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OPERATING MANUAL

HELMET FOR FIRE FIGHTERS
CALISIA VULCAN typ CV 102 NEO

and face shields: : *CW-00.04, CV-104.03, AK-06/2009.1.46*

Certificate of EU type certification No. DPI/0497/2405

Certificate of EU type examination No. CW/MED/2/09/2024

1.GENERAL CHARACTERISTICS

The firefighter helmet **CALISIA VULCAN type CV 102 NEO** 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 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"; EN 50365:2002 "Insulating helmets for use on low voltage installations". 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 slow - burning tape. The internal surfaces which adjoin the user's head are made of flame retardant material based on Nomex®, and the composite shock-absorbing insert is made of polyurethane.
The comfort of use is improved with the Nomex® padding fixed to the main belt with the help of velcros. 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 has electrical insulating properties, protecting against rated voltage up to 1000 V alternating voltage (AC) and 500V for direct voltage (DC) point 6.3.4; 6.3.5 of EN 50365: 2002
The helmet may be equipped with front plate (V1-black or V2 gold) or torch.
The helmet could be sold in this configuration:

- helmet with faceshield CW-00.04
- helmet with faceshield CV104.03
- helmet with faceshield CW-00.04 and goggles AK-06 / 2009.1.46
- helmet with faceshield CV104.03 and goggles AK-06 / 2009.1.46

Face shields are made by the injection method from polyeterosulphone - material resistant to high temperatures, flames and chemicals, meeting the requirements of the standard EN 14458:2018.
Model CW-00.04 and CV104.03 may be either transparent (in addition, it can be covered with a coating anti-fog and antiscratch) or covered with a golden infrared filter (light permeability 4-3), which protects the user's face even in close contact with flames.
The eye protector made by the injection method from polycarbonate (goggles AK-06/2009.1.46) ensures eye protection against solids and liquids during rescue missions (in addition, it can be covered with a coating anti-fog and antiscratch or tinted UV 5-3.1).

See: Technical conditions for face shield CW-00.04; CV104.03 and AK-06/2009.1.46.

The helmet (without optional equipment) weighs app. 1570 +/- 40g, depending on the equipment version.

The helmet for fire fighters CALISIA VULCAN type CV 102 NEO 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 50365:2002 "Insulating helmets for use on low voltage installations"

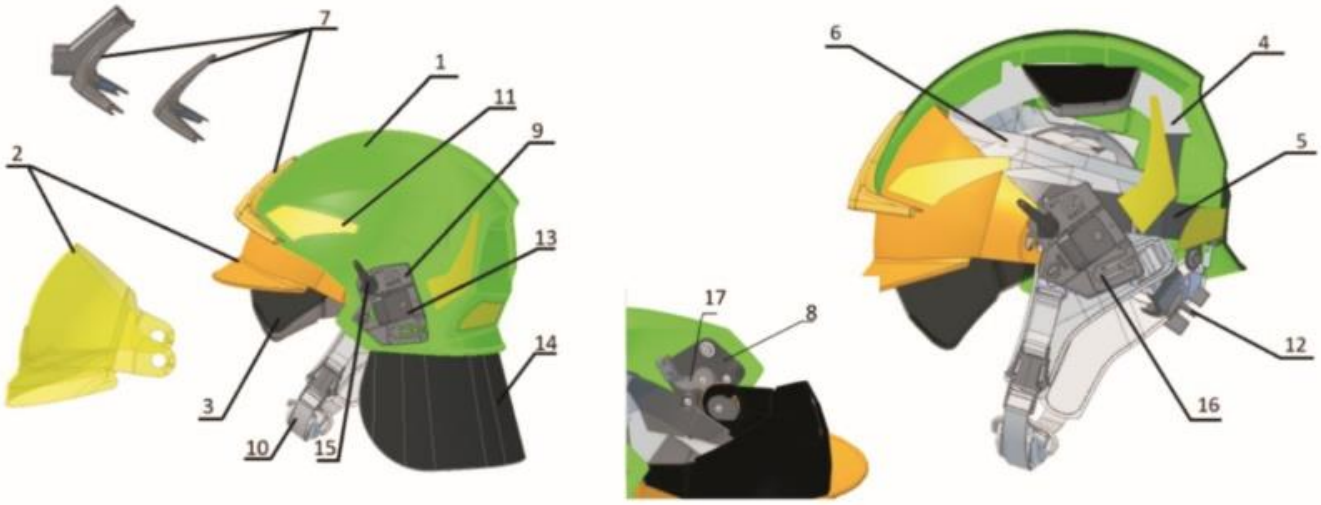
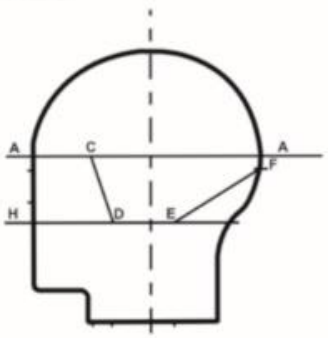


Fig. 1 Basic parts of the helmet:
1. Shell 2. Visor CW-00.04 or CV104.03 3. Goggles (optional) 4. Shock-absorbing insert 5. Band belt 6. Main belt with latches 7. Front plate V1-black; V2-gold or Torch 8. Attaching plate 9. Mask and torch holder 10. Chin belt V1 or V2 11. Reflecting element 12. Smooth regulation system 13. Adjustment mask adaptor 14.Neck protector 15.Goggle axis 16.Lower torch holder 17. Communication system holder.

2. MARKING

Each helmet has an interior label giving the following information:
- Name of the producer *BRANDBULL INTERNATIONAL S.A.*
- Number of the standard: *EN 443:2008, EN 16471:2014, EN 16473:2014, EN 50365:2002*
- Year and month of manufacture
- Name of the helmet: *Hełm strażacki CALISIA VULCAN typ Cv102 NEO*
- Type B3b - *protecting the area above the ACDEF points*



- Head circumferenc: *47-68 cm*
- **** means that the helmet provides protection in low temperatures up to -40°C
- resistance to chemicals - *„C"*
- *E2* - wet helmet insulation
- *E3* - informs that the surface of the helmet does not conduct current
- 1kV - do prac przy niskich napięciach
- EU type examination certificate
- Notified body no. CE 0497
- QR code

EN 50365:2002

CLASS 0

SERIAL NO.

3. ADDITIONAL EQUIPMENT OF THE HELMET

Neck protectors attached by snap fasteners

Fig. 2Neck 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 material.*
- *OS-5 Neck protector made of metallized material and nomex.*
- *OS-6 Neck protector made of Kevlar*

The neck protector must be tacked starting from the rear middle buttons. Then the other buttons can be done up.

Fig. 3 Attaching neck protector.

Wireless communication system fixed on the attaching plate

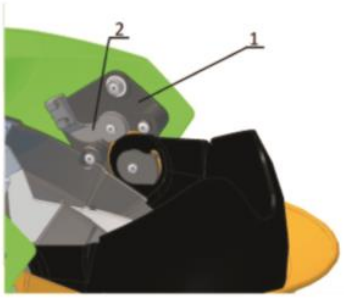


Fig. 4 Attaching plate (1) with the communication system holder (2)

The photos show the communication systems
CT-ContractCom by **CeoTronics i HC-1** by **SAVOX**

Fig. 5 Communication system CT-ContactCom by CeoTronics
2. Loudspeaker 3. Contact microphone.

Fig. 6 Communication system HC-1 by SAVOX

Fig. 7 Communication system HOLMCO Scorpion

Fig. 8 Attaching plate with fixed communication system.
1. Communication system holder 2. Loudspeaker

Fig. 9 Attaching the microphone.

How to do it:

Put the loudspeaker (item 2) in the communication system holder, according to Fig 7. Tilt back the band belt where the arrows show and insert the microphone inside the helmet into one of the two depicted positions (Fig 8). The microphone can be fixed to the shock-absorbing insert with the velcro tape.

Torch holders

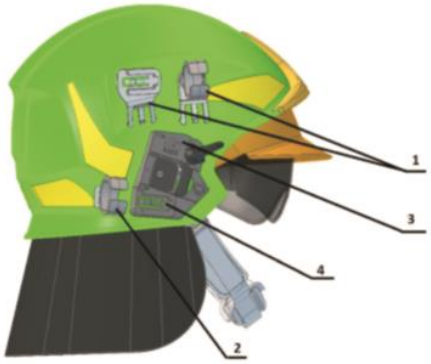


Fig. 10 Torch holders.

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 connector (item 1 Fig. 9). Before taking the connector (item 1 Fig. 9) out of the holder on the shell (item 3, Fig. 9) 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.

The helmet can be also equipped with special holders which enable the torches to be fixed close to the bottom edge of the shell with the help of a special connector (item 4 Fig. 9).

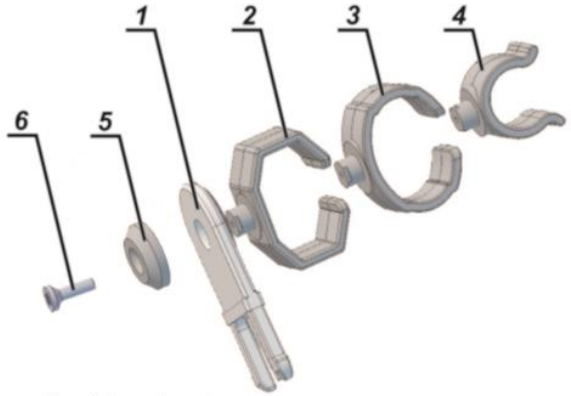


Fig. 11 Upper connector for attaching torches.

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

Fig. 12 Upper connector for attaching torches Adalit-Adaro.

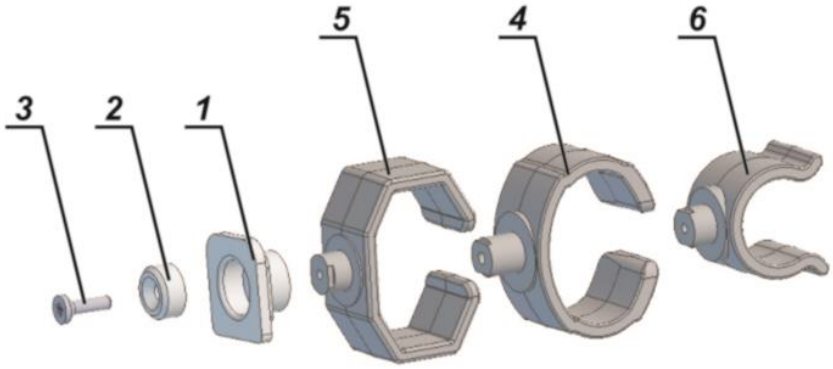


Fig. 13 Lower connector for attaching holders

1.Attaching plate 2.Screw washer 3.Screw for plastics 4. STREAMLIGHT or ISKRA LED torch holder 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.

- Helmet mask attached by the holders placed on the helmet.

The helmet is equipped with a holder cooperating with the breathing masks placed on the helmet, which enables them to be used without taking off the helmet. The following masks are recommended: FENZY type BIOMASK, FENZY type OPTI-PRO, MSA AUER Ultra Elite H, Dräger type FPS 7000, Dräger Panorama Nova.

The helmet with the above mentioned accessories meets the requirements of the EN 443:2008; EN 169471:2014 and EN 16473:2014 standard

Detailed information about the additional equipment can be obtained by phone or by e-mail.

4. LIST OF SPARE PARTS WHICH MAY BE REPLACED BY THE USER

- ·Visor
- ·Goggles
- ·Band belt
- ·Sweat band
- ·Smooth regulation cover
- ·Chin belts
- ·Nomex® padding

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

5. REGULATION AND ADJUSTMENT OF THE HELMET

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

- 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.

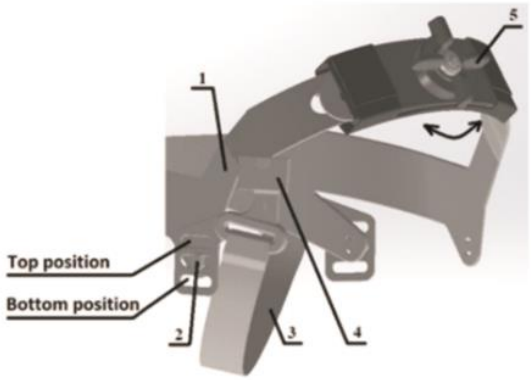


Fig.14 Band belt with suspension belt
1.Band belt; 2. Mounting hook; 3.Suspension belt; 4. Latch (1,2); 5.Knob

Regulation of the angle of the helmet seating on the head. 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 putting the latches otherwise shall increase the distance between the goggle and visor and the face.

Adjust the length of the band belt: with the knob (item 5, Fig.13) turning the knob clockwise makes the circumference of the head smaller.

Adjust the back chin belts: 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.

Fig.15 Band belt with suspension belt inside the helmet

Fig.16 Method of adjusting the chin belt.

Before placing the helmet on the head, loosen the smooth adjustment of the head circumference by the help of the knob. After placing the helmet on the head, lower the smooth adjustment assembly on the back part of the head - the back of the head, and tighten the knob quite tightly.
Then fasten the chin strap in place of the cheekbone (see photo). Then tighten the rear straps. The last stage is to check the seating of the smooth adjustment again and tighten the knob.

6. ADJUSTING THE VISOR AND THE GOGGLES

If the visor or the goggles don't work properly (too loose or too tight) one should screw down or loosen the screw (item 4 Fig 16).

Note: Use only PZ2 for screw.

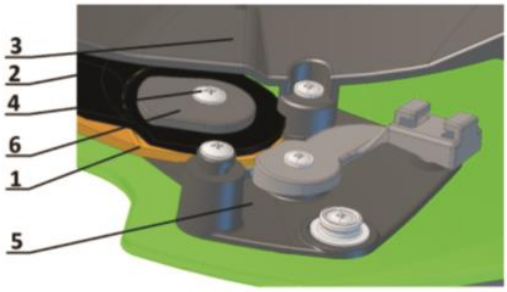


Fig. 17 Adjusting the visor and the goggles.

1.Visor CW-00.04 or CV104.03. 2.Goggles. 3.Retention belt. 4.Screw. 5. Attaching plate. 6. Clutch

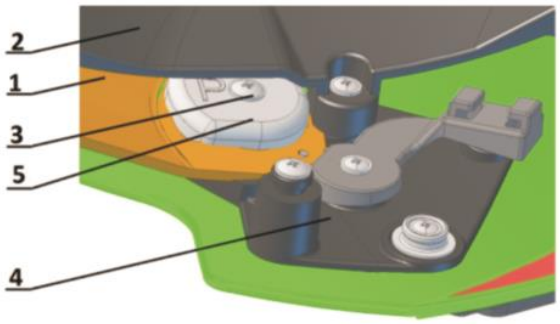


Fig. 17a Adjusting the visor (in the case of one face shield)
1.Visor CW-00.04; 2. Retention belt; 3. Screw 3,5x16; 4. Attaching plate; 5. Clutch.

7. REPLACING THE VISOR OR THE GOGGLES

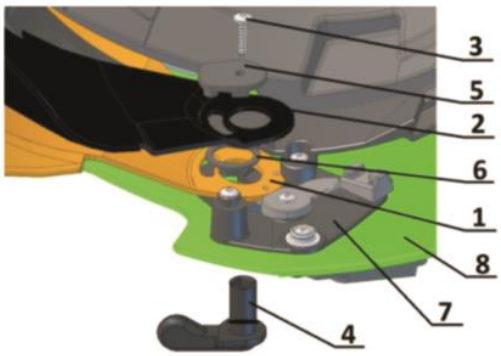


Fig 18 Replacing face protectors (visor or goggles)
1. Visor CW-00.04 or CV104.00 2.Goggles 3. Screw 4. Goggles axis 5. Clutch
6. Distance piece 7.Attaching plate 8.Shell.

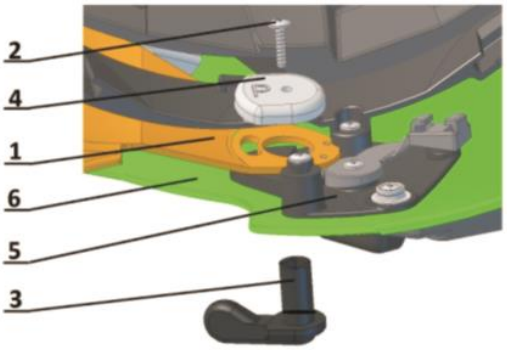


Fig. 18a Replacing face protectors (in the case of one face shield)
1.Visor CW-00.04 2. Screw 3,5x16 3.Goggles axis 4. Clutch 5. Attaching plate 6. Shell

- ***Replacing the goggles***

Screw the screw (item 3, Fig 17) through the hole in the retention belt out of the goggles axis. Take out the clutch (item 5, Fig 17) and the damaged goggles (item 2, Fig 17). Put in new goggles and the clutch and screw down the screw to the goggles axis.

- ***Replacing the visor (in the case of two face shield)***

1. Screw the screw (item 3, Fig 17) through the hole in the retention belt out of the goggles axis.
2. Take out the clutch (item 5, Fig 17), the goggles (item 2, Fig 17), the distance piece (item 6, Fig 17) and the damaged visor (item 1, Fig 17).
3. Put in a new visor and the remaining elements: the distance piece, the goggles and the clutch.
4. Screw down the whole with the screw to the goggles axis.
5. Replacing the visor (in the case of one face shield).
6. Screw the screw (item 2, Fig 17a) through the hole in the retention belt out of the goggles axis (item 3, Fig 17a).
7. Take out the clutch (item 4, Fig 17a), the goggles (item 1, Fig 17a
8. Put in a new visor and the clutch.
9. Screw down the whole with the screw to the goggles axis.

8. POSSIBLE OPTIONS OF CHINSTRAPS IN CALISIA VULCAN CV 102 NEO HELMET.

- Chinstrap V3

Chinstrap is made of non-flammable tape and textile (V3) padding. Chinstrap is assembled to the mounting plates with the help of easy clip-on and clip-off elements holders which provides easy assembly and disassembly. In the back of the helmet, the back plate socket is fastened with two screws. Back plate is assembled with the back strap with the help of easy clip-on and clip-off element. This ensures easy assembly and disassembly of The belt also in the rear part.

9. MAINTENANCE

- The helmet must be kept with folded face protectors (visor and goggles) in a dry and airy place.
- The helmet must be kept clean.
- 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. To clean the leather elements one can use water and soap.
- The residue left on the shell after a fire fighting mission may be removed with a car polish paste, e.g. Farecla.
- To clean the helmet one cannot use any solvent such as benzene, petrol, acetone, etc.
- It is permitted to cover the interior part of the visor with an anti-fog spray.

10. STORAGE AND TRANSPORT

- The helmets must be kept in dry, airy, sun-isolated places. Storage place should prevent the helmet from any mechanical damage.
- 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.
- While being transported face protectors (visor and goggles) 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.
- Damaged shell and face protectors (visor and goggles) can be replaced against payment.

NOTE! When the helmet is used with accessories or items of equipment other than indicated in this manual, it may not meet all the requirements of the standards EN 443:2008; EN 16471:2014; EN 16473:2014 and EN 50365:2002

- The helmet is resistant to the following chemicals: sulfuric acid (30%), sodium hydroxide (10%), p-xylene, butane-1, n-Heptane (table 2 EN 14458:2018)
- The user should check that the electrical limits for the helmets match the voltage rating that can be encountered during use.
- Electrically insulating helmets should not be used in actions where there is a risk of partial reduction of their insulating properties.
- If the helmet becomes dirty or contaminated (oil, tar, paint, ... etc.)
- Especially the outer surface, clean it thoroughly from the outside as recommended.
- Double triangle symbol, CLASS 0 - indicates the electrical insulating properties of helmets used for work with devices with voltage up to 1 kV

EN 50365:2002

CLASS 0

SERIAL NO.

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 and others documents is available on the website **www.brandbull.pl**.

The product is evaluated according to EU type in a notified institution no. *0497, tj.: CSI S.p.A Viale Lombardia 20B, 20021 BOLLATE (MI)*

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