



**INTECHPLAST S.A.**  
ul. Oboźna 1 00 – 340 Warszawa  
tel. +48 (22) 828 98 71

## **OPERATING MANUAL**

### **HELMET FOR FIREFIGHTERS FHR 15**

**Certificate of EU type certification No DPI/0497/1060**



#### **1. GENERAL CHARACTERISTICS.**

- The helmet for firefighters FHR 15 is a helmet of type B, designed for firefighters during fire and rescue actions, especially for firefighting in buildings and other structures. The helmet is designed and produced in accordance with the requirements included in the Regulation (EU) 2016/425 and the European Standard EN 443:2008 “Helmets for firefighting in buildings and other structures” ; EN 16471:2014 “Firefighters helmets - Helmets for wildland fire fighting” ; EN 16473:2014 “Firefighters helmets - Helmets for technical rescue”

The construction of the helmet and the materials used provide maximum protection of the user's head.

- The shell of the helmet is made of flame retardant polyamide PA 6.6 reinforced with glass fibre, which provides a very high mechanical and thermal resistance;
- The chin belts are made of flame-retardant tape;
- The internal surfaces, which adjoin the user's head are made of natural leather;
- To provide the user with the proper placement of the helmet on the head, the band belt is equipped with an adjustment system which enables to change the position of the helmet and the circumference of the head within the range of 47-68 cm.

The helmet may be equipped with one (visor) or two (visor and goggle) face protector, which can be hidden inside the helmet. They are made by the injection method from polycarbonate or polysulphone - materials resistant to high temperatures, flames and chemicals, in accordance with EN 14458:2004.

We used a visor (CW-00.04 and CV104.03) and goggle AK-06/2009.1.46 produced by Kaliskie Zakłady Przemysłu Terenowego in Kalisz Sp. z o.o.

The visor (CW-00.04 and CV104.03) may be either transparent or covered with a golden infrared filter (light permeability 4-3), which protects the user's face even in close contact with flames.

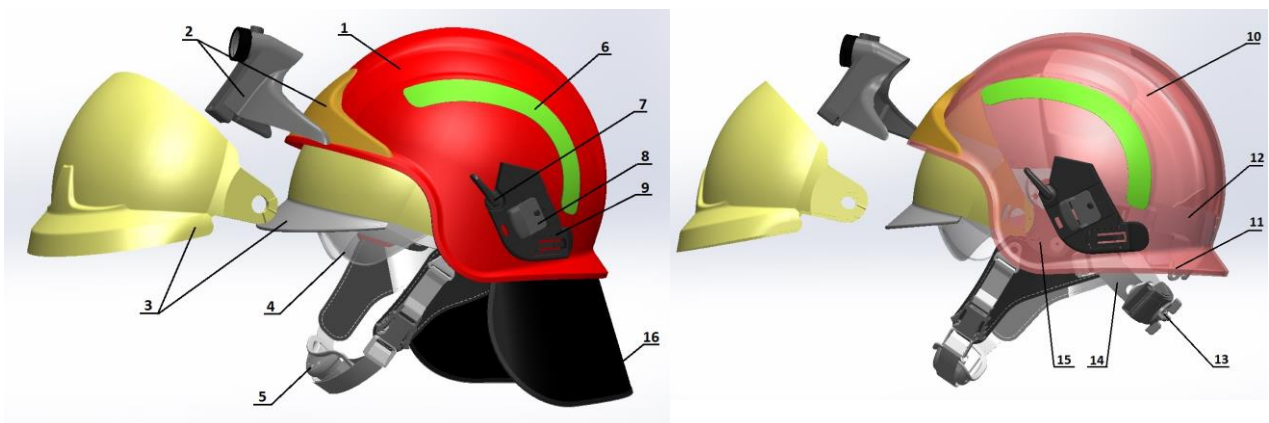
The short face protector (goggles) ensures eye protection against solids and liquids during rescue missions. **Look: Technical conditions for face shield CW-00.04; CV104.03 and AK-06/2009.1.46.**

The helmet (without optional equipment) weighs:

- with double face protection (visor CW-00.04 or CV104.03 and goggles) - 1560 +/- 40 g
- with double face protection and integrate torch - 1660 +/- 40 g

## 2. The helmet for firefighters meets the requirements of the following standards:

- EN 443:2008 "Helmets for fire fighting in buildings and other structures".
- EN 16471:2014 "Firefighters helmets - Helmets for wildland fire fighting"
- EN 16473:2014 "Firefighters helmets - Helmets for technical rescue"
- EN 166:2001 "Personal eye-protection. Specifications".
- EN 171:2002 "Personal eye-protection. Infrared filters".
- EN 14458:2004 „Personal eye-equipment. Face shields and visors for use with fire fighters and high performance industrial safety helmets used by fire fighters, ambulance and emergency services".



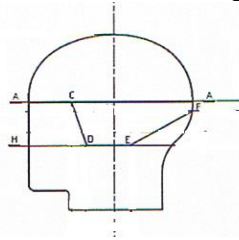
**Fig. 1 Basic parts of the helmet:**

1. Shell; 2. Plate or Firefighters Torch; 3. Visor (CW-00.04 or CV104.03); 4. Goggles; 5. Chin belt; 6. Reflecting element; 7. Goggles axis; 8. Mask holder-3position; 9. Mask and torch holder; 10. Shock-absorbing insert; 11. Rear plate; 12. Main belt; 13. Smooth regulation system; 14. Band belt; 15. Attaching plate; 16. Neck protector.

### 3. MARKING.

Each helmet has an interior label giving the following information:

- Name of the producer *INTECHPLAST S.A.* ;
- Number of the standard: *EN 443:2008*; *EN 16471:2014*; *EN 16473:2014*
- Name of the helmet: *Helmet for firefighters FHR 15*;
- Type B – protecting the area above the ACDEF points.



- \*\*\* means that the helmet provides protection in low temperatures up to - 30° C,
- resistance to chemicals – “C”;
- E2 - wet helmet insulation;
- E3 - informs that the surface of the helmet does not conduct current;
- Head circumference : 47 - 68 cm;
- Year and month of manufacture:
- Certificate of EU type certification;
- Number of notified body – CE 0497.

### 4. ADDITIONAL EQUIPMENT OF THE HELMET.

#### 4.1 Neck protectors – attached by snap fasteners.



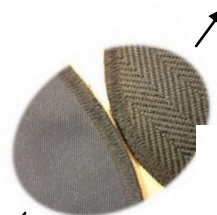
OS-1

OS-2



OS-3

OS-4



OS-5

OS-6



***Fig. 2 Neck protectors.***

*OS-1 Short neck protector made of fire resistant material.*

*OS-2 Long neck protector made of fire resistant material, protecting the whole neck.*

*OS-3 Short neck protector made of black leather.*

*OS-4 Neck protector made of metallized carbon material.*

*OS-5 Neck protector made of metallized and nomex material.*

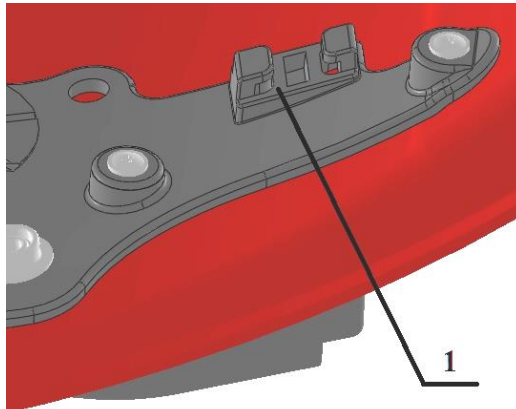
*OS-6 Neck protector made of kevlar*

The neck protector must be tacked starting from the middle button. To do this you must slightly deflect the back plate by pulling the back chin belt (Fig.3). Then the other buttons can be done up.



***Fig. 3 Attaching neck protector.***

**1.1 Wireless communication system fixed on the attaching plate.**



***Fig. 4 Attaching plate with the communication system holder.***

*1. Communication system holder.*

The photos show the communication systems CT-ContactCom by *CeoTronics* and HC-1 by *Savox*.

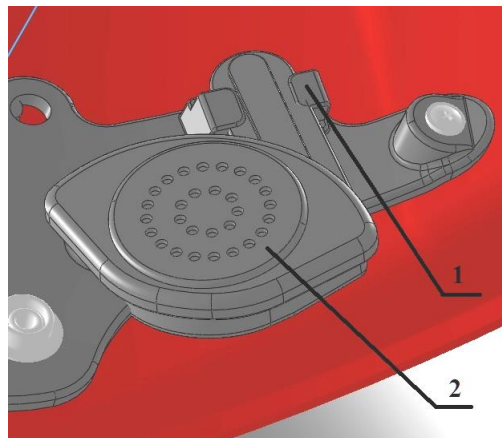


**Fig. 5. Communication system CT-Contact Com by CeoTronics.**

1. Loudspeaker.
2. Contact microphone.



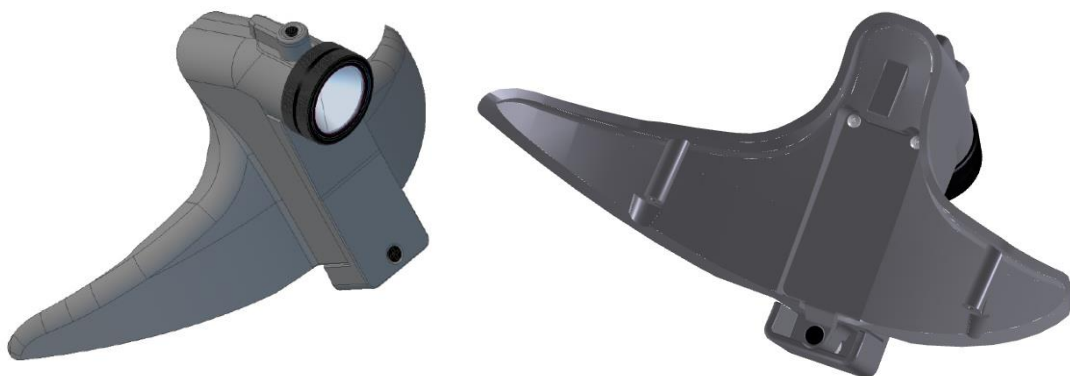
**Fig. 6. Communication system HC-1 by Savox.**



**Fig. 7 Attaching plate with fixed communication system.**

1. Communication system holder.
2. Loudspeaker.

#### **4.3 Integrated torch.**



**Fig. 8 Firefighters torch FHR-15.**

#### 4.3.1 Purpose.

The torch is an integrated part of the equipment of the helmet for firefighters FHR-15 and as such will be used during fire and rescue actions.

The torch is designed to be used in fire protection areas in danger of gas, vapour, mist (G) and dust (D) explosion.


#### 4.3.2 Requirements.

- The torch complies with the requirements of Directive 2014/34/EU and the following harmonized standards: EN 60079 - 0:2009; EN 60079- 11:2012; EN 60079-7:2007; EN 60079- 31:2009 and standard of EN 443:2008 p. 4.11 in terms of flame resistance.

#### 4.3.3 Technical data.

Name/type	Firefighters torch FHR-15
Temperature range	-30 ; +70 °C
Explosion group	IIB IIIC
Power	2 alkaline batteries 1,5V AAA type ENERGIZER , DURACEL or PANASONIC
Surface resistance	>1 GΩ
Degree of protection	IP 67
Temperature class	T4
Weight (with batteries)	120 g

#### 4.3.4 Marking.

 **CE 2284**  
INTECHPLAST S.A.  
IEP 18 ATEX 0587  
Name Firefighters torch type FHR-15  
II 2G Ex eb ib IIB T4 Gb  
II 2D Ex tb IIIC T<sub>Max</sub> 95 °C Db  
IP 67 T<sub>amb</sub> -30°/+70° C

#### 4.3.5 Installing or replacing batteries.

In order to install or replace batteries one must unscrew the head, take out the light module, take out old batteries and insert new batteries, according to the polarity marking (+;-) inside the torch body, put back the light module and screw back the head.

Caution:

- one must use only alkaline batteries 1,5 V AAA type ENERGIZER, DURACEL or PANASONIC
- when replacing the batteries one must check the state of the seal and when found damaged one must replace them too
- the head must be screwed back until resistance is felt

**Warning:**

Improper installation of batteries may cause explosion, leak or injury. It is not allowed to mix different types of batteries or use old batteries with new ones.

Do not replace batteries in areas in danger of explosion.



#### 4.3.6 Switching on the torch.

In order to switch on the torch one must turn the switch lever right.

Before switching on the torch one must make sure that the batteries are installed.

#### 4.3.7 Guarantee.

The produces gives a 24-month guarantee since the day of purchase.

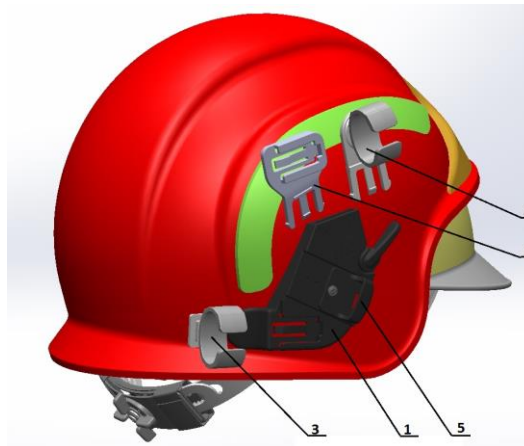
#### 4.3.8 Conditions of use.

Temperature range:  $-30 +70^{\circ}\text{C}$ .

*The torch can be safely used in much higher ambient temperatures and can be directly flame-treated, it fades within 5 seconds after being taken out of flame and does not drip, (which is in compliance with EN 443:2008, p. 4.11, 5.13). However, it may cause torch damage, which is not covered by the guarantee.*

**Do not open the torch in areas in danger of explosion.  
Batteries must be replaced according to p.4.3.5 of this instruction manual.**

#### 4.4 Torch and mask holders.

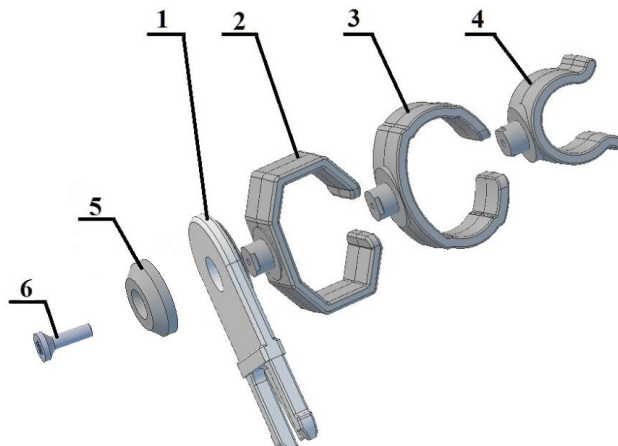


**Fig. 9 Torch and mask holders.**

1.Mask and torch holder; 2.Upper connector for attaching torches; 3.Lower connector for attaching torches; 4. Upper connector for attaching torches Adalit-Adaro; 5. Mask holder- 3position .

As a rule, the helmet is equipped with special sockets placed in the mask holders, which enables the torches to be fixed on the left and right sides of the helmet with the help of a special upper ( Fig. 10 and 11) and lower connector (Fig.12).

Before taking the connector out of the holder on the shell you must slightly deflect it from the shell and pull it out. It is not recommended to put the connector by itself into the holder on the shell.

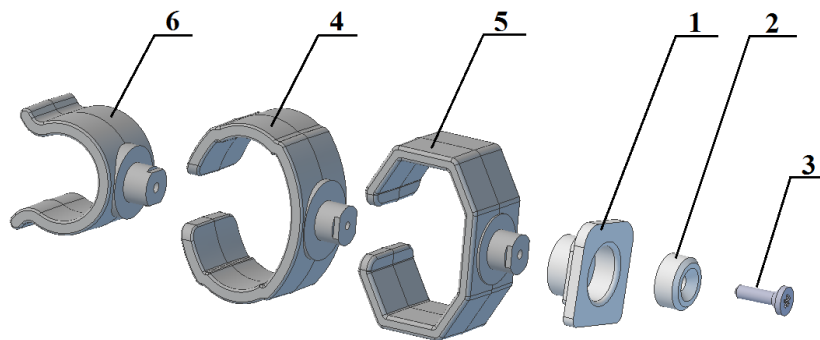


**Fig. 10 Upper connector for attaching torches.**

1.Connector, 2.PELI torch holder, 3.STREAMLIGHT torch holder, ISKRA LED,  
4. 2AAø20mm torch holder, 5.Screw washer, 6.Screw for plastics



**Fig. 11 Upper connector for attaching torches Adalit-Adaro.**



**Fig. 12 Lower connector for attaching torches.**

1.Attaching plate. 2.Screw washer. 3.Screw for plastics. 4. STREAMLIGHT torch holder,  
ISKRA LED 5.PELI torch holder. 6. 2AAø20mm torch holder.

To attach the connectors one should follow the instructions in the pictures, choosing an adequate holder for a given torch. The screw to plastics must be screwed down until there is a refusal of the attached holder when rotating.

## **2. LIST OF SPARE PARTS WHICH MAY BE REPLACED BY THE USER.**

- Visor
- Goggle
- Chin belt
- Band belt
- Neck protector

Any other parts of the helmet which are damaged should be replaced only in our service point.

## **6. REGULATION AND ADJUSTMENT OF THE HELMET.**

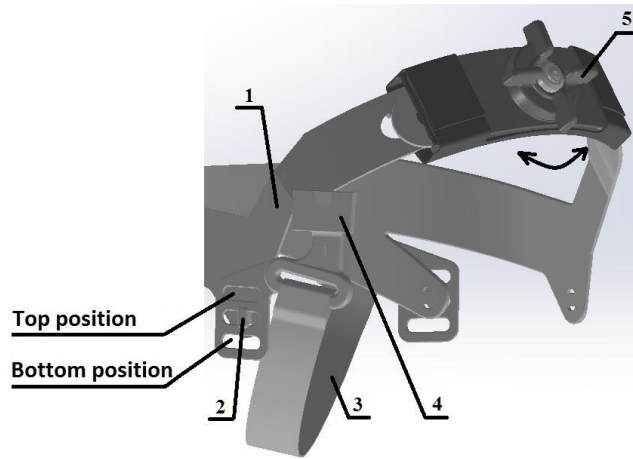
Adjusting the helmet to the user's head is made possible by:

### **1. Regulation of the height of wearing:**

- a) change of seating of the band belt (item 1 Fig.13) by putting the latch (item 4) in one of the three positions. The helmet is seated the highest when the latch is in the top



position.



**Fig.13 Band belt with suspension belt**

1.Band belt; 2. Mounting hook; 3.Suspension belt; 4. Latch (1,2); 5.Knob

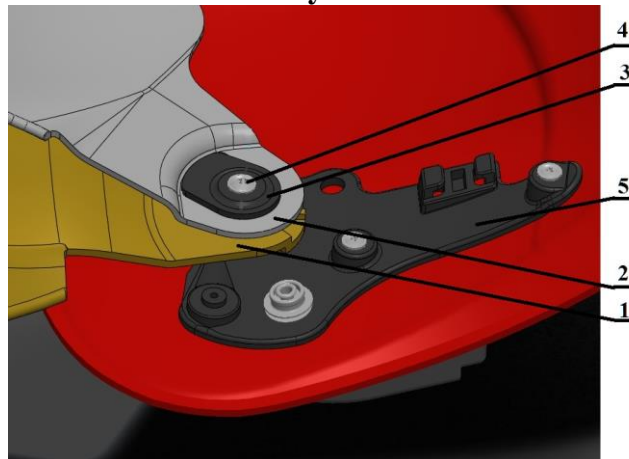
- b) adjust the length of the suspension belt at the main belt by Velcro (item 3, Fig. 13);
2. Regulation of the angle of the helmet seating on the head.
  - a) in order to reduce the distance between and visor and the face, the front latch (item 4) must be put in the highest position and the rear latch in the lowest position
  - b) putting the latches otherwise shall increase the distance between the goggle and visor and the face
3. Adjust the length of the band belt :
  - a) with the knob (item 5, Fig.13) – turning the knob clockwise makes the circumference of the head smaller.
4. Adjust the back chin belts:
  - a) after fastening the chin belts the back belts should be a bit tight.

One shall repeat the adjusting activities as long as the optimum seating of the helmet on the head is provided, which guarantees the user full protection and maximum comfort of use.

## 7. ADJUSTING FACE PROTECTORS.

If the visor and the goggle don't work properly (too loose or too tight) one should screw down or loosen the screw 3,5 x16 (item 4 Fig. 14). The visor must be pulled down by hand or two goggle axes (item 4 Fig.15)

**Note: Use only PZ2 for screw.**



**Fig. 14 Adjusting face protectors**

1.Visor CW-00.04 or CV104.03 ; 2.Goggles; 3.Clutch; 4.Screw 3,5x16; 5.Attaching plate.

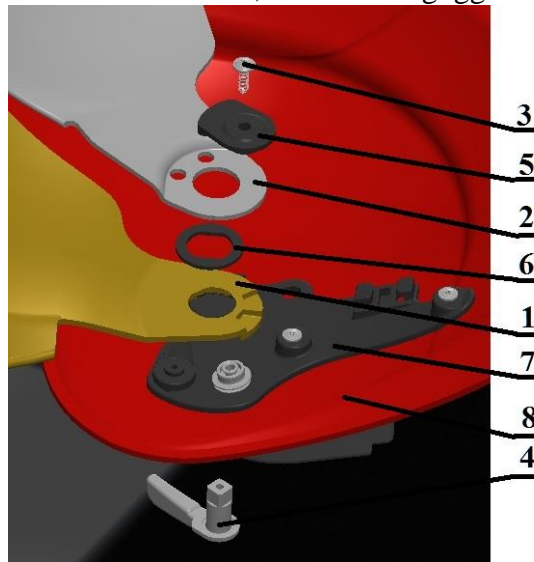
## 8. REPLACING FACE PROTECTORS.

### 8.1 Replacing the goggles.

1. Screw the screw 3,5x16 (item 3, Fig. 15 ) out of the goggles axis (item 4 Fig.15).
2. Take out the clutch (item 4, Fig. 15) and the damaged goggles (item 1, Fig.15).
3. Put in a new goggles, clutch and screw down the whole with the screw 3,5x16 to the goggles axis.

### 8.2 Replacing the visor.

1. Screw the screw (item 3, Fig 15) out of the goggles axis (item 4, Fig 15).
2. Take out the clutch (item 5, Fig 15), the goggle (item 2, Fig 15), the distance piece (item 6, Fig 15) and the damaged visor (item 1, Fig 15).
3. Put in a new visor and the remaining elements: the distance piece, the goggle and the clutch.
4. Screw down the whole with the screw 3,5 x16 to the goggles axis.



**Fig. 15 Replacing face protectors**

1. Visor CW-00.04 or CV104.03 ; 2. Goggles ; 3. Screw 3,5x16; 4. Goggles axis; 5. Clutch; 6. Distance piece; 7. Attaching plate; 8. Shell

## 9. MAINTENANCE.

1. The helmet must be kept with folded face protectors (visor and goggle) in a dry and airy place.
2. The helmet must be kept clean.
3. The shell of the helmet can be washed with water and soap or other gentle washing agents using a soft cloth. One cannot use sponges with polishing parts.
4. To clean the leather elements one can use water and soap.
5. The residue left on the shell after a fire fighting mission may be removed with a car polish paste, e.g. Farecla.
6. To clean the helmet one cannot use any solvent such as benzene, petrol, acetone, etc.
7. It is permitted to cover the interior part of the visor with an anti-fog spray.

## 10. STORAGE AND TRANSPORT.

1. The helmets must be kept in dry, airy, sun-isolated places. Storage place should prevent the helmet from any mechanical damage.
2. The helmets can be transported in all roofed vehicles, in a collective package, on condition that they are safe from drifting, damage or getting dirty.
3. While being transported face protectors (visor and goggle) must be folded inside the helmet.

## 11. WARRANTY CONDITIONS.

- *The helmet retains good utility conditions until normal wear and tear.*
- *The helmet provides safety as long as it is properly assembled and worn.*
- *The helmet meets the requirements of the EN 443:2008; EN 16471:2014; EN 16473:2014 standard if the chin belts are fastened and their length is properly adjusted according to this manual.*
- *The helmet absorbs energy of a stroke by its partial destruction or damage of some of its parts. As a result of a strong stroke, the helmet should be removed from use and replaced with a new one.*
- *A helmet damaged by aggressive agents should be removed from use and replaced with a new one.*
- *Helmet after long-term influence of high temperature and flames with visible damage should be withdrawn from use replaced with a new one*
- *The guarantee doesn't cover scratches of the face protector due to normal use*

**The producer grants a 24 -month warranty for the helmet, starting with the date of purchase.**

The warranty is granted provided that the user presents the original receipt for the helmet, obeys the operating rules included in this *Operating Manual* and uses original and unmodified spare parts.

The warranty covers the defects of material and damage done during the production of the helmet. The warranty does not cover mechanical damage resulting from using the helmet.

The declaration of conformity is available on the website [www.forhero.es](http://www.forhero.es)

The product is subject to EU by the notifying body No 0497, i.e. CSI S.p.A Viale Lombardia 20/B; 20021 BOLLATE (MI-I)

Date of issue: 10.01.2019