

A brief glimpse into purchasing a wheelchair accessible vehicle

In the world of disability, often the hardest part is to find your way 'through the maze' of suppliers, funders, medical professionals and well meaning people with a variety of opinions. In the process of applying for an updated and larger version of a powered wheelchair for my son Daniel, we stumbled upon the fact that all powered wheelchair bases are now delivered to us from a minimum floor to seat height of 44.5 cm, around 5-10cm taller than any current version. Daniel's head was already almost scraping the entry to our current vehicle, so entry in a new wheelchair was going to be impossible! The hunt for a new vehicle was on and ploughing through the maze, the resulting information may be of value to others in a similar situation.

Types of vehicles that suit modification

There is a big difference in width and height between a manual wheelchair and a powered wheelchair. Manual wheelchairs sit much lower to the ground, so entry height is not as much an issue as it is for powered wheelchairs that are higher due to the battery being under the seat. The lowest floor to seat height powered wheelchair is the Permobil range of M300's.

What do I need to consider?



- The wheelchair itself
- Size of vehicle
- Holiday equipment needs
- Floor space
- Headroom
- Door openings
- Windows
- Ride, comfort & communication
- Vehicle drivability
- Impact of modifications on ve-hicle
- Parking
- Wheelchair loading/unloading

Larger vans, suitable for powered/manual wheelchairs:

- Volkswagen Transporter
- Mercedes Vito/Sprinter
- Kia Carnival
- Toyota Hiace



Pro	Con
Up to 5 passengers	Higher fuel consumption
Extra room for additional equipment	High roof, not good in garages
Can carry >1 wheelchair	More expensive than smaller car

Smaller vans, suitable for powered/manual wheelchairs:

- Volkswagen Caddy
- Renault Kangoo
- Peugeot Partner
- Holden Combi
- Citroen Berlingo



Pro	Con
Up to 5 passengers	Not as much extra room for additional equipment
Great fuel consumption	Can only fit one wheelchair
Less expensive than larger van	
Full access to most undercover garages	

Cars, suitable only for manual wheelchairs:

- Toyota Rukus
- Kia Soul
- Holden Zafira



Pro	Con
Small car, smaller footprint	Only room for max 3 incl. wheelchair
Better petrol consumption	No room for extra equipment
Aesthetically appealing to some	Restricted headspace for taller users, restricted to manual wheelchairs

Types of modifications/ conversions

Different approaches to providing wheelchair access into a vehicle are:

1. Lowering the vehicle floor
2. And /or raising the roof line
3. Raising the door entry height
4. Power lifter (under floor, rear internal, rear external)
5. Extending the vehicle overhang

Once you have gathered this information, consideration needs to be given to available internal car designs. The most popular ones for rear entry cars are:

When considering what type of modification you want to your vehicle, take in account the following:

- Do you want rear entry or side entry?
- How much are you willing to spend?
- Consider the weight added to your vehicle, if you are using the vehicle for personal use without the wheelchair, it may be worth just carrying a manual ramp to keep the constant weight down and this in turn will curb your fuel cost!
- What is the minimum access entry height-measured from floor to top of head and add 3 cms
- What size is the wheelchair and will it fit a specified design?
- How many extra seats are needed in the vehicle for other family members/ friends?
- What position would the wheelchair like to be in-next to the driver, first row or behind the first row?
- What care needs to be provided while travelling - consider positioning of wheelchair
- How comfortable will the ride be - again related to positioning
- What is the visibility from the wheelchair position? A lot of vehicles that do not have a lowered floor can push the wheelchair occupant's head up higher and restrict their vision through the front and side windows
- Can the vehicle still fit into my garage?!
- How will the wheelchair be restrained? There are so many types of restraints available, from a Freedom lock or Permalock for Permobil chairs that just click into place once wheelchair locks in, to a ratchet system (old!), to an electric system with retractable restraints (Flashcab) to the Q-strait

Family Member Design

This design is ideal for people who do not need to travel with a family. The wheelchair can roll up to the back of the driver / passenger seats.



Seating

- 2 passengers + 1 wheelchair access
- 4 passengers (with optional double fold down seat)

Front Row Design

This design places the wheelchair occupant all the way to the front of the vehicle next to the driver without having to move from the wheelchair. This design gives you the freedom to virtually position the wheelchair and yourself anywhere in the vehicle.

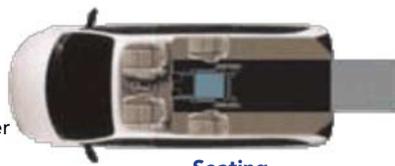


Seating

- 2 passengers + 1 wheelchair access
- 4 passengers (with optional double fold down seat)

Family Design

This design is ideal for situations where the wheelchair occupant wants or must be close to the driver or passenger's position. The wheelchair can roll through the middle of the vehicle and fits in between the two single modified bucket seats.

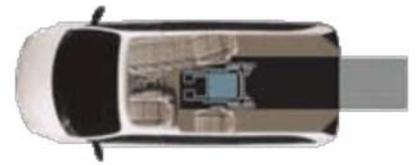


Seating

- 4 passengers + 1 wheelchair access
- 6 passengers (with optional double fold down seat)

Self Drive Design

This design is ideal for a situation where both the wheelchair occupant and other persons will be driving the wheelchair accessible vehicle.



Wheelchair Drive Design

This design is ideal for wheelchair occupants who have trouble transferring to a driver seat but still want the freedom to drive a vehicle. This design allows the wheelchair occupant to ride the wheelchair to the driver's position.



Passenger Design

This design places the wheelchair occupant behind the second row seats.



Seating

- 4 passengers + 1 wheelchair access
- 6 passengers (with optional double fold down seat)
- 5 passengers + 1 wheelchair access
- 7 passengers (with optional double fold down seat)

Two Wheelchair Access Design

This design is ideal for smaller organisations where the transportation of a second wheelchair occupant may occur on a regular basis. This design is only possible with the larger van type vehicles. Also seating arrangements for other passengers are very flexible.



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Mother of Daniel, Ben and Jesse

For Susan's complete article, including information on the international market, funding possibilities, vehicle suppliers, and whether to buy a new or second hand vehicle, please see our website under Get Support/Information and Referral.

