

drive

DeVilbiss
HEALTHCARE



*Nitrusdale
www.nitrusdale.com*

Titan LTE

User Manual

CE

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Preface

Please read this owner's manual before using the powerchair. Improper use of the powerchair could result in harm, injury or traffic accidents.

This owner's handbook includes operation instructions for every aspect of the power powerchair, assembly instructions, as well as instructions for how to deal with possible accidents.

The symbols used in this manual are explained below. Read carefully, especially the parts marked with these symbols:

	Caution Improper usage could lead to death or serious injury, or damage to your powerchair.
	Suggestion Follow these instructions to keep the status of the power powerchair working well and ease your operation.

This document includes the repair and maintenance record chart and warranty. Please keep it in a safe place or on the powerchair.

If someone else uses the powerchair, please be sure to give the instruction manual to him or her.

As designs change, some illustrations and pictures in the manual may not correspond to the powerchair that you purchased. We reserve the right to make design modifications.

The manufacturer disclaims all responsibilities for any personal injury or property damage which may occur as a result of improper or unsafe use of its products.

Safety Notices

1. Always fully charge your powerchair before operating.
2. Always make sure the power is off when getting in and out of the powerchair.
3. Always make sure the clutch levers are engaged (parallel to the wheels) before getting in or out of the powerchair. Engage the levers by pressing them downwards. Nithsdale Wheelchairs
4. To prolong the life of the battery, it is suggested you charge the battery after every trip. If you do not drive it for long periods of time, it is recommended to charge the batteries once per week.
5. If the battery gauge goes to RED, charge the battery as soon as possible. If the battery is totally discharged, it could be damaged, and/or its life could be shortened.
6. As the battery ages and deteriorates, the battery power will decrease faster.
7. In cold weather, the battery capacity will be less.
8. Avoid unnecessarily moving of the powerchair.
9. Please fasten the seat belt, if included, when operating the powerchair and check the proper position of the anti-tip wheel.
10. Our products function best at temperatures between 32-122°F (0-50°C).
11. Disassembling of controller, motor or charger by end user is prohibited; the dealer will not take any responsibility on these kinds of situations.
12. Prevent the controller, charger and battery from getting wet; this can cause a malfunction.
13. To ensure the user's familiarity with the powerchair's operation, the new driver should practice driving in a spacious area, traveling forward, backward, left, right, using the brakes, and going both up and down slopes.
14. Please turn off the powerchair when the chair is not in use and before charging the batteries.
15. The following areas and conditions can be dangerous and should be avoided; darkness, dim lighting, steep slopes, rain, snow, shoulder of the road, slippery areas, etc.
16. Please do not drive your powerchair at night without proper lighting.
17. Please do not lower the footplate to less than 2" above the ground, because accidents may occur due to insufficient ground clearance.
18. Keep your feet on the footplate at all times during operation and do not stand on the footplate. If your feet are in the improper position, you can be seriously injured.
19. When the power does not come on, recheck all connections and recharge if necessary.
20. Please check the screws under the joystick periodically and make sure they are not loose, and tighten them if needed.

Electromagnetic Interference

Power mobility products may be susceptible to electromagnetic interference (EMI), which is interfering energy emitted from sources such as:

- Cellular phones
- Wireless computer links
- Two-way radios
- Radio stations
- TV stations
- Amateur radio (HAM) transmitters
- Microwave signals
- Medium-range mobile transceivers used by emergency vehicles

This interference can cause the powered mobility product to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the power mobility product's control system.

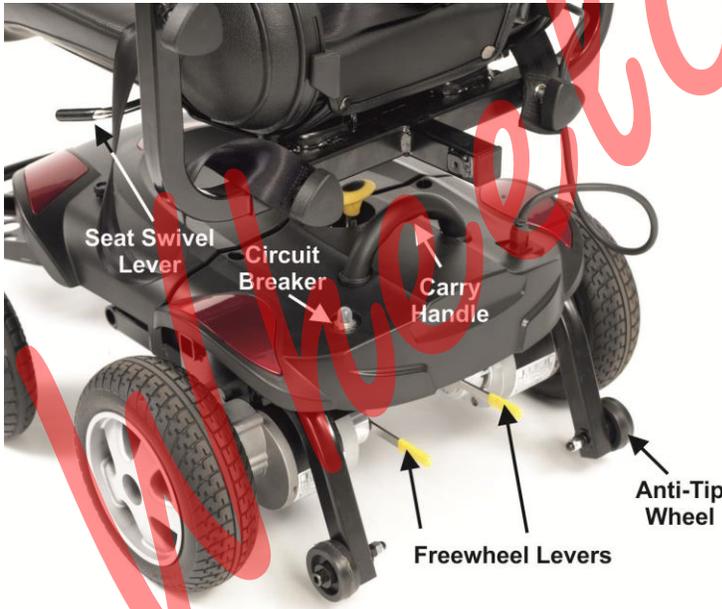
Every electronically-powered mobility powerchair has a resistance to EMI – the higher the immunity level, the greater the resistance to EMI. Your power mobility product has been laboratory tested and is immune to EMI up to a level of 20 V/M.

Warning!

Following the warnings listed below should reduce the chance of unintended brake release or powered mobility product movement which could result in serious injuries.

1. Do not operate hand-held transceivers-receivers, such as citizens band (CB) radios, or turn ON personal communication devices, such as cellular phones, while the mobility product is turned ON.
2. Be aware of nearby transmitters, such as radio or TV stations, and try to avoid getting close to them.
3. If unintended movement or brake release occurs, turn the powered mobility product OFF as soon as it is safe.
4. Be aware that adding accessories or components, or modifying the power mobility product, may make it more susceptible to EMI.
5. Report all incidents of unintended movement or brake release to Drive DeVilbiss, and note whether there were sources of EMI nearby.

Parts



Assembly

INITIAL ASSEMBLY (this is also applicable after disassembly for transport)

1. Loosen and remove the two knobs on the shroud. Lift up the front shroud to remove. Lift up the front shroud to remove.



2. Connect the battery pack.



3. Insert the seat in to the seat post. Lift up the swivel lever and rotate the seat until it locks in position.



4. Insert the arms in to the seat.



5. Set the arms to the required width then secure by turning the armrest knobs clockwise.



6. Plug the cable from the joystick remote in to the port at the back of the powerchair base.





Suggestion

Fully charge the battery for 12 hours before use. Failure to do so could impair the battery performance and may permanently reduce the battery's longevity.

DISASSEMBLY FOR TRANSPORT

The powerchair can be quickly and easily separated into 4 sections: seat assembly, front section, and rear section (with or without batteries) and the battery pack.

1. Unplug the joystick from the rear of the powerchair.



2. Swivel the seat using the lever whilst lifting up the seat to remove. The chassis can now be split. If you need to remove the batteries follow steps 3 and 4, otherwise proceed to step 5.



3. Loosen and remove the two knobs on the shroud. Lift up the front shroud to remove. Lift up the front shroud to remove.



4. Disconnect the batteries and lift up the battery pack to remove.



5. Lift up the yellow handle to separate the chassis. This can be done with or without the batteries installed.



Comfort Adjustments



SEAT SWIVEL

The seat can be swivelled left or right to make getting on or off the seat more convenient.

Lift up on the handle on the left side of the seat and then rotate the seat. Release the handle and carry on rotating the seat until it locks in position.

JOYSTICK POSITION

The position of the controller can be adjusted by loosening the bolt on the underside of the controller arm and sliding the arm forward or backward to the desired position.

Once the desired position is reached, retighten the bolt to secure the joystick in position.





ARMREST WIDTH

The width of armrests can be adjusted by loosening the bolts on the underside of the seat and sliding the armrests inward or outward to the desired width.

Once the desired position is reached, retighten the bolt to secure the armrest in position.

ARMPAD ANGLE

Adjust the angle of the arm pad by altering the position of the screw and nut with a spanner (as shown in the photograph).

To raise the angle, first turn the screw anticlockwise then turn the nut clockwise.

To lower the angle, first turn the nut anticlockwise and then turn the screw clockwise.



FOOTPLATE HEIGHT

Remove the two sets of fasteners attaching the footplate as shown in the photograph.

Reposition the footplate to the required height, then reattach the fasteners to secure.

Operation

GENERAL INFORMATION

1. Make sure that the motor levers are in engaged mode by pressing down on the levers. (Parallel to the wheels)
2. Once seated on the powerchair, turn on the power (Press the power button). The battery gauge will turn on.
3. We suggest the new users and the disabled operate the chair in low speed until comfortable with the chair and its use.
4. Start to steer, moving the joystick to drive forward, backward, left or right. If you want to stop the powerchair, release the joystick—it will automatically return to the centre position to stop the chair.
5. When driving the chair on a slope, push the joystick forward to keep the chair continuously climbing until you reach the top of the slope. While the chair is climbing a steep slope, position your body forward to prevent the front wheels from lifting.
6. When driving the chair down a slope, drive slowly and prepare for an emergency stop if you feel it difficult to control the chair. If the speed increases, release the joystick to slow down or to stop, then start again at a slower speed.

JOYSTICK



Power On / Off and Status Indicator

Press the power button to switch the powerchair on. If the system is functioning correctly, then the power button will light up green and the battery gauge will display the power remaining in the battery.

If the system detects a fault when powering up, then the power button will indicate the fault with a series of red flashes and prevent the system from driving. The battery gauge will flash continuously.

Press the power button again to switch the powerchair off.

See the Troubleshooting section for more information on fault statuses.

Battery Gauge

When the battery is fully charged then all 5 LEDs on the battery gauge will be lit constantly (i.e. not flashing). The number of LEDs lit will decrease as the battery power decreases.

When only 2 LEDs are lit you should consider charging the battery.

If only 1 LED is lit then you should recharge the battery immediately.

If the joystick is pressed during start-up then the system will display a fault by flashing all the battery gauge LEDs. If the joystick is released within 5 seconds then the error will clear. Otherwise, release the joystick and restart the powerchair.

If 3 LEDs are flashing then the powerchair is locked (see below).

Lock Function

The powerchair can be locked to prevent unintended operation.

To **lock** the system, press and hold the Power button for 4 seconds. When the powerchair is locked, the 1st, 3rd and 5th LEDs on the battery gauge will flash (as shown left)



To **unlock** the system, press the Power button once and then press the Horn button twice within 10 seconds.

Note: the lock function is not programmed on all powerchairs. Check with your dealer that your powerchair has this function programmed.

Emergency Stop

If the user needs to stop quickly press the power button to perform an emergency stop.

Under normal operation the user should release the joystick to bring the powerchair to a halt.

Joystick Operation

Push the joystick in the required direction of travel to operate the powerchair.

The further the joystick is pushed, the faster the powerchair will travel.

Releasing the joystick will stop the motors and apply the electromagnetic brakes.

Speed Dial

Use the speed dial to determine the powerchair's maximum speed.

Turn the dial clockwise to increase the maximum speed.

Turn the dial anticlockwise to decrease the maximum speed.

Horn

Press the horn button to sound the horn. Release the button to stop the horn from sounding.

FREEWHEEL MODE

Your power powerchair is equipped with two freewheel levers. These levers allow you to disengage the drive motors and maneuver the chair manually.

Press the yellow levers (shown in photograph) up to engage **freewheel** mode.

Press the levers down to engage **drive** mode.



Caution

DO NOT use your powerchair while the drive motors are disengaged unless someone is there to push you. The chair could roll on its own causing injury!

To engage or disengage the freewheel feature:

1. Pull the freewheel levers upward to disengage the drive motors.
2. Push the freewheel levers downward, to engage the drive motors.



Caution

It is important to remember that when your power powerchair is in freewheel mode, the braking system is disengaged.

CIRCUIT BREAKER

If the powerchair is overloaded (from use on a gradient for example), then circuit breaker will activate to protect the powerchair from damage.

If the circuit breaker activates, then the powerchair will be unresponsive.

Press the circuit breaker to reset, as shown in the photograph.



TRANSPORTING YOUR CHAIR

If you will be traveling with your powerchair, you may find it necessary to use a lift/elevation product or portable ramp to aid in transportation. Drive DeVilbiss suggests you closely review the instructions, specifications, and safety information included with the lift/elevation product before using that product.

	<p>Caution</p> <p>Never sit on your powerchair when it is being used in connection with any type of lift/elevation product or portable ramp. Your powerchair was not designed with such use in mind and any damage or injury incurred from such use is not the responsibility of Drive DeVilbiss.</p>
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It is important that you do not remain seated in your powerchair while traveling in a motor vehicle. The powerchair should be stowed in the trunk of a car or in the back of a truck or van with batteries removed and properly secured.

	<p>Caution</p> <p>Do not sit on your powerchair while it is in a moving vehicle.</p>
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	<p>Caution</p> <p>Always be sure your powerchair and its batteries are properly secured when it is being transported. Batteries should be secured in an upright position and protective caps should be installed on the battery terminals. Batteries should not be transported with any flammable or combustible items.</p>
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POSITIONING BELTS

Your authorized Drive DeVilbiss Provider, therapist(s), and other healthcare professionals are responsible for determining your requirement for a positioning belt in order to operate your powerchair safely.

	<p>Caution</p> <p>If you require a positioning belt to safely operate your powerchair, make sure it is fastened securely in order to reduce the possibility of a fall from your powerchair.</p>
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	<p>Caution</p> <p>The positioning belt is not designed for use as a seat belt in a motor vehicle. Nor is your powerchair suitable for use as a seat in any vehicle.</p>
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USE ON INCLINES

Many buildings have powerchair-accessible ramps with specified degrees of incline, designed for easy and safe access. Some ramps may have turning switchbacks (180° turns) that require you to have good cornering skills on your powerchair. Proceed with extreme caution as you approach the downgrade of a ramp or other incline. DO NOT use on inclines greater than 6°. Take wide swings with your powerchair's front wheels around any tight corners. If you do that, the powerchair's rear wheels will follow a wide arc, not cut the corner short, and not bump into or get hung up on any railing corners.

When driving down a ramp, keep the powerchair's speed adjustment set to the slowest speed setting to ensure a safely controlled descent. Avoid sudden stops and starts. When climbing an incline, try to keep your powerchair moving. If you must stop, start up again slowly and then accelerate cautiously. When driving down an incline, set your powerchair to the slowest speed setting and drive in the forward direction only. If your powerchair starts to move down the incline faster than you anticipated or desired, allow it to come to a complete stop by releasing the joystick, then push the joystick forward slightly to ensure a safely controlled descent.

	<p>Caution When on any sort of an incline or decline, never place the powerchair in freewheel mode while seated on it or standing next to it.</p>
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	<p>Caution When climbing an incline, do not zigzag or drive at an angle up the face of the incline. Drive your powerchair straight up the incline. This greatly reduces the possibility of a tip or a fall. Always exercise extreme caution when negotiating an incline.</p>
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	<p>Caution You should not travel up or down a potentially hazardous incline (i.e., areas covered with snow, ice, cut grass, or wet leaves).</p>
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	<p>Caution Never travel down an incline backward. Doing so may cause the powerchair to tip. Always exercise extreme caution when negotiating an incline.</p>
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Excessively high cornering speeds can create the possibility of tipping. Factors which affect the possibility of tipping include, but are not limited to: cornering speed, steering angle (how sharply you are turning), uneven road surfaces, inclined road surfaces, riding from an area of low traction to an area of high traction (such as passing from a grassy area to a paved area – especially at high speed while turning), and abrupt directional changes. High cornering speeds are not recommended. If you feel that you may tip over in a corner, reduce your speed and steering angle (i.e., lessen the sharpness of the turn) to prevent your powerchair from tipping.



Caution

When cornering sharply, reduce your speed and maintain a stable center of gravity. This greatly reduces the possibility of a tip or fall.

BATTERY

Please charge the batteries after long distance driving to prolong the battery. If you don't drive the chair for a long period of time, then charge the batteries every week. Please use a maintenance/water-free battery to avoid trouble.

MOTOR

The carbon brush connector & brakes should be serviced regularly (at least once per year).

ELECTRICAL BRAKES

Testing of the electrical brakes should be carried out on a level floor with at least three feet of clearance space around the powerchair.

Power-on the controller, and push the joystick forward slowly until you hear the electrical brake working. The power powerchair may start to move. Immediately release the joystick, you must be able to hear each electrical brake within a few seconds. Repeat the test three times, pushing the joystick backward, left and right respectively.

TYRES

Check front/rear tyres regularly and replace them when worn out.



Suggestion

Follow these instructions to keep the status of the power powerchair working well and ease your operation.

TROUBLESHOOTING

The powerchair will diagnose faults that arise with the powerchair. The power button / status indicator will flash red a number of times in a series to indicate the fault. The flash sequences are described below.

Flash Code	Description	Recommended Action
1	Remote / Joystick error	Release the joystick and restart the powerchair if required.
2	Configuration error	Unplug the charger from the powerchair. Recharge the battery. Check cables, connectors and charger.
3	Left Motor error	Check the cables and connectors
4	Right Motor error	Check the cables and connectors
5	Left Brake error	Check the powerchair is in Drive mode Check the cables and connectors
6	Powerchair Brake error	Check the powerchair is in Drive mode Check the cables and connectors
7	Module error	Check the cables and connectors

All faults disable the controller and require the controller to be turned off then on again once the source of the fault is removed. If errors persist and/or the above actions do not resolve the fault, then contact your dealer.

Batteries & Charging

Before using your power mobility product for the first time, you will need to charge your batteries for 8 – 10 hours to ensure that they are fully charged.



Suggestion

Drive DeVilbiss recommends that frequent users of their power mobility products charge their batteries overnight, 8 – 10 hours, to make certain they have a full charge each day.



Suggestion

Drive DeVilbiss recommends that infrequent users of their power mobility product charge their batteries once a week for 8 – 10 hours.

Drive DeVilbiss's battery chargers, specific to our product, are designed to not overcharge the batteries. You may leave your power mobility product plugged into the charger for longer than 8 – 10 hours without causing damage to the batteries.

In some instances Drive DeVilbiss's battery charger may show two green lights indicating that the batteries are fully charged—this is not always the case. A good rule of thumb is to charge your batteries 8 – 10 hours before each use to ensure that your power mobility product has a full charge.

CHARGER FEATURES

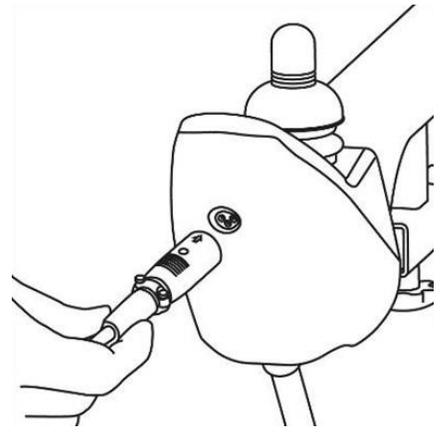
1. Ensures the battery connection automatically.
2. Monitoring all procedures until the battery is fully charged.
3. For protecting exhausted batteries, slow charge starts in the beginning then fast charge until it goes up to the normal voltage.
4. Compact, portable and light-weight.
5. Approvals: UL, CSA, CE, TUV, JAPAN (T-mark)

CHARGER OPERATION INSTRUCTIONS

Please follow these steps:

1. Only use the charger to recharge lead-acid batteries.
2. Keep the AC power switched off until the battery and charger have been connected.
3. Insert the end connector of the charger in to the socket on the front of the joystick.
4. Switch the AC power on. The LED will turn red to show that it is charging the batteries.
5. When the LED turns from Red to Green this indicates that the batteries are charged.

Note: the LED will also illuminate Green if the batteries are not connected. In the event of the LED not turning red on start up check the connection.



CHARGER USAGE ENVIRONMENT

1. Please keep the charger at least 2 inches away from other objects when charging.
2. Do not use it on wet and dirty surfaces.
3. Do not place the charger on the battery.

NOTES

1. Ensure the output-DC voltage corresponds to the battery type and voltage. Otherwise it may cause an explosion.
2. Switch off the charger before connecting the charger and battery.
3. Do not expose the charge to the rain, water or near flammable materials. Do not store the charger in humid places or in an enclosed area.
4. The warranty is given for use within normal operating conditions; it does not cover accidental damage, or problems cause by use error or neglect.

Specifications

Max. Weight Capacity	115kg (18 stone)
Maximum Speed	4mph (6.4kph)
Estimated Range	6.5 mile (10.6 km)
Maximum Grade/Incline	6°
Turning Radius	70cm (27½")
Ground Clearance	5cm (2")
<i>Powerchair</i>	
Length	86cm (34")
Width	60cm (24")
Height	87cm (34¼")
Height with Back Folded (car boot)	70cm (27½")
<i>Seat</i>	
Width	45cm (18")
Depth	45cm (18")
Back	35cm (14")
Armrest to Seat	73cm (29")
<i>Motor</i>	
Motor	24V DC 250W x 2
Controller	Dynamics Linx 40A
Batteries	12V 20Ah x 2
Battery Charger	24V 2A
<i>Wheels</i>	
Front Castors:	20cm x 5.5cm puncture proof
Rear Drive Wheels:	22.5cm x 7.5cm punct. proof
Weight without Seat and Batteries	29.4kg
Total Weight	54.0kg
Heaviest Piece Weight (front section w/ batteries)	15.2kg

User's weight, road conditions, battery charge, etc. will influence performance.

Drive DeVilbiss reserves the right to modify the specifications if necessary. The final specifications are subject to the individual power powerchair your purchase from your dealer.

Warranty

There is a comprehensive one-year warranty from the date on which your new powerchair is delivered. The warranty covers the powerchair for repairs or replacement during this period. For full warranty conditions or to make a warranty claim, contact your Drive DeVilbiss dealer from whom you purchased the powerchair.

1. Any work or replacement part installation must be carried out by an authorized Drive DeVilbiss dealer / service agent.

2. To apply the warranty should your powerchair require attention please contact the designated service agent listed above. Should any part of the powerchair require repair or full or part replacement, as a result of a manufacturing or material defect within twelve months of receiving the powerchair, replacement parts will be supplied free of charge.

Note: This guarantee is not transferable

3. Any repaired or replaced parts will be covered by this warranty for the balance of the warranty period on the powerchair.

4. Consumable items supplied will not generally be covered during the normal warranty period unless such items require repair or replacement clearly as a direct result of a manufacturing or material defect. Such items include (among others): upholstery, tyres and batteries.

5. The above warranty conditions apply to brand new powerchair purchased at the full retail price. If you are unsure whether your powerchair is covered, check with the service agent.

6. Under normal circumstances, no responsibility will be accepted where the powerchair has failed as a direct result of:

- a) The powerchair or part not having been maintained in accordance with the manufacturer's recommendations.
- b) Failure to use the manufacturer's specified parts
- c) The powerchair or part having been damaged due to neglect, accident or improper use
- d) The powerchair or part having been altered from the manufacturer's specifications or repairs having been attempted before the service agent is notified

Please note your local service agent's contact details in the previous box. In the event of your powerchair requiring attention, contact them and give all relevant details so they can act quickly.

The manufacturer reserves the right to alter without notice any weights, measurements or other technical data shown in this manual. All figures, measurements and capacities shown in this manual are approximate and do not constitute specifications.

This does not affect your statutory rights.

Appendix: Service Record

YEAR	1	2	3	4	5	YEAR	1	2	3	4	5
Service Dates						Service Dates					
Controller						Upholstery					
On/off switch						Seat					
Control Lever						Back					
Braking						Armrests					
Recharge point						Electrics					
Batteries						Connections condition					
Levels						Lights					
Connections						Test run					
Discharge test						Forwards					
Wheels and Tyres						Reverse					
Wear						Emergency stop					
Pressure						Left turn					
Bearings						Right turn					
Wheel nuts						Slope test					
Motors						Over obstacles					
Wiring						List Items repaired					
Noise											
Connections											
Brake											
Brushes											
Chassis											
Condition											
Steering											

Notes:

Nithsdale
Wheelchairs

The Team at Drive DeVilbiss develops its products to give our customers the freedom to live independently. This encompasses their daily home life and provides them with the opportunity to enjoy an outing with family and friends. Our goal is to develop a range that will provide individuals with a chance to enjoy everyday life.

Dealer Stamp Nithsdale Wheelchairs

drive

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