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General

1.1 Introduction
Thank you for choosing an Invacare product.

This user manual contains important information about the handling of the product. In order to ensure safety when using the product, read the user manual carefully and follow the safety instructions.

Please note that there may be sections in this user manual, which are not relevant to your product, since this manual applies to all existing modules (on the date of printing).

If you find that the font size in the print version of the user manual is difficult to read, you can download it as a pdf from the Invacare website (see back page of this manual). The pdf can then be scaled on screen to a font size that is more comfortable for you.

This mobility device has been constructed for a large circle of users with different requirements.

The decision whether the model is suitable for the user may only be taken by medical specialists with appropriate expertise.

Invacare or their statutory representatives can accept no liability in cases in which the mobility device has not been adapted to suit the users’ handicaps.

Some maintenance and settings can be performed by the user or his/hers attendants. Certain adjustments do however require technical training and may only be carried out by your Invacare specialist dealer. Refer to the Inspection checks chapter in 9 Maintenance, page 50. Damages and errors caused by nonobservance of the user manual or as a result of incorrect maintenance are excluded from all guarantees.

1.2 Symbols in this manual
In this manual warnings are indicated by symbols. The warning symbols are accompanied by a heading that indicates the severity of the danger.

![WARNING]
WARNING
Indicates a hazardous situation that could result in serious injury or death if it is not avoided.

![CAUTION]
CAUTION
Indicates a hazardous situation that could result in minor or slight injury if it is not avoided.

![IMPORTANT]
IMPORTANT
Indicates a hazardous situation that could result in damage to property if it is not avoided.

This product complies with Directive 93/42/EEC concerning medical devices. The launch date of this product is stated in the CE declaration of conformity.

Tools:
This symbol identifies a list of various tools, components and items which you will need in order to carry out certain work. Please do not attempt to carry out the work if you do not have the listed tools available.

1.3 Type classification
This vehicle has been classified according to EN 12184 as a class B mobility product (for indoor and outdoor areas). It is therefore
compact and agile enough for indoor areas, but also able to overcome many obstacles in outdoor areas.

1.4 Intended use
This mobility device was designed for persons whose ability to walk is impaired, but who are still in terms of their eyesight and physically and mentally able to operate an electric mobility device.

1.5 Regulations
The vehicle was successfully tested according to German and international standards as to its safety. It satisfies the requirements according to RoHS 2011/65/EU, REACH 1907/2006/EC and DIN EN 12184 including EN 1021-2 and ISO 7176–14. It was also tested successfully according to EN 60529 IPX4 as to its resistance to spray water, and is therefore well suited for weather conditions such as typical European weather conditions. When equipped with an appropriate lighting system, the vehicle is suitable for use on public roads.

1.6 Indications
The use of this power wheelchair is recommended for the following indications:

• The inability or a greatly restricted ability to walk within the scope of the basic requirement to be able to move within one’s own four walls.
• The need to leave the dwelling place in order to get some fresh air during a short walk or to reach those places generally to be found at close distance to the dwelling and where everyday business is carried out.

Provision of power wheelchairs for interior and exterior areas is advisable if the use of hand-operated wheelchairs is no longer possible on account of the disability, yet proper operation of an electromotive drive unit is still practicable.

1.7 Usability
Only use a mobility device when it is in perfect working order. Otherwise, you might put yourself and others at risk.

The following list does not claim to be exhaustive. It is only intended to show some of the situations that could affect the usability of your mobility device.

In certain situations, you should immediately stop using your mobility device. Other situations allow you to use the mobility device to get to your dealer.

You should immediately stop using your mobility device if its usability is restricted due to:

• brake failure

You should immediately contact an authorized Invacare dealer if the usability of your mobility device is restricted due to:

• the lighting system (if fitted) failing or being defective
• reflectors falling off
• worn thread or insufficient tire pressure
• damage to the armrests (e.g. torn armrest padding)
• damage to the legrest hangers (e.g. missing or torn heel straps)
• damage to the postural belt
• damage to the joystick (joystick cannot be moved into the neutral position)
• cables that are damaged, kinked, pinched or have come loose from the fixation
• the mobility device drifting when braking
• the mobility device pulling to one side when moving
• unusual sounds developing or occurring

Or if you have the feeling that something is wrong with your mobility device.
1.8 Warranty
The terms and conditions of the warranty are part of the general terms and conditions particular to the individual countries in which this product is sold.

1.9 Service life
We estimate a service life of five years for this product, provided it is used in strict accordance with the intended use as set out in this document and all maintenance and service requirements are met. The estimated service life can be exceeded if the product is carefully used and properly maintained, and provided technical and scientific advances do not result in technical limitations. The service life can also be considerably reduced by extreme or incorrect usage. The fact that we estimate a service life for this product does not constitute an additional warranty.
2 Safety

2.1 General safety notes

**WARNING!**
Risk of injury if mobility device is used in any other way than the purpose described in this manual
- Only ever use the mobility device in accordance with the instructions in this user manual.
- Pay strict attention to the safety information.

**WARNING!**
Risk of damage or injury if mobility device is accidentally set into motion
- Switch the mobility device off before you get in, get out or handle unwieldy objects.
- When the drive is disengaged, the brake inside the drive is deactivated. For this reason, pushing the mobility device by an attendant is only recommended on flat surfaces, never on gradients. Never leave your mobility device on a gradient with its motors disengaged. Always re-engage the motors immediately after pushing the mobility device (refer to Pushing the mobility device in freewheel mode).

**WARNING!**
Risk of injury if the mobility device is driven when ability to operate a vehicle is impaired by medication or alcohol
- Never drive the mobility device under the influence of medication or alcohol. If necessary, the mobility device must be operated by an attendant who is physically and mentally able.

**WARNING!**
Risk of injury if the mobility device is switched off while driving, for example by pressing the On/Off Button or disconnecting a cable, due to it coming to an abrupt, sharp stop
- If you have to brake in an emergency, simply release the joystick which will bring you to a halt (refer to the remote user manual for more information).
WARNING!
Risk of falling out of the mobility device
- Do not slide forward on the seat, do not lean forward between your knees, do not lean backwards out over the top of the backrest, for example to reach an object.
- If a posture belt is installed, it should be correctly adjusted and used each time you use the mobility device.
- When transferring to a different seat, position the mobility device as close as possible to the new seat.

WARNING!
Risk of injury when transferring mobility device to a vehicle for transport with the occupant seated in it
- It is always better to transfer the mobility device to a vehicle without the occupant seated in it.
- If the mobility device needs to be loaded up a ramp together with its driver, ensure that the ramp does not exceed the rated slope (refer to 11 Technical data, page 58).
- If the mobility device does need to be loaded using a ramp which exceeds the rated slope (refer to 11 Technical data, page 58), then you must use a winch. An attendant can safely monitor and assist the loading process.
- As an alternative you can use a platform lift. Ensure that the total weight of the mobility device including the user does not exceed the maximum permissible weight for the platform lift or winch if you are using.

CAUTION!
Risk of injury if maximum permissible load is exceeded
- Do not exceed the maximum permissible load (refer to 11 Technical data, page 58).
- The mobility device is only designed for use by a single occupant whose maximum weight does not exceed the maximum permissible load of the device. Never use the mobility device to transport more than one person.

CAUTION!
Risk of injury due to wrong lifting or dropping of heavy components
- When maintaining, servicing or lifting any part of your mobility device, take into account the weight of the individual components especially the batteries. Be sure at all times to adopt the correct lifting posture and ask for assistance if necessary.

CAUTION!
Risk of injury by moving parts
- Make sure that no injury is incurred by moving parts of the mobility device, like wheels or one of the lifter modules (if fitted), especially when children are around.

CAUTION!
Risk of injury from hot surfaces
- Do not leave the mobility device in direct sunlight for prolonged periods. Metal parts and surfaces such as the seat and armrests can become very hot.
CAUTION!
Risk of fire or breaking down due to electric devices being connected
– Do not connect any electric devices to your mobility device that are not expressly certified by Invacare for this purpose. Have all electrical installations done by your authorized Invacare dealer.

2.2 Safety information on the electrical system

DANGER!
Risk of death, serious injury or damage
Misuse of the mobility device may cause the mobility device to start smoking, sparking, or burning. Death, serious injury, or damage may occur due to fire.
– DO NOT use the mobility device other than its intended purpose.
– If the mobility device starts smoking, sparking, or burning, discontinue using the mobility device and seek service IMMEDIATELY.

DANGER!
Risk of fire
Switched on lamps produce heat. If you cover the lamps with fabrics such as clothes, there is a risk that the fabric may catch fire.
– NEVER cover the light system with fabric.

DANGER!
Risk of death, serious injury or damage when carrying along oxygen systems
Textiles and other materials that normally would not burn are easily ignited and burn with great intensity in oxygen enriched air.
– Check the oxygen tubing daily, from the cylinder to the delivery site, for leaks and hold away from electrical sparks and any source of ignition.

WARNING!
Risk of injury or damage due to electrical shorts
Connector pins on cables connected to the power module can still be live even when the system is off.
– Cables with live pins should be connected, restrained or covered (with non-conductive materials) so that they are not exposed to human contact or materials that could cause electrical shorts.
– When cables with live pins have to be disconnected, for example, when removing the bus cable from the remote for safety reasons, make sure to restrain or cover the pins (with non-conductive materials).
DANGER!
Risk of death, serious injury, or damage
Corroded electrical components due to water or liquid exposure can result in death, serious injury, or damage.
- Minimize exposure of electrical components to water and/or liquids.
- Electrical components damaged by corrosion MUST be replaced immediately.
- Mobility devices that are frequently exposed to water/liquids may require replacement of electrical components more frequently.

DANGER!
Risk of death or serious injury
Failure to observe these warnings can cause an electrical short resulting in death, serious injury, or damage to the electrical system.
- The POSITIVE (+) RED battery cable MUST connect to the POSITIVE (+) battery terminal(s)/post(s). The NEGATIVE (-) BLACK battery cable MUST connect to the NEGATIVE (-) battery terminal(s)/post(s).
- NEVER allow any of your tools and/or battery cable(s) to contact BOTH battery post(s) at the same time. An electrical short may occur and serious injury or damage may occur.
- Install protective caps on positive and negative battery terminals.
- Replace cable(s) immediately if cable(s) insulation becomes damaged.
- DO NOT remove fuse or mounting hardware from POSITIVE (+) red battery cable mounting screw.

DANGER!
Risk of death or serious injury
Electric shock can cause death or serious injury
- To avoid electric shock, inspect plug and cord for cuts and/or frayed wires. Replace cut cords or frayed wires immediately.

Risk of damage to the mobility device
A failure in the electric system can lead to unusual behavior such as continuous light, no light, or noises from the magnetic brakes.
- If a failure exists, switch off the remote and switch it on again.
- If a failure still exists, then disconnect or remove the power source. Depending on the mobility device model, you can either remove the battery packs or disconnect the batteries from the power module. If in doubt which cable to disconnect, contact your dealer.
- In any case, contact your dealer.

2.3 Safety information on electromagnetic interference
This electric vehicle was successfully tested in accordance with International standards as to its compliance with Electromagnetic Interference (EMI) regulations. However, electromagnetic fields, such as those generated by radio and television transmitters, and cellular phones can influence the functions of electric vehicles. Also, the electronics used in our vehicles can generate a low level of electromagnetic interference, which however will remain within the tolerance permitted by law. For these reasons we ask you to please observe the following precautions:
**WARNING!**
Risk of malfunction due to electromagnetic interference
- Do not switch on or operate portable transceivers or communication devices (such as radio transceivers or cellular phones) when the vehicle is switched on.
- Avoid getting near strong radio and television transmitters.
- In case the vehicle should be set in motion unintentionally or the brakes are released, switch it off immediately.
- Adding electrical accessories and other components or modifying the vehicle in any way can make it susceptible to electromagnetic interference. Keep in mind that there is no sure way to determine the effect such modifications will have on the overall immunity of the electronic system.
- Report all occurrences of unintentional movement of the vehicle, or release of the electric brakes to the manufacturer.

### 2.4 Safety information on driving and freewheel mode

**DANGER!**
Risk of death, serious injury, or damage
Malfunctioning joystick could cause unintended/erratic movement resulting in death, serious injury, or damage
- If unintended/erratic movement occurs, stop using the wheelchair immediately and contact a qualified technician.

**WARNING!**
Risk of injury if the mobility device tips over
- Inclines and declines can only be travelled up to the rated slope (refer to 11 Technical data, page 58).
- Always return the backrest of your seat or the seat tilt to an upright position before ascending slopes. We recommend that you position the seat backrest and the seat tilt (if fitted) slightly to the rear before descending slopes.
- Only ever drive downhill at a maximum of 2/3 of the top speed. Avoid abrupt braking or accelerating on gradients.
- If at all possible, avoid driving on wet, slippery, icy, or oily surfaces (such as snow, gravel, ice etc.) where there is a risk of you losing control over the vehicle, especially on a gradient. This may include certain painted or otherwise treated wood surfaces. If driving on such a surface is inevitable, then always drive slowly and with the utmost caution.
- Never attempt to overcome an obstacle when on an uphill or downhill gradient.
- Never attempt to drive up or down a flight of steps with your mobility device.
- When overcoming obstacles, always observe the maximum obstacle height (refer to 11 Technical data, page 58 and information about overcoming obstacles in 6.5 Taking Obstacles, page 35).
- Avoid shifting your center of gravity as well as abrupt joystick movements and changes of direction when the mobility device is in motion.
**WARNING!**
Risk of injury if the mobility device tips over (continued)

- Never use the mobility device to transport more than one person.
- Do not exceed the overall maximum permissible load or the maximum load per axle (refer to 11 Technical data, page 58).
- Note that the mobility device will brake or accelerate if you change the driving mode whilst the mobility device is in motion.

**WARNING!**
Risk of serious injury or damage

Improper positioning while leaning or bending could cause the wheelchair to tip forward resulting in serious injury or damage

- To assure stability and proper operation of your mobility device, you must at all times maintain proper balance. Your power wheelchair has been designed to remain upright and stable during normal daily activities as long as you DO NOT move beyond the center of gravity.
- DO NOT lean forward out of the mobility device any further than the length of the armrests.
- DO NOT attempt to reach objects if you have to move forward in the seat or pick them up from the floor by reaching down between your knees.

**WARNING!**
Risk of breaking down in adverse weather conditions, i.e. extreme cold, in an isolated area

- If you are a user with severely limited mobility, we advise that in the case of adverse weather conditions DO NOT attempt a journey without an accompanying attendant.

**WARNING!**
Risk of injury if your foot slides off the footrest and gets caught underneath the mobility device when it is in motion

- Make sure each time before you drive the mobility device that your feet are squarely and securely in place on the footplates, and that both legrests are properly locked into place.

**WARNING!**
Risk of serious injury or damage

Operating the mobility device with a ground clearance of less than 76 mm between the footplate and ground/floor may cause serious injury or property damage.

- ALWAYS maintain a minimum of 76 mm between the bottom of the footplate and ground/floor to ensure proper ground clearance while the mobility device is in motion. If necessary, adjust the footplate height to achieve proper ground clearance.
- After footplate height adjustment, if the mobility device dips forward and the footplates touch the ground while in motion, please contact your dealer for an inspection and avoid use of the mobility device if possible.
**WARNING!**
Risk of injury if you collide with an obstacle when driving through narrow passages such as doorways and entrances
- Drive through narrow passages in the lowest driving mode and with due caution.

**WARNING!**
Risk of injury
If your mobility device has been fitted with elevating legrests, there is a risk of personal injury and damage to the mobility device if you drive the mobility device with the legrests raised.
- To avoid unwanted displacement of the mobility device center of gravity to the front (especially when travelling downhill) and in order to avoid damage to the mobility device, elevating legrests must always be lowered during normal travelling.

**WARNING!**
Risk of tipping
Antitippers (stabilizers) are only effective on firm ground. They sink in on soft ground such as grass, snow or mud if the mobility device rests itself on them. They lose their effect and the mobility device can tip over.
- Only drive with extreme care on soft ground, especially during uphill and downhill journeys. In the process pay increased attention to the tip stability of the mobility device.

**WARNING!**
Risk of injury or damage
Operating the wheelchairs outdoors or in areas of poor lighting may cause injury or damage. Operating the wheelchair near motor vehicles may cause injury or damage.
- DO NOT operate on roads, streets or highways.
- Use caution when operating the wheelchair outdoors at night or in areas with poor lighting.
- ALWAYS be aware of motor vehicles when using the wheelchair.

2.5 Safety information with regard to care and maintenance

**DANGER!**
Risk of death, serious injury, or damage
Incorrect repair and/or servicing of this mobility device performed by users/caregivers or unqualified technicians can result in death, serious injury, or damage.
- DO NOT attempt to carry out maintenance work that is not described in this user manual. Such repair and/or service MUST be performed by a qualified technician. Contact a dealer or Invacare technician.
2.6 Safety information regarding changes and modifications to the mobility device

DANGER!
Risk of serious injury or damage
Use of incorrect or improper replacement (service) parts may cause injury or damage
- Replacement parts MUST match original Invacare parts.
- Always provide the wheelchair serial number to assist in ordering the correct replacement parts.

CAUTION!
Risk of injuries and damage to mobility device due to unapproved components and accessory parts
Seating systems, additions and accessory parts which have not been approved by Invacare for use with this mobility device can affect the tipping stability and increase tipping hazards.
- Only ever use seating systems, additions and accessory parts which have been approved by Invacare for this mobility device.

Seating systems which are not approved by Invacare for use with this mobility device do not, under certain circumstances, comply with the valid standards and could increase the flammability and the risk of skin irritation.
- Only use seating systems that have been approved by Invacare for this mobility device.

Electrical and electronic components which have not been approved by Invacare for use with this mobility device can cause fire hazards and lead to electromagnetic damage.
- Only ever use electrical and electronic components which have been approved by Invacare for this mobility device.

Batteries which have not been approved by Invacare for use with this mobility device can cause chemical burns.
- Only ever use batteries which have been approved by Invacare for this mobility device.
CAUTION!
Risk of injuries, and damage to the mobility device, if unapproved backrests are used
A retrofitted backrest which is not approved by Invacare for use with this mobility device may overload the backrest tube and thus increase the risk of injuries and of damage to the mobility device.
– Please contact your Invacare specialist dealer who will perform risk analyses, calculations, stability checks etc. to ensure that the backrest can be used safely.

CE marking of the mobility device
– The conformity assessment/CE marking was carried out in accordance with Directive 93/42 EEC and only applies to the complete product.
– The CE marking is invalidated if components or accessories are replaced or added that have not been approved for this product by Invacare.
– In this case, the company that adds or replaces the components or accessories is responsible for the conformity assessment/CE marking or for registering the mobility device as a special design and for the relevant documentation.

Important information about maintenance work tools
– Some maintenance work which is described in this manual and can be carried out by the user without problems require the correct tools for proper work. If you do not have the correct tool available we do not recommend that you try to carry out the relevant work. In this case, we urgently recommend that you contact an authorized specialist workshop.

2.7 The position of the labels on the product

<p>| A | If the mobility device is fitted with a tray, it is imperative that it is removed and safely stowed when transporting the mobility device in a vehicle. |
| B | Identification of the lashing eyes at the front and back: |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>This symbol indicates the position of an anchoring point when using an anchoring system during transport.</strong></td>
<td><img src="image1.png" alt="Symbol" /></td>
<td></td>
</tr>
<tr>
<td><strong>If the symbol appears on a bright yellow sticker, the anchoring point is suitable for fixation of the mobility device in a vehicle for use as a vehicle seat.</strong></td>
<td><img src="image2.png" alt="Symbol" /></td>
<td></td>
</tr>
<tr>
<td><strong>Warning that the mobility device may not be used as a vehicle seat.</strong> This mobility device does not satisfy the requirements of ISO 7176-19.</td>
<td><img src="image3.png" alt="Symbol" /></td>
<td></td>
</tr>
</tbody>
</table>
| **This mobility device may be used as a vehicle seat, but only if it is equipped with a headrest that has been approved by Invacare for this purpose.**  
  • Always make sure that the mobility device is equipped with a headrest approved by Invacare before using it as a vehicle seat. | ![Symbol](image4.png) |   |

**Identification label sticker on the chassis at the middle.**  
For details see below.

**Identification of the position of the coupling lever for driving and push operation (only the right side is visible in the picture).**  
For details see below.

**Indication of service-free wheel hub screw**

**Battery wiring label with main fuse (1) under the battery cover.**  
For technicians only.
## Explanation of symbols on labels

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Date of manufacture" /></td>
<td>Date of manufacture</td>
</tr>
<tr>
<td><img src="image" alt="CE" /></td>
<td>This product complies with Directive 93/42/EEC concerning medical devices. The launch date of this product is stated in the CE declaration of conformity.</td>
</tr>
</tbody>
</table>
| ![Recycling](image) | This product has been supplied from an environmentally aware manufacturer. This product may contain substances that could be harmful to the environment if disposed of in places (landfills) that are not appropriate according to legislation.  
  - The 'crossed out wheelie bin' symbol is placed on this product to encourage you to recycle wherever possible.  
  - Please be environmentally responsible and recycle this product through your recycling facility at its end of life. |
| ![Drive](image) | This symbol indicates the “Drive” position of the coupling lever. In this position the motor is engaged and the motor brakes are operational. You can drive the mobility device.  
  - Note that for driving purposes both motors must always be engaged. |
| ![Push](image) | This symbol indicates the “Push” position of the coupling lever. In this position the motor is disengaged and the motor brakes are not operational. The mobility device can be pushed by an attendant and the wheels turn freely.  
  - Note that the remote must be switched off.  
  - Also note the information provided in section 6.8 Pushing the mobility device in freewheel mode, page 38. |
| ![Read](image) | Read the user manual |
3 Components

3.1 Main parts of the wheelchair

1 Push handle
2 Locking screw for adjusting armrest height
3 Locking screw for adjusting backrest angle
4 Disengaging lever
5 Special control unit for light
6 Remote
7 Legrest unlocking lever

3.2 Remotes

Your mobility device may be fitted with one of several different remotes. For information on the different functions and how to operate a particular remote, refer to its corresponding user manual (enclosed).

3.3 Lighting

Depending on the configuration of your mobility device, lighting is switched on and off using a special control unit or the remote.

Displays and controls of control unit

1 Switch control unit on / off
2 Activate / deactivate hazard lamp unit
3 Activate / deactivate left-hand direction indicator
4 Activate / deactivate right-hand direction indicator
5 Activate / deactivate lighting
Displays and controls of remote

11 Warning indicator
12 Left hand indicator
13 Light
14 Right hand indicator
15 LED for “light activated”
4 Accessories

4.1 Postural belts

A postural belt is an option which can either be fixed to the mobility device ex-works or can be retrofitted by your specialist dealer. If your mobility device is fitted with a postural belt, your specialist dealer will have informed you about fitting and usage.

The postural belt is used to help the mobility device user keep an optimum sitting position. Correct use of the belt assists the user in sitting securely, comfortably and well-positioned in the mobility device, especially for such users who do not have such a good sense of balance while sitting.

We recommend using the postural belt whenever the mobility device is used. The belt should be tight enough to ensure that you are sitting comfortably and that your body is in the correct sitting position.

4.1.1 Types of postural belts

Your mobility device can be fitted with the following postural belt types ex-works. If your mobility device has been fitted with a different belt to those listed below, please ensure that you have received the manufacturer’s documentation with regard to correct fitting and use.

Belt with metal buckle, adjustable both sides

Belt can be adjusted on both sides. This means that the buckle can be centrally positioned.

4.1.2 Adjusting the postural belt correctly

1. Ensure that you are sitting correctly, which means that you are sitting right at the back of the seat, your pelvis is positioned erect and as symmetrically as possible, not to the front, to the side or at one edge of the seat.
2. Position the postural belt so that your hipbones can be easily felt above the belt.
3. Adjust the belt length using one of the adjustment aids described above. The belt should be adjusted so that you can fit a flat hand between the belt and your body.
4. The buckle should be positioned as centrally as possible. In doing so, carry out adjustments on both sides as much as possible.
5. Check your belt every week to ensure that it is still in good working condition, to ensure it has no damage or wear, and that it is fixed properly to the mobility device. If the belt is only fastened with a bolted connection, ensure that the connection has not loosened or come undone. You can find more information about maintenance work on belts in the service manual, which is available from Invacare.

Belt with metal buckle, adjustable one side

Belt can only be adjusted on one side which can result in the buckle not sitting centrally.

4.2 Using the cane holder

If your mobility device is fitted with a cane holder, it can be used for the safe transport of a walking cane, underarm or forearm crutches. The cane holder consists of a plastic container (bottom) and a Velcro fastener (top).
CAUTION!
Risk of injury! A walking cane or crutches that are not secured during transport (on the user’s lap, for example) can cause injury to the user or other persons!
– During transport, walking canes or crutches should always be secured using a cane holder!

1. Open the upper Velcro fastener.
2. Place the lower end of the walking cane or the crutches in the container at the bottom.
3. The walking cane or the crutches can be secured at the upper end using the Velcro fastener.
5 Adjusting the mobility device to the user's seating posture

5.1 General information on adjusting the mobility device to the user's seating posture

⚠️ DANGER!
Risk of death, serious injury, or damage
Continued use of the mobility device that is not set to the correct specifications may cause erratic behavior of the mobility device resulting in death, serious injury, or damage.
- Performance adjustments should only be made by professionals of the healthcare field or persons fully conversant with this process and the driver's capabilities.
- After the mobility device has been set-up/adjusted, check to make sure that the mobility device performs to the specifications entered during the set-up procedure. If the mobility device does not perform to specifications, IMMEDIATELY turn the mobility device Off and re-enter set-up specifications. Contact Invacare, if mobility device still does not perform to correct specifications.

⚠️ DANGER!
Risk of death, serious injury, or damage
Attaching hardware that is loosely secured or missing could cause instability resulting in death, serious personal injury, or property damage.
- After ANY adjustments, repair or service and before use, make sure that all attaching hardware is present and tightened securely.

⚠️ WARNING!
Risk of injury or damage
Incorrect set up of this mobility device performed by users/caregivers or unqualified technicians can result in injury or damage.
- DO NOT attempt to set up this mobility device. Initial set up of this mobility device MUST be performed by a qualified technician.
- Adjustment by the user is only recommended after they have been given appropriate guidance by the healthcare professional.
CAUTION!
Damage to mobility device and accident hazard
It is possible that collisions can occur between mobility device components due to various combinations of adjustment options and their individual settings
– The mobility device is fitted with an individual, multiply adjustable seating system including adjustable legrests, armrests, a headrest or other options. These adjustment options are described in the following chapters. They are used to adapt the seat to the physical requirements and the condition of the user. When adapting the seating system and the seat functions to the user, ensure that no mobility device components collide.

Electrical adjustment options
– Please refer to the user manual for your remote for more information on operating electrical adjustment options.

5.2 Adjustment possibility for remote
The following information is valid for all seating systems.

CAUTION!
Risk of the remote being pushed backwards during an accidental collision with an obstacle, such as a doorframe or table, and the joystick being jammed against the armpad if the position of the remote is adjusted and all screws are not completely tightened
This will cause the mobility device to drive forward uncontrollably and potentially injure the mobility device user and any person standing in the way.
– When adjusting the position of the remote, always make sure to tighten all screws securely.
– If this should accidentally happen, immediately switch the mobility device electronics OFF at the remote.

CAUTION!
Risk of injury
When leaning on the remote, for example, when transferring into or out of the wheelchair, the remote holder may break and the user may fall out of the chair.
– Never lean on the remote as a support for, for example, transfer.
5.2.1 Adjusting the remote for the length of the user's arm

1. Loosen wing bolt A.
2. Shift the remote forwards or backwards to the desired distance.
3. Retighten the bolt.

5.2.2 Adjusting the height of the remote (only for swing-away remote supports)

Tools:
- 6 mm Allen key

1. Loosen Allen screw A.
2. Adjust remote to desired height.

5.2.3 Swivelling the remote to the side

If your mobility device is fitted with a swing-away remote holder, then the remote can be moved away to the side, for example, to drive up close to a table.

5.3 Adjusting the height of the armrests

1. Loosen wing screw A.
2. Adjust armrest to desired height.
3. Re-tighten wing screw.
**5.4 Adjusting the width of the armrests**

**WARNING!**
Serious injury hazard if one of the armrests falls out of its bracket because they have been adjusted to a width which exceeds the permissible value
- The width adjustment is fitted with small stickers with markings and the word "STOP". The armrests must never be pulled out further than the point at which the word "STOP" is completely legible!
- Always tighten the fixing screws properly once adjustments have been completed.

**Tools:**
- 8 mm Allen key

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>STOP</td>
<td>STOP</td>
</tr>
</tbody>
</table>

1. Loosen screw (1).
2. Adjust armrest to required position.
3. Retighten the screw.
4. Repeat this procedure for the second armrest.

---

**5.5 Adjusting the seat angle / seat height**

**5.5.1 Manual adjustment using perforated plates**
There are three perforated plates underneath the seat for adjusting the seat angle and the seat height. These perforated plates in connection with the adjustable rear holding plates result in a multitude of different setting possibilities.

The adjustment range of the seat height is 42.5 cm to 50 cm. The adjustment range of the seat angle is 22°. Note: The higher the seat setting, the smaller the adjustment range of the seat angle!

**Tools:**
- 5 mm Allen key
- 6 mm Allen key
- 13 mm jaw spanner
- Torque wrench
- Loctite medium-hard

The picture above shows the position of the perforated plates (1) and the holding plate fixing screws (2) for adjusting the seat height and seat angle.
Adjusting the mobility device to the user's seating posture

1. Loosen the rear fixing bolt on one side (in threaded bush 1) so that the holding plate can be swivelled upwards or downwards.
2. Under the front fixing bolts and take them out (depending on the position, the bolt is either in threaded bush 2 or 3).
3. Repeat the procedure on the other side.
4. Apply a screw blocker system to the bolt, reposition the bolt and tighten it to 25 Nm +/- 3 Nm.

The hinged rear perforated plates have five positions. These are labelled in the illustration above with the letters A to E.

All five positions can be used if the holding plates are in the lower position (see above). Only positions B, C, D and E are possible in the higher position! If position A is used, there will be a collision between the holding plate and the seat frames.

The following seat heights are available:

<table>
<thead>
<tr>
<th>Holding plate in lower position:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position of perforated plate:</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>D</td>
</tr>
<tr>
<td>E</td>
</tr>
</tbody>
</table>

The picture above shows the front perforated plates. The procedure is similar for the rear perforated plates. A 13 mm jaw spanner is required in addition to a 5 mm Allen key for adjusting the front perforated plates.

1. To adjust the seat height/seat angle, undo the bolt (1) with the open-ended spanner and remove it.
2. Adjust the perforated plate to the required height/angle.
3. Apply a screw blocker system to the bolt, insert the bolt again and tighten it to 40 Nm with the open-ended spanner.

The seat height and angle can also be adjusted using the rear holding plate.

• Low setting = hole combination 1 and 2.
• High setting = hole combination 1 and 3.
### Holding plate in higher position:

<table>
<thead>
<tr>
<th>Position of perforated plate:</th>
<th>Seat height:</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>50.5 cm (at 6° seat angle)</td>
</tr>
<tr>
<td>C</td>
<td>48.5 cm</td>
</tr>
<tr>
<td>D</td>
<td>49.5 cm</td>
</tr>
<tr>
<td>E</td>
<td>51.5 cm</td>
</tr>
</tbody>
</table>

#### 5.6 Adjusting the backrest

**CAUTION!**

Adjusting the seat tilt or the backrest angle changes the geometry of the mobility device and directly influences its dynamic stability!

- For details regarding dynamic stability, negotiating gradients and obstacles and the correct adjustment of seat tilt or backrest angle, refer to 6.5 Taking Obstacles, page 35 and Driving up and down gradients.

#### 5.6.1 Adjusting the backrest (standard seat) — manually with handscrews

1. Remove the screws (1) on both sides of the backrest that hold it in position.
2. Set the backrest to the desired angle by selecting a combination of one of the two holes in the backrest frame, and one of the six holes in the metal fixation plate.
3. Re-position screws and tighten them.

#### 5.7 Adjusting and removing the tray

**CAUTION!**

Injury hazard or material damage if a mobility device which is fitted with a table is transported in a vehicle

- If a table is fitted, always remove it before transporting the mobility device.

#### 5.7.1 Laterally adjusting the tray
Adjusting the mobility device to the user's seating posture

5.7.2 Adjusting the depth of the tray / removing the tray

1. Loosen wing-screw (A).
2. Adjust tray to desired depth (or remove it entirely).
3. Re-tighten screw.

5.7.3 Swinging the tray away to the side
The tray can be swivelled up and away to the side to allow the user to get in and out of the mobility device.

CAUTION!
Risk of injury! When the tray is raised it does not lock in place in this position!
- Do not tilt the tray up and leave it leaning in this position.
- Never attempt to drive with the tray tilted up.
- Always lower the tray in a controlled manner.

5.8 Standard 80° footrest (type Stream)

5.8.1 Swivel the legrest outward and/or remove

The small unlocking knob is in the legrest upper section (1). If the legrest is unlocked it can be swivelled to the inside or the outside to aid getting in, or removed completely.

1. Press the unlocking knob.
   The legrest is unlocked.
2. Swivel the legrest inwards or outwards.
3. Simply pull up to remove legrest.

5.8.2 Adjusting the length

Tools:
- 5 mm Allen key
1. Loosen the bolt (1) with the Allen key but do not remove it completely.
2. Adjust the legrest to the required length.
3. Retighten the screw.

5.9 Standard 80° footrest

5.9.1 Swivel the footrests outwards and/or remove them

The small release lever is to be found in the upper part of the legrest (1). When the legrest is released it can be swivelled inward or outward to facilitate access and also be removed completely.

5.9.2 Adjusting the length

Tools:
- 5 mm Allen key

1. Push the release lever inward or outward. The legrest is released.
2. Swivel the legrest inward or outward.
3. To remove the legrest simply pull upward.
Adjusting the mobility device to the user's seating posture

1. Loosen the screw (1) using the Allen key, but do not remove completely.
2. Set the legrest to the desired length.
3. Re-tighten the screw.

5.10 Manually height-adjustable legrest

5.10.1 Swivelling the legrest outward and/or removing
The unlocking knob is located on the top section of the legrests. When the legrest is unlocked, it can be swivelled to the inside or outside to facilitate getting in, or can be completely removed.

1. Press unlocking knob (1) and remove legrests upwards.

5.10.2 Setting the angle

CAUTION!
Risk of crushing
– Do not reach inside the swivelling range of the legrest.

CAUTION!
Risk of injury due to incorrect adjustment of the footrests and legrests
– Before and during every journey it is imperative to ensure that the legrests contact neither the caster wheels nor the ground.
1. Press the unlocking lever (1) down. Adjust the legrest to the required angle.
2. Release the unlocking lever. The legrest engages.

5.10.3 Adjusting the length of the legrest

⚠️ CAUTION! Risk of injury due to incorrect adjustment of the footrests and legrests
- Before and during every journey it is imperative to ensure that the legrests contact neither the caster wheels nor the ground

Tools:
- 5 mm Allen key

5.10.4 Adjusting the depth of the calf pad

The calf pad has four depth settings.

Tools:
- 4 mm Allen key
1. Swivel the calf pad to the front.
2. Release bolt (1) with the Allen key and remove.
3. Set the nut on the other side to the required depth.
4. Adjust the calf pad to match the depth of the nut, put the screw back in and tighten.

5.10.5 Adjusting the height of the calf pad

1. Loosen the hand screw (1).
2. Adjust to required position.
3. Retighten the wing nuts.
6 Usage

6.1 Driving

The maximum load capacity that is stated in the technical data only states that the system is designed for this mass in total. However, this does not mean that one can sit a person with this body weight in the mobility device without restrictions. Attention must be paid to the body proportions, such as height, weight distribution, abdominal belt, leg and calf strap and seat depth. These factors have a strong influence on driving features such as tilt stability and traction. The permissible axle loads in particular must be adhered to (refer to 11 Technical data, page 58). It may possibly be necessary to carry out adaptations to the seat system.

6.2 Before driving for the first time

Before you take your first trip, you should familiarize yourself well with the operation of the mobility device and with all operating elements. Take your time to test all functions and driving modes.

If installed, make sure to properly adjust and use the postural belt each time you use the mobility device.

Sitting comfortably = Driving safely

Before each trip, make sure that:

• You are within easy reach of all operating controls.
• The battery charge is sufficient for the distance intended to be covered.
• The postural belt (if installed) is in perfect order.

• The rear mirror (if installed) is adjusted so you can look behind at all times without having to bend forward or shift your seating position.

6.3 Parking and stationary

When parking your vehicle or if your vehicle is stationary for a prolonged period:

1. Switch the vehicle’s power system off (ON-/OFF key).
2. Activate your anti-theft lock, if existing.

6.4 Getting in and out of the mobility device

6.4.1 Removing the standard armrest in order to side transfer

1. Pull the plug A of the remote cable to disconnect the remote.
2. Loosen the knob B.
3. Remove the armrest from the holder.
6.4.2 Information about getting in and out

WARNING! Risk of serious injury or damage
Improper transfer techniques may cause serious injury or damage
- Before attempting transfers, consult a healthcare professional to determine proper transfer techniques for the user and type of wheelchair.
- Follow the instructions below.

If you do not have sufficient muscle strength, you should ask other persons for help. Use a sliding board, if possible.

Getting into the mobility device:
1. Position your mobility device as close as possible to your seat. This might have to be done by an attendant.
2. Align casters parallel to the drive wheels to improve stability during transfer.
3. Always switch your mobility device off.
4. Always engage both motor locks/clutches and free wheel hubs (if fitted) to prevent the wheels from moving.
5. Depending on the armrest type of your mobility device, detach the armrest or swivel it up.
6. Now slide into the mobility device.

Getting out of the mobility device:
1. Position your mobility device as close as possible to your seat.
2. Align casters parallel to the drive wheels to improve stability during transfer.
3. Always switch your mobility device off.
4. Always engage both motor locks/clutches and free wheel hubs (if fitted) to prevent the wheels from moving.
5. Depending on the armrest type of your mobility device, detach the armrest or swivel it up.
6. Now slide onto your new seat.

6.5 Taking Obstacles

6.5.1 Maximum obstacle height
You can find information about maximum obstacle heights in the chapter entitled 11 Technical data, page 58.

6.5.2 Safety information when taking obstacles

CAUTION! Risk of tipping over
- Never approach obstacles at an angle but at 90 degrees as shown below.
- Approach obstacles followed by a gradient with caution. If unsure whether the gradient is too steep or not, move away from the obstacle and if possible try to find another location.
- Never approach obstacles on an uneven and/or loose ground.
- Never drive with too low tire pressure.
- Put your backrest into an upright position before ascending an obstacle.
CAUTION!
Risk of falling out of the mobility device and damage to the mobility device such as broken casters
– Never approach obstacles that are higher than the maximum climbable obstacle height.
– Never let the footrest/legrest touch the ground when descending an obstacle.
– If unsure whether taking an obstacle is possible or not, move away from the obstacle and if possible find another location.

6.5.3 The correct way to take obstacles

The following instructions how to take obstacles also apply for attendants if the mobility device is fitted with an attendant control.

Ascending
1. Approach the obstacle or the curb slowly, head-on and at a right angle.
2. Depending on the wheel drive type, stop in one of the following positions:
   a. In the case of centrally driven mobility devices: 5 - 10 cm before the obstacle.
   b. For all other drives: approx. 30 - 50 cm in front of the obstacle.
3. Check the position of the front wheels. They must be in driving direction and at right angles to the obstacle.
4. Approach slowly and keep at a consistent speed until the rear wheels have also passed over the obstacle.

Ascending obstacles with a curb climber
1. Approach the obstacle or the curb slowly, head-on and at a right angle.
2. Stop in the following position: 30 – 50 cm in front of the obstacle.
3. Check the position of the front wheels. They must be in driving direction and at right angles to the obstacle.
4. Approach with full speed until the curb climber makes contact with the obstacle. The impetus will lift both front wheels over the obstacle.
5. Keep at a consistent speed until the rear wheels have also passed over the obstacle.
Descending
The approach to descend an obstacle is the same as to ascend it with the difference that you need not to stop before descending.

1. Descend the obstacle with medium speed.
   - When descending an obstacle too slowly it could happen that the antitippers get stuck and lift the drive wheels off the ground. Driving the mobility device is then no longer possible.

6.6 Driving up and down gradients
For information concerning the rated slope, refer to 11 Technical data, page 58.

CAUTION!
Risk of tipping over
- Only ever drive downhill at a maximum of 2/3 of the top speed. Avoid sudden changes of direction or abrupt braking when driving on slopes.
- Always return the backrest of your seat or the seat tilt (if adjustable seat tilt is available) to an upright position before ascending slopes. We recommend that you position the seat backrest or the seat tilt slightly to the rear before descending slopes.
- Always lower the lifter (if fitted) to its lowest position before ascending or descending a slope.
- Never attempt to ascend or descend a slope on slippery surfaces or where there is a risk of skidding (such as wet pavement, ice etc).
- Avoid trying to get out of the vehicle on an incline or a gradient.
- Always drive straight in the direction the road or path you are on goes, rather than attempting to zigzag.
- Never attempt to turn around on an incline or a slope.

CAUTION!
Braking distance is much longer on a downhill slope than on even terrain
- Never drive down a slope that exceeds the rated slope (refer to 11 Technical data, page 58).
6.7 Use on public roads

If you wish to use your mobility device on public roads and lighting is required by national legislation, then your mobility device needs to be fitted with an appropriate lighting system.

Contact your Invacare dealer if you have any questions.

6.8 Pushing the mobility device in freewheel mode

The motors of the mobility device are equipped with automatic brakes, preventing that the mobility device starts rolling out of control when the remote is switched off. When pushing the mobility device manually whilst freewheeling, the magnetic brakes must be disengaged.

The wheelchair disengaging mechanism is fitted with a gas pressure spring which prevents overloading the disengager. When the drive wheels are under torque load - for example if the wheelchair is on an incline - the gas pressure spring is activated. When the engaging lever is pressed forwards it does not remain in the "Pushed" position, but moves automatically back to the "Drive" position. To disengage the drive, the drive wheels must be unloaded by moving the wheelchair slightly forwards and backwards again.

The motors may only be disengaged by an attendant, not by the user.

This ensures that the motors are only disengaged if an attendant is available to secure the wheelchair and prevent unintended rolling.

The lever for disengaging the motors is on the rear right side on the wheelchair chassis.

6.8.1 Disengaging Motors

CAUTION! Risk of the mobility device running away

- When the motors are disengaged (for push operation whilst freewheeling), the electromagnetic motor brakes are deactivated. When the mobility device is parked, the levers for engaging and disengaging the motors must without fail be locked firmly into the "DRIVE" position (electromagnetic motor brakes activated).

- The wheelchair disengaging mechanism is fitted with a gas pressure spring which prevents overloading the disengager. When the drive wheels are under torque load - for example if the wheelchair is on an incline - the gas pressure spring is activated. When the engaging lever is pressed forwards it does not remain in the "Pushed" position, but moves automatically back to the "Drive" position. To disengage the drive, the drive wheels must be unloaded by moving the wheelchair slightly forwards and backwards again.

- The motors may only be disengaged by an attendant, not by the user.

This ensures that the motors are only disengaged if an attendant is available to secure the wheelchair and prevent unintended rolling.

The lever for disengaging the motors is on the rear right side on the wheelchair chassis.
Disengaging motors:
1. Switch off remote.
2. Withdraw the locking pin (1). Push the engaging lever (2) forwards. If necessary, move the wheelchair slightly forwards and backwards during disengaging.
   The motors are disengaged.

Engaging motors:
1. Pull the engaging lever (2) to the rear.
   The motors are engaged.
7 Electrical system

7.1 Electronics protection system
The vehicle drive electronics is fitted with an overload protection.

If the drive is severely overloaded over a long period (for example, during steep climbs) and, above all, at simultaneous high external temperatures, the electronic system can overheat. In this case, the vehicle performance is gradually reduced until it comes to a standstill. The status display shows a corresponding flash code (please refer to the user manual for your remote). If you switch the drive electronics off and then on again, the error message is deleted and the electronics can be switched on again. It can however take up to five minutes until the electronics has cooled down enough for the drives to apply their full performance.

If the drive is blocked due to an insurmountable obstacle, for example, a curb or similar which is too high, and the driver attempts to run the drive for more than 20 seconds against this obstacle, the electronic system switches the drives off to avoid damage. The status display shows a corresponding flash code (please refer to the user manual for your remote). If you switch the drive electronics off and then on again, the error message is deleted and the electronics can be switched on again.

A defective main fuse may be replaced only after checking the entire electric system. An specialized Invacare dealer must perform the replacement. You can find information on the fuse type in 11 Technical data, page 58.

7.2 Batteries
Power is supplied by two 12 V batteries. The batteries are maintenance-free and only need regular charging.

In the following, you find information on how to charge, handle, transport, store, maintain, and use batteries.

7.2.1 General information on charging
New batteries should always be fully charged once before their first use. New batteries will be at their full capacity after having run through approx. 10 - 20 charging cycles (break-in period). This break-in period is necessary to fully activate the battery for maximum performance and longevity. Thus, range and running time of your mobility device could initially increase with use.

Gel/AGM lead acid batteries do not have a memory effect as NiCd batteries.

7.2.2 General instructions on charging
Follow the instructions listed below to ensure safe use and longevity of the batteries:

- Charge 18 hours prior to initial usage.
- We recommend charging the batteries daily after every discharge even after partly discharge, as well as each night over night. Depending on the level of discharge, it can take up to 12 hours until the batteries are fully charged again.
- When the battery indicator reached the red LED range, charge the batteries for 16 hours minimum, neglecting the charge complete display!
- Try to provide a 24 hour charge once a week to make sure that both batteries are fully charged.
- Do not cycle your batteries at a low state of charge without regularly recharging them fully.
- Do not charge your batteries under extreme temperatures. High temperatures above 30 °C are not recommended for charging as well as low temperatures below 10 °C.
• Use only charging devices in Class 2. This class of chargers may be left unattended during charging. All charging devices which are supplied by Invacare comply with these requirements.
• You cannot overcharge the batteries when using the charger supplied with your mobility device, or a charger that has been approved by Invacare.
• Protect your charger from sources of heat such as heaters and direct sunlight. If the battery charger overheats, charging current will be reduced and the charging process delayed.

7.2.3 How to charge the batteries
Refer to the user manuals for your remote and battery charger for the position of the charging socket and further information about charging the batteries.

![WARNING!]
Risk of explosion and destruction of batteries if the wrong battery charger is used
– Only ever use the battery charger supplied with your mobility device, or a charger that has been approved by Invacare.

![WARNING!]
Risk of electric shock and damage to the battery charger if it gets wet
– Protect the battery charger from water.
– Always charge in a dry environment.

![WARNING!]
Risk of short circuit and electric shock if the battery charger has been damaged
– Do not use the battery charger if it has been dropped or damaged.

![WARNING!]
Risk of electric shock and damage to the batteries
– NEVER attempt to recharge the batteries by attaching cables directly to the battery terminals.

![WARNING!]
Risk of fire and electric shock if a damaged extension cable is used
– Only ever use an extension cable if it is absolutely necessary. In case you must use one, make sure it is in good condition.

![WARNING!]
Risk of injury if using the mobility device during charging
– DO NOT attempt to recharge the batteries and operate the mobility device at the same time.
– DO NOT sit in the mobility device while charging the batteries.

1. Switch off the mobility device.
2. Connect the battery charger to the charger socket.
3. Connect the battery charger to the power supply.

7.2.4 How to disconnect the mobility device after charging
1. Once charging is complete, first disconnect the battery charger from the power supply, then disconnect the plug from the remote.

7.2.5 Storage and Maintenance
Follow the instructions listed below to ensure safe use and longevity of the batteries:
Always store the batteries fully charged.

Do not leave the batteries in a low state of charge for an extended length of time. Charge a discharged battery as soon as possible.

In case your mobility device is not used for a longer period of time (that is more than two weeks), the batteries must be charged at least once a month to maintain a full charge and always be charged before use.

Avoid hot and cold extremes when storing. We recommend to store batteries at a temperature of 15 °C.

Gel and AGM batteries are maintenance-free. Any performance issues should be handled by a properly trained mobility device technician.

### 7.2.6 Instructions on using the batteries

**CAUTION!**

Risk of damaging the batteries.
- Avoid ultra-deep discharges and never drain your batteries completely.

Pay attention to the Battery Charge Indicator! Charge the batteries when the Battery Charge Indicator shows that battery charge is low.

How fast the batteries discharge depends on many circumstances, such as ambient temperature, condition of the surface of the road, tire pressure, weight of the driver, way of driving and utilisation of lighting, if fitted.

Try to charge the batteries always before you reach the red LED range.

The last 3 LED (two red and one orange) mean a remaining capacity of about 15 %.

Driving with flashing red LED’s means an extreme stress for the battery and should be avoided under normal circumstances.

When only one red LED is flashing, the Battery Safe feature is enabled. From this time, speed and acceleration is reduced drastically. It will allow you to move the mobility device slowly out of a dangerous situation before the electronic finally cuts off. This is deep discharging and should be avoided.

Be aware that for temperatures below 20 °C, the nominal battery capacity starts to decline. For example, at -10 °C the capacity is reduced to about 50 % of the nominal battery capacity.

To avoid damaging the batteries, never allow them to be fully discharged. Do not drive on heavily discharged batteries if it is not absolutely necessary, as this will strain the batteries unduly and shorten their life expectancy.

The earlier you recharge the batteries, the longer they live.

The depth of discharge affects the cycle life. The harder a battery has to work, the shorter is its life expectancy.

Examples:
- One deep discharge stresses the same as 6 normal cycles (green/orange display off).
- The battery life is about 300 cycles at 80 % discharge (first 7 LED off), or about 3000 cycles at 10 % discharge (one LED off).

The number of LED can vary depending on the remote type.

Under normal operation, once a month the battery should be discharged until all green and orange LED are off. This should be done within one day. A 16 hour charge afterwards is necessary as reconditioning.

### 7.2.7 Transporting batteries

The batteries supplied with your mobility device are not hazardous goods. This classification is based on the German GGVS Hazardous Goods Road Transport Ordinances, and the IATA/DGR Hazardous
Goods Rail Transport / Air Transport Ordinances. Batteries may be transported without restrictions, whether by road, rail or by air. Individual transport companies have, however, guidelines which can possibly restrict or forbid certain transport procedures. Please ask the transport company regarding each individual case.

7.2.8 General instructions on handling the batteries

- Never mix and match different battery manufactures or technologies, or use batteries that do not have similar date codes.
- Never mix gel with AGM batteries.
- The batteries reach their end of life when the drive range is significantly smaller than usual. Contact your dealer or service technician for details.
- Always have your batteries installed by a properly trained mobility device technician or a person with adequate knowledge. They have the necessary training and tools to do the job safely and correctly.

7.2.9 How to handle damaged batteries correctly

**CAUTION!**
Corrosion and burns from acid leakage if batteries are damaged
- Remove clothes that have been soiled by acid immediately.

After contact with skin:
- Immediately wash affected area with lots of water.

After contact with eyes:
- Immediately rinse eyes under running water for several minutes; consult a physician.

- Always wear safety goggles and appropriate safety clothing when handling damaged batteries.
- Place damaged batteries in an acid-resistant receptacle immediately after removing them.
- Only ever transport damaged batteries in an appropriate acid-resistant receptacle.
- Wash all objects that have come into contact with acid with lots of water.

Disposing of dead or damaged batteries correctly

Dead or damaged batteries can be given back to your dealer or directly to Invacare.

7.2.10 Removing the batteries

**WARNING!**
Risk of fire and burns if battery poles are bridged
- When replacing the batteries the battery poles MUST NOT come into contact with metal parts of the wheelchair causing bridging.
- Be sure to replace the battery pole caps after the batteries have been replaced.

**Tools:**
- 11 mm open-ended spanner
1. Remove the battery cover.
2. Pull the battery pole caps (1) upward and push back in order to reach the battery poles.
3. Use the open-ended spanner to loosen the battery pole clamps.
4. Remove the batteries to the rear.
8 Transport

8.1 Transport — General information

**WARNING!**
Risk of death or serious injury to the mobility device user and potentially any other nearby occupant of the vehicle, if a mobility device is secured using a 4-point tie-down system available from a third party supplier and the unladen weight of the mobility device exceeds the maximum weight for which the tie-down system is certified
– Make sure the weight of the mobility device does not exceed the weight for which the tie-down system is certified. Consult the tie-down manufacturer's documentation.
– If you are unsure how much your mobility device weighs, then you must have it weighed using calibrated scales.

**CAUTION!**
Injury hazard or material damage if a mobility device which is fitted with a table is transported in a vehicle
– If a table is fitted, always remove it before transporting the mobility device.

8.2 Transferring the mobility device to a vehicle

**WARNING!**
The mobility device is in danger of tipping over if it is transferred to a vehicle while the driver is still seated in the mobility device
– Transfer the mobility device without the driver whenever possible.
– If the mobility device with the driver has to be transferred to a vehicle using a ramp, ensure that the ramp does not exceed the rated slope (refer to 11 Technical data, page 58).
– If the mobility device has to be transferred to a vehicle using a ramp that does exceed the rated slope (refer to 11 Technical data, page 58), a winch must then be used. An attendant can then safely monitor and assist the transfer process.
– Alternatively, a platform lift may be used.
– Ensure that the total weight of the mobility device including the user does not exceed the maximum permitted total weight for the ramp or platform lift.
– The mobility device should always be transferred to a vehicle with the backrest in an upright position, the seat lifter lowered and the seat tilt in the upright position (refer to Driving up and down gradients).
WARNING!  
Risk of injury and damage to the mobility device  
If the mobility device is to be transferred to a vehicle via a lift, when the remote is turned on, there is a risk that the device may act erratically and fall off the lift.  
– Before transferring the mobility device via a lift, turn off the product and disconnect either the bus cable from the remote or the batteries from the system.

1. Drive or push your mobility device into the transport vehicle using a suitable ramp.

8.3 Use of the mobility device as a seat in a vehicle  
The following section does not apply to models or configurations which may not be used as a vehicle seat. These are identified by the following label on the lashing eyes and the identification label sticker:

WARNING!  
Risk of injury  
Safety restraint devices must only be used when the wheelchair user’s weight is 22 kg or more.  
– When the user weight is lower than 22 kg, do not use the wheelchair as a seat in a vehicle.

CAUTION!  
There is a danger of injury if the mobility device is not properly secured during use as a vehicle seat.  
– If possible, the user should always leave the mobility device to use a vehicle seat and the safety belts provided with the vehicle.  
– The mobility device should always be anchored facing in the transport vehicle’s intended direction of travel.  
– The mobility device must always be secured in accordance with the mobility device and anchoring system manufacturers’ user manual.  
– Always remove and secure any accessory parts fixed to the mobility device such as chin controls or tables.  
– If your mobility device is fitted with an angle adjustable backrest, then it must be placed in an upright position.  
– Fully lower elevated legrests, if fitted.  
– Fully lower the seat lifter, if fitted.

CAUTION!  
Risk of injury exists if a mobility device that is not fitted with leak-proof batteries is transported in a vehicle.  
– Only ever use leak-proof batteries.

CAUTION!  
Risk of injury or damage to the mobility device or to the transporting vehicle, if the legrests are in a raised position while the mobility device is used as a vehicle seat.  
– Always completely lower height-adjustable legrests, if fitted.
In order to use a mobility device as a motor vehicle seat, it needs to be fitted with attachment points to enable anchoring in the motor vehicle. These accessories may be included in the standard scope of mobility device order and delivery in some countries (UK for example), but may also be obtained from Invacare as an option in other countries.

This mobility device complies with the requirements of ISO 7176-19 and may be used as a vehicle seat in connection with an anchoring system that has been checked and approved in accordance with ISO 10542. The transporting vehicle must be professionally converted to anchor the mobility device. Contact your vehicle's manufacturer for more information.

The mobility device has undergone a crash test in which it was anchored in the transporting vehicle's direction of travel. Other configurations were not tested. The crash test dummy was secured using pelvic and upper body safety belts. Both types of safety belt should be used in order to minimize the risk of injuries to head or upper body.

- **Invacare tests with a 4-point tie-down system from Unwin Safety Systems.**
  - Contact Unwin for more information on how to obtain such a system for your country and vehicle type. For information concerning the curb weight, refer to 11 Technical data, page 58.

It is imperative that the mobility device is inspected by an authorized dealer before being used again after being involved in a crash. Alterations to the mobility device anchoring points may not be carried out without the manufacturer's permission.

### 8.3.1 How the wheelchair is anchored in a vehicle

The mobility device is fitted with four anchoring points, which are labelled with the symbol shown on the right. Snap hooks or belt loops can be used for fixation.

1. Secure the mobility device at the front (1) and at the rear (2) with the anchoring system belts.
2. Secure the mobility device by tensioning the belts in accordance with the anchoring system manufacturer's user manual.
8.3.2 How the user is secured within the wheelchair

**CAUTION!**
There is a risk of injury if the user is not properly secured within the mobility device

- Even if the mobility device is fitted with a postural belt, this is no substitute for a proper safety belt which complies with ISO 10542 in the transport vehicle. Always use the safety belt installed in the transport vehicle.
- Safety belts must be in contact with the user's body. They must not be held at a distance from the user's body using parts of the mobility device such as armrests or wheels.
- Safety belts must be pulled as tightly as possible without causing the user discomfort.
- Safety belts must not be positioned while twisted.
- Ensure that the third seat belt anchorage point is not fixed directly to the vehicle floor, but to one of the vehicle uprights.

**CAUTION!**
Injury hazard during use of the mobility device as a vehicle seat if a headrest is wrongly adjusted or not installed

This can cause the neck to be hyperextended during collisions.
- A headrest must be installed. The headrest optionally supplied for this mobility device by Invacare is perfectly suitable for use during transport.
- The headrest must be adjusted to the user's ear height.

Seat belts may not be held at a distance from the user's body using parts of the wheelchair such as armrests or wheels.

The pelvic belt should be positioned in the area between the user's pelvis and thighs so that it is unobstructed and not too loose. The ideal angle of the pelvic belt to the horizontal is between 45° and 75°.
The maximum permissible angle is between 30° and 75°. The angle should never be less than 30°!

The safety belt installed in the transporting vehicle should be applied as shown in the illustration above.

1) Center line of the body
2) Center of the sternum

8.4 Transporting the mobility device without occupant

CAUTION!
Risk of injury
- If you are unable to fasten your mobility device securely in a transport vehicle, Invacare recommends that you do not transport it.

Your mobility device may be transported without restrictions, whether by road, rail or by air. Individual transport companies have, however, guidelines which can possibly restrict or forbid certain transport procedures. Please ask the transport company regarding each individual case.

- Before transporting your mobility device, make sure the motors are engaged and that the remote is switched off. Invacare strongly recommends that you additionally disconnect or remove the batteries. Refer to Removing the batteries.
- Invacare strongly recommends securing the mobility device to the floor of the transporting vehicle.
9 Maintenance

9.1 Maintenance introduction
The term “Maintenance” means any task performed to ensure that a medical device is in good working order and ready for use as intended. Maintenance encompasses different areas, such as everyday care and cleaning, inspection checks, repair tasks and refurbishment.

Have your vehicle checked once a year by an authorised Invacare dealer in order to maintain its driving safety and roadworthiness.

9.2 Cleaning the mobility device
When cleaning the mobility device, pay attention to the following points:

• Only use a damp cloth and gentle detergent.
• Do not use any abrasive or scouring agents.
• Do not subject the electronic components to any direct contact with water.
• Do not use any high-pressure cleaning devices.

Disinfection
Spray or wipe disinfection using a tested and recognised product is permitted. A list of the current permitted disinfectants is available from the Robert Koch Institute at http://www.rki.de.

9.3 Inspection checks
The following table lists inspection checks that should be performed by the user and their intervals. If the mobility device fails to pass one of the inspection checks, refer to the chapter indicated or contact your authorised Invacare dealer. A more comprehensive list of inspection checks and instructions for maintenance work can be found in the service manual for this device, which can be obtained from Invacare. That manual, however, is intended to be used by trained and authorized service technicians, and describes tasks which are not intended to be performed by the user.

<table>
<thead>
<tr>
<th>Item</th>
<th>Inspection check</th>
<th>If inspection is not passed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal horn</td>
<td>Check for correct function.</td>
<td>Contact your dealer.</td>
</tr>
<tr>
<td>Lighting system</td>
<td>Check that all lights, such as turn indicators, head lamps and tail lights, are functioning correctly.</td>
<td>Contact your dealer.</td>
</tr>
<tr>
<td>Batteries</td>
<td>Make sure the batteries are charged. See the user manual provided with your remote for a description of the Battery Charge Indicator.</td>
<td>Charge the batteries (refer to 7.2.3 How to charge the batteries, page 41).</td>
</tr>
</tbody>
</table>
## 9.3.2 Weekly

<table>
<thead>
<tr>
<th>Item</th>
<th>Inspection check</th>
<th>If inspection is not passed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armrests /side parts</td>
<td>Check that armrests are firmly attached in their holders and do not wobble.</td>
<td>Tighten the screw or clamping lever that holds the armrest (see chapter 5 Adjusting the mobility device to the user's seating posture, page 23). Contact your dealer.</td>
</tr>
<tr>
<td>Tires (pneumatic)</td>
<td>Check that the tires are undamaged.</td>
<td>Contact your dealer.</td>
</tr>
<tr>
<td></td>
<td>Check that the tires are inflated to the correct pressure.</td>
<td>Inflate the tire to the correct pressure (see chapter 11 Technical data, page 58). Repair the inner tube if you have a flat tire (see chapter 9.6 Repair Instructions, page 54) or contact your dealer to have it repaired.</td>
</tr>
<tr>
<td>Tires (puncture-proof)</td>
<td>Check that the tires are undamaged.</td>
<td>Contact your dealer.</td>
</tr>
</tbody>
</table>

## 9.3.3 Monthly

<table>
<thead>
<tr>
<th>Item</th>
<th>Inspection check</th>
<th>If inspection is not passed</th>
</tr>
</thead>
<tbody>
<tr>
<td>All upholstered parts</td>
<td>Check for damage and wear.</td>
<td>Contact your dealer.</td>
</tr>
<tr>
<td>Removable legrests</td>
<td>Check whether the legrests can be fixed securely and whether the loosening mechanism is properly operable.</td>
<td>Contact your dealer.</td>
</tr>
<tr>
<td>Casters</td>
<td>Check that casters rotate and swivel freely.</td>
<td>Contact your dealer.</td>
</tr>
<tr>
<td>Drive wheels</td>
<td>Check that the drive wheels rotate without wobbling. It is easiest to have someone stand behind the mobility device and observe the drive wheels as you drive away from them to do this.</td>
<td>Contact your dealer.</td>
</tr>
<tr>
<td>Electronics and connectors</td>
<td>Check all cables for damage and all connecting plugs for snug fit.</td>
<td>Contact your dealer.</td>
</tr>
</tbody>
</table>

## 9.3.4 Inspections performed

It is confirmed by stamp and signature that all jobs listed in the inspection schedule of the service and repair instructions have been properly performed. The list of the inspection jobs to be performed can be found in the service manual which is available through Invacare.
<table>
<thead>
<tr>
<th>Delivery Inspection</th>
<th>1st Annual Inspection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Stamp of authorized dealer / Date / Signature</td>
<td>Stamp of authorized dealer / Date / Signature</td>
</tr>
<tr>
<td><strong>2nd Annual Inspection</strong></td>
<td><strong>3rd Annual Inspection</strong></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Stamp of authorized dealer / Date / Signature</td>
<td>Stamp of authorized dealer / Date / Signature</td>
</tr>
</tbody>
</table>
9.4 Short-term storage

In case a serious fault is detected, a number of safety mechanisms are built into your mobility device and will protect it. The controller prevents your mobility device from driving.

When the mobility device is in such a condition and while waiting for repair:

1. Switch off power.
2. Disconnect the batteries.
   Depending on the mobility device model, you can either remove the battery packs or disconnect the batteries from the power module. Refer to the corresponding chapter about disconnecting the batteries.
3. Contact your dealer.

9.5 Long-term storage

In case your mobility device is not used for a longer period of time, you need to prepare it for storage to ensure a longer life for your mobility device and batteries.

Storing mobility device and batteries

- We recommend to store the mobility device at a temperature of 15° C, avoid hot and cold extremes when storing to ensure a long service life of the product and batteries.
- The components are tested and approved for greater temperature ranges as detailed below:
  - Allowable temperature range to store the mobility device is -40° up to 65° C.
  - Allowable temperature range to store batteries is -25° up to 65° C.
- Even not being used, batteries discharge themselves. Best practice is to disconnect the battery supply from the power module if storing the mobility device longer than two weeks. Depending on the mobility device model, you can either remove the battery packs or disconnect the batteries from the power module. Refer to the corresponding chapter about disconnecting the batteries. If in doubt which cable to disconnect, contact your dealer.
- Batteries should always be fully charged before storing.
• If storing the mobility device longer than four weeks, check the batteries once a month and recharge as needed (before gauge reads half full) to avoid damage.
• Store in a dry, well-ventilated environment protected from outer influences.
• Slightly overinflate pneumatic tires.
• Position the mobility device on flooring that is not discolored by contact with tire rubber.

Preparing mobility device for use
• Re-connect the battery supply to the power module.
• The batteries must be charged before use.
• Have the mobility device checked by an authorized Invacare dealer.

9.6 Repair Instructions

⚠️ Important information about maintenance work tools!
– Some maintenance work which is described in this manual and can be carried out by the user without problems require the correct tools for proper work. If you do not have the correct tool available we do not recommend that you try to carry out the relevant work. In this case, we urgently recommend that you contact an authorised specialist workshop.

The following are instructions on maintenance and repairs that can be performed by the user. For the specifications of spare parts please see 11 Technical data, page 58, or consult the service manual, available from Invacare (in this connection please see the addresses and phone numbers at the end of this user manual). In case you require assistance, please contact your Invacare dealer.

CAUTION!
Risk of damage or injury if the vehicle is accidentally set into motion during repairs
– Switch the power off (ON/OFF Button).
– Engage the motors.
– Secure the vehicle against rolling away by placing wedges under the wheels.

CAUTION!
Risk of hands and feet being crushed by the weight of the wheelchair
– Pay attention to your hands and feet.
– Use the correct lifting techniques.

9.6.1 Reparing a flat rear tire (wheel rim type 3.00-8")

⚠️ Tools:
• torque spanner with:
  – 5 mm Allen key bit
  – Torx bit T40
• tightening kit
• wooden block (approx. 12 x 30 cm for jacking up the vehicle)
• repair kit for tire repair or a new inner tube
• talcum powder
Removing the wheel

1. Raise the vehicle and place wooden blocks under it to support it.
2. Remove the four countersunk bolts TX40 using the Torx bit.
3. Pull the wheel off the hub.

Repairing flat tires

CAUTION!
Risk of explosion
The wheel explodes if the air pressure has not been released from the wheel before the wheel rim is removed.
- Always let all the air out of the tire before removing the rim.

1. Remove the valve cap.
2. Let the air escape completely out of the tire by pressing the pin in the centre of the valve firmly in.
3. Remove the 5 cylinder head screws (reverse side of wheel, A) using the Allen key bit.
4. Remove the wheel rim halves from the wheel.
5. Remove the inner tube from the wheel.
6. Repair the inner tube and re-fit it, or replace it with a new one.
   - If the old inner tube has been repaired and is to be used again, and became wet during repair, it is easier to replace it if it is lightly dusted with talcum powder beforehand.
   - Installation takes place in reverse order. Always ensure that the wheel is replaced on the same side and in the same direction as it was removed.
7. Apply the wheel rim halves to the wheel again.
8. Inflate the tire a little.
9. Place the cylinder head screws in the wheel rim and tighten the screws with 10 Nm.
   Ensure that the inner tube is not clamped between the wheel rim halves.
10. Ensure that the tire is contacting the wheel rim directly.
11. Inflate the tire to the recommended pressure.
12. Ensure that the tire is still closely contacting the wheel rim.
13. Screw the valve cap on again.

**Mounting the wheel**

**CAUTION!**

*Risk of injury from wheels coming loose*
If the drive wheels are insufficiently secured during mounting, they can come loose when driving.
– When mounting the drive wheels tighten the TX40 countersunk bolts of the drive wheels with 30 Nm.
– Always use new bolts with an undamaged coating.

1. Fit the wheel again.
2. Insert the four new countersunk bolts and tighten with 30 Nm.
10 After Use

10.1 Reconditioning
The product is suitable for reuse. To recondition the product for a new user, carry out the following actions:

- Cleaning and disinfection. Refer to 9 Maintenance, page 50.
- Inspection according to service plan. Consult service instructions, available from Invacare.
- Adaptation to the user. Refer to 5 Adjusting the mobility device to the user's seating posture, page 23.

10.2 Disposal
- The equipment wrapping is potentially recyclable.
- The metal parts are used for scrap metal recycling.
- The plastic parts are used for plastic recycling.
- Electric components and printed circuit boards are disposed of as electronic scrap.
- Exhausted or damaged batteries can be returned to your medical equipment supplier or Invacare.
- Disposal must be carried out in accordance with the respective national legal provisions.
- Ask your city or district council for details of the local waste management companies.
## 11 Technical data

### 11.1 Technical specifications

The technical information provided hereafter applies to a standard configuration or represents maximum achievable values. These can change if accessories are added. The precise changes to these values are detailed in the sections for the respective accessories.

Note that in some cases the measured values may vary up to ± 10 mm.

<table>
<thead>
<tr>
<th>Permissible operating and storage conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range for operation according to ISO 7176-9:</td>
</tr>
<tr>
<td>Recommended storage temperature:</td>
</tr>
<tr>
<td>Temperature range for storage according to ISO 7176-9:</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motors</td>
</tr>
<tr>
<td>Batteries</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Main fuse</td>
</tr>
<tr>
<td>Degree of protection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Charging device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output current</td>
</tr>
<tr>
<td>Output voltage</td>
</tr>
</tbody>
</table>
### Drive wheel tires

<table>
<thead>
<tr>
<th>Tire type</th>
<th>• 3.00 - 8&quot; pneumatic or puncture-proof</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire pressure</td>
<td>The recommended maximum tire pressure in bar or kpa is marked on the side wall of the tire or the rim. If more than one value is listed, the lower one in the corresponding units applies. (Tolerance = -0.3 bar, 1 bar = 100 kpa)</td>
</tr>
</tbody>
</table>

### Caster tires

<table>
<thead>
<tr>
<th>Tire type</th>
<th>• 220 puncture-proof</th>
</tr>
</thead>
</table>

### Driving characteristics

| Speed                         | • 6 km/h  
<table>
<thead>
<tr>
<th></th>
<th>• 9 km/h</th>
</tr>
</thead>
</table>
| Min. braking distance         | • 1000 mm (6 km/h)  
|                              | • 1800 mm (9 km/h)   |
| Rated slope$^2$               | • 10° (18 %) according to manufacturer’s specifications with 130 kg payload, 4° seat angle, 20° backrest angle |
| Max. climbable obstacle height| • 50 mm               |
| Turning diameter              | • 1660 mm            |
| Pivot width                   | • 1450 mm            |
| Drive range in accordance with ISO 7176-4:2008$^3$ | • 26 km (with 2 x 12 V / 60 Ah (C20) leakproof/gel) |

### Dimensions according to ISO 7176-15

<table>
<thead>
<tr>
<th>Total height</th>
<th>• 1000 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. total width</td>
<td>• 640 mm</td>
</tr>
<tr>
<td>Total length (incl. standard legrests)</td>
<td>• 1060 mm</td>
</tr>
</tbody>
</table>

1534065-K
### Dimensions according to ISO 7176–15

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stowage length</td>
<td>815 mm</td>
</tr>
<tr>
<td>Stowage width</td>
<td>630 mm</td>
</tr>
<tr>
<td>Stowage height</td>
<td>966 mm</td>
</tr>
<tr>
<td>Ground clearance</td>
<td>80 mm</td>
</tr>
<tr>
<td>Seat height (with manual seat angle adjuster)</td>
<td>490 – 592 mm</td>
</tr>
<tr>
<td>Seat width (armrest adjustment range in brackets)</td>
<td>495 – 545 mm (450 – 505 mm)</td>
</tr>
<tr>
<td>Seat depth</td>
<td>410 / 460 / 520 mm</td>
</tr>
<tr>
<td>Backrest height</td>
<td>540 mm</td>
</tr>
<tr>
<td>Seat cushion thickness</td>
<td>50 mm</td>
</tr>
<tr>
<td>Backrest angle (manual)</td>
<td>92.45°, 103.3°, 111.6°, 117.2°, 125.3°, 128.8°</td>
</tr>
<tr>
<td>Armrest height</td>
<td>255 – 330 mm</td>
</tr>
<tr>
<td>Armrest length</td>
<td>340 mm</td>
</tr>
<tr>
<td>Horizontal location of axle</td>
<td>111 mm</td>
</tr>
<tr>
<td>Legrest length</td>
<td>395 – 430 mm</td>
</tr>
<tr>
<td>Seat angle (manual)</td>
<td>–8.2° … +32°</td>
</tr>
</tbody>
</table>

### Weight

<table>
<thead>
<tr>
<th>Weight</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb weight</td>
<td>105 kg</td>
</tr>
</tbody>
</table>

### Component weights

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batteries 50 Ah</td>
<td>approx. 15 kg per battery</td>
</tr>
<tr>
<td>Batteries 60 Ah</td>
<td>approx. 17.4 kg per battery</td>
</tr>
</tbody>
</table>
Payload

Max. payload • 130 kg

Axle loads

Max. front axle load • 142 kg
Max. rear axle load • 153 kg

1 IPX4 classification means that the electrical system is protected against spray water.

2 Static stability according to ISO 7176-1 = 9° (15.8 %)
   Dynamic stability according to ISO 7176-2 = 6° (10.5 %)

3 Note: The drive range of a mobility device is strongly influenced by external factors, such as the speed setting of the wheelchair, the charging state of the batteries, surrounding temperature, local topography, road surface characteristics, tire pressure, weight of user, drive style and use of batteries for lighting, servos etc.

   The specified values are theoretical maximum achievable values measured according to ISO 7176-4:2008.

4 Measured without seat cushion

5 Width adjustable for side panel adjustment

6 Horizontal distance of wheel axle from intersection of loaded seat and backrest reference planes

7 The actual curb weight depends on the fittings your mobility device has been supplied with. Every Invacare mobility device is weighed when leaving the works. Refer to the nameplate for the curb weight (including batteries) measured.
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