



Küschall® Element

Manual Wheelchair
en User Manual

This manual MUST be given to the user of the product.
BEFORE using this product, this manual MUST be read and saved for future reference.

Küschall®
UNLIMIT YOUR WORLD

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1 General

1.1 Introduction

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

Only use this product if you have read and understood this manual. Seek additional advice from a healthcare professional who is familiar with your medical condition and clarify any questions regarding the correct use and necessary adjustment with the healthcare professional.

Note that there may be sections in this document, which are not relevant to your product, since this document applies to all available models (on the date of printing). If not otherwise stated, each section in this document refers to all models of the product.

The models and configurations available in your country can be found in the country-specific sales documents. Invacare reserves the right to alter product specifications without further notice.

Previous product versions may not be described in this manual's current revision. If you require assistance, please contact Invacare.

Before reading this document, make sure you have the latest version. You find the latest version as a PDF on the Invacare website.

If you find that the font size in the printed document is difficult to read, you can download the PDF version from the website. The PDF can then be scaled on screen to a font size that is more comfortable for you.

For more information about the product, for example product safety notices and product recalls, contact your Invacare distributor. See addresses at the end of this document.

In case of a serious incident with the product, you should inform the manufacturer and the competent authority in your country.

1.2 Symbols in this Document

Symbols and signal words are used in this document and apply to hazards or unsafe practices which could result in personal injury or property damage. See the information below for definitions of the signal words.



WARNING

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



CAUTION

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



NOTICE

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



Tips and Recommendations

Gives useful tips, recommendations and information for efficient, trouble-free use.

1.2.1 Other Symbols

(Not applicable for all manuals)



UK Responsible Person

Indicates if a product is not manufactured in the UK.



Triman

Indicates recycling and sorting rules (only relevant for France).

1.3 Warranty Information

We provide a manufacturer's warranty for the product in accordance with our General Terms and Condition of Business in the respective countries.

Warranty claims can only be made through the provider from whom the product was obtained.

1.4 Compliance

Quality is fundamental to the company's operation, working within the disciplines of ISO 13485. This product features the CE mark, in compliance with the Medical Device Regulation 2017/745 Class I.

This product features the UKCA mark, in compliance with Part II UK MDR 2002 (as amended) Class I.

We are continuously working towards ensuring that the company's impact on the environment, locally and globally, is reduced to a minimum.

We only use REACH compliant materials and components.

1.4.1 Product-specific standards

The wheelchair has been tested in accordance with EN 12183. It includes testing for flammability. For further information about local standards and regulations, contact your local Invacare representative. See addresses at the end of this document.

1.5 Service Life

The expected service life of this product is five years when used daily and in accordance with the safety instructions, maintenance intervals and correct use, stated in this manual. The effective service life can vary according to frequency and intensity of use.

1.6 Limitation of Liability

Invacare accepts no liability for damage arising from:

- Non-compliance with the user manual
- Incorrect use
- Natural wear and tear
- Incorrect assembly or set-up by the purchaser or a third party
- Technical modifications
- Unauthorised modifications and/or use of unsuitable spare parts

2 Safety

2.1 Safety Information

This section contains important safety information for the protection of the wheelchair occupant and assistant and for safe, trouble-free use of the wheelchair.



WARNING!

Risk of accidents and serious injury

Accidents with resulting serious injury can occur if the wheelchair is improperly adjusted.

- Contact your wheelchair provider in order to a qualified technician does the adjustments needed.



The Invacare expects that the qualified technician is familiar with the product, with good technical knowledge to understand and follow the steps of the described instructions in this manual and equipped with proper tools.



WARNING!

Risk of overturning

The longitudinal position of the rear wheels axis of the wheelchair compared to the backrest position can affect its stability.

- A forwards position makes the wheelchair less stable and increase the risk of tipping backwards, but improves its maneuverability by a better grip position of the handrim and a short turning radius.
- Conversely, by moving the rear wheels axis backwards, the wheelchair is more stable and tilts less easily, but its maneuverable is reduced.
- Depending on the occupant's abilities and its particular safety limits, the decrease in stability can be compensated for by installing an anti-tip device.



WARNING!

Risk of tilting

The rear wheel axle position and the angle of your wheelchair's backrest are two of the key adjustments that can affect your stability.

- The changes of rear/ front wheels position and/or angle fork adjustments must only be performed by a qualified technician after the assessment of your healthcare professional.



WARNING!

Risk due to driving style being unsuitable for environmental the conditions

- There is a risk of skidding on wet ground, gravel or uneven terrain.
- Always adjust your speed and driving style to the conditions (weather, surface, individual ability, etc).



WARNING!

Risk of injury

In a collision you could sustain injury to parts of your body that extend beyond the wheelchair (e.g. feet or hands).

- Avoid an unbraked collision.
- Never drive into an object head-on.
- Drive carefully through narrow passages.



WARNING!

Risk due to wheelchair being out of control

At high speed you could lose control of your wheelchair and overturn.

- Drive carefully
- Always adapt your speed and your driving style to the conditions (weather, surface, individual ability, etc.).
- Avoid collision.



CAUTION!

Risk of burning

The wheelchair components can heat up when exposed to external sources of heat.

- Do not expose the wheelchair to strong sunlight before use.
- Before use, check all components that come into contact with your skin for their temperature.



WARNING!

Risk of death or serious injury

In case of fire or smoke, wheelchair occupants are at particular risk of death or serious injury, when they are not able to move away from the source of fire or smoke. Lighted matches, lighter and cigarettes can cause an open flame in the wheelchair surroundings or on clothes.

- Avoid using or storing the wheelchair near open flames or combustible products.
- Do not smoke while using the wheelchair.



CAUTION!

Risk of getting parts of body caught

There is always a risk of getting parts of the body e.g. fingers or arms, caught in the moving parts of the wheelchair.

- Take attention while activating and deactivating the mechanisms of moving parts, such as the removable axle of the rear wheel, folding backrest or anti-tip device.



CAUTION!

Risk of injury

- In case of pressure sore or injured skin, protect your injures to avoid a direct contact with the fabrics of the device. Refer to a healthcare professional for medical advice.

**CAUTION!****Risk of injury**

When combining the wheelchair with another device, the restrictions of both devices apply for the combination. E.g. the maximum occupant mass for the device may be lower.

- Only use combinations with other devices which are allowed by Invacare. Contact your authorized provider for more information.
- Before use, read the user manual of each device and check the restrictions.

2.2 Safety Devices

**WARNING!****Risk of accidents**

Safety devices that are incorrectly set or no longer working (brakes, anti-tip device) can cause accidents.

- Always check that the safety devices are working before you use the wheelchair and have them checked regularly by a qualified technician.

**CAUTION!****Risk of injury**

Non-original or wrong parts may affect the function and safety of the product.

- Only use original parts for the product in use.
- Due to regional differences, refer to your local Invacare catalogue or website for available options or contact your Invacare distributor. See addresses at the end of this document.

**NOTICE!****Risk when using an add-on to support or substitute propelling the wheelchair**

For safety reasons, it must only be operated by persons who have the physical and mental ability to safely operate the wheelchair with the add-on attached to it in all possible situations (e.g. road traffic) and, in the event of the add-on failing to work or shutting down, are able to brake the wheelchair and stop safely. Any use contrary to the intended use involves a risk of injury.

At high speed you could lose control of your wheelchair and overturn.

- Drive carefully.
- Always adapt your speed and your driving style to the conditions (weather, surface, individual ability, etc.).
- Avoid collision.

An add-on to support or to substitute propelling the wheelchair increases the strain on the wheelchair structure.

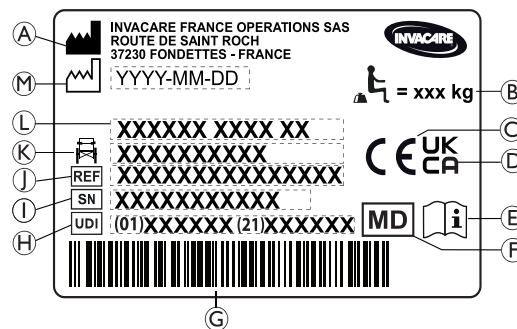
- After each use of an add-on, check the wheelchair for frame cracks or loose screwing.
- If any sign of fatigue on the wheelchair structure, stop using the wheelchair immediately and contact a qualified technician.

The functions of the safety devices are described in *Product Description, page 1*.

2.3 Labels and symbols on the product

Identification label

The identification label is available under the seat of your wheelchair and gives the following information:



- Ⓐ Manufacturer's name and address
- Ⓑ Maximum load of the wheelchair
- Ⓒ European conformity mark
- Ⓓ United Kingdom conformity mark
- Ⓔ Consult user manual
- Ⓕ Medical device
- Ⓖ UDI barcode
- Ⓗ Unique Device Identifier, with bar code
- Ⓘ Serial Number
- Ⓝ Reference number
- Ⓚ Seat width
- Ⓛ Product name
- Ⓜ Date of manufacture

	Maximum load of the wheelchair or Maximum occupant mass without any additional load
	Consult user manual
	Indicates a hazardous situation that could result in serious injury or death if it is not avoided.

Non-locking side parts warning label

	Do not lift the wheelchair by non-locking side parts.
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Posture belt information label

	Do not lift the wheelchair by non-locking side parts.
	<p>Symbol for wheelchair not intended to be used as a seat in a motor vehicle.</p> <p>This wheelchair is not configured for passenger transport in a motor vehicle. This symbol is attached to the frame close to the identification label.</p> <p>WARNING! Risk of serious injury or death Depending on the configuration, some wheelchairs may be used as a seat in a motor vehicle, some may not.</p> <ul style="list-style-type: none"> — Do not use the wheelchair for seat in a motor vehicle in.

3 Product Overview

3.1 Product Description

The Küschall Element is a manual wheelchair for active users. He has a rigid (not foldable) frame.

! NOTICE!

The wheelchair is manufactured and configured individually to the specifications in the order. The specification must be performed by a healthcare professional/ clinician according to the occupant's requirements and health condition.

- Consult a healthcare professional if you intend to adapt the wheelchair configuration.
- Any adaptation should be performed by a qualified technician.

3.2 Intended Use

The wheelchair may be used indoors and outdoors on level ground and accessible terrain.

The wheelchair is intended to provide mobility to persons limited to a sitting position, who are propelling the wheelchair themselves most of the time.

The wheelchair is not intended for abusive or excessive activities, such as sports, that are not part of the intended (daily) use.

Intended user

The wheelchair is intended for persons, ages 12 and up (adolescents and adults). The weight of the wheelchair occupant should not exceed the maximum user weight as stated in the Technical Data section and on the identification label.

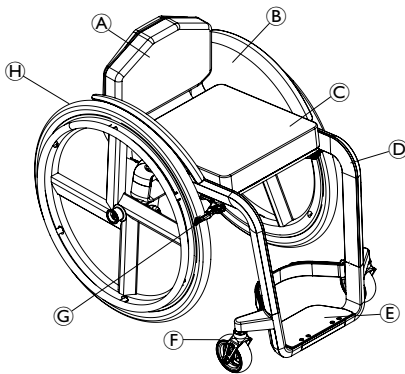
The intended user is the wheelchair occupant and/or an assistant. The user should physically and mentally be able to use the wheelchair safely (e.g. to propel, steer, brake).

Indications

- Considerable to complete impairment of mobility due to structural and/or functional damage to the lower extremities.
- Sufficient strength and gripping function of arms and hands to propel the wheelchair.

Contraindications

There are no contra-indications known, when using the wheelchair as intended.

3.3 Main parts of the wheelchair

Ⓐ	Backrest
Ⓑ	Clothes-guard
Ⓒ	Seat with cushion
Ⓓ	Frame

Ⓔ	Footrest
Ⓕ	Castor fork with castor wheel
Ⓖ	Parking brake
Ⓗ	Rear wheel with handrim



The equipment of your wheelchair may differ from the diagram as each wheelchair is manufactured individually to the specifications in the order.

3.4 Parking brakes

The parking brakes are used to immobilize the wheelchair when it is stationary to prevent it from rolling away.

**WARNING!****Risk of overturning if you brake sharply**

If you engage the parking brakes while you are moving, the direction of movement can become uncontrollable and the wheelchair may stop suddenly, which can lead to a collision or to you falling out

- Never engage the parking brakes while you are moving.

**WARNING!****Risk due to wheelchair being out of control**

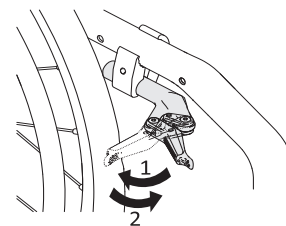
- The parking brakes must be operated simultaneously.
- Do not engage the parking brakes to slow down the wheelchair.
- Do not lean on the parking brakes for support or transfer.

**WARNING!****Risk of overturning**

- The parking brakes will not operate correctly unless there is sufficient air in the tyres. Ensure the correct tyre pressure, *11.2 Tyres, page 15*.



The distance between the brake shoe and the tyre can be adjusted. The adjustment must be carried out by a qualified technician.


Light active brake**CAUTION!****Risk of pinching or crushing**

Do not grasp the brake mechanism with the full hand when engage or disengage the brake.


1. To engage the brake, pull the brake lever backwards with the palm against the tyre as far as possible.
2. To disengage the brake, push the brake lever forwards with the hand edge.

3.5 Backrest

3.5.1 Seat and back cushions

-  The seat and backrest cushions are fixed with hoop and loop bands to the wood structure.

3.5.2 Backrest Height / Backrest Angle

-  The angle between the backrest and the seat is fixed. The backrest height can be selected when ordering the wheelchair.



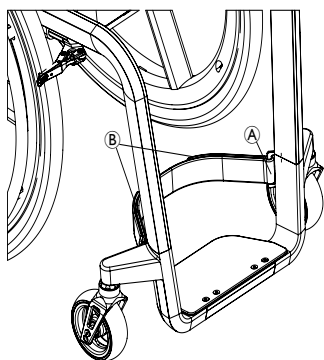
WARNING! **Risk of tipping**

The hanging of additional load (back pack or similar items) onto your wheelchair back posts can affect the rearward stability of your wheelchair. This can cause the chair to tip backwards causing injury.

- Try to avoid putting additional load in the back of the wheelchair.
- We strongly recommend the use of anti-tippers when using your back posts with additional load.

3.6 Calf Strap

A calf strap is installed to the wheelchair to provide a better position of the users' legs.



Installing / adjusting the Calf Strap

1. Install the calf strap around its fixation **A**.
2. Adjust the calf strap tension with the hook and loop fasteners **B**.

3.7 Seat cushion

A suitable cushion is recommended to provide an even pressure distribution on the seat.



CAUTION! **Risk of instability**

Adding a cushion to the seat will raise your height above the ground and can affect your stability in all directions. If a cushion is changed it may also change the user's stability.

- If the thickness of the cushion is changed, a complete set up of the wheelchair need to be done by a qualified technician.
- We recommend using an Invacare or Matrix cushion with anti-slip base cover in order to prevent sliding.



Use a seat cushion with anti-slip underlay, hook or loop fastening tapes to avoid slipping of the seat cushion. Loop and hook strips are pre-attached to the seat.

4 Options

4.1 Anti-tip device

An anti-tip device prevents the wheelchair from tipping backwards.



WARNING! **Risk of overturning**

Incorrectly setted or not working anti-tippers can lead to overturning.

- Always check that the anti-tipper is working before using the wheelchair and have it set or readjusted by a qualified technician when required.
- In some configurations, the static stability of the wheelchair may be lower than 10°; Invacare strongly recommends the use of anti-tipper (available as an option).



WARNING! **Risk of overturning**

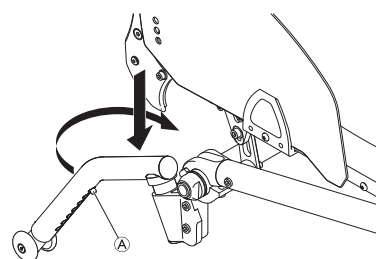
On uneven or soft ground, the anti-tipper can sink into potholes or directly into the ground, thereby curtailing or eliminating its safety function.

- Only use the anti-tipper when travelling on even and firm ground.



NOTICE! **Risk of damage**

- Never step on the anti-tipper or use it as a tipping aid.



Activating the anti-tip device

1. Push the anti-tip device completely downwards against the spring and swivel it inwards through 90° until it engages.

Setting the position

1. Press the spring pin **A** on the anti-tipper and push inner section to the position required. Allow the spring pin to engage in the nearest hole.



If further adjustments of height and/or position are necessary, refer to a qualified technician.

4.2 Attachment when using positioning belt



CAUTION!

Risk of sliding

- The belt must be placed tight to the body.
- If the length of the belt has been adjusted to fit one type of seat cushion height, it is important that this cushion is used. If the seat cushion is replaced, the length of the belt needs to be adjusted.



Positioning belts which are CE-marked for the purpose of using on wheelchairs, can be mounted on the chair with preserved CE-marking. The positioning belt should be fitted by a healthcare professional and be mounted by a qualified technician.



The purpose of using a belt for positional, is to position the user and to give him / her a better posture.

5 Setup

5.1 Safety Information



CAUTION!

Risk of injury

- Before using the wheelchair, check its general condition and its main functions in 8.2 *Maintenance schedule, page 11.*

Your provider will supply your wheelchair ready for use. Your provider will explain the main functions and ensure that the wheelchair meets your needs and requirements.



CAUTION!

Risk of instability

The adjustment of the seat in position (forward/backward) impacts:

- Stability - the seat frontwards makes the wheelchair more stable.
 - Maneuverability - the seat rearwards makes the wheelchair more maneuverable.
- This adjustment must be carried out by a qualified technician.

5.2 Delivery Check

Any transport damage must be reported immediately to the transport company. Remember to keep the packaging until the transport company has checked the goods, and a settlement has been reached.

6 Using the wheelchair

6.1 Safety Information



WARNING!

Risk of accidents

Uneven tyre pressure can have a huge effect on handling.

- Check the tyre pressure before each journey.



WARNING!

Risk of falling out of the wheelchair

When using front wheels that are too small, the wheelchair could get stuck at curbs or in floor grooves.

- Make sure that the front wheels are suitable for the surface you're driving on.



CAUTION!

Risk of crushing

There may be a very small gap between the rear wheel and the mudguard or armpad with the risk that you could trap your fingers.

- Ensure that you always propel your wheelchair using the handrims only

Theft and metal detection systems

In seldom cases the materials used in the wheelchair may activate theft and metal detection systems.

6.2 Braking during use

Whilst you are moving, you brake by transferring force to the handrim with your hands.



WARNING!

Risk of accidents

If you engage the parking brakes while you are moving, the direction of movement can become uncontrollable and the wheelchair may stop suddenly, which can lead to a collision or to you falling out.

- Never engage the parking brakes while you are moving.



WARNING!

Risk of falling of the wheelchair

- Operate the two brakes simultaneously and do not take slopes exceeding 7° to ensure perfect control of the wheelchair steering.
- Always use the parking brakes to secure the wheelchair during short or long stops.



CAUTION!

Risk of burning your hands

If you brake for a long time, a lot of frictional heat is produced at the handrims (especially anti slip handrims).

- Wear suitable gloves.

1. Hold the handrims and press evenly with both hands until the wheelchair stops.

6.3 Getting in and out of the wheelchair



WARNING! Risk of overturning

There is a high risk of overturning during the transfer.

- Only get in and out without assistance if you are physically able to do so.
- When transferring, position yourself as far back as possible in the seat. This will prevent damaged upholstery and the possibility of the wheelchair tipping forward.
- Make sure that both castors are facing straight to the front.



WARNING! Risk of overturning

The wheelchair could tip forwards if you stand on the footrest.

- Never stand on the footrest when getting in and out.



CAUTION!

A heavy load hanging on the backrest can affect the wheelchair's centre of gravity.

- Change your driving style accordingly.



CAUTION!

If you disengage or damage the brakes the wheelchair could roll away out of control.

- Do not support yourself on the brakes when getting in and out.



NOTICE!

The mudguards and armrests could become damaged.

- Never sit on the mudguards or armrests when getting in and out.



1. Propel the wheelchair as near as possible to the seat that you want to move to.
2. Engage the parking brakes.
3. Place your feet on the ground.
4. Hold the wheelchair and, if necessary, also hold a fixed object in the vicinity.
5. Move slowly to chair.

6.4 Driving and Steering the Wheelchair

You drive and steer the wheelchair using the handrims. Before driving without an assistant you must find your wheelchair's tipping point.



WARNING!

Risk of tipping

The wheelchair can tip backwards.

- When finding the tipping point, an assistant must stand immediately behind the wheelchair to catch it if it tips over.
- To prevent tipping, install an anti-tipper device.



WARNING!

Risk of tipping

The wheelchair can tip forward.

- When setting up your wheelchair, test its behaviour in terms of tipping forward and adjust your driving style accordingly.

Finding the Tipping Point



1. Release the brake.
2. Roll backwards a short distance, grasp both handrims firmly and push forwards with a slight kick.
3. The shift in weight and steering in opposite directions with the handrims will enable you to identify the tipping point.

6.5 Negotiating steps and kerbs



WARNING!

Risk of overturning

When negotiating steps you could lose your balance and tip the wheelchair over.

- Always approach steps and kerbs slowly and carefully.
- Do not go up or down steps that are higher than 25 cm.

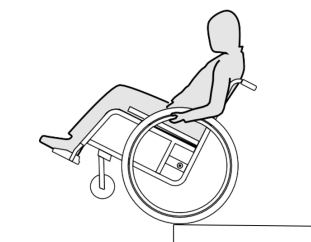


CAUTION!

An activated anti-tip device prevents the wheelchair from tipping backwards.

- Deactivate the anti-tip device before going up or down steps or kerbs.

Going down a step without an assistant



**WARNING!****Risk of tipping**

When going down a step without an assistant you could tip over if you cannot control your wheelchair.

- First learn how to go down a step with an assistant.
- Learn how finding the tipping point to balance on the rear wheels, *Chapter 6.4 Driving and Steering the Wheelchair*, page 9

1. Move the wheelchair right to the kerb, lift the front wheels and keep the wheelchair balanced.
2. Now slowly roll both rear wheels over the kerb. While doing this, hold the handrims firmly with both hands until the front wheels are back on the ground.

6.6 Negotiating Ramps and Slopes

**WARNING!****Risk due to wheelchair being out of control**

When negotiating slopes or gradients your wheelchair could tip backwards, forwards or sideways.

- Always have an assistant behind the wheelchair when approaching long slopes.
- Avoid lateral slopes.
- Avoid slopes of more than 7°.
- Avoid jerking when changing direction on a slope.

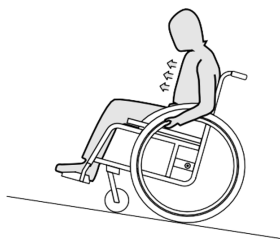
**CAUTION!**

Your wheelchair could run away even on slightly sloping ground if you do not control it using the handrims.

- Use the parking brakes if your wheelchair is stationary on sloping ground.

Going up slopes

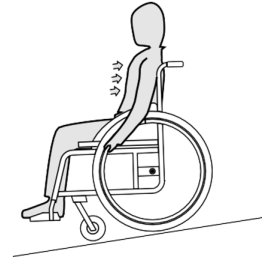
To go up a slope, you must create some momentum, keep up the momentum and control the direction at the same time.



1. Bend your upper body forwards and propel the wheelchair with quick, powerful strokes on both handrims.

Going down slopes

When going down slopes, it is important to control your direction and particularly your speed.



1. Lean back and carefully allow the handrims to run through your hands. You should be able to stop the wheelchair at any time by gripping the handrims.

6.7 Stability and balance when seated

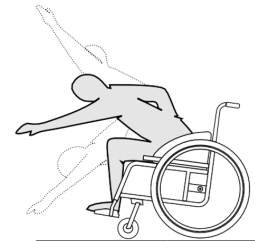
Some everyday activities and actions require you to lean forwards, sideways or backwards out of the wheelchair. This has a major effect on the wheelchair's stability. To keep your balance at all times, proceed as follows:

Leaning forwards

**WARNING!****Risk of falling**

If you lean forwards out of the wheelchair you could fall out of it.

- Never bend too far forwards and do not shift forwards in your seat to reach an object.
- Do not bend forwards between your knees to pick up something off the floor



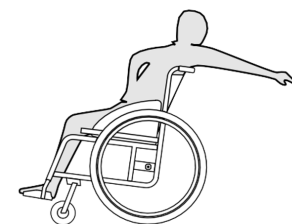
1. Point the front wheels forwards. (To do this, move your wheelchair forwards slightly then back again.)
2. Apply both parking brakes.
3. When leaning forwards your upper body must remain over the front wheels.

Reaching backwards

**WARNING!****Risk of falling**

If you lean too far backwards you could tip your wheelchair over.

- Do not lean out over the backrest.
- Use an anti-tip device.



1. Point the front wheels forwards. (To do this, move your wheelchair forwards slightly then back again.)

2. Do not apply the parking brakes.
3. When reaching backwards do not reach so far that you have to change your sitting position.

6.8 Transporting the Manual Wheelchair without Occupant

Your manual wheelchair 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.

- Invacare strongly recommends securing the manual wheelchair to the floor of the transporting vehicle.



CAUTION! Risk of injury

- If you are unable to fasten your manual wheelchair securely in a transport vehicle, Invacare recommends that you do not transport it.

7 Transport

7.1 Safety Information

The wheelchair can't be folded to assist in storage or transport.



WARNING! Risk of injury if the wheelchair is not properly secured

In the event of an accident, braking maneuver, etc. you may suffer serious injuries from flying wheelchair parts.

- Always remove the rear wheels when transporting the wheelchair.
- Firmly secure all wheelchair components in the means of transport to prevent them from coming loose during the journey.
- When transporting the unoccupied wheelchair in a car or an airplane make sure that it is secured (that chair can't be folded).



NOTICE!

Excessive wear and abrasion could affect the strength of load-bearing parts.

- Do not pull your wheelchair across abrasive surfaces without the wheels fitted (e.g. pulling the frame over tarmac).

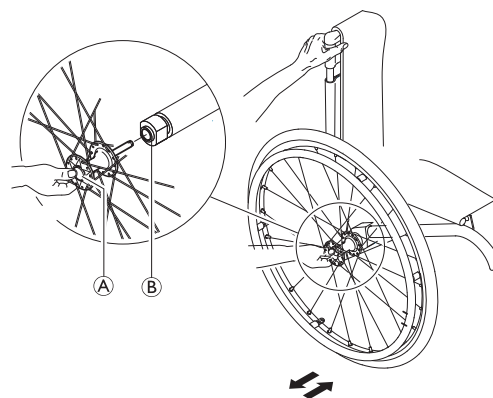
7.2 Removing and fitting the rear wheels



WARNING! Risk of overturning

If the removable axle of a rear wheel is not fully engaged, the wheel can become loose during use. This can lead to overturning.

- Always ensure that the removable axles are fully engaged whenever you fit a wheel.



Removing the rear wheels

1. Disengage the wheel locks.
2. With one hand, hold the wheelchair upright.
3. With the other, hold the wheel through the external spoke rim around the wheel hub.
4. Using your thumb, press the removable axle button **A**. Keep it pressed and pull the wheel out of the adapter sleeve **B**.

Fitting the rear wheels

1. Disengage the wheel locks.
2. With one hand, hold the wheelchair upright.
3. With the other, hold the wheel through the external spoke rim around the wheel hub.
4. Using your thumb, press the removable axle button **A**. Keep it pressed and pull the wheel out of the adapter sleeve **B**.
5. Push the axle into the adapter sleeve **B** up to the stop.
6. Release the removable axle button and make sure that the wheel is secure.

8 Maintenance

8.1 Safety Information



WARNING!

Some materials deteriorate naturally over time. This could result in damage to wheelchair components.

- Your wheelchair should be checked by a qualified technician at least once a year or if it has not been used for a long period.

8.2 Maintenance schedule

To ensure safe and reliable operation, carry out the following visual checks and maintenance regularly or have it carried out by another person. If needed contact your provider for repairs and servicing.

	weekly	monthly	annually
Check the tyre pressure	x		
Check that rear wheels are seated correctly	x		
Check posture belt	x		
Visual Check		x	
Check the castors and its fixation		x	
Check bolts		x	
Check spokes		x	
Check parking brakes (mechanism)		x	
Have wheelchair checked by a qualified technician			x

Check the tyre pressure

1. Check the tyre pressure, see *11.2 Tyres, page 15*.
2. Inflate the tyres to the required pressure.
3. Check the tyre tread at the same time.
4. If necessary, change the tyres.

Check that rear wheels are seated correctly

1. Pull on the rear wheel to check that the removable axle is seated correctly. The wheel should not come off.
2. If the rear wheels are not engaged properly, remove any dirt or deposits. If the problem persists, have the removable axles re-fitted by a qualified technician.

Check posture belt

1. Check that the posture belt is adjusted correctly.

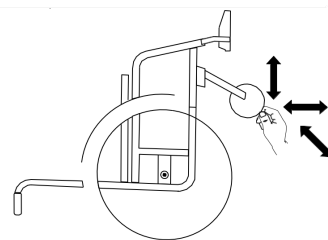
- !** **NOTICE!**
- Loose posture belts must be adjusted by an authorized provider.
 - Damaged posture belts must be replaced by a qualified technician.

General visual check

1. Examine your wheelchair for loose parts, cracks or other defects.
2. If you find anything, stop using your wheelchair immediately and contact an authorized provider.

Check the castors and its fixation

1. Check that the castors turn freely.
2. Push and pull in the 3 directions (front and rear; left and right; up and down) to observe that there is no free play and movement, also check that there is no visual damage.



3. Remove any dirt or hair from the castor bearings.
4. Faulty or worn out castors fixation must be replaced by a qualified technician.

Check the bolts

Bolts can work loose through constant use.

1. Check that the bolts are tight (on the footrest, seat cover, sides, backrest, frame, seat module).
2. Tighten any loose bolts with the suitable torque. Therefore refer to the service manual, available on the internet at www.kuschall.com.

- !** **NOTICE!**
- Self-locking screws/nuts or thread-locking adhesive are used for several connections. If these are loosened, they must be replaced by new self-locking screws/nuts or they must be secured using new thread-locking adhesive.
- Self-locking screws/nuts must be replaced by a qualified technician

Check the spoke tension

1. The spokes should not be loose or distorted.
2. Broken spokes must be replaced by a qualified technician.
3. Loose spokes must be tightened by a qualified technician.

Check the parking brakes

1. Check that the parking brakes are positioned correctly. The brake is set correctly if the brake shoe depresses the tyre by a few millimeters when the brake is engaged.
2. If you find that the setting is not correct, have the brakes correctly adjusted by a qualified technician

- !** **NOTICE!**
- The parking brakes must be reset after replacing the rear wheels or changing their position.

Checking after a heavy collision or blow

- !** **NOTICE!**
- The wheelchair can sustain visibly undetectable damage as a result of a heavy collision or hard blow.
- It is essential to have your wheelchair checked by a qualified technician after a heavy collision or hard blow.

Repairing or changing an inner tube

1. Remove the rear wheel and release any air from the inner tube.
2. Lift one tyre wall away from the rim using a bicycle tyre lever. Do not use sharp objects such as a screwdriver which could damage the inner tube.
3. Pull the inner tube out of the tyre.
4. Repair the inner tube using a bicycle repair kit or, if necessary, replace the tube.
5. Inflate the tube slightly until it becomes round.
6. Insert the valve into the valve hole on the rim and place the tube inside the tyre (the tube should lie right round the tyre with no creases).
7. Lift the tyre wall over the edge of the rim. Start close to the valve and use a bicycle tyre lever. When doing this, check all the way round to ensure that the inner tube is not trapped between the tyre and the rim.
8. Inflate the tyre to the maximum operating pressure. Check that no air is escaping from the tyre.



Spare parts

All spare parts may be obtained from an Invacare authorized provider.

8.3 Cleaning and disinfection

8.3.1 General Safety Information



CAUTION!

Risk of Contamination

Take precautions for yourself and use appropriate protective equipment.



NOTICE!

Wrong fluids or methods can harm or damage the product.

All cleaning agents and disinfectants used must be effective, compatible with one another and must protect the materials they are used to clean.

- Never use corrosive fluids (alkalines, acid etc.) or abrasive cleaning agents. We recommend an ordinary household cleaning agent such as dishwashing liquid, if not specified otherwise in the cleaning instructions.
- Never use a solvent (cellulose thinner, acetone etc.) that changes the structure of the plastic or dissolves the attached labels.
- Always make sure that the product is completely dried before taking it into use again.

8.3.2 Cleaning Intervals



NOTICE!

Regular cleaning and disinfection enhance smooth operation, increases the service life and prevents contamination.

- Clean and disinfect the product:
- Regularly while in use,
- Before and after any service procedure,
- When it has been in contact with any body fluids,
- Before using it for a new user.

8.3.3 Cleaning



NOTICE!

- The product does not tolerate cleaning in automatic washing plants, with high-pressure cleaning equipment or steam.



NOTICE!

Dirt, sand and seawater can damage the bearings and steel parts can rust if the surface is damaged.

- Only expose the wheelchair to sand and sea water for short periods and clean it after every trip to the beach.
- If the wheelchair is dirty, wipe off the dirt as soon as possible with a damp cloth and dry it carefully.

1. Remove any options fitted (only options which do not require tools).
2. Wipe down the individual parts using a cloth or soft brush, ordinary household cleaning agents (pH = 6 - 8) and warm water.
3. Rinse the parts with warm water
4. Thoroughly dry the parts with a dry cloth.



Car polish and soft wax can be used on painted metal surfaces to remove abrasions and restore gloss.

Cleaning upholstery

For cleaning upholstery refer to the instructions on the labels of the seat, cushion and backrest cover.



If possible, always overlap hook and loop strips (the self-gripping parts) when washing, to minimize lint and thread build-up on hook strips and prevent damage to upholstery fabric by these.

8.3.4 Disinfection

The wheelchair may be disinfected by spraying or wiping with tested, approved disinfectants.



Spray a soft cleaning and disinfecting product (bactericidal and fungicide meeting the EN1040/EN1276 / EN1650 standards) and follow the instructions given by the manufacturer.

1. Wipe down all generally accessible surfaces with a soft cloth and ordinary household disinfectant.
2. Allow the product to air-dry.

9 Troubleshooting

9.1 Safety Information

Faults may arise as a result of daily use, adjustments or changing demands on the wheelchair. The table below shows how to identify and repair faults. Some of the actions listed must be carried out by a qualified technician. These are indicated. We recommend that all adjustments are carried out by a qualified technician.



CAUTION!

- If you notice a fault with your wheelchair, e.g. a significant change in handling, stop using your wheelchair immediately and contact your provider.

9.2 Identifying and repairing faults

Fault	Possible cause	Action
The wheelchair does not travel in a straight line	Incorrect tyre pressure on one rear wheel	Correct tyre pressure, → 11.2 Tyres, page 15
	One or more spokes broken	Replace faulty spoke(s), → qualified technician
	Spokes tightened unevenly	Tighten loose spokes, → qualified technician
	Castor supporter is not aligned correctly	Correct position and alignment of the castor supporter, → qualified technician
	Castor bearings are dirty or damaged	Clean the bearings or replace the castor, → qualified technician
	Castors not adjusted to same height	Position the castors such that they touch the floor at the same time, → qualified technician
The wheelchair tips backwards too easily	Rear wheels are mounted too far backwards	move the seat forward, → qualified technician
Removable axles cannot be inserted correctly	Removable axles dirty	Clean removable axles
	Removable axles misaligned	Adjust removable axles, → qualified technician
The parking brakes are gripping poorly or asymmetrically	Incorrect tyre pressure in one or both rear tyres	Correct tyre pressure, → 11.2 Tyres, page 15
	Brake setting incorrect	Correct the brake setting, → qualified technician
Rolling resistance is very high	Tyre pressure in rear tyres is too low	Correct tyre pressure, → 11.2 Tyres, page 15
	Tyre is punctured	
	Rear wheels not parallel	Ensure the rear wheels are parallel, → qualified technician

Fault	Possible cause	Action
The castors wobble when moving fast	Too little tension in castor bearing block	Tighten the nut on the bearing block axle slightly, → qualified technician
	Castor has worn smooth	Change castor, → qualified technician
The castor is stiff or stuck	Bearings are dirty or faulty	Clean or replace the bearings, → qualified technician

10 After use

10.1 Storage



NOTICE!

Risk of damage to the product

Do not store the product near heat sources. Never store other items on top of the wheelchair. Store the wheelchair indoors in a dry environment. Refer to temperature limitation in section *Chapter 11.4 Environmental conditions, page 16*.

After long-term storage (more than four months) the wheelchair must be inspected in accordance to section *Chapter 8.2 Maintenance schedule, page 11*.

10.2 Reconditioning

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

- Inspection
- Cleaning and disinfection
- Adaptation to the new user

For detailed information, please see section *Chapter 8.2 Maintenance schedule, page 11* and the service manual for this product. Make sure that the user manual is handed over with the product. If any damage or malfunction is detected, do not reuse the product.

10.3 Disposal

Be environmentally responsible and recycle this product through your recycling facility at its end of life. Disassemble the product and its components and recycled individually in safe manner (use gloves, glasses as appropriate). The disposal and recycling of used products and packaging must comply with the laws and regulations for waste handling in each country. Contact your local waste management company for information.


11 Technical data

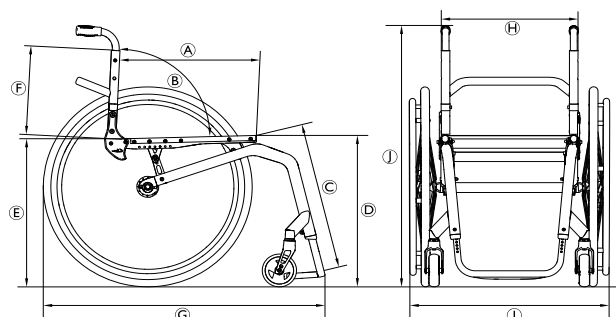
11.1 Dimensions and weight

All dimension and weight specifications refer to a wide range of the wheelchair in a standard configuration. Dimension and weight (based on ISO 7176–1/5/7) may alter according to different configurations. In some configurations, the wheelchair exceeds the recommended dimensions for a wheelchair.

! NOTICE!

- In some configurations, the overall dimensions of the wheelchair when it is ready for use exceeds the authorised limits and the access to emergency escape routes is not possible.
- In some configurations, the wheelchair exceeds the size recommended for travelling by train in the EU.

 The dimensions are measured with cushion and dummy.



	Maximum load of the wheelchair (*)	100 kg
Ⓐ	Seat depth	415 – 440 – 465 mm
Ⓑ	Backrest angle	88°
Ⓒ	Lower leg length	425 – 495 mm, in increments of 10 mm
Ⓓ	Front seat-to-floor height	520 – 540 mm, in increments of 10 mm
Ⓕ	Backrest height	260 – 320 mm, in increments of 15 mm
Ⓖ	Overall length with legrest	90° frame angle: 865 mm
Ⓗ	Seat width	355 – 435 mm, in increments of 20 mm
Ⓘ	Overall width	approx. 575 – 655 mm
Ⓢ	Overall height	approx. 735 – 795 mm
	Total weight	approx. 12.9 kg
	Weight of the heaviest part	8.2 kg
	Pivot width	1050 mm
	Minimum turning radius	685 mm

	Maximum slope for use of parking brakes	7°
	Static stability downhill	25.1°
	Static stability uphill	9.1° (with 8° seat angle) 4.8° (with 12° seat angle)
	Static stability sideways	19°
	Seat plane angle	15°
	Leg to seat surface angle	83°
	Handrim diameter	532 mm
	Horizontal location of axle	75 mm

(*) The maximum load of the wheelchair is the total of the maximum occupant mass and the maximum mass of any other items intended to be carried by the wheelchair.

The maximum occupant mass is the maximum load of the wheelchair without additional load.

E.g.: for a wheelchair with a back pack of 10kg:
Maximum Occupant Mass = Maximum Load of the wheelchair = 10kg

11.2 Tyres

The pneumatic tyres can be used on the wheelchair.

Refer to tyre or rim indication to find out the maximum pressure. Invacare recommends a minimum pressure of 4 bars for an efficient driving experience.



CAUTION!

- The tyre pressure has to be equal in both wheels to avoid a less driving comfort, to keep the brakes efficiency and an easy propelling of the wheelchair.



The compatibility of the tyres listed above depends on the configuration and/or model of your wheelchair.




In case of a tyre puncture consult a suitable workshop (e.g. bike repair shop, bicycle dealer ...) to have the tube replaced by a skilled person.




The size of the tyre is mentioned on the sidewall of the tyre. The change of appropriate tyres must be carried out by a qualified technician.

11.3 Materials


Component	Material
Frame	Aluminum and Wood
Seat and backrest shell	Wood
Mudguard	Carbon Fiber
Castor forks	Aluminum
Footplate	Carbon
Supporting parts / Attachments	Steel / Aluminum
Screws, washers and nuts	Steel
Seat/Backrest Cushion	PU/ PE

 All materials used are protected against corrosion. We use only REACH compliant materials and components.

 Theft and metal detection systems: in seldom cases the materials used in the wheelchair may activate theft and metal detection systems.

11.4 Environmental conditions

	Storage and transportation	Operation
Temperature	-5 °C to 40 °C	
Relative humidity	20 % to 90 % at 30 °C, not condensing	
Atmospheric pressure	800 hPa to 1060 hPa	

 Be aware that when a wheelchair has been stored under low temperatures, it must be adjusted before use. Please see *8 Maintenance, page 11*.

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Yes, you can.