

# Clarke®

## weld



### **SOLAR POWERED / ARC ACTIVATED HEADSHIELD**

**Model No: CWS1**

**Part No: 600689**

## **ASSEMBLY & OPERATING INSTRUCTIONS**



GC06/12

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# INTRODUCTION

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Thank you for purchasing this CLARKE Headshield.

Please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to the product giving you long & satisfactory service.

## GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for its intended purpose. Faulty goods should be returned to their place of purchase. No product can be returned to us without prior permission. This guarantee does not effect your statutory rights.

## ENVIRONMENTAL PROTECTION

If broken, do not dispose of this product with general household waste. This product contains valuable raw materials and should be disposed of appropriately at a recognised disposal facility.

## TECHNICAL DATA

Viewing Field (W x H)	90 X 40 mm
Shade Number in Light State	DIN4
Shade Number in Dark State	DIN 9-13 Outside Adjustment
UV/IR Protection	max shade DIN16 at all times
Operating Temperature Range	-5°C - +55°C
Weight	0.4 kg
Switching Time from light to dark	0.6 msec
Delay Time from dark to light	0.1 - 0.8 seconds
Lens Power Control	Auto-on, Auto-off after 15 min idle time
Power Supply	Solar Cells / Lithium Battery
Construction material	Polypropylene (fireproof)

**Please keep these instructions in a safe place for future reference.**

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**weld**

Parts & Service: 020 8988 7400/E-mail:Parts@clarkeinternational.com or Service@clarkeinternational.com

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## GENERAL SAFETY WARNINGS

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- **This headshield is not suitable for laser welding, laser cutting or overhead welding applications or for oxy-acetylene.**
- The protective plate in this headshield is breakable and will not protect against impact hazards.
- This headshield is designed for use in arc welding or cutting applications such as MIG/MAG, TIG, MMA, Plasma Arc, and Carbon Arc.
- Use this headshield for face and eye protection against harmful rays, sparks and spatter from welding and cutting.
- Never place this product on a hot surface.
- In the event of failure, the headshield remains protected against UV and IR radiation.
- Do not make any modifications to this product. Protection can be seriously impaired if modifications are made.
- When necessary, use identical replacement parts. This will ensure that the safety of the product is maintained.
- Only trained welders should use this product.
- Do not use without protective plate installed. Do not use if any part of the headshield is cracked or broken.
- Do not use this headshield for welding outside the range of DIN 9-13. Harm to the eyes and impaired eyesight may result. Always select the correct setting before use.

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## PREPARATION & USE

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### ASSEMBLY

Refer to the part numbers on page 6.

1. Install headband (8) by removing the thumbscrews (3) individually, and fasten again after passing each spindle (12) through the holes on the sides of the hood. Ensure the square lugs of the spacer (15) and back washer (13) seat in the headshield and the adjustment tab (9) is locked in position.
2. Remove protective film from lens before use.

### ADJUST HEADBAND TO FIT

1. The headband (8) should be adjusted both in diameter and height to fit the wearer's head. To do this, press the adjustment knob (10) on the back of the headband and turn the nut either left or right to expand or contract the headband.

2. The top headband can be adjusted by bending the strap and positioning the peg in the appropriate hole.
3. When the thumbscrews (3) are tight, the angle of tilt can be quickly and repeatably adjusted using the adjusting tab (9), by placing it on the chosen peg on the headband.

## USING THE HEADSHIELD

1. Remove the protective film from both sides of the cartridge (1).
  - The window will be set to Light DIN 4 state, and you will be able to see the workpiece. The lens will automatically darken when an arc is struck.
2. Test the lens by striking an arc on the workpiece for the first time. Check also that the outer screen and lens are clean and clear at all times.
3. Change the shade of setting as required using the shade adjustment knob (4). Refer to the table opposite.
4. When the helmet is not used for 15 minutes, the power will automatically shut off. There is no OFF switch.

## SELECT THE SHADE SETTING

On striking an arc, the light created will activate the solar cell and the window will automatically darken to a preset level. The lithium battery will provide the necessary energy to operate the head shield when there is no arc light. Because the cartridge assembly is a sealed unit, the battery cannot be replaced. You can adjust this shade level using the shade knob (4) on the side of the headshield, corresponding to the type of welding process.



- There are five levels available; 9, 10, 11, 12 and 13. Check the table to determine which value you should select.
1. Set the shade selector (4) to the required setting.
  2. During the welding operation the lens will automatically darken to the pre-set shade. On removal of the arc, the lens will return to the light state.



3. Adjust the 'Sensitivity' and 'Delay Time' as desired by using the adjustment knob.

Welding Process	Arc Current (Amperes)																	
	10	20	30	40	60	80	100	125	150	175	200	225	250	275	300	350	400	450
SMAW		9			10		11			12			13			14		
MIG(heavy)					10		11			12			13			14		
MIG(light)					10		11			12		13		14		15		
TIG, GTAG	9	10		11		12			13		14							
MAG/CO2				10		11	12	13			14		15					
SAW					10			11	12	13	14	15						
PAC					11			12			13							
PAW	9	10	11		12		13			14			15					

Shade numbers according to BS 379, DIN 4647-1 and EN 169



**WARNING: DO NOT USE FOR WELDING OUTSIDE THE RANGE OF DIN 9-13. INJURY TO THE EYES & LOSS OF EYESIGHT MAY BE CAUSED.**

## CARE AND MAINTENANCE

### GENERAL

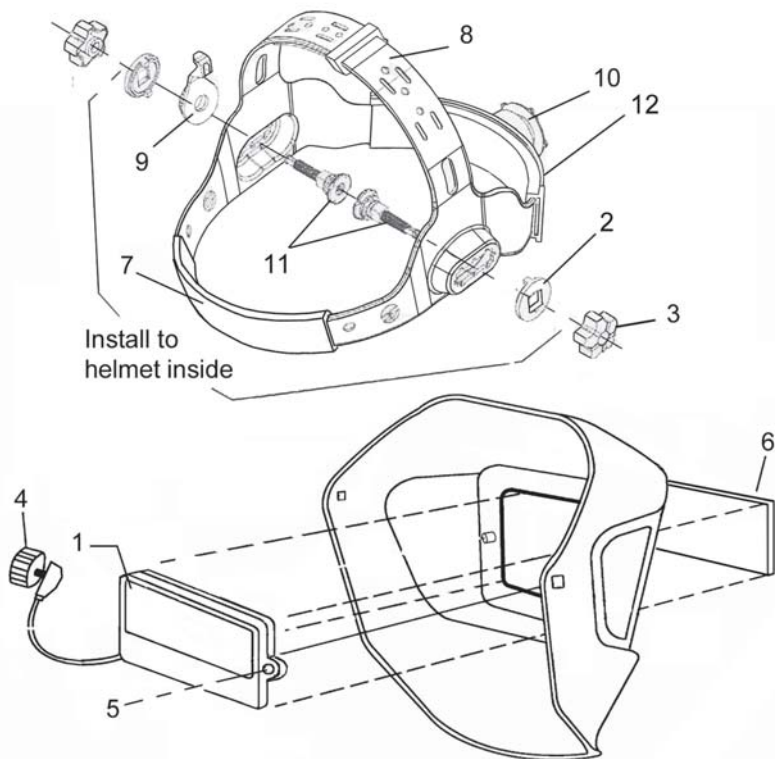
Damaged components must be replaced immediately to avoid risk of eye and face injuries. Periodically inspect the filter cartridge and lenses. Cracked, pitted or scratched lenses reduce vision and seriously reduce the level of protection and should be replaced with genuine, certified spare parts. The outer screen can be removed for cleaning or replacement by prising it away at its lower edge with the thumb. When replacing, take care it lays evenly on the lips provided. Due to the small size of the components, the lithium battery cannot be replaced.

### CLEANING & STORAGE

The cartridge (5) can be wiped with a household glass cleaner when dirty. Apply the cleaner with a clean cloth or paper towel. **DO NOT USE ALCOHOL TO CLEAN. DO NOT APPLY CLEANER DIRECTLY TO THE CARTRIDGE.** The headshield should be stored in its box or similar place.

Clean all lenses with a soft tissue and suitable lens cleaning fluid. Do not use solvents. Never use tools or other sharp objects to remove material from the filter or helmet. This may cause damage which may cause incorrect function and invalidate the warranty.

# COMPONENT PARTS



No	Description
1	Cartridge Assembly
2	Spacer
3	Thumbscrew for Headband
4	Shade Selector Knob
5	Fixing Screw
6	Outer Screen

No	Description
7	Sweat Band
8	Headband
9	Adjustment Tab
10	Headband Adjustment Knob
11	Spindle
12	Headband Tensioner

# DECLARATION OF CONFORMITY



**Clarke**<sup>®</sup>  
INTERNATIONAL

Hemnal Street, Epping, Essex CM16 4LG

## DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s):

89/686/EEC *Personal Protective Equipment Directive.*

The following standards have been applied to the product(s):

EN 379:2003+A1:2009, EN 166:2004, EN 175:1997.

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2010

**Product Description:** Solar Arc Activated Head Shield  
**Model number(s):** CWS1  
**Serial / batch Number:** N/A  
**Date of Issue:** 01/06/2012

Signed:



J.A. Clarke  
Director

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