



# AIR SPORTS EQUIPMENT

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English



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Prices not binding. See QR code for current prices.



2025



# Air sports equipment since 1974

## Expert advice directly from the manufacturer

The Finsterwalder GmbH is headquartered in Munich and was founded in 1974. In 1990, the company acquired the well-known brand Charly Produkte.

Our Munich headquarter focuses on the wholesale and retail sale of hang gliding and paragliding equipment such as helmets, sportswear, etc. Also buckles for paragliding harnesses and hardware components for rescue systems, paragliders as well as hang gliders are developed and manufactured in the city at the heart of Bavaria and are marketed from there to wholesale traders all around the world.



Visit our store in Munich, Pagodenburgstr. 8, (Business hours Monday to Thursday 9 am – 4 pm, Friday 9 - 12 am and by appointment), call us (+49 89 811 6528) or send us an email to: [office@finsterwalder-charly.de](mailto:office@finsterwalder-charly.de)

Special articles from our repair shop storage have to be pre-ordered one or two days beforehand.

The rescue systems, aviation helmets, carabiners and aviation accessories developed and manufactured by us, are marketed worldwide via selected flight schools and also directly.



We are the German and Austrian wholesaler for Kortel Design paragliding harnesses and Skywatch anemometers.









## Your right to return goods

Should the delivered goods not meet your expectations, you may return them within 14 days of receipt. Please see our terms and conditions at the end of the catalog for further details.

## Discount

The delivery is free of shipping costs within germany for online orders above € 50.-.

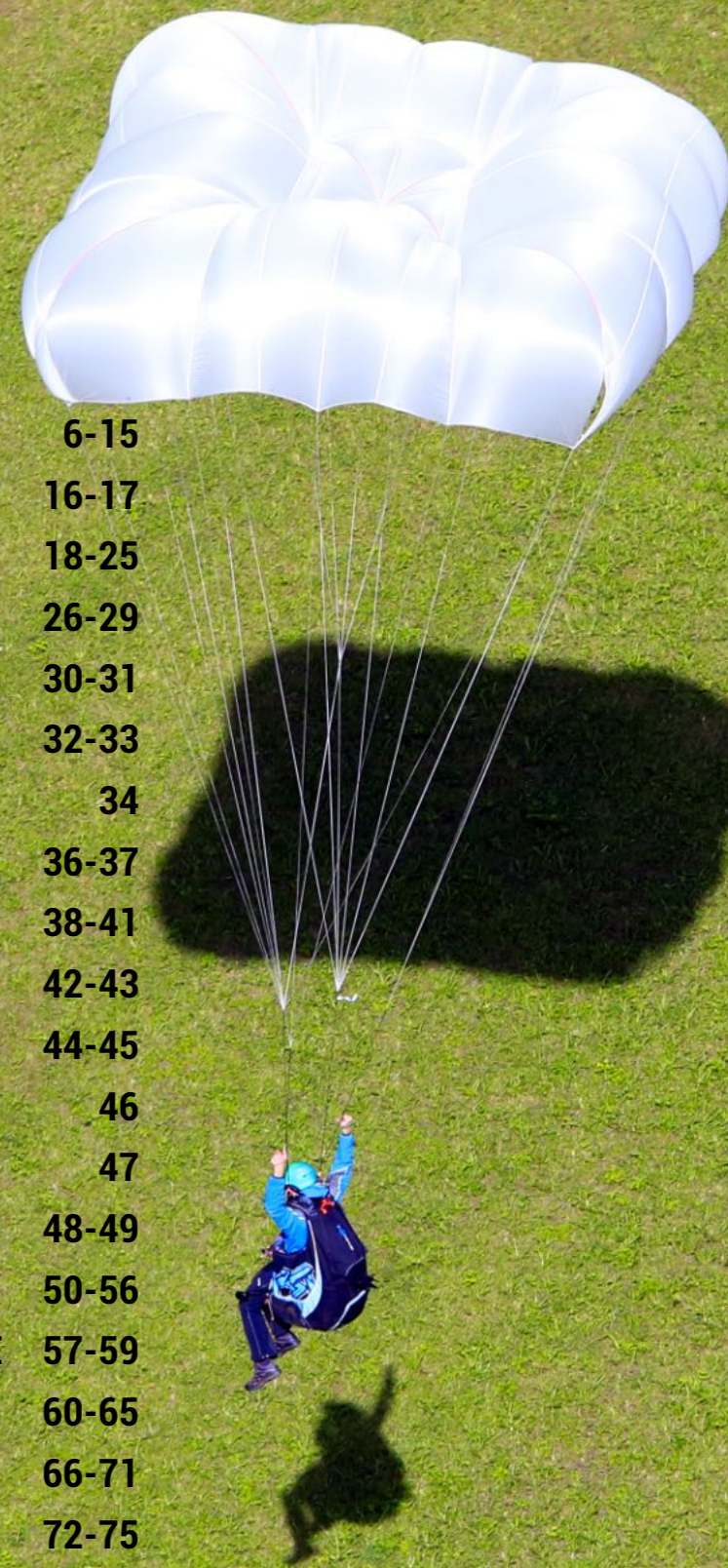
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	<b>KORTEL PG-HARNESSES</b> In 2010 CHARLY Produkte takes over the German and Austrian general distribution for these innovative paraglider harnesses.	<b>18</b>
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	<b>CARABINERS</b> Since 1993, we have been manufacturing carabiners specially designed for aviation sports and helicopter air rescue.	<b>50</b>
	<b>HELMETS</b> CHARLY has been the market leader in aviation helmets for 4 decades.	<b>60</b>
	<b>GLOVES</b> Largest selection of electric and heat pack heated gloves especially for aviation.	<b>66</b>
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RESCUE SYSTEMS

# CHARLY rescue systems: Reserves you can rely on!

## Specialised in rescue systems since 1984

Since flying with a rescue system became obligatory in aviation sports in 1984, Charly has been one of the leading supplier of rescue systems for hanggliders and paragliders due to its innovation. Center lines construction, double cap technology, rocket output, steerable rescue systems; Charly has always belonged to the pioneers. With the first steerable cruciform canopy, Charly presented another major milestone in the construction of rescue systems.

### CHARLY TARGETcross - The cross canopy with steering option

The situation in which you have to use your reserve cannot be planned. It is therefore all the more important that you carefully consider the selection of the optimal rescue equipment. Because of its high opening speed and pendulum stability, the cross canopy shape has become widely accepted for rescue parachutes. The TARGETcross cross canopy with its improved inner container, fanned out base, S-shaped canopy trim and diagonal horizontal drift represents a further optimization of this concept.

### Steerable or not steerable? Recently, a rethinking has been taking place.

If you can avoid power lines, rivers, rocks or roads and choose your landing spot, that is an undeniable advantage. Nevertheless, in the past, steerable rescue systems have only been recommended for professionals. Especially in the case of openings close to the ground, steerable reserves used to have more disadvantages than advantages. This was due to the fact that the early steerable Rogallo reserves had too little surface area or were not yet mature in terms of their design and, due to their tendency to downplanes and twists in certain situations, required the appropriate pilot skills.

These disadvantages have been largely eliminated with modern steerable Rogallo reserves. **With the TARGETcross ST, a steerable cross canopy is now available, which is also advantageous in emergency situations close to the ground where steerability is not an issue.**



Tom Grabner and Veronika Finsterwalder test the TC 220



Landing with the TC 125



### The TARGETcross solution

The TARGETcross has only moderate forward speed and enough surface area to avoid a dangerous sink rate even when stalled. The S-shaped canopy trim, as it is common for hang gliders, gives the TARGETcross canopy a high righting moment. The paraglider is thus quickly unloaded and dives down. This prevents the danger of a shear constellation between the reserve and the paraglider, makes it easier to pull in the main glider and even allows the unhooking of one riser with CHARLY Pinlock or conventional carabiners.

Similar to a regular cross canopy, the TARGETcross initially goes into a stall with vertical sinking after opening. A downplane position of the reserve is thus reliably prevented.

If you do not want to make use of the steering option or if the altitude is too low, you will sink as with a conventional cross canopy with a slight sideways drift.

Sometimes twists of the lines can occur when throwing the reserve. This is inevitable but usually unproblematic. The low friction, soft dyneema riser and line material of the TARGETcross makes it still possible to reliably steer the rescue parachute in the desired direction - even with multiple twists!

Twisted lines can be untwisted by kicking with the legs.



# RESCUE SYSTEMS FOR PARAGLIDERS

## The TARGETcross solution

Even if the main glider is not disconnected, the S-shaped canopy trim of the TARGETcross allows it to easily pull it in or to unhook it at least on one side with Pinlock or even conventional carabiners.

The rapid dive down of the main glider directly after the opening of the TARGETcross immediately ensures low sink rates of the reserve.

Due to the very effective pendulum damping, also resulting from its canopy trim, the TARGETcross is also the best choice for deployments extremely low above the ground in absolute emergency situations.



## Disconnecting or not disconnecting the main glider?

When you decide to use your rescue parachute in an emergency, it is usually because your paraglider went out of control. The best way to resolve this situation is to give control to the rescue parachute and disconnect from the paraglider as quickly as possible. If you do not disconnect, it can cause you problems in several ways. Disconnecting the paraglider is therefore also recommended for non-steerable rescue systems.

### 5 reasons why the paraglider should be disconnected after an emergency parachute deployment

1. According to the LTF, the maximum allowed sink rate for paraglider rescue systems is 6.8 m/s, corresponding to 24.5 km/h. However, many pilots are not aware that in the reserve parachute certification process, the sink rate is determined without the paraglider. Interactions between paraglider and rescue system can increase the sink rate substantially – for example, by increased pendulum movements or due to a resulting shear position. The risk of injury increases accordingly.
2. Although modern reserve parachutes usually reach maximum sink rates of “only” 5.5 m/s, corresponding to approx. 20 km/h, these values are often only achieved by a lateral drift that generates lift. A paraglider that is not separated or only separated on one side impedes this drift and thus substantially increases the sink rate.
3. The possibility to choose the landing spot with a steerable rescue system is a significant safety plus. If the main glider is not separated, this safety advantage is foregone.
4. It has shown that a separated paraglider usually collapses very quickly and that its salvage is easier. In the case of a tree landing, there is also a much lower risk of damage to the glider when it does not carry the full pilot weight.
5. A dangerous downplane situation of the paraglider after an emergency parachute deployment, as shown in the video linked on the left, can be resolved quickly and effectively by disconnecting the paraglider.

Lightweight and easy to use, the Paralock 3 separation carabiners allow the paraglider to be separated without any problems and also help to avoid risks in other emergency situations such as water or strong wind landings.

For detailed information on the Paralock 3, see page 51.



Rapid separation with the Paralock and safe landing



Example of a downplane with dangerous sink rate



# RESCUE SYSTEMS FOR PARAGLIDERS



## Benefits of rescue systems with horizontal drift

Perfectly symmetrical parachutes sink vertically, which is not advantageous for several reasons. In the case of a vertical impact on a flat surface, the deceleration distance to reduce the impact velocity is the shortest, whereas in the case of an inclined impact, the forces acting on the body are lower. In addition, the human body is not equally resilient in all axes. The most sensitive axis is the one in the direction of the spine, which has to cushion an impact on the buttocks.

When a canopy is symmetrical, the air escapes over its edges sometimes more on one side, sometimes more on the other side when sinking. This causes a pendulum motion that can considerably increase the sink rate. If, on the other hand, a rescue parachute drifts, dynamic lift similar to that of an airfoil is created, with the effect that the sink rate is significantly reduced.

A patented feature of the TARGETcross reserve is the defined lateral drift in diagonal direction. Compared to one side of a square, the diagonal has a greater aspect ratio and thus correspondingly more lift. Conventional cross canopies have an alternating lateral drift, depending on the corner from which the air escapes under the canopy.

Rescue systems without horizontal drift also carry the risk that the uncontrollable main glider may move very close to the reserve and wrap around it due to the vertical airflow.



### The TARGETcross solution

The diagonal configuration and S-shaped canopy trim of the TARGETcross with longer lines at the rear edge create a high righting moment which prevents a downplane of the canopy and ensures that the main glider is immediately unloaded. Pre-braking of the rescue parachute is therefore not necessary with the TARGETcross. The result is an immediate forward movement which keeps the paraglider at a distance from the reserve.

The Basic and HG versions of the TARGETcross also feature this trim, as the advantages of this configuration clearly outweigh the disadvantages.



RESCUE SYSTEMS FOR PARAGLIDERS

Opening security and entangling of the parachute with the main glider

The most dangerous situations for entanglements of the emergency reserve with the main glider during the opening phase are SAT-like rotations after a tangle. Preventing these absolutely dangerous situations was one of the highest priorities in development and is particularly relevant for pilots flying with only one emergency reserve parachute.

Videos: deployment tests in SAT rotation

Contrary to the urgent recommendation of the DHV in such situations to throw the rescue parachute strongly in the direction of the legs in order to prevent feeding the rescue canopy, in the tests the rescue parachute was only dropped after deployment from the harness in order to simulate the "worst case".





The TARGETcross solution

**Long line concept:** The lines of the TARGETcross were made longer, so that the opening of the parachute happens approximately in the radius of the main glider and not in the area of its lines. In the rotational movement, the longer lines have almost no influence on the opening time, because the package separates immediately from the pilot at high speed.

**Inner container design:** The inner container has a separate closure for the canopy, so that it is only released after the lines have been fully stretched. This results in a controlled deployment with a significantly reduced risk of an entanglement with the main glider. While the lines stretch, the still closed reserve package rotates in the same direction as the main glider. Only after the lines have been fully stretched and with a corresponding safety distance to the main glider, the canopy is released from the container. Fabric-coated rubbers, the gap-free design and the separate canopy closure also ensure that accidental deployment, such as premature opening of the container inside the harness, is excluded.

**Packing method:** Thanks to a special but simple way of packing, the TARGETcross already opens at the base without delay, even before the apex has left the inner container. The higher the speed of rotation, the faster the opening in the TARGETcross packing method. This is achieved by the separate folding of both pre-sorted sides (instead of the usual long S-fold) and a tube inner container, in which the parachute is packed with small standing S-folds.

**Line geometry:** The different line lengths (resulting from the steerable design) fan out the layers. This creates several gaps for an instantaneous opening of the chute base after leaving the inner container.

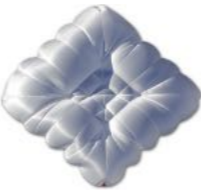


RESCUE SYSTEMS FOR PARAGLIDERS



TARGETcross		TC100 Light	TC125 Light	TC160 Light	TC220 Light
Flat surface:		25,2 m²	30,7 m²	41,0 m²	59,2 m²
Max./Min. load:		100 / 50 kg	125 / 60 kg	160 / 80 kg	220 / 100 kg
Volumetric value:		3900 ccm	4700 ccm	5300 ccm	7300 ccm
Sink speed:		4.6 m/s @ 100 kg 3.6 m/s @ 70 kg	4.5 m/s @ 125 kg 3.5 m/s @ 85 kg	4.8 m/s @ 160 kg 3.5 m/s @ 110 kg	4.6 m/s @ 220 kg 3.6 m/s @ 160 kg
Certification:		EN / LTF	EN / LTF	EN / LTF	EN / LTF
Weight:	ST	1,17 kg	1,39 kg	1,78 kg	
	Basic	1,08 kg	1,30 kg	1,69 kg	2,46 kg
	ST Tandem			1,85 kg	2,57 kg
Art. N°:	ST	HFa195/100	HFa195/125	HFa195/160	
	Basic	HFa195/100B	HFa195/125B	HFa195/160B	HFa195/220B
	ST Tandem			HFa195/160T	HFa195/220
Price:	ST	1.048,00 €	1.128,00 €	1.308,00 €	
	Basic	1.025,00 €	1.105,00 €	1.285,00 €	1.707,00 €
	ST Tandem			1.337,00 €	1.729,00 €
	ST = steerable, Basic = non steerable				

TARGETcross Basic



The non-steerable version of the TARGETcross is about 90 gram lighter and cheaper than the steerable version. All other features and technical data are identical with the TARGETcross ST. With a set of new risers you can subsequently modify the TARGETcross basic into a steerable system by the manufacturer or another authorized repair shop.

The modification costs 140,- and includes re-packing.

Please select the type of inner container (see following page) you would like to receive with your order.

Charly SECOND CHANCE

The worldwide top-selling PG rescue system has proven itself time and time again in emergency situations.

Lightweight and with small packing dimensions at a great value for money.



	SC 86	SC 94	SC 118
Flat surface:	28 m²	32 m²	36 m²
Recommended Max load	86 kg	94 kg	118 kg
Volumetric value:	4,22 l	5,62 l	7,28 l
Packing size:	22 x 24 x 8 cm	24 x 26 x 9 cm	26 x 28 x 10 cm
Sink speed:	5,9 - 6,4 m/s	4,7 - 5,2 m/s	4,9 - 5,4 m/s
Weight:	1,34 kg	1,49 kg	1,83 kg
Art. N°:	Hfa150/86	Hfa150/94	Hfa150/118
Price:	509,00 €	539,00 €	579,00 €



# INNER CONTAINER

The highly recommended rescue parachute deployments on the G-Force Trainer show again and again that pilots find it very difficult to get their rescue parachute out of the harness in emergency situations. This is due to the fact that rescue parachutes have so far mostly been offered in universal inner containers which fit both harness containers and front containers. However, this compromise is not optimal. Tom Grabner has therefore developed two different versions and optimised them on the G-Force Trainer, which are specially adapted to harnesses or front containers.

Both versions are suitable for Charly TARGETcross rescue parachutes as well as for conventional Charly rescue systems. From our point of view, there is no objection to use it for other rescue systems as well. Please contact us regarding the repacking of your rescue system into our containers.

The Charly inner container have a separate area for the canopy lines. This is advantageous for safe storage inside the harness and controlled deployment in emergency situations. Only after the lines have been stretched, the canopy is released and opens quickly and in a controlled manner. This minimizes the risk of the paraglider and rescue parachute becoming entangled. The closures consist of rubber strands with fabric sheathing. They are much more durable than conventional packing rubbers.



## Charly FLAT-INNER-CONTAINER

Flat inner container for paragliding harnesses

The Charly FLAT INNER CONTAINER for paragliding harnesses has a flat, conical shape and rounded corners. Tests have shown that this design can be pulled out of the rescue compartment of the harness much faster and with less effort than cube-shaped and volume compressed inner containers.

Sizes: S (41,5 g - red) suitable for TC 100, Expert 100  
M (43,0 g - blue) suitable for TC 125, SC 86, SC 94, Expert 120, REV I  
L (46,5 g - black) suitable for TC 160, SC 118, REV II  
XL (50,0 g - orange) suitable for TC 220



HFa1950 Charly FLAT-INNER-CONTAINER €32,00

# INNER CONTAINER



## Charly FRONT-INNER-CONTAINER

(Tom Grabner Design)

Front inner container for paragliding harnesses

The Charly FRONT INNER CONTAINER (TOM GRABNER DESIGN) for paragliding harnesses has the conventional, round shape, which is ideal for front outer containers on harnesses.

Sizes: S (41,5 g - red) suitable for TC 100, Expert 100  
M (43,0 g - blue) suitable for TC 125, SC 86, SC 94, Expert 120, REV I  
L (46,5 g - black) suitable for TC 160, SC 118, REV II

HFa1951 Charly FRONT-INNER-CONTAINER €32,00



## Gin CLOVERLEAF INNER CONTAINER

Ultralight (27 g) inner container for integrated harness compartments.

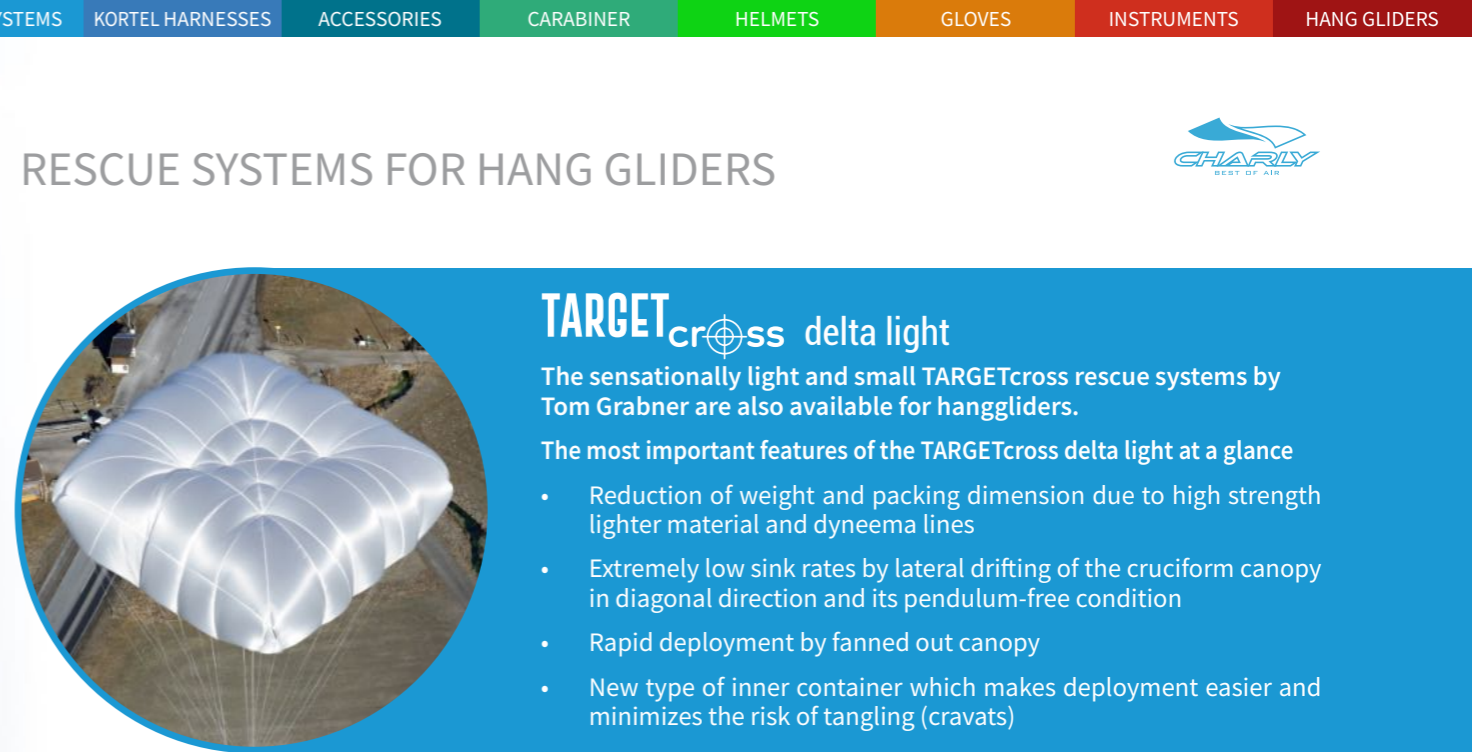
Fits CHARLY TARGETcross ST and Basic models TC100, TC125, TC160 as well as CHARLY Second Chance models SC86, SC94 and SC118.

HFa1950KB Gin CLOVERLEAF INNER CONTAINER €32,00





## RESCUE SYSTEMS FOR HANG GLIDERS



## RESCUE SYSTEMS FOR HANG GLIDERS



### TARGET<sub>cross</sub> delta light

The sensationally light and small TARGETcross rescue systems by Tom Grabner are also available for hanggliders.

The most important features of the TARGETcross delta light at a glance

- Reduction of weight and packing dimension due to high strength lighter material and dyneema lines
- Extremely low sink rates by lateral drifting of the cruciform canopy in diagonal direction and its pendulum-free condition
- Rapid deployment by fanned out canopy
- New type of inner container which makes deployment easier and minimizes the risk of tangling (cravats)



€72,00



### Finsterwalder ROTOR

#### Swivel for hang gliding and ultralight rescue systems

In emergency situations, hang gliders and ultralights (UL) can develop a spinning motion thus wrapping up the rescue system. The Finsterwalder ROTOR prevents this.

The rotor should be sewn in by the reserve manufacturer between the main riser and the lines. With the CHARLY 5.2 t Rotor Loop (Hfa161s), available as an accessory, the rotor can also be looped in by the pilot himself between the lines and the main riser.

#### Overview of the Finsterwalder ROTOR's most important features

- 3 sets of bearings • Tested for a breaking load of 5,000 kg by a weight of only 120 g
- DHV-certified for all hang glider- and UL rescue systems if built in by the manufacturer

Art.Nr.	Article		€
HFa160	Finsterwalder ROTOR	120 g	72,00



€56,00



### Charly 5,2 t. ROTOR LOOP

With the CHARLY 5.2 t Rotor loop, the FINSTERWALDER Rotor swivel can be looped between the canopy lines of the CHARLY reserve and the main parachute line.

The CHARLY 5.2 t Rotor loop is made of moisture, UV and chemical resistant Dyneema and has similar stiffness and strength properties to carbon fiber, but is lighter and less brittle. This makes the loop, which weighs only 31 g, suitable for many applications.

Length: 30 cm, Breaking load: 5.200 DaN

Art.Nr.	Article		€
HFa161s	Charly 5,2 t. Rotor Loop	31 g	56,00



### SERVICE CENTER FOR UL RESCUE SYSTEMS

As a service company we recommend:

Fallschirm Nathrath

Postal address: Stuttgarter Str. 107 • D-75365 Calw

Workshop address: Leibnitzstr. 15 • D-75365 Calw

Tel: +49(0)7051-40886 • Mobil: +49(0)160-8444086

E-Mail: nathrath@t-online.de

### TARGET<sub>cross</sub> delta light

	TC125HG	TC160HG	TC220HG
Flat surface:	30,7 m²	41,0 m²	59,2 m²
Max./min. load	125 / 60 kg	160 / 80 kg	220 / 100 kg
Volumetric value:	4700 ccm	5300 ccm	7300 ccm
Sink speed:	4.5 m/s @ 125 kg 3.5 m/s @ 85 kg	4.8 m/s @ 160 kg 3.5 m/s @ 110 kg	4.6 m/s @ 220 kg 3.6 m/s @ 160 kg
Certification:	EN / LTF	EN / LTF	EN / LTF
Weight:	incl. Rotor 1,60 kg without Rotor 1,43 kg	incl. Rotor 1,97kg without Rotor 1,83 kg	incl. Rotor 2,71 kg without Rotor 2,57 kg
Art. N°:	incl. Rotor HFa195/125HGR without Rotor HFa195/125HG	incl. Rotor HFa195/160HGR without Rotor HFa195/160HG	incl. Rotor HFa195/220HGR without Rotor HFa195/220HG
Price:	incl. Rotor 1.280,00 € without Rotor 1.152,00 €	incl. Rotor 1.472,00 € without Rotor 1.344,00 €	incl. Rotor 1.857,00 € without Rotor 1.729,00 €



from €552,00



### Charly HG

Established for many years, this center line rescue system for hang gliders has already proven its efficiency in more than 50 documented emergency situations. Improved version with central riser made of Dyneema with aramid protective sleeve.

Flat surface: 36m²

Max. load 125 kg

Sink speed: 5,4 m/sec.@110 kg

Volumetric value: 7280 ccm

Art.Nr.	Article		€
HFa110	Charly HG without Rotor	1980 g	552,00
HFa110R	Charly HG incl. Rotor	2130 g	680,00

# KORTEL HARNESSES



## Partner since 2010

KORTEL Design is a manufacture founded in 1999 in St Gervais by Denis Cortella. Denis was French paragliding champion in 1998, 2004 and 2005 and vice champion in 1995 and 2000. In 2006, Max Jeanpierre, vice world champion (PWCA 2005), joined as a partner. In 2010 CHARLY Produkte took over the German and Austrian general distribution for these innovative harnesses. KORTEL Design offers with its portfolio a perfect complement to the products of CHARLY.

# KORTEL HARNESSES



## Kortel KRUYER III

Lightweight harness

Thanks to the new 3D geometry, this lightweight hike & fly harness offers a unique level of comfort for a lightweight harness. Combined with the Kortel SAK III reversible airbag, the KRUYER III becomes a lightweight reversible harness and, with 70 l of storage space and the comfortable backpack geometry, offers everything you need to master even longer tours.

Thanks to the exclusive KONNEKT closure system, the leg loops can be opened for step-in, which makes it much easier to use with ski boots or crampons, for example.

Loops for attaching the reserve parachute are located on the shoulder straps, which means a clear safety plus in an emergency (due to the upright position).

- Dyneema line structure
- Lateral adjustment (tilt)
- Adjustable chest and shoulder straps
- Low friction rings for speed system
- Openable leg straps
- Res. attachment on the shoulder straps

Scope of delivery: KRUYER III, T-BONE Softlinks (breaking load: 2,300 DaN, 20 g/pair)

Weight: 350 g (S), 375 g (M), 395 g (L), 420 g (XL)

Sizes: S (155-168 cm), M (168-180 cm), L (189-192 cm), XL (192-205 cm)

Certification: EN 1651 / LTF (with SAK III)

Can also be combined with Finsterwalder PARALOCK separation carabiners

Accessories: Reversible airbag SAK III, front container, cockpit, speed system (light)

€435,00 Kortel KRUYER III

Ⓜ HG81



## Kortel SAKIII - REVERSIBLE AIRBAG

Reversible airbag with backpack functionality

Compared to the predecessor model, the volume has been increased to 70 litres, so that even larger standard paragliders can be accommodated in the backpack. As with the SAK II, fitting the SAK III to the KRUYER III improves lumbar support when adjusted appropriately, increasing both comfort and manoeuvrability by shifting weight.

This turns a reduced mountaineering harness (KRUYER III) into a fully-fledged reversible harness with integrated airbag for additional passive safety.

- Easy assembly
- Possibility of deactivating the upper airbag chamber when flying tandem
- Mesh side pockets
- Hiking pole and ice axe holders
- Additional back support in the lumbar area

Scope of delivery: SAK III, rain cover

Weight: 985 g (S), 1000 g (L)

Sizes: S (for KRUYER III S, M), L (for KRUYER III M, L, XL)

Certification: EN 1651 / LTF / CE

Compatible with Kruyer III

€405,00 Kortel SAK III

Ⓜ HG4254



KORTEL HARNESSES



Kortel KLIFF III NEW  
The mountaineering harness

The Kliff III is still the reference in mountaineering harnesses and now has a new modulated 3D geometry! This technology provides a level of comfort that is unique for a harness in this weight class. The pilot becomes one with the harness and stress points are significantly reduced. It is the only harness that can be attached directly to the glider without carabiners. In addition, the exclusive "Konnect" buckle system allows the leg straps to be opened, which is a great advantage when flying with crampons or skis.

- The harness has been constructed using materials in the structural reinforcements that are twice as strong as conventional materials, such as Aluula®.
- Optimisation of the cut patterns for the seat and back has also contributed to increased durability.
- No open Dyneema® lines in the back and leg areas to minimise the risk of entanglement and reduce wear.
- The use of longer nitinol rods on the legs provides better leg support.
- Separate leg suspension for a more active and dynamic flying experience!
- Integrated sliding rings for smooth operation of the speed pedal.
- The optional removable airbag increases passive safety (weight: 200 g).

**Scope of delivery:** KLIFF III with integrated Soft-Link connections  
**Sizes:** S (150-170cm), M (160-185cm)  
L (175-195cm), XL (185-200cm)  
**Weight:** 200 g (size S)  
**Certification:** EN 1651 / LTF  
**Accessories:** KIM (removable airbag)

€355,00 Kortel KLIFF III # HG4280



Kortel KIM NEW  
The optional airbag for KLIFF III

KIM gives you the necessary volume under your seat that you need for good passive safety!

- Easily removable to meet daily hike & fly requirements.
- Thanks to its compactness when empty and its 200 grams, you will not notice it in your rucksack. Safety and low weight are no contradiction!
- Made of high-strength ripstop fabric, tested and approved up to 20 G (whereby a maximum value of 50 G must not be exceeded). The over-pressure valve ensures good shock absorption.
- Nitinol ribs for fast filling behaviour.
- Two inlet openings for fast inflation and stable internal pressure.
- Adjustable lateral anchoring points ensure that the airbag does not slide to one side in the event of a collision.

**Sizes:** One size for KLIFF III - S/M/L  
Special size for KLIFF III - XL  
**Weight:** 200 g  
**Accessories:** EN 1651 / LTF

€180,00 Kortel KIM Airbag # HG4281

KORTEL HARNESSES



Kortel KARVER II  
Multifunctional harness

The KARVER I was the world's first harness without shoulder straps. With the KARVER II, Kortel retains the innovative concept of its predecessor, but is able to save another 35% in weight. The unusual mixture of reinforced back and thigh area on the one hand and absolute shoulder freedom on the other creates a harness that combines maximum freedom of movement with direct power transmission. Absolute fun feeling when flying, super precise and flexible when riding (speedflying), fun when groundhandling.

Combined with the tandem module KARVER it becomes a tandem pilot harness with integrated reserve container.

- Adjustable chest, leg and lateral straps
- Durable buckles (even in snow, ice, sand, ...)

**Scope of delivery:** KARVER II, Charly Unilock or Kortel Auto 40 carabiners (Paralock 3 separating carabiner for an extra charge)  
**Weight:** 750 g (S), 830 g (M), 910 g (L)  
**Sizes:** S (up to 1,60 m), M (up to 1,80 m),  
L (from 1,80 m), XL (from 1,90m)  
**Certification:** EN 1651 / LTF (with SAK III)  
**Accessories:** Reversible airbag SAK II, tandem module KARVER, front container, cockpit, speed system (light)

€410,00 Kortel KARVER II # HG91



Harness not included in the scope of delivery

Kortel TANDEMMODUL KARVER  
Module for Tandem Pilots

With the tandem module, the KARVER II becomes the perfect tandem harness: light, comfortable, practical. The design of the KARVER II without shoulder straps gives the pilot unrestricted freedom of movement on the ground, unmatched by any other harness.

In addition, the design without shoulder straps relieves the pilot's back if the passenger suddenly pulls his legs in during landing, as the extra weight is not taken up by the shoulders and back, but by the hips.

- Reserve container on the back
- Reserve handle can also be mounted for left-handers
- Top cover pocket
- Bottom storage compartment

**Scope of delivery:** TANDEM MODULE, reserve handle, 10 cm foam protector  
**Weight:** 1,35 kg (incl. 10 cm foam protector)  
**Sizes:** unisize  
**Certification:** EN 1651 / LTF (with additional 7cm foam protector)  
*Compatible with Kruyer II / Karver II*

€380,00 Kortel TANDEMMODUL # HG910



KORTEL HARNESSES



Kortel KONCEPT

Universal schooling harness

The Kortel KONCEPT is the first harness in its class that can be perfectly adjusted to the pilot by means of a sophisticated adjustment system. In addition to the usual comfort settings, the length of the back support, the height of the main suspension and the size of the seat can be adjusted. This makes the KONCEPT the first harness that can cover the entire pilot spectrum with one basic size: from XS to XL - from 1.50 m to 2.00 m - from 50 kg to 110 kg!

It is simply adapted individually to body size and shape, making it the perfect harness for training. The times when no suitable harness was available for a pilot are finally over.

- Airbag on the back and under the seat plate
  - Pre-filled airbag structure
  - Airbag vents at the sides and bottom
  - Chest strap with fall-out protection
- Adjustable back tilt
  - Removable protection cover on the harness bottom

**Scope of delivery:** KONCEPT, Charly Unilock or Kortel Auto 40 carabiners (Paralock 3 separating carabiner for an extra charge) front container, XS basic plate + 2 additional seat plates (sizes at choice)

**Weight harness:** 3,28 kg  
**Weight front container:** 0,22 kg  
**Weight seat board:** 0,28 kg (XS), 0,3 kg (S), 0,36 kg (M), 0,40 kg (L), 0,44 kg (XL)  
**Seat plate/pilot size:** XS (< 1,60 m), S (1,50-1,70 m), M (1,60-1,85 m), L (1,70-1,90 m), XL (>1,90 m)  
**Certification:** EN 1651 & 12491 / LTF /CE

€935,00 Kortel KONCEPT

Ⓜ HG98

Kortel KARMA III



Beginner harness

Kortel KARMA III is the perfect harness for the ambitious beginner. Comfort, ergonomics and precision are the main features of this harness. The ABS, which can be adjusted in the air, is a major advantage. The two-point V-attachment system, which serves as an integrated anti-forgetting system, enables roll stabilisation that can be adjusted in the air over a wide range, resulting in smoother and more precise turn control.

- Integrated rescue parachute container
- ABS damping setting adjustable in flight
- Large back and pelvic airbag
- Signal whistle
- 2-stage foot accelerator

**Scope of delivery:** KARMA III, 2 Unilock or Kortel Automatic carabiners  
**Weight:** 3,68 kg (M), 3,74 kg (L)  
**Sizes:** M (bis 1,80 m), L (ab 1,80 m)  
**Certification:** EN 1651 / LTF

€1.195,00 Kortel KARMA III

Ⓜ HG321

KORTEL HARNESSES



Kortel K-FLEX

Tandem passenger harness

The K-FLEX is the first unisize harness that can be used for passengers from 1.50 m to 2.00 m tall. The adjustment options for seat board depth and width, back length, back angle and height of the main suspension allow maximum flexibility and adaptation to all passengers. However, the K-FLEX can also be used in schooling or for first flights.

The harness has a pre-filled airbag with lateral air intakes, a non-forgettable safety chest strap and a large storage compartment. Handles are attached to the side of the harness to serve as a launch aid or to help the passenger to step-in in strong winds. A removable, washable cover on the bottom protects the harness from damage during hard landings.

**Scope of delivery:** K-FLEX, Charly Unilock or Kortel Auto 40 carabiners, foam protector

**Weight:** 3,1 kg  
**Sizes:** Unisize, fits 1.50 to 2.00 m body height  
**Certification:** EN 1651 & 12491 / LTF

€725,00 Kortel K-FLEX

Ⓜ HG95

Kortel KID

Harness for small passengers

The first harness for small passengers and children with a body height of 0.80 to 1.45 m. Like the Kortel K-FLEX, the Kortel KID is characterised by maximum flexibility. It is fully adjustable and thus easily adapts to small tandem passengers. The KID also scores points with small pilots in schooling or on their first flights. Adjustable are seat plate depth and width, back length and tilt as well as the height of the main suspension. It has a foam protector, a large storage compartment, side handles for launching, a removable, washable cover on the bottom to protect the harness from damage, and a protection against falling out at the chest strap.

**Scope of delivery:** KID, Charly Unilock or Kortel Auto 40 carabiners, foam protector

**Weight:** 1,9 kg  
**Sizes:** Unisize, suitable for 80cm to 150cm body height

€535,00 Kortel KID

Ⓜ HG96

Kortel CAMERA POCKET

Bag for telescopic rod

Thanks to its reliable connection system, it can be attached to most paraglider harnesses. For professional or amateur use, this bag offers an easy way to store the camera pole and secure it with a clip to close the bag. The bag is 15 cm wide and can be from 22 cm to 38 cm deep.

€35,00 KORTEL CAMERA POCKET

#HG4263

KORTEL HARNESSES



Kortel KOLIBRI EVO NEW

Lightweight harness

The KOLIBRI EVO is a lightweight harness for Hike & Fly competitions or bivouac flights.

It has all the features that have made the KOLIBRI so successful since 2014 and its numerous improvements and innovations continue to make it the reference in the world of lightweight cocoon harnesses. In the specific niche of bivouac and expedition flying, the KOLIBRI EVO is unbeatable thanks to its unmatched comfort and spacious storage pockets.

The separate leg suspension provides a smoother roll and gives the pilot more peace of mind in difficult conditions.

The comfort is unprecedented for a harness in this weight class - even flights lasting several hours are possible without restrictions. The frontal attachment of the rescue parachute, which is integrated in the leg cover, allows easy deployment even in extreme flight situations, as the deployment handle is intuitively accessible. In addition, the KOLIBRI EVO offers sufficient space for stowing equipment thanks to a large pocket in front of the protector.

- Hybrid foam and airbag back protector
  - Spacious storage pockets
  - Holder for hiking poles in the back compartment
  - Double air intake, foldable to avoid kinks when packing
  - Front rescue container integrated in leg cover
- Innovative adjustable Dyneema line system
  - Smooth adjustment system (splice technology)
  - Even easier to step in than in the predecessor model
  - Carbon ring reinforcement in the foot section

Scope of delivery: KOLIBRI EVO, T-BONE Softlinks (Paralock 3 separating carabiner for an extra charge)

Weight: 1,9 kg (M), 2,0 kg (L), 2,1 kg (XL)  
Sizes: M (<1,70 m), L (1,70-1,85 m), XL (>1,85 m)  
Certification: EN 1651 & 12491 / LTF / CE

Can also be combined with Finsterwalder PARALOCK separation carabiners  
Accessories: Carbon footplate, backpack SAK K80 for bivouac flying, Backpack SAK K60 for Hike&Fly tours

€1.590,00 Kortel KOLIBRI EVO # HG94   
€1.650,00 KOLIBRI EVO with AIRBOX # HG94

Kortel AIRBOX NEW

Inflatable protector for the Kolibri, Kolibri EVO and Kuik II Kocon

The KORTEL DESIGN Airbox is an inflatable protector that can be retrofitted to the Kolibri, Kolibri EVO and Kuik II Kocon harnesses.

Besides being slightly lighter than the standard foam protector, the Airbox has two major advantages: Firstly, the packing volume of the harness is significantly reduced and secondly, the passive protection is significantly increased. The crash test with te Kolibri showed a 27% improvement in passive protection compared to the standard foam protector!

Compatible with: KORTEL DESIGN Kolibri, Kolibri EVO & Kuik II Kocon  
Weight: 350 g

€145,00 Kortel AIRBOX # HG946



KORTEL HARNESSES



Kortel KUIK III NEW

The ONLY reversible harness with cocoon and airbag!

The KUIK III is a unique, advanced reversible harness with a modular design that makes it extremely versatile. It can be used for leisurely pleasure flights after a simple mountain tour, for challenging cross-country flights with the cocoon module attached, or for beginners immediately after completing their paragliding course.

If you are looking for a harness with lots of options, the KUIK III could be the one for you!

Compared to the previous generation, the KUIK III has been optimised in terms of clean look, ease of use and adjustability.

The increased stiffness of the back and leg straps ensures a good seating position and supports precision steering. The harness is designed for everyday use and benefits from the use of new robust and lightweight materials.

Adjustment options:

- Chest strap and distance between leg straps to adjust stability level
- Lumbar spine
- Shoulders
- Angle and position of backrest: from sitting to semi-lying
- Stable, damped behaviour filters out air mass turbulence

Reversible backpack:

- Comfortable and padded reversible backpack
- Special compartment for the paraglider, including compression strap
- Top compartment with adjustable roll-top volume for storage of accessories
- Zip and mesh pockets accessible from the outside
- Passage hole for hydration tube

Accessories included:

- Signalling whistle
- 2-step speed pedal
- Airbag and foam bag for pre-inflation to ensure good passive safety right from the start. A large rear airbag rounds off the protection.

Cocoon:

The Cocoon module provides effective protection against the cold and increases comfort. This allows you to fly longer while improving performance.

Cocoon Features:

- Adjustable length on top and bottom
- Carbon footplate
- Large cockpit with stowing compartment
- Integrated reserve container
- Reserve attachment points on the shoulders
- Side storage pocket

Scope of delivery: KUIK III, Charly Unilock or Kortel Auto 20 carabiners, (Paralock 3 separation carabiners available at an extra charge)

Sizes: S (<1,70 m), M (<1,85 m), L (<1,95 m), XL (<2,00 m)  
Weight: Reversible harness: 3,5 kg in Gr. M  
Reversible harness + Cocoon: 4,4 g kg in Gr. M

Certification: EN 1651 / LTF, CE-certified

€1.985,00 Kortel KUIK III with Cocoon # HG1930



KORTEL BACKPACKS



Kortel KOMPACT

Ultralight backpack for hike/run & fly



The Kompact is a minimalist backpack with an integrated cell pack. It has been specially designed for hike/run & fly and is the ideal companion for day trips, no matter which summit! The integrated quick pack-sack ensures optimum positioning and load distribution of the paraglider on the back. High-quality workmanship and innovative design complement the Kortel lightweight series. 3 sizes: 23L / 34L / 42L

- Mesh back
  - Mesh shoulder straps
  - Integrated cellular bag
  - Adjustable chest strap
  - Removable hip belt
- Waterproof inner protection against sweat
  - Top zip pocket
  - Helmet mount
  - Side pocket

Weight: 360g / 380g / 420g      Volume: 23 L / 34L / 42 L

€186,00   Kortel KOMPACT   # HG4220  



Integrated cellular bag

Kortel SAK K17

Backpack for mountain running



The K17 backpack is the perfect companion for mountain running with a singleskin or for many other summer activities. With its vest-like carrying system, it is perfectly adapted to the needs of mountain running. The lightweight hip belt provides additional support on the back when needed.

An integrated pack sack saves weight and ensures a perfect fit.

- Holder for hiking sticks
  - Adjustable shoulder straps
  - Net pockets on shoulder straps: For water bottles and/or small equipment
- Waistcoat-type carry
  - Internal folding cover
  - Elasticated chest strap

Weight: 330 g      Volume: 17 L

€185,00   Kortel SAK K17   # HG4225  



Kortel SAK K27

Backpack for hike&fly



The K27 is ideal for Hike & Fly day tours with mini wings or lightweight paragliders. The special carrying system, similar to a waistcoat, is particularly suitable for fast tours or even for running, with the hip belt providing the necessary stability on the back.

The integrated pack sack adapts the paraglider perfectly to the shape of the backpack and leaves enough space for the rest of the equipment. Various small pockets allow quick access to a drinks bottle, smart-phone, hat or gloves.

- Holder for hiking sticks
  - Compression straps
  - Zipped top pocket
- Removable helmet holder
  - Integrated waterproof protective film on the inside

Weight: 440 g      Volume: 27 L

€195,00   Kortel SAK K27   # HG4235  



Kortel SAK K40

Backpack for hike&fly

Kortel SAK K40 paragliding backpack with 40 l volume is specially designed for hike&fly. Ideal for day tours, no matter which summit!

- Mesh pockets on the straps, for drinks or small equipment
  - Mesh back
  - Waterproof inner protection against sweat
  - Holder for telescopic poles or ice axe
  - Numerous side mesh pockets that are accessible when walking
  - Upper zipped pocket
  - Hip belt
  - Compression straps
  - Removable helmet holder

Weight: 650 g      Volume: 40 L

€265,00   Kortel SAK K40   # HG4245  



KORTEL BACKPACKS



Easily accessible mesh pockets on the shoulder straps



Kortel SAK K60

Backpack for hike&fly

Designed with Red Bull X-Alps participants Antoine Girard and Nelson de Freymann. Like the KOLIBRI harness, it has been specially developed for the Hike & Fly pilot. Its unique compression system ensures optimal positioning and load distribution of the paraglider. Ideal for those who like to hike or fly competitions, or for those who use their light equipment on a daily basis for whom the 80 L version is too big.

- High wearing comfort
- Paraglider compression system in the backpack that optimises storage space
- Stiff slats to support and shape the back
- Internal waterproofing to protect the paraglider from sweating
- Single zip to open the backpack completely or partially
- incl. rain cover
- Inkl. 1 Paar Soft Links

Weight: 700 g Volume: 60 L

€275,00 Kortel SAK K60

# HG4255



Kortel SAK K75

Backpack for hike&fly



The Sak K75 was developed and built for hikers, aviators and bivouacers. It is robust and has all the necessary and sufficient functions for these types of activities.

Thanks to its upper roll-top, the Sak K75 has an additional capacity of 25 litres, making it suitable for all adventures.

The waterproof back and fixed frame ensure optimum comfort. It is also equipped with numerous accessories.

- Holder for hiking sticks
- Compression straps
- Drink bottle holder
- Adjustable volume 75 - 100 L
- Wide hip belt
- Compression straps

Weight: 840 g Volume: 75 + 25 L

€275,00 Kortel SAK K75

# HG4256



KORTEL BACKPACKS



opt. lid compartment  
HG4253

Kortel SAK KOLIBRI 80L+

Lightweight backback for vol-bivouac and hike & fly

The BACKPACK KOLIBRI weighs a mere 800 g and - just like the Kolibri harness - has been especially developed for vol-bivouac and hike & fly pilots. A unique compression system ensures the glider's optimal positioning and weight distribution. With its premium quality and innovativeness, it ideally complements Kortel's range of lightweight flight equipment.

- Unique compression system for the optimal positioning of the glider
- Carrying system with frame structure for optimal weight distribution and high wear comfort
- Special zipper design for easy access to the contents
- Several easily accessible side pockets, lid compartment for valuables
- Shoulder pockets for drinking bottles
- Trekking pole attachment + Raincover

Weight: 800 g + 85 g with optional lid compartment

Volume: 80 L , + 20 L with optional lid compartment

€275,00 Kortel SAK KOLIBRI 80

# HG4251



€25,00 Lid compartment (+20 L)

# HG4253



Kortel TANDEM II

XL quick pack sack

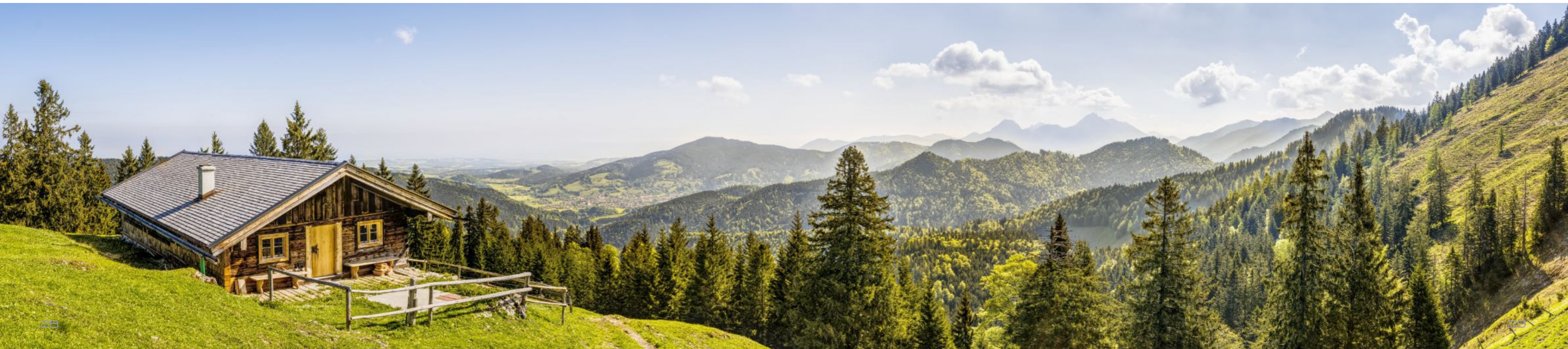
The Kortel QUICK PACK SACK TANDEM II features convenient and time-saving packing of the mushroomed glider using only one strap. It has a volume of 200 l and is spacious enough for a biplace wing, passenger and pilot harnesses incl. rescue chute and two helmets.

- Ergonomically shaped shoulder and hip straps for high wearing comfort
- Height adjustable chest strap
- 2 carrying handles (one on each side)
- 2 compression straps with quick-release buckles made of light metal
- Padded bag (e.g. for camera incl. telescopic pole)
- Pocket with window (e.g. for brevet, ID cards)
- Incl. reinforced bottom fabric

Weight: 1,47 kg Volume: 200 L

€278,00 Kortel TANDEM II

# HPa120



KORTEL HARNESSES



Kortel KANIBAL RACE II

Race and XC harness

The KANIBAL RACE II was developed with only one goal in mind: Performance!

Pure power by reducing drag with the tail wing to achieve the best possible polar in all conditions, avoiding pilot fatigue with exceptional comfort, optimising glider dynamics with the unique stabilisation system that adapts glider stability to flight conditions, creating a cockpit for the best overview. Plus a competition shell seat with unique back support that keeps the pilot in position in any flight setting.

The reserve container is designed for two independent rescue parachutes (left and right access) and complies with current FAI regulations. The inflatable profile optimises the aerodynamics of the harness and helps to control unwanted yawing movements.

- Optimal back and leg support
- Adjustable main suspension
- Anti-G chute compartment accessible from both sides
- Integrated fall-out protection
- Adjustable suspension height and seat plate angle
- Adjustable stabilisation system
- Relaxed flying due to low leg tension in the leg cover
- Three-step foot accelerator with ratchet rollers
- Combination foam/airbag back protector
- Removable cockpit with integrated compartment for external battery storage, also suitable for large tablets

**Scope of delivery:** KANIBAL RACE II, Finsterwalder PINLOCK carabiners, (Paralock 3 separating carabiner for an extra charge), detachable cockpit, adjustable 3-step accelerator, Dyneema lines

**Weight:** 7,2 kg (S), 7,5 kg (M), 7,8 kg (L), 8,1 kg (XL)

**Sizes:** S (< 1,67 m), M (1,65 - 1,83 m), L (1,80 - 1,94 m), XL (>1,88 m)

**Certification:** EN 1651 & 12491 / LTF / CE

€2.615,00 KANIBAL RACE II # HG97



Kortel KANIBAL RACE II ST NEW

Race and XC harness

Based on the standard KANIBAL RACE II, the ST version differs only in having a shorter tail. The slightly more discreet look appeals especially to cross-country pilots who are looking for ultimate performance.

The inflatable back section can easily be exchanged for that of the KANIBAL RACE II for a competition look and even more performance.

€2.615,00 KANIBAL RACE II ST # HG97ST



Kortel AIRBOX KR NEW

Inflatable protection for the Kanibal Race II and Race II ST

This protection can be installed in place of the foam and offers a 20-liter volume gain once deflated. Perfect for all cross-country pilots who want a more compact bag for travel or competition.

Much more than a simple gain in volume and weight, it's above all a better passive protection, 30% more effective than foam in our crash tests.

€145,00 AIRBOX KR /Weight 350g # HG97A

KORTEL ZUBEHÖR



Kortel SAK K220

Backpack for KANIBAL RACE II

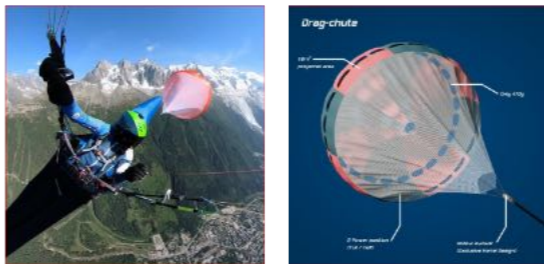
The SAK RACE II is the new Kortel Design backpack specifically designed for the KANIBAL RACE II.

Its volume has been customized to carry the KANIBAL RACE II, a competition wing, along with many essential accessories (instruments, helmet, ballast, jacket, etc.). Its elongated shape yields an excellent carrying capacity, and respects the folding instructions of the wing with its rods.

- Load carrying straps
- Compression straps
- Side pocket with zip
- Robust and durable materials

**Weight:** 1,3 kg **Volume:** 220 L

€284,00 Kortel SAK K220 # HG97S



Kortel DRAG CHUTE

Anti-G brake parachute

- 1,6 m² projected area
- 2 Power Positions (100 % / 50 %)
- Hollow swivel
- Weight: 470 g

€247,00 KOCKPIT DRAG CHUTE HG97C



Kortel REVERSIBLE BALLAST BAG

Reversible Backpack

The REVERSIBLE BALLAST BAG allows you to easily carry your ballast or various items during the race. Since it is reversible, the ballast can be stored directly in the Kortel KANIBAL RACE pocket and provides access to let the drain tube hang out.

- Small 2-belt backpack
- Incl. suspension straps: possibility to hang the BALLAST BAG in frontal position
- Reversible: ballast carrier bag
- Incl. compression straps

Please note: Delivery without water ballast bag.

**Weight:** 300 g **Volume:** 8 L

€63,00 REVERSIBLE BALLAST BAG #HG143M



Kortel KOCKPIT KANIBAL RACE II

Cockpit suitable for the harness Kanibal Race II

Can be converted into a small bag with carrying handle to carry flight instruments and various items easily.

- Large area for the flight instruments
- Sun visor for better readability of the instruments.
- Compartment for external batteries with passage for instrument power cables.

€137,00 KOCKPIT KANIBAL RACE # HG97KP

ACCESSORIES COCKPITS



Charly FRONTCOCKPIT-XC

Front cockpit bag adjustable ballast pocket

The Charly FRONTCOCKPIT-XC with adjustable ballast compartment, suitable for a water ballast bag with a filling volume of up to 10 litres. When the ballast compartment is not needed, it can be easily removed by means of a zip.



During transport, the flight instruments are perfectly protected by the padded lid compartment and can be easily attached to the front cockpit thanks to the integrated Velcro plate.

Weight: 700 g

Interior dimensions of the instrument compartment: ca. 26 x 16 cm

€84,00 FRONTCOCKPIT-XC #HFa1892



Kortel COCKPIT SAFE

Pilot safety and instrument storage

The unique attachment system of the Kortel COCKPIT SAFE prevents the pilot from falling out of the harness due to the connection between leg strap and main carabiner. Time and again, deadly accidents happened due to untied leg straps. Investigations showed that an obstruction of the view on the plugs due to instruments mounted above was a frequent reason why pilots forgot to close the plugs. For optimal instrument screen readability, the Kortel COCKPIT SAFE's attachment angle can be individually adjusted.

Compared to its predecessor, the Kortel COCKPIT SAFE provides even more storage space: The spacious upper compartment is roomy enough to store even larger flight instruments. A magnetic cover flap provides optimal protection during transport.

Weight: 500 g Material: Cordura®, ripstop

€175,00 Kortel COCKPIT SAFE #HG426



Kortel KOCKPIT EXTENSION

Extension frontcontainer

Extension of the instrument support surface of the Kortel KONTAINER KOCKPIT with angle adjustment possibility for optimal readability.

- Safety snap hook
- Velcro connection
- Adjustable tilt angle
- Padded protective bag



Size: 22 cm x 12 cm

Weight: 850 g

Material: Cordura®, ripstop

€65,00 KOCKPIT EXTENSION #HG4261

ACCESSORIES WATER BALLAST + DRINKING SYSTEM



HIGH PRESSURE-WATER BALLAST BAG 10L

Multifunctional water ballast bag

The lightweight alternative to plastic- or aluminium bottles. The compact Ortlieb HIGH PRESSURE WATER BALLAST BAG with a fluid capacity of 10 l/340 oz features straps for fixation to a backpack or a harness and is made of tear-resistant and watertight fabric. Food grade coating on the inside ensures safe transport of your water. Thanks to the two handles being provided with buckles, the water ballast bag can be easily be fixed to branches or vehicles.

Multiple applications:

- Camping shower
- Buoyancy means for diving
- Seat- or head pillow
- Can be combined with outdoor filters for water purification and an Ortlieb drinking tube
- Weight for paragliding

Weight: 160 g Volume: 10 L Dimensions: 44 x 36 cm

€35,00 WATER BALLAST BAG 10 L #HG142



DRINKING TUBE with adapter

The ideal complement to the Ortlieb WATER BALLAST BAG

With the drinking tube, you can easily transform Ortlieb water containers or common PET bottles into hydration systems: remove the valve, insert the tube into the water container and screw the valve back on. The 95 cm long tube features a lockable bite-valve and a screw cap.

- Threaded cap (28 mm) for Ortlieb WATER BALLAST BAG or common PET bottles
- For drinking simply bite the valve and sip
- For closing, turn the mouthpiece clockwise by 180°
- The tube length can be adapted inside the container
- The mouthpiece can be taken apart for hygienical cleaning
- Cleaning with warm water and liquid soap

Weight: 90 g Length: 95 cm

€20,00 DRINKING TUBE with adapter #HG1420



Kortel WATER BALLAST BAG volume 10 L

Water balast bag for paragliders

Water bag with drainage tube and remote tap that allows you to easily carry extra weight in your harness and at the same time have the possibility to drain the water and lose weight during the flight.

Weight: 178 g

Dimensions: 50 x 40 cm Drain tube length : 36 cm

€35,00 WATER BALLAST BAG 10 L #HG1434K

## ACCESSORIES FRONTCONTAINER



**Charly FRONTCONTAINER COCKPIT**

Front container with detachable instrument compartment.

The Charly FRONTCONTAINER COCKPIT for rescue system with detachable instrument compartment for flight instruments and other stuff like mobile phone, purse, adjustable fixing with line connector and snap-fits. The instruments are well protected during the flight and transportation.

The instrument compartment can be brought easily in a slightly inclined position, so that an optimal perspective on the instruments is guaranteed. The upper part of the Charly FRONTCONTAINER COCKPIT with the valuables can be separated after the flight with a zipper and can be stowed separately while the lower part can stay with the rescue system and the harness.

**Sizes:** M 475g suitable for SC 86, SC 94, TC 100  
L 520g suitable for SC 118, TC 100, TC 125  
XL 540g suitable for DUO 160, TC 160

**€94,50** FRONTCONT. COCKPIT # HFa189  

**Kortel KONTAINER V4 LIGHT**

Frontcontainer

Front mount outer reserve container for Charly and Kortel rescue parachutes.

- Ergonomic release handle for left and right-handers
- Easy attachment of the rescue connection (no additional link needed)
- Additional strap for secure fixation
- Velcro strips for fastening small instruments
- With removable riser cover
- Integrated Konnect system for easy mounting

**Weight:** 149 g (S) + 25 g Riserprpotection, 153 g (L) + 25 g Riserprotection

**Sizes:** S suitable for TC 100, SC 86/95, Krisis UL80/UL95/UL115, Krisis Karré 100, Krisis Rogallo II Light 100  
L suitable for TC 125, SC 118, Krisis UL115, Krisis Karré 125, Krisis Rogallo II 130, Krisis Rogallo II Light 130

**€120,00** Kortel KONTAINER V4 # HFaV4  



**Kortel KONTAINER KOCKPIT**

Frontcontainer

The Kortel KONTAINER KOCKPIT for the installation of a rescue system and for holding flight instruments. Its unique design integrates an anti-forget system adaptable to all harnesses.

- Instrument cockpit adaptable to all types of harnesses
- Velcro pad for instrument
- Container compartment (max. volume 5L), with compression straps
- Compatible with TARGETcross, Krisis, Rogallo II and Karre rescue devices
- With anti-forget system

**Weight:** 850 g **Material:** Cordura®, ripstop

**€155,00** KONTAINER KOCKPIT # HG4262  





ACCESSORIES V-LINES



from €39,50



Charly HIKE & FLY V-LINE

Ultralight V-LINE

If you want to reduce the weight of your paragliding equipment, you should definitely choose Charly HIKE & FLY V-LINE! They are integrated in the TARGETcross paragliding rescue systems and thus tested EN and LTF to 2400 DaN. They are suitable for mono and tandem. We recommend our softlink to be fixed on the harness.

Material: High power dyneema

Lengths: 140 cm, 160 cm

Art.#	Artikel			€
HFa1882	Charly HIKE & FLY V-Line 140	140 cm	46 g	39,50
HFa1884	Charly HIKE & FLY V-Line 160	160 cm	51 g	44,50



Kortel KONNECT V-LINE

Connecting line with integrated T-bone link

Easy connection harness- rescue parachute, suitable for solo and double seat use.

- Dyneema structure
- Integrated "T-bone link" connection
- Easy to attach

Length: 120 cm

Weight: 60 g per pair

Material: Dyneema

Breaking load: 1200 DaN



€105,00 Kortel KONNECT V-Line (pair)

# HFa1887



Charly 3,3 t. EXTENSION LOOPS

The CHARLY 3.3 t extension loops are looped into the risers of steerable CHARLY reserves when they are not attached to the shoulder straps of the harness but to the main carabiners, e.g. when using a front container.

The high-strength and low-stretch Dyneema loops are resistant to moisture, UV and chemicals and weigh only 14 g each.

Length: 20 cm • Breaking load: 3.300 DaN

€52,00 Charly 3,3 t. EXTENSION LOOPS (pair) # HFa165



ACCESSORIES RISER COVER



€32,80



Charly RISER COVER

RISER COVER for tandem and paramotor

Using Velcro straps, the Charly RISER COVER can be guided from the attachment point of the rescue to the protected area inside the harness. The risers are neatly stowed away and protected against UV radiation and mechanical stress. The tandem version is particularly suitable for the TARGETcross 160 ST tandem and for light tandem V-lines.

Since the Charly RISER COVER is not a load-bearing or certified component, it can be individually shortened and thus adapted to different harnesses and tandem spreaders. The cutting edge as well as the zipper ends can then be hemmed or taped with self-adhesive sail cloth. It is only necessary to ensure that the straps can open the zipper unhindered in the case of a rescue deployment.

HFa195RST Charly RISER COVER for Tandem (pair)

HFa195RSM Charly RISER COVER for Motor (pair)



Kortel RISER COVER

NEW

RISER COVER for tandem

Protects the risers of the double-seater rescue device from external influences up to the connection point on the spreader. (UV radiation, Velcro fasteners, dust, getting caught, ...)

- Automatic opening due to separable zip fastener
- Simple connection due to rubber band system and holding the sleeve at the connection point of the risers
- Suitable for most Tandem harnesses and spreader

Weight: 125 g per pair



€69,00 Kortel RISER COVER (pair)

# HFa195RSK



Kortel Tandem spreader carbon

NEW

Rigid tandem spreader

A special feature of this tandem spreader bar is that the pilot hangs relatively high, which reduces the distance to the brake handles. The reserve parachute bridle is attached to the spreader bar with tested T-bone links and fed into a channel closed by a zip.

Weight: 480 g incl. T-bone links and sheathing for connecting line

€250,00 Kortel Tandem spreader carbon (pair) # HGU135



Kortel Tandem spreader soft

NEW

Tandem spreader flexible

FFlexible, lightweight spreader specially designed to reduce the distance between the pilot and the brake handles, especially on two-seaters with long risers (>30cm) or harnesses with high suspension points.

Weight: 190 g incl. T-bone links and sheathing for connecting line

€130,00 Kortel Tandem spreader soft (pair) # HGU134



ACCESSORIES SPEEDSYSTEMS



SPEED PEDALS 2-step



Standard 2-step accelerator

Standard 2-stage accelerator, with a first flexible bar and a second rigid bar.  
Ultra-easy connection thanks to its Ø3mm cords equipped with split hooks.



Adjustment is made thanks to an exclusive Kortel design plate that allows easy and precise adjustment.  
Compatible with any harness.

Weight: 110 g

€47,00 SPEED PEDALS 2-step #HG133  

LIGHT-SPEED PEDALS 2-step

Light accelerator for paragliders

The two-stage 35 g LIGHT SPEEDSYSTEM from Kortel is characterised by the following features:



- made of Dyneema, therefore particularly light and robust
- Suitable for all Hike&Fly harnesses

Adjustment is made via an exclusive Kortel design plate, which allows for easy and precise adjustment.



Two rope clips are included to fix the harness in the up position during take-off and to prevent the feet from getting tangled.

Weight: 35 g

€37,00 LIGHT-SPEED PEDALS 2-step #HG130  

LIGHT-SPEED PEDALS 3-step

Light accelerator for paragliders



Light accelerator equipped with 3 flexible rods. Made of 2 mm Dyneema, it is ultra strong for its weight. It is designed to fit light cross harnesses equipped with a cocoon.

Adjustment is via an exclusive Kortel design plate that allows for easy and precise adjustment.



Two rope clips are included to fix the harness in the up position during take-off and to prevent the feet from getting tangled.

Weight: 45 g

€42,00 LIGHT-SPEED PEDALS 3-step #HG131  

ACCESSORIES SPEEDSYSTEMS



SPEED PEDALS 3-step



3-step flexible accelerator

Ideal for any Cocoon harness. The 1st stirrup is adjustable with a 3-way loop.

Easy connection by Ø3mm loop and split hooks. Adjustment is made with a simple knot at the connection between speed bar and rope.

Retaining rubbers are supplied which are attached to the underside of the cocoon.

Weight: 80 g

€38,00 SPEED PEDALS 3-step #HG134  



SPEED PEDAL adjustable

Length-adjustable speed pedal

Finsterwalder's SPEED PEDAL is length-adjustable by a 3-hole system directly at the foot rest. It is also very easy to install and adjust.

- Very robust and light
- With durable, flexible stainless steel wire rope with 7 x 19 strands, plastic coated, bent in direction of flight
- Ultra-light tube made from high-strength aircraft-grade aluminium alloy
- Ready for use incl. rope with sewn-in Brummel hooks and installation guide

Weight: 106 g

€23,50 SPEED PEDAL adjustable #HG126  

SPEED PEDAL 2-step & adjustable

Length-adjustable speed pedal

The 2-level Finsterwalder SPEED PEDAL is length-adjustable by a 3-hole system directly at the foot rest. It is also very easy to install and adjust.

- Very robust at a total weight of only 74 g!
- With durable, flexible stainless steel wire rope with 7 x 19 strands, plastic coated, bent in direction of flight
- Ultra-light tube made from high-strength aircraft-grade aluminium alloy
- Ready for use incl. rope with sewn-in Brummel hooks and installation guide

Weight: 145 g



€32,00 SPEED PEDAL 2-step & adjustable #HG128  

SOFT SPEEDSYSTEM 3-step

Textile speed bar

Flexible textile speed bar for regulated acceleration in three stages. For use in cocoon harnesses.

Weight: 135 g

€25,60 SOFT SPEEDSYSTEM 3-step #HG129  

ACCESSORIES SPEEDSYSTEM • FOOTREST



**FREE\*SPEE 3.0 SPEEDBAR**  
Light weight speedbar.

FREE\*SPEE 3.0 SPEEDBAR offers maximum performance at minimum weight. Reliable technology as well all first-class materials are setting standards. FREE\*SPEE 3.0 allows you to optimally adjust the speed system at any time. This can be done using only one hand, so that the steering lines to not have to be completely let loose.

**New in version 3.0:** The webbing loop is reinforced with a spring wire. This means that it is always optimally positioned to the front and makes it super easy to get into the speed system.

**Scope of delivery:**

- 1 free\*spee speedbar - heavy-duty GFK, robust webbing, approved clamping mechanism
- 1 Dyneema rope 3.5 mm, breaking load > 300 kg
- 2 brummel hooks (stainless steel)
- 2 cord stoppers
- 1 replacement o-ring made from weather-proof silicone

**Weight:** 80 g

€63,90 FREE\*SPEE 3.0 SPEEDBAR #HG121



**FREE\*SPEE XC 23 SPEEDBAR 3-step** **NEW**  
Light weight speedbar

FREE\*SPEE XC-3 SPEEDBAR offers maximum performance at minimum weight. Reliable technology as well all first-class materials are setting standards. FREE\*SPEE XC-3 allows you to optimally adjust the speedsystem at any time. This can be done using only one hand, so that the steering lines to not have to be completely let loose.

Easy adjustment.

**Scope of delivery:**

- 1 three-stepped free\*spee XC-3 speedbar - heavy-duty GFK, robust webbing, approved clamping mechanism
- 1 Dyneema rope 3.5 mm, breaking load >300 kg
- 2 brummel hooks (stainless steel)
- 2 cord stoppers
- 1 replacement o-ring made from weather-proof silicone

**Weight:** 90 g

€65,90 FREE\*SPEE XC 23 SPEEDBAR #HG1210

**Charly FOOTREST**  
Footrest with 2-point mounting possibility

Charly's FOOTREST facilitates the transition to the sitting position after takeoff and improves the comfort during non-accelerated flight.



Bar width: 23,5 cm  
Total length: 67 cm + 12 cm Retraction rubber  
Weight: 90 g

€24,80 Charly FOOTREST #HG124

**Kortel FOOTREST**  
Foot stirrup for Karma III und Kuik III

The Kortel FOOTREST for KARMA III and KUIK III harnesses.



Bar width: 23 cm  
Total length: 80 cm + 20 cm Retraction rubber  
Weight: 64 g

€32,50 Kortel FOOTREST #HG132

ACCESSORIES Speedsystem



**BRUMMEL HOOK • SPEED SYSTEM HOOKS**

Brummel hooks are commonly used in sailing. Finsterwalder's SPEED SYSTEM HOOKS are manufactured according to the same principle and have been developed especially for paragliding. They serve as a connection between the speed system that is attached to the harness and the glider and are hence also called speed system hooks. Nearly all paraglider manufacturers use Finsterwalder's SPEED SYSTEM HOOKS.



**Finsterwalder BRUMMEL HOOK**

Available in stainless steel and titanal version.  
Breaking load: 250 kg (S)/ 240 kg (T)  
Weight: 5,2 g (S)/ 2,1 g (T)

€2.30 Stainless steel #Be18  
Titanal #Be180



**BRUMMEL HOOK adjustable**

for ropes between 3 and 5mm. Material: Titanal  
Breaking load: 280 kg Weight: 2,6 g

€2.95 #Be181



**BRUMMEL HOOK adjustable**

2 mm vers. for rope max 3.5 mm. Material: Titanal  
Breaking load: 190 kg Weight: 1,7 g

€2.95 #Be182



**BR-HOOKS with DYNEEMA cord**

BRUMMEL HOOKS looped into spliced DYNEEMA cord. Price per pair.

€9.50 #HG1290



**5 mm ACCELERATOR ROPES**

for ratchet block, 1.50 m POWERLOCK CORD 5 mm incl. brummel hooks. Price per pair.

€9.90 #Be5450



**Kortel ACCELERATOR ROPES 5 mm**

Pair of accelerator lines Dyneema for ratchet block  
Weight: 55 g, Length 130 mm, Diameter: 5 mm

€26.00 #HG125K



**Kortel ACCELERATOR ROPES 7 mm**  
Accelerator ropes

Pair of accelerator cords polyester/aramid 7 mm:

- Better hold when used with winch blocks.
- Higher wear resistance than standard accelerator cords.
- Easy connection.

Diameter: 7 mm Length : 135 cm Weight: 90 g / pair

€38,00 ACCELERATOR ROPES 7 mm (paar) #HG127K

\* 1 DaN (Dekanewton) = 10 Newton = 1 kg

ACCESSORIES TOWING RELEASES



EASY QUICK TOWING RELEASES

Webbing towing device

Single stage, one-piece webbing towing latch for paragliders with integrated towing aid and replaceable suspension rope. The Easy Quick is extremely easy to use, towing with the Easy Quick textile tow release allows the paraglider to fly pre-accelerated during the towing process, thus minimising a tendency to stall.

- Reliable release by means of sliding sleeve
- Easy to use (even with thick gloves)
- Adjustable drag aid for pre-acceleration of the glider
- LTF certification

Weight: 90 g    Max. load: 2000 N

€135,00 TOWING RELEASE EASY QUICK #HS301



EASY QUICK T TOWING RELEASES

Divisible webbing towing device

The Dietmar Mathes EASY QUICK T TOW RELEASE splits up in two separate straps after the release. Therefore, it is also suitable for pilots using a front container or front rescue system. Many pilots with a reclined harness also prefer this version of the EASY QUICK TOW RELEASE. Left-handed pilots can swap the two sides to release the EASY QUICK TOW RELEASE with their left hand.

- Textile towing release for paraglider
- Compatible with front container
- Adjustable drag aid for pre-acceleration of the glider
- Easy to use (even with thick gloves)
- LTF certification

Weight: 90 g    Max. load: 2000N

€140,00 TOWING RELEASE EASY QUICK T #HS301T



Frontcontainer TOWING DEVICE SK1 / SK2

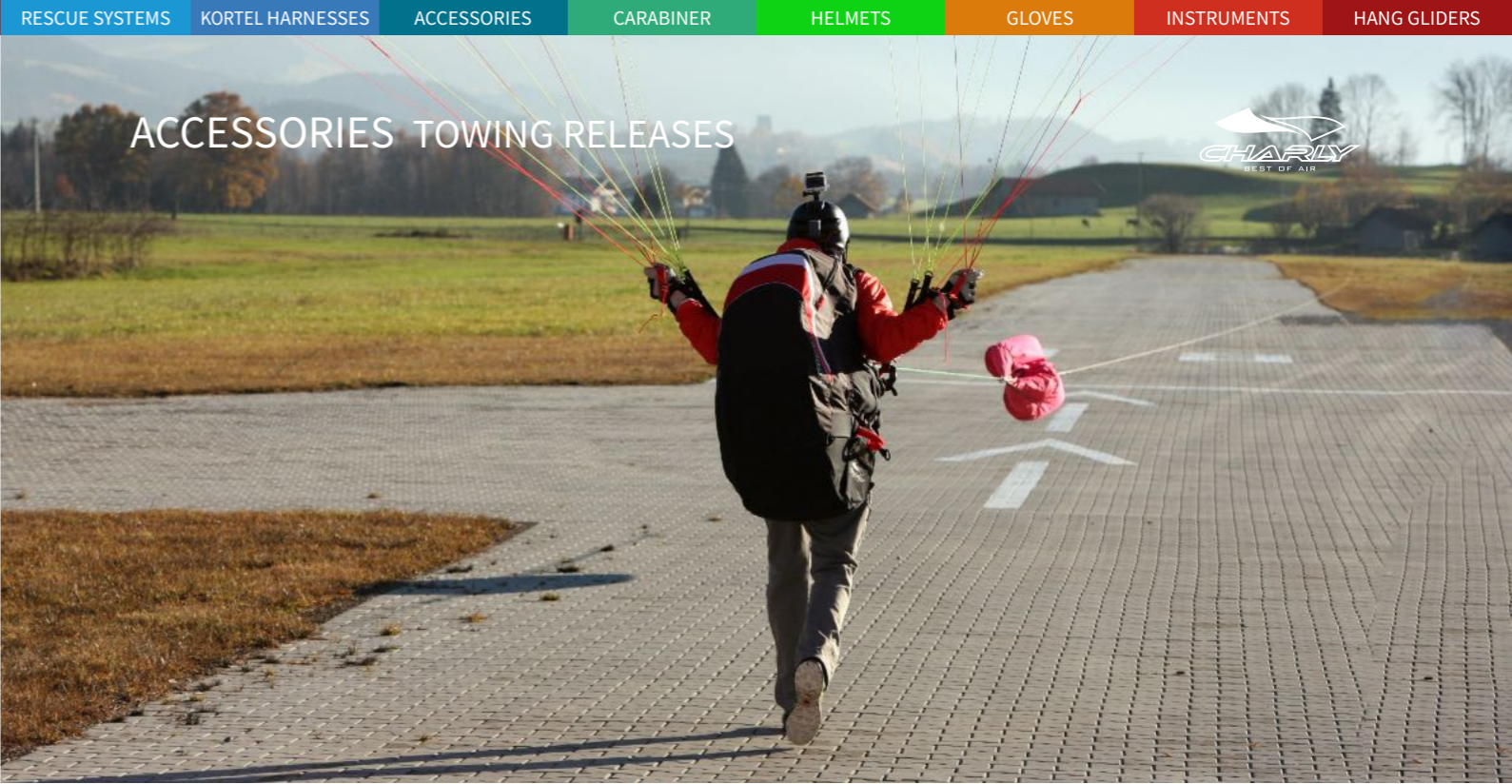
Single-stepped, split textile towing device for paragliding

Independence's frontcontainer TOWING DEVICE SK1 for paragliding has been well-established on the market for many years, as its convincing attributes are simple handling, functionality and robustness. It can be attached to the harness either at the main suspension or, if applicable, at towing loops. The TOWING DEVICE SK1 may as well be attached to harnesses with integrated front container. Weight: 75 g

€61,00 TOWING DEVICE SK1 #HS420

The Independence frontcontainer TOWING DEVICE SK2 for paragliding is equivalent to the well-established SK1, but additionally features an integrated towing adapter and a winch towing accelerator. The latter helps to pre-accelerate the wing during towing in order to make the towing phase safer to prevent deep stall. Moreover, a higher altitude can be obtained. The towing device splits upon release. Weight: 190 g

€105,00 TOWING DEVICE SK2 #HS421



ACCESSORIES TOWING RELEASES



TOWING ADAPTER for paragliding carabiners

Safety during towing

Due to its high pivot point, the Charly TOWING ADAPTER prevents the risk of stall during towing. Thus, take-off is facilitated and higher altitudes are possible. In the event of a rope break, the forward thrust of the paraglider is weaker.

The Charly TOWING ADAPTER can also be used in combination with PIN-LOCK, QUICK-OUT and PARALOCK carabiners.



Weight: 48 g (pair)    Max. load: 2000N

€19,90 TOWING ADAPTER for PG (pair) #HS50



EXPRESS LOOP for paragliding

Accessories for paragliding tow bridle

The Charly EXPRESS LOOPS for attaching the paragliding tow bridle to the riser plugs to the risers directly above the carabiners. They are used to avoid the risk of stall during towing.

Supplied in pairs, without the carabiner shown.



Width: 12 mm    Breaking load: 600 kg

€11,60 EXPRESS-LOOPS #HS5

ACCESSORIES FOR PG + HG



CROSS COUNTRY ID PLATE

Hang gliding and paragliding plate



The Finsterwalder CROSS COUNTRY ID PLATE are made from self-adhesive black ripstop nylon (other colours are not opaque enough). A complete set is included in delivery (height 30 cm).

- €59,00 CROSS COUNTRY ID PLATE 30 cm # HSe403
- €69,00 CROSS COUNTRY ID PLATE 50 cm # HSe405

SAIL REPAIR

Patch for hang gliding and paragliding sails



The Finsterwalder SAIL PFLASTER is a pre-packaged highly adhesive ripstop nylon (12 x 96 cm), which repairs smaller rips in the hang gliding and paragliding sail. Color: blue, pink

- €10,50 SAIL PFLASTER (12 x 96 cm) # HSe11

HANGGLIDER/PARAGLIDER PFLASTER

Color: black , white  
65 g/m², Maße: 12 x 150 cm.

- €13,50 HANGGLIDER/PARAGLIDER PFLASTER # HSe13

REPAIR PATCH FOR RESCUE SYSTEMS



Self-adhesive sailcloth. Especially for rescue system: white transparent, 50 x 20 cm.

- €13,50 REPAIR PATCH FOR RESCUE SYSTEMS # HSe11F

SELF-ADHESIVE SAIL CLOTH



Self-adhesive sail cloth for small repairs at paraglider or hang glider sails. Please note: For flight ID numbers or advert lettering, only black can be used as the other colours are not covering. Weight: 90 g/m² Roll width: 150 cm Color: white, red, dark blue, black, pink, purple

- €56,00 SELF-ADHESIVE SAIL CLOTH per linear metre # HSe10

RESCUE SET

RESCUE CORD WITH LEAD WEIGHT



In case of emergency landings in trees the Charly RESCUE CORD WITH LEAD WEIGHT helps lifting a rope or other rescue objects. The Charly RESCUE CORD consists of a 30 m nylon rope with a 30 g lead weight. Not suitable for descending!

- €8,50 RESCUE CORD WITH LEAD WEIGHT # HR

SOS CUTTING KNIFE for webbings



The Charly SOS CUTTING KNIFE for webbings is an important rescue kit component, if webbings or lines need to be cut in case of emergency.

- €8,80 SOS CUTTING KNIFE for webbings # HKa

VELCRO FASTENERS

Velcro HOOK & LOOP FASTENER



The Velcro HOOK & LOOP FASTENER can be cut to the desired length without fraying. Price per metre

- €1,85 HOOK tape 25 mm wide (black) # HKI1
- €1,85 LOOP tape 25 mm wide (black) # HKI2
- €5,35 HOOK tape 50 mm wide (mango) # HKI15-ha
- €5,35 LOOP tape 50 mm wide (mango) # HKI15-fl

ELASTIC VELCRO hook and loop welded



Wrapping creates connections with high tension force. 25 x 3 cm for instrument holder and more.

- €4,90 ELASTIC VELCRO hook and loop 25 x 3 cm # HKI6

WEBBING

for binding strap or pilot hang-in



The Charly WEBBING is abrasion resistant, pliant and UV stabilized.

- €2,15 18 x 1,2 mm , safety strap 700 kp # HBa1
- €2,60 25 x 2,5 mm, pilot hang-in 1800 kp # HBa5
- €3,10 44 x 1,2 mm, 2200 kp # HBa4
- €3,30 50 x 2 mm # HBa3

HIGH-STRENGTH THREAD f. sewing work on safety-relevant parts



Gauge according to DIN EN ISO 2060 41 / 3 Nm, tensile strength according to DIN EN ISO 2062 >45 DaN, needle size no. 14-19

- €7,80 HIGH-STRENGTH THREAD # HNAE40

RUBBER CORD / RUBBER BAND

Universally applicable



Elasticated braid with nylon coating. Highly elastic yet resilient. Universally applicable.

- €2,00 RUBBER CORD 3 mm, black # HSeiGu
- €1,45 RUBBER BAND 40 x 1,5 mm, black # HSeiGub



Kortel Line Cutter  
Line and belt cutter with two blades  
Length: 8 cm  
Weight: 67 g



- €25,00 Kortel Line Cutter with two blades # HKa2

ACCESSORIES FOR PG + HG



CORDS

Dyneema SUPER BRAID



New super fiber for smooth cords with higher tensile strength, lower weight, more abrasion resistance and almost the same non-stretching properties compared to Kevlar cords! The 3 mm Dyneema SUPER BRAID can be used as rescue cord for roping down in emergency situations.

€/m	Ø	Weight	Strength	Art. N°	Link
€1,20	2 mm	5 g/m	250 kp	HSeiD2	
€1,40	3 mm	7 g/m	400 kp	HSeiD3	
€2,00	4 mm	10 g/m	650 kp	HSeiD4	
€2,60	5 mm	15 g/m	1000 kp	HSeiD5	
€3,45	6 mm	22 g/m	1500 kp	HSeiD6	

Dyneema HIGH PERFORMANCE BRAIDED CORD spliceable



Highest strength, minimum weight, low elongation. Spliceable!  
Please note: Not certified for lifting loads and personal safety!

€/m	Ø	Weight	Strength	Art. N°	Link
€1,70	2,5 mm	3,5 g/m	590 DaN	HSeiD2.5	

WINDSOCK & ACCESSORIES

Charly WINDSOCK



Due to its size (ø 32 cm, length 125 cm) good to see also from great distance and due to the colours (blue at the front, red at the back side) no danger of confusion of the wind direction. Material: Robust and light Nylon Ripstop. Suitable for our linkage system.

Please note: The windsock is delivered without tubing. Please do not forget to order the corresponding TUBING and an EARTH STAKE!

- €22,80 Charly WINDSOCK ø 32 cm, Length 125 cm # HWi11

Charly TUBING for Windssocks



Foldable tubing for Charly windssocks. Turntable at the top prevents the windsock from wrapping around tubing. Length: 260 cm, 55 cm (disassembled)

Please note: The Charly TUBING is delivered without earth stake. Please do not forget to order the corresponding Charly EARTH STAKE.

- €33,50 Charly TUBING for Windssocks # HWi2
- €39,80 same with 2 riveted elastic Velcros for attachment to posts # HWi2K

Charly EARTH STAKE for windsock tubing



The Charly EARTH STAKE (new design) with a robust pull-out handle is suitable e.g. for the Charly TUBING. Length: 55 cm

Please note: The Charly EARTH STAKE is delivered without tubing. Please do not forget to order the corresponding Charly TUBING.

- €29,50 Charly EARTH STAKE for windsock tubing # HWi20

ACCESSORIES BALACLAVA • SHIRTS • BOOTS



Charly FLEECE BALACLAVA

Snug balaclava with smooth outer surface



The snug Charly FLEECE BALACLAVA has a smooth outer surface and soft, elastic fleece on the inside. Its functional cut and the sufficiently long neck part leave nothing to be desired.

€18,00 Charly FLEECE BALACLAVA

# HM7F

Charly T-SHIRT EVOLUTION PG

T-shirt with paragliding motive



Charly EVOLUTION is a high-quality cotton t-shirt.



Material: Cotton Sizes M, L, XL

€29,00 T-SHIRT EVOLUTION PG

# HM412G

Charly T-SHIRT EVOLUTION HG

Functional t-shirt with hang glider motive



Charly EVOLUTION is a high-quality functional shirt by Hanes.

Material 100 % Polyester Sizes: M, L, XL

€36,50 Functional T-SHIRT HG

# HM410H

Charly T-SHIRT EVOLUTION HG

T-shirt with hang gliding motive



Charly EVOLUTION is a high-quality cotton t-shirt.



Material: Cotton Sizes: M, L, XL

€34,50 T-SHIRT EVOLUTION HG

# HM412H

Hanwag SKY GTX

Boot for paraglider and hangglider pilots



Hanwag SKY GTX is a surprisingly lightweight boot for paraglider and hangglider pilots. With its high upper and outstanding cushioning Vibram® Mars sole, the SKY GTX ensures high levels of security and protection against twisting an ankle during take-offs and landings. The sure-grip tread provides good traction on different types of terrain. And the turf cleats and waterproof GORE-TEX lining mean that wet, grassy mountain terrain is no problem either. In addition, the membrane helps prevent your toes from getting damp and cold at higher altitudes on longer flights.

Features

- Great cushioning and comfort, breathable, and durably waterproof
- Eyelet lacing (no line tangling)
- Click-Clamp: Special jamming eyelets allow a 2-zone lacing; the boot can be laced independently on the fore- and midfoot and around the ankle and shinbone
- Built-in ankle support
- Surprisingly lightweight, comfortable, and flexing
- Additional insulation integrated in the shaft and the sole unit
- Upper with 2 wrinkles for good flex
- Sole: Vibram® Mars
- Upper: Sportvelours/Air-Mesh
- Lining: Gore-Tex®

Weight (Größe 9): 615 g  
Sizes: EUR 38-47 / UK 5-12



€259,00 Hanwag SKY GTX

#HM811

ACCESSORIES GLASSES • AIRSPEED INDICATOR



Bertoni ANTI-FOG

Aviation goggles without field of vision restriction

Air sports sunglasses/ helmet glasses that do not disturb the field of view. Distortionfree 2 mm polycarbonate lenses, 100% UV protection, anti-fog and anti-scratch coating, incl. microfibre pouch.



- Polycarbonate lenses: Ideal for sports sunglasses due to their high impact resistance. The material is 20 times stronger than glass and weighs 2/3 less.
- 100% UV-protection
- Anti-Fog & Anti-Scratch: A special surface treatment prevents fogging or scratching of the lenses.
- Incl. microfibre transport bag

Weight: 21 g Filter category: 1

€45,00 Bertoni ANTI-FOG

#HM71



Skywatch WIND

Anemometer



The JDC ELECTRONIC Skywatch Wind measures wind speed, air temperature and wind chill quickly and accurately. The newest member of the JDC ELECTRONIC family is small enough to be easily carried anywhere, resistant to dust and shock, and equipped with a user-replaceable propeller.

- Measurement data: Wind speed, air temperature
- High contrast LCD display
- Waterproof and floatable • Replaceable propeller

- Insensitive to dust and vibrations • Auto-Off Function
- Integrated lithium battery (sufficient for at least 250,000 measurements)

Dimensions: 41 x 109 x 17 mm  
Weight: 30 g

€56,00 Skywatch WIND

#Hi156W

Skywatch EOLE 1

Anemometer



The Skywatch EOLE 1 is the completely redesigned successor of Skywatch's popular omni-directional windmeter EOLE. The Swiss-designed three-cup anemometer is accurate in minimal winds yet robust enough for the strongest winds. Waterproof, the device also floats making it an ideal instrument for the harshest environments. Thanks to its aluminium base for tripod attachment, the Skywatch EOLE 1 is also ideal for situations when measuring windspeeds hands-free is necessary.

Features:

- Windspeed in km/h, m/s, Knoten, Beaufort
- 3-cup omni-directional impeller
- Backlit display
- Waterproof
- Aluminium base for tripod attachment

Dimensions: 65 x 65 x 155 mm Weight: 235 g

€100,00 Skywatch EOLE 1

#Hi158

Skwatch PRO

Anemometer



Skywatch® PRO measures wind speed and direction, air temperature, wind chill and heat stress, humidity and barometric pressure. Eight user-customisable display pages with menu-driven configuration via three buttons are shown on a high-contrast graphic display. The newest member of the JDC family is small enough to take anywhere. Dust and shock resistant.

Wind direction blade available as accessory: You can measure the wind direction with the tripod mount. Simply attach the Skywatch Pro and use it with a tripod.

- Lightweight, balanced vane made of carbon fibre
- Ball joint 1/4" tripod connection



€148,00 Skywatch PRO  
€60,00 Wind direction blade

#Hi154  
#Hi1544

Skywatch METEOS 1

Anemometer



The Skywatch METEOS 1is the completely redesigned successor of Skywatch's popular omni-directional windmeter METEOS. By contrast to its "little brother", Skywatch EOLE 1, the Skywatch METEOS 1 also possesses a thermometer. The Swiss-designed three-cup anemometer is accurate in minimal winds yet robust enough for the strongest winds. Thanks to its aluminium base for tripod attachment, the Skywatch METEOS 1 is also ideal for situations when measuring windspeeds hands-free is necessary.

Features:

- like Skywatch EOLE 1, additionally
- Temperature current / Wind Chill

Dimensions: 65 x 65 x 155 mm Weight: 235 g

€105,00 Skywatch METEOS 1

#Hi159

FLIGHT INSTRUMENTS MOUNTINGS



Charly 2-POINT LEG MOUNT

Leg mount with adjustable angle



The the comfortable Charly 2-POINT LEG MOUNT provides for reliable instrument fixation on the thigh.

The dual leg straps ensure a uniform pressure distribution. The variable angle can be adjusted easily and quickly. The leg mount is attached to the harness and secured by means of a safety strap with closure.

Weight: 66 g

€34,00 Charly 2-POINT LEG MOUNT #Hi5520

INSTRUMENT COCKPIT MOUNT

Mount with adjustable angle




Thanks to its individually adjustable angle, the Charly INSTRUMENT COCKPIT MOUNT (frontcockpit mount) provides for good display readability in any situation.

Weight: 37 g

€16,90 INSTRUMENT COCKPIT MOUNT #Hi5521

Finsterwalder UNIVERSAL MOUNT

Hang gliding mount for flight instruments.



The Finsterwalder UNIVERSAL MOUNT for radio sets and instruments without a thread.

€24,00 Finsterwalder UNIVERSAL MOUNT #Hi95

FLEXIBLE ANGLE MOUNT

Mount for paragliding flight instruments



Instruments can be attached to the Charly FLEXIBLE ANGLE MOUNT by means of a Velcro® strap. The metal angle mount can then be fixed to the chest strap.

With the BASE PLATE VARIO & GPS two instruments can be attached to the FLEXIBLE ANGLE MOUNT or to the PARAGLIDING LEG MOUNT.

€9,80 FLEXIBLE ANGLE MOUNT #Hi9600

UNIVERSAL BALL JOINT MOUNT

Light instrument mount for hang gliding.



Instruments can be attached to the ball joint by the use of two screws.

€12,50 UNIVERSAL BALL JOINT MOUNT #Hi83

SINGLE MOUNT WITH MOUNTING PLATE

Hang gliding mount for varios and other devices.



The Finsterwalder hang gliding SINGLE MOUNT WITH MOUNTING PLATE for varios (e.g. by Flytec or Bräuniger) and other flight instruments.

Measures: 60 x 120 mm

€25,00 SINGLE MOUNT WITH MOUNTING PLATE #Hi94

BALL JOINT MOUNT WITH ARM for varios

Mount for varios



The Finsterwalder BALL JOINT MOUNT WITH ARM is a mount for variometer.

Available for hang gliders and paragliders.

€53,50 BALL JOINT MOUNT WITH ARM #Hi550



INSTRUMENTS / PHOTO MOUNTINGS



MOUNT WITHOUT BALL JOINT

Camera mount small - Max. Load capacity 1,5 kg



The 3/8 inch thread of the Finsterwalder mount is suitable for all camera ball joints.

These can in turn be attached to all instrument housings via the Finsterwalder PLATE with 1/4 inch thread which is available as an accessory.

Max. load: 1,5 kg

€9,80 MOUNT WITHOUT BALL JOINT M1.5 #Hi80

MOUNT WITHOUT BALL JOINT

Camera mount big - Max. Load capacity 5 kg



The 3/8 inch thread of the Finsterwalder mount is suitable for all camera ball joints.

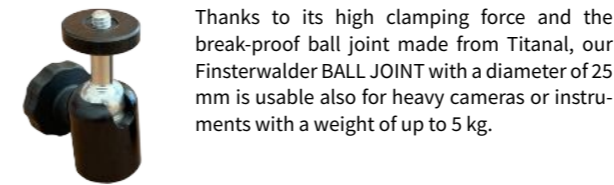
These can in turn be attached to all instrument housings via the Finsterwalder PLATE with 1/4 inch thread which is available as an accessory.

Max. load: 5 kg

€24,00 MOUNT WITHOUT BALL JOINT M5 #Hi81

Finsterwalder BALL JOINT small

Instruments, camera and GoPro mount



Thanks to its high clamping force and the break-proof ball joint made from Titalanal, our Finsterwalder BALL JOINT with a diameter of 25 mm is usable also for heavy cameras or instruments with a weight of up to 5 kg.

Upper thread 1/4 inch - Bottom thread 3/8 inch, ØHousing 25 mm, Height 58 mm, Base plate 26 mm, ØBall 18 mm, ØClamping wheel 30 mm

€14,00 Finsterwalder BALL JOINT small #Hi85

Finsterwalder BALL JOINT large

Instruments, camera and GoPro mount



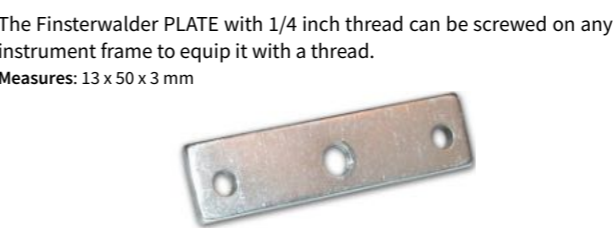
Our ball joint with a diameter of 30 mm is usable for cameras or instruments with a weight of up to 5 kg. Ball joint made from aluminium alloy. Clamping with star knob 25 mm.

Upper thread 1/4 inch - Bottom thread 3/8 inch, ØHousing 30 mm, Height 56 mm, Base plate 30 mm, ØBall 18 mm, ØClamping wheel 20 mm

€18,50 Finsterwalder KUGELKOPF large #Hi86

PLATE with 1/4 inch thread

Plate with thread for camera mountings and ball joints



The Finsterwalder PLATE with 1/4 inch thread can be screwed on any instrument frame to equip it with a thread.

Measures: 13 x 50 x 3 mm

€3,90 PLATE with 1/4 inch thread #Hi89



Finsterwalder HALL SPEED SENSOR

Precise wind and air speed indicator for hang glider and paraglider



The Finsterwalder HALL SPEED SENSOR is a proven, astonishing accurate and robust speedometer. The Finsterwalder HALL SPEED SENSOR can be mounted with a corresponding Finsterwalder MOUNTING to all types of faired tubing and paraglider harnesses.

For hang gliders, two Finsterwalder HALL SPEED SENSOR versions are available for 10-80 km/h or 10-130 km/h (weight with mount and material sleeve: 170 g).

Speed	Length	Weight
10 - 80 km/h	19 cm	60 g
10 - 130 km/h	19 cm	60 g

€39,90 Finsterwalder HALL SPEED SENSOR #Hi141

€13,50 Halter HG kurz für HALL speed sensor #Hi140

€16,00 Halter HG lang für HALL speed sensor #Hi142

## CARABINER



### FINSTERWALDER CARABINER

Since 1993, we have been manufacturing carabiners specially designed for aviation and helicopter air rescue.

These carabiners are designed to withstand the permanent oscillating loads that occur in flight, which can lead to material fatigue in conventional carabiners over time.

#### Fatigue strength for aviation sport carabiners:

During flight, airsport carabiners are exposed to permanently changing loads. By taking measurements at paragliders, the DHV has asserted that these load variations are between ten and more than 110 kg and that they can occur up to 26 times per second.

Construction- and production-conditioned, conventional carabiners exhibit a greater or lesser gate play. The catch of such a carabiner thus becomes actuated by gravity only at tensions between 25 and 110 kg. This means that within the range of the gate play, the carabiner is loaded during flight as if its catch was open.

The thus resulting high dynamic loads make it necessary to replace the carabiner every one- or two years in order to preclude a material fatigue failure.

## CARABINER



€9,40

ADAPTER for narrow risers

#HKar33

€17,80

REPLACEMENT-QUICKPIN

#HKar32

### Finsterwalder UNILOCK



Ultralight, universal paragliding carabiner

With a weight of only 45 g and a breaking load of more than 25 kN, the UNILOCK is currently the lightest and at the same time most loadable paragliding carabiners on the market. In the fatigue test, it endured 2.000 load cycles with an upper load of 252 DaN and subsequently 5 mio. load cycles with an upper load of 115,4 DaN. The UNILOCK thus achieves a fatigue strength of 5 years in mono use.

- The snap gate turned by 45° facilitates the attachment to the harness.
- The design in the shape of a "3" provides a high stability against twisting.
- The UNILOCK is suitable for both narrow and wide webbings.
- The lower belt chamber has an extra support surface for the hip belt, which slightly raises its position. This has a positive effect on the comfort of the harness.
- Red/green marking simplifies orientation when attaching the risers.
- Gate play individually tested.

Weight: 45 g Br. Load: 2.500 DaN\* Replacement interval: 5 years (mono)

€58,00 Finsterwalder UNILOCK (pair) #HKar36  

### Finsterwalder SNAPLOCK

Hang and Paragliding carabiner

The SNAPLOCK resists 16 kN without incurring damage even with open gate - this is more than four times as much as the hitherto common steel carabiners can bear.

- Max. Payload in aviation: 115 DaN\* je carabiner
- Breaking load gate open 2000 DaN\*
- Load without permanent deformation, gate open: 1.600 DaN\*
- Inner height: 60 mm
- Suitable for belt widths 25-30 mm, also up to 45 mm when folded in
- Snapper game single piece tested
- The distinctive nose allows the Snaplock to be attached to the harness in such a way that the carabiner is reliably prevented from being crossed. Harness manufacturers also have the option of attaching back straps over the nose. This can noticeably improve the back support.

Weight: 76 g Br. load: 3.000 DaN\* Inner height: 60 mm

Replacement interval: 5 years (mono), 2 years (HG and PG tandem)

€29,50 Finsterwalder SNAPLOCK (pcs.) #HKar35  

### Finsterwalder PINLOCK

Paragliding carabiner from Titanal

The ultimate paragliding carabiner - forged from Titanal (alloy 7075 T6). The Finsterwalder PINLOCK is compatible with conventional paragliding carabiners and is suitable for all paragliders and harnesses with webbing loops of 40 to 45 mm. Separate webbing chambers prevent shunt loading.

The Finsterwalder PINLOCK features a very large replacement interval but at the same time a weight reduction of 80-120 g per pair compared to steel carabiners!

- Breaking load: 2,500 DaN\*, certified fatigue endurance!
- Replacement interval for mono use: 8 years, unlimited hours of usage
- Replacement interval for tandem use: 3 years, unlimited hours of usage
- Drop-forged from Titanal

Weight: 80 g Br.load: 2.500 DaN\* Inner height: 40 mm

Replacement interval: 8 years (mono), 3 years (PG tandem)

€42,00 Finsterwalder PINLOCK (pcs.) #HKar3  

SEPARATION CARABINER



Finsterwalder QUICK-OUT

Special separation carabiner

Our separation carabiner Finsterwalder QUICK-OUT is used whenever a reliable connection and if necessary a rapid separation also under load is important. It is suitable for the safe attachment of loads - in particular persons - and for outdoor use. It has proven itself especially during helicopter missions of the police, the military, and the mountain rescue service.



In paragliding, the Finsterwalder QUICK-OUT is used for the separation of the paraglider when a steerable rescue system is deployed.

By simultaneously pushing both release buttons, pilot and aircraft are separated effortlessly. In safety trainings, the separation of the glider after a rescue chute deployment turned out to be advantageous.

Besides the rescue options in case of emergency landings in water, trees, and high winds, the Finsterwalder QUICK-OUT also offers handling advantages compared to conventional carabiners.

- Breaking load: 4.000 DaN\*, 2.000 DaN\* individually tested
- No gate play, thus fatigue endurable with unlimited hours of usage for 150 DaN\* hauled load!
- Double-button locking with multiple safety steps
- Replacement interval: 8 years, unlimited hours of usage
- Housing drop-forged from Titanal, insert made from high-strength

Weight: 200 g/pc.

€78,50 Finsterwalder QUICK-OUT (pc.) #HKar12



€27,50 EXTRA INSERT for QUICK OUT (pc.) #HKar121  
€13,50 ADAPTER SLEEVES for narrow risers (pair) #HKar128



SEPARATION CARABINER



Finsterwalder PARALOCK 3



Universal quick release paragliding carabiner

The next generation paragliding carabiner with extra safety in dangerous situations: Its quick-release function makes it possible to prevent dangerous interactions between the reserve and the paraglider, and is useful for emergency water landings and high wind conditions on the ground.

The PARALOCK 3 has a new patented locking system that is easy and safe to operate. Moreover, the swivel lever can be additionally blocked if required.

Unlike conventional paragliding carabiners, the Lock of the PARALOCK 3 is form-fit, so the dynamic stress relevant to material fatigue in flight is only a fraction.

It has survived the fatigue test of 2.000 load changes at 525 DaN top load and then 5 million load changes at 240,5 DaN at an accredited materials testing institute without damage. This is equivalent to 5 years of tandem operation with unlimited flight hours. The maximum recommended service life for mono paragliding use is 8 years, with no risk of material fatigue even with extended use.



Overview of the Finsterwalder PARALOCK 3's most important features

- Helpful in emergency situations, as the connection can be released under load.
- Long service life without the problems of material fatigue.
- Intuitive and safe operation with additional blocking option.
- Easy and twist-free installation on almost any harness.
- No need to carry a crosscut knife.
- 2.800 DaN breaking load at only 75 g weight.

Weight: 75 g Breaking load: 2.800 DaN\*

€84,00 Finsterwalder PARALOCK (pc.) #HKar130



FINSTERWALDER PARALOCK 3 BLUE DISC

Access. for the release blocking mechanism, requires diligence in handling.

The installation of the FINSTERWALDER Paralock 3 Blue Disc on the securing pin of the Paralock 3, makes the operation of the release blocking mechanism easier, and its position (close to the Paralock / at a distance) indicates the activation of the mechanism.

Weight: 1.8 g/piece Dimensions: 12 x 6 mm

€8,80 PARALOCK BLUE DISC (pair) #HKar130D

Please note when using the PARALOCK 3 BLUE DISC: With the Paralock open, the locking pin generally cannot be moved. However, with the Blue Disc mounted, this safety feature can be overcome and damaged by force. We therefore do not recommend the Blue Disc for general use. Please note that the use is at the pilot's own risk and until further notice. For more information, see the Blue Disc manual.



## SEPARATION LINK



### Speed system separation link

A speed pedal separation system is required to allow a complete separation from the paraglider after an emergency parachute opening. The speed pedal separation system works automatically after opening the carabiner.

For the following reasons, even less experienced pilots are generally recommended to separate the paraglider after an emergency parachute deployment:

- Modern rescue systems are designed to drift sideways and thus generate dynamic lift. In the certification procedure, the sink rate is determined without the main glider. If the paraglider is not separated, it prevents the drift, leading to an increased sink rate.
- The possibility to choose the landing site with a steerable rescue system is a significant safety plus. If the main glider is not separated, the safety advantage to steer the rescue system is foregone.
- Interactions between the paraglider and the rescue system can cause the danger of increased swaying or a higher sink rate due to scissoring.
- It has shown that a separated paraglider usually collapses very quickly and that its salvage is easier. In the case of a tree landing, there is also a much lower risk of damage to the paraglider when it does not carry the full pilot weight.



### BRUMMEL HOOK SEPARATION SYSTEM

Speed system separation link for QUICK-OUT / PARALOCK carabiners

The Brummel hook separation system is recommended when the harness and the paraglider are connected by means of Brummel hooks.




The existing Brummel hooks on the harness are replaced by the special speed system Brummel hooks. To be able to attach the speed system Brummel hooks, the speed system cords must each have a loop at the end. Speed system cords made of Dyneema with spliced loop are included with the Brummel hook separation system. These can be used provided they can be attached to the installed speedbar.

Alternatively, the speed system cords already present on the harness can be used if it is possible to remove the Brummel hooks attached to them.

If the existing speed system cords are not yet equipped with loops, loops with a length of about 3 cm can be knotted in.

Weight: 25 g / pair

**€19,50** BRUMMEL HOOK separation system #HKar141 

### Charly EASY RELEASE

Innovative speed system separation link for QUICK-OUT / PARALOCK


The system convinces by low construction height, weight neutrality compared to a standard Brummel hook connection and durable, safe operation.

The EASY RELEASE separation link can be easily attached to the paraglider risers if the EASY RELEASE ring clip can be looped in instead of the Brummel hook. If this is not possible, the original speed system line must be replaced with the speed system line with ring clip of the EASY RELEASE system.

Scope of delivery:

- 2x Ring clip with speed system line for attachment to the paraglider risers
- 2x Release hook with speed system line and release line (static line) for attachment to the speed system lines of the paragliding harness
- Installation instructions

Weight: 22 g / pair Breaking load: ≈ 200 DaN\*

**€39,70** Charly EASY RELEASE (pair) #HKar142 

### PATENT SHACKLE SEPARATION SYSTEM

Speed system separation link for QUICK-OUT / PARALOCK carabiners

The patent shackle separation system is recommended when the existing Brummel hooks on the paraglider's speed system cords




can be removed and replaced by the patent shackle rings included in the delivery. The Brummel hooks must be un-looped and the patent shackle



Scope of delivery:

- 1 pair Patent shackles with attached separation system cord, breaking load approx. 300 daN
- 1 pair Patent shackle rings for installation on the speed system of the paraglider
- Installation instructions

Weight: 74 g / pair

**€38,00** PATENT SHACKLE separation system #HKar14 

## CARABINER



### AustriAlpin STRATUS ALU



Paragliding carabiner with automatic lock

The AustriAlpin STRATUS ALU is a paraglider aluminium karabiner with push-button automatic closure. It is suitable for harnesses with a strap loop width of up to 25 mm. The slide autolock closure allows reliable closing without manipulation of the closure, yet it can be opened comfortably with targeted finger pressure on the slider. No CE !

Measures: 78 x 55 mm

Replacement interval: 3 years

Weight: 63 g Breaking load: ca. 1.800 DaN\*

**€25,90** AustrAlpin STRATUS ALU (pc.) #HKar11  



### AustriAlpin STRATUS INOX



Paragliding carabiner with automatic lock

The AustriAlpin STRATUS INOX is a paragliding carabiner with automatic lock for webbing widths of up to 25 mm.

Measures: 78 x 55 mm

Replacement interval: 3 years

Weight: 129 g Breaking load: ca. 2.800 DaN\*

**€32,00** AustrAlpin STRATUS INOX (pc.) #HKar10  



### AustriAlpin POWERFLY

Paragliding carabiner

Steel carabiner for paragliders with push button automatic gate. The AustriAlpin POWERFLYS is suitable for harnesses with a webbing loop width of 45 mm.

Inner height: 60 mm

Load without permanent deformation gate open: approx. 300 DaN\*

Replacement interval: 1 years

Weight: 140 g Breaking load: ca. 2.600 DaN\*

**€32,00** AustrAlpin POWERFLY (pc.) #HKar410  



\* 1 DaN (Dekanewton) = 10 Newton ≈ 1 kg

CARABINER



Kortel AUTO 20

Paragliding carabiner

Paraglider aluminium karabiner with automatic closure. Its slanted gate opening facilitates handling. Suitable for harnesses with a strap loop width of up to 20 mm.

**Restriction:** Not approved for tandem operation as spreader-paraglider and re-serve-harness connection element.

Replacement interval: 3 years

Weight: 60 g      Breaking load: approx 2.400 DaN\*

€24,50 Kortel AUTO 20      #HKar1121



Kortel AUTO 40

Paragliding carabiner

Paraglider aluminium karabiner with automatic closure. Its slanted gate opening facilitates handling. Suitable for harnesses with a strap loop width of up to 40 mm.

**Restriction:** Not approved for tandem operation as spreader-paraglider and re-serve-harness connection element.

Replacement interval: Annual replacement recommended

Weight: 65 g      Breaking load: approx 2.400 DaN\*

€24,50 Kortel AUTO 40      #HKar1141



Kortel SOFT LINKS

Glider-harness connection link for paragliders

Kortel's SOFT LINKS are ideally suited for attaching the rescue system to the harness. Moreover, they can be used as a fatigue resistant alternative to karabiners if harness and glider are only rarely disconnected from each other. The weight saving is significant as a pair of SOFT LINKS weighs a mere 12 g!

The operation is simple and safe.

Weight: 12 g / pair      Breaking load: approx. 2.300 DaN\*

€29,00 Kortel SOFT LINKS (pair)      #HKar1110



Kortel T-BONE LINKS & T-BONE LINKS XL

Glider-harness connection link for paragliders

The T-BONE LINKS from Kortel are flexible, ultra-lightweight connecting links made of Dyneema. With only 10 g/piece and a strength of more than 2,400 daN, their strength-to-weight ratio is outstanding. The Kortel T-BONE LINKS are also fatigue-resistant, durable and easier and safer to handle than conventional soft links thanks to the integration of the innovative "Kortel Konnect" quick connection.

**Replacement interval:** 5 years if used frequently as a paraglider carabiner, 10 years if used as a connecting link for rescue equipment (protected from light in the harness)

Height inside: ca. 50mm / XL 110 mm

Weight: 20 g / pair      Breaking load: ca. 2.400 DaN\*

€60,00 Kortel T-BONE LINKS (pair)      #HKar110T

€70,00 Kortel T-BONE LINKS XL (pair)      #HKar110TXL

\* 1 DaN (Dekanewton) = 10 Newton ≈ 1 kg

SCREW LOCK LINK



STAINLESS STEEL LINE LOCK

Material	Stainless steel ø 4 mm
Dimensions inside	20 x 30 mm
Opening	5,5 mm
Payload	125 DaN*
Breaking load	≈ 1.500 DaN*
Weight	13 g

€5,80      #Be290



RESCUE-HARNESS CONNECT. LINK

Material	Galvanised steel ø 7 mm
Dimensions inside	15 x 50 mm
Opening	9 mm
Payload	550 DaN*
Breaking load	≈ 2.800 DaN*
Weight	51 g

€4,20      #Be31



RESCUE-HARNESS CONNECT. LINK

Material	Stainless steel ø 6 mm
Dimensions inside	15 x 45 mm
Opening	8 mm
Payload	650 DaN*
Breaking load	≈ 3.250 DaN*
Weight	35 g

€8,90      #Be310



TRIANGULAR SCREW LOCK LINK

Material	Inox steel ø 4 mm
Dimensions inside	25 x 30 mm
Opening	5,5 mm
Payload	125 DaN*
Breaking load	≈ 1.000 DaN*
Weight	14 g

€6,50      #Be300



TRIANGULAR SCREW LOCK LINK

Material	Galvanised steel ø 4 mm
Dimensions inside	25 x 30 mm
Opening	6,5 mm
Payload	100 DaN*
Breaking load	≈ 800 DaN*
Weight	13,5 g

€3,00      #Be300z



TRIANGULAR SCREW LOCK LINK

Material	Inox steel ø 6 mm
Dimensions inside	32 x 42 mm
Opening	8 mm
Payload	450 DaN*
Breaking load	≈ 2.250 DaN*
Weight	39,5 g

€10,50      #Be2900



SCREW CHAIN LINK 5 mm

Material	Galvanised steel ø 5 mm
Dimensions inside	13 x 39 mm
Opening	7 mm
Payload	280 DaN*
Breaking load	≈ 1.600 DaN*
Weight	20,5 g

€3,65      #Be30

Photo: Horacio Llorens



SCREW CHAIN LINK 4 mm

Material	Galvanised steel ø 4 mm
Dimensions inside	11 x 31 mm
Opening	5 mm
Payload	180 DaN*
Breaking load	≈ 1.200 DaN*
Weight	11,5 g

€3,60      #Be29



\* 1 DaN (Dekanewton) = 10 Newton ≈ 1 kg

Photo: www.nova.eu

HARNESS-HARDWARE



HIKE & FLY SCREW LOCK LINK

- ▷ An alternative to carabiners
- ▷ If closed properly, it is fatigue resistant

Material	Stainless steel ø 5 mm
Dimensions inside	20 x 50 mm
Opening	6,5 mm
Payload	325 DaN*
Breaking load	≈ 2.600 DaN*
Weight	26 g

€21,90 #Be303



RECTANGULAR SCREW LOCK LINK

- ▷ An alternative to carabiners
- ▷ If closed properly, it is fatigue resistant

Material	Stainless steel ø 7 mm
Dimensions inside	30 x 52 mm
Opening	9 mm
Payload	625 DaN*
Breaking load	≈ 3.125 DaN*
Weight	63,5 g

€15,80 #Be304



TRAPEZIUM SCREW LOCK LINK

- ▷ An alternative to carabiners
- ▷ If closed properly, it is fatigue resistant

Material	Stainless steel ø 6 mm
Dimensions	42 x 45 mm
Wt x Wd x H (inside)	28 x 43 x 45 mm
Opening	9 mm
Payload	250 DaN*
Breaking strength	≈ 2.100 DaN*
Weight	42,5 g

€9,90 #Be3050



TRAPEZIUM SCREW LOCK LINK

- ▷ An alternative to carabiners
- ▷ If closed properly, it is fatigue resistant

Material	Galvanised steel ø 6 mm
Dimensions	44 x 48 mm
Wt x Wd x H (inside)	28 x 43 x 47 mm
Opening	9 mm
Payload	250 DaN*
Breaking strength	≈ 1.400 DaN*
Weight	46,5 g

€8,00 #Be305



TRAPEZIUM SCREW LOCK LINK

- ▷ An alternative to carabiners
- ▷ If closed properly, it is fatigue resistant

Material	Galvanised steel ø 6 mm
Dimensions	30 x 47 mm
Wt x Wd x H (inside)	22 x 35 x 46 mm
Opening	9 mm
Payload	250 DaN*
Breaking strength	≈ 1.400 DaN*
Weight	41,6 g

€9,90 #Be350

HARNESS-HARDWARE



SNAP-FIT STAINLESS STEEL 50

Material	Stainless steel
Dimensions	50 x 18 mm
Eye	6,5 x 10,5 mm
Breaking load	ca. 200 kg
Weight	22 g

€5,40 #Be20



SNAP-FIT STAINLESS STEEL 30

Material	Stainless steel
Dimensions	30 x 16 mm
Eye	4 x 6 mm
Breaking load	ca. 80 kg
Weight	6 g

€4,40 #Be20S



PATENTED SHACKLE

Material	Brass
Length	40 mm
Breaking load	≈ 300kg
Weight	26 g

€16,50 PATENTED SHACKLE #Be22

€2,70 RING 4 mm, ø 14 mm #Be23



JAMMING BUCKLE 20 mm

Material	Zinc diecasting
Dimensions	35 x 25 mm
Webbing width	20 mm
Breaking load	ca. 150 DaN*
Weight	26 g

€3,20 #HSi94



JAMMING BUCKLE 25 mm

Material	Zinc diecasting
Dimensions	43 x 32 mm
Webbing width	25 mm
Breaking load	ca. 300 DaN*
Weight	35 g

€3,50 #HSi95



DOUBLE BUTTON BUCKLE

Material	Stainless steel
Dimensions	30 x 45 x 9 mm
Adjustable for belt	18 - 20 mm
Breaking load	≈ 350 DaN*
Weight	36 g

€5,80 #HSi20

**MINI BRAKE HANDLE SWIVEL**

The Finsterwalder MINI BRAKE HANDLE SWIVEL prevents annoying twists and curls of the paraglider brake lines. Such swivels are well established in top quality paragliders. Our swivel can easily be sewn into the control handles, has well-rounded edges, is smooth-running, and has a high-gloss chromed surface.

**Breaking load:** approx. 300 DaN\*  
**Payload:** approx. 150 DaN\*  
**Length:** 33 mm  
**Diameter:** 8/10 mm

€8.00 #Be2

\* 1 DaN (Dekanewton) = 10 Newton ≈ 1 kg



MINI GUIDE ROLLER

Axle hardened stainless steel  
Suitable for cord ø 4-5 mm. Payload: 100 DaN\*  
Weight: 7 g, Length 28 mm, Diameter: 13 mm

€4.30 #Be541

# AIR SPORTS HELMETS

# AIR SPORTS HELMETS



## Charly VITESSE

Extremely lightweight Hike & Fly helmet with optional visor

The Charly VITESSE is an extremely lightweight paragliding Hike&Fly helmet that can be equipped with a visor. Three helmet shell sizes, replaceable inlays and the integrated headband adjustment allow precise adaptation to a wide variety of head shapes and sizes, while keeping the helmet dimensions as small as possible. Thanks to special inlays available as accessories, even the under- and oversizes XS and XXXL can be covered.

### VITESSE Features

- Helmet and visor are certified according to the latest CE EN966 standard for air sports helmets
- Remarkably lightweight: from 353g (without ear pads)
- Unique size range: 3 helmet shell sizes with fine adjustment of the headband and replaceable inlays guarantee a secure and comfortable fit for all head shapes and sizes from XS to XXXL
- Effectively ventilated, exchangeable and washable fabric inlay
- Pressure-free, removable and washable ear pads
- Good protection of the forehead, without limiting the field of vision
- All sizes can be equipped with visor and ski goggle retainer



HHe1 white/pearl + HHe11 Visor grey

Basic sizes & weights: S/M = 380 g, M/L = 430 g, XL/XXL = 480 g

Scope of delivery: Helmet in basic size incl. inlay, without visor

Art.#	Charly VITESSE	
HHe1	VITESSE S/M, M/L	€158,00
HHe10	VITESSE XL/XXL	€169,00



HHe1 cyan-blue



HHe1 black-silver



HHe1 lime-green



HHe1 lemon-orange

### Interior options

The scope of delivery includes the basic interior fittings in each case.

Description	Head circumference	Basic size	Foam thickness inlay
Special XS	53-55 cm	S/M	12 mm
Special for narrow head shape	54-56 cm	S/M	9 mm
Basic S/M	55-58* cm	S/M	6 mm
Basic M/L	58*-62 cm	M/L	12 mm
Basic XL/XXL	61-64 cm	XL/XXL	9 mm
Special XXL	64-65 cm	XL/XXL	3 mm

\*With 58 cm head circumference and normal or narrow head shape, size S/M usually fits



HHe15



HHe14



HHe73

Art.#	VITESSE Accessories	
HHe15	Goggle retainer Compatible with: Goggle strap widths up to 4.5 cm	€12,80
HHe14	Extra interior	€22,00
HHe16	Ear pads (pair)	€18,00
HHe17	Size adjusting system	€10,00
HHe73	Premium Fleece Protection bag	€9,50

### Visor available in three different colours

The Charly VISOR for VITESSE reduces drafts and protects against UV radiation. The visor fits over most glasses; as it is very well ventilated, glasses worn under the visor are prevented from fogging up.

- Available with bottom rubber edge (standard) or rimless
- Suitable for spectacle wearers
- Large field of vision, optically high quality and distortion-free
- Anti-reflective and scratch-resistant coating on the outside, antifog coating on the inside
- Infinitely adjustable, tightly sealed at the top
- Reduces air resistance and protects the eyes
- Safe, as break-resistant, elastic and flexible
- Assembly and disassembly simple and fast

Weight: 34 g

grey tinted

brown tinted

mirrored



Art.#	VITESSE Visor	
HHe11RL	Visor grey tinted rimless (Filter category 1)	€39,00
HHe11RL	Visor brown tinted rimless (Filter category 2)	€39,00
HHe12RL	Visor mirrored tinted rimless (Filter category 2)	€49,00
HHe13	Visor screws (pair)	€8,00



AIR SPORTS HELMETS



HHe72 bicolor red-metallic

Weight: 650 g  
Sizes: XS (53-54), S (55-56), M (57-58), L (59-60), XL (61-62), XXL (63)  
(head circumf. in cm) XS and XXL only for HHe7 und HHe70

Art.#	Charly INSIDER	
HHe7	unicolor white, red, blue	€216,00
HHe70	bicolor metallic: silver, blue, anthracite, black	€228,00
HHe72	bicolor metallic: red, turquoise, yellow	€233,00
HHe75	softcolor black	€222,00
HHe77	carbon-optic	€249,00

Charly INSIDER

Full-face helmet bestseller

The Charly INSIDER's high safety standards and good value vor money make the INSIDER the most popular air sports helmet worldwide. It is certified according to the air sports helmet standard CE EN 966. The helmet is also well suited for kite buggying.

The Charly INSIDER offers full protection without significantly obstructing the field of view. Moreover, the chin guard is designed in such a way that conversation before and after flight is easily possible. The helmet edges are curved inward, thus contributing to a larger field of view and reduced air drag.

The Charly INSIDER's multi-layer enamel surface is wear-resistant and recoatable!

INSIDER Features

- Thanks to vacuum high-pressure die casting, the aramid fiber reinforced outer shell is weight-optimized and can be manufactured in constant quality; the choice of material and production process ensures optimum strength and durability.
- The Charly INSIDER causes minimum wind noise that does not interfere with the VOX operation of a radio set; as hearing is only marginally affected by the helmet, airspeed estimation is still possible.
- Pressure-free padding around the ears, suitable for the installation of a headset; the wide, well cushioned internal chin strap contributes to the wearing comfort.
- Unbeatable fit and a pleasant climate inside the helmet thanks to the skin-friendly full textile lining in 6 fixed sizes (XS-XXL).
- Aerodynamically clean without a long tail: The Charly INSIDER permits an unrestricted upward view and avoids neck injuries.



Art.#	INSIDER Accessories	
HHe702	Extra lining, cheek + chin pads	€12,50
HHe703	Extra lining incl. attachment	€25,00
HHe73	Premium fleece helmet/instrument bag	€9,50



HHe77 carbon-optic

AIR SPORTS HELMETS



HHe9C matt-black + HHe950 Visor grey

Weight: 480 g  
Sizes: XS (53/54), S (55/56), M (57/58), L (59/60), XL (61)  
(Head circumference in cm)

Art.#	Charly LOOP	
HHe9C	LOOP (matt-blue, -black, -red, orange)	€139,00
HHe9C	LOOP (glossy white)	€139,00



Art.#	LOOP Accessories	
HHe952	Extra lining for Loop	€15,00
HHe950	Visor grey, salmon, yellow	€31,00
HHe9500	Visor toned and mirrored	€41,00
HHe951	Visor screw kit	€7,00
HHe73	Premium fleece helmet/instrument bag	€9,50

Charly LOOP

Temporarily not available!

Air sports and winter sports helmet with optional visor (Status March 2024)

Charly LOOP is a very comfortable, safe and reasonably priced paragliding and winter sports freestyle helmet that can optionally be equipped with a visor.

LOOP Features

- Lightweight multi sports helmet, certified according to CE EN 966 (airborne sports) and CE EN 1077 (skiing and snowboarding); high-end quality helmet made in Europe; Charly offers a lifetime warranty.
- A highly effective ventilation of the EPS calotte (foam cushioning) permanently provides for a pleasant climate inside the helmet.
- The Charly LOOP's high-quality EPS foam cushioning is completely padded with skin friendly and antibacterial textile fabric (made in EU) on the inside; the interior lining in sizes XS, S, M and L/XL is replaceable and washable.
- The helmet is equipped with very comfortable, pressure-free ear pads but can also be worn without ear covers; a high-quality ratchet closure allows precise adjustment of the chin strap.
- The Charly SUN VISOR VS that is available as an accessory is ideal for spectacle wearers as it can replace additional sunglasses.
- A protective bag is included in the price.
- Unlike some skiing and air sports helmets, the Charly LOOP is equipped with generous vents in the interior lining such that the air intakes on the outer shell are not covered from the inside. They are thus not just a visual gimmick but part of an effective ventilation system. The flow of fresh air is guided through the foam padding, distributed throughout the textile cap and channeled away again. The breathable interior lining thereby provides for comfortable temperatures without the need to adjust the airstream manually.



HHe9C orange + HHe9500 Visor mirrored



AIR SPORTS HELMETS



HHe300 white with visor brown tinted



**Weight:** 650 g + Visier 114 g  
**Sizes:** S (55/56), M (57/58), L (59/60), XL (61/62), XXL (63)  
(Head circumference in cm)

Art.#	Charly <b>NO LIMIT</b> with clear visor	
HHe30	NL white with clear visor	€279,00
HHe31	NL blau-, anthracite metallic with clear visor	€287,00
HHe32	NL carbon-optic with clear visor	€310,00

Art.#	Charly <b>NO LIMIT</b> without	
HHe300	NL white without visor	€251,00
HHe310	NL blau-, anthracite metallic without visor	€259,00
HHe320	NL carbon-optic without visor	€282,00



HHe300 white



HHe310 anthracite metallic



HHe310 blue



HHe320 carbon-optic



HHe35



HHe350



HHe3500



HHe352

Art.#	<b>NO LIMIT</b> Accessories	
HHe35	Visor clear (Filter category 0)	€48,50
HHe350	Visor brown tinted (Filter category 2)	€52,00
HHe3500	Visor dark grey tinted (Filter category 3)	€52,00
HHe352	Visor mirrored* (Filter category 3)	€68,00
HHe351	Set of visor screws with grid insert	€11,50
HHe702	Extra lining, cheek + chin pads	€12,50
HHe703	Extra lining incl. attachment	€25,00
HHe73	Premium fleece protection bag	€9,50

\* The mirrored visor is very sensitive and must be handled with care (e.g. transported in a helmet bag).

Charly **NO LIMIT**

Competition helmet with aramid fiber reinforcement

The Charly NO LIMIT competition helmet with chin guard. High-grade materials and an elaborate manufacturing process provide for constant quality, maximum safety and a long life expectancy.

**NO LIMIT Features**

- Aramid fiber reinforced outer shell, manufactured in a vacuum high-pressure moulding process, that surpasses even carbon fiber helmets in terms of impact strength and perforation resistance.
- Premium look: The Charly NO LIMIT features a scratch-resistant enameled multi-layer coating. The helmet shell's material and finishing make the Charly NO LIMIT virtually resistant to age.
- The extra wide panoramic view is important for safety. There is enough room for eye glasses under the helmet and the optional visor.
- An optional polycarbonate visor reduces air drag considerably and can be ordered additionally.
- The chin guard causes virtually no blind spots.
- Aerodynamically clean without tail: The Charly NO LIMIT enables an unobstructed upward view and avoids neck injuries.
- The full textile interior lining in 5 fixed sizes offers maximum wearing comfort. The breathable padding is skin-friendly and antibacterial. Also the comfortable ear pads and the well-padded internal chin strap contribute to the wearing comfort.



AIR SPORTS HELMETS



HHe31J blue-metallic



**Weight:** 620 g + Visier 114 g  
**Sizes:** S (55/56), M (57/58), L (59/60), XL (61/62), XXL (63)  
(Head circumference in cm) XXL only in white and carbon-optic

Art.#	Charly <b>NO LIMIT JET</b> with clear visor	
HHe30J	NLJ white with clear visor	€279,00
HHe31J	NLJ blue-, anthracite metallic with clear visor	€287,00
HHe32J	NLJ carbon-optic with clear visor	€310,00

Art.#	Charly <b>NO LIMIT JET</b> without visor	
HHe300J	NLJ white without visor	€251,00
HHe310J	NLJ blue-, anthracite metallic without visor	€259,00
HHe320J	NLJ carbon-optic without visor	€282,00



HHe300J white



HHe31J anthracite metallic



HHe310 blue



HHe320J carbon-optic



HHe35



HHe350



HHe3500



HHe352

Art.#	<b>NO LIMIT JET</b> Accessories	
HHe35	Visor clear (Filter category 0)	€48,50
HHe350	Visor brown tinted (Filter category 2)	€52,00
HHe3500	Visor dark grey tinted (Filter category 3)	€52,00
HHe352	Visor mirrored* (Filter category 3)	€68,00
HHe351	Set of visor screws with grid insert	€11,50
HHe702	Extra lining, cheek + chin pads	€12,50
HHe703	Extra lining incl. attachment	€25,00
HHe73	Premium fleece protection bag	€9,50

\* The mirrored visor is very sensitive and must be handled with care (e.g. transported in a helmet bag).

Charly **NO LIMIT JET**

High class helmet with an unobstructed downward view.

The Charly NO LIMIT JET is a paragliding helmet without chin guard allowing an unobstructed downward view.

**NO LIMIT JET Features**

- Premium Quality at a moderate price. The aramid fiber reinforced outer shell is manufactured in a vacuum high-pressure moulding process with a heated metal mould and thus offers the highest possible breaking strength at minimum weight. Aramid fiber surpasses carbon fiber in terms of impact resistance.
- Premium look: The Charly NO LIMIT JET features a scratch-resistant enameled multi-layer coating. The helmet shell's material and finishing make the No Limit Jet virtually resistant to age.
- Aerodynamically clean without tail: The Charly NO LIMIT JET enables an unobstructed upward view and avoids neck injuries.
- The full textile interior lining in 5 fixed sizes offers maximum wearing comfort. The breathable padding is skin-friendly and antibacterial. Also the comfortable ear pads and the well-padded internal chin strap contribute to the wearing comfort.
- An optional polycarbonate visor reduces air drag considerably and can be ordered additionally. There is enough room for eye glasses under the helmet and the optional visor.



HHe300J NLJ white + HHe350 visor

GLOVES



GLOVES



Charly`s innovative Li-Ion battery heating system

Battery heatable gloves

In contrast to foil-based heating systems, which can only be attached to the backs of the hands and fingers due to their low flexibility, the flexible textile heating wires of CHARLY heated gloves run along the sides of the fingers and over the fingertips. This is crucial for warming the whole hand, because it takes into account the body's reaction to direct the blood away from the extremities to the inside of the body in very cold weather in order to supply the vital organs.

The protected positioning of the heater between the fingers also has the advantage that heat loss to the outside is minimised. The gloves therefore heat noticeably warmer and longer.

Battery technology at the highest level

The flat, flexibly connected CHARLY high-performance Lipolymer 7.4V/2Ah/ 14.8Wh double batteries are hardly noticeable in gloves, can be charged as often as required and last for years if used and stored correctly.

2 CHARLY rechargeable batteries are included. Additional batteries can be purchased separately.



Can be equipped with additional batteries

As the cuffs of CHARLY heated gloves are each equipped with two battery pockets, it is possible to connect a second CHARLY double battery per glove.



Depending on the set heating level, the heating time with one battery charge is up to 10 hours. **No battery gloves offer more heating power!**

3 selectable heating levels

	RED	BLUE	GREEN
POLARHEAT / POLARHEAT LIGHT	1h 45min	2h 30min	5h
POLARHEAT / POLARHEAT LIGHT 	3h 30 min	5h	10h

Simple operations

3 heating levels can be selected on the control knob with integrated charge status display:


- 3 heating levels, indicated by a red, blue or green LED integrated in the push-button
- Temperatur of the heating wires:  
red approx. 60°C, blue approx. 44°C, green approx. 22°C
- Heating time with 1 battery per glove: red 1h 45m, blue 2h 30m, green 5h
- Heating time with 2 battery per glove: red 3h 30m, blue 5h, green 10h
- The charge level indicator on the glove allows you to optimise the heating time.
- Charger for charging up to 4 batteries simultaneously
- Conductive leather on index finger and thumb for operating smartphones and tablets
- The flat, flexibly connected CHARLY high-performance Lipolymer 7.4V/2Ah/14.8Wh double batteries are hardly noticeable in gloves, can be charged as often as required and last for years if used and stored correctly.
- Incl. practical cloth bag for storing the gloves, charger and batteries.



ELECTRICALLY HEATED GLOVES



**€210,00** POLARHEAT LIGHT incl. 2 battery #HM1936B
   
**€269,70** POLARHEAT LIGHT incl. 4 battery #HM1936B4

Sizes\* (Hand circumference in cm at finger base without thumb):
   

 S (18,0-21,0 cm), M (20,5-22,0 cm), L ( 21,5-23,5 cm),
   
 XL (22,5-24,5 cm), XXL (24,0-26,0 cm)

Charly POLARHEAT LIGHT

Battery heated gloves

The Charly POLARHEAT LIGHT are universally suitable, soft and pliable battery heated gloves, which cover a wide temperature range. They are especially recommended for cycling, horseback riding and paragliding in spring and autumn as well as for cross-country skiing or ski touring.

Features

- 2 battery pockets per glove, allowing an extended heating time of up to 10 hours
- Robust goat nappa leather on the palm, high-quality 3-layer Wind-blocker Softshell on the outside
- The extremely cozy high-tech Polartec® Micro Fleece lining and the Primaloft® outer insulation keep the hands warm and dry even when unheated
- Maximum breathability and sensitivity thanks to the smart use of materials
- Important for paraglider pilots: long gauntlets with internal draw-string and flat integrated stopper, therefore no danger of line tangles

Scope of delivery

- 1 pair of Charly POLARHEAT LIGHT gloves
- 2 (4) high-performance li-polymer 7.4V/2Ah/14.8Wh double battery
- Charger for simultaneous charging of up to 4 double battery
- Manual
- Bag to transport gloves and accessories

Charly LI-ION FIRE BASIC

Battery heated gloves

The Charly LI-ION FIRE is an electrically heated, thin glove that can be worn as a glove liner with mittens or used stand-alone.


The Charly LI-ION FIRE fits like a second skin and is the ideal glove liner when the "normal" glove is no longer warm enough. The extra-soft, highly breathable fabric, equipped with Windblocker Softshell on the back of the hand, provides an additional layer of insulation for extra warmth. In extreme cold, the battery-powered heating can be switched on. The Charly LI-ION FIRE can also be worn solo during the transition period or on less cold days and is then ideal for winter walks or jogging. For hang gliding and paragliding, the Charly LI-ION FIRE is used in conjunction with handfairings. Flight instruments with buttons or touchscreens can be easily operated through the glove.

Features

- Tight yet particularly comfortable fit, thanks to soft and supple materials
- Windblocker softshell insulation at the back of the hand
- Neoprene cuff for comfortable padding of the batteries
- Precise operation of flight instruments with buttons or touchscreen through the glove
- Can be flexibly used year-round stand-alone or as a glove liner
- Incl. battery charger and practical cloth bag for storage



**€159,80** LI-ION FIRE BASIC incl. 2 battery #HM1929B
   
**€219,50** LI-ION FIRE BASIC incl. 4 battery #HM1929B4


Sizes\* (Hand circumference in cm at finger base without thumb):
   

 S (18,0-21,0 cm), M (20,5-22,0 cm), L ( 21,5-23,5 cm),
   
 XL (22,5-24,5 cm), XXL (24,0-26,0 cm)

\* If you are unsure between two sizes, we recommend the larger size.

ELECTRICALLY HEATED GLOVES



**€229,50** Charly POLARHEAT incl. 2 battery #HM1934B
   
**€289,20** Charly POLARHEAT incl. 4 battery #HM1934B4

Sizes\* (Hand circumference in cm at finger base without thumb):
   

 S (18,0-21,0 cm), M (20,5-22,0 cm), L ( 21,5-23,5 cm),
   
 XL (22,5-24,5 cm), XXL (24,0-26,0 cm)

Charly POLARHEAT

Battery heated gloves

The Charly POLARHEAT are very well insulated, robust and waterproof Li-Ion heated gloves with Polartec® Micro Fleece lining, which are ideal for winter paragliding or skiing even without the highly effective electric heating being switched on.

They are also particularly recommended for people with Raynaud's syndrome or other circulatory disorders in the fingers.

Features

- 2 battery pockets per glove, allowing an extended heating time of up to 10 hours
- Smooth and pliable goat nappa leather with permanently waterproof Eurotex® membrane
- The extremely cozy high-tech Polartec® Micro Fleece lining and the Primaloft® outer insulation keep the hands warm and dry even when unheated
- Easy to grip thanks to elastic neoprene in the ankle area and pre-shaped fingers
- Large Supergrip reinforcements on thumb, palm and sides prevent early wear
- With practical leashes for attachment to the wrists
- Important for paraglider pilots: long gauntlets with internal draw-string and flat integrated stopper, therefore no danger of line tangles

Scope of delivery

- 1 pair Charly POLARHEAT gloves
- 2 (4) high-performance li-polymer 7.4V/2Ah/14.8Wh double battery
- Charger for simultaneous charging of up to 4 double battery
- Manual
- Bag to transport gloves and accessories

Replacement CHARGER

for charging up to 4 CHARLY heated glove batteries

**€9,80** Replacement CHARGER #HM1929C

Charly EXTENSION CABLE

for battery heated gloves

Practical EXTENSION CABLES for Charly battery heated gloves. The Charly EXTENSION CABLES allow external connection of the Li-Ion batteries of Charly heated gloves.



For example, the batteries can be stowed in an inside jacket pocket, and connected to the gloves via the extension cables routed through the sleeves. Practical when, for example, the glove cuffs should fit comfortably under tighter jacket sleeves!

The set includes 2 pcs. extension cables of 1 m length each, suitable for 1 pair of Charly battery heated gloves.

LI-ION POLYMER REPLACEMENT BATTERY

for battery heated gloves

The Charly LI-ION POLYMER REPLACEMENT BATTERIES with 7.4 V / 2000 mAh for heatable gloves by Charly:

- LI-ION POLARHEAT LIGHT
- LI-ION POLARHEAT
- LI-ION FIRE BASIC



**Please note:** The price refers to 1 twin battery pack! For glove models with 1 battery pocket per glove you need 1 twin battery pack per side, glove models with 2 battery pockets per glove can be equipped with 2 twin battery packs per side.

**€39,80** LI-ION REPLACEMENT BATTERY #HM1930

**€5,80** EXTENSION CABLE #HM1929V



# GLOVES



### Aktivated HEAT PACKS

Extra warmth for your gloves

Shrink-wrapped pouches filled with activated carbon and pulp; after opening the packaging, they are activated by oxygen in the air and provide pleasant warmth for up to six hour

€1,60 Aktivated Carbon HEAT PACKS (pair) #HM151

# GLOVES



€69,90 Charly TOUCH COMBI #HM1945

Sizes\* (Hand circumference in cm at finger base without thumb):  

S (18-20 cm), M (20,5-22,0 cm), L ( 22-23 cm), XL (23-24 cm)



## Charly TOUCH COMBI

2-in-1 fingered gloves / mittens

The Charly TOUCH COMBI is a comfortably soft, breathable and pliant year-round paragliding glove, that is also ideally suited for cross-country skiing, biking and horseback riding in the winter. Its special features is that it combines the benefits of a sensitive finger glove with the superior thermal performance of a heatable mitten. While other heated finger gloves heated with warmerpads can only warm the back of the hand or the wrist joint because of the limited way to install the warmerpads, the flexibly applicable mitten-slip of the Charly TOUCH COMBI enables a precise heating of the fingers which are always the problem with cold hands.

- Features**
- The key feature is the heating possibility of the fingers, due to the integrated mitten which is invisibly hidden at the back of the hand; if required, it can be pulled out and put over the fingers. It is equipped with special bags for the heat packs both at the upper side and under side of the fingers, when wearing the gloves at freezing temperatures.
  - If the mitten is not needed for a short time, it can be fixed with velcro at the back of the hand, and does not bother you when using it as finger glove.
  - Soft PrimaLoft® insulation and breathable windblocker softshell material in the upperhand provide warm and dry hands, high-quality goat nappa leather in the palm improves the grip and protects against sweat.
  - Extra leather reinforcements on the palm, the sides, and between the little finger and the ring finger reduce abrasion during paragliding, e.g. when wrapping the lines.
  - Elasticated inserts and preformed fingers for the easy grasping of paraglider brake handles, ski pole grips, bike handlebars or reins.

## Charly PROTECT

All year round fingered glove with integrated weatherproof cover

The Charly PROTECT is a highly comfortable, windproof and breathable all year round fingered glove that is ideally suited for paragliding, cross-country skiing and for biking and horseback riding in the winter. The clou is a completely waterproof 3-fingered cover that is invisibly tucked away in the back of the hand and that can be pulled out and put over the fingers when needed.

- Features**
- The windproof, breathable and pliant soft shell outer layer and high-quality goat nappa leather on the palm ensure a pleasant climate and sensitive grip; comfortable neoprene gauntlets keep the cold outside and your wrists warm.
  - Extra leather reinforcements on the palm, at the sides and between the little finger and the ring finger reduce abrasion at the critical wear points; elasticated inserts and preformed fingers improve the wearing comfort and provide a secure grip.
  - Anatomically placed pads reduce pressure on tendons and nerves in the wrist and thus protect against carpal tunnel syndrome.
  - A completely waterproof finger cover that is tucked away in the back of the hand offers additional protection against sudden weather changes.
  - Conductive fabric at both index fingers and thumbs enables precise operation of devices with capacitive touchscreens (e.g., smart-phones, tablet computers, etc.).

€39,90 Charly PROTECT #HM180

Sizes\* (Hand circumference in cm at finger base without thumb):  

S (18,0-20,6 cm), M (20,6-21,8 cm)



## SPECIAL HARNESSES • HG ACCESSORIES



### Charly KNEE HANGERS

Certified Hang Glider Harness

Comfortably padded, certified harness, originally developed for hanggliding. This harness is also used for climbing gardens, adventure playgrounds and theatre stages. The pulley on the suspension enables continuously positions between lying, tilted forward and hanging forward.

Material: robust Cordura fabric and scrub-resistant straps.

From an order of 4 harnesses, you can ask for individual modifications for an additional charge.

Sizes: S (1.50-1.68 m), M (1.70-1.85 m), L (1.82-2.00 m)

€442,00 Charly KNEE HANGERS

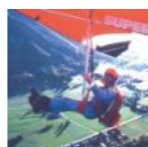
#HGu5



### Skyfloater SUPINE HARNESS

Certified Hang Glider-Skyfloating Harness

Extremely comfortable skyfloating harness, does not hinder by take-off, thus ideal for the practise hill. Extremely comfortable skyfloating harness, does not hinder by take-off, thus ideal for the practise hill. Super small packable and light-weight. Rescue system can be attached on the side or (if equipped with a special aid-chute container) the back.



Sizes: Adjustable for 1,60 - 1,80 height      Weight: 1,2 kg

€150,00 Skyfloater SUPINE HARNESS

#HGu101

### SPREADER BAR

Spacer tube for GS harnesses for use on Skyfloaters



€142,00 SPREADER BAR

#HGu110

### RUNNER SLING for pilot hang-in

Runner sling for hang gliders



Runner sling for pilot hang-in at hang glider.

Tensile strength: 2.500 kp

Width: 25 mm

€7,00 RUNNER SLING 30, 35, 40 cm

#Au12/40

€8,00 RUNNER SLING 45, 50, 55 cm

#Au12/60

€9,00 RUNNER SLING 60, 65, 70 cm

#Au12/120

## FEX - HANG GLIDERS



## Three reasons that make Finsterwalder's gliders so popular

While other hang glider manufacturers worry about decreasing sales figures, Finsterwalder's „Fexes“ are experiencing a revival and have almost attained cult status. More than 1.000 highly satisfied leisure pilots currently fly our gliders and gladly recommend them to others.

### 1. Good flight qualities

Good flight qualities are the result of a perfect interplay between several construction components: sail cut, batten and wing tube flexibility, frame geometry, ...Finsterwalder's „Fexes“ represent the perfect mix that has found after many years of optimization. While competition gliders achieve performance through a high aspect ratio and accept handling disadvantages, Finsterwalder's concept for all-round gliders is a relatively small, negatively V-shaped sail area. This way, performance is achieved by a low profile offset. This special concept enables the combination of **excellent flight qualities and surprisingly high performance**. Thanks to their effortless steering behavior and the advantages of the negative V-shape during thermal centering, the Fexes' performance can easily be accessed even by less experienced pilots. Finsterwalder's concept for intermediate gliders has meanwhile been copied several times, however, until now, has not yet been fully achieved. You can assure yourself of our gliders' qualities in the test reports of several air sports magazines. You can access them online via [www.fensterwalder-charly.de/en/downloads.html](http://www.fensterwalder-charly.de/en/downloads.html) (we will gladly send you printed copies of the test reports on request).



storage, checks and repairs. Please find further details in the test reports of several air sports magazines. The Snap Lock System is the only super short pack system for hang gliders that is widely used today. You can visit our shop in Munich and we will gladly demonstrate or instruct you on the system free of charge.

### 3. Unbeatably light and robust

Thanks to their well-engineered construction and high-quality materials, the Fexes endured all trials on the DHV test vehicle even at top speed. Years of tough use at flight schools show that despite their lightweight construction and short pack possibility, the Fexes do not have to compromise in terms of robustness. All components have demonstrated their durability. Due to their high quality, used Fexes regularly achieve top prices when resold. We exclusively use specially manufactured tubes in special sizes, seamlessly drawn from 7075 T6 aluminum alloy with a strength of 650 N/mm<sup>2</sup>. The tubes are eddy-current tested, mechanically polished and anodized both inside and outside. All Fexes are delivered with aerodynamically shaped fittings and ultra-light profiled AEROFOIL® and AEROSAFE® king posts and A-frame tubes forged.

### 2. Unique 2 m short pack possibility

In addition to the conventional rigging system and packing dimensions of 5,50 respectively 3,80 m, all Finsterwalder gliders can optionally be short-packed to just 2,00 x 0,35 x 0,25 m thanks to their unique click system. Finsterwalder's sophisticated click system, where the sail is pulled off the tubing, has been brought to perfection over many years. The procedure does not stress the material and allows for the use of supported leading edges. The Snap Lock System with Finsterwalder's specially developed quick release fasteners enables the complete tool-less disassembly respectively rigging of the glider within 10-20 minutes. Moreover, the click system is advantageous for transport,



A-frame attachment with high-tech fittings, aerodynamically shaped A-frame corner and Perunal nose plate.



FEX - HANG GLIDERS



Finsterwalder PERFEX

2 m Short pack-Skyfloater

Perfection in light-weight construction. One of our most successful gliders in terms of outstanding performance (for a floater) and wonderful handling. No surprise that the Perfex as with the Lightfex recieved top marks by test reports.

Unique for all floaters are the fittings: Perunal tubing for glider-frame and sail battens, aerodynamic A-frame, king-post and sundry fittings as well as a perfectly profiled leading edge with mylar reinforcing and nose fairing.

Surface:	16 m²	Upper battens:	15
Span:	9,4 m	Lower battens:	-
Nose angle:	120°	Tip battens spring loaded	
Weight:	22 kg	Packing lengths:	1,95/3,8/5,5 m
V-min:	22 km/h	Rec. pilot weight:	70-105 kg
V-max:	80 km/h	Max. loading:	101 kg
Glide ratio:	1:10	Certification:	DHV 1 - 2

€4.985,00 Finsterwalder PERFEX #P1000

FEX - HANG GLIDERS



Finsterwalder FUNFEX S

Intermediate double sail hang glider

The minimal weight abd good flight characteristics of the Funfex have become almost legendary over the years. Today the Funfex is still unbeatable when it comes to experiencing a maximum of enjoyment in the air with a minimum of effort.

The reason for this is the often copied (but never achieved) design which combines a low aspect ratio with astonishing performance.

Surface:	16 m²	Upper battens:	15
Span:	9,4 m	Lower battens:	4
Nose angle:	120°	Tip battens spring loaded	
Weight:	24 kg	Packing lengths:	1,95/3,8/5,5 m
V-min:	25 km/h	Rec. pilot weight:	68-95 kg
V-max:	80 km/h	Max. loading:	97 kg (112 kg DULV)
Glide ratio:	1:10,5	Certification:	DHV 2

€5.490,00 Finsterwalder FUNFEX S #F1000



Finsterwalder AIRFEX

Intermediate double sail hang glider

The intermediate glider for new pilots, the Airfex is much lighter than other double surface gliders (23 kg) an thus ideal for smaller pilots with a weight of between 50 and 70 kg.

Statically fully balanced and equipped with a smaller handler A-frame, the Airfex is unbeatable when it comes to ground handling. Also worth mentioning are the easy landing characteristics of this glider.

Surface:	13,8 m²	Upper battens:	15
Span:	9 m	Lower battens:	4
Nose angle:	120°	Tip battens spring loaded	
Weight:	22 kg	Packing lengths:	1,85/3,75/5,2 m
V-min:	27 km/h	Rec. pilot weight:	50-70 kg
V-max:	80 km/h	Max. loading:	89 kg
Glide ratio:	1:10,5	Certification:	DHV 2

€5.490,00 Finsterwalder AIRFEX #A1000

Art.#	FEX-GLIDERS OPTIONS	
	Supine A-frame incl. special rigging instead of A-frame for a lying prone position	free
	Round pipe or lightweight round pipe uprights instead of Aerosafe uprights for Perfex/Lightfex	free
	Speedbar with bayonet fitting and safety rope instead of straight base tube	free
A84	Wing tip protectors, pair	€25,00
FHa63	Keel tube extension for Funfex (rigging aid)	€69,00
Pa10	Glider bag short (2,00 m) with shoulder carrying straps	€159,05
HPa20	Premium glider bag long	€159,00

	FEX-DRACHEN SPARE UPRIGHT	
Tr22M1	AS-SPARE UPRIGHT for Funfex/Airfex	€66,70
Tr22M2	AS-SPARE UPRIGHT for Perfex/Lightfex	€66,70
Tr22M3	AS-SPARE UPRIGHT for Speedfex	€66,70



Test Reviews

Read what magazines have to say about the unsurpassed concept of our fexes.

Download under [www.finsterwalder-charly.de](http://www.finsterwalder-charly.de)



# HARDWARE FOR HANG GLIDERS



## AEROSAFE (AS) UPRIGHT

520 g/m (Finsterwalder Pat. 3309455)



- The tapered shape provides excellent aerodynamics.
- Improved control of the glider during takeoff: nonslip, good grip, pads the shoulders.
- Considerably reduces the risk of upper arm fractures in a crash!



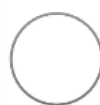
Length: 53,5 mm Width: 26 mm ØInner: 22 mm Weight: 520 g / m

Art.#	AEROSAFE-PROFIL UPRIGHT	
Tr22M2	AS-matt gold up to 1,80 m	€58,00
Tr22M3	AS-poliert silver up to 1,65 m	€66,70

Please note: We cut uprights to the desired length and deliver them undrilled (customized tubes are non-returnable).

## Extra REINFORCEMENT TUBE

for AEROSAFE-PROFIL UPRIGHT



The AEROSAFE reinforcement tube system allows for customized upright stability. The tubes can be adapted to different pilots and upright lengths in such a way, that optimum crash safety is provided (installed reinforcement tubes are non-returnable).

Art.#	AS REINFORCEMENT TUBE without assembly	
Tr221	AS-Reinforcement tube length 0,83 m	€7,00
Tr222	AS-Reinforcement tube length 1,00 m	€8,00
Tr223	AS-Reinforcement tube length 1,25 m	€10,00

Art.#	AS REINFORCEMENT TUBE with assembly	
Tr221M	AS-Reinforcement tube length 0,83 m	€10,00
Tr222M	AS-Reinforcement tube length 1,00 m	€11,00
Tr223M	AS-Reinforcement tube length 1,25 m	€13,00

## Finsterwalder SPEEDBAR

Speedbar from high-strength aircraft aluminium

The Finsterwalder SPEEDBAR is made from high-strength aircraft aluminium (Avional) and mechanically polished, hence very lightweight and robust.



The Finsterwalder SPEEDBAR is suitable for trapezoidal corner diameters of 28.5 mm (1.125"). The inner diameter of 25.1 mm is suitable for wheel stub axles.

Tr29/1	Speedbar undrilled, up to 1,57 m without rubber grip	€88,00
Tr29/2	Speedbar cut to length, drilled without rubber grip	€105,00

## AEROFOIL (AF) UPRIGHT

417 g/m



- High quality aerodynamic profile with very good lateral stability and reduced longitudinal stiffness.
- Available from stock in various lengths. Cut to size against surcharge. Maximum length for shipping is usually 2 m.



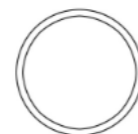
Length: 49,5 mm Width: 26 mm ØInner: 22 mm Weight: 520 g / m

Art.#	AEROFOIL-PROFIL UPRIGHT	
Tr22M1	AF-matt silver up to 1,80 m	€70,00
Tr22M3	AF-poliert silver up to 1,80 m	€70,00

Please note: We cut uprights to the desired length (customized tubes are non-returnable)

## ROUND TUBE UPRIGHT

Anodized, undrilled, round upright



The Finsterwalder ROUND TUBE UPRIGHT made from Avional (AlCuMg1), F38, matte silver anodized, undrilled.

ØInner: 25,1 mm ØOuter: 28,5 mm Weight: 405 g/m

Art.#	ROUND TUBE UPRIGHT	
Tr28M1	matt silver up to 1,645 m	€46,00
Tr28M2	matt silver up to 1,80 m	€61,70

Please note: We cut uprights to the desired length (customized tubes are non-returnable)



# HARDWARE FOR HANG GLIDERS



## AS/ AF UPRIGHTS READY TO USE

In our well-equipped service and development workshop, we manufacture replacement uprights for gliders made by Airborn, Aeros, Airwave, Apco, Enterprise Wings, Firebird, Guggenmoos, Icaro 2000, La Mouette, Moyes, Seedwings, Solar Wings, Thalsofer, UP, Wills Wing and others.

We need photos of the original top and bottom fittings and if possible a sample, so that we can make an offer.

We already have the measurements of many glider models.



## HARDWARE FOR HANG GLIDERS



### HIGH-STRENGTH TUBES

Finsterwalder is famous for a large selection of high strength super light-weight tubing from special aluminium alloys unavailable elsewhere. The tubing is also used for sport aviation purposes. We should like to draw attention to the fact, that each individual tube should be specially tested when used in safety critical situations. All tubing used in Finsterwalder gliders is from tested tubing of 7075 alloy!

**Abbreviations:**

A x B = Outside diameter A mm, Wall thickness B mm  
F = Tensile and compression strength pro mm 2  
L = length of uncut tube (minimum order)

Art.#		€/m
A10	Saw cut, per cut (€/cut)	0,75
R22E	21,90 x 0,90, 150 g/m, AlZn4,5Mn, F = 38, L = 5,00 m	8,00
R22/0,4EP	22,00 x 0,45, anodised, 85 g/m, Perunal, F = 60, L = 4,75 m	15,90
R28	28,50 x 1,70, unanodised, 400 g/m, Avional, F = 38, L = 6,58 m	21,00
R28E	28,50 x 1,70, anodised, 400 g/m, Avional, F = 38, L = 1,32 / 6,58 m	24,35
R32/0,9	32,40 x 0,90, unanodised, 234 g/m, Avional, F = 38, L = 6,00 m	14,00
R32/0,9PE	32,40 x 0,90, poliert-anodised, 234 g/m, Avional, F = 38, L = 1,467 m	21,00
R40PE	40,00 x 0,85, poliert-anodised, 295 g/m, Perunal, F = 60, L = 1,62 m	40,00
R45	45,60 x 0,85, unanodised, 330 g/m, Perunal, F = 60, L = 6,00 m	40,90
R45E	45,60 x 0,85, anodised, 330 g/m, Perunal, F = 60, L = 6,00 m	43,70
R45PE	45,60 x 0,80, poliert-anodised, 330 g/m, Perunal, F = 60, L = 2,00 m	38,00
R47/0,65	47,00 x 0,65, unanodised, 265 g/m, Perunal, F = 60, L = 1,90 m (2. Wahl)	28,80
R47	47,30 x 0,80, unanodised, 330 g/m, Perunal, F = 60, L = 5,75 m	41,40
R47/0,65PE	47,30 x 0,65, poliert-anodised, 250 g/m, Perunal, F = 60, L = 1,91 m (2. Wahl)	28,80
R47PE	47,30 x 0,80, poliert-anodised, 330 g/m, Perunal, F = 60, L = 1,91 m	52,90
R52	52,00 x 0,90, unanodised, 390 g/m, Perunal, F = 60, L = 5,80 m	45,40
R52PE	52,00 x 0,90, poliert-anodised, 390 g/m, Perunal, F = 60, L = 1,92 m	59,20
R54	54,00 x 0,90, unanodised, 420 g/m, Perunal, F = 60, L = 5,90 m	47,40
R54PE	54,00 x 0,90, pol.-elo., 420 g/m, Perunal, F = 60, L = 0,91 / 1,28 / 1,49 / 1,76 / 1,92 / 2,52 / 3,76 m	61,20
R60	60,00 x 0,90, unanodised, 470 g/m, Perunal, F = 60, Länge auf Anfrage	57,80
R60PE	60,00 x 0,90, poliert-anodised, 470 g/m, Perunal, F = 60, L = 1,91 / ca. 2,00 m	71,90
R62PE	62,00 x 0,90, poliert-anodised, 485 g/m, Perunal, F = 60, L = 1,84 m	74,80

**Sail batten tubes / white cane tubes alloy type 7075 T6**

R9	Tube unanodised 8.63x0.63, 44 g/m, Perunal, F=60, L = 3,20 m	14,00
R9E	Tube anodised 8.63x0.63, 44 g/m, Perunal, F=60, L = 3,20 m	17,50
R11	Tube unanodised 11.0x0.76, 68,5 g/m, Perunal, F=76, L = 3,20 m	14,00
R11E	Tube anodised 11.0x0.76, 68,5 g/m, Perunal, F=76, L = 3,20 m	17,50
R12/0,45	Tube unanodised 12x0.45, 46g/m, Perunal, F=60, L = 3,80 m	14,00
R12/0,45E	Tube anodised 12x0.45, 46g/m, Perunal, F=60, L = 1,90 m	17,50
R13	Tube unanodised 13.3x0.6, 67 g/m, Perunal, F=60, L = 3,64 m	14,00
R13E	Tube anodised 13.3x0.6, 67 g/m, Perunal, F=60, L = 2,40 m	17,50

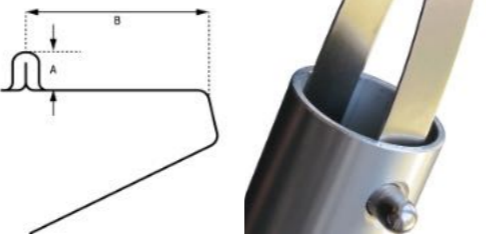
Please note that we usually stock tubes only in the stated lengths. Other lengths might be available but often have long delivery times. Tubes with a length of more than 2 m often involve high packing and shipping costs. We split the tubes at Ball lock pins / Quickpins 0,75 € per cut but must, however, charge for unusable offcuts. **The minimum purchase quantity is 1 tube.** We do not have cutoffs from our glider production. Rebates for bulk purchasers are possible. Please ask us for a quote. Please give us one day's notice when picking up orders so that the tubes can be collected from our stock.



### PUSH BUTTON SPRING SNAP CLIPS

made of chrome-nickel stainless steel

With undetachable push button.



Art.#	SPRING SNAP CLIPS	Maß A (mm)	Maß B (mm)	for tube inside-Ø (mm)	€
Be6/10	Spring snap clips ø 5,3 mm, Gr. 10*	6,5	42	9,8-12,0	2,40
Be6/13	Spring snap clips ø 5,3 mm, Gr. 13*	7,0	42	11,0-15,0	2,40
Be6/18	Spring snap clips ø 6,4 mm, Gr. 18	7,0	42	14,0-20,0	2,40
Be6/21	Spring snap clips ø 6,4 mm, Gr. 21	7,0	42	19,0-24,0	2,40
Be61/13	Spring snap clips ø 6,4 mm, Gr. 13*	8,0	44	11,0-15,0	2,60
Be61/18	Spring snap clips ø 6,4 mm, Gr. 18*	8,0	44	14,0-20,0	2,60
Be61/21	Spring snap clips ø 6,4 mm, Gr. 21	9,0	44	17,0-22,0	2,60
Be61/23	Spring snap clips ø 6,4 mm, Gr. 23	9,0	44	20,0-27,0	2,60
Be61/25	Spring snap clips ø 6,4 mm, Gr. 25	9,0	44	22,0-30,0	2,60
Be61/28	Spring snap clips ø 6,4 mm, Gr. 28	9,0	44	25,0-34,0	2,60
Be61/30	Spring snap clips ø 6,4 mm, Gr. 30	9,0	44	27,0-36,0	2,70
Be61/33	Spring snap clips ø 6,4 mm, Gr. 33	9,0	44	30,0-38,0	2,70
Be61/37	Spring snap clips ø 6,4 mm, Gr. 37	9,0	44	25,0-42,0	2,70
Be61/42	Spring snap clips ø 6,4 mm, Gr. 42	9,0	44	38,0-45,0	2,70
Be61/47	Spring snap clips ø 6,4 mm, Gr. 47	9,0	44	43,0-50,0	2,70
Be61/51	Spring snap clips ø 6,4 mm, Gr. 51	9,0	44	48,0-54,0	2,70
Be6../.D	Surcharge for version with double push button				0,60



## BALL LOCK PINS • HANDFAIRINGS



### BALL LOCK PIN / QUICKPIN

Ball lock pin e.g. for aerospace construction and rehabilitation technology

The Finsterwalder BALL LOCK PIN/ QUICKPIN is a self-locking bolt with push button unlocking for numerous uses, especially in glider and aerospace construction and in the rehabilitation branch. Shaft, axle and ball bearings of this quality product, which has proved its worth since 1975, are made of high-strength stainless steel. Three ball bearings instead of the usual two result in twice the pull-out strength.

Price per piece



Art.#	BALL LOCK PIN / QUICKPIN	€
Be64/22	Use length 22 mm	16,00
Be64/25	Use length 25 mm	16,00
Be64/28	Use length 28 mm	16,50
Be64/33	Use length 33 mm	16,50
Be64/38	Use length 38 mm	16,50
Be64/46	Use length 46 mm	17,00
Be64/48	Use length 48 mm (suitable for PINLOCK Carabiner)	17,00
Be64/50	Use length 50 mm	17,00
Be64/70	Use length 70 mm	17,00

### SECURITY CAPS

End cap for the Finsterwalder BALL LOCK PIN/ QUICKPIN



Finsterwalder's SECURING END CAP is equipped with a high-strength nylon cord and a snap ring and is suitable for all Finsterwalder BALL LOCK PIN/ QUICKPIN.

It serves as a stopper for the balls and thus prevents the unintended release of the pin. Moreover, Finsterwalder's SECURING END CAP avoids the ingress of dirt into the ball lock pin. A stainless steel ring inside the aluminium cap increases the ball lock pin's pull-off force in axial direction. The cap is securely connected to the shaft by means of the nylon cord and the snap ring.

Price per piece



Art.#	Security caps	€
Be65	End cap for ball lock pin (pcs.)	5,00



### HANDFAIRINGS for profiled speedbar

Hang gliding handfairings for profiled speedbars



The Charly HANDFAIRINGS are neoprene gloves in a special design for profiled speedbars which can easily be attached or removed by means of Velcro® strips. As slipping in and out of the gloves is easy, re-gripping at take-off and instrument operation during flight is unproblematic.

Thanks to the outstanding insulating qualities of the neoprene, the Charly HANDFAIRINGS can be used without inner gloves in the summer. In the winter, they are worn in combination with thin gloves. In the area of the fingers, inner pockets for active carbon heatpacks are integrated in the Charly HANDFAIRINGS. They provide for up to 6 hours of comfortable warmth even under arctic temperatures.



Price per pair.

€69,50 HANDFAIRINGS f. profiled speedbar #HM934

### HANDFAIRINGS for round speedbar

Hang gliding handfairings for round speedbars



The Charly HANDFAIRINGS are neoprene gloves in a special design for round speedbars. As slipping in and out of the gloves is easy, re-gripping at take-off and instrument operation during flight is unproblematic.

Thanks to the outstanding insulating qualities of the neoprene, the Charly HANDFAIRINGS can be used without inner gloves in the summer. In the winter, they are worn in combination with thin gloves. In the area of the fingers, inner pockets for active carbon heatpacks are integrated in the Charly HANDFAIRINGS. They provide for up to 6 hours of comfortable warmth even under arctic temperatures.

Price per pair.

€46,90 HANDFAIRINGS for round speedbar #HM931

### HANDFAIRINGS with map pocket

Hang gliding handfairings with map pocket



The Charly HANDFAIRINGS are warming special gloves for attachment to the speedbar. The fingers remain free for take-off and instrument operation. In the summer, the Charly HANDFAIRINGS can also be used without additional inner gloves.

Price per pair.

€29,50 HANDFAIRINGS with map pocket #HM9N

CONTROL BAR WHEELS



QUICK-SAFE control bar wheel

Control bar wheels for hang gliding

Who can rule out the possibility of a tail wind landing during changing conditions? Now that light-weight, aerodynamic wheels, which meet the needs of differing groups of pilots, are on the market, there's no reason to do without them except arrogance. A good pilot has no need to take unnecessary risks for reasons of prestige.

The Finsterwalder QUICK-SAFE are unbelievably lightweight, aerodynamic, and robust pull-apart control bar wheels, which have proven their worth now for years. Their smooth elliptical shape causes no noteworthy air resistance, a characteristic that makes them very popular also with competition pilots.

Features

- Can be attached to the rigged glider within a few seconds; problems with putting down on steep rigging sites therefore do not exist.
- Are made of tough and strong polyamide (nylon) and weigh only 270 g by measurements of 180 x 70 mm.
- Are available for control bars of different diamaters and, additionally, in a version with a diameter of 35 mm for use with a VG cord channel
- Guarantee: We replace broken wheel halves



Art.#	QUICK SAFE wheels	Price per piece	€
HRa001/25	QUICK SAFE Räder for control bar ø 25,4 mm		15,00
HRa001/28	QUICK SAFE Räder for control bar ø 28,6 mm		15,00
HRa001/35	QUICK SAFE Räder f. adapter sleeve with VG cord channel		17,00

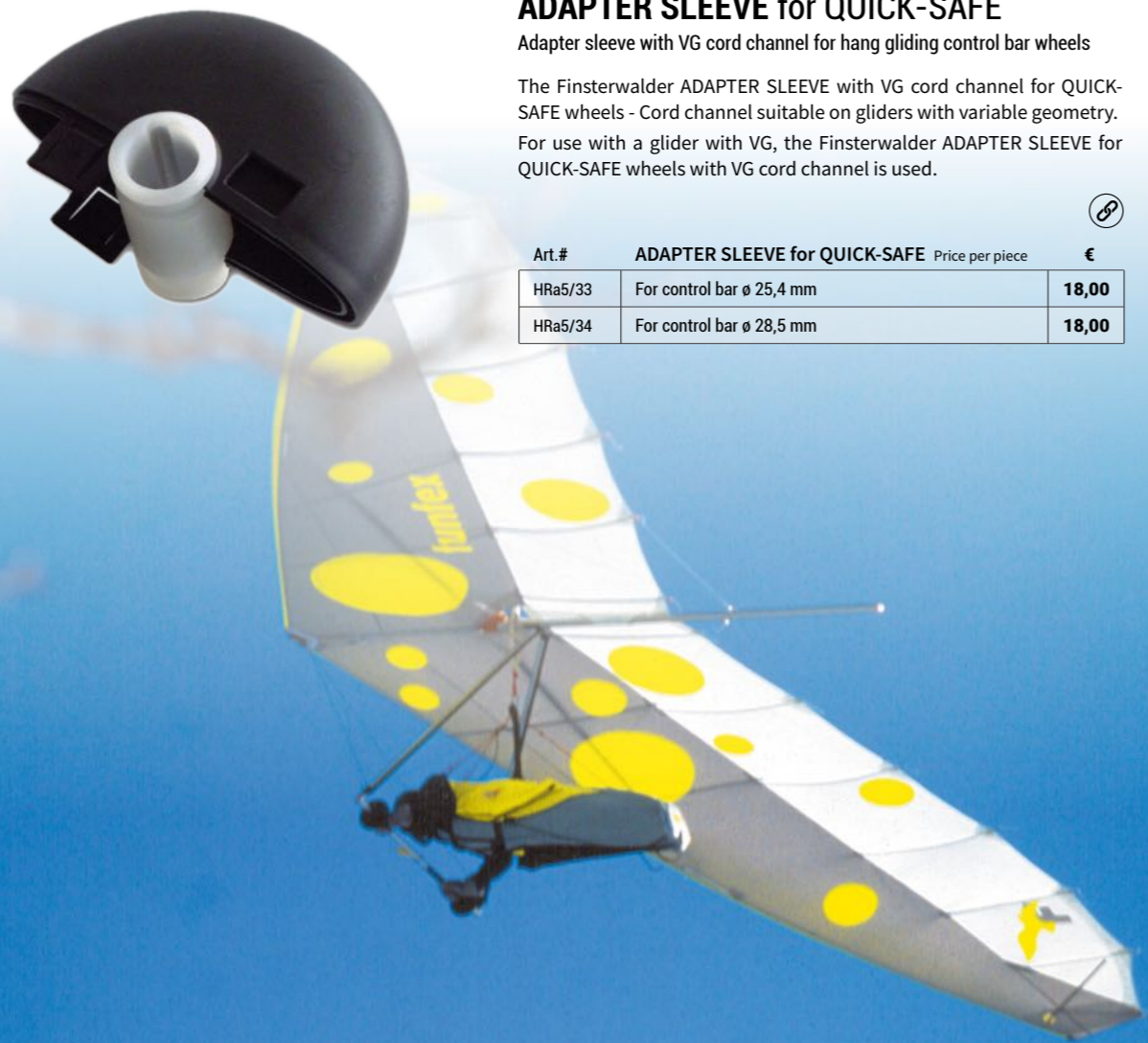
ADAPTER SLEEVE for QUICK-SAFE

Adapter sleeve with VG cord channel for hang gliding control bar wheels

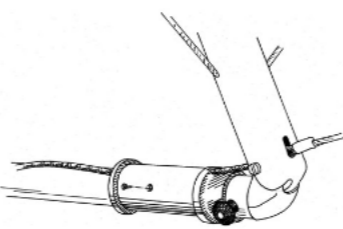
The Finsterwalder ADAPTER SLEEVE with VG cord channel for QUICK-SAFE wheels - Cord channel suitable on gliders with variable geometry. For use with a glider with VG, the Finsterwalder ADAPTER SLEEVE for QUICK-SAFE wheels with VG cord channel is used.



Art.#	ADAPTER SLEEVE for QUICK-SAFE	Price per piece	€
HRa5/33	For control bar ø 25,4 mm		18,00
HRa5/34	For control bar ø 28,5 mm		18,00



CONTROL BAR WHEELS



TRAINER WHEELS

Inflatable control bar wheels for flight schools and beginners

Due to their excellent shock absorption qualities, the Finsterwalder TRAINER WHEELS are especially suitable for flight schools and beginners in hang gliding.

Wheel spacers prevent a lateral drift of the wheels to the middle of the control bar. Outwards, the wheels are held in place by the A-frame up-rights.

Dimensions: 260 x 85 mm

Weight: 950 g

Hub hole diameter: 35 mm

Price per piece

€25,50 TRAINER WHEELS

#HRa1



LIGHTWEIGHT WHEELS

Inflatable control bar wheels.

The Finsterwalder LIGHTWEIGHT WHEELS are shock-absorbing for hard surfaces, thus especially practical for pilots who occasionally land on wheels.

Wheel spacers prevent a lateral drift of the wheels to the middle of the control bar. Outwards, the wheels are held in place by the A-frame up-rights.

Dimensions: 200x 50 mm

Weight: 450 g

Hub hole diameter: 35 mm

Price per piece

€27,50 LIGHTWEIGHT WHEELS

#HRa01



ADAPTER SLEEVES for LIGHTWEIGHT WHEELS

Adapter sleeve hang gliding inflatable wheels

The Finsterwalder ADAPTER SLEEVE for inflatable LIGHTWEIGHT WHEELS with hub hole diameter of 35 mm.

Please note: For each wheel, one pair of adapter sleeves will be required

Price per pair.



Art.#	ADAPTER SLEEVES for LIGHTWEIGHT WHEELS	€
HRa5/25	For control bar ø 25,5 mm	3,00
HRa5/28	For control bar ø 28,5 mm	3,00

ADAPTER SLEEVE with VG cord channel

Adapter sleeve with VG cord channel for inflatable control bar wheels.

The Finsterwalder ADAPTER SLEEVE with VG cord channel for LIGHTWEIGHT WHEELS with hub hole diameter of 35 mm - cord channel suitable on gliders with variable geometry (VG).

The part of the VG hub with the inner wheel rim is attached to the control bar by a screw or pop rivet and the wheel runs over the hub. The outer wheel rim can be removed if control bar and A-frame upright are separated.

Price per piece



Art.#	ADAPTER SLEEVE with VG cord channel	€
HRa5/35	For control bar ø 25,5 mm	20,00
HRa5/36	For control bar ø 28,5 mm	24,50

# GENERAL TERMS AND CONDITIONS OF BUSINESS



## 1. Scope

These terms and consitions shall apply to any and all contracts of the Finsterwalder GmbH, irrespective of their subject-matter, if and when the contract partner has received a copy of these terms and conditions for reference. Furthermore, they shall apply without express reference being made to them to any future business transactions once they have become the basis of a contract.

## 2. Contract

Any contract shall be confirmed by us in written form to become effective. Without such confirmation, a contract shall be deemed concluded upon delivery of the goods or upon rendering of the agreed service.

## 3. Prices, payment

The specified prices shall be ex works incl. VAT plus shipping costs, if not stated otherwise. We offer free shipping for orders from our webshop with a minimum order value of 50,00 € (within Germany) or 250,00 € (within the EU). Please see shipping & payment for information on the shipping costs if the value of goods is lower. Our price lists valid at the time of concluding a contract shall exclusively apply. Unless otherwise agreed, we shall deliver the goods against cash payment or prepayment. The purchase price is due and payable with delivery of goods and is to be paid within 14 days after receipt of the goods. The same applies for partial performances, as far as both parties have explicitly agreed delivery in partial performances. In case of default of payment, the statutory interest applies. Unauthorized cash discounts shall be collected plus a processing fee of 10,00 €.

## 4. Minimum order value

For customers in Germany respectively in the EU: 15 €  
For wholesalers in Germany respectively in the EU: 75 €  
For export in non-EU countries: 130 €  
We charge an extra € 5,- for requested express orders.

## 5. Delivery

Acceptances of delivery periods shall apply ex works. If and when agreed delivery periods cannot be maintained due to acts of God, they shall be suspended until the impediment due to a delivery is remedied. It is also an act of God if a supplier of Finsterwalder GmbH fails to deliver or only makes partial deliveries of the goods. In case of deliveries having a fixed deadline, the customer shall at least be obliged to bear the shipping costs out and home if we dispatch the goods in time but when they are returned due to a delay in transportation.

## 6. Withdrawal

If and when the period for any subsequent delivery has expired, the purchaser shall be entitled to withdraw from the contract. If he has received a partial delivery before and such partial delivery is of no use for him, the purchaser shall be entitled to return the same and the purchase price claim shall cease to exist. Furthermore, the customer is entitled to withdraw from the contract in the event of force majeure and related delay in delivery, according to section 5, if the delivery cannot take place within a reasonable time.



When purchasing items in our webshop, EU consumers have a 14-day right of withdrawal.

[www.shop.finsterwalder-charly.de](http://www.shop.finsterwalder-charly.de)



In other cases, the withdrawal from the contract is permissible, after the deadline of the agreed or expected date of delivery, if delivery is not made within the period of grace, despite being granted a reasonable period of grace.

## 7. Retention of ownership

Finsterwalder GmbH shall retain ownership of all goods until any and all obligations arising from a contractual relationship are fulfilled. In case of a resale of the goods, the purchaser is obliged to inform his contractual partner about this. In case of possible enforcement measures over the retained goods, the purchaser has to inform Finsterwalder GmbH immediately and under transmittance of the bailiff's return.

## 8. Passage of risk

The risk of damage or loss will pass to the purchaser on transfer of the goods to the forwarder, insofar as the customer is not a consumer. This is irrespective of the fact who (purchaser or seller) has borne the shipping costs. We shall take out particular transport insurances only upon request of the recipient of the goods and for his own account.

## 9. Warranty

The implied warranty period of two years from delivery shall apply. Batteries of any kind are excluded from the 2-year warranty obligation, as they are consumables / wear material. If the purchaser is a businessman, he is obliged to inspect the goods for any defects immediately after receipt. Finsterwalder GmbH hereby represents and warrants that its goods are free of any defects. If and when the goods / performance are / is defective for reasons beyond the purchaser's or customer's control, he shall be obliged to request a subsequent delivery of goods free of any defects or to request a subsequent improvement within a reasonable period of time first pursuant to the conditions mentioned under section 9 above before he can assert any further warranty claims. The goods shall be passed on to Finsterwalder GmbH for verification of warranty claims. In case a warranty claim is not justified, the customer shall be liable for all cost of transport. If no substitute delivery or no subsequent improvement is possible within a reasonable period of time, the purchaser shall be entitled to withdraw from the contract. Claims for compensation of consequential damages or compensation for non-performance are excluded - with the exception of intent or gross negligence. This applies in particular to cases of processing or further processing of Finsterwalder GmbH related products. Apart from that, warranty claims are excluded, as far as the defectiveness is caused by improper handling by the purchaser. When buying a hang glider or a paraglider, the customer shall be obliged to observe the operating instructions and to have a control and instruction flight made either by the manufacturer or by an instructor who is familiar with the glider.

## 10. Other provisions

If one or more of these provisions become ineffective, this shall not affect the validity of the remaining provisions.

## 11. Place of performance

For both parties, the place of performance shall be Munich, Germany, if the purchaser / customer is a businessman.

Finsterwalder GmbH, Managing Director Thomas Finsterwalder  
Adress: Pagodenburgstr. 8, D-81247 München  
Commercial register entry: HRB 5250 Amtsgericht München  
USt.-ID number: DE 129 346 945







English



## Finsterwalder GmbH • Charly Produkte

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D 81247 München

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**E-Mail** [office@finsterwalder-charly.de](mailto:office@finsterwalder-charly.de)

**Website** [www.fensterwalder-charly.de](http://www.fensterwalder-charly.de)

**Webshop** [shop.fensterwalder-charly.de](http://shop.fensterwalder-charly.de)

 [facebook.com/finsterwaldercharly](https://facebook.com/finsterwaldercharly)

 [instagram.com/finsterwalder.charly](https://instagram.com/finsterwalder.charly)

 [youtube.com/finsterwaldercharly](https://youtube.com/finsterwaldercharly)

**Business hours:** Monday to Thursday 9 am - 4 am, Friday 9 - 12 am  
and by appointment

**Commerce register entry** HRB 52509 Amtsgericht München

**Managing director:** Dipl. Ing. Thomas Finsterwalder

**Sales tax-ID-number (E.E.C. ID. Nr.)** = DE 129 346 945

**Air sports articles production and distribution**

### Banking details:

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