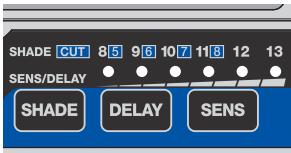


## How to change cartridges

**WG3<sup>+</sup>**  
Ray Camera Helmet

### ⑧ Shade / Delay / Sensitivity Signal Display



The shade, delay, and sensitivity control buttons are used to intuitively display the current control status to the user. Each press of each control button moves the LED one space left→right, and the shade is adjusted from bright to dark, open time from fast to slow, and sensitivity from soft to sensitive.

### ⑨ Battery change signal indicator / ⑩ Grind function indicator

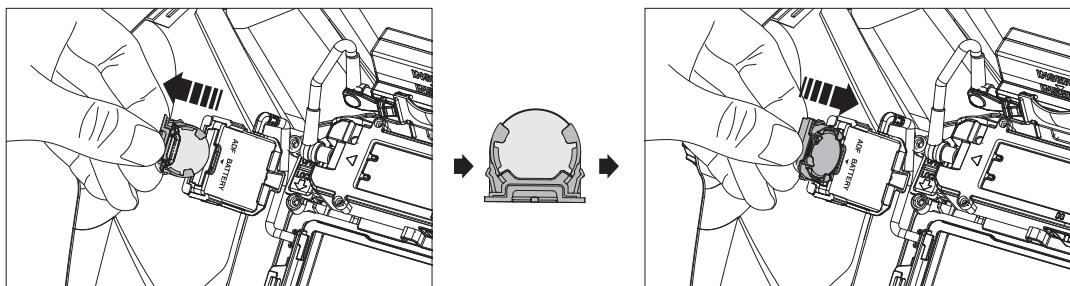


The battery replacement signal indicator serves as a reminder of the battery life and can be used for approximately 24 hours after the indicator starts blinking, but it varies depending on usage conditions, so replace it immediately. The grind function indicator lamp flashes every 5 seconds when the grind function is engaged.

### ⑪ How to change the cartridge battery



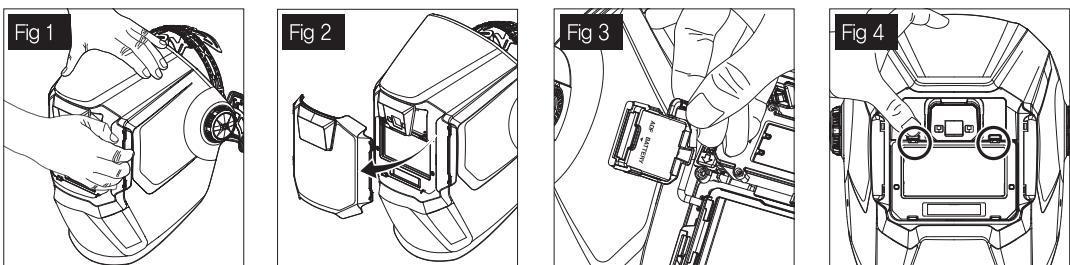
After changing the batteries, be sure to press the on/off button before use



When the batteries are low, the battery replacement signal indicator will light up. The lens can be used for about 24 hours from the time it lights up, but it is recommended to replace the battery immediately as it varies depending on the working environment. To replace the battery, remove the battery holder in the direction of the arrow as shown in the figure.

**Battery model:** Coin type battery (1 x Coin Type CR 2450/3V)

### How to replace the cartridge

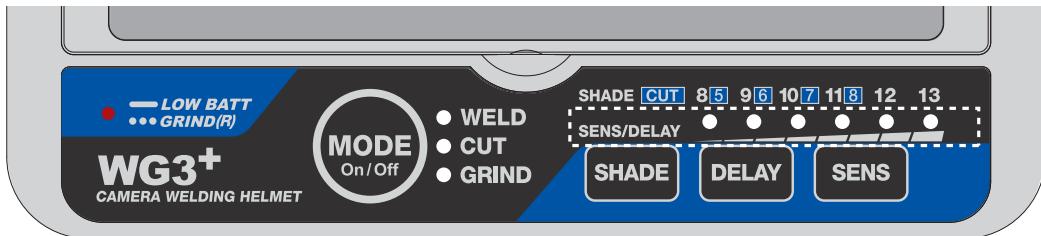


- 1) Pull out one side of the one-piece cover as shown in [Figure 1].
- 2) Remove the one-piece cover as shown in [Image 2].
- 3) Unplug the cartridge power wire that is connected to the battery inside the face as shown in [Image 3].
- 4) Slide out the cartridge inside the spheroid while pressing the marked area with one hand, as shown in [Image 4].

# Describe cartridge features and how to replace them

## Sensitivity adjustment method Left (dull response) / Right (sensitive response)

### 1) How to adjust sensitivity under standard conditions – when working in the welding function



#### a) Standard usage depending on the welding environment

SENS/DELAY	○ ○ ● ● ● ●	For outdoor welding operations
SENS/DELAY	● ● ○ ○ ● ●	For general welding operations
SENS/DELAY	● ● ● ● ○ ○	For low-current welding operations

#### b) Standard usage based on welding current intensity

SENS/DELAY	○ ○ ● ● ● ●	150A or more
SENS/DELAY	● ● ○ ○ ● ●	150A ~ 10A
SENS/DELAY	● ● ● ● ○ ○	10A or less

Set the sensitivity adjustment range according to the welding conditions in (a) and (b), and then adjust the precise sensitivity adjustment according to (c) below.

#### (c) How to adjust the sensitivity according to the welding environment

Determine the sensitivity adjustment range according to the conditions in (a) and (b) above, and then select a precise sensitivity adjustment according to the operator's environment using the sensitivity adjustment button according to ①, ②, and ③ below.

- ① The lens is dark and does not brighten – Sensitivity is sensitive
  - Adjust the sensitivity by moving the Sensitivity adjustment button from the current state to the left by one space until it becomes brighter.
- ② If the lens is bright and does not darken – Sensitivity is dull
  - At the welding distance, move the sensitivity adjustment button from its current position to the right by one space until it darkens.
- ③ If the lens flickers repeatedly
  - If the lens flickers repeatedly even though the surroundings are normal, it is caused by a mismatch between the welding distance and the sensitivity of the sensor, please increase the sensitivity adjustment button to the right or move the welding distance a little closer.

### 2) How to adjust sensitivity at outdoor work sites

Adjusting the sensitivity during the initial use or when the working conditions and environment change can help you achieve the best working conditions. In an outdoor work environment, increase the sensitivity adjustment button to the left (sensitive) to darken and decrease it back to the right (dull) to lighten, and the sensitivity that fits the welding environment is the sensitivity.



Never perform any welding without a lens protector.  
Never store the lens without a lens protector.  
If the lens is used without a lens protector, it is not eligible for free A/S.

## 1. Lens Protector Role

The lens protector plays an important role in protecting the sensor, solar panel, and lens/viewing area, which are important parts of the welding surface, from contaminants such as welding spatter, fumes, and dust. The lens protection plate must be genuine, and the genuine lens protection plate produced by our company only uses products that have passed Korean industrial safety standards, American safety standards, European safety standards, German safety standards, and Canadian safety standards.

## 2. How to check the authenticity of the lens protection plate

Check the marking OTOS Z87+ 1 B CE on the top right corner of the lens protector

## 3. When to replace the lens protector

The lens protector should be replaced immediately if scratches, welding spatter, fumes, dirt, dust, or dirty debris on the surface of the lens protector interfere with vision. It should also be replaced if the lens protector is warped, causing gaps between the weld surfaces.

If the lens protector is contaminated and still in use, it should be replaced if

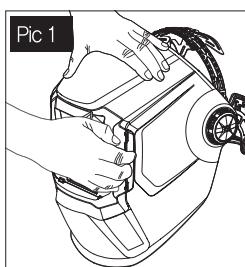
- a) Normal operation is not possible without endangering the operator.
- b) The sensor may be covered and may not work.

This may cause the welding surface to become inoperable.

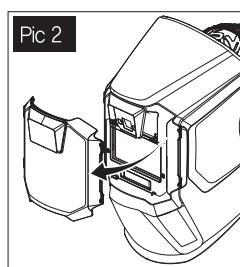
The inner lens protector plate also requires periodic cleaning and replacement with a soft, clean cloth.

## 4. To replace the lens protector

### A. How to replace the outer lens protector

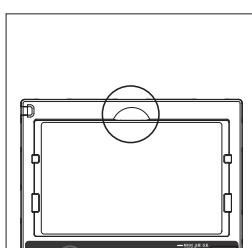


Remove the cartridge cover by pulling on one side of the cover as shown in the illustration

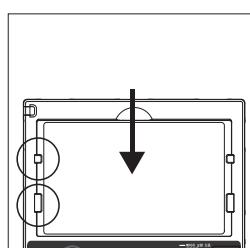


Replacing the lens protector  
Peel off the protective vinyl on both sides of the new lens protector to be replaced and assemble it by inserting the lens protector into the grooves on the faceplate. Be careful not to leave fingerprints on the lens protector plate

### B. How to replace the inner lens protector



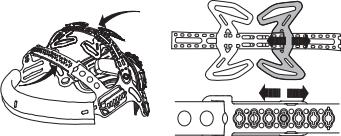
- To disassemble  
Remove the lens protector by pulling it forward using the grooves made in the cartridge.



- To assemble  
Assemble the lens protector by plugging it in from the top down, making sure that the lens protector lugs on either side of the lens.

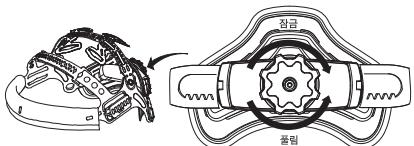
# How to put on a welding Helmet

## 1. How to adjust the head depth



The illustration next to it shows how to adjust the head depth. Move the headband in the direction of the arrows to adjust the eye level so that the user's eyes are centered on the lenses, then lock it into the holes. (It is fixed to the factory-marked baseline, so it is convenient to use this as a reference for adjustment).

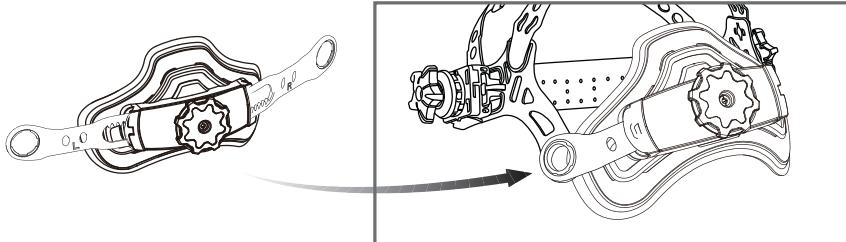
## 2. How to adjust the head circumference



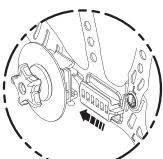
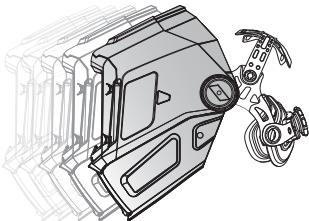
You can adjust the headband to fit your head circumference by wearing the welding face and turning the adjustment washer on the back headband clockwise (locked) or counterclockwise (loosened).

## 3. Flextech cushion

"Non-slip, pressure relief, load distribution effect, essential for neck health" Highly elastic cushion pad for neck health



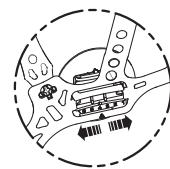
## 4. 6 steps to adjust the depth of the dihedral (adjust the distance between the eye and the lens)



(Fig1)



(Fig2)



(Fig3)

The figure above shows how to adjust the face length (the distance between the user's eyes and the lens). As shown in [Figure 1], the headband is slid onto the rail shape of the sphere and fastened. There are 6 square holes on the headband, spaced 6mm apart. (The position can be moved in steps 1–6.) To adjust the distance, the headband can be moved forward or backward while pressing the travel stopper parts in [Figure 2] together in the direction of the arrows.

Adjust the opposite stopper to lock the left and right sides to the user's first selected position from positions 1 to 6 as shown in [Figure 3]. The headband can be easily removed by holding it down as shown in [Figure 2].