

AHV-100 Series Auto-Darkening Welding Helmet

WARNING

Please read and understand all instructions prior before using of the AHV-100 Series Auto-Darkening Welding Helmet.

GENERAL INFORMATION

AHV-100 Series Auto-Darkening Welding Helmet dose not protect against severe impact hazards, such as fractured grinding wheels or abrasive discs, explosive devices or corrosive liquids. Machine guards or eye splash protection must be used when these hazards are present.

The auto-darkening welding filters are designed for Arc welding or cutting applications. The unit is suitable for all Arc welding processes such as MIG, MAG, TIG, SMAW, Plasma Arc, and Carbon Arc.

AHV-100 Series

Auto-Darkening Welding Helmet
User Instruction Manual

TECHNICAL SPECIFICATION

Viewing Field	98mm x 39mm/3.86" x 1.57" (AHV-101)
Viewing Field	98mm x 44mm/3.86" x 1.73" (AHV-102)
Cartridge Size	110mm x 80mm x 9mm/4.33" x 3.54" x 0.35"
UV/IR Protection	Permanent Shade DIN16
Light State	Shade DIN4
Darken State	Shade DIN 9 to 13 Variable
Power Supply	Solar cells with built in rechargeable battery
Sensitivity Control (AHV-102)	Adjusts for varying ambient light and welding arc
Power On/Off	Fully Automatic
Reaction Time	0.00004 sec (1/25,000)
Delay Control	0.25-0.35 seconds-fast position 0.60-0.80 seconds-slow position
Operation Temp	-5°C to +50°C (23° F to 131° F)
Storage Temp	-20°C to +70°C (-4° F to -158° F)
Total Weight	425g

This auto-darkening welding helmet is not recommended for "overhead" welding applications, laser welding or laser cutting applications.

In the event of electronic failure, the welder remains protected against UV and IR radiation according to shade 16.

The auto-darkening welding filter should always be used with original inner and outer cover lenses.

The manufacturer is not responsible for any failure due to modifications to the welding filter or the use of the filter from any other manufacturer's helmet.

Protection can be seriously impaired if unapproved modifications are made.

DO

Ensure the front cover lens is mounted before use and remove protective film.

Ensure that the lens is clean and there is no dirt or spatter covering the 2 sensors at the front of the filter cartridge.

Inspect all parts for signs of wear or damage. Any scratched or cracked parts should be replaced prior to use.

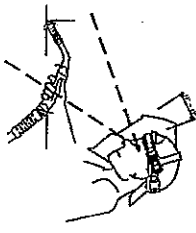
DON'T

Never place the helmet on a hot surface.

Never open or tamper with the filter cartridge.

OPERATION
1. ADJUST THE WELDING HELMET ACCORDING TO YOUR INDIVIDUAL REQUIREMENTS

The headband should be adjusted both in diameter and height. The angle between face and helmet should also be adjusted and is recommended to be 10° - 12°.



2. ON/OFF

The solar unit automatically switches on when exposed to light.

3. SELECT THE SHADE NUMBER

Five different shade numbers, 9, 10, 11, 12 and 13, are available in the dark state.

The shade number can be selected by turning the knob on the side of the helmet.

The shade setting is indicated by the arrow on the switch.

RECOMMENDED SHADE NUMBERS

WELDING PROCESS	CURRENT AMPERES																	
	10	12	15	20	25	30	40	50	60	75	100	125	150	200	250	300	350	400
Covered Electrode	Shade 8																	
MIG Shielded Metal Arc	Shade 10																	
MIG Gas Metal Arc	Shade 10																	
TIG	Shade 10																	
Welding	Shade 10																	
Shielding	Shade 10																	
Plasma Cutting	Shade 11																	
Plasma Welding	Shade 11																	

4. SELECT DELAY TIME

By moving the selector switch on the rear of the cartridge the time taken for the lens to lighten after welding can be altered.

FAST

The lens will lighten in 0.25 to 0.35 seconds from stopping of welding depending upon ambient temperature and shade setting. This is ideal for welding or production welding with short welds.

SLOW

The lens will lighten in 0.6 to 0.8 seconds depending upon the ambient temperature and shade setting. This setting is ideal for welding at high amperages where there is an after glow from the welding.

5. SELECT SENSITIVITY (AHV-102)

By moving the selector switch on the rear of the cartridge the sensitivity to ambient light changes can be altered.

LOW

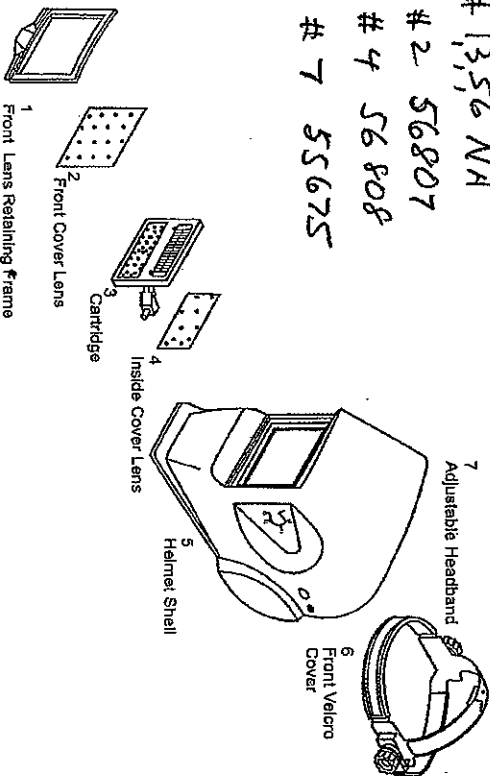
Suitable for high amperage welding and welding in bright sunlight conditions.

HIGH

Suitable for low amperage welding and use in poor light conditions. Suitable for use with steady arc process such as TIG welding.

PARTS LIST

- # 1 13,56 NA
- # 2 56807
- # 4 56808
- # 7 55675



MAINTENANCE

REPLACEMENT OF FRONT COVER LENS

- Remove the front cover by pulling out the tab at the base of the cover.
- Take out the old cover lens.
- Make sure that the protective film is removed from the new cover lens.
- Place the new cover lens in the recess at the front of the helmet.
- Place the front cover back into position by locating the top pegs in the holes, position one of the lower corners and snap in the second lower corner.

NOTE—Do not use the helmet without the cover lens and front cover in place.

REPLACEMENT OF INNER COVER LENS

- The welding inner cover lens is removed by pulling out the top edge.
- The new inner cover lens is assembled after the protective film is removed. Locate one of the sides inserting the edge under the hook at the side and bend the lens in the middle part and locate the lens under the hook at the other side.

REPLACEMENT OF WELDING FILTER

- The welding filter can be replaced by removing the front cover, cover lens and pulling off the adjusting knob from the shade button.
- From inside the helmet push out the lug on the right hand side of the cartridge.
- The cartridge can now be removed from the front of the helmet

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- Welding current is too low, select the slow position on the filter and ensure the view of the weld is unobstructed.
- Change to high sensitivity.

POOR VISION

- Ensure the cover lens and the filter cartridge are clean.
- Ensure the shade number is correct and adjust accordingly.
- Ensure ambient light is not too low.

WARRANTY

The manufacturer warrants to the purchaser that the product will be free from defects in material and workmanship for the period of one year from the date of purchase. The manufacturer's sole obligation under this warranty is limited to making replacement or repairs, or to refund the purchase price of the product with defects.

This warranty does not cover product malfunctions or damages, which result from the product being tampered, misused or abused. The operation instructions must be followed; failure to do will void the warranty. The manufacturer is not responsible for any indirect damage, which arises out of the use of the product.

INSPECTION

- Carefully inspect your Auto-Darkening Welding Filter regularly.
- Cracked, pitted or scratched filter glass or cover lenses reduce vision and seriously impair protection.
- These should be replaced immediately to avoid damage to the eyes.
- Inspect the complete helmet frequently and replace worn or damaged parts.

CLEANING

- Clean the helmet with mild soap and lukewarm water.
- Clean the welding filter with a clean lint-free tissue or cloth.
- Do not immerse in water.
- Do not use solvents.

TROUBLESHOOTING

IRREGULAR DARKENING

- Headband has been set unevenly so the distance between the eyes and the lens is different from the left to the right.

AUTO DARKENING FILTER DOES NOT DARKEN OR FLICKERS

- Front cover lens is soiled, clean or replace
- Photo sensors are dirty, wipe clean with a soft lint-free cloth.