



**Keep This Manual
With Heat Exchanger**

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Technical
Documents



**KXH60A & K2XH60A
AIR-TO-AIR
HEAT EXCHANGERS
OPERATOR'S MANUAL**

CAUTION

BEFORE INSTALLING AND
USING THIS AIR CONDITIONER,
IT IS IMPORTANT THAT THIS
MANUAL BE READ AND
UNDERSTOOD THOROUGHLY



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I. Introduction

Kooltronic Heat Exchangers are designed to provide a cool environment for your electronic or electrical components. There are models to fit virtually all sizes and shapes of electrical or electronic enclosures. Our “closed loop” design also ensures that your components will not be exposed to hot, dirty operating conditions.

This Manual provides you with the necessary general information for properly installing and operating Kooltronic Heat Exchangers. Unit specific technical data and mounting instructions are presented later in the Manual.

II. Incoming Inspection

Kooltronic Heat Exchangers are designed, built, and packaged to withstand the shock and vibration normally associated with shipment by common carriers. Occasionally improper handling during shipping causes damage. Such handling could include unbanding of palletized shipments, failing to respect any carton handling instructions, falling off conveyors, excessive vibration, crushing, etc. Therefore, a thorough inspection should be done 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.

III. Product Handling

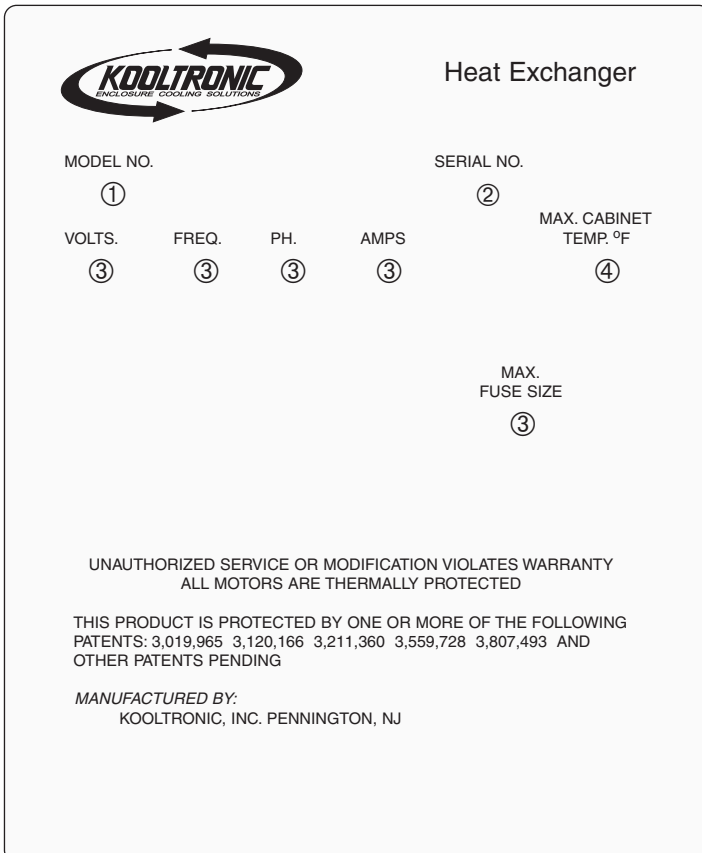
- Do not attempt to operate your Kooltronic Heat Exchanger until you read and thoroughly understand this Manual.

CAUTION

Operate this unit only on the proper voltages and frequencies as noted on the nameplate.

- Before operating this unit, all electrical wiring must be checked to assure the proper connections.

IV. Product Identification and Nameplate



KOOLTRONIC
ENCLOSURE COOLING SOLUTIONS

Heat Exchanger

MODEL NO. ①

SERIAL NO. ②

VOLTS. ③ FREQ. ③ PH. ③ AMPS ③

MAX. CABINET TEMP. °F ④

MAX. FUSE SIZE ③

UNAUTHORIZED SERVICE OR MODIFICATION VIOLATES WARRANTY
ALL MOTORS ARE THERMALLY PROTECTED

THIS PRODUCT IS PROTECTED BY ONE OR MORE OF THE FOLLOWING
PATENTS: 3,019,965 3,120,166 3,211,360 3,559,728 3,807,493 AND
OTHER PATENTS PENDING

MANUFACTURED BY:
KOOLTRONIC, INC. PENNINGTON, NJ

- ① Model Number
- ② Serial Number
- ③ Electrical power characteristics
- ④ Maximum ambient operating temperature

We recommend you copy this information from your unit.

① ② When ordering parts, specify the Model Number and Serial Number.

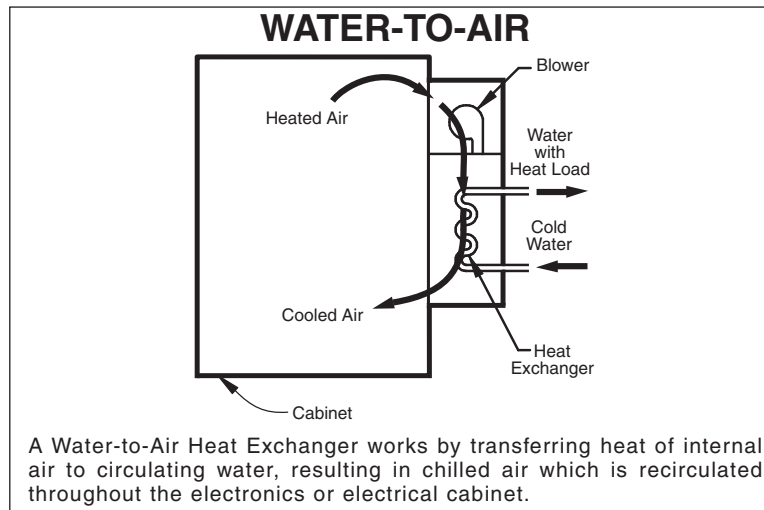
③ Before operating, be sure that the power source matches these requirements.

④ Make sure that these parameters are met. Failure to do so may result in permanent damage to the unit

V. Principles of Operation

If ambient air cannot be utilized directly as a cooling medium, another cost-effective method of cooling is a Water-to-Air system (below). Water is used to remove heat from the air circulated within the electronics enclosure.

Cooling water is circulated through a tube-and-fin coil. As the heat-laden air circulates through the coil, the heat is absorbed by the water and carried away, in a continuous process.



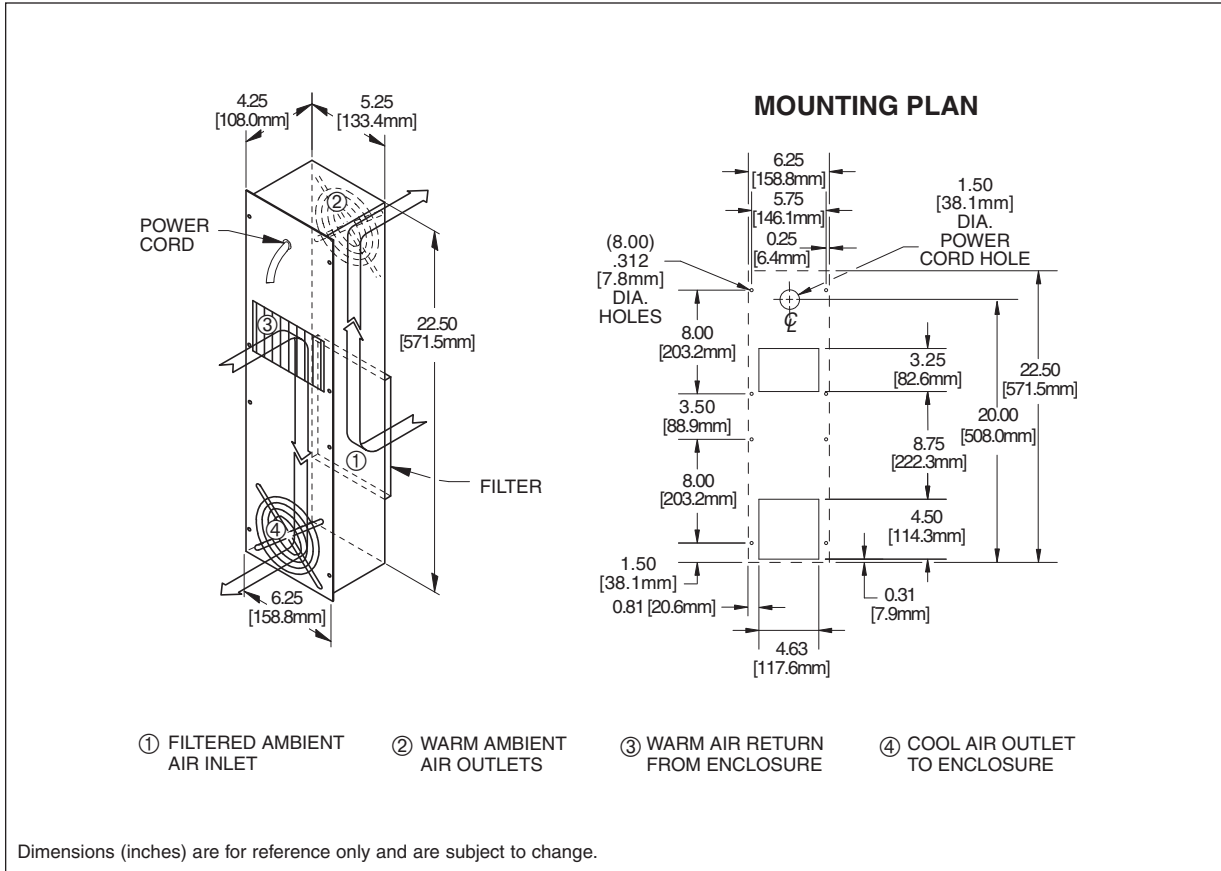
Water-to-Air systems are easy to install and usually require minimum maintenance. The water used must be reasonably clean and cold enough to ensure proper operation of the cooling system under the most severe anticipated conditions. In some cases, if sufficiently cold water is available, below-ambient-temperature cooling can be achieved.

VI. Specific Model Data

Mounting

- Panel Mounted Heat Exchangers KXHE120A and KXHE122A are equipped with two vertical mounting rails. Using these rails, the units may be mounted to any available vertical surface on the enclosure.
- Refer to page 5 for location of all mounting holes and cutouts.
- Make sure cutouts do not interfere with components inside your cabinet.
- Proper alignment of air inlets and outlets is essential for optimum Heat Exchanger performance.
- All Kooltronic externally mounted Heat Exchangers are fully gasketed to ensure proper sealing. This seal is necessary to maintain the integrity of the closed-loop system.
- Use all existing mounting holes to insure stability and a tight seal.

Drawings and Dimensions



TECHNICAL DATA **

Model	Element		Power		Maximum Allowable Temperature °F		Performance Watts/°F		Approx Weight (lbs.)
	Depth	Volts	Amps	Watts	Enclosure	Ambient	Air In	Air Out	
KXHE60A	4"	115	0.4	38	160	115	8	11	11
K2XHE60A	4"	230	0.2	38	160	115	8	11	11

**60 Hz. operation. For 50 Hz. operation, consult Kooltronic.

Major Component Replacements

	<i>KXHE60A</i>	<i>K2XHE60A</i>
Fan Motor Assembly	0265-09	0265-10
Heat Exchanger Element	0744-19A	0744-19A
Filter	5001F	5001F

Above parts are for 115V units. For 230V, consult factory.

VII. Maintenance

Kooltronic Air-Cooled Heat Exchangers are designed to require only routine cleaning of air filters and the heat exchanger element to assure unimpeded airflow through the heat exchanger element. It is not possible to recommend specific filter cleaning intervals since the level and the nature of air borne particulate matter differs widely with each installation. It is generally sufficient to remove and wash the reusable aluminum mesh air filter when the outer surface of these filters appear covered with a thin layer of dust or lint. Filter recoating adhesive is recommended. Appropriate disposable filters are available from Kooltronic.

If filter service is neglected or delayed, the heat exchanger will not perform at its design capacity. The first indication of excessively clogged air filter is usually a gradual increase of temperature within the equipment cabinet. Continued operation under these conditions will cause damage, shorten blower motor life and void the warranty.

CAUTION

Disconnect electric power from the Heat Exchanger before proceeding.

Filter Removal and Service

Kooltronic Heat Exchanger feature an easily removable inlet filter to facilitate necessary cleaning.

CAUTION

Do not operate the Heat Exchanger for extended periods of time with the filter removed. The heat exchanger element may become clogged with dust or lint from the ambient environment. A clogged heat exchanger element is not readily detected and will give the same reaction as clogged filter. A clean filter is the best protection.

- 1) Move the filter forward, using attached tab, to clear the near filter retainer. Pull the filter downward and toward you until the far side of the filter clears the far filter retainer.
- 2) After removal, the filter should be flushed under warm running water with the clean side up, driving contaminants out the dirty side of the filter. If the accumulated dirt is oily, washing in a detergent bath is recommended, followed by warm water rinse as above.
- 3) The filter may be sprayed with **Kooltronic A-16 Filter Recoating Adhesive** to trap fine airborne contaminants, or they can simply be dried and reinstalled as strainer type filters. **Recoating is recommended for the best results.**
- 4) Reinstall the filter: (a) Holding the tab, slide the filter into the near retainer, (b) press filter against the unit and (c) slide forward into far retainer.

VIII. Packing Procedure

- Keep Heat Exchanger in proper upright position.
- Pack Heat Exchanger in an appropriate carton (preferably original carton if possible), with adequate internal protective packaging, making sure carton is marked properly.
- For local controlled transportation, strap carton where possible, to a secure part of truck to prevent falling or sliding, minimizing vibration, etc.
- For common carrier shipment, band unit(s) securely to a pallet. Unpalletized shipment risks severe damage which voids the warranty.

