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Extreme Sport Helmets

User's manual and maintenance guide

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Icaro 2000 congratulates you on your purchase of this new extreme sports helmet.

The principal purpose of our helmets, safety, has been achieved without sacrificing comfort or aerodynamic performance, by virtue of the innovative technology that we have applied.

All Icaro 2000's new helmets are tested at CSI (an organization authorized by the Ministry of Transport, with certification from Germany's TUV), and they have attained certification as helmets for airborne sports, for hang gliding and paragliding, in accordance with the European standard EN 966.

The "Fly" has also obtained certification in accordance with European standard EN 1077.

Icaro 2000 recommends the use of certified helmets only

Our network of distributors world-wide ensures the availability of parts and service wherever you go to practice your sport.

Enjoy yourself!...

For further information or service, please consult your nearest Icaro 2000 retailer, or contact the company direct at:

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General information

Choosing and purchasing a helmet

When you purchase a helmet, the most important moment is choosing the right size. If you have never purchased a helmet, you probably don't know your own size. Take your time when choosing a helmet. Try several, and follow these criteria:

Put the helmet on and fasten the strap:

- The helmet should not be so loose that it moves around, but neither so tight that you can feel a continuous pressure on your head
- A helmet that is too large may slide down and obstruct your eyes
- Try to pull it off, moving it back and forth: if it tends to slip off or move around, it is too large
- Lean your head forwards, grip the helmet's rear edge, and try to pull the helmet off. If the helmet slides off, it is not suitable for the shape of your head.

If, while trying on the helmet, it does not perform satisfactorily for just one of these criteria, you should try another size or another model.

When compared with the jet, or open-face, helmet, the full-face helmet also guarantees protection for the chin area. Consider this carefully when you are choosing your helmet.

Never purchase a second-hand helmet, even if the price is good. There is no way of discerning its real conditions (whether it has been involved in an accident, etc.).

The structure of a helmet

- Outer shell:
 - thermoplastic or composite fibre material. These materials give the external shell **high perforation resistance, strength, elasticity, and lightness**.
- Crushable foam inner shell:
 - expanded polystyrene. It is damaged even by a minimal blow, and in this case the helmet should be replaced.
Polystyrene is easily deformable, and in this context its function is to **absorb shock** by means of deformation and/or partial destruction. A more rigid material would not have the effect of dissipating impact energy, and so it would transmit all the shock energy to the head.
- Comfort lining:
 - expanded polyurethane and transpirant, non-allergenic textile. Its purpose is to adapt the helmet to different sizes, while also guaranteeing comfort and hygiene. It may be removable and washable.
- Vents:
 - provide internal ventilation and air circulation.
- Chin strap.
 - This usually has a rapid fastening system. It was designed for controlled breakage.
- Visor:
 - Anti-abrasion thermoplastic material; it may also be anti-fogging. It should be replaced when vision is impeded by small scratches on the surface. **In a free flight helmet, a visor has been shown by wind tunnel tests to be necessary to obtain the best possible aerodynamic efficiency.**
Such studies demonstrate that a helmet with just an aerodynamic tail, without a visor, offers only a very small reduction in wind resistance.

The visor also not only **increases** the helmet's **passive safety** characteristics, but also its **active safety**, by increasing the **width of the field of vision when compared to the use of any type of sunglasses**.

Using the helmet

Once you have **chosen** the most suitable helmet, make sure that you **wear it correctly**. For safety, it should always fit snugly, and the strap should be tightly fastened.

A helmet will never be able to guarantee total protection for the head when subject to the forces produced by whatever type of impact. However this is no excuse to forego wearing a helmet. You should **always wear your helmet**, in order to exploit the protection that it provides, whatever impact may occur.

4 things that you should never forget

1. **Before using the helmet**, read all the instructions, and follow the suggestions carefully to ensure a correct fit.
2. **Do not use the helmet without fastening the strap**. An unfastened helmet will fall off during the first impact, leaving the head defenceless for successive impacts. There is also the risk of it falling off during flight.
3. **Do not fasten the helmet using just the velcro**. The velcro that may be present on the strap serves purely to stop it flapping in the wind.
4. **To ensure maximum performance, never modify your helmet, whatever the circumstances**.

In case of accident

- If the accident happens to you:
 - The inner shell will be deformed – though the deformation may not be visible to the naked eye – because it has absorbed the impact.
 - **After an accident, even if the impact was minor, the helmet should be replaced, regardless of whether there is visible damage or not.**
- If you witness an accident:
 - Keep calm.
 - Report the accident immediately, if possible by phoning for an ambulance (dial 118 in Italy). Only medically-qualified personnel know exactly how to deal with injuries.
 - Never move an injured person, unless this is absolutely essential because of a situation of greater danger.
If the spinal column is damaged, moving the injured person could damage the spinal cord, causing permanent paralysis.
 - If the victim is wearing a helmet, do not remove it, but open the visor to facilitate respiration.
 - Keep the victim calm, and, if possible, cover him. Shock provokes shivering and a sensation of cold.
 - Do not give the victim alcoholic drinks.
 - Stem the flow of blood from wounds, protecting your hands with gloves or similar, throwing them away later if they have been dirtied with blood. Do not apply tourniquets: if you place a tourniquet in the wrong position, you could worsen the situation.
 - Never put the victim into a private car. Wait for the ambulance. If the victim is conscious, talk to him or her and try to calm him or her down.

Helmet maintenance

The **helmet** protects your head, and so it should be **treated with care**.

The **visor** should be **changed** when it has **scratches** preventing satisfactory vision.

The helmet can be **seriously damaged** by:

- Paints and varnish

- Petrol
- All types of chemical solvent
- Excessive heat (do not leave your helmet exposed to the sun)
- Inappropriate modifications

Scrupulously follow the instructions provided by the manufacturer.

If you think that the helmet that you have chosen is not right for the shape of your head, replace it... and this time choose more carefully!

A helmet does not have a fixed lifespan. However, it is a good rule to replace it after five years of correct use.

Important!

- THE EXTERNAL SHELL OF THE HELMET SHOULD NEVER BE ALTERED IN ANY WAY.
- THE INTERNAL PARTS IN POLYSTYRENE SHOULD NEVER BE CHANGED, ADAPTED OR REMOVED.
- NEVER APPLY PETROL, DILUENTS, TOLUENE OR OTHER SOLVENTS OR CHEMICAL SUBSTANCES TO ANY PART OF THE HELMET.

Removing and fitting the inner comfort lining:

Important: do not use sharp or pointed tools such as screwdrivers etc., unless specifically requested in the instructions, in order not to scratch the helmet or damage its structure.

For some models, as previously mentioned, the inner comfort lining can be removed in order to wash or replace it.

In this case, the padding, which consists of a single piece or several components, is fastened to the inner polystyrene shell by means of a series of Velcro fasteners, and it is fixed at front and back by tabs that slot between the outer shell and the internal polystyrene shell.

Before removing the padding, it is a good idea to make a note of the position of the various padding components and of the ear protectors, if present, and likewise their position with respect to straps and other parts.

Disassembly is easy to perform. You just have to be careful when unfastening the Velcro, gripping the Velcro tape itself and not pulling on the padding.

The same technique should be used for the tabs: pull the tabs themselves, while gently and slightly separating the external shell and the internal polystyrene shell.

To reassemble the lining, just reverse the removal sequence, ensuring that all parts of the comfort lining are repositioned centrally and symmetrically, and checking the correct position of all the parts.

When you are sure that all parts of the lining have been reassembled correctly inside the helmet, press firmly over the Velcro fastening strips in order to fasten the lining.

Visor removal and assembly

The visor can be removed if it has to be cleaned thoroughly or replaced.

If you decide to fly without the visor, remove all the components that are not part of the helmet shell itself, and cover the holes with the adhesive pads supplied.

After a period of time, it may be necessary to replace the visor friction components.

Place the helmet onto a table, ensuring that it is entirely stable, and lower the visor into its position of normal use.

Important: when fitting and removing the visor, be careful not to scratch the surface of the helmet or visor with the screwdriver or other sharp or abrasive objects.

Don't touch a mirror-finish visor with your hands, because it may become opaque as a result of the acidity of perspiration.



(Versions **Long Tail, Cut, Grid and Grid Cut**)

Assembly

On each side of the helmet shell, there is a single hole with a threaded bush.

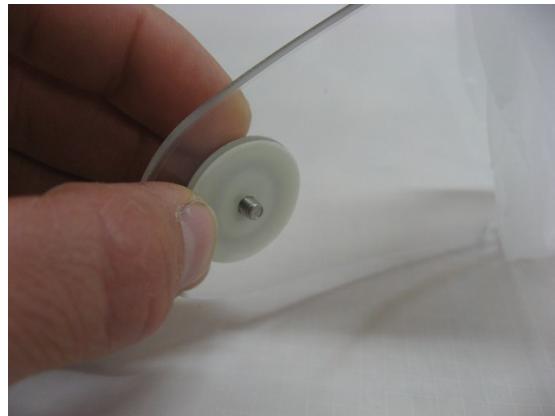
- Place the rubber O-ring into its position on the aluminium disc.



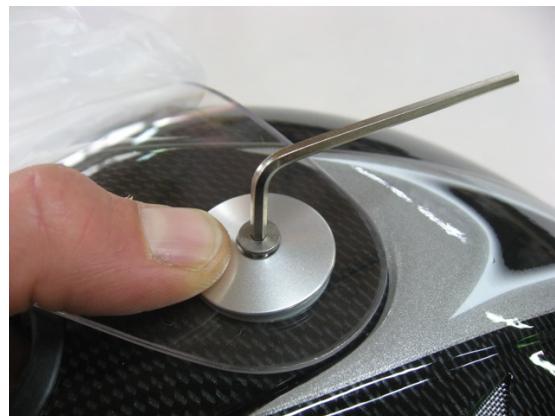
- Then place the aluminium disc with the O-ring into one of the holes on each side of the visor.



- Insert the screw into the aluminium disc and then hold the Mylar washer on the inner face of the visor.



- Holding the aluminium disc and the Mylar washer in position in the hole in the visor, place the screw into the threaded bush of the helmet, and screw it down, using the hexagonal key provided.



- Perform the same procedure on the other side of the helmet.
- You can choose how tight or loose you wish the visor to be during opening and closing by tightening the screws to a greater or lesser degree.

Removal

- Place the helmet firmly onto a table and put the visor into its lowered position.
- Unscrew the screws on each side and remove the visor.
- If you wish to use the helmet without the visor, remove all the components that are not part of the helmet shell, and cover the threaded bushes using the self-adhesive plastic discs provided.
- It may be necessary to replace the rubber O-rings after a certain period of time in order to maintain an adequate friction controlling visor movement.

SkyRunner

Assembly

On each side of the outer shell, there are three holes in alignment: the central hole is threaded, and the other two have no thread. Two serrated plastic washers and two small screws are supplied with the visor. The washers have two small projections on the inside surface.



- Take one of the washers and push it into the hole on the visor. Ensure that it is positioned so that the stop lug in the hole on the visor is below the rear projection on the washer.
- Holding the washer firmly pressed against the visor, insert the projections on the washer into the two non-threaded holes on the side of the helmet shell.



- Then introduce one of the screws into the threaded hole, and, using a screwdriver, screw down until a light locking force can be felt.



- Repeat the procedure on the other side of the helmet.
- The friction resistance of the visor is determined by the tightness of the screws.

Removal

- Unscrew the two lateral fixing screws.
- Remove the washers from their locating holes.

Fly and Kuzna

Assembly

On each side of the helmet there is a hole with a threaded bush, plus two other holes for inserting the pins for the visor locking component.



As well as the visor, the parts supplied include two components in profiled plastic with two pins, and two screws with a wide rounded head.



- Insert the pins of the plastic component into the corresponding holes, positioning it as shown in the photo below, with the lug facing forwards.



- Place the visor onto the helmet with the hole in the visor over the plastic component, while holding the latter in position.



- Insert the screw into the hole at the centre of the plastic component, and screw it in using a coin.



- Repeat the procedure on the other side of the helmet.
- The friction resistance of the visor is determined by the tightness of the screws.

Removal

- Unscrew the two lateral fixing screws
- Remove the plastic components and the visor, and cover the holes with the stickers provided.

Ear protectors

FLY and Kuzna

Removal

The Fly helmet is sold with ear protectors.

If you need to remove them to clean the helmet, you have to proceed as follow.

ATTENTION: the FLY helmet certified configuration include the ear protectors. Never fly without these elements on your helmet

- Unfastening the two snap buttons on the side straps.



- The ear protectors are removed by pulling them out from their location.



Assembly

As there is limited space between the outer shell and the inner polystyrene shell, the ear protectors should be inserted with great care.

- Insert the tab at the top of the ear flap between the outer shell and the inner polystyrene layer, and then adjust the position of the ear flap so that its edges correspond to the shape of the helmet shell.



- Fasten the snap fasteners to complete assembly.



Cleaning

Visor and external shell

- Use **only water and neutral liquid soap** and a **soft cloth** for drying the visor.
- Do not rub the visor too hard.

Internal Parts

Interior polystyrene

- Use **only a damp cloth**.
- Leave to **dry** at room temperature, protected from direct sunlight.

Comfort lining

- Hand-wash carefully, using just water at maximum 30° C and **neutral soap**.
- Rinse in cold water.
- Leave to **dry** at room temperature, protected from direct sunlight.

Accessories

Visors are available in different colours. They are easy to replace, enabling you to give the helmet optimum performance in differing light conditions.

In addition, the internal structure of the helmets enables the application of a range of accessories.

For further information, see our website:

www.icaro2000.com

Important information

Pilots who are used to flying with just sunglasses or even with no eye protection at all **may take a few flights to get accustomed to the visor**. If you don't feel comfortable with the visor to start with, just lower and raise the visor during your first flights with the helmet until you get used to it.

In conditions of high humidity and/or large temperature excursions, the visor may fog. On such occasions you will immediately appreciate the difference between flying with sunglasses and with a visor: in the latter case, you just have to open the visor slightly to obtain the complete clearance of any fogging.

A helmet with a visor produces a different air sound, and it makes it easier to hear your flight instrument.

If you rotate your head into a lateral position, the detachment of the airflow from the visor could give rise to anomalous sounds (the jet effect), which disappear immediately after the normal flight position has been resumed.

- **Never fly without a helmet**
 - Your life is too precious to risk losing it just because you have forgotten something
- **Use only a helmet with E.N. 966 certification**
 - European E.N. 966 certification was developed specifically for flight helmets.
 - All our helmets are constructed in accordance with the regulations contained in the E.N. 966 standard.
 - Never trust a helmet that has no label guaranteeing E.N. 966 certification.
- **We recommend the use of a full-face helmet.**
 - A full-face helmet offers improved protection in every situation.
- **Never modify your helmet for whatever reason.**
 - Modifications could reduce the level of protection, and could annul the helmet's certification.
- **Never use headphones under the helmet.**
 - Any rigid components placed inside the helmet, between polystyrene lining and the head, could become percussive and damaging elements.
- **Always ensure that the chin strap is tightly fastened.**
 - If you keep your helmet in the rucksac, don't sit on it.
 - Ensure that the helmet never falls to the ground or the floor.
 - Handle the helmet and visor with great care at all times.
 - After an accident, even when the impact is minimal, the helmet should be replaced, regardless of whether there is any visible damage or not.

Icaro 2000 wishes you happy and safe flying.

Icaro 2000 reserves the right to modify the characteristics of its products in any way, without any prior notice.