

PANDRAMAXX HYBRID CLT



Tabella dei livelli di protezione EN ISO 19734

**Marcaggi vetro
di protezione:**

OS 1 B EN 166
Hersteller
Optische Klasse
Mittlere Stossenergie
Nummer der Norm

**Kennzeichnung
Laserschutzbrille
EN 207:2017:**

Augen

1000-1100 D LB7 + I LB8 OS CE
Wellenlängenbereich in nm
Laserbetriebsart
Schutzstufe
Laserbetriebsart
Schutzstufe
Hersteller
Europäisches Konformitätszeichen

D Dauerstrich
I Impuls

Gesicht

1000-1100 D LB4 + I LB5 B OS CE
Wellenlängenbereich in nm
Laserbetriebsart
Schutzstufe
Laserbetriebsart
Schutzstufe
Mittlere Stossenergie
Hersteller
Europäisches Konformitätszeichen

D Dauerstrich
I Impuls

OS 1 B EN 166
Manufacturer
Optical class
Medium energy impact
Number of the standard

**Marking laser safety
glasses
EN 207:2017:**

Eyes

1000-1100 D LB7 + I LB8 OS CE
Wavelength spectrum in nm
Laser mode
Protection level
Laser mode
Protection level
Manufacturer
European mark of conformity

D Continuous wave
I Pulsed

Face

1000-1100 D LB4 + I LB5 B OS CE
Wavelength spectrum in nm
Laser mode
Protection level
Laser mode
Protection level
Medium energy impact
Manufacturer
European mark of conformity

D Continuous wave
I Pulsed

OS 1 B EN 166
Identification du fabricant
Classe optique
Impacts moyenne énergie
Marque de certifications

**Marquages lunettes de
protection laser
EN 207:2017 :**

Yeux

1000-1100 D LB7 + I LB8 OS CE
Plage de longueurs
Mode de fonctionnement
Numéro d'échelon
Mode de fonctionnement
Numéro d'échelon
Identification du fabricant
Marquage de conformité européen

D Continu
I Implusionnel

Visage

1000-1100 D LB4 + I LB5 B OS CE
Plage de longueurs
Mode de fonctionnement
Numéro d'échelon
Mode de fonctionnement
Numéro d'échelon
Impacts moyenne énergie
Identification du fabricant
Marquage de conformité européen

D Continu
I Implusionnel

OS 1 B EN 166
Identificazione del fabbricante
Classe ottica
Impatto media energia
Numero della norma

**Marcaggi occhiali protettivi
per applicazioni laser
EN 207:2017:**

Occhi

1000-1100 D LB7 + I LB8 OS CE
Spettro lunghezza d'onda in nm
Tipo di modalità laser
Grado di protezione
Tipo di modalità laser
Grado di protezione
Identificazione del fabbricante
Marchio europeo di conformità

D Onda continua
I Impulso

Viso

1000-1100 D LB4 + I LB5 B OS CE
Spettro lunghezza d'onda in nm
Tipo di modalità laser
Grado di protezione
Tipo di modalità laser
Grado di protezione
Impatto media energia
Identificazione del fabbricante
Marchio europeo di conformità

D Onda continua
I Impulso

**Kennzeichnung
Laserschutzbrille
ISO 19818-1:**

Augen

**Marking laser safety
glasses
ISO 19818-1:**

Eyes

**Marquages lunettes de
protection laser
ISO 19818-1 :**

Yeux

**Marcaggi occhiali protettivi
per applicazioni laser
ISO 19818-1:**

Occhi

1000–1100 nm OD7 C5 P5 | ISO 19818-1 OS CE

Wellenlängenbereich

Optische Dichte

Laserbetriebsart und Schutzstufe
Laserbetriebsart und Schutzstufe

Nummer der Norm

Hersteller

Europäisches Konformitätszeichen

1000–1100 nm OD7 C5 P5 | ISO 19818-1 OS CE

Wavelength spectrum

Optical density

Laser mode and protection level
Laser mode and protection level

Number of the standard

Manufacturer

European mark of conformity

1000–1100 nm OD7 C5 P5 | ISO 19818-1 OS CE

Plage de longueurs

Densité optique
Mode de fonctionnement et numéro d'échelon
Mode de fonctionnement et numéro d'échelon

Marque de certifications

Identification du fabricant
Marquage de conformité européen

1000–1100 nm OD7 C5 P5 | ISO 19818-1 OS CE

Spettro lunghezza d'onda

Densità ottica
Tipo di modalità laser e grado di protezione
Tipo di modalità laser e grado di protezione

Numero della norma

Identificazione del fabbricante
Marchio europeo di conformità

C Dauerstrich
P Impuls

C Continuous wave
P Pulsed

C Continu
P Implusionnel

C Onda continua
P Impulso

Gesicht

Face

Visage

Viso

1000–1100 nm OD4 CP3 | ISO 19818-1 OS B CE

Wellenlängenbereich

Optische Dichte

Laserbetriebsart und Schutzstufe

Nummer der Norm

Hersteller
Militäre Stossernergie
Europäisches Konformitätszeichen

1000–1100 nm OD4 CP3 | ISO 19818-1 OS B CE

Wavelength spectrum

Optical density

Laser mode and protection level

Number of the standard

Manufacturer
Medium energy impact
European mark of conformity

1000–1100 nm OD4 CP3 | ISO 19818-1 OS B CE

Plage de longueurs

Densité optique
Mode de fonctionnement et numéro d'échelon

Marque de certifications

Identification du fabricant
Impacte moyenne énergie
Marquage de conformité européen

1000–1100 nm OD4 CP3 | ISO 19818-1 OS B CE

Spettro lunghezza d'onda

Densità ottica
Tipo di modalità laser e grado di protezione

Numero della norma

Identificazione del fabbricante
Impatto media energia
Marchio europeo di conformità

C Dauerstrich
P Impuls

C Continuous wave
P Pulsed

C Continu
P Implusionnel

C Onda continua
P Impulso

Zubehör und Ersatzteile

**Accessories and Re-
placement Parts**

**Accessoires et pièces
détachées**

Accessori e ricambi

Kopfband (IsoFit)	Headband (IsoFit)	Serre-tête (IsoFit)	Fascia per la testa (IsoFit)	5003.291
Komfortpolster	Comfort pad	Coussin de confort	Cuscinetto comfort	5004.290
Nasenpolster	Nose pad	Coussinet nasal	Nasello	5003.600
USB Staubschutz	USB dust protection	Protection anti-poussière USB	Protezione antipolvere USB	5003.520
Micro-USB-Kabel	Micro USB cable	Câble micro USB	Cavo micro USB	5010.001
Vorsatzscheibe	Front cover lens	Lentille du couvercle avant	Lente frontale	5000.270
Innere Schutzscheibe	Inside cover lens	Lentille du couvercle intérieur	Lente interna	5000.185
Brustschutz	Chest protection	Protection de la poitrine	Protezione del torace	4028.015
Kopf- und Nackenschutz	Head & neck protection	Protection de la tête et du cou	Protezione della testa e del collo	4028.016
Kopf- und Nackenschutz (PAPR)	Head & neck protection (PAPR)	Protection de la tête et du cou (PAPR)	Protezione della testa e del collo (PAPR)	4028.031
Gesichtsschutz (PAPR)	Face seal (PAPR)	Joint facial (PAPR)	Guarnizione frontale (PAPR)	4160.400
Luftschlauchhalter (PAPR)	Air hose holder (PAPR)	Support de tuyau d'air (PAPR)	Supporto per tubo dell'aria (PAPR)	4551.024

Table of contents

1	Safety	5
2	Product description	6
3	Operation	7
4	Troubleshooting	7
5	Repair	7
6	Service life	8
7	Disposal	8
8	Warranty and liability	8
9	Legal information	8
10	Declaration of Conformity	8

1 Safety

1.1 Warning instructions in this document

Warning instructions in this document warn about hazards that may occur when using the welding helmet. They are available in four hazard levels, which can be recognised by the signal word:

Signal word	Significance
HAZARD	Indicates a hazard with a high risk that can cause death or serious injury if not avoided.
WARNING	Indicates a hazard with medium risk that can cause serious injury if not avoided.
CAUTION	Indicates a hazard with a low risk that can cause minor or moderate injury if not avoided.
ATTENTION	Indicates a hazard that can cause material damage.

1.2 General safety information

- Read all safety information and instructions.
- Keep the operating instructions for future reference.
- Wear additional protective clothing when welding/grinding.
- Check that the front cover lens has been fitted correctly.
- If the anti-glare guard is damaged, it must no longer be used.
- Affixing stickers or similar to the helmet is not permitted.
- Observe protection level recommendation according to EN ISO 19734.
- The helmet is suitable for all electrical welding techniques.

1.3 Safety instructions for laser safety glasses

- Recommendations for using laser safety glasses can be found in the relevant standards or in DGUV [German Social Accident Insurance] Information 203-042.
- The laser safety officer must always be involved in selecting the correct laser safety glasses, and a risk assessment must be carried out.
- All persons in the laser hazard zone must use suitable eye protection.
- Laser safety glasses protect the eyes from an accidental direct hit by the laser beam. They are not suitable for looking directly into the laser beam. They are not approved for use in road traffic.
- Limit values and resistance tests are based on a maximum duration of 5 s
- Reflective filters offer standard-compliant protection in a max. range of +/- 30°.
- Before use, check whether the laser safety glasses offer the protection appropriate for the laser.

- Hazards also arise from diffuse or directly reflected laser beams due to tilting or incorrect alignment of optical components and on laser safety glasses with reflective coatings.
- Laser safety glasses must be checked for damage and correct fit before each use.
- Laser safety glasses only protect in the coverage area.
- Glasses and covers with damage, scratches, and colour changes must be replaced or checked.
- Dirty reflective filters can reduce the protective effect and must, therefore, be cleaned before use.

1.4 Specific safety instructions



HAZARD

Severe eye and skin injuries due to laser beams

- Use the welding helmet as intended.
- Wear protective clothing.



WARNING

Allergic skin reactions caused by particles and substances

- Use the welding helmet as intended.
- Wear protective clothing.



WARNING

Severe injury due to non-observance of safety and temperature classes

- Observe the overall labelling of the safety class. The lowest safety class of all components used is decisive.
- For use at extreme temperatures, the corresponding labelling must be observed: FT, BT, or AT



WARNING

Eye and skin injuries due to heat and radiation (UV, IR)

- Use the welding helmet as intended.
- Wear protective clothing.



WARNING

Wearing glasses underneath the welding helmet

Direct shock transmission to the head
Head and facial injuries



CAUTION

Light transmission of the automatic darkening filter

Incorrect colour perception

Impaired perception of signal lights or warning indicators



CAUTION

Design features of the helmet

Restriction of the field of vision

Reduction of hearing and thermal sensation

Skin contact with the head section may cause allergic reactions in sensitive people

Risk of collision with objects or people due to large (head) circumference (head with the helmet)

1.5 Intended use

The welding helmet is suitable for the following applications:

- Tack welding
- Continuous welding
- Laser welding
- Grinding

The welding helmet may only be used for welding and grinding and not for other applications. The manufacturer accepts no liability if the welding helmet is not used as intended or in accordance with the instructions for use.

1.6 Symbols in this document



Welding mode



Grinding mode



Fit of the helmet



Maintenance and repair

✓ Requirement

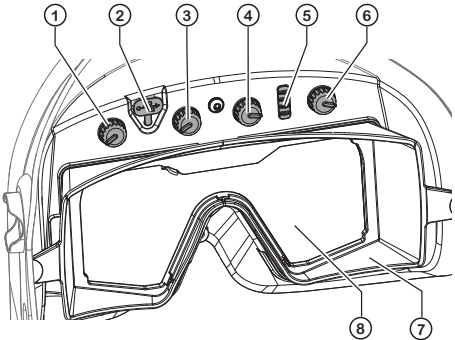
► Work step

⇒ Intermediate result

⇒ Result

2 Product description

A welding helmet is a head covering that protects the eyes, face, and neck from burns, UV light, sparks, infrared light, laser light, and heat during certain welding tasks. Depending on the model, the helmet can be combined with an industrial safety helmet and/or a PAPR system (Powered Air Purifying Respirator).



1

Sensitivity

2

Charging socket

3

Delay, Tack, and Fade-Tronic

4

ShadeTronic®

5

ShadeTronic® and manual mode slider

6

Manual mode

7

Laser protection frame

8

Anti-glare guard

Functions

- Active filter: Adapts light transmission depending on the intensity of the welding arc
- Passive filter: UV light
- Passive filter: IR light
- Passive filter: Laser light
- Colour perception
- Anti-glare guard with hibernation mode

2.1 Operating modes

Welding: ShadeTronic®

ShadeTronic® is the automatic mode in which the protection level is automatically adjusted to the intensity of the arc by means of sensors (EN ISO 16321:2021). In position "N", the protection level corresponds to 4<12. The protection level correction can also be set. Depending on personal preference, the protection level can be adjusted up or down by up to two levels. The absolute minimum and maximum protection levels 4 and 12, respectively, cannot be exceeded or underrun, regardless of the correction setting.

Welding: Manual mode

In manual mode, the protection level can be set manually. You can choose between protection levels 3 to 8. In manual mode, the protection level correction is disabled.

Grinding: Grinding mode

In grinding mode, the guard is deactivated and remains in the bright mode for 10 minutes. The activated grinding mode can be recognised from the outside by the blue flashing LED and from the inside by the reflection on the front cover lens of the helmet.

2.2 Sensors

The welding helmet has 5 sensors. 4 sensors are used to detect the welding light and 1 sensor is responsible for detecting the light intensity (ShadeTronic®).

2.3 Photosensitivity

The photosensitivity can be adjusted according to the welding arc and the ambient light. In the "super high" range, a very high photosensitivity is achieved to guarantee dimming even with weak arcs.

2.4 Opening time

The opening time controller allows you to select the opening delay from dark to light. A continuous adjustment from bright to light between 0.1 - 2.0 s can be made.

2.4.1 Tack welding mode

The tack welding mode (tack) is specially designed for tack welding, where the delay in the opening time is the shortest.

2.4.2 Fading effect

The fading effect (FadeTronic) offers additional protection for the eyes against fatigue and irritation from afterglow for a smooth transition from dark to bright. It gives the eye time to get used to the brightness.

2.5 Battery

The helmet has a high-performance lithium-polymer (LiPo) battery.

Charging status:

- Red flashing light: Battery is almost empty and needs to be charged immediately.
- Orange light: Battery is charging.
- Green light: Battery is fully charged.

2.6 Technical data

Protection level
ShadeTronic®: 2.5 (bright mode), 4 < 12 (dark mode)
Manual mode: 2.5 (bright mode), 3 – 8 (dark mode)
Laser protection according to EN 207
Eyes: 1,000–1,100 D LB7 + I LB8 OS CE
Face: 1,000–1,100 D LB4 + I LB5 B OS CE
Laser protection according to ISO 19818–1
Eyes: 1,000–1,100 nm OD4 CP3 ISO 19818-1 OS CE
Face: 1,000–1,100 nm OD7 C5 P5 ISO 19818-1 OS B CE

UV/IR protection	Maximum protection in bright and dark mode
Switching time from bright to dark	90 µs (23 °C / 73 °F) 70 µs (55 °C / 131 °F)
Switching time from dark to bright	0.1– 2.0 s with FadeTronic
Power supply	Solar cells, lithium polymer battery
Weight	Non PAPR: 605 g / 21.3 oz PAPR: 775 g / 27.3 oz
Operating temperature	-10 °C – 55 °C / 14 °F – 131 °F
Storage temperature	-20 °C – 70 °C / -4 °F – 158 °F
Classification according to EN ISO 16321-2	16321 OS W2.5/3-8 /4-12 V2 TIG+ Viewing angle dependence = V2
Approvals	CE, EAC, ANSI, AS/NZS, complies with CSA Z94.3, ISO 16321 TIG+
Additional labels for the PAPR version (notified body CE 1024)	EN12941 (TH3 in combination with e3000X, TH2 for versions with industrial helmet and e3000X) EN14594 (Class 3B in combination with supplied air)

3 Operation

3.1 Adjusting the fit of the helmet

! NOTE

Risk of the lever breaking

- ▶ When adjusting the distance between the eyes and the helmet, press the lever slightly forwards.

- Adjust the headband **A** ▶ [9]
- Release the headband **B** ▶ [9]
- Set the distance between the eyes and the helmet **C** ▶ [9]
- Adjust the helmet tilt **D** ▶ [10]

3.2 Disabling/enabling grinding mode

! CAUTION

Risk of blinding glare!

- ▶ Do not use this mode for welding.

- Enable grinding mode **G** ▶ [10]
- Disable grinding mode **H** ▶ [10]

3.3 Setting the welding operating mode

- Select ShadeTronic® **E** ▶ [11]
- Select manual mode **F** ▶ [11]

3.4 Setting the protection level

- ShadeTronic® **I** ▶ [11]
- ShadeTronic® with protection level correction **J** ▶ [11]
- Manual mode **K** ▶ [11]

3.5 Setting the opening time

! NOTE

- ▶ For fast tack welding, do not set the rotary knob in the "FadeTronic" area.
- ▶ Use the "tack" area with a minimum opening delay.

- Set the delay **L** ▶ [11]
- Set tack welding mode **M** ▶ [11]
- Set the dimming **N** ▶ [11]

3.6 Adjusting the sensitivity

- Adjusting the sensitivity **O** ▶ [12]

3.7 Charging the battery

! CAUTION

If the anti-glare guard does not function correctly despite charging the battery, contact your official retailer. A defective battery may only be replaced by the manufacturer or a service centre certified by the manufacturer.

- Charging the battery **P** ▶ [12]
- Check charging status **Q** ▶ [12]

4 Troubleshooting

Problem	Solution
Anti-glare cassette guard does not darken	▶ Adjusting the sensitivity O ▶ [12] ▶ Clean sensors or front cover lens R ▶ [12] ▶ Check charging status Q ▶ [12] ▶ Switch off opening delay L ▶ [11] ▶ Disable grinding mode H ▶ [10]
Protection level too bright	▶ Select higher protection level (manual mode) K ▶ [11] ▶ Select protection level +1 or +2 (ShadeTronic®) I ▶ [11] ▶ Replace the front cover lens S ▶ [13]
Protection level too dark	▶ Select lower protection level (manual mode) K ▶ [11] ▶ Select protection level -1 or -2 (ShadeTronic®) I ▶ [11]
Anti-glare guard flickers	▶ Adjust the position of the opening time controller (delay) to the welding technique L ▶ [11] ▶ Adjusting the sensitivity O ▶ [12] ▶ Check charging status Q ▶ [12]
Poor visibility	▶ Clean the front cover lens or the anti-glare guard R ▶ [12] ▶ Adapt the protection level to the welding technique (manual mode) K ▶ [11] ▶ Adapt the protection level correction to the welding technique (ShadeTronic®) I ▶ [11] ▶ Increase ambient light
Welding helmet slips	▶ Adjust the headband A ▶ [9]

5 Repair

! NOTE

Viewing panels damaged/scratched

- ▶ Do not use strong cleaning agents, solvents, alcohol, or cleaning agents with abrasives.
- ▶ Only clean the viewing panels with a damp cloth.
- ▶ Replace scratched or damaged viewing panels.

- Cleaning and disinfection **R** ▶ [12]
- Replace the front cover lens **S** ▶ [13]
- Replace the inner protection lens **T** ▶ [13]

- Replace the nose pad **U** ▶ [13]
- Replace the headband **V** ▶ [14]
- Replace the comfort pad **W** ▶ [14]

6 Service life

The welding helmet has no expiry date. The product can be used as long as there is no visible or invisible damage or malfunction.

7 Disposal

Helmets, fresh-air devices (PAPR system), chargers, batteries/rechargeable batteries, accessories, and packaging must not be disposed of with household waste. They must be recycled in an environmentally friendly manner. The applicable national regulations must be observed. The batteries/rechargeable batteries must be discharged before they can be recycled/disposed of in an environmentally friendly manner.

8 Warranty and liability

Please refer to the manufacturer's national sales organisation for warranty policy. For further information, please contact your authorised specialist retailer. Warranty shall be granted only for material and manufacturing defects. If damage occurs due to improper use, unauthorised interference, or use not intended by the manufacturer, the warranty and liability are void. The warranty and liability are also void if spare parts other than those sold by the manufacturer are used.

9 Legal information

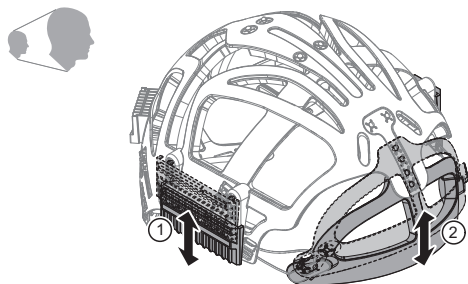
This document complies with the requirements of EU Regulation 2016/425 Point 1.4 of Annex II.

10 Declaration of Conformity

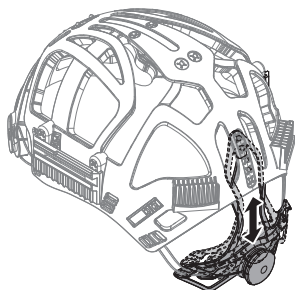
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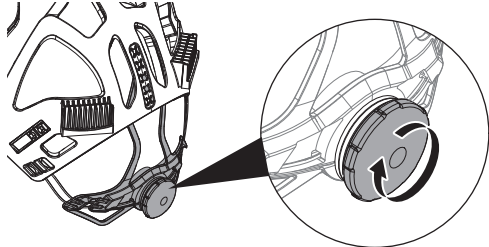
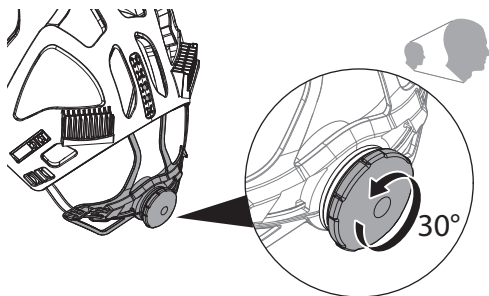
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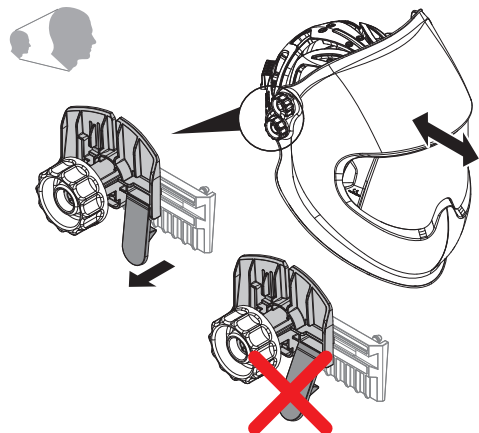
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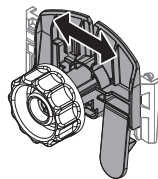
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**B****C**

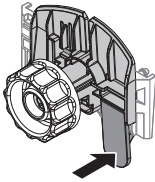
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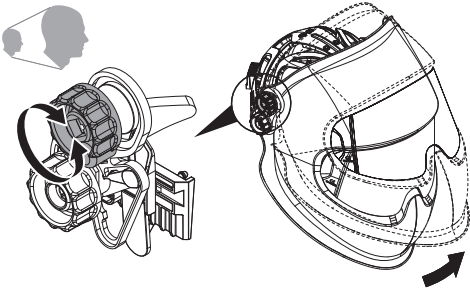


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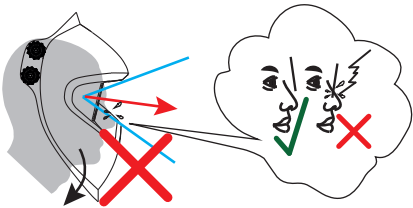


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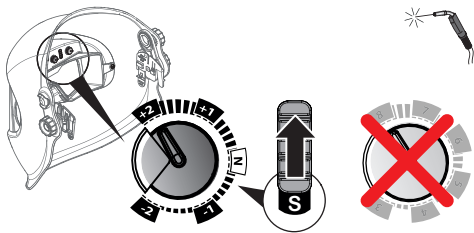


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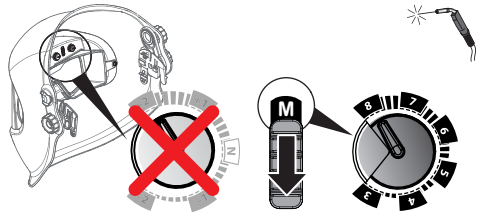


⇒ U ▶ [13]

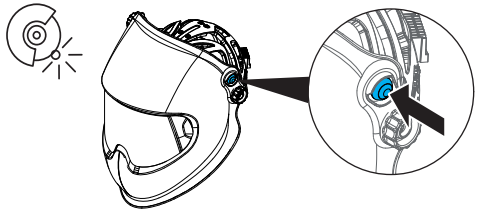
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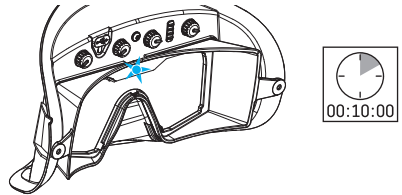
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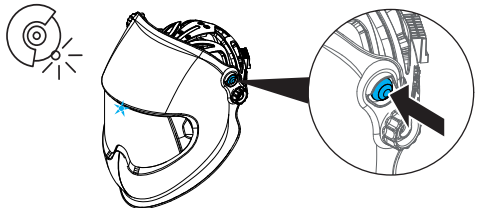


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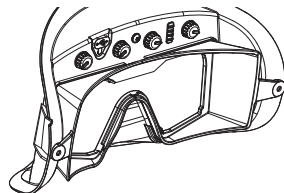


H

✓ G ▶ [10]

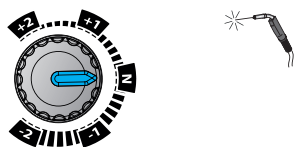


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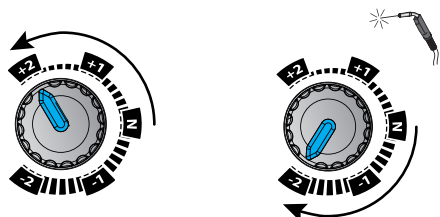


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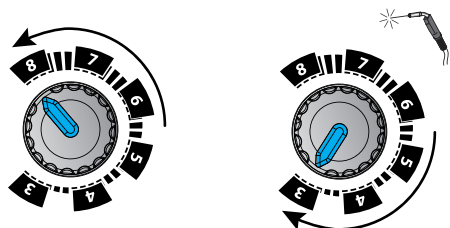
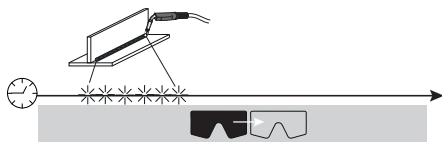
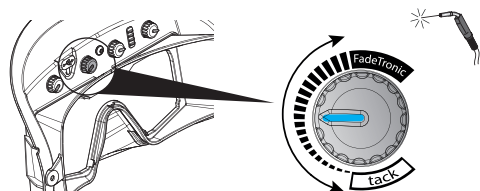
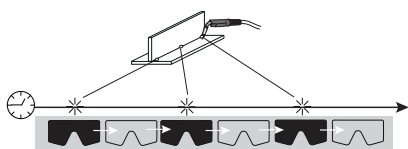
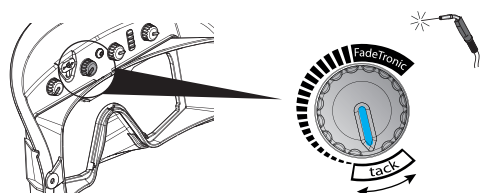
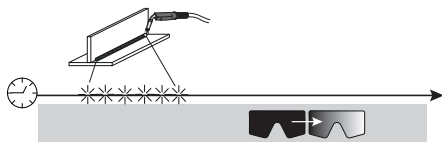
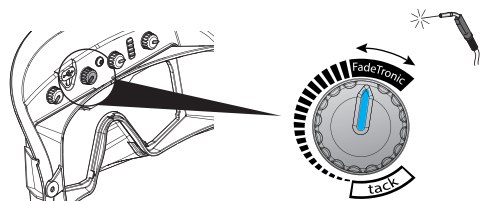
✓ E ► [11]

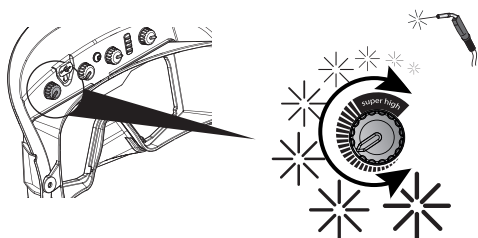
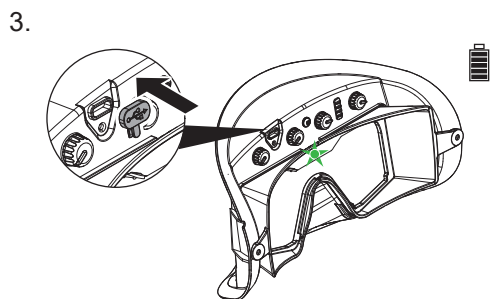
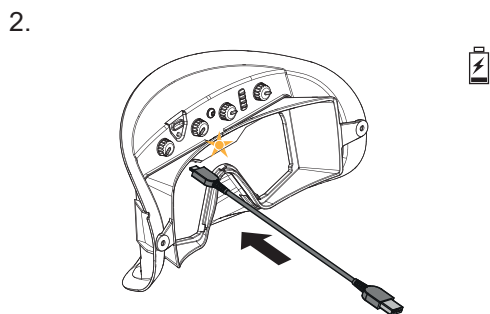
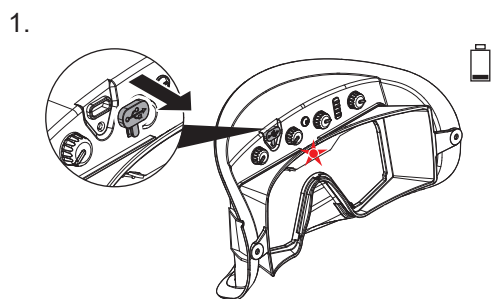
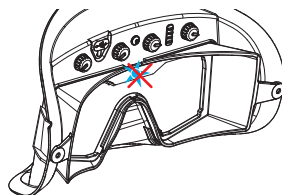
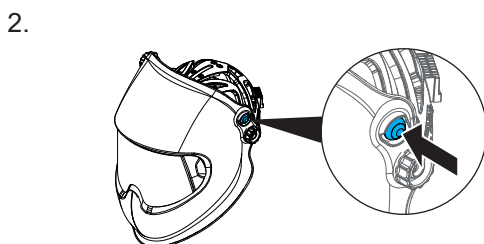
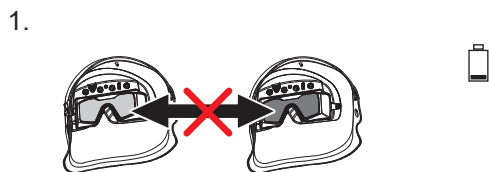
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✓ E ► [11]

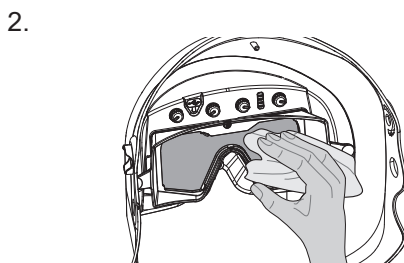
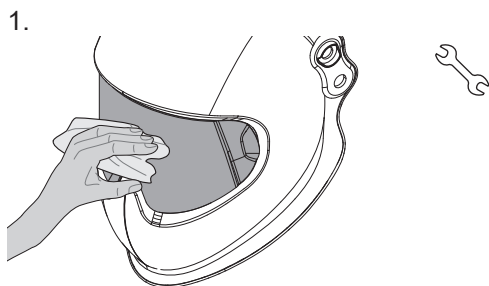
**K**

✓ F ► [11]

**L****M****N**

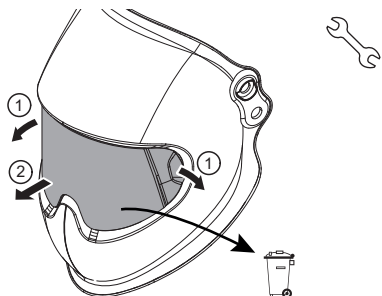
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⇒ **P** ► [12]

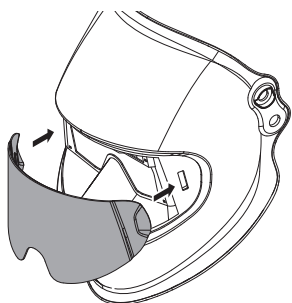
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S

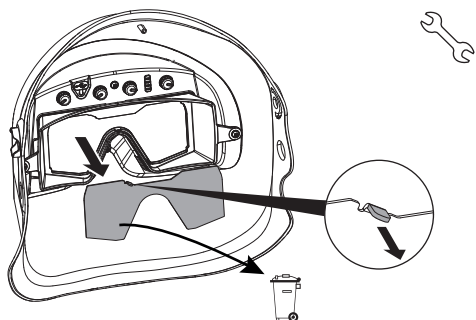
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2.

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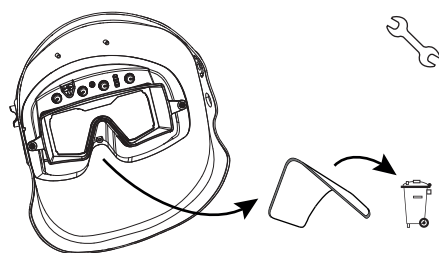
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2.

**U**

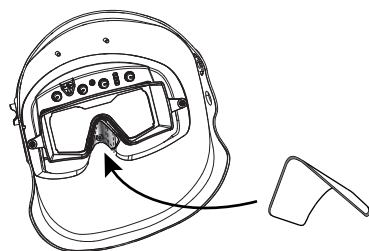
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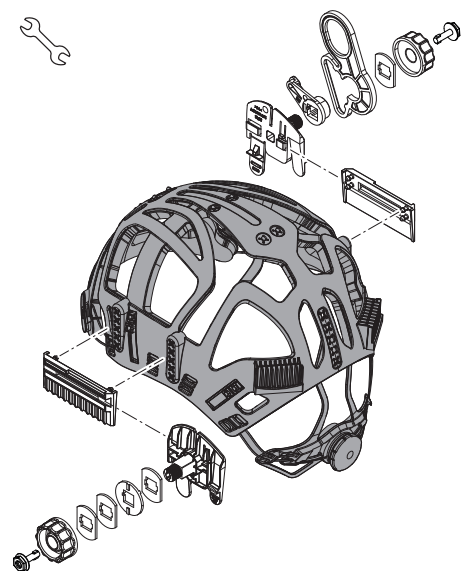
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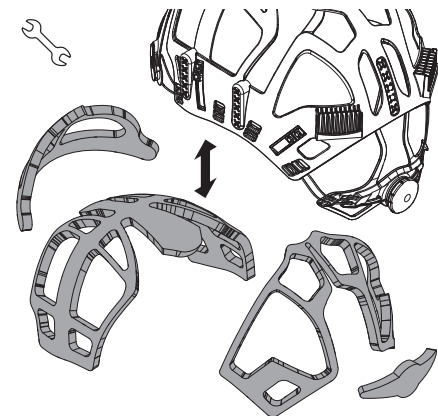
3.



V



W



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