

Automobile Attachment Kits

People with physical disabilities usually are not comfortable with automobiles because their functionality is not designed accordingly. It limits their mobility and social life. They cannot move around independently without help. It makes them dependable on others and keeps them away from the normality of life. Every disabled person requires different kinds of adjustments to adapt their situation for better mobility.

Attachment kits are modified automobile accessories that are specially made for differently-abled people. These kits are completely noteworthy as they significantly reduce the obstacles that arise while driving or being driven around for differently-abled people.

How are they made?

The requirements for every next customer can be different, therefore many of these accessories are custom made specifically to the demands of every customer.

To address these demands, the service providers ask the customer to describe the particular issues faced by them, which then are taken into consideration followed by the production of the customized kit.

There are also some companies that have ready-made vehicles available with modifications to suit differently-abled drivers or passengers.

Few examples of automobile attachment kits:



- Electric Trigger Throttle and Push Brake
- Smart transfer person lift
- The automatic wheelchair docking system
- Turny/ Valet seat
- Assist bar - It's a small, 2-pound, L-shaped device, described as a portable vehicle support grab or transfer aid. E.g., [Stander Handybar](#). Its price ranges from \$10 to \$30.



Few Types of modifications and average cost

Car Modifications	Average Cost
Hand Controls	\$500-\$2,000
Wheelchair Accessible	\$10,000-\$24,000+
Amputee Rings	\$400-\$1,000+
Pedal Extensions	\$50-200
Scooter Lifts	\$1,500-\$14,000

Adaptacar Ltd.

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This is a family-run business that specializes in adaptations for disabled drivers and passengers, supplying custom adaptations to the private sector and for the UK Motability Scheme with almost 40 years of experience.

Some products and services offered at Adaptacar Ltd:

Electric Handbrake

The [Autoadapt Carobrake](#) electric handbrake is ideal for those who do not have the strength or dexterity to use a conventional handbrake. It is operated via a switch mounted at a suitable location to apply and release the handbrake.



Specifications:

It is Electric operated with an actuator. It can pull with a power of up to 170 kg and pulls the original parking brake wire of the vehicle.

Space Drive II - Dual System

The Paravan Space Drive II Dual System is the ideal solution for those drivers with progressive illnesses or very limited mobility where two servo motors are used for the accelerator, brakes, and steering all in one vehicle. Space Drive II can also have various parameters adjusted where changes may occur to the driver's abilities.

Specifications

- [Space Drive II Components](#) consist of 3 CPU modules that control and monitor the Space Drive II system and the original vehicle controls via interfaces where input commands are converted to digital signals to control the servo motors which in turn control the steering, acceleration, and braking in real-time.
- The check control is installed in the driver's field of vision to see the system status information.
- The servomotors convert the slightest motion into a command to the control of the vehicle making this a very low effort option.
- The input device is the user-friendly end where a driver can have a choice depending upon their ability what they use to command the vehicle.
- The Input devices consist of
 - Mini steering wheel
 - Accelerating
 - Braking lever
 - 2 or 4-way joystick
 - Rotational steering device and bicycle handlebars.
 - All these components are joined by an electronic cabling. Extra components consist of backup batteries and safety systems, Gear control, Park Control, and Brake Control.
- Complies with all relevant standards and directives in Europe.
- This system can be deactivated for conventional driving.



Transfer Seating

The Autoadapt Turny incorporates the Turny Low, the Turny HD and the Turny Orbit. This range of seats allows varying degrees of assistance and can be manual or electrically



operated. [They are designed](#) to move the seat completely out of the vehicle to aid transfer and depending on specification can change the height of the seat to allow easy access.

Freedomwheels

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This company is a mission started by Jignesh Shah Owner of FREEDOM WHEELS ENTERPRISES, and the goal was to launch India's Most Cost-Effective Motorized Wheelchair including Warranty, Parts and Service Support all over India.

Some products and services offered by freedom wheels:

Wheelchair Accessible Modified Mobility cum Utility

[This is a customized two-wheeler](#) vehicle that can be accessed and utilized by people who have a mobility disability and utilize wheelchairs for their day-to-day movement. It costs around Rs45,000.



[Wheelchair Accessible Modified Scooter](#)

They customize and [modify scooters](#) according to the needs and comfort of their customers.

Modification Includes

- Reverse Gear Mechanism
- Automatic Ramp

It costs around Rs72,000.

Different Types Of Assistive Modifications

- **POWER ASSIST FOR STEERING** - For people with a limited range of motion.
- **TOUCH IGNITION** - Allows for starting the vehicle by touch.
- **POWER ASSIST FOR STEERING** - For people with a limited range of motion.
- **HAND CONTROLS FOR BRAKING AND ACCELERATING** - People who are paralyzed from the waist down can use hand controls instead of foot pedals.
- **ADJUSTABLE DRIVER SEAT** - Moving the seat back can enable wheelchairs to fit without removing the entire seat.
- **AUTOMATIC DOOR OPENER** - Doors can be opened or closed by remote touch.
- **WIDE REAR VIEW MIRRORS** - Allows people who are deaf a wider range of vision; required in some states.
- **JOYSTICKS** - For those with limited hand function.
- **SPINNER KNOB ON STEERING WHEEL** - A more advanced version of the rings Frank Fithen used in his cars.
- **LEFT GAS PEDAL ADAPTED TO OPERATE GAS** - For people who have weak or missing right legs/feet.
- **COLLISION MITIGATION BRAKE SYSTEM (CMBS)** - Assists in braking when an inevitable collision is detected
- **ROAD DEPARTURE MITIGATION SYSTEM (RDM)** - A small camera tracks road markers and alerts the driver if the car is about to leave the road
- **ADAPTIVE CRUISE CONTROL (ACC)** - Maintains a set speed on the highway so you don't have to manually change speeds
- **LANE KEEPING ASSIST SYSTEM (LKAS)** - If the vehicle detects straying from the centre line, the steering adjusts to bring the vehicle back to the centre of the lane.
- **DIGITAL DRIVER INFORMATION INTERFACE** - A 7-inch screen on the driver's dashboard includes app controls, phone calls and sensing indicators.
- **ELECTRONIC GEAR SELECTORS** - Manual gear shift levers are replaced by one-touch electronic gear selectors

Adapting your vehicle

New and existing adaptive technologies continue to broaden opportunities for people with disabilities to drive both comfortably and safely. Some of these adaptive technologies are as simple as swivel seats for more convenient access. Others, such as hand controls, may be necessary for a driver to safely operate a vehicle. Whatever your requirements, chances are good that adaptive equipment is available to support your special driving needs and allow you to maintain the freedom offered by the open road.

HYUNDAI'S NEW INNOVATIVE TECHNOLOGY FOR PEOPLE WHO ARE UNABLE TO HEAR

Making vehicles accessible for people with disabilities usually means wheelchair ramps or hands-free controls. People who are deaf have an invisible disability that can make driving a stressful experience. People who are deaf often refer to their eyes as “hawk eyes,” meaning their eyes see everything that people with normal hearing typically don’t even notice. While it may be true that sight and other senses are enhanced to make up for the missing hearing sense, it also means that everyday activities can be exhausting.

When auto companies manufacture cars with features like the digital dashboard display that visually and audibly warns drivers of dangers or issues, these tricked-out features for the



benefit of non-disabled people. Many of these features can be inadvertently helpful for drivers who are deaf or hard-of-hearing, but that isn’t their intended purpose.

Hyundai has created an innovative car technology specifically for people who are deaf. Using artificial intelligence, the vehicle's software will be able to analyze external sound and convert it to two driving-assist programs called Audio-Visual Conversion (AVC) and Audio-Tactile Conversion (ATC.) The new technology includes the following accessible features for people who are deaf:

- Traffic sounds (horns, emergency sirens) are converted into symbols on the head-up window display.
- The same traffic sounds will also be sent as a vibration onto the steering wheel.
- Led lights on the steering wheel offer navigational information.

While the technology has been developed to assist people with hearing disabilities, the vibration and visual displays can help all drivers, especially the early notification of emergency vehicles.

MV-1

The truth is that automotive manufacturers don't produce vehicles readily made with wheel-chair accessibility features straight off the assembly line. Until now, with the company [Mobility Ventures \(MV-1\)](#), a new wheelchair-accessible van made specifically to meet and exceed the needs of people who use wheelchairs. There are several models of these vans



available for purchase. The adaptive features of the vans include:

- 5-foot floor-to-ceiling interior height
- Extra-wide passenger door
- Built-in power access ramp
- Remotely open and close doors
- Anti-lock brakes
- Electronic stability control

Before some years all these things were looking like far fetched dreams but due to the rapid advancement in technology wonders are being made in the field of assistive devices and automobile interventions all this is possible now and making a huge difference in the lives of Specially Abled People.