

ICARO
PARAGLIDERS

INNOVATIVE
CREATIVE
AIRCRAFT MADE IN
ROSENHEIM

MANUAL

© Fly & more Handels GmbH, ICARO Paragliders

LITE 105/120 ***Lightweight Rescue systems***

Version: 1.2 – E, 09.05.2012

Congratulations on buying a new
LITE 105/120
lightweight rescue system and
welcome to
the **ICARO** family!

Your ***Lite 105/120*** rescue system

- is made with great care and state of the art,
- is tested according Notification of the Federal Aviation Administration of Germany ¹
(Lite 105 additional European Standards EN 12491:2001 ²),
- is pattern tested as an lightweight rescue system and
- is not suitable for tandem- flying.

**THESE RESCUE SYSTEMS
ARE NOT SUITABLE FOR
SKYDIVING!**

¹ „Directives about airworthiness for hang- and paragliders (LTF NfL II 91/09)“.

² Paragliding equipment – rescue systems –Requirements and test methods

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Please read this manual before first flight!

- This manual give you informations on the entire specific and general characteristics of the **Lite 105/120** .
- All technical data and instructions in this manual were drawn up with great care. Fly & more Handels GmbH ICARO Paragliders cannot be made responsible for any possible errors in this manual.
- Should you decide to sell this rescue system at a later date, please pass on this manual to the new owner.
- Any important changes to this manual will be published in our Homepage (www.icaro-paragliders.com).
- Paragliding is an extremely demanding sport requiring the highest levels of attention, judgment, maturity, and self-discipline. Due to the inherent risks in flying this or any paraglider.
- No guarantee of any kind can be made against accidents, injury, equipment failure, and/or death. It is assumed that the pilot is in possession of the necessary qualifications and provisions of any relevant laws are observed.
- The use of this rescue system is entirely at your own risk.
- Every pilot bears the responsibility of his/her own safety. the manufacturer or distributor assumes no responsibility for accidents occurring while using it.
- Do not fly unless you are personally willing to assume all risks inherent in the sport of paragliding and all responsibility for any property damage, injury, or death, which may result from use of this paraglider.
- It is strictly prohibited to fly the **Lite 105/120**
 - beyond the minimum and maximum recommended weight
 - for skydiving
 - with damaged
 - canopy,
 - lines,
 - connection belt or
 - seams.
- Every pilot must ensure that the rescue system is properly checked at regular intervals.
- This rescue system is not covered by product liability insurance.

- We ask for your understanding that all guarantee claims (can be read in the section guarantee terms in this manual) can only be put to a claim if
 - the correctly completed guarantee card is filled out (can be found in this manual or on our website www.icaro-paragliders.com)
 - and sent to Fly & more Handels GmbH ICARO Paragliders within 6 weeks after purchasing the glider at an official dealer/school of ICARO paragliders,
 - checks are carried out by an from ICARO paragliders authorised check establishment and
 - no alterations of the configuration without authorisation of Fly & more Handels GmbH ICARO Paragliders are performed.

Guarantee will be prolonged to next 2-year-complete-check.

!!! IMPORTANT !!!

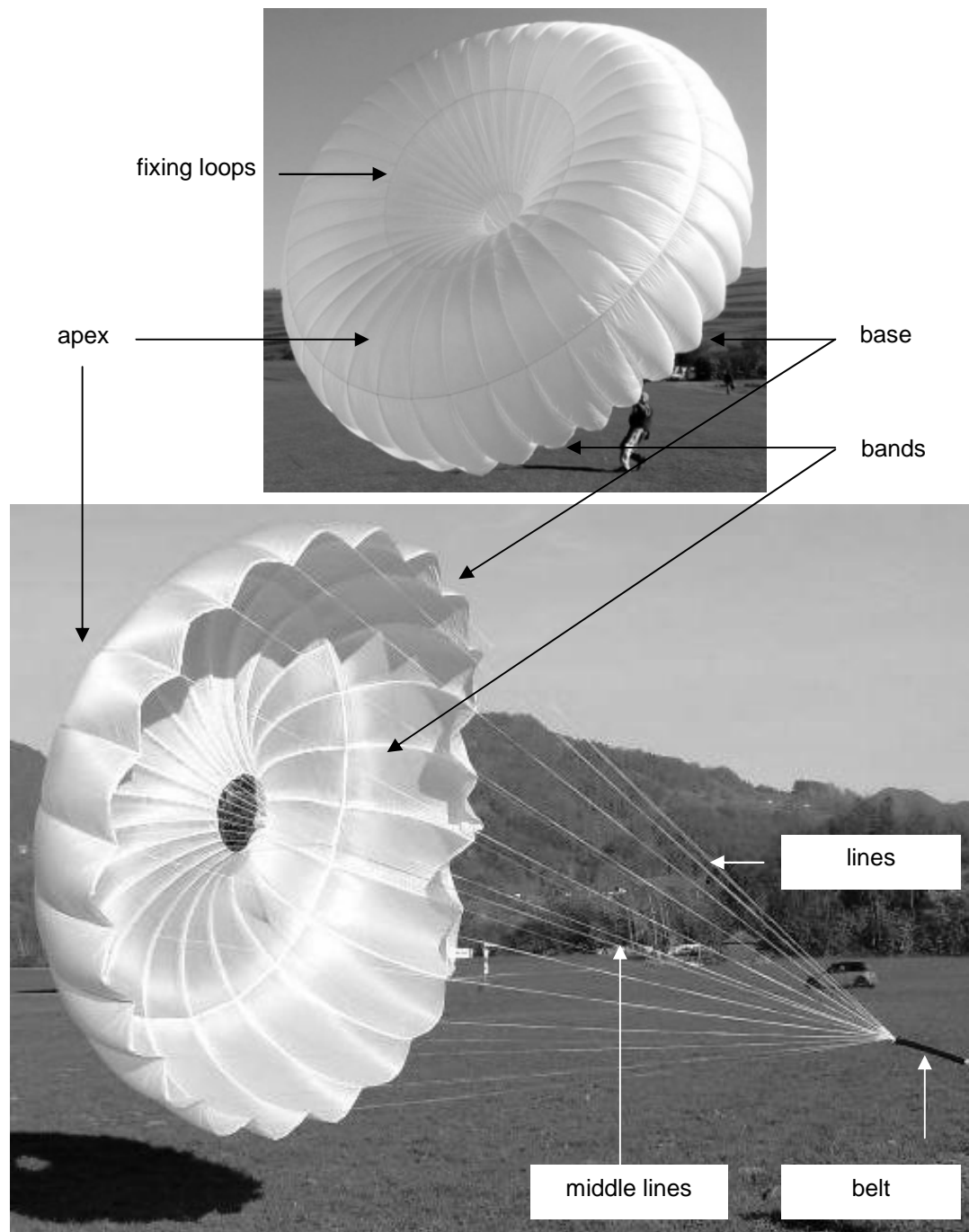
**For your own safety we recommend to let
some air in, pack and check rescue systems
which are frequently flown in sandy or
salty conditions, high humidity etc.
in shorter intervals.**

I. Your **Lite 105/120**

Characteristics of Lite 105/120

Lite 105/120 are made from high quality materials and have a circular canopy with pulled down apex. Manually deployable rescue system are suitable for hang gliding and paragliding pilots in an emergency situation.

Lite 105/120 rescue systems from ICARO are characterized by a high level of reliability and maximum material strength. Fastest inflation while maintaining moderate sink rates are features of these systems.



Technical Data

ICARO Rescue Systems	Lite 105	Lite 120
Area	34 m ²	38,5 m ²
Number of panels	16	22
Weight including container	1,3 kg	1,45 kg
Volume packed	3045,3 cm ³	3748,1 cm ³
Volume unpacked	3739,3 cm ³	4260,4 cm ³
Maximum load allowed	100 kg	120 kg
Rate of descent by maximum payload	5.4 m/sec	5,9 m/sec

Structure and how the rescue system works

The material is air permeable, strong nylon. There are bands sewn into the main seams to strengthen the canopy. The base and side edges are reinforced with bands.

In an emergency situation, the handle of the rescue system is given a sharp pull. The special thread which holds the closing splint breaks.

The pilot throws the container into the air. As the suspension lines become tight, the container will fall away and the reserve will open.

Important: *When you are flying recurrently grab the position of the handle so you can find it in an emergency!!*

If you have enough height, first try to resolve the problem and stabilize the glider as far as possible (danger of screwing of the bailout).

If you have not enough height don't hesitate for pulling the rescue.

Do not forget to unhand the rescue handle!

The throwing movement should be practised every time the rescue system is repacked.

II. Packing Instructions

Packing Preparations

Before packing the rescue system it is important that the canopy is spread out on the ground for about six hours.

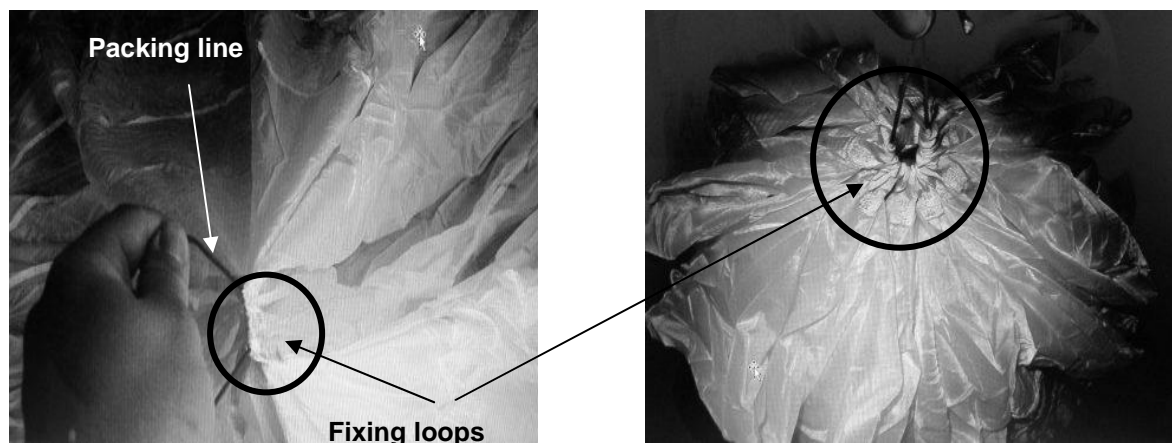
If possible, it would be even better to hang it in the air one night long. Before the rescue system gets packed, it must be looked over. If it has been deployed, it must be properly checked.

After having the rescue system packed, please ensure that rescue system and harness fit to each other. The force measured in the deployment handle should be between 5 and 8 kp.

Pulling the packing line trough the fixing loops

To help you pack the rescue system, use a short piece of old paraglider line and thread it through all the apex fixing loops.

The fixing loops are on the upper third of the canopy.



Attach the rescue system to a fixed point

Attach the apex to a stable fixed point.



Dividing and sorting the suspension lines

Next sort out the suspension lines.

Please make sure that the middle lines are in the middle and the other lines to the side.

There must not be any tangles or knots in the lines.

***Sorting the panels***

Take the lines in your hand as shown in the photo and fold over each panel from left to right like turning the pages in a book.

***Division of panels***

Lay down the canopy so that there are the same numbers of panels on each side (keep the canopy under tension).

Use sand sacks to weight down the base of the canopy.



Laying out the panels

Fold the left side onto the right side. Then lay each panel separately and precisely back to the original side. Do the same with the other side.

***Remove the line from the fixing loops!******Folding the canopy into thirds***

The left third is folded onto the middle and then the right third is folded under the middle.

***S-folding canopy to fit into inner container***

Fold the canopy in "S" folds from the top right down to the base, so that it fits into the inner container.



Folding the suspension lines

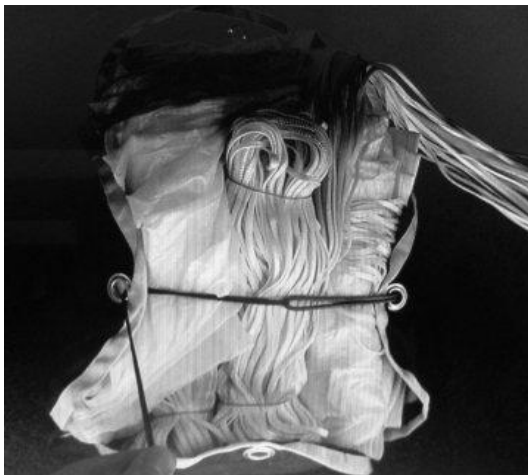
Fold the suspension lines using two fingers in "S" bundles and fix with special rubber bands.

Important: *Please use new rubber bands each time you repack.*

These are special rubber bands which you can buy from the manufacturer.

***Fitting the rescue system into the inner container***

The folded suspension lines are placed on the rescue chute as shown. Use a packing thread to pull the rubber loop through the eyelets of the inner container. The rest of the suspension lines are secured with the rubber loop. Make a note of the date of packing in the pack control booklet.

***Installing your rescue system***

Most harnesses have a handle for the harness containers. This handle must be connected to the inner container.

The inner container of ICARO rescue systems has two loops, in which the handle of the harness can be attached (center, side).

Handles for front and back containers are generally suspended in the central loop, container on side or under the seat, the side strap used.



Important: *Note the instructions for the rescue unit in the operating instructions of your harness.*

If there is no handle of the harness or it does not fit with your inner container, please ask the dealer of your harness or your paragliding school.

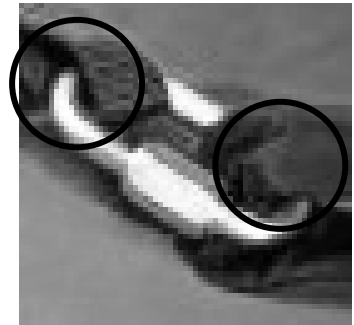
The handle must be firmly connected to the loop on the inner container (opening strength < 70 N).

Attachment of the connection belt with the harness

For connecting the two belts use a fixable 24 KN- snap hook with a diameter of 8 mm.

It is very important that the snap hook cannot twist to prevent traverse stress of the snap hook.

Therefore use cable fixer, adhesive tape or strong rubber bands and pull it **above and below the snap hook** around the belts.



Another fixing method is to put the belt of the rescue system through the connection belt of the harness and then the rescue system through the harness belt as shown in the photo.

It is just as very important that the knot is very tight fastened.

Therefore use cable fixer, adhesive tape or strong rubber bands and pull it **above and below the knot** around the belts.



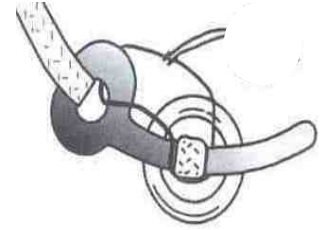
Important: *Please pay attention to the symmetry of both lines.*

Neither side of the loop must be longer than the other.



In order to avoid unwanted release of the rescue system, the closing splint must be held with a special thread (50 N) which is made with certified material. This special thread can be purchased from ICARO.

Important: *A higher breaking force could otherwise endanger the release of the rescue system!*



Compatibility- check

A control of every new combination of rescue system and harness/outer container has to be carried out by either the producer of the harness or the rescue system or an authorized person (dealer or flight instructor).

The activation of the rescue system in flight position has to be correct and in conformity to the construction guidelines.

Important: *The check has to be recorded in the documentation of the rescue system.*

IMPORTANT POINTS TO LOOK OUT FOR:

⇒ Check (steady)

- connection of the rescue system to your harness
- connection of the harness and deployment handle
- the closing splint must be held with a special thread

⇒ line from the fixing loops is removed (after each packing)

⇒ Check compatibility of rescue system and harness

⇒ Before each start with your glider you have to check the container is closed !!!

III. Care, Maintenance and repair

Care Instructions

- Please do not store your rescue system in the vicinity of acids, grease, oils or paint. To ensure safe operation, the system needs proper maintenance and care.
- Do not store your rescue system in extreme temperatures or humidity (more than 30⁰ C or 55-65% humidity).
- A humid or wet canopy needs repacking.
- Exposure to UV-rays causes deterioration the fabric.
- Please only use clean and fresh water to clean your rescue system or container.
- Dry your system in such a way that air can get all to the fabric (NOT lay drying in the sun, not to dry on a level surface, with a slight breeze in the shade depend on a leash or otherwise span).
- Wet cloth stored in warm conditions will begin to mould and significantly lose structural strength. Rescue systems in this condition must be brought to the manufacturer to be checked out.

Important: *It may take several days your second chance to dry out completely especially the lines of the rescue system, which take longer than the fabric.*

Do not fold and store your rescue system prematurely if it not completely dry. Mildew may damage your harness and your rescue system.

Repairs

Important: *The seal of approval can only be preserved if original parts are used. If you discover any damaged parts to the rescue system which might impede deployment, please send it back to the manufacturer to be repaired.*

Repairs can only be carried out by the manufacturer or from the manufacturer authorized persons.

Use Limitations, packing- and check intervals

Use limitation

10 years; The rescue system is allowed to be used for a time span of 10 Years by observance of the regulations for packing and checking. Certification is no longer valid thereafter.

The certified life span can be extended by a further three years, if the rescue system is checked by the manufacturer every year.

Packing interval

6 month; the rescue system also must be aired after 6 month

Check interval

2 years; when the rescue system was opened after an flight accident the rescue system is to be checked.

Important: Packing and checks of the rescue system must be documented otherwise guarantee is cancelled.

Documents required

- Manual
- Packing Instructions
- The Airborne Sport Equipment – Reference in the appendix is a fixed part of this manual.

IV. Terms of the guarantee

The Fly & more Handels GmbH ICARO Paragliders guarantees the proper processing, an operation within the allowable limits of proper operation and the fulfillment of the eligibility criteria of glider / harness / rescue equipment at the time of first delivery by the Fly & more Handels GmbH ICARO Paragliders.

What is covered by the guarantee?

Provided that Fly & more GmbH accept the fault the guarantee contains all necessary spare parts related to the replacement or repair of defective parts and working time.

How long is the guarantee?

Rescue system: 3 years calculated from the day when the rescue system was delivered through Fly & more Handels GmbH.

What are the conditions of the guarantee?

- Fly & Handels GmbH needs to be informed immediately after the discovery of a defect and the defective product must be sent to us for testing.
- The rescue system was used in normal circumstances and maintained according to the instructions. This includes in particular the careful drying, cleaning and storage.
- The rescue system was used only within the applicable guidelines and all rules have been complied with all times.
- There were only original spare parts used and checks, exchange and / or repairs were conducted by an authorized dealer or by Fly & more Handels GmbH ICARO Paragliders company / person and properly documented.
- A fully and correctly completed guarantee card must be sent at least 6 weeks after buying the glider to Fly & more GmbH commercial. Alternatively can this be sent via the appropriate online form on www.icaro-paragliders.com.
- Fly & more Handels GmbH ICARO Paragliders does not accept any responsibility or replacement of the above obligation. However, there is the possibility that there will be a sign of goodwill.

What is excluded from this guarantee?

- Rescue systems which were involved in an accident,
- Rescue systems, which have been changed by yourself,
- Rescue systems that were not purchased from an authorized dealer / flight school,
- Rescue systems where the required inspection intervals were not met and the verification of the Rescue system was not conducted by a Fly & more Handels GmbH Icaro Paragliders authorized operation / person
- Damage which has occurred due to improper treatment (zB.storage)
- Parts that need to be replaced due to normal wear and tear
- discoloration of the cloth material used,
- Damage caused by solvent, insect damage, ultraviolet rays, sand and salt water and
- Damage caused by force majeure.

How can I claim guarantee?

In order to claim a guarantee Fly & Handels GmbH ICARO Paragliders needs to be informed immediately after the discovery of a defect and the defective product returned for inspection. Fly & more Handels GmbH ICARO Paragliders accept no freight costs (outbound and return transportation).

V. Enviromental aspects

The materials of which a paraglider is made require a special waste disposal. So please send disused gliders back to us. We will care about a professional waste disposal without costing for you.

VI. Attitude and behaviour towards nature

Actually it's self-evident, but nevertheless we would like to mention particularly:

- Please do our nature-near sport in a way which doesn't stress nature and environment!
- Please don't walk beside the marked ways, don't leave your litter, don't make unnecessary loud noises and respect the sensitive balance in the mountains.
- Especially at the take-off we have to take care for the nature!

****Especially at the launch site consideration is needed! ****

VII. Last but not least ...

Again, we would like to congratulate you on your purchase of an ICARO rescue system!

The ICARO team thanks you for your confidence in our brand and we always have an open ear for your questions, suggestions or criticisms.

This rescue system has been manufactured with up-to-date development and manufacturing procedures and will provide you with customer satisfaction and security for years to come.

Your ICARO-Team



Appendix: *Guarantee card, Checksheet***GUARANTEE CARD**

Owner of glider/ harness/ rescue system

Name	
Address	
Zip Code	City/ country
Phone / Fax / e- mail	
Common flying site	Flight experience

Main field of usage of the glider/ harness (please mark)			
Leisure	Competition	Training	Professional
Acro	Powered	Commercially	

Datas above glider/ harness/ rescue system		
Type und size of glider/ harness/ rescue system	Purchasing date	Serial number

Dealer/ICARO agency: (Name and address or stamp)

Furthermore, I would like to inform Fly & more Handels GmbH / ICARO Paragliders as follows:

-

Date

Signature

All personal data will be treated in strict confidence and not passed on to third parties without your consent.

Checksheets for rescue systems				
Client (Name, Address):				
Type / size / year of construction :			Serial number:	
Certification number:			Date of last inspection:	
			Memos	yes no
Was an emergency tripping necessary?				
Where did you land after this emergency tripping?				
Necessary repairs?				
Was there a splashdown?				
Canopy	Visible damages?			
	Any dirt on the canopy ?			
	Holes in the canopy?			
	Seams ok?			
	Notations on the panels ok?			
	Certification stamp readably?			
	Apex fixing loops ok?			
Lines	Visible damages?			
	Seams ok?			
	Middlelines frayed?			
	Connection middleline to suspension lines on the top ok?			
	Suspension lines frayed?			
Inner container	Visible damages?			
	Loops for the deployment handle ok?			
	Rubber loop ok?			
	Eyelets ok?			
	Deployment handle correct fixed?			
Container correct closed?				
Compatibility check effected?			Additional repairs carried out? Which?	
Pack control booklet noted?				
Inspection stamp affixed?				
Overall result of the rescue system				
As new			Next inspection:	
Very good				
Used				
Much used				
certification only for one year				
not airworthy			Date, name and signature of the checker	

Dispatch protocol/ Delivery content

- Piece check complete ☐
- Inner bag ☐
- Operating instructions ☐
- Sticker ☐

.....

Date

.....

Signature