

FIRE HELMET

**CALISIA VULCAN**

**TYPE CV 103**

**CE**  
0497



1463 - MED

- ✓ Calisia Vulcan fire helmet – type A helmet.
- ✓ Category 3 personal protective equipment item.
- ✓ Complies with Regulation (EU) 2016/425 and the following harmonised standards:
  - ▶ 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,
 as confirmed by a certificate issued by Notified Body No. 0497 CSI S.p.A.
- ✓ Certificates:
  - ▶ Certificate of Conformity in accordance with Directive 2014/90/EU (MED) on marine equipment issued by Notified Body No. 1463 Polski Rejestr Statków S.A.





### Safety in extreme conditions

- ✓ Excellent protection, use convenience and design.
- ✓ Shell provides impact and penetration protection as well as lateral crushing protection.
- ✓ Complete protection in low (-40°C) and high temperatures.
- ✓ Flame (tested at 1000°C) and heat resistant.
- ✓ Electrical properties acc. to selected items of the EN 443:2008 standard.
- ✓ Contact with liquid chemicals acc. to the EN 443:2008 standard.
- ✓ Resistance to molten metals and hot solids.
- ✓ Top quality face protection:
  - category 3 face protection
  - class 1 optical protection

complies with Regulation (EU) 2016/425 and the following harmonised standards:

- EN 14458:2018 Personal eye-equipment. High performance visors intended only for use with protective helmets;
- EN 166:2001 Personal eye-protection. Specifications.
- EN 171:2002 Personal eye-protection. Infrared filters. Transmittance requirements and recommended use;

Tests within the scope of the following standards:

- resistance to high temperatures, liquid chemicals, flame and heat radiation,
- highest optical radiation protection (IR 4:3)
- protection against high speed particles in extreme temperatures, molten metals and hot solids,
- resistance to drops and liquid splashes,
- resistance to coarse dust particles, gasses and fine dust particles,
- protection against short-circuit arcs,
- E1, E2, E3 electrical properties,
- side protection,
- face shield resistant to surface damage by fine particles,
- anti-fog and/or anti-scratch face shield.



### Available models:

- ★ M – face shield – metalized visor
- ★ T – face shield – clear visor



## TECHNICAL GLOVES

**FHR 012 MAX**

**CE**  
2575

- ✓ FHR 012 Max – Protective gloves against mechanical risks for technical rescue operations. Thanks to innovative design solutions, the glove provides resistance to mechanical damage, abrasion, cuts, tears, punctures, and impacts, while maintaining a high level of dexterity. Special, professional materials applied to the gloves increase the level of safety and comfort of the user in action.
- ✓ The gloves provide protection against mechanical risks according to the following standards::
  - ▶ EN 388:2016+A1:2018 – Protective gloves against mechanical risks.
  - ▶ EN ISO 21420:2020 – Protective gloves. General requirements and test methods.





### FHR 012 MAX technical gloves description

The palm of the glove is made of black and orange two-layer synthetic leather covered with non-slip PVC elements (dots) ensuring excellent dexterity, which provides a "secure grip".

The back of the glove is made of a polyester fluorescent fabric covered with a flexible TPR (Thermo Plastic Rubber) structure which protects the outer part of the hand against impact. The upper part of the glove is finished with gray reflective piping and an elastic neoprene cuff.

The lining is made of Kevlar for cut protection.

Additionally, the glove has a ring with a hook for easy attachment to special clothing.

Sizes: 7-12

Tests according to EN 388:2016 + A1:2018:

- ★ Abrasion resistance – 4
- ★ Cut resistance – 3
- ★ Tear resistance – 4
- ★ Penetration resistance – 3
- ★ Linear cut resistance – B
- ★ Impact resistance – P
- ★ Dexterity level (EN ISO 21420:2020) – 4

EN 388:2016 + A1:2018



4343BP



2575





## LIGHT PROTECTIVE SUIT

**FHR 018**

- ✓ Category 3 personal protective equipment item.
- ✓ Complies with the most stringent protection standards in accordance with Regulation (EU) 2016/425 and the following harmonised standards:
  - ▶ EN 15614:2007 Protective clothing for firefighters. Laboratory test methods and performance requirements for wildland clothing.
  - ▶ EN 13688:2013 Protective clothing – General requirements,
 as confirmed by a certificate issued by Notified Body No. 2474 MIRTHA-KONTROL d.o.o.
- ✓ Lightweight jacket certificate of admittance issued by Notified Body No. 1438 CNBOP-PIB.





### Lightweight protective suit FHR 018 – low weight, functional and safe

- ✓ Lightweight single layer suit made out of sand fabric (75% meta-aramid, 23% para-aramid, 2% anti-static fibres).
- ✓ Excellent ergonomic design for outstanding use comfort.
- ✓ Multifunctional pockets and clamps for attaching motion sensors, torches, gloves, radios.
- ✓ Perforated reflective and fluorescent strips.
- ✓ A carabiner and a loop for attaching accessories.
- ✓ Adjustable width cuffs with elastic tighteners and a thumb hole.
- ✓ Velcro pads for insignia and signs.





# ANTI-ELECTROSTATIC, FLAME-RETARDANT UNDERWEAR

## FHR 020

CE  
0161



- ✓ Personal Protective Equipment Category II.
  - ✓ Meets the highest standards of protection in accordance with Regulation (EU) 2016/425 and harmonized standards:
    - ▶ EN ISO 11612:2015 – Protective clothing – Clothing to protect against heat and flame – Minimum performance requirements
      - A1 – limited flame spread
      - B1 – convective heat
      - C1 – thermal radiation
    - ▶ EN 1149-5:2008 – Protective clothing. Electrostatic properties
- which is confirmed by the certificate issued by the notified body No. 0161 AITEX®





### Anti-electrostatic, flame-retardant underwear FHR 020

- ✓ Underwear with flame-retardant and anti-electrostatic properties, made of knitwear that guarantees a high level of protection and comfort of use, available in three selected models of your choice:
  - ▶ FHR 020 S – T-shirt with short sleeves
  - ▶ FHR 020 L – T-shirt with long sleeves
  - ▶ FHR 020 GL – leggings

- ✓ Material composition: 52% Modacrylic, 26% Cotton, 19% Polyamide, 2% Lycra

- ✓ Advantages:
  - ▶ no side seams
  - ▶ knitted double cuffs
  - ▶ ergonomic shape
  - ▶ perfect fit
  - ▶ functional zones

Available sizes: XS-XXXL



perfect  
fit



ergonomic  
shape



comfortable  
cuffs



functional  
zones



flat  
seams







LIGHTWEIGHT FIRE HELMET

**TYTAN NEO**

**TYPE HTM 103**

**CE**  
0497

- ✓ Category 3 personal protective equipment item.
  - ✓ This helmet delivers a wide range of wildland (forests, grasslands) firefighting applications. It is also suitable for road accident rescues, mountain and water rescues as well as a mountaineering and white water sports helmet.
  - ✓ Complies with Regulation (EU) 2016/425 and the following harmonised standards:
    - ▶ EN 16471:2014 Firefighters helmets. Helmets for wildland fire fighting.
    - ▶ EN 16473:2014 Firefighters helmets. Helmets for technical rescue.
    - ▶ EN 12492:2012 Mountaineering equipment. Helmets for mountaineers. Safety requirements and test methods. Except for par. 4.2.3 – Resistance to retention system
    - ▶ EN 397:2012 + A1:2012 Industrial safety helmets points 5.1.1, 5.1.2 and 5.2.1.
    - ▶ EN 443:2008 Helmets for firefighting in buildings and other structures points 4.9, 5.13.
    - ▶ EN 1385:2012 Helmets for canoeing and white water sports,
- as confirmed by a certificate issued by Notified Body No. 0497 CSI S.p.A..





### Safety in extreme conditions

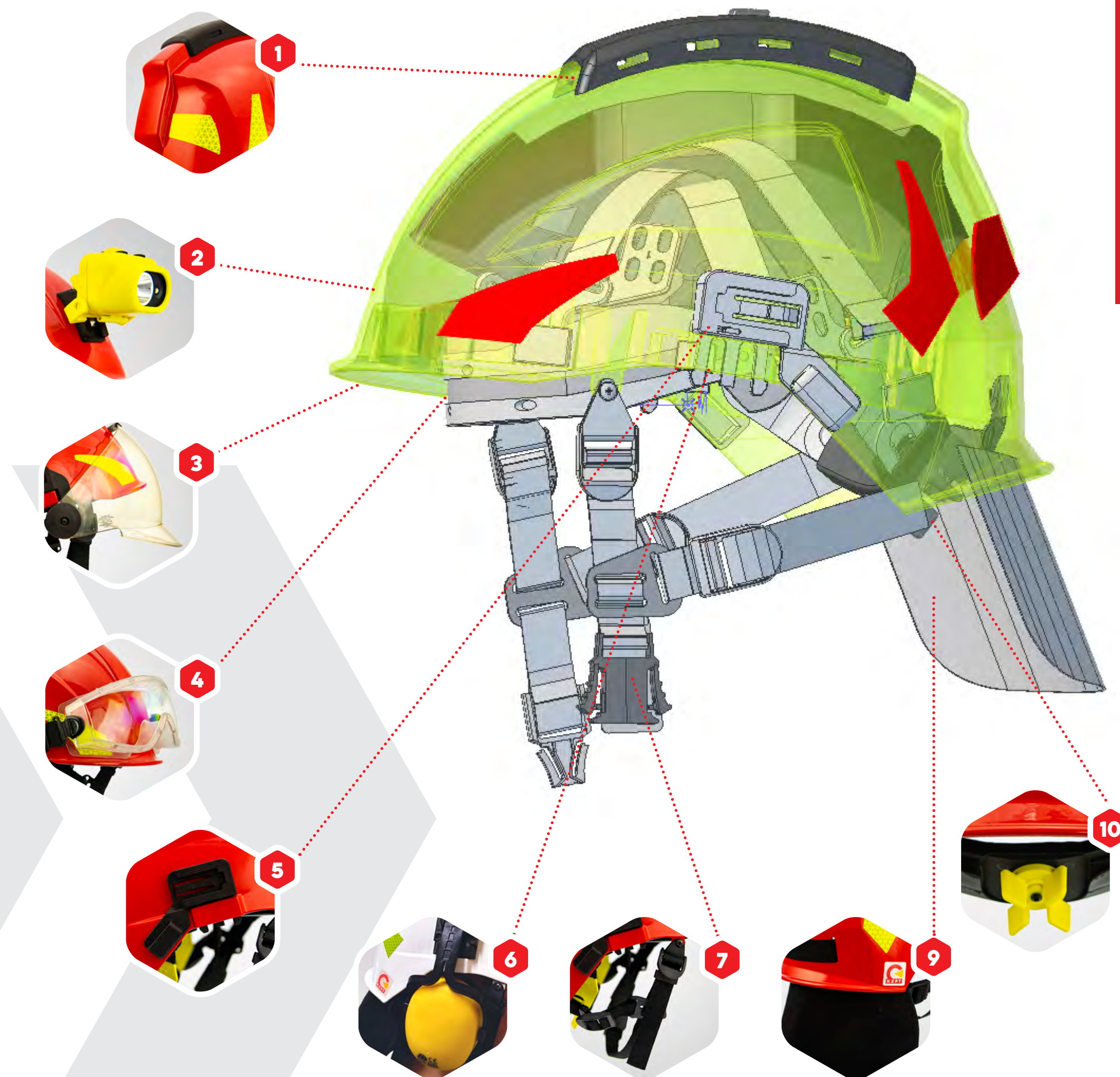
- ✓ Ergonomic, lightweight helmet.
- ✓ Excellent protection parameters, outstanding functionality.
- ✓ Highest safety levels.
- ✓ Complete protection in low and high temperatures (-30°C ÷ +50°C):
  - ▶ shock absorption
  - ▶ penetration resistance: steel ball at 120 m/s,
  - ▶ resistance to lateral crushing,
  - ▶ resistance to liquid chemicals and hot solids,
  - ▶ protection against brief contact with electrical cables (VC up to 440 V).
- ✓ All exterior helmet elements as well as chin straps are fire retardant.





1. Lightweight and durable injection-moulded helmet shell, available in all colours (including photoluminescent), fitted with reflective tape as standard. Ventilation panel with an optional mosquito net is available. Shock-absorbing liner for excellent protection. Optionally, the helmet can be customised by adding fire brigade insignia.
2. Additional accessories: headtorch socket and communication system anchoring points.
3. Clear face shield – optical class 1 visor (compliant with face shield standards applicable to fire helmets: EN 14458:2018, and EN 166:2001).
4. FHR protective goggles with an anti-scratch / anti-fog coating (compliant with the following personal eye protective equipment standards: EN 166:2001 and EN 170:2005).
5. Universal breathing mask and torch anchoring points. Torch anchoring point retains full torch position angle range even with a breathing mask attached.
6. Attachments for ear protectors and protective mesh.
7. Three-point chin strap with a buckle. Inner height and circumference (47 to 68 cm) for tailor-made fit and stability.
8. Additional accessory – silicone chin strap.
9. Short non-flammable fabric neck protector.
10. Large, ergonomic head circumference adjustment knob.

The helmet is also available in a comfort version with inner pads and aramid lining.

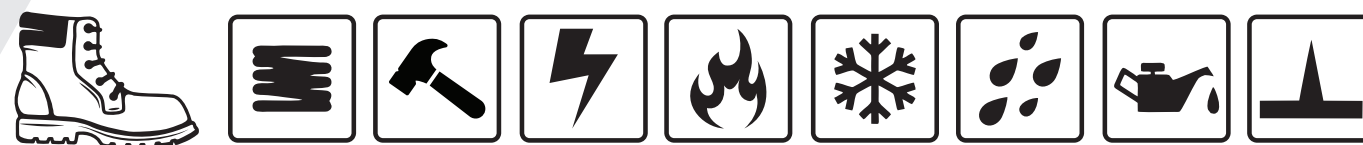




## LEATHER FIRE BOOTS

# FHR 005 / FHR 006

- ✓ Special footwear, delivering safety in extreme environments, including fire-fighting, rescue and containment operations.
- ✓ Complies with the most stringent protection standards in accordance with Regulation (EU) 2016/425 and the EN 15090:2012 Footwear for firefighters harmonised standard for type 2 firefighting footwear as confirmed by a certificate issued by Notified Body No. 2474 MIRT-KONTROL d.o.o.
- ✓ Certificate of admittance issued by Notified Body No. 1438 CNBOP-PIB.







### Safety in extreme conditions

- ✓ Third heat insulation level HI3 (contact heat resistance 40 minutes at 250°C).
- ✓ Steel toe cap with a rubber abrasion resistant edge, 200 J impact resistance and 1500 N penetration force.
- ✓ Made out of grain embossed hydrophobic leather (models 005 PL and 006 PL) or smooth leather (models 005 and 006), specially treated, heat-resistant and water-resistant (for 180 minutes).
- ✓ 3M® non-flammable reflective tape ensures excellent use visibility.
- ✓ NOMEX® non-flammable thread seams.
- ✓ Hook-free lacing system to prevent accidental catching (model 006).

### Available versions:

- |                          |  |
|--------------------------|--|
| ▶ 005                    | — slip-on, smooth leather.                                 |
| ▶ 005 PL                 | — slip-on, embossed leather.                               |
| ▶ 006                    | — double closure system (zip and laces), smooth leather.   |
| ▶ 006 PL                 | — double closure system (zip and laces), embossed leather. |
| ▶ 006 N (short upper)    | — double closure system (zip and laces), smooth leather.   |
| ▶ 006 PL N (short upper) | — double closure system (zip and laces), embossed leather. |

### Maximum comfort

- ✓ IBISAFE® — Kevlar® sole insert instead of a steel insert, ensuring the sole remains non-pierceable, flexible and elastic with excellent thermal insulation properties. Its use significantly reduces the weight of the footwear.
- ✓ NITRIL® — sole made of black vulcanised rubber, protects against frost and high temperatures, ergonomic, anti-static, anti-slip, acid and oil resistant, easy to keep clean.
- ✓ JADO® — a micro-ventilation system used in the upper of the boot (at the cuff), ensures good thermal insulation at both high and low temperatures.
- ✓ Rear articulation zone.
- ✓ Extra ankle protection.
- ✓ Leather quick pull-on straps.
- ✓ Lining around the ankle.
- ✓ Soft cuff in the upper part of the boot.
- ✓ Anatomic tongue.
- ✓ Zip lock system (model 006).





1. Quality waterproof embossed or smooth leather, available in black and red. JADO® – micro-ventilation system with an inner lining, providing good thermal insulation in the upper of the boot.
2. Hook-free lacing system to prevent accidental catching.
3. Anatomically shaped tongue, NOMEX® laces, zip and a quick pull-on strap at the rear.
4. Comfortable back articulation zone made of fabric-reinforced foam and sewn together using non-flammable NOMEX® thread.
5. Pneumatic, anti-static, heat and frost resistant, anti-slip, acid and oil resistant, easy to keep clean NITRIL® sole. Latest generation IBISAFE®, metal-free inner sole with a Kevlar® insert for complete puncture protection.
6. Fire-retardant NOMEX® seams.
7. Steel toe cap with a rubber edge. Abrasion resistant steel toe cap cover.





FIRE HELMET

**SMART HELMET****TYPE CALISIA VULCAN MAX CV 104**

- ✓ Smart Helmet – type B fire helmet.
- ✓ Category 3 personal protective equipment item.
- ✓ Complies with Regulation (EU) 2016/425 and the following harmonised standards:
  - ▶ 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.
 confirmed by a certificate issued by Notified Body No. 0497 CSI S.p.A.
- ✓ Certificate of admittance issued by Notified Body No. 1438 CNBOP-PIB.
- ✓ Certificate ATEX for camera module.





**1. 4K camera** – integrated into the helmet shell, enables video transmission in optimized resolution to the commanding center;

- ★ the image transmitted in real time enables the observation and command of the rescue and firefighting operation without the need to be directly present at the site;
- ★ the option of sharing broadcasts with many authorized recipients helps using the experience of rare events experts in difficult operations;
- ★ an additional option of video recording makes it possible to analyze the course of the events and provides training material.

**2. The LWIR (longwave infrared) thermal imaging camera.** In conditions of limited visibility, transmits in real time the thermal profiles of missing persons, fires, hot spots with the option of choosing the colors of the thermal image visualization;

- ★ the image is simultaneously visible on the near-field display/helmet visor and transmitted to the commanding center.

**3. The near-field display** located at the firefighter's eye level (adjusted precisely by a knob), enables to watch the action through the thermal imaging camera while the field of view is not limited.

**4.** The helmet shell and the camera housing are made of fire-retardant polyamide reinforced with glass fiber, manufactured by injection, which guarantees very high mechanical and thermal resistance.

**5.** The inner face shield of the helmet made of material resistant to high temperature, flame, and chemicals, meets the requirements of the EN 14458 standard and can be used simultaneously with the SCBA.

**6.** The comfortable and soft helmet inner ensures the comfort of using, washing, and disinfecting thanks to the detachable system of chin straps, without the need for tools.

**7.** Height and head size regulation (from 47 to 68 cm) with no need to take the helmet off.

**8.** Integrated multifunctional socket on both sides of the helmet for the SCBA and flashlights.

#### Selected operating parameters:

- ▶ maximum battery life up to 6 hours,
- ▶ recommended continuous working time up to 2 hours,
- ▶ built-in signaling indicator of device activity and battery charge level,
- ▶ built-in USB-C socket for charging the battery,
- ▶ WiFi data transmission system – using a router attached to the helmet or an access point created on a smartphone (local hotspot),
- ▶ easy Smarthelmet application (computer, tablet, smartphone) enables activation and management of individual Smart Helmets in a given unit.





## LIGHTWEIGHT FIRE HELMET

**TYTAN MAX****TYPE HTM 102**

- ✓ Category 3 personal protective equipment item.
- ✓ This helmet delivers a wide range of wildland (forests, grasslands) firefighting applications. It is also suitable for road accident rescues, mountain and water rescues as well as a mountaineering and white water sports helmet.
- ✓ Complies with Regulation (EU) 2016/425 and the following harmonised standards:
  - ▶ EN 16471:2014 Firefighters helmets. Helmets for wildland fire fighting.
  - ▶ EN 16473:2014 Firefighters helmets. Helmets for technical rescue.
  - ▶ EN 12492:2012 Mountaineering equipment. Helmets for mountaineers. Safety requirements and test methods.
  - ▶ EN 397:2012 + A1 2012 Industrial safety helmets points 5.1.1, 5.1.2 and 5.2.1.
  - ▶ EN 443:2008 Helmets for firefighting in buildings and other structures points 4.9, 5.13.
  - ▶ EN 1385:2012 Helmets for canoeing and white water sports,
 as confirmed by a certificate issued by Notified Body No. 0497 CSI S.p.A.  
 The helmet also complies with the following Australian standards:
  - ▶ AS/NZS 1801:1997 Occupational protective helmets.
  - ▶ AS/NZS 1337.1:2010 Personal eye protection,
 as confirmed by a certificate issued by Notified Body No. 0086 BSI Group Australia.

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### Safety in extreme conditions

- ✓ Ergonomic, lightweight helmet.
- ✓ Excellent protection parameters, outstanding functionality.
- ✓ Highest safety levels.
- ✓ Complete protection in low and high temperatures (-30°C ÷ +50°C):
  - ▶ shock absorption
  - ▶ penetration resistance: steel ball at 120 m/s,
  - ▶ resistance to lateral crushing,
  - ▶ resistance to liquid chemicals and hot solids,
  - ▶ protection against brief contact with electrical cables (VC up to 440 V).
- ✓ All exterior helmet elements as well as chin straps are fire retardant.





1. Lightweight and durable injection-moulded helmet shell, available in all colours (including photoluminescent), fitted with reflective tape as standard. Ventilation panel with an optional mosquito net is available. Shock-absorbing liner for excellent protection. Optionally, the helmet can be customised by adding fire brigade insignia.
2. Additional accessories: headtorch socket and communication system anchoring points.
3. Clear face shield - optical class 1 visor (compliant with face shield standards applicable to fire helmets: EN 14458:2018, and EN 166:2001).
4. FHR protective goggles with an anti-scratch / anti-fog coating (compliant with the following personal eye protective equipment standards: EN 166:2001 and EN 170:2005).
5. Universal breathing mask and torch anchoring points. Torch anchoring point retains full torch position angle range even with a breathing mask attached. Attachments for ear protectors and protective mesh.
6. Three-point chin strap with a buckle. Inner height and circumference (47 to 68 cm) for tailor-made fit and stability.
7. Additional accessory - silicone chin strap.
8. Short non-flammable fabric neck protector.

The helmet is also available in a comfort version with inner pads and aramid lining.

