

# Küschall® The KSL

EN **Active wheelchair**  
User Manual



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

 **küschall**<sup>®</sup>  
designed for life

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## 1 General


### 1.1 Information about the User Manual

Thank you for choosing a *küschall*® wheelchair.

This User Manual contains important information about using the wheelchair. In order to ensure safety when using your wheelchair, read the User Manual carefully and follow the safety information.

If your vision is impaired, you can view the user manual as a PDF file on the Internet at [www.kueschall.com](http://www.kueschall.com) and enlarge it on-screen as required. If you cannot enlarge the texts and graphics sufficiently, please contact the *küschall*® distributor for your country;

Ⓜ addresses on the reverse of this document. If necessary, we will provide you with a high resolution PDF file of the user manual. Moreover, you can have the PDF file read out to you with the aid of suitable programs using special language functions on your computer (e.g. in Adobe®Reader®X: Shift+Ctrl+Y).

 The equipment of your wheelchair may differ from the descriptions and diagrams given here due to the wide range of models available.

If you need additional information, please refer to our website at [www.kueschall.com](http://www.kueschall.com).

### 1.2 Symbols

#### Symbols in this manual

In this User Manual warnings are indicated by symbols. The warning symbols are accompanied by a heading that indicates the severity of the danger.



#### 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.



#### IMPORTANT!

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



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



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.

### 1.3 Warranty

Küschall AG guarantees that their wheelchairs are free from defects and are fully functional. The warranty covers all faults and defects which are verifiably attributable to faulty construction, substandard materials or poor workmanship. Warranty claims against the manufacturer may only be made by the distributor and not by the user of the product.

The warranty does not cover normal wear and tear, the consequences of improper handling or damage, poor maintenance and incorrect assembly or commissioning by the purchaser or a third person or faults which are attributable to circumstances beyond our control. Wearing parts are not covered by the guarantee. The warranty is voided if modifications are made to the product which were not authorised and not performed by the specialist dealer or if inappropriate accessories or spare parts are used. The warranty does not cover consequential

costs arising from the rectification of defects such as freight and travel expenses, labour costs, fees etc.

The term of the warranty is 24 months. The frame is guaranteed for 5 years.

Furthermore, the terms and conditions are part of the general terms and conditions particular to the individual countries in which the product is sold.

### **Quality and Flame Retardancy**

Quality is fundamental to the company's operation, working within the disciplines of ISO 9001 and ISO 13485.

The wheelchair has been tested in accordance with EN 12183. It includes a test for flammability.

## **1.4 Intended use**

The active wheelchair is propelled manually and should only be used for independent or assisted transport of a disabled person with mobility difficulties. When used without an assistant, it should only be used by persons who are physically and mentally able to use the wheelchair safely (e.g. to propel themselves, steer, brake). The wheelchair should only be used on level ground and accessible terrain, as well as indoors. This active wheelchair needs to be subscribed and fit to your specific health condition.



### **WARNING!**

Any other or incorrect use could lead to hazardous situations.

## **1.5 Service life**

The expected service life is five years, presuming that the product is used daily and in accordance with safety instructions, maintenance instructions and intended use, stated in this manual.

## **1.6 Copyright protection**

This User Manual is protected by copyright. It may not be reprinted or copied or transferred to third parties in part or in full without the prior written consent of the manufacturer.

## 2 Safety

### 2.1 Safety information

This section contains important safety information for the protection of the wheelchair user 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 wrongly adjusted.

- Adjustments at the wheelchair always must be carried out by a specialist dealer.



#### **WARNING!**

##### **Risk due to driving style being unsuitable for 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.

- Never exceed a speed of 7 km/h.
- Avoid collisions in general.



#### **CAUTION!**

##### **Risk of burning**

The wheelchair components can heat up when exposed to strong sunlight.



#### **CAUTION!**

##### **Risk of getting fingers caught**

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

- Make sure when activating the folding or insertion mechanisms of moving parts, such as the removable axle of the rear wheel, folding backrest or antitipper, that nothing becomes caught.

### 2.2 Safety devices



#### **WARNING!**

##### **Risk of accidents**

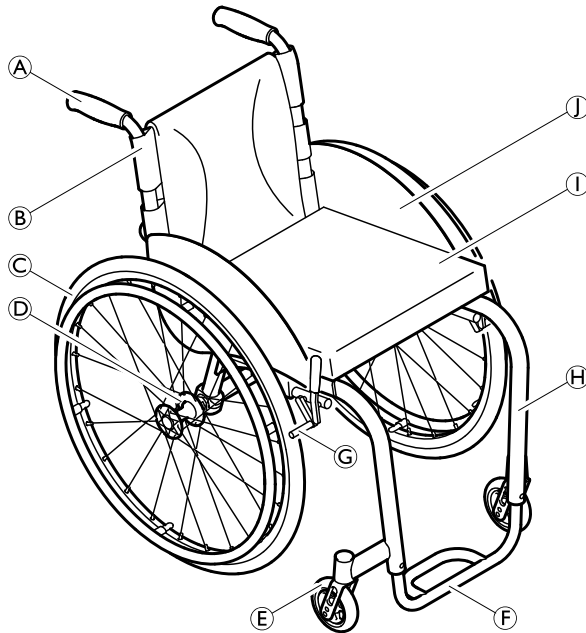
Safety devices that are incorrectly set or no longer working (brakes, antitipper) can cause accidents.

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

The functions of the safety devices are described in chapter 3 Components and their functions, page 7 .

## 3 Components and their functions

### 3.1 Overview



(A)	Push handles
(B)	Back
(C)	Rear wheel with handrim
(D)	Removable axle
(E)	Castor fork with castor
(F)	Footrest
(G)	Parking brake
(H)	Frame
(I)	Seat / Cushion
(J)	Clothes-guard

#### Short description

The *KSL* is a rigid frame wheelchair.

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

### 3.2 Parking brakes

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



#### **WARNING!**

#### **Risk of overturning if you brake sharply**

If you apply 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 apply the parking brakes while you are moving.



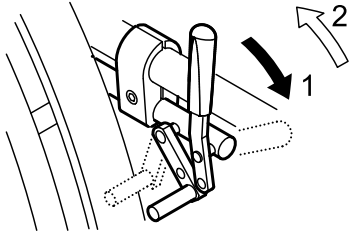
#### **WARNING!**

#### **Risk of overturning**

The parking brakes will not operate correctly unless there is sufficient air in the tyres.

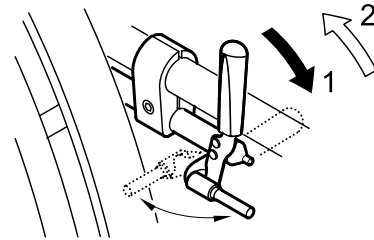
- Ensure the correct tyre pressure, 11.3 Tyres, page 31.

#### Standard brake



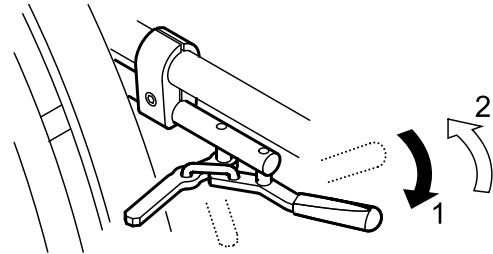
1. To apply the brake, push the brake lever forwards as far as possible.
2. To release the brake, pull the brake lever backwards.

#### Performance brake



1. To apply the brake, push the brake lever forwards as far as possible.
2. To release the brake, pull the brake lever backwards.

#### Active brake



1. To apply the brake, pull the brake lever forwards beside or between your knees as far as possible.
2. To release the brake, push the brake lever backwards beside or between your knees.

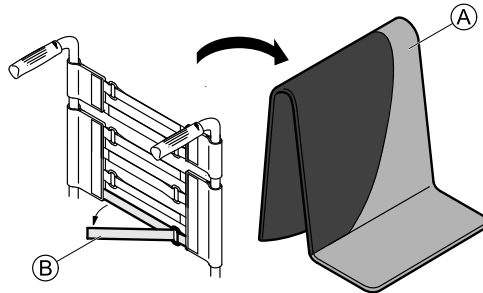


### 3.3 Backrest

#### Backrest cover

You can adjust the tension of the backrest cover as required.

#### Adjusting the backrest cover



1. Remove the backrest cushion (A).
2. Loosen the Velcro® tapes (B) on the rear of the backrest cover by simply pulling on them.
3. Tighten or loosen the tapes as required then reattach them.



#### **WARNING!**

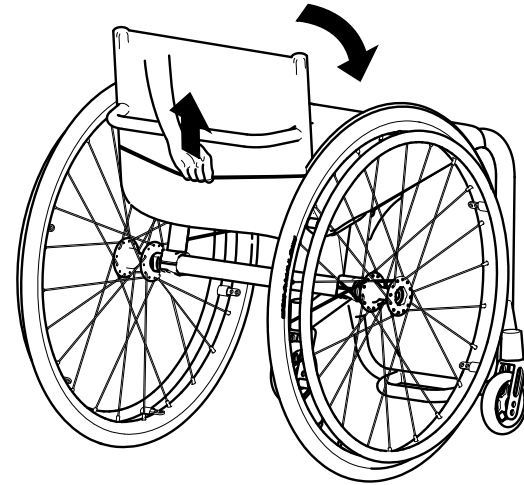
#### **Risk of tipping**

If the bands are set very loose, the tipping point of your wheelchair is changed for the worse.

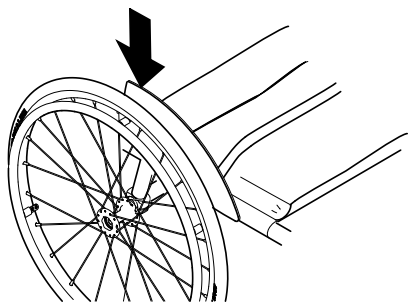
– Ensure that the bands are set correctly.

### 3.4 Foldable backrest (optional)


#### Folding down/straightening up the back



1. To fold down the back, grip the strap on the back of the wheelchair and pull it upwards.
2. At the same time, push the upper edge of the backrest forwards.



3. Push down both side parts (mudguard or clothes-guard) completely so that the backrest remains fixed in the fold down position. The wheelchair can now be lifted using the stabilizing bar on the backrest.

 If a mudguard is fitted, the rear wheels must be pulled outwards or removed before the mudguard can be lowered completely.

4. To straighten up the backrest, grip the strap on the back of the wheelchair and pull it upwards.
5. At the same time, grip the upper edge of the backrest and straighten it up.
6. Push the side parts down until they engage.
7. Put the rear wheels back on if you removed them.

### 3.5 Antitipper

An antitipper prevents the wheelchair from tipping backwards.



#### **WARNING!**

#### **Risk of overturning**

Antitippers that are incorrectly set or no longer working can lead to overturning.

- Always check that the antitipper is working before using the wheelchair and have it set or readjusted by a specialist dealer when required.

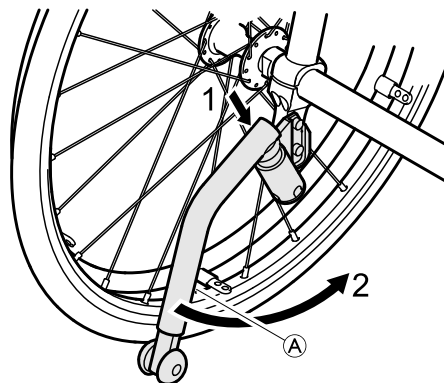


#### **WARNING!**

#### **Risk of overturning**

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

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



### Activating the antitipper

1. Push the antitipper downwards against the spring and swivel it backwards through 90° until it engages.



#### **WARNING!**

#### **Risk of tipping**


An activated antitipper can catch when negotiating a step or an edge.

- Always deactivate the antitipper before driving over a step or kerb.

### Deactivating the antitipper

1. Push the antitipper downwards against the spring and swivel it inwards through 90° until it engages.

### Setting the height

1. Press the spring pin  on the antitipper and push the inner section to the position required. Allow the spring pin to engage in the nearest hole.

## 3.6 Seat cushion

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

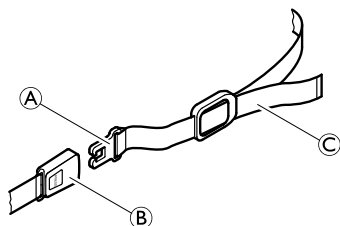


Use an antislip underlay or Velcro® fastening tapes to avoid slipping of the seat cushion.

## 4 Accessories

### 4.1 Pelvic belt

Your wheelchair can be fitted with a pelvic belt which will prevent you from sliding forward in the wheelchair or from falling out of the wheelchair.



#### **WARNING!**

##### **Risk of serious injuries through strangulation.**

- Ensure that you are sitting fully back in the seat and that the pelvis is as upright and symmetrical as possible - not forward on one side or tilted back.
- Position the lap belt so that the hip bones can be felt above the belt.
- Adjust the length using the buckles so that there is just sufficient room for your hand to slide between your body and the belt. It is recommended that the clasp is kept in a central position, i.e. make adjustments to each side.
- Make sure that the belt cannot slide and the clasp does not dissolve. Refit the pelvic belt if necessary, ® specialist dealer.
- Check and possibly change these adjustments each time the belt is used.

### Fitting the pelvic belt

1. Remove the backrest cover and attach the Velcro® fastener to the backrest at the required height. Ensure that the fastener is at the front.

### Opening the pelvic belt

1. Push in the PRESS button and pull the catch ① out of the buckle ②. The pelvic belt opens.

### Closing the pelvic belt

1. Push the catch ① into the buckle ②.
2. Pull the belt ③ until you are held securely in the wheelchair.

### 4.2 Air pump

The air pump is fitted with a universal valve connection.

1. Remove the dust cap from the valve connection.
2. Push the valve connection onto the open valve on the wheel and pump the wheel up.

### 4.3 Passive illumination

You can attach reflectors to the rear wheels.

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## 5 Setup

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### 5.1 Safety information

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

- Before using the wheelchair, check its general condition and its main functions, 8.2 Maintenance Schedule, page 24.

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

## 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.



**CAUTION!**

**Risk of crushing**

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

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



**CAUTION!**

**Risk of crushing**

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

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

### 6.2 Braking during use

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



**WARNING!**

**Risk of overturning**

If you apply 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 apply the parking brakes while you are moving.



**WARNING!**

**Risk of falling out of the wheelchair**

If the wheelchair is rapidly decelerated by an assistant pulling at the push handles, the user may fall out of the wheelchair.

- Always apply the pelvic belt if present.
- Make sure your assistant has been trained individually in transferring occupied wheelchairs.



**CAUTION!**

**Risk of burning your hands**

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

- 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.



**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!**

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

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



**IMPORTANT!**

The mudguards and armrests could become damaged.

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

1. Apply the parking brakes.
2. Place your feet on the ground.
3. Hold the wheelchair and, if necessary, also hold a fixed object in the vicinity.
4. 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 if it is not fitted with an antitipper . 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 antitipper device.



**WARNING!**

**Risk of tipping**

The wheelchair can tip forwards.

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

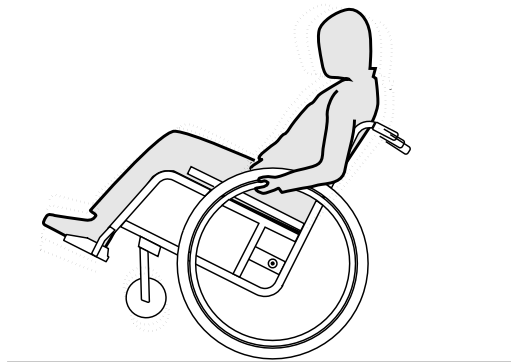


**CAUTION!**

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

- Change your driving style accordingly.

## Finding the tipping point



1. Release the brake.
2. Roll forwards a short distance, grasp both handrims firmly and pull backwards 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 antitipper prevents the wheelchair from tipping backwards.

- Deactivate the antitipper before going up or down steps or kerbs.



## With an assistant



## Going down a step

1. Move the wheelchair right up to the kerb and hold the handrims.
2. The assistant should hold both push handles, place one foot on the tipper aid (if installed) and tilt the wheelchair backwards so that the front wheels lift off the ground.
3. The assistant should then hold the wheelchair in this position, push it carefully down the step and then tilt it forwards until the front wheels are back on the ground.

## Going up a step



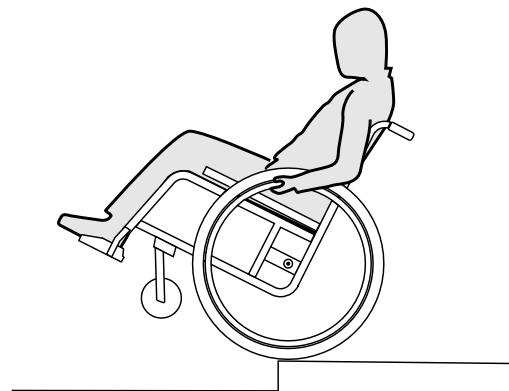
### **WARNING!**

#### **Risk of serious injuries**

Going up steps and kerbs frequently can result in earlier than expected fatigue break of the wheelchair backrest. The user might fall out of the wheelchair.  
 – Always use a tipper aid when going up steps or kerbs.

1. Move the wheelchair backwards until the rear wheels touch the kerb.
2. The assistant should tilt the wheelchair using both push handles so that the front wheels lift off the ground, then pull the rear wheels over the kerb until the front wheels can be placed back on the ground.

## Without an assistant





**WARNING!**

**Risk of tipping**

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

- First learn how to go down a step with an assistant.
- Learn how to balance on the rear wheels, 6.4 Driving and steering the wheelchair, page 15.

**Going down a step**

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 Going up and down stairs**

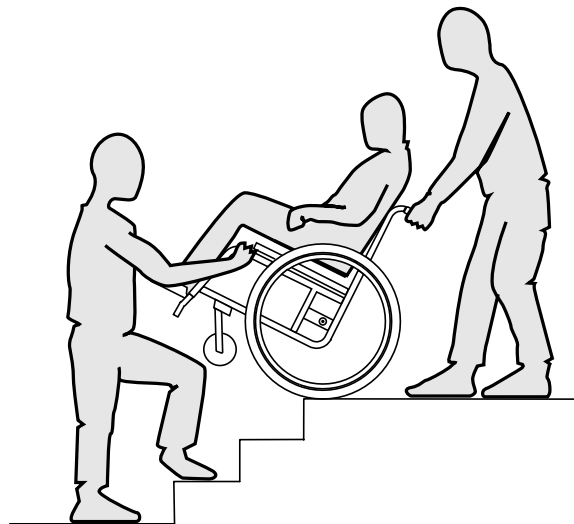


**WARNING!**

**Risk of overturning**

When negotiating stairs you could lose your balance and overturn your wheelchair.

- Always use two assistants when negotiating stairs with more than one step.



1. You can go up and down stairs by taking them one step at a time, as described above. The first assistant should stand behind the wheelchair holding the push handles. The second assistant should hold a solid part of the front frame to steady the wheelchair from the front.

## 6.7 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.



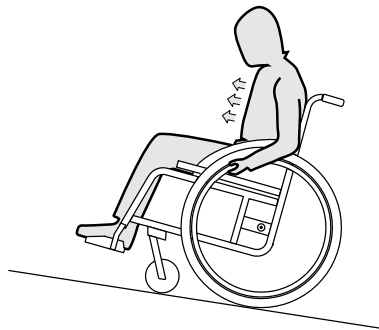
### CAUTION!

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

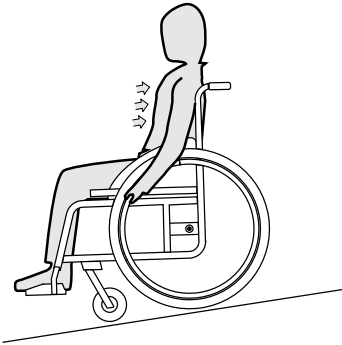
To go up a slope, you must create some momentum, keep up the momentum and control the direction at the same time.



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.



### **CAUTION!**

#### **Risk of burning your hands.**

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

- Wear suitable gloves.

## 6.8 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

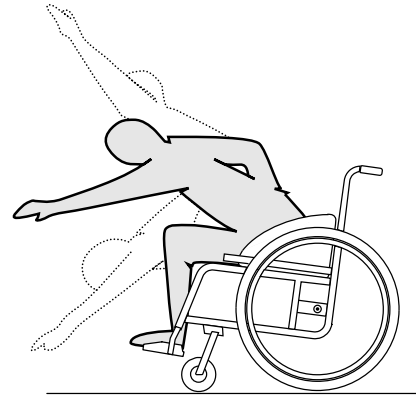


### **WARNING!**

#### **Risk of falling out**

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

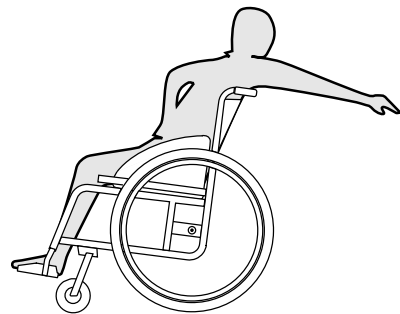


### **WARNING!**

#### **Risk of falling out**

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

- Do not lean out over the backrest.
- Use an antitipper 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.

## 7 Transport

### 7.1 Safety information



#### **WARNING!**

#### **Risk of injury if wheelchair is not secured during transport**

Your wheelchair is not designed for passenger transport in vehicles. You could suffer serious injury in an accident.

- During transport, sit in a correctly secured seat, not in the wheelchair.



#### **WARNING!**

#### **Risk of injury if the wheelchair is not properly secured**

In the event of an accident, braking manoeuvre, 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.



#### **IMPORTANT!**

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

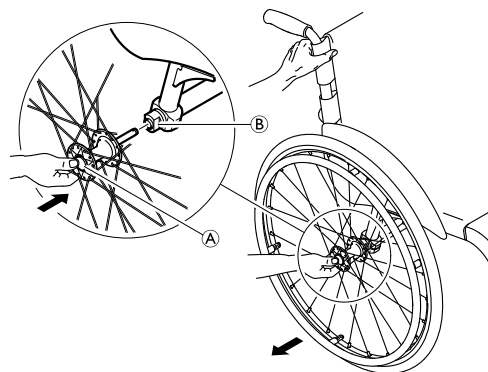


#### **WARNING!**

#### **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. Release the brakes.
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. Release the brakes.
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 and hold it down.
5. Push the axle into the adapter sleeve ⑧ 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 specialist dealer at least once a year or if it has not been used for a long period.



Your *küschall*® specialist dealer can provide help in carrying out regular maintenance. To find an authorised specialist dealer near you, contact the *küschall*® distributor for your country (end of this document).

### 8.2 Maintenance Schedule

To ensure safe and reliable operation, carry out the following checks and maintenance regularly or have it carried out by another person.

	weekly	monthly	annually
Check the tyre pressure	x		
Check that rear wheels are seated correctly	x		
Check pelvic belt	x		
Visual check		x	
Clean the front wheels		x	
Check bolts		x	
Check spokes		x	

	weekly	monthly	annually
Check parking brakes		x	
Have wheelchair checked by a specialist dealer			x

#### Check the tyre pressure

1. Check the tyre pressure, 11.3 Tyres, page 31.
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 specialist dealer.

#### Check the adjustment of the backrest joint

1. Sit into the wheelchair and lean back on the backrest. The backrest must be correctly engaged.
2. Pull the release cord. The pins must be free-moving on both sides. Otherwise, the backrest joint will have to be re-fitted by a specialist dealer.

#### Check pelvic belt

1. Check that the pelvic belt is adjusted correctly.



#### IMPORTANT!

- Loose pelvic belts must be adjusted by a specialist dealer.
- Damaged pelvic belts must be replaced by a specialist dealer.



## Visual check

1. Examine your wheelchair for loose parts, cracks or other defects.
2. If you find anything, have your wheelchair checked immediately by a specialist dealer.

## Clean the front wheels

1. Check that the front wheels turn freely.
2. Remove any dirt or hair from the front wheel bearings.

## 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 *The KSL*, available on the internet at [www.kueschall.com](http://www.kueschall.com).



### IMPORTANT!

Safety nuts and bolts lose their effectiveness as a result of repeated loosening and tightening.  
– Safety nuts and bolts must be replaced by a specialist dealer.

## Check the spoke tension

The spokes should not be loose or distorted.

1. Loose spokes must be tightened by a specialist dealer.
2. Broken spokes must be replaced by a specialist dealer.

## 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 applied.
2. If you find that the setting is not correct, have the brakes correctly set by a specialist dealer.



### IMPORTANT!

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

## Checking after a heavy collision or blow



### IMPORTANT!

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 specialist dealer 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 a *küschall*® specialist dealer. A current list of spare parts is available on the internet at [www.kueschall.com](http://www.kueschall.com).

## 8.3 Cleaning

Your wheelchair will serve you well for many years if you clean it regularly.



### IMPORTANT!

Sand and seawater can damage the bearings and steel parts can rust if the surface is damaged.

- Only expose the wheelchair to sand and seawater for short periods and clean it after every trip to the beach.



### IMPORTANT!

– Do not use coarse abrasives, aggressive cleaning products or high-pressure cleaners.

1. Clean the cushions and metal parts with a soft, damp cloth.
2. Dry the wheelchair carefully with a cloth after using it in the rain or in the shower.
3. If the wheelchair is dirty, wipe off the dirt as soon as possible with a damp cloth and dry it carefully.

## 8.4 Disinfection

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



The Robert Koch Institute has a list of currently approved disinfectants at [www.rki.de](http://www.rki.de).

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## 9 Troubleshooting

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### 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.

**CAUTION!**

- Contact your specialist dealer immediately if you notice a fault with your wheelchair, e.g. a significant change in handling.

**IMPORTANT!**

- Some of the actions listed must be carried out by an authorised specialist dealer. These are indicated. We recommend that *all* adjustments are carried out by a specialist dealer.

## 9.2 Identifying and repairing faults

<b>Fault</b>	<b>Possible cause</b>	<b>Action</b>
The wheelchair does not travel in a straight line	Incorrect tyre pressure on one rear wheel	Correct tyre pressure, ® 11.3 Tyres, page 31
	One or more spokes broken	Replace faulty spoke(s), ® specialist dealer
	Spokes tightened unevenly	Tighten loose spokes, ® specialist dealer
	Front wheel bearings are dirty or damaged	Clean or replace the bearings, ® specialist dealer
The wheelchair tips backwards too easily	Frame geometry does not meet specifications	Mount the rear wheels further back, ® specialist dealer
	Back angle too large	Replace backrest with smaller back angle, ® specialist dealer
Removable axles cannot be inserted correctly	Removable axles dirty	Clean removable axles
	Removable axles misaligned	Adjust removable axles, ® specialist dealer
The brakes are gripping poorly or asymmetrically	Incorrect tyre pressure in one or both rear tyres	Correct tyre pressure, ® 11.3 Tyres, page 31
	Brake setting incorrect	Correct the brake setting, ® specialist dealer
Rolling resistance is very high	Tyre pressure in rear tyres is too low	Correct tyre pressure, ® 11.3 Tyres, page 31
The castors wobble when moving fast	Too little tension in castor bearing block	Tighten the nut on the bearing block axle slightly, ® specialist dealer
	Castor has worn smooth	Change castor, ® specialist dealer
The castor is stiff or stuck	Bearings are dirty or faulty	Clean or replace the bearings, ® specialist dealer

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## 10 After Use

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### 10.1 Re-use

The wheelchair is suitable for re-use. The following actions should be taken:

- Cleaning and disinfection, 8.3 Cleaning, page 26 and 8.4 Disinfection, page 26 in this manual.
- Inspection, 8.2 Maintenance Schedule, page 24 in this manual.
- The wheelchair should be adapted for the new user in accordance with the service documentation (available from the *küschall*<sup>®</sup> distributor in your country, ® end of this document).

### 10.2 Disposal

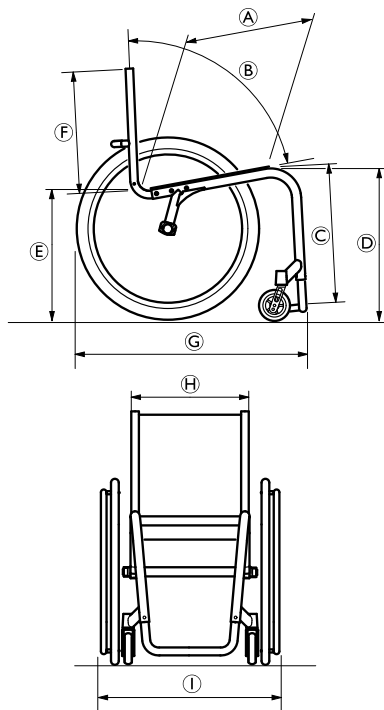
Be environmentally aware and dispose of your wheelchair properly. Disposal is subject to national and local regulations.

-  For correct disposal, contact your specialist dealer or ask your town or district council about local waste management companies.

## 11 Technical data

### 11.1 Dimensions and weight

All dimension and weight specifications refer to a seat width of 400 mm, seat depth of 410 mm in the lightest configuration of the wheelchair. Dimension and weight may alter according to different configurations.



Ⓐ	Seat depth	385 - 485 mm, in increments of 25 mm
Ⓑ	Backrest angle	74°, 78°, 82°, 86°, 90°
Ⓒ	Knee-to-heel length	350 - 500 mm, in increments of 10 mm
Ⓓ	Seat height front	450 - 530 mm, in increments of 10 mm
Ⓔ	Seat height rear	400 - 480 mm, in increments of 10 mm
Ⓕ	Backrest height	270 - 420 mm, in increments of 15 mm
Ⓖ	Total length	75°: approx. 830 mm 90°: approx. 760 mm
Ⓗ	Seat width	340 - 440 mm, in increments of 20 mm
Ⓘ	Total width	Seat width + 175 mm (wheel camber 0°) Seat width + 210 mm (wheel camber 3°) Seat width + 260 mm (wheel camber 6°)
	Weight	approx. 6.7 kg
	Transport weight (without rear wheels)	approx. 4.5 kg
	Maximum user weight	100 kg
	Reversing width	920 - 1230 mm

## 11.2 Environmental conditions

Do not expose the wheelchair to temperatures below -20 °C or above 40 °C.

## 11.3 Tyres

The ideal pressure depends on the tyre type:

Tyre	Max. pressure		
	bar	kPa	psi
Low-resistance tyre	7 bar	700 kPa	101 psi
Treaded tyre (marathon)	7.5 bar	750 kPa	108 psi
Slick tyres (speed run)	10 bar	1000 kPa	145 psi
Mountain bike tyre	4 bar	400 kPa	58 psi
Solid rubber tyre	-	-	-

(A)	Manufacturer's address
(B)	Product description
(C)	Date of manufacture
(D)	Instruction to read the User Manual
(E)	Maximum user weight
(F)	Instruction that this wheelchair is not designed for passenger transport in vehicles
(G)	Serial number
(H)	Warning that this is an active wheelchair and can tip

## 11.4 Identification label

The identification label is attached to the frame of your wheelchair and gives the following information:

(A) Küschall AG  
 Benkenstrasse 260  
 4108 Witterswil  
 SWITZERLAND  
 www.kuschall.com

(B) KÜSCHALL K-SL 2008 SB 400 mm

(C) 05/09/2012  
 (D) Read user manual

(E) 100 kg  
 (F)

(G) SN 01234567890  
 CE  
 Made in Switzerland

(H) Active wheelchair, tipping possible !

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