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WOW Owner's Manual

Reserve parachute for paragliding

Welcome to Bruce Goldsmith Design

BGD is a specialist manufacturer of high quality paragliding equipment. We fly, research and develop in the south of France, where Gourdon produces active-air test conditions year round. Bruce Goldsmith has been designing paragliders and equipment since 1991, and has produced some of the world's most loved and successful wings, including two World Championship winning designs. We apply our competitive knowledge to design top quality products that combine the highest performance with the safe handling our customers value and respect. BGD pilots appreciate our quality and reliability. BGD's World Class status is based on the skills and expertise we have developed in combining aerodynamic design with cloth and materials technology. All BGD products are developed and made with the same skill and attention to good design that are synonymous with the ultimate performance and precision required by paragliders.

Congratulations on your purchase of a BGD WOW

The Wow is a modern square reserve parachute with a fast opening time, low sink rate and high pendulum stability. The corner cut-outs make it very stable in descent immediately after deployment, and the symmetrical design prevents system-related forward movement, resulting in a stable descent with easy landing.

The materials and technologies used in its construction ensure its reliability and robustness so it will have a long service life. It is made from lightweight materials and packs down small. The panels are CNC precision cut, and the polyamide lines attach to the canopy with traditional loops, so they are quick and easy to replace if necessary. The lines have some stretch, so they absorb some of the impact of a deployment.

The reserve is packed in a lightweight inner container linked to a deployment handle. The inner container is designed

to open in any direction. The handle is reinforced for an easy grip, even when wearing gloves.

Before each flight, check all straps securing the outer container to the harness (where applicable). Ensure that the container is closed properly, and visually inspect the pins for damage and make sure that they are secure.

Introduction

Operating limits / precautions

This reserve parachute system was specifically developed as a hand-deployed, non steerable reserve parachute for paragliding, paramotoring and hangglider flying in solo configuration. It is not intended to be used for other flying sports including BASE-jumping and skydiving. It is suitable for integrated reserve containers.

- According to EN 12491, the reserve should only be used up to maximum speeds of 32m/s or 115km/h.
- The reserve should be aired out and repacked every 6 months.
- After a deployment, the reserve should be inspected by a qualified person.
- The reserve parachute must be replaced after 10 years, even if it has never been used.
- A compatibility test should be carried out to ensure harness and rescue are compatible.
- This parachute system has been tested and found compliant using the original manufacturer's inner container. Use of any other inner container may produce different results, including failures

Pre-flight check

Before each flight, check all straps securing the outer container to the harness (where applicable). Ensure that the container is closed properly, and visually inspect the pins for damage and make sure that they are secure.

Overview of parts



- ① Canopy
- ② Lines
- ③ Corner openings
- ④ Bridle
- ⑤ Centre or apex lines
- ⑥ Packing loops (on top surface)

Packing loops

There are 17 loops on the top surface of the canopy to help repack it.



Installation

Compatibility Check

The WOW rescue system is suitable for integrated reserve containers in a wide range of harnesses. The first-time installation of the reserve chute into a harness should be carried out only by an expert, to ensure the harness is compatible with the reserve.

To connect the reserve chute to the V-bridle, use an oval screw shackle with at least 2200 daN ultimate strength. The lines should be secured on both sides of the screw shackle with rubber bands by means of a Larks Head knot; fixing tape or a neoprene cover can be used to protect against fraying and abrasion.

Directly connecting the bridle to the harness attachment webbing is not recommended, as if knotted incorrectly it could significantly weaken the system.

It is important to ensure that the connection is centred, that is, the two connecting lines leading to the shoulder straps are of the same length. If the harness does not have an integrated attachment for the reserve chute on the shoulder straps, then the reserve chute connecting lines can also be attached to the main karabiners.

Practice throw

After the initial installation, and if the back protection has been moved or changed, it is essential to do a simulated reserve deployment under a static swing to ensure the parachute release system operates correctly and the parachute comes out easily.

Deploying

To deploy the WOW in an emergency:

1. Visually locate the deployment handle.
2. Grasp the deployment handle and pull it to release the parachute in its inner container, from the external outer container or harness.
3. Using the deployment handle, throw the inner container forcefully into open air (AWAY from the paraglider canopy). If in a strong rotation, throw downwards towards your feet. The canopy will separate from the inner container and inflate quickly and easily thanks to the central line.
4. Stop your paraglider from flying to ensure a stable parachute descent. This can be achieved by pulling the B-risers.

As with all paraglider reserve systems, the deployment throw must be forceful enough to separate the inner container from the canopy. The special coating of the WOW makes this easier, and reduces failed deployments.

However, if the initial throw was not powerful enough for the system to deploy immediately, grasp the parachute bridle attached to the harness, and pull it back for another, more forceful, throw.

Poorly maintained reserve chutes may open more slowly. If the container does not separate from the chute after throwing, pull firmly and sharply on the lines to assist separation.

This guide conforms to requirements specified by Regulation EN 12491.

Repacking

Your parachute should be repacked every 6 months, preferably by a qualified professional. When removing the parachute from the harness take the opportunity to complete a practice deployment. Check that you can reach your handle easily and that the parachute exits the harness smoothly and easily.

Proper packing of the canopy is essential for the reliability and safety of the system. Therefore it is strongly recommended to have the system re-packed by an authorised and trained specialist.

These instructions are aimed at pilots who are competent in folding a modern square reserve. They do not serve as a substitute for proper training in folding a parachute.

The manufacturer can ensure the safety and reliability of the system only when it has been packed by a trained professional who followed a proper packing procedure.

Before repacking

Airing

Before repacking, the reserve chute must be aired out, ideally for 12 hours in a cool, dry room.

Inspection

A thorough inspection is necessary. Visually inspect the reserve chute, checking for damage to the canopy, the lines, the suspension points, the main riser and the screw shackle.

LINES: carefully inspect all the lines on both sides to ensure that they are undamaged, from the riser all the way to the canopy. Make sure that the parachute is completely disentangled and that both the lower line and the upper of the

reef knot run freely from the risers to the canopy.
CLOTH: Ensure that it is not damaged or contaminated.

OUTER AND INNER CONTAINERS: Ensure that the handle is properly and securely attached to the inner container and the riser is securely (tightly) attached to the harness.

If you find any damage or contamination that may lead to system failure, the system must be checked by the manufacturer. If you are not certain about the reliability of the system, send it to a professional for inspection.

Packing area and tools

Ensure the packing area is large enough, clean, level and dry. You will need the following to help you repack:

- A 30cm length of line
- Silicon-based rubber bands to organise the lines
- Weights eg sand bags or clips to hold the sections together as you fold
- A line separator (optional)



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Gather the packing loops and check the lines

1. Spread the canopy out with its upper surface (with the packing loops) facing upwards.
- 2-3. Use the length of line to thread the 17 packing loops together. Don't forget the central loop and the four corner loops which are set further back.
4. Stretch the lines out to their full length and secure the riser to something heavy to maintain tension.
- 5-6. Start at the bridle end and run your fingers along the lines, working towards the canopy. Check the lines for damage and make sure there are no twists or tangles. The four apex lines should be in the centre, and two groups of eight suspension lines on either side of it. Ensure none of the lines are twisted around the apex lines or each other.



Fold the panels

7-9. Starting with a rectangular panel in the middle of one side: open out the panel, smooth it with your hand and lay it down on one side of the bridle. Take each panel in turn, pulling the base from one line attachment point to the next along the seam, and smoothing out crossed panels. Lay each panel in turn neatly on top of the previous one, until all of the panels are lying on top of each other. You can use a sand bag or clip to help keep them in place.

10-12. Then start opening the panels out again, smoothing as you go, until you have the same number of panels stacked to the right as to the left of the lines. The corners should be stacked neatly on top of each other and the bridle lines running cleanly in the centre: the four apex lines in the centre, and eight lines on each side of these.



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Folding into the inner container

13-16. The first diagram above shows the positions of the fold lines:

First (red lines) fold the bottom sections inwards to a point

Second (green lines) fold the long edges in towards the centre

Finally (blue line), fold completely in half lengthways

17-18. Use sand bags or weights to keep everything in place, while you S-fold the reserve to the dimensions of the inner container.



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19-20. Place the reserve in the container, pushing the elastic through the eyelets of the opposite and bottom flaps, and secure with a small line loop. This helps avoid burns during a deployment, as it ensures the bundle of lines will be released first and will not come in contact with the canopy fabric. The folded canopy should occupy the full length and width of the container.

21-23. Then coil the lines, S-ing back and forth to make line sections the same width as the inner container, securing the loops with the elastic bands. Leave approximately 30cm of line uncoiled. Tuck these line loops into the inner container and close the fourth flap.

24. Secure the fourth and final rescue flap with the remaining line length.

Maintenance and Repairs

Maintenance

The canopy must be stored in a clean and dry place. Avoid extensive exposure to direct sunlight. If it gets wet, immediately dry the canopy and the lines to prevent damage caused by mould. Contamination by oils or other chemicals could significantly reduce the load stability of the life saving system. A contaminated canopy must be inspected by a professional. The outer container can be cleaned (without the canopy inside!) using water and a mild detergent followed by a thorough rinse and drying. Use only clean water without soap to clean the canopy and lines.

The parachute must be checked and repacked before the first installation by an authorised packer. We recommend it is checked and repacked every 6 months, to ensure it remains clean and dry and does not become compressed. The repacking should be recorded in the Maintenance and Packing log book.

When repacking, we recommend the parachute is aired, ideally between 1 and 3 days (to discharge static electricity). Take care to keep out any insects or moisture.

If you have flown in damp conditions or landed in a wet or snowy place, it is recommended to check within 24 hours whether the rescue was affected by humidity. If it has been, you should unfold it, dry it and repack it.

Your reserve parachute consists of many high-quality, long-life components. When replacing parts (lines, fabric panels, etc.), only original parts should be used. They can be obtained from the manufacturer. In addition to the continued airworthiness of your reserve parachute, this is important for your safety as well. Your local BGD dealer should have suitable rubber rings for packing.

The parachute should be replaced after ten years from the date of purchase. The purchase date must be written on the certification label by the dealer when the parachute is sold.

Repairs

All repairs must be carried out by the manufacturer. Any unqualified repair might lead to the system failure.

Recycling

We all have a responsibility to look after the environment and protect the places in which we fly. Even the best products have a limited service life, and once your reserve chute reaches this point it should be disposed of in an appropriate recycling facility.

Guarantee

Our reserves are guaranteed against any production fault for two years from the date of purchase.

The guarantee does not cover damage caused by misuse, by neglecting the regular maintenance, by poor storage conditions, or overloading.

Specifications

	90	110	130
Area (m ²)	22.5	27.5	32.5
Weight (kg)	1.2	1.4	1.7
Max. payload* (kg)	90	110	135
Min. payload* (kg)	60	73	87
Opening time (s)	3.99	3.42	3.95
Sink rate at max. payload* (m/s)	5.2	5.47	5.43
Volume (cm ³)	4000	4600	6500
Certification	EN / LTF	EN / LTF	EN / LTF

*Payload = Weight of fully equipped pilot without paraglider

Materials

Canopy: Nylon 6.6, 33dTEX

Lines: Edelrid A-6798-150

Riser: Dyneema/polyester 13 mm

Closing

If you are ever unsure about the information contained in the manual, contact your BGD dealer.

This document is not a contract. BGD reserves the right to alter or modify its products without notice.

Our rescue parachutes come with a repack and inspection log book in which all repacking and inspection dates should be entered.

BGD GmbH, Am Gewerbepark 11, 9413 St. Gertraud, Austria. Tel: +43 (0) 4352 20477
sales@flybgd.com www.flybgd.com