

## INFORMATIVE NOTE FOR DL005 H T U Inflatable Protectors with integrated 001\_F electronic unit

### NOTES

Thank you for choosing DAirlab!

The product you have chosen has been designed taking advantage of precious cooperation at national and international levels, combined with the most advanced technologies available and tests conducted constantly at the DAirlab laboratories. All this has made it possible to design a product offering maximum comfort and performance.

- **CRITICAL WARNING could seriously affect the health of the user.**
- **IMPORTANT WARNING, could affect the safety of the user.**
- **USEFUL INFORMATION, could influence operation of the system.**



### WARNINGS:

- **At the time of purchase make sure that you check carefully, together with the dealer, your body measurements and choose the right size.**
- Before using the DL005 H T U read this Informative Note carefully and make sure that you understand it correctly. Contact your nearest DAirlab service center (see list below) if you have any problems or doubts regarding use of the DL005 H T U.
- Keep this Informative Note handy for future reference.
- DAirlab reserves the right to improve the electronic components and control software of the DL005 H T U at any time without prior notice.



### WARNINGS:

- The DL005 H T U system you have purchased (hereinafter "system" and/or "DL005 H T U") is Personal Protective Equipment provided with its own supports/fasteners.
- The DL005 H T U system provides airbag protection to the hip region.

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## 1. PRELIMINARY INSTRUCTIONS AND SUGGESTIONS

A few general suggestions for the use of the system are provided below. For greater detail, read the corresponding parts of the text below.



### WARNINGS:

- The DL005 H T U has been designed for people with mobility problems and a high risk of falling. The device is suitable for everyday use for outdoor leisure activities, at home or in a care home.
  - A fall with impact may result in personal injury. No product or protection system can offer complete protection from injury or damage to individuals or property in case of fall with impact or otherwise.
- Each person should be familiar with the activity in question, be aware of his or her skills and limits, the risks involved, and the equipment to wear, and capable of deciding whether to take said risks or not. DAirlab disclaims any responsibility for injuries or damages incurred while wearing any of its products.
- People who wear pacemakers or other medical devices should not use the system as electric disturbance or triggering of the system might interfere with correct operation of these devices.
  - Do not use the system while driving any type of vehicle.
  - Check that the pockets of garments used in combination with the DL005 H T U do not contain any items that could perforate or damage the airbag in the event of triggering.
  - Never sew or modify your DL005 H T U or its components in any way. Modification of any nature could compromise its functionalities and consequently its protective functions in the event of a fall. Never add decorations, ribbons or patches above the airbag. Never connect any kind of electric equipment or external battery to the existing cables. Components of the DL005 H T U can only be modified by authorized DAirlab operators.
  - To make the best use of its functionalities, the DL005 H T U must be installed, registered and worn correctly, carefully following the instructions and warnings provided in this Informative Note.
  - Do not switch on the DL005 H T U when not wearing it. If used incorrectly the DL005 H T U could be triggered with possible damage to property and a risk for people's safety. Always make sure that the DL005 H T U has been switched off before transporting it. The DL005 H T U must be switched off when not in use.
  - After using the DL005 H T U always switch off the device while still wearing it (before removing it).
  - Do not charge the DL005 H T U while wearing it.
  - Never leave the DL005 H T U device charging close to flammable surfaces or objects.
  - Keep children away from the DL005 H T U in order to avoid all possible risk.
  - Whenever signs of malfunction appear, switch off the system, and contact the DAirlab Assistance Service.
  - In the event of the system being triggered, do not use it again until it has been reset.
  - In case of damage of the DL005 H T U, contact the DAirlab Assistance Service.
  - The system is sensitive to sudden body movements and to impacts: never perform manoeuvres that are not necessary such as shaking the device, jumping, acrobatics or particularly sudden movements. If you require to perform one of the movements listed above, switch off the device in advance to avoid accidental triggering.

- People suffering from ataxia or PSP tend to make sudden movements and these movements could cause accidental triggering. Use of the device is not recommended for these people.
- The DL005 H T U is a new intelligent device intended for people with mobility problems and a high risk of falling, and it is capable of identifying falls as indicated in paragraph 3.4. Moreover, it is capable of activating the emergency procedure with geolocation e-alerts sent to three telephone contacts predefined by the user, if the user is in need but unable to activate it manually.
- The DL005 H T U is subject to wear based on effective conditions of use. Before using the DL005 H T U or putting it away, always check for signs of wear or damage.
- Even if it is operating correctly, contact the DAirlab Assistance Service once every 3 years for a maintenance check and servicing (for a charge) of any components subject to wear. Correct maintenance is essential for the correct operation of the system.
- No belts, waist bags or other similar articles must be worn over the DL005 H T U.
- Do not place keys, cell phones and other devices and accessories between the DL005 H T U and the body of the user.
- Before each use, the functionality of the DL005 H T U must be carefully checked following the instructions in this Informative Note. Whenever there is a state of error or any other anomaly, do not use the DL005 H T U and contact the nearest DAirlab Assistance Service.
- The DL005 H T U is composed of a hip protector with airbag technology and is provided with integrated technology with automatic or manual geolocation e-alert implemented in a smartphone app.
- Operation of the e-alert is not guaranteed if there is no network coverage by your operator.
- The DL005 is not a medical device.

## 2. FUNCTION AND INTENDED USE OF THE DL005 H T U

### 2.1. Overview

The function of the DL005 H T U is to reduce the risk of injuries, limiting the forces transmitted in the event of a fall and impact against an obstacle and to provide an integrated technology implemented in a smartphone app, which includes geolocation e-alerts to the telephone contacts defined by the user.

The DL005 H T U is an innovative system designed exclusively for the safety of people with mobility problems and a high risk of falling. The device is suitable for everyday use for outdoor leisure activities, at home or in a care home.



### **WARNINGS:**

- **Never use the DL005 H T U for purposes other than those for which it was designed.**
- **Do not use the DL005 H T U while driving a vehicle.**
- **The DL005 H T U does not offer any additional protection in the areas not covered by the airbag.**
- **The DL005 H T U does not offer any additional protection in the areas covered by the airbag during events that do not cause triggering and inflation of the airbag.**
- The DL005 H T U does not provide the emergency e-alert service in events that do not cause triggering and when there is no network coverage by your operator.

## **2.2. Protection offered by the DL005 H T U protective device**

In view of the particular protection offered by the DL005 H T U protective device, it must be considered as Personal Protective Equipment (PPE) and is therefore subject to the requirements established by Regulation (EU) 2016/425. The DL005 H T U protective device covered by this Informative Note must be considered **Class 2 PPE** according to Regulation (EU) 2016/425, namely PPE to which DAirlab may affix the CE mark only once the product has passed the “EU type examination” at a notified body.

The Notified Body that certified your DL005 H T U is:

N. 0498 RICOTEST, Via Tione, 9, 37010 Pastrengo, Verona (Italy)

better indicated in the CERTIFICATIONS chapter of this Informative Note.

Conformity with the essential health and safety requirements established by Regulation (EU) 2016/425 has been verified also with conformity of the Personal Protective Equipment DL005 H T U with a specific internal procedure of the Notified Body. This procedure is based, among others, also on the following document:

- EN 1621-4:2013 Motorcyclists' protective clothing against mechanical impact – Part 4: Motorcyclists' inflatable protectors – Requirements and test methods.

The DL005 H T U is equipped with an electronic unit called **001\_F**, which complies with the requirements and with the essential provisions of the following European Directive:

- Directive 2014/53/EU of the European Parliament and Council of 16 April 2014 concerning harmonization of the laws of the Member States relating to the making available on the market of radio equipment (RED)

Frequency bands and respective transmitted power limits applicable to the device (standardized frequencies and powers).

### 2.3. Protective performance of the DL005 H T U protective device

The system to which this Informative Note refers must be considered Class 2 Personal Protective Equipment (PPE) as it has been designed and produced to provide limited protection against the risks of mechanical impact in the event of a fall with impact as described in Chapter 3.4. For the performance levels achieved by the DL005 H T U Personal Protective Equipment refer to Table 1.

Table 1: Performance of the device

Hip region (airbag protector), tested in accordance with the technical specifications applied that provide for the following requirements:			
<ul style="list-style-type: none"> <li>Average value <math>\leq 4.5</math> kN, Value of single blow <math>\leq 6</math> kN.</li> </ul>			
Protector identification code	Standard used for the test method applied in tests	Temperature [°C] at which the protector was tested	Force transmitted with impact energy of 14 Joules,  Average/Maximum Value
DL005 H T U	EN1621-1:2012	+23°C +23°C (*)	Average: < X,XX kN Maximum: < X,XX kN

(\*) after hydrolytic treatment

In particular, when triggered, the protective device DL005 H T U protects the hip region with an airbag.

Protective performance is related to choosing the correct size of DL005 H T U, following the indications provided in Chapter 2.5.

Moreover, in the event of a fall the system is able to activate the emergency procedure, sending geolocation e-alerts to three telephone contacts predefined by the user, if the user is in need but is unable to activate it manually using the touch sensor.



**2.4. Instructions for understanding the marking on the DL005 H T U protective device and on the 001 F integrated electronic unit**

To learn the meaning of the indications provided on the markings of the device refer to Table 2.

Table 2: Marking of the DL005 H T U



The Marking is indicated on a label stitched to the protector. The label contains the following information:

<b>DAirlab</b>	Manufacturer's Name and Trademark
D-Air Lab S.r.l., Via dell'Economia 64 c, 36100 Vicenza VI Italy	Manufacturer's identification
	CE marking certifying that the protective garment complies with the requirements of Regulation (EU) 2016/425
	Pictograms indicating the need to read the Instructions for Use attached to the protector






	Indication that the product and related electronic accessories must not be disposed of with other household waste.
<b>Sacco Air-Bag</b>	Indicates that the protector is inflatable
<b>H</b>	Specification of the body area protected according to the standard EN 1621-1:2012. (H – Hip) = Hip protector
<b>TYPE A</b>	Specification of the size of the protected area, as established by Standard EN1621-1:2012, TYPE A or TYPE B (smaller for TYPE A). To find the size of the protected area, refer to table 3.
<b>DL005 H T U</b>	<b>(DL005 H T U)</b> Protector identification code; each protector model is allocated a different internal code.
<b>MADE IN XXXXX</b>	Indication of the country of origin
	International Garment Care Symbols.
<b>YYYY</b>	Indication of the production batch

Table 2: Marking on the 001\_F Electronics



The marking is found on a label applied to the plastic case. The label contains the following information:

<b>DAIRLAB</b>	Manufacturer's Name and Trademark
D-Air Lab S.r.l., Via dell'Economia 64 c, 36100 Vicenza VI Italy	Manufacturer's identification
	CE marking certifying that the product complies with the requirements of the applied Directives
	Pictogram indicating the need to read the Instructions for Use attached to the product.
	Indication that the product and related electronic accessories must not be disposed of with other household waste.
<b>001_F</b>	Identification code.
<b>IP43</b>	IP43 Indicates that the case is protected against solid bodies of over 1 mm in diameter and from sprays of water or rain up to 60° from vertical. Only if the electronic unit is correctly installed on the garment.

The production batch is indicated directly on the Airbag, as the 001\_F is placed on the market solely and exclusively assembled on a finished product.



## 2.5. How to choose and wear the DL005 H T U

The choice must be made with attention to the indications and pictograms present on the marking, bearing in mind that when triggered this protective device protects only the hip region with an airbag.

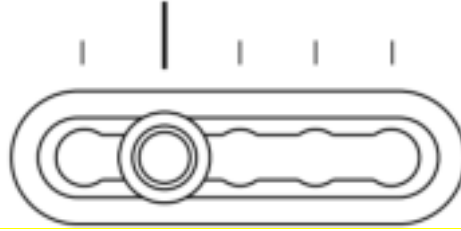
In order for a protective device to perform its protective action correctly, the body area to be protected must remain efficiently covered.

The DL005 H T U is a Protective Device with its own supports/fastening devices, designed to be used exclusively over clothing.

Always close the supports/fastening devices ensuring a snug fit against the body.

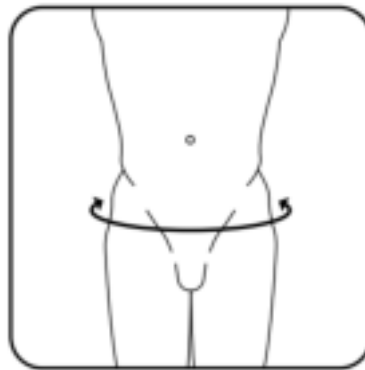
To adjust the belt it is recommended to use the special system shown in figure 1.

- Figure 1: Adjustment system



For the recommended correlation between the size of the supports and hip circumferences, consult the table below:

Support/fastening device size	Hip circumference ranges in cm.	
XS	69	79
S	79	89
M	89	99
L	99	109
XL	109	119
XXL	119	129

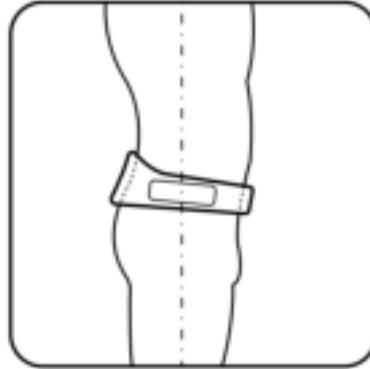


To find the hip circumference, stand straight and pass a measuring tape around your hips at the height of the iliac crest (top of the hip bones).

With the help of the appropriate adjustments, make sure that the airbags of the DL005 H T U are in the correct position as described below:

- When worn, the belt must be positioned at the height of the iliac crest and adjusted so that it fits snugly against the body.
- With the belt on, the cases containing the airbags must be central relative to the vertical axis of the head of the femur, as shown in Figure 2.

- Figure 2: Airbag position



### WARNINGS:

- Always adjust the DL005 H T U so that it fits snugly against the body.
- After using the DL005 H T U always switch off the system while still wearing it (before removing it).
- Carefully check the size of your DL005 H T U at the time of purchase.
- The DL005 H T U must be considered a personal object.

## **2.6. How to install or remove the removable parts of the DL005 H T U**

### **2.6.1. Electronic unit**

To install or remove the electronic unit, proceed as follows, referring to Figure 3;

To install the electronic unit, proceed as follows:

- Position the system with the back facing you, insert the electronic unit into the housing, applying sufficient pressure to couple it in position.

To remove the electronic unit, proceed as follows:

- Extract the electronic unit by forcing the side walls of the housing apart, releasing the connection;

- Figure 3: electronic unit



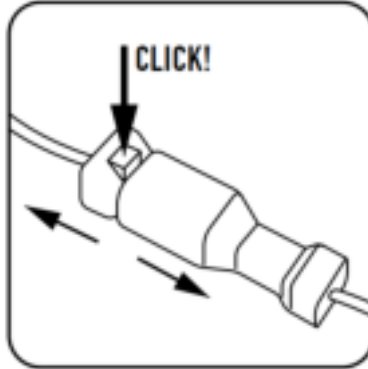
### WARNINGS:

- Connection of the electronic unit as indicated above is essential to enable switching on and correct operation of the device.
- Should you encounter difficulties or require additional information on how to install or remove the electronic unit, contact your nearest DAirlab Assistance Service.

## 2.6.2. Airbags

To remove the airbags from the DL005 H T U, proceed as follows:

- Open the side pocket containing the airbag
  - Unfasten the press studs
  - Remove the airbag
  - Disconnect the connector by pressing the connector button as shown in Figure 4.
- Figure 4: Connector button



To install the airbags, proceed as described below, referring to Figure 5;

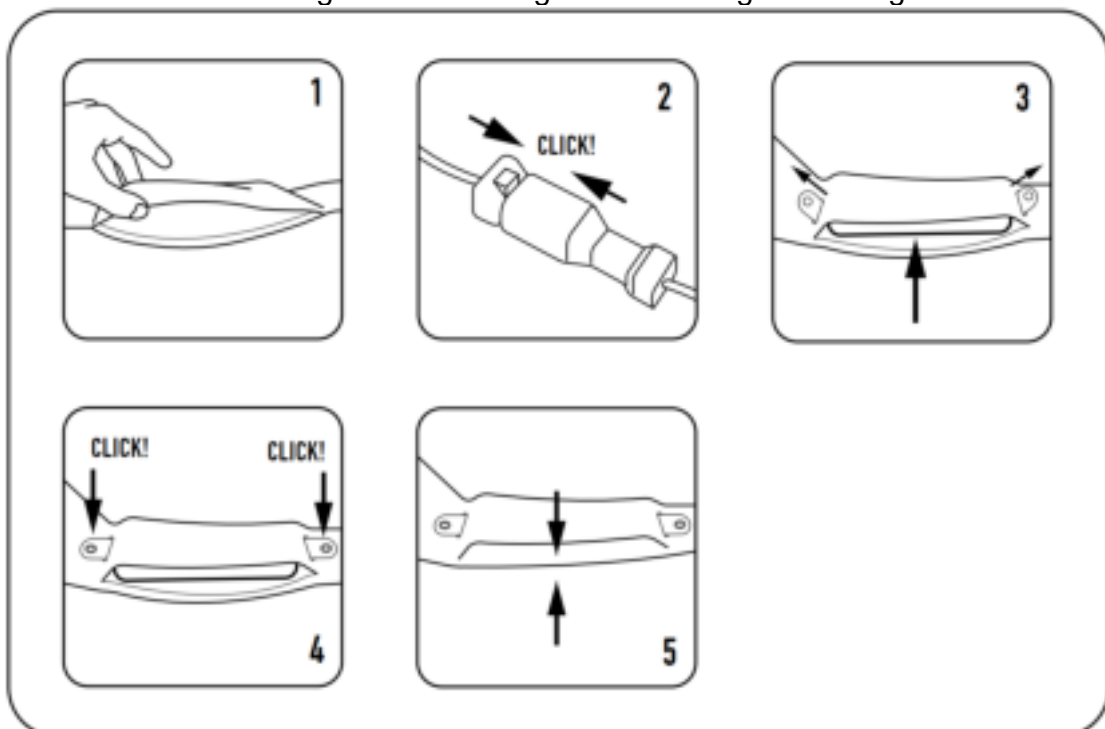
1. Open the side pocket containing the airbag.
2. Connect the connector
3. Insert the airbag, inserting the two end flaps into the specific slots
4. Fasten the press studs
5. Close the pocket



### **WARNINGS:**

- **Connection of the cables as indicated above is essential to enable switching on and correct operation of the system.**
- Should you encounter difficulties or require additional information on how to install or remove the DL005 H T U, contact your nearest DAirlab Assistance Service.

- Figure 5: Installing and removing the airbags




## 2.7. Position and minimum size of the areas protected by the DL005 H T U

Table 3 below indicates the minimum size of the protected areas and shows the positions of the body areas protected by the DL005 H T U protective device.

Table 3 - Position and minimum size of the areas protected by the airbag

Dimensions in [mm]			
Protector	r1	r2	L
(H - Hip) Type A	35	26	70



The diagram on the left shows a dashed oval representing the protected area with dimensions r1, r2, and L. The diagram on the right shows a human figure with the protected area (H) indicated on the hip.

## 2.8. Use, integrity and efficiency of the DL005 H T U

The functions for which the DL005 H T U was designed will only be performed correctly if it is registered and worn correctly and switched on.

We recommend that you inspect the device carefully prior to each use to check integrity and that you REFRAIN from use whenever any parts show signs of evident wear or malfunction, until complete functionality is restored.

In particular, check that the fastening and adjustments systems operate correctly.

Should any breaks or cracks occur through use, or if the integrity of the materials forming the product is compromised, including accessory parts, have the integrity and efficiency of the product checked by DAirlab assistance service, through the retailer where it was purchased.

In the event of a fall and/or triggering, provided the materials are intact, reset the DL005 H T U as described in paragraph 2.6.2.



### **IMPORTANT:**

●●● **The function of the DL005 H T U is to reduce the risks of injuries, limiting the forces transferred in the event of a fall and impact against an obstacle and to provide integrated technology implemented in a smartphone app, which includes automatic emergency calls with geolocation e-alerts to the telephone contacts predefined by the user. However, it is stressed that no protector is able to protect from twisting, bending or extreme movements. PROTECTIVE DEVICES CANNOT PROTECT AGAINST ALL POSSIBLE IMPACTS AND THEREFORE CANNOT PROVIDE COMPLETE PROTECTION AGAINST INJURIES.**



### **WARNINGS:**

●● Avoid contact with petrol, oil, or any other type of chemical agent. These substances could damage the component materials, compromising their original characteristics.

●● Avoid resting or rubbing against walls, sharp edges, pointed objects, red-hot objects, fences or any other objects that could cut or abrade the product, causing irreversible damage.

●● For the temperatures of use of the DL005 H T U, please refer to the temperatures at which it was tested, indicated in Table 1. In any case, we recommend avoiding exposing the protector to temperature extremes; climatic variations such as sudden increases in temperature can drastically reduce the protection offered by the device; moreover, the device should not be left in an outdoor environment at low or high temperatures before use.

- To obtain original DAirlab spare parts for the DL005 H T U, contact the retailer from whom the product was purchased or consult the following link: <https://dairlab.com/ricambi/>.
- To replace any parts, refer to the Informative Note provided with the spare part
- If the DL005 H T U is used in the rain, protect the system by wearing a waterproof jacket over it.

## **2.9. Information on the materials used**

It is hereby certified that the materials that come into contact with the wearer have been produced with suitable non-toxic and non-harmful products, as established by EC Regulation 1907/2006 (R.E.A.C.h) - Annex XVII. It is specified that as established by Regulation EC 1907/2006 (R.E.A.C.h), such materials have no azo colorants capable of releasing dangerous aromatic amines through the cleavage of one or more azo groups - Annex XVII. Moreover, the articles marketed do not contain any Substances of Very High Concern (SVHC), identified according to Article 59 and listed in the Candidate List published by the ECHA (European Chemical Agency), in concentrations greater than 0.1% weight/weight.

## **2.10. Duration of the DL005 H T U Protective Device**

The duration of a protective device depends on its frequency of use and the care with which it is stored by the user

In any case, contact the DAirlab Assistance Service once every 3 years to request a maintenance check or servicing (for a charge) of any components subject to wear.



### **WARNINGS:**

- **DAirlab does not guarantee the suitability of the device and therefore shall in no way be held liable if it is used after expiry of the time limit established for revision/maintenance if this has not actually been performed.**
- Check the DL005 H T U for signs of excess wear, breakage or damage prior to every use. Contact the DAirlab Assistance Service or an authorized DAirlab dealer in all cases of doubt.

## **3. DESCRIPTION OF THE ELECTRONIC SYSTEM 001\_F AND AIRBAG OF THE DL005 H T U**

### **3.1. Overview**

The DL005 H T U is an innovative system for the safety of people with mobility problems and a high risk of falling. The device is suitable for everyday use for outdoor leisure activities, at home or in a care home.

#### **3.1.1. 001\_F Electronic unit**

The DL005 H T U is controlled by the 001\_F electronic unit, which, if pre-set conditions are reached, triggers inflation of the system and/or activates the e-alert functions, depending on the type of event.

The system has an internal diagnostics routine and whenever a malfunction occurs, the user interface light will begin blinking red.

The electronic unit is powered by a rechargeable lithium ion battery, whose charge level is represented when required during use of the device, see paragraph 3.6 below: "How to check the charge status of the battery and how to charge it".



### **WARNINGS:**

- **in the event of malfunction do not use the system (blinking red light). In this case contact the DAirlab Technical Assistance Service.**

●●● people who wear pacemakers or other medical devices should not use the system as electric disturbance might interfere with correct operation of these medical devices.

The electronic system 001\_F is contained inside the DL005 H T U, inside a special case, represented in Figure 6.

Figure 6: electronic system



The electronic unit is contained inside the case; it is powered by a rechargeable battery positioned inside it, which controls operation of the system.

The operating status is controlled by the central fastener that also acts as on/off switch, while the battery charge level can be checked using the LEDs.



#### **WARNINGS:**

●● The case of the electronic system is sealed by DAirlab during manufacture. Tampering with this seal invalidates the product warranty. Do not tamper with and/or remove the electronic system. Contact the nearest DAirlab Assistance Service in case of need.

### **3.1.2. User interface**

The user interface is composed of two LEDs. The purpose of the interface is to communicate the information required to the user. Notes for the correct comprehension and use of the DL005 H T U user interface are provided below.

### **3.1.3. Airbag**

The DL005 H T U incorporates two airbags that contain high pressure gas generators for inflation of the airbag.

### **3.1.4. Batteries and battery life of the system**

When completely charged, the system remains active for around 20 hours of use.

The battery is not subject to memory effect, and therefore the system can be completely charged at any time.

For more information on battery operation and charging, see paragraph 3.6 “Checking the battery charge status and charging” below.

The time required to charge the system completely is around 1.5 - 2 hours.

### **3.1.5. USB-C battery charger**

A USB-C charger with 5 V 1000 mA output can be used to charge the system. Whenever a USB-C charger is not available, the battery can be charged by connecting the USB cable directly to a computer; in this case charging will be slower.

After connecting the USB-C cable to the charging source, charging can be monitored directly via a LED on the electronic unit or with the dedicated “Battery” option that can be accessed from the home page of the app.

### 3.2. Registering the system after purchase

After purchasing the DL005 H T U system and before initial use, to ensure correct traceability for updates/notifications/recalls, it is necessary to provide DAirlab with information on the owner of the DL005 H T U through the services provided by the app. Failure to register the device will prevent correct traceability for any updates/notifications/recalls.



#### **IMPORTANT:**

●●● If the user data of the owner of the DL005 H T U system is not registered operation of the system cannot be unlocked and the system will NOT be protective. This situation is indicated when the device is switched on by an orange LED, as indicated in paragraph 3.5 “Guide to the LED sequences during use”.

### 3.3. System on/off procedures




Make sure that the system battery is fully charged, the battery charge has a duration of around 20 hours; charge your DL005 H T U before the battery charge runs down completely and whenever possible.

- After installing the electronic unit correctly and putting on the DL005 H T U correctly (see paragraphs above), switch on the device through the central fastener that also acts as on/off button, as indicated in Figure 7 below.

Figure 7: fastener, on/off



- Before use, check correct operation of the system indicated by the white LEDs blinking for one second, followed by a steady light for 3 seconds. The colour depends on the charge status of the battery. The system is correctly operating and activated in this condition. The sequence indicating that the system is operating correctly and ready for use in relation to the battery charge status is indicated below:

	Green, from 100% to 50%
	Yellow, from 50% to 25%
	Red, from 25% to 0%



#### **WARNING:**

●●● After you have finished using the system, deactivate the DL005 H T U immediately using the central fastener that acts as on/off button, indicated in Figure 8.

Figure 8: fastener, on/off





**WARNING:**

●●● When the system is not in use, always make sure that it is switched off. If switched on the system could be triggered accidentally during transport.

### 3.3.1. Checking correct functionality of the system

Always check system functionality before use. Using the system when there are signs of anomaly must be considered performed at the user's own risk.

After putting on the system, switch it on and check that the LEDs switch on and blink. For more details, check the blink codes in paragraph 3.5 "Guide to the LED sequences during use".



**WARNING:**

●●● Before using the DL005 H T U always ensure that the LED interface of the system has no error messages.

### 3.4. Activation of the DL005 H T U

The DL005 H T U is capable of triggering the airbags and/or activating the e-alert procedure. The specific conditions are described below.

#### **Airbag triggering:**

The sensors installed inside the case of the DL005 H T U constantly monitor its dynamics; information from the sensors is processed by the central unit and, if the values registered exceed the pre-set thresholds, the system inflates the airbag. If the sensors are not able to recognize which side the user is about to fall on, both airbags will be activated.

The conditions in which the DL005 H T U system is triggered with consequent inflation of the airbags are described below:

- Falls from vertical position with the feet on the ground, specifically:
  - Forward falls
  - Backward falls
  - Sideways falls

Inflation time of the DL005 H T U varies according to circumstances and the intensity of the event.



**WARNINGS:**

●●● The events described above are only some examples of triggering conditions. In some cases included in the aforesaid events, the DL005 H T U might NOT be triggered or might be triggered without being fully inflated before the impact against an obstacle or the ground and hence the DL005 H T U might NOT protect, especially in cases in which said events produce a low level of acceleration, that the system is unable to identify as an accident or fall.

●●● In the case of violent events the DL005 H T U could be triggered with inflation of the airbag. Therefore, when the DL005 H T U is switched no DO NOT:

- shake the device;
- jump, perform acrobatic movements or particularly sudden movements;
- jump down steps higher than 50 cm, i.e., removing both feet from the ground at once;
- drive vehicles.

#### **Activation of the emergency procedure with e-alert:**

The sensors installed inside the case of the DL005 H T U constantly monitor its dynamics; information from the sensors is processed by the central unit and, if the values registered exceed pre-set thresholds, the system will activate the emergency procedure, sending geolocation e-alerts to the three telephone contacts predefined by the user;



The same function can also be activated intentionally by pressing and holding for at least 4 seconds the Touch interface incorporated in the fabric of the band, positioned on the front left-hand side near the two LEDs

The conditions that activate the emergency procedure are listed below:

- Falls to the ground;
- Intentionally, by pressing and holding for at least 4 seconds the Touch interface incorporated in the fabric of the band, positioned on the front left-hand side near the two LEDs.

System activation time can vary according to circumstances and the intensity of the event.



#### **WARNINGS:**

- If there is no network coverage by your operator, the geolocation e-alerts to the predefined telephone contacts will NOT be available.
- The conditions described above are only some examples of activation conditions. In some cases falling within the aforesaid conditions the system might NOT be activated.

### **3.4.1. What to do if the DL005 H T U airbags are triggered**

In the event of triggering, the system will inflate and then slowly deflate. The airbag can only inflate once, After each deployment, the DL005 H T U must be reset as describe in Chapter 2.6.2.



#### **WARNING:**

- in the event of a fall during which the system is triggered, do not use it again until it has been reset.

## **3.5. Guide to the LED sequences during use**

The user interface is composed of two multicolour LEDs integrated in the band, positioned on the front left-hand fastener.

### **3.5.1. Operating mode of the system**

The system has the following operating modes:

- “*Init Mode*” – initialization mode:  
system start-up mode, airbag protection is not available.
- “*Normal Mode*”:  
typical using mode of the system, airbag protection is available. When the battery level is below 25%, airbag protection is available, the remaining autonomy is less than 2 hours of continuous use. Charge the battery as soon as possible.
- “*Error Mode*”:  
using mode when the diagnostic system detects an error concerning the electronic components integrated in the main board or concerning the status of the gas generators integrated in the airbag.



#### **WARNING:**

- In the event of an error, it is advisable to switch the system off, check the status of the connections and then switch it back on. If the error persists, contact the DAirlab assistance service.
- “*Fired Mode*”: mode activated following triggering of the airbag
- “*Charging Mode*”:  
mode activated during battery charging

### 3.5.2. Summary of system indications

The system indications are described below.

- During use:

Type	Mode	Description
Orange blinking (1 blink per second for 5 times)	<i>"Lock Mode"</i>	System neither registered nor activated
White blinking for 1 second	<i>"Init Mode"</i>	Switching on
Green blinking (1 blink per second for 3 times)	<i>"Init Mode"</i>	Battery charge level, 50% to 100%
Yellow blinking (1 blink per second for 3 times)	<i>"Init Mode"</i>	Battery charge level, 50% to 100%
Red blinking (1 blink per second for 3 times)	<i>"Init Mode"</i>	Battery charge level, 50% to 100%
Green blinking (1 blink per second for 3 times)	<i>"Normal Mode" press touch button</i>	Battery charge level, 50% to 100%
Yellow blinking (1 blink per second for 3 times)	<i>"Normal Mode" press touch button</i>	Battery charge level, 25% to 50%
Red blinking (1 blink per second for 3 times)	<i>"Normal Mode" press touch button</i>	Battery charge level, 25% to 50%
3 violet blinks every 2 seconds	<i>"Fired Mode"</i>	Air-bag triggered, data saved
Red blinking every second	<i>"Error Mode"</i>	System error

- When recharging:

Type	Charge level
Steady light	Complete at 100%
Three blinks per second	Between 75% and 99%
Two blinks per second	Between 40% and 75%
One blink per second	Between 0% and 40%

### 3.5.3. Possible malfunctions of the system

Table 4 below describes possible malfunctions of the DL005 H T U.

Table 4: possible malfunctions

Problem	Possible cause	Possible Solution
The system does not switch on	Battery flat	Charge the battery for at least 2 hours.
When switched on the system automatically goes into <i>"Error Mode"</i>	One or more airbag cables disconnected	Check whether the airbag cables are connected to the printed circuit board, if disconnected reconnect the cable, switch the system off and back on again.
	Internal system error	Switch the system off and back on again, if the error persists contact the DAirlab assistance service
When switched on the system automatically goes into <i>"Fired Mode"</i>	Airbag previously deployed	Replace the deployed airbag, if the error persists contact the DAirlab assistance service
When switched on the system automatically goes into <i>"Lock Mode"</i>	Product not registered	Register the product via the app.

### 3.6. Checking the battery charge status and charging

You can check the battery charge level at all times before and during use by pressing and holding for one second the Touch interface incorporated in the fabric of the band, positioned on the left-hand side near the two LEDs.

The battery charge level will be displayed through the LEDs with the colour corresponding to the charge level.

The LED colours indicating the charge status of the battery are described below:

	Green, from 100% to 50%
	Yellow, from 50% to 25%
	Red, from 25% to 0%

If the charge level is low, remove the electronic unit and connect the cable provided to the connector located on the lower part of the case containing the electronic unit. Then connect the USB-C cable to the charging source as shown in figure 9.

Figure 9: Illustration of charger with USB-C connector



If a USB-C charger is not available, the battery can be charged by connecting the USB-C cable directly to a personal computer; in this case charging will be slower.

After connecting the USB-C cable to the charging source, the charging status will be notified via the LED directly on the electronic unit or in the “Battery” section that can be accessed from the home page of the app

Notification via LED is expressed as follows:

	Type	Charge level
	Steady light	Complete at 100%
	Three blinks per second	Between 75% and 99%
	Two blinks per second	Between 40% and 75%
	One blink per second	Between 0% and 40%



#### WARNINGS:

- **Never charge the system while wearing it. Always remove the DL005 H T U before charging the system. Any voltage overload that occurs might jeopardize the wearer’s safety.**
- **"Never charge the system while wearing it; the system is disabled during charging."**
- Never leave the system charging close to flammable surfaces or objects. If it were to overheat during charging, this could start a fire.
- Comply with the following general precautions for the use of rechargeable lithium-ion batteries.
- Always check the level of charge of the system prior to use and charge if necessary.
- Charge the system at least once every 2 months even when it has not been used in order to prevent deterioration of battery performance.
- Always supervise battery charging and never leave the system unsupervised while charging is in process.
- Do not disassemble the battery.
- Do not short circuit the battery
- Do not replace the battery

- The ideal storage temperature to maintain the battery charged should be between 15°C and 35°C
- Do not store the battery at temperatures exceeding 50°C
- Do not dip the battery in fresh or salt water; do not wet it in general
- Do not charge the battery at environmental temperatures exceeding 35°C
- Do not use chargers with different characteristics to those indicated in this manual.
- Do not modify the charging process or the charging hardware
- Do not expose the battery to naked flames
- Do not use the battery for uses other than that for which it was designed
- Never touch a leaking battery directly, should leakage occur contact a dealer or the DAirlab Assistance Service immediately.
- Do not allow children near the battery
- Do not charge the battery for more than the established time
- Do not place the battery in a microwave oven or in a pressurized container
- Stop charging the battery if any anomalies are noted
- Do not continue to use the battery if any anomalies are noted
- Do not expose the battery to abnormal electrostatic charges



#### **IMPORTANT:**

●●● If the recommendations above are violated the battery could generate smoke, rupture or explode with potential high risk for people's safety and the risk of causing damage to property.

In the event of problems related to the battery, contact the DAirlab Assistance Service immediately.

### **3.7. Guide to using the app**

This section contains information regarding installation, setting and use of the FutureAge app. To unlock the full functionalities of the system, correct configuration of the app is fundamental.

#### **3.7.1. Download and installation**

Select the FutureAge app from App Store® for iOS devices and from Google Play for Android devices and follow the normal installation procedure.

#### **3.7.2. User registration**

Unless already registered, the first time the app is launched the user must register by creating a new account.

Follow the wizard to register the product and configure the device.

If you have already registered an account, after being launched the app will automatically take you to the home page.

If you have re-installed the app and already registered an account, all you need to do is log in after launching to return to the home page.

#### **3.7.3. Settings**

The following screens can be accessed from the settings screen:

- Contacts: to set the emergency contacts
- Update: to check for FW updates
- Statistics: to consult the statistics on use
- App manual
- Logout

#### **3.7.4. Emergency notifications**

Sending or cancelling signals can be managed by accessing the screen for emergency notifications.

### 3.7.5. Notifications

Events regarding the sending of emergency notifications and the presence of any malfunctions found are indicated in the notifications screen.

## 4. MAINTENANCE OF THE DL005 H T U SYSTEM

### 4.1. Overview

The DL005 H T U system has been designed and produced according to high quality standards to ensure correct operation over time. However, it is advisable to carry out period maintenance on the system, consisting of a few simple operations.

### 4.2. Cleaning the DL005 H T U

#### 4.2.1. Electronic unit

Remove the electronic unit from the system referring to the instructions provided in Chapter 2.6.1

Clean the case containing the electronic unit using a soft dry cloth.



#### WARNINGS:

- Always remove the electronic unit before carrying out maintenance procedures and cleaning the protector, taking care NOT to place it on conductive surfaces, such as a metal top.
- Wetting or dipping the electronic unit in water or other liquids causes irreversible damage to it.

#### 4.2.2. System without electronic unit

The DL005 H T U must only be cleaned using a soft, damp cloth with water or with water and a softener-free neutral soapy solution.

Remove the soapy solution using a soft cloth dampened with fresh cold water only.

Do not rub with abrasive materials and do not leave the device to soak.

Leave the device to dry hanging, away from direct sources of light and heat.

Also refer to the instructions and international care symbols on the label affixed to the device, listed in the table 5 below.

Table 5: List and meaning of international care symbols on the label affixed to the device

1		2		3		4		5	
1.	THIS GARMENT CANNOT BE WASHED IN WATER								
2.	THIS GARMENT CANNOT BE TREATED WITH CHLORINE								
3.	THIS GARMENT CANNOT BE TUMBLE DRIED								
4.	THIS GARMENT CANNOT BE IRONED								
5.	THIS GARMENT CANNOT BE DRY CLEANED								



#### WARNINGS:

- Do not immerse the DL005 H T U in water or other liquids. Immersing the DL005 H T U in water or other liquids could cause irreparable damage to the electronic components of the system.
- Do not wash under running water.
- Do not use solvents or other chemical substances to clean the protector.
- Do not wring
- After operations to clean the protector separated from the electronic unit:
  - Dry thoroughly, as residual humidity could cause the electric system to malfunction.
  - Dry the housing of the electronic unit and related contacts thoroughly.

- Use a soft cloth to remove any residues from the contacts present in the housing of the electronic unit.
- Do not iron the DL005 H T U
- Do not paint the protective device, or use dyes of any kind on it.
- Avoid or limit exposure to UV rays, moisture and ice.
- Never tamper with any part of the device.
- Do not bend or twist the device as these actions constitute improper use for which the item has not been designed; in fact, this could cause loss of its protective properties or breakage. Therefore, DAirlab will not accept claims or requests for replacement of devices that it finds have been used improperly.
- When not in use, the device must be stored in a dry and well ventilated place where it is not subjected to impact or pressure.
- Avoid storing the device with its weight concentrated in only a few points.
- If the DL005 H T U is used in the rain, protect the system by wearing a rain jacket over it.
- After use, if necessary leave the device to dry in a ventilated place at room temperature; do not use hair dryers or other heating devices.
- Store your garment, clean and perfectly dry, in places that are not damp in order to prevent mildew from occurring.

#### 4.2.3. Installing the electronic unit

To install the electronic unit on the system refer to the instructions provided in Chapter 2.6.1

### 4.3. Transportation

Store and transport the device using the bag provided at the time of purchase.



#### **WARNINGS:**

- Always make sure that the system is placed in “Lock Mode” to prevent the system from being switched on accidentally during transportation.
- Always make sure that the protective system has been switched off, removing the electronic component to prevent accidental activation of the system.
- Due to the presence of gas generators and related triggering system, air transport might be prohibited or subject to special transport procedures. Before shipping your DL005 H T U by air, check with the airport authorities and with the airline to find out the correct procedure to follow.

#### 4.3.1. How to manage “Lock Mode”

If you intend to place the system in “Lock Mode” or reactivate it from “Lock Mode”, download and use the specific application, available on the app.



#### **WARNING:**

- With the system in Lock Mode it is not possible to switch on the system by inserting the electronic unit and closing the band.

### 4.4. Change of ownership

If you intend to sell your DL005 H T U to a third party, you must place the system in “Lock Mode” using the application downloaded, available on the app, so that the new owner can register it as described in Chapter 3.2 Registering the system after purchase.



#### **WARNING:**

- To ensure correct traceability for updates/notifications/recalls the system must be placed in “Lock Mode” so that the new owner registers it correctly.

## **5. ROUTINE MAINTENANCE**

### **5.1. 5.1. Routine maintenance of the system**

Contact the DAirlab Assistance Service once every 3 years to request a maintenance check or servicing (for a charge) of any components subject to wear.

### **5.2. Updating the electronic system of the DL005 H T U**

As described above, the DL005 H T U comes with built-in electronic unit that triggers the airbag in the required circumstances and activates the emergency procedure with geolocation e-alert. The firmware of the electronic system may be updated from time to time to improve its performance or to offer the user new features. New features may regard an expansion of the fall recognition functions, or also the addition of new functions.

The *firmware* can be updated by the registered final user via the app, or during operations by DAirlab at the headquarters in Via dell'Economia 64 /c 36100 Vicenza (VI), Italy.

In the future there may be other ways of updating the firmware, in this case consult the DAirlab website.

## **6. ERROR CODES OF THE DEVICE**

For information regarding the main error codes of the system, consult Chapter 3.5.3 "Possible malfunctions of the system" of this Informative Note.

## 7. CERTIFICATIONS

### DL005 H T U

The Notified Body that certified your DL005 H T U in accordance with Regulation (EU) 2016/425 and that issued the relevant certificate is EU NOTIFIED BODY No. 0498 RICOTEST, Via Tione, 9, 37010 Pastrengo, Verona (IT).

### 001\_F

UE:

This electronic device complies with Directive 2014/53/EU.

USA:

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the User's authority to operate the equipment.

This equipment 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 into 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

RF warning statement:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition

**FCC ID: 2AWM3-001F**

**Contains FCC ID: SSSBC127-X**

CA:

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

**Contains / Contient IC ID: 11012A-BC127**



## 8. F.A.Q. (FREQUENTLY ASKED QUESTIONS)

Q: Is the DL005 H T U device absolutely safe?

A: No. No protective system can protect the wearer from every possible risk or under every possible condition of use. All protective equipment has its limits and injury and even death can occur even while wearing the DL005 H T U.

Q: Has the system been certified by an authorized certification agency?

A: Yes. The EU NOTIFIED BODY No. 0498 RICOTEST, Via Tione, 9, 37010 Pastrengo, Verona (IT) performed the "EU type examination" as per Regulation (EU) 2016/425 and issued the corresponding Certification.

Q: Can the system be updated?

A: Yes, the device has updatable firmware, updates can be performed autonomously by the registered final user via the app, or during operations by DAirlab at the headquarters in Via dell'Economia 64 /c 36100 Vicenza (VI), Italy .

In the future there may be other ways of updating the firmware, in this case consult the DAirlab website.

## 9. ASSISTANCE SERVICE

D-Air Lab S.r.l.

Via dell'Economia 64 c

36100 Vicenza VI Italia

Tel: 0444 1429920

Fax: 0444 1429929

mail: [support@dairlab.com](mailto:support@dairlab.com)

## 10. DECLARATION OF CONFORMITY

To view the Declaration of conformity established by REGULATION (EU) 2016/425 consult the following link: <https://dairlab.com/conformity>; entering the "Protector identification code" indicated on the marking on the label stitched to the protector or stamped on the protector. The declarations of conformity concerning the 001\_F electronic platform are available at the same link.

## ATTACHMENT A: Disposing of the product



### WARNING:

The DL005 H T U contains electronic components and a pressurized gas generator that cannot be disposed of as conventional waste.



In order to dispose of the product correctly at the end of its working life, contact the DAirlab.

DAirlab will take care of disposal, arranging for collection and correct disposal of the product. Important: incorrect disposal of the product can create dangerous situations or cause environmental pollution.

# DAirlab

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