

# KXH224S AIR-TO-AIR PANEL-MOUNTED HEAT EXCHANGERS



KXH224S

## STANDARD FEATURES

- Baked Powder Finish
- Precision Ball-bearing Motors
- Closed-Loop Near-Ambient Cooling
- Convuluted Aluminum Exchanger Element
- Heavy-duty Steel Enclosure
- NEMA 12 Rating Maintained (UL50)**
- Permanent Filters
- Refrigerant-free
- Six foot [1.8m] (minimum)  
SJT 3-wire Cord
- UL/CUL Listed

## ACCESSORIES AND OPTIONS\*

- Cooling Effect Detector
- Epoxy-coated element
- Filter Recoating Adhesive
- Filters for replacement
- Lifting Eyes
- Mounting Hinge
- Other voltages and frequencies
- Special materials or finishes
- Special motors, line cords or connectors
- Stainless or Aluminum Cabinet
- Weather Protection Kit

\*See opposite side for more information.

## APPROXIMATE WEIGHT

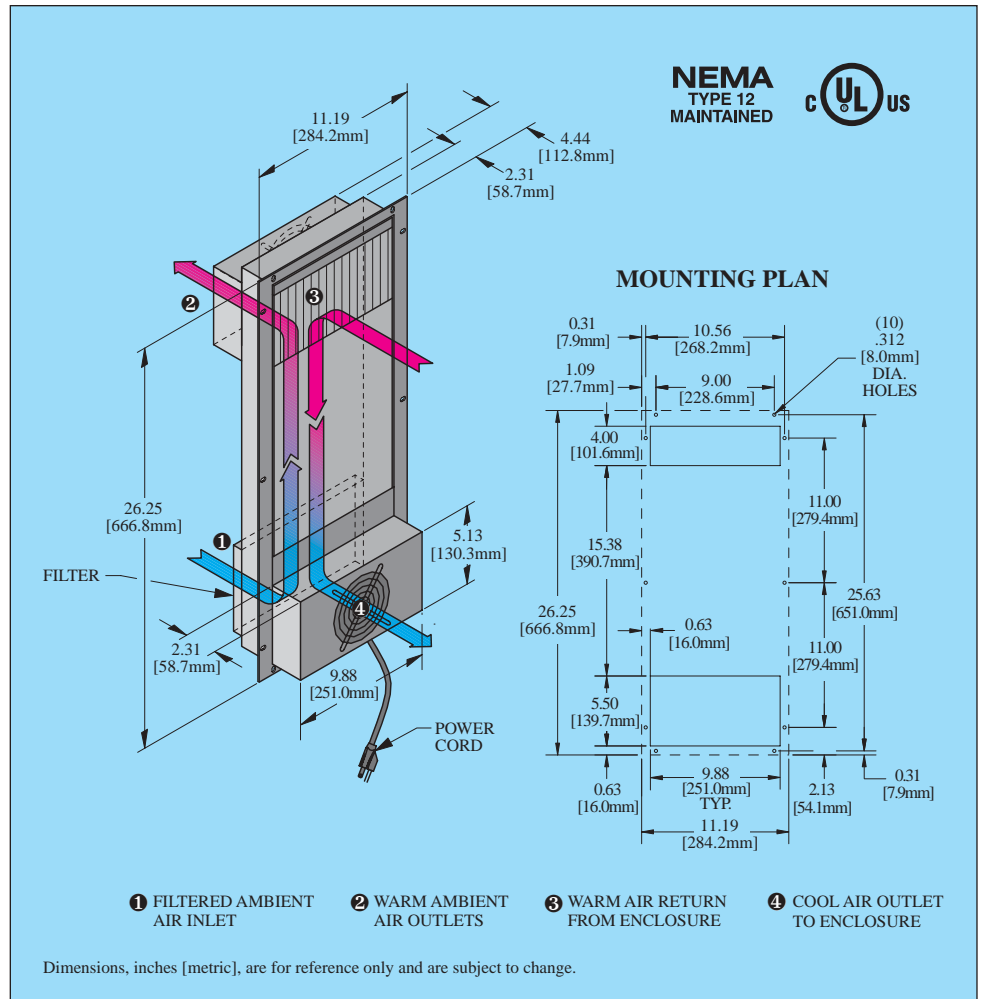
14 lbs. [6.4 kg]

## HOW TO ORDER

Specify model number. NOTE: Accessories and Options may affect model number, contact KOOLTRONIC for information. For 230 VAC operation, add a 2 after the K. Example: K2XH224S. Model number as shown denotes uncoated aluminum element. Additional suffix E denotes epoxy-coated element.

*For assistance in model selection, refer to the **Heat Exchanger Sizing and Selection Guide**, contact **KOOLTRONIC**, or use one of our design aid software programs, available **FREE**.*

CALL 1-800-321-KOOL (5665)  
or FAX 609-466-1114



## TECHNICAL DATA\*\*

Model	UL/CUL Listed or Recognized	Element Depth	Volts	Power		Maximum Allowable Temperature °F/°C		Performance Watts °F/°C	
				Amps	Watts	Enclosure	Ambient	Air In	Air Out
KXH224S	Listed	2" [50.8mm]	115	0.40	28	160/71	131/55	8/13	16/26
K2XH224S	Listed	2" [50.8mm]	230	0.20	28	160/71	131/55	8/13	16/26

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

**POPULAR MODELS ARE STOCKED AND READY TO SHIP**

## DESCRIPTION

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The **KXHE Series Air-to-Air Heat Exchangers** combines a choice of state of the art, high-efficiency convoluted aluminum heat transfer element with powerful air movers. This combination uses counterflowing airstreams, for maximum heat transfer efficiency, in a closed-loop system, to provide cooling within sealed electronics or industrial enclosures. This makes the **KXHE** an ideal choice for applications in dirty or oil-laden environments. KOOLTRONIC manufactures its own **KXHE** heat transfer elements.

These unique Heat Exchangers operate effectively when mounted vertically or horizontally, internally or externally, and are available in numerous sizes, capacities and configurations.

For M/TAB-Mounted KXHE type Heat Exchangers, see **TrimLine Series**.

**KXHE Air-to-Air Heat Exchangers** are an excellent choice for all applications requiring a closed-loop system which can tolerate cabinet temperatures slightly above ambient.

Where internal temperatures must be kept below ambient, one of the **KPHE Series Water-to-Air Heat Exchangers** or either **Air-Cooled** or **Water-Cooled Air Conditioners** should be considered.

Outdoor operations require weather protection and external protective features. Also see **Intrepid Outdoor Series** and **Integrity NEMA 4/4X Series**.

**KOOLTRONIC** also designs and manufactures a variety of Air Conditioners to meet *unique* specifications. We invite your inquiries about our modification and custom-design capabilities.

## STANDARD FEATURES

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**CLOSED-LOOP COOLING:** The enclosure interior airflow system is isolated from the ambient airflow system. No ambient air can invade the cool, dehumidified sensitive component compartment.

**PRECISION BALL-BEARING MOTORS:** All blower motors are UL/CSA Recognized and include automatic-reset thermal overload protection and double-sealed or double-shielded precision ball bearings. Special permanent lubricants perform over a broad temperature range: -20°F [-28.9°C] to 250°F [121.1°C]. Consult KOOLTRONIC for motors designed to meet military or other extreme environmental specifications.

**BLOWERS:** All centrifugal blowers are Kooltronic-designed and built, to provide optimum airflow and pressure for each Heat Exchanger design.

**RUGGED CONSTRUCTION:** Precision-engineered heavy gauge steel construction of all cabinets and blowers insures Heat Exchangers will stand up under tough applications.

**PERMANENT FILTERS:** Designed to last the life of the unit, the filters included with all Heat Exchangers consist of a multi-layer grid of sturdy, corrugated aluminum in a one-piece aluminum frame. Filters must be kept free of accumulations, to prevent reduction or loss of performance and/or damage to equipment. Disposable filters are also available.

**BAKED POWDER FINISH:** Durable, baked-on gray powder finish is standard. Other finishes are available.

**POWER:** Available in 115 VAC, 50/60 Hz and 230 VAC, 50 Hz or 60 Hz.

**POWER CORD:** All 115 and 230VAC models are supplied with six-foot SJT-type three-wire cord with plug. BLDC units have three-wire cords without plugs for direct wiring to power source. Special lengths and/or plugs are available.

**GASKETING:** All units are fully gasketed for tight, leakproof installation, in compliance with the NEMA 12 Enclosure Rating.

**INSTALLATION:** Detailed Installation and Operator's Manual, with drawings, mounting plan and spare parts list is included with each unit.

**UL/CUL LISTED:** All **KXHE224S** models are **UL/CUL Listed**.

## ACCESSORIES AND OPTIONS\*\*

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### **FACTORY-INSTALLED OPTIONS:**

**ALUMINUM CABINET:** Where light weight and/or compatibility with appearance of Aluminum Enclosures are required. Unpainted Type 5052 is standard. Other types and ultra-violet-resistant baked powder finish are available.

Append "\*\*\*A" to Part No. (5052 Unpainted)

**COOLING EFFECT DETECTOR:** A thermostat is mounted inside the cabinet and attached to a sensor in the warm air return. When the air temperature increases to the set point, a signal is sent to a terminal block. User-installed wiring from the terminal block to local and/or remote warning devices (*light, bell, siren, etc.*) can be for normally open or closed operation.

Append "\*\*\*B" to Part No.

**EPOXY-COATED ELEMENT:** Fabricated to the same standards as the uncoated convoluted aluminum elements, these are made from epoxy-coated aluminum stock that passed 1000 hour salt spray testing.

Append letter "E" to Part No.

**LIFTING EYES:** A pair of heavy-gauge steel lifting eyes, attached to the side panels, assist in positioning units.

Append letter "K" to Part No.

**MOUNTING HINGE:** (Left-hand or Right-hand) Allows the Air Conditioner itself to be used as a cabinet door. (Caution: The cabinet must be able to support the full weight of the unit in open position.) Specify left-hand or right-hand, determined by facing the mounting side of the Air Conditioner.

Append letter "P" to Part No. for left-hand.

Append letter "S" to Part No. for right-hand.

**\*\*Contact KOOLTRONIC for information.**

## ***ACCESSORIES AND OPTIONS\*\* (continued)***

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### **OTHER VOLTAGES AND FREQUENCIES\*\***

### **SPECIAL MATERIALS OR FINISHES\*\***

### **SPECIAL MOTORS, LINE CORDS OR CONNECTORS\*\***

**STAINLESS STEEL CABINET:** For applications in corrosive or other hostile environments such as those requiring Internal Corrosion Resistant Coatings, especially where chemical/moisture combinations are present.

Append letter "V" to Part No. (304-2B Unpainted)

### **CUSTOMER-INSTALLED OPTIONS:**

**FILTERS FOR REPLACEMENT:** All KOOLTRONIC filters consist of a multi-layer grid of sturdy corrugated aluminum, securely held in a one-piece aluminum frame. Filters are required wherever air is drawn into an electronics enclosure or related cooling equipment to keep internal parts as clean as possible.

A non-drying adhesive coating traps a high percentage of particulate matter. These washable, reusable filters are designed to last the life of the cooling unit. Replacements are available for those which become damaged or otherwise non-serviceable.

Part No. 100-3F (9.56" x 5.00" x 0.50" [243mm x 127mm x 13mm])

**FILTER RECOATING ADHESIVE:** This compound is a superior product for recoating all permanent filters after washing. The adhesives penetrate dirt layers to keep the filter surface tacky for longer effective performance between washings.

Part No. A-16 - one pint container.

**WEATHER PROTECTION KIT:** For outdoor installations subject to invasion by rain, snow or windblown dirt, special deflectors shield the condenser air inlet and outlet ports. Air conditioners or heat exchangers installed outdoors require special exterior paint.

**\*\*Contact KOOLTRONIC for information.**