



TiLite ZRA SERIES 2 Transit Tie-Down Option

TiLite's Transit Tie-Down Option has been crash tested in accordance with Section 5.2 and Annex A of ISO 7176-19:2008(E) (ISO 7176-19) and has been found to meet or exceed the performance requirements of ISO 7176-19¹. ISO 7176-19 is a voluntary standard that requires transit wheelchairs to be frontal impact tested to 30 mph (48 km/h)². In such testing, a wheelchair is loaded with a 130lb (59kg) crash test dummy, accelerated to 30 mph and brought to a controlled stop, simulating an impact generating 20g on the crash test dummy.

The TiLite ZRA Series 2 wheelchair has been tested under ISO 7176-19 using TiLite's Reinforced Frame and "tension adjustable" back upholstery options and TiLite's standard "bolt-on" seat sling, and are compliant to that standard in that particular configuration for persons weighing from 125 to 165 lbs (57 to 75 kg)³. This option is labeled "Transit Tie-Down Option" on the TiLite ZRA Series 2 Order Form.

TiLite's Transit Tie-Down Option consists of four factory-installed Tie-Down brackets mounted to the frame of the TiLite ZRA Series 2 wheelchair. During the crash test, the TiLite wheelchair was secured to the vehicle, and the crash test dummy was secured to the wheelchair, using a wheelchair tie-down and occupant restraint system (WTORS) consisting of four hooks and straps that secure the wheelchair to the vehicle (utilizing the four TiLite factory-installed Tie-Down brackets) and a three-point, vehicle-anchored combination pelvic belt and upper torso (shoulder) belt. Accordingly, TiLite ZRA Series 2 wheelchair equipped with the TiLite Transit Tie-Down Option is only suitable for use with this type of WTORS. The ZRA Series 2 wheelchair was not tested using a wheelchair-anchored pelvic belt and, accordingly, TiLite does not offer the Transit Tie-Down Option with a wheelchair-anchored pelvic belt. TiLite believes that this provides greater flexibility for users of our wheelchairs as most school buses that have installed wheelchair tie-downs have installed WTORS that include a 3-point, vehicle-anchored pelvic/upper torso belt system⁴. The TiLite YG and YGS wheelchairs overall scores of 16 for a rating of B when tested in accordance with Annex D of ISO 7176-19. **Please refer to the TiLite Z Series Owners Manual and the TiLite Transit Tie-Down Option Owners Manual Supplement for full information regarding the TiLite Transit Tie-Down Option and all warnings and restrictions concerning the use of the TiLite Transit Tie-Down Option. All of these materials are available at www.tilite.com.**



¹ TiLite recommends that wheelchair users NOT be transported in vehicles of any kind while seated in wheelchairs. As of this date, the U.S. Department of Transportation has not approved any tie-down systems for transportation of a user, while in a wheelchair, in a moving vehicle of any type.

² TiLite ZRA Series 2 wheelchair equipped with the TiLite Transit Tie-Down Option is designed to be forward-facing when used as a seat in a motor vehicle and are in accordance with the requirements of ISO 7176-19.

³ The TiLite ZRA Series 2 wheelchair tested was configured as follows: 16" seat width, 16" seat depth, 70° front frame angle, 22" wire wheels, 5" performance billet aluminum casters, titanium footrest with ABS Cover and, swing-away armrests.

⁴ The ease of access to, and maneuverability in, motor transit vehicles can be significantly affected by wheelchair size and turning radius. Smaller wheelchairs and/or wheelchairs with a shorter turning radius will generally provide greater ease of vehicle access and maneuverability to a forward-facing position.