

RANGE 2

SUKYUN

MANUAL/SERVICE

Serialno:



CONTENTS

- 1 TECHNICAL DATA
- 2 FUNDAMENTALS OF THE RANGE2
- 3 SPEED SYSTEM
- 4 RESCUE SYSTEM
- 5 RESCUE SYSTEM INSTALLATION
- 6 ADJUSTMENT POSSIBILITIES
- 7 CROSS BRACING
- 8 BALLAST CONTAINER
- 9 POCKETS
- 10 TOWING OPERATION
- 11 FLYING WITH THE RANGE2
- 12 MAINTENANCE AND REPAIR

1 TECHNICAL DATA

Intended Use	Glider Harness
Permittable load	120 kg
Suspension height	45 cm, incl. carabiner
Carabiner Span	44 - 58 cm
Weight (without rescue system)	8,9kg (size L)
Protector	Foam Airbag DHV-GSP-0024-05
Rescue system-installation	installation integrated Container underneath Seatboard, Rescue handle on side
Material	Straps - Finsterwalder Belt - 100 % Polyamid Material – Cordura / Nylon

2 RANGE2 FUNDAMENTALS

The Concept

The RANGE2 is a paragliding harness conceived for the ambitious performance pilot. Along with the aerodynamics, particular attention was focused on comfort and pilot safety.

Safety

Safety of the pilot is assured by the optimal suspension points and a very good integration of the protectors. The suspension points were selected so that the pilot still maintains an excellent feel for the canopy, while eliminating any feeling of unsteadiness. The protectors have been integrated into the harness so that they form one unit and have no predetermined breaking point.

3 THE SPEED SYSTEM

The RANGE2 is equipped with a two-step foot accelerator. The cable guide and accelerator pulleys were selected for an energy-saving and comfortable operation of the Speed System.



4 THE RESCUE SYSTEM

To accommodate the Rescue System, there is a container under the seat. This can be closed with the Cordura-Flap. The flap protects the Rescue from dirt and humidity. If, however, your harness should become soaked, (e.g., during a water landing), you must allow the Rescue to dry out and pack it new. The RANGE2 Container includes the Rescue Handle. You may use only this Rescue Handle. The Handle must be attached by the strap to the inner Container of the Rescue System. If there is no fastening strap attached to the inner Container, please contact the manufacturer of your Rescue System.

The Rescue System is connected to the Connection Belt before insertion. This Connection Belt is designed as a V-line, and is attached to the Shoulder Belt of the RANGE2. In the case of an emergency deployment, it helps to distribute the load on the harness. The connection to the shoulder straps offers the most secure position for the pilot during a parachutal landing.

The deployment of the Rescue System is optimized when the legs remain in a stretched-out position in the Foot Bag.

5 RESCUE SYSTEM INSTALLATION



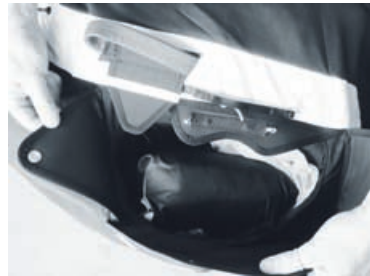
1. Insertion of the Connection Belt: for this purpose, the connection line is passed through the risers of the Rescue System. Then the Rescue System is inserted through the loop, which is then tensioned and must lay tightly against the riser.



2. Secure with an elastic to ensure against slippage. As an alternative you can use a steel shackle.



3. Now run the Connection Belt along the Harness channel and then close again.



4. Insert Rescue Handle in the loop fastener of the inner container and place into the outer container as illustrated. Be careful that the connection between the loop fastener and Rescue Handle end in an upwards facing position (to the protector). Otherwise, by deployment there is a danger of jamming.



FALSE



CORRECT



5. Insert the pack laces into the loops. First pull the helpline on one side through the grommets of the lashes one after the other. Stick the splint through the loop.



6. Repeat the procedure on the other side.

6 ADJUSTMENT POSSIBILITIES FOR THE RANGE2

The RANGE2 offers each pilot the opportunity to adjust the harness optimally to his/her individual proportions and preferences. The pilot should take adequate time to adjust his harness. He will be rewarded with excellent seating comfort. The Rescue System should be installed before individually adjusting the harness. It is recommended to suspend the harness from a simulator to carry out the setup.

Setup of the seating position

The first setup involves seating position and the size of the harness. Seating position is adjusted through the seating angle position of the harness. Here, you must decide at which angle you prefer to sit – meaning the angle of your back to your thighs. The spectrum of adjustment is approx. 80 to 100 grad. Adjustment is carried out using the side straps – approx. at ribcage height (A). If you shorten the belt here, you will achieve an increased seating angle (upright sitting position), if the belt is lengthened, the seating angle is reduced (more horizontal position).

(B) The size adjustment is possible by the setup of the shoulder belt.



(A) Seating angle adjustment



(B) Shoulder Belt adjustment

Adjustment of the Leg Straps



Circumference adjustment of Leg Straps

Sit in the RANGE2 while hanging from a simulator and test if you are able to get into the seated position without problems, after a simulated start. If you can only reach the correct seating position with the help of your hands, first check the seating angle and then adjust the Leg Straps. The harness is correctly adjusted, when you can get into it without using your hands. The Leg Strap circumference is achieved by adjustment of the Leg Strap length. Leg Strap length is adjusted under the seat. Pay attention here to a symmetrical adjustment.

Adjustment of the Speed System and the Stirrup

After you have adjusted to the correct seating position, the speed system and the stirrups must be adjusted. Stirrups should be adjusted in length so that you can stretch out the legs when sitting back in the harness.



Length Adjustment of Stirrup



Brummel hooks for the speed system

7 CROSS BRACING

Cross Bracing is not included in the RANGE2. The geometry of the RANGE2 is designed so that cross bracing is not necessary.

8 BALLAST CONTAINER

A size-adjustable pocket is located under the seat for storage of a water ballast container.

9 POCKETS

The RANGE2 comes with a large back pocket in which you will find two extra pockets for a water bottle holder and a radio. In addition, you will find a side pocket at hip height on both sides. Normally, objects will not fall out, even when pockets are left open during flight.



TOWING OPERATION

The RANGE2 is adaptable for towing without restrictions.

10

FLYING WITH THE RANGE2

For maximal safety, follow the same routine before flying!

11

Check that:

- > There are no visible signs of wear and tear or damage to the harness or carabiners that could affect airworthiness.
- > The Rescue System Container should be correctly closed and release is not in the way.
- > The Rescue Handle is completely inserted into the elastic strap and secured.
- > All clips, belts and zippers are closed securely. The clips should snap closed easily. With a slight pull on the belts, you can make sure that you are completely secured. Take particular care when sand or snow come into play.
- > The glider is correctly connected to the harness, and both carabiners are closed and secured.
- > Seatboard and protectors must not be damaged. To make sure, the seat board and protectors should be taken out of the harness at reasonable intervals in order to check thoroughly for damage. A damaged carbon seat board can cause damage to adjacent parts (e.g. main suspension straps). Therefore, this area should be checked particularly well!
- > The Speed System is correctly connected to the risers. All pockets should be closed and no loose parts should be hanging from the harness.

Performance by Rescue deployment

It is very important to occasionally grip the Rescue Handle when flying, in order to be able to instinctively find the Handle in an emergency situation. In an emergency, you must have a sense of the altitude still available to you and how serious the situation really is. To pull the Rescue, without it being absolutely necessary, can raise the risk of injury when landing. When the glider is in a rotation, it is better to first try and stop the rotation (for ex. with a full stall), in order to lessen the risk of the Rescue becoming tangled. On the other hand, when there is not enough altitude, every second may decide between life and death.

If you must pull the Rescue, do as follows:

- > Find the Rescue Handle and hold securely with one hand
- > Pull strongly on the Handle so that the container of the harness opens. Make sure to throw the Rescue from the inner container into free airspace.
- > If possible, throw the Rescue with force against the rotation motion and at the same time let go of the Handle
- > When the Rescue is open, try to avoid any pendulum motions. The best way is to pull the glider symmetrically towards you, with the B-, C- or D-Lines or with the brake lines
- > When you land, try to land with the same technique as sky divers, in order to minimize risk of injury

Landing with the RANGE2

Straighten up before landing, in order to get out of the laying position. NEVER attempt to land laying down. This is dangerous even with the back protector – and you could seriously harm your spine. Landing actively on the legs is always a safer solution than to land passively. Think, a broken leg heals after a couple of weeks, but a broken back...- so before landing get your landing gear ready.

12 MAINTENANCE AND CARE

The materials used in the RANGE2 guarantee maximal durability. Still, it will benefit you in the end if you make every effort to keep your harness clean in order to ensure its airworthiness.

Avoid dragging your harness over rocky ground. Try to land standing. Do not leave your harness sitting unnecessarily in the sun. UV rays are very damaging to the material. Allow your harness to dry if it has gotten wet.

Store it in the paraglider backpack, when not in use. Store your glider equipment loosely in a cool and dry place. Always let moist equipment dry out before storing again. In order to clean, use only water and a soft brush or cloth. Use only mild soap, if absolutely necessary.

Before cleaning, take out the Protectors, Rescue and Seatboard.

If your rescue has become wet (for ex. by a water landing), you must open it, allow to dry and pack new. Zippers and buckles can be sprayed once a year with a silicon spray.

Maintenance Check List

In addition to the normal pre-flight check- you should check the RANGE2 more thoroughly after you have packed or repacked the Rescue – normally every six months. Naturally you should also check in detail if any incidents, such as a crash, hard landing, or tree landing have occurred.

The following important points should be observed:

- > Test all harness belts and clips for wear and damage. Especially at the spots that are difficult to access, e.g. the inner side of the main suspension point
- > Check all seams and repair if necessary, so that the problem does not spread
- > The installation of the Rescue System calls for particular attention. Check the splint, elastic material, and velcro parts
- > Seat and Protectors must be free of damage
- > Check both carabiners for damage and exchange if necessary
- > If in doubt, please ask a professional flight instructor

Repair

All repairs related to load bearing harness parts must be carried out by an authorized check and repair center, in order to ensure that the correct materials and workmanship technique are used.

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