



SHINE[®]

PRODUCT
CATALOGUE

2.0

**YOUR TRUSTWORTHY
WELDING PROTECTION EXPERT**

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THE COMPANY

COMPANY INTRODUCTION

Changzhou Shine Science & Technology Co., Ltd., located in Changzhou, Jiangsu Province, very close to the metropolis Shanghai, one hour by high-speed train, is the first domestic enterprise to start the research, development, and manufacturing of auto darkening welding helmets and PAPRs. We have become the world's largest R&D and manufacturing center of Auto darkening welding helmets and PAPRs.

SHINE QUALITY

Shine is equipped with a full set of German DIN center testing equipment and takes strict control of the production procedures according to the ISO-9001: 2008 international quality system. All of our products are CE, ANSI certified and exported worldwide over the past 20 years. We have conducted strategic cooperation with a large number of the world's top welding groups.

SHINE TECHNOLOGY

Shine persists in scientific and technological innovation as well as independent research and development. We have a highly skilled engineering team engaged In the research and development of auto-darkening welding helmets, PAPRs, and other related technology over the past years. We are maintaining the industry-leading edge in technology as the profession makes perfect.

Through field research, the wishes of the user are translated into the most ideal product. We use the latest and most innovative technologies by always staying in touch with the welders.

SHINE MISSION

Shine - Your Trustworthy Welding Protection Expert. Maintaining the leading edge in technology and pursuing top quality and providing the best service for our customers is our solemn mission.





WELDING SAFETY

**Protecting your Health
is our Focus**



EUROPEAN LEGISLATION

LIMITATIONS OF USE:

The selection and use of the Shine safety welding filter, helmet, PAPR system, and any related spare part used to keep the PPE operational must be based on hazard assessment of the wearer's environment. This must be carried out by an appropriately trained individual for the relevant employer or organization.

EYE, FACE AND RESPIRATORY PROTECTION IN WELDING ACTIVITIES

Under European Commission's direction, it is the employer's responsibility to assess the need for personal protective equipment in their working environment and, where required, provide the necessary PPE free of charge to the workforce.

Personal protection during welding-related activities requires the combination of several PPE devices, all of them working together to deliver a high level of protection for the tasks.

The testing and classification of eye protection are achieved through compliance with the requirements established in EN 166 for protective lenses and visors, while for welding filters, the applicable standards are EN 169 for passive filters and EN 379 for Automatic Darkening Filters (ADFs). Effective Welding PPE solutions combine the optical protection offered by the welding filter against harmful intense light from the welding arch (in particular in the form of IR and UV light), with the mechanical strength protection that comes from the protective lenses and visors against flying particles generated during welding related activities.

Integral protection of the face is completed with a barrier against mechanical hazards (i.e. flying particles) provided by the interaction of face shields and protective lenses (regulated by EN 166) and welding shields (required to comply with the requirements under EN 175) to deliver a welding PPE solution.

CLASSIFICATION OF MECHANICAL STRENGTH

CLASS S:	INCREASED ROBUSTNESS (DROP BALLS TEST 5.1 M/S)
CLASS F:	RESISTANCE TO HIGH-SPEED PARTICLES AT LOW ENERGY IMPACT (45 M/S)
CLASS B:	RESISTANCE TO HIGH-SPEED PARTICLES AT MEDIUM ENERGY IMPACT (120 M/S)
CLASS T:	ENERGY IMPACT IS CONDUCTED AT EXTREMES OF TEMPERATURE (-5°C AND + 55°C)

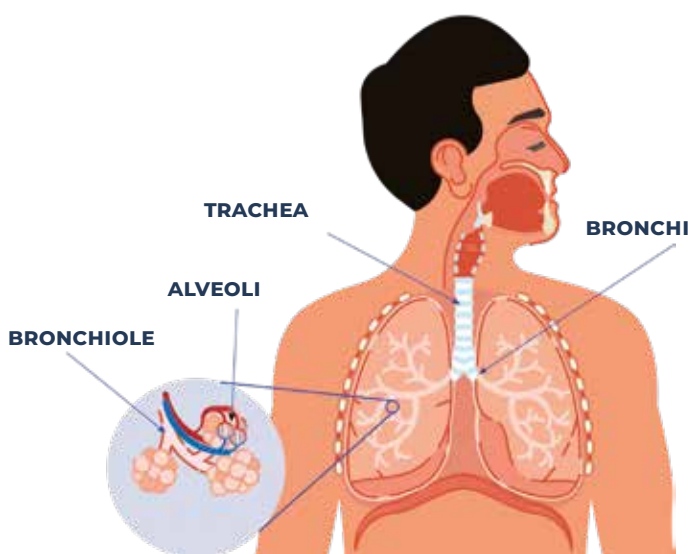
ADDITIONAL PROTECTION MAY REQUIRE THE USE OF THE FOLLOWING PPE:

Assisted protection, in particular, Power Assisted Purifying Respirators (PAPR's) that offer protection against airborne solid and liquid particles, may work in certain cases in combination with filters against a range of gases and/or vapors. PAPR systems are classified according to tested total inward leakage (among other requirements indicated in EN 12941), being TH1 for a maximum of 10% TH2 for a maximum of 2%, and the highest performance TH3 for a maximum of 0.2%.

Hard hats, which deliver head protection (among other requirements indicated in EN 397) and are integrated with welding and face shields and PAPR systems, provide multiple combined protection against multiple hazards encountered in certain work areas.



THE IMPORTANCE OF RESPIRATORY PROTECTION



Workplace health hazards are a major concern for both employers and employees. It is critical to remember, however, that hazardous materials only pose a health risk when they come into contact with your body. Hazardous materials can enter your body in three ways:

- 1. INGESTION – THROUGH THE MOUTH
- 2. ABSORPTION – THROUGH THE SKIN, EYES
- 3. INHALATION – THROUGH THE LUNGS

INHALATION is the most common route of exposure to the majority of health hazards. This includes breathing in dust, fumes, oil mist, and vapours from solvents and various gases.

When you take a breath, oxygen-rich air enters your body via your mouth and nose, windpipe, and lungs. **ALVEOLI** are tiny air sacs found in the lungs. The oxygen from the air is then transferred into your bloodstream by these delicate air sacs. Simultaneously, oxygen is absorbed into your bloodstream and carbon dioxide is transferred from your bloodstream to your air sacs. When you exhale, you are removing gaseous waste from your body.

An average person will breathe in and out about 12 times per minute. Each inhalation brings about 500 ml of air into the lungs (corresponding to 6 liters of air per minute at rest), together with any contaminants that this air contains. People undertaking hard physical work will breathe harder and take in more than 6 liters per minute. Over an eight-hour working day, more than 2800 liters of air will pass through the lungs. In conditions of hard physical work, up to 10 000 liters may be exchanged during the course of an eight-hour work shift.



Source: <https://www.ccohs.ca/oshanswers/chemicals/> <https://incchem.org/documents/hsg/hsg/> - International programme on chemical safety



“It’s better to be safety conscious than unsafe and unconscious,”

Everyone has a responsibility to work safely and not endanger themselves or others at work. Welding, cutting, and other related processes pose numerous occupational hazards to welders and others.

A hazard is something that has the potential to cause injury or harm to one’s health. The risk of injury or damage to one’s health is determined by how hazards are dealt with or controlled.

Electricity, radiation, heat, flames, fire, explosion, noise, welding fumes, fuel gases, inert gases, gas mixtures, and solvents are the most common welding-related hazards encountered by welders and allied trades.

Awareness is the first step in controlling hazards. Investing in the right personal protective equipment creates a healthier, safer and more productive workplace.

HEALTH EFFECTS OF BREATHING WELDING FUME

- Acute exposure to welding fumes and gases can irritate the eyes, nose, and throat, as well as dizziness and nausea. Workers in the area who exhibit these symptoms should leave immediately, get some fresh air, and seek medical attention.
- Prolonged exposure to welding fumes can cause lung damage as well as cancers of the larynx and urinary tract.
- Metal fume fever, stomach ulcers, kidney damage, and nervous system damage are all potential side effects of certain fumes. Prolonged exposure to manganese fumes can result in Parkinson's disease-like symptoms.
- Helium, argon, and carbon dioxide displace oxygen in the air, which can cause suffocation, especially when welding in confined or enclosed spaces. Carbon monoxide gas can form, posing a significant asphyxiation risk.



Metal fumes
Fumes are very tiny solid particles that can remain airborne and are formed when a heated metal has evaporated in the air and then condensed back to a solid form.



Gases
Gases may have an odor, but many do not. Some gases can be seen, but again, others cannot. Gases may be heavier than air, or lighter than air, but in either case, can travel for great distances undetected.



Vapours
Vapours are substances that are created when a solid or liquid material evaporates. Materials that evaporate easily at room temperature include paint thinner or solvents.



Mist
Tiny liquid droplets are generated by condensation or by breaking up a liquid into a dispersed state, in processes such as spraying.



Dust
Are polydisperse solid aerosols*, generated during the processing of organic and inorganic substances. Solid particles can be mineral, metal, coal, wood, or crop dust, as well as fibers. They are usually heavy enough to settle slowly to the ground.

REDUCE EXPOSURE TO HAZARDS

- Thoroughly understand the hazards associated with welding.
- Clean welding surfaces regularly to remove coatings that could potentially result in toxic exposure levels.
- Stay upwind of welding fumes when working in open or outdoor areas. Be aware, however, that working outdoors or in open work, environments doesn't guarantee air ventilation.
- Use local exhaust ventilation systems for indoor welding. Be sure to keep exhaust ports away from other workers.
- Never weld in a confined space that doesn't have ventilation.
- Wear respiratory protection if ventilation and work practices don't adequately reduce welding fume exposure to safe levels.
- Call an expert for professional advice regarding the use of the correct type of filtering.

PAPR SYSTEM

The physical and chemical properties of air pollutants vary greatly. As a result, no single purification technology can effectively combat all of these pollutants. Shine PAPR unit recognized that certain air contaminants require the use of particular and focused filtration methods. This filtration system combines four distinct filtration techniques to ensure thorough and durable performance. Each stage focuses on efficiently filtering a certain kind of air contaminant.

HOW DO PAPR'S WORK?

PAPR's are positive pressure respirators that are worn loosely to the face. A PAPR protects the respiratory system by drawing in ambient air through a battery-powered ventilator. When air enters the unit, it passes through a several of filter layers, keeping particles out of the air supply. The air is then forced into the user's breathing zone where they can breathe normally. By blowing positive pressure into the mask, the face seal between the mask and the user prevents contaminated air from entering the breathing zone.

On top of the PAPR unit, the airflow indicators are highlighted by an LCD screen. The unit is equipped with an audio, visual and vibrating alarm to warn for a blocked filter, low battery, or high-temperature battery, offering extra safety for the welder. The strong physical construction of the unit also makes it extremely robust and suitable for most heavy-duty welding applications.



-  RECHARGEABLE BATTERY
-  WARNING SETTINGS/ALERT
-  FILTERED AIR
-  RESPIRATORY PROTECTION
-  3 ADJUSTABLE LEVEL 3
-  BATTERY TEMPERATURE WARNING
-  AIRFLOW VELOCITY
-  LIGHT WEIGHT

BLOWER UNIT WITH INTELLIGENT & CONSTANT AIRFLOW:
Respirator will self-adjust the flow rate according to the blockage of the filter automatically and it absorbs a wide spectrum of particles, fumes and gases. The Intelligent & constant airflow thereby cleans the air.

PARTICLE FILTER (P3):
Eliminates **99.996%** of particles bigger than 0,185µ like fine dust, pollutants, and other contaminants.

PRE-FILTER:
It can eliminate the large diameter particles

COVER:
Holds the different available shine filters layers

SPARK ARRESTOR:
Retains hot, burning, and harmful particles

ODOR FILTER (OPTIONAL):
Removes unpleasant smells and taste

The respirator unit is fitted with a spark filter and replaceable pre-filter to protect and extend the life of the main filter. The perfect fitting of the face seal will guarantee an inward leakage of less than 0,2%.

PROTECTION CLASSIFICATION

TH1	TH2	TH3
INWARD LEAKAGE MAX.	INWARD LEAKAGE MAX.	INWARD LEAKAGE MAX.
10%	2%	0.2%
NPF = 10	NPF = 50	NPF = 500

NPF - NOMINAL PROTECTION FACTOR

BASED ON EN 12941



Gas filter
A1B1E1K1 filter | A2 filter
Removes fumes and harmful gases

“ All shine PAPR sets are TH3 certified.”

PAPR SYSTEM

ASSEMBLY AND SPARE PARTS



13.03.118 Complete + bag & accessories (exc. helmet)



COVER
13.03.101



SPARK ARRESTOR
13.03.104



PRE-FILTER
13.03.103



PARTICLE FILTER (P3)
13.03.102



ODOR FILTER COMPLETE REPLACEMENT FILTER
13.03.120 | 13.03.121



**GAS FILTER
A2 | A1B1E1K1 FILTER**
13.03.125 | 13.03.126



STANDARD BATTERY
13.03.106



HEAVY DUTY BATTERY
13.03.114



BATTERY CHARGER
13.03.110



BATTERY ORGANIZING STAND
13.03.112



BLOWER UNIT
13.03.105



HIGH END FLEXIBLE HOSE
13.03.116



COMFORTABLE WAIST BELT
13.03.123



LEATHER WAIST BELT
13.03.124



CARRIER BAG
13.03.111

PAPR TECHNICAL CHARACTERISTICS

1. Airflow rate	170L/min 200L/min 230L/min	
2. System	Automatic detection and control system provides constantly stable air	
3. Switch	3 Levels of airflow control on-off switch auto turned off after 30 minutes unused	
4. LCD display	Airflow level, battery data, filter status and charge status	
5. Warning	Low battery, saturated filter, airflow blocked, low airflow, and high battery temperature	
6. Noise Level	MAX.73dB	
7. High filter efficiency	99.996% @ 0.185µ	
8. Filtration level	TH3 PR SL	
9. Dimensions	240 X 165 X 70 MM(L x W x H)	
10. Weight	Complete unit: 1370G Excluding battery: 1020G	
11. Battery life	Standard battery : LEVEL 1: >10H LEVEL 2: > 8H LEVEL 3: > 6H	Heavy duty battery : LEVEL 1: >15H LEVEL 2: > 12H LEVEL 3: > 10H
12. Battery	Standard battery: LI-ION 12V 4400 MAH Heavy duty battery (optional) : 6800 MAH	
13. Charging time	Standard battery: 3.5H Heavy duty battery: 5H	
14. Charging frequency	≥500	
15. Temperature in use	- 5°C ~ + 55°C	
16. Certifications	CE EN 12941.1998 + A2:2008	

COMPATIBILITY



SparX Double
OLED AIR
13.02.200



SparX Double
LCD AIR
13.02.210



SparX Single
AIR
13.02.410



6000X-HD
AIR
13.02.250



5000X-HD
AIR
13.02.110



P-SH100 & 200
13.05.111 (short)
13.05.110 (long)



SHINE
STORAGE CONTAINER
(OPTIONAL)
13.03.117

“Nothing is more personal than personal protection equipment, so claim your clean and safe storage space in a Shine Storage Container,”



PAPR WELDING

Welding safety sets that are
fully prepared to use

ADF SETTING BY BLUETOOTH REMOTE CONTROL



OPTICAL
CLASS
1/1/1/1



TRUE COLOR



THE SPARX DOUBLE OLED PREPARED FOR AIR is equipped with the new innovative SHINE side entry air duct. This will minimize the airflow in front of the welder's eyes which could normally cause dry eyes. Another advantage of this air duct is the improvement in mobility for tight spaces.



EN 12941 / TH3 APPROVED

**For helmet specifications, please see page 38-39*

A COMPLETE SET CONSISTS OF:

- SPARX DOUBLE OLED PREPARED FOR AIR WELDING HELMET
- PAPR UNIT
- P3 PARTICLE FILTER
- PRE-FILTER
- SPARK ARRESTOR
- LI-ION BATTERY
- BATTERY CHARGER
- AIRFLOW METER
- WAIST BELT WITH SHOULDER STRAPS
- HIGH FLEX HOSE + HOSE COVER
- STORAGE BAG



**WITH INTEGRATED
SIDE ENTRY AIR DUCT**

SPARX DOUBLE OLED AIR + PAPR ARTICLE NUMBERS:

COMPLETE SET:	
SPARX Double Oled AIR + PAPR	13.03.200
AIR HELMET:	
SPARX Double prepared for air helmet	13.02.200
PARTS:	
SPARX double face seal	13.02.201
Headgear HG2003 prepared for air	13.02.211
Sweatband headgear HG2003 deluxe	13.02.212
Outer spatter lens	13.01.013
Inner spatter lens	13.01.117
SPARX inner visor clear lens	13.02.411
Lock sliders SPARX	13.01.043
Headgear adjustment screw-nut	13.01.019
SPARX inner visor peel-off sheet	13.05.002
PAPR storage container	13.03.117

**For PAPR spare parts, please see page 14-15*

ADF SETTING BY INTERNAL CONTROL



THE SPARX DOUBLE LCD PREPARED FOR AIR is equipped with the new innovative SHINE side entry air duct. This will minimize the airflow in front of the welder's eyes which could normally cause dry eyes. Another advantage of this air duct is the improvement in mobility for tight spaces.

A COMPLETE SET CONSISTS OF:

- SPARX DOUBLE LCD PREPARED FOR AIR WELDING HELMET
- PAPR UNIT
- P3 PARTICLE FILTER
- PRE-FILTER
- SPARK ARRESTOR
- LI-ION BATTERY
- BATTERY CHARGER
- AIRFLOW METER
- WAIST BELT WITH SHOULDER STRAPS
- HIGH FLEX HOSE + HOSE COVER
- STORAGE BAG



EN 12941 / TH3 APPROVED

**For helmet specifications, please see page 40-41*



WITH INTEGRATED SIDE ENTRY AIR DUCT

SPARX DOUBLE LCD AIR + PAPR	ARTICLE NUMBERS:
COMPLETE SET:	
SPARX Double LCD AIR + PAPR	13.03.210
AIR HELMET:	
SPARX Double LCD prepared for air helmet	13.02.210
PARTS:	
SPARX double face seal	13.02.201
Headgear HG2003 prepared for air	13.02.211
Sweatband headgear HG2003 deluxe	13.02.212
Outer spatter lens	13.01.013
Inner spatter lens	13.01.104
SPARX inner visor clear lens	13.02.411
Lock sliders SPARX	13.01.043
Headgear adjustment screw-nut	13.01.019
SPARX inner visor peel-off sheet	13.05.002
PAPR storage container	13.03.117

**For PAPR spare parts, please see page 14-15*



This extreme light Sparx Single helmet is a true winner when it comes to multi-functional disciplines. Easily transform your grinding helmet into a welding helmet with a flip-up window. Not all welders prefer an automatic darkening filter, so this Sparx Single is the right alternative. *Its soft flame-retardant face seal makes it comfortable to use all day long.* And the Sparx single with a clear visor can also be used in several other dusty environments.



EN 12941 / TH3 APPROVED

**For helmet specifications, please see page 56-57*

A COMPLETE SET CONSISTS OF:

- SPARX SINGLE PREPARED FOR AIR WELDING HELMET
- PAPR UNIT
- P3 PARTICLE FILTER
- PRE-FILTER
- SPARK ARRESTOR
- LI-ION BATTERY
- BATTERY CHARGER
- AIRFLOW METER
- WAIST BELT WITH SHOULDER STRAPS
- HIGH FLEX HOSE + HOSE COVER
- STORAGE BAG



**For visor overview,
please see page
56-57*



**WITH NEW IMPROVED
AIR GUIDE AIR DUCT**

SPARX SINGLE AIR + PAPR	ARTICLE NUMBERS:
COMPLETE SET: Shine SPARX Single + PAPR	13.03.400
AIR HELMET: SPARX Single prepared for air helmet	13.02.410
PARTS: SPARX single face seal	13.02.412
Headgear HG2002 + Air duct (air guide version)	13.02.213
Headgear HG2002 mounting set (L+R)	13.02.214
Sweatband PAPR headgear HG2002	13.01.042
lock sliders SPARX	13.01.043
SPARX inner visor peel-off sheet	13.05.002
Face seal Velcro	13.02.116
PAPR storage container	13.03.117
VISORS: SPARX Single flip-up clip	13.05.003
SPARX Single inner visor clear lens	13.02.411
SPARX Single inner visor shade 2	13.05.005
SPARX Single inner visor shade 3	13.05.006
SPARX Single inner visor shade 5	13.05.007
SPARX Single outer visor shade 5	13.05.008
SPARX Single outer visor shade 8	13.05.009

**For PAPR spare parts, please see page 14-15*

6000XHD

ADF SETTING BY INTERNAL CONTROL



OPTICAL
CLASS
1/1/1/1



TRUE COLOR



Automatic darkening filter with three memory functions and an extremely large viewing area of 8340 mm². Save your settings so you can quickly and easily switch between welding processes. Of course, a True color lens is included. All of the premium features are in a comfortable helmet with powered respiratory protection. With a compact air supply channel and the ability to regulate airflow.



EN 12941 / TH3 APPROVED

**For helmet specifications, please see page 44-45*

A COMPLETE SET CONSISTS OF:

- 6000X-HD PREPARED FOR AIR WELDING HELMET
- PAPR UNIT
- P3 PARTICLE FILTER
- PRE-FILTER
- SPARK ARRESTOR
- LI-ION BATTERY
- BATTERY CHARGER
- AIRFLOW METER
- WAIST BELT WITH SHOULDER STRAPS
- HIGH FLEX HOSE + HOSE COVER
- STORAGE BAG



**WITH NEW IMPROVED
AIR GUIDE AIR DUCT**

6000X-HD AIR + PAPR	ARTICLE NUMBERS:
COMPLETE SET: 6000X-HD AIR + PAPR	13.03.500
AIR HELMET: Shine 6000X-HD Prepared for air helmet	13.02.250
PARTS: Shine 5000X-HD & 6000X-HD face Seal	13.02.115
Headgear HG2002 + Air duct (air guide version)	13.02.213
Headgear HG2002 mounting set (L+R)	13.02.214
Sweatband PAPR headgear HG2002	13.01.042
Outer spatter lens 6000X-HD	13.01.051
Inner spatter lens 6000X-HD	13.01.052
Face seal Velcro	13.02.116
PAPR storage container	13.03.117

**For PAPR spare parts, please see page 14-15*

5000XHD

ADF SETTING BY EXTERNAL CONTROL



The 5000X-HD set is ready to use as a complete helmet with the highest 1/1/1/1 optical class true color lens. With 4 arc sensors and external control for Shade selection, sensitivity, delay, and grinding. Nothing has been left untouched. All high-end specifications on a very comfortable Powered Air Purifying Respirator set. With an EN12941 TH3 certificate, which is also the highest standard in the market, you have the best protection you can wish for.



EN 12941 / TH3 APPROVED

**For helmet specifications, please see page 48-49*

A COMPLETE SET CONSISTS OF:

- 5000x-HD PREPARED FOR AIR WELDING HELMET
- PAPR UNIT
- P3 PARTICLE FILTER
- PRE-FILTER
- SPARK ARRESTOR
- LI-ION BATTERY
- BATTERY CHARGER
- AIRFLOW METER
- WAIST BELT WITH SHOULDER STRAPS
- HIGH FLEX HOSE + HOSE COVER
- STORAGE BAG



WITH NEW IMPROVED AIR GUIDE AIR DUCT

5000X-HD AIR + PAPR	ARTICLE NUMBERS:
COMPLETE SET: 5000X-HD AIR + PAPR	13.03.100
AIR HELMET: Shine 5000X-HD prepared for air helmet	13.02.110
PARTS: Shine 5000X-HD face seal	13.02.115
Headgear HG2002 + Air duct (air guide version)	13.02.213
Headgear HG2002 mounting set (L+R)	13.02.214
Sweatband PAPR headgear HG2002	13.01.042
Outer spatter lens	13.01.013
Inner spatter lens	13.01.104
Face seal Velcro	13.02.116
PAPR storage container	13.03.117

**For PAPR spare parts, please see page 14-15*

P-SH100 & P-SH200

**RESPIRATORY & FACE PROTECTION
AGAINST DUST AND SPLASHES**

AVAILABLE IN 2 SIZES

- P-SH100 WITH THE LONG HOOD
- P-SH200 WITH THE SHORT HOOD



Great lightweight respiratory and face protection against dust and light chemical environments where no toxic fumes are released or where any mechanical protection is required. In combination with the SHINE PAPR unit, it reaches the highest EN12941 TH3 classification.

The respirator unit is fitted with a spark filter and replaceable pre-filter to protect and extend the life of the main filter. The perfect fitting of the face seal will guarantee an inward leakage of less than 0,2%.

SUITABLE TO MANY NON-TOXIC INDUSTRIES LIKE:

- FOOD PROCESSING
- AGRICULTURE
- LABORATORY

EN 12941 / TH3 APPROVED

P-SH100 & P-SH200 + PAPR	ARTICLE NUMBERS:
COMPLETE SET:	
Shine P-SH100 white airhood long + PAPR	13.05.100
Shine P-SH200 white airhood short + PAPR	13.05.200
PARTS:	
Shine P-SH100 white airhood long	13.05.110
Shine P-SH200 white airhood short	13.05.111
Shine P-SH100 + P-SH200 sweatband	13.05.101

**For PAPR spare parts, please see page 14-15*



WELDER'S FLASH

**THE IMPORTANCE OF
EYE PROTECTION**

WELDER'S FLASH (ARC EYE)

“Welder’s flash” is another name for photokeratitis, a painful eye condition that can happen when unprotected eyes are exposed to ultraviolet (UV) rays. Welder’s flash refers to this condition when it is caused by UV rays from a welding torch. It can feel like having a “sunburn” on the eyes. Photokeratitis is also often called arc eye, flash burn, ultraviolet keratitis, and snow blindness.

WELDER'S FLASH CAUSES

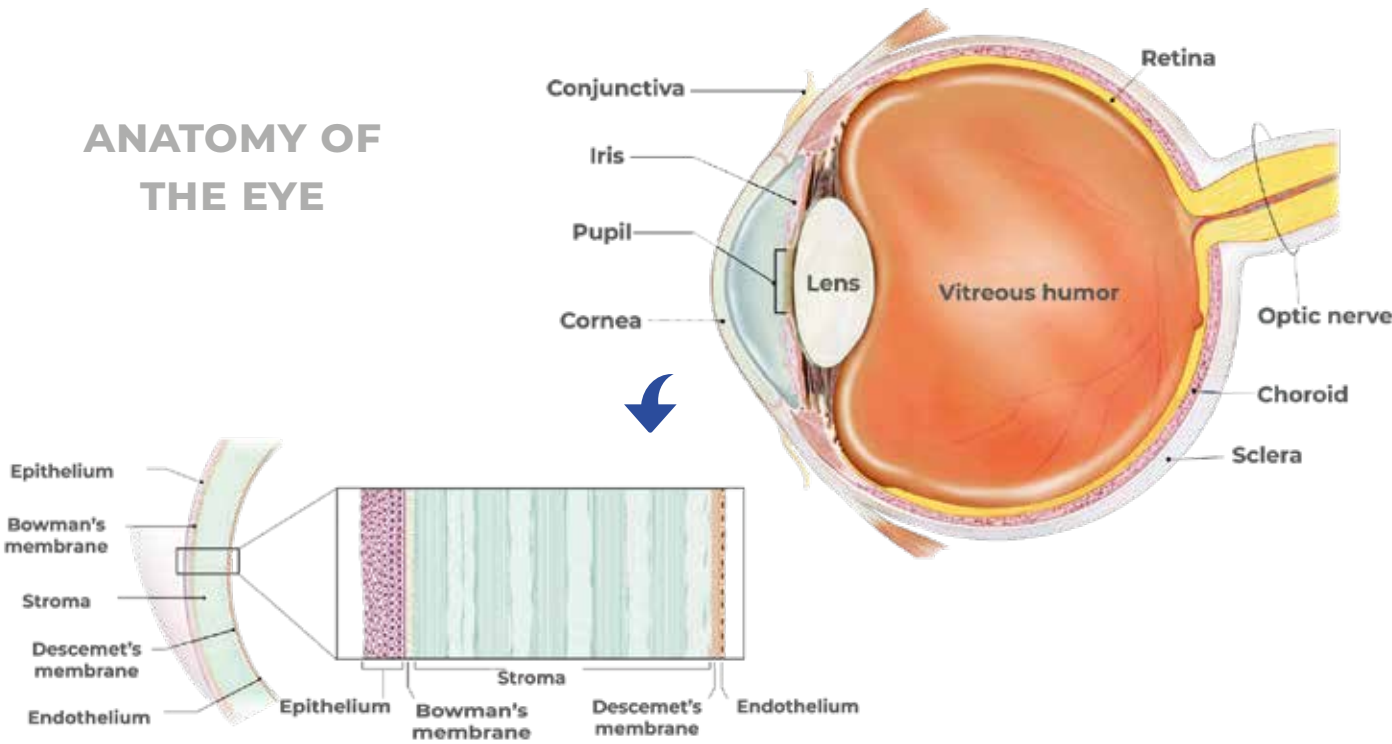
As the name implies, welders are at risk for photokeratitis when their eyes are exposed to bright flashes or “arcs” of UV radiation while welding. This type of corneal welding injury is also known as “arc eye” and “flash burn.”

Photokeratitis is caused by your unprotected eyes being exposed to ultraviolet rays. UV exposure damages the epithelium, which is the thin, outer layer of the cornea of your eye. The cornea is the eye’s clear front surface that allows light to enter the eye for vision. The epithelium layer helps spread tear film to keep your eyes moist and maintain good eye health.

When UV exposure damages corneal cells, the cells slough off, leaving corneal nerves beneath exposed and damaged. When a welder’s unprotected eyes are exposed to the UV radiation of the welding torch, the resulting “welder’s flash” feels much like a sunburn but even more painful.

But photokeratitis doesn’t affect welders alone. For example, if you’re not wearing protective sunglasses, your eyes are at risk in bright, outdoor settings like snow or water. Your eyes are also at risk in some indoor settings when there are certain types of broken high-intensity light bulbs.

ANATOMY OF THE EYE



Source: <https://www.allaboutvision.com/conditions/cornea/arc-eye-welding/> <https://incchem.org/documents/hsg/hsg/> - International programme on chemical safety

WELDER'S FLASH SYMPTOMS

Symptoms of welder’s flash can show up as early as 30 minutes after UV exposure. However, it can take up to 12 hours for a welder’s flash symptoms to occur.

The most common symptom of welder’s flash is intense pain in the affected eye. You may have pain in both eyes if each was damaged by UV rays.



SYMPTOMS OF WELDER'S FLASH INCLUDE:

- | |
|------------------------|
| 1. TEARING |
| 2. REDNESS ON THE FACE |
| 3. EYELID REDNESS |
| 4. DECREASED VISION |

Welder’s flash can also cause photophobia (light sensitivity), causing headaches and eye discomfort. This medical eye condition can also make you feel like you have dirt or debris in your eye when you don’t.



WELDER'S FLASH TREATMENT

After examining your eyes, an eye doctor can suggest treatment to help the cornea heal faster. Treatments may include applying a topical antibiotic ointment that prevents bacterial infection. Your eye doctor may suggest applying the ointment throughout the day over the next two or three days. The doctor might also recommend using artificial tears and taking oral pain medication to help with eye discomfort.

HOW TO PREVENT WELDER'S FLASH

If you’re a welder, wear a protective welding helmet while welding to guard against arc UV light. Welders need to ensure they’re not only using the right protective gear but that it is well-maintained and functions properly. Welders should regularly inspect their protective masks and replace parts as needed. Even small scratches in the lens could allow the welder’s eyes to be exposed to UV rays. The equipment works in blocking UV light but only if it is not scratched or damaged, so the lens needs to be regularly inspected.

There are many cases of eye injuries in workplaces; several of them are often related to radiation and lights. But taking an injury lightly leads to severe consequences. Even if you know how to treat an Arc-Eye, it is necessary to get treatment from experts and follow their advice.

PROPER PRECAUTIONS

1. SAFETY GOGGLES

Wearing safety goggles while dealing with bright light sources. This will decrease the risk of eyes being penetrated with harmful rays.

2. WELDING MASK

Wear a Welding mask while handling the welding machine. This is a necessary step for welders to prevent Arc eye and other hazards.

3. PERSONAL PROTECTIVE EQUIPEMENT (PPE)

Always maintain wearing personal protective equipment (PPE). This is necessary to follow in workplaces where people have to deal with hazardous lights and instruments.



TRUE COLOR TECHNOLOGY

Shine high-definition auto-darkening filters allow you to see a full spectrum of colors. These new filters improve the colorimetric transmission factor of light, providing a more realistic and detailed view than conventional filters.



PROTECTION

Improved safety during welding without sacrificing good visibility.



COMFORT

Auto-darkening welding helmets not only could prevent harmful arcs, but also can easily be switched between bright and dark without lifting the helmet.



EFFICIENCY

It will give you a high-definition, realistic vision of the weld pieces and your surroundings which is sure to improve the accuracy and quality of your weld.

CHOOSING TRUE COLOR

The True color stands out with its complex coating technology and cutting-edge production control. Among various true color ADFS, your best choice is those that comply with CE, ANSI, and CSA standards and offer the widest range of visible light.

OLD TECHNOLOGY

- RED AND ORANGE ARE HARD TO DISTINGUISH
- WELD DEFECTS MORE LIKELY TO OCCUR

SHINE HIGH DEFINITION ADF'S



OPTICAL QUALITY	CLASS 1
LIGHT SCATTERING	CLASS 1
HOMOGENEITY	CLASS 1
ANGULAR DEPENDENCE	CLASS 1

The Shine high-definition auto-darkening filters achieve the highest quality standards in all four classifications for **EN379**.

NEW TECHNOLOGY

- IMPROVED VISIBILITY IN OPEN STATE
- IMPROVE COLOR RECOGNITION
- IMPROVED VISION, REDUCE EYE STRAIN
- PROVIDES GREATER COMFORT AND INCREASED PRODUCTIVITY

ENHANCED COATING TECHNOLOGY OFFERS MORE VISIBLE LIGHT TO READ THE MACHINE'S SETTINGS AND DATA.

“All Shine ADFS are equipped with True color technology,”



TRUE COLOR

NON TRUE COLOR

WELDING HELMETS



SPARX™ Double Oled



OPTICAL
CLASS
1/1/1/1



TRUE COLOR



CERTIFICATION CE, ANSI,
CSA, AS/NZS



User-friendly remote design with Bluetooth interface and OLED display multi-featured interface menus provide easy and quick ADF settings. The remote can either be locked on a helmet or taken off.

TECHNICAL INFORMATION

	SHADE RANGE 4- 5/9 - 9/13
	OPEN STATE 4
	AUTOMATIC POWER ON/OFF
	4 ARC SENSORS
	OPTICAL CLASS 1/1 / 1/1
	RECHARGEABLE ADF BATTERY
	BLUETOOTH REMOTE CONTROL
	MINIMUM 3 AMP TIG CURRENT

GENERAL INFORMATION

	IMPACT RESISTANT EN175B - EN166B
	GRINDING MODE
	HEADGEAR HG-2003
	VIEWS AREA 6000 MM2
	FLIP - UP WITH LARGE CLEAR VIEW
	PANORAMIC GRINDING VIEW



SPARX DOUBLE OLED

Welding and grinding helmet with automatic darkening filter. To change settings on your ADF, it comes with an OLED Bluetooth remote control. Unprecedented color technology creates a realistic visual environment. The eco-friendly design includes a rechargeable battery in both the welding filter and the remote control, which can be charged via a mini USB charging cable.

SPARX DOUBLE OLED

ARTICLE NUMBERS:

SPARX Double OLED	13.01.020
Headgear HG2003 (excl. 13.01.019)	13.01.011
Headgear HG2003 mounting set (L+R)	13.01.016
Sweatband headgear HG2003 deluxe	13.02.212
Sweatband headgear HG 2003	13.01.012
Outer spatter lens	13.01.013
Inner spatter lens	13.01.117
Shine SPARX inner visor clear lens	13.02.411
Lock sliders SPARX	13.01.043
Headgear adjustment screw-nut	13.01.019
SPARX Double OLED ADF	13.06.100
Shine SPARX inner visor peel-off sheet	13.05.002

SPARXTM Double LCD



OPTICAL
CLASS
1/1/1/1



TRUE COLOR



SPARX DOUBLE LCD

Revolutionary welding & grinding helmet with an automatic darkening filter with internal control. This darkening filter with 1/1/1/1 optical class and true color technology is also of the highest standards that you can expect from SHINE. With 3 arc sensors and a replaceable battery a crystal clear view of your workpiece. A shade range from 5 to 13 and a low battery warning system is built in.

TECHNICAL INFORMATION

	SHADE RANGE 4- 5/9 - 9/13
	OPEN STATE 4
	OPTICAL CLASS 1/1 /1/1
	3 ARC SENSORS
	REPLACEABLE ADF BATTERY
	MINIMUM 3 AMP TIG CURRENT

GENERAL INFORMATION

	IMPACT RESISTANT EN175B - EN166B
	GRINDING MODE
	HEADGEAR HG-2003
	VIEWS AREA 6000 MM2
	FLIP - UP WITH LARGE CLEAR VIEW
	PANORAMIC GRINDING VIEW

SPARX DOUBLE LCD

ARTICLE NUMBERS:

SPARX Double LCD	13.01.021
Headgear HG2003 (excl. 13.01.019)	13.01.011
Headgear HG2003 mounting set (L+R)	13.01.016
Sweatband headgear HG2003 deluxe	13.02.212
Sweatband headgear HG 2003	13.01.012
Outer spatter lens	13.01.013
Inner spatter lens	13.01.104
Shine sparx inner visor clear lens	13.02.411
Lock sliders sparx	13.01.043
Headgear adjustment screw-nut	13.01.019
SPARX Double LCD ADF	13.06.110
Shine SPARX inner visor peel-off sheet	13.05.002

8000XHD

Super view



OPTICAL
CLASS
ISO 16321



TRUE COLOR



8000X-HD SUPER VIEW

A super view, as the name suggests. This latest SHINE ADF has many new special features and excellent visibility. For example, when the Ambient light sensor detects the strength of the welding arc, the ADF automatically sets the recommended DIN shade. If you are a light or dark welder, you have the option of - DIN2 & + DIN 2 in tenths of shades to adjust to your liking.

"SHADE ADAPTIVE CRUISE CONTROL" is the name given to this innovative setting.

The ADF also has an open shade state of DIN3. Very useful if you want to use your grinding function in a dimly lit environment. Furthermore, it has a Lock function, which is very useful if you work in an environment with a lot of glare, which causes your ADF to slam shut inadvertently. When the ADF is in Lock mode, you have a passive lens that can be adjusted from color 5 to 13 with half-shade options.

TECHNICAL INFORMATION

	SHADE RANGE 3- 5/9 - 9/13
	OPEN STATE 3
	OPTICAL CLASS 1/1 / 1/1
	4 ARC SENSORS
	REPLACEABLE BATTERY
	MINIMUM 2 AMP TIG CURRENT
	AMBIENT LIGHT SENSOR
	HALF SHADE SETTINGS
	SHADE ADAPTIVE CRUISE CONTROL

GENERAL INFORMATION

	IMPACT RESISTANT EN175B - EN166B
	GRINDING MODE
	HEADGEAR HG-2003
	VIEWING AREA 10506 MM2
	LOCK SETTINGS

8000X-HD SUPER VIEW

ARTICLE NUMBERS:

Shine 8000X-HD Super view	13.01.080
Headgear HG2003	13.01.011
Headgear HG2003 mounting set (L+R)	13.01.016
Sweatband Headgear HG2003	13.01.012
Outer spatter lens	13.01.051
Inner spatter lens	13.01.053
Shine 8000X-HD Super view ADF	13.06.800

6000XHD



OPTICAL
CLASS
1/1/1/1



TRUE COLOR



6000X-HD

The SHINE 6000X-HD welding helmet with 114x133mm automatic darkening filter size is a true winner. Equipped with a true color digital lens and the highest optical classification with 4 arc sensors, this helmet is ideal for all welding applications. With the 3 memory functions, you can easily switch between multiple settings, depending on which welding processes you operate most.

This helmet is provided with the HG2003 headgear. This multi-adjustable headgear is lightweight and ergonomic. The 5 points adjustable balance design provides more flexibility and comfort. With its neck padding and easy twist lock ratchet, it is a delight to wear all day long.

TECHNICAL INFORMATION

	SHADE RANGE 4- 5/9 - 9/13
	OPEN STATE 4
	OPTICAL CLASS 1/1 / 1/1
	4 ARC SENSORS
	REPLACEABLE BATTERY
	MINIMUM 3 AMP TIG CURRENT
	3 MEMORY FUNCTIONS

GENERAL INFORMATION

	IMPACT RESISTANT EN175B - EN166B
	GRINDING MODE
	HEADGEAR HG-2003
	VIEWING AREA 8340 MM2

6000X-HD

ARTICLE NUMBERS:

Shine 6000X-HD	13.01.050
Headgear HG2003	13.01.011
Headgear HG2003 mounting set (L+R)	13.01.016
Sweatband headgear HG 2003	13.01.012
Outer spatter lens	13.01.051
Inner spatter lens	13.01.052
Shine 6000X-HD ADF	13.06.200



SH

SHINE[®]

SHINE[®]

5000XHD



OPTICAL
CLASS
1/1/1/1



TRUE COLOR



5000X-HD

The SHINE 5000X-HD is the most popular welding helmet of its kind with all high-quality specifications. External control of color, delay, sensitivity and grind function on a 90 x 110mm dark color welding filter. The helmet has a large field of vision and is equipped with true color technology.

This helmet is provided with the HG2003 headgear. This multi-adjustable headgear is lightweight and ergonomic. The 5 points adjustable balance design provides more flexibility and comfort. With its neck padding and easy twist lock, the ratchet is a delight to wear all day long.

TECHNICAL INFORMATION

	SHADE RANGE 4- 5/9 - 9/13
	OPEN STATE 4
	OPTICAL CLASS 1/1 /1/1
	4 ARC SENSORS
	REPLACEABLE BATTERY
	MINIMUM 3 AMP TIG CURRENT

GENERAL INFORMATION

	IMPACT RESISTANT EN175B - EN166B
	GRINDING MODE
	HEADGEAR HG-2003
	VIEWING AREA 6000 MM2
	LIGHTWEIGHT

5000X-HD

Shine 5000X-HD
Headgear HG2003
Headgear HG2003 mounting set (L+R)
Sweatband headgear HG2003
Outer spatter lens
Inner spatter lens
Shine 5000X-HD ADF

ARTICLE NUMBERS:

13.01.010
13.01.011
13.01.016
13.01.012
13.01.013
13.01.104
13.06.300

5000X



OPTICAL
CLASS
1/1/1/2



TRUE COLOR



5000X

The 5000X is known for its excellent value for money with external control for DIN 9-13 color and grinding on the auto-darkening welding filter. The helmet has a large field of view and is equipped with true color technology.

This multi-adjustable headgear is lightweight and ergonomic. The 5 points adjustable balanced design provides more flexibility and comfort. With its neck padding and easy twist lock, the ratchet is a delight to wear all day long.

TECHNICAL INFORMATION

	SHADE RANGE 4- 9/13
	OPEN STATE 4
	OPTICAL CLASS 1/1 /1/2
	4 ARC SENSORS
	REPLACEABLE BATTERY
	MINIMUM 3 AMP TIG CURRENT

GENERAL INFORMATION

	IMPACT RESISTANT EN175B - EN166B
	GRINDING MODE
	HEADGEAR HG-2003
	VIEWING AREA 6000 MM2
	LIGHTWEIGHT

5000X

ARTICLE NUMBERS:

Shine 5000X	13.01.030
Headgear HG2003	13.01.011
Headgear HG2003 mounting set (L+R)	13.01.016
Sweatband headgear HG2003	13.01.012
Outer spatter lens	13.01.013
Inner spatter lens	13.01.104
Shine 5000X ADF	13.06.400

5000



OPTICAL
CLASS
1/1/1/2



TRUE COLOR



TECHNICAL INFORMATION

	SHADE RANGE 4- 9/13
	OPEN STATE 4
	OPTICAL CLASS 1/1 / 1/2
	2 ARC SENSORS
	MINIMUM 5 AMP TIG CURRENT

GENERAL INFORMATION

	IMPACT RESISTANT EN175B - EN166B
	GRINDING MODE
	HEADGEAR HG-2003
	VIEWING AREA 4032 MM2
	LIGHTWEIGHT

5000

The SHINE 5000 welding helmet with 90x110mm automatic darkening filter size is a welding helmet that is ideal for most people who don't have to weld all day long but still prefer to work with high-quality products. All internal controls and a shade range from 9 to 13 including a grinding option that gives you all the protection you need. This welding helmet is provided with the HG2003 headgear.

This multi-adjustable headgear is lightweight and ergonomic. The 5 points adjustable balance design provides more flexibility and comfort. With its neck padding and easy twist lock, the ratchet is a delight to wear all day long.

5000

ARTICLE NUMBERS:

Shine 5000	13.01.035
Headgear HG2003	13.01.011
Headgear HG2003 mounting set (L+R)	13.01.016
Sweatband headgear HG2003	13.01.012
Outer spatter lens	13.01.013
Inner spatter lens	13.01.015
Shine 5000 ADF	13.06.500





FLIP-UP CLIP
13.05.003



DIN 2 (INNER)
13.05.005



DIN 3 (INNER)
13.05.006



DIN 5 (INNER)
13.05.007



DIN 5 (OUTER)
13.05.008



DIN 8 (OUTER)
13.05.009

The inner and outer visors can be combined to create a DIN color for use during welding. The inner visor is available in colors Clear, DIN 2, DIN 3 & DIN 5, and the outer visor is available in colors DIN 5 & DIN 8 (with flip-up clip). The helmet is approved according to EN166 & EN169. All visors are made of polycarbonate.

GENERAL INFORMATION

IMPACT RESISTANT
EN175B - EN166B

GRINDING
HELMET

FLIP-UP WITH
LARGE CLEAR VIEW

LIGHTWEIGHT

MIX AND MATCH
OPTION

PANORAMIC
GRINDING VIEW



SPARX SINGLE

Multifunctional grinding, welding, and cutting helmet with easy-to-change parts. Mix & Match to create a product to suit the needs of your work. Whether grinding, cutting, or welding, the SparX Single can do it all.

This helmet is equipped with a light and sturdy headgear HG2002. Provided a 3-point adjustment and easy push and twist ratchet.

SPARX SINGLE

ARTICLE NUMBERS:

Shine SPARX Single	13.01.040
Headgear HG 2002	13.01.041
Sweatband headgear HG2002	13.01.042
Shine SPARX inner visor clear lens	13.02.411
Shine SPARX inner visor peel-off sheet	13.05.002
Lock sliders SPARX	13.01.043



OPTICAL CLASS 1/1/1/2



When welding in a low-light environment, the SPOTLITE has a very bright LED spot on top with 90 Lumen for extra light. With an external grinding mode and settings to adjust your DIN shade from 5 to 13, it is suitable for most welding applications.



TECHNICAL INFORMATION

	SHADE RANGE 3- 9/13
	OPEN STATE 3
	OPTICAL CLASS 1/1 / 1/2
	2 ARC SENSORS
	REPLACEABLE BATTERY
	MINIMUM 3 AMP TIG CURRENT
	AUTOMATIC POWER ON/OFF

GENERAL INFORMATION

	IMPACT RESISTANT EN175B - EN166B
	GRINDING MODE
	ANTI- FOG INNER LENS
	DETACHABLE INNER GOGGLE
	LIGHTWEIGHT
	SPOTLITE LED LAMP
	PROBAN HOOD

SPOTLITE

This ergonomically shaped monkey face is ideal for welding in very tight spaces. With a detachable shell, you can even further decrease the volume of this welding helmet/goggles. With a standard 1/1/1/2 optical class and DIN shade 3 open state, it has a true color view.

The internal spatter lens has an anti-fog coating which prevents condensation on the inside during hard work. The SPOTLITE comes with an additional flame retardant hood, an extra elastic headgear strap and a practical storage bag.



SPOTLITE

ARTICLE NUMBERS:

Shine SPOTLITE	13.01.005
Outer spatter lens	13.01.006
Inner spatter lens	13.01.007
Proban hood	13.05.050
LED light	13.05.051
Elastic headgear strap	13.05.052
SPOTLITE headgear	13.05.053

The image shows three black SHINE ADF (Automated Data Finder) devices arranged in a row. Each device has a small screen and a blue light indicator. The background is a blurred industrial or laboratory setting with metal structures. A semi-transparent blue banner is overlaid on the right side of the image, containing the text 'ADF SPECS' and a description of the document.

ADF SPECS

All ADF model specifications combined with
detailed background information

SPARX SERIES EXPERT



13.06.100



13.06.110

MODEL	SPARX - DOUBLE OLED	SPARX - DOUBLE LCD
CE classification	1/1/1/1	1/1/1/1
True color	Yes	Yes
LCD viewing area	100x60mm (3,94x3,28)	100x60mm (3,94x3,28)
Light state shade	DIN 4	DIN 4
Dark variable shades	DIN 5-9/9-13	DIN 5-9/9-13
Switching time (light to dark)	0.04ms	0.04ms
Delay time (dark to light)	Adjustable (1-5 for 0.1-0.9s)	Adjustable (1-5 for 0.1-0.9s)
Sensitivity	Adjustable (1-5 for low-high)	Adjustable (1-5 for low-high)
Arc sensors	4	3
Minimum TIG current	3	3
Power supply	Solar and rechargeable battery	Solar and replaceable battery
ADF battery (operating time)	>300h	-
ADF battery	-	CR2032 2pcs
Control panel	By remote control	Internal
Charging time	2.5h	-
Charging frequency	>500	-
Operating temperature	- 10 °C ~ 65°C (14F ~ 149 °F)	- 10 °C ~ 65°C (14F ~ 149 °F)
Storing temperature	- 20 °C ~ 85°C (4F ~ 185 °F)	- 20 °C ~ 85°C (4F ~ 185 °F)
Inside PC lens	104,5 x 64 x 1 mm (13.01.117)	106,5 x 66 x 1 mm (13.01.014)
Outside PC lens	118 x 97 x 1 mm (13.01.013)	118 x 97 x 1 mm (13.01.013)
Inner vision	Clear visor (13.02.411)	Clear visor (13.02.411)
Standards	CE EN379, ANSI Z87.1, CSA Z94.3, AS/ NZS 1337.1	CE EN379, ANSI Z87.1, CSA Z94.3, AS/ NZS 1337.1
Grind function	Yes	Yes
Warranty	2 Years	2 Years



USA SERIES EXPERT



13.06.800



13.06.200

MODEL	8000X - HD	6000X - HD
CE classification	ISO 16321 v1	1/1/1/1
True color	Yes	Yes
LCD viewing area	102.5 x102.5mm (4.04"x 4.04")	100x83.4 mm (3,94"x3,28")
Light state shade	DIN 3	DIN 4
Dark variable shades	Auto mode: 3/7 < 13M Manual mode: 3/5 - 13	DIN 5-9/9-13
Switching time (light to dark)	0.04ms	0.04ms
Delay time (dark to light)	Adjustable (1-5 for 0.1-0.9s)	Adjustable (1-5 for 0.1-0.9s)
Sensitivity	Adjustable (1-5 for low-high)	Adjustable (1-5 for low-high)
Arc sensors	4	4
Minimum TIG current	2	3
Power supply	Solar and replaceable battery	Solar and replaceable battery
Shade deviation of auto shade	+2.0/ -2.0	-
ADF battery	CR2450 2pcs	CR2450 1pcs
Control panel	Internal + external digital control	Internal digital control
Lock shade	Yes	-
Shade adaptive cruise control	Yes	-
Operating temperature	- 10 °C ~ 65°C (14F ~ 149 °F)	- 10 °C ~ 65°C (14F ~ 149 °F)
Storing temperature	- 20 °C ~ 85°C (4F ~ 185 °F)	- 20 °C ~ 85°C (4F ~ 185 °F)
Inside PC lens	108 x 108 x 1mm (13.01.053)	106,5 x 89,5 x 1mm (13.01.052)
Outside PC lens	114x 133x 1mm (13.01.051)	114 x 133 x 1mm (13.01.051)
Inner vision	-	-
Standards	CE EN379, ANSI Z87.1, CSA Z94.3, AS/ NZS 1337.1	CE EN379, ANSI Z87.1, CSA Z94.3, AS/ NZS 1337.1
Grind function	Yes	Yes
Warranty	2 Years	2 Years



EU SERIES PROFESSIONAL



MODEL	5000X-HD	5000X	5000
Optical classification	1/1/1/1	1/1/1/2	1/1/1/2
True color	Yes	Yes	Yes
LCD viewing area	100x60 mm (3.94x2.36)	100x60 mm (3.94x2.36)	96x42 mm (3.78 x 1.65)
Light state shade	DIN 4	DIN 4	DIN 4
Dark variable shades	DIN 5-9/9-13	DIN 9-13	DIN 9-13
Switching time (light to dark)	0.04ms	0.04ms	0.1ms
Delay time (dark to light)	Adjustable (1-5 for 0.1-0.9s)	Adjustable (1-5 for 0.1-0.9s)	Adjustable (1-5 for 0.1-0.9s)
Sensitivity	Adjustable	Adjustable	Adjustable
Arc sensors	4	4	2
Minimum TIG current	3 amp	3 amp	5 amp
Grind function	Yes	Yes	Yes
Control panel	External	External	Internal
Power supply	Solar cells and replaceable battery	Solar cells and replaceable battery	Solar cells + internal battery (non replaceable)
ADF battery	CR2450 1pcs	CR2450 1pcs	Non replaceable
Operating temperature	- 10 °C ~ 65°C (14F ~ 149 °F)	- 10 °C ~ 65°C (14F ~ 149 °F)	- 10 °C ~ 65°C (14F ~ 149 °F)
Storing temperature	- 20 °C ~ 85°C (4F ~ 185 °F)	- 20 °C ~ 85°C (4F ~ 185 °F)	- 20 °C ~ 85°C (4F ~ 185 °F)
Inside PC lens	106 x 66 x 1mm (13.01.104)	106 x 66 x 1mm (13.01.104)	103,5 x 47x 1 mm (13.01.015)
Outside PC lens	118 x 97 x 1mm (13.01.013)	118 x 97 x 1mm (13.01.013)	118 x 97 x 1 mm (13.01.013)
Standards	CE EN379, ANSI Z87.1, CSA Z94.3, AS/NZS 1337.1	CE EN379, ANSI Z87.1, CSA Z94.3, AS/NZS 1337.1	CE EN379, ANSI Z87.1, CSA Z94.3, AS/NZS 1337.1
Warranty	2 years	2 years	1 year



PIPE LINE SERIES EXPERT



MODEL	1004	1004V	SPOTLITE
Optical classification	1/1/1/1	1/1/1/2	1/1/1/2
True color	Yes	Yes	Yes
LCD viewing area	92x36 mm (3.62 x 1.65)	95x36 mm (3.74 x 1.42)	100x40 mm (3.74 x 1.57)
Light state shade	3	4	3
Dark variable shades	DIN 10	DIN 9-13	DIN 5-9/9-13
Switching time (light to dark)	0.03ms	0.04ms	0.04ms
Delay time (dark to light)	Fixed	Adjustable (0.1-0.9s)	Adjustable (0.1-0.9s)
Sensitivity	Fixed	Adjustable	External adjustable control
Arc sensors	2	2	2
Minimum TIG current	30 amp	5 amp	>3 amp
Grind function	No	No	Yes (with LED indicator)
Control panel	-	Internal	External
Power supply	Solar cell, non-replaceable battery	Replaceable battery	Replaceable battery
ADF battery	-	CR1025 2pcs	CR2450 1pcs
Operating temperature	- 10 °C ~ 65°C (14F ~ 149 °F)	- 10 °C ~ 65°C (14F ~ 149 °F)	- 10 °C ~ 65°C (14F ~ 149 °F)
Storing temperature	- 20 °C ~ 85°C (4F ~ 185 °F)	- 20 °C ~ 85°C (4F ~ 185 °F)	- 20 °C ~ 85°C (4F ~ 185 °F)
Inside PC lens	108 x 50.8 x 1mm (13.01.108)	108 x 50.8 x 1mm V (13.01.109)	143x 61,1 x 1mm (13.01.007)
Outside PC lens	108 x 50.8 x 1mm (13.01.108)	108 x 50.8 x 1mm V (13.01.108)	113,5x 42,8x1mm (13.01.006)
Standards	CE EN379, ANSI Z87.1, CSA Z94.3, AS/NZS 1337.1	CE EN379, ANSI Z87.1, CSA Z94.3, AS/NZS 1337.1	CE EN379, ANSI Z87.1, CSA Z94.3, AS/NZS 1337.1
Warranty	1 year	2 years	2 years

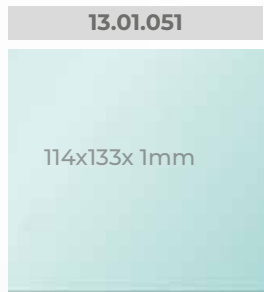


A welder is working on the metal frame of a car in a workshop. The car's body panels are removed, showing the intricate steel skeleton. The welder is positioned inside the frame, and bright sparks are visible from the welding process. To the right, a Tig-ER welding system is mounted on a blue cart, featuring a power unit and two gas cylinders (one green, one red). The workshop has a high ceiling with exposed beams and a concrete floor. A semi-transparent blue banner with the word 'ACCESSORIES' is overlaid on the right side of the image.

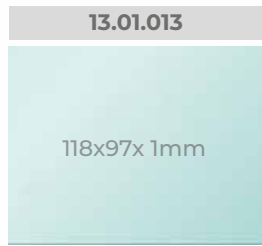
ACCESSORIES

ACCESSORIES

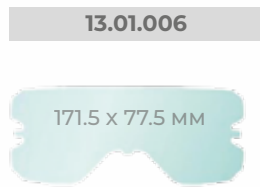
ANTI SPATTER LENS OUTER



HELMET:
8000X-HD
6000X-HD



HELMET:
SPARX - DOUBLE OLED
SPARX - DOUBLE LCD
5000X-HD
5000X
5000



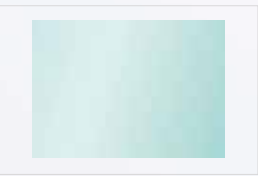
HELMET:
SPOTLITE

MAGNIFYING LENS

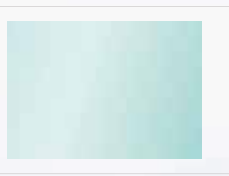


LENS STRENGTH	ARTICLE NUMBER
MAGNIFYING LENS - 1,0	13.05.010
MAGNIFYING LENS - 1,25	13.05.012
MAGNIFYING LENS - 1,5	13.05.015
MAGNIFYING LENS - 1,75	13.05.017
MAGNIFYING LENS - 2,0	13.05.020
MAGNIFYING LENS - 2,25	13.05.022
MAGNIFYING LENS - 2,5	13.05.025
MAGNIFYING LENS - 3,0	13.05.030

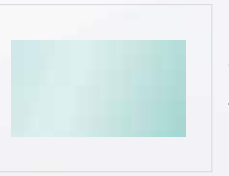
ANTI SPATTER LENS INNER



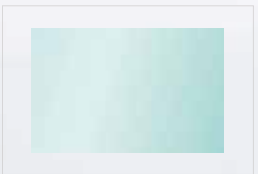
HELMET:
6000X-HD
106.5 x 89.5 x 1mm



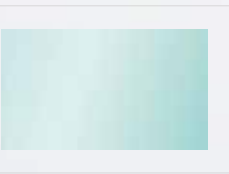
HELMET:
8000X-HD
108 x 108 x 1mm



HELMET:
5000
103.5 x 47 x 1mm



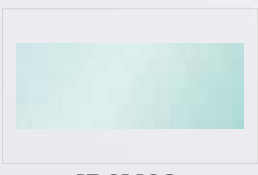
HELMET:
SPARX
DOUBLE OLED
104.5 x 64 x 1mm



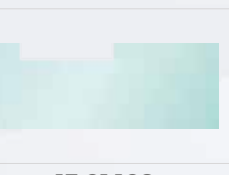
HELMET:
5000X
5000X-HD
SPARX DOUBLE LCD
106 x 66 x 1mm



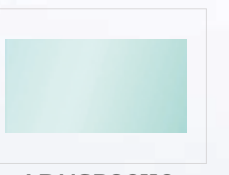
HELMET:
SPOTLITE
113.5 x 42.8 x 1mm



1004
108 x 50.8 x 1mm



1004v
108 x 50.8 x 1mm



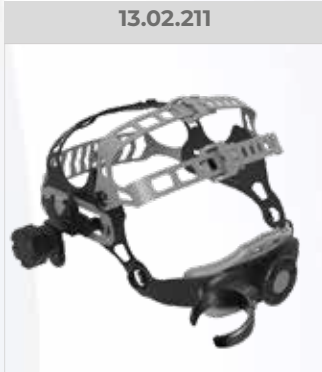
90 x 110 x 1mm

HEADGEARS



HG 2003

HELMET:
SPARX - DOUBLE OLED
SPARX - DOUBLE LCD
8000X-HD
5000X-HD
5000X
5000



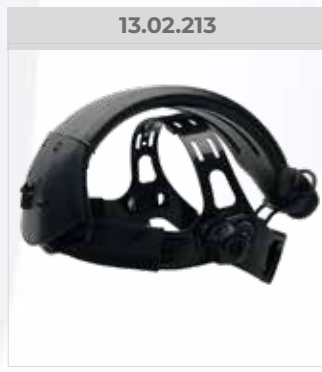
HG 2003 AIR

HELMET:
SPARX - DOUBLE OLED AIR
SPARX - DOUBLE LCD AIR



HG 2002

HELMET:
SPARX - SINGLE AIR



HG 2002 AIR

HELMET:
6000X-HD AIR
5000X-HD AIR
SPARX - SINGLE AIR

SWEATBANDS & HARD HAT ADAPTORS



SW 2003 DELUXE

HELMET:
SPARX - DOUBLE OLED
SPARX - DOUBLE LCD
SPARX - DOUBLE OLED AIR
SPARX - DOUBLE LCD AIR



SW 2003

HELMET:
SPARX - DOUBLE OLED
SPARX - DOUBLE LCD
6000X-HD
8000X-HD
5000X-HD
5000X
5000



SW 2002

HELMET:
SPARX - SINGLE
SPARX - SINGLE AIR
6000X-HD AIR
5000X-HD AIR



HH1



HH2



BATTERIES



SHINE ADF CR2450
13.06.2450

SHINE ADF CR2032
13.06.2032

SHINE ADF CR1025
13.06.1025



This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.[illegible]

