



WHEELCHAIR SYSTEMS

Adaptation Guide Number 9

For those who use a wheelchair but have difficulty or are unable to transfer to a car seat, there are wheelchair systems where a specialised design of wheelchair moves into the vehicle and becomes the front passenger seat.

There are 3 types of systems:



1. CarChair: The complete wheelchair goes into either the front passenger's or driver's seating area and becomes the front seat

2. Carony: the wheelchair base, is disconnected from the seat and the footplates removed. The seating section of the wheelchair goes into either the front passenger's or driver's seating area and becomes the front seat. The wheelbase and footplates have to be stowed separately.



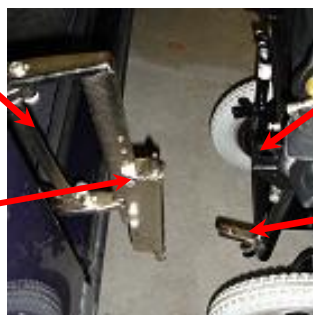
3. Baboulin Duo Voyageur: the wheels and footplates are detached separately and the seating section of the wheelchair goes into the front passenger's seating area and becomes the front seat. The wheels and footplates have to be stowed separately

1. CarChair

The vehicle is fitted with a lifting device which incorporates a metal rod with a pin at the top. Fitted to the back of the wheelchair is a bracket to fit over the pin.

Lifting device attached to vehicle

Pin on lifting bar attached to the vehicle



Hole in the metal bar fitted to the back of the wheelchair that aligns with the pin of the lifting device attached to the vehicle.

Loop on the metal bar fitted to the back of the wheelchair which has to be aligned with the metal rod of the lifting device attached to the vehicle.

The wheelchair is reversed into the door opening and guided with the help of an assistant, or by using the wheelchair control for an independent solution. The bracket on the wheelchair is aligned with the pin of the lifting device on the vehicle. When the lifting device is activated the pin locks into the bracket which enables the wheelchair to be raised by the lifting device.

The wheels can be retracted either electrically by remote control or manually by operating a lever. Electrical retraction offers an independent solution, while manual retraction requires assistance.

2. Carony

The vehicle is fitted with a swivel base in the position of the original car seat and the base of the wheelchair is fitted with a docking unit.



Docking unit on wheelchair system



Docking unit locked into powered lifting system

With the original car seat removed, an assistant manually backs the wheelchair system into the open door area by the front passenger's or driver's door. The docking unit is locked onto the swivel base and the base of the wheelchair is released by a manually operated lever.

Lever to release base from the seating part of the wheelchair



The wheelchair seat is manually pushed along the runners of the swivel base until it is within the vehicle. The seat is then swivelled into the vehicle.

For higher seated vehicles such as MPVs, a powered base is used which slides out of the vehicle and lowers until level with the wheelchair.

The wheelchair system can be fitted with seating components which make it suitable for some children.

Other options, such as large self-propelling wheel/powerbase and attendant powerbases are available.

3. Baboulin Duo Voyageur

The wheelchair is aligned with a lifting device which is lowered using a hand held remote control. The seating part of the wheelchair is taken into the front passenger's seat area by an articulated motorised arm. The footplates and the rear wheels of the wheelchair need to be removed and stowed separately, requiring the help of an assistant.

Points to consider

With all systems:

- These systems enable a wheelchair occupant to be seated in the front of a standard vehicle without having to transfer.
- The range of vehicles into which these systems can be fitted is limited.
- Cambers on the road and high kerbs may make it more difficult to align the connection of the wheelchair system to the powered lifting system.
- Care should be taken to lower the person's head when manoeuvring the chair into the vehicle to ensure that the head clears the door frame.
- When the system is being used as a wheelchair, there is no replacement seat available to fit in the front passenger or driver's area for another person to use.
- Positioning the wheelchair system onto the lifting device or powered arm requires some precision.
- Depending on the vehicle, there may be limited space behind the system for someone to sit in the rear passenger seat.

Where the complete wheelchair goes into the vehicle:

- With electrically operated retracting wheels, it is possible to access the vehicle independently and drive from the wheelchair system as long as any adaptations required are not affected and the person has enough ability to guide the wheelchair precisely onto the lifting device and strength to release and apply the wheel lock.
- The system's hoist will not completely manoeuvre the wheelchair into the vehicle, so some strength is required by the user to assist with pulling themselves and the wheelchair system into the vehicle.
- With manually operated retracting wheels the carer requires some dexterity and strength to operate the levers that retract and lock the wheels.

Where only the seating part of the wheelchair goes into the vehicle:

- An assistant will need to be able to lift and stow the wheelbase or use a hoist.



Ricability have carried out a survey of these systems which is in their publication 'People Lifters'. This is on their website www.ricability.org.uk or contact Ricability at:

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For details of companies supplying these systems contact the Forum of Mobility Centres on 0800 5593636, email: enquiries@mobility-centres.org.uk website: www.mobility-centres.org.uk

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