

# WF390/ WF540



## Owner's Manual



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SM-WFANS Rev A

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## Preface

Thank you for purchasing the RAMFAN Positive Pressure Ventilator manufactured by Euramco Group

For more than 30 years Euramco Group has been on the cutting edge of industrial, fire, and marine ventilation products. Each and every one of our blower/exhausters, smoke ejectors, 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.Euramco.com](http://www.Euramco.com) and discover how RAMFAN can make a difference in the field!

*This manual covers operation and maintenance procedures for the RAMFAN WF390 and WF540 Positive Pressure Ventilators.*

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



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

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## 1 | Warning Labels

### Ventilator Cautions, Warnings & Specs:



Wear ear protection.



Keep fingers, hair, debris, food, or any loose objects away from intake of fan.




## RAMFAN®

### WF SERIES SPECIFICATIONS

LBWFANS

	MODEL	PART #	WEIGHT	DIMS (h/w/d)	POWER
	WF390	WB5001LB (BSP) WB5001LNH (NH) WB5001DIN	27kg 60lbs	580/430/410 mm 22.8/16.9/16 in	7.5kw@1.75MPa 10Hp@250psi
	WF540	WD5010	27kg 60lbs	650/630/530 mm 25.6/24.8/20.9 in	3.9kw@0.8MPa    6.8kw@1.75MPa 5.2Hp@115psi    8Hp@250psi



MADE IN THE USA

RAMFAN is a brand of Euramco Group | Ph +1.619.670.9590 | www.ramfan.com

**MAX PRESSURE 1.75 MPa/ 250psi**

***NOTE: This fans are NOT for use in Explosive Atmospheres!***

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## 2 | Features & Benefits

### Water-Powered Turboventilators with PowerStream™ Technology\*

Equipped with PowerStream® air straighteners that produce a powerful, straight, focused beam of air; allowing the fan to be set back further from a structure's entrance without sacrificing PPV performance. Offering superior ventilation with less equipment clutter and reduced noise inside the structure. The PowerStream FlowPath™ penetrates deeper through the structure than traditional cone of air.

\*PowerStream Technology is included on the WF540

### Design and Performance

- 7-Blade Polymer TurboForce™ Impeller for increased shatter resistance and enhanced PPV performance
- Outlet for water recycling (closed circuit) to conserve water supply
- Compact, for easy storage in typical engine compartments
- Wide range tilt adjustment
- Powder coated steel frame
- Full-width retractable handle and heavy-duty wheels for upright, push-pull operation
- 4 soft rubber feet - fan will never walk back while performing PPV

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### 3 | Safety Precautions



DO NOT START fan if there are any signs of shipping damage, particularly to blade, guards, or housing. If ANY damage is suspected, STOP and call your dealer immediately.



Use safe lifting practices.



Keep fingers, hair, debris, food or any loose objects away from intake of fan.



Wear eye and ear protection.



Start ONLY if fan is sitting in a stable and upright position.



DO NOT move fan while in operation.

- Keep fan guard securely in place. Do NOT operate with damaged or missing fan guards.
- Keep area clear of rocks and debris.
- Operate the fan on a level surface whenever possible, NOT to exceed 20°.
- Do not stand directly in front of the fan.
- Turn fan OFF if you hear unusual noises.
- Exercise care during deployment and storage to prevent physical damage.
- Allow fan to cool before storing.
- Blower should be operated and repaired by trained personnel ONLY.

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### 4 | Preparation for Use

- Use only with properly tested and certified hose to make inlet and discharge connections.
- Connect inlet hose to proper connection. Observe the inlet labeling.

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### 5 | Operation

- STOP the blower if mechanical noise, vibration, or other abnormal condition occurs. Any noise other than turbine type pitch is not normal.
- Remove protective end caps from inlet and discharge swivels. Connect the inlet and discharge water hoses to the fan. Run both hoses to provide as straight a path as possible. **MAX PRESSURE IS 250 psi/ 1.75MPa**

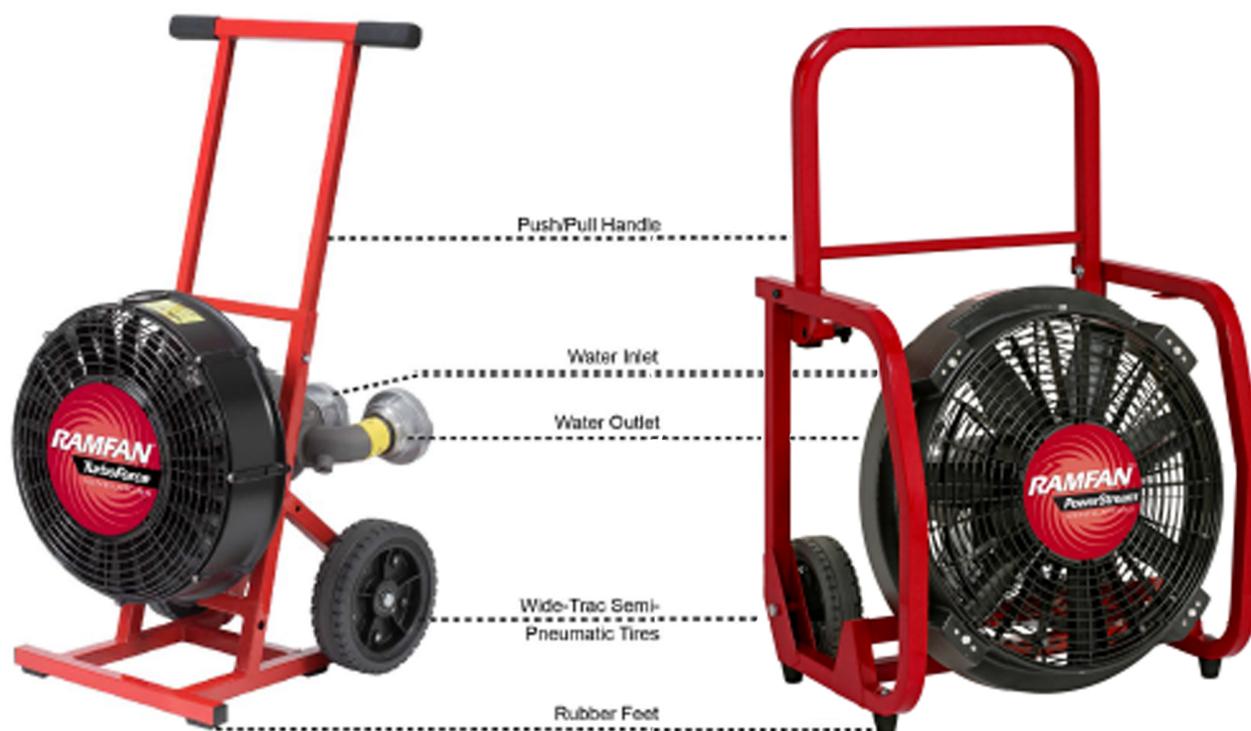
- Visually check for leaks or excessive strain from the hose. Leakage should be controlled if the presence of water could be detrimental to the surrounding area.

### 5.1 Control Features

Refer to Figure 1 below for location of WF390 controls and features.  
Refer to Figure 2 below for location of WF540 controls and features.

Figure 1- WF390

Figure 2- WF540



**Figure 1 – WF390/WF540 Control Functions & Features**

1	Water Inlet	Connect water supply hose
2	Water Outlet	Connect water discharge hose
3	Push/Pull Handle	Retractable handle for easy maneuvering
4	Tilt Mechanism	Adjust tilt from 0° to 18°
5	Rubber Feet	Rubber feet and wide footprint reduces vibration, lengthens service life.
6	Semi-Pneumatic Tires	Easily roll over wet grass or mud

## 5.2 | Run Procedure

### 5.2.1 | Start-Up

- 1 Read the Owner's Manual completely before starting fan.
- 2   Wear both eye and ear protection.
- 3 Complete checks as indicated in Section 4, Preparation for Use.
- 4 Position the fan on a level surface at your desired setback distance.
- 5 Using the Tilt Mechanism, adjust fan to the desired angle.
- 6 Remove protective end caps from inlet and discharge swivels. Connect the inlet and discharge water hoses to the fan. Run both hoses to provide as straight a path as possible.

**MAX PRESSURE is 250 psi / 1.75 MPa**

### 5.2.2 | Shut-Down

- 1 Secure water supply and disconnect from blower.
- 2 Disconnect discharge hose and allow blower to drain.
- 3 Flush internal water passages of unit with clean, fresh water after each use.
- 4 Allow unit to dry. Using compressed air or a blower can reduce drying time.
- 5 Install end caps on swivels and recover the tilt to 0° before storage.

## 6 | Maintenance

- There are no user serviceable parts. Contact factory for replacement part applicability.
- NEVER operate fan with damaged or missing finger guards.

- Inspect the fan for loose fasteners at least once every 6 months. Tighten any loose fasteners immediately. Do NOT overtighten.
- Inspect impeller blade for cracks and pitting prior to each use. Never operate fan with a broken impeller. Contact factory for parts and installation instructions.
- Clean with commercially available biodegradable cleaning solutions. DO NOT use solvents containing chlorinated hydrocarbons (i.e., MEK, Acetone)
- Check rubber feet on frame for excessive wear or breakage.
- Inspect and clean strainer if necessary. Reinstall strainer and strainer adapter on inlet swivel. Tighten only enough to prevent leakage. Do NOT overtighten. Excessive force can result in damage to threads.
- Flush internal water passages of unit with fresh water after each use.
- Grounding connection on blower should be maintained tight and free of corrosion.

## 7 | Storage

- Drain water.
- Make sure all parts of the fan are dry.
- Store in the upright position ONLY.

## 8 | Troubleshooting

- **Fan does not tilt down**
  - Fan is already at the down limit. Tilt fan up.
- **Fan does not tilt up**
  - Fan is already at the upper limit. Tilt fan down.
- **Limited Performance**
  - Increase water pressure.
  - Increase outlet hose diameter.
  - Check debris filter on inlet.

## 9 | Spare Parts

		WF390	WF540	For other spare parts order online at <a href="http://www.ramfan.com">www.ramfan.com</a> , or contact <a href="mailto:theteam@euramco.com">theteam@euramco.com</a>
RAMFAN	Rubber Feet	Part # FZ-TPRRF6	Part # FZ-51368	
RAMFAN	Inlet Strainer	Part # WA2300		
RAMFAN	Inlet Adapter	Part # WB2810		
RAMFAN	Outlet Adapter	Part # WA2203		

## 10 | Supplements

### 10.1 Setback Distances

Setback distance, is the term used to describe how far back from the structure's ingress point to setup the ventilator. As any front line responder will tell you, techniques are based on the situation at the scene and should not be dictated by a manufacturer's design limitations.

Here's a bit of insider information: with certain designs, the fan can produce some amazing airflow numbers set pretty far back, which is great for marketing big numbers, but when positioned at more realistic distances (closer in to the entry point) the performance of most ventilators is pretty much the same, because most countries use standard door sizes in the construction of buildings. All our equipment is rated at several different door sizes to guide your proper selection and to provide a better understanding of the ventilators capabilities.

Every structure is different, every fire is dynamic, and every piece of rescue equipment must be ready for anything. Therefore, the topic of "setback distance" needs to be addressed. The setback distance is simply a general range of acceptable setback distances, that will provide the desired result of **ventilating the structure**.

Sometimes structural entries have large approaches, where the ventilator can be setback farther, at distances of 4 meters or more.

Sometimes a short approach, with stairs or a turn or in a hallway, confines the useable setback distance to 3 meters or less.

The point is, you don't always know, and in this line of work you have to be prepared for anything.

When selecting any equipment for your brigade, you should already know the typical structure types and sizes in your response area. A ventilators size and performance should be chosen based upon the following criteria:

**1. What is the average size structure in your response area?**

If mixed, for example, between small residential/commercial and a few larger industrial buildings, several smaller fans may be a more realistic choice than a single giant fan that will take up valuable space and is difficult to maneuver. Several smaller fans, used together, can produce very impressive air movements and easily fit within the compact compartments of most modern fire apparatus.

**2. How big are your truck's compartments?**

Saving space, and minimizing weight, are increasingly becoming concerns of brigades when deciding which equipment to choose. Furthermore, budget cuts may force fire brigades to use their current apparatus, more efficiently. That means, packing as much equipment as possible into your existing truck. To do this, equipment must be lightweight and as compact as possible, while still providing the performance needed to get the job done.

**3. What do you expect from your ventilator?**

While there are certain factors that can effect the airflow performance of a ventilator, considering the challenging realities faced by first responders, there really are more important things to consider when selecting equipment than which one has the highest airflow performance in a controlled test environment.

- **Reliability:** Which ventilator will keep on working after running the gauntlet on fire scene operations for the next 3 years or more?
- **Durability:** Which ventilator is tough enough to start right up after the new rookie drops it out of the rear compartment?
- **Performance:** Which ventilator will provide superior performance at every ventilation-required scene in your response area?

## 10.2 Shared Operation Zone

Every fire and rescue scene has an area in which all responders, their equipment, and their vehicles must share. How this area is shared and how efficiently it is used and managed will determine the quality of the response itself. We call this the Shared Operation Zone (SOZ).

When selecting the tools, equipment, and vehicles needed to respond to any situation, the best Fire Fighting leaders will choose the equipment that allows them to manage their response operations the most efficiently and effectively as possible.

Euramco Safety knows this, and designs special characteristics into each product to ensure the SOZ at your next response can be used effectively.



Any structure fire has limited ingress/egress opportunities, as determined by the location of the fire within the structure, the building design, and the overall mission.

Often, personnel, along with vehicles, equipment and hoses must be strategically located around a single ingress point of the structure. This obviously places restrictions on the specifications of everything from the vehicles, equipment & hoses to personnel and strategy.

Vehicle placement happens first, as first responders arrive. This immediately places further restrictions on potential placement of equipment. Is your equipment designed to accommodate these restrictions? Or will you be wishing your procurement officer paid attention to what really matters when purchasing equipment, now that you are facing a life & death situation?

In an average high-rise response situation, the SOZ gives the responders less than 500 square meters of area to place equipment and personnel in front of the main ingress/egress point. Many factors come into play.

- How to lay your hand lines?
- Where to place your main pumper, command vehicle, and rescue truck?
- Where to stage spare SCBAs?
- Where to place your ventilator to eliminate smoke in the ingress/egress route? The stairwell?

Consider this carefully, through smart equipment selection and proper fire fighter training, develop equipment specifications and

SOPs that meet the actual challenges that you face every day, and the challenges that you will face tomorrow. Seek the opinions and guidance of those more experienced than yourself. Make sure you are ready!