

# XCEL-ARC



# CHAOS

**2 YEAR**  
PRODUCT  
WARRANTY

CHAOS

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SAFETY.....	3
FEATURES.....	4
HELMET BREAKDOWN.....	5
OPERATING INSTRUCTIONS.....	6
RECOMMENDED SHADE SETTINGS.....	8

**WELDING TECHNOLOGY**  
SUPPLIERS OF WELDING AND ENGINEERING EQUIPMENT



**Please read and understand all instructions before using.**

- Be sure that the dark shade of the lens in the welding helmet is the correct shade number for your application.
- This helmet and lenses are not suitable for “overhead” welding application, laser welding, or laser cutting applications.
- Welding helmets are designed to protect the eyes and face from sparks, spatter, and harmful radiation under normal welding conditions.
- This helmet will not protect against explosive devices or corrosive liquids. Machine guards or eye splash protection must be used when these hazards are present.
- Impact resistant, primary eye protection, spectacles or goggles that meet current ANSI specifications, must be worn at all times when using this welding helmet.
- Avoid work positions that could expose unprotected areas of the body to spark, spatter, direct and/or reflected radiation. Use adequate protection if exposure cannot be avoided.
- Before each use, check that the protection plates are clean and that no dirt is covering the sensors on the front of the lens.
- Inspect all operating parts before each use for signs of wear or damage. Any scratched, cracked, or pitted parts should be replaced immediately.
- Do not make any modifications to either the welding lens or helmet, other than those specified in this manual. Do not use any replacement parts other than those specified in this manual. Unauthorised modifications and replacement parts will void the warranty and expose the user to the risk of personal injury.
- If this lens does not darken when striking arc, stop welding immediately and check the helmet is in Weld Mode and not Grind Mode. If the issue persists, contact your local Xcel-Arc Service Department.
- Do not immerse this lens in water.
- Do not use any solvents on any lens or helmet components.
- The recommended operating temperature range for welding lens is -10°C to 65°C (14°F-149°F). Do not use this device beyond these temperature limits.
- Failure to follow these warnings and/or failure to follow all of the operating instructions could result in severe personal injury.



# FEATURES



The CHAOS Welding Helmet is equipped with an automatic darkening filter. The filter is transparent before welding so that the operator may observe the work surface clearly. When striking arc, the filter darkens automatically immediately. When arc goes out, the filter will become transparent again. The switching time from light to dark is about 0.08 ms. The switching time from dark to light may be set up within 0.1-0.9 second.

The helmet is equipped with a continuous darkness-adjusting unit so that the operator may select an arbitrary dark shade number ranging from 9-13.

The CHAOS Welding Helmet gives the operator permanent complete protection against UV/IR, even in transparent condition. The UV/IR protection level is up to DIN15 in all time. The power is provided by solar cells and replaceable battery.

The helmet is equipped with four photosensors to sense arc light. In addition, the helmet contains an outer protection shell made of high polymer materials. The plate is wear-resistant, thermostable, and has no dregs-sticking, thus a very long service life.

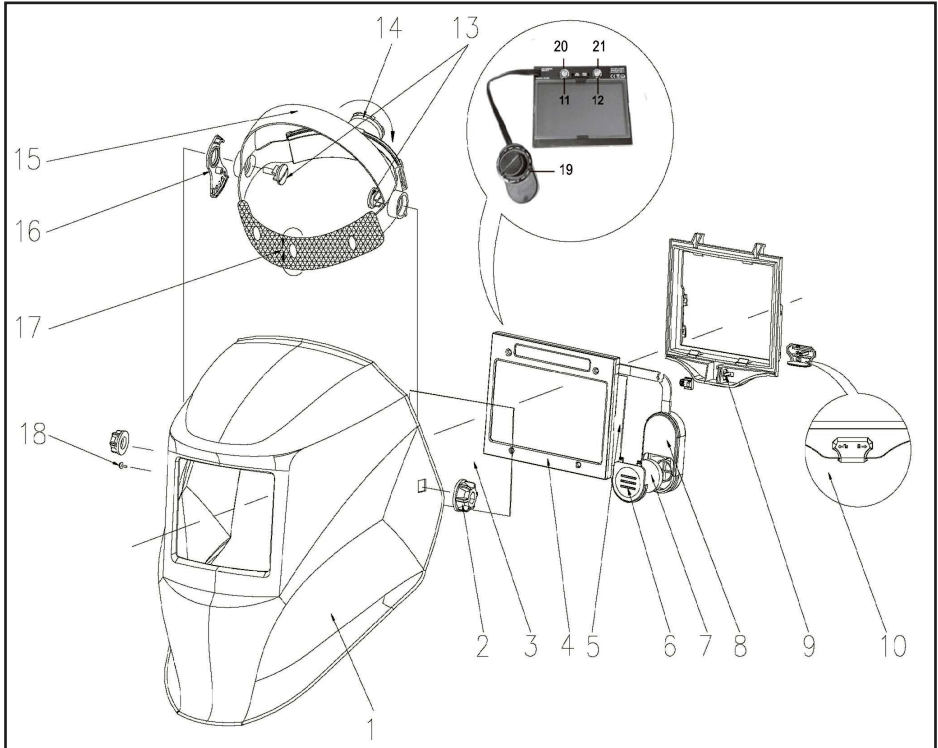
The CHAOS Welding Helmet is a ELITEVISION™ welding helmet. With advanced ELITEVISION™ technology, the users can weld with improved clarity due to new Blue Optical Coating technology, grind with precision while in grind mode and finally see the job performance in the light state in the full spectrum of colours. There is no need to remove the helmet to see clearly!

TECHNICAL DATA		TECHNICAL DATA	
<b>SKU</b>	CHAOS	<b>Sensitivity Delay</b>	Adjustable (Internal)
<b>Filter Dimensions</b>	110x90x9mm	<b>Power Supply</b>	Solar Cells & CR2450 Replaceable Battery
<b>View Size</b>	100x60mm	<b>Warranty</b>	2 Years
<b>Classification</b>	1/1/1/2	<b>Operating Temperature</b>	-10°C to 65°C
<b>Light State</b>	4	<b>Storage Temperature</b>	-20°C to 85°C
<b>Dark State</b>	9-13	<b>Shade Control</b>	Yes (External)
<b>UV/IR Protection</b>	DIN15	<b>Grind Mode</b>	Yes (External)
<b>Time from Light to Dark</b>	0.08ms	<b>Standards</b>	CE, ANSI , CSA, AS/NZS
<b>Time from Dark to Light</b>	0.1-0.9s		

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# HELMET BREAKDOWN



#	Description	#	Description
1	Helmet Shell	12	Delay Knob
2	Block Nut	13	Headband Screw
3	Outer Lens (XA-AS-100-ICL)	14	Headband Tightness Knob
4	Automatic Filter	15	Headband Adjusting Button
5	Inner Lens (XA-AS4-1-ICL)	16	Segmental Positioning Plate
6	Battery Cover Plate	17	Sweat Band (XA-AS-1-SWB)
7	Replaceable Battery (CR2450)	18	Segmental Plate Positioning Point
8	Potentiometer Container	19	SHADE/GRIND Control Knob
9	ADF Frame	20	Low Battery Warning Flash
10	ADF Frame Lock	21	GRIND Mode Flash
11	Sensitivity Knob		

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## THE POWER SUPPLY

The power of the CHAOS Welding Helmet is provided by solar cells with one replaceable lithium battery CR2450. Turning on or off is automatically controlled by the circuit. You can use this helmet at any time you need and take it away after working without operating any key.

## SHADE SELECTION

Select the darkness with the *SHADE/GRIND Control (19)* according to the current of the welding process. Strike the arc, then observe lens shade and adjust to the optimum darkness if needed.

## DELAY TIME SELECTION

By moving the *DELAY Selector Knob (12)*, the time taken for the lens to lighten after welding can be altered from 0.1-0.9 second.

**MIN:** The time the lens takes to lighten after welding changes to become shorter. The shortest time is about 0.1 second depending upon welding point temperature and shade set. This setting is ideal for track welding or production welding with short welds.

**MAX:** The time the lens takes to lighten after welding changes to become longer. The longest time is about 0.9 second depending upon welding point temperature and shade set. This setting is ideal for welding at high amperage where there is an afterglow from the weld.

## SENSITIVITY SELECTION.

By moving the *SENSITIVITY Selector Knob (11)*, the sensitivity to ambient light changes can be altered.

**MIN:** The photosensitivity changes to become lower. Suitable for high amperage welding and welding in bright light conditions (lamplight or sunlight).

**MAX:** The photosensitivity changes to become higher. Suitable for low amperage welding and using in poor light conditions. Suitable for use with steady arc process such as TIG welding.

In regular usage, we suggest using this helmet with high sensitivity.

## HARNESS

The harness can be adjusted for better comfort during operation. The *Headband Adjustment Button (15)* adjusts the size of the headband. The *Segmental Positioning Plate (16)* adjusts the viewing angle. The *Headband Tightness Knob (14)* adjusts the tightness of the headband.

## WELDING/GRINDING FUNCTION

Welding/grinding function can be selected by moving the *SHADE/GRIND Control (19)*.

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## LOW BATTERY WARNING LIGHT

The *Low Battery Warning Light (20)* will flash when the battery is low.

## GRIND MODE FLASH

The *Grind Mode Flash (21)* will flash when using grinding function. To avoid any harm to eyes, do not conduct welding while on grinding mode.

## ADF LOCK & UNLOCK

Move the *ADF Frame Lock(10)* to the left to unlock the ADF frame. Move the lock right to lock the ADF frame.

## ADDITIONAL INSTRUCTIONS

- Be sure that the helmet is used in the correct condition and according to the SAFETY content.
- There is a liquid crystal-valve in the filter, although it has inner and outer protection plate, it is important to avoid heavy knocks to the helmet.
- The outer protective shell of the helmet should be periodically inspected and cleaned. In the case of a break, crack, pitting or other damage, the helmet shell must be replaced.
- To operate more efficiently and safely, please select the correct dark shade number.
- The arc light must be visible completely by the sensor. If not, the filter will be transparent or unstable in darkness.
- Please use the automatic filter at a temperature between -10°C to 65°C (14°F-149°F)
- Do not disassemble the filter. If any problems arise, please contact your local z service department.

## REPLACEABLE PARTS

- Outer Lens - XA-AS-100-ICL
- Inner Lens - XA-AS4-1-ICL
- Head Harness - XA-AS-3-HB
- Sweat Band - XA-AS-1-SWB



# RECOMMENDED SHADE SETTINGS



		Current Amperes																								
		0.5	1	2.5	5	10	15	20	30	40	50	60	100	125	150	175	200	225	250	275	300	350	400	450	500	
Covered Electrode	Shade 9											Shade 10														
													Shade 11													
MIG Plate Welding	Shade 10																									
												Shade 11														
MIG Sheet Metal	Shade 10											Shade 11														
												Shade 12	Shade 13													
TIG	Shade 9											Shade 10	Shade 11	Shade 12	Shade 13											
MAG	Shade 10											Shade 11	Shade 12	Shade 13	Shade 14	Shade 15										
Arc Gouging	Shade 10											Shade 11	Shade 12	Shade 13	Shade 14	Shade 15										
Plasma Cutting	Shade 11																									
												Shade 12														
Plasma Welding	4	5	6	7	8	9	Shade 10	Shade 11	Shade 12	Shade 13	Shade 14		Shade 15													

WELDING TECHNOLOGY  
SUPPLYING OF WELDING AND ENGINEERING EQUIPMENT

