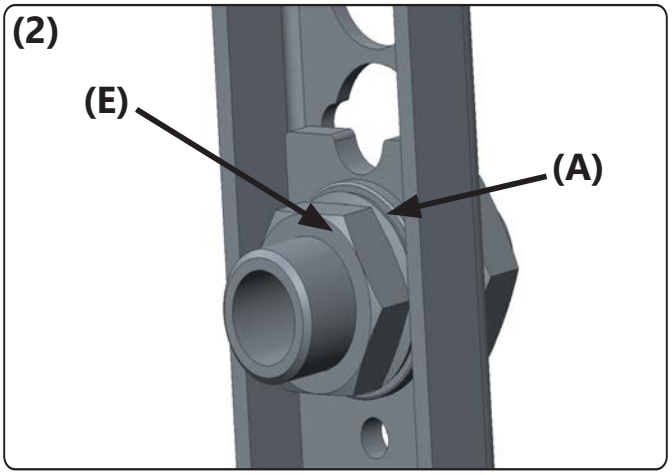
The wheelchair is delivered with the appropriate toe-in, depending on the wheel camber adjustment and attachment of the steering and pushing aid. When changing the camber or retrofitting the steering or pushing aid, it may be necessary that the toe must be changed.




**(1)** In order to avoid the so-called "eraser effect", we generally assemble the matching track compensation **(A)** at the factory. If the camber is subsequently changed, it may be necessary to replace the track compensation adapter **(A)** with a suitable one (spare part).

To change toe-in:

- Remove drive wheels,
- and remove screw connection **(B+C)**.
- 
- Depending on the mounting variant and camber, please observe the instructions on the following pages.
- After changing the toe settings:
- replace the screws **(B+C)** and tighten the screws **(B)**.
- Check / correct the distance between the drive wheel and the side part or clothing protection by attaching the drive wheel.




The tires of the wheel must be at least 10 mm away from the side panel or clothing guard. Pay attention to the same distance left and right!

**(1)** To insert or remove the quick-release axle fitting:

- loosen the screw connection **(B)** of the fitting (also the lock nut **(2E)** on the inside),
- Turn the complete fitting **(C)** to the desired position and
- Tighten all screw connections again (tightening torque of nuts M18 fitting 35 Nm).

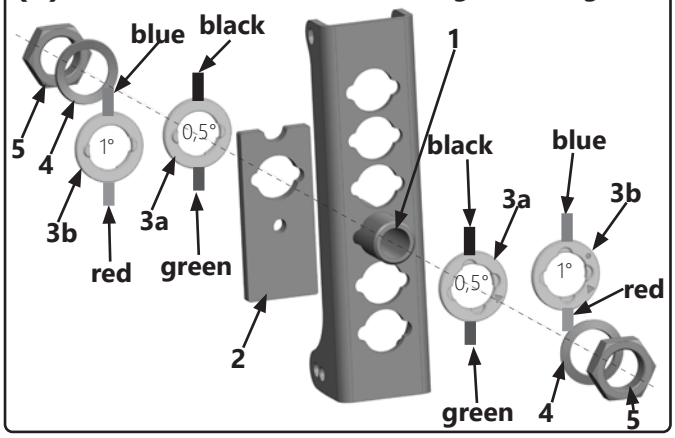
⚠ Be sure to check the functionality of the knee lever brake and adjust if necessary.

Please note the colored discs for the correct adjustment of the camber.

**(1+2)** Assembly of track compensation:

| pos.-nr. | count | description |
|---|---|---|
| 1 | 1 | Screwed M18*1, d=12 |
| 2 | 1 | reinforcement axle plate |
| 3a | 2 | fall-in-track disc 0,5° |
| 3b | 2 | fall-in-track disc 1,0° |
| 4 | 2 | locking washer S18 |
| 5 | 2 | nut M18x1 SW24 |

**(1) Illustration shows the mounting on the right**



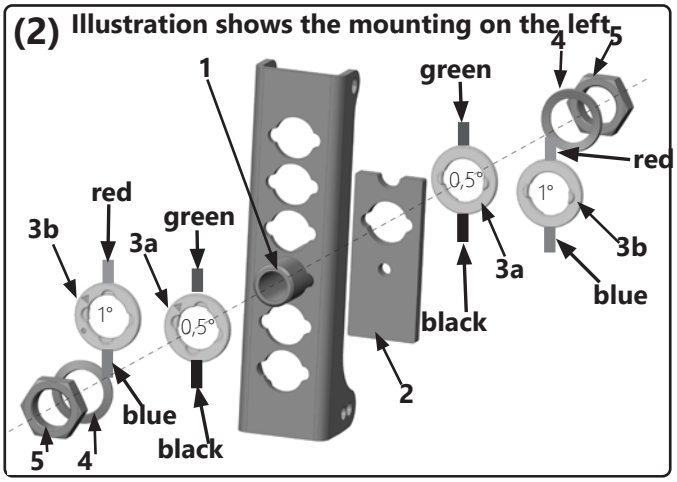

For Vector and Jump beta 8 ° camber, as well as Jump alpha 5 ° and 8 ° camber, a spacer block for wheelbase extension is required (spare part). Here, the toe is already integrated in the broadening.
Which disc has to be used at which setting:

| Camber | Without seat tilt |
|---|---|
| 0° | without track disc |
| 2° | without track disc |
| 4-8° | without track disc |

| Camber | Normal seat tilt (ca. 5°) |
|---|---|
| 0° | without track disc |
| 2° | without track disc |
| 4-8° | track disc with 0,5° |

| Camber | Strong seat tilt |
|---|---|
| 0° | without track disc |
| 2° | track disc with 0,5° |
| 4-8° | track disc with 1° |

**(2) Illustration shows the mounting on the left**

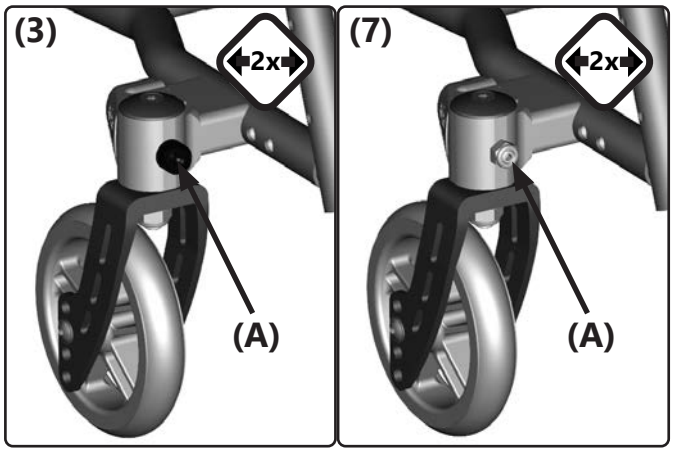



⚠ For the steering and pushing aid, at least the 0.5 ° track disc must always be mounted (except for a camber of 0 ° in which no track disc is used).

### 3.1.7 Activation of track fixation

With the help of the track fixation, straight-ahead driving can be supported. The pressure spring keeps the steering axle in a straight line. When you countersteer, this support is released again. To set this particular support, proceed as follows:

- Loosen the protective cap **(3A)**,
- Use an M8 Allen key to tighten the spring-loaded pressure piece **(7A)** on both sides until you can feel the ball compressing the wheel in a straight-ahead direction.

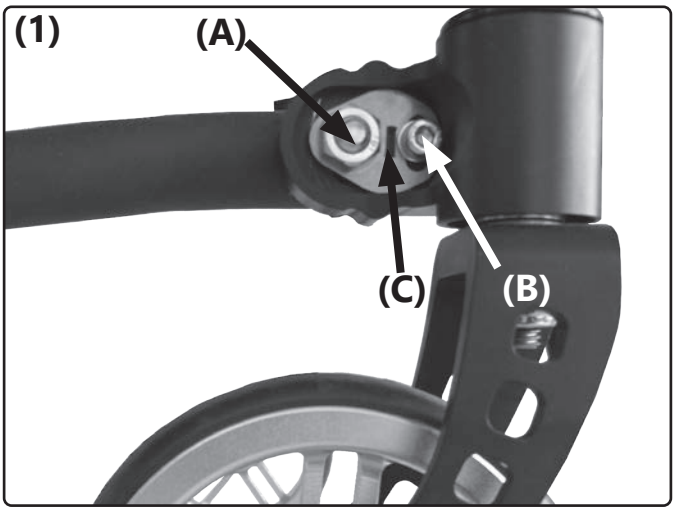



⚠ Do not turn the pressure spring piece onto the steering axle with the threaded end of the pressure ball. Otherwise the function will be lost.

### 3.1.8 Caster

To adjust the caster adapter:

- **(1)** loosen the screw **(A)**, also on the frame inside, with which the adapter is attached to the frame tube,
- loosen the screw **(B)**,
- bring the adapters into an exactly vertical position by turning the adjustment disc **(C)** (with a flat-head screwdriver),
- check the position by applying an angle.
- Retighten all screws; Screws **(A)** with 9 Nm, screw **(B)** with 7 Nm
- After each change to the drive wheel, the steering head inclination must be readjusted.



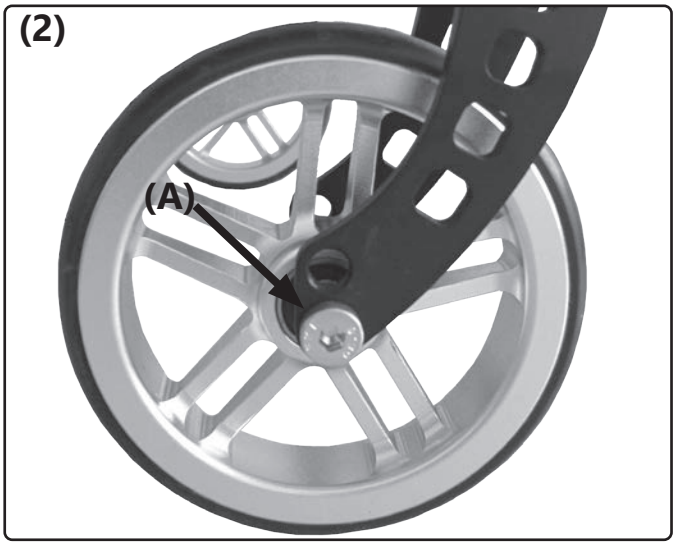

⚠ Safety nuts may only be used once. Once loosened safety nuts must be replaced by new ones.

⚠ An incorrect steering head inclination leads to cornering through the castor wheels to disturbing and obstructive "ascent and descent".

To replace the caster:

- **(2)** loosen the screw **(A)** on both sides,
- remove the steering wheel,
- put the new steering wheel on the sleeves.
- Then set the appropriate distances for the existing steering wheel fork steering wheel combination
- and tighten the screws **(A)** again.

Depending on the size of the new steering wheel, the steering wheel fork may need to be replaced as well.



### 3.2.1 Frame arche for closed frame

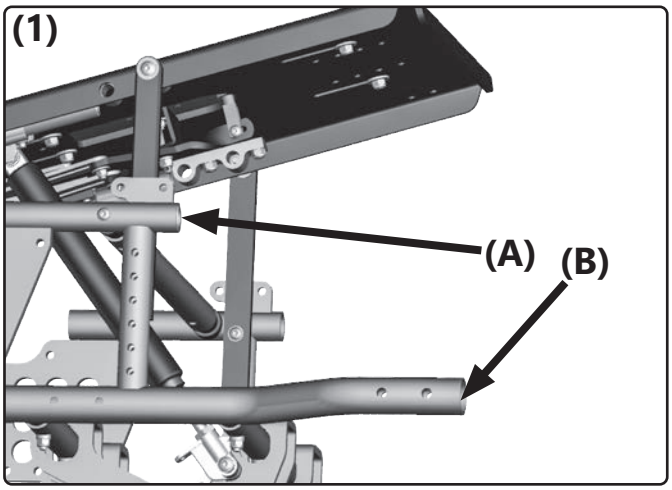
For retrofitting the frame bows for a frame closed at the front, proceed in the same way on both sides of the frame as follows:

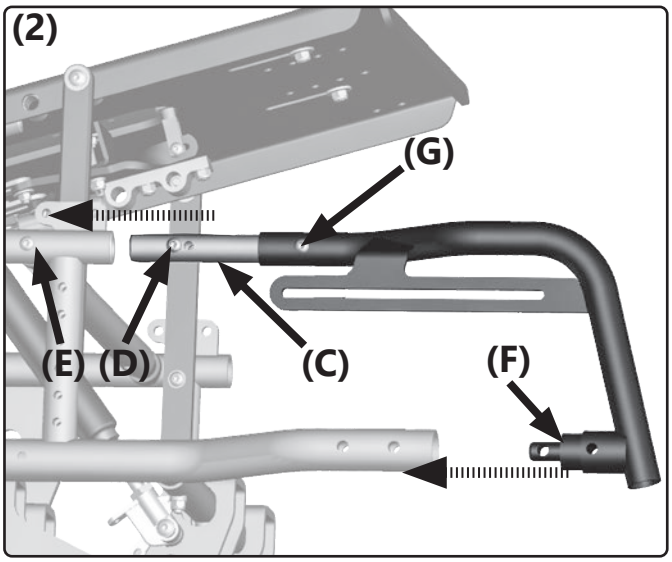
- **(1)** Remove the steering wheel adapter **(3A)** including the half-shells **(3B)** on both sides as described,
- remove the knee lever brakes if necessary (see chapter "Brakes")
- and remove the caps at the end of the frame tubes **(A)** and **(B)**.

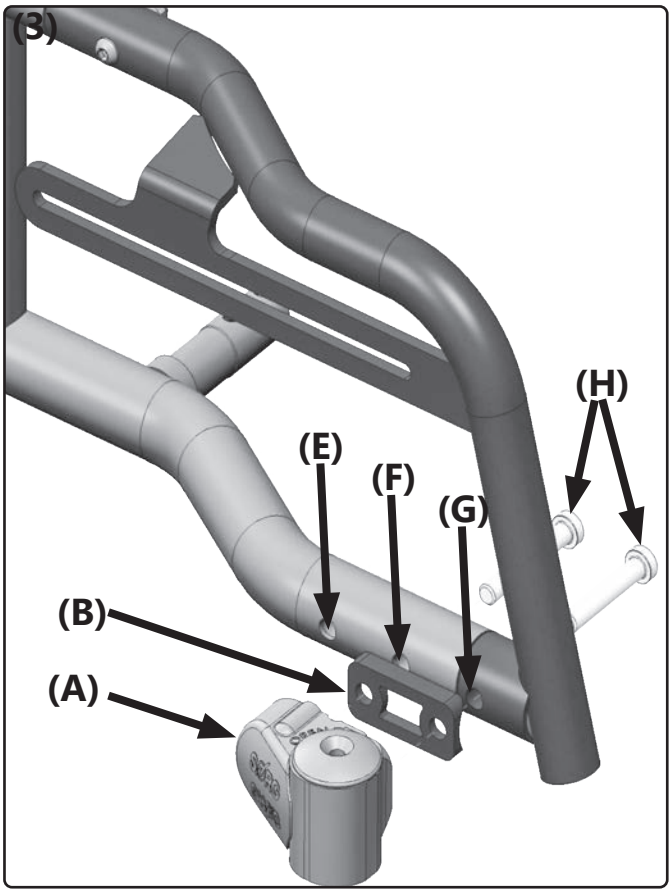
- **(2)** Insert the supplied sleeve **(C)** from the front into the upper frame tube and screw tight with the screw **(D)** in the hole **(E)** provided.
- Place the frame bow on top of the mounted sleeve **(C)** and at the same time insert the pin **(F)** into the lower frame tube at the bottom.
- Screw the frame bow at the top with the screw **(G)** to the sleeve **(C)**.
- Check the tightness of the fittings **(D and G)**.

- **(3)** Move the steering wheel adapters **(A)** and half shells **(B)** from the old holes **(E + F)** into the new holes **(F + G)**,
- Mount the adapters **(A)** including the half shells **(B)** with the screws **(H)** in the new position **(F + G)**
- and adjust the steering wheels to an absolutely vertical position.
- Possibly. you must re-assemble and adjust the toggle brakes (see chapter "Brakes").

⚠ The steering wheels must be mounted in the new position as the frame bow is connected to the frame with the screws **(H)** for the steering wheel adapter.



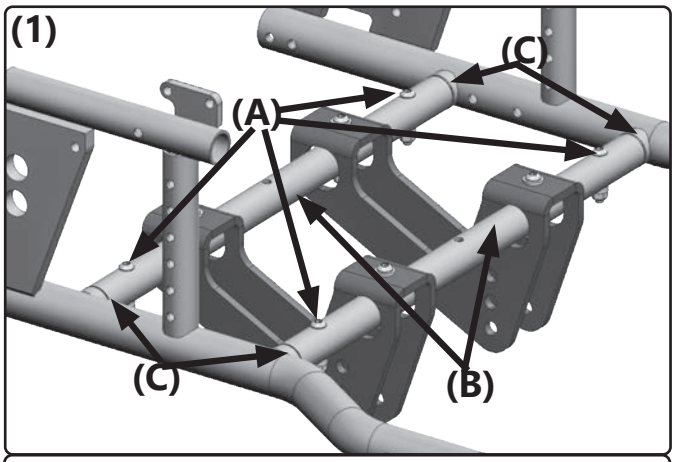
### 3.2.2 Frame extension

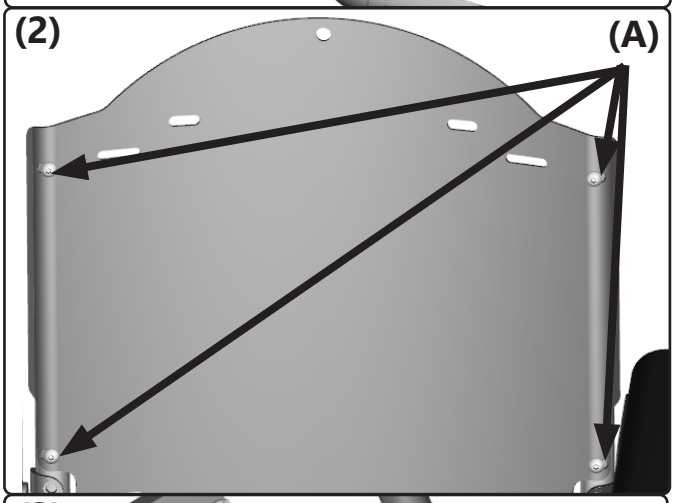
When using a standard firm curved back plate, a new saddleback for the desired width must be ordered.

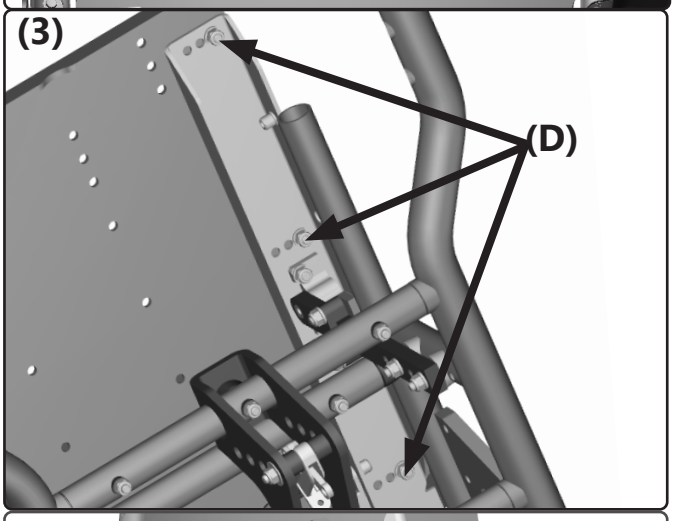
To broaden the framework:

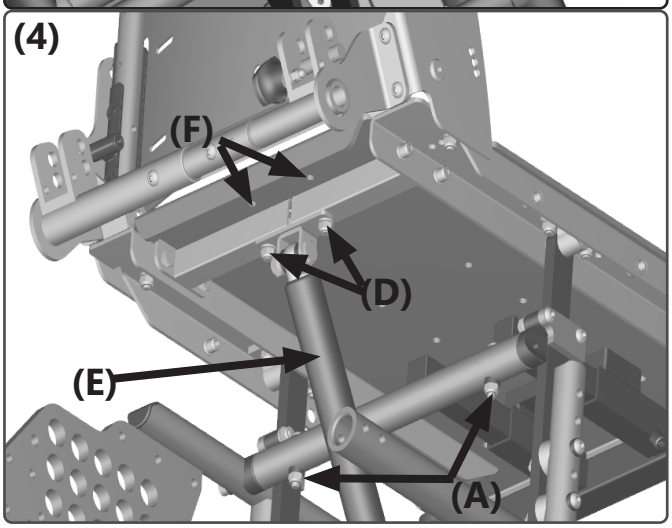
- Remove both drive wheels,
- remove the screw connection **(3D + 4D)** of the seat plate and then the seat plate itself.
- Now remove the firm curved back plate (ERGO back: remove the back center part) by loosening the screws **(2A)**
- and remove the screwed connections of the trusses **(1A + 4A)** on one side.
- Proceed with the use of a back part with gas spring adjustment, with the traverse installed there, analog.
- Now pull the frame apart (half desired broadening)
- and replace the screws loosely.
- Proceed analogously with all screw connections on the opposite side.
- Then tighten the screws again,
- unscrew the seat plate symetrically
- and screw on the new firm curved back plate (for ERGO back: screw on the center of the spine symmetrically).

⚠ The trusses must be offset at the same distance on both sides.



# 3.3 Assembly Group Seat

## 3.3.1 Horizontal displacement of the seat plate

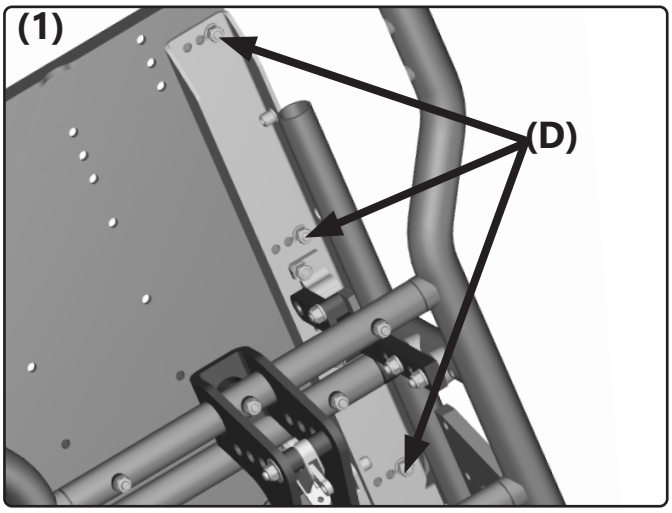
For moving the seat plate by 20 mm / 2 cm with the same tilting path to increase the seat depth:

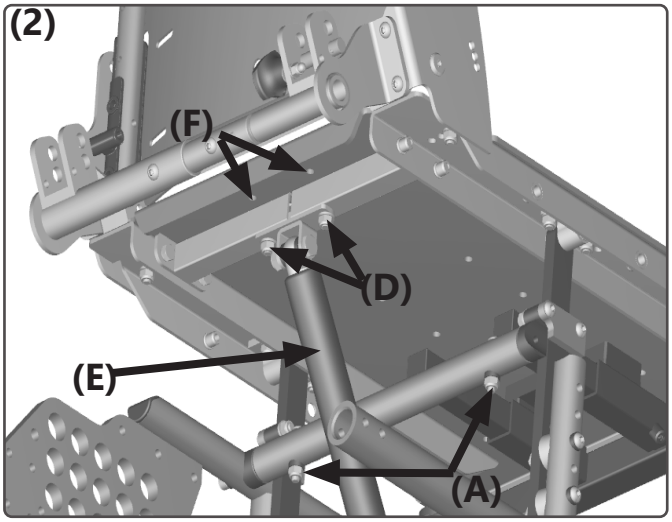
- **(1)** Remove the screw **(D)** of the seat plate completely on both sides.
- **(2)** Remove the screw connection **(F or D)** of the gas spring **(E)** completely,
- put the seat plate in the alternative position,
- and tighten the screwed connections **(1D)** again.
- Move the gas spring **(2E)** to the alternative position **(2F or 2D)**,
- put the screw back in
- and turn it tight.

We recommend a seat inclination of 3-5 °.

⚠ After any change to the seat unit and / or tipping, the tipping behavior of the Loop-SORGRS must be retested and practiced with the help of an experienced, strong helper.

If the Loop[SORG]RS is equipped with two gas pressure springs, proceed analogously.



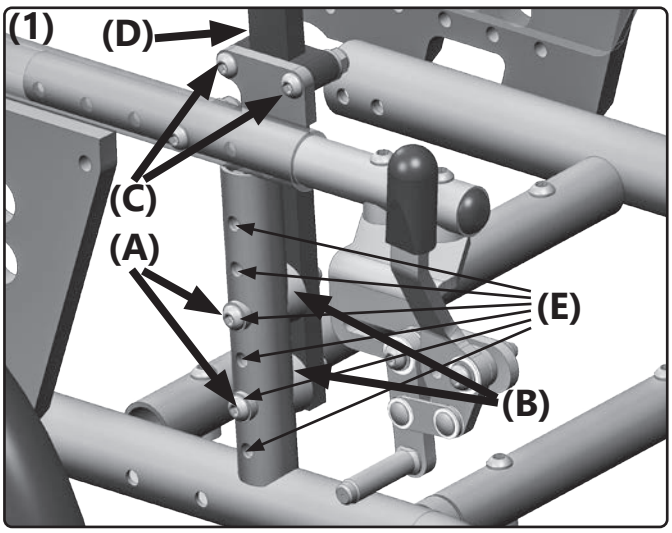



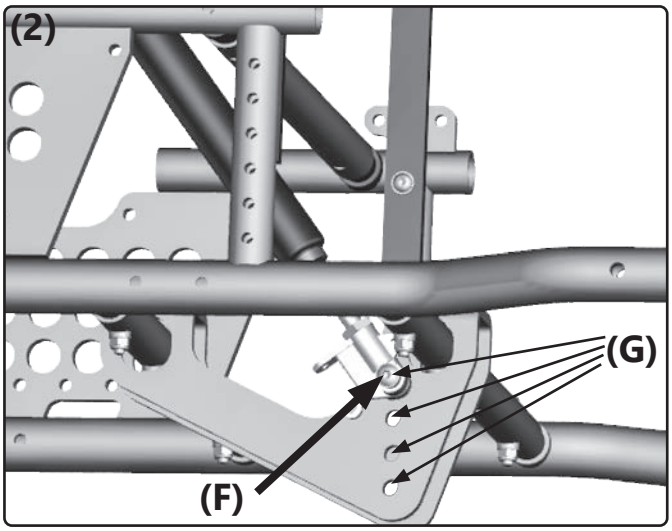
### 3.3.2 Vertical displacement of the seat plate

In addition to the ability to define the seat height by the positioning and size of the drive and steering wheels, this can also be changed by vertical displacement of the seat plate.

To change the seat height in 20 mm increments with the same tilting path:

- **(1)** loosen both screws **(C)** of the guide clamp on both sides and
- remove both screws of the screw connection **(A)** of the seat unit incl. the calipers **(B)** on both sides completely.
- **(2)** Remove the screw connection of the gas spring **(F)** incl. The sleeves completely.
- **(2)** Move the seat unit with the supports **(D)** to the desired dimension in the hole pattern **(E)** (± 20 mm / 2 cm per hole),
- **(2)** move the gas spring in the hole pattern **(G)** (± 20 mm / 2 cm per hole) to the same extent.
- Insert the screws **(1A)** with the calipers **(1B)** into the new position and turn them tight.
- Insert the screw **(2F)** with the sleeves into the connection of the gas spring and turn it tight.




⚠ After any change to the seat unit and / or tipping, the tipping behavior of the Loop[SORG]RS must be retested and practiced with the help of an experienced, strong helper.

⚠ If you do not move the seat assembly in parallel with the gas spring, the result is a different tilt path and a different seat angle.

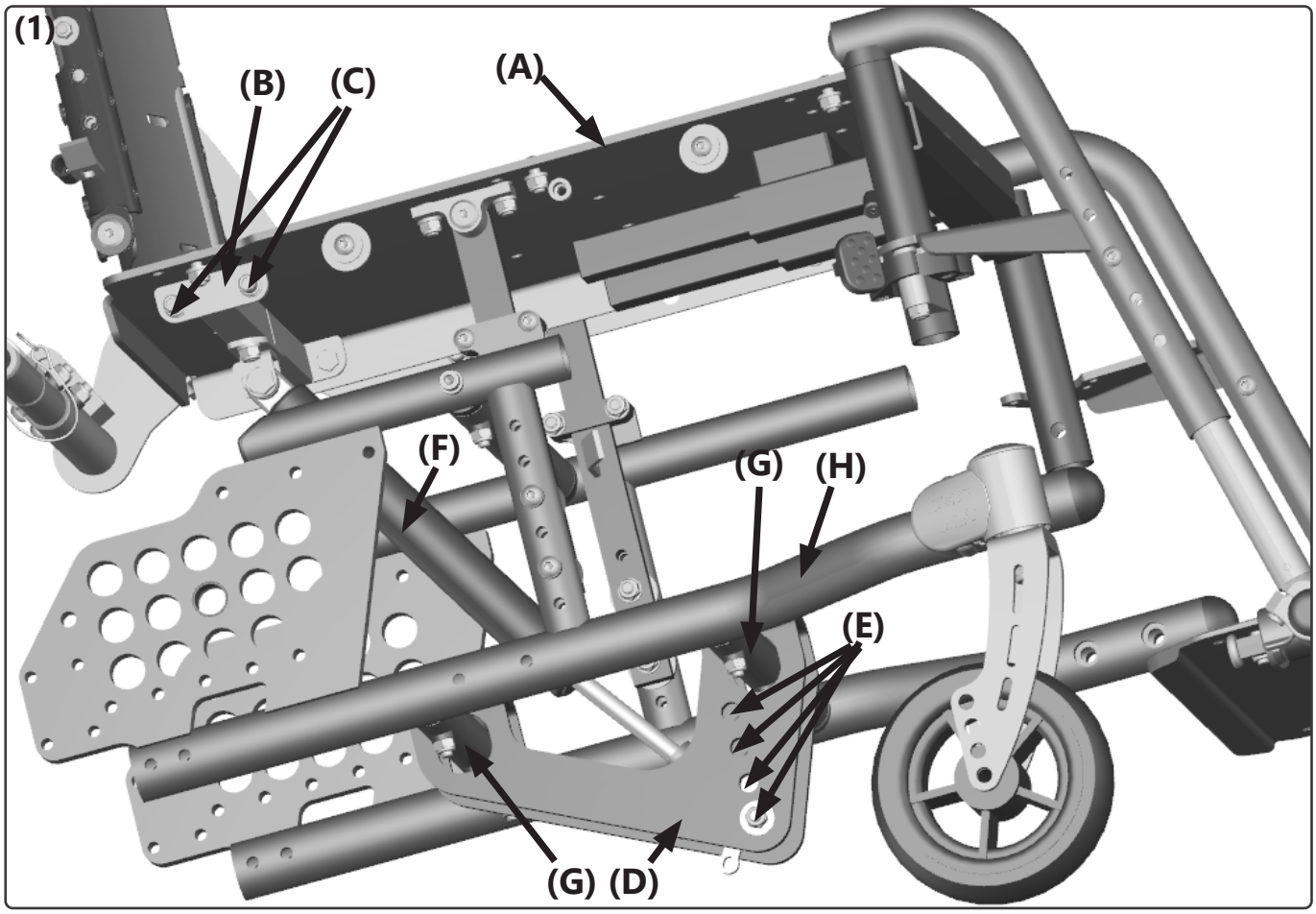
### 3.3.3 Double gas spring

The components involved:

**(1)** **(A)** seat plate
**(B)** top adapter for gas spring
**(C)** top mounting points for gas spring
**(D)** bottom adapter for gas spring
**(E)** bottom mounting points for gas spring
**(F)** release lever for gas spring
**(G)** Bowden cables (with release lever on the push bar)
**(H)** gas spring
**(I)** frame traverse
**(J)** frame half

An oversight of the individual steps to apply a second gas spring in short form:

1. Remove control lever of the gas spring and wedge adapter,
2. move the already available gas spring,
3. take off frame half,
4. attach new gas spring adapter,
5. put frame back together,
6. mount the top adapter under the seat plate,
7. attach new gas spring to the top adapter,
8. attach new gas spring to the bottom adapter,
9. mount the release lever for the double gas spring on the bar,
10. determine the max. length of the new Bowden cable and install it, cut the Bowden cables,
11. bring the back of the Loop into an upright position,
12. mount the Bowden cable on the respective release mechanism of both gas springs,
13. fixate the traction of the release mechanisms,
14. if necessary, retighten wedge adapter,
15. test the tilting with max. strain and if necessary, adjust.



# 3.3 Assembly Group Seat

Step 1: Control lever
- **(1)** Remove the two screws **(A)** of the control lever and the spiral cable sheath from the Bowden cables.

Step 2: Move the gas spring
- **(2)** Use the screws **(A)** to remove the upper receptacle of the gas spring.
- **(3)** Remove the two screws **(A)**.
- Move the holder **(B)** incl. Gas spring **(C)** into the alternative holes **(D)**.
- **(4)** Move the upper bracket **(A)** into the alternative holes **(B)**.
- **(5)** Remove the inner cable of the Bowden cable **(A)** from the trigger mechanism of the gas spring by loosening the nipple **(B)** and adjusting screw **(C)** and / or locknut **(D)** and pulling out the complete Bowden cable **(A)**.

Step 3: Remove frame half
- Remove a frame half

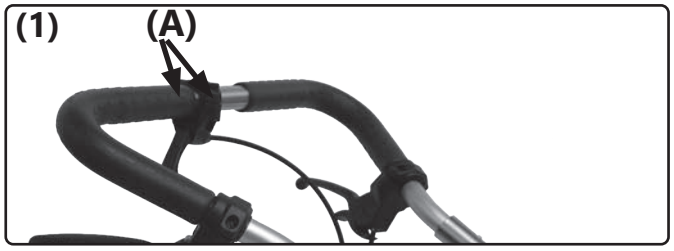
Step 4: Insert new lower shots
- **(6)** "Thread" the second lower seat **(A)** of the gas spring over the two trusses **(B)** and
- screw the mount with the screws **(C)** firmly into the prepared holes in the trusses **(3D)**.

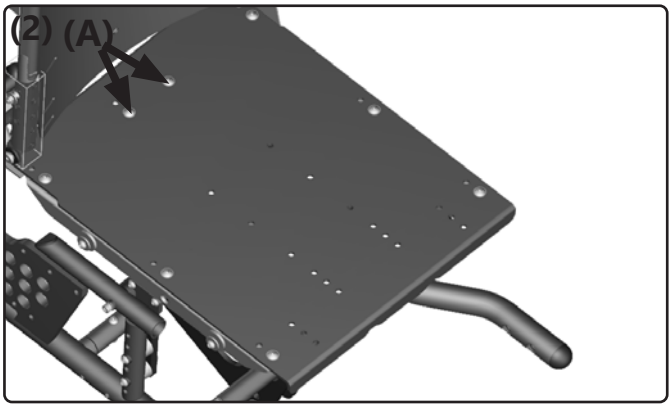
Step 5: Assemble the frame
- Screw the frame together (as already described) on the trusses.
- Pay attention to the symmetry of the crosshead adapters (right and left side in the same hole!).

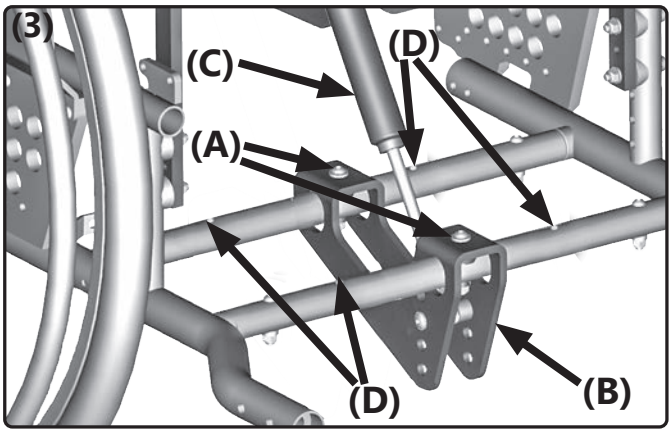
Step 6: Mount upper shots
- **(1)** Screw the second upper receptacle **(A)** of the gas spring with the two screws **(B)** under the seat plate into the prepared holes.

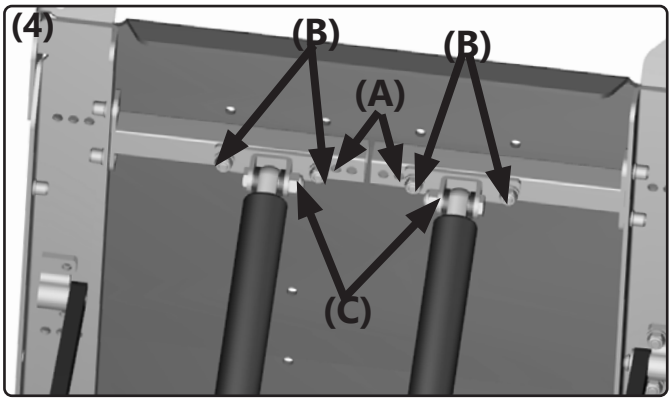
Step 7: Mount new gas spring on top
- **(1)** Screw the gas spring with the screw **(C)** to the upper receptacle **(A)**.

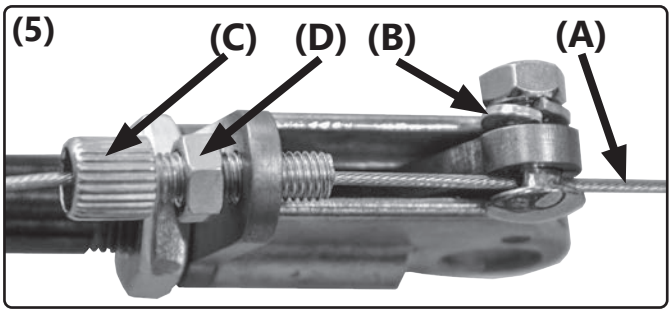
Step 8: Fit new gas spring down
- **(2)** Screw the gas spring into the lower holes with the screw **(A)** into the prepared hole **(B)**.

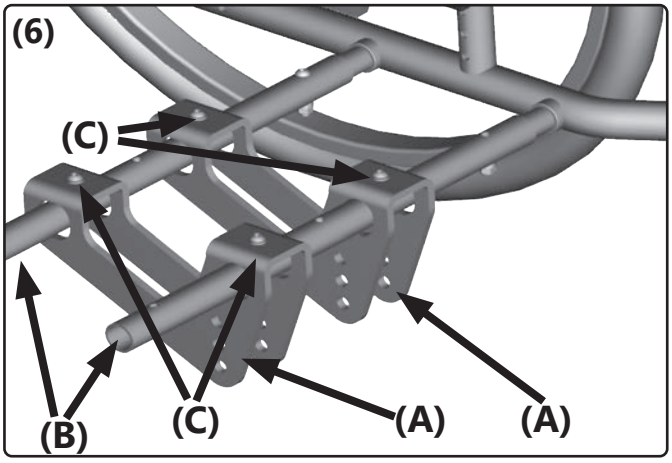


# 3.3 Assembly Group Seat

Both gas springs must be mounted in the same mounting points of the receptacle.

Use the same mounting points as before. Otherwise, you will reach another Kantelungsweg.

Step 9: Screw on the release lever again

- Mount the new release lever for the gas springs on the handlebar.
- Step 10: Set up the maximum length of the Bowden cable
- Set the handlebar to its maximum sliding height,
- **(3)** fold the back of the
- Loop[SORG]RS forward and around
- In addition, push the push bar forward toward the legrest (see illustration) to get the maximum length for the Bowden cable.
- Now guide the new Bowden cable from the release lever over the seat to the rear and then forward again under the Loop[SORG]RS to the respective release device of the gas pressure springs.
- Fold the back of the Loop[SORG]RS back to a vertical position and
- Cut the outer spouts of the two Bowden cables to the required dimensions.

Step 11:

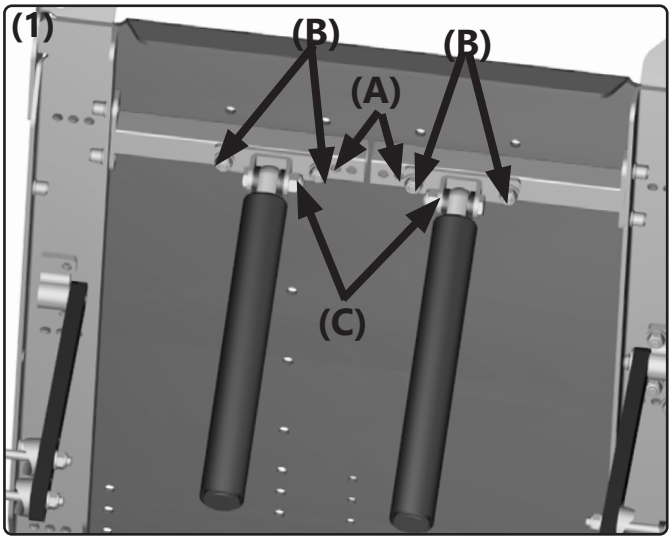
- **(3)** Fold the back of the
- Loop[SORG]RS back in one
- vertical position

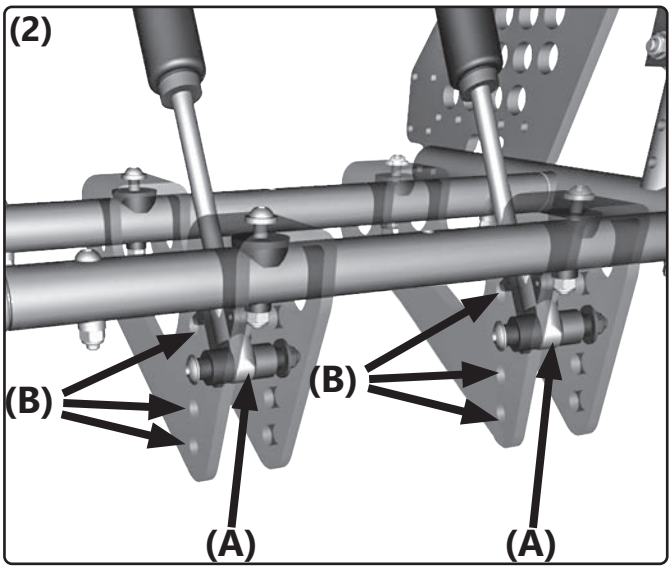
Step 12: Mount Bowden cables

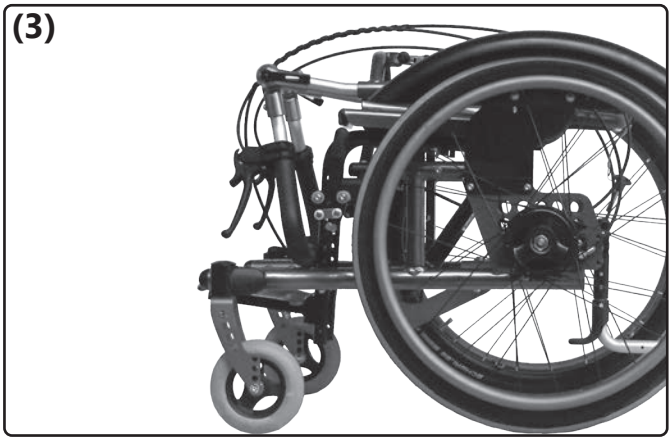
- **(4)** Mount the ends **(A)** of both inner cables to the trigger mechanism of the gas springs.
- Thread the inner cables **(B)** first through the adjusting screw **(C)**, then through the hole **(D)** of the clamping nipple **(E)**.
- Use one thumb to push the release lever **(A)** slightly upwards in the direction of the adjusting screw **(C)**.
- Close the clamping nipple **(D)** with the release lever pushed upwards at the same time.
- **(5)** Shorten the protruding piece of Bowden cable **(A)** only so far that you can also readjust the release torque with the clamping nipple if necessary.

Step 13:

- Check the operation of the release mechanism and adjust the release torque using the setscrew **(5B)** and locknut **(2C)**.

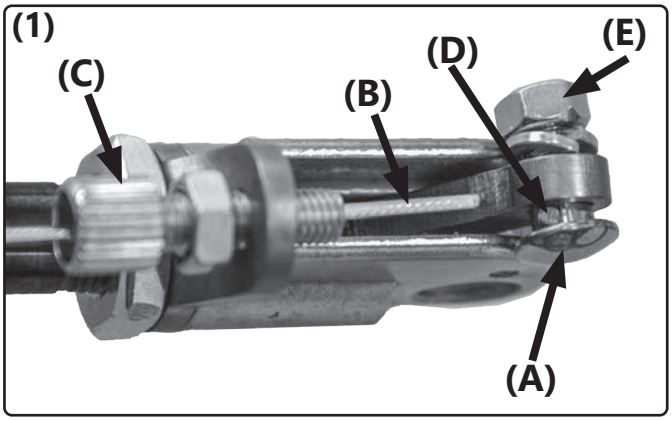


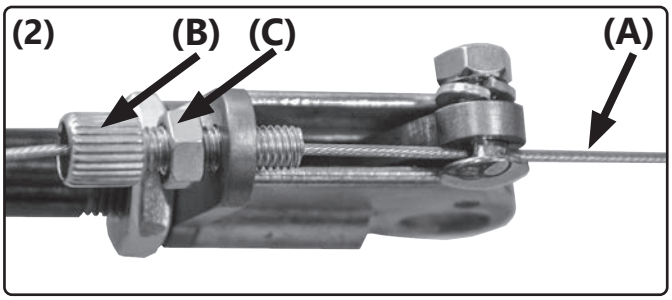



Step 14:
- Set your back up.

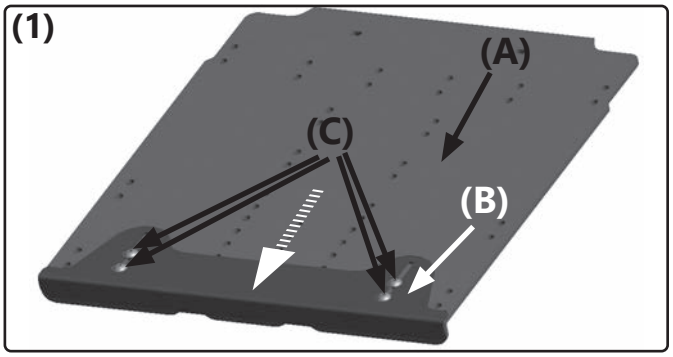
⚠ After any change to the seat unit and / or tipping, the tipping behavior of the Loop-SORG RS must be retested and practiced with the help of an experienced, strong helper.




### 3.3.4 Change in seatdepth

**(1)** To extend the seat plate **(A)** with the seat extension **(B)**:
- Loosen the four screws **(C)**,
- pull the seat extension **(B)** forwards by the desired amount
- and tighten the screws again **(C)**.

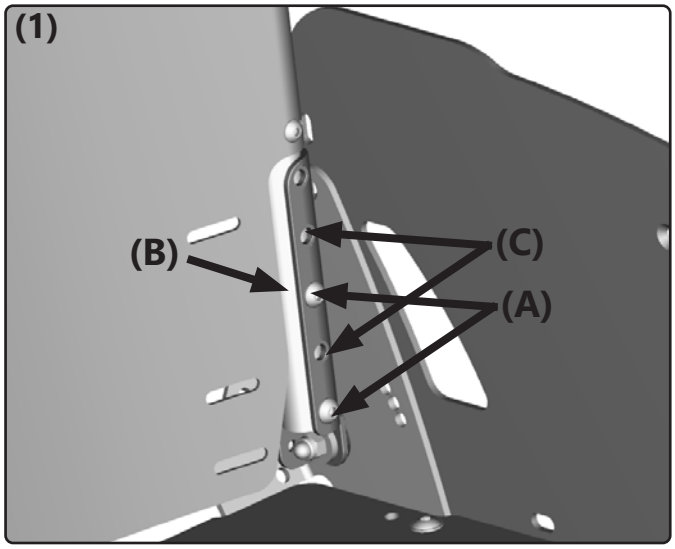


# 3.4 Assembly Group Back

## 3.4.1 Increase back height

The back height can be increased by 5 cm. For this, the back tubes must be moved upwards by 5 cm:

- Remove the 4 screws **(1A)** on both sides
- and move the back tubes **(1B)** upwards.
- Insert the 4 screws **(1A)** into the new holes **(1C)**
- and retighten all screws **(1A)**.

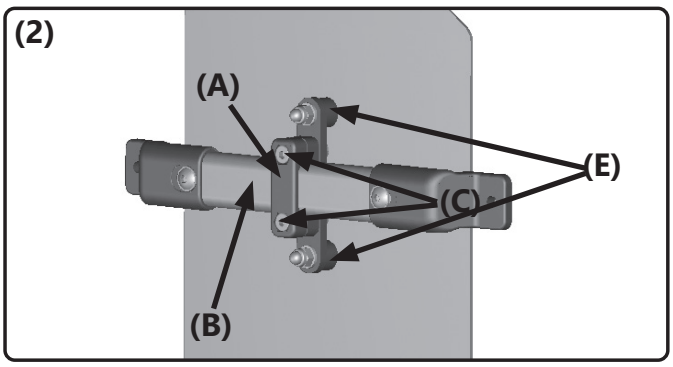


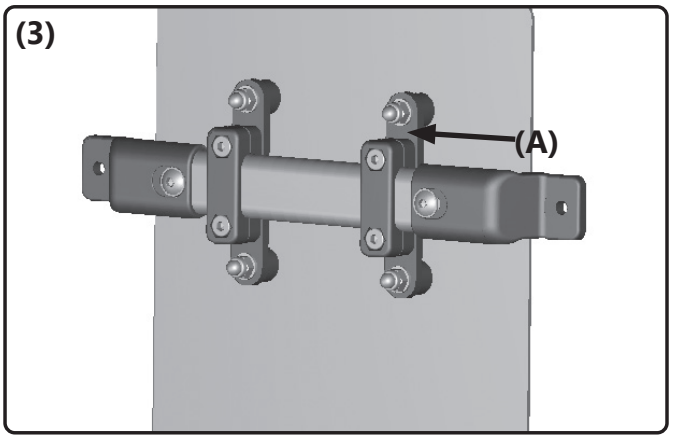

## 3.4.2 Back shell connection

Assembly of the back shell connection:

- Mount the clamping parts of the back shell connection **(2A)** to the profile tube of the stabilizer bar **(2B)**.
- Slide the connection bracket **(3A)** over the M6 screws **(2C)** and fix them with the M6 safety nuts.
- The clamp is fixed using the M6 screws **(2C)**.
- The specialist store must then professionally connect the self-made backrest or the seat shell to the connection bracket using the enclosed spacers **(2E)**.

From a seat width of 30 cm, two connections are screwed **(3)**. Please proceed as described above for each connection.



### 3.5.1 Positioning the leg supports

All leg supports are mounted under the seat plate, which is shown transparent here. You have two scenarios available with which you can adjust the distance of the adapter to the seat shell.
1. Displacing the leg support adapter:

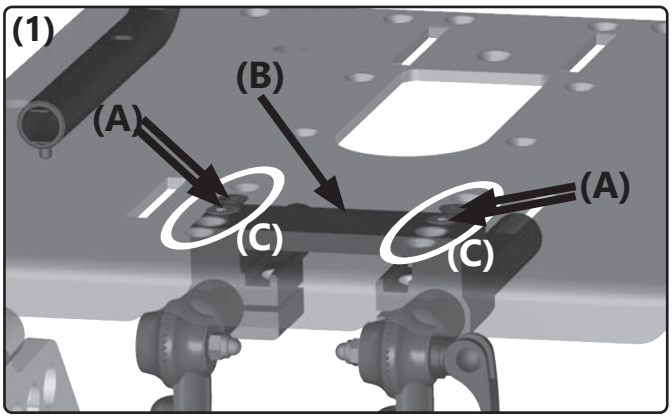
- **(1)** If necessary, you must move the wedge adapter (here displayed transparent), so that through the mounting holes **(A)** the holes underneath **(2A)** between adapter **(2B)** and seat plate are accessible.
- Remove all four screws **(B)** and
- move the wedge adapter as stated above.
- **(2)** Remove the screwing **(A)** between adapter **(B)** and seat plate on both sides,
- move the adapter **(B)** along the drilled holes **(C)** (= per hole about 2 cm),
- replace the screwing **(A)** back through the seat plate and retighten the screws.
- Correct the position of the wedge adapter and
- screw it back on to the seat plate tightly.

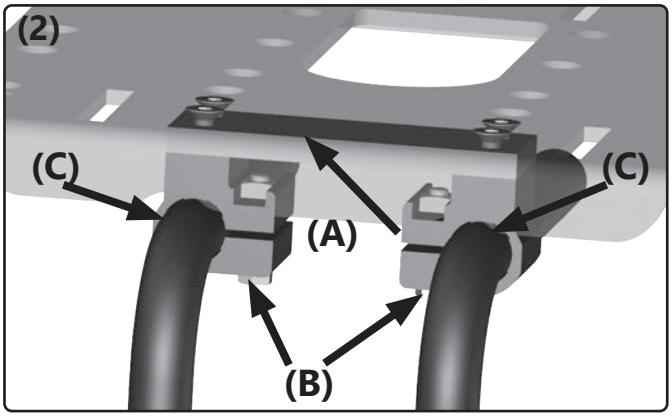
2. Displacing the leg support in the adapter:

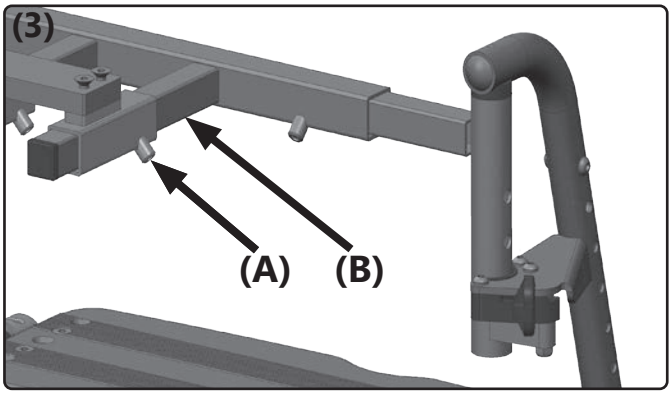
- **(3)** Loosen both screws **(B)** on the leg support adapter **(A)** and slide the leg support bars in the desired position.
- Retighten both screws **(B)**.
- **(4)** When it comes to the leg supports which swing to the side, loosen the headless screw **(A)**
- push the leg support bars **(B)** in the desired position and
- retighten both screws **(A)**.
- **(5)** So that the top end of the leg support bars **(A)** is stabilized under the footrest, two square tubes **(B)** are mounted under the seat plate.

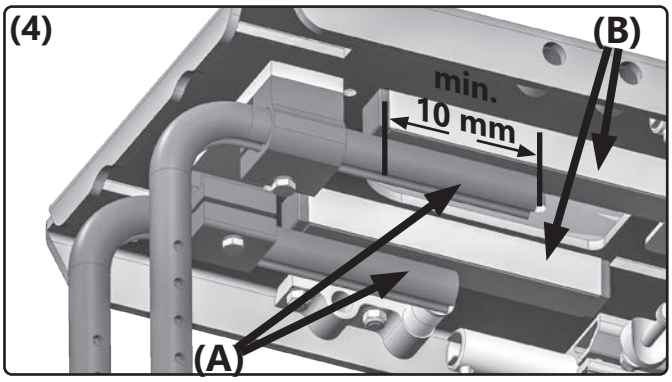
**(5)** The end of the leg support bar must always overlap the stabilizing tube at least 1 cm.

⚠ After every change on the leg support be sure to make sure that the casters can freely turn 360° by maximum tilting. If necessary, make corrections on the casters or on the leg support.



### 3.5.2 Leg supports: standard or angle adjustable

Setting distance between footrest and seat board

The distance between top edge of the seat board and the top edge of the footrest can be adjusted in the same way by standard leg supports **(1)** continuous or divided and angle adjustable leg supports **(2)** continuous or divided:

- **(3)** Remove both screws **(A)**,
- remove the footrest/s and
- move the footrest/s along the holes **(B)** in the new position/s.
- Replace both screws **(A)** and tighten them.

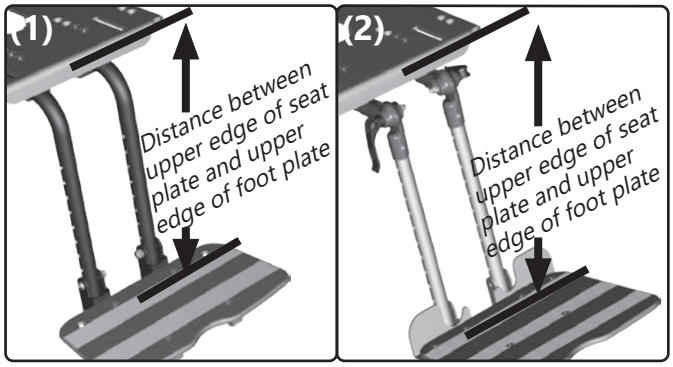
When it comes to a continuous footrest you must move both connections of the footrest parallel on the leg support.

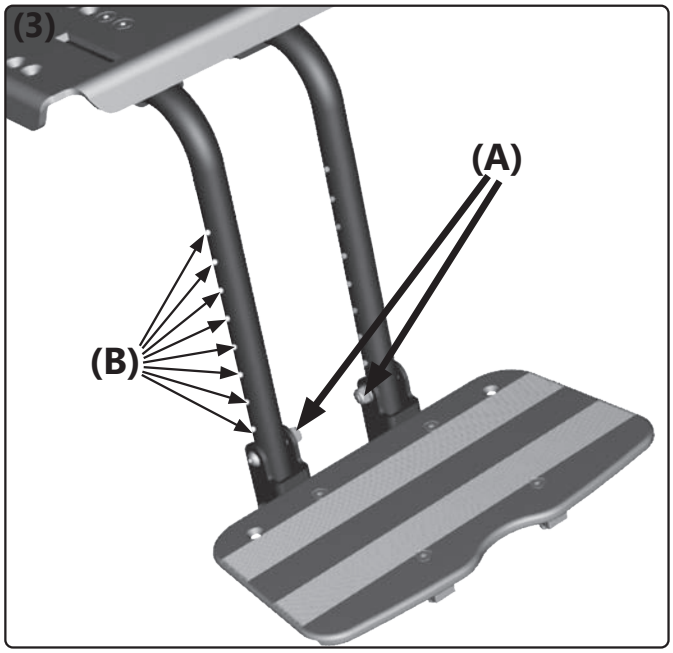
Setting the stop angle of the footrest/s

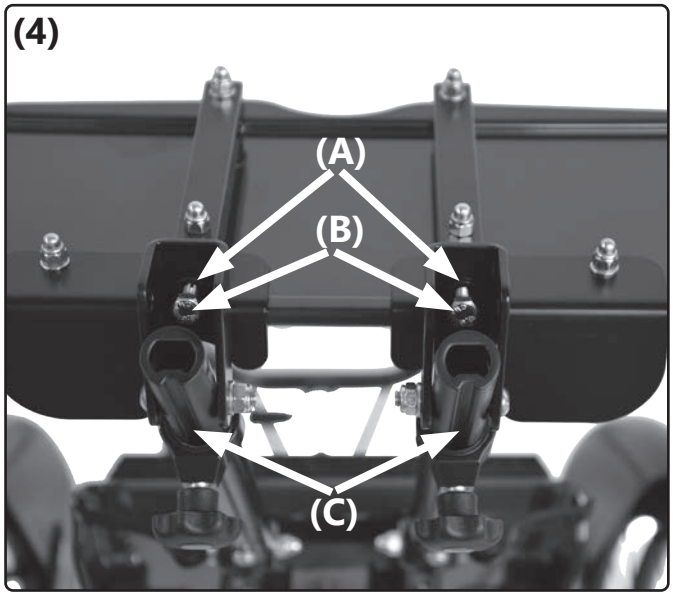
**(4)** With both adjusting screws you can adjust the stop angle of the footrest/s.

- Flip the footrest/s back,
- loosen the lock nut **(A)**
- turn both adjusting screws **(B)** until you have reached the wanted angle,
- retighten the lock nut **(A)**.

⚠ Both adjusting screws must fit close to the tubes **(C)** when the footrest/s is/are in use. Avoid an uneven fitting position of the adjusting screws.



### 3.5.3 Leg supports which swing to the side

Setting distance between footrest and seat plate
- **(1)** Remove both screws **(A)**,
- move the footrest/s and the alternative holes **(B)**,
- replace both screws **(A)** and tighten them.

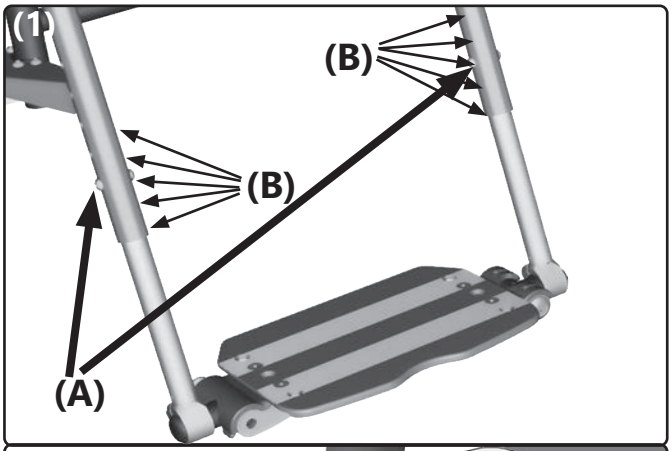
When it comes to a continuous footrest you must move both connections of the footrest parallel on the leg support.

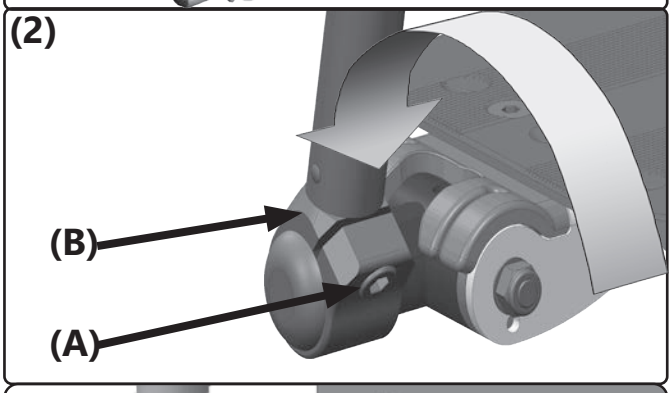
Angle setting
- **(2)** If possible, close the footrest.
- Loosen the cylinder bolt **(A)** on both sides until the clamp connection **(B)** loosens,
- set wanted angle,
- retighten cylinder bolt **(A)**.

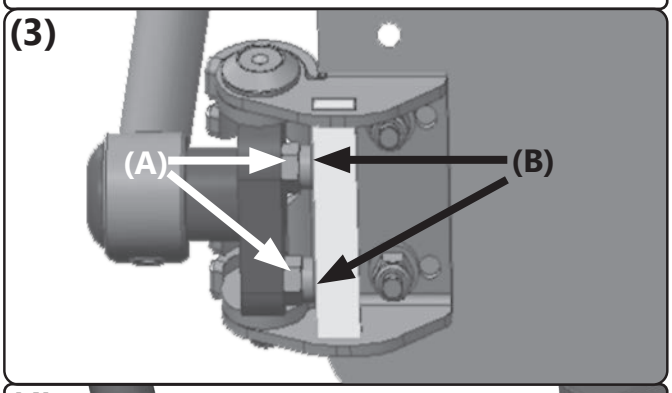
Fine adjustment of the try square
- **(3)** loosen lock nut **(A)**,
- turn the stop screw **(B)** in the wanted position,
- retighten the lock nut **(A)**.

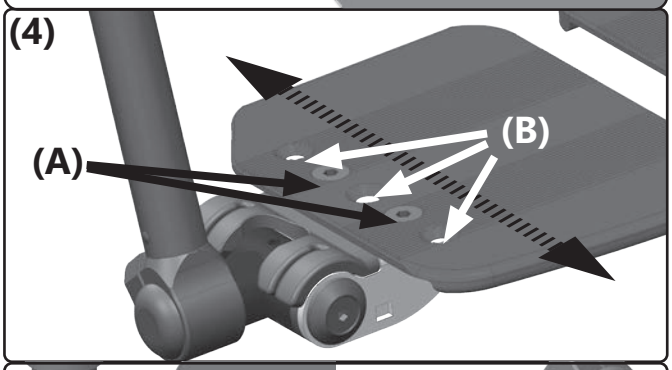
Depth adjustment of the footrest/s
- **(4)** Remove the screws **(A)** on the footrest/s,
- move the footrest/s in the holes **(B)** and
- retighten the screws.

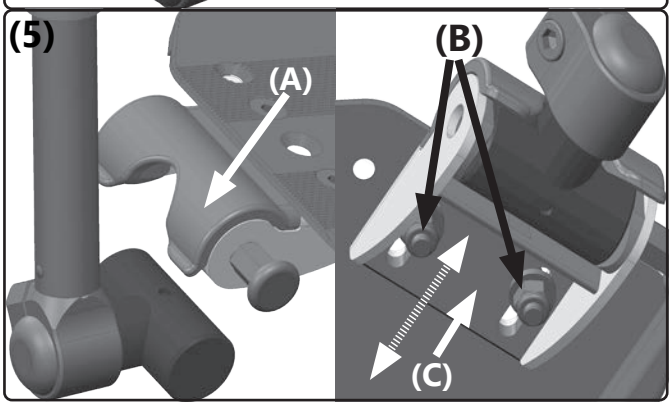
Fine adjustment of the locking claw
- **(5)** To do fine adjustments on the locking claw **(A)**
- loosen the nuts **(B)** on the bottom,
- move the holder **(C)** until the footrest closes.
- Retighten the nuts.



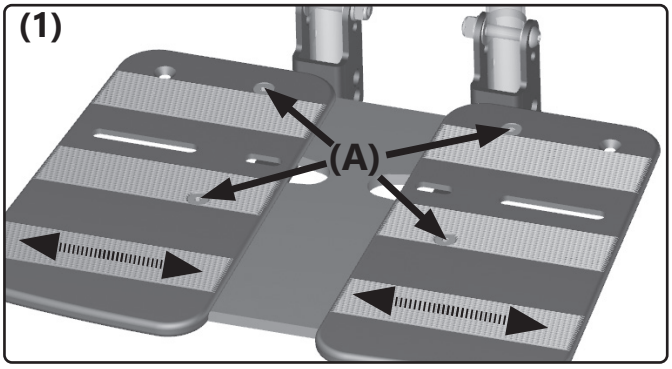



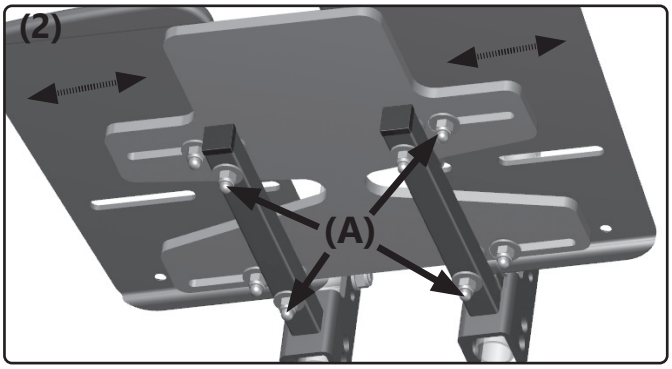



### 3.5.4 Width-adjustable footplate

To adjustjustable footplate, loosen the countersunk screws **(1A)** and the lock nuts **(2A)**. Now bring the footplate into the desired position by pulling or pushing it and tighten the countersunk screws and lock the nuts again.



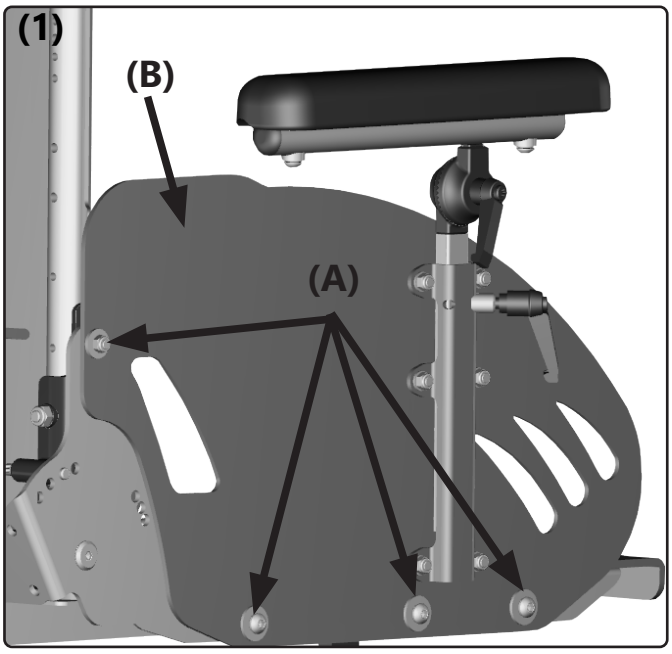



# 3.6 Assembly Group Side guard

## 3.6.1 Replace

To replace the side guards:

- Remove the drive wheels on both sides,
- loosen the screws **(A)** on the side guard,
- remove the side guard **(B)**,
- insert the new side panel
- and tighten the screws again.



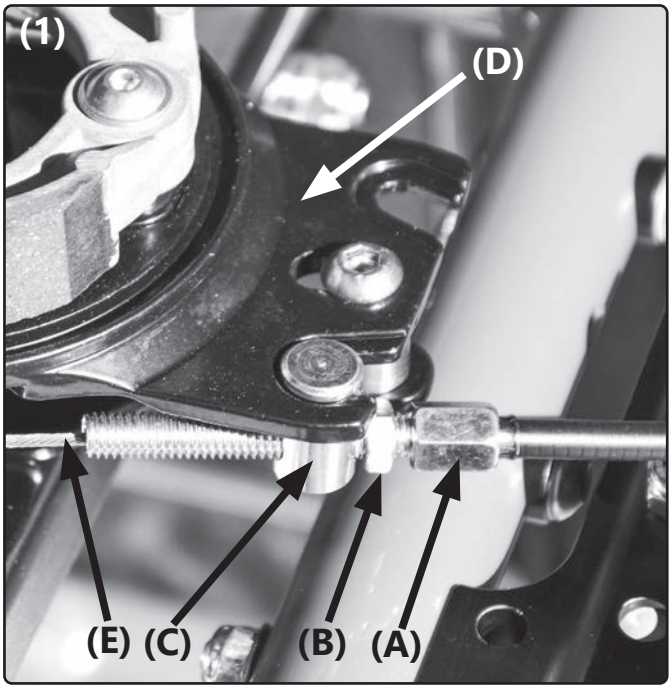
### 3.7.1 Trum brake

The brake force of the drum brakes is set ideally by our technicians.

⚠ For safety reasons it is recommended to check the functionality regularly since a readjustment of the brake force or even a replacement of the Bowden cables becomes necessary from permanent use.

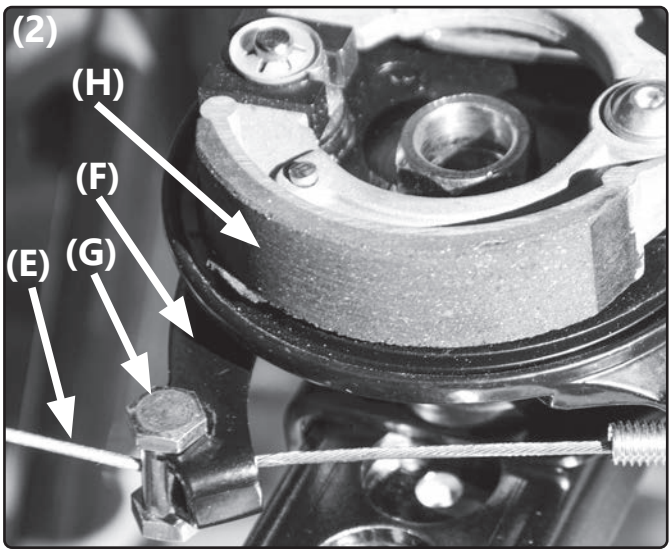
**(1+2)** The following parts of the drum brake are of importance in order to adjust the brake force.

- setscrew **(A)**
- lock nut **(B)**
- push-on nipple **(C)**
- holder **(D)**
- inner cable **(E)**
- locking lever **(F)**
- clamp **(G)**
- brake shoe **(H)**



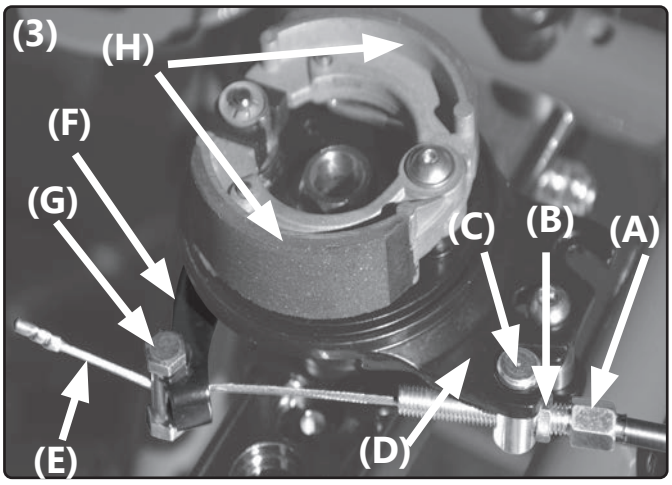

To install the Bowden cable:

- **(3)** place the push-on nipple **(C)** with the setscrew **(A)** and the lock nut **(B)** at the bottom end in the holder **(D)**,
- guide the inner cable **(E)** through the clamp **(G)**,
- place the clamp **(G)** in the locking lever **(F)** and
- push the locking lever **(F)** slightly forward toward push-on nipple **(C)**, so that a slight pull between clamp and push-on nipple occurs.
- Tighten the clamp **(G)**.
- Put the wheel back on and check if the brake shoes **(H)** already grind against the brake pad.
- For this, jack up the wheelchair or tilt it to the side. The wheel must be able to turn unhindered.
- Should the brake shoes grind (without using the control lever), loosen the clamp **(G)** and
- give the locking lever **(F)** more room.
- After, retighten the clamp **(G)**.




**(3)** To set the brake force:

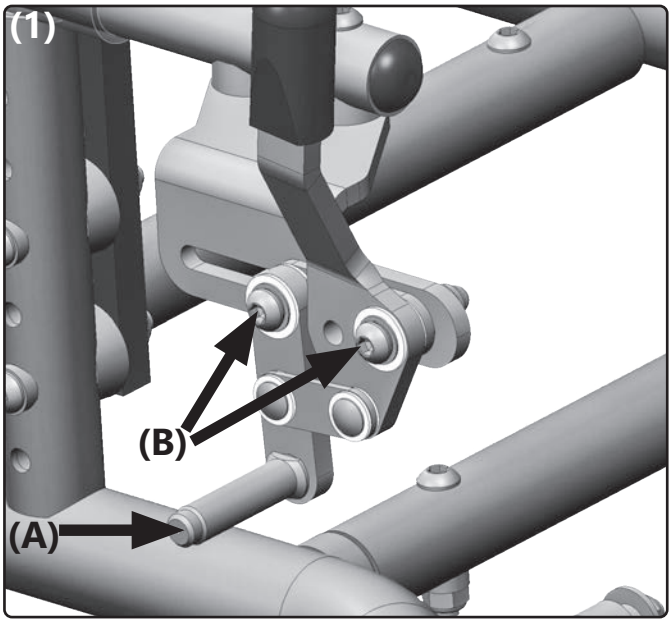
- loosen the lock nut **(B)** on the drum brake pad,
- tighten or loosen the inner cable **(E)** of the Bowden cable and turn the setscrew **(A)**,
- test the traction on the control lever and
- retighten the lock nut **(B)**.




Possible impairments of the brake force can occur from: wrongfully adjusted traction of the Bowden cables, defected Bowden cable, dirty brake pads/brake shoes.

### 3.7.2 Cable brake

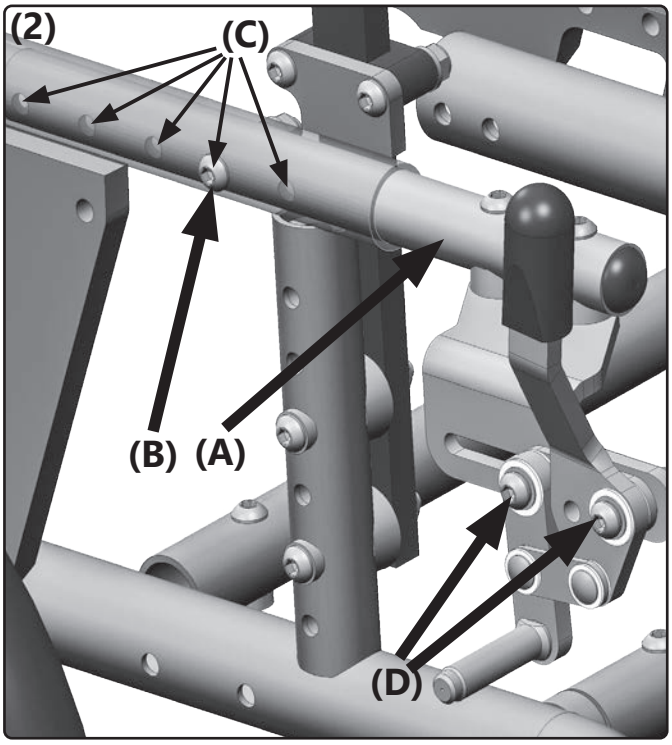
When the knee lever brake is closed, the wheelchair must not move with the occupant on a gradient of 7% (= 4 °). All variants of the toggle brake are set in the same way.




⚠ The correct functioning of the toggle brakes can be impaired by: too little tire pressure, wetness, dirt, snow, ice, etc. or worn tire tread or too large a distance between brake pressure pin and tire.

When the brake is open, the maximum distance between brake pressure pin (A) and tires is:
Standard KHB max. 21 mm,
Pull-to-lock brake max. 11 mm,
KHB with roll-back lock max. 11 mm,
Brakes with companion function 6mm
(Reserve technical changes)
**(1)** To change the distance between brake pressure pin **(A)** and tires:

- first check the tire inflation pressure of the drive wheels (required information on the tire casing),
- bring the brake into an open position,
- loosen the two screws **(B)** on both sides,
- move the brakes to the required position (attention maximum distance!),
- Tighten both screws and tighten
- Control the braking force of the brake.

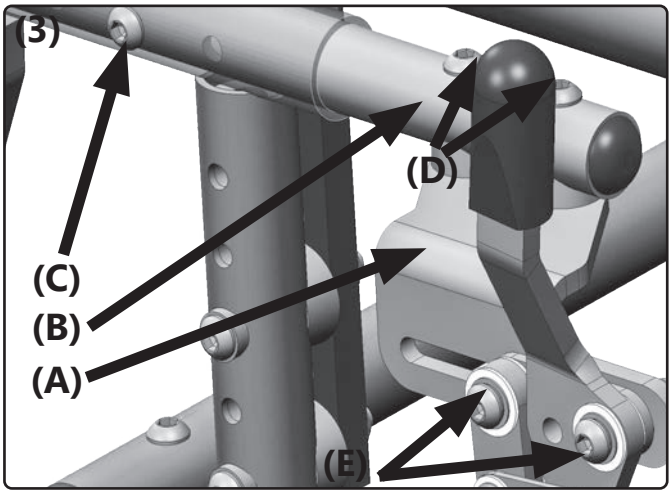



⚠ After all changes to the drive wheels, reset the brake.

### 3.7.3 Mounting a knee lever brake

**(2)** For retrofitting a knee lever brake:

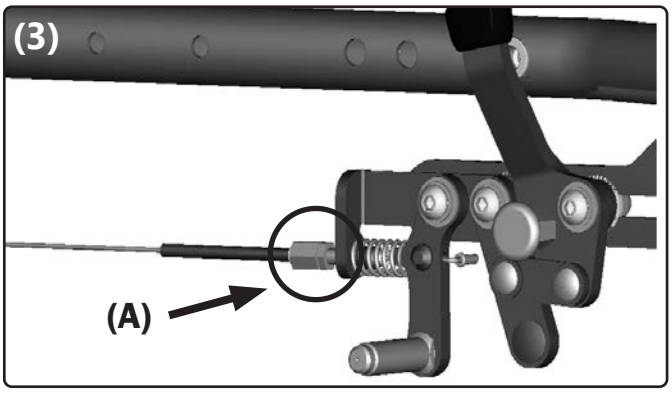
- put the bracket tube **(A)** of the knee lever brake from the front into the upper frame tube (shown here in transparent) and
- Guide the mounting tube so far into the frame tube, the distance is small enough.
- Insert the screw **(B)** into one of the holes **(C)**,
- turn the screw **(B)** tightly and
- Adjust the braking force by means of the screws **(D)** on the brake body as described above.



### 3.7.4 Brakes with companion function

When adjusting the parking brake and the distances to the drive wheel, please follow the description in chapter 3.7.2.

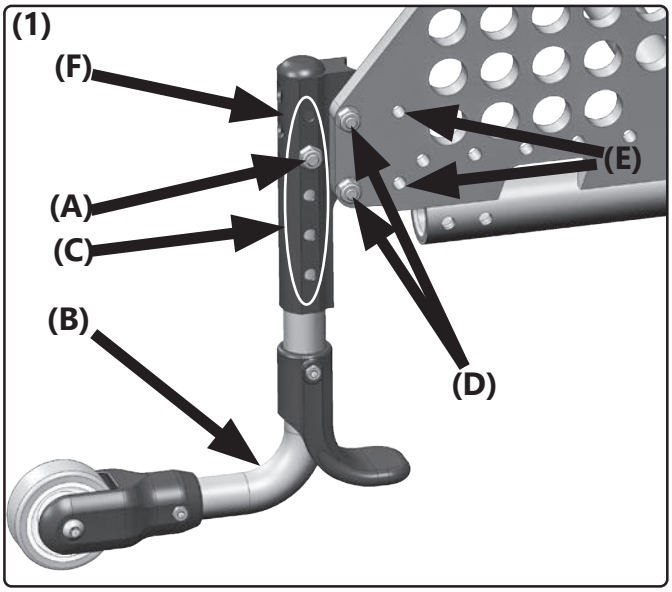
**(3)** The parking brake is adjusted using a screw at the lower end of the brake cable **(A).** The brake cable is (re-)tensioned by turning the adjusting screw counterclockwise.



### 3.8.1 Anit-tipper

Height of anti-tipper:

- **(1)** Remove the screws **(A)**.
- Pull the anti-tipper bar **(B)** down
- and displace the screw **(A)** in the alternative holes **(C)**,
- retighten the screws **(A)**
- and release the anti-tipper bar **(B)**.
- Displacing the anti-tipper in the holes **(E)**:
- **(1)** Remove the screws **(D)**,
- place the distance pieces in between the hole board and the holder **(F)**,
- replace the screws **(D)**
- and tighten them.
-



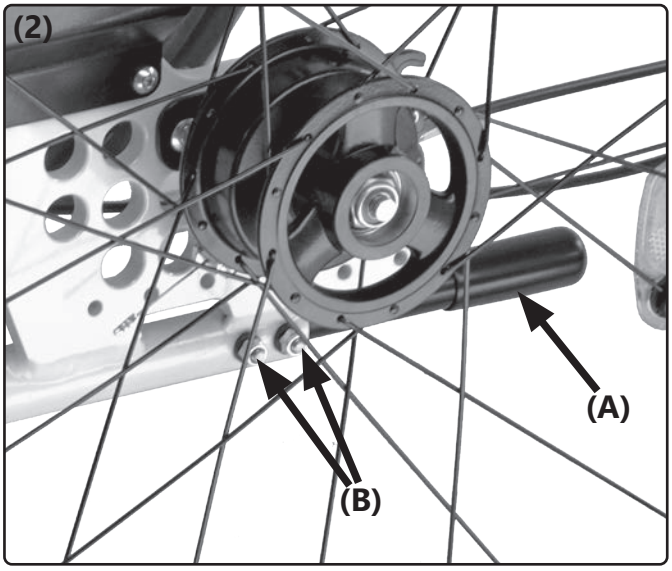

Mounting the anti-tipper afterwards/additionally:

- **(1)** Place the holder **(F)** on the holes **(D)**,
- put in the screws **(D)**
- and tighten them.

### 3.8.2 Tipping lever

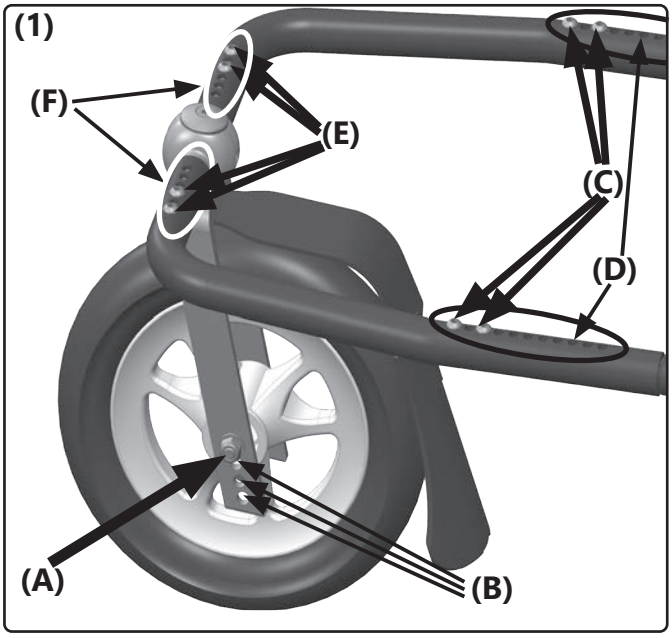
**(2)** Assembling the tipping lever:

- Guide the tipping lever **(A)** in the right or left frame pipe,
- place the self-locking nuts **(B)** as well as the saddle washer and locking washer in the holes
- and tighten the nuts **(B)**.



### 3.8.3 Outdoor Front End

The greater the seat tilt angle, the higher the tractability but also the more wobbly the wheelchair!




**(1)** Setting the height of the casters:
- Remove the axle with the screw **(A)**,
- place the axle in the alternative holes **(B)** of the caster fork and
- retighten the screw **(A)**.

**(1)** Setting the length and/or width:
- In order to change the length between the wheelchair and caster remove the screws **(C)** on both sides,
- telescope the outdoor front end along the alternative holes **(D)** to the length wanted,
- replace the screws **(C)** and retighten them.
- In order to change width of the outdoor front end, proceed the same way with the screws **(E)** along the alternative holes **(F)**.

⚠ The screw pairs **(A)** and **(B)** must be moved parallel and symmetrical. There must be at least one hole free between the screws of each screw pair

⚠ The tilting behavior changes crucially when using the outdoor front end and must be practiced!

## 4.1 Repairs

⚠ Repairs are to be done by your specialized retailer.

## 4.2 Spare parts

Only original spare parts can be used! They are available at your medical supply store.

The spare parts list can be downloaded at www.sorgrollstuhltechnik.de or can be requested directly from us.

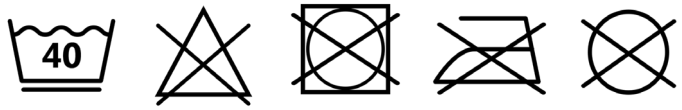
For a correct delivery of spare parts the appropriate serial number of the wheelchair is to be stated. You will find the number on the type label on the wheelchair's frame.

## 4.3 Maintenance

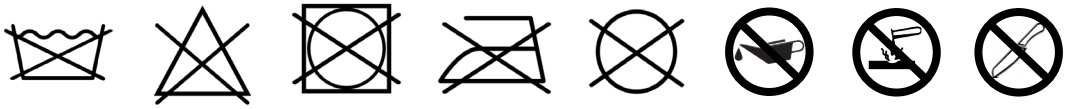
Clean the wheelchair and all components regularly with a mild household water-based cleaner and then dry it thoroughly.

In addition, clean the rear wheels and the casters and free the axles of dirt and impurities e.g. hair etc.).

Wash textile parts:
*care directions:*




Wipe off pleather, straps and other upholstery:
*Care directions:*



## 4.4 Disinfection

Before each disinfection the parts should be cleaned off first. For disinfection use a household water-based agent. Observe the instructions of the respective manufacturer.

## 4.5 Storage

- Carry out cleaning
- Fold foldable wheelchair (if available)
- Adjust seat tilt to 90° (if available)
- If necessary, pack removable textile parts in foil or similar
- Secure the wheelchair from rolling away and getting dirty
- Store in a dry environment without aggressive environmental influences.

## 4.6 Lifespan

The expected lifespan, depending on the intensity of use and the number of re-uses, is 5 years. For this purpose, the product must be used within the intended purpose and intended use, the instructions in the instructions for use must be followed and all maintenance and service intervals must be observed.
The product can be used beyond this period if it is in a safe condition. This theoretical lifespan is not a guaranteed lifespan and is subject to a case-by-case check by specialist retailers, as is reusability.
Use beyond the specified lifespan leads to an increase in residual risks and should only be carried out after careful and qualified consideration by the operator.
The lifespan can also be shortened depending on the frequency of use, the environment and care. The usual service life does not refer to wear parts such as textile parts, wheels and plastic parts that are subject to material-specific aging and / or wear. This specified service life does not constitute an additional guarantee or guarantee.

## 4.7 Reinstatement

Before reuse, a full inspection according the the checklist must be carried out by a specialized retailer. All disinfection measures for reuse must be carried out according to a validated hygiene plan.

## 4.8 Disposal

The wheelchair my only be disposed of with the approval of the benefactor. Disposal of the wheelchair mus be in accordance with the applicable national regulations

## 4.9 Maintenance/Inspection

For safety reason and to maintain product liability, an inspection by your retailer is required at least once a year. This must be carried out and documented according to the following checklist.

*Checklist maintenance and care (user)*

⚠ A poor or neglected maintenance of the wheelchair represents a significant safety risk.

**Before each use:**
**Please check:**

- frame, back tubes, mounting parts and accessories for visible damages, deflections, cracks or missing/loose screws,
- wheels/quick release axles for firm fit,
- the airpressure of the tires, tire tread,
- the function of the brakes,
- firm fit of the angle adjustements/eccentric clamps,
- firm fit of seat plate/back/foot plate,
- the function of the anti-tipper/seat and back straps,
- if all previously dismantled parts are put on again or firmly locked.

**Every 3 months**:
(depending on use, earlier)
**Please check:**

- screws for firm fitting
- welds, attachments and accessories for hidden damages, deflections or cracks
- tire tread
- the firm fit of third-party systems (if available)

Clean the wheelchair and oil all moving parts.

⚠ If you notice any defects during maintenance, please contact your specialist retailer immediately and do not use the wheelchair anymore.

*Checklist yearly inspection (specialized retailer)*

**Template (available for download at www.sorgrollstuhltechnik.de/downloadportal)**

*Preparatory Work*
☐ cleaning done

*Check:*
☐ Frame, back, mounted parts and accessories checked for damage, bends, cracks and corrosion,
☐ all fixing screws checked for firm fit and completeness,
☐ casters and rear wheels as well as the associated attachments checked for good condition, functionality and proper running qualities,
☐ spokes checked for firm fit and completeness,
☐ brakes cleaned and maintained,
☐ Locking mechanisms (tripod springs of push handles, quick-release axles, eccentric clamps, etc.) checked for functionality,
☐ anti-tipper checked for firm fit and fuctionality.

*Oiling:*
☐ moving parts and bearings oiled

*Final check:*
☐ functional check of all mechanical adjusting devices carried out.

# 5 Technical specifications

## 5.1 Data and measurements

Model: Loop[SORG] RS
German Aid Indix Nr.: 18.50.03.2001
Type: 803

All measurements ± 5%

| Indication | | Measurements | Comment |
|---|---|---|---|
| **seat width (SW)** | 20-mm-steps | 300 to 480 mm | +40 mm growable |
| **seat depth (SD)** | 20-mm-steps | 300 to 480 mm | ± 20 mm (optional + 60 mm) growable |
| **back height (BH)** | 50-mm-steps | 300 to 600 mm | +50 mm growable |
| **back angle** | | 80° to 120° | in raster |
| **lower leg length** | 150 - 550 mm | | |
| **back angle with gas pressure spring** | | 90° to 117° | infinitely variable |
| **leg support** | about 60 mm forward displaceable | | infinitely variable |

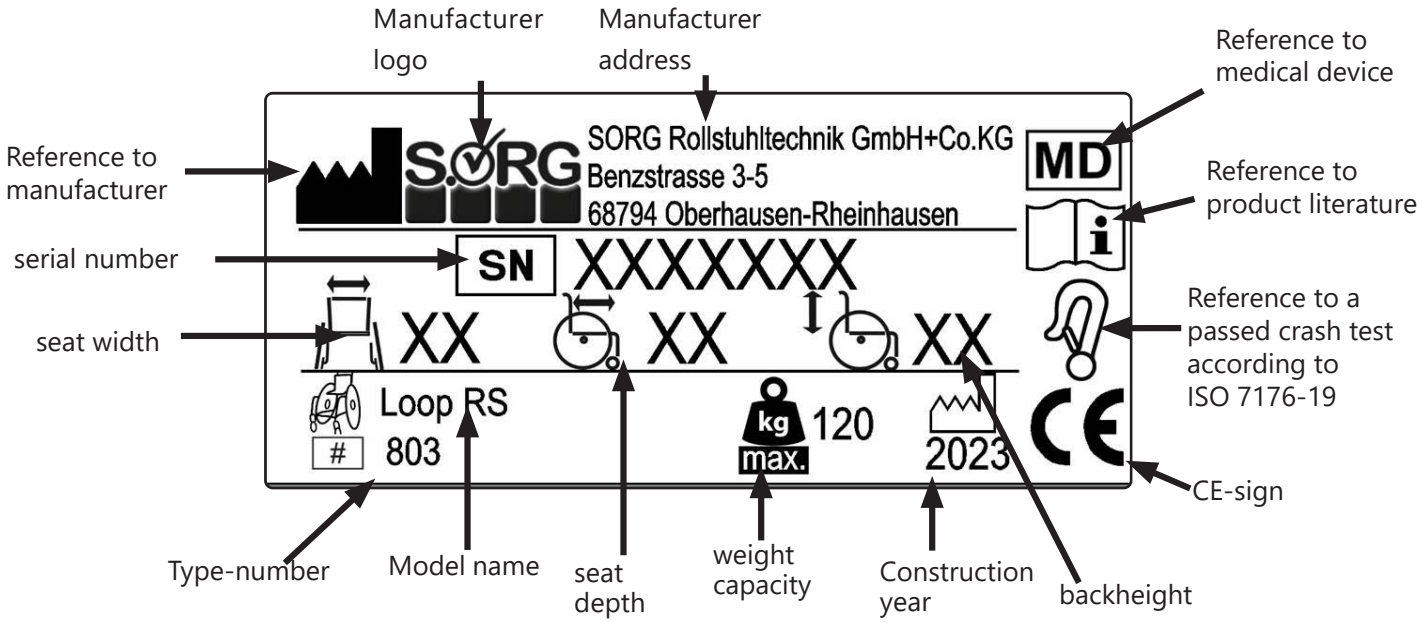
| | | | | |
|---|---|---|---|---|
| **tilting** | | from -3° to +34° | | infinitely variable |
| **ETRTO wheel size** | at 20“ | Ø 451 mm | 444 mm | Commercially available pneumatic tires in the sizes 1 "(25.4mm), 1 3/8" (35mm) - sizes 355 mm (20 "), 451 mm (22"), 540 mm, (24 ") All puncture-proof tires in the mentioned dimensions. |
| **ETRTO wheel size** | at 22“ | Ø 489 mm | 481 mm | |
| **ETRTO wheel size** | at 24“ | Ø 540 mm | 533 mm | |
| **handrim** | | Ø 19 mm | | diameter pipe |
| **camber** | | 0° or 2° | | 4° limited |
| **Seat height (SH) with horizontal seat and horizontal frame** | rear wheel 20“/22“ caster 5“/5,5“ | 410 mm<br>500 mm | | height adjustment +20/+40 mm |
| | A-Rad 20“/22“ Lenkrad 6“/7“ | 430 mm<br>530 mm | | height adjustment +20/+40 mm |
| | A-Rad 24“ Lenkrad 5“/6“ | 460 mm<br>530 mm | | height adjustment +20/+40 mm |
| | A-Rad 24“ Lenkrad 7“ | 505 mm<br>550 mm | | height adjustment +20/+40 mm |
| **wide wheelchair absolutely** | min. | 520 mm | | depending on camber and kind of wheel |
| | max. | 810 mm | | |
| **Wheelchair length absolut** | min. | 790 mm at 20“ , standard leg support | | |
| | max. | 1200 mm bei 24“ rear wheel, seat depth 480 mm, detachable leg support | | |
| **Wheelchair height absolut** | min. | 830 mm | | at BH 300 mm and 22“ rear wheel |
| | max | 1430 mm | | at BH 600 mm and 24“ rear wheel |
| **Height wheelchair folded back** | min. | 550 mm | | |
| | max. | 620 mm | | |
| **incline** | | 12% = 7° | | at 0 ° tilt and 0 ° tilt of the back angle |
| **descent** | | 12% = 7° | | |
| **stability** | | 12% = 7° | | |
| **turning circle** | | ca. 1100 mm | | depending on the size of the wheelchair |
| **load capacity (max.)/ weight testdummy** | | 120 kg | | inkl. seat shell |
| **tare** | roadworthy at: seat height 300 mm, rear wheel 20“, caster 5“ PU | 19,5 kg | | frame, seat plate, trum brake, handrim, caster, leg support, push handle, tilting mechanism |
| **heaviest weight** | rear wheel | 1,2 - 2,2 kg | | depending on the design and size |
| | leg support | from 2 kg | | |
| **wheels** | commercial pneumatic tires, sizes 1 ", 1 3/8" or puncture-proof tires (same dimensions), tire inflation pressure usually 3-10 bar | | | |
| **corrosion protection** | material | Stainless steel, aluminum | | |
| | coating | Powder coating, galvanizing | | |
| **length of use of the wheelchair** | 3 years | at not excessive demand | | |
| **life cycle of the wheelchair** | 5 years | | | |
| **Normative requirements** | The wheelchair meets the requirements of ISO 7176-8 and the requirements against ignition. | | | |

## 5.2 Meaning of labels

The meaning of the individual labels can be directly derived from the text at the corresponding position.

A new nameplate can be obtained from SORG Rollstuhltechnik if the original one is lost or damaged.

*Nameplate:*




## 5.3 Declaration of conformity

SORG Rollstuhltechnik declares that the product Loop[SORG] RS a class 1 device is and it complies with the EU regulation (EU) 2017/745 on medical devices.

This was confirmed by a conformity assessment procedure according to the medical Product Guidelines.

If the product is not modified with SORG wheelchair technology, this declaration will lose its validity.

## 5.4 Guarantuee

In addition to our general terms and conditions, we provide a guarantee on frames (for manufacturing and material defects) of two years.

We do not assume any warranty or guarantee for damage resulting from improper assembly/adjustment and/or repairs, neglect and wear and tear as well as changes to assemblies by the user or third parties.
In these cases, product liability expires.

In this respect, we would like to expressly refer again to our specified maintenance intervals under point 4 in our instructions for use.

Please understand that any special constructions and textile parts cannot be exchanged.

# Service Record Loop[SORG] RS

company stamp

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MADE IN GERMANY