drive

DeVilbiss HEALTHCARE

# Titan AXS Powerchair

## Instructions for use

# CONTENTS

## 1. INTRODUCTION

Thank you for purchasing this product. These instructions for use should be read carefully and understood before operating the powerchair. Improper use or unfamiliarity with the powerchair may result in harm, injury or traffic accidents. A maintenance schedule has also included at the back. Keep this manual with the powerchair, or in a safe place.

Contact Drive DeVilbiss Healthcare Ltd. or check our website for the latest version of this document. Users with visual, reading or cognitive disabilities should seek advice from a professional care provider for an appropriate format. If this is not viable, users should contact Drive DeVilbiss Healthcare Ltd. If you have any questions concerning the operation or maintenance of the powerchair, contact Drive DeVilbiss Healthcare Ltd.

## 2. CONTACT INFORMATION

For assistance in setting up, using, maintaining your powerchair, to report unexpected operation or for any service, warranty, sales or customer service information regarding this product, please contact Drive DeVilbiss Healthcare Ltd.

Wu´s Tech (Vietnam) Co., Ltd.
No. 31, VSIP II, Road 6, Thu Dau Mot City,
Binh Duong Province, Vietnam


Komas Medical Technology GmbH
Sternstraße 67, 40479 Düsseldorf, Germany


UK Aplan Corporation Ltd.
47 Wandle Road, Croydon, Surrey, CR0 1DF, England, Great Britain

Drive DeVilbiss Healthcare Ltd.
Sidhil Business Park, Holmfield, Halifax, West Yorkshire,
HX2 9TN, Great Britain

Drive DeVilbiss Sidhil Ltd.
4 Trench Road, Mallusk, Newtownabbey
BT36 4TY, Northern Ireland

If the use of the powerchair results in a serious incident, reports should be forwarded to the manufacturer and the MHRA or local competent authority of your Member State. Please quote the product serial code on all correspondence, which can be found at the bottom of the frame.

For Service & Support outside the United Kingdom, please contact the local distribution company from where this equipment was purchased. Failure to do so may result in the product warranty becoming void.

# 3. PRODUCT DESCRIPTION

### 3.1 Environment

The Titan Powerchair can be used in both indoor and outdoor environments where appropriate. The Titan Powerchair can be used on flat, even path surfaces, however the user should avoid grass, gravel, gradients greater than 6° and motorised roads. Additional care should be taken to avoid inclement weather and wet surfaces.

### 3.2 Intended User Group

The Titan Powerchair is intended for a single user of weight up to 136kg (21.4st). The intended user group for this device is any mobility restricted individual that requires assistance with transport. The patient / occupant is the only intended operator. Users must be both mentally and physically capable of operating the device with minimal risk of injury to themselves and others.

### 3.3 Intended Use

The intended use of the powerchair is to transport an end user with restricted mobility, as defined in section 3.2.

The powerchair is intended to support a single occupant. A risk assessment must always be performed on the suitability of the user to the powerchair.

### 3.4 Indications

To provide transport mobility to an end user with restricted mobility.

### 3.5 Product Overview

The Titan Powerchair has been designed to provide a comfortable and secure solution for users who have mobility restrictions. The product is a class A powerchair (under EN 12184:2014), class I medical device and class 2 invalid carriage (under The Use of Invalid Carriages on Highways Regulations 1988).

The Titan Powerchair is designed to be suitable for extended indoor use, but with outdoor use capabilities. For specific guidance with outdoor use, see section 10.6.

This manual is composed from the product design and specifications at the time of publication. 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.

### 4.1 Warnings & Cautions

Warning

Warnings in this user manual highlight potential hazards that if disregarded could lead to injury or death.

Caution

Cautions in this user manual highlight potential hazards that if disregarded could lead to equipment damage or failure.

### 4.2 Risk Assessment

Before using the powerchair, a risk assessment must be performed by a competent individual to ensure the safe use of the powerchair on a user-by-user basis. It is the responsibility of users and carers to determine that they are both mentally and physically capable of operating the powerchair with minimal risk of injury to themselves or others.

The risk assessment should include, but not be limited to:

- Entrapment
- Falling out of the powerchair
- Small adults (and children)
- Individuals who lack capacity
- Users with visual, reading or cognitive disabilities
- Very active occupants
- Unauthorised people with access to the powerchair

### 4.3 Contraindications

- The end user exceeds maximum weight capacity indicated in section 4.4,
- The end user has postural support needs that are not addressed by the Titan Powerchair,
- Inability to safely operate a power mobility device.

Other contraindications may be relevant which are specific to an individual and / or care environment.

### 4.4 Powerchair Loading

The maximum occupant mass of the Titan Powerchair is: 136kg (21.4st)

Exceeding the maximum weight capacity will void your warranty. Drive DeVilbiss Healthcare Ltd. will not be held responsible for injury and / or damages resulting from failure to observe weight capacities.

Warning

- The maximum load is for the powerchair to be occupied by one person only. Additional weight could damage components or destabilise the powerchair, potentially causing injury.
- The powerchair may only be used to transport one person at a time. It should not be used for climbing. The backrest is not designed to support an entire person's body weight, and the armrests are not designed to support other individuals sitting / leaning — risk of collapse, entrapment.
- The powerchair is not a toy. Children should not be allowed to play near or operate the powerchair, as they are at risk of harm.
- If any ancillary attachments or accessories are being transported in addition to the occupant the rated load of the Titan powerchair is not to be exceeded.

### 4.5 Training

All individuals operating the Titan Powerchair are to be suitably familiar with the functionality and limitations prior to use. It is the responsibility of the user to ensure they are suitably trained to use the powerchair and any associated parts safely and correctly. Every effort should be made to resolve deficiencies and should include consideration of retraining, falls prevention and equipment alterations and modifications.

If these instructions for use are not deemed sufficient and the need for training is required, please contact Drive DeVilbiss Healthcare Ltd. (see section 2) who can discuss training options with you.

### 4.6 General Warnings

Warning

- Do not use a damaged or badly worn powerchair — risk of harm.
- Check the functionality of the powerchair before every use. Ensure the joystick and control system is responsive and free from unintended movement. Check the current fastest speed setting is appropriate. (It is recommended to use a slower speed setting at the beginning of every use, gradually increasing the speed setting as appropriate.) Ensure your lap belt is secured before operating the powerchair.
- Do not use the powerchair in rain or snow conditions — risk of electric shock.
- Improper storage of your powerchair may result in permanent damage to the frame and / or electronics.
- Do not drive on grass, motorised roads or in muddy or icy conditions.
- Reduced speed and care should be taken when navigating obstacles.
- Do not attempt to navigate on slopes greater than 6°.
- If unintended movement of the powerchair occurs, release the joystick to automatically stop the powerchair. If this fails, cut off power to the powerchair.
- Under no circumstances should the powerchair be used as a seat in a motor vehicle
- The powerchair is designed for occupants who weigh less than 136kg; overloading may put the user at risk of falling or entrapment.
- Do not touch any exposed contacts or connectors while using the product or while in contact with other individuals.
- Misused electrical equipment can be hazardous.
- Do not operate the powerchair while under the influence of alcohol or when excessively tired.
- Do not operate the powerchair at night near roads or in situations without a clear line of sight.

Warning

- Only approved parts, specified for the Titan Powerchair, should be used. Accessories that have not been approved or designed for use with the powerchair are not to be used — a hazard could be introduced due to product combination incompatibility. If in doubt, contact your local distributor.
- Modification of the Titan Powerchair, its parts or features is not allowed without the permission of Drive DeVilbiss Healthcare Ltd. — a hazard could be introduced.
- The powerchair is electrically operated, so should not be used in the presence of flammable gases, sources of heat or naked flames — risk of explosion / fire. Damaged or worn upholstery may reduce its resistance to ignition and should be replaced immediately.
- Individuals unable to drive the powerchair without assistance or supervision must not use the powerchair without such supervision. Unsupervised use of the powerchair must be avoided if there is any doubt about the ability of an individual to operate it safely.
- Do not step on the footrest while loading or unloading from the powerchair. Risk of instability.
- Do not hang items from any part of the powerchair. Risk of instability.
- If children, adults with learning difficulties or pets pose a potential risk of tampering with the powerchair, its suitability for use is to be considered during the initial user / product risk assessment.
- Do not use or leave the Titan Powerchair unattended while in manual mode. Always seek assistance if manual mode is used. Do not use the powerchair in manual mode when on any slope.

## 5. SYMBOL DEFINITION

The following symbols are found on the Titan Powerchair:

| Symbol | Description |
|---|---|
|  | Warning<br>Beware of potential hazard |
|  | Caution<br>Beware of potential product damage |
|  | Refer to instructions for use - Recommended<br>Failure to read the instructions for use could introduce a hazard |
|  | Refer to instructions for use - Mandatory<br>Failure to read the instructions for use could introduce a hazard |
|  | Medical Device |
|  | Maximum user mass |
|  | Do not create a stack of more than two boxes. |
|  | Fragile, handle with care |
|  | Use no hooks |
|  | No heavy load |

| Symbol | Description |
| --- | --- |
| SN | Serial number |
| REF | Product code |
| # | Importer code |
| QTY | Quantity |
| UKRP | UK Responsible person |
| EC REP | Authorised EU Representative |
|  | Manufacturer |
|  | Date of manufacture |
|  | Importer |
|  | W.E.E.E Label - Found on individual parts of electrical system<br>(Waste Electrical and Electronic Equipment) Refer to section 13 |
|  | Keep away from rain |
|  | This way up |
|  | Beware of trapping points |
|  | This device must not be used as a seat in a motor vehicle. |

## 6. PARTS IDENTIFICATION

## 7. TRANSPORT & STORAGE

Environmental conditions for transport and storage:

Ambient temperature: 0°C to +50°C

Humidity: <80% RH

Follow these conditions when transporting or storing the powerchair:

- Store the powerchair on a flat, level floor.
- Always fully charge, then remove the battery prior to long-term storage.
- The powerchair should be stored in clean and dry conditions. Cover to protect from fluid ingress, dirt, dust etc.
- Powerchairs should not be stored on their side, on their backs, or stacked.
- When transporting powerchairs by vehicle, they should be securely stowed in the back of a van, truck, or boot of a car. Adjustable parts should be removed or properly secured during transport.
- Keep the instructions for use with the powerchair or in a safe place.

Note: This vehicle is suitable for land and air transport, but contact your carrier in advance to determine their specific requirements. The battery pack may require special packaging and storage provisions in line with IATA or UN guidelines. To remove the batteries, disconnect and lift up the battery pack.

If your powerchair is stored for a prolonged period, flat spots may develop in the wheels, causing an uneven sensation when driving. This should work itself out over time. Drive DeVilbiss Healthcare Ltd. suggests placing a sturdy platform under the frame to lift the wheels off the ground and take weight off the wheels during storage. If you notice flat spots after continued use, replace the powerchair wheels immediately.

Caution

- Always lift your powerchair by the frame. Do not attempt to lift by any removable parts (e.g. seat or armrests).
- Infrequently charged batteries, or batteries stored without a full charge are susceptible to permanent damage, causing unreliable performance from your powerchair.
- Avoid placing the powerchair in direct sunlight — this could damage the electrical system and / or cause label fading.
- Clean the powerchair in line with section 11 prior to storage.

Warning

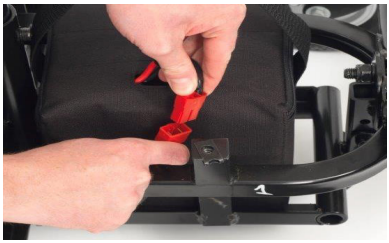
- Do not sit in the powerchair while in a moving vehicle.

## 7.1 ASSEMBLING THE POWERCHAIR

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

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

2. Connect the battery pack. Refit the shroud and tighten the two knobs to secure.



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

4. Insert the arms into the seat.

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

6. Affix the headrest to the top of the seat by inserting the headrest posts into the holes in the top of the seat.

Pictures for illustration purposes only

7. Insert the controller's square mount into the housing under the armrest. Tighten the star knob on the underside of the controller arm mount to hold it in place at the desired extension.

8. Plug the cable from the joystick remote into the port at the centre of the powerchair base.

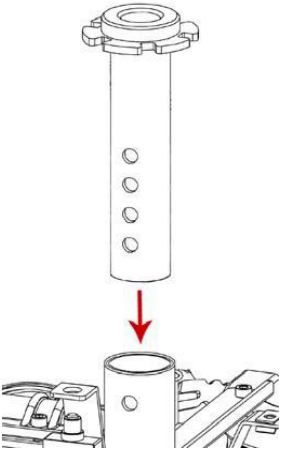
Fully charge the powerchair by inserting the round charger connector into the battery charging terminal on the front of the controller, and then insert the 3-pronged plug into a standard electrical outlet.

NOTE: The Titan AXS powerchair comes with interchangeable shrouds, allowing you to customise your powerchair to your liking. All models come with the red shrouds installed, and a spare set of blue shrouds included in the box. The shrouds can be interchanged by hand, or using a small pry tool. Be sure not to scratch the painted shrouds whilst using the pry tool.

## 8. ADJUSTMENTS FOR COMFORT

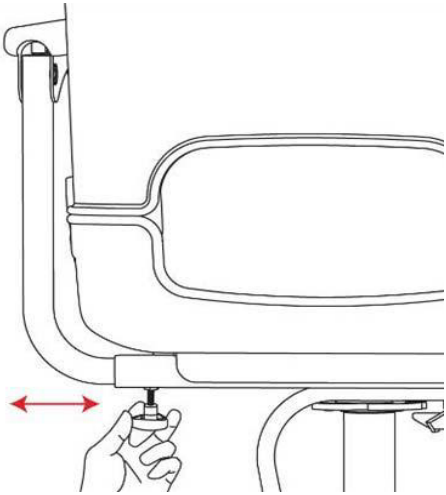
**Seat Swivel**
The seat can be swivelled left or right to make getting on or off the seat more convenient.
Lift up on the handle on the left side of the seat and then rotate the seat. Release the handle and carry on rotating the seat until it locks in position.


**Seat Height Adjustment**
Remove the nut and bolt holding the seat post in place with the tool kit included with your powerchair. Adjust the seat post to the desired height, and reinstall the nut and bolt removed. Be sure the nut and bolt are tightened securely to reduce vibrations, and improve stability.



**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 Height**
The armrest height can be adjusted by loosening the star knob on the top side of the armrest, and sliding the armrests up or down to the desired height.

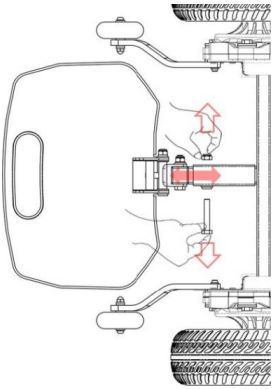


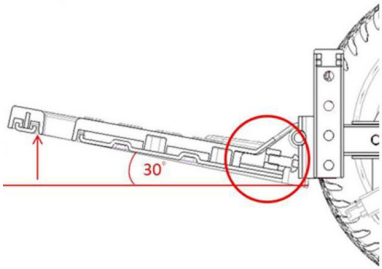
**Armrest Width**
The width of armrests can be adjusted by loosening the bolts on the underside of the seat and sliding the armrests inward or outward to the desired width.
Once the desired position is reached, retighten the bolt to secure the armrest in position.

**Armpad Angle**
Adjust the angle of the arm pad be 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.

**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.






**Footplate Angle**
The footplate angle can be adjusted by lifting up on the footplate, and tightening or loosening the bolt under the footplate. Tightening will lower the angle, and loosening will raise the angle of the footplate.

**Seat Recline**
The recline angle of the seat can be adjusted by pulling up on the lever on the side of the seat.

## 9. CHARGING & PREPARING FOR USE

### 9.1 Installation

Warning

- Before preparing the powerchair, ensure these instructions have been read and fully understood.
- Prepare the powerchair in a dry, indoor environment. Risk of electric shock if prepared in a damp area.
- Only competent persons are to prepare the powerchair for use. If in doubt, contact Drive DeVilbiss Healthcare Ltd.
- Ensure a risk assessment in line with local health and safety policy is undertaken to ensure that staff are not put at risk when performing assembly activities.

### 9.2 Battery Charging

Warning

- Do not open the battery.
- Do not connect an extension cord to the battery charger.
- Keep metal objects away from the battery terminals; electric shock may occur.
- Ensure the charging cable is not under excessive tension to avoid cable damage — damaged cables can create an electrocution / fire risk.
- Ensure the battery is not exposed to direct sunlight or a secondary heat source — direct heating of the battery via an external source could pose a fire risk or cause an explosion.
- Do not drive the powerchair while the charging cable is attached or connected.

Caution

- Only charge the Titan Powerchair with the approved charger. Never charge the powerchair using a different charger.
- Charge fully before each use.
- Use of the socket to supply power to other electrical equipment may damage the powerchair's control system and EMC performance.

The Titan Powerchair's batteries should be fully charged (approximately 8-10 hours) before its initial use.
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.

To Charge:
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.

If you use your powerchair on a daily basis, charge the batteries as soon as you are finished with the day's activities, and leave it on the charge until you are ready to use the following day. After charging, unplug and remove the charger from the mains socket and powerchair.

If there is a longer period of no use, it is recommended to charge the battery every two months.  This may help preserve / extend the life of the battery.

**9.3 Checking Before Use**

It is important to check the functionality of the powerchair before the initial use to ensure its safe operation.

- Make sure that the motor levers are in engaged in drive mode by pushing down on the levers. (Parallel to the wheels)
- Switch on powerchair and wait 5 seconds for the joystick to initialise.
- Gently press the joystick in any direction then check the battery indicator and status light are illuminated on the joystick controller.
- Gently rotate the joystick in all directions and ensure that all the wheels rotate freely.
- Release the joystick after moving in any direction. The joystick should immediately return to the middle position.

# 10. OPERATION OF THE TITAN AXS POWERCHAIR

## 10.1 Operational Limits

| | |
|---|---|
| Ambient temperature: | 0°C to +50°C |
| Operating humidity: | 30% to 85% RH |

## 10.2 Control Features

**Control Panel**

Please refer to the diagram below to identify your Titan Powerchair control panel and its functions. Familiarise yourself with the terminology to better understand references throughout these instructions.


Caution

Make sure the powerchair functions work correctly before operating, using the checklist in section 9.3 for guidance.

**On/Off Switch & 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.

**Joystick**
The joystick is used to control the speed and directional movement of the powerchair. The joystick has 360° of movement and moves the powerchair in a combination of forwards, backwards, left and right. The further the joystick is pushed from the central position, the faster the powerchair will move. When the joystick is released, it automatically returns to the central position and engages the powerchair brake.

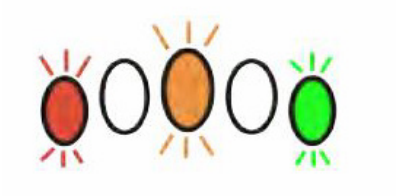
**Horn Button**
The horn will sound when this button is pressed.

Increase Speed and Decrease Speed
Use the speed dial to determine the powerchairs maximum speed. Rotate the speed dial clockwise to increase the maximum speed. Rotate the speed dial anticlockwise to decrease the maximum speed.

**Battery Indicator**
When the powerchair is turned on, the battery gauge will light up from left to right with red, orange, and green lights indicating:

Red lights only: Your powerchair should be charged as soon as possible.
Red and orange lights only: Do not drive your powerchair for a long trip.
Red, orange, and green lights: Your powerchair has full battery capacity.

**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 below)
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.



**Freewheel mode**

Your powerchair is equipped with two freewheel levers. These levers allow you to disengage the drive motors and manoeuvre the chair manually.
Pull the red levers (shown in photograph) backwards to engage freewheel mode.
Push the levers forwards 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!

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 (circled below)to reset.

### 10.3 Driving the Powerchair

You must exercise awareness, caution, care, and common sense when operating your powerchair. Always keep in mind your own limitations and substance use.

Users may encounter difficult manoeuvring situations such as narrow doorways, travelling up and down ramps, cornering, and travelling on uneven terrain. Be sure to lower the speed, take your time, and carefully manoeuvre the powerchair.

For your safety, fasten the safety belt before you drive the powerchair.

Warning

- Never use your powerchair while tired, smoking, under the influence of alcohol or other mind-altering substances. Be aware of precautions, warnings, and safety issues when taking prescribed or over-the-counter drugs before driving.
- If there is a history of active seizures in the last 6 months, clearance should be obtained from a neurologist that the patient's seizures do not prohibit safe use of a motorised device.
- When operating the powerchair, the occupant is expected to be positioned appropriately in the seat, with their feet inboard of the footrest at all times, and limbs clear of moving parts to prevent entrapment. Never reach, lean or bend when driving the powerchair.
- Always make sure the power is off, with the powerchair and seat fully assembled before getting on / off the powerchair.
- Carers should keep clear once the powerchair is powered on. Do not operate the controls while anyone is entering or leaving the powerchair – a hazard may be introduced.
- Do not let children play near or operate the powerchair.
- Keep your feet on the footrest at all times during operation. Do not stand on the footrest.
- Keep your hands and feet away from moving parts while driving. Be aware of loose-fitting clothes that can become caught in the drive wheels.
- Always reduce your speed and maintain a stable centre of gravity when turning corners.

Caution

Always check the Titan Powerchair is free of obstructions before use.

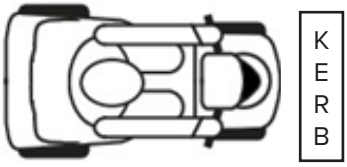
### 10.4 Steps, Kerbs & Fixed Obstacles

Use extreme caution when operating your powerchair near kerbs, porches, stairs, escalators, drop-offs, unprotected ledges, and raised areas. Approach slowly, and make sure the front of the powerchair is perpendicular to the obstacle.

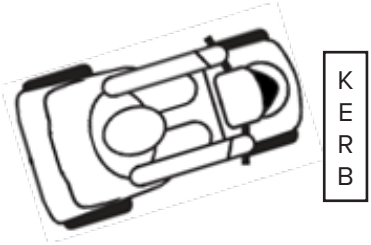
To manoeuvre up a fixed obstacle – Increase the forward speed until the powerchair has cleared the obstacle, and then you may reduce the speed or return the joystick to neutral.

To manoeuvre down a fixed obstacle – Reduce the forward speed just before the front wheels come in contact with the obstacle and remain at the reduced speed until powerchair has cleared the obstacle, then you may increase the forward speed.

Correct Approach:




Incorrect Approach:




Warning

- Never attempt to navigate your powerchair over a kerb or other fixed obstacle taller than the maximum ground clearance. Refer to section 15 for this information.
- Never attempt to navigate your powerchair backwards over an obstacle. Make sure that there are no steps, kerbs or other obstacles behind you while reversing – tipping / falling risk.
- Never attempt to operate your powerchair on steps or escalators.

### 10.5 Inclines

Use caution when approaching inclines or declines. If necessary, lower the speed before travelling on a slope.

When travelling up an incline, try to keep the powerchair moving forward. If you must come to a stop, use caution and slowly accelerate the powerchair forward. When travelling down an incline, lower the speed on your powerchair to the slowest setting, and proceed cautiously.

If the powerchair is travelling down the incline faster than you expected, slowly return the joystick to the centre to come to a stop, then slightly push the joystick forward again to continue safely down the incline.

Warning

- Drive your powerchair straight up or down an incline, never backwards. Erratic movements, or back and forth patterns may increase the chance of tipping.
- Be careful when driving on inclines. Inclines vary and doing so may decrease stability.
- Do not, under any circumstances, travel on a slope greater than the maximum stability angle for this powerchair. Refer to section 15 for this information. Exceeding the stability angle may cause unstable conditions.

### 10.6 Outdoor Operation & Inclement Weather Precautions

Exposure to inclement weather should always be avoided. Monitor weather forecasts before starting a journey to reduce risks. If you find yourself caught in inclement weather while operating your powerchair, proceed to the closest shelter immediately. Completely dry your powerchair before operating, charging, or storing.

Warning

- Always use the pavement when it is available. When there is no pavement, use extreme caution when on the road and where possible travel in the direction of the traffic.
- Be cautious when driving your powerchair in busy areas, such as shopping malls.
- If you get caught outside in the rain, seek shelter immediately and dry the powerchair with a cloth.
- Do not drive your powerchair at night without proper lighting.
- Avoid exposure to moisture, standing water, rain, snow, ice or salt when possible. Operating in rain, snow, salt, mist and on icy or slippery surfaces may have an adverse effect on the electrical system.
- At extreme temperatures, the batteries may freeze, and your powerchair may not be able to operate. In extreme high temperatures, it may operate at slower speeds due to a safety feature of the controller that prevents damage to the motors and other electrical components. Operational limits stated in section 10.1 must be observed.

Caution

If you are unsure of a surface, such as gravel, it is recommended to avoid it and locate an alternative route.

### 10.7 After Use Instructions

Turn off the power after use of the powerchair. Store the powerchair in a location that cannot be interfered with by children, meets the storage temperatures listed in section 7 and is free from excess moisture.

Clean the powerchair with a soft cloth and ensure it is dry (see section 11). Do not use chemicals to clean the powerchair. If the seat cover requires cleaning, remove it to be washed and allow to dry before placing back on the powerchair.

If the powerchair is to be stored for a long period of time, we recommend fully charging and then removing the battery to prevent battery drain.

## 11. CLEANING

Warning

- Never use direct contact with water to clean the powerchair. This could cause damage to the electrical components and put the user at risk. Only a damp cloth should be used.
- Always disconnect the Titan Powerchair from the mains supply prior to cleaning.
- Never use any neat bleach or similar chemicals on the seat or armrests, as this may cause the seat to dry out and crack.
- PPE must be worn during manual decontamination to prevent the risk of infection.
- Deviating from the specified cleaning instructions could cause a biological hazard, especially in multi-user environments, and adversely affect the life and efficiency of the product.

Caution

Regular cleaning can help prolong the lifespan of the powerchair.

The surface of the powerchair frame has been treated with a protective coating to allow for easy removal of dirt. Use a damp cloth with a mild soap to clean the frame and then dry thoroughly.

## 12. MAINTENANCE & SERVICING

Warning

- Your powerchair should be serviced every 12 months, take your powerchair to a service engineer for inspection and maintenance who are authorised on behalf of Drive DeVilbiss Healthcare Ltd.
- Always disconnect the powerchair from the mains power supply and remove the battery prior to performing any maintenance procedures (where viable).
- Never attempt to open the enclosures, re-wire any components or replace internal battery components. Modification of the powerchair is not allowed without the permission of Drive DeVilbiss Healthcare ltd and electrical system components are only to be replaced by authorised service personnel.
- No maintenance or servicing should be conducted while the device is in use – risk of electric shock, entrapment, etc. If not possible due to the occupant's mobility, a risk assessment should be carried out, and if deemed safe to proceed, care should be taken to avoid contact with the occupant when working on electrical items.
- Failure to carry out the following checks at the stated frequencies could negatively influence the essential performance of the powerchair and as a result put individuals at risk.
- Allow all components to cool before performing maintenance. Parts of the motor system can generate heat while driving.

Caution

All maintenance should be conducted by a competent person. Disassembling the controller, motor, or charger by anyone other than an approved service engineer is prohibited and voids any applicable warranty. For any maintenance concerns, contact Drive DeVilbiss Healthcare Ltd.

### 12.1 General Guidelines

Routine maintenance is required to ensure the maximum use of your powerchair. While some of the maintenance can be done by yourself, you may need assistance from an authorised service engineer. If you have any doubts, contact Drive DeVilbiss Healthcare Ltd.

If there are any signs of damage, or the powerchair is not performing as it should, withdraw it from service until the powerchair has been repaired and is fit for use.

Preventative maintenance is key to keeping the Titan Powerchair in prime operating condition. Follow the Maintenance Schedule at the end of this manual to periodically inspect the Titan Powerchair for serviceable items.

- Avoid abuse to the joystick and control functions
- Avoid prolonged exposure to extreme heat or cold
- Keep the powerchair clean and free from moisture
- Never use a conditioner on the tread of the wheels
- If only red LEDs appear on the battery gauge, the batteries are nearly out of charge and should be recharged as soon as possible
- Check for the presence of flat spots on the tyres
- Check all cable connections, ensuring they are fastened and not corroded
- Check the frame and all components for loose fasteners and tighten where appropriate

The following conditions may indicate a serious problem with your powerchair. Contact Drive DeVilbiss Healthcare Ltd. if one of the following conditions occurs:

- Motor or gearbox noise
- Frayed electrical harnesses
- Cracked or broken connections
- Uneven wear on the tyres
- Veering to one side when steering straight
- Bent or broken wheel assemblies
- Will not power on
- Loose seat or seat components

If in doubt about the correct replacement of a component, contact Drive DeVilbiss Healthcare Ltd.

### 12.2 Fault Detection

This Titan Powerchair has an automatic fault detection system that will alert you to any issues. Either a small wrench will flash under the horn button a certain number of times indicating the diagnostic code or 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. The issue can be identified using the table below. If the fault does not appear on the table below, do not use the powerchair, turn off the power and contact Drive DeVilbiss Healthcare Ltd.

| Flash Code | Fault Diagnosis | Resolution |
|---|---|---|
| 1 | User Fault | Power off the powerchair, let rest for 15 minutes, and power on. |
| 2 | Battery Fault | Unplug the charger from the powerchair.<br>Recharge the battery.<br>Check cables, connectors and charger. |
| 3 | Left motor error or plug connection poor | Check left motor and wiring harness |
| 4 | Right motor error or plug connection poor | Check right motor and wiring harness |
| 5 | Left brake error or cable connection poor | Put freewheel lever in “drive” mode. Check left parking brake cables and connections. |
| 6 | Right brake error or cable connection poor | Put freewheel lever in “drive” mode. Check right parking brake cables and connections. |
| 7 | Joystick Fault | Turn power off and then back on. Check battery voltage. Check joystick connections are not loose. |
| 8 | Power Module Fault | Check battery voltage. Check connections are not loose or damaged going to the joystick and power module. |
| 9 | Communications Fault | Check battery voltage. Check connections are not loose or damaged going to the joystick and power module. |
| 10 | Unknown Fault | Contact Drive DeVilbiss Healthcare Ltd or supplier. |

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.

### 12.3 Repair

Contact Drive DeVilbiss Healthcare Ltd. to discuss the replacement of components on the powerchair. Some spare parts may be replaced by the user under instruction from service personnel, however other components will require installation by a service engineer.

## 13. DISPOSAL OF PARTS

When the powerchair, the electrical system or any associated packaging and accessories have come to the end of their useful life, follow W.E.E.E. (Waste Electrical and Electronic Equipment) policies, local and national regulations for recycling and disposal.

Individual parts can be separated and disposed according to the type of material. The electrical components of the powerchair should not be disposed in municipal waste. Some of these electrical components could be harmful to the environment and where viable, can be recovered and reused / recycled.

When the powerchair is unpacked for the first time, the cardboard box, and plastic packaging used can be recycled at recycling centres that offer suitable cardboard and polymer recycling programmes respectively.

For further information about disposal, contact your local waste agency, recycling centre, or provider. If in doubt, contact Drive DeVilbiss Healthcare Ltd.

## 14. ELECTROMAGNETIC COMPATIBILITY (EMC)

Electromagnetic interference (EMI) tests have shown to produce adverse effects on the performance and control of electrically powered mobility devices. EMI can be produced from different sources, such as cellular phones, amateur radio transmitters (HAM), microwave signals and emergency vehicle transceivers. The EMI produced from hand-held radios are of special concern.

The EMI waves can cause unintentional movement of the powerchair, or damage to the controller. Every electrically powered mobility device has a resistance to EMI. The higher the resistance level the greater the protection. The intensity of the interference can be measured in volts per meter, V/m.

If the powerchair or any alternative equipment is found to be operating abnormally, turn off the piece of equipment that is believed to be causing the interference (if possible, as soon as it is safe) to identify the source of the RF energy. Once identified, mitigation measures are to be taken, such as the separation distances being increased and / or the device(s) being re-orientated. If the powerchair continues to operate abnormally, turn off at the mains supply and contact Drive DeVilbiss Healthcare Ltd.

The warnings listed below are recommended to prevent possible interference with the control system of your powerchair. Your powerchair, with no modifications, has an immunity level of 20 V/m. For specific emissions and immunity information relating to the powerchair, contact Drive DeVilbiss Healthcare Ltd.. Report EMI incidents to Drive DeVilbiss Healthcare Ltd. using the details provided in section 2.

Warning

- Do not operate hand-held transceivers or turn on personal communication devices while the powerchair is powered on. Avoid use adjacent to or stacked with other equipment where possible. If adjacent use is necessary, the powerchair should be observed to verify normal electrical operation in the configuration in which it is to be used.
- Use of accessories and cables other than those specified or provided by your provider could result in increased electromagnetic emissions or decreased electromagnetic immunity of the powerchair and result in improper operation or driving performance.
- Portable RF communications should be used no closer than 30 cm to any part of the powerchair (including its cables), otherwise a degradation in performance could result.
- Avoid use around radio transmission systems, such as radio or television stations.

## 15. SPECIFICATION

| | |
|---|---|
| Product name: | Titan AXS Powerchair |
| Product code: | TITANAXS |
| Top Speed* | 4 mph (6.4 kph) |
| Maximum Range* | 19 miles (30.5 km) at 100 kg user weight |
| Rated Slope | 6° |
| Maximum Stability Angle | 6° (dynamic) |
| Ground Clearance | 6cm (2.5") |
| Minimum Turning Radius | 51cm (20") |

**Powerchair Dimensions:**

| | |
|---|---|
| L x W x H (cm / in) | 100 × 59 × 112 cm (39” × 23.5” × 44”) |
| Seat Width x Depth | 45cm x 45 cm (18” x 18") |

**Wheels:**

| | |
|---|---|
| Castors | 15 cm x 5 cm (6” x 2”) |
| Mid Drive Wheels | 25 cm x 8 cm (10" x 3") |
| Wheel Type | Solid, PU |

**Maximum Occupant Mass: 136 kg (21.4 stone)**

If any ancillary attachments or accessories are being transported in addition to the occupant the rated load of the Titan powerchair is not to be exceeded.

| | |
|---|---|
| Product weight: | 40 kg (88 lb) excluding battery & seat |
| Seat Weight | 18 kg (40 lb) |
| Total weight: | 78 kg (172 lb) |
| Motor Type: | 24 V / 320 W x 2 |
| Battery Supplied: | 12 V, 34 Ah x 2, Sealed lead acid |

The battery charger is considered a detachable part of the powerchair equipment.

| | |
|---|---|
| Max Controller Output: | 40 A |
| Max Charger Output: | 4 A |
| Application environment: | See section 3.1 |
| Liquid ingress protection: | IPX4 – Protection from water splashes |

* The driving distance is based on a 100 kg user weight and will be reduced if used frequently on slopes, rough ground or to climb kerbs. Speed and range may also vary depending upon user weight, battery charge and condition, incline, weather conditions and driving behaviour.

# 16. WARRANTY

Drive DeVilbiss Healthcare Ltd. guarantees this product is free from defects in material and workmanship under normal use for 2 years (with the exception of batteries and tyres which are guaranteed for 1 year and the frame which is guaranteed for 3 years), from date of purchase from Drive DeVilbiss healthcare Ltd. and its subsidiary companies or authorised dealers (Your Supplier). All implied warranties, of fitness and merchantability, are limited in the total duration of 2 years from date of purchase. Proof of purchase must be presented with any claim.

Drive DeVilbiss Healthcare Ltd. makes no other warranties, expressed or implied and all implied warranties of merchantability, non-infringement and fitness for a particular purpose are hereby disclaimed. In no event will Drive DeVilbiss Healthcare Ltd. be liable for punitive, special, or consequential damages.

Except as provided herein, this warranty will not apply to any Drive DeVilbiss Healthcare Ltd. products that have been (a) damaged by lightning, water, or power surges, (b) neglected, altered, abused, or used for a purpose other than the purpose for which they were designed, (c) repaired by you or any other party without Drive DeVilbiss Healthcare Ltd. prior written authorisation, (d) used in conjunction with a third-party product or products not approved in advance by Drive DeVilbiss Healthcare Ltd. (e) damaged or failed by or attributes to acts of God, (f) damaged, caused by failure to follow instructions, or (g) otherwise used in a manner inconsistent with any instructions provided by Drive DeVilbiss Healthcare Ltd. The warranty explicitly exempts consumable items.

This warranty contains the entire agreement between You, your Supplier and Drive DeVilbiss Healthcare Ltd. with respect to any warranty matters and supersedes any and all other written or oral statements, representations or agreements relating to the subject matter of this warranty.

In the event of a product defect during the warranty period you should contact your Supplier, whether it be Drive DeVilbiss Healthcare Ltd., its subsidiary companies, authorised dealers or international distributors, who will at their option, unless otherwise provided by law, do one of the following:

a) correct the defect by product repair within the terms of the warranty, b) replace the product with one of the same or similar design or c) refund the purchase price.

Please note if a fault is outside of the warranty terms and conditions (please see above), any repair undertaken will be charged for.

All replaced parts and products on which a refund is made become the property of Drive DeVilbiss Healthcare Ltd. Repaired or replaced parts and products are warranted for the remainder of the original warranty period.

You will be charged for repair or replacement of the product made after the expiration of the warranty period.

Drive DeVilbiss Healthcare Ltd. cannot be held responsible for any injury or incident which relates to the use of this product in conjunction with accessories manufactured by companies other than Drive DeVilbiss Healthcare Ltd.

Drive DeVilbiss Healthcare Ltd. has a policy of continual product improvement and reserves the right to amend specifications covered in this document.

## 17. MAINTENANCE SCHEDULE

Inspect your powerchair routinely for any worn or damaged items and replace where necessary.

| Inspection | AT ANY TIME | WEEKLY | MONTHLY | SIX MONTHLY |
|---|---|---|---|---|
| Joystick returns to centre when released and is free from damage | ✓ | ✓ | | |
| Exposed electrical cables have not been damaged | ✓ | ✓ | | |
| Check tyres are in good condition and free from flat spots | ✓ | ✓ | | |
| Seat, armrests and footrests have not experienced damage | ✓ | ✓ | | |
| Batteries (and surrounding area) are free from corrosion | | | ✓ | |
| Electrical junction to control unit is secure | | | ✓ | |
| Check brake functionality by pressing the joystick in any direction and releasing. The joystick should return to centre and the powerchair should immediately slow down. | ✓ | | ✓ | |
| Check the tyres have sufficient tread | | | | ✓ |
| Check the full rotation of the front castors and ensure they align with the rear wheels when driving straight | | | | ✓ |
| Check all fasteners are tight and all components are secure. | | | | ✓ |
| Ensure the powerchair is clean of dirt and built-up residue | | | ✓ | |

Once a year, take your powerchair to a service engineer for inspection and maintenance who are authorised on behalf of Drive DeVilbiss Healthcare Ltd.

If maintained correctly, the Titan Powerchair has an expected service life of 5 years.

Drive DeVilbiss Healthcare Ltd.
Sidhil Business Park, Holmfield, Halifax, West Yorkshire, HX2 9TN, Great Britain

Drive DeVilbiss Sidhil Ltd.
4 Trench Road, Mallusk, Newtownabbey, BT36 4TY, Northern Ireland

UKRP

UK Aplan Corporation Ltd.
47 Wandle Road, Croydon, Surrey, CR0 1DF, Great Britain

EC REP

Komas Medical Technology GmbH
Sternstraße 67, 40479 Düsseldorf, Germany

Wu´s Tech (Vietnam) Co., Ltd.
No. 31, VSIP II, Road 6, Thu Dau Mot City, Binh Duong Province, Vietnam

Drive DeVilbiss Healthcare Ltd provide these instructions for use and product markings.

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