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# Contents

**General introduction** .................................................. 6  
   Specially adapted wheelchairs ........................................ 6  

**Safety Instructions** ..................................................... 7  

**Design and function** .................................................... 10  
   General ................................................................. 10  
   Chassis ............................................................... 10  
   Seat ................................................................. 11  
   Seat lift ............................................................. 11  
   Wheels ............................................................... 12  
   Lighting/reflectors .................................................. 12  
   Electrical system ................................................... 13  
   Control panel ....................................................... 15  
   Joystick menu ........................................................ 20  

**Accessories** ............................................................... 23  
   Tool wallet ........................................................... 23  
   Bow, luggage basket, crutch holder etc. .......................... 24  

**Operation** ................................................................. 25  
   General ............................................................... 25  
   Driving ............................................................... 25  
   Driving rules ....................................................... 29  
   Releasing the brakes ............................................... 32  
   Charging the batteries ............................................. 33  

**Transport** ................................................................. 35  
   Air transport ......................................................... 36  

**Preventive maintenance** ................................................ 37  
   General ............................................................... 37  
   Cleaning .............................................................. 38  
   Wheels ............................................................... 38  
   Batteries ........................................................... 38  

**Repairs** ................................................................. 39  
   Resetting the main fuse/circuit breaker .......................... 39  
   Changing fuses ..................................................... 41  
   Changing batteries ................................................ 42  
   Changing inner tubes .............................................. 43  
   Filling with air ...................................................... 44  

**Labels** ................................................................. 45  

**Specifications** .......................................................... 47  
   Electrical system .................................................. 48
Contents Trax seat

General introduction ....................................................... .50
Safety Instructions .......................................................... .50
  Specially adapted product ............................................. 50
Design and function ........................................................... .51
  General ........................................................................... 51
  Seat .............................................................................. 52
  Back rest ........................................................................ 52
  Arm rests ........................................................................ 52

Accessories ........................................................................... .52

Adjusting the settings ......................................................... .53
  Seat angle ....................................................................... 53
  Arm rest ......................................................................... 54

Maintenance and transport .................................................. .55

Technical specifications ....................................................... .56

Important Information (only for the US-market) ................. .58-59
General introduction

In order to get the best possible use from your wheelchair, it is important to use it in the intended way. We therefore advise you to carefully read the operating instructions, especially the safety instructions. Keep the operating instructions with the rest of the things belonging to the chair.

The first thing you should do is to charge the batteries. If you’re not sure what to do, read the chapter on Battery charging on pages 33-34. Charging takes about ten hours.

Specially modified wheelchairs
If your wheelchair is marked with a “Specially modified product” sticker, it has been modified to your specific needs and wishes. This means that the design and functions could be different from the text in these operating instructions, or the design and functions of other wheelchairs of the same type.

The seat can also contain parts that are unique to your chair. These aren’t available as spare parts, and must be made as required. This can affect the repair time of your seat.

Specifications
All information and specifications given in these operating instructions where applicable when this wheelchair was delivered. As Permobil carries out continual development and improvement, we reserve the right to make changes without prior notice.
Safety instructions

General
A wheelchair is a motor-driven vehicle, so be very careful when using it.

Incorrect use can cause a risk of injury or damage to the chair. To reduce these risks, you should read the operating instructions carefully, especially the safety instructions and warnings.

Any improper modification of the wheelchair and its systems may increase the risk of accident. Follow the recommendations in the section on Operation in order to avoid risks when driving.

All modifications to, and interference with, the key systems of the wheelchair should be done by qualified servicing engineers. Always contact a qualified service engineer in case of doubt.

Warning

Wherever you see this warning symbol, take special care. There could be a risk of personal injury.

Maximum weight of user
The wheelchair is designed for one person with a maximum weight of 298 lbs. If the wheelchair is fitted with a seat lift, the maximum user weight is 220 lbs.

Passengers
It is absolutely forbidden to carry passengers on the wheelchair.

Operation
Do not let children drive the wheelchair without supervision.

Do not drive the wheelchair over any edges higher than 4.5 inches.

When driving downhill, select the slowest speed and take great care.

The wheelchair is not designed for driving down slopes with a gradient greater than 15°.

Do not drive up slopes with a gradient greater than 15°. There is a risk that the wheelchair will not maneuver safely.

Do not drive the wheelchair where the sideways gradient is more than 12°. There is a risk of tipping over.
Operating the seat lift
Make sure nothing gets jammed between the chassis and the seat when you are operating the seat lift. The center of gravity is higher when the seat is raised, increasing the risk of tipping. So use the seat lift only on flat ground and not on uneven surfaces.

Releasing the brakes
Make sure the wheelchair is on a level surface before you release the brakes, so it doesn’t roll away.

If the wheelchair is fitted with servo-steering, it will not be possible to steer it electrically once the brakes are released. The wheelchair can be steered manually by turning the front wheels directly by hand.

Charging the batteries
Charging should be done in a well-ventilated area, not in a wardrobe or closet. You should not charge the batteries in a bathroom or wet area. Only use a charger with a maximum charging current of 15A. You should not try to drive the chair when the charger is connected, since this will not work.

Transport
Ensure that the chair is properly secured (see page 35). A chair that is not properly secured can cause injury and damage if it comes loose.
Servicing
Only attempt the servicing and maintenance that the operating instructions say may be done by the user. All other servicing and maintenance should be done by someone with sufficient knowledge to be able to do it correctly.

Always disconnect the positive terminal of the battery before you work on the electrical system of the wheelchair. Take care when using metal objects while working on the battery. A short circuit could easily cause an explosion. Always use protective gloves and glasses.

The recommended air pressure is 36 psi. The tire could explode if you over-inflate it.
Design and Function

General

Fig. 1. Electric wheelchair Trax

1. Seat (Trax seat)
2. Control panel
3. Chassis
4. Foot rest
5. Rear wheel/drive wheel
6. Front wheel
7. Chassis cover
Seat
See enclosed seat instructions (Trax) or the supplied Owner’s Manual for the seat (CorpusII/Miniflex).

Seat lift/seat twist
Trax is fitted with an electrically controlled seat lift or a fixed seating pillar. A position adjuster operated from the control panel allows continuous adjustment of the seat to any height between 20-29 inches, permitting simple matching with table, seat heights etc. Whenever the seat lift is raised from its lowest position the chair's maximum forward speed is lowered to 4 miles/h and the maximum reverse speed to 2,5 miles/h.

The seat lift function is only operative when the wheelchair is stationary.

Both electric seat twist and manual seat twist are possible (not Miniflex). The seat is mounted to twist to the right or the left, see Fig. 2.

![Fig. 2. Manual seat twist](image)

Make sure nothing is trapped between the chassis and the seat when operating the seat lift.

Use of the seat twist function must take place only on a level surface.
Seat angle
The seat angle can be set in three different positions, forward-leaning, neutral and backward-leaning. If the seat is equipped with seat twist, the seat must be in neutral, i.e. level, position.

The seat angle is set by means of the holes under the seat. There are three holes under the seat at the front and three at the back, see fig. 3. A level position is obtained by mounting screws in the equivalent row of holes front and back. For more information, read the user instructions for your seat.

Lengthways adjustment
The wheelchair has electric or manual lengthways adjustment. The length of the wheelchair can be adjusted by up to 8 inches, see page 18, 28.

Wheels
The wheelchair has pneumatic tires.

Lighting and reflectors
In the standard version, the wheelchair is equipped with lights, direction indicators and reflectors back and front. For more information on lighting and blinkers, see pages 16-17.
**Electrical system**

The wheelchair batteries are situated under the battery cover in the center of the chassis. The batteries are maintenance-free (gel-type), so there is no need to check fluid levels.

![Fig. 5. Batteries](image)

**Drive system**

The wheelchair has a drive pack for each drive wheel. The motors regulate speed and braking and activate turning. A joystick on the control panel passes signals to the electronic unit situated centrally under the chassis cover at the far rear, and this in turn controls the motors.

![Fig. 6. Electric motor](image)
Fuses
The wheelchair has four fuses, the main fuse, the charging fuse, the fuse for the position adjuster and that for lighting/direction indicators. The main fuse is mounted at the right-hand front of the battery box, while the other three are located below the junction box. The fuses are easily accessible between the shock absorbers at the rear of the wheelchair. To change the fuses, see page 41.

The main fuse is tripped when the toggle switch is turned away from the chassis center, see fig. 7.1. Press the switch back towards the chassis center to reset the main fuse. See "Resetting the main fuse", pages 39-40.

1. Main fuse 100A
2. Charging fuse 20A
3. Position adjuster 15A
4. Lighting/indicators 7,5A

NB! Under very specific circumstances, the fuses in the Safe Gate electronics may cut off the power supply. This will require checking by a service engineer before the fuses are changed.

Safe Gate electronics
5. Lighting/indicators 30A
6. Position adjuster 30A
7. Charging fuse 30A
Control panel

The wheelchair control panel is fixed to the right or left-hand arm rest, with adjustable location on the panel holder for optimum ease of use. The illustration below shows the different control panel functions.

Fig. 8. Control panel

1. Lighting  
2. Direction Indicators  
3. Seat lift  
4. On/off switch  
5. Battery voltage indicator  
6. Horn  
7. Speed selector (low, medium, high)  
8. Joystick  
9. Start key  
10. Button box
Start key
The start key is a plug device which is inserted into the control panel. The key must be inserted before the main switch can be activated.

Main switch
The main switch acts as an on/off switch for power to the wheelchair and must be set to "on" before the chair will operate.

NB! First switch off the power on the maneuvering panel (switch marked "0") before switching the power off on the main fuse.

Seat lift
The switch for moving the seat lift up and down. When the seat lift is in operation, the indicator lamp (Fig. 11) lights. Whenever the seat lift is raised from its lowest level, maximum speed is reduced by half (approx. 4,5 miles/h, 7 km/h).

Direction indicators
Pressing the direction indicator symbols will activate the right or left-hand direction indicator.

A second press on the same symbol will stop the indicators flashing.
Lighting
The lights will be turned on when the lighting symbol is pressed. A second press will turn them off again.

Horn
Pressing this switch sounds the horn to attract the attention of other road users.

Battery voltage indicator
The window display on the control panel (Fig. 14) indicates the following (left to right):
- Red/yellow/green = Fully charged
- Red/yellow = Half charged
- Red = Recharge batteries

Speed selector
The speed can be set at three levels, with one or more of the indicator lamps lighting up, depending on the speed range selected.
- 1 lamp lit = Low speed
- 2 lamps lit = Medium speed
- 3 lamps lit = Maximum speed
Small control box

The small control box is attached to the right or left-hand armrest behind the control panel. The small control box contains the various options such as wheelchair lengthways adjustment, seat twist (if equipped) and backrest angle. The pictures below show the different functions of the small control box and its location.

Back rest angle (Corpus II only)
The backrest can be angled back to the user’s desired position. Pressing the top part of the switch causes the back to rise up. The back can be lowered by pressing the lower part of the switch.

Back rest slope angle can be continuously adjusted backwards to 130°.

Lengthways adjustment
The distance between the foot rest and the seat can be adjusted. Pressing the upper part of the symbol causes the footrest to move outward, while it moves back again if the lower part is pressed. This makes it easy to adjust the chair to the user’s leg length and allows the legs to be stretched during driving. Extending the foot rest completely gives a smoother ride outdoors. Retracting it makes driving round the house more convenient. More information on page 28.

Seat twist
The seat twist enables the seat to be twisted out. This makes it easier to get on and off the seat. When seat twist is activated, a lamp lights above the seat lift symbol on the control panel. The wheelchair is immobilized while this light is on. More information on page 28. The seat can only be twisted in one direction, to the right or to the left, depending on how it is mounted.

⚠️ WARNING! ⚠️

Use of the seat twist function must take place only on a level surface.
**Joystick**

The joystick is used for regulating the speed of the wheelchair forwards or backwards, for turning and for braking.

Speed is continuously adjusted by movements of the joystick, either forwards or backwards. The speed is directly proportional to joystick movement (a small movement causes a low speed, a large movement a high speed).

Braking occurs by moving the joystick back to neutral or by letting go of it altogether.

Turning is effected by moving the joystick to one side or the other.

*Fig. 19. Joystick*
Joystick menu (Leverman)
Switching the joystick menu on and off
You can choose whether you want to be able to use the joystick menu or not. To choose between having the joystick menu switched on/off you hold the light button and the right indicator button down while you switch the wheelchair on, see Fig. 20. Three beeps indicate that the joystick is switched on and two that it is off.

Using the joystick menu
There are two ways to go into joystick menu mode, either by holding the light button in for two seconds or by holding the joystick at the extreme left or right position for two seconds. A short audible signal confirms the action.

NB! To be able to use the joystick to activate the joystick menu, the electronic unit in the wheelchair must have been configured. Contact your service technician for help with this.

The lamp above the lights/horn buttons lights when you have activated the joystick menu. All other lamps are off, including the LED battery voltage indicator, see Fig. 21.

Activating the light and horn
When the lamp above the light and horn lamps is lit you can activate the light by moving the joystick forwards and activate the horn by moving it backwards. So when you move the joystick forwards it has the same function as when you press in the top button. The selected function remains active until you move the joystick back.

Every stage (including “button pressed in”) is indicated by a short audible signal.
Other functions that you can activate via the joystick menu:

- Indicators – right/left
- Seat lift up/down
- Speed
- Extra button box
- Switch the wheelchair off

**Activating the indicators**

To activate the indicator function you move the joystick to the right until the lamp over the indicator buttons lights. You then activate the left indicators by moving the joystick forwards, and the right indicators by moving it backwards.

**NB!** After you have activated one of the indicators, the joystick menu automatically returns to the drive condition. *See also “Closing the joystick menu”*.  

**Activating the seat lift**

To activate the seat lift function you move the joystick to the right until the lamp over the seat lift button lights. To raise the seat lift, move the joystick forwards and to lower it move it backwards.

**Activating the speed selector**

To activate the speed selector you move the joystick to the right until one or more lamps over the speed selector button lights. Move the joystick forwards to increase the speed and backwards to reduce it.

You can set the speed in three fixed ranges, which are indicated by one, two or three lamps being lit.

**NB!** If you move the joystick left or right without activating a function, the joystick menu automatically cycles through the menu until you release the joystick.
Controlling the button box functions
To activate the functions of the button box you move the joystick to the right until the first lamp on the battery voltage indicator lights.

The first lamp corresponds to the button at the left of the button box, the second lamp to the second button from the left and so on. You activate a function by moving the joystick forwards or backwards.

NB! Your wheelchair doesn’t need to have an button box for you to be able to use the corresponding functions in the joystick menu.

Closing the joystick menu
There are two ways to come out of joystick menu mode.

1. Go to the last menu position
Move the joystick to the right until all ten lamps on the battery voltage indicator are lit, (3 red, 4 yellow and 3 green). The other indicator lamps on the control panel now lights and you can return to drive mode by moving the joystick forwards. You can also switch the wheelchair off by moving the joystick backwards and holding it there for at least 3 seconds.

2. Activate the indicator function
Move the joystick to the right until the lamp over the indicator button lights. Activate the right or left indicators. The joystick menu will then be closed and return to drive mode.
Accessories

Tool wallet
A tool wallet for the wheelchair is provided, and contains the following tools:

![Tool wallet image]

**Fig. 29. Tool wallet**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety goggles</td>
<td>Work on the battery</td>
</tr>
<tr>
<td>Allen key set</td>
<td>General maintenance/seat adjustment</td>
</tr>
<tr>
<td>12-13 mm spanner</td>
<td>General maintenance, battery replacement</td>
</tr>
<tr>
<td>Socket spanner, 19/21 mm</td>
<td>Seat twist/removal of seat</td>
</tr>
<tr>
<td>Screwdriver</td>
<td>General maintenance/removal of covers</td>
</tr>
</tbody>
</table>
Bow
Trax accessories include a bow for mounting behind the wheelchair. The bow is silver.

NB! The bow can not be mounted in conjunction with a CorpusII/T seat.

Rear-view mirrors
The rear-view mirrors are mounted at the front to facilitate rearwards viewing.

Foot rest insert
The foot rest insert is a support for the feet which is fitted to the foot rest when the rear foot position has to be used.

The foot rest insert gives better support to the whole foot.

Luggage basket/container
Allows transport of luggage in basket or closed container. The luggage container is lockable. Maximum weight in the basket must not exceed 11 lbs.

Crutch holder
A fastening device allowing crutches, sticks etc. to be strapped to the wheelchair.
Operation

General
This wheelchair is designed for use in and out of doors. To facilitate driving indoors the wheelchair can be contracted in length to make it shorter. Out of doors you must remember to drive very slowly on steep slopes and not to drive over edges more than 4,5 inches high.

Don't go out alone on your first test drive. The test drive is a check of how you and your wheelchair will function together and you may need a helping hand.

Remember that children should not drive an electric wheelchair unsupervised.

Driving

1. Insert the start key into the control panel.

2. Switch on the power by pressing the main switch (1) on the control panel.

3. Select a suitable speed by pressing the speed selector until the correct indicator lamp lights up for your type of driving. Preferably start with a low speed.
3. Select a suitable speed by pressing the speed selector until the correct indicator lamp lights up for your type of driving. Preferably start with a low speed, see Fig. 32.

![Speed selector](image1)

*Fig. 32. Speed selector*

4. Carefully move the joystick forward to drive forwards or backwards to reverse, see Fig. 33.

![Joystick](image2)

*Forward drive*  
*Reverse*

*Fig. 33. Joystick*
5. The speed of the wheelchair can be adjusted continuously by moving the joystick different distances forwards or backwards. The Safegate electronics enable you to move at crawl speed over edges. You drive up to the edge and then carefully drive over it. Approach the edge at a slight angle and you will pass over it more easily. When driving down an obstacle or down a steep slope, you must drive slowly and brake gently. The maximum speed should be set to low. You can brake gently by bringing the joystick back to a position within the neutral area. When your speed reduces, you can let go of the joystick completely.

**NB!** The wheelchair will operate at reduced speed when the seat is raised. You can only use full speed if the seat is in its lowest position.

**Steering with joystick**

Move the joystick to one side or the other while travelling forwards or backwards to turn the wheelchair in the desired direction.
Seat twist
Seat twist makes it easier to get on and off the seat. Electric seat twist is controlled from the button box, see page 18. The wheelchair is immobilized while the electrical seat twist is being operated. For manual seat twist, push down the lever at the side of the seat, see Fig. 36. It will then be possible to twist the seat to the desired position. The seat can only be twisted in one direction, to the right or left, depending on how the seat is installed.

![Fig. 35. Seat twist](image)

**WARNING!**
Use of the seat twist function must take place only on a level surface.

Electric lengthways adjustment
The distance between the footrest and the seat is adjustable by up to 8 inches. This function is controlled by a switch on the button box. By pressing the upper part of the symbol the distance between the seat and the front wheel will increase, while it will reduce if the lower part is pressed. This function operates only when the wheelchair is stationary.

Manual lengthways adjustment (initial setting)
Carried out by setting the adjustment rod at the rear of the chair to a suitable position (0-8 inches).

![Fig. 36. Seat twist lever](image)

![Fig. 37. Lengthways adjustment](image)
Driving rules
High edges

⚠️ WARNING !

Never drive the wheelchair over edges higher than 4,5 inches.

---

Fig. 38. High edges

Downhill slopes
When driving downhill you must use the lowest speed and take great care.

⚠️ WARNING !

The wheelchair is not designed for driving down slopes with a gradient greater than 15°
Uphill slopes

⚠️ WARNING!

Do not drive up slopes with a gradient greater than 15°.

On slopes with a higher gradient there is a risk that the wheelchair will not maneuver safely.
Driving on sideways gradients

⚠️ WARNING!

Risk of tipping over.
Do not drive the wheelchair on sideways gradients greater than 12°.

Fig. 41. Driving on sideways gradients
Releasing the brakes

⚠️ WARNING!

To avoid the wheelchair rolling away, make sure it is on level ground before releasing the brakes.

⚠️ WARNING!

When the brakes are released, you must turn the front wheels by hand to maneuver the Trax.

The brakes can be released to allow the wheelchair to be moved manually.

1. Switch off the wheelchair by turning the main switch to "off".

2. Pull the brake release lever forwards and up so that it hooks onto the brake lever track. The chair can now be moved manually.

   NB After moving the chair, reapply the brakes by pushing down the brake release lever until the brakes engage.

![Fig. 42. Releasing the brakes](image)
Battery charging

⚠️ WARNING !
Only carry out charging in a well-ventilated area, not a wardrobe etc. Do not charge up in a bathroom or other wet room.

⚠️ WARNING !
Be careful with metal objects when working on the batteries. A short circuit could easily cause an explosion. Always wear safety gloves and goggles.

⚠️ WARNING !
Only chargers with a max. 15A charging current may be used.

Fig. 43. Lester Electrical’s Dual mode charger.
When should the batteries be charged?

As a general rule, you should recharge your batteries as frequently as possible to assure the longest possible life and to minimize the required charging time. Plan to recharge them when you do not anticipate using the chair for a long period of time.

A battery voltage indicator on the control panel indicates when the battery voltage is low. The batteries must then be charged as soon as possible.

If the batteries should become completely discharged, it is important that you recharge them as soon as possible. If you delay before recharging them, the batteries can be damaged.

Charging

1. Connect the mains cable to the power outlet. Turn off charger first, then, after connecting to the wheelchair, turn on charger.

**NB!** If your charger has an on/off switch, you must ALWAYS ensure the switch is in the OFF position BEFORE plugging your connection plug into the wheelchair and BEFORE unplugging the connection plug.

2. Connect the connection cable from the charger to the charging socket on the wheelchair, which is on top of the right side of the chassis cover.

**NB!** When the charger is connected, the chair must not and cannot be driven.

**NB!** The circuit breaker must be in the “ON” position during charging.

*Description and Use of Battery Charger, see supplied Instruction Manual.*

*Fig. 44. Connecting the charger*
Transport

We recommend that Permobil wheelchairs are transported on trailers. The Permobil can be locked in place with transport belts attached to the fixing loops marked with yellow labels. The fixing loops are located on the side of the battery box and at the rear side of the bumpers. If the chair has to be transported in an estate car or other vehicle it is vital that the chair is properly fixed and that the fixing points used are well anchored.

⚠️ WARNING ⚠️

A poorly fixed chair can cause serious injury to passengers if it comes loose, not to mention damage to the vehicle and the wheelchair itself.

Fig. 45. Wheelchair fixing loops
Air transport
In the case of air transport there are three major aspects to consider: the batteries; the wheelchair's dimensions and weight; and the risk of damaging the seat in handling, as it will be sharing space with suitcases and other cargo in a confined space.

Batteries
This wheelchair has maintenance-free gel-type batteries, in some airlines it is not necessary to remove the batteries from the wheelchair during the flight (but you must check with your airline for their rules). However, the batteries must be disconnected. This can be done with the main fuse/battery cut-out.

If a wheelchair is fitted with acid-type batteries, the airline will require them to be taken off the wheelchair and transported in the special boxes they will supply. Many foreign airlines refuse to take acid batteries altogether, so always check with the airline which rules apply.

For battery removal, see page 42.

If you have to remove the batteries and your wheelchair has a seat lift, this must be lowered manually after removing the batteries for air transport.

See page 42, points 1-7.

Wheelchair's dimension and weight
The importance of the chair's dimensions and weight depends on the type of aircraft used for transporting it. The smaller the plane the smaller the wheelchair must be and the less it must weigh, and vice versa. Always check with the airline for the rules which apply.

Preventing damage
Cover the control panel with soft shock-absorbent material (foam etc.) and bend it in towards the backrest. Other protruding items should be similarly protected. Tape any loose hanging cables to the seat or covers.

NB! To ensure that transport can be safely carried out, without any unpleasant surprises at the last minute, always contact the airline with which you are travelling beforehand.
Maintenance and Repairs

General
For optimum performance of your wheelchair it is important to take good care of it. All wheelchairs are subject to wear, partly due to moving parts and partly due to stresses. What you need to know is how your wheelchair works, how to drive and use it in the best way and how to take regular care of it.
The purpose of preventive maintenance is to prevent problems arising. If you look after your wheelchair it will function well and the risk of faults will be reduced.

⚠️ WARNING !
Before working on the wheelchair's electrical system the connection to the positive pole of the battery must always be removed or the main fuse/circuit breaker be tripped.

⚠️ WARNING !
When the brakes are released you must turn the front wheels directly by hand to maneuver the wheelchair.

⚠️ WARNING !
Be careful with any metal objects when working on the battery. A short circuit could easily cause an explosion. Always wear safety gloves and goggles.

⚠️ WARNING !
Make sure nothing is trapped between the chassis and the seat when operating the seat lift.

⚠️ WARNING !
Any inappropriate modifications to the wheelchair and its various systems may entail an increased risk of accidents. Carefully follow the recommendations in the Handling section to prevent the risk of accidents in connection with driving.
All modifications to and interventions in the vital systems of the wheelchair must be performed by a qualified service engineer. Always contact a qualified service engineer in cases of doubt.
Maintenance

Cleaning
Clean the wheelchair often. After use outdoors it should be cleaned extra thoroughly. Use a damp cloth with a mild soap solution to wipe off dirt and dust.

NB! Do not hose down your wheelchair! The electronics may be damaged.

Wheels
Regularly check the wheels for the correct tire pressure. Top up the air if necessary. See page 44.

Batteries
Storage
Note that a battery will run down of its own accord and any battery will be ruined if it freezes in cold weather. If the wheelchair is to be kept unused for a lengthy period, the batteries must always be recharged once a month to prevent damage.

NB! The temperature in the place of storage must not fall below 40°F.

The Permobil Trax has maintenance-free gel-type batteries. This means there is no need to check fluid levels.

Battery life depends entirely on regular charging.

Fig. 46. Batteries
Repairs

Resetting the main fuse/circuit breaker
The main fuse also functions as a circuit breaker but is still referred to as the main fuse in the user instructions.

**NB!** First switch off the power on the maneuvering panel before switching the power off on the main fuse.

**Main fuse**
The main fuse should only be changed by persons with a good knowledge of the wheelchair.

**NB!** A tripped main fuse often indicates a serious electrical fault, so the service engineer should be called.

In case of air transport the batteries must be disconnected. This may be done with the main fuse/circuit breaker, but check with the airline for their rules.

1. Check the label to see which is the "on" and which the "off" position.
   Bend up the rubber protector. Press the toggle arm away from the center of the chassis to trip the main fuse, see fig. 47.

2. Press the toggle arm on the fuse to the right, as seen from the front of the chair, to reset the main fuse.

**Fig. 47. Location of main fuse**
WARNING!

Investigate the cause if the main fuse trips. It could be due to a serious electrical fault, in which case the service engineer should be called.

Fig. 48. Main fuse tripped
Changing the fuses for charging, position adjustment and lighting/direction indicators

The fuses for charging (20 A), position adjustment (15 A) and the lighting/direction indicators (7.5 A) are located under the rear edge of the vehicle (junction box). They are easily accessible at the rear of the wheelchair between the shock absorbers, see figs. 49 and 50 to the right.

1. Change the blown fuse.

Safe Gate electronics

NB In very specific circumstances the fuses in the Safe Gate electronics may interrupt the circuit. A check by a service engineer is necessary before the fuses are changed.

See service manual for more information.
 Changing batteries

1. Set the wheelchair on an even surface.

2. Raise the seat lift to its full height.

   **NB** If the battery is completely dead, the seat lift can be cranked up using the bolt head under the front edge of the seat, see fig. 52. **NB** the screw must not be rapidly turned with a drill attachment. Risk of damage to components.

   In the case of a fixed seat attachment/pillar, loosen the rear screw and move the seat forwards, see fig. 53.

3. First switch off the power on the maneuvering panel before switching the power off on the main fuse, see page 14.

4. Remove the battery cover by undoing the four screws.

   **NB** Watch out for the cable to the rear lights. Disconnect the contact in the junction box. If the rear screw on the seat lift is unscrewed, the seat can be moved forward to gain extra space for changing the batteries, see fig. 53.

5. Disconnect the battery connections. First the positive pole, then the negative.

6. Disconnect the straps which retain the batteries in place. Check that the strap fixing is in the proper position as each strap is disconnected.

7. Lift out the batteries.

8. Set in two new batteries. Place the batteries in the same position as before and fix them with the straps. Tighten the straps well.
9. Connect the battery connections, first the negative pole, then the positive.

10. Replace the chassis cover and connect the contact for the rear lighting in the junction box. Lower the seat lift.

11. Charge the batteries, see Charging pages 33-34.

**Changing inner tubes**

1. Set up the wheelchair on blocks and let out the air.

2. Lever the tire out of the rim.

3. Replace the defective inner tube.

4. Replace the tire on the rim and reinflate, see page 44.
Filling with air

⚠️ WARNING!

Over-inflation could cause an explosion. Recommended air pressure 36 psi.

Fig. 54. Air valve

Low air pressure in the tire will cause abnormal wear and a shorter travelling range. So, check regularly that the pressure in the front tires and back tires is up to 36 psi.

1. Unscrew the plastic cap on the wheel air valve.

2. Attach a compressed air nozzle to the air valve and adjust the tire pressure to the prescribed level.
Labels
Brake release
When the wheelchair brakes are released, the brake lever must be pulled out and hooked in place with a slight upwards movement.

NB Only release the brake on a level surface.
The brake will engage when the brake lever is pushed down. The brake lever will then return to its initial position.

Main fuse/circuit breaker
The main fuse is reset when the toggle switch is pressed in the direction of the arrow towards ON.
When the toggle switch is moved towards the OFF position, the fuse will be tripped.

NB! First switch off the power on the maneuvering panel before switching the power off on the main fuse.

Charging current warning
The label shows the maximum current which the battery charger should feed into the wheelchair.

Fig. 55. Brake release label

Fig. 56. Main fuse label

Fig. 57. Charging current label
Fixing hooks
The label shows where the wheelchair should be attached during transport. A label is placed near each fixing point. The arrow points in the direction of the fixing point.

Battery connection
Turn the battery poles away from the center of the chair.
Connect the black cable to the negative pole (-).
Connect the red cable to the positive pole (+).
Connect the green cable in series between the negative and the positive poles on the two batteries. The green cable passes through the main fuse, rated at 100 Amps.

Prohibition against passengers on the back cover
It is not permitted to take passengers on the wheelchair. There is a risk of injury to persons and damage to equipment.

Fig. 58. Fixing hook label
Fig. 59. Battery connection label
Fig. 60. No passengers label
Specifications

General
Designation.......................................... Trax

Dimensions and weight
Length.................................................. 48,5 - 56,5 inches
Width.................................................... 27,5 - 29 inches¹)
Height .................................................. 34 - 35,5 inches, Trax seat
Height .................................................. 44,5 - 46 inches, Corpus II/T
Seat height .......................................... 19,5 - 29 inches²) (50-74 cm)
Transport dimensions L/W/H.................... 48,5/27,5¹)/25,5 inches (Trax seat, dropped back)
Transport dimensions L/W/H.................... 48,5/27,5¹)/35,5 inches (CII/T, back removed)
Min. transport height (without seat)..... 20 inches
Weight inc. batteries ............................ 352 lbs, inc. Trax seat
Weight inc. batteries ............................ 397 lbs, inc. CorpusII/T seat
Maximum weight of user ..................... 298 lbs³)

Wheels
Wheel dimensions, front...................... 2,50 x 8
Front wheel air pressure...................... 36 psi
Wheel size, rear................................... 3,00 x 10
Back wheel air pressure ....................... 36 psi

Performance
Travelling range................................. 22 - 31 Miles
Max. speed, forward ......................... 9 Miles/h (5.5 Miles/h until age 16.)
Turning circle, 180°............................. 108 inches
Obstacle limit ...................................... 4,5 inches
Gradient limit ..................................... 15 degrees

¹) Depending on choice of tire
²) Seat height from 20-21 inches up to 27,5-29 inches depending on adjustment holes under seat.
³) If the wheelchair has a seat lift, maximum user weight is 220 lbs.
Electrical system

Batteries
Battery type ......................................... Maintenance-free gel-type batteries
Maximum battery dimension L/B/H ... 13,5/ 6,5/ 9,5 inches
Recommended batteries ..................... Group 27
Battery capacity ............................... 2 x 97 Ah
Charging time .................................... 10 hours

Fuses
Charging fuse ...................................... 20 A
Seat lift ............................................. 15 A
Lighting ............................................. 7,5 A
Main fuse ......................................... 100 A

All dimensions in inches
General Introduction
The Trax seat is a simple seat designed for users up to max. weight of 298 lbs. The seat is based on a plastic shell which is then fitted with armrests and cushions in different fabrics.

In order to get the best possible use from your seat, it is important to use it in the intended way. We therefore advise you to carefully read the operating instructions, especially the safety instructions. Keep the operating instructions with the rest of the things belonging to the chair.

Specially modified wheelchairs
If your seat is marked with a “Specially modified product” sticker, it has been modified to your specific needs and wishes. This means that the design and functions could be different from the text in these operating instructions, or the design and functions of other seats of the same type.

The seat can also contain parts that are unique to your chair. These aren’t available as spare parts, and must be made as required. This can affect the repair time of your seat.

Specifications
All information and specifications given in these operating instructions where applicable when this seat was delivered. As Permobil carries out continual development and improvement, we reserve the right to make changes without prior notice.
Design and function

General
The Trax seat is a simple seat with a forward-folding back rest and adjustable arm rests.

Fig. 1. Trax seat

1. Back cushion
2. Arm rest
3. Seat cushion
**Seat**
The seat angle can be manually adjusted in three positions, sloping forwards, neutral or sloping backwards, see page 53.
The seat cushions are covered in fabric or imitation leather.
The seat width is 17 inches. The seat depth is 17,5 inches.

**Back rest**
The back rest can be manually folded down onto the seat cushion.
The cushions are made of foam rubber and covered in fabric or imitation leather.

**Arm rests**
The distance between arm rest and back rest, arm rest height and arm rest angle are all adjustable. The armrest can be folded up.

**Accessories**
**Belt**
The Trax seat can be fitted with a seat belt with snap-lock.
Setting the seat angle
The seat angle can be set in three positions, forward-leaning, neutral and slightly backward-leaning.

**NB!** If the seat is fitted with seat twist, the seat must be in level position.

The seat angle is set using the holes under the seat. There are three holes under the seat at the front and three at the back, see fig. 2 below.

Level position is obtained if the screws are mounted in the equivalent holes back and front. Maximum slope forwards is obtained when the screws are set in the top hole at the front and the bottom hole at the back. The reverse gives the maximum slope backwards.

The seat slope can be varied from a maximum backwards slope of $+6^\circ$ to a maximum forwards slope of $-5^\circ$.

*Fig. 2. Seat in neutral position (level)*
Setting the arm rests

Height adjustment
Turn the knob, fig. 3.1, clockwise or anticlockwise to the desired height. The arm rests can also be mounted in reverse position, i.e. with the right-hand arm rest joint on the left-hand side and the joint plate reversed, for the sake of gaining extra height.

Arm rest angle
Release the handle, fig. 3.2, and adjust to desired angle. Tighten the handle.

**NB! Secure the arm rest at the desired angle.**
Use the provided bolt (4A) to further secure the arm rest at the desired angle. This bolt needs to be installed through one of the holes in the arm rest bracket that line up with the tapped hole (4B) in the arm rest bar.

Length adjustment
The arm rest can be adjusted in two positions. Undo the screw, fig. 3.3, remove the arm rest adjustment handle, and move the joint plate backwards or forwards. Remount the handle and tighten the screw.
**Maintenance**

The seat can be cleaned with a damp cloth and mild soapy water.

**Upholstery washing instructions**

Refer to the label on the cushion. The cover may be removed if desired for easier washing.

No other maintenance is required.

**Transport**

To take up less space during transport, the back rest can be folded down. The armrests can be set to their lowest position or completely removed.

---

**Removing the seat**

If your seat is equipped with seat twist, the seat can easily be removed from the chassis to obtain even lower transport height. This is done by unscrewing the nut located beneath the seat cushion, see fig. 6.

**NB!** Before the seat can be lifted off, the cables between the seat and chassis must be disconnected. Do this by unscrewing the connection behind the seat back, see fig. 7.

---

⚠️ **WARNING!**

Make sure the fixing nut is properly tighten when fitting the seat.
**Technical data Trax seat**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total length of seat including arm rest</td>
<td>21 inches</td>
</tr>
<tr>
<td>Total height of seat</td>
<td>17 inches</td>
</tr>
<tr>
<td>Seat width</td>
<td>17 inches</td>
</tr>
<tr>
<td>Seat depth</td>
<td>17,5 inches</td>
</tr>
<tr>
<td>Back height</td>
<td>14 inches</td>
</tr>
<tr>
<td>Arm rest length</td>
<td>10 - 16 inches</td>
</tr>
<tr>
<td>Arm rest height*)</td>
<td>10,5 - 14,5 inches</td>
</tr>
<tr>
<td>Seat angle, manual</td>
<td>+6° - -5°</td>
</tr>
<tr>
<td>Weight inc. arm rests</td>
<td>33 lbs</td>
</tr>
<tr>
<td>Transport length, min. inc. chassis</td>
<td>48,5 inches</td>
</tr>
<tr>
<td>Transport width, min. inc. chassis</td>
<td>27 inches</td>
</tr>
<tr>
<td>Transport height, min. inc. chassis</td>
<td>25,5 inches with folded back rest</td>
</tr>
</tbody>
</table>

*) Reversed installation reduces arm rest height

**Maximum user weight**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Angle</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual seat angle</td>
<td>+6° - -5°</td>
<td>298 lbs*</td>
</tr>
</tbody>
</table>

*) If the wheelchair is fitted with seat lift, maximum user weight = 220 lbs.
CAUTION! It is very important that you read this information regarding the possible effects of electromagnetic interference on your powered wheelchair.

Electromagnetic Interference (EMI) From Radio Wave Sources

Powered wheelchairs and motorized scooters (in this text, both will be referred to as powered wheelchairs) may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones.

The interference (from radio wave sources) can cause the powered wheelchair to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the powered wheelchair’s control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m). Each powered wheelchair can resist EMI up to a certain intensity. This is called its "immunity level". The higher the immunity level, the greater the protection.

At this time, requested immunity level as per EN 60601-1-2 is 3 V/m. The immunity level of this powered wheelchair model as shipped, with no further modification, is >20V/m in the range of 26 MHz to 950 MHz.

There are a number of sources of relatively intense electromagnetic fields in the everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure is unavoidable. However, we believe that by following the warnings listed below, your risk to EMI will be minimized. The sources of radiated EMI can be broadly classified into three types:

1. **Hand-held portable transceivers** (transmitters-receivers) with the antenna mounted directly on the transmitting unit. Examples include: citizens band (CB) radios, "walkie talkie", security, fire, and police transceivers, cellular telephones, and other personal communication devices.

   **NOTE!** Some cellular telephones and similar devices transmit signals while they are ON, even when not being used.

2. **Medium-range mobile transceivers**, such as those used in police cars, fire trucks, ambulances, and taxis. These usually have the antenna mounted on the outside of the vehicle.
3. *Long-range transmitters and transceivers*, such as commercial broadcast transmitter (radio and TV broadcast antenna tower) and amateur (HAM) radios.

**NOTE!** Other types of hand-held devices, such as cordless phones, laptop computers, AM/FM radios, TV sets, CD players, and cassette players, and small appliances, such as electric shavers and hair dryers, so far we know, are not likely to cause EMI problems to your powered wheelchair.

Because EM energy rapidly becomes more intense as one moves closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy very close to the powered wheelchair’s control system while using these devices. This can affect powered wheelchair movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the powered wheelchair.

**WARNINGS**

Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones can affect powered wheelchairs and motorized scooters. Following the warnings listed below should reduced the chance of unintended brake release or powered wheelchair movement which could result in serious injury.

1. Do not operate hand-held transceivers (transmitters/receivers), such as citizens band (CB) radios, or turn ON personal communications devices, such as cellular phones, while the powered wheelchair is turned ON.

2. Be aware of nearby transmitters, such as radio or TV stations, and try to avoid coming close to them.

3. If unintended movement or brake release occurs, turn the powered wheelchair OFF as soon as it is safe.

4. Be aware that adding accessories or components, or modifying the powered wheelchair, may make it more susceptible to EMI.

   *(Note: There is no easy way to evaluate their effect on the overall immunity of the powered wheelchair).*

5. Report all incidents of unintended movement or brake release to the powered wheelchair manufacturer, and note whether there is a radio wave source nearby.