MINIPLANE parachute rescue system.

Manufacturer‘s free test durying the omologation

Welcome to our team and congratulations, You have made an excellent choice!

SNIP L MINIPLANE and WAY RICHLY MINIPLANE are proportionally shaped double surface rescue chute developed for paragliding and paramotoring.
They have extremely fast opening characteristics and a low weight, double cell design and short suspension lines.

Thanks to the very low weight WAY RICHLY MINIPLANE is designed as second spare rescue chute for acro and cross country pilots. It has extremely fast opening characteristics. It was designed for situations involving malfunction of reserve chute or cases when main reserve chute entangles with canopy itself.
Can also be used like main rescue parachute if the pilot / machine weight are very light.

Development was completed with successful passing of SHV flying tests and loading tests.

Before your first flight with **MINIPLANE parachute rescue system** as a safety system, please study this manual thoroughly. It contains information critical to safe and easy operation of the system.

If you wish to be informed about the latest technical improvements and innovations as well as news about the rescue system and related products visit the manufacturer EASY FLY web page www.kitesurfing.cz , the PER IL VOLO snc page : www.miniplane.com or www.miniplane.it , or your local dealer.

Content:

Model	***WAY RICHLY Miniplane***	***SNIP L Miniplane***
size	***24 m2***	***30 m2***
cells		***54***
gores	***16***	***18***
Canopy weight	***1600 g***	***1850 g***
Bag weight	***350- 550 g***	***350- 550 g***
Max omologated charge	***110 Kg***	***75-130 Kg***
Opening time at flight speed	***< 4 s***	***< 4 s***
Max vertical speed	***5,5 m/s***	***5,5 m/s***
omologation	***CEN DHV***	***CEN DHV***

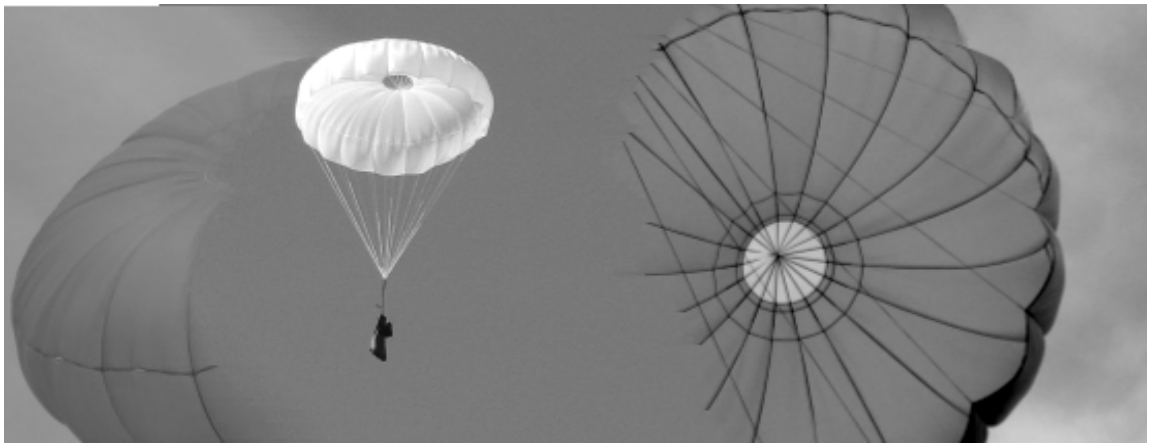
DISTRIBUTOR	MANUFACTURER	YOUR LOCAL DEALER
PER IL VOLO snc Cittadella PD Italy www.miniplane.com www.miniplane.it MINIPLANE paramotors TOP engines	Easy Fly Tomáš Brauner Ruská 16. Prostějov 796 01 Czech Republic e-mail: easyfly@kitesurfing.cz www.kitesurfing.cz	

Important

At the time of purchase, this reserve chute conforms to required certifications, any change made to the chute by purchaser invalidates the certification.

Manufacturer is not responsible for any damages caused by improper use.

The use of this paragliding safety system is at your own risk.
Each pilot is responsible for his/ her own safety.



SNIP L MINIPLANE and WAY RICHLY MINIPLANE are proportially shaped double surface rescue chute with forward speed, partially stearable.they have extremely fast opening characteristics thanks to the low weight, double cell design and short suspension lines.

SNIP L MINIPLANE and WAY RICHLY MINIPLANE are designed also for powered paragliding.
The construction considers special needs of powered paragliding. Such as low weight,easy mounting on all types of harnesses, possibility to toss with either hand in any flying regime, choice of attaching instruments and maps on the container itself.

Biggest advantages are:

- choice of tossing chute with left or right hand on either side as needed.
- it is necessary to maintain vertical stability of a pilot after deployment, so that he is not pushed forward while landing. There is no shift in center of gravity of a pilot after deployment thanks to attachment of chute to main hanging points, paramotor cage will help to absorb the impact force on landing.
- chute is closely connected to its handle for easy and accurate toss.

Technical specifications

SNIP L MINIPLANE and WAY RICHLY MINIPLANE comes with the front mount container.
It consit in a 33cm cylinder , 13cm in diameter, with possibility to attach instruments on top of it.
optional - a container designed as instrument panel with map holder and compact 5l ballast pocket.

Applications

SNIP L MINIPLANE was designed and tested as a paragliding and paramotoring reserve chute.
WAY RICHLY MINIPLANE as a second spare paragliding reserve chute
They was **not** designed or tested for use in skydiving or base jumping , and such as has to be used with [certified] paragliding harness only.

Components

- canopy, main and central lines, bridles
- outer and inner container
- two bridle straps used for attaching with harness's hanging points

Operational time limits

Ten years fitness is guaranteed only if:
- manufacturer or authorized dealer service performs 5 year warranty check and following year checks.
- every 12 months repack is provided by manufacturer or authorized service
- after every use, when reserve chute was deployed, opened and flown, it was sent for check to manufacturer

Maintenance

- store reserve chute in dry and clean place
- due to used materials, avoid any direct sunlight. UV rays cause fast deterioration of canopy materials, so never expose it to extended direct sunlight
- check after flying in rain if reserve is damp. If yes, dry it immediately to prevent mildew damage
- if reserve gets in contact with salt water, rinse it as soon as possible with fresh water and dry it
- if soiled with grease, oil or other chemicals, it has to be send to manufacturer for check up. Grease, oil or chemicals can destroy materials.
- while in transport it should not be exposed to temperature above 50c

Repairs

- all repairs have to done by manufacturer. Any unprofessional interference or modification can cause reserve chute failure and manufacturer cannot be responsible for any of it

Checks

- before every flight it is necessary to check whether outer container is secured by reserve pins so it does not open spontaneously
- reserve chute has to be regularly repacked, thanks to used materials repack period can be extended to 12 months. IT IS NECESSERY TO MAINTAIN THIS PERIOD, if not repacked for extended time it can prolong the opening .
- every repack has to be kept on record in service book

Conditions of warranty

Manufacturer guarantees 6 year warranty from date of purchase:
- if every check and repacking has been properly filed in service book
- if all conditions for use, maintenance and repairs have been kept
-if chute was not exposed to extended UV radiation or otherwise destroyed

How to use it

- it's recommended to try a practice toss before first flight, so you can check proper function of outer container which is supplied with reserve chute **MINIPLANE parachute rescue system** (pulling handle, inner container, rubber loops or other parts can be damaged from transport)
- force needed to pull chute from outer container should not exceed 5-10kg in any flight mode

Toss of reserve chute[RC hereafter] in step by step:

- pilot grabs with one hand handle of RC and with continuous smooth movement releases secure pins of outer container and throws away RC into open free space
- it is necessary to throw away the container with as much force as possible to shorten the opening time [it is mandatory to throw away the handle along with container]

Important : if **MINIPLANE parachute rescue system** is in its original front mount container it is possible to throw it away on either side with either hand

- immediately after opening of RC you have to pull the main canopy towards yourself, so the RC and main canopy won't tangle together which could cause failure of RC
- for pulling down and folding of main canopy use the brakes or the last risers -'D' or 'C'- of the main canopy
- pull both brakes or both risers **simultaneously**, so there is no rotation of main canopy

Recommendations :
Practise how to use reserve chute at least mentally, so you are aware of procedures and mainly to be aware of reserve chute in time of need. The best practice and training is to take part in SIV clinic.

Canopy, suspension lines and bridles

The most important part of RC is its canopy. **MINIPLANE parachute rescue system** is designed as proportionally shaped canopy with central line and double air-filling to optimize the relation between the amount of used material and projected area. Canopy is constructed from 18 panels and 54 pcs.

What is double air-filling or double cell construction and what is it used for?

Basically it shortens the opening time of RC. After full opening of RC, the filling openings stay partially open and air is flowing through them against the movement of RC which results in lesser sink rate and greater stability.

Material used for RC has great affect on opening and flying characteristics. **MINIPLANE parachute rescue system** is made from french fabric Porcher Marine 90 82.

Other part of RC are lines, there are 16 main and two central lines. Their main characteristics are strength, ability to stretch and absorb part of the opening shock. Breaking strength of lines is: main - 220 daN, central - 370 daN, elasticity 33%. Bridle's breaking strength is < 2000 daN.

Inner container

Inner container is made from light but durable materials. It is connected with handle by two 6cm long straps, so after pulling out from outer container we have compact packet which can be easily and accurately thrown away with sufficient force. For safety and functional reasons the loops for attaching the lines are on outside of container, so the container stays at least 1.5m enclosed after toss. One reason to stay enclosed is to prevent immediate deliberate opening right after pulling out from outer container. Second - the RC starts to open in safe distance from pilot's

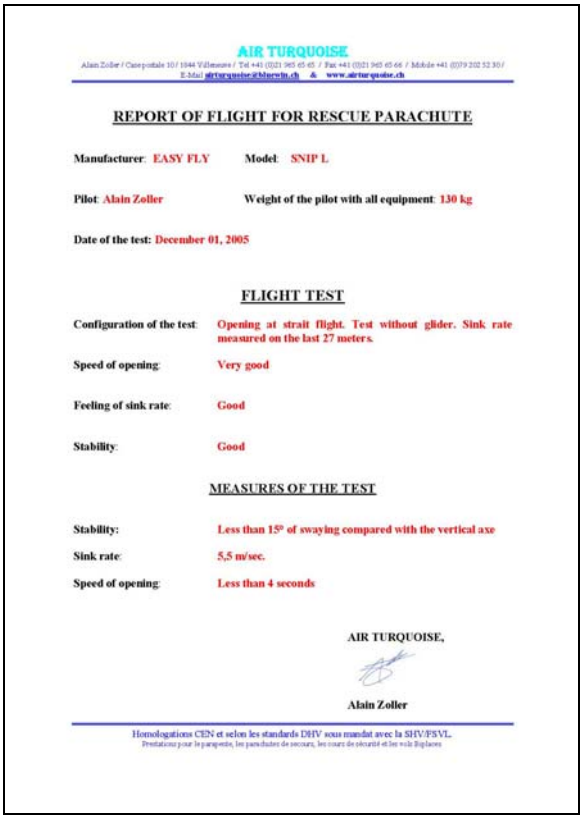
aerodynamic wake. (RC's opening in a wake can cause delayed inflating or sticking of RC to pilot's body.). For these matters, change of inner container must be consulted with manufacturer!

Outer container

Outer container is designed for use with majority of modern harnesses. Reserve chute is attached to a chest strap through outer container's plastic buckle and bridles are clipped into harness's main hanging points - as shown on picture no.**

ATTENTION!

For correctly functioning reserve chute
BOTH bridles have to be connected to harness's main hanging points
Don't use prolongement bridles



AIR TURQUOISE

REPORT OF FLIGHT FOR RESCUE PARACHUTE

Manufacturer: EASY FLY Model: SNIP L

Pilot: Alain Zoller Weight of the pilot with all equipment: 130 kg

Date of the test: December 01, 2005

FLIGHT TEST

Configuration of the test: Opening at strait flight. Test without glider. Sink rate measured on the last 27 meters.

Speed of opening: Very good

Feeling of sink rate: Good

Stability: Good

MEASURES OF THE TEST

Stability: Less than 15° of swaying compared with the vertical axe

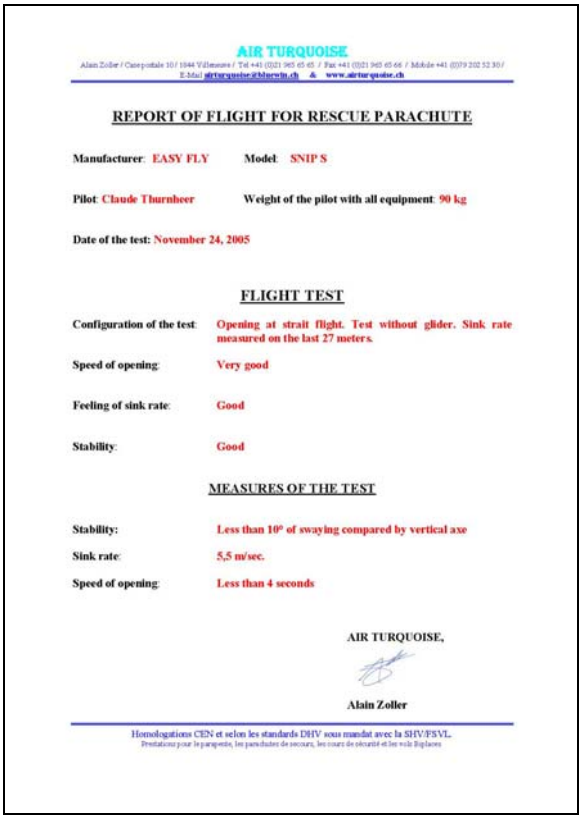
Sink rate: 5,5 m/sec.

Speed of opening: Less than 4 seconds

AIR TURQUOISE,

Alain Zoller

Homologations CEN et selon les standards DHV sous mandat avec la SHV/FSVL.



AIR TURQUOISE

REPORT OF FLIGHT FOR RESCUE PARACHUTE

Manufacturer: EASY FLY Model: SNIP S

Pilot: Claude Thurnheer Weight of the pilot with all equipment: 90 kg

Date of the test: November 24, 2005

FLIGHT TEST

Configuration of the test: Opening at strait flight. Test without glider. Sink rate measured on the last 27 meters.

Speed of opening: Very good

Feeling of sink rate: Good

Stability: Good

MEASURES OF THE TEST

Stability: Less than 10° of swaying compared by vertical axe

Sink rate: 5,5 m/sec.

Speed of opening: Less than 4 seconds

AIR TURQUOISE,

Alain Zoller

Homologations CEN et selon les standards DHV sous mandat avec la SHV/FSVL.

Packing instructions

Packing must be done from an authorized expert, following instructions are only suggestions.

always check before packing:

1. for damaged lines and for any damages on their attachment points and bridles
2. condition of canopy material-its cleanness, and for any damages
3. condition of: inner container, handle, container's elastic closing, rubber bands used for attaching lines

1

Divide canopy gores evenly into right and left side, **SNIP L MINIPLANE** 9 by 9 gores, (**WAY RICHLY MINIPLANE** 8 by 8 gores) . Reserve canopy gores are not symmetrical and they are numbered. Always start folding with right hand side, on the bottom gore #9 (#8) and finish the side with gore #1 on the top

2

We gently strech the lines and tuck the upper part of reserve chute underneath the upper panel so that suspension and central lines will be of the same lenght

3

Folding of left side starts with gore #10 (#9) and finish with gore #18 (#16)

4

Loose the tension on bridles' side. Separate the lines equally into right and left halves to prevent any tangles. Tension up the bridles again and check for any line crossings or entanglements.

5

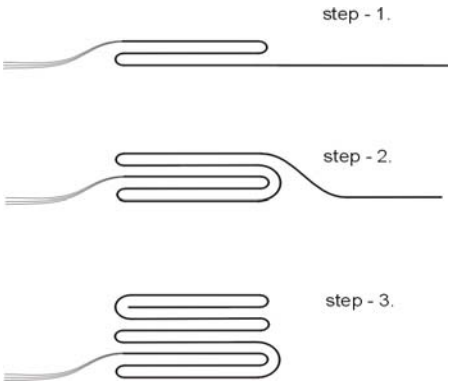
Both halves fold longitudinally into thirds : make first 1/3 fold under RC and second one on the top of RC - see photo [folding RC into thirds to make Z shape - one third on top and other on bottom - improve speed and symmetry of opening]

6

Straighten out all wrinkles on RC (which is folded into thirds), press out air and start folding -as shown on pictures and in step 1.

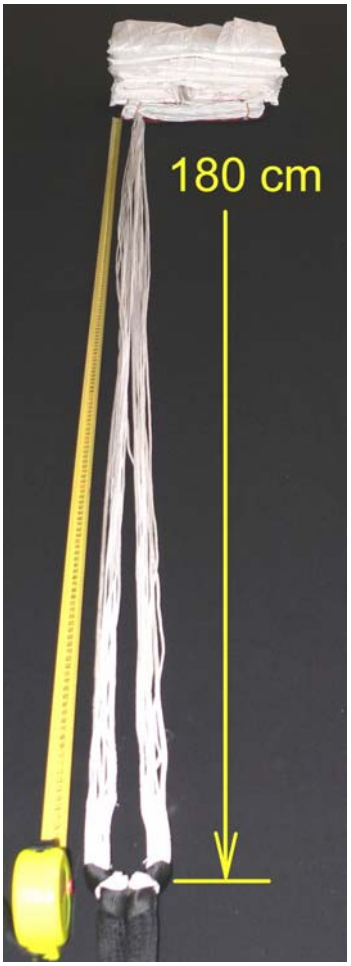
7

Another fold is done around and on top of the first one - as shown in the steps 2 & 3 - and continue after that with 'Z' folding upwards.

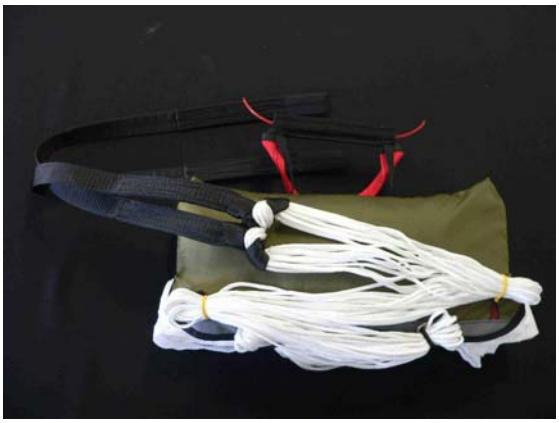


8

Insert folded canopy into inner container and fold up lines into loops and secure them with rubber bands and insert them into pocket of container until you reach approx. 180 cm from bridles.



9
Close container with rubber loops and secure them with approx. 3-4 cm loops made from lines. Force needed to open container (slip the loops of lines out of rubber loops) should be in range of 300-900 g.



The rest of lines, approx.120 cm, fold up into ‘figure8’ loops and secure them with rubber bands on outside of the container.

10
To start folding of outer container, take bridles and attach them to Velcro on inner side.

(Bridles' span should be similar to width of harness chest strap plus approx. 7cm) .

PLEASE TAKE CARE TO THE BRIDDLE ORIENTATION as shown on the following pictures

11

After, close container and secure it with two plastic pins. Folding of RC and closing of outer container have to be done carefully and slowly so that RC fits easily into outer container. Check the function of outer container. Attach RC to harness, and make practice toss in flying position. Force needed to pull out RC should not exceed 10 kg.

WARRANTY CERTIFICATE

Filled out by dealer

Type	☐ **SNIP L MINIPLANE**	☐ **WAY RICHLY MINIPLANE**
Serial number	Production date	Checked by

Filled by customer

Date of purchase	Name	address

- please keep the purchase receipt (or a readable copy) with this document -

YEAR REPACK SERVICE RECORD

date	Service center (complete address please)	signature