

KEEPER-ST

Steerable Rescue System

Instruction manual

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Introduction

Thank you for flying 777

Welcome to the Triple Seven Team! Thank you for choosing the Keeper. We wish you safe flying adventures!

About Triple Seven

Our company's goal is to produce high quality products and technologically innovative gliders of all types and classes. We are striving to develop state of the art paragliders, with the optimum compromise between safety and performance, produced in Europe.

Your success is our inspiration, our goal is your success.

IMPORTANT

All technical information in this book are developed by the authors with great care. However, errors can not be completely ruled out. 777 Jadralna Padala d.o.o. Can not accept neither guarantee nor the legal responsibility or liability for the consequences of incorrect information. The authors are gratfull for any information about possible errors. Changes about technical improvements may be done without notice.

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Keeper-ST

We highly recommend that you read this document carefully. It contains instructions and important information about safety, maintenance, and is necessary for the Maintenance and Checking. You will get to know your product quickly.

More current information can be found on www.777gliders.si. Also new security knowledge about the product will be published there. For questions or problems please contact your dealer or contact the Triple Seven Team.

This manual is an important part of the reserve chute. You should want to resell your KEEPER ST later, we ask you to provide this manual to the new owner.

We wish you a pleasant flight and many happy landings.

Safety Notice

The rescue KEEPER ST are manually triggered emergency parachutes for paragliders, who are in an emergency situation. Due to their design features they are not suitable for free-fall! The rescue and suspension connection are not designed for a sudden opening, as the required shock absorber is missing. An improper use is inadmissible. A proper installation of the rescue in the harness is essential and a compatibility check of an entitled person is required. Only a correctly inserted rescue gives proper functionality and thus contributes to safety. When throwing a rescue as part of a SIV training over water, attention should be paid to the fact that a harness-protector combination in the water generates lift and the pilot may be brought into a head down position. There is also the risk that a harness-protector combination staying for longer in the water, may soak the water and pull the pilot into deeper water.

The usage of this reserve parachute is at your own risk. Any liability claims resulting from use of this product towards the manufacturer, distributor or dealers is excluded. We recommend to use controllable rescue equipment for training purposes only with release carabiners, under expert instructions, and over water. Furthermore, we recommend a second reserve when using the KEEPER ST for training purposes.

Purpose

Manually triggered reserve for paraglider emergency situations.

The Keeper Product Range

The KEEPER rescue equipment are characterized by high reliability and for strength, fastest opening time at a low sink rate, high swing stability and small pack size. The KEEPER ST M is the lightest steerable rescue device that is certified to 110kg starting weight. By modern development and materials, which are also used in the parachute scene, we have constructed a sensational compact emergency unit. The KEEPER ST XL is suitable for any aspiring pilot and is for Acro and CrossCountry pilots a top choice. Due to the compact size it is guaranteed that the reserve is compatible with most harnesses. Immediately after the suspension there are 2 small brake handles that allow a steering control, even in difficult conditions, especially wind. Especially in situations where with a normal “round cap” you are not able to avoid an obstacle, the KEEPER ST shows its advantages.

Components of the delivery

Keeper ST
777 Keeper ST inner container (Tubecontainer for the M, four-blade container for the XL)
777 Keeper ST packing instructions (in the Operations Manual)
777 Keeper ST Inspection records (via download from www.777gliders.com)
Operations manual (via download from www.777gliders.com)

Quality Assurance

The 777 Keeper product family is subject to strict controls during the entire production with a comprehensive quality assurance. Thus, the processed cloth, lines and risers are checked several times. The production process is constantly monitored. Each reserve is lay out prior to packaging and checked for line twists.

Used Materials

We continuously check and test our wide variety of provided materials. Like all our products, the 777 KEEPER product range was designed using the latest technologies and procedures and production techniques. The materials were very carefully selected to meet strict quality standards. The controllable KEEPER ST composed by panel. The material is made of air-permeable, ripstop nylon. On the main seams tapes enhance the strength of the cap. The lines are made of high-strength polyester or Dyneema on the XL size. The connection of the lines correspond to the international parachute standards.

Reserve Design

- 777 KEEPER ST consists of 4 components.
- The load-bearing and lift-generating cap
 - the lines (sides top and bottom center lines)
 - Main risers (H-Risers with control handles)
 - Tube container (for size M) or four-leaf container (for size XL)

Certification

The reserve parachutes 777 KEEPER ST are all sertified by the airworthiness requirement LTF. This is exclusively for use with the original 777 KEEPER tube or four-bladed inner container. The 777 KEEPER ST M EN is also certified.

Technical Data

Modell	KEEPER-ST M	KEEPER-ST L
Area	33,3 m2	37,4m2
Weight	1,5kg	2,2kg
Max. in-flight weight	110kg	130kg
Max sink > 120kg	-	4,1 m/s
Max sink 110kg	4,1 m/s	3,7 m/s
Max sink 100kg	3,7 m/s	3,3 m/s
Max sink <90kg	3,3 m/s	3,0 m/s
Panel number	14	16
Main lines	8 x 2	9 x 2
Side lines	2 x 7	2 x 8
Line material	Dyneema	Polyamid
Raiser material	Dyneema	Polyester
Cloth	27g Polyamid Rip-Stop	27g Polyamid Rip-Stop
Reinforcement tape	9,5mm Polyester	9,5mm Polyester

Limitations

Every 12 months the 777 KEEPER ST rescue must be aired and repacked. It makes sense, if you use this opportunity to exercise the throwing the reserve in an a dry and clean place. Currently, there is no requirement for a manufacturer check of rescues. However, we recommend a check every 24 months for a review of the reserve. In any case, the 777 KEEPER ST should be checked after a rescue opening.

TBO KEEPER ST:
12 years under the pack intervals and storage requirements, and then extendable by manufacturer to 15 years.

Required Documentation

- a) Manual
- b) Inspection records

Release and proof of efficacy of the rescue system

In an emergency, the release handle is pulled snatchily. The ideal direction of pull plays an important role. Caution: Do not keep the handle in your hand after the release, but throw it away along with all of your package. This action will release the lock loops.

The pilot throws the inner container to the rear, right or left. The air flow stretches the lines and opens the inner container. The canopy is stretched and filled. Within a few seconds, the reserve will stabilize over the pilot. By pulling the steering linesthe reserve can be controlled similar to a paraglider. The 777 KEEPER ST M is pre braked immediately after release. After first use of the control handles the full speed is reached. We recommend mental training of throwing the reserve on every flight (reach the release handle). To react in an emergency situation safely and quickly we encourage you to visit a flight school training (SIV), a dry exercise in a gym or a rescue throw over water. The better you prepare with the procedure of throwing the reserve, a possible emergency situation will be less stressful for you.

Reserve check

Before each packing the reserve must be inspected by a qualified professional. If the reserve was opened for a rescue, it must be checked by a manufacturer authorized professional.

Behaviour in case of fault

If a fault is found in the check of the reserve that is affecting the airworthiness, the rescue must be sent to the manufacturer for repair. If it is not possible to determine whether a damage is affecting airworthiness or not it should also be sent to the manufacturer.

Attachment to the harness

Each new combination of reserve and harness must be verified by the harness manufacturer or by a person authorized by him trained (compatibility testing). The deployment of the rescue must be possible in the flight position and in accordance with the requirements of the building regulations of the reserve. It should be noted that the release force of 7daN is not exceeded. The 777 KEEPER ST must be connected with a carabiner to the harness. The ultimate load of the joint connecting carabiner should not be below 2400 daN.

WARNING: Use only original spare parts. (O-rings
Attaching of 777 KEEPER ST to additional suspensions in the shoulder area of the harness by using approved carbines and O-rings:
WARNING: Note that BOTH main suspension raisers should be attached to the harness and the carabiners should be closed.
WARNING: The carabiner must be certified for a load of at least 1,600 kg per attached side.
Attaching of 777 KEEPER ST to the main carabiner of your harness when using a front container.
WARNING: Note that BOTH of the main suspension raisers are attached.

Registration and Warranty

777 Gliders is interested to inform you about technical developments and innovations, as well as any information relating to your KEEPER ST. In order to be able to contact you, we ask you to send your warranty card back to us or you simply to register on <http://777gliders.com/tripleseven/support>.

Storage

A reserve, which is there to save the life of its owner, requires careful maintenance. UV radiation, moisture and chemicals are the worst enemies of your 777 KEEPER reserve. Avoid unnecessary stress and do not let your KEEPER unnecessarily in the sun. Rescue equipment is dried in clean, dry and dark room. If the rescue is no longer used, it should be opened, loosely rolled and stored in a bag.

Cleaning and drying

Dirty canopy and containers can be washed with clean tap water. Acids and mildew can affect the strength of the components. Dirty reserves have to be returned to the manufacturer for inspection and repair if necessary.

Repairs

The repair must be carried out by the manufacturer.

Environmental and Agricultural

behaviour

Paragliding is a sport in which the experience is sought in the most natural environment. It is precisely this environment that is an ecologically sensitive structure, which not only requires proper care but a pronounced protection. While doing our sport, we should always be aware that we make unnecessary noise and disturb the wildlife considerably. Even entering the launch and landing sites can pollute the self-regulation of the fragile ecosystem. Be considerate of the plant world, respect the wildlife habitat and you will enjoy the beauty and diversity of nature and the countryside without degrading the experience and recreational value.

Environmental friendly disposal

As an environmentally conscious manufacturer of paragliders we give great importance to produce our products accommodating eco-sociality. Also, the materials used in our products are evaluated according to environmental criteria and are subject to continuous monitoring. For the proper disposal separate the steel fittings dispose them to metal collecting points. The canopy, lines and risers can be disposed of with household waste. We are happy to take back old rescues for disposal free of charge.

Pack intervals

777 KEEPER ST M and XL

You should visually check the rescue before packing it. Leave the rescue open at a humidity between 60 – 65 % for 24 hours. If possible pack the rescue on a packing table, or at least on a clean, antistatic surface.

This packing instruction applies to KEEPER ST and is using the Packaging Tool when was packed. All rubber bands must be replaced at any new packing with new ones. The following photos are from a KEEPER ST. We remind you, that you are flying paraglider at your own risk. This also applies for the use of this life-saving device.

At the beginning the KEEPER ST raisers are attached so that all operations with pulling can be done away from the risers. If the folding is done with the KEEPER PT (Keeper Packaging Tool) all packing loops should be hooked to the KEEPER PT from the beginning to the end.





WARNING: Only the KEEPER ST size M needs to be prepared by putting a loop to the pre-acceleration system.

For simplicity, we begin with the number 7 (on back of the Rogallo) and end with the number 1. Thus the tip of the KEEPER ST is on top for the folding.

Start to tighten the bottom panel, so that the cloth is without waves. It should be noted, that the packing loops should be aligned in the middle of the reserve.



The first two panels when folded form a triangle. The other panels are laid flat and tightened. The last panel (Tip of Rogallo) is to be folded in a triangular shape.

The KEEPER ST should now be symmetrical and tightened in a shape like a fir tree. Now check all lines if they are tightened.



For the next step ideally two persons are required. All panels are put on the opposite side at once. If this second person is not available, we recommend to do this panel by panel.

The halved wing is reversed as a whole by 180 degrees. The middle of the rescue (line channel) should correspond to the fold.



This picture is showing how the not yet folded side is rotated by 180 degrees correspond to the line channel.

Also this side is folded to half panel by panel to fit into the container width.

It is recommended that the reserve is now again smoothed and balasten with sandbags.



From the bottom side classic handbreadth S-folds are done.



The packed rescue is then placed in the inner container.



The tube container is placed over the packed canopy and closed with 3 rubbers.

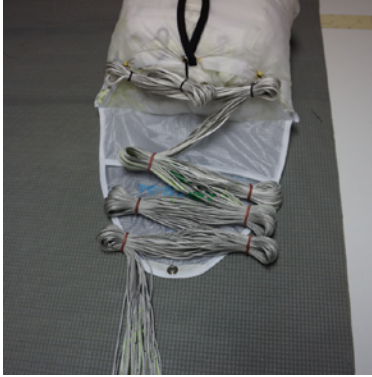


Important: The loop length should be exactly 1.5 cm. Start by closing the middle rubber and then the side.



The lines are folded from the risers away (ideally using the packing tool) laced in classic double packs and secured with rubber bands. The line slack should be adjusted to the outer container position.





Tip for review: Pull the lines of the reserve up, the rubber must be opened by the weight of the reserve.



The lines are now placed in the inner container
Now close the last loop with a rubber strap. Also this should be kept small.



The KEEPER ST is now ready for installation in the harness. The connection to the KEEPER ST to the harness has to be done with the recommendations of the harness manufacturer. (Check the harness manual). Both connecting risers of the KEEPER ST are connected to the suspension of the harness. For the connection, we recommend the special carabiners.

Safety and responsibility

Paragliding is a dangerous and high risk activity, where safety depends on the person practicing it. By purchasing this equipment you are responsible to be a certified paragliding pilot, and you accept all risks involved in paragliding activities, including serious injury and death. Improper use or misuse of paragliding equipment considerably increases these risks.

The designer, manufacturer, distributor, wholesaler and retailer cannot and will not guarantee your safety when using this equipment or accept responsibility for any damage, injury or death as a result of the use of this equipment. This equipment should only be used by qualified and competent pilots or by pilots under supervision of qualified paragliding instructors. You must not use this equipment if you are not trained.

You alone as a qualified and competent pilot must take full responsibility to ensure that you understand the correct and safe use and maintenance of this paragliding equipment and to use it only for the purpose that it was designed for and to practice all proper safety procedures before and during its use.

Guarantee

Triple Seven WARRANTY:

All Triple Seven products are fully warranted for 12 months, against material defects that are not the result of normal wear or accidental damage.

Registration information

To fully use all Triple Seven maintenance and warranty services you need to register your glider on our website. Wanting to provide good product support, we invite you to do so, even if you bought your glider second-hand.

Triple Seven Warranty & Product registration:

<http://www.777gliders.com/tripleseven/support>

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Online resources

For complete help, the latest news, product information and support go to:

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Facebook:

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Newsletter register:

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