

Invacare® Esprit Action^{®4} NG

User manual EN



Yes, you can:

CE

This manual must be given to the user of the product. Before using this product, read this manual and save for future reference.

Introduction

The *Esprit Action⁴ NG* wheelchair is equipped with an Alber e-fix[®] add-on drive and can easily be transformed into a manual wheelchair.

There is one (1) option available: Scalamobil (Scalaport in combination with Scalamobil).

Advantages:

- The Esprit Action⁴ NG with Alber e-fix[®] add-on drive can be quickly transformed into a manual wheelchair.
- Thanks to the easily removable motor drive unit, the chair is easily transportable.
- The driving characteristics of the *Esprit Action*⁴ NG wheelchair can be individually adapted thanks to the Alber e-fix[®] system.
- Its simple design facilitates care and maintenance of this wheelchair.
- Scalamobil allows effortless climbing of stairs without the need for special adaptations.
- This user manual aims at getting you familiarized with the functions of the *Esprit Action*⁴ NG wheelchair.

It contains a description:

- Of the electric motor drive unit
- Of the control elements
- Of the control functions as well as care and maintenance guidelines.

Stamp of the Distributor

Caution

The *Esprit Action*⁴ *NG* wheelchair ALBER e-fix[®] add-on drive has successfully passed the required security tests to meet European and international standards. This wheelchair equipped with the ALBER e-fix[®] is a class B device for indoor and outdoor use with limited outdoor capabilities (see 1.2 Driving Safety guidelines).

This user guide is only valid for use with the electronic ALBER e-fix^e user guide and the other chosen options and/or Scalamobil.

Read the different user guides carefully, ALBER e-fix®, Scalamobil (if these options have been chosen) before operating the wheelchair.



The guarantee doesn't cover damage and malfunctions arising from the disregard of operating instructions. Your approved Invacare distributor will be delighted to answer your questions.

Esprit Action⁴ NG is delivered with a pre-programmed maximum speed of 6 km/h.

The maximum speed may not be increased under any circumstances. Doing so will be considered a violation of road traffic regulations.

The launch date for this product is indicated on the CE declaration of conformity.

This product is supplied by Invacare, a manufacturer who respects the environment. It conforms to the EU Working Directive 2002/96/CE on the management of Waste Electrical and Electronics Equipment (WEEE).

This product may contain substances which could be harmful to the environment if they are disposed of in inappropriate locations (e.g. landfill sites) and not conforming to the applicable legislation.



The barred trash can symbol is affixed to this product to encourage its recycling to selective collection systems (contact your town hall). Be environmentally responsible by recycling this product at the end of its useful life.

NOTE: The symbol $\breve{1}$ identifies general notes which simplify the use of the wheelchair and draws attention to some specific functions.



SUMMARY

I. User Guidelines	3	10. Driving Guidelines / Operational Safety	17
I.I. General Guidelines	3	10.1.The First Time	17
I.2. Driving Safety Guidelines	3	10.2. Comfortable Position	17
2. User Guidelines	3	10.3. Obstacles	17
2.1. General Information	3	10.4. Going Uphill and Downhill	18
2.2. Handling Guidelines	4	10.5. Parking / Immobilisation	19
2.3 Handling	4	10.6. How to Transfer to a New Seat	19
3. Description	4	II. Pushing the Wheelchair	19
3.1. Performance Checks	4	12. Batteries: Charge, Maintenance and Transport	19
3.2. General Condition Check	5	12.1. Guidelines for Charging the Batteries	19
3.3. Motor Drive Unit	5	8 8	20
4. Settings	6	12.2. Charging the Batteries	
4.1. Seat	6	12.3. Guidelines for Battery Maintenance	20
4.2. Frame	11	12.4. Transport	20
4.3. Rear Wheels	12	13. Assembling the Rear Wheels for Manual Propulsi	
4.4. Castor Wheels	13	13.1.Assembling the Rear Wheels	21
4.5. Brakes	13	13.2. Dismantling the Rear Wheels	21
4.6. Options	14	14. General Care and Maintenance	21
5. Equipment	15	14.1. Cleaning the Wheelchair	21
5.1. Motor Drive Unit	15	14.2. Maintenance Operations	22
5.2. Mounting Plate	15	15. Repairs	22
5.3. Locking System	16	15.1. Checking the front Castor bearings and the Fork	22
5.4. Transformation Kit for Manual Drive	16	15.2. Castor Wheel Removal / Reassembly	23
6.ALBER e-fix [®] Electronics	16	15.3. Replacing the Tyre and Inner Tube	23
6.1. Electronic Unit	16	16. Nameplates	23
7. Electrical Part	16	17.Transport	24
7.1. Batteries	16	17.1.Transporting the Wheelchair in a Car	24
7.2. Motorised Wheels	16	1 0	24
8. Mechanics	17	17.2. Frame Folding and Unfolding	
8.1. Hand Control Box Height Adjustment	17	18. Technical Specifications	25
8.2. Hand Control Box Retraction	17	19. Inspections	26
9. Motorised Wheels Assembly and Dismantling	17	20.Warranty	27
9.1. Motorised Wheels Dismantling	17	21.Tools and Maintenance	27
9.2. Motorised Wheels Reassembly	17	22. After Sales and Recycling	27
		23. Dimensions	28

I. Safety Guidelines

- Maximum Weight:

The maximum weight recommended for the user is 120 kg for e-fix* 22/24" and Scalamobil.

The maximum weight is 125 kg for e-fix[®] 12"

I.I. General Guidelines

The **Esprit Action**⁴ **NG** with Alber e-fix^{\circ} add-on drive is designed for indoor use mainly, but can be taken outdoors.

Do not use the powered wheelchair when under the influence of medication causing drowsiness or confusion.

- Turn off the wheelchair before
- getting in,
- getting out
- raising the armrest.
- Never load the wheelchair into a vehicle with the user sitting in.

• **Esprit Action**⁴ **NG** wheelchair has neither been developed nor tested to be used as a car seat.

• Respect the authorized load indicated on the cross brace nameplate.

- Check front wheels tyre pressure regularly (2.5 bars).
- Only use the battery types specified in the technical features.

• During repairs and maintenance be aware that some parts might be heavy.

1.2 Driving Safety guidelines

- This wheelchair is designed to transport one person only.
- \bullet If restraining systems (e.g. safety belts) have been installed, use them for each trip.
- Do not turn off the wheelchair while moving about.
- Don't change the speed while moving about.
- \bullet Do not use on more than 5° slopes.

- Only tackle inclines and obstacles with the backrest in a vertical position.
- Only go down slopes at most at 2/3 maximum speed.
- Do not go uphill or downhill where the ground is uneven or slippery or if there is a risk for skidding (Cant, dampness, gravel, ice, grass etc.).
- Proceed through narrow passageways (doors, entrances) at a reduced speed and with care.
- Always approach obstacles straight on. Pass the front and rear wheels over the obstacle in one go.
- Maximum height for passable obstacles: 3-4 cm.
- Avoid jerky joystick movements.
- Avoid jerky changes of direction.
- Always use Scalamobil without anti-tip wheels on staircases.
- Do not use the electric drive with Scalamobil.

• Always reposition the anti-tipping castor wheels after dismantling Scalamobil.

2. User Guidelines

2.1. General Information

The e-fix $^{\circ}$ add-on drive must be turned off whilst getting in and getting out as well as while handling items.

Figure A: Do not step on the footrest while getting into or out of the wheelchair.

Figure B: Do not lean out of the wheelchair.

Figure C: Do not try to pick up items from the ground if this requires placing your torso between your knees.



Figure D: Do not try and reach items when this requires sitting at the front of the chair.

Figure E: Do not try and reach items when this requires leaning backwards over the backrest.

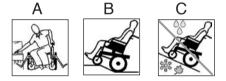
2.2. Handling Guidelines

Figure A:To transfer to a new seat, move the wheelchair as close as possible to the new seat.

Figure B: Always approach obstacles straight on.

Pass the front and rear wheels over the obstacle in one go, do not stop half way through.

Figure C: Never try to go up or down slopes where the ground is damaged or slippery or if there exists a risk for skidding (dampness, gravel, ice, grass etc.).



2.3. Handling (Photo I)

- Turn on the hand control box with the START/STOP switch (A).
- Select the speed with the speed potentiometer (B).
- Moving the joystick (C) allows the power wheelchair to roll in the corresponding direction.

The magnitude of the joystick movement determines the speed of the chair.

Avoid jerky joystick movements. There is a risk of the chair tipping.

3. Description of Esprit Action⁴ NG

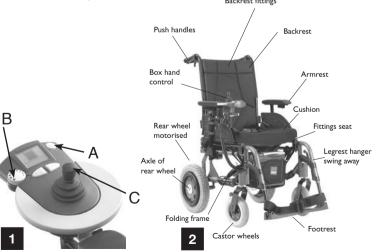
3.1. Introduction

Your wheelchair, while benefiting from standard pre-adjustments before your purchase, must be specifically adapted to meet your own needs.

The following detailed paragraphs outline the different features and possible adjustments, as well as the available options.

Some adjustments can be performed by you, while others will require the intervention of your Distributor.

Important: based on the chosen model or options, your new **Esprit Action⁴ NG** wheelchair may or may not be equipped with elements or options described in the following pages. Non contractual photos and illustrations.



This is a warning symbol, it is essential to respect the guidelines provided in these paragraphs in order to avoid any injury to yourself and those around you.

$\overset{\circ}{\amalg}$ This symbol indicates information which could be of interest to you, please contact your distributor.

3.2 General Condition Check

Your wheelchair is composed of different parts and the most important parts are referred to in this manual.We suggest that you familiarize yourself with the following terms in order to understand how your wheelchair works:

• The **seat** comprises the seat and backrest fittings, the backrest and the armrests. Together they are designed to provide optimal comfort;

• The **swing away legrest**. It comprises the support piece between the frame and the footrest, it rotates for ease of transfers and dismantles for transport;

• The **footrest** includes the adjustable rail and the footplate which supports the foot;

• The **folding frame** includes the lateral mountings and the folding system including the seat rails.

These parts constitute the frame, which is the carrying element of the wheelchair, their overall strength has been carefully considered. Tested at 125 kg for 380-605 mm widths and at 80 kg for 305-380 mm widths;

• The **rear wheel** comprises the wheel, the axle and the handrim. The rear wheels guarantee the stability of the back and are used for hand propulsion with the handrims;

• The **castor wheel** comprises the front wheel and the fork. The castor wheels ensure front contact with the ground and determine the direction through the orientation of the forks;

• The **handbrake** is a parking brake. The two handbrakes are used to immobilise the chair during prolonged stops (in manual propulsion);

3.3. Motor Drive Unit

• electric drive unit, $2 \times 12^{"}$ or $22/24^{"}$ motorised wheels

- hand control box
- junction cables
- battery pack.

4. Settings

4.1. Seat

- Standard seats:

• Nylon seat fabric with or without Velcro: the Velcro strips are necessary for properly holding the cushion in place, ensure that it is correctly placed on the seat.

 $\overset{\mathrm{O}}{\amalg}$ The standard seats are not adjustable; if they become loose, you should ask their replacement from your Distributor. Invacare offers a range of seat cushions adapted to your needs, please consult your Distributor.

 \square Always use a fabric equipped with Velcro strips with a cushion, this is to avoid any slippage and risk of falling!

4.1.2. Types of backrests

- Mid-height folding backrest (photo 3): in order to reduce the volume during transport, activate the lever (B) by pulling or pushing on it and fold the top part of the backrest.

To return to the initial position, bring back the top part to a vertical position, it will snap back into place automatically.

Always check that the backrest is correctly locked into position before the user gets in the chair in order to avoid any risk of injury!

- 0°-30° Reclining backrests with standard 30/41/43 cm and 47/49/ 51 cm heights.

They are now equipped with a new trigger handling system. The reclining angle is easily adjustable, allowing an always comfortable resting position.

Pull on the triggers (A) simultaneously to ensure the same angle on the two sides and release the triggers at the chosen angle (Photo 4A).





Mechanical version

NOTE: Push on the backrest before activating the triggers in order to release the locking system (automatic locking safety mechanism) (Photo 4B)

There are 4 available reclining positions, 10° apart.

• Pneumatic version (Photos 5A and 5B). 30/41/43 cm and 47/49/51 cm Heights

The pneumatic springs provide help with lifting, always undertake this action with the user sitting in the chair. The pneumatic springs version may be equipped with optional pushing handles which are height adjustable for the comfort of the attendant. Continuous adjustment of the reclining position from 0° to 30°

This action should only be carried out by an attendant. Always verify that the backrest is correctly locked in order to ensure complete user safety. In order to avoid any injury, keep your fingers away from any moving parts (levers, mechanisms etc.)!

So as not to destabilize the user position, avoid activating the levers (A) during a sideways transfer, for example! (Photo 5B)







4.1.3. Backrest fittings

- Backrests with standard cover:

 $\tilde{\underline{I}}$ If the padded backrest cover loosens, you should ask for a replacement from your Distributor.

• Adjustable backrest tension (photo 6): it allows the adjustment of the backrest curvature to the body shape and the position of the user.

Lift the flap (A) and pull on one or both straps (B) and then tighten or loosen them based on the version you have on your chair. Each strap is adjustable independently of the others. Reposition the flap (A).

Check that the Velcro strips are well positioned and holding. Always carry out this adjustment before the user gets in the chair to avoid any risk of injury! 4.1.4. Legrest hangers

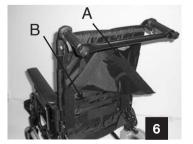
- Standard hangers (photo 7) : they are retractable for transfers and removable for transport.

Operate lever (A) by pushing sideways and rotate outwards or inwards in the event of reduced space.

To return to the initial position, bring the legrest hanger back into line, it will snap back into place automatically.

To remove the legrest hanger, simply pull upwards once you have unlocked the system.

Carry out the operation in reverse to put it back into place whilst keeping the unlocked position.





- Legrests Figure 8 & photo 9: follow the same procedure as for the legrest hangers to retract and dismantle the legrest, operating the trigger (A) to unlock the locking system.

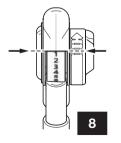
Angle adjustment

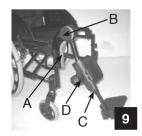
Turn lever (B) with one hand while holding the legrest with the other. Release the lever once you have reached the desired angle, it will lock in one of the 7 positions (figure 8).

The calf cushion is retractable for transfers; its height is adjustable by sliding after loosening the screw (C): adjust to the desired height and firmly tighten up the screw (C). It is also adjustable in depth: loosen the screw (D), change to the new position and firmly tighten up the screw (D).

- Legrests (photos 10 & 11) : they are height adjustable and can be equipped with a fixed or articulated footplate (optional); the footplate can be flipped-up for transfers. Loosen the screw (A) to adjust to the desired height, firmly tighten up the screw after the adjustment.

The footplate can be articulated by a toothed plate (optional), loosen the screw (B), adjust to the desired angle and firmly tighten up.





- Straps: to ensure a good position for the feet, two kinds of straps are offered; the heel push strap positioned on the footplate, fixed or adjustable through Velcro strips and the calf strap affixed to the legrest hanger and adjustable through Velcro strips.

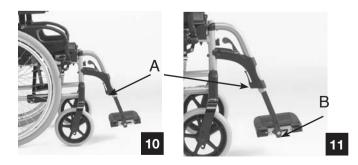
NOTE: the standard legrest hangers and the legrests are fixed by pair on the chair; when dismantling, remember that there is a left side and a right side!

Never lift the chair by the legrest hangers or the armrest! In order to avoid any injury during folding, dismantling or adjusting operations, keep your fingers away from any moving parts!

4.1.5. Multi-adjustable armrests (photos 12 & 13)

• To remove the armrest, simply pull it upwards, and do the reverse to put it back in place, taking care that they are correctly positioned.

• To adjust the height, slightly loosen the screw (A) and adjust to the desired height using the preset adjustment holes. Firmly tighten up.



• To adjust the width, slightly loosen the screw (B) and slide the armrest to the desired width. Firmly tighten up the screw (B).

 \bullet There are two available positions for the depth according to body shape or comfort desired by the user (positions C or D).

NOTE: the lateral protection adjustment may be necessary according to the height chosen, unscrew the four fixation screws (E) and replace them in the new position, firmly tighten up the four screws (E)

These armrests are fixed on an adjustable carrier (in 2 parts) which allows you to reduce the looseness and facilitates removal during transfers, the 4 screws should be tightened or loosened (F) according to the desired result

D The armrests are fixed by pair on the chair, when dismantling; remember that there is a left side and a right side!

Never lift the chair by the armrests! In order to avoid any injury during folding, dismantling or adjusting operations, keep your fingers away from any moving parts!

4.1.6. Comfort Dartex seat

- Comfort Dartex seat (photo 14):

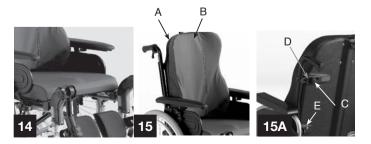
It is removable for folding the wheelchair; just lift up the seat and put it aside, then hold the 2 chair rails and pull upwards. Do the reverse for unfolding (see § 2.1.1).

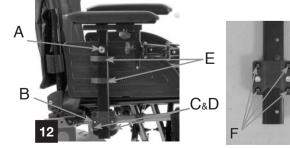
⁹ The cover and padding of this seat is subject to wear, contact your Distributor for any replacement.

Take care that the seat is well positioned on the 3 Velcro seat strips to ensure the safety and comfort of the user. In order to avoid any injury when folding and unfolding, keep your fingers away from any moving parts!

- Comfort Dartex backrest (photos 15 & 15A):

Consisting of a rigid shell (A) and a preformed foam cushion (B) affixed with Velcro, it ensures an optimal comfort. It is removable for folding the chair: release the two buttons (C), slide the triggers (D) inwards and release the hooks (E) from their supports. Do the reverse to put it back in place.





This action should only be carried out by the attendant. Always check that the backrest is correctly locked in order to ensure complete user safety.

Check that the Velcro strips of the backrest cushion are well positioned and have a good grip.

In order to avoid any risk of injury keep your fingers away from any moving parts!

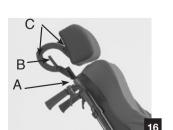
NOTE: To clean the Dartex cover, use a soft cloth soaked in alcohol.

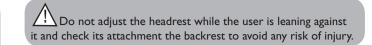
- Comfort Dartex head rest (photo 16) :

It is removable by completely loosening the button (A). The height is adjustable by slightly loosening button (A), adjust to the desired height and tighten gently (A).

The reclining angle, depth and height of the cushion are also adjustable in by simultaneously operating lever (B) and the screws (C).

NOTE: take care when positioning the indexable lever so that it isn't in the way or could cause injury for the user or the attendant.





4.2. Frame

4.2.1. Sides

The sides or lateral support are mainly designed for receiving the castor and rear wheels.

These wheel supports allow three (3) height positions and two longitudinal positions:

4.2.2. Folding system

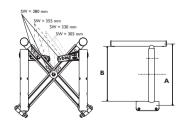
380-605 mm Widths:

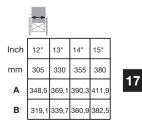
It consists of two double cross-braces which integrate the seat rails.

To fold and unfold your wheelchair, see chapter A General Information, paragraph 2.1.

305-380 mm Widths:

It is equipped with a telescopic cross-brace (figure 17) which offers 4 seat width adjustments from 305 to 380 mm. The seat and backrest covers are also width adjustable.





All of these positional changes and adjustments must be carried out by a professional technician according to your medical prescriber; please ask for advice from your Distributor. This information is provided for reference only.

4.3. Rear Wheels

4.3.1.Wheels

The 22/24" (550/610 mm) rear wheels have spokes, they can be supplied with a puncture proof tyre or band.

Repairs (photo 18) : when a tyre is punctured it needs to be removed for repair. Remove the whole (tyre and tube) from the wheel rim, repair or replace the inner tube, put it back in place in the tyre and reposition the whole on the wheel rim.

Comply with the tyre pressure indicated on the side of the wheel.

NOTE: Don't forget that in order to keep the interchangeability of the wheelchair wheels equipped with rapid dismantling axles, the two tyres must be inflated to the same pressure.



The pressure indicated on the sides of the tyre must never be exceeded or there is a risk of injury if the tyre were to burst! $\underline{\tilde{I}}$ The tyres are subject to wear, rough grounds and the driving styles will also have an influence on their life span; please ensure their regular replacement to avoid the inconvenience of punctures, please ask for advice from your Distributor.

4.3.2. Handrims

They are for propulsion, and are made from anodized aluminium.

The handrims are in permanent contact with the hands; regularly check that they are not damaged!

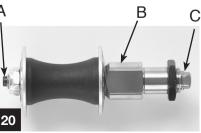
4.3.3.Axles

The axles link the wheels to the frame and can be quickly dismantled (photo 19):

- Quick-release axles (photo 20): push in button (A) and insert the axle into the wheel hub. Position all of it in the bearing (B) of the multi-adjustable wheel support until it locks into position.

The locking balls (C) should protrude from the bearing and there should not be any significant lateral looseness.





To reduce looseness to a minimum, remove the axle and adjust the nut with a 19 mm wrench, lock the axle with an 11 mm spanner.

Regularly monitor the cleanliness of the axle and the stop balls. To avoid any risk of falling, it is absolutely essential that the button (A) and the stop balls are completely clear to ensure that the rear wheels are completely locked.

The quick dismantling axle is a precision piece, avoid shocks and clean it regularly to ensure a good performance.

4.4. Castor Wheels

4.4.1.Wheels

The castor wheels are available with a diameter of 8" (200 mm) and a width of 2" (50 mm) or with a diameter of 7" (172 mm) and a width of 1 3/8" (32 mm), they can be supplied with a puncture proof tyre or band.

NOTE: Refer to paragraph 15 for ongoing maintenance.

4.4.2. Forks

Various fork positions are available based on the options chosen for seat-to-floor height, castor and rear wheels.

 $\bar{\mathbb{I}}$ If you wish to change the fork or castor or rear wheels, please ask for advice from your Distributor.

4.5. Brakes

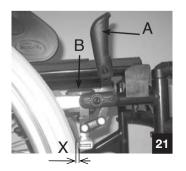
4.5.1. Handbrakes

The handbrakes (photo 21) are used to immobilise the chair during prolonged stops. They cannot to be used to slow down the chair or as a support to carry out a transfer. They must be used together.

Braking is done by pushing the handle (A) towards the front of the wheelchair. Handle (A) folds back to facilitate transfers. Beforehand, pull the handle upwards. Once the brakes have been activated, the chair should not be able to move.

NOTE: the brake adjustments depends on the diameter and type of wheels used. After repairing a flat tyre or after wear of the tyre or band, it may be necessary to adjust the brake or brakes with the screws (B).

To carry out the adjustment, loosen the two screws (B) and slide all of the brake until you reach between the wheel and the brake pad in an unlocked position a value (X) as follows: Band X = 4 mm - Tyre X = 5 mm



Firmly re-tighten the screw (B) after adjustment. Keep your fingers far away from all moving parts in order to avoid any risk of injury!

4.6. Options

4.6.1. Seat options

- Straight backrest stretcher (photo 22): it ensures that tension is maintained for the backrest fittings and allows a better ergonomic position for the attendant while pushing the wheelchair.

NOTE: It is foldable to fold the chair, slightly loosen button (A), pull upwards and turn it until a vertical position is reached, along the backrest.

To put it back in place, do the reverse and firmly tighten up button (A) while ensuring that button (B) is tightened well.

Avoid lifting the chair by the stretcher! There is a risk of the stretcher unlocking while pushing upwards.

Keep your fingers far away from any moving parts in order to avoid any risk of injury!



4.6.2. Safety options

• Postural belt with buckle lock (photo 23): to lock the buckle, place part (A) into part (B), to open it press on (C). Based on the user body size, pull on one or the other of the strap extremities (D) passing it through the two buckles (E).

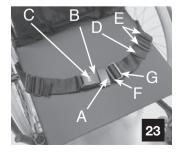
It is important that both buckles (E) are used. If not there is a danger that the belt will slip.

If the belt gets loose, it can be adjusted by tightening the strap (F) passing it through the buckle (G).

Ensure that the user is well seated at the back of the seat and that the pelvis is well positioned.

Position the belt under the ilium crest. Adjust the length in such a way that a hand can fit between the belt and the body of the user.

It is recommended that the belt locking mechanism is in a central position so adjust the strap on each side. These adjustments must be checked each time the belt is used.



The belt fixation must be conform to the scheme enclosed with each belt delivery; the belt should be mounted and adjusted by your regular dealer.

Please be careful that the belts don't get caught in the spokes of the rear wheel. The postural belts must not be used as safety belts in a car.

• Anti-tipping castor wheels with foot rest (photo 24 and figure 25) :

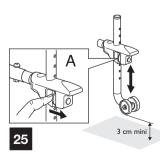
This version includes a support for helping to tilt.

Adjust to the desired height (while respecting the recommended distance) by operating the button (A figure 25).

 Δ The recommended distance between the castor wheels and the floor is 3-5 centimeters, this adjustment is necessary in relation to the rear wheel position and diameter.

Operate the button (A figure 25) and adjust the desired distance using the preset adjustment holes.





Ensure that the stud is well positioned in the preset adjustment hole to avoid any risk of falling. Never forget to fold the anti-tipping castor wheels once they are retracted.

5. Equipment

5.1. Motor Drive Unit (photo 26)

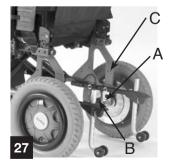
The electric drive unit of the **Esprit Action**⁴ **NG** includes the following components:

- 2 x 12" or 22/24" motorised wheels (A)
- electronic center (B)
- the battery packs (C)

5.2. Mounting Plate (photo 27)

The mounting plates to the right and left of the wheelchair frame are equipped with two housings (A) for the rear wheel axle and (B) for the electrical connection which allow fitting of the 2 motorised wheels.





The bearing supports for fixing the manual propulsion wheels are positioned above (C) for e-fix^{\circ} 12" and in the place of the motorised wheels for e-fix^{\circ} 22/24".

Refer to the additional e-fix° guide paragraph 2.1 Wheel assembly and paragraph 2.2 Removing the wheels.

5.3. Locking the Motorised Wheels

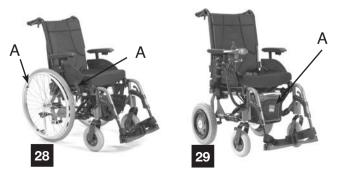
Refer to the additional e-fix $^{\circ}$ guide paragraph 2.1 Wheel assembly and paragraph 2.2 Removing the wheels.

5.4. Transformation Kit for Manual Propulsion (optional)

This kit allows the transformation of the powered **Esprit Action⁴ NG** wheelchair into a manual propulsion wheelchair.

It contains the 22/24" rear wheels (A) which are essential for the transformation as well as two hand brakes (B). (photo 28).

Refer to paragraph 4.5.1 for adjusting the brakes.



6.ALBER e-fix® Electronics

6.1. Electronic center

The electronic center of *Esprit Action⁴* NG is found in the electric drive unit. Called the ALBER e-fix^{*} system, it is responsible for controlling the movement functions. As well as controlling the driving, ALBER e-fix^{*} is also responsible for controlling the wheelchair's electrical system. Any system failure is indicated by a flashing light in the hand control box (status indicator).

For more information, see the ALBER e-fix[®] user manual!

7. Electrical Part

7.1. Batteries (photo 29)

All the power supply for the power wheelchair is provided by two 12V batteries (A). (12 Ah standard, 17 Ah optional).

They are housed in a box (B). To facilitate removing and repositioning the batteries, it is possible to remove the housing box from the wheelchair frame (self gripping strips).

7.2. 12" or 22/24" Motorised Wheels

The motorised wheels are equipped with automatic brakes. A mechanism allows disengaging of the motors to allow the chair to be pushed.

The motor brakes are off when the chair is pushed. See the additional ALBER e-fix® guide.

8. Mechanical Part

8.1. Hand Control Box Height Adjustment (photo 30)

 \bullet Loosen the wing nut (A) which secures the box by turning it anticlockwise.

• Adjust the height of the box by pulling it upwards or by pushing it back down.

• Tighten the wing nut (A) by turning it clockwise.

8.2. Hand Control Box Retraction

• Rotate the box onto the side.

• Bring it back to its starting position. A spring will lock it in its original position.

9.Assembling and Dismantling the 12" or 22/24" Motorised Wheels

9.1. Dismantling the motorised wheels

See the additional ALBER e-fix[®] guide, paragraph 2.1 Wheel assembly and paragraph 2.2 Removing the wheels.

9.2. Reassembling the 12" or 22/24" Motorised Wheels

See the additional ALBER e-fix $^{\circ}$ guide, paragraph 2.1 Wheel assembly and paragraph 2.2 Removing the wheels.



10. Driving Guidelines / Operational safety

10.1.The First Time

Before moving the first time with the wheelchair, familiarize yourself with its handling and with all the driving components. Take the time to practice all the functions and driving modes.



Use the existing retaining systems for each trip.

10.2. Comfortable Position

Before each departure, check that:

- All the control elements and accessories are easily accessible.
- the batteries are sufficiently charged for the trip,
- the horn works
- the postural belt is in perfect condition.



🚹 Check the castor wheels tyre pressure

10.3. Obstacles

Esprit Action⁴ **NG** can surmount obstacles or sidewalk height based on to the front castor wheel dimensions, i.e. a height of 3-4 cm. Based on the chosen options your wheel chair is equipped with different anti-tipping castor wheels with an adjustable height.

e-fix[®]: Height adjustment for the anti tipping castor wheels (photo 31 and figure 32)

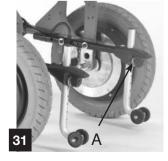
Lift up the spring button (A) and choose one of the 2 available heights, 3 or 5 cm. Make sure that the anti-tipping system is locked in its new position

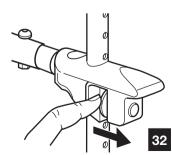
Scalamobil: See the description in the Scalamobil guide

Always reposition the anti-tipping castor wheels after dismantling Scalamobil (risk of falling or tipping).

Driving guidelines (figure 33):

- Always approach the obstacle or sidewalk slowly and straight on (maximum of 3 to 4 cm).
- · Increase the speed just before the castor wheels or the lifting device comes in contact with the obstacle.
- Only reduce speed after the rear wheels have also surmounted the obstacle.





Never approach obstacles at an angle. The chair risks tipping and only pass over obstacles with the backrest in a vertical position.

10.4. Going Uphill and downhill

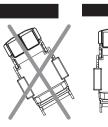
Esprit Action⁴ NG can securely travel uphill on inclines lower than 5° (figure 34). There is a risk of tipping when the inclines are steeper. Follow the course of the incline; do not travel in a zigzag pattern.

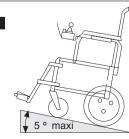
Only go uphill or downhill with the backrest in a vertical position and the anti-tipping castor wheels correctly secured.

Go downhill at most at 2/3 maximum speed.

 \square Do not go uphill or downhill where the ground is rough or slippery or if there is a risk for skidding (dampness, gravel, ice, grass etc.).

 \square Increased risk of tipping when getting out of the chair on a slope.





34

10.5. Parking / Immobilisation

To park your vehicle or in the event of a prolonged immobilisation, turn off the hand control box (ON/OFF switch) The chapter «Circulation» describes the different operations.

10.6. How to Transfer to a New Seat

- Move as close as possible to the new seat (figure 35).
- Turn the wheelchair power off.
- Remove/raise the armrest.
- Slide on the new seat.

II. Pushing the Wheelchair

In order for accompanying person to manually push

Esprit Action⁴ **NG**, the motors should be disengaged. Refer to the additional e-fix^e guide, paragraph 7.2 Driving with the e-fix^e wheels in manual mode.



12. Batteries: Charging, Maintenance and Transport

12.1. Guidelines for Charging the Batteries

Follow the charger user guide provided with the wheelchair. If the wheelchair is equipped with different options (e-fix*, Scalamobil) each battery pack must be recharged with its proper charger, see the appropriate Alber guide.

 $\overset{0}{\amalg}$ It is possible to recharge the batteries overnight as the charger is equipped with an automatic switch off system which prevents the batteries from overcharging.

During the charging procedure, the wheelchair must be powered off. This saves any excess use of power and ensures that the batteries are fully charged. When the wheelchair is plugged in, the charging procedure cannot be automatically interrupted.

 $\overset{o}{\amalg}$ New batteries should be charged for 12 hours before first time use.

 $\overset{o}{\amalg}$ Always recharge the batteries after the last trip.

 $\tilde{\square}$ Batteries that are almost completely discharged should be recharged for at least 16 hours. If this procedure isn't possible on three successive occasions, the batteries should be charged once for over 24 hours.

 $\overset{
m N}{
m L}$ Room temperature should be 10-30 °C while recharging. Charge time is longer when the temperature is below 10 °C.

12.2. Charging the Batteries

Always refer to the charger user manual.

There is a risk of explosion and destruction of the batteries should an incorrect charger be used. Always use the charger supplied with the wheelchair.

There is a risk of injury by electrocution and of destruction of the charger if it is wet. Protect the charger from humidity.

20

There is a risk of injury by short-circuit and of electrocution if the charger has been damaged. Do not use the charger if it has dropped on the floor or if it is damaged.

There is a risk of fire and of injury by electrocution in the event a damaged extension cord is being used. Use an extension cord only when absolutely necessary! If you must use one, you must be sure that it is in perfect condition.

For more information refer to the Alber e-fix® and/or Scalamobil user manual or contact your local Invacare representative.

12.3. Guidelines for Batteries Maintenance

- Only store the batteries when they are fully charged.
- Their storage temperature must be between -40°C and +50°C.
- In the event of a prolonged immobilisation (over 4 weeks), the wheelchair batteries must be recharged once a month.

This allows them to hold their full charge and avoids any deterioration by spontaneous discharge.

12.4.Transport

Tests have allowed the determination of a battery category: Batteries which equip **Esprit Action⁴ NG** are not "dangerous materials".

This classification relates to the following regulations:

- Regulation for road transport of dangerous goods GGVS
- Regulation for rail transport of dangerous goods
- Regulation for air transport of dangerous goods IATA/DGR

13. Assembling the Rear Wheels for Propulsion Manual

13.1. Assembling the Manual Rear Wheels

• Remove the hand control box and the motorised wheels.

 \bullet Push in the quick dismantling axle button (A) and introduce the axle (A) into the bearing support (B) of the mounting plate. (photos 36 and 37).

/! Verify that the stop balls (C) protrude from their housing.

 $\overset{0}{\amalg}$ Clean the quick dismantling axle (A) as well as the bearing support (B) of the castor wheel before assembling them. Dirty components lead to premature wearing of the bearings.

Carefully check the manual brake adjustments according to the 22/24" rear wheel type mounted on the wheelchair (see paragraph 4.5.1).



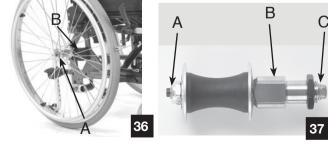
• Push in the quick dismantling axle button (A) and remove the axle from the wheel bearing supports (B) of the mounting plate.

14. General Care and Maintenance

14.1. Cleaning the Wheelchair

Follow the following points for cleaning the wheelchair:

- Clean the hand control box and the seat and backrest covers only with a damp cloth and a gentle cleaning product.
- Only use cleaning products which do not contain abrasives.
- Do not direct streams of water directly onto the electronic components.
- Do not use a high pressure cleaner.



14.2. Maintenance Operations

22

In case of problems during maintenance or if you spot damages or anomalies at your **Esprit Action⁴ NG**, immediately contact your local Invacare representative

Week Frame · Check that the cross-braces are not damaged. · Check that all cross-braces joints for are not loose and that they move easily. Backrest and seat covers • Check that they are in perfect condition. Armrest and armrest pads Check the condition of the armrest. · Check that all joints move easily. × · Check that the armrest deadlocks are working correctly. Footrest · Check that the deadlock device is working correctly. · Check the condition of the footplates. Tyres and tyre bands × • Check that the wheels tyre pressure is correct (2.5 bars). • Make sure the wheels and bands are showing no signs of damage (cracks, etc): Forks / castor wheels • Make sure the castor wheels turn freely. × · Make sure the fork bearings are securely fixed. Motorised rear wheels × • Make sure the electric drive unit locking system moves easily and × works correctly. • Make sure the bolts are securely fixed in the mounting plate. • Check that the rear wheel screws are completely tightened. • Make sure the rear wheels aren't bent after a side impact.

General inspection by the approved Invacare distributor.

15. Repairs by the user/attendant

Month

×

×

× П

×

×

×

×

×

×

×

×

×

Year

D Please contact your distributor for all repairs; they will be responsible for returning your chair to Invacare® After Sales service, if necessary.

Before dismantling the wheels, lift the wheelchair up, support and immobilise it to ensure that it doesn't move.

Lift the chair up and place a support (A) under the frame to ensure that it doesn't fall. (figures 38 and 39). Before starting to dismantle the wheels, ensure that the wheelchair is powered off.

15.1. Checking the Castor Wheel Bearings

Spin the left and right castor wheels.

If the wheel spins freely for some time: the bearing is in good condition.

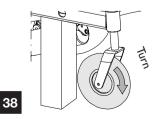
- If the wheel stops spinning as soon as you let go: have the wheel checked / replaced by the approved distributor.

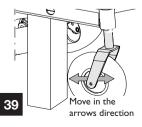
Checking the fork bearing

Hold the fork by the sides and move it forwards and backwards.

- Impossible to move the castor fork backwards in its bearing: the bearing is in good condition.

- The fork moves forwards and backwards in its bearing: Have the bearing checked / replaced by the approved distributor.





15.2. Removal / Reassembly of the Front Castor Wheel (photo 40)

• Remove the electric drive unit from the frame.

• Place the frame on a clean surface with the push handles backwards.

- \bullet Loosen nut (A) with a 5 mm Allen wrench while holding screw (B) with a second 5 mm Allen wrench.
- Remove screw (B) from the fork.
- Remove the wheel from below.

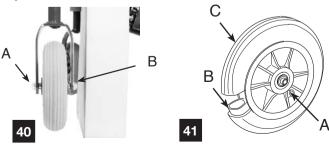
To reassemble front wheel proceed in the reverse order.

15.3. Replacing the Tyre / Inner tube (figure 41)

- Unscrew the valve cap (A).
- Let out the air from the inner tube (B) by pushing on the spring pin.
- \bullet With the help of a tyre remover, free the tyre (C) from the rim, starting on the valve side.
- Remove the inner tube from the tyre.

Replacing the tyre

• With the help of a tyre remover, free the opposite side of the tyre from the rim.



• With the help of a tyre remover, lift the first side of the tyre (C) above the rim

Assembling/replacing the inner tube (photo 41)

- Place the inner tube (B) inside the tyre and inflate it slightly.
- Ensure that inner tube (B) and valve (A) are correctly positioned.
- \bullet Put the opposite side of the tyre (C) on the rim, starting from the side opposite valve (A).
- \bullet Ensure that the inner tube (B) isn't caught between the rim and the tyre (C).
- Inflate the inner tube to the recommended pressure written on the tyre (usually 2.5 bars).
- Ensure that the tyre (C) is correctly placed on the rim.

16. Nameplates

The wheelchair nameplates provide important technical information; they make chair identification easier and help with the ordering of replacement parts.

e-fix®:

They are found on the inner side of the 2 motorised wheels and on the battery pack connection interface.

Scalamobil:

They are located on the rear side of the motor-battery unit The serial numbers are stuck to the folding cross-brace as well as on the interface.

17.Transport

17.1.Transporting the Wheelchair in a Car

Without its user:

Drive or push the power wheelchair into the vehicle with the help of an appropriate ramp.

Once the wheelchair is inside, immobilise it with the security belts as shown (photo 42).

Before each departure, ensure that:

- the motors are engaged
- the hand control box is turned off.

24

For safety reasons, loading the wheelchair with the help of a ramp should always be done without its occupant sitting it. There is a risk of the chair tipping.

During transport the battery pack must imperatively be dismantled, there is risk of injury in case of impact.

17.2. Frame Folding and Unfolding

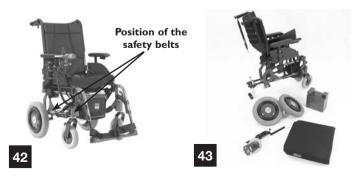
Transportation is carried out with separate elements (photo 43). Refolding the wheelchair (figure 44)

- Remove the footrest and the electric drive unit.
- Hold the seat cover by the middle and pull upwards as far as possible.
- Completely close up the entyre frame, holding it by the armrests.

Be careful with moving parts when folding and unfolding the chair. Risk of crushing.

Unfolding the chair (figure 45)

- Open the frame to the fullest, holding it by the armrests.
- Pull the cross-braces apart by the exterior tubes until the frame clicks into place (stop).
- Reassemble the electric drive unit and the footrests.







18.Technical Specifications (Adult = Std, Child = Jr) for the wheelchair equipped with e-fix° 12"		Tyre pressure:	2,5 bars (front castor wheels only)	
Wheelchair classification:	Class B (indoor and limited outdoor use)	Turning radius:	Std : 930 mm Jr : 760 mm	
Seat width:	Std : 380 /405/430/455 485/505/555/605 mm	Driving speed:	6 km/h max.	
	Jr : 305/330/355 mm	Max driving range:	14 km (12 Ah) 26 km (17 Ah)	
Seat depth	Std : 400/450/500 mm r : 325/375 mm	Enne for une inchée		
Seat height without cushion:	Std : 460/485 mm	Empty weight:	Std : 45 kg Jr : 42 kg	
U U	Jr : 460 mm	Maximum load (payload):	Std : 125 kg	
Total height:	Std : 1020 mm Jr : 915 mm		Jr : 80 kg	
Total width:	Seat width + 170 mm	Uphill range:	up to 5° max on stable ground	
Total length, without footrest:	Std : 800/850/900 mm	Ground clearance:	45 mm	
Jr : 695/745 mm		Passable objects:	Std : 40 mm	
Total length, with footrest:	Std : 1000/1050/1100 mm Jr : 900 mm	·	Jr : 30 mm	
Armrest / seat height (mm):	210 to 345 m by 15 mm	Electrical installation:	24 V	
Armrest width adjustment:	+ 60 mm	Batteries:	2x 12 V 12 Ah batteries	
Footrest length:	Std : 330 à 480 mm		(17 Ah optional)	
Backrest reclining position range:	0° à 30°	Battery charger:	240 V / 24 V - 3 A	
Front tyre dimensions: Std : 8" x 2"	Std : 8" x 2"	Electronic center:	ALBER e-fix System	
	Jr:7" x 3/8"	Authorized storage temperature:	-40° C to +65° C	
Rear tyre dimensions:	12".1/2 x 2".1/4"	Authorized room temperature:	-20° C to +40° C	

19. Inspections (Operations to carry out)

In case of problems during maintenance or if you spot damages or anomalies at your **Esprit Action**⁴ **NG**, immediately contact your local Invacare representative

Regularly tighten all the fixation screws.

Frame

26

· Check that the cross-braces are not damaged.

• Check all joints of the cross-braces to ensure that they are not loose and that they move easily.

Backrest and Seat Covers

• Check that they are in perfect condition.

Armrests and Armrest Pads

- Check the condition and fastening of the armrest pad.
- Check the armrest bearing to ensure that it is not excessively loose.
- Make sure the armrest deadlocks are working properly.

Standard Hand Control Box

- Check its overall condition and fastening.
- Check all joints of the rotating mechanism (optional) to ensure that they move easily.

Footrest

- Check that the locking system works properly.
- Check all the bearings to ensure that they are not excessively loose and that they move easily.
- Check the condition of the footplates.

Tyres and Tyre Bands

- Check the tyre pressure (2.5 bars).
- Check the wheels and bands are showing no signs of damage (cracks, etc.).

Forks/Castor Wheels

- Check that the forks are securely fastened to the frame.
- Check that the forks/castor wheels are showing no signs of damage.
- Check the fork bearings.
- Check the front castor wheel bearings.

Motorised Rear Wheels

- Check that the motorised wheel lock moves easily and works properly.
- Check that the bolts are securely engaged in the mounting plate.
- Check that the rear wheels are not distorted following a lateral impact.
- Clean the motor contacts.

Trial Run

- Smooth start/turn.
- · Check the brakes.

20. Warranty Conditions Summary

Contractual warranty

Invacare[®] wheelchairs have a 2 years warranty against all manufacturing defects arising from a materials or construction defect, starting from the delivery day.

This warranty is explicitly limited to a return in working condition or a free exchange (parts and labour) of parts recognized as being defective in the Distributor's workshop after agreement from Invacare[®], being specified here that this return in working condition or exchange can be achieved with new parts, from new sub assemblies or standard exchange of said parts after final judgment from Invacare[®].

Applicability Conditions

To activate this warranty, contact your Invacare[®] Distributor and present this duly completed certificate. Postage and packing costs as well as transport costs are at borne by the purchaser. The distributor may or may not bear these costs depending on the sale conditions they use.

The warranty applies provided that:

• The wheelchair is repaired in the Distributor or Invacare® local workshop.

• The periodic checks figuring on the back of the warranty certificate have been carried out in a timely manner in said workshops.

Limitations

We draw your attention to the fact that this warranty is not applicable in the event of:

- Accidents, falls, shocks, abnormal use.
- Normal wear and tear arising from use of the wheelchair.
- Poor maintenance of the wheelchair.

• From dismantling, repair or modification carried outside of the Distributor or Invacare® local workshops.

• If you cannot provide proof of purchase.

The warranty does not cover:

• Replacement of parts subject to normal wear and tear resulting from the use of the wheelchair (tyres or bands, brake pads, armpad, seat and backrest fittings, footrest plates, batteries, etc.)

21.Tools for Adjustments and Normal Maintenance

(not supplied)

Function Tool 5 mm Hex wrench (Allen) Brake Footrest tube 5 mm Hex wrench (Allen) Footplate 5 mm Hex wrench (Allen) 5 mm Hex wrench (Allen) Armrests T20 Torx wrench Armrest Front wheel 5 mm Hex wrench (Allen) 11 / 19 mm Flat wrench Quick dismantling axle

22. After Sales and Recycling

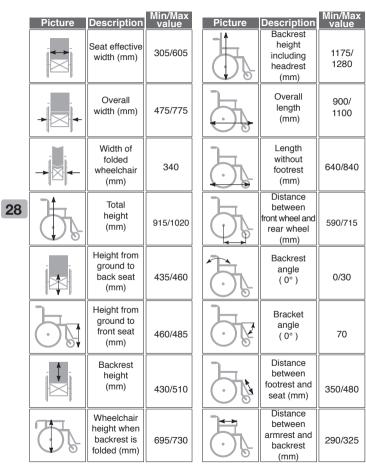
• You must use Invacare® spare parts available from all Invacare® Distributors.

• Please contact your distributor for all repairs; they will be responsible for returning your chair to Invacare® After Sales service, if necessary.

• Recycling: The metallic and plastic parts can be recycled (reuse of metal and plastic materials).

The disposal must be carried out according to applicable local and national regulations. For further information on waste treatment organizations in your area, please contact your town hall.

23. Dimensions



Picture	Description	Min/Max value	Picture	Description	Min/Max value
	Fixed armrest height (mm)	N/A	<u>St</u>	Maximum obstacle height (mm)	30/40
	Adjustable armrest height (mm)	210/345	- St	Maximum down slope (0°)	10
	Notched armrest height (mm)	N/A	61	Maximum up slope (0°)	5
	Rear wheel diameter (mm)	320/610		Maximum lateral super elevation (0°)	10
	Handrim diameter (mm)	520	F.	Removable parts	Wheels Armrests footrests
35	Seat plane angle (0°)	3	Kg	Overall weight when empty (kg)	42/45
~~~	Height without rear wheel (mm)	760/930	Ĩ.	User's maximum weight (kg)	80/125
	Turning circle (mm)	850	Kg	Weight of the heaviest removed part ( kg )	15
	Cushion thickness (mm)	50		Seat material Fire class	Nylon:M4 NF EN 1021-1 NF EN 1021-2



Invacare[®] Australia Pty Ltd. | lenton Place, North Rockes NSW 2151 Australia 🖀 (61) 2 8839 5333 Fax (61) 2 8839 5353 Invacare[®] n.v. Autobaan 22 8210 Loppern (Brugge) Belgium & Luxemburg 🖀 +32 (50) 831010 Fax +32 (50) 831011 Invacare[®] A/S Sdr. Ringvei 37 2605 Brøndby Danmark 🖀 (kundeservice) +45 - (0) 3690 0000 Fax (kundeservice) +45 - (0) 3690 0001 Invacare[®] GmbH Alemannenstraße 10, D-88316 Isny Deutschland 🖀 +49 (0) 75 62 7 00 0 Fax +49 (0) 75 62 7 00 66 Invacare[®] European Distributor Organisation Kleiststraße 49, D-32457 Porta Westfalica Deutschland 🖀 +49 (0) 31 754 540 Fax +49 (0) 57 31 754 541 Invacare[®] SA c/Areny s/n Poligon Industrial de Celrà | 7460 Celrà (Girona) España 🖀 +34 - (0) 972 - 49 32 00 Fax +34 - (0) 972 - 49 32 20 Invacare[®] Poirier SAS Route de St Roch F-37230 Fondettes France 🖀 +33 - (0) 2 47 62 64 66 Fax +33 - (0) 2 47 42 12 24 Invacare® Mecc San s.r.l. Via dei Pini. 62 1-36016 Thiene (VI) Italia 🖀 +39 - (0) 445-380059 Fax +39 - (0) 445-380034 Invacare[®] Ireland Ltd Unit 5 Seatown Business Campus, Seatown Rd, Swords, County Dublin Ireland 🖀 (353) 1 8107084 Fax (353) 1 8107085 Invacare[®] NZ 4 Westfield Place Mt. Wellington Auckland New Zealand 🖀 (kundeservice) +64 - 22 57 95 10 Fax (kundeservice) +64 - 22 57 95 01 Invacare® AS Grensesvingen 9 0603 Oslo Norge 🖀 (kundeservice) +47 - 22 57 95 10 Fax (kundeservice) +47 - 22 57 95 01 Invacare[®] PORTUGAL Lda Rua Estrada Velha, 949 4465-784 Leça do Balio Portugal 🖀 +351-225105946 Fax +351-225105739 Invacare® AB Fagerstagatan 9 163 91 Spånga Sverige 🖀 (kundtjänst) +46 - (0) 8 761 70 90 Fax (kundtjänst) +46 - (0) 8 761 81 08 Invacare[®] B.V. Celsiusstraat 46 NL-6716 BZ Ede Nederland 🖀 +31 - (0) 318 - 69 57 57 Fax +31 - (0) 318 - 69 57 58 Invacare® Ltd Pencoed Technology Park, Pencoed, Bridgend CF35 5AQ United Kingdom

Customer service +44 - (0) 1656 - 776222 Fax +44 - (0) 1656 - 776220



#### Manufacturer

Invacare ° France Operations SAS Route de Saint Roch 37230 Fondettes **France** 

1561198-EN VA 05/2013

www.invacare.eu.com



Yes, you can: