



Happy Reserve System

PILOT'S MANUAL

Thank you for taking the time to read this booklet.



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1. INTRODUCTION

Axis have a 10 year history in parachute design and have employed their years of knowledge and expertise in the design and construction of the paragliding reserve system, Happy. Happy reserve consists of: canopy with lines, inner container, connecting bridle strap and release handle.

Happy is based on the pull-down apex design. The canopy is reinforced so that it is resistant even to the dynamic impact after a free fall. The pull-down apex central line reduces opening time and improves the sink rate whilst the inner container is designed so that all the suspension lines are attached to container by rubber bands so there is no danger of entanglement of lines or canopy during deployment.

Happy is designed only for use in an emergency situation on a paraglider, it is unsuitable for free fall parachuting.

This manual provides information about the Happy reserve system, which will help you to fly safely and keep your equipment in good condition. If after reading this manual you have any further questions, please don't hesitate to contact us or any authorised Axis dealer.

Thank you for choosing the Happy from **Axis**.

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2. PRE FLIGHT

For your safety, always use a consistent system of pre-flight checks for all your equipment and repeat the same sequence before every flight.

Specifically with your reserve parachute, check that:

- There is no visible damage that could affect its airworthiness.
- The reserve parachute container is closed correctly with the pin or pins in place.
- The deployment handle is secured correctly to your harness

If any part of your harness / reserve/ handle system includes Velcro, you should separate and re-attach these pieces regularly. Velcro 'beds-in' over time which could make deploying your reserve difficult,

3. CARE AND MAINTENANCE

We recommend that Happy should be inspected and repacked at least every 6 months by a trained professional re-packer. If you feel there may be the likelihood of damage or wear, additional inspections should be carried out.

After a deployment, the reserve must be checked by the distributor or manufacturer.

The materials used in Happy have been carefully selected for maximum durability.

Nevertheless, maintaining your reserve following the guidelines below will extend its lifetime.

It is recommended that any reserve system is replaced after 10 years, even if it has never been used.

4. STORAGE

Due to the specific purpose of the reserve system you should pay careful attention to its storage and packing. If you need to store your reserve long-term it should be unpacked and loosely rolled in a closed bag.

Be careful to avoid any possible contact with harmful substances such as oils, grease, acids, paint etc. Your reserve should always be stored away from contact with UV radiation (sunlight).

5. DRYING AND AIRING

If your reserve gets wet you should remove it from the harness, dry it naturally in the air, and have it repacked before putting it back into the container. Take care to avoid contact by sunlight while the reserve is drying. If the canopy shows any sign of mildew or mould, it must be sent to the distributor or manufacturer for checking, as its strength could be compromised.



6. CLEANING

Oils, grease, paint and other chemicals can seriously damage and weaken the structure of reserve system.

If your reserve becomes contaminated by any such agent the whole reserve system must be sent back to the manufacturer for a thorough inspection.

A dirty reserve canopy or container can be cleaned with lukewarm water. Mild, neutral soap may be used on the container if necessary.

Always rinse the canopy thoroughly in fresh, clean water and allow it to dry naturally.

7. REPACKING

We recommend that you open, air and repack the reserve at three monthly intervals as recommended in the warranty.

Before each repack, a thorough inspection must be made of the following:

- the canopy fabric must be checked for any damage or pollution from chemicals or dirt
- the suspension lines must be checked for any damage
- each attachment point between the suspension lines and canopy must be checked.
- the inner and outer container, deployment handle, webbing connection with harness (bridle) and reserve pin system must be checked for damage

If any damage is evident during this inspection you should send the whole reserve system to the manufacturer for repair.

Please be aware that the reliability of any reserve parachute system is significantly affected by how it is packed. We strongly recommend that you only use only trained qualified re-packers or the manufacturer for this important task.

You should always have the reserve system inspected by the manufacturer in the event of any of the following:

- After deploying the reserve, even in controlled or training purposes
- After any damage or alteration of the system
- Within 2 years of the previous manufacturers inspection.

Failure to do so may invalidate the warranty.

The warranty card should be sent with the reserve system at each inspection.

7.1 Repack sequence

Repacking should be carried out in a clean, smooth dry place.

Before starting make sure you have the following available to hand,

- Rubber bands
- Solid weights (clean and smooth)

Take hold of the apex lines and check that they are the same length. Secure the apex lines with a weight or attach them to a fixed object at each end to help keep the reserve in place.



Separate the lines equally each side of the apex lines.





Locate the centre panels by following the outer suspension line. Begin by folding all the panels one by one to the same side of the suspension lines. Check each panel for any damage or deterioration of the fabric and /or seams while doing this. Check that each panel is flat and without creases.



Next fold each panel one by one to the other side of the suspension lines. Again check each panel for damage and make sure it is flat and without creases.





Next fold back half the number of panels.



Make sure that each panel is laid flat and evenly and without any creases.



Keep the skirt even and suspension lines separated each side of the apex lines.





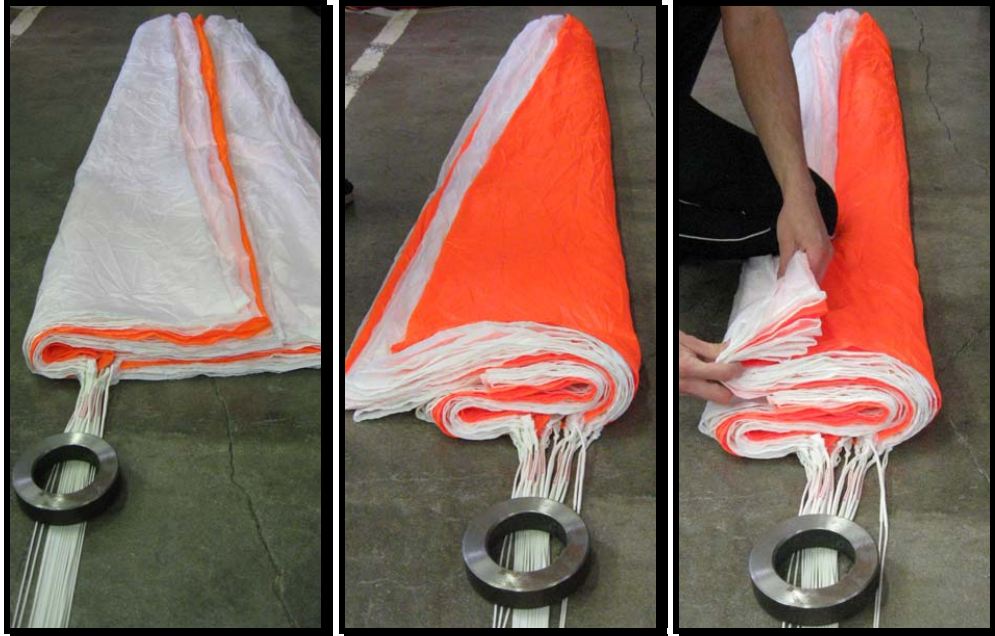
Pull down the apex into the reserve by stretching all the suspension lines to the same length while gently holding onto the apex of the reserve





S-Folding:

Fold 1/3 of the canopy over the right side and then back over itself. Then fold the right side over the left and back over itself. Make sure that you secure the canopy while making the folds to prevent creasing. Smooth the canopy to remove excess air and make sure that the skirt remains even.



Accordion-Folding:

Take hold of the skirt and fold the canopy underneath it to a size that fits the deployment bag. Holding this securely, continue to fold the rest of the canopy in an accordion fashion over the folded skirt.





When you reach the apex fold this in, before making the final fold over the canopy.



Packing into the deployment bag:

Place the folded canopy over the deployment bag with the skirt towards the top of the folds. Secure the canopy with a weight while you begin to stow the lines. Keep an equal tension on all lines and stow the lines in a 'figure of 8' pattern, securing the ends of each pair with an elastic band.



Carefully lift the lines on top of the folded canopy and bring the 2 flaps together feeding the elastic closing loop of flap 1 through the eyelet of flap 2 opposite.





Make sure that each bite (loop) of lines is flat and that nothing can interfere or obstruct the loops. Holding the loop bring flap 3 over and thread it over the elastic. Finally thread the loop through flap 4 and secure it in place with a 'bite' of the suspension line approximately 4 cm long.



The last 30-50cm of the lines is left free.



8. WARRANTY CONDITIONS

The warranty is valid for a period of 3 years provided all the manufactures recommendations are followed.

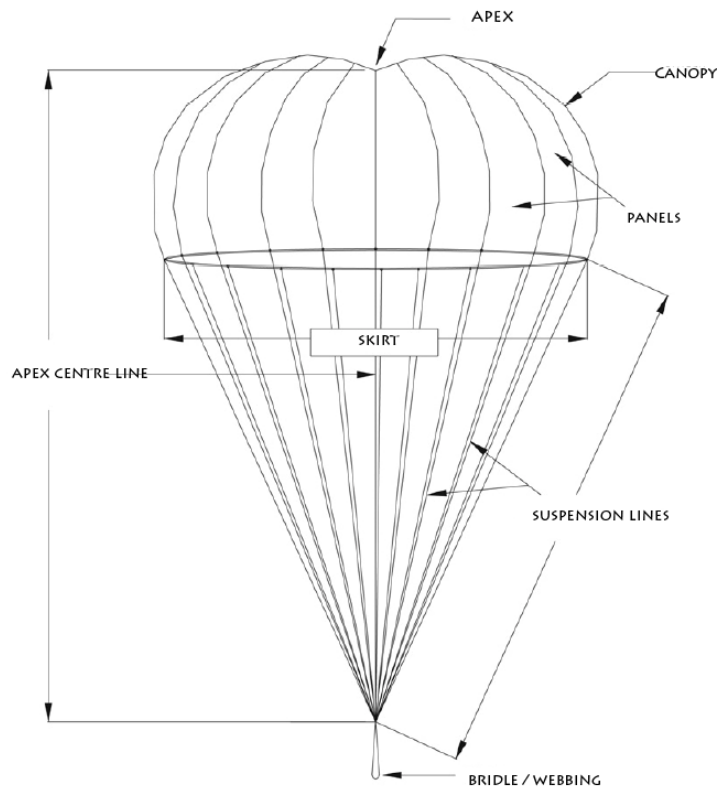
However from our wide experience, if the reserve system is used properly and checked in accordance with these recommendations the warranty period can be extended. Extension periods of 1 year may be granted by the manufacturer after a thorough inspection of the reserve system.

9. REPAIRS

All repairs must be carried out by the manufacturer.

10. TECHNICAL INFORMATION

| Size | H32 | H35 |
|---------------------|--------|--------|
| Projected area (m2) | 31.6 | 34.7 |
| Number of panels | 20 | 22 |
| Weight (kg) | 2.1 | 2.3 |
| Sink rate (m/s) | 5.0 | 5.0 |
| Weight range (kg) | 75-100 | 95-120 |





10. ABOUT AXIS

Axis started to design and make parachutes in 1997 and paragliders in 2001. Success swiftly followed and now many of the world's best competition pilots choose to fly Axis. They have won podium places at competitions around the world, including at recent World Cup events and the World Championships.

The lessons learned from these thousands of hours of testing gliders and competition success' have been used in the development of the Happy reserve system. All our test pilots use the Happy reserve system while testing our proto-type and new paragliders.

We welcome feedback from you about your new Happy reserve system. Send it to us at info@axispara.cz or info@axispara.co.uk (UK pilots).

Please note

We have made every effort to ensure that the information in this manual is correct but please remember it is for guidance only.

The manual is subject to change without prior notice. Check the websites for updates and the latest information regarding Axis products.

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