

TROLL
+
TROLL MDV
BASE-Canopy with
Firebird
BASE Containersystem
RELAX



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Foreword:

In this manual you will find only basic packing and rigging instructions. Base jumping is extremely dangerous. Make absolutely certain Base jumping is really what you want. Make at least 200 skydives. Take first Base jump course from a competent qualified teacher or from VDO in Germany.

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Warninglabel:

WARNING !!!

BASE - jumping is extremely dangerous! You may be seriously injured or killed. Training and experience are required before you jump this equipment. Do not use this equipment if you have not read this warning label, all owners manuals and packing instructions. Do not jump this equipment without inspecting it and all of its components before every use.

Atair and its affiliates offers no warranty; expressed or implird, as to the reliability or safety of this or any equipment that it sells. This equipment has no guarantee of its quality or performance.

It sometimes fail to operate properly even when properly assembled, packed and operated so that you risk serious injury or death each time you use this system.

CANOPY:

SERIAL NUMBER:

DATE OF MANUFACTURE:



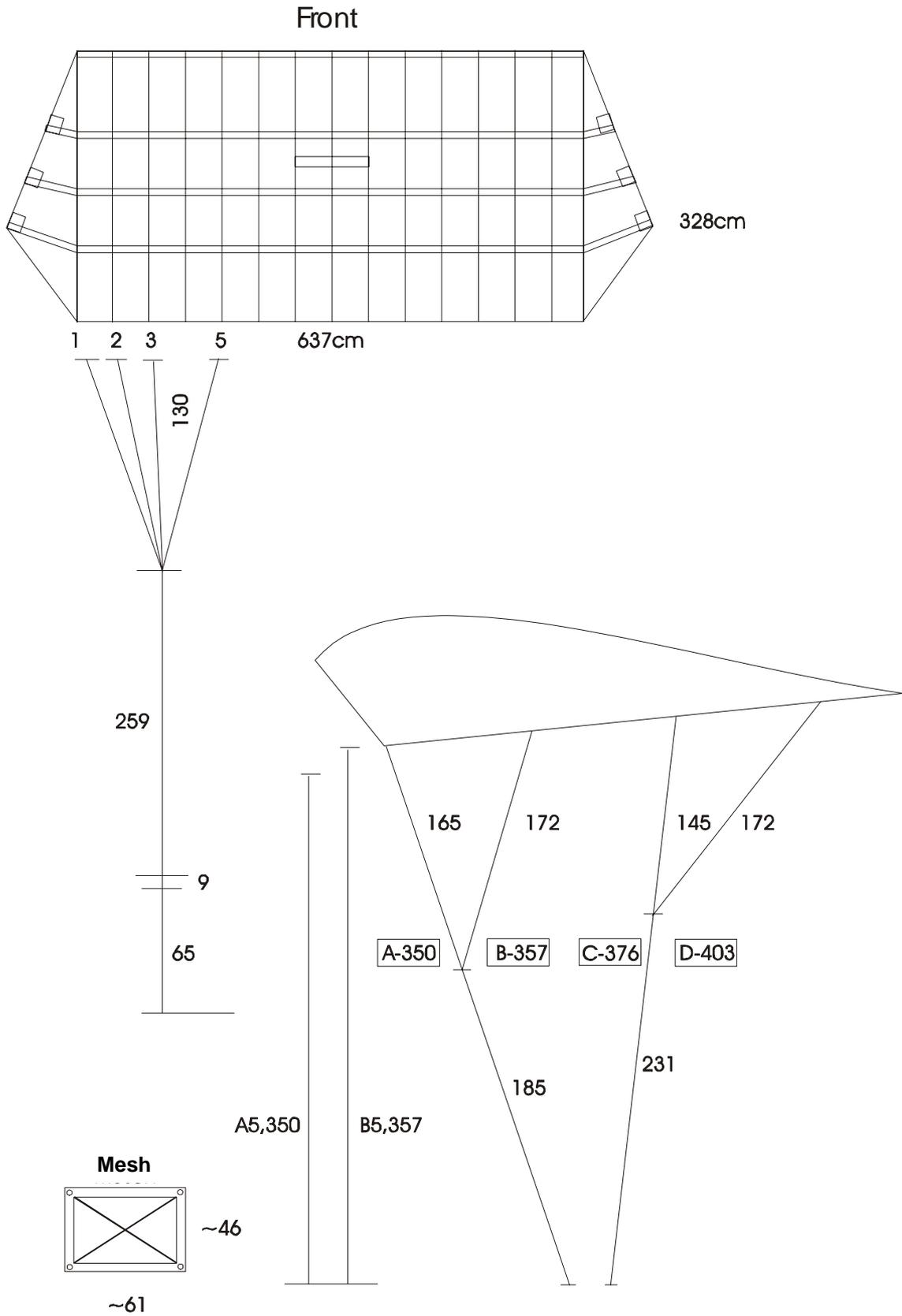
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REMOVAL OF THIS LABEL VOIDS ALL WARRANTIES

**Never use this system unless you have read the Manual and Warninglabel.
And have completed the ground and air training!**

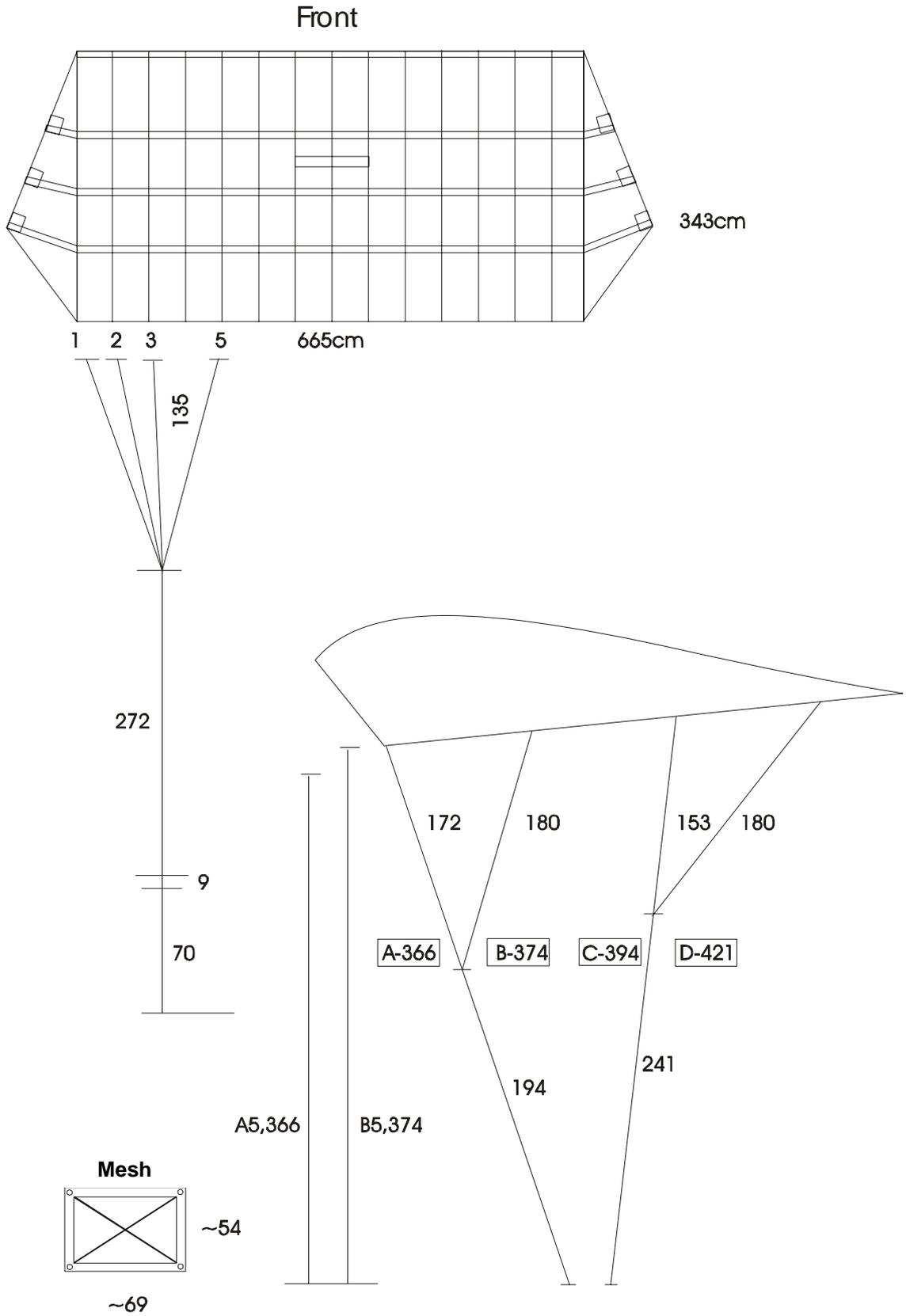


Technical Description Troll 225

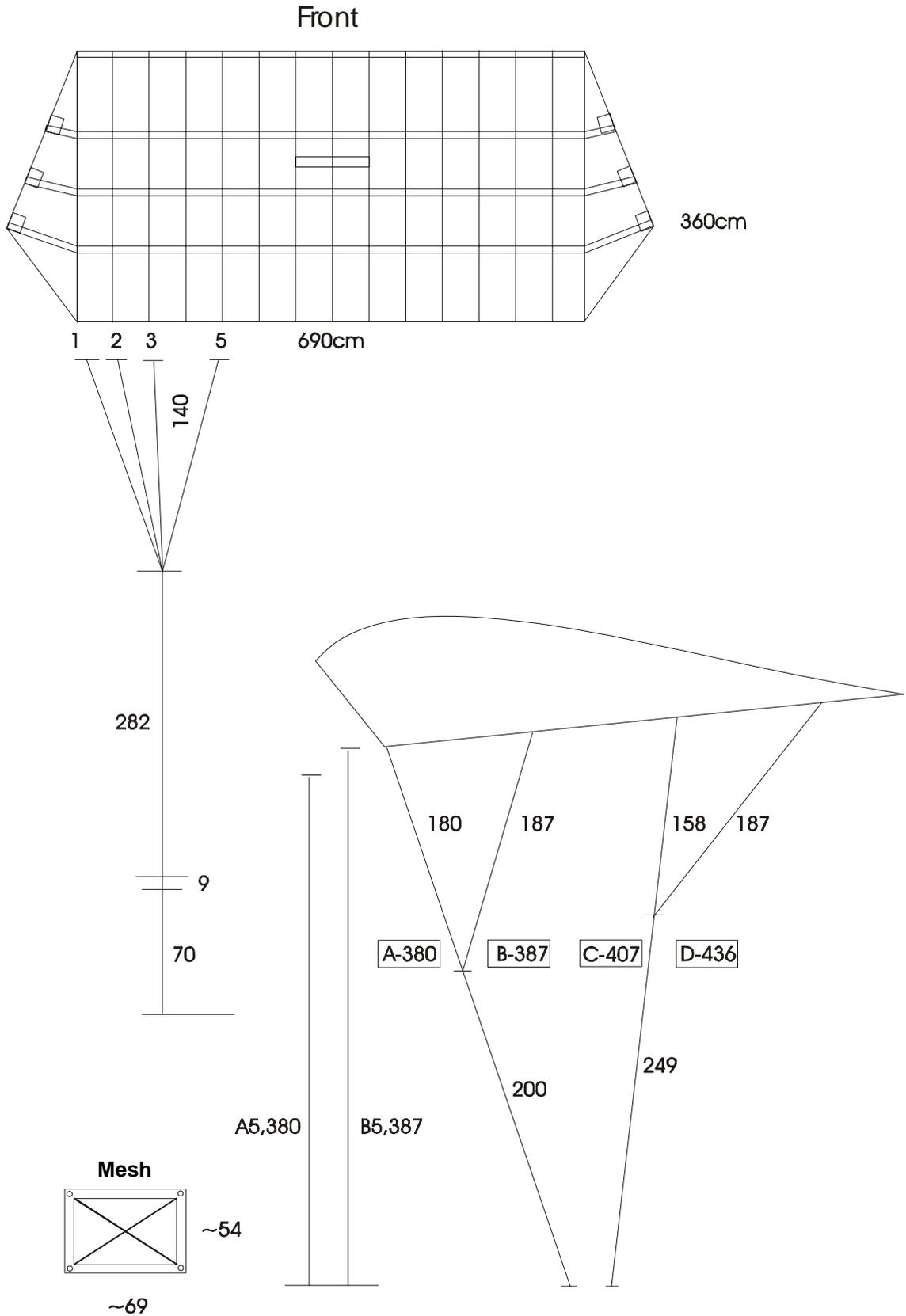




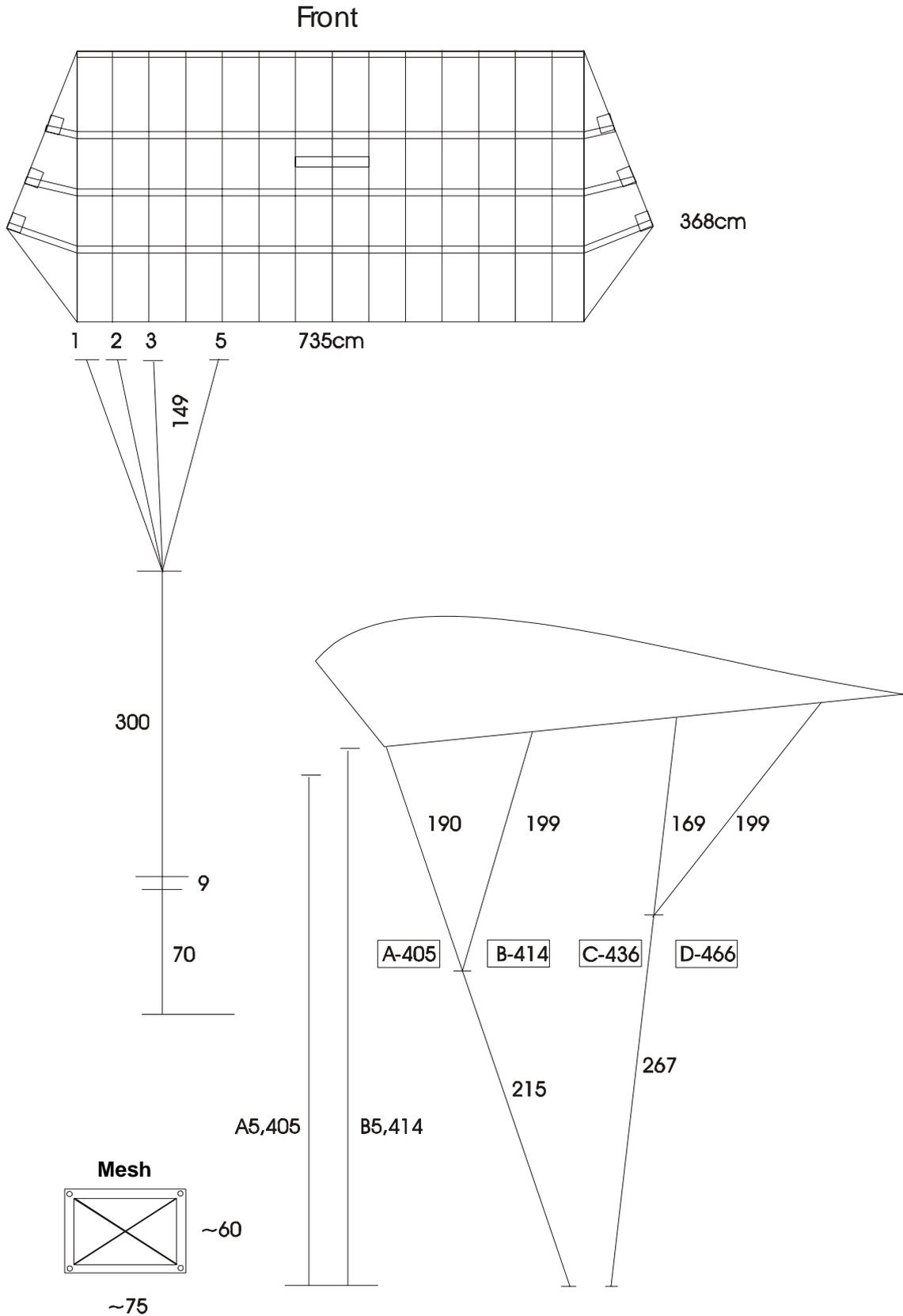
Technical Description Troll 245



Technical Description Troll 265



Technical Description Troll 290



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MDV (Mono Directional Valves)

An option is our Troll MDV. The Canopy has a vented bottom Skin that improves low-Altitude and no Slider opening Performance.

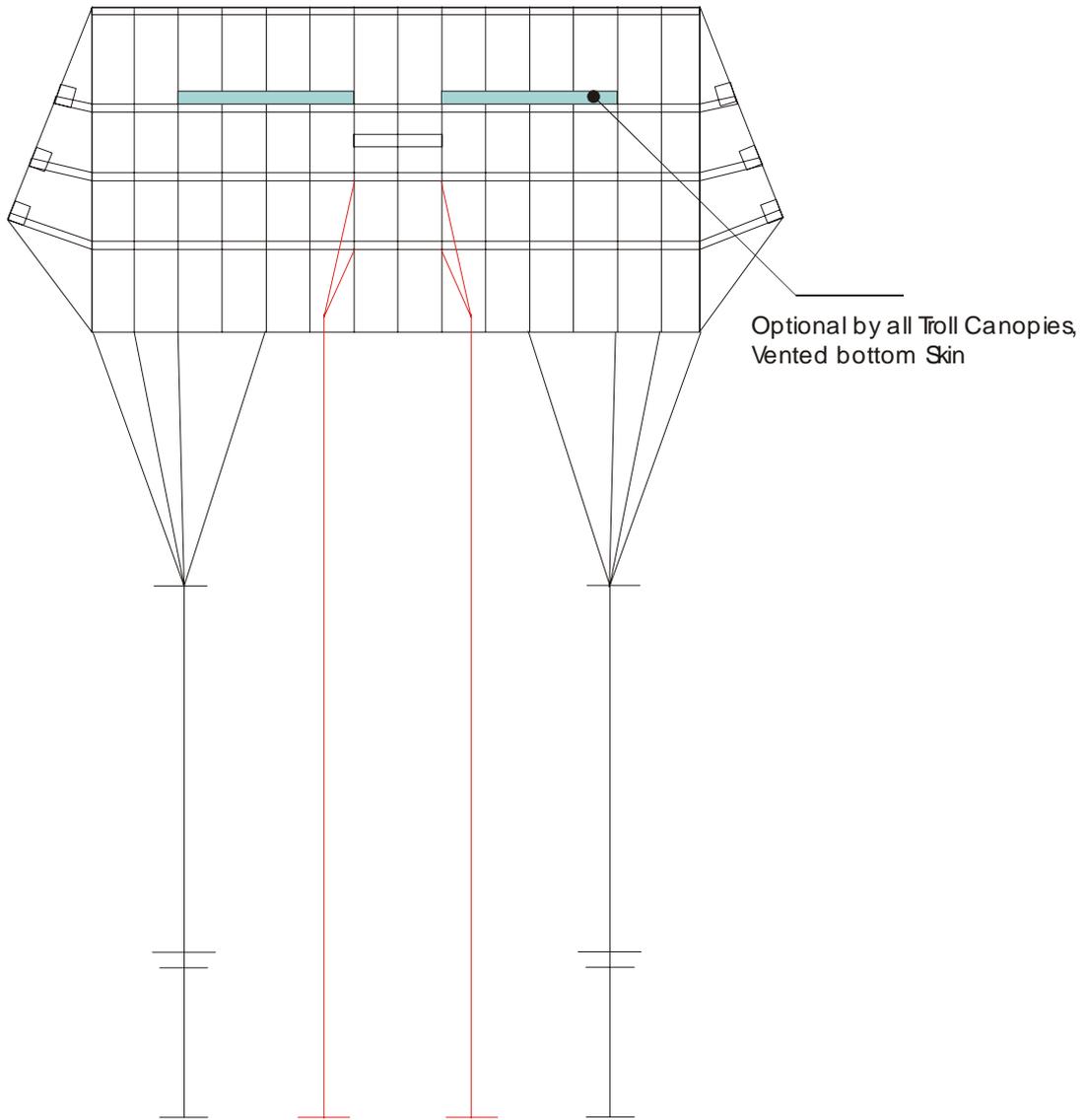
The vents reduce the Time between bottom Skin inflation and full pressurization. The vents are made of Marquisette/Mesh Fabric used by Pilot chutes.

The Pressure inside of the Canopy is higher than on bottom Surface. The Air normally escapes through the vents. We added valves (sleeve type of valve) to prevent this Problem. The valves allow the Air to enter inside the Canopy, but not to escape again.

The Glide Ratio of MDV Troll is the same than on normal, not vented Troll.

When Slider is used, it should have some „control“ during deployment. This can be obtained by rubber banding the top of stowed Slider in a rubber band that is attached to a center „C“ line. It is important to roll the nose of the canopy and stop tracking before deployment to prevent hard openings.

Tailgate and MDV Option



1. Canopy lines A,B,C,D made of Dacron 525 lb - white.
2. Control lines, Center C5+ D5 made of Dacron 600 lb- red or black.

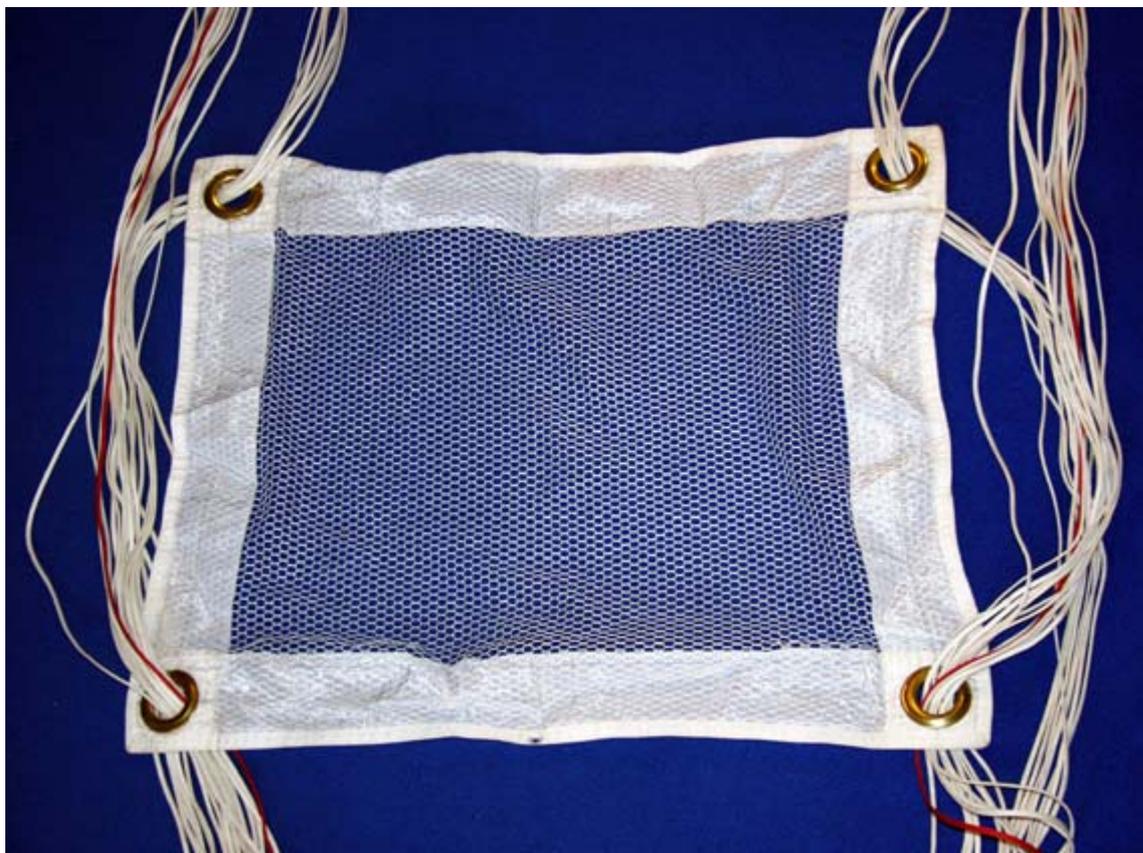
Center C5+ D5 are called Tailgate friendly lines (TGF).

Option: TGF lines black, Control lines red.
TGF lines red, Control lines black.

Slider:

The Troll comes as standard with a Mesh Slider There are different ways to use a Slider. For example low altitute jumps did not need a slider. So you must remove it or do the packjob with slider down. If you do slider down you also have to remove the steeringlines of the guiding ring on the riser.

So there are many things about BASE packing and jumping we can not explain in this manual. So we recomend that you use the VDO in germany and their instruction Programm to be well prepared for your first jump.



Packing

Setting the Brakes:

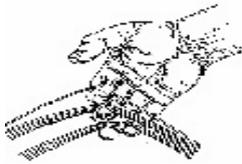
1. It is important to choose the right fingertraped point on booth steeringlines. For different altitude you need different settings.

Low altitude: Higher Brakesetting (1), use Tailgate, no Slider and routing the Steeringlines outside the guidingring on the riser. (in case of a steeringlineover malefunktion you can drop them and they are completly released from your risers.

High altitude: Low Brakesetting (2), use slider.

2. Different to normal sportrisers is the additional loop in picture (3). Take care to route it in the same way!

After that you can put in the toogle. And take care that it is fixed on the velcro.



The lower part of the steeringline should be stowed in the velcropocket next to the toogle.



Packing

Setting the Brakes:

At least close the linepocket as shown in the picture.



Start the packing:

First be shure there is no damage or dirt in the canopy. It is helpfull to fix both risers with a clamp or cord to be shure that there is no different length between them.



Start the packing:

The Base pack job is like a regular reserve propack-job. If you do not know how to pack a normal reserve, ask for instruction by a certified Rigger or Baseinstructor.
For easy packing it is the best to hookup the canopy. Flake out the inside of the canopy and place the Nose (3cell left and 3cell right) open infront of the canopy.



Packing

Here you can see how to pull out the inside fabric of the canopy. Start with A line attachment to B line attachment. Do this with both sides of the canopy.

Flake out the inside Fabric carefully all the way down to the bottom of the canopy.

In the end all lines should stay in the middle of the canopy. Important is to draw more attention on the D-lines and steeringlines to avoid a lineover Malfunction.



Packing

Before you lay down the canopy on the ground place the nose like in the picture. 3cells to the left and 3cells to the right. Leave the middle cell in the center and complete open.



Start on one side of the canopy to flake it out again, but on the ground. It doesn't care which side you start with.



Follow the steps as shown on the picture.



Packing

Be carefull that the inside of the canopy stays in position. Don't pull to much!



It is helpfull if you fix all the lines temporary with a pul-lupcord or a clamp (remove all packingtools before you finish the packjob) to keep them all in the center.



Here we are close to the middel only the tail need to be fold on top.



Packing

Here you can see left side already finished. The tail is in the middle with the linepocket on top.



Now start with the right side and do the same again.



Be more carefull not to pull or move to much the left side. Otherwise you need to check the left side again.



Packing

Here it is the same technique as on page 15.



Packing

If you folded both sides of the canopy it should look like this. The fabric is symmetricly folded on both sides and the lines are clean in the middle.



Here you can see the tailgate in use.



Here is a closeup of the tailgate. When and where to use you need basic training by a BASE instructor.



Packing

Now fold the side of the packjob again in halves to get it tighter. It need to fit inside the container.



So check the wide of your container to see how far you need to fold the canopy.



You have to fold both sides of the canopy. Here in the picture is only left side. But you need to fold right side aswell.



Packing

After you did that you need to put around the middle of the tail.



And wrap it tight around the canopy. Don't wrap the nose too. The nose must stay outside!



S-fold the lower part inside under the tailpocket.



Packing

Stow the lines with the rubberband (two times around the lines) and put it between the tail (top surface) and the tailpocket. Here is a small pocket were you can put it in.

Open the tailpocket all the way.

Put in the lines like in the picture. Be careful not to damage the lines with the velcro.

Now just fold the nose towards the canopy but don't roll them. They need to stay open.



Packing

Up to here you need to follow the instructions of the Rig manufacturer which you can find in the users manual.

If you use a RELAX follow the pictures step by step.



Prepare the container on the ground that it is easy to lay down the canopy inside the container. The tailpocket should be next to the bottom flap of the container, facing towards the packer.



The canopy must be folded backwards to fit in the container. You can check the nose again that it is still open.



Packing

Close the lower loop first.



Then close the second loop. Be careful to route the bridle in the same way as in the picture.



Fix the small velcrosnap on the bridle between the two pins. It is important to give extra length to allow the first pin to get out easily.



Packing

An example to fold the hand deployment is to stretch the mesh fabric all the way upwards.



Then put it in the center of the ZeroP fabric and fold the bridle on too.



Now quarter the ZeroP fabric to keep the mesh and the bridle inside the handdeployment.



Packing

Put it in the pouch on the bottom of the container.

This picture shows how to close the risercover. It is very easy and it protect the 3-ring Releasesystem. Also it covers all the Hardware that your rig looks more like a backpack.



Packing

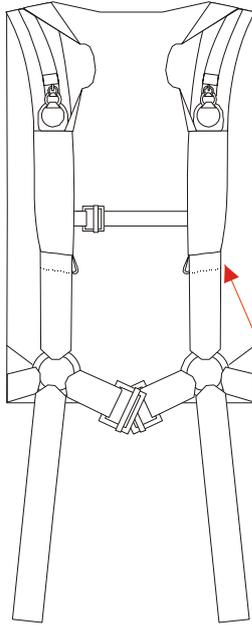
This is the mainriser-releasehandle. It is fixed to the rearside of the right mainlift. It is only for changing the canopys. It is not made to cut away the maincanopy in a emergency situation.



This picture shows how the finished packjob looks on your back.



Extras:



Harness and Container

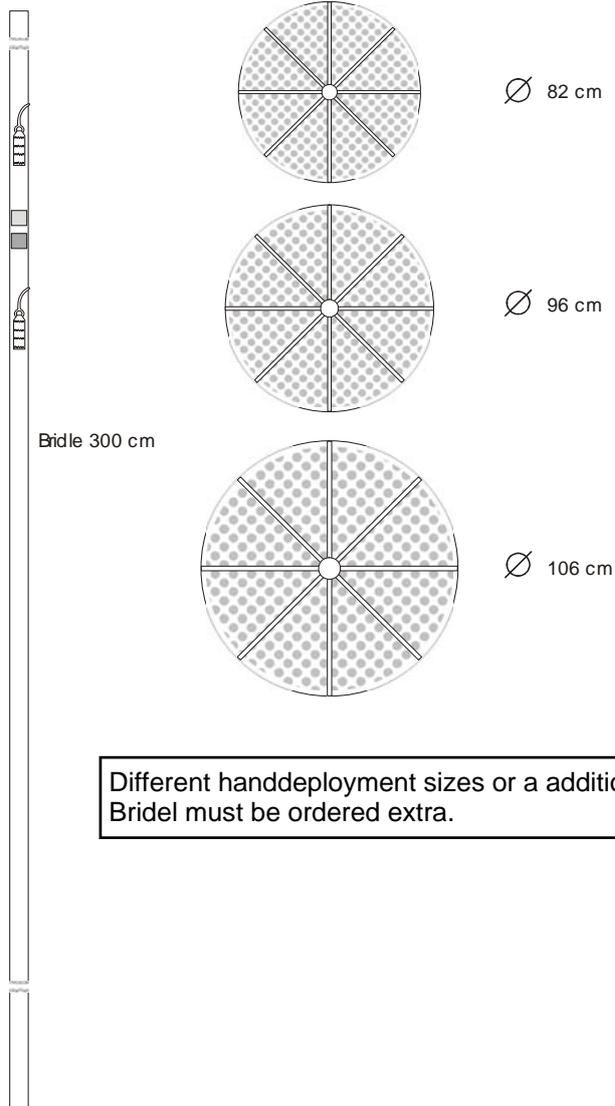
The container of polyamid fabric is integrated in the harness of polyester webbing.

The container is closed by a metal pin for a manual deployment.

The harness is equipped with a 3-point closure and has an adjustable chest strap as well as adjustable leg straps.

The parachute is attached by means of the suspension-line connector links and main risers to the largest ring of the 3-ring release system.

Optional attachment points to hook up a chestreserve.



Different handdeployment sizes or a additional Bridel must be ordered extra.

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Service

Maintenance Instructions:

Parachutes must be opened, aired, inspected and re-packed at the latest every 120 days. In extremely hot and humid climates, an essentially shorter pack cycle is recommended.

Assembly

The parachute system may only be assembled by the manufacturer or an FAA-certified senior or master rigger or equivalent.

Periodic Inspection Instructions

The equipment should be re-examined every 24 months.

The parachute canopy and the container system should be thoroughly examined every 50 jumps or every 120 days after assembly, whichever comes first.

This examination is considerably more detailed than the inspection that is to be carried out each time the parachute is packed.

Every 365 days the parachute must be opened, aired and thoroughly inspected before it is re-packed.

The inspection can be carried out according to the following directions.

The container should be examined in place that is clean, dry, well lighted and large enough that the parachute can be completely laid out.

The following inspection sequence is systematic and meaningful:

1. Pilot Chute, Bridle

Check the pilot chute and bridle for orderly attachment on the top surface of the canopy, as well as for damage. The parachute fabric and the reinforcement tapes, as well as their stitching, should not be damaged. Replace old stowing rubber bands as necessary.

2. Main Risers

The main risers should not show damage in the material or on the grommets or rings. Check the functionality of the Velcro attachment of the toggles. Soiled Velcro should be cleaned.

3. 3-Ring System

The 3-ring system must be perfect, the rings must be round and undamaged. The closing loop must show no damage. The 3-ring system must open with the lightest pull, as soon as the cable is removed.

4. Release Device

It should be checked that the cables move freely in the housings. The Velcro fastening must be perfect and mate well.

5. Harness, Hardware and their Stitching

An examination of the harness, hardware and their stitching can only be carried out visually. Pay attention that the yellow signature thread running along the outside of the type-7 webbing is not damaged and that the stitching is not broken. All metal parts must be free of corrosion and should move freely as designed.

6. Container Material

Examine the container for possible tears, rips or fabric separation. The grommets especially should not show sharp edges or evidence that the fabric is torn away. The loop must be in perfect condition. It is preferable to replace the loop too early rather than too late. The inside of the container must be clean.

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**Should something unusual turn up during this inspection, an expert such as an FAA-certified rigger should definitely be contacted for a more exacting examination and opinion.
When in doubt—safety first!**

Maintenance and Storage

The system should always be kept dry (45-70% relative humidity) and cool (10-15° Celsius, 50-60° Fahrenheit), in a container through which light will not pass. Ultraviolet light can cause invisible damage to the fabric through the deterioration of the nylon fibers. The parachute canopies and container should be kept away from all types of corrosive substances such as lye, acids, fuels, varnishes and solvents. Also storage in areas with running electrical motors (O³ - Ozone forming) should be avoided.

Parachute canopies should be opened no later than 12 months after being packed, to air, check and

Cleaning

Basically the container should only be cleaned with fresh water. The use of brushes or rough sponges should be avoided. After contact with salt water, the container should be rinsed with fresh water at least three times within the first 24 hours. The removal of oil, tar or similar substances should be discussed with the manufacturer. The equipment should not be cleaned in a washing machine.

Only dry the container by hanging it in the shade.

After cleaning the container should be re-inspected.

Alterations and Replacement

Should repairs be necessary, they should be performed by the manufacturer.

Alterations or modifications may only be carried out by the manufacturer or with his agreement. Only official replacement parts or those approved by the manufacturer may be used.

Pre-inspection Each Time Before the Parachute is Packed

The parachute system should be inspected according to the manufacturer's instructions. Stretch the harness-container and the main canopy out on the ground so that the suspension lines are pulled tight. Check that the lines are straight and untangled and that the slider is not damaged.

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If you still have questions, please contact:

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