

ELECTRICAL APPLIANCE AND UTILIZATION EQUIPMENT DIRECTORY 2012

This Directory contains all Listings and Classifications in effect as of March 28, 2012 for product categories covered.

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ELECTRICAL APPLIANCE AND UTILIZATION EQUIPMENT DIRECTORY

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Introduction

This Directory contains the names of companies authorized to use the UL Mark on or in connection with products that have been investigated by UL and found to be in compliance with UL's requirements. These companies, as well as the manufacturers and submitters of the products, have entered into an Agreement with UL to use the UL Mark only on or in connection with products manufactured in compliance with UL's requirements. It should be noted that UL certified products of different makes or model designations are not necessarily equivalent in quality or performance.

The appearance of catalog or model numbers or other specific product designations in this Directory signifies that: (1) representative samples of these products have been submitted to UL and found to comply with the applicable requirements, and that (2) the manufacturer has been authorized to use the appropriate UL Mark on production that continues to comply with UL's requirements and is subject to UL's Follow-Up Service. Since manufacturers are not obligated to apply the UL Mark on all of their production, products that do not bear the UL Mark are not required by UL to comply with UL's requirements. Accordingly, the appearance of a company's name or a specific product designation in this Directory does **not** in itself ensure that products so specified or identified are subject to UL's Follow-Up Service. The manufacturer's products are not subject to UL's Follow-Up Service unless they bear the UL Mark. **Only those products bearing the appropriate UL Mark and the company's name, trade name, trademark or other authorized identification should be considered as being covered by UL's Listing or Classification and Follow-Up Service. The UL Mark provides evidence of listing or labeling, which may be required by installation codes or standards.**

Many of the products bearing the UL Mark incorporate components that bear the UL Recognized Component Mark . The Recognized Component Mark is applicable to components that are incomplete in construction features or limited in performance capabilities. **The Recognized Component Mark does not provide evidence of listing or labeling, which may be required by installation codes or standards.**

This Directory contains Listings and Classifications in effect as of March 28, 2012. Records of Listings and Classifications issued or withdrawn after this date will be found in UL's Listing Information database. In addition, Listings and Classifications issued after the effective date will be found in UL's Online Certifications Directory at www.ul.com/database and will appear in the next annual Directory.

Note: At the back of this Directory is important information about UL services for manufacturers and other clients, Authorities Having Jurisdiction, and consumers.

Installation and Use of Products Bearing the UL Mark

Authorities Having Jurisdiction should be consulted as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, systems, devices and materials.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

Use of this Directory

This Directory includes the following:

- General Guide Information for each product category that includes references to the requirements used for the investigation of the products and the UL Mark to be used on the product;
- Information relating to limitations or special conditions applying to the product;
- Names of companies that are authorized to provide products bearing the UL Mark.

The companies whose names appear in this Directory may not be the manufacturer of the product, but are qualified to provide products that bear the UL Mark.

UL Listings and Classifications are arranged alphabetically in this Directory by product category and alphabetically by company name under each category. The four-letter code (shown in parentheses) following each category title is the product category guide designation.

Under individual product categories, each company is assigned an alphanumeric file number (starting with letters such as AU, BP, E, EX, MH, MP, MQ, R, S or SA). This number may not be required to be marked on the product. The file number can be used to identify a particular company and the associated product category.

To assist in the use of the Directory, an Index of Product Categories, an Index of Companies and a List of Company Identifications are provided (see Table of Contents). The List of Company Identifications contains the trade names or trademarks of companies that have chosen to use such identification in place of or in addition to their company name.

UL's General Guide Information at the beginning of each product category provides important information regarding the scope and limitation of UL's certification of the product and a general description of the UL Marks authorized for products in that category.

This information may include the identification of published standards that have been used to investigate products in that category. There may not be a published standard against which a product can be tested and evaluated to determine its acceptability for the UL Mark. If no applicable standard is available, UL will exercise its judgment in the selection of applicable requirements from standards and other sources and will develop requirements to cover uses and conditions for which specific requirements did not previously exist.

The scope of each UL Standard for Safety and Outline of Investigation can be accessed at <http://ulstandardsinfo.net.ul.com>.

The information in the individual Listing or Classification varies from category to category depending on the needs of the users of the Directory. Certain Listings or Classifications contain specific model or catalog designations, others contain general types of products, and others include the company name only.

For some product categories, UL's Online Certifications Directory may include additional product information that does not appear in this Directory. To obtain additional information for a particular Listing or Classification or information on UL Listed and Classified products and Recognized Components, contact the Customer Experience Center by telephone: +1.877.UL.HELPS (1.877.854.3577) or e-mail at cec.us@us.ul.com.

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Look for the UL Mark

Identification of UL Listed and Classified Products

The symbol  and the name "Underwriters Laboratories Inc." in various forms and abbreviations are registered with the U.S. Patent and Trademark Office, and in numerous other countries. Subject to the terms of UL's Follow-Up Service Agreement, companies are permitted to use the symbol  or other specified forms of UL's name as part of the UL Mark on products that are Listed or Classified and that comply with UL's requirements.

The product name as indicated in the General Guide Information for each product category is generally included as part of the UL Mark, but may be omitted when, in UL's opinion, the use of the name is unnecessary and the UL Mark is directly and permanently applied to the product by stamping, molding, ink-stamping, silk screening or similar processes.

A separable UL Mark (not part of a nameplate and in the form of decals, stickers or labels) will always include the following four elements: UL's symbol , the word "LISTED" or "CLASSIFIED," the product or category name, and a control number assigned by UL.

The complete UL Mark will appear on the product unless otherwise indicated in the General Guide Information for a specific product category.

When a UL Listed product is of such a size, shape, material or surface texture that, in UL's opinion, it is impossible to apply legibly the complete marking to the product, the complete UL Listing Mark will appear on the smallest unit container in which the product is packaged. In these cases UL may authorize the use of the UL symbol  on the product in addition to the complete UL Mark on the package.

When a UL Classified product is of such a size, shape, material or surface texture that, in UL's opinion, it is impossible to apply legibly the complete marking to the product, the complete UL Classification Mark will appear on the smallest unit container in which the product is packaged. In these cases there shall be no reference to UL on the product.

Refer to the General Guide Information for each product category for additional information on the specific UL Mark for the products in the category.

Identification of UL Listed Products

The UL Listing Mark generally includes the UL symbol or it may include other registered forms as authorized by UL. The UL Listing Mark includes: (1) the UL symbol shown below; (2) the word "LISTED" ; (3) the product identity; and (4) a control number assigned by UL.



Identification of UL Listed Gas-Fired Products

The UL Listing Mark for gas-fired products certified to UL Standards includes: (1) the UL symbol with the words "GAS-FIRED" above the UL symbol as shown below; (2) the word "LISTED" below the UL symbol; (3) the product identity; and (4) a control number assigned by UL.

GAS-FIRED



LISTED

The UL Listing Mark for gas-fired products certified to ANSI Z21 or Z83 Series Standards includes: (1) the UL symbol with the words "GAS-FIRED" above the UL symbol as shown below; (2) the word "LISTED" below the UL symbol; (3) the ANSI/CSA or ANSI/CGA Standard designation; and (4) a control number assigned by UL.

GAS-FIRED



LISTED

[identification of standard]

Identification of UL Listed Environmental and Public Health (EPH) Products

The UL Listing Mark for Environmental and Public Health (EPH) products certified to UL Standards includes: (1) the UL symbol with the letters EPH inside a triangular background as shown below; (2) the word “LISTED” below the UL symbol; (3) the product identity; and (4) a control number assigned by UL.



The UL Listing Mark for Environmental and Public Health (EPH) products certified to standards of other organizations for foreseeable hazards includes: (1) the UL symbol with the letters EPH inside a triangular background as shown below; (2) the word “LISTED” below the UL symbol; (3) the product identity; (4) the standard designation; and (5) a control number assigned by UL.



[identification of standard]

Identification of UL Classified Products

The UL Classification Mark may appear in various forms as authorized by UL. The UL Classification Mark includes: (1) the UL symbol; (2) the word “CLASSIFIED” above the UL symbol; (3) the product identity; (4) a control number assigned by UL; and (5) indication of the extent of UL’s evaluation of the product, e.g. “AS TO [nature of hazard] ONLY” ; rating or classification as specified in the General Guide Information pertaining to the product category; “IN ACCORDANCE WITH [designation and title of standard published by other organization]” ; or “FOR USE WITH [identification of specified product].” A typical Classification Mark is shown below:



AS TO [nature of hazard] ONLY
or
IN ACCORDANCE WITH
[identification of standard]

Identification of UL Classified Environmental and Public Health (EPH) Products

The UL Classification Mark for Environmental and Public Health (EPH) products certified to standards of other organizations for EPH evaluations only includes: (1) the UL symbol with the letters EPH inside a triangular background, as shown below; (2) the word “CLASSIFIED” above the UL symbol; (3) the product identity; (4) the standard designation; and (5) a control number assigned by UL.



[identification of standard]

Additional information regarding the UL Marks for Environmental and Public Health (EPH) can be found at the back of this directory under **Other UL Services** and online at www.ul.com/eph.

Identification of UL Listed Products that are Also Classified in Accordance with International or Regional Standards

The UL Listing Mark and Classification Mark shown above can be combined for products that not only meet the applicable UL requirements but also comply with the requirements of the applicable international or regional standards. For these products the combination UL Listing and Classification Mark is shown below:



LISTED

**ALSO CLASSIFIED
IN ACCORDANCE WITH
[identification of standard]**

Identification of Products Classified in Accordance with International or Regional Standards Only

UL provides a service for the Classification of products that have been determined to comply with the appropriate requirements of the applicable international or regional standards only. For these products, the Classification Mark may appear in various forms as authorized by UL. A typical form which may be authorized is shown below. When the complete Classification Mark cannot be applied to the product, no reference to UL on the product is permitted.



**[product identity]
IN ACCORDANCE WITH
[identification of standard]**

Products Listed by Report

Certain products are Listed under a special service designated as "Listed by Report." These are usually products or constructions for which there are no generally recognized installation requirements. The description of this type of product or construction and information concerning proper field assembly and/or installation are contained in a Report identified by the reference and date shown by the Listing. Products Listed by Report are eligible to bear a UL Mark, which includes a reference to the Report number and date. Copies of the Report may be obtained upon application to the company whose product is Listed.

Specifying UL Listed and Classified Products

Specifying UL Listed and Classified products up front is one of the best methods used by designers, consultants, insurers and others to help gain jurisdictional acceptance. A typical specification reads: "The [product] must bear the UL Mark." Or, if the specification cannot be that precise, an alternate wording would read: "The [product] must meet the requirements of UL. The UL Mark on the product will be accepted as evidence of compliance."

Products, equipment and materials evaluated by UL in accordance with international or regional standards only are intended for installation and use where the specified standards have been adopted.

Electrical Equipment for Use in Ordinary Locations (AALZ) GENERAL

Electrical equipment for use in unclassified (ordinary) locations is intended to be installed in accordance with ANSI/NFPA 70, “National Electrical Code” (NEC). Electrical equipment for use in hazardous (classified) locations, as defined by the NEC, may also be used in ordinary locations.

INVESTIGATION REQUIREMENTS AND STANDARDS

Electrical equipment for use in ordinary locations has been investigated with reference to risks to life and property and for potential conformity to the installation and use provisions of the NEC.

Some products are certified for uses not within the scope of the NEC. Such products are investigated for the specifications or the use conditions indicated in the general Guide Information for each product category.

The standards used to investigate products are identified in the general Guide Information for each product category. There may not always be a published standard for investigating a product to determine its acceptability for Listing or Classification. If no applicable standard is available, UL will exercise its judgment in the selection of applicable requirements from related standards and other sources to develop the requirements to cover uses and conditions for which specific requirements did not previously exist.

Products, equipment and construction materials certified by UL in accordance with international or regional standards only (e.g., products Classified to an IEC or ISO Standard) are intended for distribution, installation and use in areas of the world where the specified standards have been adopted and are in effect as national or regional standards.

The general Guide Information for each product category describes the limitations relative to the products covered, such as current, voltage and horsepower limits, markings, special descriptions and installation provisions.

INSTALLATION REQUIREMENTS

Ordinary locations, as defined in the NEC, include:

Damp Location — Partially protected locations under canopies, marquees, roofed open porches, and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, barns, and cold-storage warehouses.

Dry Location — A location not normally subject to dampness or wetness. A location classified as dry may be temporarily subject to dampness or wetness, as in the case of a building under construction.

Wet Location — Installations underground or in concrete slabs or masonry in direct contact with the earth, and locations subject to saturation with water or other liquids, such as vehicle washing areas, and locations exposed to weather and unprotected.

Outdoor Use — In general, individual appliances and equipment have been investigated only for use indoors, in dry locations. An exception is where outdoor use is specifically permitted by the Article of the NEC concerned with the product installation. See also the general Guide Information for the product category or included in the individual Listing. In some cases the title (e.g., Snow Movers, Swimming Pool Fixtures) indicates the conditions for which the product has been investigated.

Cord- and plug-connected appliances obviously intended for outdoor use, such as gardening appliances, are not intended for use in the rain, and should be stored indoors when not in use.

Enclosure Types

Section 110.11 of the NEC specifies that equipment shall be identified for use in certain operating environments. Section 300.6 provides guidance regarding protection against corrosion and Table 430.91 provides the basis for selecting motor controller enclosure types for use in specific locations. To assist inspection authorities, UL requires type designations on power distribution and control equipment enclosures such as cabinets and cutout boxes, enclosed panelboards or switchboards, meter sockets, enclosed circuit breakers or switches, industrial control and other equipment. The following table summarizes the intended uses of the various type enclosures for other than hazardous locations:

Enclosure Type Number	Provides a Degree of Protection Against the Following Environmental Conditions*
1	Indoor use
2	Indoor use, limited amounts of falling water
3R	Outdoor use, undamaged by the formation of ice on the enclosure**
3RX	Same as 3R plus resists corrosion
3	Same as 3R plus windblown dust
3X	Same as 3 plus resists corrosion
3S	Same as 3R plus windblown dust, external mechanisms remain operable while ice laden
3SX	Same as 3S plus resists corrosion
4	Outdoor use, splashing water, windblown dust, hose-directed water, undamaged by the formation of ice on the enclosure**
4X	Same as 4 plus resists corrosion
5	Indoor use to provide a degree of protection against settling airborne dust, falling dirt, and dripping noncorrosive liquids
6	Same as 3R plus entry of water during temporary submersion at a limited depth
6P	Same as 3R plus entry of water during prolonged submersion at a limited depth
12, 12K	Indoor use, dust, dripping noncorrosive liquids
13	Indoor use, dust, spraying water, oil and noncorrosive coolants

*All type enclosures provide a degree of protection against ordinary corrosion and against accidental contact with the enclosed equipment when doors of covers are closed and in place. All type enclosures provide protection against a limited amount of falling dirt.

**All outdoor type enclosures provide a degree of protection against rain, snow and sleet. Outdoor enclosures are also suitable for use indoors if they meet the environmental conditions present.

An enclosure that complies with the requirements for more than one type of enclosure may be marked with multiple designations.

Enclosures marked with a type may also be marked as follows:

- A Type 1 enclosure may be marked “Indoor Use Only”
- A Type 3, 3X, 3S, 3SX, 4, 4X, 6 or 6P enclosure may be marked “Raintight”
- A Type 3R or 3RX enclosure may be marked “Rainproof”
- A Type 4, 4X, 6 or 6P enclosure may be marked “Watertight”
- A Type 3X, 3RX, 3SX, 4X or 6P enclosure may be marked “Corrosion Resistant”
- A Type 2, 5, 12, 12K or 13 enclosure may be marked “Driptight”
- A Type 3, 3X, 3S, 3SX, 5, 12K or 13 enclosure may be marked “Dusttight”

For equipment designated “Raintight,” testing designed to simulate exposure to a beating rain will not result in entrance of water. For equipment designated “Rainproof,” testing designed to simulate exposure to a beating rain will not interfere with the operation of the apparatus or result in wetting of live parts and wiring within the enclosure. “Watertight” equipment is so constructed that water does not enter the enclosure when subjected to a stream of water. “Corrosion resistant” equipment is so constructed that it provides degree of protection against exposure to corrosive agents such as salt spray.

“Driptight” equipment is so constructed that falling moisture or dirt does not enter the enclosure. “Dusttight” equipment is so constructed that circulating or airborne dust does not enter the enclosure.

Sizes and Ratings

The scope of product sizes and ratings appearing in the general Guide Information for some product categories is intended to indicate the current range of Listed products, however, it is not necessarily indicative of limitations for those Listed products.

Marked ratings of utilization equipment include ampere, wattage or volt-ampere ratings. Motor-operated utilization equipment may also be marked with a horsepower rating. The actual marked ratings (other than the horsepower rating) and other markings or instructions, if any, are to be used to select branch-circuit conductors, branch-circuit overcurrent protection, control devices and disconnecting means.

The ampere or wattage marking on power-consuming equipment is valid only when the equipment is supplied at its marked rated voltage. In general, the current input to heating appliance or resistance heating equipment will increase in direct proportion to an increase in the supply voltage, while the current

input to an induction motor supplying a constant load will increase approximately in direct proportion to a decrease in the supply voltage. These increases in current can cause overcurrent protection devices to open even when these devices are properly selected on the basis of nameplate ratings.

Appliance and Utilization Equipment Terminations

Except as noted in the general Guide Information for some product categories, most terminals, unless marked otherwise, are for use only with copper wire. If aluminum or copper-clad aluminum wire can be used, marking to indicate this fact is provided. Such marking is required to be independent of any marking on terminal connectors, such as on a wiring diagram or other visible location. The marking may be in an abbreviated form, such as “AL-CU.”

Except as noted in the general Guide Information for some product categories, the termination provisions are based on the use of 60°C insulated conductors in circuits rated 100 A or less, and the use of 75°C insulated conductors in higher rated circuits as specified in Table 310.16 of the NEC. If the termination provisions on equipment are based on the use of other conductors, the equipment is either marked with both the size and temperature rating of the conductors to be used or with only the temperature rating of the conductors to be used. If the equipment is only marked for use with conductors having a higher (75 or 90°C) temperature rating (wire size not specified), the 60°C ampacities (for circuits rated 100 A or less) and 75°C ampacities (for circuits rated over 100 A) should be used to determine wire size. Conductors having a temperature rating higher than specified may be used, though not required, if the size of the conductors is determined on the basis of the 60°C ampacity (circuits rated 100 A or less) or 75°C ampacity (circuits rated over 100 A).

Distribution and Control Equipment Terminations

Most terminals are suitable for use only with copper wire. Where aluminum or copper-clad aluminum wire can or shall be used (some crimp terminals may be Listed only for aluminum wire), there is marking to indicate this. Such marking is required to be independent of any marking on terminal connectors, such as on a wiring diagram or other visible location. The marking may be in an abbreviated form, such as “AL-CU.”

Except as noted in the following paragraphs or in the general Guide Information for some product categories, the termination provisions are based on the use of 60°C ampacities for wire size Nos. 14-1 AWG, and 75°C ampacities for wire size Nos. 1/0 AWG and larger, as specified in Table 310.16 of the NEC.

Some distribution and control equipment is marked to indicate the required temperature rating of each field-installed conductor. If the equipment, normally intended for connection by wire sizes within the range 14-1 AWG, is marked “75C” or “60/75C,” it is intended that 75°C insulated wire may be used at full 75°C ampacity. Where the connection is made to a circuit breaker or switch within the equipment, such a circuit breaker or switch must also be marked for the temperature rating of the conductor.

A 75°C conductor temperature marking on a circuit breaker or switch normally intended for wire sizes 14-1 AWG does not in itself indicate that 75°C insulated wire can be used unless 1) the circuit breaker or switch is used by itself, such as in a separate enclosure, or 2) the equipment in which the circuit breaker or switch is installed is also so marked.

A 75 or 90°C temperature marking on a terminal (e.g., AL7, CU7AL, AL7CU or AL9, CU9AL, AL9CU) does not in itself indicate that 75 or 90°C insulated wire can be used unless the equipment in which the terminals are installed is marked for 75 or 90°C.

Higher temperature rated conductors than specified may be used if the size is based on the above statements.

Copper-clad Aluminum Conductors — Copper-clad aluminum conductors are subject to the ampacity requirements applicable to aluminum conductors.

Copper Pigtail Leads — Copper pigtail leads may be used with aluminum or copper-clad aluminum supply wires in dry locations if 1) the splicing devices are Listed for use in joining copper to aluminum, 2) there is sufficient wiring space, and 3) the means provided for connecting the wiring system are acceptable for the wire size used.

Wiring Devices — Supply terminals of 15 A and 20 A switches and receptacles not marked “CO/ALR” are for use with copper and copper-clad aluminum conductors only. Terminals marked “CO/ALR” are for use with aluminum, copper and copper-clad aluminum conductors.

Screwless pressure terminal connectors of the conductor push-in type are for use only with copper and copper-clad aluminum conductors, both solid and stranded, unless otherwise limited by marking.

Terminals of switches and receptacles rated 30 A and above not marked “AL/CU” are for use with copper conductors only. Terminals of switches rated 30 A and above marked “AL/CU” are for use with aluminum, copper and copper-clad aluminum conductors.

Wire Connectors — Combinations of dissimilar conductors in terminal or splicing connectors are acceptable only in dry locations and when the connectors are identified as suitable for such intermixing. See also the information under Wire Connectors and Soldering Lugs (ZMVV).

Terminals — Product terminals, including wire connectors and terminal screws, are acceptable for connection of only one conductor, unless there is marking or a wiring diagram indicating the number of conductors which may be connected.

Tightening Torque — Some equipment may be marked to show a tightening torque for wire connectors intended for use with field wiring.

Supply Cords — When flexible supply cords or cord sets are replaced on utilization equipment and appliances, the replacement should be of the same type, AWG size, voltage rating and temperature rating as originally used.

INSTRUCTIONS AND PRODUCT MARKINGS

These products are intended to be installed in accordance with the installation instructions provided with the product. It is critical that the cautionary statements and installation and operating instructions on the product and in accompanying literature be followed.

FIELD MODIFICATIONS

The UL Mark applies to the product as it is originally manufactured when shipped from the factory. Authorized use of the UL Mark is the manufacturer's declaration that the product was originally manufactured in accordance with the applicable requirements. UL does not know what the effect of a modification may have on the safety of the product or the continued validity of the UL certification mark unless the field modifications have been specifically investigated by UL. Unless UL investigates a modified product, UL cannot indicate that the product continues to meet UL's safety requirements.

The only exception for a field modification authorized by UL is when the product has specific replacement markings. For example, a switchboard may have specific grounding kits added in the field. The switchboard is marked with a list of specific kit numbers that have been investigated for use in that particular switchboard. Only grounding kits that are included on the product have been investigated for use in that product.

MARINE EQUIPMENT

Certain equipment has been specifically investigated and certified for use aboard marine vessels. Such equipment has been investigated in accordance with the applicable requirements of UL, the United States Coast Guard (USCG), the American Boat and Yacht Council, Inc. (ABYC), and the National Fire Protection Association (NFPA). For additional information, see the general Guide Information for the specific product category. Equipment bearing UL's Marine Mark is suitable for use only with stranded copper wire.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

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2012 ELECTRICAL APPLIANCE AND UTILIZATION EQUIPMENT DIRECTORY

ADAPTERS, VEHICLE BATTERY (AATX)

ADAPTERS, VEHICLE BATTERY (AATX)

GENERAL

This category covers portable adapters that are intended to be supplied from the battery-powered electrical system of a vehicle. Connection to a vehicle electrical system is by means of a connector intended for insertion into a cigarette lighter receptacle or vehicle power outlet. Vehicle battery adapters may supply output for appliances such as portable computers, telephones, radios, tape players, battery chargers and tools.

Products covered under this category include (1) cord assemblies consisting of the connector for insertion into a receptacle, a flexible cord and connector intended for connection to an appliance, (2) units consisting of the connector for insertion into a receptacle, a flexible cord and permanently attached filtering or regulating circuitry, which may include an additional enclosure, output cord and connector or battery receptacle.

This category does not cover: (1) products intended for marine use in areas where ignition-protected equipment is required, and (2) power inverters intended to be supplied from the battery-powered electrical system of a vehicle; see Power Converters/Inverters and Power Converter/Inverter Systems (QPPY).

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate products in this category is UL 2089, "Vehicle Battery Adapters."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Vehicle Battery Adaptor," "Vehicle Battery Adapter" (or "VBA") or "Vehicle Power Adapter" (or "VPA"), or other appropriate product name as shown in the individual Listings.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

ASTEC INTERNATIONAL LTD - PHILIPPINE BRANCH 3RD & 4TH FL, TECHNO PLAZA ONE BLDG 18 ORCHARD RD EASTWOOD CITY CYBERPARK, BAGUMBAYAN, QUEZON CITY 1110 PHILIPPINES	E208711
ATECH OEM INC 2F NO 135 LANE 235 BAOCIAO RD SINDIAN CITY, TAIPEI COUNTY 23145 TAIWAN	E312777
BILLION ELECTRIC CO LTD 8TH FL 192 CHUNG HSING RD, SEC 2, HSIN TIEN CITY, TAIPEI 231 TAIWAN	E341331
BLUEVISION HK LTD UNIT B 16/F JCG BLDG 16 MONGKOK RD, KOWLOON HONG KONG	E313414
CANON INC 30-2 SHIMOMARUKO 3-CHOME OHTA-KU, TOKYO 146- 8501 JAPAN	E179803
CASIO COMPUTER CO LTD 2-1 SAKAECHO 3-CHOME, HAMURA-SHI, TOKYO 205- 8555 JAPAN	E122110
CHANNEX TECHNOLOGY CO LTD 1ST FL 182-184 TONG RONG ST, SHU-LIN, TAIPEI HSIEN 238 TAIWAN	E242641
CHIAO LIN ELECTRONICS CO LTD 37 ALLEY 16 LANE 337 TA-TUNG RD SEC 1 SHI-CHIH DISTRICT, NEW TAIPEI 221 TAIWAN	E249120
CINCON ELECTRONICS CO LTD 8-1 FU KUNG RD FU HSING PARK FU HSING HSIANG, CHANGHUA HSIEN 506 TAIWAN	E234150
DEE VAN ENTERPRISE CO LTD NO 5 PAO-KAO RD, HSIN-TIEN, TAIPEI 231 TAIWAN	E323823
DELTA ELECTRONICS INC 3 TUNGYUAN RD CHUNGLI INDUSTRIAL ZONE, TAOYUAN COUNTY 32063 TAIWAN	E237716
DONGGUAN CHANNEX ELECTRONICS CO LTD 1ST INDUSTRIAL AREA SICUN SHUIE TOWN, DONGGUAN, GUANGDONG CHINA	E223571



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ADAPTERS, VEHICLE BATTERY (AATX)

FAIRWAY ELECTRONIC CO LTD 3RD FL-2 502-2 YUAN SAN RD, CHUNG-HO, TAIPEI HSIEN 235 TAIWAN	E204392
FLEXTRONICS SALES & MARKETING (A-P) LTD LEVEL 3 ALEXANDER HOUSE 35 CYBERCITY, EBENE MAURITIUS	E300829
FORMOSA ELECTRONIC INDUSTRIES INC 5TH FL NO 8 LANE 130 MIN CHUAN RD HSIN-TIEN CITY, TAIPEI 231 TAIWAN	E323500
GROUP WEST INTERNATIONAL 1166 REDFERN CT, CONCORD CA 94521	E240482
GUANGDONG JETFAST PORTABLE LIGHTING CO LTD NO 18 NANTOU DADAO EAST NANTOU, ZHONGSHAN, GUANGDONG 528427 CHINA	E332765
HITACHI KOKI CO LTD 1060 TAKEDA, HITACHINAKA-SHI, IBARAKI-KEN 312- 8502 JAPAN	E315602
HUIZHOU SANHUA INDUSTRIAL CO LTD ZHONGKAI HI-TECH DEVELOPMENT ZONE 14 ZONE, HUIZHOU, GUANGDONG 516008 CHINA	E332632
ICCNEXERGY INC-DESIGN CENTER 3RD FL, WESTERN CHANGHUA BLDG 929 XING YE RD, NANCUN TOWN PANYU, GUANGZHOU, GUANGDONG 511442 CHINA	E306739
INSEAT SOLUTIONS L L C 11839 E SMITH AVE, SANTA FE SPRINGS CA 90670	E179604
INTERMEC TECHNOLOGIES CORP 6001 36TH AVE W, EVERETT WA 98203	E311147
KENIC ELECTRIC MFG CO LTD FLAT L, 9/F WINNER FACTORY BLDG 55 HUNG TO RD, KWUN TONG KOWLOON HONG KONG	E305658
LEADER ELECTRONICS INC 8F 138 LN 235 BAOQIAO RD XINDIAN DISTRICT, NEW TAIPEI 23145 TAIWAN	E253567
LIAN YAO ELECTRONIC TECHNOLOGY (SZ) CO LTD THE THIRD INDUSTRIAL ZONE SHANGXIA WEI, SHASAN VILLAGE SHAJING TOWN, BAOAN DISTRICT, SHENZHEN, GUANGDONG 518100 CHINA	E327377
LONG TU ELECTRONIC CO LTD NO 181 NORTH LIN KOU DISTRICT LING YUAN ST, JINJIANG, FUJIAN 362200 CHINA	E315873
MAD CATZ INTERACTIVE(ASIA)LTD UNIT 2005-08, 20TH FL MIRAMAR TOWER, 132 NATHAN RD TSIMSHATSUI, KOWLOON HONG KONG	E348965
MILWAUKEE ELECTRIC TOOL CORP 13135 W LISBON RD, BROOKFIELD WI 53005	E101626
MOBICOOL ELECTRONIC (SHENZHEN) CO LTD ROOM 1402-1404, ZHUOYUE BLDG 1 FUHUA RD, FUTIAN CENTRAL ZONE, SHENZHEN, GUANGDONG 518033 CHINA	E238980
NINGBO YUNHUAN ELECTRONICS GROUP CORP SIMEN TOWN, YUYAO, ZHEJIANG 315472 CHINA	E173544
ONE WORLD TECHNOLOGIES INC 1428 PEARMAN DAIRY RD, ANDERSON SC 29625	E250916
OUTSTANDING ELECTRONICS MANUFACTURER CO LTD 3RD FL 541 CHUNG CHENG RD, HSIN TIEN, TAIPEI HSIEN 231 TAIWAN	E316229



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PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA 1 PANASONIC WAY, SECAUCUS NJ 07094	E51096
PANTENE INDUSTRIAL CO LTD UNIT 1903-05 19/F NAN FUNG TOWER 173 DES VOEUX ROAD, CENTRAL HONG KONG	E213284
PHIHONG TECHNOLOGY CO LTD 568 FU XING 3RD RD GUISHAN SHIANG, TAOYUAN HSIEN 33383 TAIWAN	E200954
PHILIPS (CHINA) INVESTMENT CO LTD NO 9 LANE 888 TIANLIN RD 200233, SHANGHAI CHINA	E346812
RATON TECHNOLOGY DEVELOPMENT CO LTD UNIT 906, 9TH FL YUE FUNG INDUSTRIAL BLDG 35~45 CHAI WAN KOK ST, TSUEN WAN, N T HONG KONG	E308338
ROBERT BOSCH GMBH AUF DER BREIT 4 76227, KARISRUHE GERMANY	E340353
ROBERT BOSCH L L C 2800 S 25TH AVE, BROADVIEW IL 60155	E340842
SAFCO CORP 5404 W TOUHY AVE, SKOKIE IL 60077	E226793
SALCOMP PLC SALORANKATU 10 PO BOX 95 24101, SALO FINLAND	E338708
SHENZHEN ACT INDUSTRIAL CO LTD BLDG 5, BEISHAN INDUSTRIAL PARK BEISHAN RD, YANTIAN DISTRICT, SHENZHEN, GUANGDONG 518000 CHINA	E332229
SHENZHEN FRECOM ELECTRONICS CO LTD FRECOM BLDG FUCHUAN TECHNOLOGY ZONE TONGFUYU INDUSTRY GUANGMING ST BAOAN DISTRICT, SHENZHEN, GUANGDONG 518107 CHINA	E317705
SHENZHEN ZHENGERYA TECHNOLOGY CO LTD 5 UNION ST, LONGCHENG COMMUNITY ZHU SHI-YANG KU INDUSTRIAL PARK BLDG C, PLANT DISTRICT, SHENZHEN, GUANGDONG 518116 CHINA	E335767
SINBON ELECTRONICS CO LTD 582 KUO-HWA RD, MIAO LI 360 TAIWAN	E340436
SKYCABLE ENTERPRISE CO LTD 3RD FL 1 ALLEY 6, LANE 45 PAO-SHIN RD, SHIN TIEN, TAIPEI HSIEN 231 TAIWAN	E325308
SONY ELECTRONICS INC 16530 VIA ESPRILLO, SAN DIEGO CA 92127	E111114
STAR WERKS INC 1237 CAPITOL DR, ADDISON IL 60101	E205661
STRAX AMERICAS INC 1867 NW 97TH AVE, MIAMI FL 33172	E347905
SUN YONG ELECTRONICS CO LTD TAISHI INDUSTRIAL CENTER YUWOTOU TOWN, GUANGZHOU, GUANGDONG CHINA	E251227
SUNLUXE ENTERPRISES LTD 15TH FL, ROOM 1504-1506 CONVENTION PLAZA, OFFICE TOWER 1 HARBOR RD, WAN CHAI HONG KONG	E319307
SUPA TECHNOLOGY CO LTD 7F NO 19-5 SANCHONG RD NANGANG DISTRICT, TAIPEI 115 TAIWAN	E323874
SYMBOL TECHNOLOGIES INC 1 SYMBOL PLZ, HOLTSVILLE NY 11742	E326318



TAILING TECHNOLOGY LTD UNIT D, 9/F HARIBEST INDUSTRIAL BUILDING NOS 45-47 AU PUI WAN STREET, FOTAN, SHATIN N T HONG KONG	E317704
TAIWAN LINE TEK ELECTRONICS CO LTD 272 BEI SHEN RD, SEC 3, SHEN KENG HSIANG, TAIPEI HSIEN 222 TAIWAN	E323420
TAMURA CORP 5-5-30 CHIYODA, SAKADO-SHI, SAITAMA-KEN 350-0214 JAPAN	E122024
TECH-POWER INTERNATIONAL CO LTD 3 ON 9TH FL WEALTH COMMERCIAL CENTRE 48 KWONG WA ST, KOWLOON HONG KONG	E332024
TEN PAO INDUSTRIAL CO LTD 6TH FL, ROOM 10-11 KWONG SANG HONG CENTRE KWUN TONG, 151-153 HOI BUN RD, KOWLOON HONG KONG	E321676
TIANXUN ELECTRONIC (YANTAI) CO LTD YAQIAN VILLAGE CHAOSHUI TOWN, PENGLAI, SHANDONG 265617 CHINA	E351093
TRUMP WAY CORP LTD 7TH FL, KIN ON COMM BLDG 49-51 JERVOIS ST, SHEUNG WAN HONG KONG	E335823
UNION ELECTRIC PLUG & CONNECTOR CORP 12-4TH FL 160 MIN-CHUAN E RD, SEC 6, TAIPEI 114 TAIWAN	E308888
WELL SHIN TECHNOLOGY CO LTD 196 XINHU 3RD NEIHU DISTRICT, TAIPEI 114 TAIWAN	E323121
XIAMEN KELI ELECTRONICS CO LTD NO.19,XINGLIN NORTH THREE RD JIMEI DISTRICT, XIAMEN, FUJIAN 361022 CHINA	E328636
YANG SHENG ELECTRICAL FACTORY 3 SHENG YUAN ST YAYUAN INDUSTRIAL ZONE NANCHENG DISTRICT, DONGGUAN, GUANGDONG CHINA	E303356

AIR CONDITIONING EQUIPMENT (AAYZ)

ACCESSORIES, AIR CONDITIONING EQUIPMENT (ABFY)

GENERAL

This category covers accessories intended for installation only on Listed equipment as designated in the individual Listings of the equipment and accessory. These accessories are intended primarily for field installation, but may be factory installed.

The equipment on which an accessory covered under this category may be field installed is marked to indicate that it is Listed for use with the specific accessory as designated by model, catalog number, part number, etc. in this category. Markings on the equipment also indicate any changes in the equipment ratings with the accessory installed.

Information concerning field wiring connections, mounting location, installation clearances, etc., are marked on the accessory, and/or in detailed installation instructions accompanying each accessory. For permanently connected equipment, the wiring termination provisions are based on tests during product investigation, and Table 310.16 of ANSI/NFPA 70, "National Electrical Code," as follows:

1. 75°C insulated conductors at the 75°C ampacities.
2. 90°C insulated conductors at the 75°C ampacities, in which case the equipment is marked for 90°C conductors.
3. Insulation temperature rating of 75 or 90°C and wire size as marked on the unit.

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 1995, "Heating and Cooling Equipment."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Air Conditioning Equipment Accessory."

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

ALLIED AIR ENTERPRISES INC 215 METROPOLITAN DR, WEST COLUMBIA SC 29170	SA11615
Electric heater accessories , Models*a 991553, 991554, 991560, 991587, 991588, 991555, 991556, 991577, 991578, 991579, 991580, 991561, 991589, 991590, 991557, 991558, 991581, 991582, 991583, 991584, 991562, 991591, 991592, 991559, 991585, 991586, 991593, 991594, 991595, 991596, 991861 may be suffixed by two additional digits.	
Electric heat accessories , Models*b,c AHEFN05A-1, AHEFN07A-1, AHEFN10A-1, AHEFC12A-1, AHEFC15A-1, AHEFC20A-1, AHEFC25A-1, AHEFC30A-1.	



Accessories, Air Conditioning Equipment (ABFY)–Continued

Model*b AHEF#09B-1, AHEF#15B-1, AHEFC20B-1, AHEFC22B-1, AHEFC30B-1.

Models*d 0655009-01, 0655009-02, 0655009-03, 0655009-04, 0655009-05, 0655009-06, 0655009-07, 0655009-08, 0655009-09, 0655009-11, 0655009-25.

Hot water heat accessories, Models*a 991565, 991566, 991567, 991568, 991569, 991570, 991571, 991572, 991573, 991574, 991575, 991576, 991599, 991600, 991601, 991602, 991603, 991604, 991605, 991606, 991607, 991608, 991609, 991610.

*a May be factory or field installed in the Manufacturers Listed heating and Cooling Equipment, Fan Coil Unit Model Series BA and BS.

*b May be factory or field installed in the Manufacturers Listed Heating and Cooling Equipment, Electric Central Heating Furnace Models EFC08SA, -12SA, -14MA, -16MA, -20LA.

*c May be factory or field installed in the Manufacturers Listed Heating and Cooling Equipment, Electric Central Heating Furnace Model EFV08SA.

*d May be factory or field installed in the Manufacturers Listed heating and Cooling Equipment, Fan Coil Unit Model Series RC and RS.

#-May be C or N.

APPLIED COMFORT PRODUCTS INC

SA32901

1210 BALMORAL RD, CAMBRIDGE, ON I1T 1A5 CANADA

Hydronic heating coil accessories, Models*a RAVHW1, RAVHW2, RAVHW3.

*a May be for factory- or field-installed on Sharp Electronic Corp., (SA12534), Listed Heating and Cooling Equipment, Series AZ75W.

FRIEDRICH AIR CONDITIONING CO

SA13016

SUITE 500 10001 REUNION PL, SAN ANTONIO TX 78216

Subbase kits, PXSB, PXPC15, PXPC20, PXPC30.

Disconnect switch kit, PXDS.

Conduit kit, PXCI.

Desk control kit, PXDC.

Standard louver, PXGA.

Architectural louvers, PXAA, PXDB, PXSC.

Wall sleeve, PXWS.

Wall thermostat, Model RT2.

May be factory or field installed in the Manufacturers Listed heating and Cooling Equipment, Packaged Terminal Air Conditioners, Model Series PTAC and PTHP.

TRANE U S INC

SA6944

3600 PAMMEL CREEK RD, LA CROSSE WI 54601

Remote display panel, Part No. X13650359.

Sequence control panel assembly*a, Part No. CVMA003NAA followed by 0 or A.

*aFor use with the The Trane Company's air conditioning liquid chillers.

UNITED TECHNOLOGIES ELECTRONIC CONTROLS INC

SA7240

3650 W 200 N RIVERFORK DR E, HUNTINGTON IN 46750

Reset controls, Part. Nos. HT203777-1, -2.

For installation on air conditioning liquid chillers Listed for Carrier Air Conditioning Co.

ACCESSORIES, AIR DUCT MOUNTED (ABQK)**USE AND INSTALLATION**

This category covers products employing ultraviolet lamps or ionization tubes for the purpose of treating air and having provisions for connection to heating and ventilation ducts used for air distribution.

This equipment is rated 600 V ac or less and is intended for installation in accordance with ANSI/NFPA 70, "National Electrical Code." Equipment to be connected to an air duct system is additionally intended for installation in accordance with ANSI/NFPA 90A, "Standard for the Installation of Air-Conditioning and Ventilating Systems," or ANSI/NFPA 90B, "Standard for the Installation of Warm Air Heating and Air-Conditioning Systems."

This equipment is suitable for rigid sheet-metal air ducts only. Installation should be such that the structural integrity of the duct is not compromised.

Equipment employing ionization tubes is not intended for installation downstream from a humidifier or where similar exposure to other sources of moisture is likely.

PRODUCT MARKINGS

Information concerning wiring connections, mounting location, installation clearances, etc., are either marked on the accessory and/or in detailed installation instructions accompanying each accessory.

Products intended for use with germicidal lamps are marked "This product (fixture) is designed for use with germicidal lamps and must be installed in compliance with competent technical directions so that the user's eye and bare skin will not be subjected to ultraviolet rays."

UNEVALUATED FACTORS

The health aspects associated with the use of these products and their ability to aid in disinfection of environmental air have not been investigated. This limitation is specified in the instruction manual and on the product for all products covered under this category.

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ) and Heating, Cooling, Ventilating and Cooking Equipment (AAHC).

REQUIREMENTS

The basic standards used to investigate products employing ultraviolet lamps in this category are ANSI/UL 153, "Portable Electric Luminaires," ANSI/UL 1598, "Luminaires," and ANSI/UL 1995, "Heating and Cooling Equipment."

The basic standards used to investigate products employing ionization tubes in this category are ANSI/UL 1995 and ANSI/UL 867, "Electrostatic Air Cleaners."

UL MARK

The Classification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Classification and Follow-Up Service. The Classification Mark for these products includes the UL symbol, the word "CLASSIFIED" above the UL symbol (as illustrated in the Introduction of this Directory), and the following additional information:

**AIR DUCT MOUNTED ACCESSORY
WITH RESPECT TO ELECTRIC SHOCK, FIRE AND CASUALTY HAZARDS ONLY
Control No.**



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Accessories, Air Duct Mounted (ABQK)–Continued

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AERISA INC 204 S RIVER DR, TEMPE AZ 85281	E251521
AIR-HANDLERS CLEAN AIR CONCEPTS INC 1109 OLD OKEECHOBEE RD, WEST PALM BEACH FL 33401	E169819
AMERICAN AIR & WATER INC 12 GIBSON DR, HILTON HEAD ISLAND SC 29926	E42012
AMERICAN ULTRAVIOLET CO 212 N MT ZION RD, LEBANON IN 46052	E316411
AQUA TREATMENT SERVICES INC 194 HEMPT RD, MECHANICSBURG PA 17050-2604	E341657
AUTOMATED ASSEMBLY INC 259 THIRD CONCESSION RD PO BOX 490, PRINCETON, ON N0J 1V0 CANADA	E205015
CARRIER CORP 7310 W MORRIS ST, INDIANAPOLIS IN 46231	E224113
CLEAN AIR PARTNERS SUITE 204 418 MEADOW ST, FAIRFIELD CT 06824	E313742
DUST FREE L P 1112 INDUSTRIAL DR PO BOX 519, ROYSE CITY TX 75189	E213952
FIELD CONTROLS L L C 2630 AIRPORT RD, KINSTON NC 28504	E206039
GENESIS AIR INC 5202 CR 7350, SUITE D, LUBBOCK TX 79424	E326567
HOME HEALTH PRODUCTS L L C PMB 322 9702 GAYTON RD, RICHMOND VA 23233	E223905
HONEYWELL INTERNATIONAL INC ACS ENVIRONMENTAL & COMBUSTION CONTROLS 1985 DOUGLAS DR N, GOLDEN VALLEY MN 55422	E223009
LUMALIER CORP 743 S DUDLEY ST, MEMPHIS TN 38104	E183446
MICROGENIX CANADA INC 6021 YONGE ST, TORONTO, ON M2M 3W2 CANADA	E231865
PLASMA AIR INTERNATIONAL INC 35 MELROSE PL, STAMFORD CT 06902	E313835
RUKS ENGINEERING LTD UNIT 18 18 AUTOMATIC RD, BRAMPTON, ON L6S 5N5 CANADA	E337863
STERIL-AIRE INC 2840 N LIMA ST, BURBANK CA 91504	E233711
THERMO PRODUCTS L L C 5235 W STATE RD 10 PO BOX 217, NORTH JUDSON IN 46366	E196920
ULTRAVATION 212 IDEAL WAY PO BOX 165, POULTNEY VT 05764	E226860
ULTRAVIOLET DEVICES INC 26145 TECHNOLOGY DR, VALENCIA CA 91355	E212213
UV RESOURCES L L C PO BOX 800370, SANTA CLARITA CA 91380-0370	E341088



AIR CONDITIONERS, PACKAGED TERMINAL (ACKZ)**GENERAL**

This category covers packaged terminal air conditioners and packaged terminal heat pumps. They consist of a wall sleeve, outdoor louvers, and a combination of assemblies designed as a unit and intended for mounting through the wall. They include refrigeration components as the prime source of cooling and dehumidification. They may also have provision for heating by hot water, reverse cycle refrigeration, steam, electric resistance heat or gas-fired burner(s). These units employ alternating current, hermetic refrigerant motor compressors with factory charged refrigeration systems and include a means for ventilation and circulating air. Accessories intended for use with packaged terminal air conditioners are also covered under this category.

This category does not cover equipment intended for connection to duct systems for the purpose of providing central cooling and/or heating.

INSTALLATION

This equipment is rated 600 V or less and intended to be installed in accordance with the requirements of ANSI/NFPA 70, "National Electrical Code." It is intended for installation through walls and basically intended to serve a single room, zone or space, although some units may have provision to additionally serve an adjacent room.

Permanently-connected units are intended to be connected to a branch circuit protected by overcurrent devices that do not exceed the value marked on the data plate or attached wiring diagram. This marked protective device rating is the maximum for which the unit has been investigated and found acceptable. If the marking specifies fuses, the unit is intended to be protected by fuses only. If time-delay fuses are required for restarting, the unit is so marked.

Units employing gas heat are intended to be installed in accordance with the installation instructions and markings on the appliance, and are intended to be connected to a gas supply of the type specified on the appliance. Equipment is intended to be installed in accordance with the current edition of ANSI Z223.1/NFPA 54, "National Fuel Gas Code."

PRODUCT MARKINGS

Cord-connected units that require a circuit breaker or time-delay fuses to permit restarting are so marked.

Units with water cooled condensers investigated for connection to ground water sources are so marked.

Some equipment may be designed to accept accessories in the field. In such cases, both the air conditioner and the accessory are marked to relate the two for proper installation.

This equipment typically consists of multiple assemblies or sections that are shipped in separate packages to be assembled in the field. The sections are marked to relate to one another for proper installation. The section incorporating the primary nameplate contains an essential elements label that details the other sections needed to complete the installation.

UNEVALUATED FACTORS

The effect of these units on the fire resistance rating of the wall has not been investigated.

RELATED PRODUCTS

See Air Conditioners, Room (ACOT) and Gas-fired Room Heaters, Vented (LPNH). Air conditioners for spot cooling or environmental control of electronic enclosures are covered under Air Conditioners, Special Purpose (ACVS). Dehumidifiers are covered under Dehumidifiers, Refrigeration Type (AFFT). Air conditioning equipment designed for duct connection to multiple rooms is covered under Heating and Cooling Equipment (LZFE).

ADDITIONAL INFORMATION

For additional information, see Heating, Cooling, Ventilating and Cooking Equipment (AAHC) and Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate the refrigeration and heating (other than gas) portions of the products in this category is UL 484, "Room Air Conditioners."

The basic standard used to investigate the gas heating portion of the products in this category, if provided, is the current edition and effective addenda thereto of ANSI Z21.86/CSA 2.32, "Vented Gas-Fired Space Heating Appliances."

UL MARK

The Listing Mark and Gas-fired Listing Mark, if gas heat is provided, of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and one of the following product names as appropriate: "Packaged Terminal Air Conditioner," "Packaged Terminal Heat Pump," "Section of Packaged Terminal Air Conditioner," "Cooling Portion of Packaged Terminal Air Conditioner" or "Accessory for Packaged Terminal Air Conditioner."

The Gas-fired Listing Mark for the gas heating portion of these products, if provided, includes the UL symbol with the words "GAS-FIRED" above the UL symbol and the word "LISTED" below the UL symbol (as illustrated in the Introduction of this Directory), a control number, the product name "Gas Heating Portion of Packaged Terminal Air Conditioner," and the standard designation "ANSI Z21.86(+)/CSA-2.32(+)-(+)" Fan-Type Direct Vent Wall Furnace."

(+) Suffix letter of latest addendum if applicable

(++) Issue year of latest addendum or standard

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CARRIER INTERAMERICA CORP
3450 NW 115TH AVE, DORAL FL 33178

SA33400

EAIR L L C
12201 NW 107TH AVE, MEDLEY FL 33178

SA33269

ELECTROLUX HOME PRODUCTS INC
10200 DAVID TAYLOR DR, CHARLOTTE NC 28262

SA33529

FEDDERS/ISLANDAIRE INC
22 RESEARCH WAY, EAST SETAUKET NY 11733

SA9301

FRIEDRICH AIR CONDITIONING CO
SUITE 500 10001 REUNION PL, SAN ANTONIO TX 78216

SA7659

GD MIDEA AIR-CONDITIONING EQUIPMENT CO LTD
PENG LAI RD BEIJIAO, SHUNDE, GUANGDONG 528311 CHINA

SA33645

GENERAL ELECTRIC CO GE APPLIANCES
APPLIANCE PARK, LOUISVILLE KY 40225

SA7526



Documents
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Air Conditioners, Packaged Terminal (ACKZ)–Continued

GREE ELECTRIC APPLIANCES INC OF ZHUHAI JIN JI WEST RD QIANSHAN, ZHUHAI, GUANGDONG 519070 CHINA	SA32366
HEAT CONTROLLER INC 1900 WELLWORTH AVE, JACKSON MI 49204	SA11013
INTERNATIONAL REFRIGERATION PRODUCTS CO INC SUITE N 11325 NATIONS FORD RD, PINEVILLE NC 28134	SA33268
LG ELECTRONICS INC AIR CONDITIONERS OBU 76 SEONGSAN-DONG, CHANGWON-SHI, KYOUNGSANGNAM-DO 641-310 REPUBLIC OF KOREA	SA13362
MCQUAY LATIN AMERICA L C SUITE 310 7205 NW 19TH ST, MIAMI FL 33126-1230	SA33547
MJC AMERICA LTD, DBA SOLEUS INTERNATIONAL INC 20035 E WALNUT DR N, CITY OF INDUSTRY CA 91789	SA33336
NRG EQUIPMENT INC UNIT 1 1245 MAPLE HILL CT, NEWMARKET, ON L3Y 9E8 CANADA	SA33218
PREM SALES LTD 6021 AVENUE A, LUBBOCK TX 79404	SA33398
REFRICENTER OF MIAMI INC 7101 NW 43RD ST, MIAMI FL 33166	SA33436
SANYO ELECTRIC CO LTD 1-1-1 SAKATA OIZUMI-MACHI, ORA-GUN, GUNMA-KEN 370- 0596 JAPAN	SA32431
SHARP ELECTRONICS CORP ONE SHARP PLAZA, MAHWAH NJ 07495	SA10305
SIMON-AIRE INC 746 E 9TH ST, NEW YORK NY 10009	SA32206
SUBURBAN MFG CO 676 BROADWAY ST, DAYTON TN 37321	SA10773
TURBO AIR CONDITIONING CORP 1250 VICTORIA ST, CARSON CA 90746	SA33430
YMG I GROUP L L C PO BOX 1559, O'FALLON MO 63366	SA33776

AIR CONDITIONERS, ROOM (ACOT)**GENERAL**

This category covers room air conditioners and recreational vehicle (RV) air conditioners. They are encased assemblies designed as a unit and intended as the prime source of cooling and dehumidification, intended to serve a single room, zone or space. These products may be self-contained or split-system. Accessories intended for use with room air conditioners are also covered under this category.

INSTALLATION

This equipment is rated 600 V ac or less and is intended to be installed in accordance with ANSI/NFPA 70, "National Electrical Code." Room air conditioners are intended for installation in windows, through walls, or as consoles located in or adjacent to the room, zone, or space to be conditioned. They may also be split-system, where the evaporator section is installed inside, and the condensing unit is installed outside. The two sections are connected by refrigerant piping and electrical wiring.

A console or in-wall-type room air conditioner may have provision to additionally serve a single adjacent room.

Split-system room air conditioners are designed for field interconnection with a matching section. Such units and sections are marked to relate the two for proper installation. The sections may be shipped separately.

RV air conditioners are intended for roof-top or underfloor mounting as indicated in the installation instructions, and are intended only for permanent connection to the source of electrical supply.

These units employ hermetic refrigerant motor-compressors with factory-charged refrigeration systems and include a means for circulating air. They may also have provision for electric heating, reverse cycle heating, and ventilation. Room air conditioners are not intended for connection to duct systems for the purpose of providing central cooling and/or heating. RV air conditioners may be ducted to remote areas of the vehicle as specified in the installation instructions, which include the minimum duct size, maximum length, and minimum register size.

Permanently connected units are intended to be connected to a branch circuit protected by overcurrent devices that do not exceed the value marked on the data plate or attached wiring diagram. This marked protective device rating is the maximum for which the unit has been investigated and found acceptable. If the marking specifies fuses, the unit is intended to be protected by fuses only. If time-delay fuses are required for restarting, the unit is so marked.

Air Conditioners, Room (ACOT)–Continued

Cord-connected room air conditioners are provided with instructions regarding the use of extension cords. If the use of an extension cord is not recommended, the instructions state this. Recommendations for an extension cord specify the use of a cord set with an equipment grounding conductor, grounding-type attachment plug and grounding-type connector, and the ampacity and voltage rating of the cord set.

The U.S. Environmental Protection Agency's Significant New Alternatives Policy (SNAP) Program requirements should be consulted for room air conditioners in this category that employ a flammable refrigerant (ASHRAE 34 Class A2, A2L or A3). Authorities Having Jurisdiction should also be consulted for any additional requirements.

PRODUCT MARKINGS

Cord-connected units that require circuit breakers or time-delay fuses to permit restarting are so marked.

Units with water-cooled condensers investigated for connection to ground water sources are so marked.

Some equipment may be designed to accept accessories installed in the field. In such cases, both the room air conditioner and the accessory are marked to relate the two for proper installation.

If parts or sections of the room air conditioner are separately shipped from the factory, they are marked to relate the sections to one another for proper installation.

RELATED PRODUCTS

Packaged terminal air conditioners are covered under Air Conditioners, Packaged Terminal (ACKZ).

Air conditioners for spot cooling or environmental control of electronic enclosures are covered under Air Conditioners, Special Purpose (ACVS).

Dehumidifiers are covered under Dehumidifiers, Refrigeration Type (AFFT).

Products Verified for energy efficiency are covered under Air Conditioners, Room Verified for Energy Efficiency (ZWAT).

ADDITIONAL INFORMATION

For additional information, see Heating, Cooling, Ventilating and Cooking Equipment (AAHC) and Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 484, "Room Air Conditioners."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and one of the following product names as appropriate: "Room Air Conditioner," "Split System Air Conditioner," "Split Type Air Conditioner," "Section of Room Air Conditioner" or "Accessory for Room Air Conditioner."

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AIR-CON INC #2 SUITE 15 PMB#181 CARR, BAYAMON PR 00959-5259	SA33343
AIRWELL-FEDDERS NORTH AMERICA INC 2 CENTER DR, MONROE TOWNSHIP NJ 08831	SA1039
ALMO CORP 2709 COMMERCE WAY, PHILADELPHIA PA 19154	SA33544
AMERICAN POWER CONVERSION CORP 132 FAIRGROUNDS RD PO BOX 278, WEST KINGSTON RI 02892	SA10743
CARRIER INTERAMERICA CORP 3450 NW 115TH AVE, DORAL FL 33178	SA33401
CE NORTH AMERICA L L C 6950 NW 77TH CT, MIAMI FL 33166	SA32785
CROSLEY GROUP INC SUITE 200 111 CLOVERLEAF DR, WINSTON SALEM NC 27103	SA32560
DANBY PRODUCTS LTD 5070 WHITELAW RD PO BOX 1778, GUELPH, ON N1H 6Z9 CANADA	SA10703
DE LONGHI APPLIANCES SRL VIA L SEITZ 47 31100, TREVISO, TV ITALY	SA7047
DE LONGHI SPA VIA L SEITZ 47 31100, TREVISO, TV ITALY	SA13527
EAIR L L C 12201 NW 107TH AVE, MEDLEY FL 33178	SA8053
ECR INTERNATIONAL INC 2201 DWYER AVE PO BOX 4729, UTICA NY 13504	SA7477
ELECTROLUX HOME PRODUCTS INC 10200 DAVID TAYLOR DR, CHARLOTTE NC 28262	SA11087
FHP MFG 601 NW 65TH CT, FORT LAUDERDALE FL 33309	SA11725



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AIR CONDITIONING EQUIPMENT (AAYZ)

Air Conditioners, Room (ACOT)–Continued

FRIEDRICH AIR CONDITIONING CO SUITE 500 10001 REUNION PL, SAN ANTONIO TX 78216	SA2243
GAC CORP 1000 TOYOSHINA, AZUMINO-SHI, NAGANO-KEN 399-8286 JAPAN	SA32197
GALANZ (ZHONGSHAN) ELECTRICAL APPLIANCES LTD MAXIN INDUSTRY ZONE XINGPU RD E HUANGPU TOWN, ZHONGSHAN, GUANGDONG 528429 CHINA	SA32452
GD MIDEA AIR-CONDITIONING EQUIPMENT CO LTD PENG LAI RD BEIJIAO, SHUNDE, GUANGDONG 528311 CHINA	SA12388
GENERAL ELECTRIC CO GE APPLIANCES APPLIANCE PARK, LOUISVILLE KY 40225	SA2141
GENERAL ELECTRIC CO ROOM 1312 BLDG 35 APPLIANCE PARK, LOUISVILLE KY 40225	SA11094
GENIE AIRCONDITIONING & HEATING INC 15041 CALVERT ST STE A, VAN NUYS CA 91411	SA10888
GOODMAN MFG CO L P SUITE 500 5151 SAN FELIPE AVE, HOUSTON TX 77056-3650	SA33502
GREE ELECTRIC APPLIANCES INC OF ZHUHAI JIN JI WEST RD QIANSHAN, ZHUHAI, GUANGDONG 519070 CHINA	SA10632
GUANGDONG CHIGO AIR CONDITIONING CO LTD SHENGLI INDUSTRY DISTRICT LISHUI TOWN, NANHAI, GUANGDONG 528244 CHINA	SA12793
GUANGDONG KELON AIR CONDITIONER CO LTD 2 QIAODONG RD RONGGUI, SHUNDE, GUANGDONG 528303 CHINA	SA12409
HAIER AMERICA TRADING L L C 1356 BROADWAY, NEW YORK NY 10018	SA11045
HEAT CONTROLLER INC 1900 WELLWORTH AVE, JACKSON MI 49204	SA3201
HLC INTERNATIONAL GROUP INC, DBA COOLTECH PO BOX 315205, TAMUNING GU 96931	SA33667
INTERNATIONAL REFRIGERATION PRODUCTS CO INC SUITE N 11325 NATIONS FORD RD, PINEVILLE NC 28134	SA11088
KAIPING NEW WIDETECH ELECTRIC CO LTD FIRST BLDG NO.40 XINGDA RD SHUIKOU TOWN, KAIPING, GUANGDONG 529300 CHINA	SA13504
KLIMAIRE PRODUCTS INC 7909 NW 54TH ST, MIAMI FL 33166	SA8068
LG ELECTRONICS INC LG TWIN TOWER 20 YOIDO-DONG YOUNGDUNGPO-GU, SEOUL 150-010 REPUBLIC OF KOREA	SA7244
LIVING DIRECT INC BUILDING 5 500 N. CAPITAL OF TEXAS HWY, AUSTIN TX 78746	SA33096
MANUFLOW INC 9101 BOUL LOUIS-H LAFONTAINE, ANJOU, QC H1J 1Z1 CANADA	SA12913
MC APPLIANCE CORP 777 MARK ST, WOOD DALE IL 60191	SA33494
MIRAGE APPLIANCES INC UNIT 6 6700 GATEWAY PARK DR, SAN DIEGO CA 92154	SA32908



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Air Conditioners, Room (ACOT)–Continued

MJC AMERICA LTD, DBA SOLEUS INTERNATIONAL INC 20035 E WALNUT DR N, CITY OF INDUSTRY CA 91789	SA10893
MS COOLING EQUIPMENT INC 61-40 163TH ST, FRESH MEADOW NY 11365	SA33653
NINGBO HICON INTERNATIONAL INDUSTRY CO LTD 68 KAI FA RD ZHOUXIANG TOWN CIXI, NINGBO, ZHEJIANG 315324 CHINA	SA12660
PANASONIC CORPORATION OF NORTH AMERICA PRODUCT SAFETY & COMPLIANCE DIV 1 PANASONIC WAY 4B-8, SECAUCUS NJ 07094	SA4893
PREM SALES LTD 6021 AVENUE A, LUBBOCK TX 79404	SA33399
PRIDIOM GROUP L L C SUITE 9 32 PIERMONT RD, CRESSKILL NJ 07626	SA33420
QINGDAO HAIER AIR CONDITIONER GENERAL CORP LTD QINGDAO HIGH TECH IND PARK HAIER RD, QINGDAO, SHANDONG 266101 CHINA	SA11753
QUIETSIDES CORP 8750 PIONEER BLVD, SANTA FE SPRINGS CA 90670	SA32539
RV PRODUCTS, DIV OF AIRXCEL INC 3050 N ST FRANCIS, WICHITA KS 67219	SA4433
SAMSUNG ELECTRONICS CO LTD CS CENTER 416 MAETAN 3-DONG SUWON-SI, YEONGTONG- GU, GYEONGGI-DO 443-742 REPUBLIC OF KOREA	SA7227
SEARS ROEBUCK & CO 3333 BEVERLY RD, HOFFMAN ESTATES IL 60179	SA2274
SHARP ELECTRONICS CORP ONE SHARP PLAZA, MAHWAH NJ 07495	SA9639
SHENZHEN YONAN AIR CONDITIONING CO LTD 24B-1 BLK B FORTUNE PLAZA 7060 SHENNAN RD, SHENZHEN, GUANGDONG 518040 CHINA	SA13460
SOLEUS INTERNATIONAL INC 20035 E WALNUT DR N, WALNUT CA 91789	SA33610
TEAM INTERNATIONAL 590 W 84TH ST, HIALEAH FL 33014	SA33382
TORONTO COMMUNITY HOUSING CORP 2ND FL 931 YONGE ST, TORONTO, ON M4W 2H2 CANADA	SA32846
TOYOTOMI CO LTD 5-17 MOMOZONO-CHO MIZUHO-KU, NAGOYA-SHI, AICHI- KEN 467-0855 JAPAN	SA32101
TURBO AIR CONDITIONING CORP 1250 VICTORIA ST, CARSON CA 90746	SA33432
TURBO AIR INC 1250 VICTORIA ST, CARSON CA 90746	SA11119
WHIRLPOOL CORP GLOBAL WATER TECHNOLOGY ST JOSEPH TECHNOLOGY CENTER MD-0220, BENTON HARBOR MI 49022	SA33434
WOLF STEEL LTD 24 NAPOLEON RD, BARRIE, ON L4M 4Y8 CANADA	SA32667
ZYMBO (ZHONGSHAN) ELECTRICAL MFG CO LTD GUANGFENG INDUSTRIAL ESTATE SHA LANG XI QU, ZHONGSHAN, GUANGDONG 528411 CHINA	SA33394



AIR CONDITIONERS, SPECIAL PURPOSE (ACVS)**GENERAL**

This category covers equipment designed for special purposes, such as portable spot cooling, environmental control of electronic enclosures, or supplementary cooling of computer rooms or computer equipment. These products may be self-contained or sectional, and are designed to provide conditioned air to a single room or space. Accessories are also covered under this category.

INSTALLATION

This equipment is rated 600 V or less and is intended for installation in accordance with ANSI/NFPA 70, "National Electrical Code" (NEC).

This equipment consists of one or more factory-made sections. If the equipment is provided in two or more sections, each such section is designed for field interconnection with a matched section(s) to make the air conditioner assembly. Unless so indicated in the individual Listings, the evaporator blower is provided as part of the assembly, and may be an integral part of the evaporator section or furnished as a separate section. The individual Listings show the distinctive designation of each section comprising the assembly.

The proper method of electrical installation (number of branch circuits, disconnects, etc.) is shown on the wiring diagram and/or marking required to be attached to the unit.

In permanently connected units employing two or more motors or a motor(s) and other loads, operating from a single supply circuit, the motor overload protective devices (including thermal protectors for motors) and other factory-installed motor circuit components and wiring are investigated on the basis of compliance with the motor branch circuit short-circuit and ground-fault protection requirements of Section 430.53(C) of the NEC. Such multimotor and combination load equipment is intended to be connected only to a circuit protected by fuses or circuit breakers with a rating that does not exceed the value marked on the data plate. This marked protective device rating is the maximum for which the equipment has been investigated and found acceptable.

Accessories for special purpose air conditioners are provided with instructions for installation into the product.

Units suitable for use with Listed field-installed accessories, such as electric resistance heaters, are specifically indicated in the individual Listings.

The U.S. Environmental Protection Agency's Significant New Alternatives Policy (SNAP) Program requirements should be consulted for special-purpose air conditioners in this category that employ a flammable refrigerant (ASHRAE 34 Class A2, A2L or A3). Authorities Having Jurisdiction should also be consulted for any additional requirements.

PRODUCT MARKINGS

Units suitable for outdoor installation are so marked. Units not marked as suitable for outdoor installation are for indoor use only.

Some equipment is designed to accept accessories installed in the field. In such cases, both the air conditioner and the accessory are marked to relate the two for proper installation.

Where a clearance is required to be maintained to combustible construction, the minimum clearance is designated in the individual Listings and is also marked on the unit. Unless otherwise indicated, the designated clearances (other than "zero") are based on tests of units with uninsulated sheet-metal ducts and plenum attached. Under these conditions, temperatures below established criteria have been measured on a wooden test enclosure, representing combustible construction, spaced at the specified clearance (air) from the unit, ducts, and plenum.

RELATED PRODUCTS

See Air Conditioners, Room (ACOT), Air Conditioners, Packaged Terminal (ACKZ), Dehumidifiers, Refrigeration Type (AFFT) and Heating and Cooling Equipment (LZFE).

Equipment without a refrigeration system is covered under Heating and Cooling Equipment (LZFE).

Permanently connected computer room air conditioners are covered under Heating and Cooling Equipment (LZFE).

ADDITIONAL INFORMATION

For additional information, see Air Conditioning Equipment (AAYZ), Electrical Equipment for Use in Ordinary Locations (AALZ) and Heating, Cooling, Ventilating and Cooking Equipment (AAHC).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 484, "Room Air Conditioners."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Special Purpose Air Conditioner," "Section of Special Purpose Air Conditioner" or "Accessory for Special Purpose Air Conditioner," or other appropriate product name as shown in the individual Listings.

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ADALET/SCOTT FETZER CO

4801 W 150TH ST, CLEVELAND OH 44135

SA13382

Self-contained, cord-connected computer room air conditioners, Models NE010126, NE015126, NE020126, CS020126, NE030126, NE040126, NE050126, NE060126, NE080126.

Models CS020236, NE010236, NE015236, NE040236, NE050236, NE060236, NE080236, may be followed additional suffixes.

AMERICAN POWER CONVERSION CORP

132 FAIRGROUNDS RD PO BOX 278, WEST KINGSTON RI 02892

SA12821

Self-contained computer room air-conditioners, Models ACPA4000, ACSC100.

AUTOMATION DIRECT COM INC

3505 HUTCHINSON RD, CUMMING GA 30040

SA33404

Special purpose self-contained air conditioner units, Models TA10-010-16-12 [+a], TA10-015-16-12 [+a], TA10-020-16-12 [+a], TA10-040-16-12 [+a], TA10-050-16-12 [+a], TA10-060-16-12 [+a], TA10-010-16-04 [+a], TA10-015-16-04 [+a], TA10-020-16-04 [+a], TA10-040-16-04 [+a], TA10-050-16-04 [+a], TA10-060-16-04 [+a], TA10-010-16-4X [+a], TA10-015-16-4X [+a], TA10-020-16-4X [+a], TA10-040-16-4X [+a], TA10-050-16-4X [+a], TA10-060-16-4X [+a], TA10-010-26-12 [+a], TA10-015-26-12 [+a], TA10-020-26-12 [+a], TA10-040-26-12 [+a], TA10-050-26-12 [+a], TA10-060-26-12 [+a], TA10-010-26-04 [+a], TA10-015-26-04 [+a], TA10-020-26-04 [+a], TA10-040-26-04 [+a], TA10-050-26-04 [+a], TA10-060-26-04 [+a], TA10-010-26-4X [+a], TA10-015-26-4X [+a], TA10-020-26-4X [+a], TA10-040-26-4X [+a], TA10-050-26-4X [+a], TA10-060-26-4X [+a].

[+a] - ML models may also have a prefix of "B -"

DANTHERM AIR HANDLING INC

SUITE K 110 CORPORATE DR, SPARTANBURG SC 29303

SA10718

Special purpose air conditioners, Models A000007, CS016055A, CS016055B, CS020020A(+), CS020020B6(+), CS030040A, CS030040B, CS030060A, CS030060B, CS030075A, CS030075B, CS047100B, CS047120B, CS050130B, CS050130B-H030, CX064060B, CX093040A, CX098020A, CX098060B, iA / C-T-B10000, CS050125B, CX124020A(+), followed by suffixes -H004, -H008, -H012; Models CS0120-15, -18, -21, -25, -42, CX039042 followed by suffixes A, B, BT, C, -H004, -H008, -H012; Model DA12M followed by 1.5, 1.8, 2.6, 3.1 or 4.2, followed by A, B, BT, C, -H004, -H008, -H012.

Air Conditioners, Special Purpose (ACVS)–Continued

Models E*067240C, E*067240D, E*067360C, E*067360D, E*076480C, E*076480D, E*076600C, E*076600D, EX055600C, EX71360C, EX071360D, EX181001C, EX204001C, EX204002D, E*204003C, E*204004D.

Special purpose type room air conditioners, Models iA/C-T-A6000, iA/C-T-B6000, iA/C-T-B8000.

Models eco-B-4K50, eco-B-6K50, eco-B-8K50.

*May be T or O. (T= Free cooling 0 = closed loop).

(+)- may be blank or "Q". (Q = optional alarm cable).

ICE QUBE INC**SA12062**

141 WILSON AVE, GREENSBURG PA 15601

Computer room air conditioners, Models IQ2200MM, IQ3000MM, RD-CKC-2501, RD-CKC-3501.

Models ICE4000, ICE4000A, ICE4000B.

Electronic control equipment air conditioners, Model IQ, followed by 1000V, 1200VS, 1200VXS, 1500VS, 1500VXS, 1800TS, 1800VS, 1800VXS, 2000TXS, 2000TXS-M1, 2000VXS, 2200VB, 2200VS, 2300TSHA, 2300TS, 2400VXS, 2500T, 2500TS, 2500TSHA, 2500TXS, 2500V, 3000T, 3000V, 3000VS, 3500V, 3800VS, 4000T, 4000TS, 4000V, 4000V16HA, 4000VB, 4000VS, 4500V, 5000T, 5000V, 5000V16, 5000V16HA, 5500VS, 6000T, 6000V, 6000V16, 6000V16HA, 6000VB, 6000VS, 7000T, 8000V16, 8000VHA, 10000V, 12000V, 14000V, 17000V, 20000V, may be provided with suffix H, may be provided with suffix XP1 or XP2.

Model IQ, followed by 4000VXS, 5000VXS, 6000VXS, may be provided with suffix H, may be provided with suffix XP1 or XP2.

Model IQ, followed by 2500V, 3000T, 3000VS, 3500V, 3800VS, 4000V, 4000V16HA, 4000VB, 4000VS, 4000VXS, 5000V, 5000V16HA, 6000V16HA, 8000V16, 8000VHA, 10000V, 12000V, may be provided with suffix XP1, XP2 or H.

Model IQ, followed by 5000V16HA, 6000V16HA, 8000T, 8000V16, 8000VB, 8000VHA, 10000V, 12000V, 14000V, 17000V, 20000V, may be provided with suffix XP1, XP2 and/or H. (For use with R-407c Only).

Models IQ, followed by 1000MM, 1300MM, followed by L or R.

Model IQ, followed by 8000V16, 8000VB, 8000VHA, 10000V, 12000V, 14000V, 17000V, 20000V, may be provided with suffix XP1, XP2 or H. (For use with R-407c only).

Model IQ, followed by 3000T, 3500V, 4000T, 4500V, 4000V16HA, 4000VS, 4000VXS, 5000T, 5000V16, 5000VXS, 6000T, 6000V16, 6000VXS, may be provided with suffix XP1, XP2 or H. (Units for use with R422D only).

Model IQ, followed by 1000V, 1200VS, 1200VXS, 1500VS, 1500VXS, 1800VXS, 2000TXS, 2000TXS-M1, 2000VXS, 2200VB, 2200VS, 2400VXS, 2500TXS, 2500V, 3000VS, 3500V, 4000V, 4000V16HA, 4000VS, 4000VXS, 4500V, 5000V, 5000V16, 5000V16HA, 5000VXS, 5500VS, 6000V, 6000V16, 6000V16HA, 6000VB, 6000VS, 6000VXS, may be provided with suffix XP1, XP2 or H.

Special purpose air conditioner, Model ICE2200.

ISC SALES INC**SA8067**

4421 TRADITIONAL TRL, PLANO TX 75093

Special purpose self-contained air conditioners units, Models ISCNE015126, ISCNE020126, ISCNE030126, ISCNE040126, ISCNE050126, ISCNE060126, ISCNE080126, ISCNE015236, ISCNE040236, ISCNE050236, ISCNE080236, ISCCS020126, ISCCS010126, ISCNE010126(#), ISCHC100126(#), ISCHC120126(#), ISCCS020236(#), ISCNE010236(#), ISCNE010236(#), ISCNE020236(#), ISCNE030236(#), ISCNE060236(#), ISCHC120236(#), ISCHC150236(#), ISCHC200236(#), ISCNE020486(#), ISCNE030486(#), ISCNE040486(#), ISCNE050486(#), ISCNE060486(#), ISCNE080486(#), ISCHC120486(#), ISCHC150486(#), ISCHC200486(#), ISCFWF060126(#), ISCFWF080126(#), ISCFWF080236(#), ISCCS011126, ISCHC101126, ISCHC121126, ISCHC101236, ISCHC121236, ISCHC151236, ISCHC201236, ISCHC241236, ISCHC101486, ISCHC121486, ISCHC151486, ISCHC201486, ISCHC241486, ISCFWF081126, ISCFWF081236.

(#)Followed by suffix letters and/or numbers.

KOOLTRONIC INC**SA6441**

30 PENNINGTON HOPEWELL RD PO BOX 240, PENNINGTON

NJ 08534

Self-contained industrial control cabinet units, Models KA4C1.0MMT, -1.0NP17, -1.2MMT, -1.4MMT, -1.5NP17, -1.8NP17, -2.0NP17, -2P28T, -2P36T, -3P28T, -3P36T, -4P28T, -4P36T.

Model K(*)A followed by 3 or 4, followed by C, followed by 1.0, 1.5, 1.8, 2, 2.5, 2.6, 3.5, 4, 4.2, 5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 22, 24 followed by H, HS, HT, NM, NP, P, RP, TP, followed by 5, 6, 7, 8, 9, 9/50, 9/56, 10, 10/50, 10/56, 28, 28/50, 28/56, 33, 33/50, 33/56, 36/50, 47, 47/50, 47/56, 52, 52/50, 53, 59, 59/50, with suffix numbers and/or letters.

Models K2WA3C24P52R, K2WA3C26P52R, K2WA3C28P52R, K2WA3C30P52R.

Models KA3C13NP47L, KA3C13NP47L5, K2A3C13NP47L, K2A3C13NP47L5.

Models K3A4C5DP38L, K3A4C7DP52L, K3A4C9DP52L, KA4C2DP17L, KA4C3DP21L, K2A3C14DP50L, K2A3C18DP53L, K2A3C26DP60L, K3NA4C5DP38L, K3NA4C7DP52L, K3NA4C9DP52L, K3NA6C14DP50L, K3NA6C18DP53L, and K3NA6C26DP60L.

Models KA4C3RTL, K2A4C3RTL, KA3C6RTL, KA3C12RTL, K2A3C6RTL, K2A3C12RTL, KA4C6RTL, K2A4C6RTL, KA4C12RTL, K2A4C12RTL.

Models KNA4C5DP33L, K2NA4C5DP33L, KNA4C7DP43L, K2NA4C7DP43L, KNA3C9DP47L, K2NA3C9DP47L, KNA4C9DP47L, K2NA4C9DP47L, KA4C9DP47L, K2A4C9DP47L, KNA4C1DKP15L, K2NA6C14DP50L, K2NA6C18DP53L, K2NA4C26DP60L.

Models KA4C5RML, K2A4C5RML.

Models KAC6C10NPT47L, K2A6C10NPT47L, K2A6C13NPT47L, K2A6C4NPT33L, K2A6C16NPT52L, KA6C4NPT33L.

Model K2A6C12HTL.

*-With or without number 2.

MORPHO DETECTION INC**SA32556**

7151 GATEWAY BLVD, NEWARK CA 94560

Self-contained cooling unit, Model InViroPak 3.

NOREN PRODUCTS INC**SA9567**

1010 O'BRIEN DR, MENLO PARK CA 94025

Air-to air heat exchangers, Models*b CC200, CC500, CC800, CC1200, CC1400, CC2000; Models*ab CC254, CC400, CC450, CC600, CC900, CC1000, CC1100, CC1300, CC2500; Models*d CC401F, CC601F, CC901F, CC1301F, CC2501F.

Air-to water heat exchangers, Models*b NP0158, CC2060, CC3060, CC3260, CC6360.

Model*c CC2061P, CC2062P, CC3061P, CC3062P, CC6360P, CC6361P, CC6362P.

*a - These models are suffixed with F or I.

*b - These models may be suffixed with Type 12.

*c - These models may be suffixed with Type 4 or Type 4X.

*d - These models may be suffixed with -WL, -RH#, -HH# (where # is 4, 6, 9, 13, or 25). These models may also have an "interior" enclosure designation of Type 4 and an "exterior" enclosure designation of Type 3R. The "interior" enclosure is defined as the part of the heat exchanger enclosure that completes the enclosure of the end-product equipment and is not exposed to the ambient surrounding the end-product. The "exterior" enclosure of the heat exchanger is exposed to the ambient surrounding the end-product.

OCEANAIRE INC

6228 OAKTON ST, MORTON GROVE IL 60053

**Documents**

SA11730

Document Sharing Hub

Air Conditioners, Special Purpose (ACVS)–Continued

Special purpose air conditioners, Models OAC1211, -1811, -2412, -3612, -3632, -3634, -6012, -H6012, -6032, -3634, -6034, -H6032, 20AC1211, 20AC1811, 20AC2412, 20AC3612, 20AC3632, 20AC6012, 20AC6032, 20AC6034, OACH1211, -1811, -2412, -3612, -3634, -6034, OWC1011, -1012, -1211, -1212, -1811, -1812, -2412, -3612, 20ACH1211, 20ACH1811, 20ACH2412, 20ACH3612, 20ACH3632, 20ACH3634, 20ACH6012, 20ACH6032, 20ACH6034, OWC6012, -6032, -6034, 20WC1211, -12, 20WC1811, -12, 20WC2412, 20WC3612, 20WC6012, 20WC6032, 20WC6034, PAC or PACH, -10, -12, -18, -24, -36, -325, -3612, -3632, -3634, -6012, -6032, -6034, PWC10, -12, -18, -24, -36, -325, -3632, -6012, -6032, -6034, -6035, followed by additional suffix digits.

PENTAIR TECHNICAL PRODUCTS**SA6453****PO BOX 9, ANOKA MN 55303**

Self-contained electronic enclosure units, Models HB11-02AB-G3xx, -03AB-G3xx, -0416-3xxU, -04AB-G3xx, -0425-3xxU, -0426-G3xx with suffixes, may be prefixed with the letter “M”.

Models 13-0116-xxxxU, -01AB-Gxxxx, -01AB-G1xxx, -0126-1xxxU with suffixes, may be prefixed with the letter “M”.

Models HB16-0716-xxxU, -0826-xxxU, -0926-xxxU, -0816-GXXX, -0826-GXXX, LB14-0726-XXXU, LB14-0765-XXXU, LB16-0616-001U, LB16-1026-XXXX, LB16-1026-GXXX with suffixes.

Models 17-02AB-Gxxx, -0216-xxxU with suffixes, may be prefixed with letter “M”.

Models 28-0216-xxxU, -02AB-Gxxx, -03AB-Gxxx, -04AB-Gxxx, -0416-xxxU, -05AB-Gxxx, -06AB-Gxxx, -06AB-xxx with suffixes, may be prefixed with letter “M”.

Models CR29-02AB-Gxxx, -04AB-Gxxx, -0416-xxxU with suffixes.

Models 33-03AB-Gxxx, -04AB-Gxxx with suffixes, may be prefixed with letter “M”.

Models 36-0616-xxxU, -0625-xxxU, -06AB, -08AB-xxxU with suffixes, may be prefixed with letter “M”.

Models 36-0526-G3xx, 36-0565, -06AB-Gxxx with suffixes, may be prefixed with letter “M”.

Models CRXX-06AB-XXX, -06AB-GXXX, -0615-XXX, -0625-XXX, -08AB-XXX, -08AB-GXXX, -0815-XXX, -0825-XXX.

Model CRXX-04AB-GXXX.

Models CRXX-0615, -06AB, -0625, -0815, -08AB, -0825.

Model 47-0616-xxxU with suffixes.

Model 47-12AB-WXXX.

Models 52-06AB, -08AB, -0865-XXXU, -0825-2XXU, -10AB, -12AB with suffixes, may be prefixed with letter “M” excluding 52-1216-XXXUE, 52-1255-XXXUE.

Models 52-1926-xxx, -1926-GXXX with suffixes.

Model 56-1216 followed by suffixes.

Model 52-0846 followed by suffixes.

Model 52-0646 followed by suffixes.

Model 52-1046 followed by suffixes.

Model 59-1226, 59-1265 with suffixes.

Models 62-2126, 62-2226, may be prefixed with letter “T”, with suffixes.

Models 63-2026-xxxU, 63-2065-xxxU with suffixes.

Model CR23-02AB-GXXX.

Model T50-1226-G1XX.

Model T53-1926-XXX.

Models G57-2026-GXXX, G-57-2046-GXXX.

Models T29-0416-GXXX, T29-0426-GXXX.

Models T20-0216-GXXX, T20-0226-GXXX.

Models 70-3626, 70-3646-GXXX may be prefixed with letter “T”, with suffixes.

Model 70-6026 may be prefixed with letter “T”, with suffixes.

Models T15-0116, T15-0126 with suffixes.

Models T45-0816-GXXX, T45-0826-GXXX with suffix numbers.

Models T43-0616-GXXX, T43-0626-GXXX, T43-0816-G2XX, T43-0816-GXXX, T43-0826-GXXX, T43-0826-G2XX.

Models T43-1016-GXXX, T43-1026-GXXX with suffix numbers.

Models G52-1216-GXXX, G52-1226-GXXX, G52-1246-GXXX, G52-08A6-GXXX.

Models G28-0416-GXXX, G28-0616-GXXX, G28-0426-GXXX, G28-0626-GXXX, G28-0446-GXXX, G28-0646-GXXX.

Water cooled modules, Model 33-04ABGWXXX.

Model CRXX-08AB-GWXXX.

Models LB11-0226, LB11-0265, LB11-0426, LB11-0465.

Models N28-04AB-GXXX, N36-06AB-GXXX, N36-08AB-GXXX, N43-12AB-GXXX.

“A” represents 1, 2, 4, 5 and 6 (115V, 230V, exceeds 240V, 100V and 200V respectively).

“B” represents 5 and 6 (50Hz and 60Hz respectively).

Note: Model numbers may or may not include dashes.

PFANNENBERG GMBH**SA10300****WERNER-WITT-STRASSE 1 POSTFACH 80 07 47 21007,****HAMBURG GERMANY**

Special purpose air conditioners, Models DTS 3021, -3041@, -3061@, -3081@, -3141*, -3145, -3161*, -3165, -3181*, -3185, -3241, -3245, -3261, -3265, -3281, -3185, -3341, -3361, -3381, -3541, -3561, -3581, -3641, -3661, -3681; DTS-31X5, -32X5 with suffix “WC”; Model 30X1@.

Air to water heat exchangers, Models PWS7102, PWS7152, PWS7332, PWS7332L, PWS7502, PWS7702, PWS7702SL, PWS71002, followed by UL, may be followed by SS.

* - Units may be followed by suffix “SL”.

@ - Units may be followed by suffix “Lite”.

SHARP ELECTRONICS CORP**SA32671****ONE SHARP PLAZA, MAHWAH NJ 07495**

Portable type room air conditioners, self-contained, Models CV-P09FX, CV-P09FL, CV-P09LX, CV-P10LC, CV-P10MX, CV-P10MC, CV-10MH, CV-10NH, CV-P10NC, CV-P10PC, CV-P12LX, CV-13NH, CV-P10RC.

THERMAL EDGE INC**SA32252****SUITE 111 1751 HURD DR, IRVING TX 75038**

Special purpose self-contained air conditioners units, Models NE010126, NE015126, NE020126, CS010126, CS011126, CS020126, NE030126, NE040126, NE050126, NE060126, NE080126, HC100126, HC100486, HC101126, HC101486, HC120126, HC120486, HC121126, HC121486 may be followed additional suffixes.

Models CS020236, NE010236, NE020236, NE030236, NE015236, NE040236, NE050236, NE060236, NE080236, HC120236, HC101486, HC151236, HC155236, HC200236, HC201236, HC241236, NE020486, NE030486, NE040486, NE050486, NE060486, NE080486, HC101236, HC101486, HC120486, HC121486, HC151486, HC155486, HC200486, HC201486, HC241486 may be followed additional suffixes.

Air Conditioners, Special Purpose (ACVS)–Continued

Models WF060126, WF080126, WF081126 may be followed additional suffixes.
Models WF080236, WF081236 may be followed additional suffixes.

PACKAGED TERMINAL AIR CONDITIONERS, REPLACEMENT (ADAU)**GENERAL**

This category covers replacement packaged terminal air conditioner and replacement packaged terminal heat pump chassis investigated for field installation with existing wall sleeves, louvers, and panels as marked on the unit. They are rated 600 V or less and intended as the prime source of air conditioning and dehumidification.

These units may also have provision for heating by hot water, reverse cycle refrigeration, steam or electric resistance elements. They employ alternating current, hermetic refrigerant motor-compressors with factory-charged refrigeration systems, and include a means for ventilating and circulating air.

INSTALLATION

This equipment is intended to be installed in accordance with ANSI/NFPA 70, “National Electrical Code,” and is intended for installation through walls and to serve a single room, zone or space, although some units may have provision to additionally serve an adjacent room.

Permanently-connected units are intended to be connected to a branch circuit protected by overcurrent devices that do not exceed the value marked on the data plate or attached wiring diagram. This marked protective device rating is the maximum for which the unit has been investigated and found acceptable. If the marking specifies fuses, the unit is intended to be protected by fuses only. If time-delay fuses are required for restarting, the unit is so marked.

PRODUCT MARKINGS

Cord-connected units requiring a circuit breaker or time-delay fuses to permit restarting are so marked.

Units are marked to indicate the existing wall sleeves, louvers and panels with which they are to be used and field installed.

RELATED PRODUCTS

Room air conditioners are covered under Air Conditioners, Room (ACOT).

Air conditioners intended for spot cooling or environmental control of electronic enclosures are covered under Air Conditioners, Special Purpose (ACVS).

Dehumidifiers are covered under Dehumidifiers, Refrigeration Type (AFFT).

Air conditioning equipment designed for connection to duct systems for the purpose of providing central cooling and/or heating is covered under Heating and Cooling Equipment (LZFE).

ADDITIONAL INFORMATION

For additional information, see Heating, Cooling, Ventilating and Cooking Equipment (AAHC) and Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 484, “Room Air Conditioners.”

UL MARK

The Classification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Classification and Follow-Up Service. The Classification Mark for these products includes the UL symbol, the word “CLASSIFIED” above the UL symbol (as illustrated in the Introduction of this Directory), and the following additional information:

**REPLACEMENT PACKAGED TERMINAL AIR CONDITIONER
FOR FIELD INSTALLATION WITH EXISTING WALL SLEEVES, OUTDOOR LOUVERS,
AND INDOOR PANELS AS SPECIFIED ON THE PRODUCT
AS TO ELECTRIC SHOCK, FIRE AND CASUALTY HAZARDS ONLY**

Control No.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

GREE ELECTRIC APPLIANCES INC OF ZHUHAI
JIN JI WEST RD QIANSHAN, ZHUHAI, GUANGDONG
519070 CHINA

SA32567

HEAT CONTROLLER INC
1900 WELLWORTH AVE, JACKSON MI 49204

SA33779

SIMON-AIRE INC
746 E 9TH ST, NEW YORK NY 10009

SA32883

AIR FILTERING APPLIANCES (AEDX)**GENERAL**

This category covers portable and stationary air filtering appliances intended for window, floor, table and similar mounting. This category also covers fixed air filtering appliances intended for permanent mounting to walls, ceilings, and similar applications. The appliances consist primarily of air-circulating fans and mechanical filters, but may additionally employ ultraviolet/germicidal lamps.

PRODUCT MARKINGS

Appliances specifically investigated for use in “other spaces used for environmental air,” per Article 300.22(c) of ANSI/NFPA 70 (2002), “National Electrical Code,” are marked “These units evaluated for use in other spaces for environmental air per National Electrical Code Article 300.22(c)(2).”

UNEVALUATED FACTORS

The physiological effects of the operation of these appliances, beneficial or otherwise, have not been investigated.

RELATED PRODUCTS

Appliances not provided with filters and intended for circulating air in a room are covered under Fans, Ceiling Suspended (GPRT) and Fans, Electric (GPVV).

Electrostatic air cleaners and fans employing electrostatic air cleaners are covered under Electrostatic Air Cleaners (AGGZ).

Ionizers, fans employing ionizers, and ion generators are covered under Ion Generators (OETX).

Deodorizers intended to remove odors in specific applications by ozone generation are covered under Deodorizers, Ozone Generator Type (EOKL).

Deodorizers intended to be used in treating air by dispersal of chemicals or by scenting the air are covered under Deodorizers and Air Fresheners (EOGX).

Appliances employing ultraviolet lamps or ionization tubes for the purpose of treating air and having provision for connection to heating and ventilation ducts used for air distribution are covered under Accessories, Air Duct Mounted (ABQK).

Air Filtering Appliances (AEDX)–Continued

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ) and Heating, Cooling, Ventilating and Cooking Equipment (AAHC).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 507, "Electric Fans."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Air Filtering Appliance" or "Air Filter," or other appropriate product name as shown in the individual Listings.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

3M COMPANY CONSTRUCTION & HOME IMPROVEMENT MKTS 3M CENTER 251-1C-09, ST PAUL MN 55144	E305233
AAF (SUZHOU) CO LTD 116 CHANGYANG ST SIP, SUZHOU, JIANGSU 215126 CHINA	E301189
ADA ELECTROTECH CO LTD 5 XIN GUANG EAST RD HAICANG XINYANG INDUSTRIAL AREA, XIAMEN, FUJIAN 361022 CHINA	E316886
AIR-PURE SYSTEMS 16873 FISHPOINT RD SE, PRIOR LAKE MN 55372	E202270
AIRISTAR TECHNOLOGIES L L C 2330 ERNIE KRUEGER CIR, WAUKEGAN IL 60087	E242859
ALLENTOWN INC. IMLAYSTOWN RD RTE 526 PO BOX 698, ALLENTOWN NJ 08501	E201619
AMERICAN CLEAN ROOM SYSTEMS, DIV OF AMERICAN PARTITIONS INC 29722 AVENIDA DE LAS BANDERAS, RANCHO STA MARGARITA CA 92688	E191814
ASSOCIATED EQUIPMENT CORP 5043 FARLIN AVE, ST LOUIS MO 63115	E136990
BROAN-NUTONE L L C 926 W STATE ST PO BOX 140, HARTFORD WI 53027	E103375
CLEAN AIR PRODUCTS 8605 WYOMING AVE N, BROOKLYN PARK MN 55445	E219822
CLEAN ROOMS INTERNATIONAL INC 4939 STARR ST SE, GRAND RAPIDS MI 49546	E226186
DANTHERM AIR HANDLING INC SUITE K 110 CORPORATE DR, SPARTANBURG SC 29303	E348246
DOMETIC CORP (THE) 509 S POPLAR ST, LAGRANGE IN 46761	E347024
DRI-EAZ PRODUCTS INC 15180 JOSH WILSON RD, BURLINGTON WA 98233	E229154
E F COOK & ASSOCIATES LTD SUITE 200 5858 MT ALIFAN DR, SAN DIEGO CA 92111	E227467
ENVIRCO, DIV OF AIR SYSTEM COMPONENTS INC 101 MCNEILL RD, SANFORD NC 27330	E152685
FIELD CONTROLS L L C 2630 AIRPORT RD, KINSTON NC 28504	E243200
FUMEX INC SUITE D 1150 COBB INTERNATIONAL PL, KENNESAW GA 30152	E187451



GD MIDEA ENVIRONMENT APPLIANCES MFG CO LTD HESUI EAST INDUSTRIAL AREA 28 DONG FU RD DONG FENG TOWN, ZHONGSHAN, GUANGDONG 528425 CHINA	E311503
GEBHARDT FANS USA L L C 1503 W MISTY BREEZE CIR, KAYSVILLE UT 84037	E223652
GENERAL ELECTRIC CO GE APPLIANCES APPLIANCE PARK, LOUISVILLE KY 40225	E326035
GENESIS AIR INC 5202 CR 7350, SUITE D, LUBBOCK TX 79424	E321509
GORDON INC 5023 HAZEL JONES DR, BOSSIER CITY LA 71111	E204852
HEPA CORP 3071 E CORONADO ST, ANAHEIM CA 92806	E204400
HONOR TONE LTD UNIT 9-11, 7TH FL TECHNOLOGY PARK 18 ON LAI ST, SHATIN N T HONG KONG	E203370
HUNG HSING ELECTRIC CO LTD 105 NAN SHING RD YUNG KANG, TAINAN HSIEN 710 TAIWAN	E206731
KAZ USA INC 250 TURNPIKE RD, SOUTHBOROUGH MA 01772	E155174
KOPEN ELECTRICAL CO LTD WINNER FTY BLDG, 2ND FL, FLAT H 55 HUNG TO RD KWUN TONG, KOWLOON HONG KONG	E308442
KRUEGER, DIV OF AIR SYSTEM COMPONENTS INC 1401 N PLANO RD, RICHARDSON TX 75081	E331495
KYODO-ALLIED INDUSTRIES LTD 17 KIAN TECK RD, SINGAPORE 628771 SINGAPORE	E315786
LENNOX INDUSTRIES INC 2100 LAKE PARK BLVD, RICHARDSON TX 75080	E223257
LIGHT WAVE 1246 E LEXINGTON AVE, POMONA CA 91766	E341586
M & W PRODUCTS GMBH BUSINESS LINE CLEANROOM PRODUCTS LOTTERBERGSTRASSE 30 70499, STUTTGART GERMANY	E216256
MARLEY ENGINEERED PRODUCTS, DIV OF MARLEY CO 470 BEAUTY SPOT RD E, BENNETTSVILLE SC 29512	E25681
MAYAIR TECHNOLOGY (NANJING) CO LTD 16 YINLONG ROAD JIANGNING ECONOMIC DEVELOPMENT ZONE, NAN JING, JIANGSU 211106 CHINA	E336779
PHILIPS (CHINA) INVESTMENT CO LTD NO 9 LANE 888 TIANLIN RD 200233, SHANGHAI CHINA	E344817
PLYMOVENT GROUP B V WEZELKOOG 11 1822 BL, ALKMAAR THE NETHERLANDS	E234223
SEARS ROEBUCK & CO 3333 BEVERLY RD, HOFFMAN ESTATES IL 60179	E75341
SGBLUE INC SUITE 7-101 229 AIRPORT RD, ARDEN NC 28704	E339431
SHARP ELECTRONICS CORP ONE SHARP PLAZA, MAHWAH NJ 07495	E309561
SHINSUNG ENG CO LTD 409-1 SUNJUNG-RI SAMSUNG-MYUN EUMSUNG-KUN, CHUNGBUK 369-832 REPUBLIC OF KOREA	E166874



Air Filtering Appliances (AEDX)—Continued

SHOP-VAC CORP 2323 REACH RD PO BOX 3307, WILLIAMSPORT PA 17701	E206937
SUNBEAM PRODUCTS INC DBA JARDEN CONSUMER SOLUTIONS 2381 EXECUTIVE CENTER DR, BOCA RATON FL 33431	E130777
SUNBEAM PRODUCTS INC DBA JARDEN CONSUMER SOLUTIONS 2381 EXECUTIVE CENTER DR, BOCA RATON FL 33431	E205342
TANIS TECHNOLOGIES L L C SUITE 200 4269 LINCOLN RD, HOLLAND MI 49423	E332251
TEKQUEST INDUSTRIES INC 4275 CHURCH ST, SANFORD FL 32771	E181416
TERRA UNIVERSAL INC 800 S RAYMOND AVE, FULLERTON CA 92831	E326560
TITUS 605 SHILOH RD, PLANO TX 75074	E328025
TUTTLE & BAILEY 1401 N PLANO RD, RICHARDSON TX 75081	E328012
VITAIRE CORP PO BOX 88, ELMHURST ANNEX NY 11380	E63891
WINIX INC 1280-10 CHUNG WANG-DONG, SHI HEUNG-SHI, KYOUNGGI-DO 329-450 REPUBLIC OF KOREA	E327306
WOONGJIN COWAY CO LTD 658 YUGU-RI YUGU-EUP, KONGJU-SI, CHUNGNAM REPUBLIC OF KOREA	E229156

DEHUMIDIFIERS, REFRIGERATION TYPE (AFFT)**GENERAL**

This category covers portable, self-contained household, commercial and industrial dehumidifiers for use in removing moisture from the air. These dehumidifiers are designed for cord connection to single-phase, alternating-current circuits rated not more than 20 A, 125 V or 15 A, 208 or 230 V. They employ hermetic refrigerant motor-compressors and may also incorporate electric air heaters.

These dehumidifiers are intended for installation in accordance with ANSI/NFPA 70, "National Electrical Code."

RELATED PRODUCTS

Air conditioners intended for spot cooling are covered under Air Conditioners, Special Purpose (ACVS).

Desiccant-type dehumidifiers with a heater are covered under Heaters, Specialty (KSOT).

Duct-mounted and permanently-connected dehumidifiers are covered under Heating and Cooling Equipment (LZFE).

See Air Conditioners, Room (ACOT).

Products Verified for energy efficiency are covered under Dehumidifiers, Refrigeration Type Verified for Energy Efficiency (ZWHP).

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ) and Heating, Cooling, Ventilating and Cooking Equipment (AAHC).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 474, "Dehumidifiers."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Dehumidifier" for a household unit, or "Special Purpose Dehumidifier" for a commercial or industrial unit.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

AIRWELL-FEDDERS NORTH AMERICA INC 2 CENTER DR, MONROE TOWNSHIP NJ 08831	SA33496
ALMO CORP 2709 COMMERCE WAY, PHILADELPHIA PA 19154	SA33545
DANBY PRODUCTS LTD 5070 WHITELAW RD PO BOX 1778, GUELPH, ON N1H 6Z9 CANADA	SA9780
DE LONGHI APPLIANCES SRL VIA L SEITZ 47 31100, TREVISO, TV ITALY	SA32134



Dehumidifiers, Refrigeration Type (AFFT)–Continued

DRI-EAZ PRODUCTS INC 15180 JOSH WILSON RD, BURLINGTON WA 98233	SA9572
ELECTROLUX HOME PRODUCTS INC 10200 DAVID TAYLOR DR, CHARLOTTE NC 28262	SA11089
FRIEDRICH AIR CONDITIONING CO SUITE 500 10001 REUNION PL, SAN ANTONIO TX 78216	SA7531
GD MIDEA AIR-CONDITIONING EQUIPMENT CO LTD PENG LAI RD BEIJIAO, SHUNDE, GUANGDONG 528311 CHINA	SA12617
GENERAL ELECTRIC CO GE APPLIANCES APPLIANCE PARK, LOUISVILLE KY 40225	SA7251
GREE ELECTRIC APPLIANCES INC OF ZHUHAI JIN JI WEST RD QIANSHAN, ZHUHAI, GUANGDONG 519070 CHINA	SA12864
GUANGDONG CHIGO AIR CONDITIONING CO LTD SHENGLI INDUSTRY DISTRICT LISHUI TOWN, NANHAI, GUANGDONG 528244 CHINA	SA12794
GUANGDONG KELON AIR CONDITIONER CO LTD 2 QIAODONG RD RONGGUI, SHUNDE, GUANGDONG 528303 CHINA	SA13076
HAIER AMERICA TRADING L L C 1356 BROADWAY, NEW YORK NY 10018	SA12945
HEAT CONTROLLER INC 1900 WELLWORTH AVE, JACKSON MI 49204	SA10980
INTERNATIONAL REFRIGERATION PRODUCTS CO INC SUITE N 11325 NATIONS FORD RD, PINEVILLE NC 28134	SA32349
KAIPING NEW WIDETECH ELECTRIC CO LTD FIRST BLDG NO.40 XINGDA RD SHUIKOU TOWN, KAIPING, GUANGDONG 529300 CHINA	SA12797
MC APPLIANCE CORP 777 MARK ST, WOOD DALE IL 60191	SA33517
MJC AMERICA LTD, DBA SOLEUS INTERNATIONAL INC 20035 E WALNUT DR N, CITY OF INDUSTRY CA 91789	SA10907
OASIS INTERNATIONAL 222 E CAMPUS VIEW BLVD, COLUMBUS OH 43235	SA33604
QINGDAO HAIER AIR CONDITIONER GENERAL CORP LTD QINGDAO HIGH TECH IND PARK HAIER RD, QINGDAO, SHANDONG 266101 CHINA	SA11931
SEARS ROEBUCK & CO 3333 BEVERLY RD, HOFFMAN ESTATES IL 60179	SA3826
WINIX INC 1280-10 CHUNG WANG-DONG, SHI HEUNG-SHI, KYOONGGI-DO 329-450 REPUBLIC OF KOREA	SA32357

ELECTROSTATIC AIR CLEANERS (AGGZ)**GENERAL**

This category covers duct type, room type (fixed), stationary and portable electrostatic air cleaners intended to remove airborne dust particles and the like.

This category also covers accessories intended for field installation on specific Listed electrostatic air cleaners. They are marked to indicate the associated Listed equipment by model, catalog number, part number, or other identifier as appropriate. Markings on the equipment also indicate any changes in the equipment ratings with the accessory installed. Information concerning field wiring connections, mounting location, installation clearances, etc., are marked on the accessory, and/or in detailed installation instructions accompanying each accessory.

Duct-type electrostatic air cleaners are intended for installation in and adjoining heating air conditioning and ventilating ducts in accordance with ANSI/NFPA 90A, "Standard for the Installation of Air-Conditioning and Ventilating Systems," and ANSI/NFPA 90B, "Standard for the Installation of Warm Air Heating and Air-Conditioning Systems."

Electrostatic Air Cleaners (AGGZ)–Continued

Duct-type electrostatic air cleaners that may be used in exhaust systems of restaurant-type cooking equipment are so marked. These air cleaners are intended for installation in accordance with ANSI/NFPA 96, “Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.” When installed in accordance with ANSI/NFPA 96, a Listed grease filter or extractor must be installed ahead of the air cleaner.

Room-type electrostatic air cleaners are self-contained units; the fixed types are intended for permanent installation. Portable or stationary types are cord connected.

Electrostatic air cleaners are intended for use where removal of dust and dirt from equipment is frequent enough to prevent excessive accumulation, which may result in flashover and fire damage. The instructions and warnings supplied with and on each piece of equipment should be carefully observed.

Electrostatic air cleaners have either Class 1 or Class 2 filters or adhesive-coated ionizer collector cells as follows:

Class 1 filters or adhesive-coated ionizer collector cells are those which, when clean, do not contribute fuel when attacked by flame and which emit only negligible amounts of smoke.

Class 2 filters or adhesive-coated ionizer collector cells are those which, when clean, burn moderately when attacked by flame or emit moderate amounts of smoke, or both.

Electrostatic air cleaners designed to be assembled together in the field from component parts are Listed by Report. Under this form of Listing, a Report is prepared that identifies and describes the complete assembly and includes instructions for proper installation. Copies of the report are available from the Listee.

REBUILT PRODUCTS

This category also covers electrostatic air cleaners that are rebuilt by the original manufacturer or another party having the necessary facilities, technical knowledge and manufacturing skills. Rebuilt electrostatic air cleaners are rebuilt to the extent necessary by disassembly and reassembly using new or reconditioned parts. Rebuilt electrostatic air cleaners are subject to the same requirements as new electrostatic air cleaners.

UNEVALUATED FACTORS

The physiological effects of the operation of these appliances, beneficial or otherwise, have not been investigated.

RELATED PRODUCTS

Ionizers, fans employing ionizers, and ion generators are covered under Ion Generators (OETX).

Air filtering appliances utilizing mechanical filtration only or ultraviolet/germicidal lamps are covered under Air Filtering Appliances (AEDX).

Deodorizers intended to be used in treating air by dispersal of chemicals or by scenting the air are covered under Deodorizers and Air Fresheners (EOGX).

Deodorizers intended to remove odors in specific applications by ozone generation are covered under Deodorizers, Ozone Generator Type (EOKL).

Appliances employing ultraviolet lamps or ionization tubes for the purpose of treating air and having provisions for connection to heating and ventilation ducts used for air distribution are covered under Accessories, Air Duct Mounted (ABQK).

Power supplies intended for use in electrostatic air cleaning equipment are covered under Power Supplies, Electrostatic Air Cleaning Equipment (QQCH2).

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ) and Heating, Cooling, Ventilating and Cooking Equipment (AAHC).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 867, “Electrostatic Air Cleaners.”

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word “LISTED,” a control number, and the product name “Electrostatic Air Cleaner” or “Electrostatic Air Cleaner Accessory.”

For rebuilt products, the word “Rebuilt,” “Remanufactured” or “Reconditioned” precedes the product name.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

ADA ELECTROTECH CO LTD 5 XIN GUANG EAST RD HAICANG XINYANG INDUSTRIAL AREA, XIAMEN, FUJIAN 361022 CHINA	E316132
AIR-PURE SYSTEMS 16873 FISHPOINT RD SE, PRIOR LAKE MN 55372	E64835
AIRVITA CO LTD #2206 URIM BLUE NINE B YEOMCHANG-DONG 240-21 GANGSEO-GU, SEOUL REPUBLIC OF KOREA	E247360
ALLEN CORP SUITE 307-299 5114 BALCONES WOODS DR, AUSTIN TX 78759	E342213
ALLIED AIR ENTERPRISES INC 215 METROPOLITAN DR, WEST COLUMBIA SC 29170	E300111
CRS INDUSTRIES INC, DBA COSATRON SUITE 502 6304 BENJAMIN RD, TAMPA FL 33634	E76962
DUST FREE L P 1112 INDUSTRIAL DR PO BOX 519, ROYSE CITY TX 75189	E167031
FRIEDRICH AIR CONDITIONING CO SUITE 500 10001 REUNION PL, SAN ANTONIO TX 78216	E126456
GD MIDEA ENVIRONMENT APPLIANCES MFG CO LTD HESUI EAST INDUSTRIAL AREA 28 DONG FU RD DONG FENG TOWN, ZHONGSHAN, GUANGDONG 528425 CHINA	



Electrostatic Air Cleaners (AGGZ)–Continued

HONEYWELL ENVIRONMENTAL & COMBUSTION CONTROLS (TIANJIN) CO LTD 158 NANHAI RD TIANJIN ECONOMIC TECHNOLOGICAL DEVELOPMENT AREA 300457, TIANJIN CHINA	E220547
HONEYWELL INTERNATIONAL INC ACS ENVIRONMENTAL & COMBUSTION CONTROLS 1985 DOUGLAS DR N, GOLDEN VALLEY MN 55422	E30954
HUNG HSING ELECTRIC CO LTD 105 NAN SHING RD YUNG KANG, TAINAN HSIEN 710 TAIWAN	E253144
JOHNSON CONTROLS INC 507 E MICHIGAN ST, MILWAUKEE WI 53202	E318787
KELEC MOTOR (ZHUHAI) CO LTD 18 SCIENCE & TECHNOLOGY SIX RD GANG WAN AV TANGJIAWAN TOWN, ZHUHAI, GUANGDONG CHINA	E348794
LIFE'S RESOURCES INC 114 E MAIN ST PO BOX 260, ADDISON MI 49220	E151622
ORECK CORP 1400 SALEM RD, COOKEVILLE TN 38506	E175763
PLYMOVENT GROUP B V WEZELKOOG 11 1822 BL, ALKMAAR THE NETHERLANDS	E231264
RESEARCH PRODUCTS CORP 1015 E WASHINGTON AVE PO BOX 1467, MADISON WI 53701	E187541
SEARS ROEBUCK & CO 3333 BEVERLY RD, HOFFMAN ESTATES IL 60179	E32956
SUNPENTOWN INTERNATIONAL INC 14625 CLARK AVE, CITY OF INDUSTRY CA 91745	E354174
TRION, DIV OF AIR SYSTEM COMPONENTS INC 101 MCNEILL RD, SANFORD NC 27330	E19320
WHITE-RODGERS, DIV OF EMERSON ELECTRIC CO 8100 W FLORISSANT AVE, ST LOUIS MO 63136	E224266
WHITE-RODGERS, DIV OF EMERSON ELECTRIC CO 8100 W FLORISSANT AVE, ST LOUIS MO 63136	E25968
WINIX INC 1280-10 CHUNG WANG-DONG, SHI HEUNG-SHI, KYOUNGGI-DO 329-450 REPUBLIC OF KOREA	E318765
YEL LI ELECTRICAL WORKS CO LTD 12 LANE 296 CHUNG CHING N RD, SEC 3, TAIPEI 103 TAIWAN	E206101

EVAPORATIVE COOLER RETROFIT PUMPS (AGIS)**USE AND INSTALLATION**

This category covers pumps intended to replace the original pumps provided in certified evaporative coolers and pumps meant as retrofit pumps providing additional functionality, such as the timed purging of evaporative cooler reservoirs. They do not require qualified service personnel for installation when the evaporative cooler is provided with a receptacle intended for cord-and-plug connection of the pump. For installations where the pump is not provided with a plug or where the plug must be cut off in order to wire the pump directly into the cooler circuitry, installation by qualified service personnel is specified. Pump construction, performance and installation instructions have been investigated to determine that, when properly installed, they comply with the requirements applied to original equipment pumps in these coolers.

PRODUCT MARKINGS

The pump packaging indicates the brand name, models or ratings of the evaporative coolers for which the pump is designed. Information concerning mounting of the pump, cord routing, maximum depth of water in the reservoir, and regular testing of any GFCI protecting the pump is either marked on the pump packaging or provided in detailed installation instructions accompanying each pump.

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ) and Heating, Cooling, Ventilating and Cooking Equipment (AAHC).

REQUIREMENTS

The basic standards used to investigate products in this category are ANSI/UL 778, "Motor-Operated Water Pumps" and ANSI/UL 507, "Electric Fans."



Evaporative Cooler Retrofit Pumps (AGIS)–Continued

UL MARK

The Classification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Classification and Follow-Up Service. The Classification Mark for these products includes the UL symbol, the word “CLASSIFIED” above the UL symbol (as illustrated in the Introduction of this Directory), and the following additional information:

**EVAPORATIVE COOLER RETROFIT PUMP
FOR USE WITH SPECIFIED EVAPORATIVE COOLERS ONLY
Control No.**

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

CHAMPION COOLER CORP 1724 S SCULLIN, DENISON TX 75020	E229328
DIAL MFG INC 4940 W JEFFERSON, PHOENIX AZ 85043	E124683
FANPAC CO L L C SUITE 204 1117 22ND ST S, BIRMINGHAM AL 35205	E332553
FRANKLIN ELEC-WATER TRANSFER SYSTEMS, SUB OF FRANKLIN ELECTRIC CO INC 301 N MACARTHUR BLVD, OKLAHOMA CITY OK 73127	E224017
PHOENIX MFG INC 3655 E ROESER RD, PHOENIX AZ 85040	E102283
PPS PACKAGING CO 3189 E MANNING AVE PO BOX 427, FOWLER CA 93625	E174766

EVAPORATIVE COOLERS (AGNY)

USE AND INSTALLATION

This category covers evaporative coolers of portable, window and stationary types for residential, commercial and industrial applications. Stationary types may have provision for connection to a duct system for air distribution. Models evaluated for outdoor installation are marked “Outdoor Use.”

Motors used in stationary equipment intended for duct system connection are prevented from hazardous overheating by inherent over-heating devices, by overcurrent protective devices, or by impedance of the motor windings.

Units permanently connected to the source of supply are intended to be installed in accordance with the requirements of ANSI/NFPA 70, “National Electrical Code.”

Evaporative media provided on stationary units that are intended for connection to a duct system in accordance with the International Mechanical Code, ANSI/NFPA 90A, “Standard for the Installation of Air Conditioning and Ventilating Systems” or ANSI/NFPA 90B, “Standard for the Installation of Warm Air Heating and Air Conditioning Systems” are investigated in accordance with UL 900, “Air Filter Units.” These products are also suitable for installation in accordance with the Uniform Mechanical Code.

RELATED PRODUCTS

Some stationary, duct-connected evaporative coolers are covered under Evaporative Coolers Evaluated in Accordance with the Uniform Mechanical Code (AGOS). Air coolers that include a motor compressor and refrigeration system are covered under Room Air Conditioners (ACOT). Products intended primarily for circulating moistened air are covered under Humidifiers (AHIV).

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ) and Heating, Cooling, Ventilating and Cooking Equipment (AAHC).

REQUIREMENTS

The basic standard used to investigate products in this category is UL 507, “Electric Fans.”

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word “LISTED,” a control number, and the product name “Evaporative Cooler” or “Evaporative Air Cooler.”

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

CHAMPION COOLER CORP 1724 S SCULLIN, DENISON TX 75020	E103496
Base-mounted, up-discharge evaporative coolers, Evaporator air coolers, Portable evaporative type coolers, Roof mounted, down-discharge evaporative coolers, Roof mounted, side-discharge, evaporative coolers, Roof or side mounted evaporative coolers, Stationary evaporative type coolers, Wall-mounted, side-discharge evaporative coolers, Window-mounted evaporative coolers, Window mounting kits. Accessory bleed off pumps, Accessory switches.	
CLIMATE TECHNOLOGIES PTY LTD 26 NYLEX AVE, SALISBURY, SA 5108 AUSTRALIA Portable evaporative coolers, Window-type evaporative coolers.	E171684
ECONO CLIMAS S A DE C V ANTIGUO CAMINO AL MILAGRO 303 FRACC HACIENDA EL MILAGRO 66600, APODACA, NL MEXICO	E123590

Evaporative Coolers (AGNY)–Continued

Portable evaporative coolers.

GD MIDEA ENVIRONMENT APPLIANCES MFG CO LTD **E301926**
 HESUI EAST INDUSTRIAL AREA 28 DONG FU RD DONG
 FENG TOWN, ZHONGSHAN, GUANGDONG 528425 CHINA
 Air coolers.

IMPCO S DE R L DE C V **E21700**
 CARRETERA MIGUEL ALEMAN 6061 COL AMERICA 67130,
 GUADALUPE, NL MEXICO
 Duct-connected evaporative coolers, Portable evaporative coolers, Portable type coolers, Roof-mounted straight duct connection axial fan commercial/industrial coolers, Roof or side-mounted duct connected commercial-industrial coolers, Roof or side-mounted, duct-connected, evaporative coolers, Roof or side-mounted duct connected type coolers, Wall mounted coolers, Window mounted coolers.

LANAIR PRODUCTS L L C **E327053**
 4109 CAPITAL CIR, JANESVILLE WI 53546
 Portable evaporative coolers.

PHOENIX MFG INC **E81307**
 3655 E ROESER RD, PHOENIX AZ 85040
 Evaporative coolers, window type, Portable evaporative coolers, Roof mounted, Residential condensing unit evaporative coolers.

SEELEY INTERNATIONAL PTY LTD **E87557**
 1-11 ROTHESAY AVE, ST MARYS, SA 5042 AUSTRALIA
 Portable evaporative coolers.

SHIVN FENG ENTERPRISE CO LTD **E204080**
 2-1 LANE 94 PAN LIEN RD, SEC 1, HSI CHIH, TAIPEI HSIEN
 221 TAIWAN
 Air coolers.

TALL & STOUT INDUSTRIAL CORP **E319997**
 SHI LONG ZAI SHUITIAN VILLAGE, SHIYAN TOWN BAO'AN,
 SHENZHEN, GUANGDONG 518000 CHINA
 Ultrasonic Misting Coolers.

YOU LONG ELECTRICAL INDUSTRY (SHENZHEN) CO LTD **E200680**
 DA WANG SHAN TSUN INDUSTRIAL ZONE SAH CHIN CHEN
 BAO' AN HSIEN, SHENZHEN, GUANGDONG 518104 CHINA
 Air coolers.

Evaporative Coolers Classified in Accordance with the Uniform Mechanical Code (AGOS)

USE AND INSTALLATION

This category covers stationary residential, commercial and industrial evaporative coolers with provision for connection to a duct system for air distribution and intended for installation in accordance with the Uniform Mechanical Code.

Models investigated for outdoor installation are marked "Outdoor Use."

Motors are prevented from hazardous overheating by inherent overheating devices, by overcurrent protective devices, or by impedance of the motor windings.

Units permanently connected to the source of supply are intended to be installed in accordance with ANSI/NFPA 70, "National Electrical Code."

RELATED PRODUCTS

Evaporative coolers of the portable or window type and stationary evaporative coolers employing evaporative media investigated to ANSI/UL 900, "Air Filter Units," are covered under Evaporative Coolers (AGNY).

Air coolers that include a motor compressor and refrigeration system are covered under Room Air Conditioners (ACOT).

Products intended primarily for circulating moistened air are covered under Humidifiers (AHIV).

ADDITIONAL INFORMATION

For additional information, see Evaporative Coolers (AGNY), Electrical Equipment for Use in Ordinary Locations (AALZ) and Heating, Cooling, Ventilating and Cooking Equipment (AAHC).

REQUIREMENTS

The basic requirements used to investigate products in this category are contained in the Uniform Mechanical Code. They include the requirements contained in ANSI/UL 507, "Electric Fans," except for the requirement that the evaporative media comply with ANSI/UL 900, "Air Filter Units."

UL MARK

The Classification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Classification and Follow-Up Service. The Classification Mark for these products includes the UL symbol, the word "CLASSIFIED" above the UL symbol (as illustrated in the Introduction of this Directory), and the following additional information:

[PRODUCT NAME*]

IN ACCORDANCE WITH THE UNIFORM MECHANICAL CODE

Control No.

* EVAPORATIVE COOLER or EVAPORATIVE AIR COOLER

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

CHAMPION COOLER CORP
 1724 S SCULLIN, DENISON TX 75020



Documents
 E240831
 Document Sharing Hub

Evaporative Coolers Classified in Accordance with the Uniform Mechanical Code (AGOS)–Continued

Base-mounted up-discharge evaporative coolers, Roof mounted down-discharge evaporative coolers, Stationary evaporative type coolers, Wall-mounted side-discharge evaporative coolers, Window-mounted evaporative coolers, Window mounting kits.

IMPCO S DE R L DE C V **E231794**
 CARRETERA MIGUEL ALEMAN 6061 COL AMERICA 67130,
 GUADALUPE, NL MEXICO
 Duct-connected evaporative coolers, Roof or side-mounted, duct connected, type evaporative coolers.

PHOENIX MFG INC **E234392**
 3655 E ROESER RD, PHOENIX AZ 85040
 Duct-connected evaporative coolers employing media evaluated in accordance with the Uniform Mechanical Code.

SEELEY INTERNATIONAL PTY LTD **E354162**
 112 O'SULLIVAN BEACH RD, LONSDALE, SA 5160 AUSTRALIA
 Commercial/industrial evaporative coolers.

HUMIDIFIERS (AHIV)**GENERAL**

This category covers humidifiers intended for residential and commercial applications that circulate moistened air and generally incorporate an air-circulating fan with or without filters. Stationary types may have provision for connection to heating and ventilating ducts for air distribution.

Motors used in stationary equipment intended for duct connection are prevented from hazardous overheating by inherent overheating devices, overcurrent protective devices, or inherent impedance. Impedance-protected motors do not generate smoke during locked-rotor testing.

RELATED PRODUCTS

Evaporative coolers are covered under Evaporative Coolers (AGNY) and Evaporative Coolers Certified in Accordance with the Uniform Mechanical Code (AGOS).

Vaporizers are covered under Vaporizers (YEIV).

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ) and Heating, Cooling, Ventilating and Cooking Equipment (AAHC).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 998, "Humidifiers."

The basic standard used to investigate air filters provided on stationary-type humidifiers in this category is ANSI/UL 900, "Air Filter Units."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Humidifier."

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

ARMSTRONG INTERNATIONAL INC **E32044**
 816 MAPLE ST, THREE RIVERS MI 49093
 Commercial: Steam humidifiers.

BEIJING YADU SCIENCE & TECHNOLOGY CO LTD **E158471**
 BEIJING UNIV OF PHYSICAL EDUCATION 2 WEST RD
 HAIDIAN DISTRICT 100084, BEIJING CHINA
 Evaporative humidifiers, ultrasonic humidifiers.

CAREL INDUSTRIES SRL **E137548**
 VIA DELL'INDUSTRIA 11 35020, BRUGINE, PD ITALY
 Blower packs, Commercial electrode humidifiers.

CARNES CO, DIV OF CARNES CO INC **E43695**
 448 S MAIN ST, VERONA WI 53593
 Blower packs, Commercial humidifiers.

CARRIER CORP **E118739**
 7310 W MORRIS ST, INDIANAPOLIS IN 46231
 Humidifiers, Residential, duct mounted humidifiers.

FIELD CONTROLS L L C **E54601**
 2630 AIRPORT RD, KINSTON NC 28504
 Duct mounted humidifiers, Humidifiers.

GD MIDEA ENVIRONMENT APPLIANCES MFG CO LTD **E308240**
 HESUI EAST INDUSTRIAL AREA 28 DONG FU RD DONG
 FENG TOWN, ZHONGSHAN, GUANGDONG 528425 CHINA
 Portable humidifiers, Ultrasonic humidifiers.

GUARDIAN TECHNOLOGIES L L C
 7700 ST CLAIR AVE, MENTOR OH 44060

Humidifiers (AHIV)–Continued

Portable humidifiers.

HONEYWELL INTERNATIONAL INC ACS ENVIRONMENTAL & COMBUSTION CONTROLS 1985 DOUGLAS DR N, GOLDEN VALLEY MN 55422 Plenum mounted humidifiers.	E178533
HONEYWELL INTERNATIONAL INC ACS ENVIRONMENTAL & COMBUSTION CONTROLS 1985 DOUGLAS DR N, GOLDEN VALLEY MN 55422 Duct mounted humidifiers, Humidifiers.	E185662
HUMIDITY SOURCE L L C SUITE 58 BLDG 1-D 90 DAYTON AVE, PASSAIC NJ 07055 Humidifiers for duct connection.	E26522
INTERNATIONAL COMFORT PRODUCTS L L C, DIV OF CARRIER CORP 651 HEIL-QUAKER AVE, LEWISBURG TN 37091 Humidifiers, bypass residential type, Humidifiers, power residential type.	E170161
JOHNSON CONTROLS INC 507 E MICHIGAN ST, MILWAUKEE WI 53202 Humidifiers, residential type.	E318784
JOIN-ONE ELECTRIC (SHENZHEN) LTD 5TH FL 49 CHUNG SHAN N RD, SEC 3, TAIPEI TAIWAN Evaporative humidifiers, Humidifiers, Ultrasonic humidifiers.	E108164
JOIN-ONE ELECTRIC (SHENZHEN) LTD 5TH FL 49 CHUNG SHAN N RD, SEC 3, TAIPEI TAIWAN Portable humidifiers.	E203912
JS HUMIDIFIERS PLC ARTEX AVE RUSTINGTON, LITTLEHAMPTON BN16 3LN UNITED KINGDOM Atomising humidifiers.	E320190
KAZ USA INC 250 TURNPIKE RD, SOUTHBOROUGH MA 01772 Cool mist humidifiers, Evaporative humidifiers, Humidifiers, Impeller humidifiers, Portable humidifiers, Portable Warm Mist Humidifiers, Ultrasonic humidifiers, Warm mist humidifiers.	E132522
KUO TONG ELECTRICAL & TECHNOLOGICAL (HUIZHOU) CO LTD YIN SHAN INDUSTRIAL DISTRICT LIANG JING TOWN HUIYANG DISTRICT, HUIZHOU, GUANGDONG CHINA Portable humidifiers.	E227818
LENNOX INDUSTRIES INC 2100 LAKE PARK BLVD, RICHARDSON TX 75080 Humidifiers, bypass residential type, Humidifiers, power residential type	E195686
NORDYNE INC 8000 PHOENIX PKY, O'FALLON MO 63368 Humidifiers, residential type.	E196789
NOVITA CO LTD MT 22 JAEUNGA-RI JIGSAN-MYON, CHEONAN-SHI, CHONGCHEONG-NAMDO 333-810 REPUBLIC OF KOREA Ultrasonic humidifiers.	E255336
OH SUNG CO LTD 51 SUNGSAN-DONG, CHANGWON CITY, KYUNG-NAM 641- 713 REPUBLIC OF KOREA (Portable) Humidifiers, Ultrasonic humidifiers.	E236495
POLARAY INDUSTRIAL CORP 11/15 FL 217 SEC 3 SHAN MIN RD, TAICHUNG 404 TAIWAN Humidifiers.	E155172
RESEARCH PRODUCTS CORP 1015 E WASHINGTON AVE PO BOX 1467, MADISON WI 53701 Humidifiers, residential type.	E155172



Humidifiers (AHIV)—Continued

SAM KWANG POWER SYSTEM CORP #563-15 SIPJUNG 1-DONG BUPYUNG-GU, INCHON 403- 847 REPUBLIC OF KOREA Humidifiers.	E193508
SKUTTLE MFG CO INC, DBA SKUTTLE INDOOR AIR QUALITY PRODUCTS 101 MARGARET ST, MARIETTA OH 45750 Plenum mounted humidifiers, Portable humidifiers, Residential duct mounted humidifiers.	E29222
SUNBEAM PRODUCTS INC DBA JARDEN CONSUMER SOLUTIONS 2381 EXECUTIVE CENTER DR, BOCA RATON FL 33431 Evaporative humidifiers, Humidifiers, Ultrasonic humidifiers, Warm mist humidifiers.	E91919
TRANE U S INC 6200 TROUP HWY, TYLER TX 75707 Humidifiers.	E244208
TRION, DIV OF AIR SYSTEM COMPONENTS INC 101 MCNEILL RD, SANFORD NC 27330 Humidifiers, commercial, non-duct mounted, air-water atomization, Residential, duct mounted humidifiers, Steam humidifiers.	E57914
VAPAC HUMIDITY CONTROL LTD STATION RD, EDENBRIDGE, KENT TNS 6EZ UNITED KINGDOM Commercial resistance heater humidifiers, Blower packs, Commercial electrode humidifiers.	E72719
WALTER MEIER (CLIMATE USA) INC PO BOX 698, OGDENSBURG NY 13669 Blower packs, Blower packages, Commercial humidifiers, Humidifiers, Residential humidifiers, Residential humidifiers with built-on blower packs, Steam exchanger humidifiers.	E65185

AMUSEMENT AND GAMING MACHINES (ASMU)

GENERAL

This category covers self-contained commercial amusement and gaming machines.

The appliances are marked on or adjacent to the electrical rating plate with one of the following: "Suitable for Indoor Use Only," "Suitable for Protected Locations — See Installation Instructions" or "Suitable for Outdoor Use." Complete instructions appear on an appliance intended for use in a protected location, indicating the manufacturer's recommendations concerning the use or installation, or both, of any canopy, marquee, shelter, etc., that may be necessary for the protection of the appliance. The instructions may be located inside the appliance if they are accessible through the front door.

REBUILT PRODUCTS

This category also covers amusement and gaming machines that are rebuilt by the original manufacturer or another party having the necessary facilities, technical knowledge and manufacturing skills. Rebuilt amusement and gaming machines are rebuilt to the extent necessary by disassembly and reassembly using new or reconditioned parts. Rebuilt amusement and gaming machines are subject to the same requirements as new amusement and gaming machines.

UNEVALUATED FACTORS

The burglary and theft protection features of coin-operated machines have not been investigated unless specifically indicated in the individual Listings.

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 22, "Amusement and Gaming Machines."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Amusement Machine," "Gaming Machine" or other appropriate product name as shown in the individual Listings.

For rebuilt products, the word "Rebuilt," "Refurbished" or "Remanufactured" precedes the product name.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

AGS L L C 727 OVERHEAD DR, OKLAHOMA CITY OK 73128 Video Slot Machines.	E329512
AINSWORTH GAME TECHNOLOGY LTD SUITE #201 6600 NW 12 AVE, FORT LAUDERDALE FL 33309 Video slot machines.	E323188
ARISTOCRAT TECHNOLOGIES INC 7230 AMIGO ST, LAS VEGAS NV 89119 Video slot machines. Slot machines, Video poker machines, Video slot/poker machines, Up-Right Video Slot Machine, Rebuilt video slot machines.	E178752



Documents
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Listed accessories.

BOB'S SPACE RACERS INC 427 15TH ST, DAYTONA BEACH FL 32117 Coin operated games, Park model amusement games.	E148617
CHICAGO GAMING CO INC 4616 W 19TH ST, CICERO IL 60804 Redemption games, Video games.	E241313
D E Q SYSTEMES CORP SUITE 103 1840 1ERE RUE, ST ROMUALD, QC G6W 5M6 CANADA Amusement and gaming machines.	E232351
DELTRONIC LABS INC 120 LIBERTY LN, CHALFONT PA 18914 Amusement game accessories: Ticket eaters, Ticket Dispenser Assemblies.	E168799
FBM GAMING AND AMUSEMENT PHILIPPINES INC #28-31, LOT 49-51, UNIT D FAITH ST COR INNOVATIVE ST SUBIC BAY GATEWAY PARK, PH 1, OLONGAPO CITY 2200 PHILIPPINES Video gaming machines.	E337470
FRANK MAYER & ASSOCIATES INC 1975 WISCONSIN AVE PO BOX 105, GRAFTON WI 53024 Video game systems, Video kiosks.	E202056
INCREDIBLE TECHNOLOGIES INC 3333 N KENNICOTT AVE, ARLINGTON HEIGHTS IL 60004 Listed accessories, Slot machines, Video games.	E183420
JVL LABS INC 181 WHITEHALL DR, MARKHAM, ON L3R 9T1 CANADA Video games.	E189334
KONAMI GAMING INC 585 TRADE CENTER DR, LAS VEGAS NV 89119 Reel slot machines, Video slot machines.	E214819
LASER STAR AMUSEMENTS INC SUITE 202 4700 SW 51ST ST, DAVIE FL 33314 Laser shot shooting galleries.	E209805
MIAMI TRIBE OF OKLAHOMA BUS DEVELOPMENT AUTHORITY, DBA ROCKET GAMING SYSTEMS 66201 E 290TH RD, GROVE OK 74344-6251 Reel slot machines, Video slot machines.	E331956
NAMCO-AMERICA INC 951 CAMBRIDGE DR, ELK GROVE VILLAGE IL 60007 Video arcade games, Redemption games, Field installed accessories, Marquee, Target shooting games.	E137480
POKERTEK INC 1150 CREWS RD, MATTHEWS NC 28105 Video Game Accessories, Video Gaming Machines.	E303901
RAW THRILLS INC 5441 FARGO AVE, SKOKIE IL 60077 Video games.	E247094
SEGA AMUSEMENTS EUROPE LTD 42 BARWELL BUSINESS PARK LEATHERHEAD ROAD, CHESSINGTON, SURREY KT9 2NY UNITED KINGDOM Amusement game cranes, Coin operated video games, Redemption games, Video games. Accessories.	E142028
SHUFFLE MASTER INC 1106 PALMS AIRPORT DR, LAS VEGAS NV 89119 Accessory: Gaming table controller kits, Automated transaction stations (ATS), Card dealers, Card shuffler, Card shuffler power supplies, Listed accessory: conversion kits, Listed accessory: Video gaming machines, Multi-deck card shufflers, Progressive, Single-deck card shufflers, Video gaming machines, Video gaming machine, card shufflers, Video slot machines. Field Installed Accessories: Computer assemblies, Marquee assemblies, Accessory LCD displays.	E182496
SKEE-BALL INC 121 LIBERTY LN, CHALFONT PA 18914	E143141



Amusement Games, Redemption games, Skee ball machines, Video games.

SPIELO INTERNATIONAL GERMANY GMBH BORSIGSTRASSE 22 32312, LUBBECKE GERMANY Slot machines, Video slot machines.	E179484
SPIELO INTERNATIONAL USA L L C 6757 SPENCER ST, LAS VEGAS NV 89119 Video slot machines, Listed accessories: Top Boxes, Reel slot machines.	E218569
STERN PINBALL INC 2020 JANICE AVE, MELROSE PARK IL 60160 Listed accessory, tournament kits, Pinball machines, Redemption machines.	E164965
ULTRACADE TECHNOLOGIES INC 1281 WAYNE AVE, SAN JOSE CA 95131 Video games.	E252170
VIDEO GAMING TECHNOLOGIES INC 308 MALLORY STATION RD, FRANKLIN TN 37067 Gaming machines.	E317730
VKGS L L C 7270 PACIFIC ST, OMAHA NE 68114 Accessories - RF Base Station, RF Remote Transmitter, Bingo consoles, Flashboards, Player terminals, Bingo machine handsets, Charging racks, Mini racks, Super racks, 18 Play bingo stations.	E154268
WMS GAMING 800 S NORTHPPOINT BLVD, WAUKEGAN IL 60085 Accessory: Video slot machine top boxes, Power Supply Audio Boxes, Video slot machines. Listed gaming accessory: Sensory immersion chairs (SI Chair)	E329544

ANIMAL CARE APPLIANCES (ASTS)

USE

This category covers motor-operated equipment intended for the grooming, management and feeding of animals or other forms of animal care, for household or commercial use.

RELATED PRODUCTS

Animal hair clippers are covered under Hair Clipping and Shaving Appliances (KEFX).
Heating appliances, such as pet dryers, vivarium heaters, heated pet bowls and heated pet beds are covered under Heaters, Specialty (KSOT).
Aquarium equipment is covered under Aquarium Equipment (AVRR).

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 73, "Motor-Operated Appliances."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the appropriate product name as shown in the individual Listings.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

3BSYSTEM INC 1727 SANKYUK DONG BUK GU, DAE GU 702-845 REPUBLIC OF KOREA	E234043
DOSKOCIL MFG CO INC 4300 BARNETT BLVD, ARLINGTON TX 76017	E330149
ERGO SYSTEMS INC 7N023 BRISTOL CT, ST CHARLES IL 60175	E218110
JENSORTER L L C SUITE 6 20756 HIGH DESERT CT, BEND OR 97701	E343311
NORTH AMERICAN PET PRODUCTS 450 N SHERIDAN, CORONA CA 92880	E254738
PIONEER PET PRODUCTS L L C N144 W5660 PIONEER RD, CEDARBURG WI 53012	E327229
QUALCOMM INCORPORATED 5775 MOREHOUSE DR, SAN DIEGO CA 92121	E346133
ROBERT BOSCH TOOL CORP 1800 W CENTRAL RD, MT PROSPECT IL 60056	E39834



SUNBEAM PRODUCTS INC DBA JARDEN CONSUMER SOLUTIONS 2381 EXECUTIVE CENTER DR, BOCA RATON FL 33431	E59903
VECTOR WIRELESS PO BOX 5931, SANTA CLARA CA 95056	E324321
VETERINARY VENTURES INC 661 SIERRA ROSE DR, RENO NV 89511	E225924

ANTENNA DISCHARGE UNITS (ASWA)

USE

This category covers antenna discharge units intended to minimize the effects of voltage surges on antenna transmission lines. These products have not been investigated to determine their suitability as lightning protective devices.

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate products in this category is ANSI/UL 452, "Antenna-Discharge Units."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Antenna Discharge Unit," or other appropriate product name as shown in the individual Listings.

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GLOBAL INVACOM LTD ALTHORNE, ESSEX CM3 6BX UNITED KINGDOM Antenna discharge units, Multi-Dish Switches, Power inserter signal amplifiers.	E258971
GLOBAL INVACOM LTD ALTHORNE, ESSEX CM3 6BX UNITED KINGDOM Multi-dish switches.	E349498
LEVITON MFG CO INC 201 N SERVICE RD, MELVILLE NY 11747 Antenna discharge units.	E157290

ANTENNA ROTATORS (ASYI)

This category covers power-operated antenna rotators intended for use with VHF and/or UHF television, FM radio and similar antennas receiving signals directly from transmitters.

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate products in this category is UL 150, "Antenna Rotators."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Antenna Rotator," or other appropriate product name as shown in the individual Listings.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

JEBSEE ELECTRONICS CO LTD 24-3 SIN-LO RD PO BOX 57, TAINAN 702 TAIWAN Antenna rotators.	E87683
MCM ELECTRONICS 650 CONGRESS PARK, CENTERVILLE OH 45459 Antenna rotators.	E178154
NTE ELECTRONICS INC 44 FARRAND ST, BLOOMFIELD NJ 07003 Antenna rotators.	E92006
WALDOM ELECTRONICS CORP 1801 MORGAN ST, ROCKFORD IL 61102 Antenna rotators.	E88893

AQUARIUM EQUIPMENT (AVRR)

GENERAL



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This category covers household and commercial aquarium equipment, such as air pumps, submersible water pumps, submersible air pumps, water pumps, filters, heaters, light reflectors (hoods), low-voltage submersible lighting and UV sterilizers.

RELATED PRODUCTS

Water pumps covered under this category have not been investigated for use in fountains or ponds, or with or in proximity to swimming pools or spas. Such pumps are covered under Pumps, Electrically Operated, Liquid (REUZ) and Pumps (WCSX), respectively.

ADDITIONAL INFORMATION

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ).

REQUIREMENTS

The basic standard used to investigate products in this category is UL 1018, "Electric Aquarium Equipment."

UL MARK

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and the product name "Aquarium Equipment," or other appropriate product name as shown in the individual Listings.

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A S A AQUACULTURE SYSTEMS AXITON INC 9700 SOLAR DR, TAMPA FL 33619 Aquarium systems.	E237711
ACME ELECTRICAL MANUFACTURE CO LTD 3RD FL, 2 AQUARIUM SUPPLIES WORKSHOP 26 THIRD RD N DURAN, JIANGMEN, GUANGDONG 529075 CHINA Aquarium submersible pumps.	E347188
ALL-GLASS AQUARIUM CO INC 5401 W OAKWOOD PARK DR, FRANKLIN WI 53132 Household Aquarium Reflectors, Reflectors.	E163201
ALPINE CORP 4901 ZAMBRANO ST, COMMERCE CA 90040 Water pumps.	E339723
ASKOLL DUE SPA VIA INDUSTRIA 32/34 36031, POVOLARO DI DUEVILLE, VI ITALY Aquarium filters, Aquarium filter pumps, Aquarium pumps, Aquarium light hoods, Pumps, Water pumps.	E110726
CENTRAL GARDEN & PET CO 5401 W OAKWOOD PARK DR, FRANKLIN WI 53132 Aquarium filters, Aquarium heaters, Submersible pumps.	E308548
DIANN BAO INC 120 LANE 701 SEC 1 SIANDONG RD CHANGHUA, CHANGHUA HSIEN 500 TAIWAN Aquarium air pumps.	E179687
DONGGUAN KK ELECTRICAL APPLIANCE CO LTD JIU WEI INDUSTRIAL ZONE QI SHI, DONGGUAN, GUANGDONG 523508 CHINA Aquarium light hoods, Aquarium UV Sterilizers, Aquarium water pumps.	E335411
EHEIM GMBH & CO KG POSTFACH 1180 73777, DEIZISAU GERMANY Aquarium heaters, Filters, Filter pumps, Aquarium filters.	E57095
EIKO ELECTRIC PRODUCTS CORP 9TH FL 388 NEI HU RD, SEC 1, TAIPEI 114 TAIWAN Aquarium external filters, Air pumps, Aquarium heaters, Aquarium hoods, Aquarium pumps, Aquarium reflectors, Submersible air pumps, Submersible pumps, Water pumps.	E114229
EUGENE G DANNER MFG INC 160 OVAL DR, ISLANDIA NY 11749 Aquarium air pumps, Filters, Water pumps.	E148999
FIVEPLAN CORP 1-14-15 IMAGOME, HIGASHIOSAKA, OSAKA 578-0903 JAPAN Aquarium air pumps, Aquarium filters, Aquarium pump power heads.	E327289
FOSHAN HAI KE AQUARIUM DEVICE APPLIANCE CO LTD ZHENYE WEST 3RD RD SHATOU INDUSTRIAL PARK, A JIUJIANG TOWN NANHAI AREA, FOSHAN, GUANGDONG 528208 CHINA Aquarium submersible pumps.	E314293



GUANG ZHOU QIAN HU AQUARIUM & PETS ACCESSORIES MFG CO LTD LIHONG RD, DONG AN INDUSTRIAL PARK BI VILLAGE, XINHUA TOWN HUADU DISTRICT, GUANGZHOU, GUANGDONG CHINA Aquarium filters, Aquarium Lamps.	E244695
GUANGDONG HAILEA GROUP SINLI INDUSTRIAL AREA SINLI RD, S YANHE BLK, RAOPING, GUANGDONG 515700 CHINA Aquarium air pumps.	E316130
GUANGDONG ZHENHUA ELECTRICAL APPLIANCE CO LTD 74 JUCHENG RD E XIAOLAN, ZHONGSHAN, GUANGDONG 528415 CHINA Air pumps, Aquarium air pumps, Aquarium water pumps, Water pumps.	E207329
HAWKEYE INTERNATIONAL, DIV OF KOLLER ENTERPRISES 19919 SHAWNEE MISSION PKY, SHAWNEE KS 66218 Household type: Aquariums, Aquarium air pumps, Compact fluorescent reflectors, Fluorescent reflectors, Reflectors.	E120084
HONEST STAR ENTERPRISES LTD 7TH FL, A-1 PO YIP BLDG 62-70 TEXACO RD, TSUEN WAN N T HONG KONG Aquarium filters, Aquarium lights.	E228699
HYDOR SRL VIA VOIRON 27 36061, BASSANO DEL GRAPPA, VICENZA ITALY Aquarium Air Pumps, Aquarium heaters, Aquarium immersible lights, Aquarium thermofilters, Aquarium water circulating pumps, Aquarium water filters, Aquarium water pumps, Inline aquarium heaters, Water pumps.	E175149
IMPERIAL GARDEN PRODUCTS, DIV OF O S I MARINE LAB INC SUITE 440 1350 BAYSHORE HWY, BURLINGAME CA 94010 Submersible water pumps.	E302503
JINJIANG QIMEI GIFTS & FAVOURITE INDUSTRY CO LTD DONGCHEN INDUSTRIAL AREA DONG SHI TOWN, JINJIANG, FUJIAN 362241 CHINA Air pumps, Aquarium pumps, Internal filters, Water pumps.	E229706
MODERN AQUARIUM EQUIPMENT CO LTD 6TH FL, 8-5 LANE 128, SEC 1 NAN CHU RD LU CHU HSIANG, TAOYUAN HSIEN TAIWAN Submersible pumps.	E311144
NEWA TECNO INDUSTRIA SRL VIA DELL'ARTIGIANATO 2 35010, LOREGGIA, PD ITALY Aquarium water pumps, Household: Air pumps, Aquarium filters, Aquarium heaters, Submersible pumps.	E169832
PENN-PLAX INC 35 MARCUS BLVD, HAUPPAUGE NY 11788 Air pumps, Aquarium pumps, Internal filters, Water pumps.	E83202
PROJECT SRL VIA DELL ARTIGIANATO 36 ZONA ARTIGIANALE 35013, CITTADELLA, PD ITALY Non-submersible aquarium filters, Submersible aquarium filter pumps, Water pumps.	E177542
RENA LA RAVOIRE 74370, METZ TESSY FRANCE Air pumps, Aquarium filters, Submersible water pumps, Water pumps'.	E140361
ROLF C HAGEN INC 20500 TRANS CANADA HWY, BAIE-D'URFE, QC H9X 0A2 CANADA Air pumps, Aquarium external filters, Aquarium filters, Aquarium light hoods, Aquarium pumps, Pumps, Submersible pumps.	E236571
SEALAND INDUSTRIAL CO LTD 5TH FL HUNG MOU IND BLDG 62 HUNG TO RD, KWUN TONG KOWLOON HONG KONG Aquarium heaters, Aquarium UV Sterilizers.	E183973



SHENZHEN LENYO AQUATICS CO LTD C D BLDG 3 CHANGSHAN IND ZONE LIULIAN PINGDI LONGGANG, SHENZHEN, GUANGDONG 518115 CHINA Aquarium water pumps.	E339611
SHENZHEN XING RISHENG INDUSTRIAL CO LTD BAOLONG AVE, RD 3 BAOLONG INDUSTRIAL CITY LONGGANG, SHENZHEN, GUANGDONG 518116 CHINA Aquarium air pumps, Aquarium filters, Aquarium heaters, Hang-on filters, Submersible water pumps.	E230625
SHENZHEN YUANHUA ELECTRICAL APPLIANCE CO LTD CHANGZHEN VILLAGE, GONGMING TOWN BAOAN, SHENZHEN, GUANGDONG 518132 CHINA Submersible pumps.	E212158
SHINING POND ELECTRONIC PRODUCT INC UNIT A1-2F, HENG-XING INDUSTRIAL DIST XIA-SHI-JIA VILLAGE GONG-MING TOWN, SHENZHEN, GUANGDONG 518106 CHINA Submersible pumps.	E347718
SKYISH ELECTROMOTOR & ELECTRICAL APPLIANCE CO LTD 48 NORTH OF XIAOLAN INDUSTRIAL AVE XIAOLAN TOWN, ZHONGSHAN, GUANGDONG 528145 CHINA Aquarium submersible pumps.	E315726
SUISAKU CO LTD SUISAKU AKIHABARA BLDG 1-9-6 TAITO TAITO-KU, TOKYO 110-0016 JAPAN Aquarium filters.	E343412
SUNLIGHT SUPPLY INC SUITE 101 BLDG A 5408 NE 88TH ST, VANCOUVER WA 98665 Aquarium air pumps, Submersible water pumps.	E224851
SUNTECH ELECTRONICS (ZHUHAI) CO LTD 3 ZHENG FANG SQUARE XIANGZHOU SCIENCE TECHNOLOGY PARK HONGWAN, ZHUHAI, GUANGDONG 519060 CHINA Aquarium heaters.	E251527
TAIE WEIE ENTERPRISE CO LTD 85-1 SHUIYUAN RD, TAIPEI TAIWAN Water pumps (submersible).	E184587
TETRA HOLDING (US) INC 3001 COMMERCE ST, BLACKSBURG VA 24060 Air pumps, Aquarium Chillers, Aquarium heaters, Aquarium light hoods, Aquarium power filters, Aquarium power head pumps, Aquarium pump/filters, Aquarium reflectors, Filters, Household aquarium hoods and reflectors, Reflectors, Submersible heaters, Submersible pumps, Whisper power filters.	E63138
TRANSWORLD AQUATIC ENTERPRISES INC #3 3730 W CENTURY BLVD, INGLEWOOD CA 90303 Aquarium water pumps, Household aquarium chillers.	E258787
ZHONGSHAN JEBAO ELECTRICAL APPLIANCES CO LTD TONGMAO INDUSTRIAL PARK DONGSHENG TOWN, ZHONGSHAN, GUANGDONG 528414 CHINA Aquarium water pumps.	E249776
ZOO MED LABORATORIES INC 3650 SACRAMENTO DR, SAN LUIS OBISPO CA 93401 External filters, Submersible filters, Submersible water pumps.	E247287

AUDIO AND RADIO EQUIPMENT, COMMERCIAL (AZCY)

COMMERCIAL AUDIO AND RADIO EQUIPMENT, SYSTEMS AND ACCESSORIES (AZJX)

This category covers power-operated audio and radio equipment and accessories rated 300 V or less and designed to meet the use requirements of commercial enterprises or establishments, churches, schools, theaters, factories and similar locations, and connected to supply circuits in accordance with ANSI/NFPA 70, "National Electrical Code."

Commercial audio and radio equipment includes amplifiers, preamplifier mixers, signal processors, etc. for general use; public address and centralized sound systems; intercommunication devices and systems; radio receivers, tuners and tuner amplifiers, recording devices.

Commercial Audio and Radio Equipment, Systems and Accessories (AZJX)–Continued

sound masking systems, tape decks and power supplies intended for use with commercial sound systems; special effects units and integral amplifier/speakers, etc. that are intended for use by professional and semi-professional musicians.

This category also covers accessories for use with commercial audio and radio equipment such as audio modulated lights, audio level indicators, etc.

Products of the above types may also be Listed under Audio/Video Apparatus (AZSQ).

This category does not cover dictating or transcribing machines for office use.

This category does not cover musical instruments and accessories other than those noted above. For musical equipment not covered by this category refer to the category for "Musical Instruments".

Speakers and their accessories that have been investigated for mounting in air-handling spaces are specifically identified by markings on the product and in the individual Listings. Installation details are shown on the product or are provided in a separate installation document provided with the product and referenced in the marking on the product.

Products intended to form part of any fire resistant barrier assembly can be found in the Fire Resistance Directory.

For additional information, see Electrical Equipment for Use in Ordinary Locations (AALZ).

The basic standard used to investigate products in this category is ANSI/UL 813, "Commercial Audio Equipment". The requirements of ANSI/UL 2043 "Fire Tests for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air Handling Spaces" are used to evaluate nonmetallic materials of products marked suitable for use in air handling spaces.

Equipment rack systems consist of an equipment rack and one or more audio or video components such as amplifiers, equalizers, VCRs and similar equipment. Each component installed in the rack that does not bear the UL Mark is identified by type and model number on a tag that is permanently attached to the rack. If all components installed in the rack bear the UL Listing Mark, the tag is not required.

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, and one of the following product names as appropriate: "Commercial Audio System," "Commercial Audio Equipment," "Commercial Sound Equipment," "Commercial Audio Product," "Commercial Radio," or other appropriate product name (prefixed by "Commercial") as shown in the individual Listings.

UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental or consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Guide Information.

ALESIS CORP **E140010**
1633 26TH ST, SANTA MONICA CA 90404
Dual channel power amplifiers, Models Matica 500, Matica 900.

AMPLIVOX SOUND SYSTEMS L L C **E37772**
3995 COMMERCIAL AVE, NORTHBROOK IL 60062
Amplifiers, Models S402, S805A, SW805A.
Amplifier-speakers, Models S122, S122A, SW122A, S210, S222, SW222, employing Model S1460 power supply; Models S210, S310, S500, S610.

ATLAS SOUND L P **E199147**
1601 JACK MCKAY, ENNIS TX 75119
In wall volume controls, Models AT10, -10A, -10A-PA, -10PA, -35, -35A, -35A-PA, -35PA, -75, -75PA, -100A, -100A-PA, DAT-10, DWS-15, DWSM-15, DWTM-15, DWT-15, E408-100, SAT-10, -35, SWS-15, SWSM-15, SWTM-15, SWT-15, AT10, AT10-RM, AT10-PCB, AT10-PA, AT10-PARM, AT10-PA-PCB, AT35, AT35-RM, AT35-PCB, AT35-PA, AT35-PARM, AT35-PA-PCB, AT100, AT100-RM, AT100-PCB, AT100-PA, AT100-PARM, AT100-PA-PCB.
Speaker Masking Systems, Models AM1100-LH, AM1100-16VH.
Model numbers may employ suffix numbers or letters.

ATLM-AMERICA INC **E219645**
1491 N 500 W, COLUMBUS IN 47201
Processors, Models A2001, D2001.
Amplifier, Model D4100.
Subwoofer amplifiers, Models SMS1, SMS1-WH, SMS1-SUB, SMS1-SUB-WH.

AUDIO TELEX COMMUNICATION PTY LTD **E230433**
149 BEACONSFIELD ST PRIVATE BAG 149, SILVERWATER, NSW
1811 AUSTRALIA
Audio Mixer, Model TX 8201.
Models TX 6000, TX 8000.
Audio Mixer Amplifiers, Models AMIS 120, AMIS120P, AMIS 120XL.
Model AMIS 1202P.
Models AMIS 250, AMIS 250P.
Models AMIS 604, AMIS 604P.
Model AMIS 60.
Professional Audio-Stereo Amplifier, Model SY 1200.

AUDIO-TECHNICA U S INC **E145220**
1221 COMMERCE DR, STOW OH 44224
Antenna distribution system, Models AEW-DA800EU, AEW-DA860UK, AEW-DA800J, AEW-DA730G.
Wireless microphone antenna distribution systems, Models AEW-DA550C, -DA660D, ATW-DA600, -DA700.

AVAYA INC **E224230**
211 MOUNT AIRY RD, BASKING RIDGE NJ 07920
Amplifier, Model LU10WAMP.

AXL MUSICAL INSTRUMENTS CO LTD **E174845**
USA LOCATION 31067 SAN CLEMENTE ST, HAYWARD CA 94544
Guitar amplifiers, Models AAMP35R, AAMPB60, Stage-100, AXL-10WEA, AXL-20WEA, AXL-30WEA, Vintage 60, Vintage 50, Acoustic 50, Vintage 60R, Vintage B70, G10, B20, G20R, Power 10.



Commercial Audio and Radio Equipment, Systems and Accessories (AZJX)—Continued

Powered mixers, Models AXL-HD4, -HD5, -HD6.

BBE SOUND INC

E142095

5381 PRODUCTION DR, HUNTINGTON BEACH CA 92649

Guitar preamps, Models 383 and 386.

BOGEN COMMUNICATIONS INC

E15903

50 SPRING ST PO BOX 575, RAMSEY NJ 07446

Amplifiers, Models BPA60, GA-2, GS-35, -60, -100, -150, -250, HTA-125A, -250A, LU35WAMP, -60WAMP, -100WAMP, -250WAMP, -250WAMPE, PM3180, RM350, TPU-15A, -35A, -35B, -60A, -60B, -100A, -100B, -250, TU-35A, -60A, -100A, WMA-80.

Models C10, C10MOH, C20, C20MOH.

Audio power amplifiers, Models LUAMFMT, RM350D, TP-30D.

Master control panel, Model MCP-35A with pre-amplifier switch, Model MCP-B.

Mixer/Preamplifier, Model CAM-2.

Mixer/Power amplifiers, Models DMA-40, -80, -160, DPA-160.

Music/Paging amplifier system, Models LUIOWAMP, TPU-15, -15A.

Public address amplifiers, Models C10C, C20C, CT-100C, CTS-1035, -1060, -1100.

Solid state public address amplifiers, Models C35, C35C, C60, C60C, C100, C100C.

Tuner-amplifier, Model CAM.

Tuners, Models TP-30D, -50A, -100A.

BOGEN COMMUNICATIONS INC

E323435

50 SPRING ST PO BOX 575, RAMSEY NJ 07446

Amplifiers, Models C10, C10MOH, C20, C20MOH.

Models GS-35, GS-60, GS-100, GS-150, GS-250.

Models LU 35WAMP, LU 60WAMP, LU 100WAMP, LU 250WAMP, LU250WAMPE, TPU-35B, TPU-60B, TPU-100B, TPU-250.

Music/paging amplifier systems, Models LU10WAMP, TPU-15A.

BOSCH SECURITY SYSTEMS INC

E50518

12000 PORTLAND AVE, BURNSVILLE MN 55337-1522

Digital intercom systems, Models 90007500-000, Zeus 2400.

Power supply, Model 92934-000.

Power supply/intercoms, Models PS-4000, SPS-2000A, -2000L.

CLEAR-COM L L C

E148337

SUITE 105 1301 MARINA VILLAGE PKY, ALAMEDA CA 94501

Intercom systems: Main Stations, Models CS-222, MS-232, Matrix Plus 3 System 200, Matrix Plus 3 Compact 72.

Power supplies, Models PS-454, PS-464, PSU-102, PSU-101.

CREST AUDIO INC

E194258

5022 HWY 493, MERIDIAN MS 39305

Amplifiers, Models CS-200X, PA150.

Power amplifiers, Models CA2, CA4, CA6, CA9, CA12, CA18.

Models CK1200S, CK1200V, CK1400S, CK1800S, CK1800-S2, CKS100, CKS200, CKS400, CKS800, CKS800-2, CKS1200-2, CKS1600-2, CKV100, CKV200, CKV400, CKV800, CKV1600.

CROWN AUDIO INC

E106377

1718 W MISHAWAKA RD, ELKHART IN 46517

Amplifiers, Models 460 CSL, 800 CSL, 1400 CSL, 8404A, A-800, -1000, CP-660, Com-Tech 200, -210, -210A, -400, -410, -410A, -800, -810, -810A, -1600, -1610, -1610A, CT800, -810, -810A, -1600, -1610, -1610A, -1610SAE8, D-45, D-75A, K1, K2, MA602, -1202, -2402, Macro Tech 600, -1200, -2400, -3600VZ, Micro Tech 600, -1200, MT-2400, Power Base-1, -2, -3, Power-Tech 3, PS-200, -400.

Audio system controller component, Models IQ System Interface, IQ System Repeater.

Audio system monitor, Model SLM-8.

Multiplexers, Models AMB-5, MPX-6, SMX-6.

Remote power controller, Model RSVP.

Accessory, Model PIP-ISO.

EDWARDS, A DIV OF UTC FIRE & SECURITY AMERICAS

E10404

CORPORATION, INC.

8985 TOWN CENTER PKY, BRADENTON FL 34202

Administrative control centers, Models 12A3200#, -3212#, 12B3200#, -3212#.

Alternating current panels, Models 9A1491, -1492.

Amplified monitor panel, Model 9A1687.

Amplifiers, Models 1A-20, -1635, -1660, -1725, -4060, -4125, -3125, -3250, -3127, -3252.

Compressor limiter noise gate, Model 2A82.

Control panels, Models 1A952, -954.

Dynamic range limiter Model 2A81A.

Equipment housing, Models 13A152, -153.

Equipment racks, Models 13A142B, -161B, -177B.

Intercommunication units, Models 4A876B, -881B.

Line amplifier, Model 2A95.

Master control amplifier, Model 1A957.

Mixer preamplifier, Model 2A96A.

Modular communication systems, Models 12A2080++, 12B2080++, MCS350+, PC1250.

One-third octave filter set, Model 3A242A.

Paging amplifier, Model 1A4250.

Power amplifiers, Models 1A931, -929.

Power supplies, Models 17A365, 17A475.

Tone generator, Model 15A266A.