independence

gliders for real pilots

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Owner´s manual

Version 1.2 from 01.11.2008

Rescue system

Piccolo Classic
Annular Classic 20
Annular Classic 22
Annular Classic 24
Annular Classic Tandem
Annular Classic 22 HG
Annular Classic 24 HG
Annular Classic Tandem HG

with RAM AIR Pockets

Fly market GmbH & Co. KG
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Warning

It´s not allowed to use this rescue-parachute for skydiving!

The rescue-systems of the Annular Classic series are certified according to the German type approval LTF 35/03.

The manufacturer can not be made liable for any possible damages to persons or material-damages, which may result from this rescue-parachutes in any way.

1. TECHNICAL DATA

Type of rescue-parachute: Paragliding rescue system — Piccolo, Annular Classic 20/ 22 / 24/ 30/ 36
Hanggliding rescue system — Annular Classic 22 HG / 24 HG / 30 HG/ 36HG

Manufacturer:

Fly market GmbH & Co. KG
Am Schönebach 3
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Tel. +49-8364-9833-0

Paragliding/Hanggliding (HG) rescue-parachute:	**Piccolo Classic**	**Annular Classic 20**	**Annular Classic 22/ HG**	**Annular Classic 24/ HG**	**Annular Classic Tandem / HG**	**Annular Classic 36 / HG**
Weight of the parachute (kg):	1,6	2,0	2,3/2,4	2,6/2,7	3,9/4,0	4,2/4,3
Surface (m²):	24	32	36	40	65	67
Number of lines / panels:	20	20	22	24	30	36
Max. load (kg) according to LTF:	100	100	120	160	200	250
Recommended load (kg)	89	100	120	160	200	250

2. Purpose

The emergency parachutes are manually-released parachutes for paraglider / hangglider (HG version) pilots in an emergency situation while flying. Annular Classic Tandem / Tandem HG are for biplace paragliders / hanggliders.

3. Conditions of use

Maximum speed for usage: 115 km/h (32 m/s)
Interval for repacking: 6 month, then the rescue-parachute have to be repacked and this repacking have to be recorded in the “Repack and inspection log book”.
Interval of inspection: 24 month, then a complete inspection of the rescue-parachute is necessary. The inspection have to be recorded in the “Repack and inspection log book”.
Operational lifespan of parachute: 10 years. The lifespan can be extended for 2 more years if the rescue-parachute is inspected yearly during this last two years. So the total max. possible lifespan is 12 years.

4. Necessary documentation:

a) Owner´s manual
b) Repack and inspection log book (with recorded repack and inspection jobs).

5. Mode of operation:

During an emergency situation while flying the pilot pulls at the release-handle with a firm tug. Thereby the outercontainer opens and the rescue-parachute is released. After that the rescue-parachute-package (which is still packed in it´s innercontainer) have to be thrown with a dynamic move into the free air-space. That means the release handle have to be thrown away together with the recue-parachute-package!!!

The innercontainer, together with the integrated drogue-parachute and the connection-bridle, is designed in a way which releases the lines and canopy of the parachute not before the parachute-package is thrown away.
This prevents an unintentional or too early opening of the rescue-parachute. This is minimizing the danger of tangling up with the paraglider, the pilot or the reason which maybe causal for the emergency case (e.g. collision with another paraglider).
Moreover the maximum speed of the innercontainer, which is necessary for a fast opening of the rescue-parachute is reached not before the package is thrown away.
In short words: The faster the rescue-parachute-package is thrown, the faster the streching and opening of the parachute will be.

After the throw first the drogue-parachute at the innercontainer opens, and then the innercontainer itself opens.
The powerful throw and/or the airstream elongates the lines and the canopy and the rescue-parachutes opens.

After the rescue-parachute is opened completely, you first have to check the altitude above ground.
If you have still enough height you should ty to make the paraglider unable to fly according to the doctrine, to avoid an V-position of the paraglider and the rescue-parachute.
If you do not have enough height anymore, just focus on the ground and prepare yourself for the landing-fall.

6. Inspection of the parachute

A parachute must be controlled by a registered packer before it is packed. After being opened during an emergency rescue, the parachute must be inspected by the manufacturer or a workshop which is authorized by the manufacturer. A packed parachute which is to be repacked, should undergo a release test. This establishes whether the power of the release is between 2 kp and 7 kp.

7. Behaviour if damages are noticed

If you notice any damage at the rescue-parachute, which may affect the airworthy condition of the recue-parachute, you have to send the rescue-parachute for inspection/repair to the manufacturer. Also, if you are not sure about the airworthy condition in any way, you have to send the parachute to the manufacturer.
Attention: Chemicals, detergents, insects, mould stains or the like can have the same negative effects to the strength of the parts as mechanical influences.

8. Storage

Oil, grease, acid and paint should not be stored near the parachute. The storage space should be dry. Parachutes which have not been used for a long period of time should be opened and the canopy loosely rolled and stored in a bag.
Avoid unnecessary high temperature (e.g in a parking car)!

9. Maintenance

The lifespan and condition depends largely upon how carefully you handle and maintain your parachute. Out of this reason we recommend to controll the parachute regularly, at the latest if it is repacked, if there are any wears or damages.

During normal use you have to take care of the following points:

If the parachute got wet, you have to open it and dry it at a well-ventilated place as soon as possible (but avoid direct sunlight!) The fast drying is important to avoid mould stains. After the parachute is complete dry it can be repacked.

If the parachute is strained more than normal (for example: a car drove over the harness in which the parachute is placed, or it maybe is damaged by a sharp object, or any other possible damage), you have to send the parachute to the manufacturer to check it.

Avoid contact with salt water, acids or other aggressive substances!

Also avoid unnecessary exposure to sun-light, cause the UV-rays may damage the molecular-structure of the material.

10. Cleaning

A dirty canopy and container can be carefully cleaned with clear water and a soft sponge.
Attention: Never use detergents, chemicals, brushes or hard sponges to clean the parachute! Also a cleaning in the washing maschine is not allowed.
If the rescue-parachute gets in contact with salt water, you have to wash it with fresh water. A too often cleaning accelerates the ageing of the system.

11. Repairs

Repair jobs have to be done only by the manufacturer or a workshop which is certified by the manufacturer.

12. Nature- and environment-friendly behaviour

Please do our nature-near sport in a way which do not stress nature and environment!
Please do not walk beside the marked ways, don´t leave your litter, don´t make unnecessary loud noises and respect the sensitive balance in the mountains. Especially at the take-off we have to take care for the nature!

13. Environmentally compatible waste disposal

The materials of which a rescue-parchute is made require a special waste disposal. So please send disused parachutes back to us. We will care about an professional waste disposal.

14. Spare parts / changeable parts

Beside the rubber-bands the Annular Classic series do not need any other spare parts. Only certified rubber-band with the sizes 30x3x1 are allowed! This special rubber-band you can get from us very well-priced.

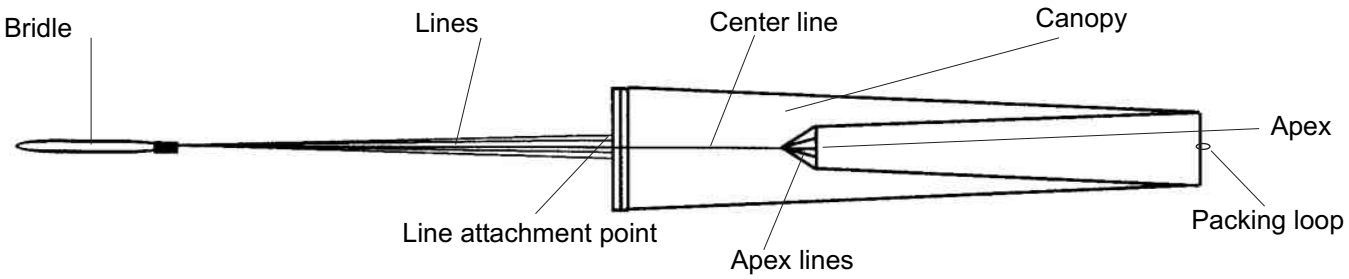
The innercontainer is part of the rescue-parachute. It´s not allowed to use an other rescue-parachute-innercontainer model of other manufacturers. A change to an other innercontainer will cancel the operating license of the rescue-parachute!
If you loose the innercontainer, because you have used your parachute in case of emergency or while doing a safety-course, you have to replace it with a new original innercontainer.

15. Structure of the parachute

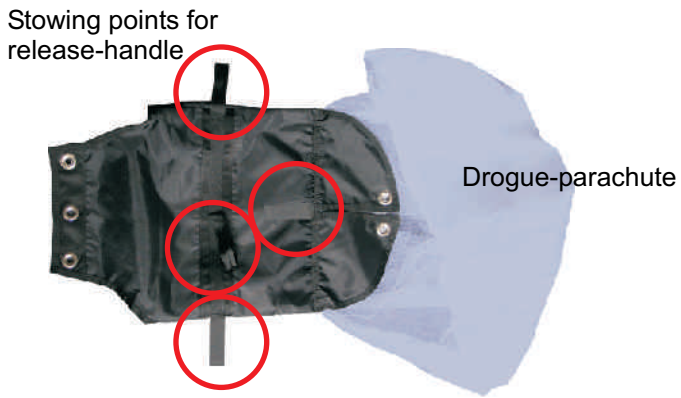
The parachute has, depending on the model 20, 22, 24, 30, 36 segments (see technical data).

The canopy is made of tear resistant , high-strength nylon fabric. The seams at the canopy are flat-fell seams. The base and the apex are reinforced with a band.
The lines are sewn to the canopy, and reinforced with V-tapes at the canopy. The apex is pulled in by the center line. The center line and all other lines are connected to the bridle.

The bridle has a strength or more than 2400 kp. Hanggliding models only differ from paragliding models by a much longer bridle. The model Annular Classic 30 has a special V-shaped bridle, which is suitable for biplace flying.



The innercontainer is made of nylon fabric and gets closed at three points. The small drogue-parachute is integrated to the innercontainer.
On the flat side of the innercontainer are four loops. At one of these loops the release-handle of the outercontainer or the harness is attached



The outercontainer is made of robust, water-repellent Nylon fabric. It consists of 2 lateral flaps, the upper and lower flap, the release-handle with 2 pins, which close the container.

Backside of the outercontainer,
with attaching-points

16. Packing the parachute

1. Slide on the packing-loops on a line (packing-cord), and hook it in.

2. Segment 10 (Piccolo, Annular Classic 20) have to be put on the right side.
Annular Classic 22/22HG: segment 11
Annular Classic 24/24HG: segment 12
Annular Classic Tandem/ Tandem HG: segment 15
Annular Classic 36 Tandem/ 36 Tandem HG: segment 18

3. Lay all segments until segment 1 (stamped segment) is on the top, then put a weight (sand bag) on it.

4. Fold the left side onto the right side.

5. Now lay all segments of the left side.

6. When all segments are laid properly put a weight (sand bag) on both sides.

7. Check that line 1 and 20 (Annular Classic 20) and the center line are not crossed and running free. (Annular Classic 22/22HG: 1 and 22; Annular Classic 24/24HG: 1 and 24; Annular Classic Tandem/ Tandem HG: 1 and 30; Annular Classic 36 Tandem / 36 Tandem HG: 1 and 36)

8. Fold the parachute like a “S”, and pull out the Ram-Air-Pockets a little bit to the side.

9. Remove the packing cord!

10. Put the upper part of the canopy into the innercontainer.

11. Fold the rest of the canopy in small S-shapes and place it in front of the innercontainer.

12. Put the S-shaped canopy into the innercontainer.

13. Bundle the lines in 3x3 “8-shapes”. Do not bundle thelast 60cm of the lines.
Attention: You have to use new rubber-bands for the line-bundles and the container everytime the parachute is packed.

14. Close the container with the lines. First in the middle then the sides.

15. Roll in the drogue parachute. (Not necessary at Piccolo classic, because Piccolo Classic does not have a drogue-chute.)

17. Mounting in an outercontainer

1. Stow the relaese-handle at the loop in the middle of the innercoantainer. Place the bridle at the side of the container which you prefer. Note: The tandem-versions have a V-shaped bridle!
(On this picture an innercontainer without drogue-chute is shown)

2. Close the two lateral flaps of the outercontainer with two packing-cords and closed it with the pins of the handle provisionally.

3. Close the upper and lower flap with the pins. Remove the packing cords then!

4. Close the upper flap finally. Notice the packing in the “repack and inspection log book”.

5. To avoid an unintentional opening, the German type approval (LTF) prescribe a minimum release-force of 20 N. If the system does not have this minimum release-force, it is necessary to build in a predetermined breaking point (special thread). This have to define a minimum release force of 20 N.
The special thread which is used as predetermined breaking point must be put through the hole of the pin and around the loop as shown on the picture.
Both ends of this special thread are fixed with a knot and an additional seal.
To secure the pin it is only allowed to use certified material because if the strength of this material is too high the save operation of the rescue system is not guaranteed.
This thread is supplied by Fly market GmbH & Co. KG! Do **not use** other threads which may look the same!

18. Mounting / integration to a harness

For harnesses without integrated rescue-container:

If the harness does not have an integrated rescue-container you can use the outercontainer which is shown at point 15. This outercontainer shown at point 15 has got several loops, eyelets and velcro-tapes on it´s back side to attach it at the harness. The possibilities of the attachment to the harness depends on the harness. For a correct mounting you have to read the manual of the harness.

Usage of a frontal-container / outercontainer of an other manufacturer.

The possible usage of a frontal-container or of an outercontainer of an other manufacturer depends on the size and if the container is certified. If the container is too small or not certified the operating license of the rescue-parachute expires. If it is a container of an other manufacturer you have to read the manual of the container. For attaching it to the harness you have to read the manual of the harness.

For harnesses with integrated rescue-container:

Almost all modern harnesses have an intergrated rescue-container in which a rescue-parachute can be placed. For the correct mounting of the rescue-parachute in such a container you have to read the manual of the harness.

Attention:

If the parachute is mounted to a harness or a frontal-/outer-contaienr you have to check the compatibility. This check is only allowed to be done by therefore authorizied persons. The compatibility check have to be noticed in the ".repack and inspection log book".
Beside some other points you have to take care particularly that the connection-length of the release-handle to the innercontainer is minimized. Therefore are three loops at the innercontainer at which the release-handle can be attached. You should always try to use the shortest possible connection to ensure that the rescue-parachute can be thrown as good as possible. But you also have to take care that the release out of the container is not hinderd in any way. (take care that the release pin does not block!!!). Read the manual of the harness in any way.

19. Specialities for paraglider´s whinch-towing

For whinch-towing you have to consider the instructions of the harness-, paraglider- and towing-release-manufacturer!
If you use a frontal-container you have to ensure that the rescue-parachute can be released in every situation.

20. Biplace flights

Only the Annular Classic Tandems (30 and 36) are certified for biplace flights. Out of this reason it´s bridle is V-shaped, so it can be attached directly to the T-bar. As at all other configurations you also have to ensure and check the compatibility of rescue-parachute, harness and T-bar.

21. Pre-flight check

In addition to a normal pre-flight check (see manual of the glider/harness or maybe towing-device), you have to check before every take-off that the rescue-container is closed correctly and the release-handle is placed correctly.
If the rescue-parachute-connection-bridle is removed after every flight (for examaple: when you use a frontal-container) you also have to check the correct attachment of the bridle!