



**CYPRES 2**  
Reliability made in Germany

# Aircrew CYPRES 2 User's Guide

This English user's guide is the original user's guide. It will not be further processed. The actual version of the manual can be downloaded at [www.militarycypres.cc](http://www.militarycypres.cc) The latest revision is applicable for all herein mentioned CYPRES 2 models only and replaces and supercedes all previous applicable revisions\*. See [www.militarycypres.cc](http://www.militarycypres.cc) to verify / obtain the latest revision. Subject to change without notice. Aircrew CYPRES2 User Guide as revised 10/2019 Art. No. 991013.

\*If your CYPRES does not have the latest upgrades / updates installed it is possible that your unit does not have all options available, which are stated in the newest English user's guide.



## Aircrew CYPRES 2

### User's Guide

- English version -

Dieses Handbuch ist in Deutsch erhältlich.

Este manual está disponible en español.



Congratulations on your choice of CYPRES, the surely safest and most accurate Automatic Activation Device currently available.

Like most airmen, you probably assume you will always have the opportunity to deploy your canopy yourself, and that situations requiring use of an automatic activation device always happen to others. We do hope that you will always do it yourself, and that your CYPRES will never have to take action to save your life.

Should CYPRES ever decide to cut your reserve closing loop, it will most likely happen at a moment which, no matter how experienced and cautious you are, justifies that you haven't left your safety to chance.

*Airtec GmbH & Co. KG Safety Systems*

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## What an Aircrew CYPRES 2 is

The Aircrew CYPRES 2 is an Automatic Activation Device for the needs of the staff of an aircraft.

It initiates the opening of the emergency parachute, if an airman has bailed out from his aircraft, is below activation altitude (see chapter 2.1.1) and has a vertical speed of more than 35 meters per second (that equivalent to approx. 6.900 feet per minute).

The Aircrew CYPRES 2 does its job by severing the closing loop allowing the spring loaded pilot chute to push away the flaps of the container and to jump out into the airstream and initiate the canopy opening.

CYPRES is truly the most reliable piece of skydiving equipment ever produced.

### **WARNING**

CYPRES is not able to open your reserve. It is only intended to sever your reserve closing loop. CYPRES is strictly a backup device and does not replace proper training or timely execution of emergency procedures. It may display a wrong status, fail whenever and for whatever reason and may cause injury or death. If you are not comfortable with these risks you must not use CYPRES. You must make sure that the loop passes through the cutter's passing hole. If you loan, rent or sell your CYPRES to somebody it is your responsibility to inform him about the above circumstances.

## 1. Function

### 1.1 How the Aircrew CYPRES 2 works

The processing unit contains a factory-programmed microprocessor that is capable of real-time calculations of the airman's altitude and rate of descent based on barometric pressure.

By monitoring this data, certain criteria are generated from which conclusions are drawn. Should the conclusion be that the airman is lower than activation altitude and in freefall, the processing unit triggers the release unit to initiate the opening of the reserve parachute container.

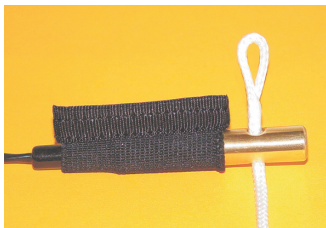
The release unit (cutter) system for the canopy container is completely independent of the rig's primary system. It does not pull the ripcord pin out of the closing loop, but rather cuts the loop inside the canopy container to release the pilot chute.

Opening a canopy container by severing the closing loop is a method invented and patented by the founder of Airtec, Helmut Cloth, in 1987.

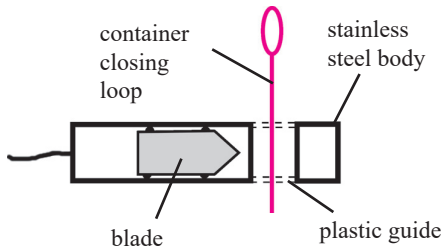
The CYPRES' canopy activation system has these advantages:

- The canopy container can be opened in two different ways. One method is used by the airman pulling the ripcord handle. The other method is used by CYPRES when it cuts the closing loop.
- Mechanical components are reduced to a single movable piston in the release unit.
- The activation system is located inside the canopy container where it is not exposed to excessive shock or other adverse influences.
- The system is unobtrusive and can be installed so that it is undetectable from the outside.

Release unit (cutter) with elastic keeper



Functional diagram:



The distance which the piston moves in case of an activation is approx. 5 mm.

The release unit (cutter) is completely self-contained and specifically developed for CYPRES. In the event of activation, nothing escapes or is expelled.

During an 18 month long investigation by BAM (Bundesanstalt für Materialprüfung), Berlin, 99 release units were tested. The result is that BAM and the U.S. DOT have classified the CYPRES as being non-hazardous.

Due to its high reliability and other properties, the CYPRES release unit is currently being used in aerospace applications (satellites).

## 1.2 Components

The Aircrew CYPRES 2 consists of a control unit, a processing unit with the attached release handle cable housing and one release unit (cutter) for a 1-pin canopy container or two release units (cutters) for a 2-pin canopy container.

**SAFETY INSTRUCTIONS**  
Do not pull, lift, carry or throw CYPRES by the cables



arming by static line



manual arming  
by slider



release unit  
(cutter)



processing unit



control unit

### 1.3 Power supply

No user attention should be needed for the power supply of CYPRES 2.

The unit should function from the date of manufacture (DOM) to the end of service life.

If CYPRES 2 should cease to function, contact Airtec or SSK.

No CYPRES 2 user has ever spent any money on a battery since 2003.





## 2. How to handle the Aircrew CYPRES 2

### SAFETY INSTRUCTIONS

**Always check the operativeness of the Aircrew CYPRES2 prior to the first action of the day:**  
Perform a self-test. Do it on the ground before boarding.

### 2.1 How to use it

The Aircrew CYPRES 2 is dedicated to assist an airman in the emergency situation after a bail out from his aircraft or an unintentional fall out of the aircraft (working at open tailgate etc). The primary action for the airman is to pull the ripcord handle of the emergency parachute. If this should not be possible for whatever reason, the Aircrew CYPRES 2 can step in and help.

The operation method of the Aircrew CYPRES 2 is very safe and simple. It's only armed when the arming cable is pulled out. In this condition it will permanently monitor the situation and initiate the canopy opening in case it detects a vertical speed higher than 35m/s (6.900 ft/min) below the selected activation altitude (see chapter 2.1.1) above sea

page 8

level. These two parameters have to be fulfilled to make the unit activate. After arming, the unit stays on for 14 hours or until the cable is pushed back in again.

When the arming cable is inserted, the unit is off (disarmed). In this condition the Aircrew CYPRES 2 will not interfere with all possible flight scenarios or pressure chamber situations.

manual arming by slider



arming by static line

The Aircrew CYPRES 2 can be operated in two different ways:

1. manual arming by handle (airmen working in the plane at the door or open tailgate etc).

The emergency parachute is equipped with a manual handle at the end of the arming cable. When the situation requires an arming of the Aircrew CYPRES 2 (tailgate opening, upcoming work at open door), this handle has to be pulled at least 5



centimeters out of the cable housing. Now the unit is armed. This is indicated by a „0“ in the display. When the work is finished (no further protection needed) the arming cable has to be pushed back into the housing to switch the unit off (display goes blank). The unit is now disarmed again.

2. static line (for pilots or airmen who are permanently seated).

The emergency parachute is equipped with a static line at the end of the arming cable. The static line is connected by a shackle with the seat (or other suitable spots). It has to be connected when the



pilot takes seat. The arming cable stays inserted completely and the static line stays connected all times during flight. In case of an emergency bail out, the static line will automatically arm the Aircrew CYPRES 2 by pulling out the arming cable.

## 2.1.1 Selectable activation altitude

### **⚠ WARNING**

**Settings: Make sure all settings are correct before use. Wrong settings can cause injury or death.**

After changing settings as described in chapter 2.1.1 and following, switch the unit ON and verify the settings within the unit information sequence (see chapter 3)  
Any adjustment is made exclusively at the user's own risk.

The Aircrew offers the option to select the upper edge of the activation altitude between approximately 14.000 ft above MSL and approximately 2000 ft above MSL in steps of 1000 feet.

The unit will show the selected upper edge of the activation altitude during the self-test between the pressure and the **0\***.

(see user's guide chapter 2.2 How to check the operativeness).



indicating 14.000 ft upper edge of activation altitude during self-test

To change the activation altitude:

1. execute a self-test
2. switch the unit on. When **0\*** appears **instantly press+hold the button**
3. you will see a series of information (serial number, etc), wait until you see the activation altitude setting (default **14000ft** )
4. state that you want to change the setting by **briefly release and press+hold the button**
5. CYPRES confirms by turning on the LED for 1 sec
6. when LED is off **instantly release the button**
7. then you see a sequence of the different setting possibilities **14000ft** thru **02000ft** (repeated) on the screen **click your new choice**
8. unit switches itself off immediately
9. **repeat** step 2 to 7 identically without doing anything else in between to confirm the new setting.

To check your setting, perform a new self-test (operativeness check) and verify your setting.

## SAFETY INSTRUCTIONS

**Making a decision:** The decision to change the activation altitude by how much is the user's choice and decision, and can be made in consultation with the reserve & main canopy and harness/container manufacturers.

### WARNING

Because of the variables involved, it is the user alone who bears all responsibility and consequences of the activation altitude setting. Airtec GmbH & Co. KG, the manufacturer of the CYPRES device, does not take any responsibilities thereof.

### WARNING

**An inappropriate activation altitude is likely to injure or kill you or others.**

Always use this unit set at the appropriate activation altitude. Never, under any circumstances and for any reason at an inappropriate activation altitude.

### WARNING

**Malfunction: A malfunction can easily injure or kill you or others.**

Every technical device can fail. So everything imaginable can happen with the CYPRES, including, but not limited to: displaying a status which is not true, failing to function, or functioning at a wrong moment or at a wrong occasion.

If you or your friends or family are not willing to accept these uncertainties and risks, then you must not use CYPRES.

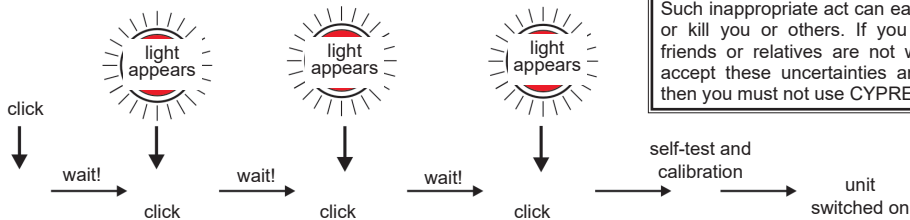
## 2.2 How to check the operativeness

Check the operativeness of the Aircrew CYPRES 2 prior to the first action of the day. This is achieved by a self-test, which has to be done on the ground before boarding. The self-test is started by pressing the push button on the control unit four times as described below in the illustration. After the switch on procedure you will see a „10“ in the display, followed by a countdown to „0“. Between „1“ and „0“ the unit will show the actual ambient air pressure in hpa. The „0“ is displayed for 2 seconds, confirming a positive self-test. Operativeness is given. Then the unit shuts down automatically.

Please take this opportunity to check the proper position of the arming cable.

If the self-test should detect any irregularities, the display would not show the „0“ but a four digit error code like „1111“ or „2222“ etc. In this case, the operativeness is not given. Please contact your service point or Airtec directly.

Error codes are explained in chapter 4.



### WARNING

**Malfunction can result in false activation / no activation:** Every technical device can fail. So everything imaginable can happen with the CYPRES, including, but not limited to: displaying a status which is not true, failing to function, or functioning at a wrong moment or at a wrong occasion. Such inappropriate act can easy injure or kill you or others. If you or your friends or relatives are not willing to accept these uncertainties and risks, then you must not use CYPRES.

## 2.3 Access to unit information

The Aircrew CYPRES 2 provides an easy way to view

1. the activation counter,
2. the unit's serial number,
3. the next maintenance date\*
4. and the current upper edge of the activation altitude in feet

When the 0<sup>v</sup> appears at the end of the switch-on procedure press the button immediately and keep it pressed.

Each value is displayed for 5 seconds, then the next value shows up.

You can stop the information sequence whenever you want by just letting go of the button.

\* After the 10 year maintenance has been performed, the words 'maint. no' and the date of the total lifetime (end of life) is shown.

1. display of the activation counter



2. display of the serial number



3. next possible maintenance in 08 / 2023



4. upper edge of activation altitude



## 2.4 Water contact

Because of its arming cable, the Aircrew CYPRES 2 is not waterproof.

If an Aircrew CYPRES 2 is exposed to water, please send it in for a free inspection.

### 3. Installation

During the first years after introduction of the CYPRES AAD it was necessary to establish a testing and evaluation procedure for the installation



of this new AAD into the existing harness/container systems, as there was no such AAD concept on the market.

The installation had to be tested and approved. This was solely done at Airtec GmbH & Co. KG in Germany until 2012. Airtec GmbH & Co. KG undertook this

task in preference to the harness/container manufacturers to find out the best and safest possible installation for each system.

The resulting installation instructions, in all its variations, originated from the different construc-

tions of the different harness/container systems, should not create any negative influence on the original function of the CYPRES unit, which is the cutting of the reserve closing loop. It had to be assured that the initiation of the reserve opening (severing the closing loop) did not hinder the reserve development in any way.

All CYPRES installations should be performed and approved by the harness/container manufacturer in collaboration with the AAD manufacturer.

Should you wish to install a CYPRES into a container which does not have a CYPRES set-up, you should contact the harness/container manufacturer for advice and instructions.

#### **NOTICE**

„Each parachute manufacturer approves the installation of the AAD on their equipment.“ 12/04/13 AC No:105-2E Page 4 part 2.b. of Advisory Circular of U.S. Department of Transportation, Federal Aviation Administration

#### **⚠ WARNING**

**Retrofit:** Comply with the specific retrofit instructions of the harness/container manufacturers.



CYPRES can be assembled into rigs with existing setups. Please refer to the harness/container manufacturer if in doubt.

It is necessary to place the processing unit into the pouch so that the cables lay flat on the bottom of the pouch. Control unit cable and cutter cable(s) must be placed without tension.

Excess cable is stowed in the flat part of the pocket underneath the velcro-adjustable flap. If you have to stow both the thinner cutter cable and the thicker control unit cable, be sure to place the thicker cable so that it lays on top of the thinner one. Cables should be placed in a circle in order to avoid twists. Always avoid pulling, bending, twisting, or kinking the cables.

### **⚠ WARNING**

**Inappropriate installation can result in inappropriate container opening performance.**

That can cause injury or death. Never install a CYPRES by trial and error.

Removal of CYPRES can be done by the owner without any problems. Do not pull on the cables, instead push the processing unit, cutter and control unit from their keepers.



- wrong**
- cables not flat on bottom
  - unit is inserted up side down
  - thin cable on top of thicker cable
  - cable is bent



## 4. Error Display

If there is an error condition detected during the self-test countdown, CYPRES 2 shows an error code on the display.

**1111** or **2222** One or both of the attached release units are not correctly electrically connected to the unit. The reason may be a cable break, the cutter plug could be disconnected, or the release unit(s) may have activated. Check / replace the release unit(s).

**3333** Excessive variations in ambient air pressure have been measured during the self-test period. The unit is unable to obtain consistent values for the ambient air pressure at ground level. Possible reasons could be that an attempt to switch CYPRES on has been made in a car driving uphill or downhill, in an elevator or in a flying aircraft. The switch-on procedure can be performed several times after a **3333** error was displayed. If **0'** is displayed, the unit has successfully gone through the self-test.

Codes 1-3 are displayed for approx. 2 seconds, then unit switches itself OFF. (Display goes blank).

**PSE** unit reached last month of the total service life, displayed for approx. 5 seconds, unit remains ON

Additional error codes for units produced / serviced on or after January 2013.

**Pdo** Power Down

**CH5** Checksum Error

**PSE** Pressure Sensor Error

After one of these three error codes appears, the unit switches OFF and cannot be switched on again. Please discontinue use and send the unit in for service.

If other error codes appear in the display, if the unit switches itself off and can not be switched on again, if the unit does not switch off after 14 hours, if there is no red light when the button is pressed, or if anything else unusual occurs please record the error code and contact Airtec or SSK before further use!

### **WARNING**

**Malfunction: A malfunction can easily injure or kill you or others.**

Every technical device can fail. So everything imaginable can happen with the CYPRES, including, but not limited to: displaying a status which is not true, failing to function, or functioning at a wrong moment or at a wrong occasion. If you or your friends or family are not willing to accept these uncertainties and risks, then you must not use CYPRES.

## 5. Changing the release unit(s)

After an activation the release unit can be changed by your rigger packer via the plug-and-socket connection.

Disconnecting the release unit:

Hold plug and socket by their aluminium grips and pull them apart using a smooth straight motion. Do not twist!



1-pin Cutter



Connecting the release unit(s):

Hold plug and socket by their aluminium grips. Place the plug directly in front of the socket and connect them by pushing together with a smooth straight motion until it is completely seated.

Do not twist!



It is easy to change a 1-pin CYPRES to a 2-pin or CYPRES or vice-versa, by swapping cutter types.

2-pin Cutter



## Notes:

1. Any CYPRES cutter is fully compatible with any CYPRES 2 unit. It can be used with older and newer units. The decisive factor is that both must be within their service life.
2. Release units (cutters) have a serial number on a heat shrink tubing placed on the cable. This number identifies the cutter. To get the end of service life date of your cutter, please check our database with the cutter serial number list at [www.cypres.cc](http://www.cypres.cc)
3. It is possible that the cutter plug separates from the socket after a CYPRES activation. In the rare combination of this event and a water landing, the socket must be dried out before further use. Do that by tapping the open end of the socket onto a flat surface such as a table top. Once no additional water comes out while tapping on the table top, store the CYPRES with the open end of the socket hanging downward for another 24 hours in a dry area, to allow the socket to dry out completely. When completely dry, insert the plug of the new cutter. Never insert an object (i.e. Q-tip) to dry out the plug.
4. Use a one-pin cutter in a one-pin container and a two-pin cutter in a two-pin container.

### **WARNING**

Do not use release units (cutters) after the end of cutter service life (16,5 years after DOM)

Technical service / maintenance is also offered for release units (cutters) that are / were attached to a CYPRES unit. The DOM of the CYPRES unit (with the attached cutter) determines the service schedule. See chapter 14.1.

New release units (cutters) that were never attached to a CYPRES unit and were stored (according to manufacturers instructions) do NOT need to be sent in for maintenance within the service time frame.

## 6. Technical service / maintenance

The extremely reliable function of CYPRES is based on 4 facts: exclusive use of carefully pretreated and approved parts, strict detailed manufacturing procedures, continuous quality control and monitoring through the manufacturing process, and regular periodic technical service (maintenance). We offer a maintenance for 4 primary reasons:

1. Deviations between nominal and actual values are corrected to ideal values. Every detail is observed. It is common that signs of wear and tear are corrected and sometimes even ‘cosmetic’ treatment is done.
2. The technical condition of each unit is analyzed. The fact that a very high percentage of units are returned for the periodic maintenance gives the ability to see statistical trends and to predict potential problems at a very early stage. The advantage: it is often possible to prevent situations by modifications during the maintenance procedures, rather than having to fix problems with downtime later.

3. Experience shows that during a period of a maintenance cycle, changes and improvements do happen. Applicable updates are performed during maintenance. Such updates may have the background of technical improvements, or enhancement of knowledge, or may result from environmental changes or changes in the sport (e.g. new disciplines), which Airtec is always researching and taking into consideration.
4. The most important part of the maintenance is the individual pre-adjustment of each unit for the next cycle. A unit will not be returned before a high confidence level is reached regarding the prediction of the unit’s proper function for the next cycle.



### **WARNING**

**Reliability:** As NOTHING lasts forever, the longer you use a device without a thorough check, the greater the chance that it does not work properly every time you need it. If you choose to not have maintenance performed on your device you’re taking the risk that the reliability level will decrease.


For maintenance cycle schedule see chapter 10. The earliest possible date for the CYPRES 2 maintenance is 6 months early, the latest 6 months after the month of manufacture. This maintenance window gives you more freedom, and avoids maintenance down-time at the wrong time of the year. It's smart to choose a suitable time during the 13 month window for sending the unit in for maintenance, rather than waiting until the last possible moment, or until the beginning of the next season.



Reaching the end of the first maintenance cycle your CYPRES will start to tell you that there is a maintenance possible in six month from then and the unit will display the proposed month and year.

That will happen after switch on in the self-test between the unit showing  and . From there on you have one year to give it to us and be in the maintenance window. If you don't do it until the proposed date, then the unit will show month and year for a little bit longer than it did before.

Three month after the proposed date it will show month and year for an even longer time.

However, after this remembering your unit will always proceed and will go to  and be usable for you.

If we receive your unit from exactly 6 month before the proposed date until six month after the proposed date (that means in the maintenance window) in our place for a maintenance, we will execute the procedure with all the details and consequences as described in this manual. The price for this treatment will be the CYPRES maintenance flat rate, even when a unit requires extensive repairs.

If you want us to do the maintenance, we really ask you to please give us your CYPRES in the meaningful time span. And not earlier and not later. In case we receive your unit in our place outside of this time window we will possibly still be willing to execute a treatment, but the details and the consequences will likely be different and the price will be significantly higher.

If a first maintenance has been done on your

CYPRES, then your unit will give a second notice for a second (and last) maintenance when reaching the end of the second maintenance cycle. This will happen regardless of when a first maintenance was done.


After the second maintenance, CYPRES 2 should be usable until the end of life. For service life schedule see chapter 10.

During the service life of a CYPRES 2 unit, the parachutist should not have any operation costs other than the 2 maintenance fees (except for any required replacement cutters or waterproof filters). Please contact your local CYPRES dealer concerning the maintenance. Please contact Airtec when you don't know who your local dealer is.

The CYPRES Service Center for the USA, Canada,

South America and other Western Hemisphere countries is:

SSK Industries, Inc.,  
1008 Monroe Road  
Lebanon, OH 45036 - USA  
Tel: ++ 1 513 934 3201  
Fax: ++ 1 513 934 3208  
email: [info@SSKinc.com](mailto:info@SSKinc.com)  
[www.SSKinc.com](http://www.SSKinc.com)

 <b>WARNING</b>	
<p><b>Reliability:</b> As NOTHING lasts forever, the longer you use a device without a thorough check, the greater the chance that it does not work properly every time you need it. If you choose to not have maintenance performed on your device you're taking the risk that the reliability level will decrease. (See chapter 10 for maintenance / utilization cycle.).</p>	



## 7. Important notes for users

- CYPRES 2 is shielded against radio-transmitter signals. Extreme concerted efforts have been taken to protect the Aircrew CYPRES 2 from „radio pollution“. Although the extraordinary shielding system of the Aircrew CYPRES 2 has been investigated thoroughly, it is impossible to have 100% protection. It is still recommended to avoid strong radio-transmitters. Please contact Airtec if you have questions.
- A release unit that has activated builds up a high internal pressure and will remain pressurized. Never attempt to open it by force. It can, however, be stored safely for an indefinite period of time, provided that it has not been damaged.
- Please do not post process or alter the Aircrew CYPRES after receipt of the goods from the manufacturer.
  - do not apply any kind of super-glue/glue to any parts of the Aircrew CYPRES system. This may cause severe damage to the system and will void the guaranty.
  - do not retighten any attached lid's or screws of the Aircrew CYPRES. Some lid's on the processing unit are not plain with the casing, and it needs to be kept this way. Any altering of the original parts will void the guaranty of the complete system
- Since 2007 we only use a black covered arming cable housing. The former version (without cover) is too flexible, during use the arming cable can get partially pulled out, arming the unit unintentionally. To avoid this, the black covered arming cable housing must be used.



## 8. Rigging/Parachute Issues

Previous reserve container closing loops were made from old parachute suspension lines or similar material consisting of Kevlar, Dacron, Spectra etc. They were often thick, rough and became stiff while under tension in a packed container for a long period of time. As a result these loops could delay the reserve container opening or even avoid it after the ripcord was pulled because they became trapped between the grommets.

A number of skydivers died because the reserve flaps did not open in time.

To fasten the reserve closing loops in the container bottom riggers and packers used normal metal washers. Sometimes these washers had sharp edges. A loop which is under a lot of tension in the container could be damaged and cut accidentally by those sharp edges. Especially from vibration in a car or in an aircraft.

Skydivers were killed by premature reserve openings, caused by fraying loops. Even an aircraft crashed because of a premature reserve opening. Our intention is to make skydiving safer, so we

worked on this issue. In 1991 and 1992 we designed a loop and disc solution to reduce these risks as much as we could.

The CYPRES loop is woven like a tube, so it can be inserted into itself to create the closing loop's eye. At the same time it is only 11/16 inch in diameter (1.8 mm), is extremely flexible and has an extra smooth surface to make it extremely slippery. In addition CYPRES loops are treated with a special silicone on the upper 1.5 inch (4 centimeters) to maximize the smoothness of its surface giving it even less friction when passing through the reserve container grommets and the cutter.

Although the loop is really narrow, its breaking strength is in excess of 408 lbs (185 Kp).

The CYPRES disc (often called a smiley because of its looks) is a small piece of artwork. It is a round aluminium disc with no sharp edges. Within its surface it has 3 passing holes.

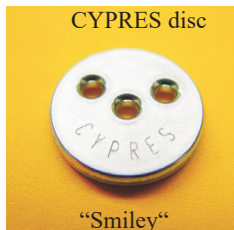
The fingertrapped loop is threaded through the middle hole and then through the left hole, the loop then gets threaded through the right hole, and knotted.

With this, the knot only realizes one third of the force when the loop is under tension. Without reducing the extreme tension the knot will shrink and pull it through the disc.

The three holes have no sharp edges. It is a very extensive procedure to manufacture this disc, but loop tearing has reduced to almost zero by using this product.



- extremely flexible
- extremely slippery
- breaking strength: 450 lbs
- diameter: 11/16 inch



- no sharp edges
- minimal loop tearing

Both the loop and disc together as a system has certainly made skydiving significantly safer during the last two decades. Totally separate from CYPRES. Since the system was introduced to the scene in 1992, approx. 1,010,000 discs and well above 4,000,000 loops have been manufactured by Airtec and given to rig manufacturers, riggers, and packers worldwide to improve safety in the sport.

Nowadays it's unlikely to find a rig worldwide, with a reserve container that is not closed by the CYPRES Closing Loop System.

In addition to making its technical effect inside the reserve container, this CYPRES Loop System has another advantage. It reduces the necessary pull force on the reserve ripcord handle by up to 50%. A huge help for all those skydivers who, for one reason or another, have difficulties with the pull force.

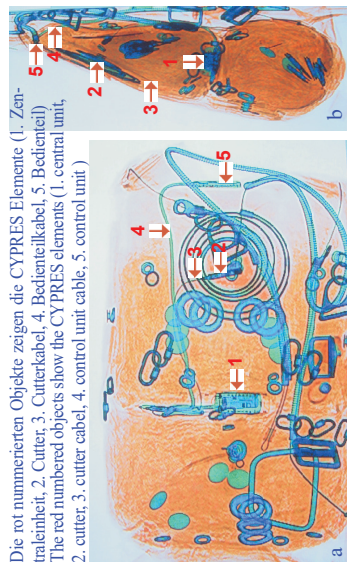
Like to view the genuine CYPRES Loop System? Take a look at your reserve container; it will most likely be there.

## 9. Regarding Air Travel

A CYPRES equipped rig may be transported in freight and passenger airplanes without restrictions. All its components (e.g. measuring technique, electronics, power supply, loop cutter, control unit, plugs, cables, casing) as well as the complete system, contain parts and materials that are approved by U.S. DOT and other competent agencies world-wide, and are not subject to any transport regulations.

Because of the size of a rig we recommend to check it in as normal luggage and to not take it on board as hand luggage. In case of questions or objections from the security personnel, please use the card shown on the right which you'll find in the back cover of this book. The card shows an X-ray of a complete rig with CYPRES 2. Depending on type and design of the rig the X-ray on the security's screen may vary.

Presently, the Parachute Industry Association and the USPA are working with the Transportation Security Agency concerning traveling with parachutes.



If you've lost the card, you can get a new one from Airtec or SSK.

original card located in the back cover

## 10. Technical Data

for the Aircrew CYPRES 2 excluding the ripcord housing for the activation handle:

Length, width, height of the processing unit: .....	approx. 85 x 43 x 32 mm
Length, width, height of the control unit: .....	approx. 65 x 18 x 6,5 mm
Length, diameter of the release unit: .....	approx. 43 x 8 mm
Cable length of the release unit: .....	approx. 500 mm
Cable length of control unit: .....	standard approx. 650 mm or 1200 mm
Volume .....	standard approx. 144 cm <sup>3</sup>
Weight: .....	standard approx. 260 grams
Standard activation altitude: .....	user adjustable between approx. 14.000 feet and 2000 feet MSL,
Activation speed: .....	approx. 35 m/s (6,900 feet/min)
Storage temperature: .....	+71° to -50° Celsius
Working temperature: .....	+63° to -32° Celsius *
Maximum allowable humidity: .....	up to 98 % rel. humidity
Operating range below / above sea level: .....	-1,600 feet to +65,500 feet (-500 m to +20.000 m)
Minimum operating altitude: .....	700 ft / 200 m / + deployment distance of parachute in use
Functioning period (once activated by pulling the arming cable): .....	14 hours
Maintenance (voluntary): .....	5 and 10 years from date of manufacture
Power supply: .....	lifetime warranty**
Total lifetime: .....	15,5 years from date of manufacture***

\* These temperature limits do not mean the outside (ambient) temperatures but rather temperatures inside the processing unit. Therefore, these limits won't have any meaning until the processing unit itself has reached the temperatures in question.

\*\* If maintenance has been performed.

\*\*\* Anticipated, according to the present knowledge base.

## 11. Warranty

Airtec GmbH & Co. KG provides the 2 year warranty required by law, and 3 additional years where all repairs are free of charge, except resulting from intentional or negligent damages.

Thereafter, on a voluntary base Airtec will be open to provide repairs or replacements for all non intentional or non negligent damages free of charge to all those customers who submit their units for maintenance on schedule.

This is a CYPRES practice already since 1991.

The manufacturer reserves the right to decide whether the unit will be repaired or replaced. Neither repair nor replacement will affect the original warranty.

When a CYPRES 2 unit is returned to the manufacturer or service center, it must be packed in the original box or an equivalent shipping package including an entirely completed Service Form / proper documentation for billing purposes, return shipping information, contact information, and any other relevant notes.

No claims will be accepted if the unit has been damaged or has been opened by an unauthorized individual, or if an opening of the processing unit, release unit (cutter) or control unit has been attempted.

## 12. Disclaimer

In designing and manufacturing CYPRES, the aim of Airtec GmbH is that the device should never cause an accidental canopy opening, but should initiate the opening sequence of a reserve canopy at an appropriate altitude when the activation criteria are met.

All investigations and experiments performed during the product's development, and all laboratory and field tests accompanying trial and production phases have shown to date that CYPRES meets both requirements.

However, the occurrence of a malfunction cannot be excluded. We accept no responsibility for damages and consequences resulting from any malfunction.

Airtec GmbH also accepts no responsibility for damages or problems which are caused by the use of non original Airtec parts and supplies or modified or old, out of date Pilot CYPRES parts in combination with new Aircrew CYPRES units. The use of CYPRES does not automatically prevent from injury or death. Risk can be reduced by assuring that each component has been installed in strict

compliance with the manufacturer's instructions, by obtaining proper instruction in the use of this system, and by operating each component of the system in strict compliance with this User's Guide. Automatic activation devices (AADs) sometimes fail to operate properly, and sometimes activate when they should not, even when properly installed and operated. Therefore the user risks serious injury or even death to themselves and others during each use.

By using or allowing others to use CYPRES, you acknowledge that you accept responsibility for the proper use of the device, as well as accepting the consequences of any and all use of this device. Airtec GmbH, their Dealers, Service Centers, and Agents total and complete responsibility is limited to the repair or replacement of any defective device. CYPRES is strictly a backup device, and is not intended to replace proper training or timely execution of appropriate emergency procedures.

Note: not all features described are available on units manufactured prior to Jan 2013 until the next software update is performed.

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## 14. Packing List

In addition to the Aircrew CYPRES 2 unit and the user's guide, the following items will be delivered:

For 1-pin Aircrew CYPRES 2:

- 1 metal ripcord cable housing for the activation handle
- 1 arming cable
- 2 1-pin loops
- 1 pull up
- 1 disc

For 2-pin Aircrew CYPRES 2:

- 1 metal ripcord cable housing for the activation handle
- 1 arming cable
- 2 1-pin loops
- 2 pull ups
- 2 discs

For 3-pin Aircrew CYPRES 2:

- 1 metal ripcord cable housing for the activation handle
- 1 arming cable
- 2 1-pin loops
- 1 2-pin loop
- 2 pull ups
- 1 disc

## Trade Marks

CYPRES is a trade mark of Airtec GmbH.

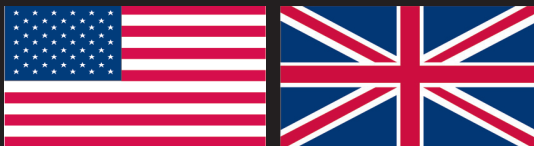
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**CYPRES 2**  
Reliability made in Germany



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