



# USER MANUAL & INSTRUCTIONS

ACCESSORY KIT C5 FOR J INSPIRE 3

FLIGHT MANUAL (C5) - PRS-FTS-MOC KRONOS AD INSPIRE 3 V2.4

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# WHE MAHE YOUR ORONE SAFER









Since 2015. Dronavia has been designing innovative accessories in France to enhance the safety of professional drones. Developed and manufactured in our own workshops, the Kronos range — including Parachute Recovery System and internal Flight Termination System — is the result of 8 years of research and development, fully complying with EASA requirements for C5 Class.

Thanks to these certified safety systems, drone pilots benefit from the highest levels of protection and risk management for their flight operations.

Thank you for your trust, and enjoy your flight with the DJI Inspire 3.

Ludovic Pelletey, Dronavia's CEO.

### Version 2.0

• Initial release.

### Version 2.1 - 01/07/2024

 Replaced the connection cable between the PRS and FTS: switched from Micro-USB to USB-C for improved reliability and compatibility.

### Version 2.2 - 03/04/2025

 Added a new battery latch to simplify the installation of the Flight Termination System (FTS).

### Version 2.3 - 05/05/2025

• Implementation of an automatic lockout for the parachute system below 20 meters altitude to prevent ineffective or accidental deployment.

### Version 2.4 - 12/06/2025

 Improved power-on logic: the parachute system can now only be activated when connected to the drone, significantly reducing the risk of improper handling and accidental deployment.



# TUTORIAL

Parachute Recovery System Installation



Parachute Recovery System Rearming



Flight Termination System Installation



Flight Termination System Testing Procedure



User's manual Klick trigger remote control





Dronavia has recently launched an innovative software solution specifically designed to simplify the updating of Kronos systems. Thanks to this new software, Dronavia customers can now manage and update their systems more quickly and easily.

Download Dronavia Updater software



# oresentation

Congratulations on acquiring your Kronos 13 C5 accessory kit, which includes a Parachute Recovery System & autonomous Flight Termination System, specifically designed for the DJI Inspire 3 drone.

The Kronos 13 C5 accessory kit complies with the technical requirements of the EASA-defined C5 Class category and has been developed through a rigorous R&D process, ensuring the highest level of safety for flight operations under STS-01 scenarios.

Based in Remiremont, France, Dronavia is here to support you with the use of your Kronos 13 C5 accessory kit and to answer any technical or commercial questions you may have.

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# **SENERAL**oresentation

The Kronos I3 Parachute Recovery System and Flight Termination System have been specifically designed for DJI Inspire 3 drones, with the primary goal of ensuring ultra-fast deployment to optimize deceleration and minimize impact energy in the event of an in-flight issue.

Multirotor drones, even when properly maintained and operated, can sometimes encounter emergency situations—such as severe weather conditions, radio transmission failure, propulsion system malfunction, or GPS signal loss—where immediate activation of a safety system is crucial.

In such critical scenarios, the combined deployment of the Flight Termination System and Parachute Recovery System can mean the difference between a minor incident and a serious accident. Kronos I3 systems are engineered to activate and deploy in under one second.



# **SENERAL**oresentation

## TO BE READ CAREFULLY

These safety devices do not guarantee the integrity of the equipment, nor the absence of damage to property or injury to persons. They are complementary safety features, designed to enhance existing safety measures. Under no circumstances shall Dronavia or its distributors be held liable for any malfunction, perceived performance shortcomings, or failure to deploy.

# COMPUIDIONE with C5 Class

# TO BE READ CAREFULLY

The Kronos I3 Parachute Recovery System and internal Flight Termination System form a accessory kit specifically designed to upgrade a Class C3 drone to Class C5, in full compliance with the technical and regulatory requirements set by EASA.

# COMPLIENCE Class



### EXTRACT FROM REQUIREMENTS PUBLISHED BY EASA

1(8) A Class C5 UAS may be a Class C3 UAS fitted with an accessory kit transforming a Class C3 UAS into a Class C5 UAS. In this case, the Class C5 label is affixed to all accessories.

- 2) An accessory kit may only convert a Class  $C_3$  UAS that complies with point 1) and has the necessary interfaces with the accessories.
- 3) The accessory kit does not include any modifications to the Class C3 UAS software.
- 4) The accessory kit is designed and each accessory is identified in such a way as to ensure that it can be fully and correctly installed by a UAS operator on a Class C3 UAS in accordance with the instructions provided by the manufacturer of the accessory kit.
- 5 The accessory kit may be placed on the market independently of the Class C3 UAS to which it converts. In this case, the accessory kit manufacturer markets a single conversion kit which:
- (1) does not affect the compliance of the Class C3 UAS with the requirements of Part 4;
- (2) ensures compliance of the UAS fitted with the accessory kit with all the additional requirements set out in this Part, with the exception of paragraph (3) above; and
- (3) is accompanied by the manufacturer's instructions including:
- a list of all Class C3 UAS to which the kit may be applied; and
- (ii) instructions on how to install and operate the accessory kit.





# LANNINGS \* safety precautions

### TO BE READ CAREFULLY

The Kronos I3 accessory kit includes two safety accessories designed to, under certain conditions, prevent the equipped drone from exiting its regulatory flight envelope by cutting its motors, and to avoid free fall in the event of a critical failure.

Activating the Flight Termination System and/or the Parachute Recovery System will inevitably result in the drone falling.

These systems do not prevent technical failures from occurring. Any drone operation inherently involves a risk to equipment and nearby individuals, regardless of the safety systems in place. The use of the Kronos I3 Flight Termination System and Parachute Recovery System must never lead to increased risk-taking during flight operations.

# UPBUINGES safety precautions

# TO BE READ CAREFULLY

Dronavia may suspend the warranty and disclaim any responsibility for anyone who fails to adhere to the basic safety instructions outlined below.

Before handling the Kronos I3 systems, you must carefully read this manual. It provides information on the deployment of the Parachute Recovery System and the Flight Termination System. In addition to the important notes and information mentioned in this manual, the device owner must comply with all the essential safety instructions outlined below.

# 15 SAFETY instructions to follow

- 1 It is forbidden to carry out any manipulations other than those specified in the manual.
- The device should only be used by or under the supervision of a responsible adult. Always keep the device out of the reach of children. Do not let them play with it.
- Do not under any circumstances dismantle the various parts of the device, except when resetting it in accordance with the instructions in this manual.
- Do not place the device in a damp or wet environment and keep it out of direct sunlight.
- Do not expose the system to high temperatures, strong shocks, shock hazards, contact with chemicals or acids, or long-term storage in a high-humidity or dusty environment. The maximum operating temperature is 40°C and the minimum operating temperature is -5°C.
- Check that the Kronos Inspire 3 Parachute Recovery System and Flight Termination System is in good condition before each use. Do not use the device if it is damaged. If necessary, contact your dealer.
- The Kronos Inspire 3 Parachute Recovery System and Flight Termination System cannot prevent the drone from malfunctioning.
- Any flight with a drone implies the existence of a risk for equipment and people in the vicinity, with or without Kronos Inspire 3 safety systems.

# 15 SAFETY instructions to follow

- 9 Using a Kronos Inspire 3 Parachute Recovery System and Flight Termination System should in no way increase your risk.
- The Kronos Inspire 3 Parachute Recovery System and Flight Termination System attempts to prevent a drone experiencing a malfunction from free-falling. However, there are fall situations in which the effectiveness of the Kronos Inspire 3 parachute system may be limited or impeded.
- The Kronos Inspire 3 Parachute Recovery System and Flight Termination System can be actively deployed by the user. Regular training is necessary to be able to react correctly in an emergency.
- The spring ejection system only works once. You can recharge the system yourself by following the instructions in this manual. It is your responsibility to ensure that the system is under warranty.
- When reloading, it is forbidden to do so with people nearby, and especially with the barrel pointing in their direction. You must take the same precautions as when handling a loaded rifle. In the event of accidental firing during this stage or mishandling, the spring could be ejected and cause serious injury. Safety glasses must be worn.
- After deploying the device, we recommend that you carefully inspect each component to ensure its integrity. If in doubt, contact your reseller.
- After switching on the system, if the LED changes to a steady red, do not use it and contact your dealer for assistance.

# **LISTING**

# & accessories identification

PART	QUANTITY	IMAGE	C5 LABEL	DESCRIPTION
PRS	1		YES	The Kronos Inspire 3 plug & play Parachute Recovery System for the DJI Inspire 3 makes your flights safer by slowing your drone's rate of descent and impact energy in the event of a problem. The parachute can be deployed automatically or manually using the Klick trigger remote control.
FTS	1		YES	The Kronos Inspire 3 plug & play Flight Termination System, developed for the DJI Inspire 3, prevents the drone fitted with it from leaving its regulation flight envelope by cutting (manually or automatically) the drone's power supply in less than a second.
KLICK	1			The Klick trigger remote control offers a fast and secure means of remotely deptoyment your Kronos safety accessories (PRS / FTS). Totally independent of the drone, this lightweight, ergonomic remote control is equipped with LED status indicators and a secure wireless connection. Designed to adapt to the different uses of professional drone operators and different DJI radio controllers, the Klick trigger remote control is supplied with 3 fixing supports.
Accessories: Extending the drone's landing gear	4			The landing gear extensions on the DJI Inspire 3 drone prevent damage to the drone during an emergency landing. The drone's undercarriage extensions are quick and easy to replace.

PART	S O F T W A R E V E R S I O N	VERIFICATION METHOD	DIMENSIONS	MASS
PRS	Para_MOC_IA_v1.9	See "System states" on page 29	8 X 12 X 20 cm	376 G
FTS	TS CC_MOC_I3_v1.0 See *System son page 2		7.5 x 9 x 2 cm	78 G
KLICK	Radio_MOC_v1.3	See "System states" on page 29	32 x 28 x 13 mm	20 G
Accessories: Extending the drone's landing gear	/		49 x 24 x 18 mm	3 G



# of drones compatible with the accessory kit

MODEL	MANUFACTURER	CONFIGURATION	TESTED SOFTWARE VERSION	ORIGINAL C3 DECLARATION OF CONFORMITY
Inspire 3	ורם	Any payload if take-off weight is less than 4.31 KG, kit included	/	See appendix

SECTION

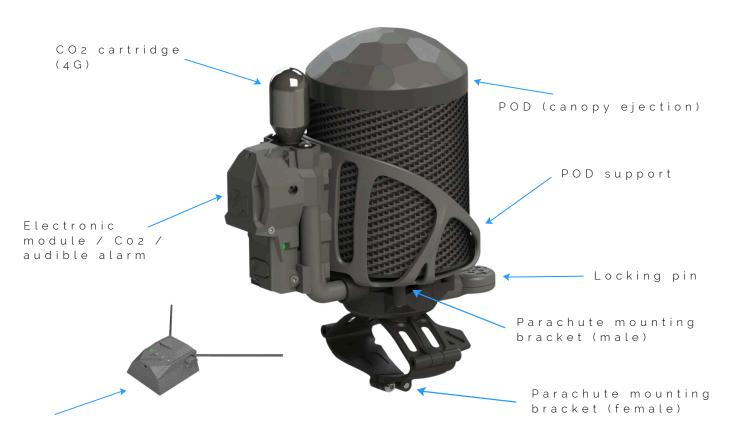
# HRONOS B

PARACHUTE RECOVERY SYSTEM FOR 💋 INSPIRE 3 😻

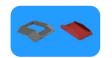


# COMPONENTS

presentation



Klick trigger remote control





### ADDITIONAL ACCESSORIES SUPPLIED



Micro USB cable



Allen key 2 m m



Reset tool



Threaded reset tool



Mounting bracket cover



Landing gear extensions

System Visual Representation

Kronos I3
Parachute Recovery System



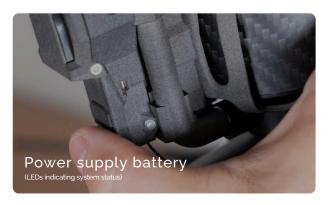
DJI Inspire 3 drone



# ELEMENTS

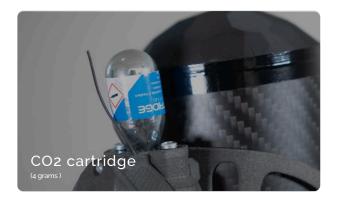
of the parachute system

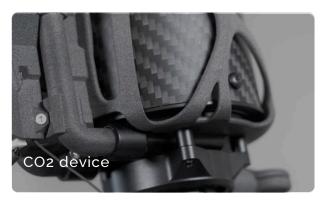
















Overview of Key System Figures



Technical specifications

**376 GRAMS TOTAL WEIGHT** (WITH CARTRIDGE) CO<sub>2</sub> CARTRIDGE **EJECTION DEVICE** 4 GRAMS **FROM** MINIMUM HEIGHT 24 METERS **EFFICIENCY** SRD860 WITH COMMUNICATION **ENCRYPTED KEY WIRELESS RADIO** (869 MHZ / 100 MW) RANGE OF THE KLICK 1500 METERS\* **REMOTE CONTROL PARACHUTE 5 HOURS AUTONOMY** KLICK REMOTE **30 HOURS ENERGY GROUND** < 24 JOULES **IMPACT OPERATING** -5°C TO 40°C **TEMPERATURE** STORAGE 10°C TO 40°C **TEMPERATURE** 

\*can reach up to 1.5 km, under optimum conditions and in an environment free of obstacles and interference.

Operational limits



Dimensions and weights

## DRONE



8 X 12 X 20 cm

376 g

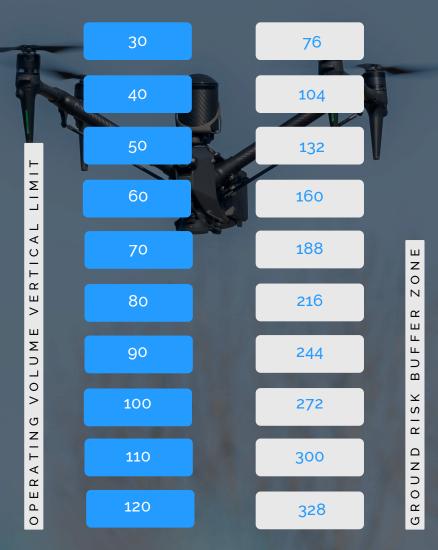
### PARACHUTE + DRONE



50 x 71 x 35 cm

4 311 g

Minimum Size of the Ground Risk Buffer (GRB)



The ground risk threshold can be calculated as a function of different drone parameters and different assumptions. Please refer to the document dedicated to calculating the ground risk threshold, if you need to calculate more precise ground risk thresholds for your application.

# SYSTEM states

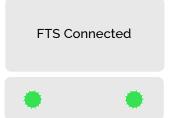
## INITIALIZATION





## CONNECTION











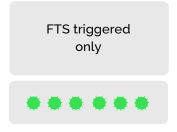






### ACTIVATION AND DEPLOYMENT

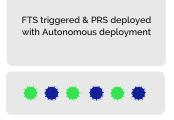






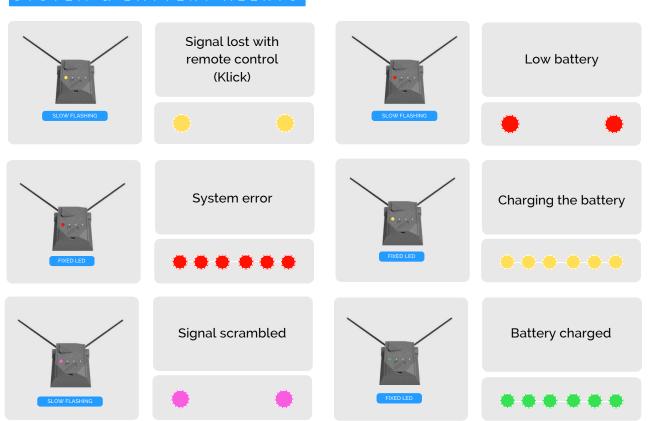






# SYSTEM states

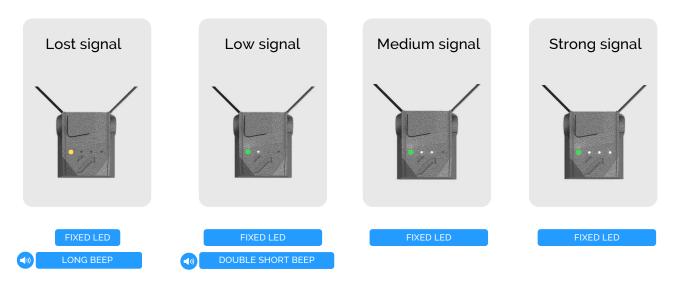
## SYSTEM & BATTERY ALERTS





Four LEDs let you check the status of the link between the Klick trigger remote control and your Kronos I3 accessory kit. The signal level is represented by the number of lights on: the more lights, the more stable the connection.

### The different LED states



## Warning

If the signal is lost, the manual release of the Parachute Recovery System and the Flight Termination System will become inoperative. Move closer to the drone to re-establish the link with the Klick remote control.

# INSTALLATION of the parachute system

The Kronos I3 parachute system can be installed in just a few minutes. To install it, please follow the instructions below in order:

## Skills & tools required

Designed to be quick and easy to use, the parachute system can be installed without any specific technical skills. A 2mm allen key (supplied by Dronavia) is required for installation.

### Warning

For reasons of operational safety and to prevent inadvertent deployment, the I3 Parachute Recovery System incorporates an automatic lock that prevents deployment at altitudes below 20 metres. This limitation ensures that the parachute system can only be activated in conditions that guarantee the minimum effectiveness of the system. However, manual deployment of the parachute via the Klick trigger remote control remains possible. Be cautious when handling the powered-on parachute to avoid any unintentional ground deployment, which could cause physical injury or material damage.

### Instructions

1

Unscrew the protective cover from your new POD. Install the POD on its central support.





### Advice

Be sure to keep the POD's protective cover so that you can use it when returning the POD for annual maintenance.

# INSTALLATION

of the parachute system

Fit the parachute attachment bracket to the top of the DJI Inspire 3 drone, then attach it to the drone by screwing the two ends together using the 2 screws supplied, as shown below.









# Warning

Be sure to observe the tightening torque of 0.8 Nm.

The fixing support is installed with the Dronavia logo towards the front of the drone.

# INSTALLATION

of the parachute system

3 Place the parachute in its fixing support and lock the system by turning it a quarter turn.





4 Connect the USB-C cable linking the parachute to the FTS.





### Advice

The connection between your parachute system and your FTS provides unlimited autonomy for the parachute system. The parachute system recharges when the drone is switched on. This connection also enables the parachute system to be switched on automatically when the DJI Inspire 3 drone is switched on.

# INSTALLATION

of the parachute system

A protective cover for the fixing support is supplied for transporting and using the DJI Inspire 3 without a parachute.





In order to protect the drone's feet in the event of an emergency landing, 4 DJI Inspire 3 landing gear extensions are supplied in the kit. Remove the self-adhesive tab before inserting the extensions on the 4 landing gear of the DJI Inspire 3 drone.









- 7 Your Kronos I3 parachute is now operational. 🤣
- Each installation must be entered in the 'List of installations and deinstallations and maintenance operations' section on page 62.

# INITIALIZATION

of the parachute system

To initialize the Kronos I3 parachute system, follow the steps below in order:

### Instructions

Power on your DJI Inspire 3 drone. Ensure that the USB-C cable is properly connected between the parachute system and the drone. This connection is essential to allow the automatic initialization of the parachute system.





Power on the Klick trigger remote. Once the connection with the parachute system is established, a cyan-blue LED flashes on the Klick trigger remote, and an initialization sequence appears on the module's LED, confirming successful startup and operational readiness of the system.



- At the end of this sequence, the LED on the parachute module and the LED on the Klick remote flash cyan blue when a connection with the parachute system is established, and cyan blue and green when the connection is established with both the parachute system and the Flight Termination System (FTS).

# NOTALIZATION of the part of th

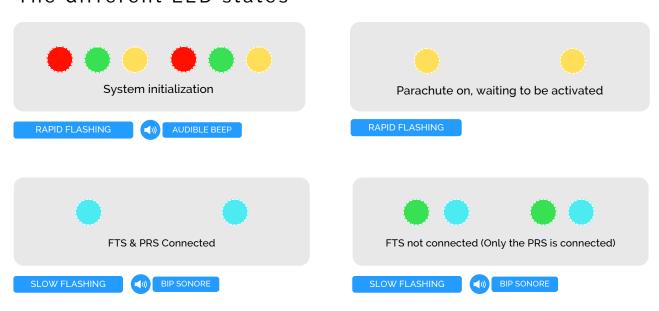
of the parachute system

### Warnings

For operational safety and to prevent any accidental deployment, the Kronos I3 parachute system can only be powered on when it is connected to the DJI Inspire 3 drone via the USB-C cable and the drone is powered on. The system cannot be activated without a valid USB-C connection.

The power button on the parachute module serves only two functions: checking the battery level via the LED indicator and manually shutting down the system.

### The different LED states



# ACTIVATION

of the autonomous deployment function of the parachute system

To activate the Kronos I3 parachute system, follow the instructions below in order:

### Warning

For operational safety and to prevent any unintentional deployment, the Kronos I3 parachute system includes an automatic lockout that prevents deployment below 20 meters altitude. This limitation ensures that the parachute can only be deployed under conditions that guarantee a minimum level of effectiveness. Warning: Manual deployment of the parachute system remains possible at any time via the Klick trigger remote.

### Instructions

- The Kronos I3 parachute system automatically detects the drone's takeoff. During this phase, the LEDs on both the parachute module and the Klick remote flash purple, and double audible beeps are emitted.
- When the drone reaches an altitude of 20 meters, two distinct audible beeps confirm that the minimum threshold required for activation of the autonomous parachute deployment function has been reached. The LEDs on both the parachute module and the Klick remote then flash dark blue.
- Your Kronos I3 parachute is now active with the autonomous deployment function enabled.

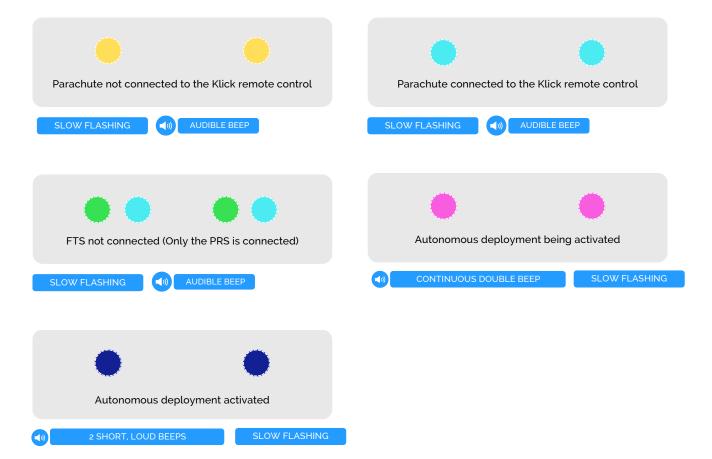
### Warning

If there is no audible signal or dark blue LED, it is likely that the autonomous deployment function has not yet been activated due to insufficient altitude. A minimum altitude of 20 meters is required to enable the autonomous deployment function.

# ACTIVATION

of the autonomous deployment function of the parachute system

### The different LED states



# DEACTIVATION

of the autonomous deployment function of the parachute system

To deactivate the Kronos 13 parachute system, follow the instructions below in order:

### Instructions



The Kronos I3 parachute system automatically detects the landing of the DJI Inspire 3 drone. Approximately 5 seconds after detection, an audible beep is emitted and the dark blue LED turns off. The takeoff detection module then automatically deactivates. It will reactivate on the next flight once the drone reaches a minimum altitude of 20 meters.

### Warning

If the dark blue LED on the Kronos I3 parachute system remains illuminated, it indicates that the autonomous deployment function is still active. Do not handle the drone to avoid any risk of unintentional deployment. Wait an additional 5 seconds for the system to automatically deactivate.

The autonomous deployment function of the Kronos I3 parachute system is now deactivated; however, the parachute remains active and can still be deployed using the Klick trigger remote.

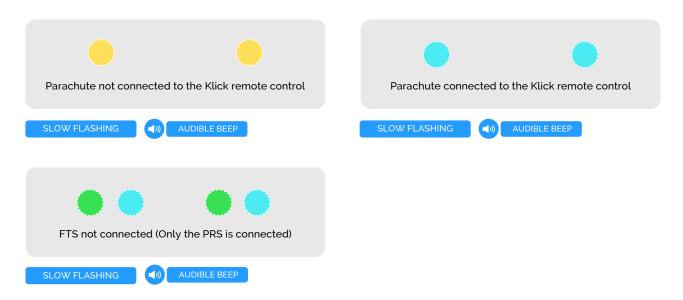
Your Kronos I3 parachute is active without the autonomous deployment function.



To completely deactivate your Kronos 13 parachute system: If the parachute system is connected to the drone using the provided cable, simply power off the DJI Inspire 3 drone and the parachute system will shut down automatically. Otherwise, turn off the Kronos 13 parachute system by pressing and holding the power button for 2 seconds.

# DEACTIVATION of the parachute system

### The different LED states





# DEPLOYMENT of the parachute system

To deploy the Kronos I3 parachute system (with autonomous deployment or manually), observe the following safety instructions:

### Warning

- 1 Never attempt to deploy the I3 Parachute Recovery System on the ground.
- The Kronos I3 Parachute Recovery System is designed to be deployed at a minimum height of 24 m from the ground in standard atmospheric conditions.
- For a fall from a height of 24 metres, the impact on the ground is less than 21 joules with the Kronos I3 Parachute Recovery System, compared with 1177 joules without any device.

### Warnings

This data may vary depending on altitude above sea level, relative wind and many other external factors. That's why we recommend a minimum height of 24 m above ground level to deploy the Kronos I3 Parachute Recovery System and sufficiently limit the impact of your drone on the ground.

For reasons of operational safety and to prevent inadvertent deployment, the I3 Parachute Recovery System incorporates an automatic lock that prevents deployment at altitudes below 20 metres. This limitation ensures that the parachute system can only be activated in conditions that guarantee the minimum effectiveness of the system.

# AUTONOMOUS

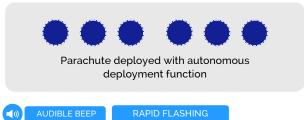
### deployment of the parachute system

### Instructions



When autonomous deployment is activated, the parachute system analyses the flight parameters (altitude, acceleration, inclination, angular velocity) in real time. If any abnormal behaviour is detected, indicating a loss of control, the I3 Parachute Recovery System is automatically triggered, without pilot intervention.

### The different LED states







To manually deploy the Kronos I3 parachute system, follow the instructions below in order:

### Instructions



Find out how to deploy your Kronos I3 Parachute Recovery System manually with the help of our user and instruction manual for the Klick remote activation system.



# LOW-SPEED

mode

European EASA regulations require the inclusion of a low-speed mode that can be selected on the drone and activated manually by the drone operator. When the low-speed mode is activated, the drone cannot exceed a speed of 5 m/s. To activate the low-speed mode (Mode T), follow the instructions below in order:

### Instructions

1 Switch on your DJI remote control.

Access the camera view, then click on the menu represented by the 3 dots at the top right of the screen. Check that the T/S/N flight mode is selected.





Switch the flight mode selector on the DJI RC Plus radio control from mode N to mode F. Mode F corresponds to mode T.





The use of mode S (Sport) is prohibited when the C5 accessory kit is installed on the DJI Inspire 3 drone. All validation tests on the Kronos I3 system were carried out exclusively in N (Normal) mode, guaranteeing behaviour that complies with safety requirements.

### Warning

When using SPORT mode, Dronavia accepts no responsibility for non-deployment, partial or delayed deployment of the parachute system, due to flight dynamics incompatible with the system's deployment parameters.



Indicators on the DJI remote controller allow you to check the signal status between the DJI Inspire 3 drone and the DJI remote controller during a flight.

### Strong signal



### Low signal



### Lost signal







To stop the Kronos I3 parachute system, follow the instructions below in order:

### Warning

If the dark blue LED on the Kronos I3 parachute system remains lit, this indicates that the autonomous deployment function is still active. Do not manipulate the drone to avoid any risk of involuntary deployment. Wait a further 5 seconds for the automatic deactivation.

### Instructions

Switch off your DJI Inspire 3 drone. If you have connected the parachute system to the FTS using the cord supplied, the parachute system and FTS will switch off automatically.





If you have not connected the parachute system to the FTS using the cord supplied, to switch off the parachute system immediately, hold down the ignition button for 5 seconds. Then switch off the DJI Inspire 3 drone.





# **STOP** of the parachute system

Remember to turn off your Klick trigger remote control.



4 Your Kronos I3 parachute system has been shut down. 🤣

### Advice

If the parachute system is not manually powered off, it will automatically shut down after 30 seconds. The Flight Termination System (FTS) powers off automatically when the DJI Inspire 3 drone is turned off.

of the parachute system

To dismantle the entire Kronos I3 parachute system, follow the instructions below in order:

### Instructions

Disconnect the USB-C cable linking the parachute system to the FTS. Then release the locking pin by pulling on it.









2 Turn the parachute system a quarter turn to unlock it.





of the parachute system

3 Disengage the parachute system from its support.





Unscrew the two screws on the parachute module mounting bracket. Then remove the fixing support from the DJI Inspire 3 drone.





of the parachute system

To dismantle the entire Kronos I<sub>3</sub> Parachute Recovery System, follow the installation instructions in reverse order.

### Instructions



Each de-installation must be entered in the 'List of installations, de-installations and maintenance operations' section on page 62.

### Advice

The support for fixing the parachute system can be kept on the DJI Inspire 3 drone and does not interfere with the storage of the drone in its flycase. A protective cover is supplied. Only the parachute system needs to be removed for transport.





# CHECHING of the parachute system battery

To check the battery status of the I3 parachute system, follow the instructions below in order:

### Instructions

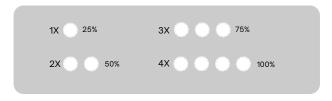


Press the parachute ignition button quickly. The number of flashes indicates the remaining charge level.





### The different LED states



RAPID FLASHING



To charge the I3 parachute system battery, follow the instructions below in order:

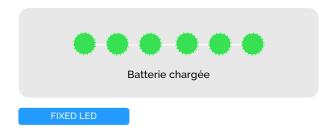
### Instructions



To recharge the parachute's battery, simply connect the USB-C cable supplied to the parachute's USB-C socket located near the ignition button. Then plug the USB socket into a computer.

### The different LED states





# RESETTING of the parachute system

In the event of a malfunction or any other bug, follow the instructions below in order:

### Instructions

To reset the parachute system, there is a small hole in the back of the parachute. Slide a paper clip or other thin object through the hole, and a short press will reset the entire parachute system.



### Warning

If the malfunction persists, contact Dronavia customer service or your reseller.

# parachut maintenance



### TO BE READ CAREFULLY

Like all rescue parachute systems (rescue parachutes for paragliders or parachutists, avalanche airbags, etc.) Dronavia parachutes must undergo preventive maintenance to be kept in optimum working order. The only preventive maintenance operation is to replace the POD. It's a quick and easy operation, which means that pilots never have to leave their drone standing idle.

A use-by date is set for each POD. Dronavia disclaims all liability and cancels the warranty if your POD has exceeded this use-by date.

# PROCEDURES

### maintenance requirements

To be kept in optimum working order, each parachute system must undergo preventive or post-deployment maintenance. Here is a summary table of the mandatory maintenance operations:

### FREQUENCY

### OPERATION

### CAN BE MADE BY

Every year	Replacement of the POD or Repackaging of the canopy	Final user  or  DRONAVIA or any certified partner
Every 5 years	Mandatory manufacturer global maintenance	Manufacturer
After every deployment	Rearming of the parachute system	Final user  or  DRONAVIA or any certified partner
After every deployment	Inspection of the CO2 system	Final user  or  DRONAVIA or any certified partner
After every deployment	CO2 cartridge replacement	Final user  or  DRONAVIA or any certified partner
After every deployment	Replacement of the POD or Repackaging of the canopy	Final user  or  DRONAVIA or any certified partner
After 30 deployments	Mandatory manufacturer global maintenance	Dronavia

### Warning

If you wish to carry out global maintenance yourself, Dronavia will disengage its responsibility for the system, in addition to cancelling the warranty.



If the Kronos I3 parachute system deployment fails during flight, record the following:

UAS Concerned with the failed activation	Accumulated Flight Hours at activation failure	Distance between Control Unit and UAS at activation attempt	Location of the operation	Presence of high power emitter in the operational volume



### voluntary and intensive parachute deployments

If the Kronos I3 parachute system is deployed during flight, record the following:

UAS Concerned with the activation	Accumulated Flight Hours at activation	Distance between Control Unit and UAS at activation attempt	Location of the operation	Was the activation commanded or un-commanded	Presence of high power emitter in the operational volume

### Warning

If the probability of failure observed in service is greater than 10-2/FH (taking into account the statistical uncertainty), the operator must inform the competent authority.



# of installations / de-installations & maintenance operations

To be kept in optimum working order, each parachute system must be monitored for installation, de-installation, firmware updates, preventive or post-deployment maintenance. The following table summarizes the operations to be listed:

Date	Operation	Issues	Operator and signature

# USE-BY DATE

Each POD has a use-by date to ensure that it remains in optimum working order:

The optimum life of a POD is 1 year. The use-by date is shown on the label on the back of the POD.





### Warnings

If a POD is used after its use-by date, Dronavia accepts no liability for partial or slower deployment of the parachute system.

# PROCEDURE of return of the POD for maintenance

There are several options for exchanging your POD that is past (or close to) its use-by date:

### Buy 259€

Buy a POD in advance from your dealer. You'll be able to continue flying during the annual maintenance of your first POD.

### Exchange

2 Return your POD to a reseller and receive a new one at a preferential price.

### Warning

Please plan in advance how long it will take to contact your reseller (order, delivery time, etc.) so as not to exceed the use-by date and jeopardise your flight missions.

of the POD system for maintenance

To remove the POD from the I3 parachute system, follow the instructions below in order:

### Instructions

Unlock the POD by unscrewing it from its central support. Then remove the POD.





# Recovery System Parachute of the Kronos

### TO BE READ CAREFULLY

Once the Parachute Recovery System has been deployed, Kronos systems have been designed to be rearmed quickly, enabling telepilots to resume their missions without undue delay.

Simple reactivation procedures should be followed. As some of them may present risks, it is imperative that you read the instructions in this section carefully.

A use-by date is defined for each POD. Dronavia disclaims all liability and voids the warranty if your POD has exceeded this use-by date.



To rearm your 13 parachute system, follow the instructions below in order:

### Warning

For reasons of operational safety and to prevent inadvertent deployment, the I3 Parachute Recovery System incorporates an automatic lock that prevents deployment at altitudes below 20 metres. This limitation ensures that the parachute system can only be activated in conditions that guarantee the minimum effectiveness of the system. However, manual deployment of the parachute via the Klick trigger remote control remains possible. Be cautious when handling the powered-on parachute to avoid any unintentional ground deployment, which could cause physical injury or material damage.

### Instructions

Switch off your DJI Inspire 3 drone. If you have connected the parachute system to the FTS using the cord supplied, the parachute system and FTS will switch off automatically.





If you have not connected the parachute system to the FTS using the cord supplied, switch off the parachute system by holding down the ignition button for 5 seconds. Then switch off the DJI Inspire 3 drone.





# REARMING of the parachute system

3

Disconnect the USB-C cable linking the parachute system to the FTS.





4

Unscrew the deployed POD from its central support. Then remove the POD.





### Warning

When unscrewing the used POD, be careful of the sharp edges of the carbon tube, which can cause cuts and/or carbon spikes on your hands.

# INSPECTION

of the CO2 system

5 Remove the CO2 cartridge.



6 Unlock the locking pin by pulling on it.





7 Turn the parachute system a quarter turn to unlock it.





# INSPECTION of the CO2 system

8 Disengage the parachute system from its fixing support.





Turn the parachute system over to remove the firing pin and spring. Check that the firing pin is in good condition.







### Warning

9

Check that the tip of the firing pin is not chipped. If the tip is chipped, the firing pin must be replaced. If in doubt, contact your reseller.

# REPLACEMENT of the CO2 cartridge

### Warning

Before replacing the CO<sub>2</sub> cartridge, please read pages 76, 77 & 78.

10 Reinsert the spring, then reinsert the firing pin.





Then insert the reset tool into the hole left by the CO2 cartridge.



Push the tool in as far as it will go and hold it during step 4. There must be some force against this operation.



# REPLACEMENT

of the CO2 cartridge

Switch on the Klick trigger remote control and the parachute system. Wait for the system to initialise. The force described above should disappear and the LED on the module should flash green and turquoise (if this is not the case, repeat steps 2 and 3 until the force disappears and the LED flashes green and turquoise).





Remove the tool and install a new CO2 cartridge.





Each CO2 cartridge replacement must be entered in the "List of installations, de-installations and maintenance operations" section on page 62.

# REPLACEMENT

of the POD system

17 Unscrew the deployed POD from its central support. Then remove the POD.





Unscrew the protective cover from your new POD. Insert the new POD into its central support, then screw it down until the POD locks into place.





- Each time the POD system is replaced, the information must be entered in the 'Listing of installations and de-installations and maintenance operations' section on page 62.
- 20 Your Kronos 13 parachute is rearmed. 🥏



# PROCEDURE for returning a used POD

There are several options for returning your used POD:

#### Buy 259€

Buy a POD in advance from your dealer. You'll be able to continue flying during the annual maintenance of your first POD.

#### Exchange 99€

2 Return your POD to a reseller and receive a new one at a preferential price.

#### Warning

Please plan in advance how long it will take to contact your reseller (order, delivery time, etc.) so as not to exceed the use-by date and jeopardise your flight missions.

# REPLACEMENT

the parachute's CO2 cartridge

**TYPE** 

CARTRIDGE OF CO2

VOLUME

4 CC

**TOTAL WEIGHT** 

18G (+/- 2G)

CAPACITY

4G (+/- 1G)

LID

WELDED

**CONTAINER** 

**UNWELDED STEEL** 

RECYCLING

100% RECYCLABLE

TRANSPORTABILITY

PLANE / TRAIN /BOAT

Warning

Only cartridges officially sold by Dronavia may be used, as they are subject to specific checks. Dronavia disclaims all responsibility and voids the warranty if any other type of CO2 cartridge is used.

# 12 INSTRUCTIONS

to follow

- 1 Keep the CO2 cartridge at a temperature below 45°C.
- 2 Do not leave full cartridges in the car when the temperature is too high.
- In the event of prolonged inactivity, store your CO2 cartridges at normal temperatures between 10 and 20°C. CO2 cartridges may burst at temperatures above 70°C.
- High temperatures can increase the pressure in the cartridge and this can prevent the device from working, possibly damaging it.
- 5 Avoid hitting the cartridge.
- 6 If corrosion spots appear on the surface of the cartridges, change them immediately.
- Make sure the used cartridge is completely empty before removing it.
- B Do not cut or puncture the cartridge.

TO BE READ CAREFULLY

# 12 INSTRUCTIONS

to follow

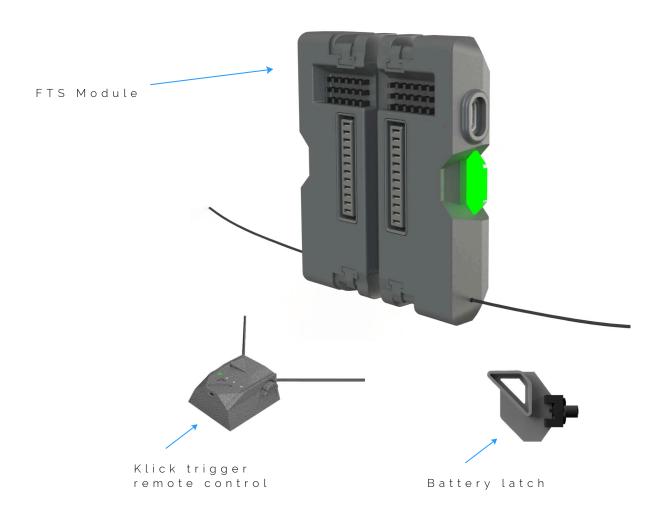
- 9 Only use certified CO2 cartridges sold by Dronavia.
- Once the gas cartridge has been installed, do not attempt to unscrew or remove it.
- 11 Do not dispose of the cartridge in a fire.
- 12 Keep out of reach of children.

TO BE READ CAREFULLY



# COMPONENTS

presentation



#### ADDITIONAL ACCESSORIES SUPPLIED







Micro-USB cable

# KRONOS B

Technical specifications

**TOTAL WEIGHT** 

**78 GRAMS** 

COMMUNICATION WIRELESS RADIO

SRD860 WITH ENCRYPTED KEY

(869 MHZ / 100 MW)

RANGE OF THE KLICK REMOTE CONTROL

1500 METERS\*

AUTONOMY KLICK REMOTE CONTROL

30 HOURS

OPERATING TEMPERATURE

-5°C TO 40°C

'The range can be up to 1.5 km. under optimum conditions and in an environment free of obstacles and interference.

# OESCRIPTION of the Flight Termination System

#### Description

The Kronos I3 Flight Termination System. developed for the DJI Inspire 3. prevents a drone equipped with it from leaving its regulatory flight envelope by cutting (manually or automatically) the drone's power supply in less than a second.

#### Installation

The Kronos Inspire 3 Flight Termination System is installed between the drone and the drone batteries. Simply insert the left and right modules into the battery slots, then insert the drone batteries. The only modification made by installing the FTS on the drone is the battery latch, which must be changed to ensure that the drone's batteries are held securely. Installation is detailed on page 83.

#### Initialization

To start the Kronos I3 Flight Termination System, switch on your DJI Inspire 3 drone and the Flight Termination System will switch on automatically, then switch on your Klick trigger remote control by pressing and holding the start button. When the FTS is properly connected, a green LED flashes on the Klick trigger remote control and on the FTS module. Activation is described in detail on page 87.

#### Activation

In order to keep the possibility of activation at your fingertips and to be as reactive as possible, a simple gesture allows you to cut the drone's power supply and deploy your parachute (if your drone is equipped with one). Simply press the triangular button on the Klick trigger remote control for at least 1 second. Activation of the I3 Flight Termination System is described in detail in the Klick trigger remote control user manual.

# INSTALLATION of the FTS

The Kronos I3 FTS can be installed in just a few minutes. To install the FTS, please follow the instructions below in order:

#### Instructions

1

Remove the batteries from the DJI Inspire 3.





2 Position the battery latch by clipping it onto the centre of the drone.





# INSTALLATION

of the FTS

Insert the Flight Termination System module into the bottom of the battery compartment of the DJI Inspire 3.









Then insert the two batteries into the DJI Inspire 3 drone, and lock the battery latch by turning it half a turn to the right.









# INSTALLATION of the FTS

#### Warning

This step is essential for the correct operation of the drone and the FTS. If you do not lock the attachment latch, an error message may appear on your DJI radio control system.

#### **Error notifications**

DJI RC Plus remote controller screen



# INSTALLATION

of the FTS

#### OPTIONAL

If you also have a Kronos parachute system for Inspire 3, you can connect the FTS module to the parachute module using the USB-C cable supplied.









The connection between your parachute system and your FTS provides unlimited autonomy for the parachute system. The parachute system recharges when the drone is switched on. This connection also enables the parachute system to be switched on automatically when the DJI Inspire 3 drone is switched on.

6

Your external Kronos 13 FTS is operational. 🤣

# INITIALIZATION of the FTS

To initialize the 13 FTS, follow the instructions below in order:

#### Instructions

Switch on your DJI Inspire 3 drone. The I3 Flight Termination System will switch on automatically.





Switch on your Klick remote control. When the Flight Termination System is properly connected, a green LED flashes on the Klick tirgger remote control and on the Flight Termination System module.





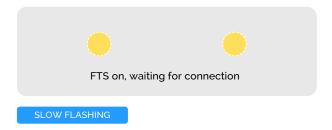
3 Your external FTS Kronos I3 is initialization started. 📀

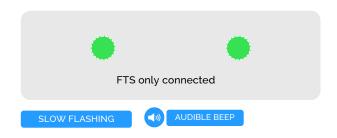
# INITIALIZATION of the FTS

#### Warning

If your Flight Termination System module is connected to a Kronos parachute system for DJI Inspire 3 a green and turquoise LED flashes on the Klick trigger remote control and on your parachute module.

#### The different LED states











To activate the 13 FTS, follow the instructions below in order:

#### Instructions



Find out how to activate your Kronos I<sub>3</sub> Flight Termination System manually using our user and instruction manual for the Klick trigger remote control.

# HICCHA manual deployment of the parachute Consult our Klick user manual



# AUTONOMOUS activation of FTS

To automatically activate your 13 FTS, follow these instructions in order

#### Instructions

Switch on your DJI Inspire 3 drone. The Flight Termination System will switch on automatically.





Switch on your Klick trigger remote control. When the I3 Flight Termination System is properly connected, a green LED flashes on the Klick tirgger remote control and on the FTS module.



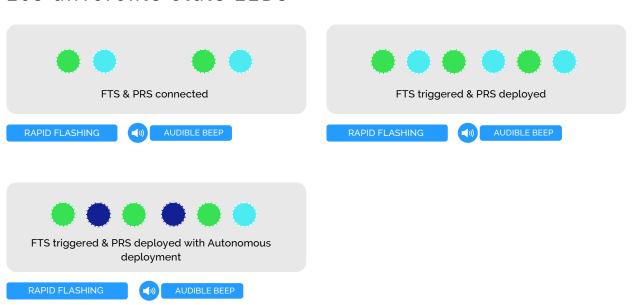


When the parachute is deployed, the Flight Termination System is automatically activated via a secure wireless link, established beforehand by Dronavia experts through precise pairing between the two modules.

# AUTONOMOUS activation of FTS



#### Les différents états LEDs





Before the flight or before the first flight of the day, you can test the FTS. Follow the instructions below in order:

#### Warning

If your drone is fitted with a parachute system, remember to disconnect the cable linking the parachute system to the FTS before carrying out the test. Otherwise, the parachute system will be deployed at the same time as the engine cut-out.

#### Instructions

Disconnect the cable connecting the parachute system to the FTS. Switch on your DJI Inspire 3 drone. Switch on your Klick trigger remote control.









Check that the LEDs on your FTS and Klick trigger remote control are flashing green. If your drone is fitted with a parachute, check again that it is switched off.

# PROCEDURE of FTS testing

3

Arm the motors and initiate rotation while keeping the drone on the ground.



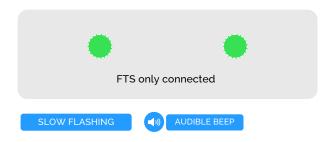
4

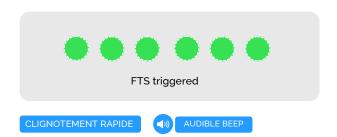
Stop the rotation of the motors by simultaneously pressing the trigger buttons on the Klick trigger remote control. Check that the motors stop correctly and that the green light flashes rapidly on both the Klick trigger remote control and the FTS.





#### The different LED states







To stop, switch off and reset the I3 FTS, follow the instructions below in order:

#### Instructions

1 Switch off your DJI Inspire 3 drone and the FTS will shut down automatically.





2 Switch off your Klick trigger remote control.



Your external FTS Kronos 13 has been switched off. 🥏

# OISMANTLING of Flight Termination System

To dismantle 13 FTS, follow the instructions below in order:

#### Instructions



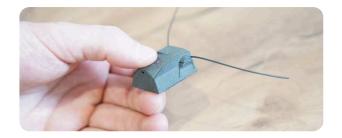
To dismantle the system, simply follow the installation instructions in reverse order. The Klick trigger remote control module can remain installed on the DJI Inspire 3 remote controller without affecting its operation.



In the event of a malfunction or bug, follow the instructions below in order:

#### Instructions

To reset the Klick trigger remote control, you'll find a small hole on the left-hand side. Insert a paper clip or other thin object into the hole and press it down briefly.





#### If the malfunction persists



Contact Dronavia customer service or your reseller.

#### STORAGE

Store your C5 Kronos Inspire 3 accessory kit for DJI Inspire 3 in a dry, cool, clean place away from UV light.

#### SPECIFIC MAINTENANCE

In the event of contact with moisture, chemicals or other substances, the POD must be replaced immediately.

#### Warranty

Dronavia takes great care in the design and production of its products. We guarantee our accessory kit for a period of one year from the date of purchase, against any defect or design fault that may arise during normal use of the product. Any abusive or incorrect use, or exposure to aggressive factors (high humidity, excessively high temperatures, etc.) that could lead to damage will invalidate this warranty.

#### **NOTICE OF LIABILITY**

Flying a drone, whether manual or automatic, is an activity that requires attention, specific knowledge and good judgement. Be cautious, get trained in appropriate structures, take out insurance and comply with the requirements defined by the DGAC decrees of 11 April 2012 and 17 December 2015 and the EASA.

Ask our sales team your questions



# 

For France, we recommend that you consult the website of the Ministry of Ecology, Sustainable Development and Energy if you have any doubts or questions. For Europe, we recommend that you consult the EASA website. Remember that you are flying under your own responsibility.

Website of the Ministry of Ecological Transition and Territorial Cohesion



Details of class C5 published by EASA:



The IGn map of restricted areas for drones



European Union Aviation Safety Agency (EASA)



Lo know

The French Civil Aviation Authority (DGAC)



Ask our sales team your questions









distri@dronavia.com



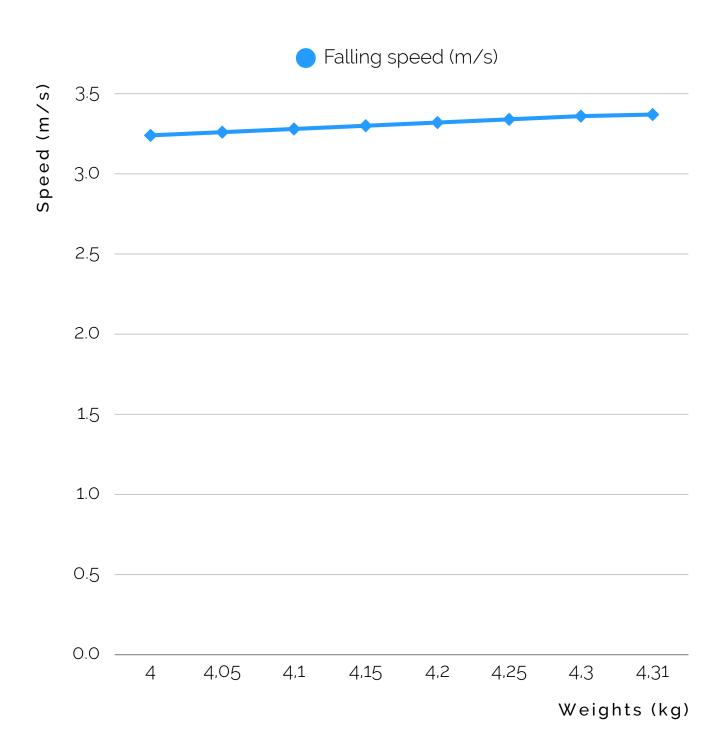
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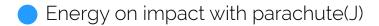
# APPENDICES

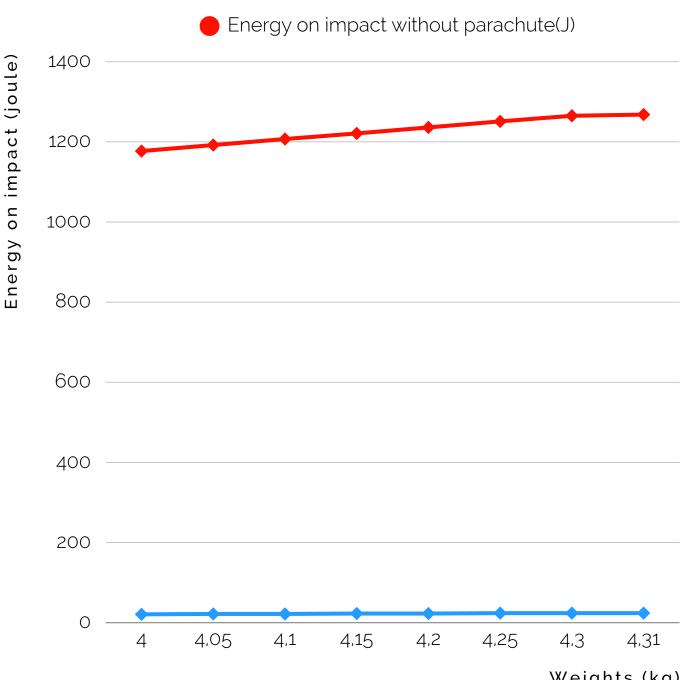
Falling speed (m/s) ) X Weight (kg)



# APPENDICES

Impact energy (joule) X Weight (kg)





Weights (kg)

### APPENDICES

Minimum extent of buffer zone for ground-related risks (m) X Weight (kg) X Deployment height (m)

