

USER GUIDE

TECH-STAR[®] AIR 3

**IMPORTANT - READ THIS MANUAL
CRITICAL SAFETY INFORMATION INSIDE**

v. 1.1



Please read the following important WARNING and LIMITATION of use notice carefully:

Motorcycling is an inherently dangerous activity and an ultra-hazardous sport, which may result in serious personal injury, including death. Each individual motorcycle rider must be familiar with motorcycling, recognize the wide range of foreseeable hazards and decide whether to assume the risks inherent in such an activity with the knowledge of the dangers involved and accept any and all risks of injury, including death. While all motorcycle riders should utilize appropriate protective equipment, each rider should exercise extreme care for safety while riding and understand that no product can offer complete protection from injury including death or damage to individuals and property in case of fall, collision, impact, loss of control or otherwise. Riders should ensure that safety products are correctly fitted and used. DO NOT use any product that is worn out, modified or damaged.

Alpinestars makes no guarantees or representations, express or implied, regarding the fitness of its products for any particular purpose.

Alpinestars makes no guarantees or representations, express or implied, regarding the extent to which its products protect individuals or property from injury, death or damage.

ALPINESTARS DISCLAIMS ANY RESPONSIBILITY FOR INJURIES INCURRED WHILE WEARING ANY OF ITS PRODUCTS.

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0. Preliminary Notes

In this manual the following four presentation styles are used to provide information:

WARNING! Provides critical information which, if not followed, may cause injury, death, System malfunction or non-function, and/or an exaggerated expectation of the Tech-Air® 3 System's abilities.

IMPORTANT! Provides important information regarding the limitations of the System.



Tip: Provides useful advice regarding the Tech-Air® 3 System.



Provides information related to Tech-Air® App optional functionalities.

1. Introduction

Dear User, thank you for choosing an Alpinestars Product!

The Tech-Air® 3 System (hereinafter referred to as "System" and/or "Tech-Air® 3 System") is an active safety system for sport and recreational motorcycling, which offers protection to a motorcycle user both as a rider or passenger. In the event of an accident or other triggering event, the System provides protection to the upper body as it covers the user's chest and full back. The System is designed to function in both road riding and light off-road riding situations (subject to the Off-Road limitations indicated in Section 3 below).

The Tech-Air® 3 System consists of a standalone Airbag System, contained within a vest, which is designed to provide additional protection from impacts occurring during a motorcycle accident, to motorcycle users both as riders or passenger. The System is specifically designed to be worn over standard motorcycling gear, as it is able to guarantee protection, within the coverage area, against impact and possible abrasion during an accident.

WARNING! The Tech-Air® 3 System does not offer the Dual Charge Concept. Once the airbag has deployed there is no additional airbag charge. This means that the User of the System is without further airbag protection until the System is serviced, and the airbag inflator is replaced.

WARNING! The System, including its components, are technologically advanced pieces of motorcycling safety equipment and should not be treated like a normal motorcycle garment. Similar to one's motorcycle, the System and its components must be cared for, serviced and maintained, so that they may function correctly.

WARNING! Although the Tech-Air® 3 System is abrasion resistant certified, it is highly recommended to use it in combination with an additional protective garment, compatible with the System (see Section 8 "Compatible Garment").

WARNING! It is essential to read this user manual carefully, to understand it completely and to follow the advice and warnings illustrated in this user manual. If you have any questions regarding the equipment, contact Tech-Air® Support (see Section 19 "Tech-Air® Support").

IMPORTANT! Without any additional notice, Alpinestars reserves all rights to, from time to time, update the software and/or the electronic components of the Tech-Air® 3 System.

2. Principles of Operation

The System consists of a vest with an integrated Airbag Electronic Control Unit (with built-in sensors) and a LED Display (Figure 1). The Airbag Electronic Control Unit contains 1 triaxial accelerometer and 1 triaxial gyroscope (also referred to as a sensor cluster). These sensors monitor the user's body for shocks or unexpected movements. In the event the user's body is subject to a high and/or sudden amount of energy, the System will deploy. This may occur when the motorcycle is involved in an accident, such as when the motorcycle collides with another vehicle or with an obstacle, when the rider loses control or when the rider falls off the motorcycle.

The System is equipped with a Bluetooth Low Energy (BLE) device located in the Electronic Control Unit (ECU). The BLE allows the System to connect directly to a mobile phone in order to receive important information from the System, while also permitting the users to access a number of other functions (for further information see "Tech-Air® App" in Section 17 "Tech-Air® App"). The System does NOT need to be connected to the Tech-Air® App to work, it functions independently of the Tech-Air® App.



To connect the System to the mobile phone via Bluetooth, remember to activate the Bluetooth module within your phone and to download the Tech-Air® App available at the Google Play Store or at the Apple Store.

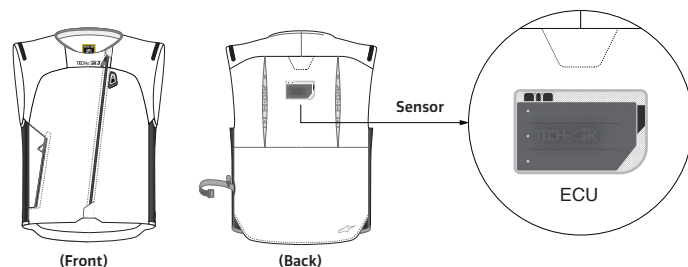



Figure 1 – Sensor Location

The Tech-Air® 3 System comes with the "Street Mode" that permits the use of the System on streets, as well as on light off-road paths. Users can easily check to have the Street Mode correctly installed in their Systems by verifying with the Tech-Air® App.

 *User must always ensure via the App that the System is running the most up to date software release.*

3. Tech-Air® Envelope of Protection

The "Envelope of Protection" is a term used to generally describe situations and/or circumstances where the System may provide protection, denoted as "inside the Envelope", and those where it will not, denoted as "outside the Envelope".

WARNING! No product can provide complete protection from injury (or death), or damage to persons or property in the event of a fall, accident, collision, impact, loss of control or other event.

The System provides impact protection, on the areas shown in Figure 2, to the user (both as rider and as a passenger) wearing the System in the event of an accident or other triggering events. Note that there are limitations to the protection it can provide as explained later in this user manual (see Section 3.2 and Section 4 "Limitations of Use").

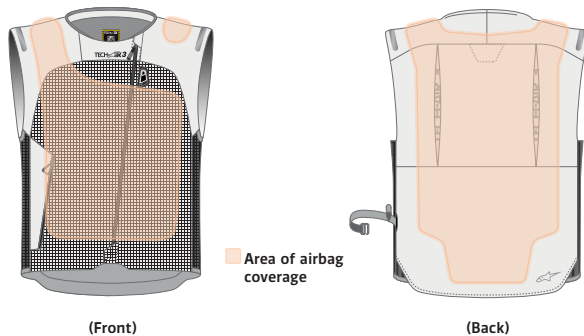


Figure 2: Area of Airbag coverage

For the Tech-Air® 3 System the Envelope of Protection includes crashes against obstacles and loss of control crashes (commonly referred to as 'low-side' and 'high-side' crashes).

In the Street Mode, the Envelope of Protection also include situations in which the rider's motorcycle whilst stationary, is hit by another vehicle.

Table 1 summarizes the Envelope of Protection for the Street Mode.

IMPORTANT! Unless explicitly stated, in this manual the 'contact' and/or the 'impact' of the user with other objects must always be referred to as the covered areas of the body.

WARNING! The System provides only limited impact protection against forces in the areas of Airbag coverage as depicted in Figure 2. No guarantee is given that the System will prevent injuries (including severe or fatal injuries) inside and/or outside the areas of Airbag coverage or the Envelope of Protection.

WARNING! The System cannot prevent accidents to the user.

WARNING! No protective device, including the System, can provide protection against all possible sources of injury and therefore cannot provide complete protection against injuries.

WARNING! Wearing the System is not a substitute for wearing other protective motorcycling clothing and gear. To provide full potential protection, the System must always be worn in conjunction with suitable motorcycling gear and apparel that covers the rider from head to toe, including a helmet, protectors, boots, gloves, and other appropriate protective equipment.

Incident Type		Street Mode	
Crashes	Crashes against Obstacles		✓
	Stationary Crashes		✓
Loss Of Control	Low-Side Crashes		✓
	High-Side Crashes		✓

Table 1: Summary of the Envelope of Protection for Street Mode.

3.1 Envelope of Protection for STREET MODE

In Street Mode, the Tech-Air® 3 System is active only when the System Check is passed (see Section 12 "System Operation") and after having started riding for approximately 10 seconds. Once activated, the System remains active even if the rider stops, and until the System is manually switched off, to offer protection also in a stationary condition, when the motorcycle is hit by a vehicle as described in the Envelope of Protection conditions (see Section 3.1.2).

As summarized in Table 1, in Street Mode the Envelope of Protection includes:

- Crashes against Obstacles
- Stationary Crashes
- Low-Side Crashes
- High-Side Crashes

3.1.1 Envelope of Protection for Crashes against Obstacles

Tech-Air® 3 System is expected to inflate and protect before the user's covered body areas contact an obstacle, in Crashes Where a Motorcycle Strikes a Vehicle or Obstacle (Figure 3) according to the following conditions:

Relative Arrival Speed	From 25km/h (15mph) to 50km/h (31mph)
Impact Angle (Fig 3)	From 45° to 135°

Table 2: crash conditions

The above parameters are valid for both the rider and passenger.

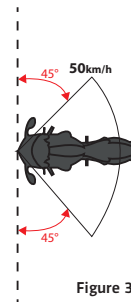


Figure 3

IMPORTANT! Figure 3 outlines the Envelope of Protection where the Tech-Air® 3 System is expected to inflate before the user's body covered areas contact an obstacle. At speeds above 50km/h (31 mph) or outside the declared angle, the System is expected to deploy as well, however, outside the Envelope of Protection the System may not be fully inflated before there is contact between the obstacle and the user's covered areas.

WARNING! Outside the conditions of Table 2, the System may not deploy before the first impact, but may deploy if the rider suddenly falls from the motorcycle after the impact, regardless of the impact angle.

3.1.2 Envelope of Protection for Stationary Crashes

In Street Mode, the Tech-Air® 3 System is tested to activate in Crashes Where a Vehicle Strikes a Stationary Motorcycle (Figure 4) according to the following conditions:

Vehicle Arrival Speed	From 25km/h (15mph)
Impact Angle	From 45° to 135°, rear/front

Table 3: crash conditions

The above parameters are valid for both the rider and passenger.

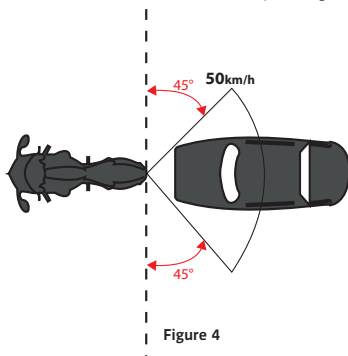


Figure 4

IMPORTANT! If the (relative) speed between the Motorcycle and the vehicle or obstacle during the impact is less than 25km/h (15 mph), the System may not deploy at the time of the collision/crash, but may deploy if the rider or passenger suddenly falls from the motorcycle after the impact.

3.1.3 Envelope of Protection for Loss of Control Crashes

A Loss of Control Crash (Low-Side and High-Side Crashes) often results in the motorcycle falling over during riding, without necessarily being involved in a crash with other vehicles or obstacles. This commonly happens when tire grip on the roadway is lost during a turn or heavy braking.

WARNING! During Loss of Control Crashes, and in particular, in Low-Side Crashes, the System may not deploy before the first impact with the ground, but may deploy during the following sliding phase, if present.

3.2 Envelopes of Protection: Limitation of use

There are some limitations to the deployment of Tech-Air® 3 System even inside the Envelopes of Protection, when, in general, the environmental conditions prevent the System from measuring acceleration and/or angular speed sufficient to activate the System.

WARNING! If the crash conditions are outside the Envelopes of Protection described above, the System may not deploy if the acceleration and angular speed measured by the System are not sufficient to activate the Tech-Air® 3 System.

WARNING! The user does not need to be involved in a crash for the System to deploy. For example, the System will deploy if the user falls while wearing the System, such as when dismounting from the motorcycle. These types of "non-riding" deployments are not failures of the System.

Motorcycle Type

The Tech-Air® 3 System can be utilized by riders or passengers on any type of motorcycle, including electric motorcycles.

Light Off-Road Riding

The Tech-Air® 3 System be used off-road IN A LIMITED CAPACITY riding on gravel roads only. For the purpose of using the System off-road, the definition of a gravel road is:

- An unpaved road surfaced with gravel.
- Has a minimum width of 4m (13ft).
- Has no gradients +/-30%.
- Has no ruts, steps, or holes greater than 50cm (19.5") in depth.



The Tech-Air® App permits the user to temporarily disable the System protection if, for instance, the user is undertaking heavy off-road riding. The System cannot be turned on again with the App, but only by means of opening and closing again the Activation Zip (1).

IMPORTANT! The chances of falling off a motorcycle are notably higher when riding off-road, particularly when a rider is inexperienced. Even when stopped, a fall may cause the System to deploy, leaving the user without protection until the System is returned and recharged (see Section 16 "Actions in the Event of an Accident").

4. Limitations of Use

WARNING! Since the System is sensitive to sudden body movements and shocks, the System is to be used **ONLY** for motorcycling within the conditions and limitations delineated above. The System is **NOT** for use in:

- a. Any racing or competitive events;
- b. Enduro, Motocross, or Supermoto events;
- c. Motorcycle stunts; or
- d. Side skidding, wheelies, etc.;
- e. **ANY** non-motorcycling activities.

WARNING! Due to shocks, movement and/or other input detected and/or received by the System while in use, although unlikely, the System may deploy even though there is no crash event.

WARNING! Depending on the motorcycle type for example a scooter or trials bike, it cannot be guaranteed that the System will inflate before the user collides with parts of the motorcycle, or other objects.

WARNING! Wearing the System is not a substitute for wearing other protective motorcycling clothing and gear. To offer full potential protection the System must always be worn in conjunction with suitable motorcycling gear and apparel that covers the rider from head to toe, including a helmet, protectors, boots, gloves, jacket, and other appropriate protective equipment.

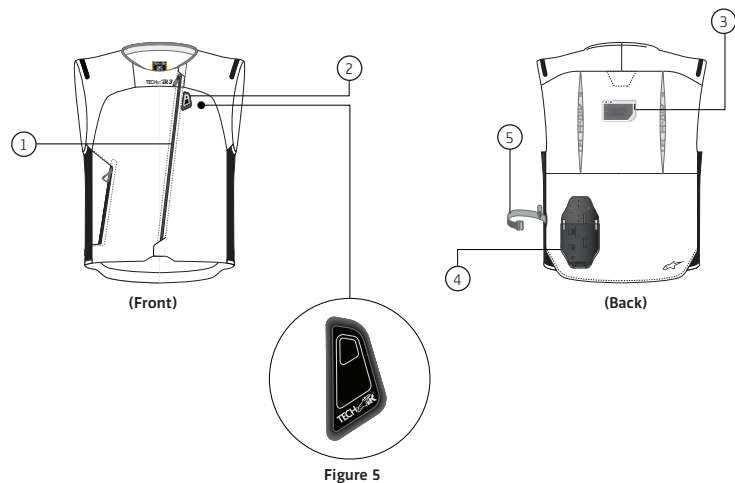
WARNING! The System's working temperature is between -20° and +50° (-4°F to 122°F).

WARNING! Do not use the System 4,000 meters above sea level as low pressure may not guarantee a correct level of protection for the System.

5. System Overview

The diagrams below illustrate the different parts of the Tech-Air® 3 System. The numbered parts are used to guide you through this user manual.

TECH-AIR® 3 SYSTEM



1. Activation Zip
2. LED Display
3. Electronic Control Unit
4. Inflator Housing
5. Elastic band

AIRBAG ELECTRONIC CONTROL UNIT

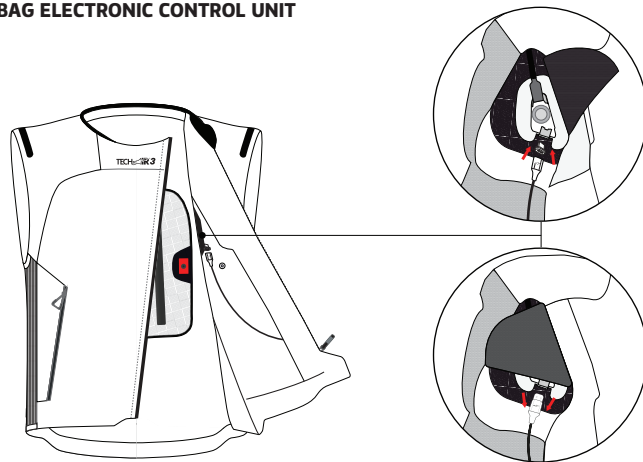


Figure 6

6. Type C USB Recharge Port
7. Type C USB Adapter
8. Magnetic Charging Cable

6. Sizing

The System is available in sizes ranging from XS to 4XL. In addition, a women's STELLA version specifically designed for use by female riders is available in sizes ranging from XS to XXL.

Each size is characterized by a specific waist-to-shoulder length of the user (Figure 7). Waist to Shoulder length (WSL) is an important parameter for the choice of the right size of back protector: the user should always be sure to use a protector with a WSL that match his/her measurement.

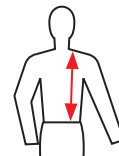


Figure 7

Refer to Section 20 (Certification Information) for the details on the WSL for each Tech-Air® 3 size.

It is imperative that the System is fitted correctly, in order to provide the maximum potential protection in the event of an accident. To help with the choice of the right size, the user may refer to Table 4a and Table 4b below, that provides the reference measurements of the body for each system's size. When used as an outer garment, once worn, be sure that the lateral elastic panels are not stretched and fit correctly, otherwise they may not work properly during the Airbag inflation.

MEN'S SIZE GUIDES TECH-AIR® 3

SIZE	XXS	XS	S	M	L	XL	XXL	3XL	4XL									
A. CHEST (CM)	78	83.5	83.5	89	89	94.5	94.5	100	100	105.5	105.5	111	111	116.5	116.5	122	122	127.5
B. WAIST (CM)	63	69	69	75	75	81	81	87	87	92	92	97	97	102	102	107	107	112
F. OUTER ARM (CM)	49	51	51.5	53.5	54.5	56.5	57.5	59	60	62	63	65	66	68	66	68	68	70
G. HEIGHT (CM)	157	162	163	168	169	174	175	179	180	184	185	189	190	194	190	194	195	199
A. CHEST (IN)	30 3/4	32 7/8	32 7/8	35	35	37 1/4	37 1/4	39 3/8	39 3/8	41 1/2	41 1/2	43 3/4	43 3/4	45 7/8	45 7/8	48	48	50 1/4
B. WAIST (IN)	24 3/4	27 1/8	27 1/8	29 1/2	29 1/2	31 7/8	31 7/8	34 1/4	34 1/4	36 1/4	36 1/4	38 1/4	38 1/4	40 1/8	40 1/8	42 1/8	42 1/8	44 1/8
F. OUTER ARM (IN)	19 1/4	20 1/8	20 1/4	21	21	22 1/4	22 1/4	23 5/8	23 5/8	24 3/8	24 3/8	25 5/8	26	26 3/4	26	26 3/4	26 3/4	27 1/2
G. HEIGHT (IN)	61 3/4	63 3/4	64 1/8	66 1/8	66 1/2	68 1/2	68 7/8	70 1/2	70 7/8	72 1/2	72 7/8	74 3/8	74 3/4	76 3/8	74 3/4	76 3/8	76 3/4	78 3/8

Table 4a

HOW TO MEASURE MEN'S

A. Chest

Measure around the fullest part, under the armpits, keeping the tape horizontal.

B. Waist

Measure around the natural waist line, in line with the navel, keeping the tape horizontal.

C. Hip

Measure around the fullest part of your hips, about 20cm below waist line, keeping the tape horizontal.

D. Thigh

Measure around the thigh just below the crotch, keeping the tape horizontal.

E. Inner Leg

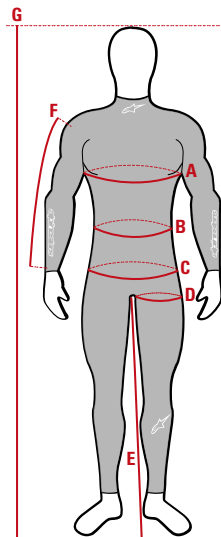
Stand against a wall, ask someone else to measure from the crotch to the bottom of your leg.

F. Outer Arm

Measure from shoulder (Humerus) to wrist.

G. Height

Stand against a wall, ask someone else to measure from the floor to the top of your head, keeping the tape vertical.



WOMEN'S SIZE GUIDES TECH-AIR® 3

SIZE	XS		S		M		L		XL		XXL	
A. CHEST (CM)	74	80	80	86	86	90	90	94.5	94.5	99	99	104
B. BUST (CM)	78	84	84	90	90	94	94	98.5	98.5	103	103	108
C. WAIST (CM)	58	64	64	70	70	74	74	78.5	78.5	83	83	88
D. HIP (CM)	82	88	88	94	94	98	98	102.5	102.5	107	107	112
G. OUTER ARM (CM)	50	52.5	52.5	55	55.5	57.5	58	59.5	60	61.5	61.5	62.5
H. HEIGHT (CM)	157	162.5	162.5	168	168.5	172	172.5	176.5	176.5	180.5	180.5	182.5
A. CHEST (IN)	29 1/8	31 1/2	31 1/2	33 7/8	33 7/8	35 3/8	35 3/8	37 1/4	37 1/4	39	39	41
B. BUST (IN)	30 3/4	33 1/8	33 1/8	35 3/8	35 3/8	37	37	38 3/4	38 3/4	40 1/2	40 1/2	42 1/2
C. WAIST (IN)	22 7/8	25 1/4	25 1/4	27 1/2	27 1/2	29 1/8	29 1/8	30 7/8	30 7/8	32 5/8	32 5/8	34 5/8
D. HIP (IN)	32 1/4	34 5/8	34 5/8	37	37	38 5/8	38 5/8	40 3/8	40 3/8	42 1/8	42 1/8	44 1/8
G. OUTER ARM (IN)	19 3/4	20 5/8	20 5/8	21 5/8	21 7/8	22 5/8	22 7/8	23 3/8	23 5/8	24 1/4	24 1/4	24 5/8
H. HEIGHT (IN)	61 3/4	64	64	66 1/8	66 3/8	67 3/4	67 7/8	69 1/2	69 1/2	71	71	71 7/8

Table 4b

HOW TO MEASURE WOMEN'S

A. Chest

Measure around the fullest part, under the armpits, keeping the tape horizontal.

B. Bust

Measure around the fullest part of the bust, keeping the tape horizontal.

C. Waist

Measure around the natural waist line, in line with the navel, keeping the tape horizontal.

D. Hip

Measure around the fullest part of your hips, about 20cm below waist line, keeping the tape horizontal.

E. Thigh

Measure around the thigh just below the crotch, keeping the tape horizontal.

F. Inner Leg

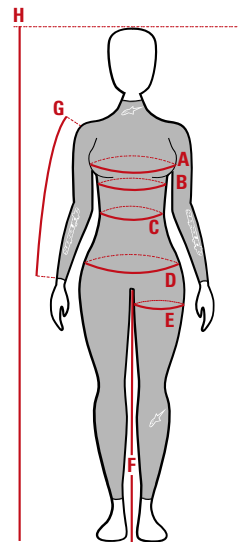
Stand against a wall, ask someone else to measure from the crotch to the bottom of your leg.

G. Outer Arm

Measure from shoulder (Humerus) to wrist.

H. Height

Stand against a wall, ask someone else to measure from the floor to the top of your head, keeping the tape vertical.



7. Health and Age Restrictions

IMPORTANT! In Europe the Pyrotechnic Directive EU 2013/29 prohibits the sale of pyrotechnic articles to anyone under the age of 18.

WARNING! The System must not be handled by children at any time.

WARNING! In the event of a crash, inflation of the System will cause sudden pressure across the back and torso. This can cause discomfort and/or pain and/or complications to users in poor health.

WARNING! The System must not be used by persons with a history of heart problems, or other diseases, conditions, afflictions or illnesses which may weaken the heart.

WARNING! The System must not be used by persons fitted with a pacemaker or other implanted electronic medical devices.

WARNING! The System must not be used by persons with neck or back problems.

WARNING! The System must not be used by women during pregnancy.

WARNING! The System must not be used by women with artificial breast implants.

WARNING! Any body piercings which coincide with the Airbag coverage area should be removed before electing to use the System, as inflation of the Airbag into and against the body piercings may cause discomfort and/or injury.

Allergy Advice

Persons with certain skin allergies to synthetic, rubber or plastic materials, should carefully monitor their skin each time the System is worn. If any irritation of the skin occurs, immediately stop wearing the System and seek medical advice and/or attention.

8. Compatible Garment

The Tech-Air® 3 System is specifically designed to be worn OVER any protective garment, with the limitations indicated in Section 10 "Transportation of Objects and use of the Pockets".

The Tech-Air® 3 System is certified as an abrasion resistant garment. Therefore, for the entire covered area, the System guarantees protection against possible abrasions during an accident. However, it is highly recommended to use the System in combination with a protective garment that can guarantee protection for the uncovered areas.

The System may also be worn UNDER a protective riding garment: in this case the user must choose a protective outer garment that does not cause discomfort and does not prevent the functioning or inflation of the System.

Alpinestars offers many Tech-Air® Ready outer garments, specifically designed with stretch panels to accommodate the volume of the inflated Airbag after deployment.

In addition, Tech-Air® 3 can also be worn under an Alpinestars' Tech-Air® Compatible garment.

WARNING! Even if Tech-Air® Ready garments are specifically designed according to certain standard sizing criteria to be used with Tech-Air® Systems, always try the outer garment together with the System in order to correctly select the appropriate fit according to your body size. This will ensure that the outer garment has the necessary space to accommodate the System in its inflated state and that the System does not cause discomfort or prevent the correct functioning of the System when it expands.

Compatibility with any outer garment

If Tech-Air® 3 is used under an outer garment that is not Tech-Air® Ready, or in case of any doubts, follow the procedure described below to check if your outer garment is compatible with the System. Remember to ensure that you select an outer garment that has the proper fit (providing 4 cm of space around the circumference of the upper body to accommodate the inflation of the airbag) and should any protectors be present on such outer garment, that the protectors are correctly positioned. If the outer garment you have chosen is made of leather or any different non-stretchable material, it must have stretch panels to accommodate the inflated Airbag after deployment, if it does not have stretch panels then you should NOT wear it and instead choose another garment that fits the criteria and will be able to expand to accommodate the inflation of the airbag in the event of a deployment.

Upon inflation, the Tech-Air® 3 System's Airbag covers chest and fullback area, accordingly, the System must not be used inside a protective garment, if such garment has insufficient space to accommodate the inflation of the Airbag, in order to prevent discomfort in case of deployment.

Here some important warnings and guidelines regarding compatibility of Tech-Air® 3 with any outer garment:

WARNING! Tech-Air® 3 in sizes smaller than size "S" must not in any case be worn under a protective outer riding garment and shall be worn only OVER the protective outer garment.

WARNING! Tech-Air® 3 in sizes "S" or larger shall be worn with a Tech-Air® Ready Alpinestars' outer garment of the same size of the System or with any Alpinestars' outer garment that is not Tech-Air® Ready provided that the size of the Alpinestars' outer garment is one size larger than the size of the System or regardless of whether it is an Alpinestars' outer garment or not meets the following criteria: For the chest area, measure the circumference of the chest (A) and the garment width on the chest region (A1). The garment is compatible with Tech-Air® 3 System if $A1 > 0.5 \times A + 12$ cm ($A1 > 0.5 \times A + 4.72$ in) (see figure 8 below)

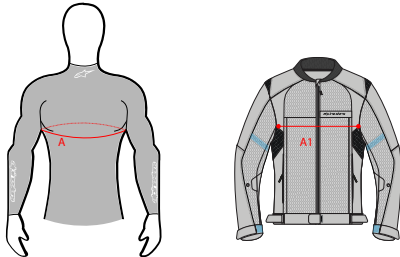


Figure 8

WARNING! The Tech-Air® 3 System must ALWAYS be used with a properly fitting outer garment to the user's appropriate body size. Use of the System inside an incorrectly sized outer garment, or with an outer garment that is not compliant with the size check recommendations above, may result in the System malfunctioning or failure and injury, including severe injury and/or death.

9. System Installation and Fitting

For the correct use of Tech-Air® 3 System, the user must go through the following steps:

1. Put on the System and fix the Airbag present in the chest area using the magnetic buttons present on the vest (Figure 9).
2. Close the Activation Zip (1) from the bottom to the top and wait for the System to switch on
3. The correct closure of the Activation Zip (1) and the switching on of the System are signalled by the switching on of the LED Display (2) and by the presence of a vibration in the same area
4. Once the System is switched on, check the LED Display (2) to verify that the System has started correctly (see Section 13 "LED Display Indications"). In particular, the user must verify that, after the System start-up, no System fault is present.

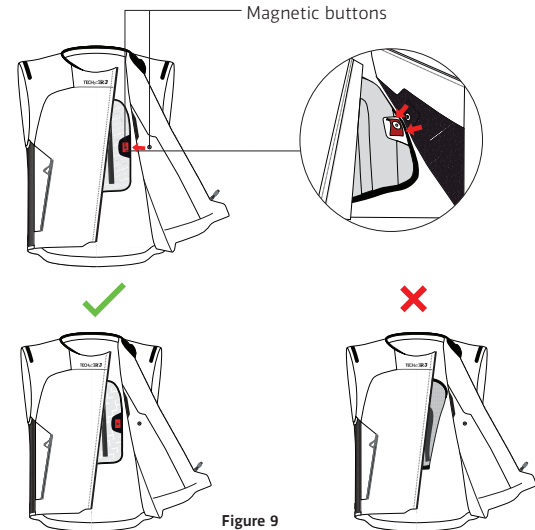


Figure 9

5. Once the Tech-Air® 3 System is switched on (see Section 13 "LED Display Indications"), the System is ready to deploy under the conditions explained in Section 3 "Tech-Air® Envelope of Protection".

WARNING! It is imperative that the System is fitted correctly in order to provide the maximum potential protection in the event of an accident. Once worn, be sure that the lateral elastic panels are stretched and fit correctly, otherwise they may not work properly during the Airbag inflation.

WARNING! In case the System is used under an outer garment be sure to follow the instructions of Section 8 "Compatible Garment". If outer garments are too small, they will cause severe discomfort when the System is inflated. In case of doubt or questions regarding proper fit, please seek advice from an authorized Alpinestars' Dealer.

WARNING! Always ensure that the Activation Zip (1) is open when the Tech-Air® 3 System is not worn by the user; check the LED Display (2) to verify that the System is not turned on.

10. Transportation of Objects and use of the Pockets

When using Tech-Air® 3 System, you must pay particular attention to the objects which are placed inside the pockets present in System, as well as to the objects that are in the pockets of the over and/or under garment. For example:

- Sharp or pointed objects placed in pockets may pierce the Airbag and will compromise the inflation of the Airbag.

- Bulky objects may limit the Airbag expansion after deployment, potentially reducing the effectiveness of the Airbag and/or making the System feel much tighter when inflated, thereby increasing discomfort or causing distraction or injury.

IMPORTANT! Particular attention should also be paid to the contents of the internal breast pocket. Only flat objects such as a wallet should be stored within the internal breast pocket.

WARNING! Provided that they fit comfortably inside the pockets, only blunt objects should be transported in the System and garment's pockets. Under NO circumstances should a user attempt to transport objects of any size or shape, including sharp or pointed objects, that will be tightly stuffed inside the System and garment's pockets, as such objects will cause injury to the user and/or damage to the Airbag when the System becomes inflated.

IMPORTANT! Users should note that the System has been tested to be safe when used in combination with common backpacks loaded up to a maximum of 6 kg (approximately 13 pounds) in weight. In any case, the user must check that the backpack will allow the correct volume increase of the Airbag during the inflation, according to the guidelines reported in Section 8 "Compatible Garment."

WARNING! During the Airbag inflation the objects contained in the pockets may be submitted to a notable sudden stress. Therefore, avoid to put delicate objects in the pockets that may be damaged by an inflation.

11. Battery Charging

The Tech-Air® 3 Airbag System is supplied with a Magnetic Charging Cable (8) and a Type C USB Adapter (7), for an easy and fast plug-in to the Type C USB Recharge Port (6). It is possible to access to the USB Recharge Port (6) through the opening present in the inner part of the vest, below the LED Display (2).

Any standard USB charger may be used to recharge the Tech-Air® 3 System. The current absorption during recharge is approximately 1 Ampere. The user should check that the used charger is capable to supply such a current. Lower current capability of the charger may result in longer charging time.

Fully charge the System before the first use. To do this, connect the supplied Magnetic Charging Cable (8), or a standard Type C USB charging cable, to the Type C USB Recharge Port (6) present on the LED Display (2), accessing it through the appropriate opening in the vest. Once on charge, the LED Display (2) will display a different combination of solid and blinking LEDs, according to the description provided in "LED Display Indications" (See Section 13).

IMPORTANT! The battery will only recharge when the ambient temperature is between 0°C and 40°C (32°F – 104°F).

IMPORTANT! If the battery is not periodically charged, it may take longer to fully charge it.

WARNING! Do not leave the System unattended while charging the battery. Charge only in a dry location with a temperature range of 0°C to 40°C (32°F – 104°F).

Charging and Use Times

Approximately 4 hours are required to recharge a discharged battery with a standard USB Charger capable to supply at least 1 Ampere. A fully charged battery will provide approximately 40 hours of use. If limited time is available, charging the battery for approximately 1 hour will provide approximately 10 hours of use.



Tip: : The System may be charged by connecting it to a computer, or to an alternative Micro USB Charger. However, if the current output is under 1 Ampere, the charging times will be longer than those stated above.

If, during the usage, the battery charge gets very low and the System is going to switch off, the LED Display (2) will alert about this condition with a short vibration (~1s). The switching off of the System is signaled with a long vibration(~3s).

WARNING! When using a USB charger, for a safe operation always ensure that it is compliant to EN 62368-1 as a class 1 (ES1) and class 1 (PS1) or 2 (PS2) power source, with a maximum output current of 2 Amperes.

WARNING! The System should be recharged as soon as possible when the red Battery Level LED light flashes, as this indicates a low battery level.

12. System Operation

a) Switching On the System

To switch on the System, close completely the Activation Zip (1) from the bottom to the top. An internal sensor detects that the Activation Zip (1) is closed and the System will switch on. The switching on of the System is signalled by the switching on of the LED Display (2) and by the presence of a short vibration (~1s). in the same area. At this point, the user MUST check the LED Display (2) to verify that the System starts correctly. See "LED Display Indications" in Section 13 below for the meaning of the LED indicator lights.

WARNING! In order to activate the Tech-Air® 3 System, the Activation Zip (1) must be correctly closed taking care that the Airbag in the chest area is positioned correctly by closing the magnetic buttons.



Tip: If the System does not switch on (no LED Indications present) check that the Activation Zip (1) has been correctly closed. In addition, check that the Tech-Air® 3 battery has a sufficient charge. If the problem persists, contact Tech-Air® Support (see Section 19 "Tech-Air® Support").



The battery and the status of the Tech-Air® System can be checked by connecting the System to the Tech-Air® App. When the System Check has been successfully passed and the System is active, the Tech-Air® App will display the indication "System On."



System inactivation can be "forced" directly using the Tech-Air® App. This functionality can be useful in case the user wants to turn off the Airbag protection, for instance before undertaking some heavy off-road riding [please note that the System cannot be turned on again by means of the App. To turn on the System, open and close the Activation Zip (1)].

b) System Check and activation for "Race Mode"

After the System is correctly turned on, the System will start performing the System Check. This operation is indicated by a solid yellow LED indicator light. During this phase, the System checks if it is correctly worn by the user. During the System Check, the System will not deploy. This phase may take several seconds.

Whilst the System Check is being performed, the System is looking for the user's body movements to conduct one or all of the following activities:

- Walking (including up and down stairs).
- Mounting the motorcycle.
- Riding the motorcycle.

Note that the following activities are unlikely to pass the System Check:

- Zipping up the jacket without wearing it.
- Standing still.
- Sitting down – INCLUDING sitting on the motorcycle with the engine at idle.

When the System Check is passed, a solid blue LED indicator light will illuminate and the LED Display (2) will vibrate two times.

WARNING! The Tech-Air® 3 System will be fully active (i.e. ready to deploy) only after having started riding for approximately 10 seconds. Once activated, the System will remain active even if the rider stops, and until the System is manually switched off, to offer protection also in a stationary condition in case the motorcycle is hit by another vehicle as described in the Envelope of Protection conditions (see Section 3 "Tech-Air® Envelope of Protection").

WARNING! The user **MUST ALWAYS** check the LED Display (2) after the System Check to confirm that the solid blue LED indicator is illuminated before starting to ride/use the Tech-Air® 3 System. The System will not deploy if the solid blue LED indicator is not present on the LED Display (2).

c) Switching Off the System

Turn the System off by opening the Activation Zip (1). The System will shut down after approximately 1 second. Confirm that the System is off by checking that the LED Display (2) is switched off. A long vibration (~3s) of the LED Display (2) will confirm that the System is no longer activated.

To keep the System switched off, keep the Activation Zip (1) open as shown in Figure 10. Always keep the System in this condition while stored, transported, or shipped (see Section 14 "Cleaning, Storage and Transportation").

Note that the following activities are unlikely to pass the System Check:

- Zipping up the jacket without wearing it
- Standing still
- Sitting down – INCLUDING sitting on the motorcycle with the engine at idle.

If the System Check is passed, a solid green (3a) LED indicator light will illuminate.

WARNING! ALWAYS switch the System off by opening the Activation Zip (1) when you are not riding a motorcycle, even if you continue to wear the System. Although the System has been evaluated for a number of non-riding activities, keeping the System switched on and/or active increases the possibility of an unwanted deployment and drains the battery. So as a rule, when not riding, always open the Activation Zip (1).

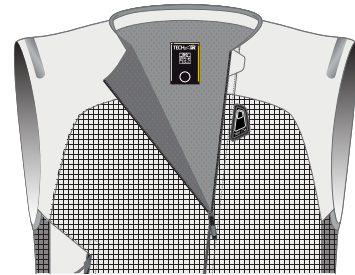


Figure 10

WARNING! When not in use and being stored, transported, or shipped, the System must be turned off by leaving the Activation Zip (1) open. This prevents the System from accidentally switching on and inadvertently deploying, and it will preserve battery and battery life.

IMPORTANT! Even when the System Check has successfully been completed, the System will automatically switch off if the System detects:

- a position incompatible with the normal usage of the System or
- no movements for more than 10 minutes. When either of the above situations occur, open and close the Activation Zip (1) to restart the System and perform a new System Check.

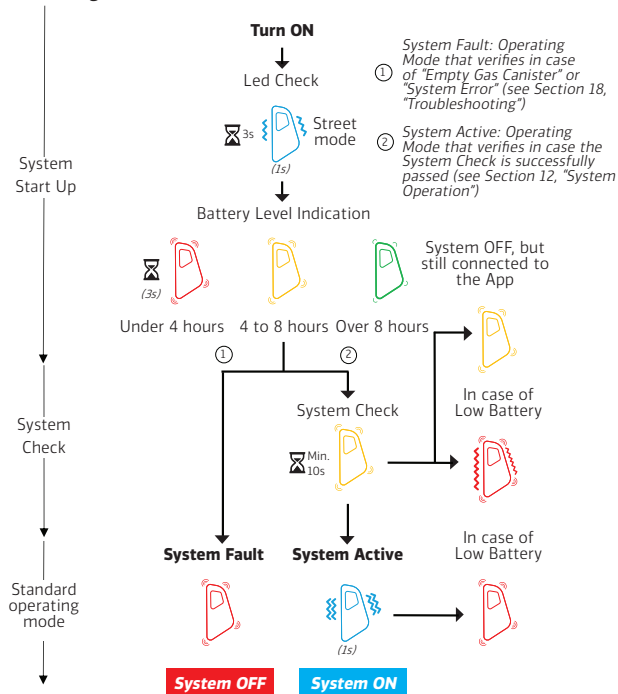
13. LED Display Indications

The LED Display (2) has RGB LEDs which are used to indicate the status of the System.

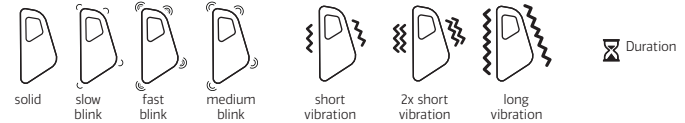
(1) System Fault: The Operating mode will show a System Fault in the case of an "Empty Gas Canister" or a "System Error" (see Section 18, "Troubleshooting").

(2) System Active: The Operating mode will show the System Active in the case where the System Check is successfully passed (see Section 12, "System Operation").

LED Indications During Normal Use

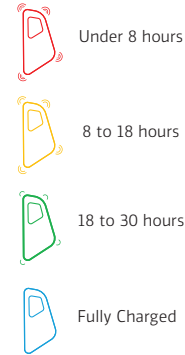


Glossary



LED Indications During Recharge

Battery Recharge



IMPORTANT! The solid blue LED light indicates that the System is on.

WARNING! Any LED indication different from the solid blue LED light indicates that the System is not active and accordingly will NOT deploy in a crash.

14. Cleaning, Storage and Transportation

Vest Cleaning

The vest can be washed according to the instructions reported on the care label.

Before washing, it is necessary to remove the Airbag and any electronic components that constitutes the System.

To remove the Airbag, follow the instructions below:

1. Access the opening in the inner part of the vest by opening the zip and the hook-and-loop patches (Figure 11).

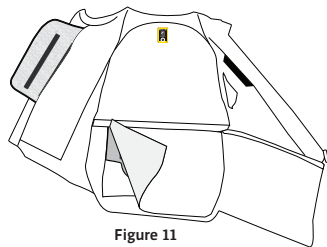


Figure 11

2. Access the Inflater Housing (4) and disconnect the cable connected to the battery and the squib connector from the inflator (Figure 12).

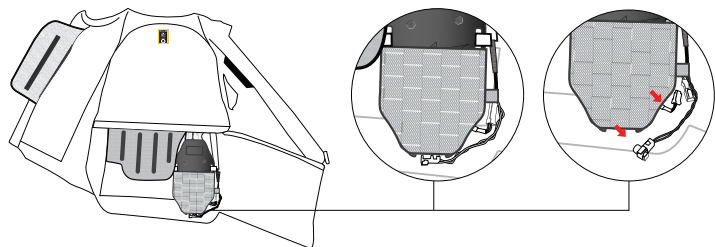


Figure 12

3. Remove the Inflater Housing (4) from its pocket by opening the two fastening hook-and-loop patches (Figure 13).

WARNING! The removal of the inflator housing doesn't require that it be opened. Do not open the Inflater Housing (4). Only authorized Alpinestars Dealers may open the Inflater Housing (4) for servicing purposes.

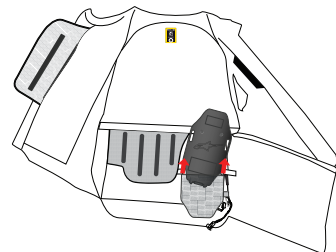


Figure 13

4. Detach the Airbag from the vest by opening all the connection clips. The clips are arranged as shown in the Figure 14.

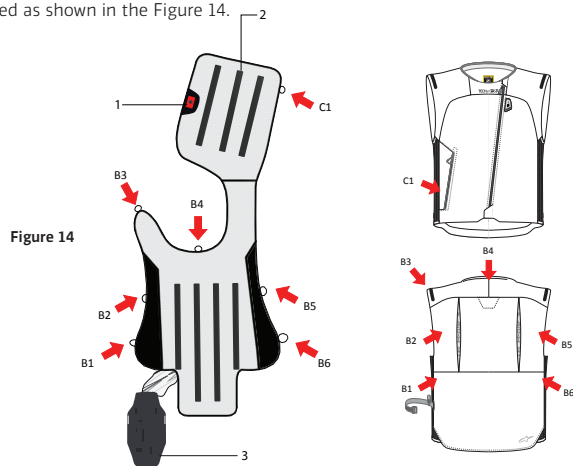


Figure 14

5. Regarding the front part of the Airbag that covers the chest area, open the clip, detach the hook-and-loop patches placed on the front and back of the Airbag. Finally, remove the Airbag through the aperture present above the right sleeve (Figure 15).

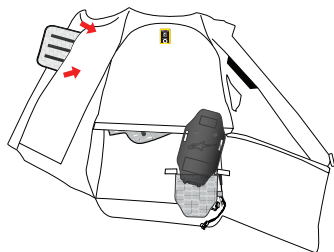


Figure 15

To remove the electronic components, follow the instructions below:

1. Access the Electronic Control Unit (3) present in the pocket located on the back of the System. To access the pocket, open the vest using the zip and hook-and-loop patches present on the inner part of the vest.
2. Disconnect the cable that powers the LED Display (2), indicated in Figure 16.

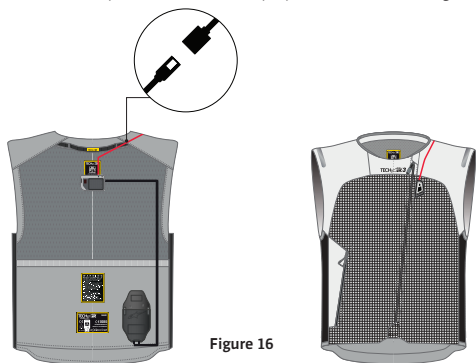


Figure 16

3. Remove the Electronic Control Unit (3) from the pocket taking care to remove the cables previously disconnected from the Inflator Housing (4).

4. Remove the LED Display (2) accessing the pocket on the left side of the vest and pulling out the cables previously disconnected from the Electronic Control Unit (3).

After cleaning the vest, proceed with the correct reassembly of the electronic components and of the Airbag on the vest, following the instructions reported above in the reverse order.

IMPORTANT! Particular attention must be paid to the insertion of the area of the Airbag that protects the chest area to avoid twisting the narrower part of the airbag that passes up and over the right shoulder. The obstruction of the canal could compromise the correct inflation and therefore the protection of the Airbag in the chest area.

WARNING! Always check that all the connection clips are properly closed after the reassembly of the Airbag on the vest.

Airbag

Use only a cloth dampened with water to clean the Airbag (fabric and plastic parts). Solvents or chemical cleaners must not be used, as they may compromise the integrity of the System.

WARNING! Under NO circumstances should the Airbag be washed in a washing machine, submerged in water, tumble dried or ironed. This may cause permanent damage to the System and cause malfunction.

WARNING! Detach the Airbag only to wash the vest. After washing the Airbag vest, reinsert and reposition the Airbag into the vest following the instructions reported above. The Airbag is a very critical safety part of Tech-Air® 3 System. Always use extreme caution when handling the Airbag. Any scratches, holes, or damage to the Airbag will lead to the System's malfunction, accordingly if there is any such damage to the Airbag do not use the System and send the System to Alpinestars or to an authorized Alpinestars' Tech-Air® Service Centre for service.

Storage

Differently from other Alpinestars' Tech-Air Systems, the Tech-Air® 3 System does not come with an integrated back-protector. For this reason, the System can be easily folded to facilitate its transport, for example, the Tech-Air® 3 can be easily stored inside the top case or the side bags of the motorcycle. The System is also equipped with an Elastic Band (5) that can be used to facilitate the folding of the System. The Elastic Band (5) is contained in a small pocket on the left side of the System. Remember to hide the Elastic Band (5) inside the pocket when not in use.

When not in use, it is recommended that users store the System in its original packaging. It may be stored flat provided that no heavy or sharp objects are placed on top of it. The System can also be stored hung up on a hanger. The System should always be stored in a cool, dry place, out of direct sunlight.

The battery of the System slowly self-discharges, even if the System is not turned on, especially if the System is stored in a warm environment. It is thus recommended that even whilst in storage, the System be periodically recharged (at least once every 18 months) to prevent battery drainage and shortening of the battery life.

IMPORTANT! If the battery becomes fully drained, the System may require a longer time to recharge. It is thus recommended that the System be periodically recharged as indicated.

WARNING! Do NOT leave the System in direct sunlight inside a closed car, or otherwise exposed to high temperatures. High temperatures will damage the battery and possibly the electronic components of the unit.

WARNING! Zipping up the vest and closing the Activation Zip (1) will cause the System to switch on. To prevent this, it is essential that the Activation Zip (1) is open, in order to prevent accidental activations of the System. Failure to do so will cause the System to switch on, which will cause the battery to drain. When storing the System remember to keep the Activation Zip (1) open and check that there are no indicator lights illuminated on the LED Display (2).

WARNING! The System's storage temperature must be between -20°C and +60°C (-4°F to 140°F). Exposure to a temperature lower than -20°C (-4°F) may cause permanent damage to the battery.

Transportation

Users should be aware that the Tech-Air® 3 is classified as a Life-Saving, self-inflating Jacket, UN 2990 class 9. Detailed instructions for the transportation of the System can be found in the Product Information Sheet (PIS) related to the Tech-Air® 3 System available in the Documentation Section of the TechAir® App.

When transporting the System by air, users are strongly recommended to download and print a copy of the Product Information Sheet (PIS) in case they are questioned about the System by airport staff.

Note: Please be advised that not all countries worldwide permit the import of pyrotechnic devices. Prior to traveling, users should check with the appropriate authorities of countries through which and to which they will be traveling to determine if the entry of System will be permitted or not.



The Product Information Sheet (PIS) can be downloaded using the Tech-Air® App in Settings -> Documents.

15. Maintenance, Servicing, Lifespan and Disposal

Garments with electronically activated airbags are critical safety systems which must be maintained in good working order to ensure their correct function. If not, they may not function properly or at all.

Maintenance

Prior to each use, the user should conduct a check of the System, looking for any signs of wear (loose threads, holes, marks) or damage. If any signs of wear are found, the System should be inspected further by an authorized Alpinestars Tech-Air® Service Centre.

Servicing

Alpinestars recommends that the System be routinely inspected at least every 2 years or after 500 hours of functioning by Alpinestars or an authorized Alpinestars Tech-Air® Service Centre. During the inspection service, the Airbag and the electronic unit's components will be examined. Inspection can be requested directly at an Alpinestars Tech-Air® Dealer. The following work is undertaken as part of the inspection service:

- All components are removed from the System and the vest is washed.
- The diagnostics of the electronic unit are checked (and firmware upgraded, if applicable).
- The expiration date of the high pressure inflator is checked, and if needed the inflator is replaced.
- The Airbag is inspected for any sign of wear and/or damage.
- The System is reassembled into the vest and checked functionally.



Tip: Two years or 500 hours of functioning is the maximum recommended period between inspections.

WARNING! If no service or recharge operation has been conducted after two years or 500 hours of functioning from the purchase date, there is the possibility that the System will not function inside the Envelope of Protection.

WARNING! There are NO user serviceable parts inside the System. Under no circumstances should users attempt to open, service, disassemble or modify the System. Do not remove or change the internal battery. Any and all work performed on the System must be done by Alpinestars or an authorized Alpinestars' Tech-Air® Service Centre. Severe injury or damage may result otherwise.

Lifespan and disposal

The materials and components used by Alpinestars in the System are selected to maximize durability.

Properly caring for, including regularly servicing and updating your System, will help ensure the longest possible lifespan.

Notwithstanding in the long run the System, similar to any product, has a limited lifespan as it is subject to natural degradation and breakdown of materials and/or components through factors such as use, wear and tear, improper care for your System, incorrect storage and/or common environmental conditions – all of which affects the practical lifespan of products.

For safety issues and to ensure that the above factors have not reduced the integrity or product performance levels, Alpinestars strongly recommend replacing your System 10 years from the date it was first worn.

WARNING! The internal high pressure gas inflator has a limited duration, and must be changed approximately every 4 years. Before the use and during the periodic inspection service, the expiration date must be verified and in case the inflator is over 4 years old, it must be substituted.

As written in this manual, always before any use, check the System for any damage to any part of the product. Regardless of the age of the product, do not use any product if you notice any damage.



Disposal of the System at the end of life span

Deployed System

IMPORTANT! The System contains electronic components, accordingly, at the end of its working life, the System must be disposed of following the European Directive 2012/19/EU requirements. The symbol of the crossed bin displayed on the System indicates the electronic parts of the System which, at the end of its life span, must be separately disposed from other waste, for appropriate waste processing and recycling. The user must therefore take the Electronic Control Unit (8), Magnetic Charging Cable (8) and all other electronic parts marked with the crossed bin, to those sites assigned for the disposal of electrical and electronic waste or return the System to an Alpinestars' Tech-Air® Dealer for disposal in accordance with the local waste requirements.

Disposing of the System according to the local waste allows for a correct and environmentally-friendly recycling, processing and disposal of the System itself, thus avoiding the dispersion of dangerous substances and any negative effects on the environment and health and favouring the reuse and/or recycle of the materials from which the System is made of. The unauthorized disposal of the System on behalf of the user, entails application of fines pursuant to the current law. We urge you to check the current legislation and the measures adopted by the public services operating in your territory.



Tip: A deployed Airbag can be verified/confirmed by turning on the System and looking for the red light on the LED Display (2) (see Section 13 "LED Display Indications") or checking the System status using the Tech-Air® App (see Section 17 "Tech-Air® App").

Undeployed System

WARNING! An undeployed System still contains live pyrotechnic charges and thus must NOT be disposed of in household waste or incinerated.

An undeployed System must be returned to an Alpinestars' Tech-Air® Dealer for subsequent return to Alpinestars who will handle the disposal. This service is free of charge.

16. Actions in the Event of an Accident

Whenever the System deploys, the internal high pressure gas inflator must be substituted to allow for the next inflation. This inflator replacement must be undertaken by an authorized Alpinestars' Dealer and/or Service centre that will check the status of the System and consequently verify if further services are needed.

The Tech-Air® 3 System features an Airbag that is certified for up to three inflations. Upon the third deployment, the System will mandatorily undergo a full service, where besides the gas inflator, the Airbag will also be replaced. This kind of service must be performed by an Authorized Alpinestars' Tech-Air® Service Centre.

IMPORTANT! The Tech-Air® 3 Electronic Control Unit (3) records the number of deployments. After the third deployment, the System will permanently indicate a System Fault (displaying a steady red light on the LED Display (2)). The System will remain locked until a full service is performed by an authorized Alpinestars' Tech-Air® Service Centre.



The Tech-Air® App displays a warning indicating that the Airbag needs to be replaced at the next deployment. In addition, the App displays the warning when, after the System deployment, it is necessary to replace the Airbag.

In case of deployment, in a situation where the user believes the System should not have deployed, the System should be returned to an Alpinestars' Tech-Air® Dealer along with a detailed report of the event (including photos, if possible).

Accident WITHOUT Deployment

In the case of minor, low energy and/or low speed accidents, such as those involving speeds below those described in Section 3 ("Tech-Air® Envelope of Protection"), it is likely that the System will not deploy. Nonetheless, a thorough inspection of the System should be made to ensure that there is no significant damage (tears, holes, etc.) which could compromise the functioning of the System, as per the maintenance check outlined in Section 15 "Maintenance, Servicing, Lifespan and Disposal".

In case of situations where the user believes that the System should have deployed, feedback can be sent to Alpinestars through the Tech-Air® App and/or given to Alpinestars directly by contacting Tech-Air® Support. If the System is returned to an authorized Alpinestars' Tech-Air® Service Centre for an inspection, a detailed description of the event (including photos where possible) must be included.



The user can notify any feedback related to deployment events to Alpinestars through Tech-Air® App and/or by contacting Tech-Air® Support (see Section 19 "Tech-Air® Support").

17. Tech-Air® App

The Tech-Air® 3 System is equipped with a Bluetooth Low Energy (BLE) device which allows users to directly connect their mobile phone to the System, in order to get certain information from the System and have access to several functions, such as:

- monitoring the status of the System;
- verifying the installed software version and, eventually, performing the latest software updates;
- sending feedback related to the System and its performance;

WARNING! Alpinestars is not responsible for reporting possible accidents or for providing any assistance to those involved. User agrees that Alpinestars has no duty or responsibility to report any accidents or the possibility of any accidents based on the data transmitted to Alpinestars. Users assumes the risk of any accidents or injuries whether or not data is being transmitted to Alpinestars.

The Tech-Air® App is available for download in the Android Play Store and in the Apple Store.

IMPORTANT! The Tech-Air® App is not necessary for the Tech-Air® 3 System to work as an impact protector. The Tech-Air® 3 System will protect the user as described in Sections 2 to 13, even if Tech-Air® App is not installed or not running on the user's mobile phone. The Tech-Air® 3 System does not need to be connected to the Tech-Air® App to work.

User Registration

To have access to the Tech-Air® App, the user must log in or, if not, sign up. In order to configure the Tech-Air® App, the user must turn on Bluetooth within the mobile phone settings.

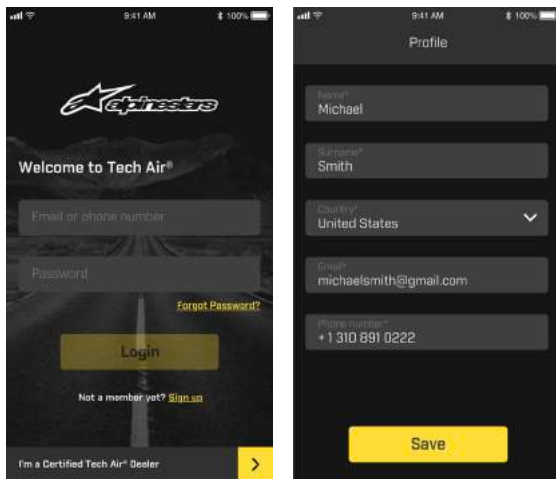


Figure 17

Pair the System

Once the Bluetooth is turned on, the App will automatically attempt to establish a connection with an available Tech-Air® System, if already paired with the System. Should no Tech-Air® System have been already paired to the App, the System can be easily paired to the App by scanning the QR code present on the tag found on the System's internal neck liner. Once the System has been correctly paired with the App, it will be possible to visualize the overall status of the System, such as battery level and installed software, and users will be able to enable or disable some of the functions provided by the App.

When the Tech-Air® System turns off, the Bluetooth connection will stay active to allow for the dialogue between the System and the mobile phone, provided that the System is in the vicinity. In this case, the active connection with the App is indicated by the blinking yellow light on the

LED Display (2) and the user can interact with the App. The LED Display (2) will definitely turn off when the System doesn't detect any connection with the App.

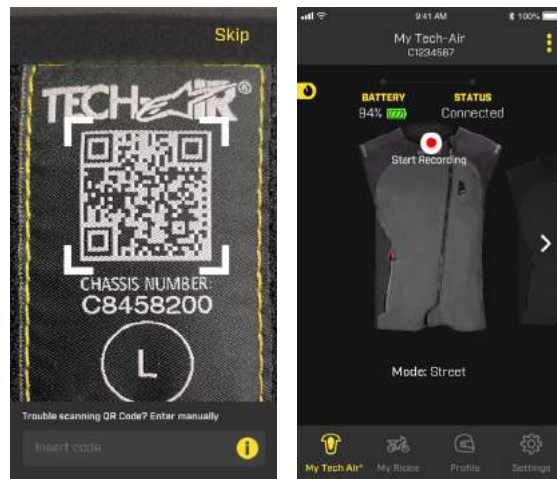


Figure 18

Monitoring the System Status

The App provides information about the actual operating mode of the System, verifying if the System is functioning correctly or not. The indication "SYSTEM ON" displayed on the screen indicates that the System Check has been successfully passed and that the System is active.

While riding, "SYSTEM ON" mode is active and accordingly, for safety reasons, the user cannot access most of the App functions. In case the System needs to be disabled by the user, such as during a heavy off-road riding session, the System can be turned off using the slide icon on the App (as shown in Figure 19). To reactivate, open and close the Activation Zip (1). In case of deployment, the App will show the relevant status with the wording "SYSTEM DEPLOYED" as depicted in Figure 19.

WARNING! ! On every such notification the System must be sent to an authorized Alpinestars® Tech-Air® Service Centre for service in order to replace the gas inflator and, eventually, the Airbag as described in Section 16 "Actions in the Event of an Accident."

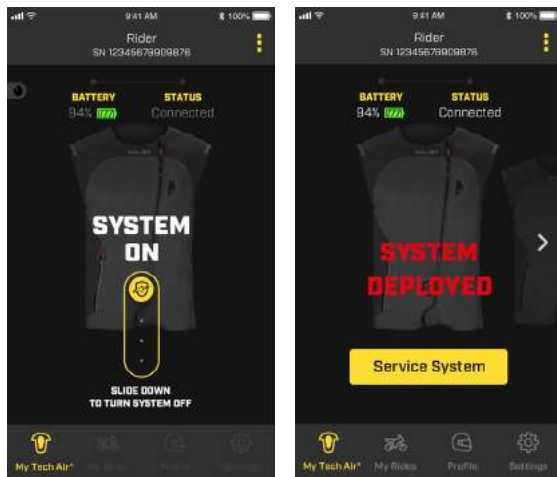


Figure 19

As indicated in Section 16 above, the System's Airbag is certified for up to 3 deployments, after which the Airbag needs to be changed during the servicing. The App will inform the user when there is one deployment left. Once the Airbag has deployed for the third time, the Airbag will need to be replaced together with the gas inflator during the servicing of the System.

Enjoy the Ride with MyRide

The Tech-Air® App contains the MyRide function which displays information about the ride, such as duration, distance and route related to the ride. MyRide can also be used to send feedback regarding any events that occurred during the use of the System, during a specific ride.

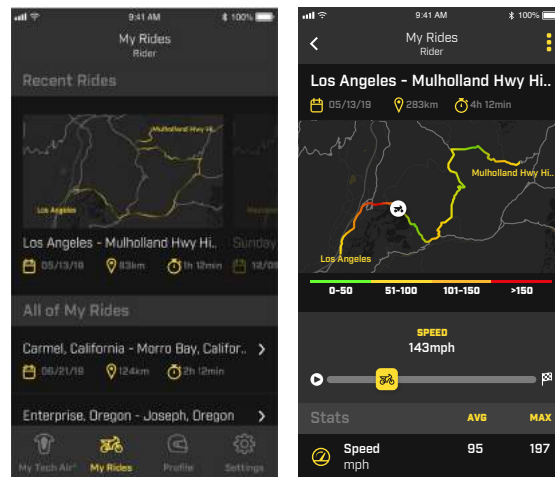


Figure 20

18. Troubleshooting

Problem	Possible Cause	Possible Solutions
LED Display (2) does not switch on when Activation Zip (1) is closed	System Battery fully discharged	Recharge battery (see Section 11) and check the correct LED behaviour during the recharge.
	LED Display (2) not properly connected to the Electronic Control Unit (3)	Check the correct insertion of the cables.
SOLID red LED on the LED Display (2)	Gas inflator empty and/or Airbag must be replaced	After a deployment, the gas inflator must be replaced. Until such replacing, the System will not work even though the battery is charged and the LED Display (2) will show the red light until the gas inflator is replaced. If the same Airbag has deployed more than 3 times, the red LED will indicate a System fault even after the replacement of the gas inflator. In this case, the Airbag itself must be replaced and the System reactivated by an Authorized Tech-Air® Service Centre.
	System Error	If gas inflator is not empty (double check this using the Tech-Air® App), the System may have an internal error. Contact an Authorized Alpinestars' Tech-Air® Service Centre to check the System.
Flashing red LED, while blue LED is on	Battery Low	Remaining battery level is lower than 4 hours. Recharge the battery as soon as possible.

Problem	Possible Cause	Possible Solutions
SOLID yellow LED that doesn't pass the System Check and always remains turned on. The SOLID blue LED indicator light fails to illuminate, and the LED Display (2) doesn't vibrate two times.	The Electronic Control Unit (ECU) of the Tech-Air® may not be correctly positioned in the ECU pocket.	1. Access the opening in the inner part of the vest by opening the zip and the hook-and-loop patches (Figure 11).
		2. Access the Electronic Control Unit (ECU) (3) present in the pocket located on the back of the System.

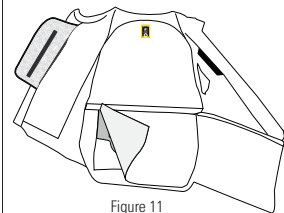


Figure 11

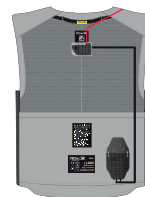
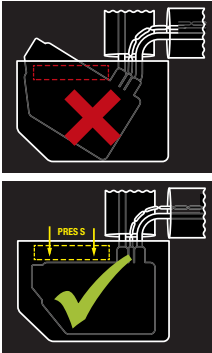


Figure 16

Problem	Possible Cause	Possible Solutions
		<p>3. Check to make sure that the ECU (3) is positioned correctly in the pocket, as shown in the diagram on the ECU pocket and also hereunder Figure 21. The ECU should be positioned in the pocket with the Tech-Air® logo facing downwards and with the connector cables exiting from the top and the right side of the ECU. The ECU must be completely aligned straight against the inner lining of the pocket. It should NOT be inclined or tilted.</p>  <p>Figure 21</p> <p>IMPORTANT: If the ECU is not positioned properly inside the pocket and according to Figure 21, the System will not arm and will not function and accordingly the SOLID blue LED indicator light will fail to illuminate.</p>

19. Tech-Air® Support

In case of questions or should users need further information, they may contact the Tech-Air® Dealer where they purchased the System or contact Alpinestars directly:

E-mail: techairsupport@alpinestars.com

Tel: +39 0423 5286 (ask for Tech-Air® Support)

20. Certification Information

The Tech-Air® 3 System is manufactured by:

Alpinestars SpA

5, Viale Fermi – Asolo (TV) 31011 Italy

And it is covered by a number of certifications.

Personal Protective Equipment

The Tech-Air® 3 System is considered Category 2 Personal Protective Equipment under EU Regulation 2016/425. This product is tested and certified also under the corresponding UK legislation Regulation 2016/425 on personal protective equipment as brought into UK law and amended. An EU Type examination has been conducted on this product using the Notified Body as well as an UKCA Type examination has been conducted using the UK Approved Body.

As an impact protector garment, the standard 17092-6:2020 has been applied; as a motorcyclist inflatable protector, the DOLOMITICERT - Technical disciplinary for inflatable protectors with electronic activation Revision n° 4 of October 14th, 2018. has been used in all applicable parts only, since Tech-Air® 3 is an electronically triggered System.

The EU examination was conducted by:

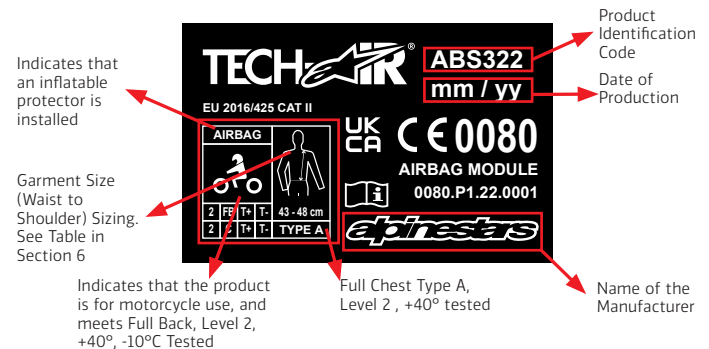
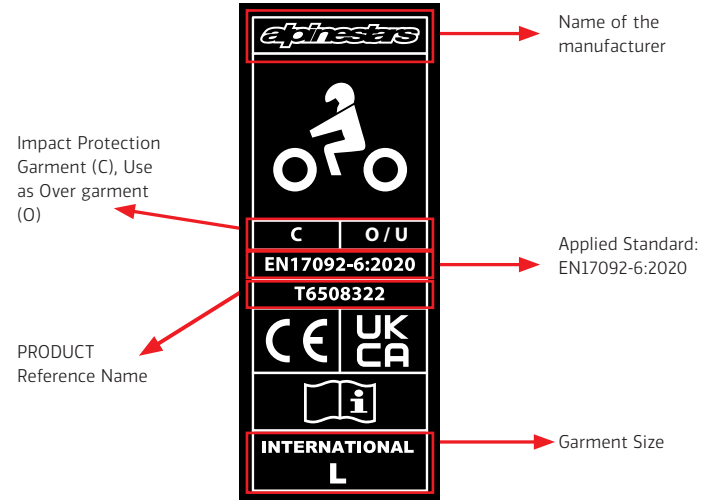
Notified Body #2008 Dolomitcert S.C.A.R.L., Zona ind. Villanova 7/A, 32013 Longarone (BL), Italy

The UKCA examination was conducted by:

- Approved Body #8503 Certdolomiti Ltd, 17 Grosvenor Street, Mayfair, London W1K 4QG, UK

The explanation of the product markings are as follows:

- Protective garments for Motorcycle Riders (EN 17092 – 6: 2020)
- Inflatable Impact Protector

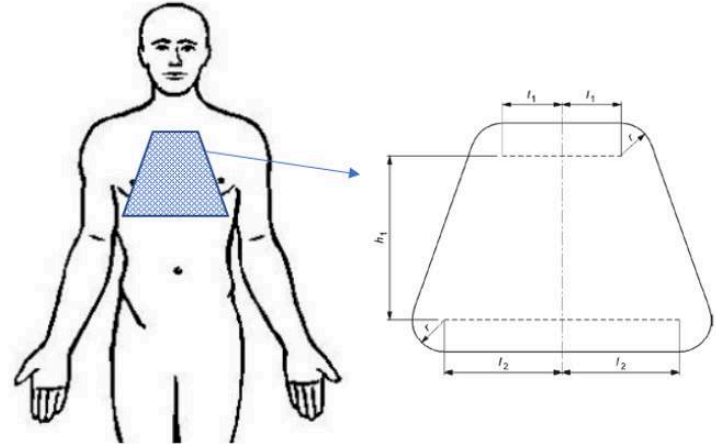


Protection Level

The following table summarizes and explains the performance level reported on the product marking as an inflatable impact protector:

Tested Area	Standard Used for tests	Temperature	Force Transmitted	Level
Full Back	1621-4:2013	20°, -10°, 40°	Average $\leq 2.5\text{kN}$ Peak $\leq 3.0\text{kN}$	Level 2
Full Chest	1621-4:2013	20°, -10°, 40°	Average $\leq 2.5\text{kN}$ Peak $\leq 3.0\text{kN}$	Level 2

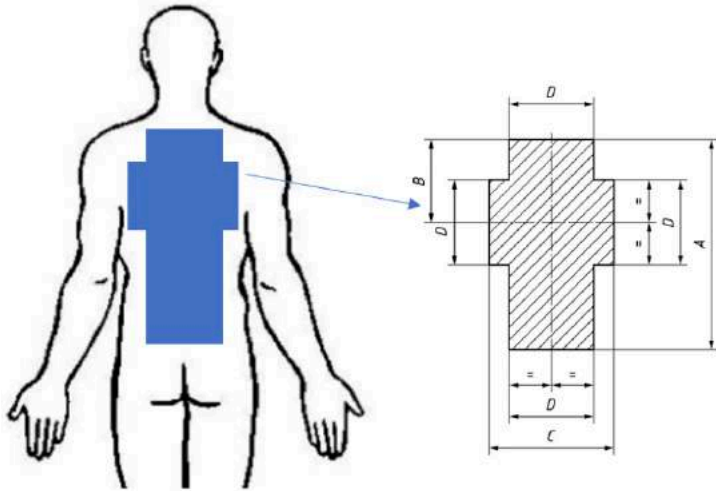
Description of Chest Protected Area



Type	Dimensions in mm			
	r	l ₁	l ₂	h ₁
A	25	42	84	118
B	30	50	100	140

Description of Back Protected Area:

For the waist to shoulder length of the bigger user, refer to the upper value in the third column of Tables 5 and 6 for each size.



Dimensions					
A	B	C	D	E	F
72 %	29 %	44 %	29 %	32 %	25 %
NOTE: All dimensions refer to the waist to shoulder length (100%) of the biggest user					

Table 5 and 6 below lists the sizes of the System, the waist-to-shoulder length and a suggested person height to assist with the selection.

WARNING! The height range suggested is only for reference. Always check the correct waist-to-shoulder length before choosing the size of the System.

Table 5 – Tech-Air® 3 Sizes in centimeters and inches

System Size	Int. Size MAN	User's Waist to Shoulder length	Suggested Height Range
XS	42-44	41 (16.1") to 46cm (18.1")	Up to 164cm (65.6")
S	46	41 (16.1") to 46cm (18.1")	Up to 175cm (68.9")
M	48	41 (16.1") to 46cm (18.1")	Up to 182cm (71.8")
L	50-52	43 (16.9") to 48cm (18.9")	Up to 190cm (74.8")
XL	54-56	43 (16.9") to 48cm (18.9")	Up to 190cm (74.8")
2XL	58-60	48 (18.9") to 53cm (20.9")	Up to 202cm (79.3")
3XL	62-64	48 (18.9") to 53cm (20.9")	Up to 202cm (79.3")
4XL	66	48 (18.9") to 53cm (20.9")	Up to 202cm (79.3")

Table 6 – Tech-Air® 3 STELLA Sizes (available and specifically designed for female use) in centimeters and inches

System Size	Int. Size WOMAN	User's Waist to Shoulder length	Suggested Height Range
XS	38-40	41 (16.1") to 46cm (18.1")	Up to 164cm (65.6")
S	42	41 (16.1") to 46cm (18.1")	Up to 175cm (68.9")
M	44	41 (16.1") to 46cm (18.1")	Up to 182cm (71.8")
L	46-48	43 (16.9") to 48cm (18.9")	Up to 190cm (74.8")
XL	50-52	43 (16.9") to 48cm (18.9")	Up to 190cm (74.8")
2XL	54-56	48 (18.9") to 53cm (20.9")	Up to 202cm (79.3")

The EU Declaration of Conformity of this PPE (as established by the REG. EU 2016/425) can be downloaded at: eudeclaration.alpinestars.com

The UK Declaration of Conformity of this PPE can be downloaded at: ukdeclaration.alpinestars.com

Pyrotechnic Articles

The Tech-Air® 3 System contains one pyrotechnically activated cold gas inflator, and as such, the whole item is considered as an "AIRBAG MODULE" category P1 under EU Directive 2013/29. As such an EU Type Examination (Module B) has been conducted on the design of the System, and an EU Type Examination and Audit (Module E) has been conducted on the assembly of the System.

The EU Type Examination and Audit have been conducted by Notified Body #0080, Ineris, Parc Technologique ALATA BP2, Verneuil-en-Halatte, 60550, France.

The CE label on TechAir® 3 System reports the relevant information regarding the pyrotechnic certification:



Code of INERIS, the notified body that certified the TechAir® 3

Certification Code:

0080: code of the notified body (INERIS)

P1: category of the Pyrotechnic article contained in the TechAir® 3 System

22.0001: unique code of the certification

Electromagnetic Stability

The Electronic Control Unit of the Tech-Air® 3 System has been tested according to different regulations for electronic and radio devices.

FCC compliance Statement:

The System has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING! Changes or modifications not expressly approved by Alpinestars could void the User's authority to operate the equipment. (Part. 15.21).

FCC ID: YCP – STM32WB5M001

Canadian compliance Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to RSS-210 of the IC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can

be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING! Changes or modifications not expressly approved by the party responsible for compliance could void the User's authority to operate the equipment. (RSS-210)

IC: 8976A-STM32WB5M01

EU compliance Statement:

The Tech-Air® 3 System contains a Bluetooth Low Energy Radio Module, with the following characteristics:

Frequency Band	2402-2480 Mhz
Rated Output Power	0.00313 Watts

Alpinestars SpA hereby declares that this wireless device is in compliance with the Directive 2014/53/EU. A copy of the EU Declaration of Conformity is available at: eudeclaration.alpinestars.com

21. Important Information for Users WARNING!

The Tech-Air® 3 System is an active safety protection system that is different from normal motorcycle clothing and as a result requires additional care and precautions. You must read and understand this user manual fully before using the System, as well as pay close attention to the following warnings:

- The System can only provide a limited amount of protection in an accident or event. As such, there always remains a possibility that a serious or fatal injury could occur even when using the System.
- Certain types of movements could be interpreted as a crash by the System and cause a deployment though no crash has occurred.
- The System has been designed to deploy in crashes above a minimum energy threshold. This is to prevent wasteful use of the charges in situations where protection typically would not be needed. Thus, in low speed/low energy crashes it is likely and reasonable that the System will not deploy.
- The System contains no parts which may be serviced by final customers, and accordingly must be serviced and recharged ONLY by approved Alpinestars' Service Personnel.
- Do not attempt to make any modifications or adjustments to the electronics and/or to the System.
- The System must only be used for motorcycle street riding and limited off-road use.
- This System is NOT to be used for any other purpose, motorcycle-related or otherwise. This includes: road racing, heavy off-road use, Enduro, Motocross, Supermoto, performing stunts and any type of non-motorcycling activity. Wearing the System during any non-intended activity (with the electronic unit switched on) may cause the System to deploy and cause injury or death to you or others and may cause damage to property. Alpinestars does not accept any claims for malfunctions of the System used outside the environments for which its use is intended.
- When not in use and being stored, transported, or shipped the System must be turned off by keeping the Activation Zip (1) open.

- Prior to each use, the System should be inspected for any signs of wear or damage. Additionally, when turned on, the LED Display (2) must be checked. In the event that the System reports a fault (red LED is illuminated), users should not use the System and must follow the instructions in this user manual.
- Whenever the LED Display (2) gives a low battery indication, the System MUST be recharged as soon as possible.
- The System must never be machine washed, submerged in water, tumble dried or ironed, except for the sole vest, with the airbag removed and as described in Section 14.
- After a deployment, the System must be returned to either an Alpinestars' Tech-Air® Dealer which can arrange for the System to be recharged or directly to an Alpinestars' Tech-Air® Service Centre.
- Even if the System has not been used, or the Airbag has never fired, it is important that the System be serviced at least once every two years or 500 hours of functioning. This can be arranged through an Alpinestars' Tech-Air® Dealer or directly by an Alpinestars' Tech-Air® Service Centre.

TECH-AIR® 3

**IMPORTANT - LIRE LE PRESENT MANUEL.
INFORMATIONS CRITIQUES DE SÉCURITÉ À L'INTÉRIEUR.**