P r o t e c t III

M a n u a l

Dear SWING customer,

Thank you very much for deciding to purchase a new Swing reserve.

You have chosen a sophisticated product. We place great importance on using materials of the highest quality.

Although we hope that you never need to use the reserve chute, we ask that you familiarise yourself with how it works and the intervals at which it must be serviced and repacked. The reserve system will only fulfil its purpose if it is properly maintained and if you are able to operate it properly!

You will be impressed by the rapid deployment times, high level of pendular stability and the astonishingly low sink rate of the " S w i n g PROTECT III" family of reserve systems.

Consistent development work and the innovative combination of the materials used have resulted in a product which satisfies our demanding requirements and those of pilots too, and which sets standards for others to follow.

If you have any questions which are not answered in this manual, please do not hesitate to contact your Swing dealer or Swing directly: Tel: +49 81 41 32 77 888 or info@swing.de

from

the S w i n g Team

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5 May 2009

1 Disclaimer and exclusion of liability

!!! Warning !!!

This reserve system must not be used for skydiving

In Germany, paraglider reserve systems are not subject to the rating requirements of the German Civil Aviation Authority (*Luftfahrtbundesamt* - LBA).

The paraglider reserve systems in the PROTECT series comply with the airworthiness requirements of the DHV (German Hanggliding and Paragliding Association). The manufacturer is not liable for any injuries or material damage caused in connection with this reserve system.

At the time of their dispatch, these reserve systems comply with the DHV's certification regulations.

Reserve systems must only be packed by adequately qualified people.

2 Technical Data

Parachute type: paraglider reserve systems

PROTECT III NANO, PROTECT III RIS L, PROTECT III RIS XL

Technical Data for Swing paraglider reserve systems			
PROTECT III	**NANO**	**RIS L**	**RIS XL**
Recommended load	**70kg - 100kg**	**80kg - 120kg**	**100kg - 140kg**
Weight with container	**1.6kg**	**2.3kg**	**2.5kg**
Surface area	**25m²**	**38m²**	**42m²**
Maximum load DHV drop test positive	120kg	140kg	160kg
Start weight / sink rate			140kg approx. 5.0m/s
		120 kg approx. 5.2m/s	120kg approx. 4.7m/s
	100kg approx. 6m/s	100 kg approx. 4.7m/s	100kg approx. 4.3m/s
	80kg approx. 5.3m/s	80kg approx. 4.2m/s	80kg approx. 4.0m/s
Central lines	1	1	1
Pilot chute	yes	yes	yes
LTF Certification	GS-02-0156-09	GS-02-0157-09	GS-02-0158-09

3 For your safety

Your PROTECT reserve leads the way in the development standard for reserve gliders. It will remain airworthy for many years if you look after it properly.

Please be aware at all times that any air sport is potentially dangerous and that, at the end of the day, you are personally responsible for your own safety.

We therefore recommend in particular that you fly in a conservative manner. This applies both to the choice of conditions in which you fly and also to the safety reserve which you factor into your flying manoeuvres.

We recommend that you only fly with a glider and harness which have been tested and certified, and that you wear a suitable helmet.

You will also find further information concerning your safety at certain points in this manual. This information is indicated by two symbols:

M

Caution! Accident risk!

This symbol indicates risks which may arise. We also explain how you can avoid the risk or how you should react if the situation arises.

F

Tip!

This symbol is used when we give advice on correct handling of the reserve system, how to protect it from damage and general information.

4 Construction of reserve

The reserve canopy of the PROTECT III NANO and the PROTECT III RIS L and XL consists of 20 panels. The material is manufactured from air-permeable, tear–resistant PARATEX RS40 nylon fabric. Tape runs along the main seams which increases the canopy's strength. Tape is also used to reinforce the base and apex. The apex is pulled down and fixed with an elastic line. The high quality stitching gives the bridle a strength of at least 2,600kg. The central line has a strength of approx. 150 kg. It is firmly spliced onto the apex lines and the bridle.

The inner container is made of tear-resistant nylon fabric. The edges are reinforced. It has a 3-point fastener.

5 Use

5.1 Purpose

These reserve systems are manually deployed emergency parachutes for paraglider pilots who find themselves in an emergency situation during a flight. Any use other than this is not authorised.

M **Caution! Accident risk!**

Reserve systems must not be used for sky-diving

5.2 Operating life of reserve

Permissible operating life of reserve: 10 years, subject to inspection by the manufacturer or approved service agent every two years.

F **Tip!**

The reserve system must be aired and repacked every six months.

5.3 Documentation required

- Manual
- Packing records
- The attached *Luftsportgerätekennblatt* (aviation equipment data sheet) forms part of this Manual.

5.4 How the reserve system operates

If there is an emergency situation, take hold of the deployment handle and pull it firmly. The reserve chute package is then thrown into the air with a sweeping movement. The airflow and the pilot chute located on the inner container stretch out the lines, thereby opening the inner container. The chute is pulled out, unfolded and inflates.

We recommend that you frequently go over this procedure in your head, according to your own combination of harness and reserve chute, so that you are able to react quickly and confidently if you ever find yourself in an emergency situation. If you have the opportunity, we also recommend that you carry out a "dry run". Paragliding schools and clubs often organise this as part of their programme. The more familiar you are with the procedure, the less stressful it will be if you ever really do get into difficulty while flying.

6 Looking after your reserve

6.1 Inspecting the reserve and compatibility test

The reserve packer carries out a visual inspection of the reserve system before it is packed. If the chute was opened for an emergency deployment or during safety training, then it must be inspected by the manufacturer or an approved service agent.

M

Caution! Accident risk!!

If a previously packed reserve chute is repacked, it is important to ensure that it can still be deployed after installing it into the paraglider harness outer container (Compatibility Test). It must be verified that the necessary deployment force is between 6 and 10 kg.

6.2 What to do if the reserve is damaged

The reserve system must be sent for repairs to the manufacturer or an approved service agent if any damage is discovered which affects its airworthiness. This is also the case if damage is suspected, but it is not possible to definitively determine the effect of the damage on the equipment's airworthiness.

6.3 Storage

The reserve must be stored in a dry place at room-temperature, and away from oil, grease, acids and paint.

6.4 Cleaning and drying

If the canopy or the container are dirty, they can be washed with clean tap water. Acid and mould or mildew can affect the strength of the reserve. If your reserve is affected in that way, it must be sent to the manufacturer or an approved service agent for inspection and any repairs necessary.

6.5 Repairs

M

Caution!

Repairs should only be carried out by the manufacturer or an approved service agent.

7 Packing directions

7.1 Laying out and untangling the reserve chute

The reserve should ideally be packed on a special packing table. If none is available, a clean flat surface can be used.

The reserve chute is stretched out to its full length on the packing table or other suitable surface.

A temporary line is then inserted through the packing loops and attached to the top end of the packing table. (Fig. 1).

The bridle is attached to the other end of the packing table, and the chute is stretched tight. The reserve lines are checked to ensure that they are straight. Pick up lines 1 and 20 and check them along their length to the bridle. Any tangles are removed. (Fig. 2)

Fig. 1

Fig. 2

7.2 Laying out the panels

Take hold of panel 1 and count out half of the total number of panels, i.e. 10 panels, and put to one side the bundle of suspension lines thus separated (Fig. 3).

Now panels 1-10 are on the right-hand side and panels 11-20 are on the left-hand side. Beginning with panel 10, now start to lay out the panels. To do this, take hold of panel 10 and pull it towards you, and then put each panel, one by one, on top of each other, going from panel 10-1 (Fig. 4).

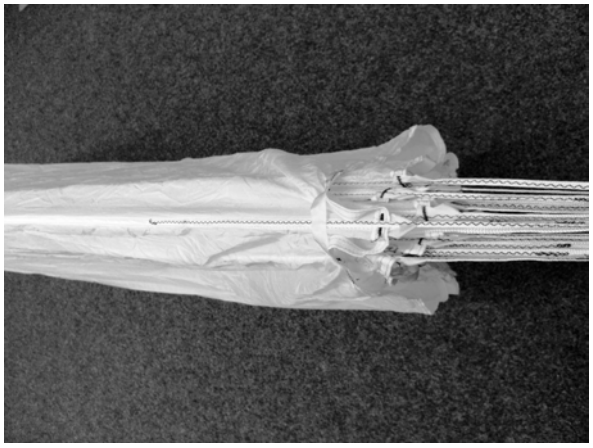

Fig. 3

Fig. 4

If a special line ‘comb’ is being used, this is now the time to ‘comb’ the lines, from the top down.

The canopy is now arranged so that the panel with the stamp (in this case panel 20) is on the top left (Fig. 4).

The apex, which is held with the packing loops, is then straightened.

M **Caution! Accident risk!:**

The temporary packing line which was inserted through the packing loops must now be removed. Failing to do so will mean that the chute cannot be deployed (Fig. 5 and 6).

Fig. 5

Fig. 6

Now fold the canopy into a large 'S' shape (Fig. 7), so that the lines come out of the centre (Fig. 8). When doing this, make sure that the folded width of the reserve is not wider than the inner container (narrow end).

Fig. 7

Fig. 8

7.3 Bundling the lines

The lines are put into three bundles, each made up of three figure 8's, and secured with suitable rubber bands.

Make sure that they are not wider than the inner container, and that there is still approx. 40cm of line free to use for closing the inner container (Fig. 9 to Fig. 11)

Fig. 9

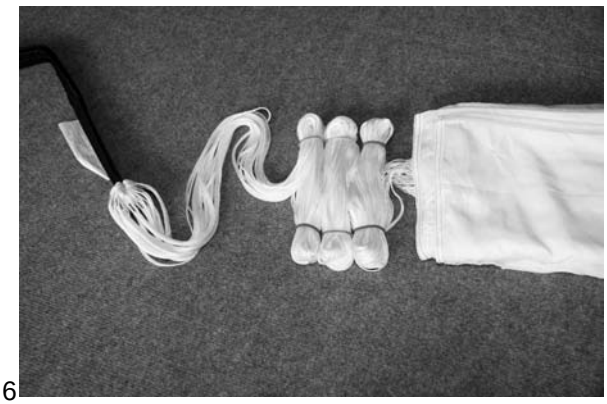

Fig. 10

Fig. 11

7.4 Packing the canopy into the inner container

The lines and the canopy are then placed into the inner container (Fig. 12 and Fig. 13).

Fig. 12

Fig. 13

The canopy is placed over the bundle of lines along the length of the inner container.
(Fig. 14 and Fig. 15).

Fig. 14

Fig. 15

7.5 Closing the inner container

Now take up the first flap of the inner container with the rubber band – and then close the other flaps in clockwise order (Figs. 17-19)

Fig. 16

Fig. 17

The inner container is then secured using the lines left free earlier (Fig. 19).

Fig. 18

Fig. 19

7.6 Entry in the reserve logbook

An entry must now be made in the reserve logbook (*Pack- und Prüfnachweis*), giving the date, name and signature of the packer, and the type of work carried out.

Deutscher Hängegleiterverband e. V. im DAeC

DHV-Technikreferat

LBA-anerkannte Prüfstelle für Hängegleiter und Gleitsegel

MUSTERPRÜFBESCHEINIGUNG

Rettungsgerät für Gleitschirm

Musterprüfnummer ***DHV GS-02-0156-09***

Bezeichnung des Gerätemusters

Protect III Nano

Das nachstehend bezeichnete Luftsportgerät ist als Muster geprüft im Auftrag von:

U-Turn GmbH, Esslingerstr. 23, 78054 Villingen-Schwenningen, Deutschland

Diese Musterprüfbescheinigung ist erteilt auf Grund der die Musterprüfung betreffenden Bestimmungen des Luftverkehrgesetzes, der Luftverkehrs-Zulassungs-Ordnung, der Verordnung zur Prüfung von Luftfahrtgerät und der Lufttüchtigkeitsforderungen in der heute geltenden Fassung sowie zu den Bedingungen der Vereinbarung über Musterprüfung und des Schreibens vom 06.05.2009.

Die Musterprüfung gilt gemäß zugehörigem Geräte-Kennblatt Nr.: *DHV GS-02-0156-09*

06.05.2009

Datum der Ausstellung

Unterschrift

Deutscher Hängegleiterverband e.V
Miesbacher Straße 2, 83703 Gmund

Deutscher Hängegleiterverband e. V. im DAeC

DHV-Technikreferat

LBA-anerkannte Prüfstelle für Hängegleiter und Gleitsegel

MUSTERPRÜFBESCHEINIGUNG

Rettungsgerät für Gleitschirm

Musterprüfnummer ***DHV GS-02-0157-09***

Bezeichnung des Gerätemusters

Protect III RIS L

Das nachstehend bezeichnete Luftsportgerät ist als Muster geprüft im Auftrag von:

U-Turn GmbH, Esslingerstr. 23, 78054 Villingen-Schwenningen, Deutschland

Diese Musterprüfbescheinigung ist erteilt auf Grund der die Musterprüfung betreffenden Bestimmungen des Luftverkehrgesetzes, der Luftverkehrs-Zulassungs-Ordnung, der Verordnung zur Prüfung von Luftfahrtgerät und der Lufttüchtigkeitsforderungen in der heute geltenden Fassung sowie zu den Bedingungen der Vereinbarung über Musterprüfung und des Schreibens vom 06.05.2009.

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DHV-Technikreferat

LBA-anerkannte Prüfstelle für Hängegleiter und Gleitsegel

MUSTERPRÜFBESCHEINIGUNG

Rettungsgerät für Gleitschirm

Musterprüfnummer ***DHV GS-02-0158-09***

Bezeichnung des Gerätemusters

Protect III RIS XL

Das nachstehend bezeichnete Luftsportgerät ist als Muster geprüft im Auftrag von:

U-Turn GmbH, Esslingerstr. 23, 78054 Villingen-Schwenningen, Deutschland

Diese Musterprüfbescheinigung ist erteilt auf Grund der die Musterprüfung betreffenden Bestimmungen des Luftverkehrgesetzes, der Luftverkehrs-Zulassungs-Ordnung, der Verordnung zur Prüfung von Luftfahrtgerät und der Lufttüchtigkeitsforderungen in der heute geltenden Fassung sowie zu den Bedingungen der Vereinbarung über Musterprüfung und des Schreibens vom 06.05.2009.

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