



WEM WM8VS9-13H
WEM RF8VS9-13H
WEM BF8VS9-13H
WEM C8VS9-13H
WEM SS8VS9-13H



***Auto Darkening
Welding Helmet***



SAFETY WARNINGS - READ BEFORE USING



WARNING
Read & Understand All Instructions Before Using



Auto-Darkening welding helmets are designed to protect the eye and face from sparks, spatter and harmful radiation under normal welding conditions. Auto-Darkening filter automatically changes from a light state to a dark state when an arc is struck, and it returns to the light state when welding stops.

The Auto-Darkening welding helmet comes assembled. But before it can be used, it must be adjusted to fit the user properly. Check battery surfaces and contacts and clean it if necessary. Verify if the battery is in good condition and installed properly. Set up for delay time, sensitivity and shade number for your application.

The helmet should be stored in dry, cool and dark area and remove the battery, when not using it for a long time.



WARNING



- This Auto-Darkening welding helmet is not suitable for laser welding and oxyacetylene welding / cutting processes.
- Never place this helmet and Auto-Darkening filter on a hot surface.
- Never open or tamper with the Auto-Darkening filter.
- This Auto-Darkening welding helmet will not protect against severe impact hazards.
- This helmet will not protect against explosive devices or corrosive liquids.
- Don't make any modifications to either the filter or helmet, unless specified in this manual. Don't use replacement parts any other than those specified in this manual. Unauthorized modifications and replacement parts will void the warranty and expose the operator to the risk of personal injury.
- Should this helmet not darken upon striking an arc, stop welding immediately and contact your supervisor or your dealer.
- Don't immerse the filter in water.
- Don't use any solvents on the filter screen or helmet components.
- Use only at temperatures: -10 °C ~ +55 °C (14 °F ~ 131 °F).
- Storing temperature: -20 °C ~ +70 °C (-4 °F ~ 158 °F). The helmet should be stored in dry cool and dark area and remove the battery, when not using it for a long time.
- Protect filter from contacting with liquid and dirt.
- Clean the filter surface regularly; don't use strong cleaning solutions. Always keep the sensors and solar cells clean using a clean lint-free tissue.
- Regularly replace the cracked / scratched / pitted front cover lens.
- The materials which may come into contact with the wearers skin, can cause allergic reactions in some circumstances.
- Please install AAA Alkaline batteries (2 required) before using this product. Replace batteries immediately when LOW BATTERY alarm turns red.



WARNING



Severe personal injury could occur if the user fails to follow the above mentioned warnings, and/or fails to follow the operating instructions.

COMMON PROBLEMS AND REMEDIES

• Irregular Darkening Dimming

Headband has been set unevenly and there is an uneven distance from the eyes to the filter lens. (Reset the headband to reduce the difference to the filter).

• Auto-Darkening filter does not darken or flickers

- ① Front cover lens is soiled or damaged. (Change the cover lens).
- ② Sensors are soiled. (Clean the sensors surface).
- ③ Welding current is too low. (Adjust the sensitivity level to higher).
- ④ Check battery and verify they are in good condition and installed properly. Also, check battery surfaces and contacts and clean if necessary. Please referring to the “POWER” on page 2.

• Slow response

Operating temperature is too low. (Do not use at temperatures below -10° C or 14° F)

• Poor vision

- ① Front/inside cover lens and/or the filter is soiled. (Change lens).
- ② There is insufficient ambient light.
- ③ Shade number is incorrectly set. (Reset the shade number).

• Welding helmet slips

Headband is not properly adjusted. (Readjust the headband).



WARNING



The user must stop using the auto-darkening welding helmet immediately if the above-mentioned problems cannot be corrected. Contact the dealer.

INSTRUCTIONS FOR USE

WARNING! Before using the helmet for welding, ensure that you have read and understood the safety instructions.

• POWER

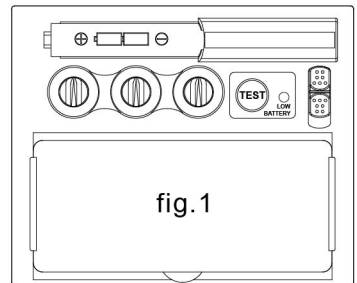
This ADF cartridge is powered by solar cell and 2 AAA alkaline batteries. Open the battery cover, replace the battery when Low battery light turn red. Please connect the battery positive and cathode electrode correctly according to the battery marking inside the battery holder (see fig. 1).

• TEST

Press and hold test to preview shade selection before welding. When released then viewing window will automatically return to the light state (2.5 Shade).

• SELECTING THE OPERATING MODE

Use the switch button on the back of shade cartridge to select the mode appropriate for the work activity.



Weld mode - Used for most welding applications. In this mode the shade functions turned on when it optically senses a welding arc. Select shade level, delay time and sensitivity as required. (see fig.2).
 Grind Mode - Used for metal grinding applications. In this mode, the shade function is turned off. The shade is fixed shade DIN 2.5 that allowing a clear view to grind a weld with the helmet providing face protection. (see fig.2).

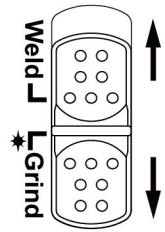


fig.2

• SELECTING SHADE LEVEL

Select the shade level you require according to the welding process you will use by referring to the “Shade Guide Table” below for settings. Turn the shade control dial on the lens to the shade number required.



fig.3a

• SELECTING DELAY TIME

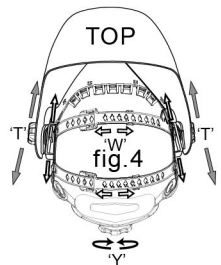
When welding ceases, the viewing window automatically changes from dark back to light but with a pre-set delay to compensate for any bright afterglow on the workpiece. The delay time/response can be set to “ S ” (short: 0.1 sec.) or “ L ” (long: 1.0 sec.). As you require using the infinitely dial knob on the back of the shade cartridge. (See fig.3a). It is recommended to use a shorter delay with spot welding applications and a longer delay with applications using higher currents. Longer delays can also be used for low current TIG welding in order to avoid the filter opening when the light path to the sensors is temporarily obstructed by a hand, torch, etc.



fig.3b

• SENSITIVITY

The sensitivity can be set to “ H ”(high) or “ L ”(low) by using the infinitely dial knob on the back of the shade cartridge. The “Mid-High” setting is the normal setting for everyday use. The maximum sensitivity level is appropriate for low welding current work, TIG, or special applications. Where the operation of the helmet is disturbed by excess ambient light, or another welding machine close by, use the “low” setting. (See fig.3b). As a simple rule for optimum performance, it is recommended to set sensitivity to the maximum at the beginning and then gradually reduce it, until the filter reacts only to the welding light flash and without annoying spurious triggering due to ambient light conditions (direct sun, intensive artificial light, neighboring welder's arcs etc.).



• ADJUSTING THE FIT OF THE HELMET

The overall circumference of the headband can be made larger or smaller by rotating the knob on the back of the headband. (See adjustment “Y” in fig.4). This can be done while wearing the helmet and allows just the right tension to be set to keep the helmet firmly on the head without it being too tight.

• If the headband is riding too high or too low on your head, adjust the strap which passes over the top of your head. To do this release the end of the band by pushing the locking pin out of the hole in the band. Slide the two portions of the band to a greater or lesser width as

required and push the locking pin through the nearest hole. (See adjustment "W" in fig.4).

- Test the fit of the headband by lifting up and closing down the helmet a few times while wearing it. If the headband moves while tilting, re-adjust it until it is stable.

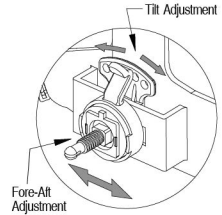


fig.5

• ADJUSTING THE DISTANCE BETWEEN THE HELMET AND THE FACE

- Step 1: Undo the block nut (See "T" in fig.4) to adjust the distance between the helmet and your face in the down position.
- Step 2: Retighten the block nut when adjustment is complete.

• ADJUSTING VIEW ANGLE POSITION

TILT: Tilt adjustment is located on right side of helmet. Loosen the righthedgegear tension knob and push the top end of the adjustment lever outward until the lever's Stop Tab clears the notches. Then rotate the lever forward or back to the desired tilt position. The Stop will automatically engage again when released locking the helmet into position (See fig.5)

SHADE GUIDE TABLE

(No.1)

Welding Process	ARC CURRENT (Amperes)												
	0.5	2.5	10	20	40	80	125	175	225	275	350	450	
	1	5	15	30	60	100	150	200	250	300	400	500	
SMAW				9	10		11		12		13	14	
MIG (heavy)						10	11		12		13	14	
MIG (light)						10	11		12		13	14	
TIG, GTAW			9	10	11	12		13				14	
MAG/CO ₂					10	11	12		13		14	15	
SAW							10	11	12	13	14	15	
PAC						11		12			13		
PAW		8	9	10	11	12		13		14		15	

NOTE:

- SMAW – Shielded Metal Arc Welding
- MIG (Heavy) – MIG on Heavy Metals
- PAW – Plasma Arc Welding
- SAW – Shielded Semi-Automatic Arc Welding

- TIG, GTAW – Gas Tungsten Arc Welding
- MIG (Light) – MIG on Light Alloys
- PAC – Plasma Arc Cutting
- MAG/CO₂ - Metal Active Gas

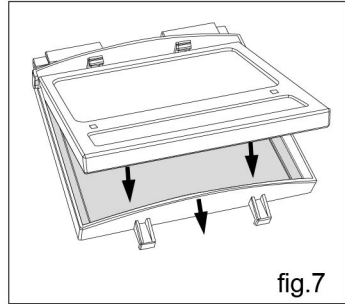
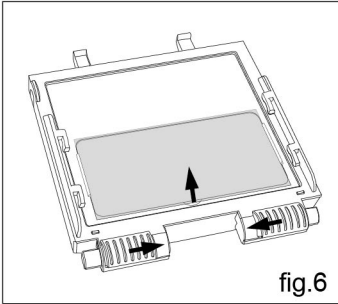
MAINTENANCE

To replace the front cover lens remove lens cassette by moving locks toward center (fig.6) and lift up the lens cassette to remove / replace the front lens cover.

REPLACING INSIDE COVER LENS : Replace the inside cover lens if it is damaged. Place your fingernail in recess below cartridge view window and flex lens upwards until it releases from edges of cartridge view window.

CHANGE THE SHADE CARTRIDGE : Remove ADF holder assembly from helmet shell. See fig.6 for removal. Flex top end of the ADF holder to allow for ADF cartridge to be removed from frame. Install new ADF cartridge into frame per fig.7 below. Make sure that the ADF cartridge is inserted in ADF holder correctly as shown. Install ADF holder assembly into helmet shell.

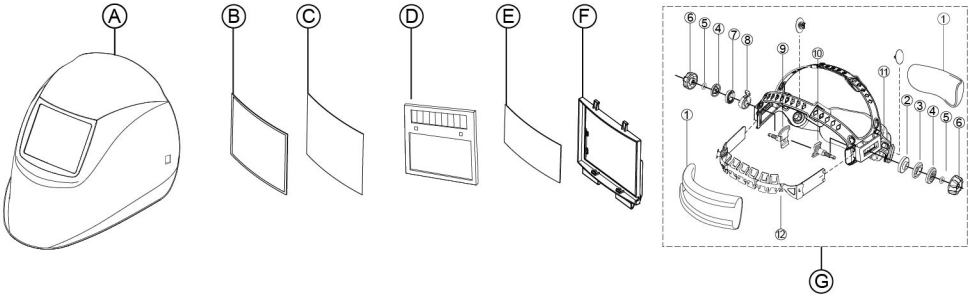
CLEANING. Clean helmet by wiping with a soft cloth. Clean cartridge surfaces regularly. Do not use strong cleaning solutions. Clean sensors and solar cells with methylated spirit and a clean cloth and wipe dry with a lint-free cloth.



TECHNICAL SPECIFICATIONS

Optical Class:	1 / 1 / 1 / 2
Viewing Area:	98x44mm (3.86"x1.73")
Cartridge Size:	110x90x9mm (4.33"x3.54"x0.35")
Arc Sensor:	2
Light State:	DIN 2.5
Shade:	DIN 9 ~ 13
Shade Control:	Internal, Variable Shade
Power On/Off:	Fully Automatic
Sensitivity Control:	Adjustable by dial knob
UV/IR Protection:	Up to Shade DIN16 at all times
Power Supply:	Solar cell. Battery change required 2 x AAA Alkaline battery
Low Battery Warning:	Red Light
Switching Time:	1/25,000 s. from Light to Dark
Delay (Dark to Light):	0.1 ~ 1.0s by dial control knob
Low Amperage TIG Rated:	≥ 5 amps
Grinding:	Yes
Operating Temp.:	-10°C ~ +55°C (14°F ~ 131°F)
Storing Temp.:	-20°C ~ +70°C (- 4°F ~ 158°F)
Helmet Material:	High Impact Resistance Nylon
Total Weight:	450g
Application range:	MIG; MAG/CO2; SMAW; Air carbon cutting; TIG (Excellent lower amperage TIG response); PLASMA arc welding/cutting
Approved:	ANSI Z87.1-2003 / CSA Z94.3, CE / DIN

PARTS LIST & ASSEMBLY



Part List

ITEM	PART#	DESCRIPTION	QTY
A		HELMET SHELL	1
B	WMGASKET	LENS RUBBER GASKET	1
C	WMFC15*	FRONT COVER LENS	1
D	WEM WMRL72SG-RV	REPLACEMENT LENS	1
E	WMIC72SG*	INSIDE COVER LENS	1
F	HOLDER-AUTO-SM	LENS HOLDER	1
G	AHG-15	HEAD GEAR	1
G-1	WEM WMSB-AH	SWEATBAND BUNDLE	1

* Contains a Quantity of 5 Pieces

AUTO-DARKENING WELDING HELMET WARRANTY

Weldmark

EFFECTIVE JANUARY 1, 2016

LIMITED WARRANTY

This warranty applies to the original purchaser and is subject to the terms and conditions listed below. This Limited Warranty is for new equipment purchased after the above date, providing coverage for defects in material and workmanship at the time it is shipped from the factory.

Limited to the warranty periods below, WELDMARK will repair or replace the item under warranty that fails due to defects in material and workmanship. WELDMARK must be notified within 30 days of the failure, so as to provide instructions on how to proceed with the repair of your helmet and warranty claim processing. Warranty period begins at the time the equipment is purchased from and Authorized Weldmark Distributor. **Keep your receipt as proof of purchase.**

Warranty Periods

No Warranty

Items considered to be normal wear items, such as protective cover lens and sweat bands, are considered consumable items and have no warranty.

90 days

All parts, with the exception of the auto darkening lens cartridge and the items listed above in the "No Warranty" section, have a 90 day warranty that covers the absence of parts or any parts that are defects in material and/or workmanship.

3 year Lens Replacement Warranty

This warranty covers the replacement of the Auto Darkening Lens Cartridge due to defects in material and/or workmanship. This warranty does not cover failure due to misuse or damage caused in the use of the product. Physical damages such as cracks in the lens, spatter marks on the lens or burn damage is considered physical damage that occurs during the use of the product and are not covered by this warranty. This is a lens only replacement warranty.

Voiding Warranty

Warranty does not apply to: Shipping Damage, Misuse and abuse of the unit, alteration of the unit in any way.

Warranty Claim

This is a parts replacement warranty. Bring your helmet back to the authorized Weldmark Distributor that you purchased your helmet from. Retain your receipt in the case a warranty claim is needed. No warranty will be provided without the original receipt from an authorized Weldmark Distributor.