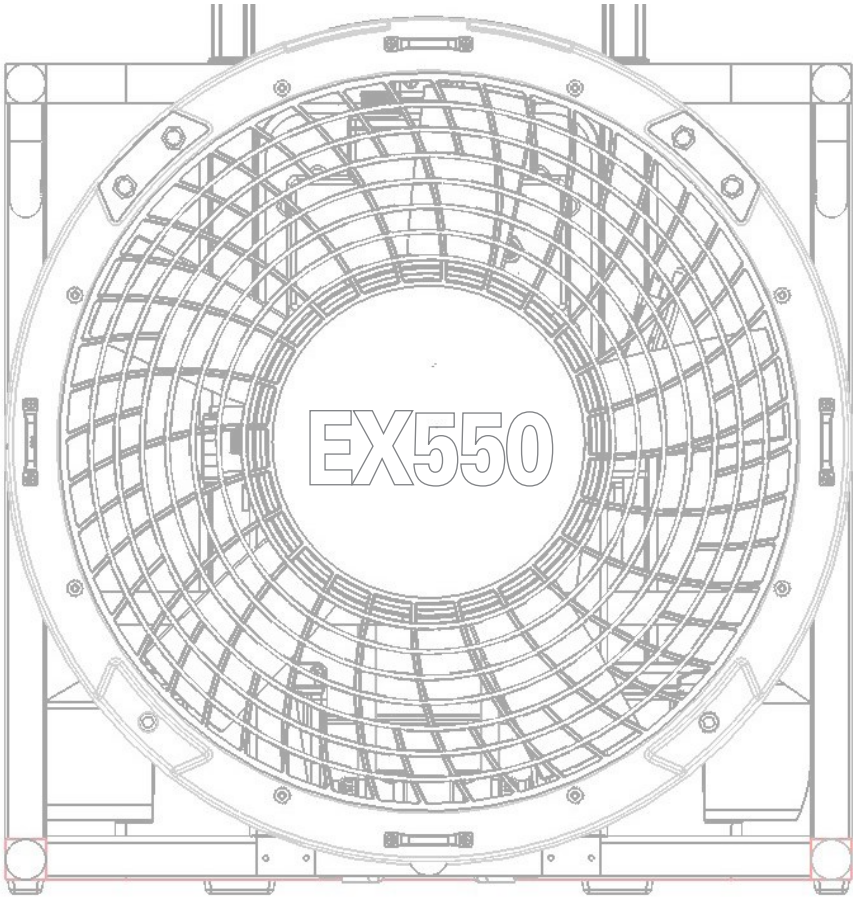


# Owner's Manual



## ALL PURPOSE-ELECTRIC VENTILATOR

**! READ MANUAL BEFORE STARTING FOR THE FIRST TIME!**

Thank you for purchasing the RAMFAN® EX550 multi-purpose ventilator manufactured in the USA by Euramco Group, Inc.

For more than 50 years Euramco Group has been on the cutting edge of industrial, fire, and marine ventilation products. Each of our blower/exhausters, PPV & LSV fans and accessories represent the finest technologies available. Every product is constructed to demanding and exact specifications for quality, performance, and reliability.

When human life depends on having a fan that can deliver clean, safe air, you have only one choice you can trust: RAMFAN.

Explore our website and online catalog at [www.ramfan.com](http://www.ramfan.com) and discover how RAMFAN can make a difference in the field!

**All product information in the publication is based on the most current information available at the time of printing. Euramco Group, Inc. reserves the right to make changes at anytime without notice.**

**RAMFAN products are warranted against manufacture defect. Failure to properly maintain product will invalidate warranty coverage. Please visit [www.euramco.com](http://www.euramco.com) for warranty details.**

**PRIOR TO FIRST USE**

1. Operate on AC voltage, 85-264V, 50/60 Hz 1Φ, for charging and discharging.
2. The unit is suitable for use on Ground Fault protected circuits.
3. Should the provided AC connector be unsuitable, replace with desired connector containing a grounding circuit. Check continuity from ground terminal to motor shell.
4. Place batteries into holders and connect to IP66 connectors, Fully charge prior to first use.



**CONTENTS**

**Unit Description** ..... 4

**Warning Labels & Safety Pecautions** ..... 5

    Specifications ..... 5

**Main Interface** ..... 6

**Adjusting Angle** ..... 6

**Operational Modes** .....7

    Operation Procedures ..... 7

**Maintenance and Disposal** ..... 7

    Maintenance Schedule ..... 8

    Accessories ..... 9

**Parts Exploded View & Index** ..... 10-11

**Plug Types** ..... 13

**Certification** ..... 14

## Unit Description

The EX550 is a multi-purpose ventilator powered by single phase AC. The flexible frame configuration allows for PPV, Smoke Ejector or ducted blower use in both normal, horizontal and hanging positions.

The motor is a variable-speed BLDC motor controlled by a microprocessor integrated with a power supply and an LED light driver.

LED scene lights are integrated into the ventilator shroud and 3-intensity infinite switch knobs: high, low, & off. Hold to change. The LED knob selects the scene lights output level in a row. Clockwise Progression: Off►Full►Half►Off.

The integrated controller is EMI-protected to prevent interference with radio communication.

A simple Control Panel on the top of controller controls all functions.

## Warning Labels & Safety Precautions

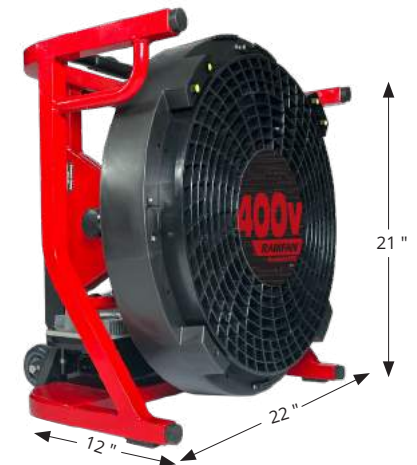
- Electrical shock hazard. Do not open enclosures.
- **DO NOT START** with signs of visible damage.
- Blower is not intended for operation in explosive atmospheres.
- Wear ear protection when close by.
- Keep body parts and loose objects away from intake of fan.
- Do not move while running.
- Operate and repair by trained personnel only.
- Always use grounded plug and properly ground AC power receptacle.
- Heat sink becomes hot during operation and charging.
- Use with approved, good condition extension cord with ground connector.



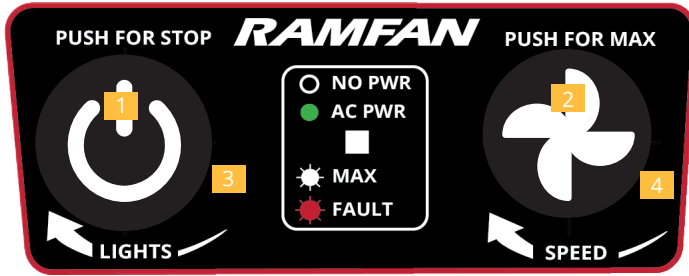
Wire Gauge Requirements per ft (m)	
0-150 ft (0-50m)	AWG 14 (2.5 mm <sup>2</sup> )
>150 ft (> 50m)	AWG 12 (4 mm <sup>2</sup> )

## Specifications

<b>Model</b>	EX550 18"/46 cm	
<b>Order#</b>	EK90500 / EK90500CE	
<b>Motor</b>	2.4 kW / 3 hp, BLDC BrushlessPPV™	
<b>Runtime @ Max. Speed</b>	Unlimited	
<b>Power AC</b>	Universal Input: 85-264V 1Φ, 50/60 HZ	
<b>IP Rating (Motor /Controller)</b>	IP66 / IP66	
<b>Dimensions (h x w x d)</b>	22 x 21 x 12 in / 56 x 53 x 30 cm 22 x 21 x 16.25 in / 56 x 53 x 41 cm (with wheel kit)	
<b>Weight</b>	54 lbs / 25 kg 58 lbs / 26 kg (with wheel kit)	
<b>Operating Temp Range</b>	-4°F to 105°F	-20°C to 40°C
<b>Tilt</b>	-10° to + 34°	
<b>Approvals</b>	CE AMCA	



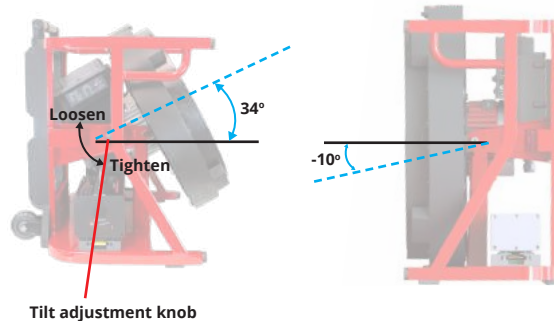
## Main Interface



Number	Symbol	Indicate Function
1		Start / Emergency Stop Button
2		Maximum Speed Button Press MAX button for 2 seconds.
3		LED Scene Lights knob On, off, on high or on low.
4		Speed Control knob Controlled operation from 0 to full speed.

## 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 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

- 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 connected 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.

## Operation Procedures

- 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 Light will flash white for the status.
- Reduce run speed to minimum required to increase runtime.

## 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.
- 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**

## 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		After 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			• <sup>(1)</sup>	
Impeller	Visual Check	•			
	Clean				• <sup>(1)</sup>
Control Box Gaskets	Visual Check	•	• <sup>(2)</sup>		
	Replace if necessary				• <sup>(3)</sup>
Electrical Cables	Check	•			•
Rubber Feet	Check				•

(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. Vehicle Mount Kit

Custom mount that perfectly fits fan  
Order # EL610K

### 2. Integrated Rehabilitation Mister

Order # EL8111

### 3. HI-Expansion Foam Adapter

Foam adapter converts EX550 into a high-expansion foam generator  
Order # HI-500

### 4. Convert to a Smoke Ejector

Door Bar and Hangar Kit  
Order # EL7095K  
Hanger Kit (if you already own door bar)  
Order # EL8095

### 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. Shoulder Strap

Order # EL6013

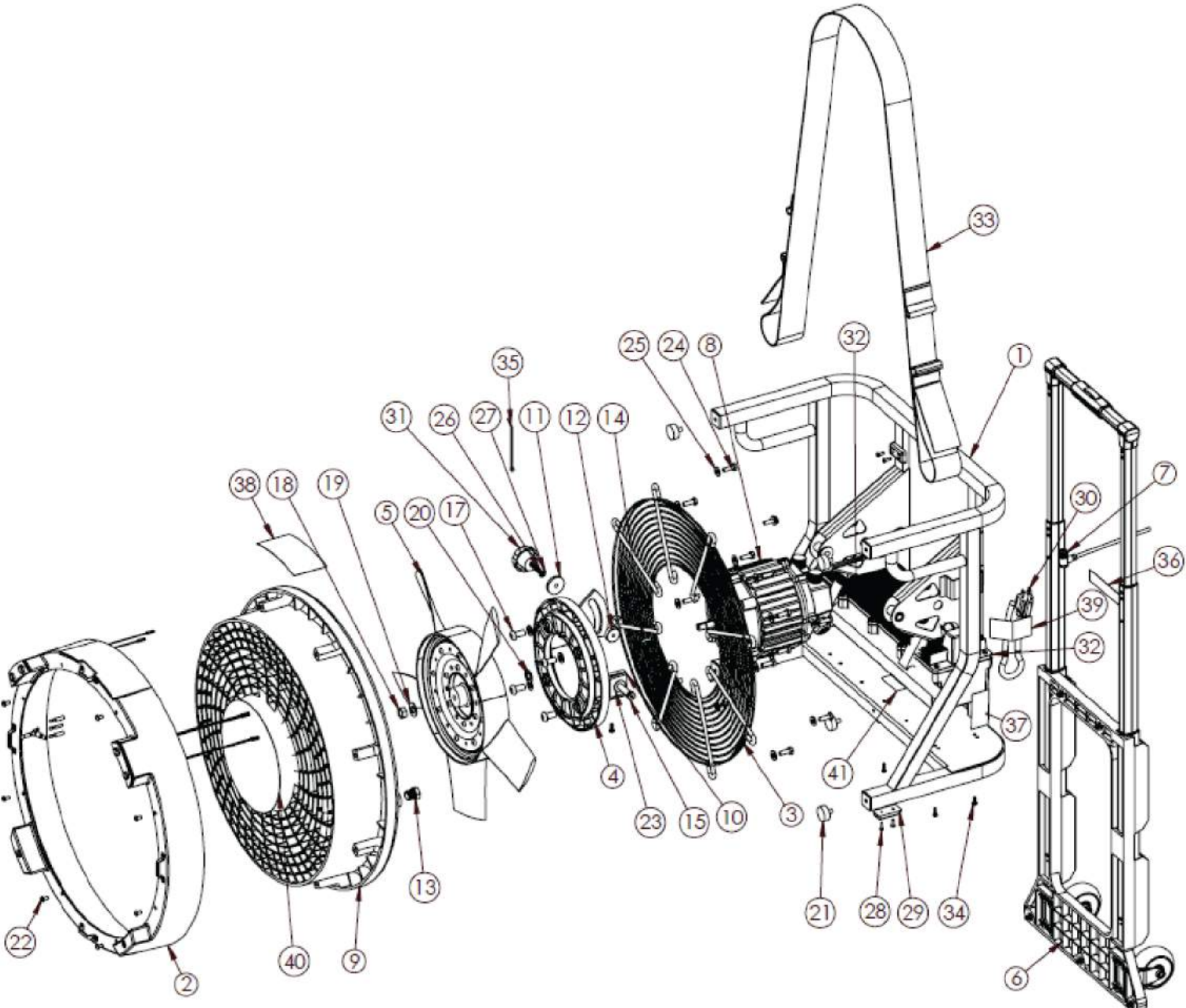
### 7. Rubber Feet

Rubber foot (Set of 4) + Screws for EX550 Frames

### 8. Mister Adapters

Double Female NH 1" Adapters  
Order# WF20-0252  
1" BSP TO STORZ  
Order# GX-8020

Exploded View



## Parts Exploded View EX550 Index

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	EL0155 REV C	FRAME, NEGATIVE TILT	1
2	EL2300	SHROUD COVER, 18" MOLDED	1
3	EL4001	GUARD, INLET, 18" FLAT	1
4	EL3202	MOTOR MOUNT TILT PLATE, MACHINED - WELDED	1
5	BL231	IMPELLER BLADE, 5 BLADE, 17.65", 1.8HP@3600RPM	1
6	EL6015	BACK PLANE/HANDLE & WHEELS	1
7	EL5078	LED SCENE LAMP HARNESS, 90 DEGREE CONN.	1
8	EM-400V MOTOR	EM-400V MOTOR, EX550 ASSY	1
9	GH4015	SHROUD, POWER STREAM, 18"	1
10	EL320004	SPACER BLOCK, TILT PLATE	1
11	EL0151-101	WASHER, TILT SPACER	1
12	EL0151-100	CLAMP, TILT GUIDE	1
13	FHP0514-MACH	PIPE PLUG, 3/8" NPT, MACHINED	1
14	EA7020	IMPELLER KEY, 3/16" X .75" L IMP	1
15	FZ-50LT-A628	SHOULDER SCREW, 3/8" DIAM, 5-16-18" THD X 3/4" LG., ALLOY STEEL	2
16	FG95450	WASHER, LOCK, 3/8"	4
17	FZ950482-BH	3/8-16 X 0.75 B/H/ C/5 BLK ALLOY	4
18	FF6106NY	NUT, 7/16-20, NYLOCK, THIN	1
19	FF66845AE	WASHER, 7/16", SAE PLATED	1
20	FF91467A1960	FLAT WASHER, 1/2", SS A1960	2
21	FZ-MM9873	RUBBER FOOT, 50 DURO	5
22	FZ9103459-BH	CAP SCREW, 10-24 X 3/8, C/5	8
23	FF99454	WASHER, 3/8" X 3/4", NYLON	1
24	FA9606480	CAP SCREW, 1/4-20 X 0.75 H/H	16
25	FF64395AE	FLAT WASHER, 1/4", SAE, PLTD STL	16
26	98758A308	98758A308-THREADED ROD, 420-1.5, BLACK STEEL	1
27	FF99432	WASHER, .250 NYLON	1
28	FZ9500461-PT	#4 X 1/2" SHEETMETAL SCREW	10
29	FZ-TPRRF6	FOOT, RECT RUBBER, BLK, 64 DURO	5
30	EL-CUS-4762 STOWED	POWVER LINK, EX SERIES BATT FAH	1
31	FZ-KN08-4210	KNOB, 1/4-20 INSERT	1
32	EX550-CONTROLLER-EZ-PG11	CONTROLLER BOX, EX550 ASSY, EZ-PG11	1
33	EL6013 B	SHOULDER STRAP	1
34	FZ9102468-BTP	8-32 X 1/2" HEX TMP-PRF B/S, SS, BLK OXIDE	6
35	EZ-718UVR	TIE WRAP, 4" BLACK	1
36	LB9106	LABEL, CAUTION HOT SURFACE	1
37	LB9108	LABEL, HIGH VOLTAGE	1
38	LB9301	LABEL, QUICK START/STOP GUIDE	1
39	LB9306	LABEL, CORD STORAGE	1
40	LB4259	LABEL, POWER STREAM, 8" DIA, CMYK	1
41	SERIES	SERIAL # LABEL, 2" X 3/4"	1
42	LB8002	LABEL, MOTOR CONTROLLER (NOT ON DWG)	1
43	LB8003	LABEL, FAH QUICK START (NOT ON DWG)	1
44	LB8004	LABEL, BRUSHLESS MOTOR SPECS (NOT ON DWG)	1
45	LB8005	LABEL, FAH SPECS (NOT ON DWG)	1

## Plug Types

The EX550 is suitable for worldwide applications. Both a voltage & frequency converter is not needed. The unit includes a simple removable cord that allows the unit to operate up to 250 VAC, 50 Hz and 60 Hz:

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	G	EL-83070-4762
Australia, New Zealand, Papua New Guinea and Argentina	I	EL-84040-4762
China	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.



FlowPath™ Control

## AMCA



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

Euramco Group 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	WEIGHT		RPM	SETBACK		ANGLE	AIRFLOW @ FULL SPEED	
	in	cm		in	cm		lbs	kg		ft	m		tilt	cfm
EK90500	18	46	3	22x21x16	56x53x41	BrushlessPPV™	54	25	3726	16	4.8	11°	14,000	23,786

*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.

May 2023



Euramco Group

2746 Via Orange Way | Spring Valley, CA 91978 USA | (800) 472-6372 | (619) 670-9590

WWW.EURAMCO.COM

PROUDLY MADE IN CALIFORNIA







SM-EX550  
062223

**USA**

2746 Via Orange Way  
Spring Valley, CA 91978 USA  
Toll Free: (800) 472-6326  
Phone: +1 (619) 670-9590  
Fax: +1 (619) 670-7345  
theteam@euramco.com

**EUROPE-LUXEMBOURG**

68, Avenue de la liberte  
1931 Luxembourg  
Phone: +352-26008055  
Fax: +352-26008056  
theteam@euramco.com

**SINGAPORE**

J1 Fullerton Road  
#02-01 One Fullerton  
Singapore 049213  
Phone: +65-9773 33 35  
theteam@euramco.com

**CHINA**

No.239 Gui'an South  
road, ZhenHai District,  
NingBo, China. 315201  
Phone: +86-574-87979390  
Fax: +86-574-87979391  
saleschina@euramco.com