



WHAT IS THE IMPACT AIRBAG SYSTEM?

Braun Ambulances is proud to build on their legacy of safety by introducing the new IMPACT Airbag System with RollTek™ technology. Short for Interior Module Protection and Collision Technology, the IMPACT Airbag System is an option focused on enhancing occupant protection in every seating position in the module.

Occupants are protected with RollTek technology and energy absorption padding.

Leveraging RollTek technology, strategically placed airbags deploy in the event of a side impact induced rollover collision. The system calculates the angle of the vehicle and speed at which it is rolling to determine when to deploy airbag restraints. Inflated airbags assist in absorbing energy from the seated occupant(s). They also provide a barrier between occupants and solid surfaces. Airbags are located by the attendant seat, CPR seat, and squad bench for protection. This enhances safety for any seated position in the module.

The airbags are used in conjunction with additional, energy absorption padding at head strike points. A multi-density foam pad is located forward of the CPR seat position. A single-density foam with increased energy absorption is

positioned in the action area. Numerous combinations and materials were tested using high tech cannon fires, reverse-firing servo sleds, and instrumented crash test dummies to identify the best solution.

The result was a combination of materials that reduce HIC score values by more than half. HIC, which stands for Head Injury Criteria, is an important consideration in ambulance safety testing. Head trauma is the most frequent non-fatal injury reported in rollover accidents. Enhancing head protection increases the rate of survivable impacts.

The safest way to ride in an ambulance is belted into a seat.

While airbags and padding add significant protection to the module in the event of a side impact induced rollover, a big part of staying safe inside an ambulance is using a seat belt. The importance of staying belted cannot be stressed enough. The IMPACT Airbag System is only effective when occupants are safely belted into their seats.

Existing seating restraint systems in Braun ambulances already exceed industry requirements for frontal, side, and rear impacts. 4-point seat belts with one-click, single

buckles are available on attendant seats. Advanced restraints are also available for CPR, head, fore, and aft bench seats. In addition, Braun seat backs are composed of a multiple density foam, which also helps to absorb energy on impact. Customers are encouraged to work with a Braun Ambulances sales representative to identify the best seating options for their needs.



Developed by IMMI and tested through CAPE, RollTek is a well-known name in airbag safety for fire apparatus and commercial trucks. Custom engineered as an option for Braun ambulance models, RollTek works in the blink of an eye to reduce the potential for serious injury or death in the event of a side impact collision rollover.

The system includes a sensor that detects an unrecoverable rollover in a fraction of a second. In addition, two different types of airbags are deployed. An inflatable head curtain protects attendants from the inhalation area cabinet and the rear compartment (aft squad bench). Tubular structure airbags are used by the attendant, CPR, and fore squad bench positions for additional head, neck, and upper body protection.



RollTEK®



The RollTek sensor detects an unrecoverable rollover and deploys airbags in a quarter of a second.

“BUILT FOR LIFE” AND TESTED TO PROTECT IT LIKE NO OTHER.

For decades, Braun Ambulances has been on the leading edge of ambulance safety. Anchored by their SolidBody™ Construction process, Braun builds ambulances that are “Built for Life” in more ways than one. From a safety perspective, “Built for Life” focuses on occupant protection for the crews, the patient, and passengers.

It all starts with Braun’s unique SolidBody™ Construction.

Using .125” flat-sheet marine grade aluminum, the floor, roof, sides, and doors of a Braun ambulance are constructed from brake formed parts with fully welded seams. SolidBody™ Construction reduces weight, adds strength, and provides other significant advantages to the unit. In the event of an accident, the one integrated module helps absorb impact, minimizes transferred damage, and provides added protection.

Braun has a long-standing commitment to safety.

Building on the foundation of SolidBody™ Construction, Braun has been focused on enhancing the safety of their ambulances since accepting their first order in 1972. Dedicated to developing cutting-edge innovations and driving industry standards, Braun has used testing throughout the years to validate their commitment to safety. In 2008, Braun surpassed by 300% the industry standard for roof and side load testing. Then, in 2016, they made history by conducting the industry’s first ambulance rollover crash test. Shortly thereafter, they took one ambulance first through a side impact crash test and then a rollover test, seeking to replicate a real-world accident scenario. Today, Braun remains the only ambulance manufacturer to hit and roll the same ambulance module in testing.



SolidBody™ Construction is a superior construction method that outperforms the most rigorous tests in ambulance safety standards.



Braun Ambulances works with The Center for Advanced Product Evaluation (CAPE) to test their ambulance modules and safety innovations.



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