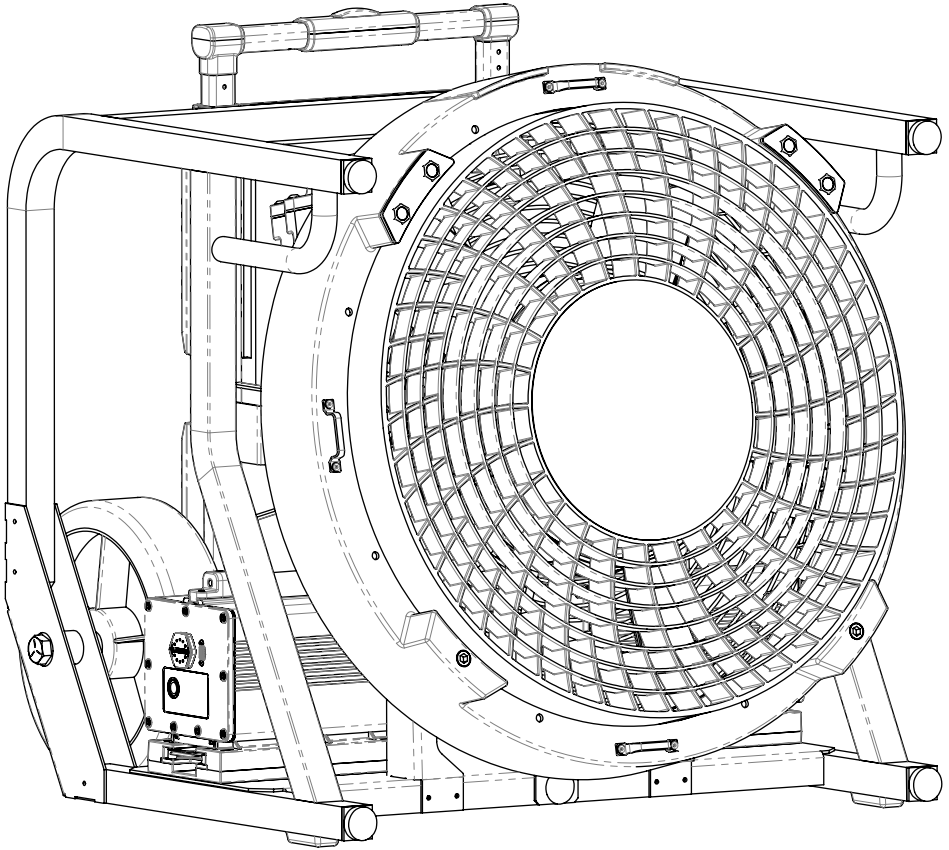


Owner's Manual



EX150Li HIGH-PERFORMANCE BATTERY FAN



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Introduction

Congratulations on your purchase of the high-performance ventilator RAMFAN EX150Li.

WARNING!

Read this manual before starting for the first time!

You now own an industrial ventilation unit that offers endless possibilities. Before using, make sure that no damage was done to your ventilator during transport. If this is the case, do not use the product and immediately contact your authorized Euramco dealer.

For your own safety and that of others, please read this instruction manual carefully before using the unit.

Anyone involved in installing, operating or servicing the EX150Li must:

- Be a qualified, authorized professional.
- Strictly follow the instructions in this user manual.

Please take the time to read this manual carefully and thoroughly before operating the ventilator. You should have a good knowledge of its operating conditions and all pertinent product information.

After you have become familiar with this manual, we recommend that you keep a copy for future use. All the information found in this manual is subject to change without notice. Euramco reserves the right to modify and upgrade its range of products, with no obligation to integrate these changes into products already sold.


If any questions arise concerning any of the information in this manual, Euramco Customer Service must be consulted:

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Toll Free: (800) 472-6326
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About Euramco

Euramco Group is a leading manufacturer of portable ventilation solutions for the world's toughest job sites, with a primary focus on rotating machinery, engineered for superior fluid dynamics, and developing innovative industry-specific drive and control solutions. Euramco Group sells to defense, firefighting, hazardous area, and commercial safety markets worldwide through five locations globally.

Warning Labels and Safety Instructions

This is the safety-alert symbol. 

When you see this symbol on your ventilator or in this manual, be alert to the potential for personal injury or damage to your equipment. Be sure you understand all safety messages and always follow recommended precautions and safe operating practices. Important safety information is presented in this section and throughout the manual:

- Electrical shock hazard. Do not open the unit.
- DO NOT START with signs of visible damage.
- Ventilator is not intended for operation in explosive atmospheres.
- Wear ear protection when close by.
- Keep body parts and loose objects away from in take of ventilator.
- Do not move ventilator while in operation.
- Operate and repair by trained personnel only.
- Always use grounded plug and properly ground AC power receptacle.
- Heat sink becomes hot during charging to some extent. DO NOT touch. Do not place items over heat sink area.
- Use with approved, good condition extension cord with the ground connector:

| Wire Gauge Requirements per ft (m) | |
|------------------------------------|------------------|
| 0-150 ft (0-50m) | AWG 14 (2.5 mm²) |
| >150 ft (> 50m) | AWG 12 (4 mm²) |



**KEEP
FINS
CLEAR**

**HOT SURFACE!
DO NOT TOUCH!
DO NOT PLACE ITEMS OVER
HEAT SINK AREA!**

DANGER
HIGH VOLTAGE
DO NOT OPEN
No User Serviceable Parts

CAUTION!



Safety Checklist

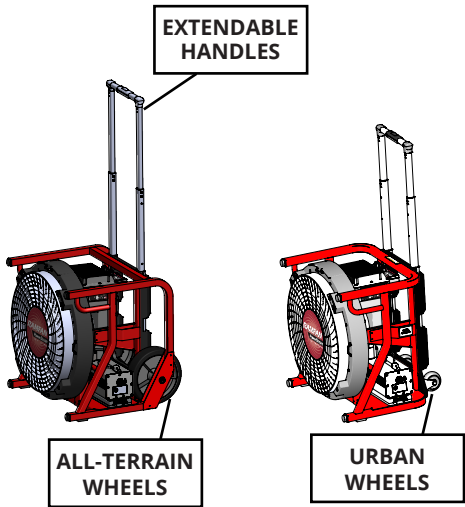
- ✓ Always purchase from a Euramco's authorized dealer to ensure you are getting real RAMFAN products, a full product warranty, and the best customer service.
- ✓ Flexible electrical cables connected to the equipment may not be used when damaged
- ✓ If you are unsure if the equipment is unsafe or if there are signs indicating that the equipment is defective or damaged, report it and do not use it.
- ✓ Check if the connectors, cables and its connections are in perfect condition.
- ✓ Do not use the equipment until the equipment has been fully assembled and inspected for correct performance in accordance with the Owner's Manual.
- ✓ Fully charge the batteries before the first use! Safeguard your battery to ensure continued high performance. It should be recharged after each use.

Unit Description



- The EX150Li is a multi-purpose 18"/46 cm ventilator powered by battery(s) or 90-250V single phase, 50-60Hz AC power source. Its multipurpose frame can be configured for PPV, smoke ejector or ducted ventilator use in both normal, horizontal and hanging positions, all-terrain wheeled mobility or urban wheeled mobility. The ventilator can be tilted from 0-30° within the frame in PPV mode.
- The motor controller and batteries are water-resistant, IP66 rated.
- The motor is a variable-speed BLDC motor controlled by a microprocessor integrated with a power supply, dual battery chargers and an LED light driver.
- The EX150Li will run with one or two 52V 8Ah Lithium Ion Battery Packs. The batteries may be swapped during operation.
- AC voltage can be applied while running on batteries and the ventilator will auto-switch to AC power. Conversely, the AC power can be removed, and the unit will auto-switch to battery power, if enough charge remains to power the ventilator.
- The integrated battery chargers will charge one or two fully discharged battery packs in 6 hours or less.
- LED scene lights are integrated into the ventilator shroud and have a 3-intensity infinite switch knob: high, low and off. Turn to change. The LED knob selects the scene lights output level in a row. Clockwise Progression: Off ► Full ► Half ► Off.
- A Control Panel on the top of the unit controls all functions.

Parts List

| Qty | Description |
|-----|--|
| 1 | Ventilator EX150Li with All-Terrain wheel or Urban wheel kit assembled |
| 2 | Lithium-ion Battery Pack M1-52V 8Ah |
| 1 | Power Cord |



Technical Specifications

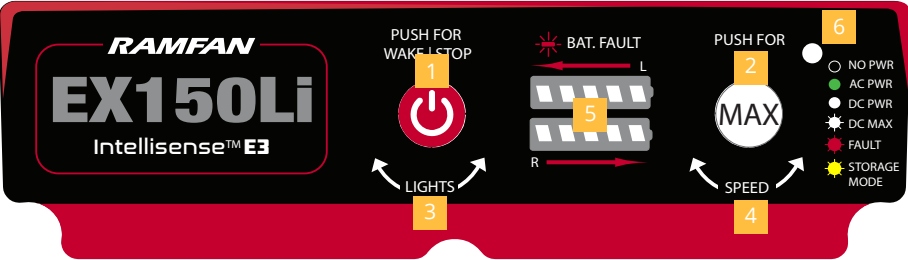
| Model | EX150Li 18" (46 cm) | |
|--|---|------------------------------------|
| Motor | 1.9hp (1.4kw) | |
| Order #EL6500 | EX150Li with wheel kit assembled (1), 52V 8Ah battery (2) and power cord (1) | |
| Runtime @ Full speed | DC: 45 min DC Max: 30 min AC: Unlimited | |
| AC Input | Multiple plug options available | |
| Battery System | 52V Lithium-Ion, 832Wh, 16Ah | |
| IP Rating (Motor/ Battery System/Controller) | IP66 / IP66 / IP66 | |
| Weight | Urban Wheels | All-Terrain Wheels |
| | With two batteries: 71 lb (32 kg) | 77 lb (35 kg) |
| | With one battery: 64 lb (29 kg) | 70 lb (32 kg) |
| | Without batteries: 58 lb (26 kg) | 63 lb (29 kg) |
| Dimensions (h x w x d) | 23 x 21 x 19 in 58 x 53 x 48 cm | 23 x 21 x 21 in 58 x 53 x 53 cm |
| |   | |
| Approvals | | |
| AMCA Verified Airflow in DC Power Supply | 12,377 cfm (21,029 m³/hr) | |
| AMCA Verified Airflow in AC Power Supply | 11,896 cfm (20,211 m³/hr) | |

Dimensions



Main Interface

Control Panel:



| Number | Symbol | Indicate Function |
|--------|--------|---|
| 1 | | Wake Button / Emergency Stop Button Press and hold WAKE button to start. |
| 2 | | Maximum Speed (DC) Button Press MAX button for 2 seconds. |
| 3 | | LED Scene Lights On, off, on high or on low. |
| 4 | | Speed Control Controlled operation from 0 to full speed |
| 5 | | Battery Status LED Lights |
| 6 | | Ventilator Status LED Lights See table below for details. |

| Color | Status | Description |
|-------------------|--------------|--|
| Off | NO PWR | Power is off |
| Green (Solid) | AC PWR | Ventilator is running on AC Power Supply |
| White (Solid) | DC PWR | Ventilator is running on DC Power Supply |
| White (Flashing) | DC MAX | Ventilator is running on Maximum speed - DC Power Supply |
| Red (Flashing) | FAULT | Fault on the ventilator |
| Yellow (Flashing) | STORAGE MODE | Storage/Transport Mode |

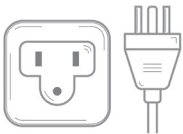
Plug Types

The EX150Li is suitable for worldwide applications. A voltage converter is not needed. The unit includes a simple removable cord that allows the unit to operate up to 250 VAC:

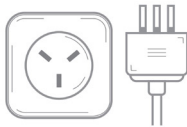
| Mainly used in | Type | Order # |
|--|------|---------------|
| North and Central America, Japan | B | EL-CUS-4762 |
| France, Belgium, Germany, Austria, the Netherlands (and most European countries) | E/F | EL-CEU-4762 |
| United Kingdom, Ireland, Malta, Malaysia and Singapore, Hong Kong, Nigeria | G | EL-83070-4762 |
| Australia, New Zealand, Papua New Guinea and Argentina | I | EL-84040-4762 |
| China, P.R.C. | I | EL-84640-4762 |

If it becomes necessary to use a power cord with another plug standard, order the power cord that matches the electrical requirements of the country or area. The physical adapter for the outlet is interchangeable for use in different countries and allows you to swap the cable yourself into the socket.

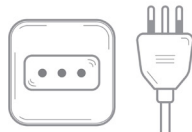
This page shows a selection of electric plugs we can currently offer for the EX150Li. If you need a special solution, just inform your local Euramco representative about the specific.



type **B**



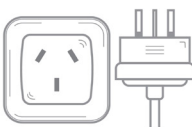
type **H**



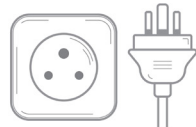
type **L**



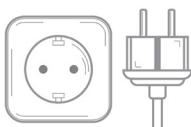
type **E**



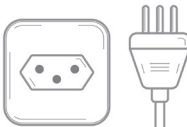
type **I**



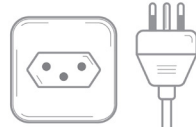
type **M**



type **F**



type **J**



type **N**



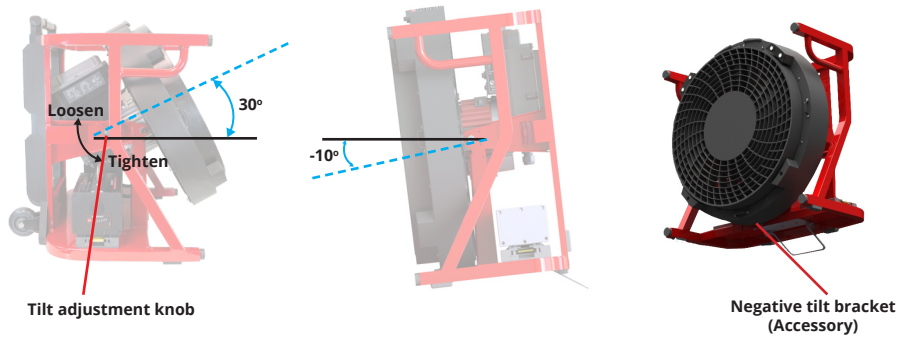
type **G**



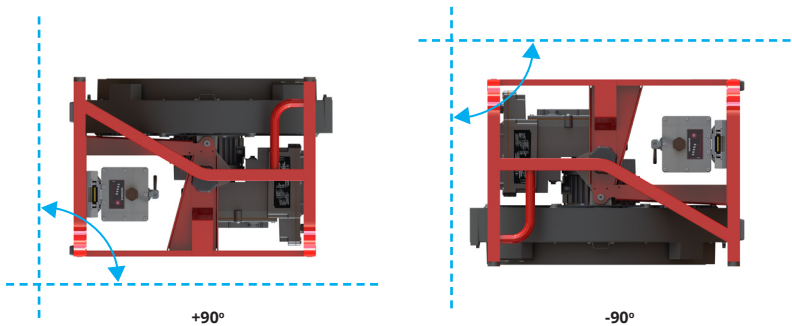
type **K**

Adjusting Angle

Perform this procedure to adjust the position of the ventilator. Use your hand to unscrew the tilt adjustment knob, and then lock it in place from above, and held in the inclined position by tightening the knob. For negative tilt, use the negative tilt bracket. This provides tilt up/down adjustment, from -10 to + 30 degrees.



For confined space rescue operations, you can place the ventilator directly on top of a manhole. Tilt range from -90 to +90 degrees. Note that those positions can direct airflow downward or upward



Operational Modes

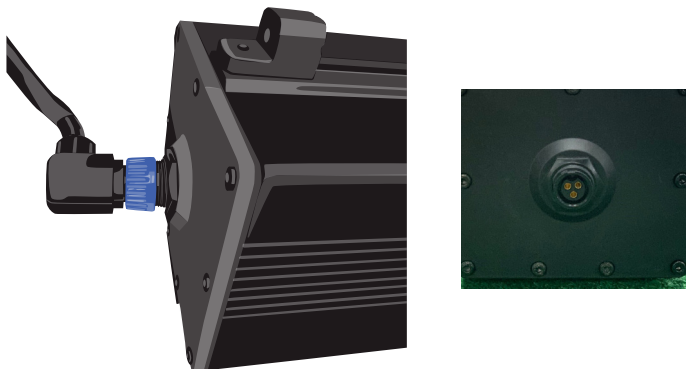
AC Operation

- Input Voltage. 90-250VAC, 50/60Hz
 - The ventilator is capable of operating seamlessly in countries that supply electricity at either 120V AC/60 Hz or 240V AC/50 Hz without manual adjustments by the user.
 - Operation out of these limits can damage electrical components and will void the warranty.
1. Connect the fan to an AC power source.
 2. Status LED Light will automatically turn green, displaying the status “Ventilator is running on AC Power Supply”.
 3. Start the ventilator by using the Speed Control knob to the desired speed.
Note: You can keep the batteries on their location without charging the battery. Battery Indicator Lights will turn off because there is no battery charging when ventilator is running on AC.
 4. When the fan is powered off, Status LED Light will automatically turn off after 1 hour and the battery Indicator Lights will redisplay battery charge level of each battery pack detected. The ventilator will begin charging the battery packs after 60 minutes of idle time.
 5. Battery Packs do not charge while ventilator is running.

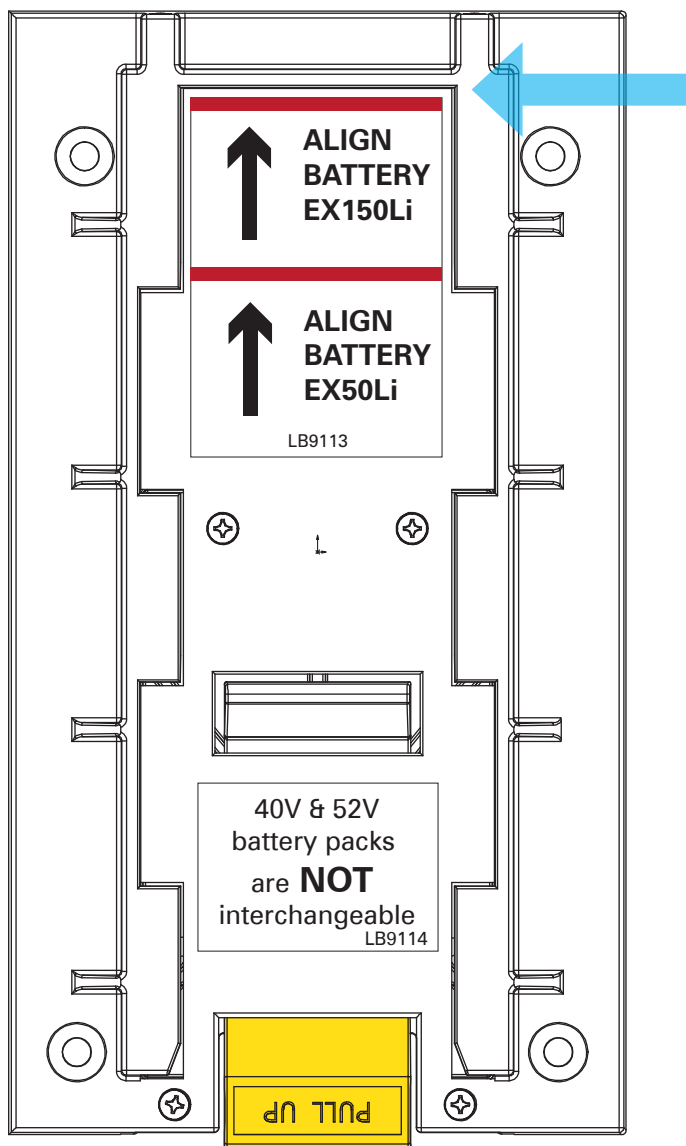
DC Operation

Connection of Battery Pack

- Plug the ventilator connector cable (blue) into the battery connector:



- Set the installation index on the battery with the cable, lining up with the cable connector.
- Press the connector lock and rotate the blue piece clockwise (a quarter turn to the right) in the most careful way possible.
- Align the edge of the battery pack with holder under the red line where it says, “Align battery EX150Li” and firmly slide the battery in the direction of the arrow as shown in the illustration until a loud click is heard.



- Gently pull up the yellow handle to remove the battery from the holder.

Battery Operation Procedures

Please full charge battery before first use




Using One Battery

- The EX150Li allows the option of using one or two battery packs.
- When using one battery, simply plug the battery into either one of the two battery connectors (left or right).
- Be sure to secure the unused battery connector by placing electrical tape over the contacts.
- When running fan on single battery, operating power is limited to reduce maximum discharge current--extending useful life of battery.

Using Two Batteries


- ***The EX150Li offers a true redundant dual battery system.***
- When using two batteries of identical charge level, batteries are connected in parallel to increase significantly the total runtime and airflow performance.
- When using two battery packs, each pack functions independently and is isolated from the other so that if one pack should fail (open circuit, short-circuit, or become discharged) the other battery will provide power to operate the system.
- When using dual batteries, it's important that both batteries be of the same charge level and ideally of the same age and condition.
- It's normal for one battery to discharge slightly more than the other. This is the nature of a truly redundant isolated battery system.
- The battery that has the higher voltage will discharge at a faster rate (until its voltage equals the other battery).
- We recommend that use both batteries on the Same State of Charge (or at least as close as possible). If this is not possible, the controller will eventually bring batteries to a balanced charge level.
- To keep battery packs healthy for long-term use, a simple implementation of cell-balancing, internal to the battery pack, includes a FET placed in parallel with each cell and controlled by a comparator for simple voltage based algorithms that turn-on the bypass FETs during the onset of voltage differences, controlled by a microcontroller for more complex and effective algorithms that can work continuously regardless of variations of voltage differences.

Battery Operation Procedures

- When AC is disconnected and Speed Control is off (speed = 0), the controller and battery(s) will enter a sleep mode to conserve the battery power after 60 minutes of no activity.
- To wake the ventilator, push and hold WAKE | STOP Button  on Control Panel. Battery Status LED Light will show white solid for the status. The unit will return to sleep mode if not used within 10 minutes.
- The ventilator starts at the lower speed = 0. Speed will vary by 11 levels - from 11 (highest) to 0 (off). Turn clockwise to increase speed. At level 11 (the highest), if keep turning the control knob clockwise, the speed will not change, it will stay at highest speed all the time. To slow down, turn counterclockwise.
- If you want to increase the speed, push and hold the MAX Button  Ventilator Status LED Light will flash white for the status. Remember that this will only work when 2 batteries are connected to the ventilator and when it is operating exclusively on DC current source (battery).
- The ventilator will operate on one or two battery pack(s). If two battery packs are used simultaneously, they discharge evenly.
- To STOP the ventilator, push and hold WAKE |STOP Button  on Control Panel. Battery Status LED Light will be unlit.
- Battery(s) may be swapped for charged batteries at any time.
- Reduce run speed to minimum required to increase runtime.

Run Time

Run time refers to how long the ventilator on battery power will last under a given load. We will assume both batteries have full charge beforehand and also 100% efficiency (Read "Factors that affect Battery Life" section):

| | 2 Batteries | Speed Level Knob |
|--|-------------|--|
| At maximum speed | 45 minutes | 11 |
| At maximum speed and DC Max button activated | 30 minutes | Max button activated  |

Charging Procedure

Make sure the battery pack is connect correctly into the ventilator, as described above in **"Connection of Battery Pack"**.

- The next step is to leave the ventilator off. During charging, the battery indicator lights will flash. The battery charge level can be recognized by the number of lights that are constantly lit.
- If both batteries and AC are connected, the batteries will begin charging after 60 minutes of idle time. If only one single battery is connect, the battery will begin charging after 120 minutes of idle time.
- Indicator lights will show charge state during charging. Charging should complete in about 5 hours, with the Battery Status Indicator lights turning green and all the five Fuel Gauge lights on the battery turning red. Should the Speed Control be turned counterclockwise on during the charge, charging will stop, and the ventilator will start. Charging will begin again after 15 min of idle time.
- After charging is complete, the chargers will maintain the battery(s) by keeping the ventilator connected to AC.
- While charging, the battery status LED lights will strobe, as well as the battery charge indicator status lights located on the battery itself. The batteries will be disconnected at the end of their charge automatically. At the end of charging, the current power is displayed for 5 minutes and then lights will be turned off.
- If all the Fuel Gauge lights are flashing, this indicates an error condition.

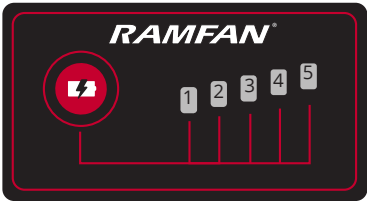


The Fuel Gauge

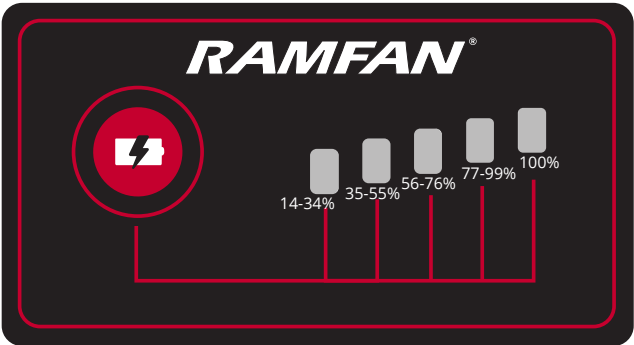
The Battery Fuel Gauge provides battery status information using five red LEDs.

Press the Fuel Gauge button to display the lights. The fuel gauge lights will remain lit for approximately five seconds.

The numbers represent each LED and the grid is how they're laid out:



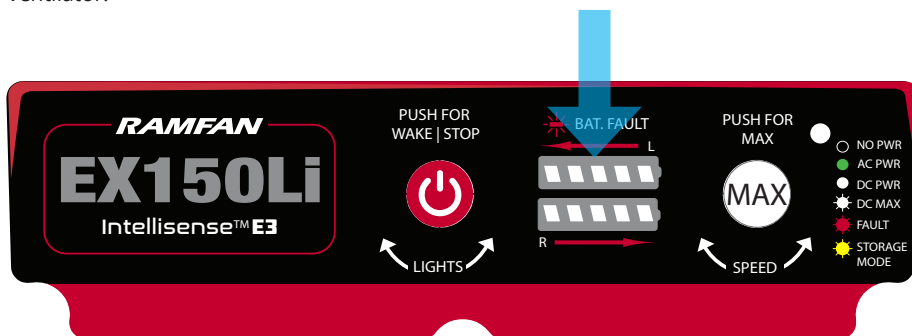
| Fuel Gauge Lights | Diagnosis | Solution |
|--------------------------------------|------------------------------|-----------------------|
| LEDs 1-5: Red Solid | Remaining Run Time | Continue Working |
| LED 1: Red Flashing LEDs 2-5: Off | Less than 13% run time left | Charge Pack |
| LEDs 1-5: Red Flashing | Battery Temperature too high | Allow Battery to Cool |



Less than 13% if bottom light is flashing

Battery Status Indicator Lights

On the control panel there are 2 sets of lights: on the top side of the battery lights indicate the charge level in the battery attached to the left side of the ventilator, on the bottom side of the battery lights indicate the charge level in the battery attached to the right side of the ventilator.



If the battery is charging, the green indicator lights will horizontally scroll from left-to-right, turning solid green when the battery is fully charged.

If the ventilator is running on battery power, the estimated remaining battery time is shown.

If all the lights flash red, this indicates that the battery has failed and the battery must be replaced.

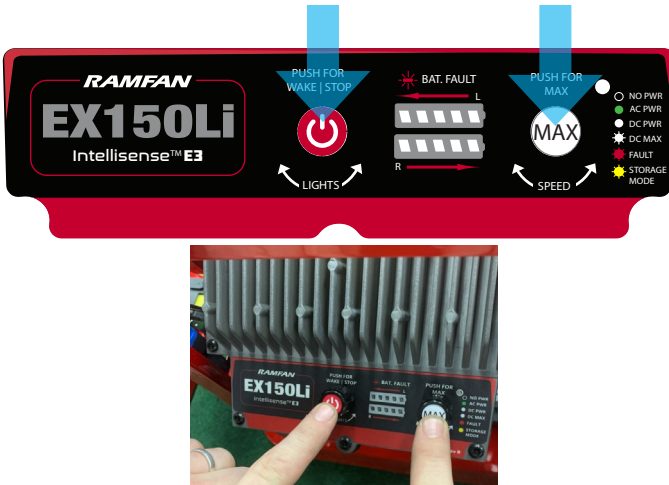
Battery Pack Protection

- To protect itself from damage and extend its life, the battery pack's intelligent circuit monitors current draw and temperature. In extreme situations, the battery pack will turn OFF the ventilator if the current draw becomes too high. All the fuel gauge lights will flash.
- Under extreme circumstances, the internal temperature of the battery could become too high. If this happens, the fuel gauge lights will flash in an alternating pattern and the tool will not run.
- While a battery undergoes a charge cycle, its temperature rises. To prevent grid corrosion and eventual battery failure, allow the battery to cool down in between charging and discharging.

Storage/Transport Modes

Lithium-ion cell manufacturers recommend that battery cells be stored at 30% state of charge (SoC) for best long-term health and stability. Further, IATA (International Air Transport Association) Dangerous Goods Regulations (DGR) state that all lithium-ion batteries must not exceed 30% SoC at time of shipment.

RAMFAN battery-powered fans built with Intellisense™ E3 controllers are equipped with integrated "Storage/Transport Mode" to make it easy to comply with storage recommendations and transport regulations by automatically discharging installed battery pack(s) to 30% SoC.



How to activate "Storage/Transport Mode"

1. Press and hold both the WAKE | STOP and the MAX buttons, together for 8 seconds, until the status LED light changes to yellow flashing.
2. Once activated, fan will automatically turn on at low RPM until battery pack reaches 30% SoC. Once 30% SoC reached, fan will turn off.

Storage/Transport Mode can be interrupted by turning Speed Control at any time during the operation.

Storage/Transport Mode can be engaged with either one (1) or two (2) battery packs installed on the fan.

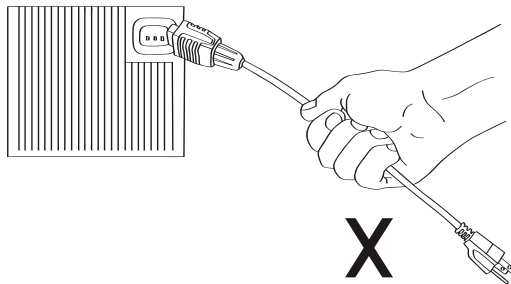
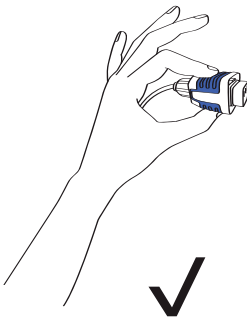
AC power must be disconnected for Storage/Transport Mode to be activated.

AC Power Cord

This battery fan was designed to replace corded AC fans, optimizing cordless operations. AC power cord is designed to be removable for the convenience of those users who choose to operate cordless.

AC power connector is a "Push-Pull" locking system where the outer (blue) slide must be pulled back, in line with the cable, to securely engage connector.

- When AC power is needed, push (blue) connector onto (black) inlet on fan controller. Check that it is securely engaged.
- When disconnecting AC power cord from fan, pull back on (blue) slide to disengage and gently remove. Store in marked frame position when not in use.



Pull the plug out itself, never by the cord or by wiggling it out of the outlet.

Operating Limitations

RAMFAN lithium-ion battery packs are designed to operate in a wide range of temperatures. Due to the chemistry of lithium ion battery cells, different operational limits apply to discharge and charge functionality.

- Temperature range (discharge): -20°C to +45°C (-4°F to +113°F)
- Temperature range (charge): 0°C to +40°C (32°F to 104°F)

A "cold soaked" battery may not power a fan or be able to take a charge. If this occurs, warm up cold battery at room temperature 20°C (68°F) and try again.

Lithium-Ion Battery Maintenance Guidelines

Battery packs do require routine maintenance and care to maximize their useful life and maintain warranty coverage. Read and follow the guidelines in this manual to safely use your lithium-ion battery packs and achieve battery life span.

Overview

According to leading cell manufacturers (LG, Samsung, Panasonic), the estimated life of a lithium-ion battery is 500 charge cycles. When stating approximate useful life of a battery in units of “charge cycles,” cell manufacturers define this as the point where the battery capacity (Ah) is reduced to 80% of original. This means battery is not “dead” after 500 charge cycles, but runtime is significantly reduced, and replacement should be considered.

Partial discharge of lithium-ion batteries is fine. There is no “memory effect” and the battery does not need periodic full discharge cycles to prolong life.

Storage

When storing, remove battery packs from fan and store in a dry and cool location. Avoid extreme temperatures.

- Recommended Storage Temperature: 5°C to 20°C (41°F to 68°F)
- Maximum relative humidity during storage: 90% RH

NOTE: all batteries self-discharge during storage. Higher temperature (>20°C or 68°F) reduce the battery storage life.

Lithium-ion batteries should be stored in a charged state, ideally around 30% state of charge (SoC). See “Storage/Transport Mode” section of this manual for easy discharging steps to follow before storing battery packs.

Long-term (>6 months) storage of battery packs is not recommended. When a battery pack has been unused for 6 months, check the charge status and either charge or dispose of the battery as appropriate.

Recommendations

- Battery packs will last significantly longer when run in pairs (two battery packs per fan) as there is 50% less discharge current per pack.
- As with any equipment, batteries will wear out faster with heavy use. Depth of Discharge (DoD) determines the cycle count of the battery. The smaller the discharge (low DoD), the less stress is enacted on the chemistry of the battery and the longer the battery will ultimately last. Ideally, operators should avoid full discharges and charge the battery after every use.
- Partial discharge of lithium-ion batteries is fine. There is no “memory effect” and the battery does not need periodic full discharge cycles to prolong life. Battery(s) will need to be replaced as they age.

Maintenance and Disposal

- DO NOT disassemble the ventilator for maintenance reasons.
- Do not loosen screws on control box without contacting Euramco customer service. They are torqued to a setting to achieve water tightness. Clean ventilator periodically to remove accumulated dust or particles from ventilator guards.
- Assembly screws are torqued to a specified value to achieve water tightness. Completely unravel power cord and place unit on a flat, stable surface. Clean ventilator periodically to remove accumulated dust or particles from ventilator guards, impeller blade and heat sink in rear of controller (ribbed). Use only biodegradable detergents. If power washing, avoid controller housing especially gaskets and control panel.
- Contact factory for replacement parts and installation instructions. To order spare parts call Euramco Group **+1.619.670.9590** or **theteam@euramco.com**
- Always dispose of your battery pack according to federal, state and local regulations.
- Even discharged batteries contain some energy. Before disposing of, use electrical tape to cover the terminals to prevent the battery pack from short circuit.
- Properly dispose of battery packs when necessary. Contact your local hazardous materials e-waste collection department for details or proper disposal of rechargeable batteries.

Maintenance Schedule

Battery packs should be inspected regularly for mechanical damage.

- Dropping, or any other heavy impact, may compromise water ingress protection. Quickly inspect for obvious damage after every use. If damage is noted, contact Authorized Service Center for inspection, testing, and maintenance.
- Damage to gasket may compromise water ingress protection, increasing risk of pack failure.
- Do not store in same compartment with combustible or highly flammable material as gasoline and diesel oil.
- Liquid damage is not covered under warranty.

| REGULAR SERVICE PERIOD | | Each use | Every 3 months | Every 6 months | Every year |
|---|---------------------------|----------|----------------|----------------|------------|
| Perform at every indicated month or operating hour interval, whichever comes first. | | | | | |
| ITEM | | | | | |
| Fan Inlet/Outlet Gaurds | Visual Check | • | | | |
| | Clean | | | • (1) | |
| Impeller | Visual Check | • | | | |
| | Clean | | | | • (1) |
| Control Box Gaskets | Visual Check | | • (2) | | |
| | Replace if necessary | | | | • (3) |
| Electrical Cables | Check | | | | • |
| Rubber Feet | Check | | | | • |
| Battery Packs: | | | | | |
| Gaskets | Visual Check | | • (2) | | |
| | Replace if necessary | | | | • (3) |
| Electrical Connector/USB Connector | Visual Check | | • (2) | | |
| Internal Diagnostics | Plug into USB if equipped | | | | • (3) |

(1) Clean more frequently when used in high-sediment areas.
(2) Check immediately if dropped, or damage may affect water ingress protection.
(3) These items should be serviced by your RAMFAN servicing dealer, unless you have the proper tools and are mechanically proficient. Refer to RAMFAN service manual for service procedures. Failure to follow this maintenance schedule could result in non-warrantable failures.

Accessories

1. 52V Li-Ion Battery Pack

Spare battery pack for EX150Li
(recommend ordering 2)

Order # M1-52V



2. Vehicle Mount Kit

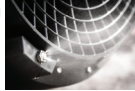
Custom mount that perfectly fits
ventilator

Order # EL610K



3. Integrated Rehabilitation Mister

Order # EL8111



4. Hi-Expansion Foam Adapter

Foam adapter converts EX150Li
into a high expansion foam
generator

Order # HI-5000



5. Convert to Confined Space Rescue Fan

18"/46cm duct (16.4'/5m length)

Order # FDT-185MSR



18"/46cm duct (32.8' / 10m length)

Order # FDT-181MSR

6. Rubber Feet (Set of 4)

Rubber foot (Set of 4) + Screws for
EX150Li frames





FlowPath™ Control

AMCA



Euramco Safety Inc. certifies that the portable PPV Blowers shown here are licensed to bear the AMCA SEAL.

Euramco Safety Inc. certifies that the Portable PPV Blower shown below is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures in accordance with AMCA Publication 211 and comply with the AMCA Certified Ratings Program.

Why We Use AMCA

AMCA, The Air Movement and Control Association International, has been in existence for nearly 80 years and is the world's only recognized authority for the development of standards and measurement of air movement.

Our commitment to AMCA Certification is your verifiable assurance that every RAMFAN PPV Turbo Blower will perform exactly as specified.

SPECIFICATIONS AND PERFORMANCE RATINGS

| MODEL | SIZE | | HP | DIMENSION (HxWxD) | | MOTOR MFG/MODEL N° | WEIGHT | | RPM | SETBACK | | ANGLE | AIRFLOW @ FULL SPEED | | POWER SUPPLY |
|---------|------|----|-----|-------------------|----------|--------------------|--------|----|------|---------|-----|-------|----------------------|--------|--------------|
| | in | cm | | in | cm | | lbs | kg | | ft | m | | cfm | m³/hr | |
| EX150Li | 18 | 46 | 1.8 | 23x21x19 | 58x53x48 | Euramco EM-E1020 | 58 | 26 | 3550 | 16 | 4.9 | 11° | 11,896 | 20,211 | AC |
| EX150Li | 18 | 46 | 1.8 | 23x21x19 | 58x53x48 | Euramco EM-E1020 | 58 | 26 | 3600 | 16 | 4.9 | 11° | 12,377 | 21,029 | DC |

Performance certified is for installation type A - Free inlet, Free outlet.

Performance ratings do not include the effects of appurtenances (accessories).

RAMFAN's fire fighting PPV Series outperforms larger blowers in their class with their precision balanced TurboForce Impellers that maximize airflow. These PPV blowers have proven to be effective in controlling airborne contaminants, replacing interior air, removing heat and supplementing fixed ventilation systems. By pressurizing properly and controlling the resultant flow path, these changes occur very rapidly. This is accomplished by using these specialized blowers with the power and velocity to pressurize the interior of a structure or building.

August 2019



Euramco Group

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WWW.EURAMCO.COM

PROUDLY MADE IN CALIFORNIA



Declaration of Conformity

**DECLARATION OF CONFORMITY
BATTERY POWERED FANS**

Year of Manufacture: 2020

Manufacturer: Euramco Safety, Inc.
2746 Via Orange Way
Spring Valley, Ca. 91978 USA

Equipment Description: EX50Li – 18”/46cm Battery Powered PPV, Variable Speed, 85-250VAC (EL5500 / EL5500-230)
EX150Li – 18”/46cm Battery Powered PPV, Variable Speed, 85-250VAC (EL6500)

**Standards to which
Conformity is Declared:** 2006/42/EC – Machinery Directive
2014/35/EU – Low Voltage Directive
2014/30/EU – EMC Directive
2011/65/EU – RoHS – Reduction of Hazardous Substances
UN 3481 – Lithium-Ion Batteries when **Packed with Equipment**

Euramco Safety, Inc. hereby declares that the equipment described above conforms to the relevant Essential Health and Safety Requirements of the European Machinery Directive 2006/42/EC and the additional Directives and Standards listed above.




Wayne Allen
President and CEO

01/03/2020
DATE



SM-EX150LI REV E
08/2020

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