



- ES** Manual de instrucciones
- IT** Istruzioni d'uso
- GB** Operating instructions
- FR** Instructions d'emploi
- P** Manual de instruções
- PL** Instrukcja obsługi

**GS-0**  
**AS-R**  
**AS-1D**  
**AS-X**  
**AS-XP**  
**AS-XL**

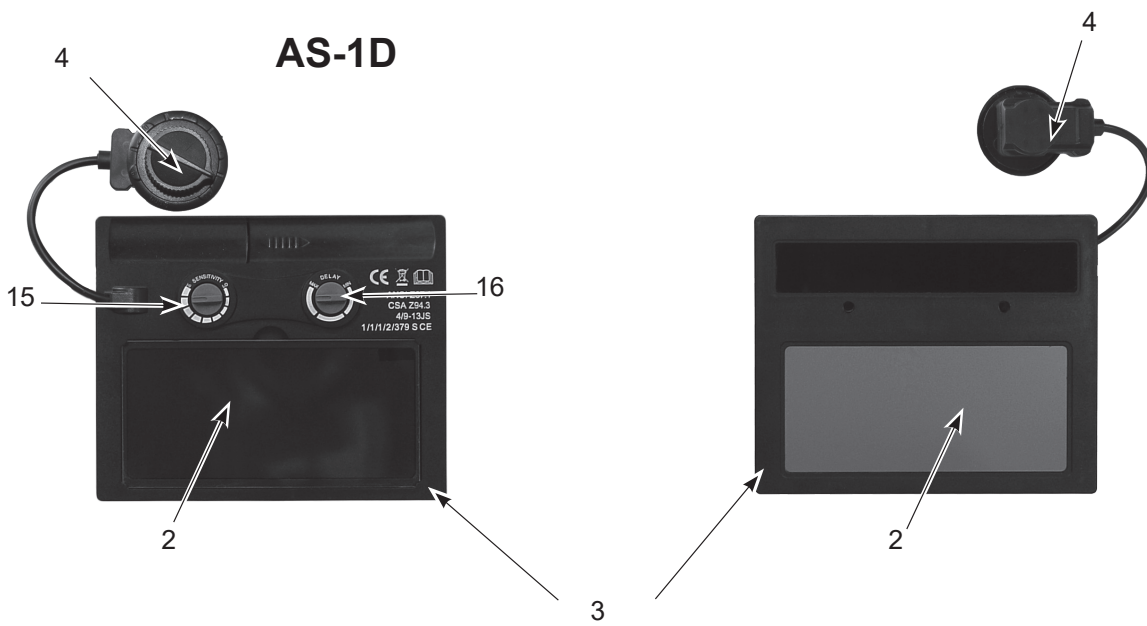


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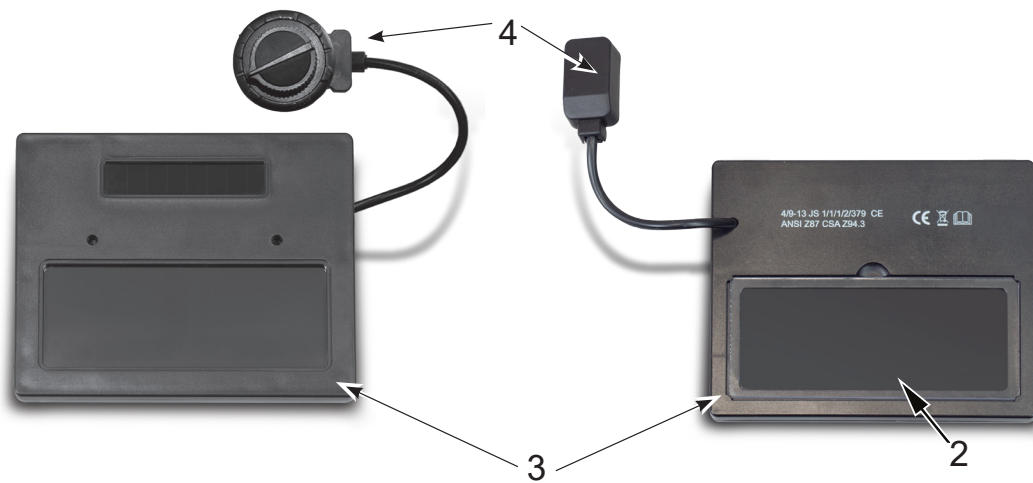
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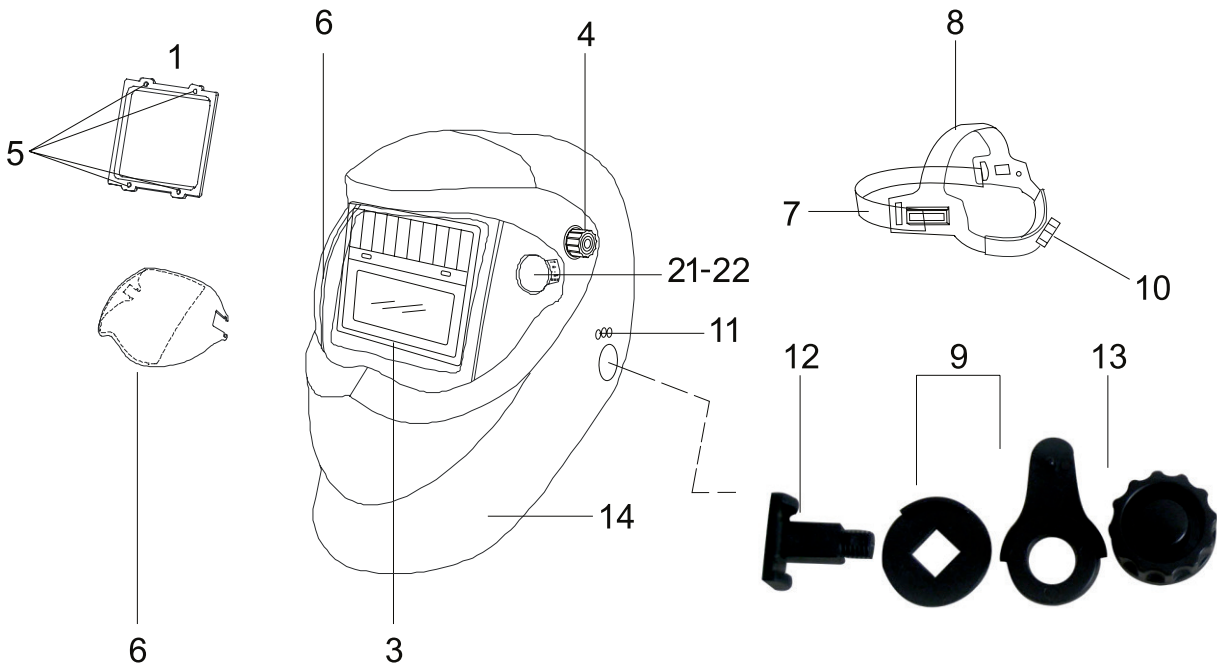


**AS-1D**

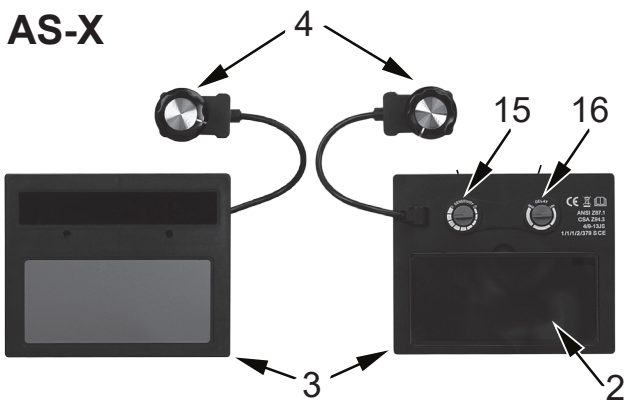


**AS-R**

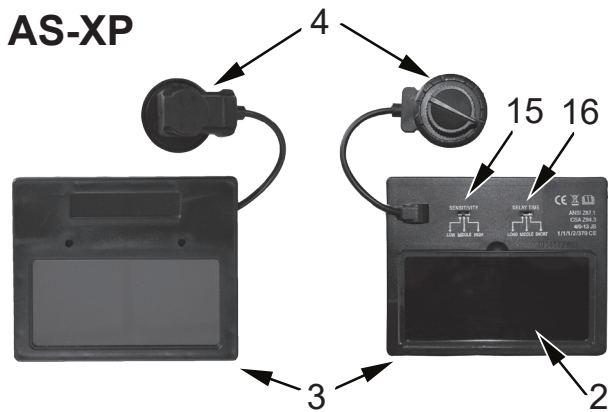




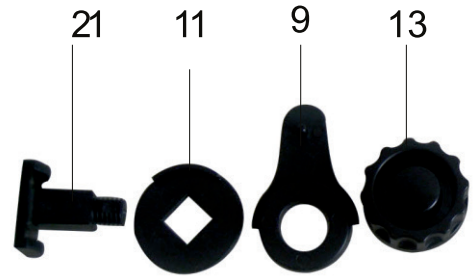
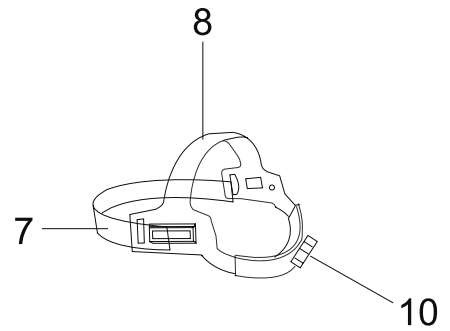
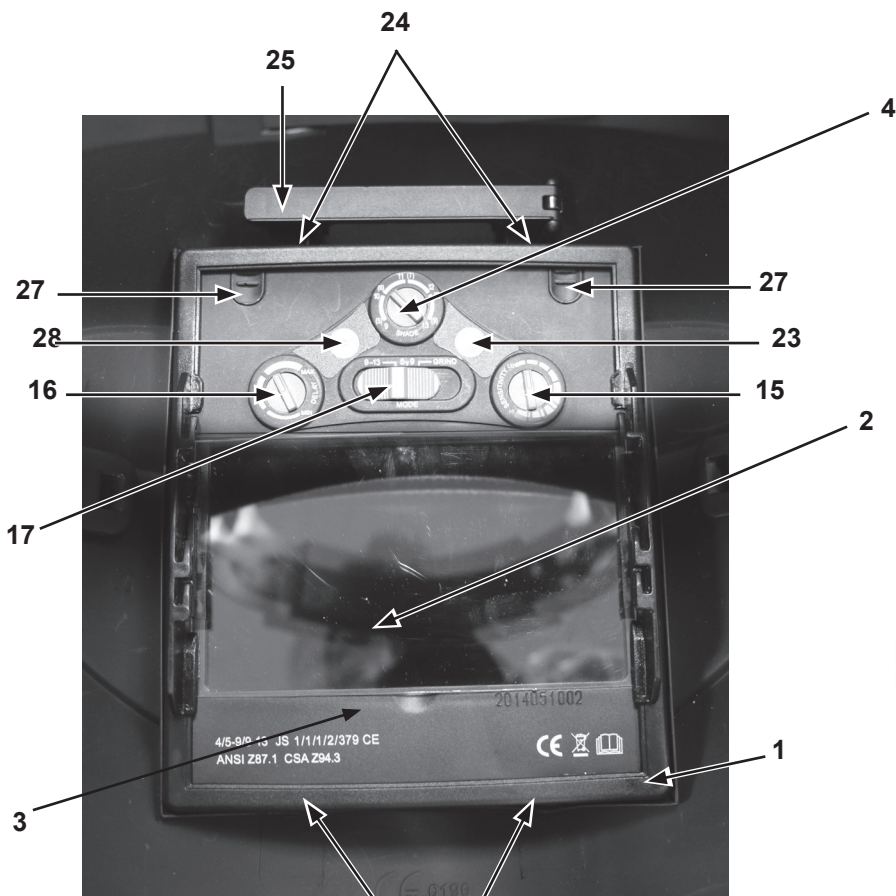
### AS-X



### AS-XP








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**1. PART LIST Fig.1**




1. Filter holder.
2. Protective inner lens.
3. Fixed / automatic filter.
4. Control of degree of protection.
5. Frame fastening screw.
6. Protective outer lens.
7. Textile band of sweat.
8. Harness height adjustment band.
9. Angle adjustment plate in working position.
10. Attenuating adjustment of the harness perimeter band.
11. Retaining bolt for adjustment plate # 9.
12. Screws for attaching the harness to the helmet.
13. Mounting the locking nut of the harness to the hull.
14. Casco.
15. Setting the sensitivity to dark.
16. Set standby to clear.
17. Right clip.
18. Left clip.
19. Shade regulating potentiometer
20. Casco
21. Right clip (AS-X / AS-XP)
22. Left Clip (AS-X / AS-XP)
23. Reset button (self-diagnostics-safety ADF (AS-XL)
24. Filter attachment holes (AS-XL)
25. Filter attachment bar (AS-XL)
26. Filter retention straps (AS-XL)
27. Replaceable Battery Housing (AS-XL)
28. Battery Indicator (AS-XL)
29. Complete Clips Set (AS-XL)

 **Protect this manual and have it available to the user.**

 **Read and understand completely this manual before using this product.**

	External Protector	Protector Interno	Harness	Filter
FIG	6.	2.	8.	3.
<b>AS-XP</b>	4020.48	4020.47	4020.19	4020.31
<b>AS-X</b>	4020.8	4020.13	4020.19	4020.18
<b>AS-XL</b>	4020.29	4020.30	4020.42	4020.27
<b>AS-R</b>	4020.8	4020.57	4020.55	4020.53
<b>AS-1D</b>	4020.58	4020.59	4020.60	4020.61
<b>GS-0</b>	-	8110.1220	8110.1221	8110.1219

**2. SPARES**

-  **Do not use any solder equipment without prior training.**
-  **Do not use equipment if you are not prepared for its use. Before each use, inspect the equipment as explained in this manual to insure that equipment is in perfect state.**
-  **Do not make any modifications to equipment other than mentioned in this manual. Do not use replacement part other than mentioned in this manual.**

**3. USE LIMITATIONS**

Do not work under possible severe impact conditions. This equipment is designed to protect under normal welding conditions.

Do not work out of the margins of this equipments design. This equipment does not protect against corrosive liquids or in an explosive atmosphere.

Do not work out of the margins of this equipments design. Using this equipment with temperatures lower than -5°C or higher than 55°C effects filter design and could cause permanent damage to the eyes and even loss of vision.

This equipment must be used for overhead welding and laser cutting and welding.

This equipment is not designed to work in wet conditions or in water. Do not submerge in liquid.

Do not work out of the margins of this equipments design. The use of this equipment in any other type of activity that requires a level of protection higher than 13 could cause permanent damage to the eyes and even a loss of vision. This equipment is not designed to be used with laser cutting or any other work that requires a grade greater than 13.

Do not use this equipment in extensive overhead soldering. Dangerous burns could be received if there is a possibility of droppings from molten metal. Do not use dissolvent on the filter or helmet.

## 4. CHARACTERISTICS

The mask "stayer welding" are composed by four main parts:

1. Helmet sell STAYER EN 175 F (*Fig n° 14*).
2. Automatic darkening filter 4/9-13 STAYER 1/3/2/2/379 (*Fig n° 3*).
3. Front cover lens STAYER 1 F (*Fig n° 6*).
4. Back cover lens STAYER 1 S (*Fig n° 2*).

Explanation of helmet sell STAYER EN 175 F  
STAYER=manufacturer code, EN 175= number of testing standard, F=symbol for low energy impact (45m/s).

Explanation of automatic darkening filter 4/9-13 STAYER 1/3/2/2/379.

Explanation: 4 = light state, 9-13 = dark states, STAYER = manufacturer code, 1 = optical class, 3 = diffusion of light class, 2 = homogeneity class, 2 = angle dependence class, 379 = number of testing standard.

Explanation of cover lens STAYER 1 F and STAYER 1 S.

Explanation: STAYER=manufacturer code, 1 = optical class, F = symbol for low energy impact (45m/s) or S = increased robustness).

### Warning!

Automatic darkening filters shall only be used in conjunction with a suitable backing ocular.

### Warning!

If the symbols F and B are not common to both the ocular and the frame then it is the lower level which shall be assigned to the complete eye-protector.

### Warning!

Materials which may come into contact with wearer's skin could cause allergic reactions to susceptible individuals.

### Warning!

Scratched or damaged oculars should be replaced.

### Warning!

Eye-protectors against high speed particles worn over standard ophthalmic spectacles may transmit impacts, thus creating a hazard to the wearer.

### Note

If protection against high speed particles at extremes of temperature is required then the selected eye-protector should be marked with the letter T immediately after the impact letter. If the impact letter is not followed by the letter T then the eye protector shall only be used against high speed particles at room temperature.

## INTRODUCTION

The product "welding mask AS-X / AS-R / AS-XP / AS-XL" includes 2 photo sensors implanted at eye level in the automatic darkening filter. This filter darkens or lightens automatically depending on the level of light induced.

The filter is transparent before soldering that the way that the user can observe clearly the surface of the work area. When the solder arc energizes, the filter will darken immediately. When the arc is finished, the filter will become transparent once again.

The time that it takes for the filter to go from transparent to dark is extremely fast: 0.00004 seconds.

Filter protection is adjustable in a way that the user can select the level of protection between degrees 9 to 13 (EN 379).

The filter gives the user complete and permanent protection from infrared and ultraviolet radiation even in transparent mode.

The filter has a special position for grinding. In this position the filter doesn't darken with the sparks of an angle grinder.

The level of protection against radiations IR/UV is permanently set at 13 degrees.

The filter includes 2 superficial removable transparent high weight molecular polymer protectors which are resistant to particle sticking, and excessive use.

The unit is powered via integrated solar cells in a way that the user does not have to change batteries or turn on nor off the unit.

The GS-0 welding mask includes a permanent dark crystal filter DIN 11.

## 5. SPECIFICATIONS

### GS-0

Filter dimensions .....	110 x 80 x 3 mm
Vision area.....	97 x 73 mm
Degree of protection, clear state/ dark state .....	11
Degree of protection, dark state .....	11
Protection against infrared and ultraviolet .....	11
Interval between clear to dark .....	0 sec
Interval between dark to clear .....	0 sec
Operating Temperature.....	-5 -55 °C
Weight .....	500 grams

### AS-1D

Filter dimensions .....	110 x 90 mm
Vision area.....	98 x 35 mm
Degree of protection, clear state .....	4
Degree of protection, dark state .....	9/13
Protection against infrared and ultraviolet .....	15
Interval between clear to dark .....	1/20000 sec
Interval between dark to clear .....	0.2-0.8 sec
Sensitivity.....	Automático
Operating Temperature.....	-5 -55 °C
Weight .....	440 grams
Guarantee.....	2 years

**AS-R**

Filter dimensions .....110 x 90 x 8 mm  
 Vision area..... 92 x 35 mm  
 Degree of protection, clear state .....4  
 Degree of protection, dark state .....9/13  
 Protection against inferred and ultraviolet .....15  
 Interval between clear to dark ..... 1/20.000 sec  
 Internal between dark to clear ..... 0.4 sec  
 Sensibility..... manual  
 Power supply ..... solar cells  
 Operating Temperature.....-5 -55 °C  
 Weight .....500 grams  
 Guarantee..... 2 years

**AS-X**

Filter dimensions .....110 x 90 x 9 mm  
 Vision area..... 92 x 42 mm  
 Degree of protection, clear state .....4  
 Degree of protection, dark state .....9/13  
 Degree of protection at max dark state ..... 13  
 Protection against inferred and ultraviolet ..... 16  
 Interval between clear to dark ..... 1/25000 sec  
 Internal between dark to clear ..... 0.2/0.8 sec  
 Filter battery.....Mod. CR2032  
 Sensibility..... manual  
 Power supply ..... solar cells  
 Operating Temperature.....-5 -55 °C  
 Weight .....500 grams  
 Guarantee..... 2 years

**AS-XP**

Filter dimensions .....110 x 90 x 9 mm  
 Vision area..... 92 x 42 mm  
 Degree of protection, clear state .....4  
 Degree of protection, dark state .....9/13  
 Degree of protection for grinding .....2  
 Protection against inferred and ultraviolet .....16  
 Interval between clear to dark ..... 1/25000 sec  
 Internal between dark to clear ..... 0.2/0.8 sec  
 Sensibility..... manual  
 Power supply ..... solar cells  
 Operating Temperature.....-5 -55 °C  
 Weight .....500 grams  
 Guarantee..... 2 years

**AS-XL**

Filter dimensions .....110 x 90 x 9 mm  
 Vision area..... 92 x 42 mm  
 Degree of protection, clear state .....4  
 Degree of protection, dark state.....5/9-9/13  
 Protection against inferred and ultraviolet ..... 16  
 Interval between clear to dark ..... 1/25000 sec  
 Internal between dark to clear ..... 0.2/0.8 sec  
 Sensibility..... manual  
 Power supply ..... solar cells  
 Operating Temperature.....-5 -55 °C  
 Weight .....440 grams  
 Guarantee..... 2 years

Recommended use of different degrees of protection to EN 169 arc welding

Process	Current intensity (A)																
	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600
Coated electrodes				9	10	11	12	13									
MAG				9	10	11	12	13									
TIG			9	10	11	12	13										
MIG with heavy Metals				9	10	11	12	13									
MIG with light Alloys					10	11	12	13									
Finish-to-air arc					10	11	12	13									
Plasma Jet cutting				9	10	11	12	13									
Micro plasma Arc welding					9	10	11	12									
	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600

NOTE – The tern “heavy materials” applies to steel, alloy steel, copper and its alloys, etc..



## 6. USER INSTRUCTIONS

### 6.1. Adjusting the mask to the user.

In the models AS-X / AS-XP / AS-1D. Adjustments may vary do to different sizes of users head. To correctly adjust the equipment to individual users, follow the proceeding instructions.

1. **Adjust the height of the head:** Adjust the upper band of the harness (8), adjust the length of the band so that it sits on the head in a way that the eyes are at the height of the filter with the mask perpendicular to the horizon and the harness is parallel to the horizon.
2. **Adjustment of the perimeter to the head:** Adjust the adjustment knob (10) by pushing and turning until the harness sits comfortably without too much slack or too much pressure.
3. **Adjust the angle of vision:** Loosen screws (13), Lift and turn the work angle adjustment deck (9) in a way that the upper part of the mask is in its working position (stopper of the harness resting in the stopper of the deck (9) ) an angle of 10° to 15° towards the face of the user.

### 6.2. Adjusting protection angle

Adjust knob (4) using the following table based in UNE EN 379:2004/A1:2010.

These tables are valid for mid class work conditions where the distance between the operators eyes and the base of the molten metal is approximately 50 cm and the middle brightness is around 100 lx.

The AS-XL model has a range selector with three positions:

1. Shade range DIN 5-9.
2. Shade range DIN 9-13.
3. Grinding without shadow.

Select according to welding type. Generally, work in the range 9-13 except for low intensity work such as low intensity TIG or soft flame welding.

Grinding mode: in this mode the filter does not darken avoid losing vision when used as a protector against sparks projections.

In the AS-XL model: Set knob 4 according to the following table based on UNE EN 379: 2009-07.

These tables are valid for average working conditions, where the distance from the observer's eye to the molten metal bath is approximately 50 cm and the average illumination is about 100 lx.



**The use of a degree of protection higher does not necessarily proportion more protection and obligates the user to close in on the radiant source and breath harmful fumes.**



**It's possible to use filters with one more degree of protection when working in open air where there is a strong natural illumination.**

### 6.3. Adjusting sensibility (AS-1D/AS-X/AS-XP/AS-XL)

This regulation, labeled "SENSIVITY" (n° 15) calibrates the minimum light intensity needed for darkening the filter. Adjustment is continuous form minimum to maximum but three standard position (min, medium and max) are explained.

1. Min. (LO) Used when is used close to another welders arcs. The purpose is to avoid not desired darkening of the filter when other welders have established their welding arc. Complementary to this use case is the situation of high amperage welding.
2. Medium. This is the standard and initially recommended position for medium amperages and / or sunlight conditions.
3. Max. (HI) For use in covered and alone welding with no interference with another welder's arcs. Complementary is the situation of low amperage welding in no sunlight presence. Staring to sunlight can fire darkening when filter is at maximum sensibility.

It is recommended to start adjustment at mid position adjusting until the adequate adjustment is obtained.

### 6.4 Adjusting wait time (AS-1D/AS-X/AS-XP/AS-XL)

This regulation is named "DELAY" (n° 16) and sets the time elapsed between the end of welding arc and the return to clear state of the welding filter. Two limit use cases are described, Min and Max positions.

1. Max. For using at high amperage welding with very bright welding pool. In this case is desirable a slight cool of pool before enable eye to see.
2. Min. In low amperage, quick cooled, situations were immediate control is desired.

Initial position recommended is central one.

It is recommended to start adjustment at mid position adjusting until the adequate adjustment is obtained.

### 6.5. Setting grinding

You can adjust your mask (AS-X / AS-R / AS-XP / AS-XL ) as work either welding or grinding.

1. To enable the mask grinding AS-X / AS-R / AS-XP / AS-XL just put the controller in position 17 GRIND.

To use the GS-0 mask in grinding operations, lift the fixed filter until it stops.



**Never leave the knob 17 in the grinding position. Risk of glare if welded.**



## 7. MAINTENANCE

### 7.1. Cleaning and Storage

Clean the equipment using a soft cloth, a medium soap and lukewarm water. Do not use solvents.

Clean the automatic filter with a cloth that does no loose fibers. Do not project sprays in equipment nor submerge. Store equipment in a place that has a medium temperature and is clean and dry without any dust.

Since the inner part of the outer filter can be get dirt with the welding smoke is recommended to be dismantled and cleaned regularly.

### 7.2. Replacing the protective lenses

The automatic filter 3 has two protective lens to protect the other lens from smoke flying particles and arc spatter during the welding process.



**Use only original filters supplied by distributor.**

### 7.3. Replacing the exterior protection (AS-X/AS-R/AS-XP)

To remove the protective filter:

1. Press downwards the flaps of the buttons **21-22**, on both sides of the transparent screen.
2. Pull protector 6 while holding clips 21-22 to release the clear shield.

### 7.4. Replacing the interior protection

1. Remove the interior protector **2** with index finger in the groove supplied at upper side of filter.
2. Place the interior protector **2** by slightly bending in a way so that it can be inserted into the four highlighted corners.
3. Remove the protective film from the surface.

### 7.5. Replacing the harness

If the harness **8** is broken or does not adjust correctly, proceed with its replacement.



**Only use original harness that is supplied by an official distributor.**

Extract the harness by loosening knobs and nuts (**13**) and separate the screws (**12**).

Replace with new harness using the screws (**12**) and nuts (**13**) respecting the insertion of the angular adjustment dock (**9**).

### 7.6. Replacing the filter (AS-1C/AS-0/AS-XL)

When the filter has been used more than two years, it is necessary to change the automatic filter.



**Only use original filter that is supplied by an official distributor.**

### Changing the inner protector

Simply start the guard or its retaining clip to remove and replace the guard .

1. Loosen and remove potentiometer knob 4.
2. Release the adjustment potentiometer by loosening and removing the outer nut.
3. Release the protective frame 1 by loosening and removing the screws 5
4. Remove the old filter and present the new one on the hull.
5. To assemble the mask, follow these instructions starting from 4 to 1.
6. Fix the filter by placing frame No. 1, tightening screws # 5, setting potentiometer and pressing knob # 4.

### 7.7. Guarantee

#### Guarantee card

Included in the documentation that accompanies this equipment, you should find the warranty card.

You should fill out the card completely and return to vendor with a copy of purchasing receipt or invoice and you should receive a receipt.

**Note: If you cannot find the warranty card within the documentation, you must ask for it through your supplier.**

#### Conditions of warranty

As with professional equipment, there is established a warranty period of one year from the date of purchase.

The warranty will expire immediately if the Customer Attention department in the Central Office does not receive the warranty card within one month of the date of purchase.

The warranty will also expire if this equipment is used in an inappropriate manner or accessories are used that are not appropriate to the specifications of the manufacturer.

The warranty is limited only to manufacturing defects and expire if pieces have been removed or manipulated or repaired other than the manufacturer.

**STAYER** repair of defective parts or replacement is granted only after being analyzed by its technicians.

All costs of shipping and disassembly will be considered to part of the purchaser.

To make it easier for technicians, a list of defects that where found during use should be supplied.

## 8. INSPECTION

Before each use, mandatorily inspect the equipment. Do not use the equipment if it does not comply with any of the following circumstances. Any component not valid should be replaced immediately.

The harness to the head is clean, complete and adjusts perfectly to the head.

The helmet is clean, complete and does not present any type of crack.

The filters should be complete with no embedded projection chips or cracks, including the protection lenses.

The filter must cover completely is slot in a way the no type of light passes through.  
The photo sensors must be visible under any circumstance and not covered by any particles.

The filter should not be used if it has exceeded its expiration date. Verify that 2 years have not passed from the traceability code. Check the first four characters (starting from the left) in the code marked on interior part of the automatic darkening filter. First two are the year and second ones are the week.

Make sure that the automatic filter doesn't fails and darkens immediately after the welding arc appears. If not, reject it from using and contact your dealer immediately. Don't test directly with a welding arc for security.

Recommended procedure is:

1. To use a cigarette lighter for testing automatic filter. Only with the sparks the filter must immediately darken in any position of the sensitivity control 15.
2. To face the welding mask against the direct sun light and verify that filter darkens. Increase first sensitivity control 15 between medium and high.

Always test before use!

Sensors of the automatic darkening filter should be kept clean and unobscured.

## 9. DECLARATION OF CONFORMITY CE

The undersigned:

STAYER IBÉRICA, S.A.

Address:

Sierra de Cazorla 7  
Área empresarial Andalucía Sector 1  
28320 Pinto (Madrid) SPAIN  
Tel: +34 91 691 86 30 / Fax: +34 91 691 86 31

### CERTIFY THAT

Individual protection equipment:

**Type: Welding Mask with automatic filter.**

Is in compliance with the provisions of annex II of Directive 89/686/ECC (Edition 1989-12) and standards:

DIN EN 166:2002-04 for protective oculars.  
DIN EN 175:1997-08 for helmet sell.  
DIN EN 379:2009-07 for automatic welding filter.

Notified body name and address:

DIN CERTCO Gesellschaft fuer onformitaetsbewertung  
mbH Alboinstrasse 56 - 12103 Berlin.  
Notified body number 0196.



January, 2017

CE  R&H S

Signed: **Ramiro de la Fuente Muela**  
Manager Director



**STAYER**

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