

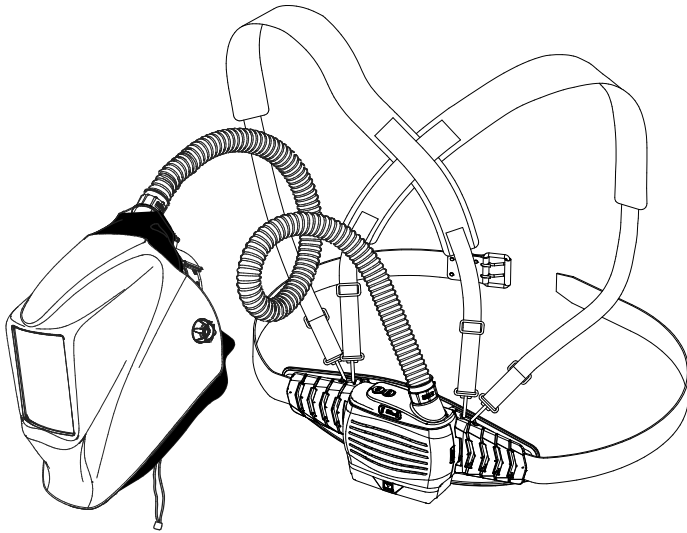
## Operator's Manual

# VIKING PAPR 3350 WELDING HELMET

## POWERED AIR-PURIFYING RESPIRATOR (PAPR) WITH VIKING 3350 AUTO-DARKENING HELMET

PRODUCT NUMBER:

**K3930-2**



**Register your machine:**

[www.lincolnelectric.com/register](http://www.lincolnelectric.com/register)

**Authorized Service and Distributor Locator:**

[www.lincolnelectric.com/locator](http://www.lincolnelectric.com/locator)

**Save for future reference**

Date Purchased

K#: (ex: K3930-1)

Serial: (ex: U1060512345)

**WARNING:** Users must read and understand the user instructions prior to use. Use of this respirator by untrained or unqualified people, or use that is not in accordance with these user instructions, **may adversely affect respirator performance and may be dangerous to your health.** Keep this operator's manual for future reference.

## SAFETY WARNINGS – READ BEFORE USING

Refer to <http://www.lincolnelectric.com/safety> for additional safety information.

### FUMES AND GASES can be dangerous to your health.

- Fumes from the normal use of welding products contain significant quantities of potentially hazardous compounds. See consumable product label/insert.
- Keep your head out of fumes.
- Use enough ventilation or local exhaust to keep fumes and gases from your breathing zone and general area.
- An approved respirator should be used unless exposure assessments are below applicable exposure limits.
- When welding with electrodes which may require additional ventilation such as stainless or hard facing (see instructions on container or Safety Data Sheet (SDS) or on lead or cadmium plated steel and other metals or coatings which produce highly toxic fumes, keep exposure as low as possible and within applicable OSHA PEL and ACGIH TLV limits using local exhaust or mechanical ventilation. In confined spaces or in some circumstances, outdoors, a respirator may be required. Additional precautions are also required when welding on galvanized steel.



The Viking PAPR 3350 respirator components and filtration media must be used only in configurations listed on parts pages. Refer to parts pages for list of approved components.

This respirator is not capable of or approved for use in an area which includes hazardous levels of gases. It is only effective to filter out particulate contaminants.

### ARC Rays can injure eyes and burn skin

- Before welding, always inspect helmet and filter lens to be sure they are fitted properly, in good condition and not damaged.
- Check to see that the clear lens is clean and securely attached to the helmet.
- Always wear safety glasses with side shields or goggles under the welding helmet and protective clothing to protect your skin from radiation, burns and spatter.
- Ensure that optical radiation from other welder's arcs in the immediate area does not enter in from behind the helmet and auto-darkening filter.
- Stop welding immediately if the auto-darkening lens does not darken when arc is struck. See instruction manual for troubleshooting information.
- Do not weld in the overhead position while using this helmet.



**IMPORTANT: THIS RESPIRATOR IS INTENDED TO BE USED BY TRAINED INDIVIDUALS IN ACCORDANCE WITH ALL THE PROVISIONS OF AN ORGANIZED RESPIRATORY PROTECTION PROGRAM WHICH COMPLIES WITH THE REQUIREMENTS OF THE OSHA STANDARD 29 CFR 1910.134 AVAILABLE FROM THE US DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION OR IN CANADA CONFORMANCE WITH CSA Z94.4.**

The Viking PAPR 3350 is approved for use in environments where:

- Particulate concentrations are known and characterized.
- Particulate concentrations are not Immediately Dangerous to Life or Health (IDLH).
- Atmospheres are NOT oxygen deficient.
- Contaminant concentrations do not exceed the Maximum Use Concentration (MUC) determined using the Assigned Protection Factor (APF) for specific respirator system or the APF mandated by specific government standards, whichever is lower.

**Note:** Auto-darkening filters in Lincoln helmets are designed to protect the user against harmful ultra-violet and infrared rays both in the dark and light states. No matter what shade the filter is set to, the UV/IR protection is always present.

# THANK YOU FOR SELECTING A QUALITY PRODUCT BY LINCOLN ELECTRIC.

## PLEASE EXAMINE CARTON AND EQUIPMENT FOR DAMAGE IMMEDIATELY

When this equipment is shipped, title passes to the purchaser upon receipt by the carrier. Consequently, Claims for material damaged in shipment must be made by the purchaser against the transportation company at the time the shipment is received.

## SAFETY DEPENDS ON YOU

Lincoln arc welding and cutting equipment is designed and built with safety in mind. However, your overall safety can be increased by proper installation ... and thoughtful operation on your part. **DO NOT INSTALL, OPERATE OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL AND THE SAFETY PRECAUTIONS CONTAINED THROUGHOUT.** And, most importantly, think before you act and be careful.



### WARNING

This statement appears where the information must be followed exactly to avoid serious personal injury or loss of life.



### CAUTION

This statement appears where the information must be followed to avoid minor personal injury or damage to this equipment.



## KEEP YOUR HEAD OUT OF THE FUMES.

**DON'T** get too close to the arc. Use corrective lenses if necessary to stay a reasonable distance away from the arc.

**READ** and obey the Material Safety Data Sheet (MSDS) and the warning label that appears on all containers of welding materials.

**USE ENOUGH VENTILATION** or exhaust at the arc, or both, to keep the fumes and gases from your breathing zone and the general area.

**IN A LARGE ROOM OR OUTDOORS**, natural ventilation may be adequate if you keep your head out of the fumes (See below).

**USE NATURAL DRAFTS** or fans to keep the fumes away from your face.

If you develop unusual symptoms, see your supervisor. Perhaps the welding atmosphere and ventilation system should be checked.



## WEAR CORRECT EYE, EAR & BODY PROTECTION

**PROTECT** your eyes and face with welding helmet properly fitted and with proper grade of filter plate (See ANSI Z49.1).

**PROTECT** your body from welding spatter and arc flash with protective clothing including woolen clothing, flame-proof apron and gloves, leather leggings, and high boots.

**PROTECT** others from splatter, flash, and glare with protective screens or barriers.

**IN SOME AREAS**, protection from noise may be appropriate.

**BE SURE** protective equipment is in good condition.

Also, wear safety glasses in work area **AT ALL TIMES.**



## SPECIAL SITUATIONS

**DO NOT WELD OR CUT** containers or materials which previously had been in contact with hazardous substances unless they are properly cleaned. This is extremely dangerous.

**DO NOT WELD OR CUT** painted or plated parts unless special precautions with ventilation have been taken. They can release highly toxic fumes or gases.

### Additional precautionary measures

**PROTECT** compressed gas cylinders from excessive heat, mechanical shocks, and arcs; fasten cylinders so they cannot fall.

**BE SURE** cylinders are never grounded or part of an electrical circuit.



## SECTION A: WARNINGS



### CALIFORNIA PROPOSITION 65 WARNINGS

#### Diesel Engines

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

#### Gasoline Engines

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

**ARC WELDING CAN BE HAZARDOUS. PROTECT YOURSELF AND OTHERS FROM POSSIBLE SERIOUS INJURY OR DEATH. KEEP CHILDREN AWAY. PACE-MAKER WEARERS SHOULD CONSULT WITH THEIR DOCTOR BEFORE OPERATING.**

Read and understand the following safety highlights. For additional safety information, it is strongly recommended that you purchase a copy of "Safety in Welding & Cutting - ANSI Standard Z49.1" from the American Welding Society, P.O. Box 351040, Miami, Florida 33135 or CSA Standard W117.2-1974. A Free copy of "Arc Welding Safety" booklet E205 is available from the Lincoln Electric Company, 22801 St. Clair Avenue, Cleveland, Ohio 44117-1199.

**BE SURE THAT ALL INSTALLATION, OPERATION, MAINTENANCE AND REPAIR PROCEDURES ARE PERFORMED ONLY BY QUALIFIED INDIVIDUALS.**



### FOR ENGINE POWERED EQUIPMENT.



- 1.a. Turn the engine off before troubleshooting and maintenance work unless the maintenance work requires it to be running.
- 1.b. Operate engines in open, well-ventilated areas or vent the engine exhaust fumes outdoors.
- 1.c. Do not add the fuel near an open flame welding arc or when the engine is running. Stop the engine and allow it to cool before refueling to prevent spilled fuel from vaporizing on contact with hot engine parts and igniting. Do not spill fuel when filling tank. If fuel is spilled, wipe it up and do not start engine until fumes have been eliminated.



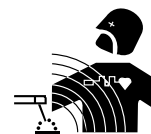
- 1.d. Keep all equipment safety guards, covers and devices in position and in good repair. Keep hands, hair, clothing and tools away from V-belts, gears, fans and all other moving parts when starting, operating or repairing equipment.



- 1.e. In some cases it may be necessary to remove safety guards to perform required maintenance. Remove guards only when necessary and replace them when the maintenance requiring their removal is complete. Always use the greatest care when working near moving parts.
- 1.f. Do not put your hands near the engine fan. Do not attempt to override the governor or idler by pushing on the throttle control rods while the engine is running.
- 1.g. To prevent accidentally starting gasoline engines while turning the engine or welding generator during maintenance work, disconnect the spark plug wires, distributor cap or magneto wire as appropriate.
- 1.h. To avoid scalding, do not remove the radiator pressure cap when the engine is hot.



### ELECTRIC AND MAGNETIC FIELDS MAY BE DANGEROUS



- 2.a. Electric current flowing through any conductor causes localized Electric and Magnetic Fields (EMF). Welding current creates EMF fields around welding cables and welding machines
- 2.b. EMF fields may interfere with some pacemakers, and welders having a pacemaker should consult their physician before welding.
- 2.c. Exposure to EMF fields in welding may have other health effects which are now not known.
- 2.d. All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit:
  - 2.d.1. Route the electrode and work cables together - Secure them with tape when possible.
  - 2.d.2. Never coil the electrode lead around your body.
  - 2.d.3. Do not place your body between the electrode and work cables. If the electrode cable is on your right side, the work cable should also be on your right side.
  - 2.d.4. Connect the work cable to the workpiece as close as possible to the area being welded.
  - 2.d.5. Do not work next to welding power source.



## ELECTRIC SHOCK CAN KILL.



- 3.a. The electrode and work (or ground) circuits are electrically “hot” when the welder is on. Do not touch these “hot” parts with your bare skin or wet clothing. Wear dry, hole-free gloves to insulate hands.
- 3.b. Insulate yourself from work and ground using dry insulation. Make certain the insulation is large enough to cover your full area of physical contact with work and ground.

**In addition to the normal safety precautions, if welding must be performed under electrically hazardous conditions (in damp locations or while wearing wet clothing; on metal structures such as floors, gratings or scaffolds; when in cramped positions such as sitting, kneeling or lying, if there is a high risk of unavoidable or accidental contact with the workpiece or ground) use the following equipment:**

- Semiautomatic DC Constant Voltage (Wire) Welder.
  - DC Manual (Stick) Welder.
  - AC Welder with Reduced Voltage Control.
- 3.c. In semiautomatic or automatic wire welding, the electrode, electrode reel, welding head, nozzle or semiautomatic welding gun are also electrically “hot”.
  - 3.d. Always be sure the work cable makes a good electrical connection with the metal being welded. The connection should be as close as possible to the area being welded.
  - 3.e. Ground the work or metal to be welded to a good electrical (earth) ground.
  - 3.f. Maintain the electrode holder, work clamp, welding cable and welding machine in good, safe operating condition. Replace damaged insulation.
  - 3.g. Never dip the electrode in water for cooling.
  - 3.h. Never simultaneously touch electrically “hot” parts of electrode holders connected to two welders because voltage between the two can be the total of the open circuit voltage of both welders.
  - 3.i. When working above floor level, use a safety belt to protect yourself from a fall should you get a shock.
  - 3.j. Also see Items 6.c. and 8.



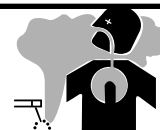
## ARC RAYS CAN BURN.



- 4.a. Use a shield with the proper filter and cover plates to protect your eyes from sparks and the rays of the arc when welding or observing open arc welding. Headshield and filter lens should conform to ANSI Z87.1 standards.
- 4.b. Use suitable clothing made from durable flame-resistant material to protect your skin and that of your helpers from the arc rays.
- 4.c. Protect other nearby personnel with suitable, non-flammable screening and/or warn them not to watch the arc nor expose themselves to the arc rays or to hot spatter or metal.



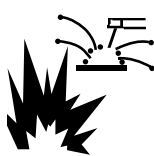
## FUMES AND GASES CAN BE DANGEROUS.



- 5.a. Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. When welding, keep your head out of the fume. Use enough ventilation and/or exhaust at the arc to keep fumes and gases away from the breathing zone. **When welding with electrodes which require special ventilation such as stainless or hard facing (see instructions on container or MSDS) or on lead or cadmium plated steel and other metals or coatings which produce highly toxic fumes, keep exposure as low as possible and within applicable OSHA PEL and ACGIH TLV limits using local exhaust or mechanical ventilation. In confined spaces or in some circumstances, outdoors, a respirator may be required. Additional precautions are also required when welding on galvanized steel.**
- 5.b. The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits.
- 5.c. Do not weld in locations near chlorinated hydrocarbon vapors coming from degreasing, cleaning or spraying operations. The heat and rays of the arc can react with solvent vapors to form phosgene, a highly toxic gas, and other irritating products.
- 5.d. Shielding gases used for arc welding can displace air and cause injury or death. Always use enough ventilation, especially in confined areas, to insure breathing air is safe.
- 5.e. Read and understand the manufacturer's instructions for this equipment and the consumables to be used, including the material safety data sheet (MSDS) and follow your employer's safety practices. MSDS forms are available from your welding distributor or from the manufacturer.
- 5.f. Also see item 1.b.



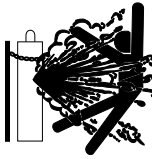
## WELDING AND CUTTING SPARKS CAN CAUSE FIRE OR EXPLOSION.



- 6.a. Remove fire hazards from the welding area. If this is not possible, cover them to prevent the welding sparks from starting a fire. Remember that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas. Avoid welding near hydraulic lines. Have a fire extinguisher readily available.
- 6.b. Where compressed gases are to be used at the job site, special precautions should be used to prevent hazardous situations. Refer to "Safety in Welding and Cutting" (ANSI Standard Z49.1) and the operating information for the equipment being used.
- 6.c. When not welding, make certain no part of the electrode circuit is touching the work or ground. Accidental contact can cause overheating and create a fire hazard.
- 6.d. Do not heat, cut or weld tanks, drums or containers until the proper steps have been taken to insure that such procedures will not cause flammable or toxic vapors from substances inside. They can cause an explosion even though they have been "cleaned". For information, purchase "Recommended Safe Practices for the Preparation for Welding and Cutting of Containers and Piping That Have Held Hazardous Substances", AWS F4.1 from the American Welding Society (see address above).
- 6.e. Vent hollow castings or containers before heating, cutting or welding. They may explode.
- 6.f. Sparks and spatter are thrown from the welding arc. Wear oil free protective garments such as leather gloves, heavy shirt, cuffless trousers, high shoes and a cap over your hair. Wear ear plugs when welding out of position or in confined places. Always wear safety glasses with side shields when in a welding area.
- 6.g. Connect the work cable to the work as close to the welding area as practical. Work cables connected to the building framework or other locations away from the welding area increase the possibility of the welding current passing through lifting chains, crane cables or other alternate circuits. This can create fire hazards or overheat lifting chains or cables until they fail.
- 6.h. Also see item 1.c.
- 6.i. Read and follow NFPA 51B "Standard for Fire Prevention During Welding, Cutting and Other Hot Work", available from NFPA, 1 Batterymarch Park, PO box 9101, Quincy, Ma 022690-9101.
- 6.j. Do not use a welding power source for pipe thawing.



## CYLINDER MAY EXPLODE IF DAMAGED.

- 7.a. Use only compressed gas cylinders containing the correct shielding gas for the process used and properly operating regulators designed for the gas and pressure used. All hoses, fittings, etc. should be suitable for the application and maintained in good condition. 
- 7.b. Always keep cylinders in an upright position securely chained to an undercarriage or fixed support.
- 7.c. Cylinders should be located:
  - Away from areas where they may be struck or subjected to physical damage.
  - A safe distance from arc welding or cutting operations and any other source of heat, sparks, or flame.
- 7.d. Never allow the electrode, electrode holder or any other electrically "hot" parts to touch a cylinder.
- 7.e. Keep your head and face away from the cylinder valve outlet when opening the cylinder valve.
- 7.f. Valve protection caps should always be in place and hand tight except when the cylinder is in use or connected for use.
- 7.g. Read and follow the instructions on compressed gas cylinders, associated equipment, and CGA publication P-1, "Precautions for Safe Handling of Compressed Gases in Cylinders," available from the Compressed Gas Association 1235 Jefferson Davis Highway, Arlington, VA 22202.



## FOR ELECTRICALLY POWERED EQUIPMENT.



- 8.a. Turn off input power using the disconnect switch at the fuse box before working on the equipment.
- 8.b. Install equipment in accordance with the U.S. National Electrical Code, all local codes and the manufacturer's recommendations.
- 8.c. Ground the equipment in accordance with the U.S. National Electrical Code and the manufacturer's recommendations.

Refer to

<http://www.lincolnelectric.com/safety>

for additional safety information.

Welding Safety Interactive Web Guide for mobile devices



Get the free mobile app at <http://gettag.mobi>

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**CAUTIONS AND LIMITATIONS**

- A – Not for use in atmospheres containing less than 19.5% oxygen.
- B – Not for use in atmospheres immediately dangerous to life or health.
- C – Do not exceed maximum use concentrations established by regulatory standards.
- F – Do not use powered air-purifying respirators if airflow is less than four cfm (115 lpm) for tight fitting facepieces or six cfm (170 lpm) for hoods and/or helmets.
- I – Contains electrical parts that may cause an ignition in flammable or explosive atmospheres.
- J - Failure to properly use and maintain this product could result in injury or death.
- L – Follow the manufacturer’s User’s Instructions for changing cartridges, canister and/or filters.
- M – All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other applicable regulations.
- N – Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
- O - Refer to User’s Instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
- P - Do not use as surgical masks.

**POWERED AIR-PURIFYING RESPIRATOR SECTION**

**RESPIRATOR SPECIFICATIONS**

Size of Blower Assembly	8" W x 7.5" T x 3" D (203 x 191 x 76 mm)
Weight of Blower (including battery, belt, and filters)	47 oz. (1338 g)
Weight of Helmet Assembly	32 oz. (899 g)
Air Flow	Low Speed: 170+ lpm (6+ cfm) High Speed: 210+ lpm (7.4+ cfm)
Operating Temperature	23°F to 131°F (-5° to 55°C)
Storage Temperature	23°F to 131°F (-5°C to 55°C)
Storage Humidity	<80%
Battery Type	Lithium Ion (Rechargeable)
Battery Charge Time	About three hours
Battery Life	Approximately 500 charges
Belt Size <sup>(3)</sup>	29 to 52 in. (736 to 1321 mm)
Helmet Compliance	ANSI Z87.1-2010, CSA Z94.3, CE EN 379
Respirator Approval <sup>(1)</sup>	EN 12941, AS/NZS 1716
Assigned Protection Factor <sup>(2)</sup>	25

(1) Refer to parts pages for system configuration.

(2) APF=25 for loose fitting Powered Air-Purifying Respirator according to OSHA 3352-02 2009, when the employer implements a continuing, effective respirator program in compliance with the Respiratory Protection Standard (29 CFR 1910.134).

(3) Belt size maximum of 60 in.(1524 mm) with belt extension accessory (see Parts Page in this manual)



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**BATTERY OPERATION**
**⚠ WARNING**
**Battery Safety**

- Keep battery away from fire or heat as this may cause the battery to explode and may result in serious injury or death.
- Battery should be charged with supplied Li-ion charger only. Charge in an open, well-ventilated location.
- The charger is designed only for use indoors.
- Do not allow the battery to get wet.
- Do not attempt to disassemble or repair the battery. There is no maintenance on Li-ion batteries.
- Battery disposal – battery must be disposed of properly or recycled.

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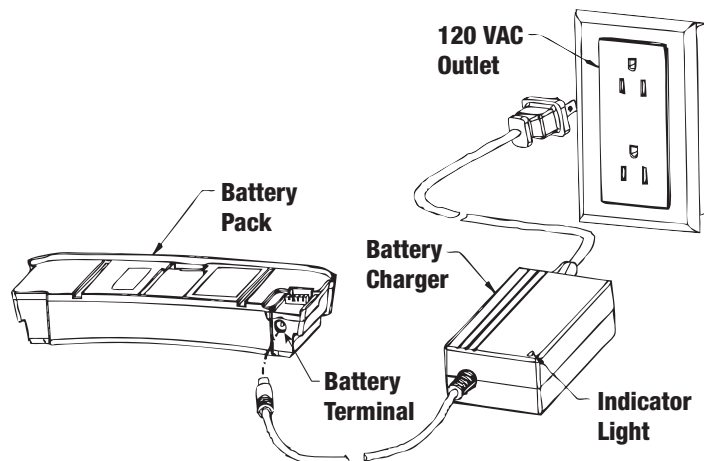
**Charging of battery pack**

- Charge battery before first use or if battery has not been used for one week. Always recharge the battery before it becomes fully discharged.
- Batteries not in use should be charged at least once a year.

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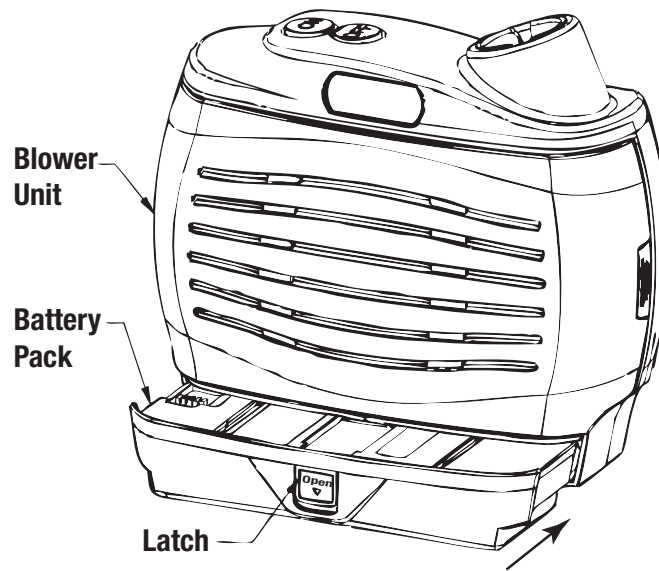
Remove battery pack from blower assembly. Connect charger cord to battery terminal. Plug charger into 120/240 VAC receptacle. Use European/Australian plug adapter if necessary. The battery pack does not need to be discharged before it is charged.

The charger indicator light will turn red in color when battery pack is being charged. When battery pack is finished charging, the indicator light will turn green letting the user know that the battery is fully charged (normal charge time approximately 3 hours). Although it is okay to leave the battery pack connected to the charger, it is recommended that once the battery pack is fully charged to disconnect battery pack from charger.

**FIGURE 1**


**INSTALLING BATTERY PACK**

**FIGURE 2**



Slide battery pack into blower unit just below filter cover until battery pack latch snaps into position. It is very important that the battery pack snaps into position. This makes sure the battery pack is locked in place and will not slide out causing possible nuisance shutoffs while in use.

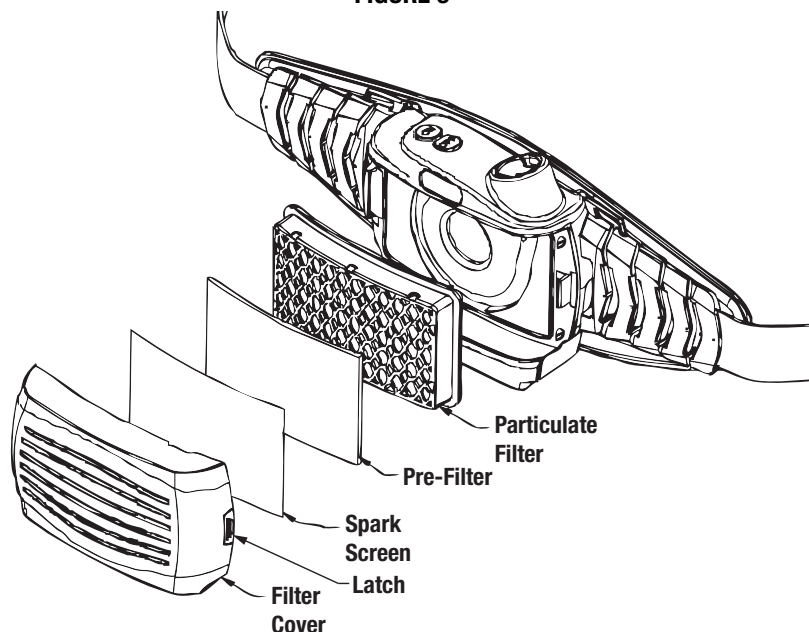
To remove battery pack, simply push down on latch to release and slide battery pack out from blower unit.

## FILTER INSTALLATION

 **WARNING**
**Filter Safety**

- Do not use the respirator without the spark screen, pre-filter, and the HE particulate filter (HEPA) installed. The approval of this PAPP is with the spark screen, pre-filter and HE particulate filter installed using respirator without any of these items is not in accordance with approval and may be dangerous to your health.
- Replace air filters when damaged or clogged. **DO NOT** wash, clean with compressed air or reuse dirty air filters.
- Use specific replacement filters specified in this manual. Use of other filters is in violation of the approval of the respirator system. Refer to parts pages for system configuration.

FIGURE 3



Install the spark screen, pre-filter, and particulate filter in filter cover exactly as shown.

Install the filter cover assembly to the blower unit by engaging tabs on filter cover into bracket on blower unit and rotate assembly to close. Push filter cover assembly down until latch clicks into position securing filter cover assembly. Make sure the filter cover assembly is secure to the blower unit body. Inspect both latching side of cover and opposite side to see that the filter cover is properly secured.

To replace filter, push latch into release filter cover and replace filter as shown in figure 3. Refer to parts page at the back of this operator's manual for proper filters to be used with this respirator.

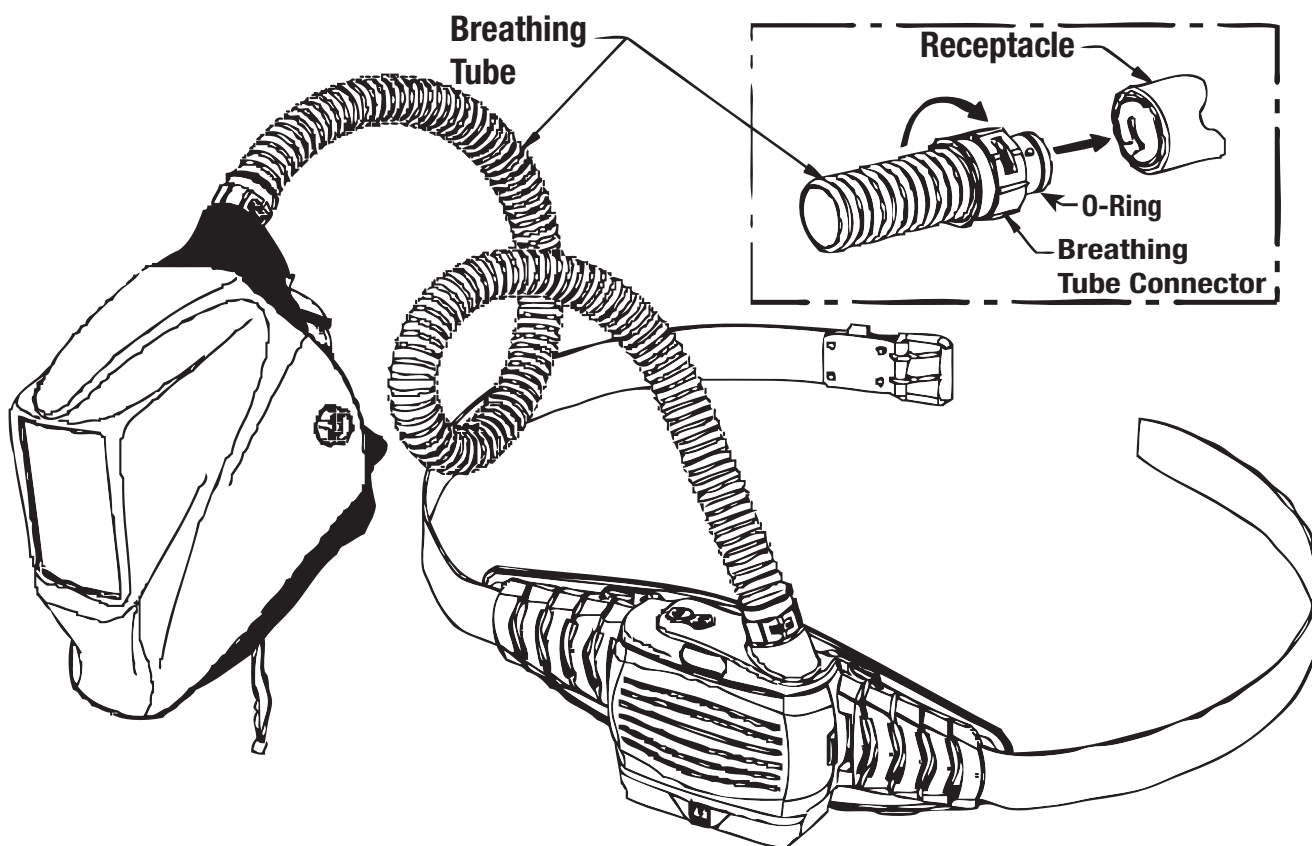
**BREATHING TUBE INSTALLATION**

**⚠ WARNING**

**Breathing tube safety**

- Be sure breathing tube is properly installed or non-filtered air may enter the helmet.
- Be sure o-ring is properly installed on tube connector and there are no visible signs of cuts or tears on o-ring. Replace o-ring if damaged.
- Do not use respirator if o-ring is missing.

FIGURE 4



**Connecting breathing tube to blower**

Align pins of tube connector with channels in blower unit receptacle. Insert connector as far as it will go into blower unit and the turn connector 1/8 of a turn clockwise to secure this end of breathing tube.

**Connecting breathing tube to helmet**

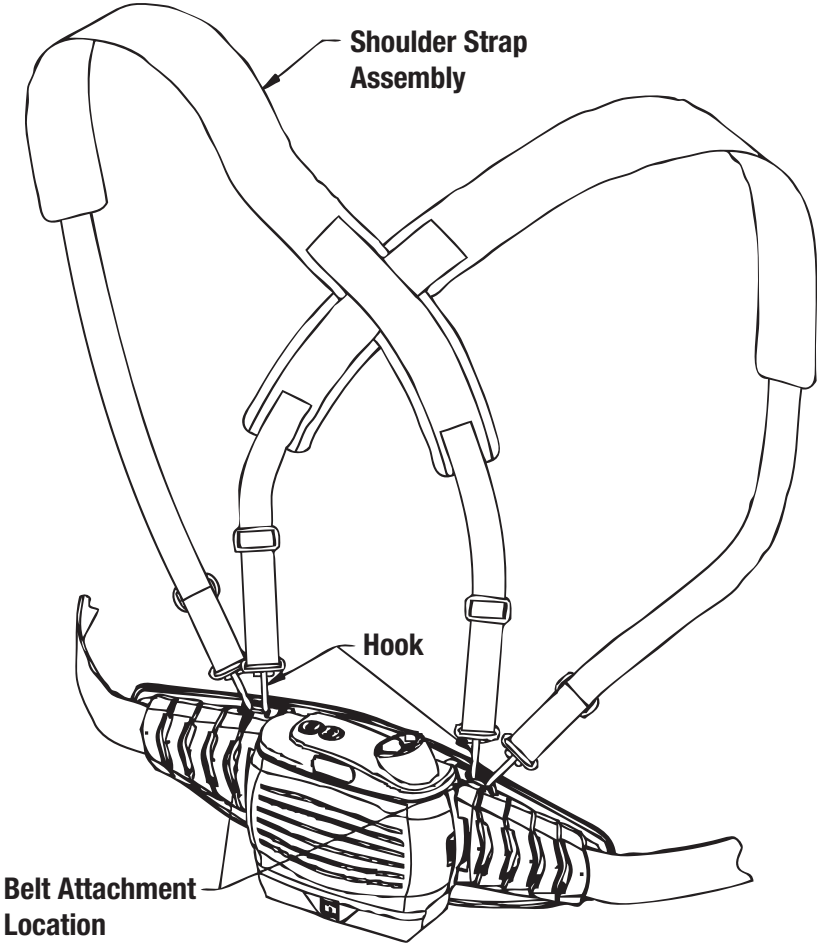
Align pins of tube connector with channels in helmet receptacle. Insert connector as far as it will go into helmet receptacle and the turn connector 1/8 of a turn clockwise to secure this end of breathing tube. If tube is twisted, disconnect one end of breathing tube. Untwist tube and re-attach.

To remove breathing tube turn connector 1/8 of a turn counter clockwise and pull connector out to release from helmet or blower unit.

**SHOULDER STRAP INSTALLATION**

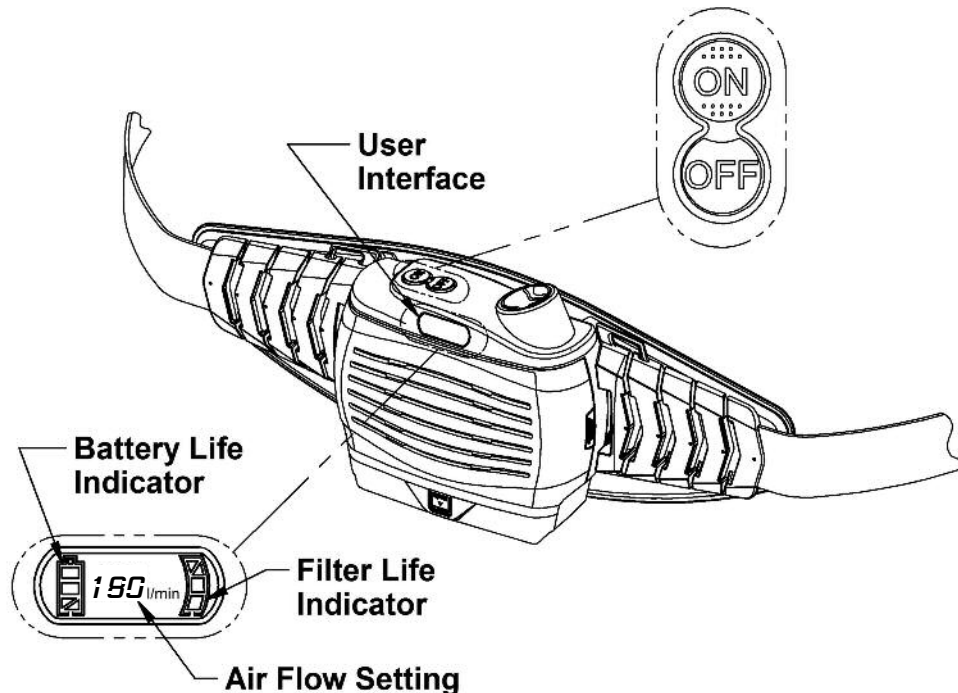
Connect hooks (4 total) on shoulder strap assembly to belt attachment points as shown.

**FIGURE 5**



## RESPIRATOR CONTROLS

FIGURE 6

**WARNING****Respirator Use**

If an alarm sounds or the blower vibrates, leave the work area immediately. Do not remove the respirator until you are in a safe area.

**Starting the Respirator**

Press ON button for 1 to 2 seconds until the blower is activated. An audible sound will be heard and the user interface will light up. The blower will always start at the low air flow setting (180 lpm). Pressing the ON button again will switch to the high air flow setting (210 lpm). The user interface will show the air flow setting chosen.

**Stopping the Respirator**

Press OFF button for 2 seconds until blower stops. When pressing OFF button, an audible beeping sound indicates the OFF button has been depressed. Beeping sound will stop and the user interface will darken when blower unit is off.

**Battery Level Indicator**

This indicator gives the user an estimate of the battery life remaining. When three full bars show up in the display, the battery is fully charged.

**Filter Life Indicator**

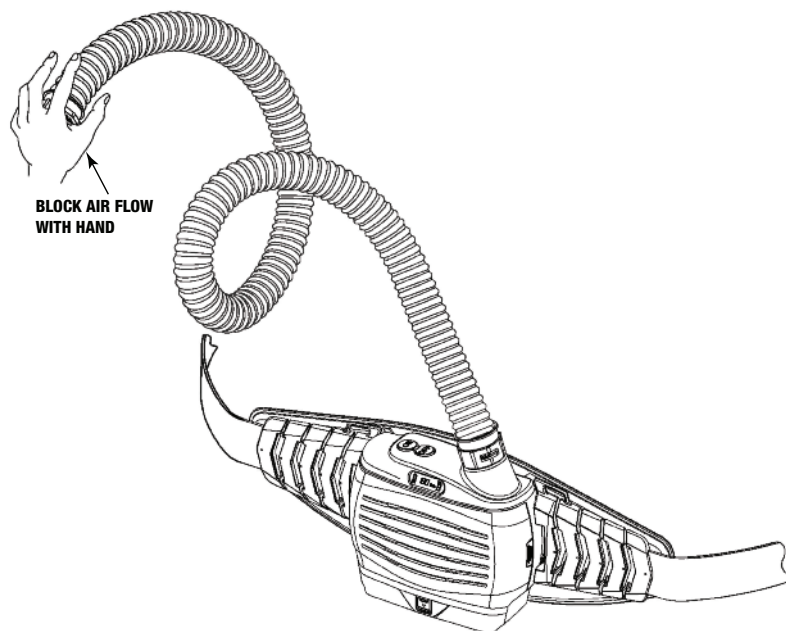
This indicator gives the user an estimate of the filter life remaining. When three full bars show up in the display, the filter is in need of changing. When zero bars show up in the display, the particulate filter is clean. As the bars appear, the filter is becoming clogged and a reduction in battery life is expected. Operating respirator with filter indicator showing a clogged filter will significantly reduce the battery life/run time.

## AIR FLOW ALARM OPERATION

### Air Flow Alarm

- The control system of the blower unit maintains the air flow rates consistently throughout the operating time. If the air flow alarm is activated, the filter may need to be replaced and/or breathing tube has become blocked.

FIGURE 7



- Always test air flow alarm prior to using respirator.
- If an alarm sounds or the blower vibrates, leave work area immediately. Do not remove the respirator until you are in a safe area.

### Testing of Air Flow Alarm

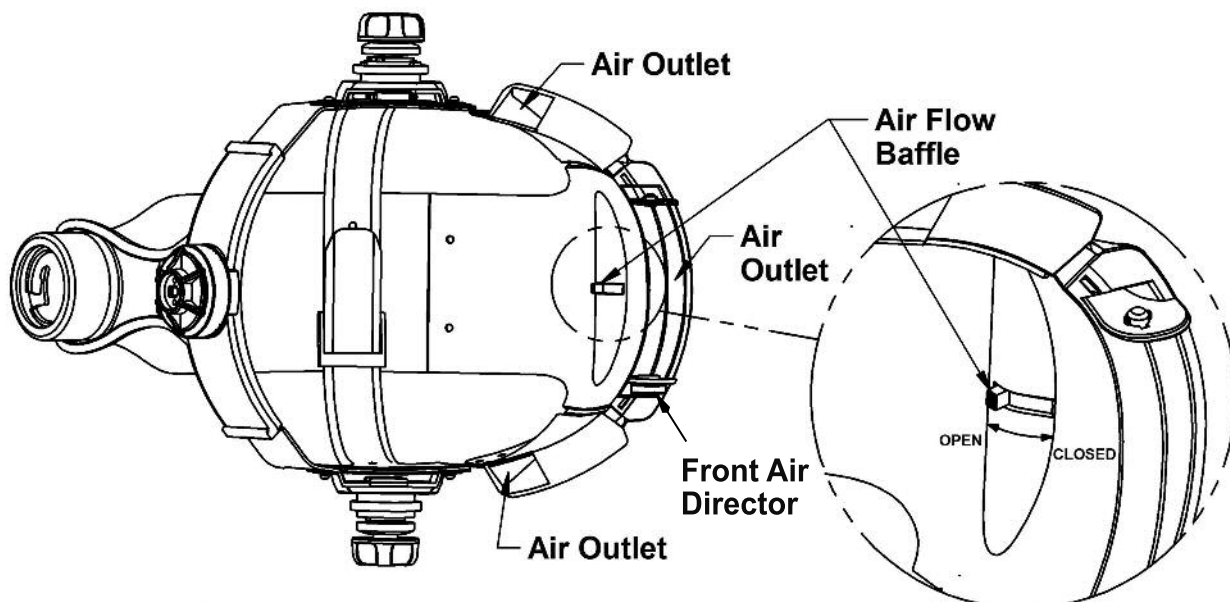
Testing of air flow alarm must always be done in a safe environment.

Disconnect breathing tube from helmet. Start blower unit and block air flow by placing your hand over the end of the breathing tube as shown. Hold your hand over end of tube as shown until alarm sounds and blower vibrates (approximately 15 to 30 seconds).

If the alarm does not activate return unit for repair and do not use.

## AIR FLOW CONTROL

FIGURE 8



**Bottom view of headgear with shell, headcovering and sweatband removed for clarity**

Adjust Air Flow Baffle as shown. Air flow baffle allows for air to be distributed to all three air outlets (open position) or to be shutoff (closed position) to the forehead outlet pushing more air to the other two side air outlets. Baffle can also be adjusted to reduce the amount of air being delivered from the forehead air outlet. This allows the user to adjust the amount of air delivered at multiple outlets to provide maximum comfort. The default position for this baffle will be open for air to be distributed to all three air outlets.

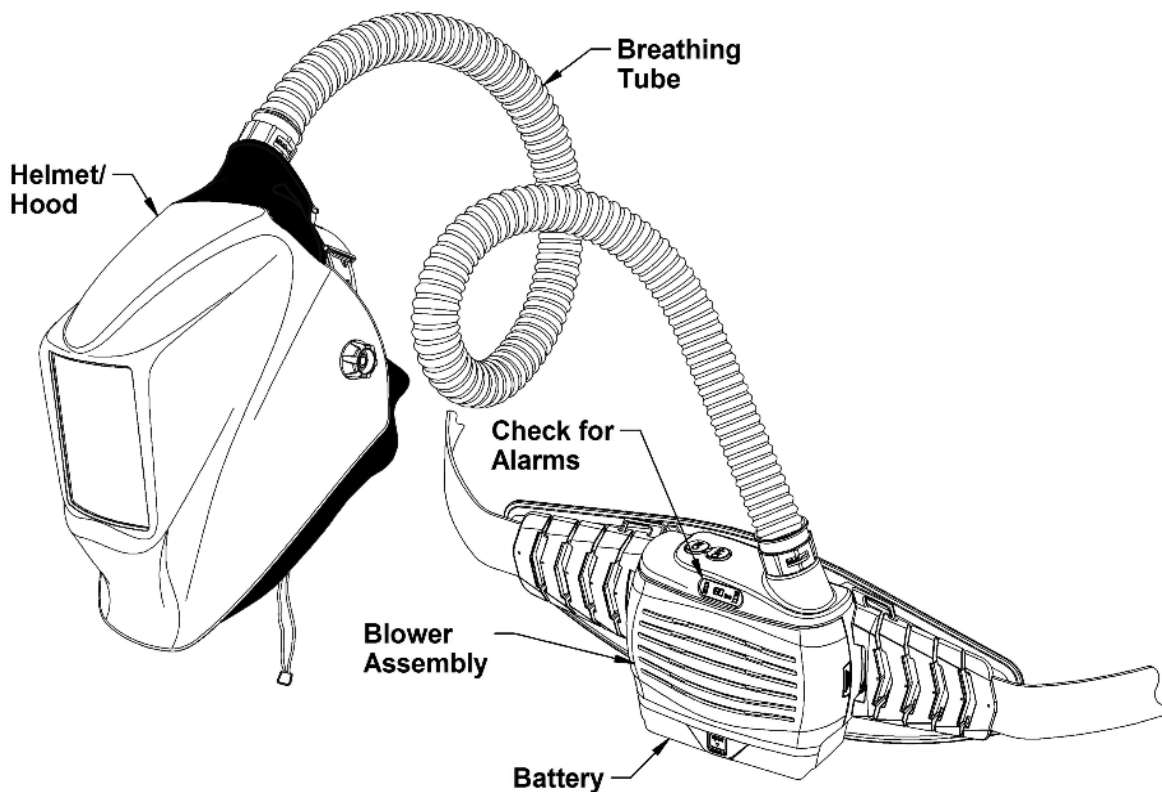
There is also a Front Air Director to change the direction of the air exiting the front air outlet. The Front Air Director does not affect the volume of air exiting the front air outlet but may be adjusted by the user to enhance comfort.

**NOTE:** Varying the air flow baffle will not adversely affect respiratory protection.



## PREPARING FOR USE

FIGURE 9

**Before using Respirator – Check the Following Items**

1. Blower Assembly
  - Verify the air filter is proper for application and is approved for use with this respirator. Verify the spark screen, pre-filter and particulate filter are properly installed and securely latched.
2. Breathing Tube
  - Make sure tube is not damaged and connected properly to the blower unit and helmet.
3. Battery
  - Verify connection to blower unit is secure and that battery is fully charged.
4. Air Flow/Air Flow Alarms
  - Start blower unit and verify air flow rate is being maintained by checking for air flow alarm activation. Test to verify air flow alarm is working (see page 15 for procedure).
5. Helmet/Hood
  - Inspect helmet for damage and replace if necessary. If air from blower is not being supplied to helmet, see troubleshooting guide (page 15).

**DONNING PROCEDURE FOR RESPIRATOR**

**⚠ WARNING**

**Respirator Safety**

- Do not enter a hazardous area until you are sure the respirator equipment is functioning correctly and properly worn.
- Leave the contaminated area immediately if the alarm sounds or the blower vibrates. Do not remove equipment until you are in a safe area.
- It is recommended that the user practice the donning and wearing of the respirator before attempting to use the respirator for respiratory protection.
- Do not use the powered air-purifying respirator without all filter components or with blower turned off or hazardous levels of oxygen and carbon dioxide may accumulate in the helmet.

**Donning respirator**

**NOTE: Make sure all procedures within preparing for use have been completed, prior to donning.**

1. Put the blower assembly on against your lower back with hose extending upwards. Extend arms through shoulder straps, allow straps to go over shoulders and belt around waist. Adjust shoulder straps and belt so blower unit rests against lower back properly.
2. Start the blower unit by pressing the ON button. Adjust air flow rate.
3. Connect the hose to the helmet assembly. Put on helmet and adjust so helmet fits snug on head. Tighten drawing string of face covering to establish a seal around head.

**Respirator removal**

**NOTE: Leave contaminated area before removing the helmet and blower unit.**

1. Take off helmet and disconnect hose from helmet.
2. Turn off blower unit by pressing OFF button.
3. Release belt, remove straps from shoulders and remove blower unit off of your lower back.

After use, the respirator components must be cleaned, inspected and prepared for reuse (battery charged).

**⚠ WARNING**

**Respirator Maintenance And Storage**

- Replace damaged or dirty air filters. Filters cannot be washed or cleaned with compressed air. Never reuse a dirty air filter.
- Never use solvents or abrasive cleaning solutions to clean the respirator. Keep water and other fluids out of blower assembly.

Maintain accurate records of filter replacement and respirator maintenance.

The respirator components should be cleaned after each use. Use of a soft cloth dampened with a mild soap and water solution to wipe all external surfaces of blower unit clean. Allow to dry.

Factors including product usage and workplace contamination levels affect the life of the filters. Replace filters if air flow is reduced because of dirty filter and according to the filter change schedule established by your Safety Director and an Industrial Hygienist.

Inspection of blower assembly and breathing tube after each use is good practice. Replace breathing tube if damaged or if inside of tube is dirty.

Storage of respirator should be in a clean, dry, cool place with the filter and battery removed for blower assembly if respirator will not be used for an extended period of time.

TROUBLE SHOOTING GUIDE FOR RESPIRATOR

PROBLEMS (SYMPTOMS)	POSSIBLE CAUSE	RECOMMENDED COURSE OF ACTION
No air flow to helmet from blower.	<ol style="list-style-type: none"> <li>1. Blower not ON.</li> <li>2. Battery not charged.</li> <li>3. Battery connection not being made.</li> <li>4. Breathing tube blocked.</li> </ol>	<ol style="list-style-type: none"> <li>1. Press ON button.</li> <li>2. Charge battery.</li> <li>3. Verify battery pack is securely latched into blower unit.</li> <li>4. Clear obstruction from blower outlet and/or hose.</li> </ol>
Blower supplies insufficient air to helmet.	<ol style="list-style-type: none"> <li>1. Breathing tube connections not properly connected.</li> <li>2. Clogged filter.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check breathing tube connections to blower and helmet.</li> <li>2. Replace filter.</li> </ol>
Low airflow alarm (audible & vibratory).	<ol style="list-style-type: none"> <li>1. Breathing tube is blocked.</li> <li>2. Filter inlet is covered.</li> <li>3. Clogged filter.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clear obstruction from blower outlet and/or hose</li> <li>2. Make sure inlet to filter not restricted.</li> <li>3. Replace filter.</li> </ol>
Battery alarm (audible & vibratory).	<ol style="list-style-type: none"> <li>1. Low battery.</li> </ol>	<ol style="list-style-type: none"> <li>1. Charge battery or replace battery as required.</li> </ol>
User detects odor or taste of contaminants or feels eye or throat irritation.	<ol style="list-style-type: none"> <li>1. Incorrect respirator for application.</li> <li>2. Hose connections loose allowing air to enter downstream of blower.</li> <li>3. Filter</li> </ol>	<ol style="list-style-type: none"> <li>1. Consult onsite Industrial Hygienist or safety director for proper equipment for work environment.</li> <li>2. Check hose connections to blower and helmet.</li> <li>3. Leave area wearing respirator. Check filter and replace if necessary.</li> </ol>
Battery run time is too short.	<ol style="list-style-type: none"> <li>1. Inadequate charging.</li> <li>2. Clogged filter.</li> <li>3. Battery faulty.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fully charge battery.</li> <li>2. Replace filter.</li> <li>3. Replace battery with new one.</li> </ol>
The motor runs "faster than normal" (increased sound level).	<ol style="list-style-type: none"> <li>1. Filter is getting clogged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace filter and pre-filter as required.</li> </ol>

## AUTO-DARKENING HELMET SECTION

### HELMET/LENS INFORMATION

The Auto-Darkening Lens in this welding helmet will automatically change from light state (Shade 3.5) to dark state (5-13) when arc is initiated.

The lens automatically returns to a light state when the arc stops.

Before welding, match your welding application to the shade indicated on the shade guide setting chart. (See Page 20) Also adjust the sensitivity setting to your welding application/environment.

This Auto-Darkening Welding Helmet is designed for use with GMAW, GTAW, SMAW welding, or Plasma Arc and air carbon arc cutting.

The Auto-Darkening Lens provides protection from harmful UV and IR radiation, in both dark and light states. No matter what shade the lens is set to, the UV/IR protection is always present.

The Auto-Darkening Lens contains four sensors to detect the light from the welding arc, resulting in the lens darkening to a selected welding shade.

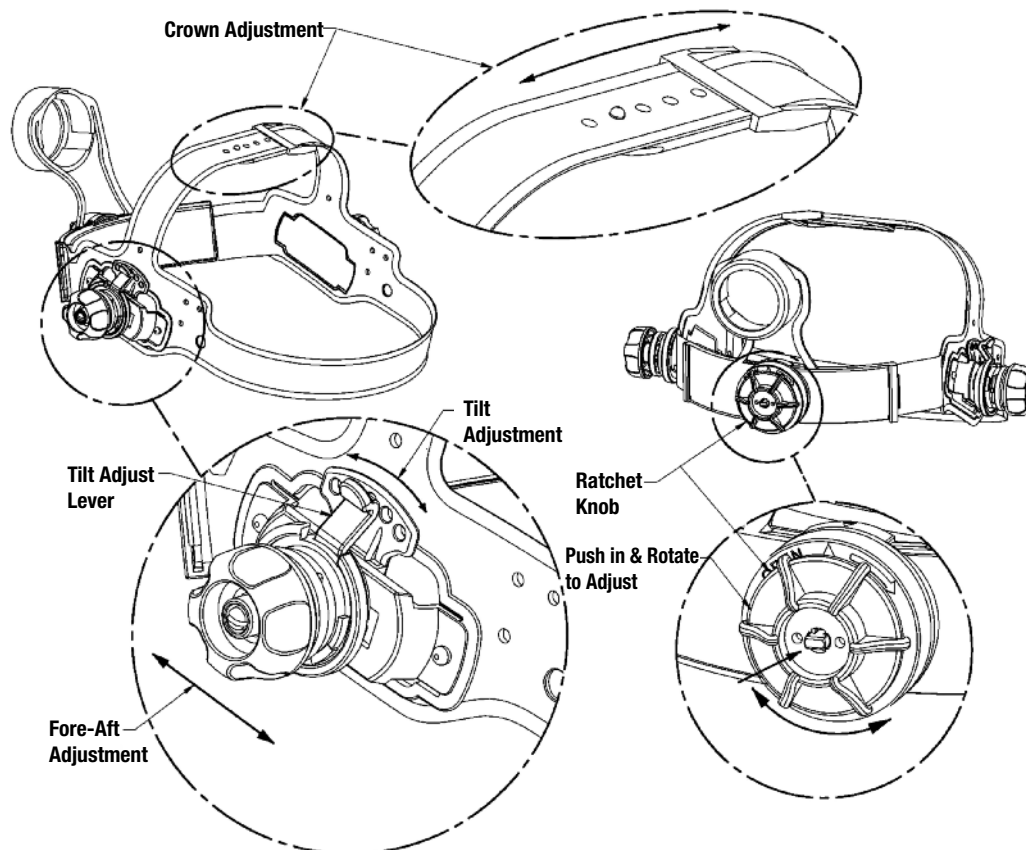
- Do not use solvents or abrasive cleaning detergent.
- Keep the sensors and solar cell clean.
- If cover lens is spattered or covered with dirt, it should be replaced immediately.
- Use only replacement parts specified in this manual.
- Do not use the helmet without inside and outside cover lenses properly installed.
- Do not use the auto-darkening lens if damaged by shock, vibration or pressure.

**AUTO-DARKENING LENS SPECIFICATIONS**

Optical Class	1/1/1/1 (per EN 379)
LCD Viewing Area	95 x 85 mm (3.74 x 3.34 in.)
Cartridge Size	114 x 133 mm (4.50 x 5.25 in.)
UV/IR Protection	Up to Shade DIN 16 at all times
Arc Sensors	4
Light State Shade	DIN 3.5
Variable Welding Shades	DIN 5 to 13
Shade Control	Dial knob – full adjustment
Power Supply	Solar cells – with Battery
Low Battery Warning	Red Light
Battery	CR2450 Lithium (1 Required)
Power On/Off	Fully automatic
Light to Dark Switching Time	0.00004 sec. (1/25,000 sec.)
Dark to Light Switching Time	0.1 sec. (Short) to 1.0 sec. (Long)
Sensitivity Control	Variable and Grind
TIG Rating	DC $\geq$ 2 amps, AC $\geq$ 2 amps,
Operating Temperature (helmet)	14°F to 131°F (-10° to 55°C)
Storage Temperature (helmet)	-4° to 158°F (-20°C to 70°C)
Compliance of Helmet	ANSI Z87.1-2010/CSA Z94.3/CE EN 379

## WELDING HELMET OPERATING INSTRUCTIONS

FIGURE 10



**NOTE:** Air Plenum and Sweatband removed for Clarity

## HEADGEAR ADJUSTMENT

**HEAD SIZE ADJUSTMENT:** Headgear tightness is adjusted by pushing in the ratchet knob and turning to adjust to fit user's head size. The ratchet knob is located at the back of the helmet.

**HEADGEAR CROWN ADJUSTMENT:** Crown adjustment is made by adjusting the top band of headgear for comfort and snapping the pin into the hole to lock securely in place.

**TILT:** Tilt adjustment is located on right side of helmet. Loosen the right headgear tension knob and push the top end of the adjustment lever outward until the lever's Stop Tab clears the notches. Then rotate the lever forward or back to the desired tilt position. The stop tab will need to engage another notch to get proper tilt position. Tighten right headgear tension knob when finished with this adjustment.

**FORE / AFT ADJUSTMENT:** Adjusts the distance between the user's face and lens. To adjust, loosen the outside tension knobs and slide headgear forward or back to desired position and retighten.

**NOTE:** Make sure both sides are equally positioned in fore/aft adjustment for proper operation.

**CARTRIDGE OPERATION/FEATURES**

**Variable Shade Control**

The shade can be adjusted from shade 5 to 8 and 9 to 13 based upon welding process or application (refer to lens shade selection chart on page 20). Shade is adjusted by setting the shade range switch to the proper range, then use the shade dual scale dial to set the desired shade. The shade range switch and dual scale dial are located on the Auto-Darkening Lens as shown in figure 11.

**Test**

Press and hold test to preview shade selection before welding. When released the viewing window will automatically return to the light state (3.5 Shade).

**Sensitivity**

Adjust the light sensitivity by turning the **SENSITIVITY** knob to the left or right as shown in the figure below. Turning the knob all the way to the left is the **HI** setting. When helmet is used in the presence of excess ambient light or with another welding machine close by, improved helmet performance can be obtained with a lower setting by turning the knob to the right to reduce the sensitivity. **Grind mode** can be selected by rotating the sensitivity knob all the way to the right until an audible click is heard.

**Grind mode is intended for grinding only not for welding.**

**Delay Knob**

This control is designed to protect the welder's eyes from the strong residual rays after welding. Changing the **DELAY** knob will vary the dark to light time between 0.1 second (**S**) to 1.0 second (**L**).

The **L** setting is recommended for high amperage applications where the weld puddle is still very bright after the welding arc has ceased and for situations where the Lens may be temporarily blocked from seeing the welding arc.

**Power**

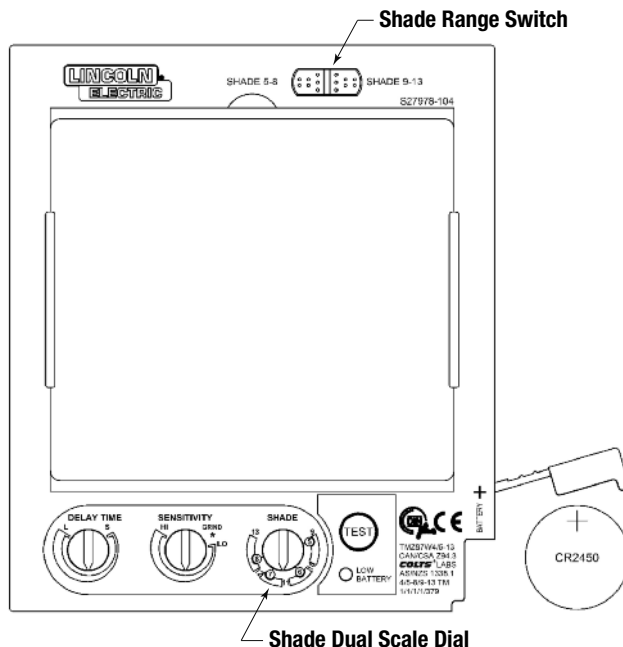
This Auto-Darkening Lens is powered by a replaceable battery and solar power. The battery is located at the bottom corner of the Auto-Darkening Lens. Replace battery when **LOW BATTERY** light is lit. See the specification chart on page 17 for type of battery required. See Auto-Darkening Lens shown in figure 11 for battery proper charge orientation for installing into Auto-Darkening Lens. Battery compartment door release slides down and rotates open as shown.

**HELMET CARE AND MAINTENANCE**

**Cleaning:** To clean helmet wipe with a soft cloth. Clean cartridge surfaces regularly. Do not use strong cleaning solutions. Clean sensors and solar cells with soapy water solution and a damp, clean cloth. Wipe dry with a lint-free cloth. Do NOT submerge Auto-Darkening Lens in water or other solution.

**Storage:** Store in a clean, dry location.

**FIGURE 11**



SHADE GUIDE SETTING

GUIDE FOR SHADE NUMBERS				
OPERATION	ELECTRODE SIZE 1/32 in. (mm)	ARC CURRENT (A)	MINIMUM PROTECTIVE SHADE	SUGGESTED <sup>(1)</sup> SHADE NO. (COMFORT)
Shielded metal arc welding	Less than 3 (2.5)	Less than 60	7	–
	3-5 (2.5–4)	60-160	8	10
	5-8 (4–6.4)	160-250	10	12
	More than 8 (6.4)	250-550	11	14
Gas metal arc welding and flux cored arc welding		Less than 60	7	–
		60-160	10	11
		160-250	10	12
		250-500	10	14
Gas tungsten arc welding		Less than 50	8	10
		50-150	8	12
		150-500	10	14
Air carbon Arc cutting	(Light)	Less than 500	10	12
	(Heavy)	500-1000	11	14
Plasma arc welding		Less than 20	6	6 to 8
		20-100	8	10
		100-400	10	12
		400-800	11	14
Plasma arc cutting	(Light) <sup>(2)</sup>	Less than 300	8	9
	(Medium) <sup>(2)</sup>	300-400	9	12
	(Heavy) <sup>(2)</sup>	400-800	10	14
Torch brazing		–	–	3 or 4
Torch soldering		–	–	2
Carbon arc welding		–	–	14
PLATE THICKNESS				
	in.	mm		
Gas welding	Light	Under 1/8	Under 3.2	4 or 5
	Medium	1/8 to 1/2	3.2 to 12.7	5 or 6
	Heavy	Over 1/2	Over 12.7	6 or 8
Oxygen cutting	Light	Under 1	Under 25	3 or 4
	Medium	1 to 6	25 to 150	4 or 5
	Heavy	Over 6	Over 150	5 or 6

(1) As a rule of thumb, start with a shade that is too dark, then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line the visible light of the (spectrum) operation.

(2) These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the workpiece.

Data from ANSI Z49.1-2012

If your helmet does not include any one of the shades referenced above, it is recommended you use the next darker shade.



**CARTRIDGE AND LENS REPLACEMENT**

**Replacing Front Clear Cover Lens:** Replace the front cover lens if it is damaged. Remove Lens holder assembly per Figure 12a. Remove front cover lens from helmet assembly. Carefully remove gasket from cover lens. Install new cover lens into gasket and assemble to helmet shell. Make sure to assemble new cover lens and gasket into helmet shell the same way as it was removed.

**Replacing Inside Clear Lens:** Replace the inside clear lens if it is damaged. Place your fingernail in recess above cartridge view window and flex lens upwards until it releases from edges of cartridge view window. Install new lens into one side retainer and flex lens upward to secure other edge of lens into the other side of cartridge view window.

**Change the Auto-Darkening Lens:** Remove Lens holder assembly from helmet shell. See figure 12a for removal. Flex top end of the Lens holder to allow for Auto-Darkening Lens to be removed from frame. Install new Auto-Darkening Lens into frame per figure 12b below. Make sure that the Auto-Darkening Lens is inserted in lens holder correctly as shown. Install lens holder assembly into helmet shell.

**Installing a Magnifying Lens:** Remove Lens holder assembly from helmet. Remove Auto-Darkening Lens from Lens holder. Slide the magnifying lens into the short rails located on the sides of Lens holder per Figure 12c. Re-assemble Auto-Darkening Lens to Lens holder and Lens holder assembly to helmet. With magnifying lens installed, the lens location can be adjusted up or down based on user preference.

**FIGURE 12**

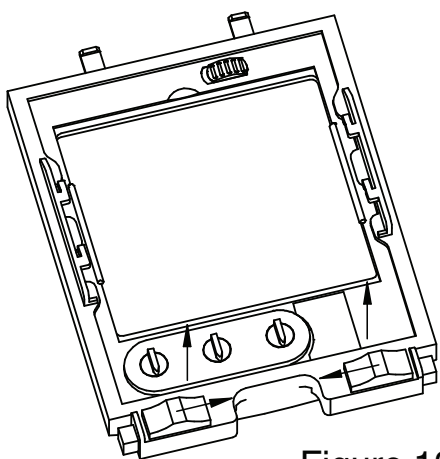


Figure 12a

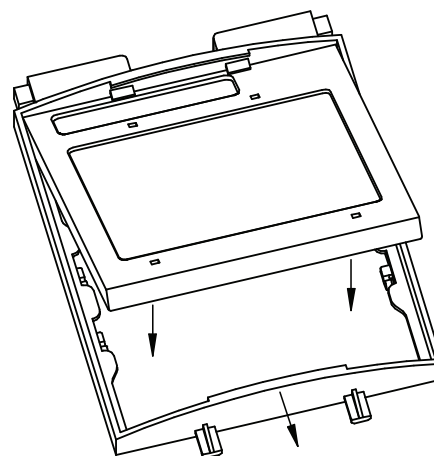


Figure 12b

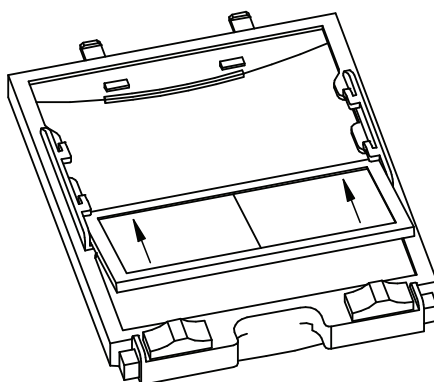



Figure 12c

**TROUBLE SHOOTING GUIDE FOR AUTO-DARKENING LENS**

**ALWAYS TEST TO BE SURE THE AUTO-DARKENING LENS IS FUNCTIONING PROPERLY BEFORE WELDING.** The TEST button is for the user to verify the Auto-Darkening Lens is darkening properly. If lens is not darkening properly, check shade range switch and/or shade dual scale dial for proper shade setting. If this does not resolve your issue, replace battery with fresh battery and test again before use. While welding, the arc and solar cell will keep the lens charged.

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>	
Filter does not darken when TEST button is pressed.	Low battery.	Replace battery.	
Difficult to see through filter.	Front cover lens dirty.	Clean or replace front cover lens.	
	Cartridge dirty.	Clean the Auto-Darkening Lens with soapy water solution and soft cloth.	
Filter does not darken when arc is struck.	Sensitivity is set too low.	Adjust sensitivity to required level.	
	Front cover lens dirty.	Clean or replace front cover lens.	
	Front cover lens is damaged.	Check for cracked or pitted front cover lens and replace as required.	
	Sensors are blocked or Solar panel is blocked.	Make sure you are not blocking the sensors or solar panels with your arm or other obstacle while welding. Adjust your position so that the sensors can see the weld arc.	
	Grind Mode Selected	Check sensitivity knob setting.	
Filter darkening without arc being struck.	Sensitivity set too high.	Adjust sensitivity to required level.	
Filter remains dark after completing a weld.	Delay set too high.	Adjust to required level.	
<b>⚠ WARNING</b>			
	<b>Lens is cracked.</b>	<b>Cease (STOP) using this product if this problem exists. UV/IR protection may be compromised resulting in burns to the eyes and skin.</b>	
	<b>Weld spatter is damaging the filter.</b>	<b>Missing, damaged, broken, cracked or distorted front cover lens.</b>	<b>Replace front cover lens as needed.</b>



**WARRANTY INFORMATION**

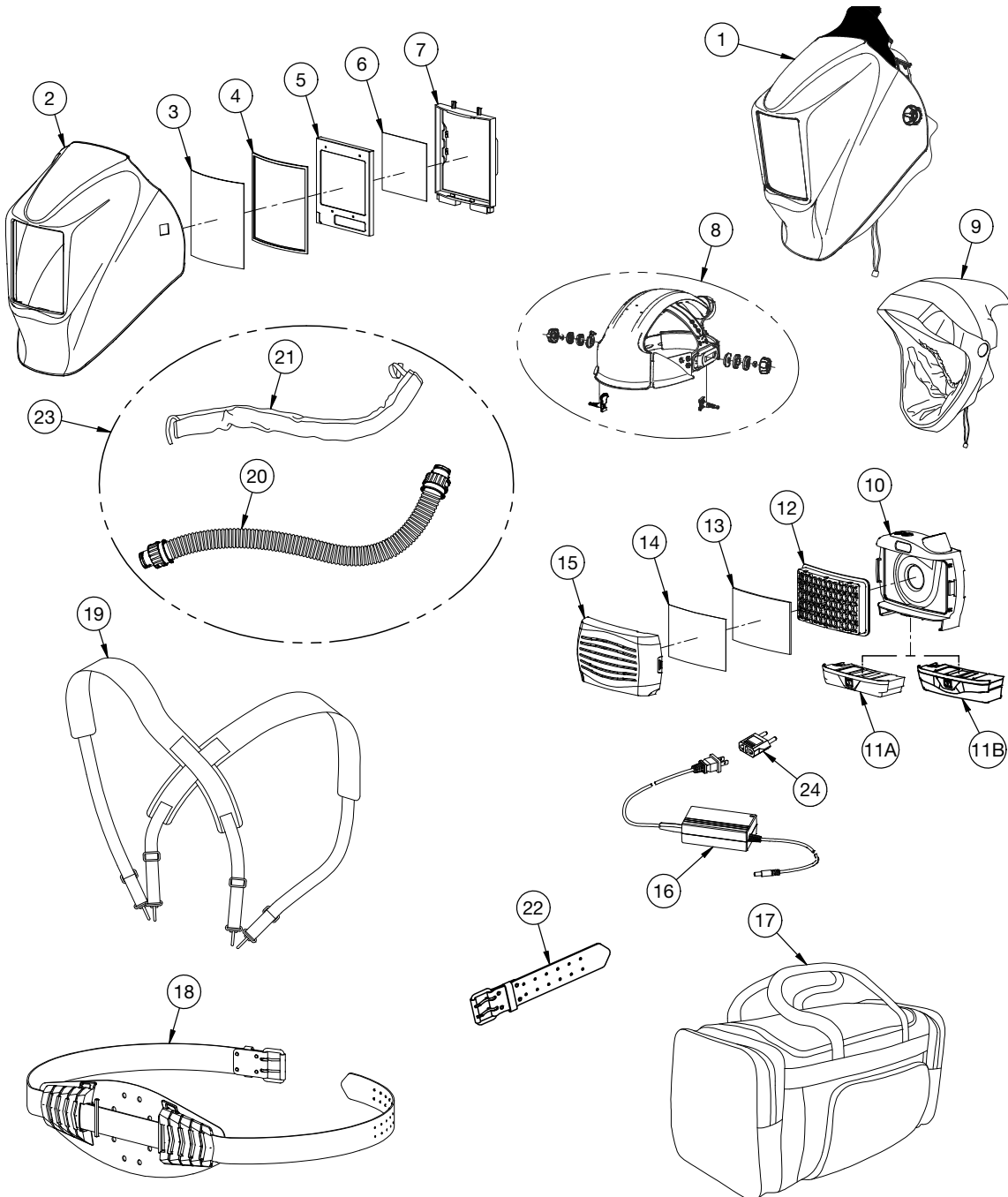
**WARRANTY INFORMATION:**

Reference IMWS1 included in Literature.

**SPATTER DAMAGE IS NOT COVERED BY WARRANTY:**

Do not use this product without the correct protective clear lenses installed properly on both sides of the Auto-Darkening Lens. The clear lenses supplied with this helmet are properly sized to work with this product and substitutions from other suppliers should be avoided.

**K3930-2 VIKING PAPER 3350 WELDING HELMET ASSEMBLY (Parts Pages)**



**VIKING PAPR 3350 WELDING HELMET**

**K3930-2 VIKING PAPR 3350 WELDING HELMET ASSEMBLY (PARTS PAGES)**

ITEM	PART NO.	PURCHASED PART NO.	DESCRIPTION	QTY.
1	G7893-1	KP5121-2	VIKING PAPR 3350 HELMET ASSEMBLY (PKG INCLUDES HEADGEAR AND HEADCOVERING)	1
2	M25062-15	M25062-15	HELMET SHELL (W/HOOK AND LOOP ATTACHMENT)	1
3	S27978-36	KP2898-1	OUTSIDE COVER LENS (5.25 X 4.5 IN.) (PKG QTY: 5)	1
4	S27978-32	S27978-32	OUTSIDE COVER LENS SEAL	1
5	S27978-115	KP3045-3	3350 AUTO-DARKENING LENS	1
6	S27978-62	KP3044-1	INSIDE COVER LENS (3.53 X 3.73 IN.) (PKG QTY: 5)	1
7	S27978-33	S27978-33	LENS HOLDER	1
8	M25062-17	KP3942-1	HEADGEAR (INCLUDING PLENUM AND SWEATBAND)	1
		KP3943-1	SWEATBAND	1
9	M25062-18	KP3940-1	HEADCOVERING (W/HOOK AND LOOP ATTACHMENT)	1
10	G7737	KP3944-1	BLOWER ASSEMBLY (PKG INCLUDES ITEM 15 - FILTER COVER ASSEMBLY)	1
11A	M24960	KP3937-1	BATTERY PACK - STANDARD	1
11B	M25063	KP3938-1*	BATTERY PACK - EXTENDED	1
12	M25123-1	KP3424-2	HE FILTER ASSEMBLY (PKG QTY: 2)	1
		KP3424-6	HE FILTER ASSEMBLY (PKG QTY: 6)	1
13	M24966	KP3935-1	PRE-FILTER	1
14	M24965	KP3936-1	SPARK SCREEN	1
15	M25062-1	M25062-1	FILTER COVER ASSEMBLY	1
16	M24961	KP3932-1	BATTERY CHARGER	1
17	G7240	K3096-1	LINCOLN INDUSTRIAL DUFFLE BAG	1
18	L16463	KP5123-1	PAPR BELT ASSEMBLY	1
19	M24967	KP5124-1	SHOULDER STRAP ASSEMBLY	1
20	M24962	NSS (SEE ITEM 23)	HOSE ASSEMBLY	1
	M25062-28	M25062-28	BREATHING TUBE O-RING (PKG QTY: 2)	1
21	M24964	NSS (SEE ITEM 23)	HOSE COVER	1
22	M25208	KP3939-1 *	BELT EXTENSION (EXTENDS BELT TO 60")	1
23	M25246	KP5122-1	HOSE ASSEMBLY W/ COVER (ITEMS 20 AND 21 ASSEMBLED)	1
24	M25611	KP4255-1	EUROPEAN PLUG ADAPTER	1
		KP3046-100 *	CHEATER LENS, 1.00 MAGNIFICATION	1
		KP3046-125 *	CHEATER LENS, 1.25 MAGNIFICATION	1
		KP3046-150 *	CHEATER LENS, 1.50 MAGNIFICATION	1
		KP3046-175 *	CHEATER LENS, 1.75 MAGNIFICATION	1
		KP3046-200 *	CHEATER LENS, 2.00 MAGNIFICATION	1
		KP3046-225 *	CHEATER LENS, 2.25 MAGNIFICATION	1
		KP3046-250 *	CHEATER LENS, 2.50 MAGNIFICATION	1

NSS - NOT SOLD SEPARATELY

\* - OPTIONAL ACCESSORY

**Lincoln Electric Company**  
**Viking Powered Air Purifying Respirator Model 3350**

European Union and Great Brittan Supplemental Information Appendix

This supplemental appendix provides specific information as apply to the Lincoln Electric Viking Model 3350 respirator for use in EU countries and / or countries whom utilize EN standards. The information provided herein is specific per the European Personal Protective Equipment Directive (EEC/89/686) and European Standard EN 12941 for Powered Air Purifying Respirators. It is intended for use only along with the information as provided within the Viking PAPR 3350 User Instruction in whole. User's of this respirator shall read and understand the complete Viking PAPR 3350 User Instruction Manual prior to use.

This Powered Air Purifying Respirator (PAPR) is CE certified (article 10) by EU Notified Body 2056 to class TH2P in accord with EN 12941-1998 / A2 2008). (SAI Global, Milton Keynes MK1 9ES, United Kingdom. EU Notified Body Number 2056)

The system provides for two electronically controlled, user selectable, operational (flow) modes; a Standard Flow Rate of 180 l/min and a High Flow Rate of 210 l/min. The flow of filtered air is constantly monitored by the electronics and will alarm to inform the user when the battery is depleted and can no longer provide the power needed to maintain the set flow rate. The operating time (battery life) of the respirator depends on the operational (flow rate) mode selected, the battery type used, and the condition of the filter. When the respirator is unable to provide air flow at the selected operating mode the system will alarm (Ref. main Viking PAPR 3350 User Instruction Manual page 15.

**Operating Mode Specification Table**

	<b>Standard Battery</b>	<b>Extended Life Battery</b>
Number of Charging Cycles	Approx. 500	Approx. 500
Min. Operating Time at Standard Flow Rate	12.5 hours	+12.5 hours
Min. Operating Time at High Flow Rate	9.5 hours	+9.5 hours
Charging Time (from completely depleted state)	Approx. 3 hours	Approx. 4.5 hours
Net Weight (battery)	268g / 0.59 lb	472g / 1.04 lb
Voltage/amp hour capacity	14.4 V nominal / 3.1 Ah	14.4 V nominal / 5.8 Ah

**Warnings !:**

- This respirator only provides protection when turned ON and operating within one of the selected operational (flow rate) modes. It does not provide protection when powered OFF.

- This respirator should not be worn when powered OFF or when not operating within one of its selected operational (flow rate) modes as a rapid depletion of Oxygen build up of Carbon Dioxide may occur.
- This respirator utilizes electronic flow control and monitoring. Refer to the main Viking PAPR 3350 User Instruction Manual (page 14) for setting and checking the flow rate.
- Filters shall be fitted only to the Viking PAPR 3350 blower unit (Ref. Viking PAPR 3350 User Instruction Manual Page 11, Figure 3) and not the helmet.
- The function of the electronic air flow monitor / alarm should be tested prior to use. Refer to the main Viking PAPR 3350 User Instruction Manual page 15.
- User's of this respirator shall be aware that at very high work rates the pressure may become negative at peak inhalation flows.
- User's shall use caution not to confuse the markings on a filter relating to any standard other than EN 12941 with the classification of this device when used with this filter.

**Lincoln Electric Company**  
**Viking Powered Air Purifying Respirator Model 3350**

Australian and New Zealand Supplemental Information Appendix

This supplemental appendix provides specific information as apply to the Lincoln Electric Viking Model 3350 respirator for use in countries whom utilize AS/NZS standards. The information provided herein is specific per AS/NZS 1716:2012. It is intended for use only along with the information as provided within the Viking PAPR 3350 User Instruction in whole. User's of this respirator shall read and understand the complete Viking PAPR 3350 User Instruction Manual prior to use.

This Powered Air Purifying Respirator (PAPR) is certified by SAI Global to class P2 in accord with AS/NZS 1716:2012 as tested under standard laboratory conditions (20 °C ±2° / 50% RH ± 20%)

The system provides for two electronically controlled, user selectable, operational (flow) modes; a Standard Flow Rate of 180 l/min and a High Flow Rate of 210 l/min. The flow of filtered air is constantly monitored by the electronics and will alarm to inform the user when the battery is depleted and can no longer provide the power needed to maintain the set flow rate. The operating time (battery life) of the respirator depends on the operational (flow rate) mode selected, the battery type used, and the condition of the filter. When the respirator is unable to provide air flow at the selected operating mode the system will alarm (Ref. main Viking PAPR 3350 User Instruction Manual page 15.

**Operating Mode Specification Table**

	<b>Standard Battery</b>	<b>Extended Life Battery</b>
Number of Charging Cycles	Approx. 500	Approx. 500
Min. Operating Time at Standard Flow Rate	12.5 hours	+12.5 hours
Min. Operating Time at High Flow Rate	9.5 hours	+9.5 hours
Charging Time (from completely depleted state)	Approx. 3 hours	Approx. 4.5 hours
Net Weight (battery)	268g / 0.59 lb	472g / 1.04 lb
Voltage/amp hour capacity	14.4 V nominal / 3.1 Ah	14.4 V nominal / 5.8 Ah

**Warning !:**

- The helmet of this respirator does not comply with AZ/NZS 1801. If head protection is required, consult with your safety officer.
- User's shall use caution not to confuse the markings on a filter relating to any standard other than AS/NZS 1716 with the classification of this device when used with this filter.



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<b>WARNING</b>	<ul style="list-style-type: none"> <li>● Do not touch electrically live parts or electrode with skin or wet clothing.</li> <li>● Insulate yourself from work and ground.</li> </ul>	<ul style="list-style-type: none"> <li>● Keep flammable materials away.</li> </ul>	<ul style="list-style-type: none"> <li>● Wear eye, ear and body protection.</li> </ul>
Spanish <b>AVISO DE PRECAUCION</b>	<ul style="list-style-type: none"> <li>● No toque las partes o los electrodos bajo carga con la piel o ropa mojada.</li> <li>● Aíslese del trabajo y de la tierra.</li> </ul>	<ul style="list-style-type: none"> <li>● Mantenga el material combustible fuera del área de trabajo.</li> </ul>	<ul style="list-style-type: none"> <li>● Protéjase los ojos, los oídos y el cuerpo.</li> </ul>
French <b>ATTENTION</b>	<ul style="list-style-type: none"> <li>● Ne laissez ni la peau ni des vêtements mouillés entrer en contact avec des pièces sous tension.</li> <li>● Isolez-vous du travail et de la terre.</li> </ul>	<ul style="list-style-type: none"> <li>● Gardez à l'écart de tout matériel inflammable.</li> </ul>	<ul style="list-style-type: none"> <li>● Protégez vos yeux, vos oreilles et votre corps.</li> </ul>
German <b>WARNUNG</b>	<ul style="list-style-type: none"> <li>● Berühren Sie keine stromführenden Teile oder Elektroden mit Ihrem Körper oder feuchter Kleidung!</li> <li>● Isolieren Sie sich von den Elektroden und dem Erdboden!</li> </ul>	<ul style="list-style-type: none"> <li>● Entfernen Sie brennbares Material!</li> </ul>	<ul style="list-style-type: none"> <li>● Tragen Sie Augen-, Ohren- und Körperschutz!</li> </ul>
Portuguese <b>ATENÇÃO</b>	<ul style="list-style-type: none"> <li>● Não toque partes elétricas e electrodos com a pele ou roupa molhada.</li> <li>● Isole-se da peça e terra.</li> </ul>	<ul style="list-style-type: none"> <li>● Mantenha inflamáveis bem guardados.</li> </ul>	<ul style="list-style-type: none"> <li>● Use proteção para a vista, ouvido e corpo.</li> </ul>
Japanese <b>注意事項</b>	<ul style="list-style-type: none"> <li>● 通電中の電気部品、又は溶材にヒフやぬれた布で触れないこと。</li> <li>● 施工物やアースから身体が絶縁されている様にして下さい。</li> </ul>	<ul style="list-style-type: none"> <li>● 燃えやすいものの側での溶接作業は絶対にしてはなりません。</li> </ul>	<ul style="list-style-type: none"> <li>● 目、耳及び身体に保護具をして下さい。</li> </ul>
Chinese <b>警告</b>	<ul style="list-style-type: none"> <li>● 皮肤或湿衣物切勿接触带电部件及焊条。</li> <li>● 使你自已与地面和工件绝缘。</li> </ul>	<ul style="list-style-type: none"> <li>● 把一切易燃物品移离工作场所。</li> </ul>	<ul style="list-style-type: none"> <li>● 佩戴眼、耳及身体劳动保护用具。</li> </ul>
Korean <b>위험</b>	<ul style="list-style-type: none"> <li>● 전도체나 용접봉을 젖은 헝겊 또는 피부로 절대 접촉치 마십시오.</li> <li>● 모재와 접지를 접촉치 마십시오.</li> </ul>	<ul style="list-style-type: none"> <li>● 인화성 물질을 접근시키지 마십시오.</li> </ul>	<ul style="list-style-type: none"> <li>● 눈, 귀와 몸에 보호장구를 착용하십시오.</li> </ul>
Arabic <b>تحذير</b>	<ul style="list-style-type: none"> <li>● لا تلمس الاجزاء التي يسري فيها التيار الكهربائي أو الألكترود بجسدك أو بالملابس المبللة بالماء.</li> <li>● ضع عازلا على جسمك خلال العمل.</li> </ul>	<ul style="list-style-type: none"> <li>● ضع المواد القابلة للاشتعال في مكان بعيد.</li> </ul>	<ul style="list-style-type: none"> <li>● ضع أدوات وملابس واقية على عينيك وأذنيك وجسمك.</li> </ul>

**READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTION FOR THIS EQUIPMENT AND THE CONSUMABLES TO BE USED AND FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.**

**SE RECOMIENDA LEER Y ENTENDER LAS INSTRUCCIONES DEL FABRICANTE PARA EL USO DE ESTE EQUIPO Y LOS CONSUMIBLES QUE VA A UTILIZAR, SIGA LAS MEDIDAS DE SEGURIDAD DE SU SUPERVISOR.**

**LISEZ ET COMPRENEZ LES INSTRUCTIONS DU FABRICANT EN CE QUI REGARDE CET EQUIPMENT ET LES PRODUITS A ETRE EMPLOYES ET SUIVEZ LES PROCEDURES DE SECURITE DE VOTRE EMPLOYEUR.**

**LESEN SIE UND BEFOLGEN SIE DIE BETRIEBSANLEITUNG DER ANLAGE UND DEN ELEKTRODENEINSATZ DES HERSTELLERS. DIE UNFALLVERHÜTUNGSVORSCHRIFTEN DES ARBEITGEBERS SIND EBENFALLS ZU BEACHTEN.**

			
<ul style="list-style-type: none"> <li>● Keep your head out of fumes.</li> <li>● Use ventilation or exhaust to remove fumes from breathing zone.</li> </ul>	<ul style="list-style-type: none"> <li>● Turn power off before servicing.</li> </ul>	<ul style="list-style-type: none"> <li>● Do not operate with panel open or guards off.</li> </ul>	<b>WARNING</b>
<ul style="list-style-type: none"> <li>● Los humos fuera de la zona de respiración.</li> <li>● Mantenga la cabeza fuera de los humos. Utilice ventilación o aspiración para gases.</li> </ul>	<ul style="list-style-type: none"> <li>● Desconectar el cable de alimentación de poder de la máquina antes de iniciar cualquier servicio.</li> </ul>	<ul style="list-style-type: none"> <li>● No operar con panel abierto o guardas quitadas.</li> </ul>	Spanish <b>AVISO DE PRECAUCION</b>
<ul style="list-style-type: none"> <li>● Gardez la tête à l'écart des fumées.</li> <li>● Utilisez un ventilateur ou un aspirateur pour ôter les fumées des zones de travail.</li> </ul>	<ul style="list-style-type: none"> <li>● Débranchez le courant avant l'entretien.</li> </ul>	<ul style="list-style-type: none"> <li>● N'opérez pas avec les panneaux ouverts ou avec les dispositifs de protection enlevés.</li> </ul>	French <b>ATTENTION</b>
<ul style="list-style-type: none"> <li>● Vermeiden Sie das Einatmen von Schweißrauch!</li> <li>● Sorgen Sie für gute Be- und Entlüftung des Arbeitsplatzes!</li> </ul>	<ul style="list-style-type: none"> <li>● Strom vor Wartungsarbeiten abschalten! (Netzstrom völlig öffnen; Maschine anhalten!)</li> </ul>	<ul style="list-style-type: none"> <li>● Anlage nie ohne Schutzgehäuse oder Innenschutzverkleidung in Betrieb setzen!</li> </ul>	German <b>WARNUNG</b>
<ul style="list-style-type: none"> <li>● Mantenha seu rosto da fumaça.</li> <li>● Use ventilação e exaustão para remover fumo da zona respiratória.</li> </ul>	<ul style="list-style-type: none"> <li>● Não opere com as tampas removidas.</li> <li>● Desligue a corrente antes de fazer serviço.</li> <li>● Não toque as partes elétricas nuas.</li> </ul>	<ul style="list-style-type: none"> <li>● Mantenha-se afastado das partes moventes.</li> <li>● Não opere com os painéis abertos ou guardas removidas.</li> </ul>	Portuguese <b>ATENÇÃO</b>
<ul style="list-style-type: none"> <li>● ヒュームから頭を離すようにして下さい。</li> <li>● 換気や排煙に十分留意して下さい。</li> </ul>	<ul style="list-style-type: none"> <li>● メンテナンス・サービスに取りかかる際には、まず電源スイッチを必ず切ってください。</li> </ul>	<ul style="list-style-type: none"> <li>● パネルやカバーを取り外したままで機械操作をしないで下さい。</li> </ul>	Japanese <b>注意事項</b>
<ul style="list-style-type: none"> <li>● 頭部遠離煙霧。</li> <li>● 在呼吸區使用通風或排風器除煙。</li> </ul>	<ul style="list-style-type: none"> <li>● 維修前切斷電源。</li> </ul>	<ul style="list-style-type: none"> <li>● 儀表板打開或沒有安全罩時不準作業。</li> </ul>	Chinese <b>警告</b>
<ul style="list-style-type: none"> <li>● 얼굴로부터 용접가스를 멀리하십시오.</li> <li>● 호흡지역으로부터 용접가스를 제거하기 위해 가스제거기나 통풍기를 사용하십시오.</li> </ul>	<ul style="list-style-type: none"> <li>● 보수전에 전원을 차단하십시오.</li> </ul>	<ul style="list-style-type: none"> <li>● 관널이 열린 상태로 작동치 마십시오.</li> </ul>	Korean <b>위험</b>
<ul style="list-style-type: none"> <li>● ابعد رأسك بعيداً عن الدخان.</li> <li>● استعمل التهوية أو جهاز ضغط الدخان للخارج لكي تبعد الدخان عن المنطقة التي تتنفس فيها.</li> </ul>	<ul style="list-style-type: none"> <li>● أقطع التيار الكهربائي قبل القيام بأية صيانة.</li> </ul>	<ul style="list-style-type: none"> <li>● لا تشغيل هذا الجهاز اذا كانت الاغطية الحديدية الواقية ليست عليه.</li> </ul>	Arabic <b>تحذير</b>

**LEIA E COMPREENDA AS INSTRUÇÕES DO FABRICANTE PARA ESTE EQUIPAMENTO E AS PARTES DE USO, E SIGA AS PRÁTICAS DE SEGURANÇA DO EMPREGADOR.**

使う機械や溶材のメーカーの指示書をよく読み、まず理解して下さい。そして貴社の安全規定に従って下さい。

請詳細閱讀並理解製造廠提供的說明以及應該使用的銀焊材料，並請遵守貴方的有關勞動保護規定。

이 제품에 동봉된 작업지침서를 숙지하시고 귀사의 작업자 안전수칙을 준수하시기 바랍니다.

اقرأ بتمعن وافهم تعليمات المصنع المنتج لهذه المعدات والمواد قبل استعمالها واتباع تعليمات الوقاية لصاحب العمل.

## **CUSTOMER ASSISTANCE POLICY**

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to [www.lincolnelectric.com](http://www.lincolnelectric.com) for any updated information.



**THE LINCOLN ELECTRIC COMPANY**

22801 St. Clair Avenue • Cleveland, OH • 44117-1199 • U.S.A.  
Phone: +1.216.481.8100 • [www.lincolnelectric.com](http://www.lincolnelectric.com)