

*SPEED 2000*  
Reserve

OWNERS MANUAL

---

BETRIEBSHANDBUCH

Weingartstr. 12  
66798 Wallerfangen  
Tel.: (49)-6837-7375  
Fax : (49)-6837-74373

## **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 you or 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

Paratec GmbH

Eva Schumann  
President

## Table of Contents

<b>Letter from the President .....</b>	<b>2</b>
<b>Table of Contents .....</b>	<b>3</b>
<b>About this Manual.....</b>	<b>4</b>
<b>Technical Data Sheet.....</b>	<b>5</b>
<b>Read before Assembling .....</b>	<b>6</b>
<b>Inspection Procedures.....</b>	<b>7</b>
<b>Packing Procedure.....</b>	<b>9 - 25</b>
<b>Cleaning your Canopy .....</b>	<b>26</b>
<b>Storage.....</b>	<b>26</b>
<b>Maintenance.....</b>	<b>27</b>
<b>Component Compatability Chart .....</b>	<b>28</b>
<b>Line Trimm Table, overview .....</b>	<b>29</b>

## 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 seales and signs any packjob.**

**It is also in the resposibility of every user to stay within the limitations set by the manufacturer regarding maintenance cycles, wing loadings 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.

## 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 Pack 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 center 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 you pack !**

## 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**

CANOPY 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

## 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 lbs 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 :  
Paratec GmbH  
Weingartstr. 12  
66798 Wallerfangen  
Germany  
Tel. 49 - 6837 - 7375 Fax : 49 - 6837 - 74373  
email: support@paratec.de

## **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 compatability, refer to the chart on page 18 in this manual. Should your container not be listed, then contact us immediately for an updated version.**

**Assemble this parachute also in accordance with the harness / container manufacturer's manual.**

## **Inspection Procedures**

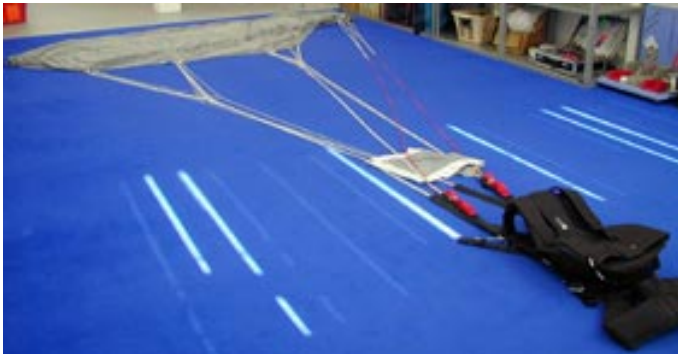
**To be carried out at assembly, before every repack and after every emergency use.**

As mentioned above, your Speed 2000 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.

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



## Packing Procedure, Speed 2000 Reserve Parachute



Step 1  
Lay out the parachute



Step 2  
Perform a line check by  
making sure the steering lines  
run free through the slider 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.

If the parachute is too big for your height, use

a hook as shown in this picture.

Start your pack jpb by pulling out the Nose(7)



Step 6 ( both pictures )  
Start splitting the canopy by  
performing S-folds  
between the A and B line  
groups  
Then continue towards the tail  
by doing the same to BC and  
CD sections.



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



Correctly folded canopy  
shown from trailing edge  
side



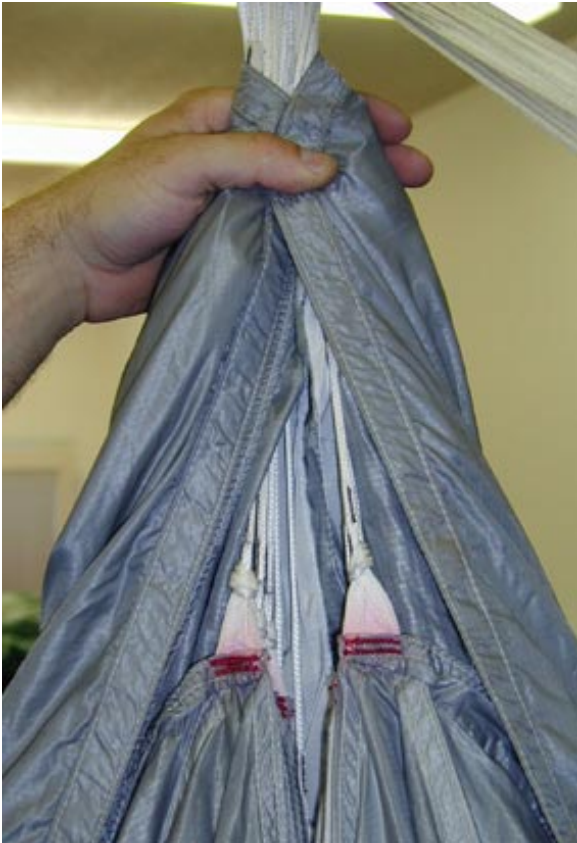
Correctly folded canopy  
shown from leading edge  
side



Step 7  
Position the slider in the  
centre of the canopy



Step 8  
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 page.





### Step 9

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 the canopy.

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,  
supporting 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 layes  
on top of the spead 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  
Perform a S fold  
backwards towards the  
line strand



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 big difference in this  
pack job is, that  
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  
Do so with the right ear.



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 assures 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

Set the bag upright and start stowing the rest of the lines into the stowage pocket ( see picture on following page )





**Attention!**

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

## **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 cleansers and do not agitate the fabric by scrubbing it. A soft cloth will do the work.**

## **Storage**

**Store your parachute in a clean, cool ( 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.**

## 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 !

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

## 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 appreciably affect weight, balance, structure strength, performance, flight characteristics or other qualities affecting airworthiness.  
or
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 7.02

### Speed 2000 Compatability Chart

The Speed 2000 Family of Reserve Parachutes is compatible with the Reserve Compartments and Reserve Pilot Chutes of the 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.

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

**Line Trimm Chart ( all measurements in cm )**

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