

# **SWS**

# **ARC-DEFENSE**

## **WELDING HELMET**

### **YC-09-I**



Warning: For your own safety, please read these instructions carefully before using auto-darkening welding helmet!

Auto-darkening welding helmet is designed to protect the eyes and faces from spark, spatter, and harmful radiation under normal welding conditions. Auto-darkening filter automatically changes from light state to dark state when the arc is struck, and returns to the light state when welding stop.

Auto-darkening welding helmet comes ready to use. The only thing you need to do before your welding is to adjust the position of the headband and select the correct shade number for your application.

#### **BEFORE WELDING**

Check the front cover lens to make sure that they are clean and no dirt covering the four sensors on the front of filter cartridge. Also please check the front/inside cover lens to make sure that they are secure.

Check all operating parts before use, if there are signals of wear or damage. Any scratched, cracked or pitted parts should be replaced immediately before using again to avoid severe personal injury.

Check for light tightness before each use.

Select a shade number by the shade knob(Seeing the Shade Guide Table No.1). Be sure that the shade number is the correct setting for your application. Adjust headband so that the helmet is seated as low as possible on the head and close to your face. The angle of helmet is adjusted upon the buckles, fastened to different bumps.

#### **DARK SHADE NUMBER SELECTION**

The shades are divided to two sections. One is 5-8, the other is 9-13. The shade section can be chosen by the switch K4. Also if you need for grinding, you can set the Grind/Weld select (K5) switch to "GRIND". Check the shade guide table to determine the proper shade number for your application. Select a shade number by the shade knob(Seeing the Shade Guide Table No.1).The shade goes darker from 5 to 8 or from 9 to 13 gradually by turning knob K2.

## PRODUCT FEATURES

MODEL is designed & equipped with a special turn over(up & down) headband mechanism. When welder turns over the helmet to welder's head top, the headband mechanism makes helmet's gravity center to be lower, to be coincided with the center of welder's head. The design of welding helmet greatly reduces the fatigue of welder's head (&neck) and make welder feel more comfortable than before during working.

At the moment of starting welding, it automatically changes filter screen from clear to dark in only 1/25,000 sec.

The delay time from dark to clear is set between 0.2s and 1s adjustable by delay knob.

The helmet utilizes high performance solar cells as power supply and 2 built-in 3V lithium batteries as power back-up. And the battery life is raised to a new limit. The power will be off automatically within 10-15mins after stopping work. Under normal welding conditions ,users can expect a battery has a lifetime of more than 1 years. Once the battery power is off, operators can use the lithium batteries of same sizes for replacement.

The product is in full conformity with related DIN,ISO,EN safety standards and ANSI Z87.1-2010 standards.

The ultra high performance of UV/IR auto-darkening filters provide full protection for the user's eyes & face against UV/IR radiation during the entire welding process, even in the light state. The UV/IR protection level is up to Shade 16(DIN) at all times, it makes welders feel comfortable during welding working.

## WARNING

This auto-darkening welding helmet is not suitable for laser welding & Oxyacetylene welding.

Never place the 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 other than those specified in this manual.

Unauthorized modification and replacement parts will void the warranty and expose the operator to the risk of personal injury.

Should the 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 filter's screen or helmet components.

Use only at temperature:-5°C~+55°C

Storing temperature:-20°C~+70°C

Keep filter away from liquid and dirt.

Clean filter's surfaces regularly, do not use strong cleaning solutions. Always keep sensors and solar cells clean by using a clean lint-free tissue/cloth.

Regularly replace the cracked/scratched/pitted front cover lens.

**Severe personal injury could occur if the user fails to follow the aforementioned warnings, and/or fails to follow the operating instruction.**

## COMMON PROBLEMS AND REMIDIES

### \*Irregular Darkening Dimming

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

### \*\*Auto-darkening Filter Does Not Darken Or Flickers

Turn the sensitivity knob to "HI" position

Front cover lens is soiled or damaged(change cover lens)

Sensors are soiled (clean the sensors' surface)

Welding current is too low.

### \*\*\*Slow Response

Operating temperature is too low (do not use at temperature below -5°C)

When the power of battery in the filter screen is not enough, please stop using and change a new filter cartridge.

#### \*\*\*\*Poor Vision

Front/inside cover lens and/or filter lens are soiled(change lens)

There is insufficient ambient light.

Shade number is incorrectly set(reset the shade number).

The protective film of the front/back cover lens is not peeled off.

#### \*\*\*\*\*Welding Helmet Slips

Headband is not adjusted properly(readjust headband)

**Warning!** Operator must stop using the auto-darkening welding helmet immediately if the above mentioned problems cannot be corrected. Contact the dealer.

### LENS & HELMET MAINTENANCE

**Replacing the front cover lens** if it is damaged (cracked,scratched, soiled or pitted)

**Step 1:** Take out the old front cover len.

**Step 2:** Place the new cover lens into the right position.

### TECHNICAL SPECIFICATIONS (YC-1)

Viewing Area:100 ×65mm

Size of Cartridge:110×90×9mm

Light state: DIN 4

Darken state: DIN5-8/9-13

Switching Time: 1/25,000s

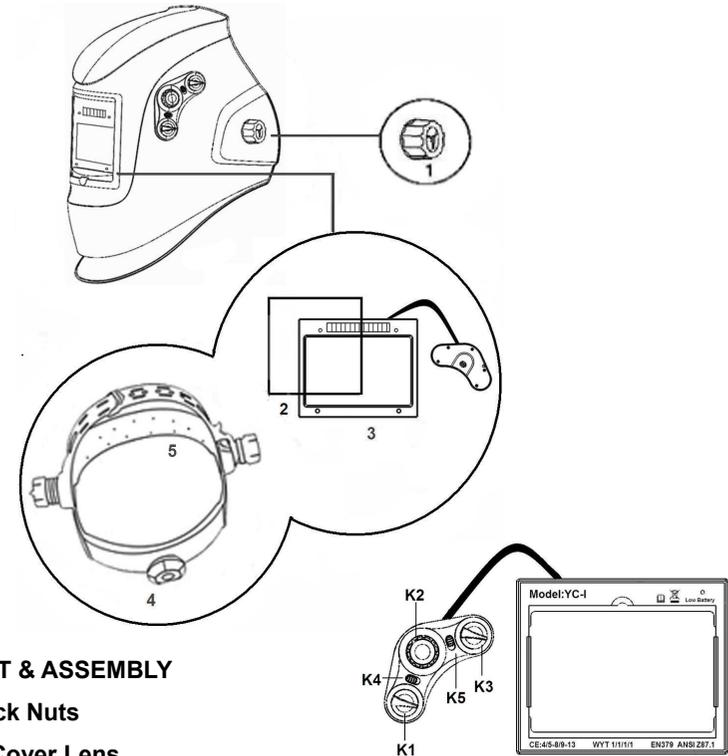
Operating Temperature : -5℃~+55℃

Storing Temperature : -20℃~+70℃

Helmet Material: High-impact resistant plastic/Polyamide Nylon.

**Total Weight: 520g**

### THE PARTS LIST OF THE HELMET



#### PARTS LIST & ASSEMBLY

1. 2x Block Nuts
  2. Front Cover Lens
  3. Auto-Darkening Filter Cartridge(front)
  4. Headband
  5. Sweat Band
  6. Auto-Darkening Filter Cartridge(back)
- K1 Sensitivity knob  
K2 Shade knob  
K3 Delay knob  
K4 Shade grades select switch  
K5 Grind/Weld select switch

## SHADE GUIDE TABLE (No.1)

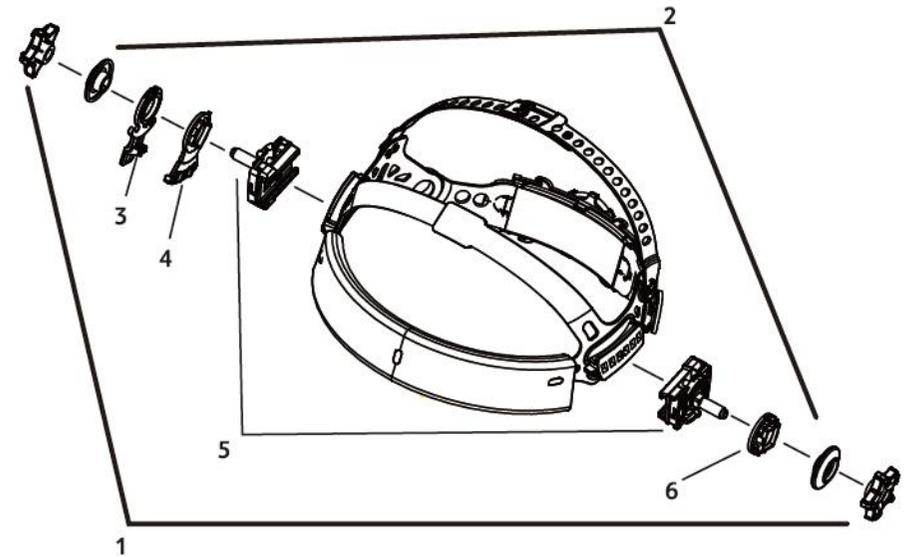
Welding Process	Arc Current (Amperes)																							
	0.5	2.5	10	20	40	80	125	175	225	275	350	450	1	5	15	30	60	100	150	200	250	300	400	500
SMAW								9	10	11	12	13	14											
MIG (heavy)										10	11	12	13	14										
MIG (light)										10	11	12	13	14	15									
TIG, GRAW				9	10	11	12	13	14															
MAG/CO2						10	11	12	13	14	15													
SAW										10	11	12	13	14	15									
PAC												11	12	13										
PAW				8	9	10	11	12	13	14	15													

**Note:**

- SMAW - Shielded Metal Arc Welding
- MIG(heavy) - MIG on heavy metals
- MIG(light) - MIG on light alloys
- TIG, GRAW - Gas Tungsten Arc Welding (GRAW)(TIG)
- MAG/CO2 - Metal Active Gas Welding (CO2)
- SAW - Shielded Semi - Automatic Arc Welding
- PAC - Plasma Arc Cutting
- PAW - Plasma Arc Welding

	4	5	-8	9	-13	WYT	1	1	1	2	379
Light state scale no											
Lightest dark state scale no											
Darkest state scale no (if applicable)											
Lightest dark state scale no											
Darkest state scale no (if applicable)											
Manufacture's identification											
Optical class											
Diffusion of light class											
Variations in luminous transmittance class											
Angle dependence of luminous transmittance class(optional)											
Number of this standard											

## THE PARTS LIST OF THE HEADBAND



- 1、 Nut
- 2、 Separator
- 3、 Installation part-1
- 4、 Setting hook
- 5、 Screw
- 6、 Leveler