WEST BEND®

Driving Safety Throughout the Industry

Wheelchair Securement

Wheelchair securement is an important safety measure for not only those in the wheelchairs, but also others in the vehicle. A wheelchair securement system consists of a means to secure the wheelchair to the vehicle while providing a lap and shoulder seat belt for the wheelchair user. Both securements are required. Some systems are unified, meaning the wheelchair and user are secured with a common set of seat belts, tie-downs, and anchorage points, while other systems have separate seat belts and tie-down strap systems to secure the user and wheelchair independently.

There are three main types of wheelchair tie-downs: fixed, moveable, and powered automatic docking systems. The tie-down must attach to the frame of the wheelchair, not to a moving part of the wheelchair, such as the wheel.

• Fixed tie-down systems (pictured on the right) generally have four straps that attach the wheelchair to fixed floor anchorage points. This is the most basic and the least expensive system, but it also has the least flexibility. The wheelchair must be set into the correct position to tighten and release the tie-down straps. The straps are more difficult to tension for the user and can get in the way posing a tripping hazard. The straps and anchorage points are also installed in place on the floor or wall and can't be moved. This is the least preferred system as it has more injury potential.

• Moveable tie-down systems (pictured on the right) also generally tie down the wheelchair with four straps that secure to four separate anchorage point locations on the floor. The retractable feature allows the strap to be tightened with a hand knob to maintain enhanced tension on the straps to better secure the wheelchair to the floor. Many retractors also self-tighten to establish and maintain tension. The retractors make it faster and easier to tighten and release the straps, which are enclosed, eliminating loose straps that create a tripping hazard. The retractors can easily be removed from the floor or wall anchorage points when not needed, freeing up floor space and eliminating a tripping hazard. This is the most common system in use. It's more flexible and easier to use compared to the fixed anchor systems. This makes it the preferred system.

• Automatic docking systems (pictured on the right) secure wheelchairs by pushing them into a pre-installed bracket on the floor. The wheelchair locks automatically when it's pushed into position. This system isn't flexible because the anchorage point on the floor is a permanent installation. There's also a corresponding bracket that must be installed on the bottom of the wheelchair. These systems are more costly and generally used for an individual user, such as a wheelchair user's personal vehicle and wheelchair, not a group wheelchair transportation vehicle that needs to accommodate multiple different wheelchairs.

Wheelchair and seat belt anchorage ties-downs anchor to the floor and/or wall of the vehicle either in a fixed anchorage point, or a track system. Track systems (pictured on the right) provide multiple location options to set the anchorage point that are reconfigurable. Track systems also allow the tie-downs to be removed when not needed, which clears up the floor space from tripping hazards and provides more flexibility to transport other items.

Tie-downs and seatbelts both need to match the manufacturer of the floor and wall anchorages unless cross-manufacturer computability is explicitly stated, such as with the OMNI approved designation between Q'Straint and Sure-Lok as an example.

Reference manufacturers:

Q'Straint	https://www.qstraint.com	800-987-9987
Sure-Lok	https://sure-lok.com/	866-787-3565
EZ Lock	https://www.ezlock.net	888-952-5625