

OWNERS MANUAL

BETRIEBSHANDBUCH

Speed 2000 Reserve



1. Preamble

Dear Customer!

Thank you for choosing a Speed 2000 Reserve. This parachute is designed, built and tested not only to JAA and FAA minimum performance standards but also to our philosophy: "The Reserve is the last parachute you have, and should therefore be your best"!!

We strongly recommend, that you and your rigger thoroughly inspect your new parachute and carefully read this manual.

Should you find anything, that does not look right to your rigger, please contact us immediately.

Again, thank you for choosing a Paratec Speed 2000 Reserve. We are very confident it will be dependably at your service, when you need it most.

Sincerely

Eva Schumann
Stefan Ertler
President
Paratec GmbH

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3. About this Manual

This manual can not substitute for the knowledge and training you get in a proper riggers course. The scope of this manual is also not to enable you to pack this reserve parachute without any basic skills.

It is in the responsibility of every trained and licensed rigger, to assemble inspect and pack to the manufacturers instructions, recommendations and his best knowledge and ability before he seals and signs any pack job.

It is also in the responsibility of every user to stay within the limitations set by the manufacturer regarding maintenance cycles, wing loading and pack opening speeds to not endanger himself nor his fellow skydiver friends!!

This manual is rather a guideline and a source of compact information, both for the owner and the rigger.

4. About packing

Paratec recommends the Pro Packing Method for the Speed 2000 Reserve. Should you wish to Flat Pack, this is also acceptable. The Speed 2000 reserves look, handle and pack no different than any other 7 cell reserve on the market. The Pro packing Method is probably the most logical and efficient method of packing a reserve today. Nevertheless, the packer should pay extra attention to the following steps:

- Always keep your lines under tension, tying them together at the connector links
- clear stabilizers, perform neat S-folds, clearing all line groups
- while folding the tail, make sure your steering lines stay in the centre of the pack
- split the nose part in a left and right half, keeping the centre nose exposed
- seat the base of the reserve with the slider properly, so it won't shift
- match your packing (fabric distribution) to the dimensions of the individual free bag
- after the canopy is in the bag, follow the manual of the rig manufacturer.

And most important of all: Inspect before your pack!

5. Technical Data

SPEED 2000 Technical Data

The Speed 2000 Family of Reserve Parachutes have been certified under JAA JTSO C23d and under FAA TSO C23d, issued by the Luftfahrt Bundesamt LBA as a full member of the Joint Aviation Authorities of the European Union and the Federal Aviation Authorities in the USA.

CERTIFICATION NR.: LBA.O.40.014/06 JTSO

**THIS PARACHUTE IS LIMITED TO BE USED
UP TO A PACK OPENING SPEED OF
150 KTS**

**AT A MAXIMUM OPERATING WEIGHT OF
115 KG**

HOWEVER

THE MANUFACTURER HAS DETERMINED MAXIMUM SUSPENDED WEIGHTS FOR EACH SIZE TO ASURE SAFE FLIGHT AND LANDING CHARACTERISTICS.

**! WARNING !
NEVER EXCEED THE LIMITS LISTED BELOW**

| CONOPY SIZE | PN/Nr. | MSW KG | MSW LBS | PACKVOLUME CUI |
|-------------|--------|--------|---------|----------------|
| SPEED 120 | 20101 | 72 | 158 | 221 |
| SPEED 135 | 20102 | 80 | 176 | 248 |
| SPEED 150 | 20103 | 88 | 194 | 266 |
| SPEED 170 | 20104 | 96 | 211 | 307 |
| SPEED 190 | 20109 | 110 | 242 | 322 |
| SPEED 220 | 20105 | 105 | 231 | 344 |
| SPEED 250 | 20106 | 115 | 253 | 393 |

6. Flight Characteristics

Speed 2000 Reserves let you fly and land with confidence. Openings are clean, with a quick linear inflation and on heading. Remember, your Cypres fires at 225 m or 750 ft!! In flight and on landing, the Speed 2000 will remind you a little of a classic 9 cell. When we determined the parameters of our new reserves, we took into consideration, that skydivers of today, in most cases, only get to know 9 cell canopies, from their first student jumps onward. With the Speed 2000 concept, we put the flight performance of reserves back where they should belong: As close to the main parachutes as possible. Simply look at your Speed 2000 not as a reserve, but rather as a superb substitute for the lost main canopy.

Something else to think about!

Please choose your canopy size to match your personal experience level and your requirements. A 120 sqft reserve will easily support and land a 200 Ibs jumper but is he really able to do so under all circumstances? Probably not!!

When you have to use your reserve, you are probably not over your home DZ with plenty of space to land (Remember: Murphy is everywhere).

Our Speed 2000 Reserves pack so small that you can afford to choose the recommended canopy size for your weight.

There is no need to overload the canopy and there is also no room for vanity when you 're down to you last parachute!!

Should you have any further questions, then please contact us at:

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66798 Wallerfangen
Germany
Phon: 0049-06837-7375 Fax: 0049-6837-74373
Email: info@paratec.de

7. Read before Assembling

Since parachutes are manufactured and inspected by people, there is always the possibility of human error in terms of defects. Therefore, inspect the entire parachute system, Reserve, Harness/Container, Main Parachute and all other functional components, before you begin to assemble, pack or use any parachute system.

Your Speed reserve should be assembled by a properly certified Rigger (or equivalent rated person in your country).

Before assembling, be sure that the components are compatible to this parachute. To check for compatibility, refer to the chart on page 5 in this manual. Contact us immediately in case of any question.

Assemble this parachute also in accordance with the Harness/Container manufacturers manual.

8. Inspection Procedures

To be carried out at assembly, before every repack and after every emergency use.

As mentioned above, your Speed 200 reserve must be inspected by qualified personnel before it is used for the first time and before every repack, no matter if it was used or not. The periodic inspection and repack cycle for this Reserve Parachute is 12 months. Other countries may have different regulations, so please check with your responsible organisation. Read the instructions in this manual completely before you begin.

Canopy Inspection

| | |
|---|---|
| 1. Links | Assure the barrel nuts are tight, not stripped or cracked. |
| 2. Slider | Check for correct assembly, the fabric for weave imperfections, the grommets for proper setting, knicks and dents. |
| 3. Lines | Check for continuity, trim, burns and excessive fraying. Check for complete existence of all bartacks. |
| 4. Stabilizer Attatchments Line Attatchments | Check for proper slack to the connecting lines, the slider stops and for imperfections in the fabric. |
| 5. Seam Starts | Check for back stitches and the existence of bartacks. |
| 6. Seam Work | Check for loose stitches, continuity and snags. |
| 7. Fabric | Check each cell (ribs, Top Skins, Bottom Skins) for imperfections. |

9. Packing Procedure, Speed 2000 Reserve Parachute



Step 1
Lay out the parachute and sort the lines.



Step 2
Perform a line check by making sure the steering lines run free through the sliders grommets to the steering toggles.



Step 3
Tie the connector links together using a easy to see ribbon. Make sure you tie the steering lines in with it.



Step 4
Prepare the canopy for packing by moving the slider up to the base of the canopy.



Step 5

We recommend the pro packing method for the Speed 2000 Reserve.

This pro pack version works best, if you start your pro pack over your shoulder. Start your pack job by pulling out the nose (7).



Step 6 / 1 (both pictures)

Start splitting the canopy by performing S-fold between the A and B line groups.

Then continue towards the tail by doing the same to BC and CD sections.



Step 6 / 2

Note: This page is for explanation purposes only. It is not in sequential order with the packing procedure.



Step 6 / 3
Correctly folded canopy shown
from trailing edge side.



Step 6 / 4
Correctly folded canopy shown
from leading edge side.



Step 7 / 1
Slider before being centred be-
tween B and C lines.



Step 7 / 2
Slider centred.



Step 7 / 3
Open nose of canopy.



Step 8 / 1
Pull up the centre cell with the trailing edge and position it just above the slider grommets and around the line strand.
See details on next picture.



Step 8 / 2



Step 8 / 3



Step 9 / 1

This is an important step in this packing method.
Bring the left and the right half of the trailing edge around the pack and
Push it past by the corresponding outer cell towards the centre of canopy.



Step 9 / 2

Then, as seen in the right picture flake out the cell openings equally. 3 left
– 3 right and leave the centre cell in the middle of your pack job.



Step 10

Gently lay the canopy on the floor
in the above shown manner, sup-
porting it with your lower arm.



Step 11

Start dressing the pack job from
the base up. Pull out the 3 cells on
either side, which you had flaked
out in step 9.
Notice, how the canopy lies on top
of the spread out nose. This is
very important, since it will avoid
steering line overs.



Step 12
Narrow down the base of the canopy even more to be able to grasp it with one hand.



Step 13 / 1
Perform a S-fold backwards towards the line strand.



Step 13 / 2
The finished S-fold



Step 14
Spread the canopy down the centre and start reefing up the centre cell. Make sure to kneel on the base S-fold to keep it securely in place.



Step 15
Dressing the centre cell in it's reefed configuration.



Step 16
Roll the centre cell forward and on top of the base S-fold.



Step 17
By doing as described in Step 16, you receive a configuration as shown in this picture. This will allow you to grab the very small base of the pack job and be able to lift it up to position the reserve bag right underneath the base. The base goes in the bag first and stays nice and unaltered.



Step 18
Slide the left ear 90° forward while still kneeling on the base.



Step 19
Perform a S-fold with this ear by dividing it in thirds.



Step 20

Push the S-fold into the bag. Remember the base fold is already in it.



Step 21 / 1

Do the same with the right ear.



Step 21 / 2

This will give you a nice and even volume distribution with room to fit the AAD unit right in between the halves of your pack job (where the hand is).



Step 22

As you probably have noticed, this pack job ensures that the lines stay on the floor at all times and therefore are all of the same length. This adds to the neatness of the first 2 stows to close off the bag and of all other line stows to come yet.

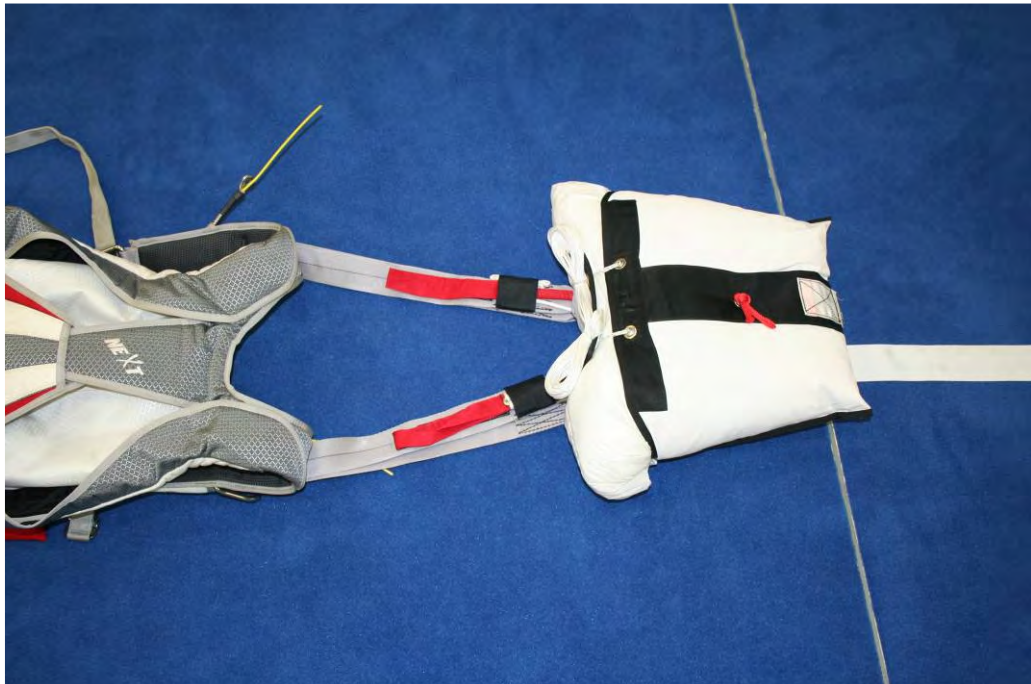


Step 23 / 1

Set the bag up right and start stowing the rest of the lines properly into the stowage pocket (see on following picture).



Step 23 / 2



!! Attention !!

At this point you remove the ribbon which keeps the connector links together and follow the instructions of your harness/container manufacturers manual!

10. **Cleaning your canopy**

We assume, that in the life of a reserve parachute it is most unlikely that it needs to be cleaned. Should you however have to do so, avoid washing the parachute if possible.

Cleaning will generally increase the porosity which will result in a loss in performance.

Usually mild soap and water applied to the dirty spots will get most contaminants out.

Avoid any acids, bleach and other aggressive substances.

Do not use cleaners and do not agitate the fabric by scrubbing it. A soft cloth will do the work. In case of question contact your rigger.

11. **Storage**

Store your parachute in a clean (not over 20°C), dry and dark place. Also make sure that the storage place will stay in this manner during the time of storage. This will prevent the "hard to detect" ultra-violet damage caused by sunlight and other sources such as chemicals, acids and other aggressive substances.

12. **Maintenance**

There are 3 different types of maintenance for a Speed 2000 Reserve!
Mandatory ones, such as the

INSPECTION with REPACK PROCEDURE and MINOR AND MAJOR REPAIRS

All maintenance carried out on this parachute has to be performed by a properly trained and certified parachute rigger or a qualified person with equivalent ratings (ratings may differ from country to country, so please check with your parachute organisation before you choose your service person).

See the chart below for who may do what type of maintenance to your Speed Reserve!

As an example here a list that shows "may and may not" according to the German regulations.

| Type of Maintenance | Manufacturer | Senior Rigger | Master Rigger | Maintenance Cycles |
|------------------------------------|--------------|---------------|---------------|--|
| Assembling and compatibility check | yes | yes | yes | before release to service |
| Inspection and Repack | yes | yes | yes | - before release to service - within 12 months periodically |
| Minor Repair | yes | no | yes | - after emergency use |
| Major Repair | yes | no | yes | - after water jumps - after improper handling |

Definitions

Minor Repair

"A repair any other than a major repair". Pointer Manual, Volume I, Glossary/Index. Such as:

Replacing

canopies, harness/containers, pack opening bands, cable housings, automatic actuation, devices and harness hardware, where major stitching is not required.

Making repairs to

containers, repair of stitching (re-stitch), patching holes in canopies.

Major Repair

1. That, if improperly done, might affect weight, balance, structure strength, performance, flight characteristics or other qualities affecting airworthiness.
2. That is not according to accepted practices or cannot be done by elementary operations.
3. Which includes replacement of panels, ribs, lines, lateral bands, back straps, main lift webs.

Pointer Manual, Volume I, Chapter 7.01 and 07.02

13. Speed 2000 Compatibility Chart

The Speed 2000 Family of Reserve Parachutes is compatible with the Reserve Compartments and Reserve Pilot Chutes of following Harness/Container Models. Please check with your rigger or the H/C manufacturer for the matching container sizes. You will find the pack volumes of the individual speed sizes on page 5 of this manual. Should your current harness/container not be in this list, call us for an updated version.

| Manufacturer | Model or Model Family |
|------------------------|------------------------------------|
| Altico | Dolphin |
| Mirage Systems | Mirage |
| Jump Shack | Racer Family |
| Parachutes de France | Atom Family |
| Parafun | Advance |
| Paratec | Ultra, Next |
| Performance Variable | Omega |
| Relative Workshop | Vector Family |
| Rigging Innovations | Talon I, Talon II, Telesis, Voodoo |
| Strong Enterprises | Quasar Family |
| Sun Path Products | Javelin Family |
| Sunrise Rigging | Wings Family |
| Thomas Sport Equipment | Tear Drop Family, Zerox Family |

Line Trimm Charts (all measurements in cm)

| Size | Totals length of A line | AB | AC | AD | Br | Tg |
|------|-------------------------|----|----|----|-----|----|
| 120 | 258 | 6 | 21 | 42 | 180 | 50 |
| 135 | 271 | 5 | 22 | 45 | 192 | 50 |
| 150 | 284 | 6 | 23 | 47 | 195 | 50 |
| 170 | 304 | 7 | 25 | 51 | 214 | 53 |
| 190 | 324 | 7 | 26 | 54 | 225 | 53 |
| 220 | 311 | 8 | 30 | 63 | 217 | 55 |
| 250 | 325 | 7 | 32 | 65 | 225 | 60 |