

<b>Icaro 2000 - Exclusive Sports Helmets</b> Rollbar Plus owner's manual		Page # 1 / 17
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## Rollbar Plus – Owner's manual

We are happy that you have chosen a helmet by Icaro 2000, designed to offer the greatest possible protection, comfort and style in your favourite sport.

This high-quality, certified product is accompanied by a manual that provides details on specifications, personalisation, use and care. We recommend reading the manual to optimize the helmet's performance.

We have decided to help the environment by not printing the manual. You can find the latest version of this document online at the following link:

<https://bit.ly/3U6MNVe>

You will also find a link to this document on our website [www.icaro2000.com](http://www.icaro2000.com), at the page for the helmet you have just bought.

Or scan the QR code below using your mobile device:



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Icaro 2000 congratulates you on your purchase of a new **Rollbar Plus helmet**. This is the first **dual visor helmet**, ideal for micro light flying. The dual visor, along with the **turbo skip** protection under the chin, offers optimum protection from the cold and the airstream. The **rollbar** in high-performance aluminium offers chin protection while also ensuring excellent visibility. Rollbar Plus is available in **three versions**: Pearl White, Full Carbon or Carbon Optic.

Rollbar Plus was designed by **Ignazio Bernardi**, with technical consultancy from Italy's most important helmet developer. The resulting helmet has a **modern, exclusive look**. Its principal purpose, **safety**, has been achieved without sacrificing comfort or performance, by virtue of the innovative technology that we have applied. In fact it is constructed using the same technology as in military applications, including **high-modulus full carbon** or **glass fibre** in order to guarantee the highest possible safety standards.

All new Icaro 2000 helmets are tested by CSI (an organization authorized by the Italian Ministry of Transport and recognized by German certification association TÜV). Rollbar Plus has obtained certification as a **free flight helmet** in compliance with **European standard EN 966**. This certification is valid only with ear defenders or electronic headset correctly fitted

**Icaro 2000 recommends the use of exclusively certified helmets.**

Our network of distributors worldwide ensures the availability of service and components wherever you are based.

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

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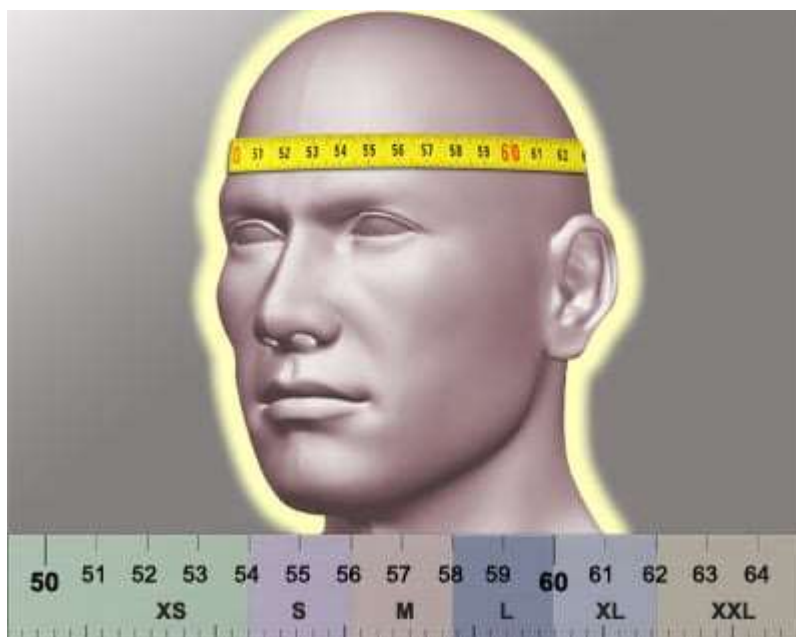
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## General information

### 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. The size of a helmet is specified by the **inner circumference of the internal padding**. The size number therefore corresponds to the **head circumference in centimetres**.



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, a 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.).

### How to try on a helmet with headset

When you are trying on a helmet whose shell has an opening in correspondence with the ears, because they are designed to be used with headsets (whether for noise reduction or radio communications), it is essential

to **fasten the chinstrap correctly** and position the **headphone cups** (swing them down into the closed position) **over the ears**.

In fact, if these helmets are worn without headphones, a large portion of the contact surface, which contributes considerably to the helmet's stability on the head, is missing.

So if you try on the helmet with the headphone cups in the open position, the helmet will feel unstable.

In addition, the **headphones are part of the certification**, and so a helmet of this type worn without headphones can be considered as not certified.



## Structure of the Rollbar Plus helmet

### Outer shell

Rollbar Plus is made using the same technology as in military applications, with an outer shell in full carbon or glass fibre to ensure the highest possible standards of safety. These materials give the outer shell **high perforation resistance, strength, elasticity, and lightness**.

### Crushable foam inner shell

Rollbar Plus has a **very thick inner shell** in **expanded polystyrene**, in order to comply with the stringent penetration test that is part of EN 966 certification.

In the case of impact, it is likely that the inner shell will be deformed or damaged, and in this case the helmet should be replaced. This is part of the helmet's intrinsic function. In fact, 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 padding

**Rollbar Plus** has internal comfort padding that can be replaced by thicker or thinner elements, thus varying the helmet size. If the helmet is not a perfect fit, we can send new padding free of charge, irrespective of where you bought the helmet. The padding is easy to remove, and so it can be washed and replaced whenever you like.

- There are seven **internal padding sets** for the sizes:
  - 52 (XX Small)
  - 54 (X Small)
  - 56 (Small)
  - 58 (Medium)
  - 60 (Large)
  - 62 (X Large)
  - 64 (XX Large).



## Air flow inside the helmet

Rollbar Plus has large perforations in the inner shell, with vents in the outer shell which correspond to vents in the polystyrene inner shell. These ensure optimum internal aeration.



### Sidepieces and luxury chin strap

Rollbar Plus has **sidepieces in stainless steel** coated in plastic wire. The strap fitted onto the sidepieces can also be adjusted with millimetric precision. The system is protected by a registered patent, and we are in fact the only company using this unique arrangement.



### Visors

Rollbar Plus has **two visors** for optimum protection. When raised, the transparent or brown-tinted **inner visor** is integrated into the helmet's structure, protected in its position between the outer shell and the inner polystyrene shell. You can **open or close the visor** by using the **black button** on the top of the helmet, an operation that can be performed with one hand, even when you are flying. This visor is easy to change, as it is held in position by just a **single screw**, indicated by a label inside the helmet.

The **long visor** is transparent, and when in position it can be **locked** onto the Rollbar, preventing it from unintended opening at high speeds. This visor offers good strength and, along with the Rollbar, it helps to protect the face in a way analogous to a full-face helmet. **The two visors** not only **increase** 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**.



### Rollbar and Turbo skip

Rollbar Plus has a **rollbar** that provides additional chin protection. It is made in titanium-anodized aluminium tubing. The rollbar offers an excellent combination of **protection** along with excellent **visibility**, greater when compared to a conventional full-face helmet. The **turbo skip** is mounted onto the rollbar, and it prevents air flow from entering the helmet from below and creating annoying turbulence between eyes and visor. It can be removed and reassembled in case of washing or replacement.



### Ear defenders or electronic headsets

**Rollbar Plus** is a **professional helmet**, and the use of **specially-fitted headsets** is of fundamental importance. The models shown here are very practical, because the ear cups can be flipped upwards or sideways quickly and easily. As a result, you can hear normally even when wearing the helmet on the ground. When you are in the air, you can ventilate your ears whenever you like.

**Headsets** are **mandatory for the helmet's EN 966 certification**. We can fit our Rollbar Plus helmet with professional electronic headset systems. For any special requirements, please contact us directly.





## Technical specifications

- **Weight:**
  - Rollbar Plus in the full carbon version weighs 950 grams (+/-50 grams) including the visors.
  - Rollbar Plus in the fibre glass version weighs 1,100 grams (+/-50 grams) including the visors.
  - Peltor Op II ear defenders, which just filter out engine noise, weigh 230 grams.
  - Electronic headsets with cable weigh 390 grams.
- **Sizes:**

The Rollbar Plus helmet is available with seven internal padding options.

  - 52 (XX Small)
  - 54 (X Small)
  - 56 (Small)
  - 58 (Medium)
  - 60 (Large)
  - 62 (X Large)
  - 64 (XX Large)
- **Certification:**
  - Rollbar Plus has **EN 966 certification**. It was tested by the Italian testing laboratory CSI, a company authorized by the Italian Ministry of Transport and recognized by the German organization TÜV. This certification is specific for the helmet with a correctly-fitted fitted headset.

## Using the helmet

It is important that you **wear your helmet 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 has been fractured, 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 breathing.
  - 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 soiled 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.

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.**
- **INTERNAL POLYSTYRENE PARTS SHOULD NEVER BE MODIFIED OR REMOVED.**
- **NEVER APPLY PETROL, DILUENTS, TOLUENE OR OTHER SOLVENTS OR CHEMICAL SUBSTANCES TO ANY PART OF THE HELMET.**

## Personalization

### Removal and reassembly of internal padding

**Important: do not use sharp or pointed tools such as screwdrivers, etc., unless absolutely necessary, in order to prevent scratching or damaging the helmet and its structural components**

Rollbar Plus' internal comfort padding can be removed and replaced for washing or for varying the helmet size.

The padding is fixed to the polystyrene inner shell by means of a series of Velcro strips. It is easy to remove. Just ensure that you **detach the padding carefully, pulling it gently off each Velcro strip**.

### Reassembly

When reassembling the padding, ensure that it is positioned centrally and symmetrically.

When you are sure that the padding is in the correct position inside the helmet, press the lining onto the Velcro fastening strips.

## Visor removal

The visors can be removed if they have to be cleaned thoroughly or replaced.

## Inner visor removal and reassembly

The inner visor is easy to remove or replace, as it is held in position by just a single screw. It is not necessary to remove the outer visor in order to remove the inner visor.

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

### Procedure for visor removal

- Looking into the inside of the helmet, you will see a hole in the polystyrene inner shell, near the front of the helmet (it may be marked by a label saying “Remove the screw to remove the visor”).



- While looking into the hole, move the visor until the screw comes into view (you will see it when the visor is about two-thirds fully down).



- Using a hex screwdriver or Allen key, unscrew and remove the screw. Take care to prevent it from falling into the apertures in the polystyrene inner shell.
- The visor can now be removed.

**To replace the visor or fit a new visor, follow the reverse procedure:**

- Look into the hole inside the helmet and operate the visor slider until the threaded bush comes into view.
- Slide the visor into its location on the helmet, between the outer shell and the polystyrene inner shell.
- Position the visor so that the hole in the visor is in correspondence with the threaded bush.
- Use a hex screwdriver to tighten the screw, thus fixing the visor in place.

### Outer visor removal and replacement

**To remove the outer visor:**

- Place the helmet onto a table, ensuring that it is entirely stable, and lower the visor into its position of normal use.
- Unscrew and remove the two pinlock screws and washers that determine the visor's travel between the open and closed positions.
- Unscrew the two lateral fixing screws and remove them along with the aluminium washer with O-ring on its inner surface.

**To replace the outer visor:**

- Put the helmet onto a table, resting on its side, ensuring that it is stable by means of appropriate cushioning.

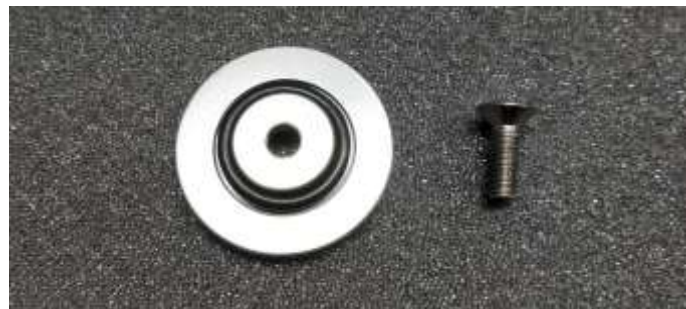


- Place the slim white plastic washer over the front threaded bush in the outer shell, slide the pinlock screw into the chamfered plastic washer.
- Hold the visor in its place on the helmet, and screw the pinlock screw through the arc-shaped travel slot on the visor into the threaded bush, using the hex key provided. Do not tighten completely at this stage.

- Slide the large black plastic washer between the visor and the visor pivot bush in the outer shell.



- Place the rubber O-ring onto the inside of the large aluminium washer.



- Place the large aluminium washer into position over the visor and screw in using the hex key provided.
- Tighten the pinlock screw as desired for smooth visor travel.



### Removal of rollbar and turbo skip

To wash or replace the turbo skip, the rollbar has to be removed.

- Unscrew the single screw towards the rear of the rollbar using a cross-head screwdriver.
- Place the helmet side down onto an appropriately-cushioned surface, press down on the outer shell near the root of the rollbar, and pull the rollbar off the pin on that side.



- Turn the helmet over, apply pressure to the outer shell and slip off the rollbar on the other side.
- Once you have removed the rollbar, you can carefully detach the turbo skip fabric from the two small Velcro strips on the rollbar, and then slide the turbo skip off.



### Assembly of rollbar and turbo skip

To reassemble turbo skip and rollbar, follow the inverse procedure:

- Ensure that the velvety surface of the turboskip is facing upwards, for comfort in contact with the chin.
- Slide the turbo skip onto the rollbar and fix using the two small Velcro strips on the rollbar.

- Place the helmet side down onto an appropriately-cushioned surface, and slide the rollbar onto the pin on that side.



- Turn the helmet over, press down on the outer shell near the root of the rollbar, and slide the rollbar back onto the pin.



- Fasten the rollbar using the two crosshead screws, screwing them into the hole on the inside of the rollbar near where it is attached to the helmet.

## Cleaning

### Visors 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.
- **Do not use solvents, chemicals or petroleum-based products** which may cause damage to the helmet's structure.

### Internal parts

#### Interior polystyrene

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

#### Internal padding

- 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.

## 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 visors**. If you don't feel comfortable with the visors 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 visors 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.

When you rotate your head into different positions, the interaction of the airflow with the visors may give rise to anomalous sounds.

- **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 EN certification**
  - European EN certification was developed differently for all different activities to offer the best possible protection
  - All our helmets are constructed in accordance with the regulations contained in the EN standard
  - Never trust a helmet that has no label guaranteeing an EN 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 your backpack, 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.



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- After an accident, even when the impact is minimal, the helmet should be replaced, regardless of whether there is any visible damage or not.

### Helmets and action cameras

Many pilots mount an action camera onto their helmets in order to record their adventures. It is important to remember that **any object projecting for more than 5 mm above the level of the outer shell annuls the helmet’s certification**, just as for any other modification that is not specified in the user manual. The reason for this is that an object mounted onto the external shell could become a percussive element that concentrates a percussive force onto a small area. Therefore, it is potentially dangerous and reduces the level of protection that the helmet can provide.

Considering that even the most compact action camera projects at least 30/40 mm from the helmet’s outer shell, there is no doubt that a helmet equipped with this sort of device can no longer be considered as compliant with its respective certification.

For this reason, because we at **Icaro 2000** wish to offer the highest possible level of protection for our customers, we recommend not fitting action cameras or other devices onto the outer shell of a helmet.

**Icaro 2000 wishes you happy and safe flying.**