

Manufacturer/ Models	Sizes – Product fits	Securement in Personal Vehicles	Comments
<p>E-Z-ON VEST Class:</p> <p>UPRIGHT VESTS:</p> <p>Models vary by adjustability and available closure types. (Size column)</p> <p>Model orders are further determined by picking from the securement options menu (Securement column).</p> <p>The chart notes which options exist and mix or not. Compare size and securement columns, and vehicle type charts that differ.</p> <p>Models:</p> <p>E-Z-ON 101/102 (Non-adjustable width; front or back closures available)</p> <p>103Z (Adjustable width, back enclosure only)</p> <p>203 (push button, front-only)</p>	<p>Changes below apply only to the “Vest” class:</p> <p>Streamlined sizing/sales: Transitioning in 2008, the company decided to: 1) Eliminate use of ages on all products, 2) Standardize “Small,” “Medium” and “Large” previously different by model, and 3) Differently classify products as Standard or “Custom.” Larger previously sold products are now sold only as Custom. (See Comments for definitions.)</p> <p>Crash test changes: Additional crash-tests in 2005 or other test-related conclusions recently led to altering previously reported/labeled weight thresholds for low and/or high ends.</p> <p>The company intention now is to have all of the smallest E-Z-ON Vests start at 20 lbs. and to divide “Standard” from “Custom” at 100 lbs. across all Vests.</p> <p>Consult the company about assurance questions regarding previously sold products whose labels or instructions differ from this company-verified report of E-Z-ON intention.</p> <p>For VESTS, in addition to given sizes, orders also may require having a torso measurement to verify fit. Torso size is not labeled. (See Comments alert, right)</p> <p>Sizes listed are Standard:</p> <p>101: S and M increments serving the 20 to 65 lbs. range. 102: L serving 65 to 100 lbs.</p> <p>103Z: S and M increments serving the 20 to 65 lbs. range, L serving 65-100 lbs.</p> <p>203: S and M increments serving the 20 to 65 lbs. range, L serving 65-100 lbs.</p>	<p>Vest category securement definitions:</p> <p>Vest models for Personal Vehicles are available in “tethered,” “floor mounted” or “LATCH” securement versions. The company web site illustrates its concepts.</p> <p>E-Z-ON’s tethered versions come standard with attachment hooks to support the maximum weight user for that product. (Products before this writing used the same hooks for their labeled higher product weight capacity. See Comments)</p> <p>Consult vehicle makers and SRN LATCH manual about compatibility of product weights and vehicle anchors. E-Z-ON also sells its own heavy-duty tether anchors for securing its products in vehicles that lack anchors or vehicle maker assurances about anchor capacity.</p> <p>E-Z-ON “floor mounting” is a unique system for bypassing both seat belt and LATCH installations. Instead, it uses alternative securement equipment bolted directly into the floor, unlike the usual tether or LATCH or belt anchorages. E-Z-ON says this method is to be used ONLY for users of back-enclosure style vests at risk of unfastening restraint systems during travel. Success with other options should be explored first.</p> <p>E-Z-ON LATCH-like vests are a voluntary variation of Federal Motor Vehicle Safety Standard 225 (LATCH) that exempts harnesses/vests. This method uses attachment hooks for fastening to vehicle lower and tether anchors. Consult vehicle makers and SRN LATCH manual about compatibility of products and vehicle anchors.</p> <p>Use in adapted vans: These vests have also been used in combination with rotating adaptive vehicle seats that partially exit a vehicle to assist in transferring the occupant from vehicle to either a standing position or a wheelchair. While a lap-shoulder belt can only be used inside the vehicle, a vest on these moving seats can secure the user during riding and transfer. Consult manufacturers of vehicle, safety restraint, and modification devices, along with medical advisers.</p>	<p>Only Vests (not harnesses) offer customized design options. These might address medical/weight suitability, hardware-capacity, non-traditional use or all of these.</p> <p>Standard products are available directly to the public or distributors in off-the-shelf stock form.</p> <p>“Custom” products reflect a sales process more than an automatic design difference, but MAY involve physical adaptations other than size alone. The aim is to involve more clarification of variations and understood terms-of-use as part of such sales. Custom currently ends at 168 lbs. Consult company to define distributor issues.</p> <p>Continuity: E-Z-ON began as an inventor and customizer of occupant protection strategies in areas where few alternative solutions existed, especially for children having disabilities. Its latest Custom change is not a new foray, but a clarification of long-standing efforts and evolution intent.</p> <p>Alert on label interpretation of weights: The company emphasizes that all E-Z-ON products are made from the same material and that Vest weight labels serve primarily to help gauging likely user fit. For VEST users over the labeled weight but fitting the device, consult the company to determine suitability.</p>
<p>E-Z-ON VESTS: Modified (for occupant lying down)</p>	<p>See next page for model sizing detail</p>	<p>Users lie flat on vehicle bench; extremity belt secures legs (variably, see instructions). Typical position is supine (face up), but instructions urge best medical practice for comfort and security of the passenger/patient plus a position that does not interfere with treatment.</p>	<p>Child must be short enough to fit across a bench seat in the vehicle to be used.</p> <p>Head protection strategies also are recommended in product instructions.</p>

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<p>E-Z-ON Modified Vest (lying down), continued</p> <p>M203 (smaller)</p> <p>101M2 (larger)</p>	<p>M203: Adjustable for 20-65 lbs.</p> <p>(Most M203 products labeled before this writing cited a minimum of 2 years of age. The company says it retested in 2005 with the 12-month-old crash dummy and recently applied that new age minimum. Then, the company dropped age references, now using weight alone.)</p> <p>101M2: 65 to 100 lbs. (In spring of 2008, the company had announced this size would become part of a “Custom” reclassification for products above 65 lbs.. In July 2008, it set “Custom” at above 100 lbs., leaving the 101M2 as a Standard product.)</p> <p>In both cases, the products were not physically changed.</p>	<p>See previous page</p>	<p>For situations other than standard allowances, call the company for Custom evaluations.</p>
<p>E-Z-ON HARNESS Class:</p> <p>86Y</p>	<p>Y”-shaped harness (top of Y over shoulders, tail of Y as tether) differ from vests in having a wider range of fit and weight capacity.</p> <p>66-168 lbs.</p> <p>Recent changes in the Vest class did not affect the Harness class.</p> <p>Custom options also are not available for this class.</p>	<p>Harnesses differ from vests in that this class is not available in floor-mount or LATCH securements.</p> <p>Harnesses come standard with hooks or can be ordered with heavy-duty E-Z-ON tether anchor hardware instead.</p> <p>Consult vehicle manufacturer about seat back as well as weight capacity of factory-installed anchors for use with upper weight range of harness. 2007 LATCH manual list of vehicle manufacturer policies reports 80 lbs. as the top capacity offered specifically by a particular vehicle maker, but 40 to 48 lbs. is more common. Some defer to child restraint manufacturers for upper weight limits for tether anchors.</p>	<p>Harnesses are primarily used to provide supplemental upper body restraint to a lap-only belt. This need is not limited to riders having medical issues.</p> <p>See Vest overview (securement column) about combinations of harnesses and boosters.</p> <p>Notice differences between “Y” harnesses for Personal Vehicle and School Bus classes.</p>
<p>Safeguard (IMMI)</p> <p>SafeGuard Go</p>	<p>22-60 lbs. with harness as of early '08. (Earlier versions allowed harness use only for 30-60 lbs. The company says to follow instructions for the model being used.)</p> <p>As a booster, weight range is 40 to 100 lbs.</p>	<p>“Go” offers both harness and booster modes. Harness mode can be secured in tether or LATCH methods, both of which require using the tether:</p> <p>Harness mode/tether method: “Go” uses the seat belt with tether up to 60 lbs.</p> <p>Harness mode/LATCH method: “Go” may be installed with lower LATCH attachments as well as tether up to 60 lbs.*</p> <p>Lower LATCH attachments also may be used when “Go” is converted to a belt-positioning booster.</p> <p>* SafeGuard states: “SafeGuard urges parents to consider both our recommendations and those from the vehicle manufacturer when making their installation decision regarding child’s weight.” See Comments at right.</p>	<p>* SafeGuard reports its “testing shows the “Go” with a 60-lb. occupant is in compliance with the amount of force exerted on the LATCH anchor points as required by NHTSA FMVSS 225. The heavier weight of the occupant is offset by the light weight of the “Go.”</p> <p>See Background (General) and SRN LATCH manual Chapter 5 plus comparison charts to help interpret conflicting anchor capacity positions by vehicle and restraint manufacturers.</p>

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<p>Safe Traffic System Inc.</p> <p>Ride Safer Travel Vest</p>	<p>Small, 35-60 lbs.</p> <p>Large, 50-80 lbs.</p>	<p>Use with lap-shoulder belt (with or without tether) as belt-fit alternative to booster. Alternatively can be used with lap belt and tether. For lap-only belt installation, the tether must be attached to a manufacturer-designated tether anchor.</p> <p>Company advertises dual-points tether for securing riders 60-80 lbs. (special order)</p>	<p>Manufacturer web site slide show illustrates installations</p> <p>See Background (General) and SRN LATCH manual Chapter 5 plus comparison charts to help interpret conflicting anchor capacity positions by vehicle and restraint manufacturers.</p>

Built-in Harness/Vest Products

List excludes built-in lap-shoulder belt seating or LATCH anchor products unless part of using vest/harness sets.

Manufacturer	Seating style/name	Harness models	Comments
<p>Family Vehicle manufacturers</p> <p>(optional equipment in some personal passenger vehicles, especially vans and station wagons)</p>	<p>Neither the seating nor harness tend to have specific model names but are sold as options in some passenger vehicle models. They might have specific part numbers.</p> <p>Most are single placements in second rows of vans.</p> <p>Consult each manufacturer about differing options for old or new vehicles, especially multi-row vehicles. (See Comments at right.)</p>	<p>These tend to be five-point harnesses or fold-down belt-positioning booster cushions that improve adult seat belt fit for children.</p> <p>Weight capacities have ranged from 40 to 66 lbs., with variable minimum weights.</p>	<p>Availability trends: More than 30 models of vehicles offered built-in child restraints in the mid-1990s but by the early 2000s the number began dropping significantly.</p> <p>By 2007, government rules required center seating positions to offer lap-shoulder belts. As of 2008, while built-in harnesses can be legal substitutes for mandatory LATCH placements, that substitution is not an option for the new center shoulder belt rule. Built-in harnesses and lap-shoulder belts do not easily physically fit into the same seating location. Built-in harnesses have been sold as additional options, while the new shoulder belts come standard in those positions.</p> <p>See Background: Regulatory Factors for video tutorials on this type of product (under Personal Vehicles) plus recall resources about them (under General).</p>
<p>Freedman Seating Co.</p> <p>Seating supplier for installation by manufacturers or modifiers of large vans (such as for child care transport or large families)</p>	<p>Integrated Child Seating (I.C.S.)</p> <p>Add-on harnesses/vests from other manufacturers are prohibited on this seating product.</p> <p>Company also offers optional “225 CRS (Child Restraint System) “hooks” that are its term for a built-in unit having lower LATCH-result hardware and a seat back tether-result on the seatback, but for use with only its own products.</p>	<p>Integrated Child Seat (I.C.S.), 22-51 lbs., five-point restraint. This reflects a change made in early spring 2008. (Earlier versions and web site reported a version that was 20-60 lbs.)</p> <p>Child’s straps (five-point harness) are built into the vehicle seat and stored behind a seatback panel that folds down for use. One or two I.C.S. may be ordered in a two-person seating product.</p>	<p>Contact Freedman and vehicle manufacturer about retrofit options. See Personal Vehicle Background and Issues about van differences before and after Sept. 1, 2007 shoulder belt rule changes.</p> <p>Terminology: The company prefers avoiding the term “harness” to describe its built-in product, to distinguish it from competing add-on harnesses that are prohibited on this seating. Notice also unusual LATCH meaning in the Seating Style column.</p>