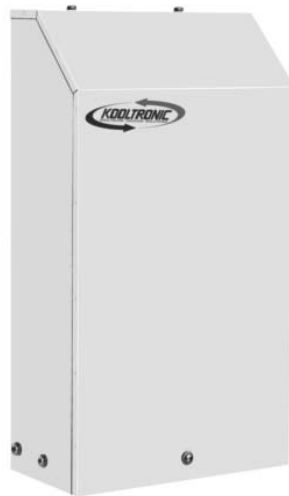


**Guardian Series**  
**KNP40FL**  
**NEMA 4 or 4X Filter Fans**

***Keep This Manual  
With Fan***

***GUARDIAN SERIES  
FILTER FAN  
OPERATOR'S MANUAL***



***CAUTION***

**BEFORE INSTALLING AND  
USING THIS FILTER FAN, IT IS  
IMPORTANT THAT THIS MANUAL  
BE READ AND UNDERSTOOD  
THOROUGHLY**

***READ AND SAVE THESE INSTRUCTIONS***

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## ***I. Introduction***

This Manual provides you with the necessary general information for properly installing and operating Guardian Series Filter Fans. Unit specific technical data and mounting instructions are presented later in the Manual.

## ***II. Cautions and Warnings***

### ***CAUTION***

Do not operate fan without fanguard in place.

### ***CAUTION***

The risk of fire, electric shock or injury exists when cleaning or performing maintenance on these units. Disconnect this fan from the power supply before servicing.

### ***WARNING***

**TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK:  
Do Not Use This Fan With Any Solid-State Speed Control Device.**

### ***WARNING***

**TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY, OBSERVE THE FOLLOWING:  
Use this unit only in the manner intended by Kooltronic. If you have questions, contact Kooltronic. Before servicing or cleaning this unit, switch power off at the service panel and lock service panel to prevent power from being switched on accidentally. If service panel cannot be locked, securely fasten a prominent warning device, such as a tag, to the panel.**

### ***WARNING***

**TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY, OBSERVE THE FOLLOWING:  
Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction. When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.**

### ***CAUTION***

For general ventilating use only. Do not use these fans to exhaust hazardous or explosive material and vapors.

### ***CAUTION***

#### ***NOT ALL SYSTEMS ARE SUITABLE FOR UTILIZING OUTSIDE AIR***

To protect sensitive components against condensation an enclosure heater or closed-loop cooling is recommended. To protect sensitive components against corrosive elements closed-loop cooling is recommended.

### III. Incoming Inspection

Guardian Series Filter Fans are designed, built, and packaged to withstand the shock and vibration associated with shipment by common carriers. Occasionally improper handling during shipping causes damage. Therefore, a thorough inspection should be performed upon receipt of all shipments. Any carton tears, dents, scratches, or loose articles should be noted on the Freight Bill. Cartons should be opened promptly and the units inspected for CONCEALED DAMAGE.

An immediate claim **MUST** be filed with the freight carrier and an inspection requested. Retain all packing materials. Kooltronic cannot assume responsibility for Consignee's failure to file a timely freight claim.

### IV. Product Handling

- Do not attempt to operate your Filter Fan until you read and thoroughly understand this Manual.
- Before operating this unit, all electrical wiring must be checked to assure the proper connections.
- Use only on GFCI Protected Receptacles.

<b>CAUTION</b> Operate this unit only on the proper voltages and frequencies as noted on the nameplate
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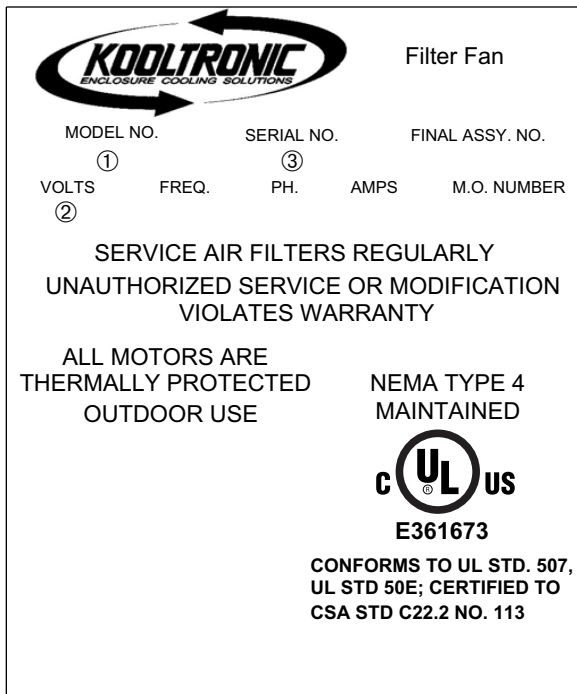
### V. Product Identification and Nameplate

Each Filter Fan includes an identification nameplate. This nameplate provides:

- ① Model Number
- ② Electrical Power Characteristics
- ③ Serial Number

We recommend you copy this information from your unit.

- ① When ordering parts, specify the Model Number.
- ② Before operating, be sure that the power source matches these requirements.



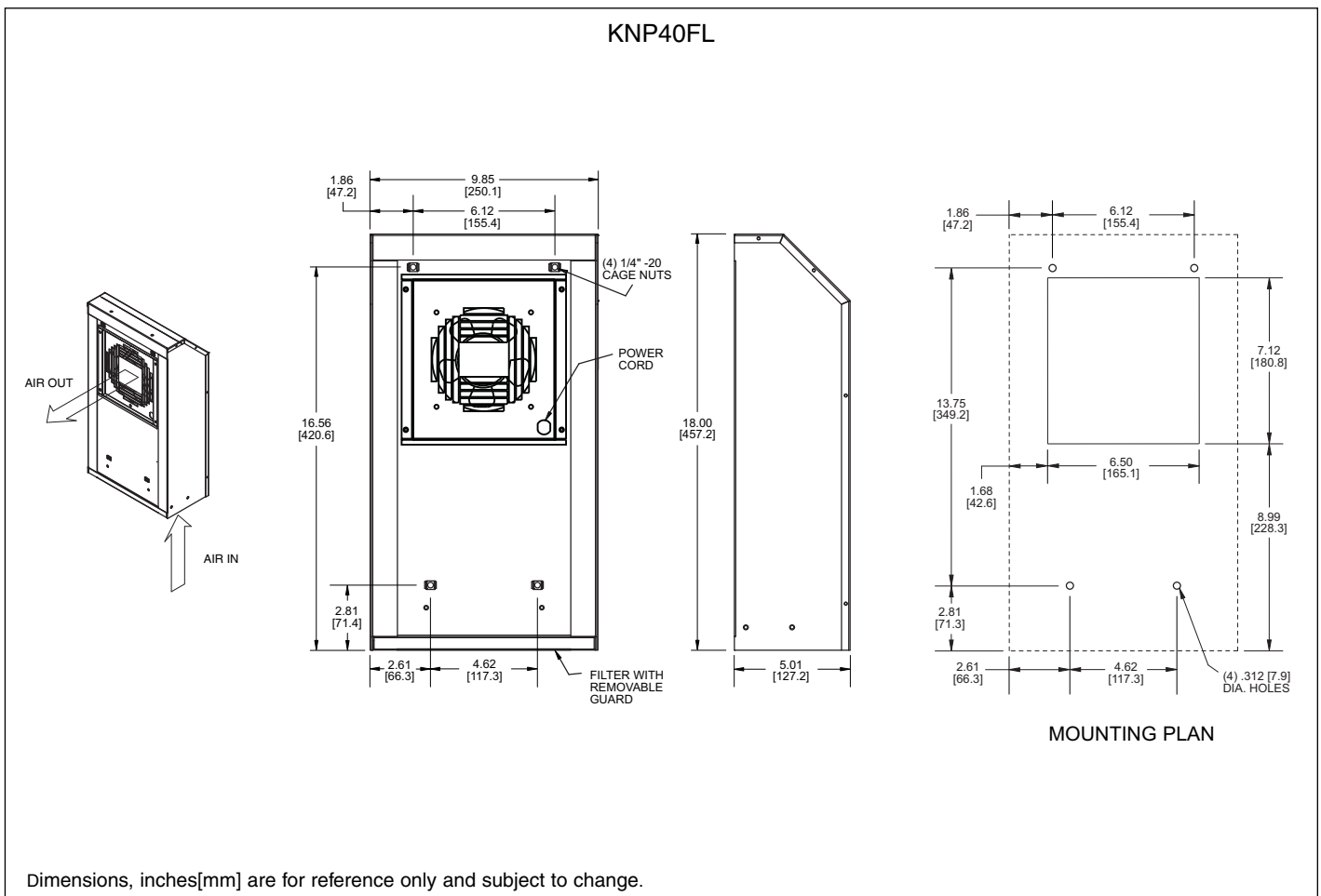
## VI. Installation Instructions

The Guardian Series NEMA 4 or 4X Filter Fans have been engineered to be installed easily. These NEMA 4 or 4X filter fans have been designed for indoor or outdoor use. Prior to mounting, refer the mounting drawings below showing dimensions and locations of mounting holes and cutouts. Prior to cutting or drilling, make sure that cutouts and mounting holes do not interfere with components inside the cabinet.

When mounting your filter fan please keep the following in mind:

- Proper orientation of unit is filter at the bottom.
- A minimum of 6 inches clearance from filter to the nearest surface is recommended.
- Use neoprene washers provided.
- Recommended torque of 35-in-lbs for proper gasket compression.

## VII. Drawings and Dimensions



## VIII. Specific Model Data

### Technical Data

Model	Voltage	Frequency Hz	Input Amps	Input Watts	Unit Airflow CFM	Operating Temp. °F		Approximate Weight (lbs.)
						Min.	Max.	
KNP40FL	115 VAC	50/60	.22/.19	14/13	90/106	-40	158	10
K2NP40FL	230 VAC	50/60	.13/.11	14/12	90/106	-40	158	10
KNP40FLV	115 VAC	50/60	.22/.19	14/13	90/106	-40	158	10
K2NP40FLV	230 VAC	50/60	.13/.11	14/12	90/106	-40	158	10

### Standard Features

Filter  
Integrated Fan Guards  
Integrated Sealing Gasket  
IP55 Filter Protection  
Most Assemblies are UL/CUL Listed  
NEMA 4 or 4X Rating Maintained (if used with provided filter)  
Secure Mounting  
Stainless Steel Shell (NEMA 4X models)  
Baked Powder Finish  
UL/CSA Shielded Ball Bearing Motors

### Replacement Filters

Model	Filter
	Part Number
KNP40FL	0429-01-01
K2NP40FL	0429-01-01
KNP40FLV	0429-01-01
K2NP40FLV	0429-01-01

### Optional Filter-Hood Assemblies

Model	Filter Hood Assembly
	Part Number
KNP40FL	KNPA60FL
K2NP40FL	KNPA60FL
KNP40FLV	KNPA60FLV
K2NP40FLV	KNPA60FLV

## IX. Packing Procedure For Warranty Repair

Pack the Filter Fan in an appropriate carton (preferably the original carton), with adequate internal protective packaging, making sure carton is marked properly.

## ***X. Maintenance***

Kooltronic Guardian/GuardianX NEMA 4 or 4X Series Indoor/Outdoor Filter Fans require no maintenance. These Filter Fans are designed to require only the routine cleaning of air filters to assure unimpeded airflow through the unit. It is not possible to recommend specific cleaning intervals, since the level and nature of airborne particulate matter differs widely with each installation. It is generally sufficient to remove and wash the reuseable aluminum mesh air filters when the outer surfaces of these filters appear covered with a thin layer of dust or lint. Filter coating adhesive, available from Kooltronic, is recommended (Part number A-16 - 10 oz. container). Replacement filters are also available from Kooltronic. See page 6 for part numbers.

If filter service is neglected or delayed, the filter fans will not perform at design capacity. The first indication of an excessively clogged filter is usually a gradual increase of temperature within the equipment cabinet.

### **Filter removal and service**

Kooltronic Guardian/GuardianX NEMA 4 or 4X Series Indoor/Outdoor Filter Fans feature an easily removable filter to facilitate necessary cleaning.

### ***CAUTION***

**Do not operate the filter fan for extended periods of time with the filter removed. Operation with the filter in place is necessary for the fan to maintain its NEMA rating.**

- 1) On the bottom of the unit, pull the filter retainer away from the cabinet and downward to remove filter and filter retainer.
- 2) After removal, the filter should be flushed under warm running water with the clean side up, driving contaminants out of the dirty side of the filter. If the accumulated dirt is oily, washing in a detergent bath is recommended, followed by a warm water rinse as above.
- 3) Reinstall the filter and filter retainer, making sure that the retainer legs face toward the cabinet.

## ***XI. Standard Warranty***

KOOLTRONIC products are warranted to be free of defects in workmanship, materials and components. The following warranty periods apply from date of shipment:

- Air moving devices/components and hermetic system components: One year
- Non-operating parts, except filters: 5 years

The above warranty applies when the equipment is operated under the following conditions:

- Ambient temperature not in excess of 125°F (52°C) in normal atmosphere or as stated on product nameplate
- Voltage variation no greater than  $\pm 10\%$  from nameplate rating
- Frequency variation no greater than  $\pm 3\text{Hz}$  from nameplate rating
- Maximum cooling load no higher than air conditioner nameplate rating
- Waiting five minutes before restarting air conditioner after intentional or accidental shutoff
- Compliance to all other installation, maintenance and operating instructions, as supplied
- The purchaser assumes the responsibility of grounding the unit and installing it in accordance with local electrical and safety codes, as well as the National Electric Code (NEC) and OSHA

**KOOLTRONIC cannot assume responsibility for mis-application of its products or the erroneous selection of an inappropriate product by a non-authorized KOOLTRONIC representative. Our applications engineers will gladly assist in the selection of the proper product, provided all required details of the application are furnished.**

**THIS WARRANTY CONSTITUTES THE ENTIRE WARRANTY WITH RESPECT TO THE PRODUCT AND IS IN LIEU OF ALL OTHERS, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY AND WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND IN NO EVENT IS KOOLTRONIC RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER.**

### ***RETURN AUTHORIZATION (RA) PROCEDURE***

- All returns require a Return Authorization number whether the return is for warranty or non-warranty repair, rotation of stock, damage or any other reason. Returns without an RA number will be refused.
- Customer must call the KOOLTRONIC Customer Service Department, Pennington, New Jersey (609 • 466 • 3400) to obtain an RA number.
- The following information is required when an RA is requested:
  - Original customer Purchase Order number and date
  - Date product was received by customer
  - Number of parts to be returned
  - Product description, model and serial number
  - Reason for return
  - Action requested
  - Contact name, telephone, FAX numbers and e-mail address
- Pack unit in a suitable container for shipment, preferably the

KOOLTRONIC assumes no liability beyond the repair or replacement of its own product. This Warranty does not cover:

- Labor or reimbursement of labor for evaluation, removal, installation, repair, or cost of any warranted part, unless authorized in writing by KOOLTRONIC
- Use of equipment for other than its designed purpose or operating conditions
- Operation in harsh, oily, corrosive or other abnormal environmental conditions, without the proper filtration, sealing, protective coatings and/or weather protection
- Damage to hermetic system resulting from continuous operation with dirty or clogged air filters or improper or negligent maintenance
- Use of refrigerant other than designated
- Customer modification or abuse
- Shipping damage or other accident (Claims for shipping damage are the responsibility of the customer. Timely claims must be filed by the customer with the freight carrier)
- Cracked or broken hermetic tubing, brazed joints or other internal damage caused by shipping or mishandling
- Damage caused by shipping units attached to an enclosure
- Any and all conditions resulting from noncompliance with the preceding operating conditions
- Returned freight must be paid by customer
- **This standard warranty does not apply to custom products. Consult your KOOLTRONIC representative for limitations**

original packaging if available. All Air Conditioners must be returned in an upright position properly secured to a pallet. **Improper packaging may void warranty claim.** If an Air Conditioner is received laying down or shipped via UPS or similar small parcel service the warranty will be void.

- Mark carton prominently with KOOLTRONIC's Return Authorization Number.
- Enclose all pertinent documents.
- Freight charges on all products returned to KOOLTRONIC shall be paid by the customer. Unauthorized collect shipments will be refused.
- If a unit is repaired under Warranty, KOOLTRONIC will pay the freight charges both ways within the Continental USA at KOOLTRONIC's negotiated rates. Warranty repaired units will be returned to customer at KOOLTRONIC expense only within the Continental USA.
- All authorized returns are subject to a restocking fee.