

Aketek LIFT-UP welding helmet

Installation, operation and maintenance instructions



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Let us introduce Aketek

Åke Hörnell is the inventor of Auto-Darkening Welding Filters, an innovation that has improved the working conditions for welders around the globe. Åke patented the technology and founded a company that began to introduce products under the trade name Speedglas. After a long and successful expansion ending up as a market leader, the company was acquired by 3M Group. After some years of non-compete restrictions, Åke Hörnell could not resist the temptation and challenge to reenter the welding safety business. A new star – Aketek – was born.



Åke Hörnell

Aketek welding helmets are Swedish designed and built based on more than 30 years of expertise. They make the welding safer, more comfortable and easier. With low cost, high performance and easy operation, we believe that Aketek welding helmets make every welder to a better welder.

Aketek – best possible optics

Aketek welding helmets have the best classes for optics performance (1/1/1/1) according to the European standard EN 379. They work for all type of electric arc welding. The switching time from light to dark is around 0,0001 sec. The electronic is extremely low power and the in-built battery, supported by a solar cell, has a long life time. At all Aketek welding helmets switching to grinding mode is possible.

Operating instructions are also available at www.aketek.se/english-information.

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1.0 Information

Welding without proper eye protection is dangerous. Automatically darkening welding filters provide reliable protection against UV/IR radiation, heat, sparks and weld spatter in both light and dark states. The automatic dark state protects the eyes from the strong light from the welding arc. The automatically darkening welding filter must always be used with the welding helmet.

Welding helmets equipped with automatic welding filters are easy to use. When the welding arc is struck, the glass darkens automatically and when the welding stops, the glass returns to its light state again. This provides the following advantages: both hands free, safer working environment thanks to protection against UV/IR radiation for eyes and skin, no glare from the welding arc, better quality, faster and more efficient welding. With the Aketek LIFT-UP, you can lift up the welding filter to also have protection for grinding work and to get a better overview of the workplace.

These operating instructions must not be removed from the product, except by the user of the welding helmet. The operating instructions must always be available to a new user. If you don't have the operating instructions, they can be downloaded at www.aketek.se.

2.0 Areas of applications

The welding helmet together with the automatically darkening welding filter and protection plates should only be used for electric arc welding and plasma welding. This includes welding with coated electrodes, MIG/MAG welding, TIG welding and plasma welding/cutting in the temperature range -5 °C to +55 °C. Do not use the welding helmet for uses other than those specified on the next page.

Ampere	5	10	15	20	30	40	60	80	100	125	150	175	200	225	250	275	300	350	400
Covered electrodes					9		10		11			12				13			
MIG (steel)									10	11			12				13		
MIG (light metal leg.)									10	11			12		13			14	
TIG (WIG)		9			10		11			12			13		14				
MAG							10		11		12		13				14		
Plasma welding	7	8	9	10		11		12			13			14					
Plasma cutting								11				12			13				

3.0 Preparations before use:

3.1 Make sure that the welding helmet is suitable for the welding to be performed. Check that the welding filter cassette, both inner and outer protection plates and clear visor are clean and not cracked or scratched. Make sure that the protective film is removed from all plates before using the welding helmet.

3.2 Do not use sharp tools or objects that could damage the welding helmet and may cause the product warranty to be invalidated.

3.3 The welding helmet should be placed on the head so that the black sweatband of the headband comes towards the forehead and the orange neck pad and the size adjustment end up in the neck. Adjust the size so that the helmet fits firmly and comfortably. The headband has double adjustable head straps and flexible neck plate for increased comfort. The headband is adjustable forwards and backwards in five steps to get the best distance to the welding glass. The headband has an adjustable angle up and down to get the best view through the welding glass. The headband can easily be detached from the welding helmet, for example for changing sweatbands. See picture of the headband on the page 9.

3.4 After correct adjustment, the welding helmet should cover the entire face and head.

4.0 In use

There are two knobs with adjustment options on the inside of the welding filter cassette. The knob on the left side affects the sensitivity of the light detectors. Counterclockwise rotation reduces the sensitivity and clockwise rotation increases the sensitivity. The detectors do not respond to sunlight and constant ambient light, but only to rapidly varying lights such as the welding arc. Therefore, it is recommended to normally use maximum sensitivity. The knob on the right side is for setting the shade number, with the lowest shade 8 (lightest setting) at counterclockwise rotation to stop and with the highest shade of 12 (darkest setting) at clockwise rotation to stop. When welding, select position welding on the welding filter cassette, and when grinding select grind.

Automatically darkening welding filter must be used with outer and inner protection plates. The protection plates protect against heat, dirt, welding splashes and welding spatter. The outer and inner protection plates must be replaced if they become scratched or damaged in any way that impairs the view. The protection plates from Aketek are made of polycarbonate plastic (PC) with a scratch-resistant surface coating. If protection plates are not used, the welding filter cassette will be damaged by weld spatter and the warranty will be invalidated.

When grinding, the welding filter cassette can be lifted up and the inside clear polycarbonate plastic visor will give the needed protection.

5.0 Maintenance and cleaning

Inspect the welding helmet regularly, both before and after use. Do not use the equipment until any damaged or defective parts have been replaced, as this can affect the work negatively. The welding filter cassette is sensitive to water.

5.1 The welding helmet must be handled with care. Do not leave it in a dirty environment.

5.2 The welding helmet has an outer protection plate of polycarbonate plastic (PC) with a scratch-resistant coating that protects against mechanical particles and welding spatter. Over time the transparency will deteriorate and the protection plate will then need to be replaced, see 7.0. If cleaning is required, use a damp cloth and wipe with a clean cloth.

5.3 In normal use, the welding glass cassette does not require any special maintenance for the entire service life.

5.4 Other parts of the welding helmet can be cleaned with a cleaning cloth moistened in water with a little detergent and dried with a clean cloth.

5.5 See recommended maintenance list below. You can also download the maintenance list from www.aketek.se.

Product	Control	Recommended replacement	Note
Outer protection plate	Daily. Look for scratches, dirt, heat damage, etc.	Once a month, more often when needed.	Scratches, dirt, and welding splashes impair visibility, which may adversely affect the result.
Date of exchange:			
Inner protection plate	Daily. Look for scratches, dirt, heat damage, etc.	Every other month, more often when needed.	Scratches, dirt, and welding splashes impair visibility, which may adversely affect the result.
Date of exchange:			
Grinding clear visor	Daily. Look for scratches and dirt.	Every other month, more often when needed.	Scratches, dirt, and splashes impair visibility, which may adversely affect the result.
Date of exchange:			
Headband	Daily so that the headband is complete.	Replace if damaged.	Important for function, efficiency, and feeling. Make sure it is complete and correctly set.
Date of exchange:			
Neck pad/sweatband	Once a week so that they are clean and fresh.	Every 4-8 weeks, more often when needed.	Neck pad and sweatband are cleaned and replaced for good hygiene.
Date of exchange:			

6.0 Storage and transport

Make sure that the welding helmet is not damaged. The welding helmet must not be transported in contact with other objects or stored near sharp objects. The storage area must be dry, not near heat sources or in direct sunlight. Store the welding helmet at a temperature between -10 °C and +40 °C. This welding helmet does not contain any special or hazardous materials. It can be discarded in the same way as ordinary electrical equipment.

7.0 Installation and replacement of parts

If the Aketek automatic welding filter cassette, a protection plate or grinding visor needs to be replaced, follow the instructions below. Note that the welding filter cassette protects against UV/IR radiation and is in the light state before welding and in the dark state during welding. The transparent protection plates protect the automatic welding glass against mechanical impact and weld spatter during the welding work. The protection plates are also necessary for the welding helmet to meet the safety requirements demanded by standards.

7.1 Replacing the outer protection plate

7.1.1 Loosen and remove the outer protection plate by pulling with your finger at the lower edge of the plate.

7.1.2 Pull off the protective film on both sides of a new protection plate.

7.1.3 Slide the new outer protection plate into one short side. Bend the plate on the opposite side, to fix it in place.

7.2 Replacing the inner protection plate

7.2.1 Lift up the front part holding the welding filter cassette. Remove the inner protection plate on the inside of the welding filter cassette by pulling it out from the side holders.

7.2.2 Remove the protective film on both sides of the new inner protection plate.

7.2.3 Push in the new inner protection plate.

7.3 Replacing the grinding clear visor

7.3.1 Lift the front part with the welding filter cassette. Remove the clear grinding visor with your finger in the recess at the lower edge of the clear plastic visor.

7.3.2 Pull off the protective film on both sides of a new clear grinding visor.

7.3.3 Make sure that the bulge of the clear visor is placed so that it fits into the lower edge of the recess. Slide the clear visor into one short side. Bend the visor and insert it on the opposite side to fix it in place.

7.4 Replacing the welding filter cassette

7.4.1 The cassette with the welding filter is held by a metal locking spring. Release the spring from the two plastic holders.

7.4.2 Remove the cassette.

7.4.3 A new cassette is mounted with the knobs in the upper edge directed inwards into the helmet.

7.4.4 Attach the cassette to the welding helmet by folding back the metal locking spring and securing it over the two holders.

7.5 Replacing the headband

7.5.1 Release the headband from the helmet by pressing the button on the upper side of the bracket, both on the right and left sides of the helmet. Pull out the headband.

7.5.2 To loosen the attachment points of the headband, release the screws on the outside of the helmet. Number 1, 2, 3, 7, 8 and 9 are places on the outside of the helmet.

7.5.3 The picture below shows the parts that are included in the headband.



7.6 Replacing a new sweatband

7.6.1 Detach the sweatband from their mounts on the headband.

7.6.2 Attach a new sweatband.

7.7 Replacing of the soft neck pad

7.7.1 Remove the soft neck pad which is attached with Velcro.

7.7.2 Attach a new soft neck pad, with Velcro on the outside of the headband.

7.8 Installation of magnifying lens

7.8.1 Lift up the front part holding the welding filter cassette. Remove the inner protection plate on the inside of the welding filter cassette by pulling it out from the side holders.

7.8.2 Carefully slide in the magnifying lens. The magnifying lens replaces the inner protection plate.

8.0 Spare parts

Outer and inner protection plates, as well as clear grinding visor, are spare parts that always need to be available to maintain the welding helmet. The headband's sweatband and neck pad are also changeable. All spare parts can be ordered from www.aketek.se.

9.0 Warranty

From the date of purchase, a 24-month warranty on the welding helmet and welding filter cassette apply. Aketek Industries obligation during this period is to repair or replace the product or the part of the product that is defective. To use the warranty, proof of purchase is needed such as a copy of the invoice and the serial number of the product concerned. A warranty form can be downloaded from www.aketek.se. If a defect is found to be covered by the warranty, the product must be returned to Aketek Nordic Sales AB. Aketek Nordic Sales AB is not responsible for indirect damages or consequential damages that arise through the use of the product. The warranty does not apply to malfunctions or damage to the product caused by modification, improper use, or improper and careless handling such as marks from abuse and damage to the electronic welding filter cassette.

10.0 Please note the following

10.1 This welding helmet should only be used for electric arc welding and plasma welding and related grinding.

10.2 The welding helmet must always be equipped with an automatically darkening welding filter as well as outer and inner protection plates and a clear grinding visor.

10.3 If the automatic welding glass does not darken at the start of welding, stop the work

immediately. Check that nothing obscures the light detectors or that the working distance is too large. Check the sensitivity setting. Some welding processes require that the light sensitivity is set to maximum sensitivity. If the welding glass flashes the temperature may be higher than +55 °C, keep distance between welding helmet and welding arc. If the welding helmet does not work for MIG welding, which is the easiest to detect, it means that there is a malfunction of the welding filter cassette and it then needs to be replaced.

10.4 The welding helmet is intended to withstand normal heat generated during the welding process. However, it must not be in contact with or placed on hot objects including the welding nozzle.

10.5 For best protection of the face, make sure that the welding helmet is properly lowered during welding work.

10.6 Check the welding helmet regularly and replace damaged or worn parts. The protection plates and grinding visor must be replaced regularly to obtain the best visual conditions.

10.7 In particular, always check that the light detectors are clean, to ensure correct operation.

10.8 Long welding time with high current can cause the temperature in the welding glass to exceed the maximum working temperature +55 °C. This can reduce the life of the product and should be avoided. In strong heat, increase the distance between welding helmet and welding arc.

10.9 If the switch on the welding filter cassette is set to grind, the glass does not darken. When welding set the switch to weld.

10.10 If the welding glass stops working, it needs to be replaced. Check the function according to 10.3.

11.0 Marking

The welding helmet meets the requirements according to the harmonized standard EN 175:1997 and is designed with increased robustness. The welding helmet has markings on the inside that indicate the performance and suitable area of use.

	CE AKE EN 175:1997 B
CE	CE logo
AKE	Identification of Aketek Industries AB
EN 175:1997	Number of the applied harmonized standard
B	Mechanical strength – increased robustness

The automatically darkening welding filter meets the requirements of the harmonized standard DIN EN 379:2009. It is marked in a way that indicates the performance of the product and the appropriate area of use.

	3/8–12 AKE 1/1/1/ 379 CE
3	Light state
8	Lowest dark state
12	Highest dark state
AKE	Identification of Aketek Industries AB
1	Optical power
1	Scattering light
1	Homogeneity
1	Angle dependency
379	Number of the applied harmonized standard
CE	CE logo

Notified Bodies No 1437 CIOP-PIB, Poland.

Manufacturer: Aketek Industries AB, Falun, Sweden.

General agent: Aketek Nordic Sales AB, www.aketek.se.