

Powered Air Purifying Respirator
HelmeTec
Wind

OPERATIONAL MANUAL

EN



Please read this manual carefully before using this equipment.

EN 1. OVERVIEW

The **HELMETEC WIND Respiratory Protective Device** is intended to be used to provide protection when the user works in a contaminated environment. The equipment is able to filter the contaminated air by means of the filter build into the blower and therefore supply fresh air through the breathing hose to the headpiece, so that the user can work continuously in a contaminated environment.



The auto-darkening filter is equipped with the new **ColorView** optical technology which allows to see the workpiece in natural colours. The automatic welding mask effectively protects operator's eyes from injuries caused by arc, leaving both hands free and improving work efficiency.



2. WARNING

Read and understand all instructions before using.

- This equipment should be used only by well-trained and qualified personnel.
- Before each use, inspect the equipment for damage and verify that it operates properly.
- Before using the device, test air flow to verify it is providing an adequate air volume.
- Before using the device, make sure you understand that at very high working rates and deep breaths for a long time, the air pressure in the device may become negative, possibly resulting in contaminants entering the helmet.
- Before and during use, attention must be paid to any incorrect use and, where appropriate, to possibility of the hose getting caught.
- DO NOT use HELMETEC WIND with the blower unit switched off. Always wear the equipment turned on and do not remove the headgear or turn off the air filter unit until you left the contaminated area. When the device is in the off state there may be a rapid accumulation of carbon dioxide and depletion of oxygen within the hood. If the device is off, poor or no respiratory protection can be expected. This must be considered an anomalous situation.
- If you are unsure of the pollution concentration or the equipment performance, contact your industrial safety manager.
- The filters shall only be fitted to the turbo unit and not directly to the helmet.
- The user should not confuse the markings on the filter relating to any standard other than EN 12941 with the classification of this device when used with this filter.
- Do not use in an atmosphere that is immediately hazardous to user hygiene or health and/or has oxygen content of less than 19.5% or contains unknown substances.
- Do not use in an explosive atmosphere.
- Do not use in confined spaces or areas of poor ventilation.
- Do not use in high winds.
- Do not alter or modify in any way.
- Do not touch any of the moving parts.
- Do not allow water or other liquids to enter the fan, filter or battery compartment.
- This auto-darkening helmet is not designed for "overhead" welding, laser welding or oxyacetylene welding applications.
- 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 the current applicable regulations, must always be worn when using this welding helmet.
- Avoid working 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 the darkening functionality, check that the inner and outer protective lenses are clean and that no dirt is covering the sensors on the front of the auto-darkening lens.
- Make sure that the protective films both inside and outside of all protective lenses are removed.
- Inspect all operating parts before each use for signs of wear or damage. Any scratched, cracked, or pitted parts should be replaced immediately.
- If the auto-darkening lens does not darken when striking the arc, stop welding immediately and contact service.
- Do not immerse the auto-darkening lens in water. This model is not waterproof.
- Do not use any solvents on any lens or helmet components.
- Do not use any replacement parts other than those specified in this manual. Unauthorized modifications and replacement parts will void the warranty and expose the user to the risk of personal injury.
- Do not use this device beyond the working temperature limits.
- Failure to follow these warnings and/or failure to follow all the operating instructions could result in severe personal injury.

3. CHARACTERISTICS

The **HELMETEC WIND** Respiratory Protective Device is a combined face and breathing protection device for increased safety and comfort during work operations. The equipment is intended to be used to provide protection when the user works in a contaminated environment.

The device is designed to provide filtered air through a breathing tube to a headpiece (helmet). The contaminated air is filtered by the filter integrated in the blower unit. Fresh purified air is then supplied through the breathing hose to the headpiece, so that the user can work continuously in a contaminated environment.

The equipment can be used in environments that require a TH3P class respiratory protection device. It protects against particulate contamination.

The auto-darkening lens is equipped with the new ColorView optical technology. With the advanced ColorView technology, users can weld with improved clarity thanks to the new complex coating technology, grind with precision while in grinding mode and finally see the job performance in the full spectrum of colours. It is no longer necessary to remove the helmet to see clearly. The results are enhanced weld quality, increased efficiency, and improved safety.

4. PACKING LIST

See Pic. 1 at the end of this manual.

1 piece	Welding helmet equipped with LCD filter, inner and outer protective lenses, headgear, sweatband, and cotton hood.
1 piece	PAPR (Powered Air Purifying Respirator) equipped with filters and waist belt.
1 piece	Lithium-ion battery.
1 piece	Hose equipped with both end fittings and fireproof cover.
1 piece	Shoulder harness.
1 piece	Air flow tester.
1 piece	Battery charger.
1 piece	Remote control.
1 piece	USB cable for charging the LCD filter and the remote control.
1 piece	Carrying bag.
1 piece	Operation manual (via QR code).

5. APPROVALS

- This device has been designed and manufactured in accordance with the requirements of Regulation 2016/425 – on Personal Protective Equipment
- This device, manufacturer's model "SparX Air", complies with the specifications of the technical standard EN 12941: 1998 +A2: 2008 class TH3 P R SL, has been certified by Occupational Safety Research Institute, v.v.i. (Notified body: 1024) - Jeruzalémská 1283/9, 110 00 Praha 1, Czech Republic, and it is thus CE marked.
- The Declaration of Conformity can be requested by filling out the form in the contact section of our website www.gcegroup.com.
- The approval is no longer valid if the product is used incorrectly in conjunction with unapproved or other manufacturers parts or components.

6. SPECIFICATIONS

6.1 Blower

Particle Filter	TH3 P R SL	Power Supply	Rechargeable Li-ION 4400mAh
Filter efficiency	≥99.97%@0.3um	Expected Battery Operation Time	Level 1: >10h Level 2: >8h Level 3: >6h
Filter working time	max 180 hours	Battery Charging Time	3,5 Hours
Air Flow	Level 1: 170 L/min Level 2: 200 L/min Level 3: 230 L/min	Battery Lifetime	>500 Charges Depending on the airflow rate and the filter load
Noise Level	max 75 dB	Operating temperature	-5°C ~ +55°C (+23°F ~ +131°F)
LCD Display	<ul style="list-style-type: none"> • Air flow level and data • Battery capacity • Filter status 	Storage temperature	-10°C ~ +55°C (+14°F ~ +131°F)

Warning alarms (visual, sound)	<ul style="list-style-type: none"> • Low Battery • Clogged filter • Motor stuck/damaged • High battery temperature 	Size (blower)	240 x 165 x 70 mm
		Weight (blower)	1,1 kg
		Weight (complete device)	2,4 kg
Reference standard	EN 12941:1998 +A2:2008	Belt Size	90 cm ~ 130 cm

Filter Symbols:

TH3 means the level of protection 3 (max inward leakage 0,2%).

P means the filter is a particle filter.

R means the filter is reusable for more than one shift.

S means the filter protects against solid particles.

L means the filter protect against liquid particles.

6.2 Auto-Darkening Lens

Optical Class	1/1/1/1	Time from light to dark	0.08 msec (1/12500 sec)
ColorView	Yes	Time from dark to light (Delay)	0.1 - 0.9 sec
Filter dimension	117 x 128 mm	Sensitivity	Adjustable (5 levels)
View area	100 x 60 mm	Control	Remote (2.4GHz wireless)
Sensing	4x (four) Sensors	Power On/Off	Fully Automatic
Low Amperage TIG Rated	>2A	Power Supply	Solar cells + Li-ION Rechargeable Battery (180mAh)
Operating Modes	4 Modes: <ul style="list-style-type: none"> • Weld (#5 - 9) • Weld (#9 - 13) • Grind • Cut 	Battery Operation Time	>300h
		Battery Charging Time	2,5 Hours
		Battery Lifetime	>500 Charges
Light Shade	#4	Operating temperature	-10°C ~ +65°C (+14°F ~ +149°F)
Dark Shades	Weld Mode: #5 - 9 Weld Mode: #9 - 13 Grind Mode: #4 Cut Mode: #5	Storage temperature	-10°C ~ +55°C (+14°F ~ +131°F)

6.3 Remote Control

Display	OLED	Battery Operation Time	>30h of continuous use
Control	Encoder	Battery Charging Time	2,5 Hours
Communication	2.4GHz wireless	Battery Lifetime	>500 Charges
Operating temperature	-10°C ~ +65°C (+14°F ~ +149°F)		

7. CONSTRUCTION AND ASSEMBLY

Construction and assembly scheme. See Pic. 2 at the end of this manual.

1	Cotton Hood	11	Blower
2	Headgear	12	Filter
3	Helmet shell	13	Pre-filter
4	Inner Visor	14	Spark Arrestor
5	Inner protection lens	15	Filter Cover
6	Auto Darkening Filter (ADF)	16	Battery Charger
7	Outer protection lens	17	Rechargeable Battery
8	Remote control	18	Air Flow Tester
9	Shoulder Harness	19	Breathing Hose + Fireproof Cover
10	Waist Belt	20	Bag



- All components used in Respiratory System must be manufacturer approved parts and must be used in accordance with the instructions in this manual.
- All components must be installed and used in accordance with this manual in order to provide the specified protection.
- Only the original manufacturer's particulate filter and prefilter can be used with this system. Never use filters from other manufacturers.
- Do not use any replacement parts other than those specified in this manual.
- Unauthorized modifications and replacement parts will void the warranty and expose the user to the risk of personal injury.

7.1 Filter Replacement

- Remove the filter cover by pressing in the latch of the filter cover. (See Pic. 3-a)
- The filter cover is released. (See Pic. 3-b)
- Remove the used filter by lifting it out from the filter cover. (See Pic. 3-c)
- Remove the pre-filter. (See Pic. 3-d)
- Clean the spark arrestor if necessary. (See Pic. 3-e)

From the hygienic point of view the maximum working time of the particle filter is 180 hours and should not be exceeded. In case of intensive use, frequently check the cleanliness of the filter and, if necessary, replace it often (even at every shift).

7.2 Installing the Battery

- Slide the battery towards the back of the filtration unit. (See Pic. 4-a)
- Make sure that the battery is locked in position. (See Pic. 4-b)
- The battery can be charged on the filtration unit (See Pic. 4-c) or separately (See Pic. 4-d).

The battery is partially charged when delivered. It must be charged at a 100% (4 bars) before the first use.

It is recommended to charge the batteries 100% before each use.

The charger must not be used for purposes other than the one it was designed for. Do not charge the battery in a potentially explosive area. The charger is for indoor use only. The charger automatically adjusts the charge, once the battery is fully charged, it will keep it at 100% (floating charge).

The charge time is 3-4 hours.

The battery drains after long storage periods. Always charge the battery if the device has been stored for more than 15 days. When the battery is new or has been stored for more than 3 months, charge it and discharge it at least twice in a row to reach the rated charge capacity.

7.3 Charging the Battery

- Connect the battery to the charger. The connector is above the battery.
- Connect the charger to the power supply.
- The charging status is displayed via a red LED on the charger.
- When charging is complete, the floating charge becomes active: the red LED turns off and a green LED turns on.
- Disconnect the charger from the mains (do not keep the charger plugged to the mains if it's not in use).

7.4 Connecting the Hose

- Connect the air hose to the respiratory system and turn it clockwise to lock it into position. (See Pic. 5-a)
- Connect the other end of the hose to the headgear in the same way. (See Pic. 5-b)

Check that the respiratory hose is strongly connected. If the hose is broken, replace it.

7.5 Installing the Respiratory System on the Belt

- Remove the belt's release buckle. (See Pic. 6-a)
- Remove the fastening belt from the 2 belt loops. (See Pic. 6-b)
- Pass the fastening belt through the 2 loops of the blower unit. (See Pic. 6-c)
- Position the Velcro between the 2 loops. (See Pic. 6-d)
- Flip the blower unit and fasten the Velcro on the belt's back pad. (See Pic. 6-e)
- Pass the fastening belt back through the 2 belt loops. (See Pic. 6-f)
- Put the buckle back. (See Pic. 6-g)
- Connect the harness to the belt's 4 plastic rings. (See Pic. 6-h)

Make sure the belt is securely fastened.

8. BEFORE USE

8.1 Testing the Airflow.

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- Connect the breathing hose to the blower unit and turn it clockwise to lock it. (See Pic. 7-a)
 - Insert the flowmeter on the end of the hose. (See Pic. 7-b)
 - Press the ON button and keep the hose end upright at eye level. (See Pic. 7-c)
 - The air flow is sufficient if the indicator reaches the minimum flow level. (See Pic. 7-d)



The air flow must be tested before each use.

If the indicator fails to reach the minimum flow level, DO NOT use the system. Replace the filter or battery and repeat the airflow test.

8.2 Testing the Airflow Alarm

- Remove the hose from the headpiece and press the ON button. (See Pic. 8-a)
 - Cover the air output with your hand and wait about 15 seconds. (See Pic. 8-b)
- If the alarm does not work, please repair or replace the Respiratory System.

9. BLOWER UNIT

9.1 LCD Display Screen

There is a LCD display screen on the blower unit to show the working condition. (See Pic. 9)

Part 1 shows the data of current airflow.

Part 2 shows the level of the airflow.

Part 3 shows the filter condition.

Part 4 shows the battery level.

Part 5 shows the temperature of the battery.

Any of them will flash if there are malfunctions.

9.2 Operation

Switch the device on by pressing the ON button once.

Press the ON button once again to select between the 3 airflow levels.

Level 1 (~170L/min)

Level 2 (~200L/min)

Level 3 (~230L/min)

Each press changes the level of the air flow.

Switch the device off by long pressing the OFF button for more than 3 seconds.

The system will cut off the entire circuit and switch to sleep mode if the blower unit has turned off for more than 30 minutes. Pressing the ON button can activate the system.

The system must be operated in the temperature range of -5°C to +55°C and relative humidity less than 90%RH.

9.3. Warning Alarms

This PAPR has visual, sound, and vibration alarm indications to alert the user about malfunctions or maintenance.

See the troubleshooting section for more details on the visual alarm.

Different alarm sound sequences correspond to different warnings as shown in the table (Pic. 10).

10. AUTO-DARKENING FILTER (ADF) AND REMOTE CONTROL

This ADF is fully controlled by a remote control connected via Bluetooth. All ADF settings are controlled by the remote control. The ADF will switch to the function/mode set on the remote control.

10.1 Auto-Darkening Filter

There are 3 LED on the ADF cartridge showing the working status. (See Pic. 11)

RUNNING (Green):

- The LED will flash once every 2 sec during the pairing with the remote control.
- Once paired, the LED will flash when the ADF receives a signal from the remote control.

GRIND/CUT (Orange):

- The LED will flash when the ADF is in Grind/Cut mode.

BATTERY (Red/Green):

- The LED will turn on (red) when the ADF battery is out of power.
- The LED will flash (green) during charging.
- The LED will turn on (green) when charging is over.

10.2 Remote Control

The remote control fully controls the ADF settings via Bluetooth. The parameters are shown on the LCD display by means of icons. (See pic. 12 at the end of this manual).

10.3 Mode Setting

The ADF has 4 function modes which can be selected in sequence:

- Welding mode (Shade range 5-9)
- Welding mode (Shade range 9-13)
- Grinding mode
- Cutting mode

To switch between the 4 modes (in loop), long press the knob (2 sec) on the remote control and release.

Once selected the mode, short press the knob (less than 1 sec) to access the additional settings, depending on the mode.

WELDING MODE (Shade range 5-9)

Select this mode if an eye protection shade between #5 and #9 is required during welding operations.

The LCD display on the remote control will show the screen as in the picture n° 13-a.

Short press the knob (less than 1 sec) on the remote control to access the additional settings.

In this mode, Shade, Sensitivity and Delay can be adjusted (see in the next sections).

WELDING MODE (Shade range 9-13)

Select this mode if an eye protection shade between #9 and #13 is required during welding operations.

The LCD display will show the screen as in the picture n° 13-b.

Short press the knob (less than 1 sec) on the remote control to access the additional settings.

In this mode, Shade, Sensitivity and Delay can be adjusted (see in the next sections).

GRINDING MODE

Select this mode for grinding operations.

The LCD display will show the screen as in the picture n° 13-c and the Grind/Cut LED (Orange) on the ADF will flash.

In this mode, Shade, Sensitivity and Delay cannot be adjusted, the ADF will not darken and will remain in shade #4.

Note: Do not make welding operations with ADF in the Grinding mode.

CUTTING MODE

Select this mode for cutting operations.

The LCD display will show the screen as in the picture n° 13-d and the Grind/Cut LED (Orange) on the ADF will flash.

In this mode, Shade, Sensitivity and Delay cannot be adjusted, the ADF will darken to shade #5.

Note: Do not make welding operations with ADF in the Cutting mode.

10.4 Shade Setting

The **dark shade** can be adjusted in both Welding modes. It cannot be adjusted in other modes.

Once selected the mode, short press the knob (less than 1 sec) to access the additional settings.

Select the "SHADE" setting and adjust the shade by turning the knob on the remote control.

The shade ranges from #5 to #9 or from #9 to #13, depending on the selected welding mode.

Press the knob again to switch to the next settings.

Choose the appropriate Shade number required for your process or application

See table at the end of this manual.

Note: Shade selection table from standard EN 169.

10.5 Sensitivity Setting

The **sensitivity** (responsiveness to different levels of light) can be adjusted in both Welding modes. It cannot be adjusted in other modes.

Once selected the mode, short press the knob (less than 1 sec) to access the additional settings.

Select the "SENS" setting and adjust the sensitivity by turning the knob on the remote control.

Turn to 1 (low): The photo sensitivity changes to be lower.

Suitable for high amperage welding and welding in bright light conditions (lamp light or sun light).

Turn to 5 (high): The photo sensitivity changes to be higher.

Suitable for low amperage welding and using in poor light conditions.

Suitable for using with steady arc process such as TIG welding.

Under normally use, a higher sensitivity setting is recommended.

Press the knob again to switch to the next settings.

10.6 Delay Setting

The **delay** (the time the ADF takes to return to the light state) is for the protection of welder's eyes from strong residual rays after welding.

It can be adjusted in both Welding modes. It cannot be adjusted in other modes.

Once selected the mode, short press the knob (less than 1 sec) to access the additional settings.

Select the "DELAY" setting and adjust the delay by turning the knob on the remote control.

Turn to 1 (0.1s): The time the ADF takes to return to light state changes to be shorter.

The shortest time is about 0.1s depending upon welding point temperature and shade set.

This setting is ideal for track welding or production welding with short welds.

Turn to 5 (0.9s): The time the ADF takes to return to light state changes to be longer.

The longest time is about 0.9s depending upon welding point temperature and shade set.

This setting is ideal for welding at high amperage where there is an after-glow from the weld.

Press the knob again to switch to the next settings.

10.7 Power Supply and Battery Charging

The **power of the auto-darkening lens** is provided by solar cells and rechargeable lithium battery.

Regularly check the battery charge of the auto-darkening lens by means of the "BATTERY" LED light on the ADF. When the LED light turns red, charge the battery, otherwise the switching time will become slower, and the shade accuracy will be compromised.

Charge the battery with a micro-USB cable when the battery power is low. (See Pic. 14-a at the end of the manual).

- The LED will turn on (red) when the ADF battery is out of power.
- The LED will flash (green) during charging.
- The LED will turn on (green) when charging is over.


The **power of the remote control** is provided by rechargeable lithium battery.

The icon on the LCD display indicates the remote-control battery status. Charge the battery when it is low, otherwise the remote control will not work properly.

Charge the battery with a micro-USB cable when the battery power is low. (See Pic. 14-b at the end of the manual).

10.8 Pairing the Remote Control with the Auto-Darkening Lens.

ADF and Remote Control are paired one to one when the device is assembled on the helmet and they do not need to be paired again.

Once paired, the Icon  is displayed on the remote-control display. One remote control can only control the ADF to which it has been paired.

A new Remote Control can be paired with a new ADF.

Move the new Remote Control near the new ADF.

Long press the pair button on the ADF for more than 3 sec by a fine needle and release (see pic 15-a).

Then long press the pair button on the Remote Control for more than 3 sec by a fine needle and release (see pic 15-b).

The "RUNNING" LED light on ADF will flash once every 2 sec and will stop flashing when the pairing has been successful.

Once paired, the Icon  is displayed on the remote-control display.

If Icon  is displayed, it means that the pairing has failed, and must be repeated.

11. HEADGEAR ADJUSTMENTS

Since the shape of the operators' head varies from person to person, the working position and the observing angle are different.

The headgear has 5 different adjustments to optimize weight balance and comfort. (see pic 16)

- Adjust the upper stripe of the headgear (1) to set the eye level.
- Adjust the segmental positioning plate (2) to select an appropriate observing angle.
- Push and turn the headgear tightness adjusting knob (3) to adjust the head size perimeter.
- Push and slide the side rails (4) into the proper slot (1 to 5) to adjust the distance between eye/nose and ADF. Make sure both sides are equally positioned for a proper vision.
- Adjust the block washers (5) up or down in the slots (6) to select the height of the headgear.

12. FACE SEAL POSITIONING

Make sure that the face seal (cotton hood) is properly positioned around the throat, to ensure proper insulation from the environment.

Failing to correctly position the seal of the face could lead to breathing not purified air.

13. MAINTENANCE

For best performance clean after each use using a soft cloth dampened with mild soap and water solution. Never use solvents or abrasive detergents. Parts should be allowed to air dry. Inspect the equipment daily and always before each utilize. Check for signs of damage or malfunction.

13.1 Blower Unit and Battery:

The Respiratory system unit must be checked regularly and must be replaced if it is damaged and cause leakage. The battery must be charged when the low battery alarm sounds.

The Blower Unit, filter housing and main unit must all be regularly cleaned to keep them in good working order.

- Liquids must not be allowed to enter the blower unit, especially the motor and the air outlet.
- Pay attention when cleaning the battery housing on the bottom of the blower unit, especially around the battery connector pins. Ensure that the parts of this area and pins are thoroughly dry before next utilize or storage.
- Dampen a clean soft cloth with mild soap and water solution to clean the outer surfaces and the battery pack.
- DO NOT soak in water or solution.
- NEVER use solvents or abrasive cleaning agents. All the parts should be allowed to air dry. The unit must not be dried using hot air or radiant heat.
- For single users, the units can all be cleaned with a cloth moistened with warm water and soap.
- For multiple users, the units should be disinfected when passed from one user to another.

13.2 Breathing Hose

The air hose must be checked regularly and must be replaced if it is damaged and causes leakage. Check the tightness of the connections.

- Dampen a clean soft cloth with mild soap and water solution to wipe the breathing hose and clean it.
- Alternatively, the breathing hose can be soaked in the cleaning solution.
- The hose should be allowed to air dry completely before being reused or stored.

13.3 Filter and Pre-filter

The filter must be replaced if it is broken or clogged and does not provide enough airflow.

The filter must be replaced if the battery operating time becomes too short.

- The particle filter CANNOT be cleaned. Do not attempt to remove contamination using compressed air or other.
- DO NOT wash or reuse filters once used.
- Liquids must not be allowed to get on to the element of the filter.
- From the hygienic point of view the maximum working time of the particle filter is 180 hours and should not be exceeded.
- In case of intensive use, frequently check the cleanliness of the filter and, if necessary, replace it often (even at every shift).
- The particle filter should be replaced together with the pre-filter.

13.4 Helmet and Auto-Darkening Lens:

The helmet and the auto-darkening lens require little maintenance.

- Clean your helmet assembly by using mild soap and water solution and a soft cloth.
- All the parts must be cleaned, including the hose connector.
- DO NOT soak in water or solution.

13.5 Replacing the Inner Visor:

The Large Inner Visor is a protection lens and must be replaced if broken, damaged or covered with welding spatter if the vision is impaired.

- Flip the tilting outer front upwards.
- Push the plugs inside the helmet up, (see pic 17-a). The Inner Visor will be released from the helmet.
- Pull the Inner Visor out (see pic 17-b).
- Insert the new Visor. It is necessary to place it into the corresponding hole in the helmet, then push the plugs inside the helmet down and lock the visor.
- Make sure the Visor is properly mounted, well locked and that there are no visible gaps.








13.6 Replacing the Outer Protection Lens:

The outer protect lens is a protection lens and must be replaced if broken, damaged or covered by welding spatter to the extent that vision is impaired.

- Flip the tilting outer front upwards.
- Unlock the auto-darkening filter (ADF) by pulling the locking structure inside the tilting cover, (see pic 18).
- Remove the ADF.
- Replace the outer protection lens.
- Insert the ADF into the tilting cover and lock the ADF by pushing the locking structure.
- Make sure the outer protection lens is properly mounted and well locked.

14. TROUBLESHOOTING

14.1 Blower Unit:

Trouble	Cause	Remedy
Fault code «E01»  blinks Warning	<ul style="list-style-type: none"> • Motor is stuck • Motor is damaged • Blower structure failure caused by outer force • Circuit failure 	Check and remove physical failure and restart the system. Return to dealer if LCD still shows E01.
Fault code «E02»  blinks Warning	<ul style="list-style-type: none"> • Motor is damaged • Motor impeller rubs blower shell • Circuit has excessive current 	Check and remove physical failure and restart the system. Return to dealer if LCD still shows E02.
Alarm sounds  blinks  blinks Warning	<ul style="list-style-type: none"> • Low battery 	Charge the battery.
Alarm sounds  blinks  blinks Warning	<ul style="list-style-type: none"> • Filter blocked • Hose blocked 	Remove obstruction, replace the filter. Clean the hose.
Alarm sounds  blinks	<ul style="list-style-type: none"> • Battery high temperature 	Stop working and rest.
No air flow, no alarm	<ul style="list-style-type: none"> • No power • Battery contact damaged 	Charge the battery. Check battery contact.
Battery run time is too short	<ul style="list-style-type: none"> • Battery is not fully charged • Filter is blocked • Battery is damaged 	Charge the battery. Remove obstruction, change filter. Change battery.
Air supply to helmet smells unusual	<ul style="list-style-type: none"> • Filter broken • Hose broken • Helmet broken 	Leave current area immediately. Change filter Change hose Change helmet
Supply insufficient air to helmet	<ul style="list-style-type: none"> • Filter clogged • Hose broken 	Check hose connection to helmet and Respiratory system unit. Change breathing hose. Remove obstruction, change filter.

14.2 Auto-Darkening Filter

Trouble	Remedy
The ADF does not darken when welding.	<ul style="list-style-type: none">• Stop welding or cutting immediately.• Make sure the sensors are facing the arc without obstructions.• Check the mode that is on WELDING, and not GRINDING.• Adjust the sensitivity according to the recommendations.• Replace the battery, if necessary.
The ADF stays dark after welding or when there is no arc.	<ul style="list-style-type: none">• Adjust the sensitivity to the lower level (level 1).• If the welding place is extremely bright, reduce the surrounding light level.
The ADF blinks during welding.	<ul style="list-style-type: none">• Increase the sensitivity if possible.• Make sure the sensors are facing the arc without obstructions.• Increase the Delay. 0.1-0.3 second may reduce switching.
Inconsistent shade number on the corner of ADF.	<ul style="list-style-type: none">• It is a natural feature, not dangerous for the eyes.• For a maximum comfort, keep a viewing angle at around 90°.

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15. STORAGE AND TRANSPORTATION

The Respiratory system must be stored in a dry, clean area.

Storage temperature : -10°C ~ +55°C and relative humidity less than 90%RH.

If the equipment is stored at temperature below 0°C, the battery must be allowed to warm up to achieve full power capacity. The equipment must be protected from dust, particles and other contamination.

If the equipment is not used for a long time, the battery should be fully charged, removed from Respiratory system unit and stored separately.

It is advisable to store and transport the device in its original packaging.

16. DISPOSAL



This device meets the requirements of the Environmental Protection Directives (2011/65/EU, 2012/19/EU) and their amendments.

At the end of the products life cycle it must be disposed of according to the regulations concerning special waste collection as it cannot be treated as normal urban refuse. The product is made up of materials that are both non-biodegradable and of potentially polluting substances to the environment if not disposed of correctly.

17. WARRANTY

Manufactured in China by Changzhou Shine Science & Technology Co.,Ltd. Distributed by GCE.

GCE guarantees the Auto-Darkening Filter (ADF) for 24 (twenty-four) months, the Blower Unit for 12 (twelve) months, the Blower Unit battery for 6 (six) months, or in accordance with statutory warranty rights, from the date of delivery, against faulty design, material and workmanship.

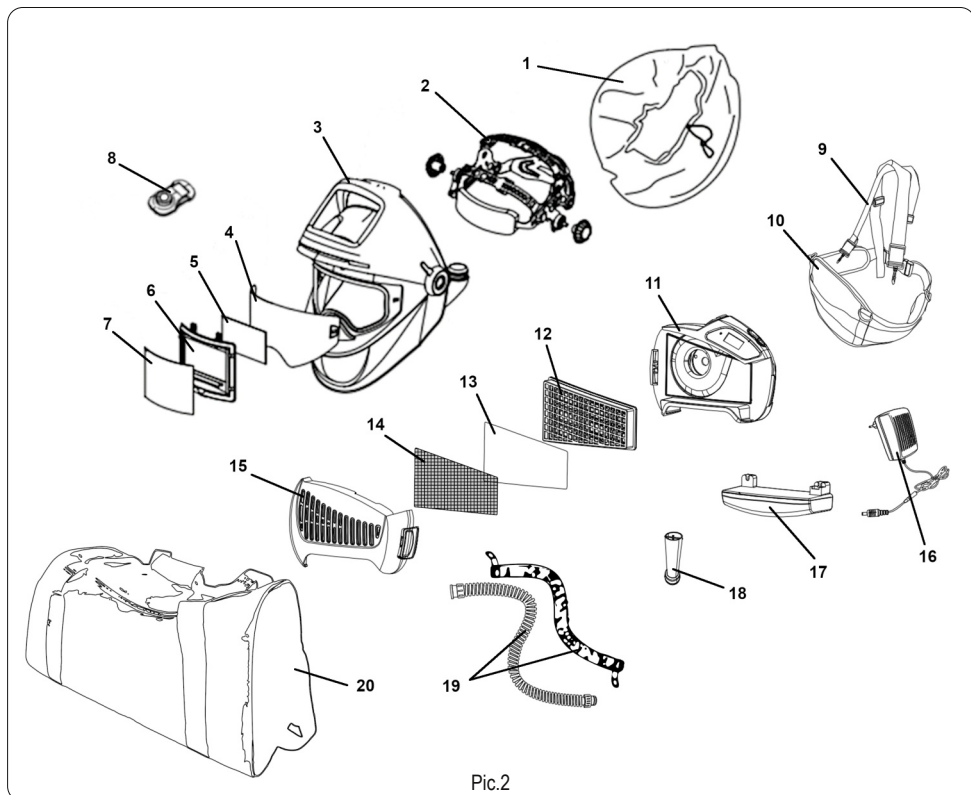
GCE shall not be liable for loss of production, loss of profit or any other consequential damage or indirect loss. In the event of any fault in the goods due to defective design, materials or workmanship, the liability of GCE is limited to repair or replacement of this good, provided that written notification is given to GCE within three months of the date of delivery or deemed delivery. GCE cannot be held liable if the product is modified, serviced or repaired by personnel not authorized by GCE or if the apparatus is used in a manner not conforming to its intended use. GCE cannot be held responsible for the misuse of the equipment in case of non-application of the instructions for use.

PACKING LIST



Pic.1

CONSTRUCTION AND ASSEMBLY SCHEME



Pic.2

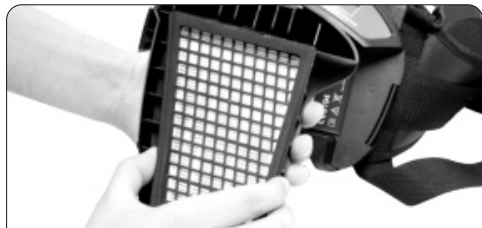
Filter Replacement



Pic.3-a



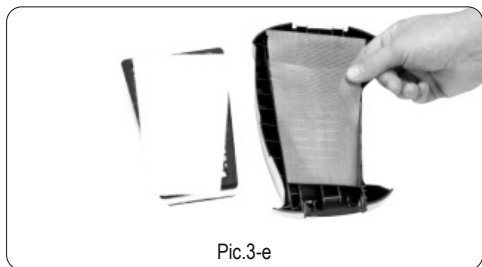
Pic.3-b



Pic.3-c



Pic.3-d



Pic.3-e

Installing the Battery



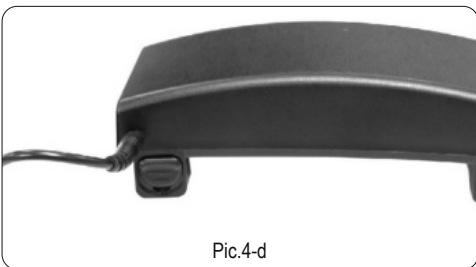
Pic.4-a



Pic.4-b



Pic.4-c

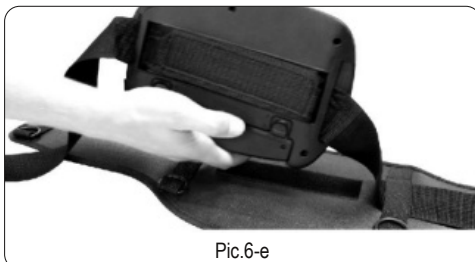
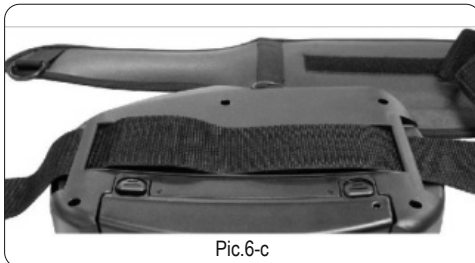
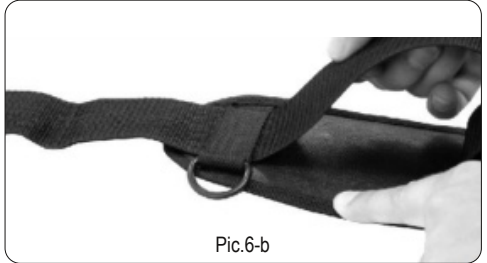
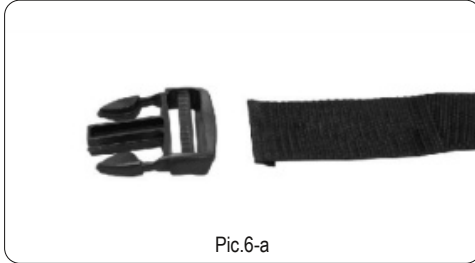


Pic.4-d

Connecting the Hose



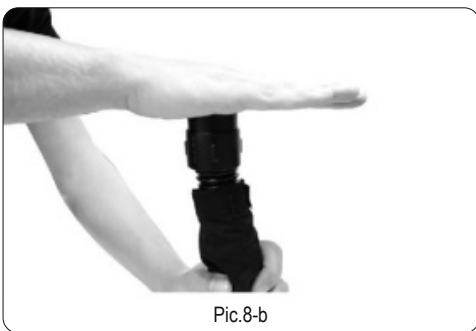
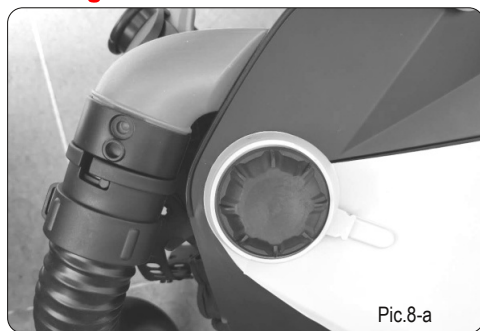
Installing the Respiratory System on the Belt



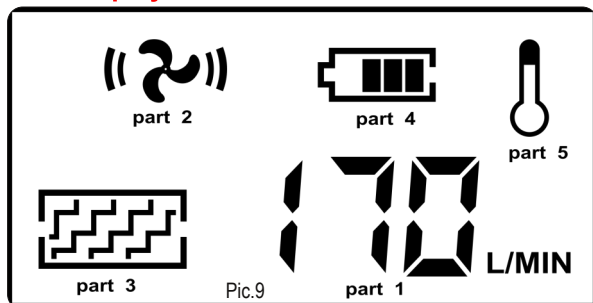
Testing the Airflow



Testing the Airflow Alarm



LCD Display Screen



Alarm Sound Sequences

Different alarm sound sequences correspond to different warnings. Each grid step stands for a period of 100ms. Gray is the beep sound

	1	2	3	4	5	6	7	8	9	10
Install the battery										
Turn on the system										
Change the airflow speed										
Turn off the system										
Current overload										
Air outlet jam										
Over heat										
Low battery										
Filter jam										

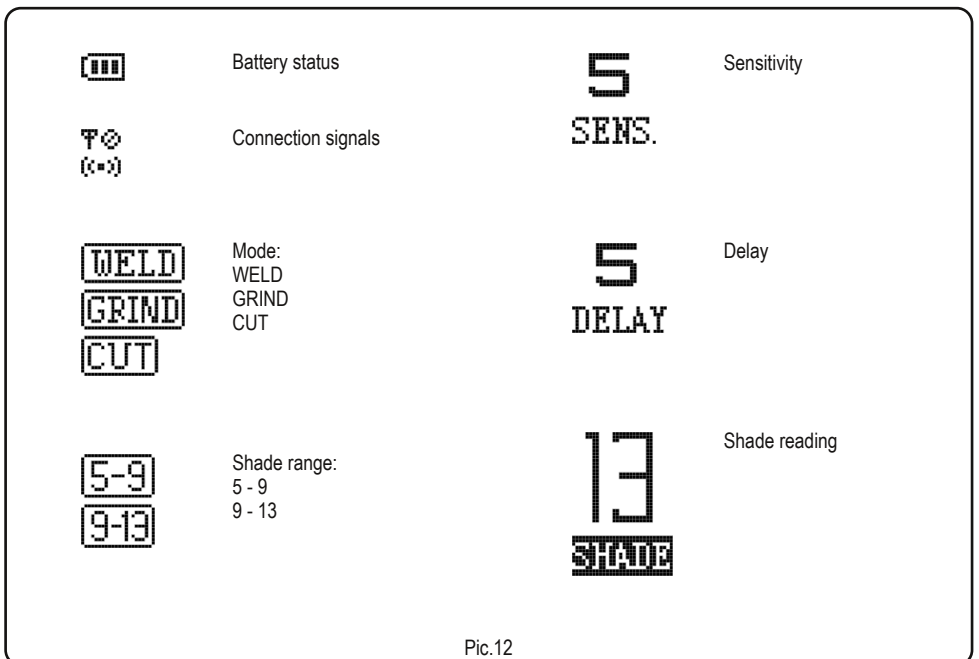
Pic.10

LED on Auto-Darkening Filter



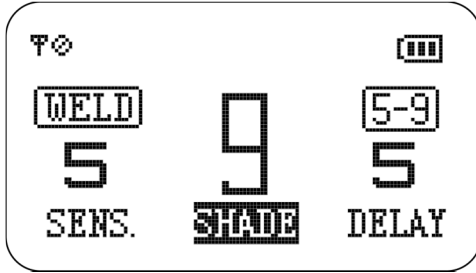
Pic.11

Remote Control Icons

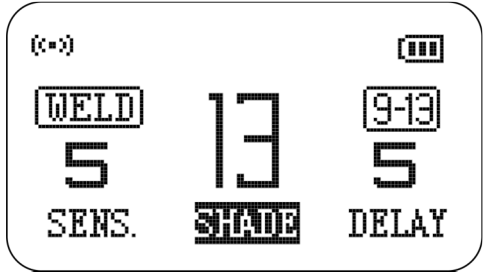


Pic.12

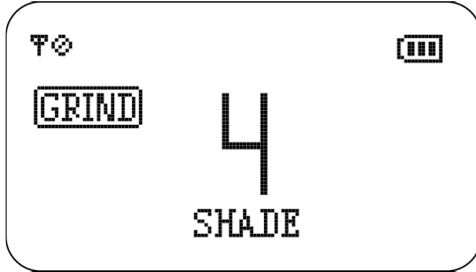
Mode Setting



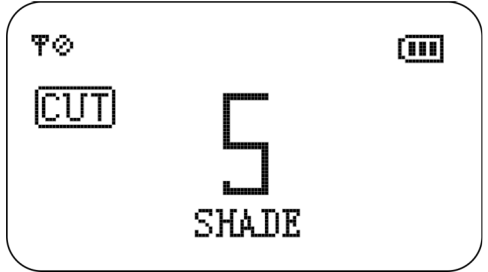
Pic.13-a



Pic.13-b



Pic.13-c



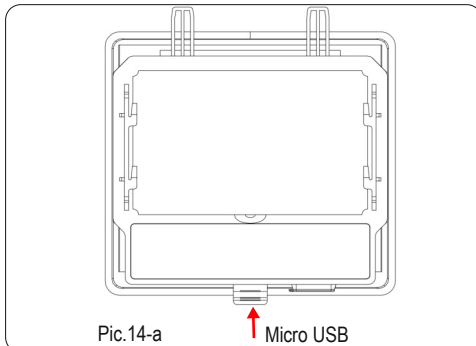
Pic.13-d

SHADE SELECTION TABLE

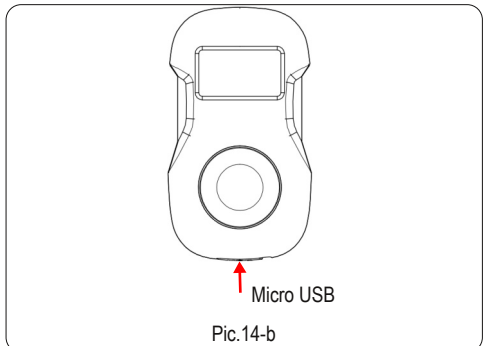
PROCESS	CURRENT AMPERES															
	0,5	2,5	5	10	20	40	80	125	175	225	275	350	450	500		
	1		5	15	30	60	100	150	200	250	300	400	500			
Covered Electrodes					9	10		11		12		13	14			
MIG with heavy metals							10	11		12		13	14			
MIG with light metals							10	11		12	13	14	15			
TIG				9	10	11		12		13	14					
MAG						10	11	12		13		14	16			
Air-arc gouging								10	11	12	13	14	15			
Plasma jet cutting								11		12		13				
Microplasma arc welding	4	5	6	7	8	9	10	11	12	13	14		15			

Note: The term "heavy metals" applies to steels, alloy steels, copper and its alloys, etc.

Batteries Charging

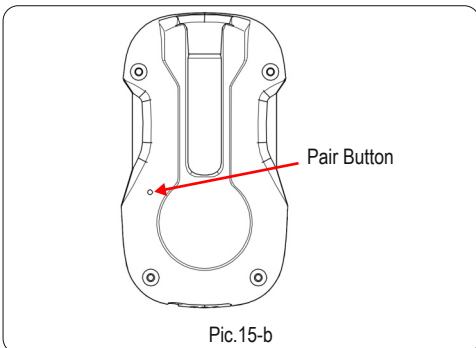
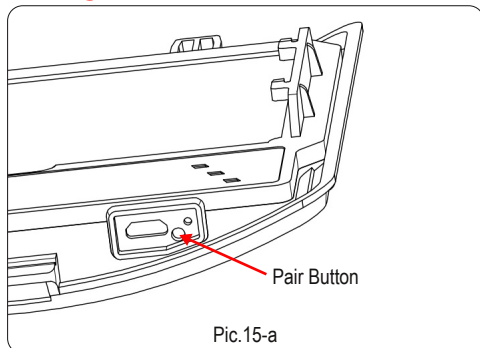


Pic.14-a

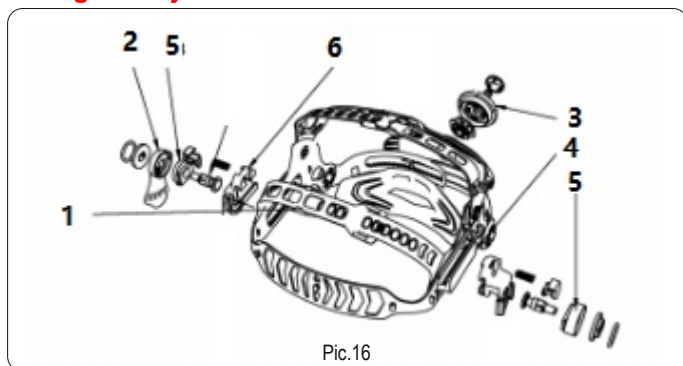


Pic.14-b

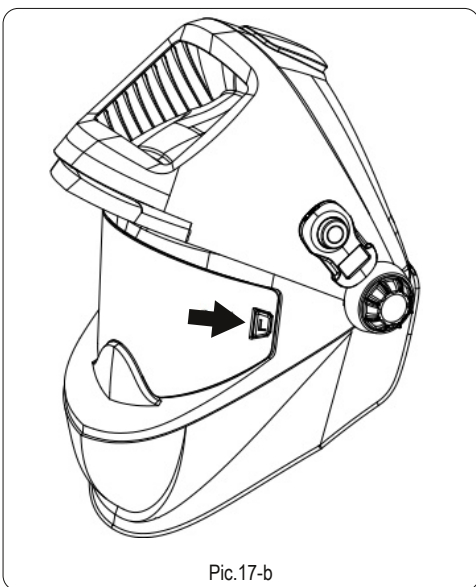
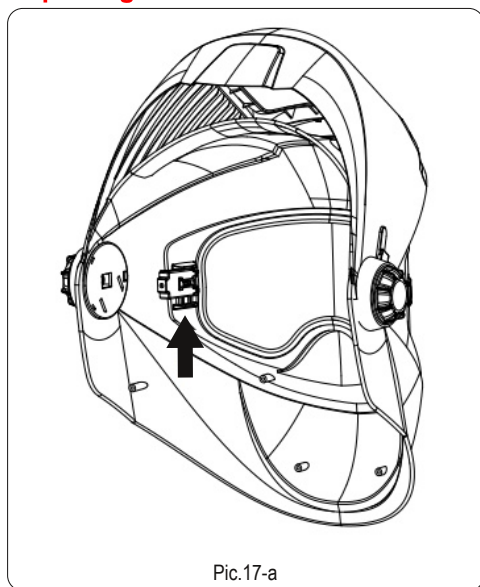
Pairing the Remote Control



Headgear Adjustments



Replacing the Inner Visor



Replacing the Outer Protection Lens Visor

