

***drive***

 **DeVilbiss®**  
HEALTHCARE

**SD2 Aluminium Wheelchair**  
(SD2SP16BLK, SD2SP18BLK,  
SD2SP20BLK, SD2SP22BLK,  
SD2TS16BLK, SD2TS18BLK,  
SD2TS20BLK, SD2TS22BLK)

**Instructions for use**

**UK  
CA** **CE**

# Introduction

## Intended purpose

To provide manually propelled mobility to an individual who has a walking related disability and/or who does not have the full capacity to walk.

## Intended user group

The wheelchair is intended for an individual who has a walking related disability and/or who does not have the full capacity to walk and has a weight of up to 135kg (21 stone).

## Environment of use

The wheelchair is suitable for both indoor and outdoor use however it is not intended to be used on rough or uneven terrain.

## Indications

To assist with the mobility of an individual, as defined in the 'intended user group' section.

## Contraindications

- The occupant exceeds the maximum weight capacity.
- The occupant has postural support needs that are not addressed by the wheelchair.
- Inability to safely guide a wheelchair. (only applies to self propelled variants)
- Occupants with Hemiplegia. (only applies to self propelled variants)
- Occupants with only one arm/hand. (only applies to self propelled variants)

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

## Product overview

The wheelchair is constructed from an aluminium frame with a padded fabric seat for the occupant. The wheelchair incorporates footrests for the occupant, and it is able to be folded when not in use or being transported in a vehicle. The wheelchair is available in either a transit model, or as a self-propelled model, where the occupant can propel it. The wheelchair can be manually propelled forwards and backwards.



### Warning

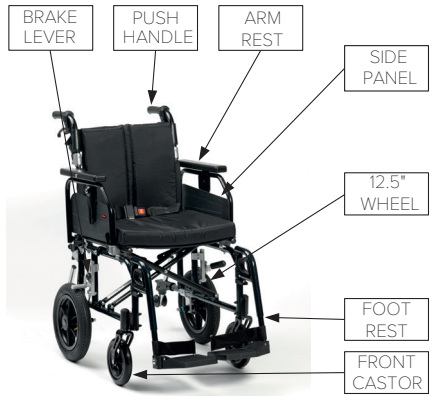
This wheelchair must not be used as a seat in a motor vehicle. Users should always transfer to the vehicle's seat and the wheelchair should be safely stowed away.

## Parts description



### Self Propel models

- 16" (SD2SP16BLK)
- 18" (SD2SP18BLK)
- 20" (SD2SP20BLK)
- 22" (SD2SP22BLK)



### Transit models

- 16" (SD2TS16BLK)
- 18" (SD2TS18BLK)
- 20" (SD2TS20BLK)
- 22" (SD2TS22BLK)

# Preparing for use

These instructions should be read carefully before using the wheelchair.

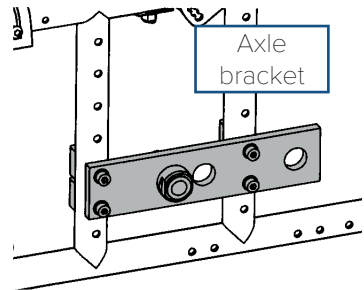
This product does not have a service manual. Before use, the rear tyres should be inflated to the pressure marked on their side. The following parts should also be adjusted by a healthcare professional to suit each user's requirements:

## 1. Rear Wheels

Use the axle bracket (see Axle bracket image) to alter the horizontal position of rear wheels and the vertical position of self-propel wheels.

Remove the wheels using the quick release pins (see disassembly and storage), remove screws and nyloc nuts, reposition, then reattach the fasteners and adjust the brakes (as detailed below).

Drive DeVilbiss Healthcare Ltd recommends approved service personnel do this.



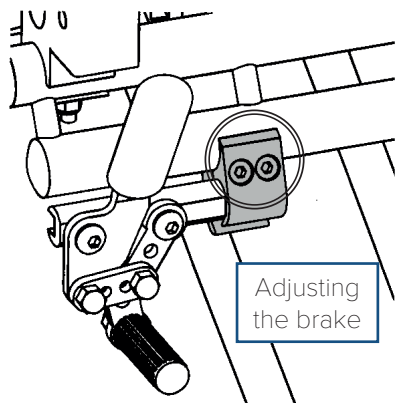
## 2. Upholstery

This wheelchair features a cushioned seat and back, and a tension-adjustable back canvas. To adjust the tension, remove the cushion and backrest, then adjust the Velcro straps. Ensure straps are not too taut, as this can damage the wheelchair.

## 3. Brake Unit

Loosen the inner bolt heads (shown in Adjusting the brake image) with a 5mm hex key, sliding the brake unit along the frame. No other bolts should be adjusted. Drive DeVilbiss Healthcare Ltd recommends approved service personnel do this.

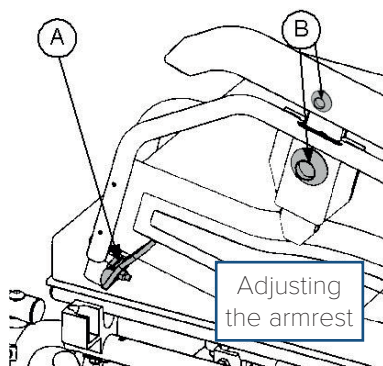
Readjust the brakes if any rear wheels have been moved.



#### 4. Armpad Position

The armrests and side panels can be moved away from the seat to increase space or aid transferring occupants (as shown in *Adjusting the armrest* image). To swing the side panels away, push the small paddle levers (A) at the front.

The armrests can also be repositioned using the buttons on either side (B). Move the armpads up and down using the large silver buttons, or move them back and forward with the smaller black buttons.



#### 5. Footrest / Backrest Height and Angle, Anti-tip Wheels

See **footrest / backrest adjustment** and **steep terrain** sections.

A risk assessment must also be performed to assess suitability of the device for the user. This assessment should include, but not be limited to:

- Small adults (and children)
- Users (and attendants) who lack capacity
- Very active occupants
- Unauthorised access to the wheelchair

Independent users and attendants are responsible for determining that they are both mentally and physically capable of using the wheelchair with minimal risk of harm.



Maximum occupant mass – Exceeding the value marked on your device can damage the product and put users at risk of harm.

Remove all packaging and stand the wheelchair on the ground. Separate the arm rests to open the wheelchair, then push down firmly. Once the seat is secure, the backrest is upright and the footrests are attached (see overleaf), the wheelchair is ready for use.

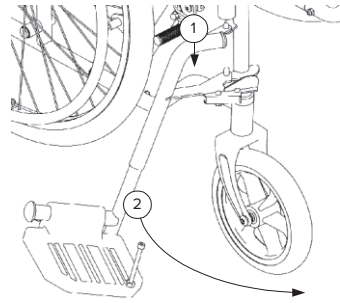
## Footrest adjustment

To fit the footrests, align approximately 45° outwards, push down firmly into the frame (1) then rotate inwards (2) until they lock into place. Pull the handle / lever and rotate to release.

For optimum comfort it is important to attain the correct leg position. The footrests have been designed so they can be extended into one of 5 fixed lengths.

To change the height, unscrew the bolt on the silver tubing with a 4mm hex key. Adjust the footrest as required, then tighten to secure.

To alter the footplate angle, loosen the 6mm hex bolt on the side. Adjust the footrest as required, then tighten to secure.



Attaching the footrest

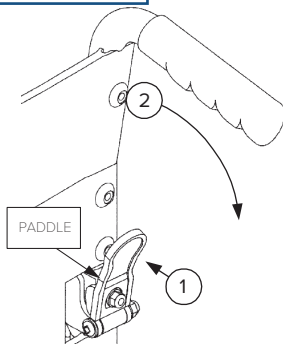


### Common misuse

Do not stand on the footrests. Overloading can damage the product and cause harm to the occupant.

## Folding back mechanism

Folding the backrest



To fold the backrest, push the black paddle towards the back post with your thumb (1) whilst pulling the handle down (2) as shown in the folding the backrest image. Repeat this operation for the other handle.

To put the backrest back into position, lift both handles together and the folding mechanism will lock back automatically.

Do not push down on the handles to raise the front of the wheelchair, as this could result in damage to the wheelchair.

To mount kerbs and steps, reconnect the backrest and use the stepper tube as described in the **steep terrain, kerbs and steps** section.



### Common misuse

The paddle is intended to be pushed. Do not pull the paddle to fold the backrest.

## General warnings



### **Before using the wheelchair, read the safety notices below;**

- Do not exceed the 10° maximum gradient. Use slow speeds and do not reverse down a gradient.
- Do not use on escalators.
- The wheelchair is only suitable for single occupancy.
- Rear tyres must be manually inflated to their rated pressure before use. Do not exceed this limit, or use powered or compressed air pumps.
- Keep your feet on the footrests when moving. Do not stand on the footrests.
- Ensure that fingers and objects do not get caught in the wheel spokes or any other moving parts during use and assembly.
- Maintain proper balance at all times. Users should not move their centre of gravity out of the seating area.
- Do not reach for items further than your arm's length.
- Parking brakes should always be applied when transferring.
- Be aware of hazards in your environment, such as narrow doorways, steps, household appliances, children's toys, etc.
- A risk assessment must be performed by a competent person to ensure the wheelchair is suitable for the user. We recommend you consult a healthcare professional before using any assistive medical devices.
- Keep away from heating and ignition sources which may raise surface temperatures or cause a fire.

## Transfer and use

**Transfer:** When transferring in and out of the seat, move the seats as close as possible to each other. Attendants should engage parking brakes and fold away footrests. If users need to be lifted out of a seat, attendants are responsible for being suitably trained and competent to lift occupants with minimal risk of harm. Good health and safety practice must always be used.

**Propelling:** The attendant should push from behind using the handgrips, and following the safety advice above. Transit models can only be propelled by an attendant. Self Propel models can also be propelled by wheelchair users, pushing the handrims on the rear wheels. To slow down, apply pressure to the handrims.

When stationary, the brakes should always be applied.

## Calf straps

The SD2 wheelchairs also come with calf straps, which can support the user's legs while sitting with the footrests out. Make sure to keep them with the wheelchair.

To attach the calf strap, wrap across the front of both footrests, between the foot pads and the handles. The soft material should be facing outwards. Secure the Velcro around the back so the calf strap is taut.



## Steep terrain, kerbs and steps

**Steep terrain:** These wheelchairs are not designed for use on gradients beyond 10°. When on a slope, avoid swerving or sudden changes in movement.

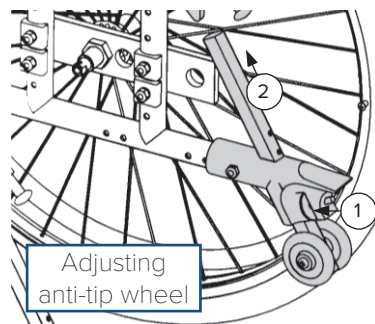
**Over kerbs:** Attendants push down on the stepper tube with a foot to raise the front castors (when mounting a kerb for example).



### Common misuse

Do not lean or push down on the push handles, as this can damage the wheelchair.

The stepper tube at the back of the wheelchair comes with an integral anti-tip wheel (shown in *Adjusting anti-tip wheel*). To adjust the height of these wheels and enable the wheelchair to tip backwards, pull the metal disc (1) and adjust the height of the wheel (2). Release the disc and slide the anti-tip wheels to ensure they are locked in position.



To mount kerbs, lift the anti-tip wheels fully and approach the kerb head-on. Then the attendant uses the stepper tube to raise the front castors, and lowers the front castors on the raised kerb. Finally the attendant should push the wheelchair forward, lifting it up slightly to mount the kerb if required.

To go down, line up the front castors with the edge of the kerb. The attendant uses the stepper tube to raise the front castors and tip the user slightly back. Keeping the castors raised, slowly lower the wheelchair down the kerb.



### Common misuse

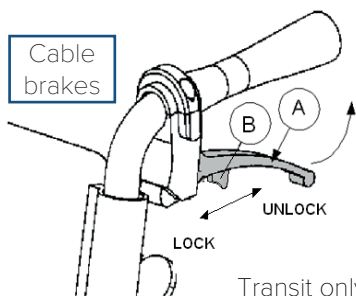
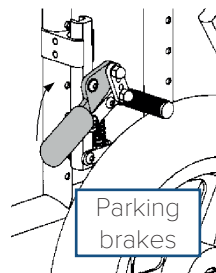
In most cases, attendants should also raise the front castors when going down kerbs, to prevent the user from falling or sliding out.

**Multiple steps:** The wheelchair is not designed to mount staircases, so may require carrying if no elevators or ramps are available. Attendants are responsible for being suitably trained and competent to lift the wheelchair with minimal risk of harm. Do not carry using the handles or any removable sections.

## Brake operation

### Parking Brakes

To apply the parking brakes, push the handle on the brake unit (in the parking brakes image) until locked in place. To release the brake, pull the handle in the opposite direction. The brakes should always be applied when the wheelchair is stationary.



Transit only:  
To lock, push the lock tab (B) forward. Pull back to release.

### Cable Brakes

On the transit models, the attendant pushing the wheelchair may use cable-operated brakes to slow or park the wheelchair.

To apply the brakes, squeeze the large lever (A) on the push handles and the brakes will be applied until the levers are released. Ensure both levers are pulled simultaneously to ensure the wheelchair travels in a straight line.

## Using a wheelchair belt

Belts are often used to restrain wheelchair occupants during normal use. Any belts used should be adjusted to suit each user. When fastened, they should be tight without causing discomfort or undue pressure. Belts may not be suitable for all users. Seek professional medical advice before using a wheelchair belt.

### Lap belts

All wheelchairs in the SD2 range come with a lap belt. They are secured around the user's pelvis to help keep their hips and pelvis towards the back of the seat. These belts must not be used as a substitute for a seatbelt in a motor vehicle. The length of the belt can be adjusted using the tri-glides, and it has a large clip to fasten and unfasten the lap belt.

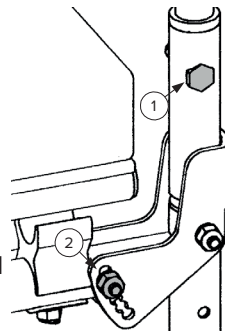
There is a risk of suffocation from users 'submarining' (where they slide down the chair until the lap belt is around the neck area). To reduce the risk of this, ensure appropriate belts are fitted, occupants are under supervision and the belts are used in line with the manufacturer's instructions for use.

## Backrest adjustment

The height and angle of the backrest can be adjusted if necessary from the posts towards the back of the seat. To access the bolts, the armrests should be tipped back or removed (see [Removing armrests in disassembly and storage](#)). This adjustment may not be suitable for all users. Seek professional medical advice before adjusting the height or angle of the backrest. Failure to secure or align properly may put users at risk of harm.

To adjust the backrest height, remove the upper nut and bolt (1) then reposition to the required height. Reinsert the bolt through one of the pre-drilled holes in the vertical post, then attach the nut and secure.

To adjust the backrest angle, use a suitable tool to remove the lower nut and bolt (2) then rotate the post to the required angle. Reinsert the bolt through a pre-drilled hole in the bracket, then attach the nut and secure.



For easier propulsion and optimal stability, keep the seat horizontal and at 90° to the backrest.



### Warning

Adjusting the seat and backrest will affect the wheelchair's stability. Always apply these modifications equally to both sides.

# Disassembly and storage

This wheelchair has a number of quick release components and the wheelchair frame is easily foldable. This facilitates a light carry weight and minimises storage space required. To disassemble for storage, transport or maintenance, follow the steps below. To reassemble components, reverse these instructions.



## 1. Quick release wheels

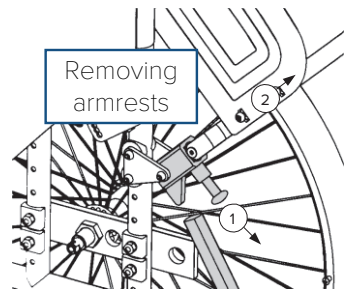
To remove the rear wheels, push the button in the centre of the wheel hub, (shown on the Quick release button diagram in grey), and slide the wheel and axle from the frame.

To reattach, push both parts into the frame until the wheel is secure.

## 2. Armrests

There is a lever towards the front of each armrest to move them, similar to the backrest levers. Push the levers to release the armrests and flip them upwards.

To remove the armrests, flip them upwards, pull the lever at the back (1) of the Removing armrests image and pull upwards on the tube frame (2).



## 3. Half Folding Back

Follow the previous instructions to fold the back.

## 4. Footrests

Follow the previous instructions to remove or swing out the footrests.

## 5. Folding the wheelchair

Remove the seat and back cushions. Then grab the centre of the front and rear edges of the seat sling. Pull upwards on the seat sling and the wheelchair should naturally fold up.

Note: The wheelchair may be folded and stored in a motor vehicle.

The wheelchair should be stored in a dry environment, away from direct sunlight. If wheels are attached, store with the parking brakes on.

## Care and maintenance

Do not use a damaged or badly worn wheelchair. Users should routinely check for any malfunctions or changes in performance. See **Accessories and Spare Parts** section for approved parts available from Drive DeVilbiss Healthcare Ltd.

- Before each use of the wheelchair, the brakes should be checked and tyres inflated to no more than their rated pressure; 450 kPa (65 psi) for self propel models or 280 kPa (40 psi) for transit models. If in doubt, **inflate to the pressure marked on the tyres**. It can be folded up for storage, with the parking brakes on.
- The wheelchair should be kept clean and dust free. This can be done with a duster or damp cloth. Avoid neat bleach or abrasive surface cleaners. Leave to fully dry before reuse.
- Drive DeVilbiss Healthcare Ltd recommends that an approved service engineer maintains the wheelchair annually, and these items should be repaired, replaced, adjusted and/or lubricated if required:
  - Tyres
  - Wheel bearings
  - Castors
  - Brakes
  - Footrest locking mechanism
  - Seat upholstery
  - Back upholstery
  - Arm pads
  - Rear wheel quick release pin
  - Half folding back mechanism
  - Back posts
  - Wheelchair folding mechanism
- When the product has reached the end of its useful life, follow local recycling and disposal policies.

## Powerpack installation



This wheelchair is suitable for some retrofit powerpacks, which allow the device to be controlled electronically. (See Powerpack example image.)

Powerpacks are not required to use the wheelchair. The mounting position will need adapting to be suitable for both the user and the powerpack used. Any installed powerpack must be used in line with the manufacturer's instructions for use.

For more information about powerpacks, contact Drive DeVilbiss Healthcare Ltd or your local dealer.

## Specification

Model	SD2SP16BLK	SD2SP18BLK	SD2SP20BLK	SD2SP22BLK
Maximum occupant mass	135 kg	135 kg	135 kg	135 kg
Overall length with footrest	105 cm	105 cm	105 cm	105 cm
Overall width	61 cm	66 cm	71 cm	76 cm
Folded length	80 cm	80 cm	80 cm	80 cm
Folded width	28 cm	28 cm	28 cm	28 cm
Folded height	76 cm	76 cm	76 cm	76 cm
Total mass	18.2 kg	18.4 kg	18.6 kg	18.8 kg
Mass of heaviest part	9.3 kg	9.5 kg	9.7 kg	9.9 kg
Static stability	10°	10°	10°	10°
Effective seat depth	52 cm	52 cm	52 cm	52 cm
Effective seat width	40 cm	45 cm	50 cm	55 cm
Seat surface height at front edge	52 cm	52 cm	52 cm	52 cm
Overall height	100 cm	100 cm	100 cm	100 cm

Model	SD2TS16BLK	SD2TS18BLK	SD2TS20BLK	SD2TS22BLK
Maximum occupant mass	135 kg	135 kg	135 kg	135 kg
Overall length with footrest	102 cm	102 cm	102 cm	102 cm
Overall width	57 cm	62 cm	67 cm	72 cm
Folded length	80 cm	80 cm	80 cm	80 cm
Folded width	28 cm	28 cm	28 cm	28 cm
Folded height	76 cm	76 cm	76 cm	76 cm
Total mass	16.9 kg	17.1 kg	17.3 kg	17.5 kg
Mass of heaviest part	10.2 kg	10.4 kg	10.6 kg	10.8 kg
Static stability	10°	10°	10°	10°
Effective seat depth	52 cm	52 cm	52 cm	52 cm
Effective seat width	40 cm	45 cm	50 cm	55 cm
Seat surface height at front edge	52 cm	52 cm	52 cm	52 cm
Overall height	100 cm	100 cm	100 cm	100 cm

## Warranty

Your Drive branded product is warranted to be free of defects in materials and workmanship for one year from date of purchase. This device was built to exacting standards and carefully inspected prior to shipment. This warranty is an expression of our confidence in the materials and workmanship of our products and our assurance to the customer.

In the event of a defect covered by this warranty, we will at our option supply parts or replace the device. This warranty does not cover device failure due to owner misuse or negligence, or normal wear and tear. The warranty does not extend to non-durable components, such as rubber accessories, castors and grips, which are subject to normal wear and need periodic replacement. The wheelchair frame has a 5-year warranty.

If you have any queries or require full warranty conditions, please contact your provider.

## Accessories and spare parts

Drive DeVilbiss Healthcare Ltd provide a range of accessories for the wheelchairs in the SD2 range. Spare parts are also available for maintaining your wheelchair.

To order these parts, contact your provider. Visit [www.drivedevilbiss.co.uk](http://www.drivedevilbiss.co.uk) to find your local stockist. Spare part catalogues, compatibility charts and other documentation can also be found on this website. Only use parts approved by Drive DeVilbiss Healthcare Ltd.

## Support

For more information, or assistance with use and maintenance, please contact your provider. Users with visual, reading or cognitive disabilities should seek advice from their provider or a professional care provider for an appropriate format. For the latest version of this document, contact Drive DeVilbiss Healthcare Ltd using the details below, or check our website.

Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the MHRA or the competent authority of your Member State. Please quote the product serial code on all correspondence, which can be found on the wheelchair frame under the seat.



### **Sichuan AST Medical Equipment Co. Ltd.**

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

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