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Report pages reissued

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Att2 Illustrations added: 43 to 51

Att13 Drawings added: 1 for Model KD100-ff, KD100-ff-x

Att 14 Drawings- 1 to 3 for model LPxxV05yy or LPxxV05yy-ff, NTxxzz09yy and NTxxzz09yy-ff.

Report pages reissued

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## PRODUCTS

CLASS 2811 03 - HEATERS-Air - Stationary Type

CLASS 2811 83 - HEATERS-Air - Stationary Type - Certified to US Standards

Wall-insert Heater, household use, stationary type, grounded, cord-connected, rated 120 V, 60 Hz, 1400 W:

PART A: Model FA23V60L or FA23V60L-Cx or FA23V60L-x; FA18V60L or FA18V60L-Cx or FA18V60L-x;  
FA42V60L or FA42V60L-Cx or FA42V60L-x

PART B: Model FA23V60 or FA23V60-Cx or FA23V60-x

PART C: Model FA26V60L or FA26V60L-Cx or FA26V60L-x

PART D: Model FA26V60 or FA26V60-Cx or FA26V60-x

PART E: Model FA26V60A or FA26V60A-Cx or FA26V60A-x

PART F: Model FA30V60 or FA30V60-Cx or FA30V60-x

PART G: Model F18V66L or F18V66L-Cx or F18V66L-x; F23V66L or F23V66L-Cx or F23V66L-x;

PART H: Model Exxyyor Exxyy-x or Exxyy-Cx series

PART J: Model RVxxxxzz80yyy or RVxxxxzz80yyy-ff

PART J1: Model ZFxxxxzz03yyy or ZFxxxxzz03yyy-ff.

Wall-insert Heater, household use, stationary type, grounded, cord-connected, rated 120 V, 60 Hz, 1500 W:

PART I: Model GxxxK08yyy-ff, GxxxR16yyy-ff series

PART K: Model xxx22-yyy or xxx22-yyy-ff

PART L: Model KD100-ff, KD100-ff-x

Note 1: In part H, "xx" denotes 25, 35, 42, 48 and 52; "yy" denotes WF, W, MR and C.

Note 2: In part I, "xxx" denotes 18, 23, 26, 30, 36 and 42; "yyy" denotes H, M, L; "ff" denotes blank, x, Cx, NR, NRx, MT, MTx; In part J&K, "xxx" denotes 18, 23, 26, 28, 30, 33, 36, 42, 48, 60, 72, 96 (part J only) and 108 (part J only); "yyy" denotes H, M, L, S, F(part J only) and FG, CG, CCG; "ff" denotes x, Cx, NR, NRx, MTx, BB, HB, FB, SB, BG, CG, Tx and Px, Vx, Dx (part K only).

Note 3: In part J, "zz" denotes P, D, V.

Note 4: In part J1, "xxx" denotes 30, 33, 36, 42, 48, 50, 60, 74, 96. "yyy" denotes L, F. "zz" denotes P, D, V.

"ff" denotes Sx, Wx, Gx, Cx, Tx.

Note 5: In Part L, "ff" denotes zz, Czz, Tzz, Gzz, MTzz and "zz" = 23, 26, 30.

The suffix "x" denotes 1~20 and the different numbers indicated different customer.

Wall-insert Heater, household use, stationary type, grounded, cord-connected, rated 120 V, 60 Hz, 800 W:

Models LPxxV05yy or LPxxV05yy-ff.

Note: "xx" denotes 12, 13, 15; "yy"= S (small), R (reduction), T (Tiny), L; "ff" denotes x, Cx, NR, NRx, MT, MTx, Wx, Gx, x= 1~20.

Wall-insert Heater, household use, stationary type, grounded, cord-connected, rated 120 V, 60 Hz, 1400 W:

Models NTxxxx09yy or NTxxxx09yy-ff

Note: "xx" denotes 18, 23, 26, 28, 30, 33, 36, 42, 48, 54, 58, 60; "zz"= P, V, D; "yy"= S (small), R (reduction), T (Tiny), L, M; "ff" denotes x, Cx, NR, NRx, MT, MTx, Wx, Gx, x= 1~20.

## APPLICABLE REQUIREMENTS

- C22.2 No. 46-13 - Electric Air-Heaters  
UL 2021 (4th Edition, Feb 2, 2021) - Fixed and Location-Dedicated Electric Room Heaters

## MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

The following markings must appear in a visible and permanent manner, but do not cover the openings and the screws so that your products will be easily identified and recognized in the field as being CSA Certified. And markings shall appear on CSA Accepted adhesive type nameplate(s) affixed to the enclosure:

- Submittor's name and/or CSA Master Contract Number "261046"
- CSA, CSAus or cCSAus Mark
- Model designation
- Rated voltage, frequency, rated input in watts
- Date code or serial number (denoting, at least, month and year of manufacture)
- The blower motor and synchronous motor is marked "Impedance Protected" or "Z.P."
- \* "CAUTION: High temperature, keep electrical cords, drapery, and other furnishings at least 3 feet (0.9 m) from the front of the heater and away from the side and rear." and "ATTENTION - Haute température, risque d'incendie, tenez les câbles électriques, les rideaux et les autres objets mobiliers à au moins 3 pieds (0.9m) du devant de l'appareil et loin des côtés et du derrière."
- \* CAUTION: A heater shall bear the cautionary marking shown as below:



and

**CAUTION  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN  
NO USER-SERVICEABLE PARTS INSIDE**



**ATTENTION  
RISQUE DE CHOC ÉLECTRIQUE  
NE PAS OUVRIR  
AUCUNE PIÈCE RÉPARABLE PAR L'UTILIZATEUR À L'INTERIEUR**

The following additional marking applies to movable models with a pedestal only:

- "CAUTION: DO NOT LOCATE AGAINST WALLS OR BEHIND DRAPES OF FURNITURE"  
and  
"NE PAS ADOSSER AU MUR OU PLACER DERRIÈRE LES RIDEAUX OU LES MEUBLES"
- A tag, permanently affixed to the power supply cord (no more than 152 mm from the attachment plug), including the following or equivalent instructions at least:

**\*\*WARNING – TO REDUCE THE RISK OF FIRE**

1) Always plug heaters directly into a wall outlet/receptacle. Never use with an extension cord or relocatable power tap (outlet/power strip).

2) Check your heater cord and plug connections. A loose fitting outlet can cause the plug to overheat and a or cause a fire. Be sure plug fits tight in the outlet. Check frequently during use to make sure plug and outlet are not hot. If so, discontinue using heater and have outlet replaced by a qualified electrician.

Note: Heaters draw more current than small appliances, overheating of the outlet may occur even if it has not occurred with the use of other appliances.

3) Always unplug the heater when not in use;

4) Do not operate heater with a damaged cord or plug or after the theater malfunctions, has been dropped or damaged in any manner. Discard heater or return to an authorized service facility for examination and/or repair.

5) Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.

**\*\*DO NOT REMOVE THIS TAG!**

The following additional marking applies to mounted models:

k. Install the heater with a minimum distance of 40 cm from the unit bottom to finished floor.

\*: The Warnings and Cautions shall be visible from a point 5 feet (1.5 m) above the floor and between 1 and 4 feet (0.3 and 1.2m) away from the front surface of the heater when the heater is placed in the intended use location.

The words Warnings and Cautions shall be in letters at least 3.2 mm high and shall be of permanent type and in a color that contrasts with that of the enclosure or background.

\*\* : The statements shall be in capital letters at least 4.8 mm in high and shall be of permanent type and in a color that contrasts with that of the enclosure or background.

**Installation:** Clear and complete instructions for the installation of the heater shall be provided. The instructions shall include the following items:

a) Wiring procedures and connections shall be in accordance with the national and local codes having jurisdiction.

b) A complete electrical diagram of the heater, showing the connections of the power supply and the interconnection of individual components.

c) Illustrations of essential features, showing the relation of components.

d) The method of mounting heaters individually or in groups. In the absence of any specific restrictions, it is to be presumed that heater frames may be mounted in contact with combustible materials and heaters may be mounted in close proximity to one another.

e) A caution similar to “High temperature, keep electrical cords, drapery, and other furnishings at least 3 feet (0.9 m) from the front of the heater and away from the side and rear.”

f) The following warning, or equivalent statement: “To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.”

**Important Safety Instructions:** The following information appear in an instruction sheet, manual, booklet, or the like, provided with an appliance and are separated in format from other instructions, and shall appear before the operating instructions. The upper case letters in the instructions relating to the risk of fire, electric shock, and injury to persons shall be not less than 1/12 inch (2.1 mm) high and the lower case letters shall not be less than 1/16 inch (1.6 mm) high. The words “IMPORTANT INSTRUCTION” and “SAVE THESE INSTRUCTIONS” shall be in upper case letters not less than 3/16 inch (4.8 mm) high.

### IMPORTANT INSTRUCTION

When using electrical appliance, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- 1) Read all instructions before using this heater.
- 1) This heater is hot when in use. To avoid burns, do not let bare skin touch hot surface. If provided, use handles when moving this heater. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.
- 2) Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
- 3) Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
- 4) Do not use outdoors.
- 5) To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel (or operate internal disconnect switch if provided).
- 6) Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
- 7) To prevent a possible fire, do not block air intakes or exhaust in any manner. Do not use on soft surfaces, like a bed, where openings may become blocked.
- 8) A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable liquids are used or stored.
- 9) Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- 11) If heater may include an audible or visual alarm to warn that parts of the heater are getting excessively hot. If the alarm sounds (or illuminates), immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred. **DO NOT OPERATE THE HEATER WITH THE ALARM SOUNDING (OR ILLUMINATING).**
- 12) **“SAVE THESE INSTRUCTIONS”**

**Operation:** the instruction manual shall also include the following in separate section or sections:

- a) Instructions and cautionary statements for cleaning, user-maintenance, operations recommended by the manufacturer, such as lubrication or nonlubrication, and a warning to the user that any other servicing should be performed by an authorized service representative.
- b) Any heater employing a manually reset control shall be provided with instructions to the user regarding its operation.
- c) Specific instructions for the proper method of cord storage, total heater storage, and the like when the heater is not in use.

Remarks: The operating instructions shall contain all appropriate information needed to operate a heater properly, and shall be preceded by the heading “OPERATING INSTRUCTIONS,” or the equivalent.

The operating instructions shall:

- a) Warn that the heater must be properly installed before it is used.
- b) Explain and describe the location, function, and operation of each control of the heater, including all user-operated devices intended to reduce the risk of fire, electric shock, or injury to persons; and warn against tampering with such devices.

### MAINTENANCE INSTRUCTIONS:

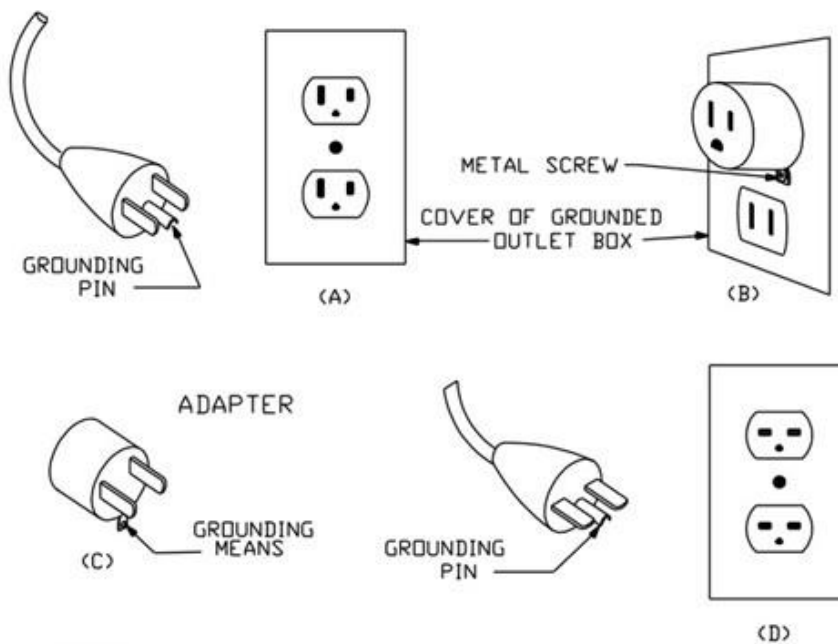
- a) The user maintenance instructions shall indicate when the heater shall be cleaned.
- b) The user maintenance instructions, shall state before cleaning, make sure the power has been turned off at the circuit breaker panel and that the heating element of the heater is cool.
- c) The user maintenance instructions shall not include operations that would require disassembly of the heater to accomplish.
- d) The user maintenance instructions, shall state what cleaning instrument should be used to clean the heater.

### Grounding Instructions:

This heater is for use on 120 volts. The cord has a plug as shown at (A) in figure below.

An adaptor as shown at (C) is available for connecting three-blade grounding-type plugs to two-slot receptacles. The green grounding lug extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box.

The adaptor should not be used if a three-slot grounded receptacle is available.



NOTE: Adaptors are NOT for use in Canada

**Heater Carton Information:** The following information pertaining to the heater features and its use conditions shall be included on the external surface of the packaging of a heater. All information shall be grouped together and appear on one side, except the bottom, of the packaging.

- a) 120 V, 60 Hz, 1400 W or 120 V, 60 Hz, 1500 W.
- b) Wall-insert, wall-mounted, freestanding for model Exxyy or Exxyy-x or Exxyy-Cx series and model RVxxxxzz80yyy or RVxxxxzz80yyy-ff ; insert type for other models.
- c) This heater is hot when in use. To avoid burns, do not let bare skin touch hot surface. If provided, use handles when moving this heater. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.
- d) Do not use this heater wet or moist locations.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US; or with adjacent indicator 'US' for US only; or without either indicator for Canada only.

Note: Bilingual Markings for products with CSA Mark or cCSAus Mark.

Jurisdictions in Canada may require these markings to be also in French. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the products.

## **ALTERATIONS**

- a. Marking as noted above.

## **FACTORY TESTS**

- a. Dielectric Voltage-Withstand Test:

The equipment at the conclusion of manufacture, before shipment, shall withstand for one min, without breakdown, the application of 1000 V ac between live parts and exposed non-current-carrying metal parts. The factory test may be made at existing room temp. As an alternative a potential 20% higher may be applied for one second.

WARNING: The factory test specified may present a hazard of injury to personnel and/or property and should only be performed by persons knowledgeable of such hazards and under conditions designed to minimize the possibility of injury.

- b. Production Line Grounding Continuity Tests:

The manufacturer shall test, at the conclusion of manufacture and before shipment, each heater provided with a power supply cord incorporating a ground conductor to determine that electrical continuity exists between an exposed dead metal part of the heater and the grounding blade of the attachment plug. An indicating device, such as an ohmmeter, low voltage battery and buzzer combination, or the like, may be employed, in the test.

## **SPECIAL INSTRUCTIONS FOR FIELD SERVICES**

1. Component descriptions marked with either the "(INT)" or "(INT\*)" identifiers may be substituted with other components providing the requirements specified under the notes in the "Description" are complied with.

## **COMPONENT SPECIAL PICKUP**

1. Component descriptions marked with the identifier "(CT)" are subject to annual pickup and Conformity Testing.

**DESCRIPTION**

Notes:

1. Component Substitution
  - a) Critical components (those identified by mfr name, cat no), which are NOT identified with either "INT" or "INT\*" are not eligible for substitution without evaluation and report updating
  - b) The term "INT" means a "Certified" and/or "Listed" (or a "Recognized" and/or "Accepted") component may be replaced by one "Certified" and/or "Listed" by another certification organization accredited by the appropriate accreditation body or scheme requirements to the correct standard, for the same application; providing the applicable country identifiers are included and requirements in item "d" below are complied with.
  - c) The Term "(INT\*)" means a "Recognized" and/or "Accepted" component may be replaced by a component that is CSA Certified. The applicable country identifiers shall be included, the requirements in item "d" below as well as any "conditions of suitability" for the component (as recorded in this descriptive report) shall be complied with;
  - d) Components which have been substituted, must be of an equivalent rating, configuration (size, orientation, mounting) and the applicable minimum creepage and clearance distances are to be maintained from live parts to bonded metal parts and secondary parts.
  - e) Substitution of a "Certified" and/or "Listed" component with a component that is "Recognized" or "Accepted" is not permitted without evaluation and report updating.
  - f) Substitution of a "Recognized" and/or "Accepted" component by one that is not CSA Certified is not permitted without a proper evaluation as well as a report update because the Conditions of Acceptance of the original component may be different than the Conditions of Acceptance of the substitute component.

PART A: Model FA23V60L or FA23V60L-Cx or FA23V60L-x; FA18V60L or FA18V60L-Cx or FA18V60L-x; FA42V60L or FA42V60L-Cx or FA42V60L-x

Note #1: For Part A/C/G/J/I, due to its different usage conditions (wall-insert for all models listed above and free-standing for model of 18, 23 26 inches, which is insert with decorative mantel), the representative model was evaluated with satisfactory results by CSA C22.2 No. 46-13, UL 2021 (4<sup>th</sup> Edition) and UL 1278 (4<sup>th</sup> Edition).

General: Please refer to Photo 1-4 and Illustrations 1-6.

1. Enclosure:

- a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. See Att3 for dimensions. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	104	40 mm by 3 mm	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick.

Alternate: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Same as the above except for top and back as described below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	Slot: 52 or louver: 12	Slots: 40 mm by 3 mm Louver: 80 mm long by 3.4 mm (Max Minor Dim.)	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Back	52	50 mm by 3 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick. If no opening provided on Side enclosure, metallic handler may be provided.

Alternate: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Same as the above except for top and back as described below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	Slot: 52 and louver: 6	Slots: 40 mm by 3 mm Louver: 80 mm long by 3.4 mm (Max Minor Dim.)	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Back	69	50 mm by 3 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick. If no opening provided on Side enclosure, metallic handler may be provided.

- b. Front Frame: Steel frame with tempered glass, 3 or 4 mm thick. Mounted to enclosure sides in a steel frame and held in place with brackets and glass cement.

Optional Decorative Mantel (Applied for 18/23/26 inches models in Part A/C/G/J): Refer to Photo 30-32.

2. Power Supply Cord: UL and cUL Listed (E315592).

Manufacturer: LINOYA ELECTRONIC TECHNOLOGY CO LTD.

Designation: XYTP-006.

Plugcap: Type 5-15 P, rated 125 V, 15 A.

Rating: SJT or HPN-R, 16/3 AWG, 300 V, 105 C.

Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord:UL and cUL Listed(E254267).

Manufacturer: GUANGDONG KAIHUA ELECTRIC APPLIANCE CO LTD.

Designation: KH-9922L.

Plugcap: Type 5-15 P, rated 125 V, 15 A.

Rating: SJT or HPN-R, 16/3 AWG, 300 V, 105 C.

Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord:UL and cUL Listed(E206144).

Manufacturer: UNIRISE ELECTRIC WIRE & CABLE CO LTD.

Designation: UE-322A.

Plugcap: Type 5-15 P, rated 125 V, 15 A.

Rating: SJT or HPN-R, 16/3 AWG, 300 V, 105 C.

Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord:UL and cUL Listed(E87333).

Manufacturer: TRANSWORLD ELECTRIC CO LTD.

Designation: TE-34P.

Plugcap: Type 5-15 P, rated 125 V, 15 A.

Rating: SJT, 16/3 AWG, 300 V, 105 C.

Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord: UL and cUL Listed. (E334525)

Manufacturer: ZHONGSHANCITY HONGSHANCHUAN ELECTRICAL EQUIPMENTS CO LTD.

Designation: HSC-203.

Plugcap: Type 5-15P, rated 125 V, 15 A.

Cord: HPN-R cord, 16/3C AWG, rated 300 V, 105 C.

Length: 1.8 m min, 2.4 m max.

Connection Box and Cover: Refer to Photo-29.

Note: Applied this connection box and cover only for models stated in PART A when the units intended for permanently connection.

3. Strain Relief Bushing: UR Recognized. (E107293).

Manufacturer: HEAVY POWER CO LTD.

Designation: 6N3-4.

Mounting: Secured in Side Housing or Back Housing through a suitably sized double “D” shaped hole.

4. Bonding:The green conductor from the power supply cord is terminated to a certified, closed loopconnector and then is secured to the supporting panel by a M4 screw, star washer. The screw serves no other purpose than to provide a grounding point for the appliance.

5. Wire Connector: (INT) cURus Recognized.

Type: Insulated, closed-end pressure crimp-on type.

Rating: 105 C or 750 C, suitable for 16 AWG, 20 AWG and 22 AWG.

6. Internal Wiring: (INT) cURus Recognized.

- a Heating Element Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.  
Alternate Heating Element Supply: AWM I A 3122 FT2/AWM 3122 HB, 16 AWG, 200 C, 300 V.
- b Self-hold Thermostat Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.  
Alternate Self-hold Thermostat Supply: AWM I A 3122 FT2 / AWM 3122 HB, 16 AWG, 200 C, 300 V.
- c Blower Motor Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.
- d Synchronous Motor Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.
- e LED strip Supply: AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.
- f Control Panel Supply: AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.

Remarks: Cable ties provided to fix the internal wirings. Fiberglass tube provided for preventing wirings from overheating near heater element.

7. Control Panel: (INT) UL Recognized.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 169 mm by 20 mm.

Mounting: secured to plastic cover with screws.

Consists of the following critical components soldered on it:

- a. LED1~LED4: Rated 2V, 20mA.
- b. Display: Rated 2 V, 150mA.
- c. Remote: Rated 2.7-5.5V, 0.8mA.

Alternate Control Panel: (INT) UL Recognized. Refer to Att2 ILL-41.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 141 mm by 32 mm.

Mounting: secured to plastic cover with screws.

Consists of the following critical components soldered on it:

- a. SW1~SW5 or SW6: Rated 2V, 20mA.
- b. Display: Rated 2 V, 150mA.
- c. Remote: Rated 2.7-5.5V, 0.8mA.

8. Main PCB: (INT) UL Recognized.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 147 mm by 82 mm.

Mounting: Secured to supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.

Consists of the following critical components soldered on it:

- a. Fuse: cURus Recognized. (E321507)  
Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.  
Designation: RXF-1W.  
Rating: 0.82R, 1 A.
- b. Capacitor:  
EC2: Electrolytic type, 10 uF, 400 V, 105 C.  
EC3: Electrolytic type, 100 uF, 16 / 25 V, 105 C.

EC4: Electrolytic type, 47 uF, 50 V, 105 C.

EC5: Electrolytic type, 470 uF, 25V, 105 C.

EC6: Electrolytic type, 10 uF, 400 V, 105 C.

Relay (Relay1): cURus Recognized. (E134517)

Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.

Designation: HF2160-1A-12DE.

Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (Relay 1): cURus Recognized. (E179944)

Manufacturer: NINGBO SONGLE RELAY CO LTD.

Designation: SLI-12VDC-SL-A.

Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (Relay 1): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GK-C-1A-12D.

Rating: Contact 277Vac, 40 A, 100,000 operations.

Relay (relay2): cURus Recognized. (E134517)

Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.

Designation: JQC-3FF.

Rating: 125 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E167996)

Manufacturer: NINGBO SONGLE RELAY CO LTD.

Designation: SRD-12VDC-SL-A.

Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GH-1A-12L.

Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E190598)

Manufacturer: SANYOU CORPORATION LTD.

Designation: SRD-S-112D.

Rating: 250 V ac, 7A, 100,000 operations.

c. High Frequency Transformer:

Insulation Class: 130 C.

Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core.

Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long.  
(Flame Rating: UL 94 V-0, RTI=130 C)

Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.

Mounting: Soldered to Main PCB via pin terminals.

Alternate Main PCB: Refer to Photo 25 and Illustrations 11-14 for details.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 147 mm by 82 mm.  
Consists of the same critical components described in item 8 above.

Alternate Main PCB: Refer to Photo 27 and ILL 16 for details.  
Material: Glass Fabric Epoxy.  
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.  
Dimension: 1.6 mm thick, overall dimension 150 mm by 45 mm.  
Consists of the same critical components described in item 8 above.

Alternate Main PCB: (INT) UL Recognized. Refer to Att2 ILL-27~29, No.1.  
Material: Glass Fabric Epoxy.  
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.  
Dimension: 1.6 mm thick, overall dimension 147 mm by 82 mm.  
Mounting: Secured to supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.  
Consists of the following critical components soldered on it:

- a. Fuse: cURus Recognized. (E321507)  
Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.  
Designation: RXF-1W.  
Rating: 0.82R, 1 A.
- b. Capacitor:  
EC1, EC2: Electrolytic type, 10 uF, 400 V, 105 C or 15uF, 400 V, 105 C  
EC3: Electrolytic type, 47 uF, 50 V, 105 C.  
EC4: Electrolytic type, 470 uF, 25V, 105 C.  
EC5: Electrolytic type, 100 uF, 16V, 105 C.
- c. Relay (Relay1): cURus Recognized. (E134517)  
Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.  
Designation: HF2160-1A-12DE.  
Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (Relay 1): cURus Recognized. (E179944)  
Manufacturer: NINGBO SONGLE RELAY CO LTD.  
Designation: SLI-12VDC-SL-A.  
Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (Relay 1): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GK-C-1A-12D.  
Rating: Contact 277Vac, 40 A, 100,000 operations.

Relay (relay2): cURus Recognized. (E134517)  
Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.  
Designation: JQC-3FF.  
Rating: 125 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E167996)  
Manufacturer: NINGBO SONGLE RELAY CO LTD.  
Designation: SRD-12VDC-SL-A.

Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GH-1A-12L.

Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E190598)

Manufacturer: SANYOU CORPORATION LTD.

Designation: SRD-S-112D.

Rating: 250 V ac, 7A, 100,000 operations.

d. High Frequency Transformer:

Insulation Class: 130 C.

Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core.

Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long.  
(Flame Rating: UL 94 V-0, RTI=130 C)

Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.

Mounting: Soldered to Main PCB via pin terminals.

Alternate Main PCB: (INT) UL Recognized. Refer to Att2 ILL-30~31, No.2.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 144 mm by 47 mm.

Mounting: Secured to supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.

Consists of the following critical components soldered on it:

a. Fuse: cURus Recognized. (E321507)

Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.

Designation: RXF-1W.

Rating: 0.82R, 1 A.

b. Capacitor:

EC1, EC2: Electrolytic type, 10 uF, 400 V, 105 C or 15uF, 400 V, 105 C

EC3: Electrolytic type, 47 uF, 50 V, 105 C.

EC4: Electrolytic type, 470 uF, 25V, 105 C.

EC5: Electrolytic type, 100 uF, 16V, 105 C.

c. Relay (Relay1): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GJL-1A-12LF

Rating: Contact 125Vac, 20A, 100,000 operations.

Relay (relay2): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GI-1A-12D

Rating: 125 V ac, 10 A, 100,000 operations.

d. High Frequency Transformer:

Insulation Class: 130 C.

Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core.

Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long.

(Flame Rating: UL 94 V-0, RTI=130 C)

Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.

Mounting: Soldered to Main PCB via pin terminals.

Alternate Main PCB: (INT) UL Recognized. Refer to Att2 ILL-32~33, No.3.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 144 mm by 58 mm.

Mounting: Secured to supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.

Consists of the following critical components soldered on it:

a. Fuse: cURus Recognized. (E321507)

Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.

Designation: RXF-1W.

Rating: 0.82R, 1 A.

b. Capacitor:

EC1, EC2: Electrolytic type, 10 uF, 400 V, 105 C or 15uF, 400 V, 105 C

EC3: Electrolytic type, 47 uF, 50 V, 105 C.

EC4: Electrolytic type, 470 uF, 25V, 105 C.

EC5: Electrolytic type, 100 uF, 16V, 105 C.

c. Relay (Relay1): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GJL-1A-12LF

Rating: Contact 125Vac, 20A, 100,000 operations.

Relay (relay2): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GI-1A-12D

Rating: 125 V ac, 10 A, 100,000 operations.

d. High Frequency Transformer:

Insulation Class: 130 C.

Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core.

Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long.

(Flame Rating: UL 94 V-0, RTI=130 C)

Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.

Mounting: Soldered to Main PCB via pin terminals.

Alternate Main PCB: (INT) UL Recognized. Refer to Att2 ILL-34~35, No.4.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 144 mm by 64 mm.

Mounting: Secured to supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.

Consists of the following critical components soldered on it:

- a. Fuse: cURus Recognized. (E321507)  
Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.  
Designation: RXF-1W.  
Rating: 0.82R, 1 A.
  
- b. Capacitor:  
EC1, EC2: Electrolytic type, 10 uF, 400 V, 105 C or 15uF, 400 V, 105 C  
EC3: Electrolytic type, 47 uF, 50 V, 105 C.  
EC4: Electrolytic type, 470 uF, 25V, 105 C.  
EC5: Electrolytic type, 100 uF, 16V, 105 C.
  
- c. Relay (Relay1): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GK-C-1A-12D.  
Rating: Contact 277Vac, 40 A, 100,000 operations.

Relay (relay2): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GI-1A-12D  
Rating: 125 V ac, 10 A, 100,000 operations.

- d. High Frequency Transformer:  
Insulation Class: 130 C.  
Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core.  
Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long.  
(Flame Rating: UL 94 V-0, RTI=130 C)  
Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.  
Mounting: Soldered to Main PCB via pin terminals.

Alternate Main PCB: (INT) UL Recognized. Refer to Att2 ILL-36~37, No.5.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 144 mm by 55.3 mm.

Mounting: Secured to supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.

Consists of the following critical components soldered on it:

- a. Fuse: cURus Recognized. (E321507)  
Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.  
Designation: RXF-1W.  
Rating: 0.82R, 1 A.
  
- b. Capacitor:  
EC1, EC2: Electrolytic type, 10 uF, 400 V, 105 C or 15uF, 400 V, 105 C

EC3: Electrolytic type, 47 uF, 50 V, 105 C.

EC4: Electrolytic type, 470 uF, 25V, 105 C.

EC5: Electrolytic type, 100 uF, 16V, 105 C.

- c. Relay (Relay1): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GK-C-1A-12D.  
Rating: Contact 277Vac, 40 A, 100,000 operations.

Relay (relay2): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GI-1A-12D  
Rating: 125 V ac, 10 A, 100,000 operations.

- d. High Frequency Transformer:  
Insulation Class: 130 C.  
Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core.  
Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long.  
(Flame Rating: UL 94 V-0, RTI=130 C)  
Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.  
Mounting: Soldered to Main PCB via pin terminals.

Alternate Main PCB: (INT) UL Recognized. Refer to Att2 ILL-38~39, No.6.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 189.5mm by 45 mm.

Mounting: Secured to supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.

Consists of the following critical components soldered on it:

- a. Fuse: cURus Recognized. (E321507)  
Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.  
Designation: RXF-1W.  
Rating: 0.82R, 1 A.
- b. Capacitor:  
C3, C4: Electrolytic type, 10 uF, 400 V, 105 C or 15uF, 400 V, 105 C  
C13: Electrolytic type, 47 uF, 50 V, 105 C.  
C5: Electrolytic type, 470 uF, 25V, 105 C.  
C12: Electrolytic type, 100 uF, 16V, 105 C.
- c. Relay (Relay1): cURus Recognized. (E134517)  
Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.  
Designation: HF2160-1A-12DE.  
Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (Relay 1): cURus Recognized. (E179944)

Manufacturer: NINGBO SONGLE RELAY CO LTD.

Designation: SLI-12VDC-SL-A.

Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (Relay 1): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GK-C-1A-12D.

Rating: Contact 277Vac, 40 A, 100,000 operations.

Relay (relay2): cURus Recognized. (E134517)

Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.

Designation: JQC-3FF.

Rating: 125 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E167996)

Manufacturer: NINGBO SONGLE RELAY CO LTD.

Designation: SRD-12VDC-SL-A.

Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GH-1A-12L.

Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E190598)

Manufacturer: SANYOU CORPORATION LTD.

Designation: SRD-S-112D.

Rating: 250 V ac, 7A, 100,000 operations.

d. High Frequency Transformer:

Insulation Class: 130 C.

Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core.

Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long.  
(Flame Rating: UL 94 V-0, RTI=130 C)

Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.

Mounting: Soldered to Main PCB via pin terminals.

Alternate Main PCB: (INT) UL Recognized. Refer to Att1 Photos-44 and Att2 ILL-44.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 110 mm by 47 mm.

Mounting: Secured to side panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.

Consists of the following critical components soldered on it:

a. Fuse: cURus Recognized. (E321507)

Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.

Designation: RXF-1W.

Rating: 0.82R, 1 A.

- b. Capacitor:  
EC1, EC2: Electrolytic type, 4,7 uF, 400 V, 105 C.  
EC3: Electrolytic type, 22 uF, 50 V, 105 C.  
EC4: Electrolytic type, 470 uF, 25V, 105 C.  
EC5: Electrolytic type, 100 uF, 16V, 105 C.
  
  - c. Relay (K1): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GJL-1A-12LF  
Rating: Contact 125Vac, 20 A, 100,000 operations.  
  
Relay (K2): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GI-1A-12D.  
Rating: Contact 125Vac, 10 A, 100,000 operations.
  
  - d. High Frequency Transformer: Refer to Att2 ILL-45~46.  
Insulation Class: 130 C.  
Core: 13.5 mm by 13.5 mm by 5.5 mm. Homocentric squares ferrite core.  
Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 8.5 mm OD by 10.5 mm long.  
(Flame Rating: UL 94 V-0, RTI=130 C)  
Winding: N1, 2UEW 0.17mmx1, 117 turns; N2, 2UEW 0.17mmx1, 8 turns;  
N3, 2UEW 0.17mmx1, 9 turns; N4, JYTIW-B 0.30 mmx1, 14 turns.  
Mounting: Soldered to Main PCB via pin terminals.
9. Faux Fire Assembly: Consists of the following:
- a. Flame LED: Total 15 provided, each rated 2 V dc, 20 mA.  
Ember LED: Total 16 provided, each rated 2 V dc, 20 mA.
  
  - b. Synchronous Motor: cURus Recognized. (E199324)  
Manufacturer: FOSHAN SHUNDE HENGXING MICRO MOTOR CO LTD.  
Designation: TYJ50-8A.  
Rating: 120 V, 60 Hz, 4 W, 18r/min.  
Protection: Impedance protected.  
Mounting: Secured to the bracket with two screws.  
Remarks: Shaft provided with sliver mylar reflective film fastened on it.  
  
Alternate Synchronous Motor: cURus Recognized. (E242178)  
Manufacturer: Zhaoqing City Gaoyao District Hengjun Electrical Appliance Co Ltd.  
Designation: TY-50.  
Rating: 120 V, 60 Hz, 4 W, 18r/min.  
Protection: Impedance protected.  
Mounting: Secured to the bracket with two screw s.  
Remarks: Shaft provided with sliver mylar reflective film fastened on it.  
  
Alternate Synchronous Motor: cURus Recognized. (E212993)  
Manufacturer: ZHAOQING LONGTOU ELECTRONIC & ELECTRIC CO LTD.  
Designation: TY-50B.  
Rating: 120 V, 60 Hz, 4 W, 12 or 18 r/min.

Protection: Impedance protected.

Mounting: Secured to the bracket with two screw s.

Remarks: Shaft provided with sliver mylar reflective film fastened on it.

c. Projection Screen: Made of PP, measured 1-3mm thick, flame rating HB @ 0.8 mm, RTI=105 C.

d. Ember Bed:

Material: Resin.

Flame rating: UL 94 V-0 @ 0.8 mm, RTI=105 C.

Dimensions: Average approximately 5 mm thick.

Mounting: Secured to Bottom panel and Sides panel with adhesive.

Alternate Ember Bed: Made of PP. Flame rating HB. Measured 1.0 mm ~3.0 mm.

Alternate Ember Bed: Made of PE. Flame rating HB. Measured 1.0 mm ~3.0 mm.

10. Switch (Optional): cURus Recognized. (E176026)

Manufacturer: SHENZHEN BAOKEZHEN ELECTRONICS CO LTD.

Designation: SC792-1.

Rating: 125 V, 60 Hz, 15 A, 6,000 cycles.

11. Heater Element Assembly: Consists of the following:

a. HeatingElement Bracket: (INT) cURus Recognized.

Material: Sheet steel.

Dimensions: 0.6 mm thick average, overall dim when assembled 50 mm by 33.5 mm.

Mounting: Secured to blower motor housing with screws.

b. Upper Housing: Two pieces provided, made of mica, 0.7 mm thick, one overall dim when assembled 320 mm by 37 mm. Another one overall dim when assembled 320 mm by 20 mm, provided as heat barrier.

c. Lower Housing: One piece provided, made of mica, 0.7 mm thick, one overall dim when assembled 320 mm by 50 mm.

d. Heating Element: two elements are connected in parallel, secured in place by element supports and side brackets, each element is made of 0.7mm dia wire, 3.5~3.7  $\Omega$ /m, 900 C melting point. Rated 120 V, 60 Hz, 1400W.

e. Heating Element Support: Four provided, made of mica, 0.7 mm thick.

f. Self-hold Thermostat: cURus Recognized. (E309745)

Manufacturer: DONGGUAN SHUNHE ELECTRONIC CO LTD.

Designation: H20 or H20X.

Rating: 125 V, 15 A, 10,000 operations, 105 C.

Mounting: Riveted to heater element housing.

Alternate Self-hold Thermostat: cURus Recognized. (E301742)

Manufacturer: FOSHAN CHANCHENG EAGLE TECHNOLOGY CO LTD.

Designation: AMT-P1

Rating: 125 V, 15 A, 10,000 operations, 105 C.

Mounting: Riveted to heater element housing.

Remarks: This thermostat acts as manual reset type. To reset, disconnecting the power by unplugging the plug from the wall receptacle.

- g. (Optional) Thermal Fuse: cURus Recognized. (E313239)  
Manufacturer: HONGYU ELECTRICAL (HONG KONG) CO LTD.  
Designation: H4B00184C or H4B00144C  
Rating: 184C or 144C, 16 A.

12. Fan Assembly: Consists of the following:

- a. Blower Motor: cURus Recognized. (E327392)  
Manufacturer: SHEN ZHEN ZHAOLI MOTOR LTD or GuangDong ZhaoLi Motor Group Co., Ltd.  
Designation: YJ48/200  
Rating: 120 V, 60 Hz, 14.5 W.  
Enclosure: Open.  
Insulation Class: class B.  
Protection: Impedance protection. ZP marked on the motor.  
Type: Shaded pole, induction motor.  
Mounting: Secured to blower motor housing with mechanical ways.

Alternate Blower Motor: cURus Recognized. (E343126)  
Manufacturer: FOSHAN CITY SHUNDE DISTRICT LEPUDA MOTOR CO LTD.  
Designation: PLD48-120.  
Rating: 120 V, 60 Hz, 14.5 W.  
Enclosure: Open.

Insulation Class: class B.  
Protection: Impedance protection. ZP marked on the motor.  
Type: Shaded pole, induction motor.  
Mounting: Secured to blower motor housing with mechanical ways.

Alternate Blower Motor: cURus Recognized. (E184751)  
Manufacturer: HUNAN KELI MOTOR CO LTD.  
Designation: YJ48-16E.  
Rating: 120 V, 60 Hz, 14W.

Enclosure: Open.  
Insulation Class: class B.  
Protection: Impedance protection. ZP marked on the motor.  
Type: Shaded pole, induction motor.  
Mounting: Secured to blower motor housing with mechanical ways

- b. Blower Wheels:  
Material: Sheet aluminum.  
Dimension: 0.5 mm thick min, 9.2 mm wide by 295 mm long. Consists of 3 or 4 sections, each section has 20 blades spaced equally.  
Mounting: Secured to the rotating shaft with by fitted press.  
Remarks: Fan housing provided.

13. Remote Controller: Infrared control. Refer to Photo-4.

- 14. Toggle Switch (Optional): Manufactured byxinbao, model SS-12F15, rated 0.5A, used to disable the heater.  
Alternate: Manufactured by Jiesheng, Model SS-12J01, rated 0.5 A, used to disable the heater.

**PART B: Model FA23V60 or FA23V60-Cx or FA23V60-x**

General: The subject model is similar in construction to Model FA23V60L described in PART A except for the higher height. Refer to Photo-1 and Att4 Drawings for the detailed dimensions.

**PART C: Model FA26V60L or FA26V60L-Cx or FA26V60L-x**

General: The subject model is similar in construction to Model FA23V60L described in PART A except for the larger sizes (26 inches wide). Refer to Photo-1 and Att5 Drawings for the detailed dimensions.

**PART D: Model FA26V60 or FA26V60-Cx or FA26V60-x**

General: The subject model is similar in construction to Model FA23V60L described in PART A except for the following:

1. Enclosure:

- a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Refer to Photo-2 and Att6 for dimensions. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	88	42.5 mm by 3.5 mm	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position
	6	72.6 mm long by 5.6 mm	Louver shaped. Components compartment opening.

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick.

Alternate: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Same as the above except for top and back as described below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	Slot: 44 or louver: 12	Slots: 40 mm by 3 mm	Heater intake

		Louver: 80 mm long by 3.4 mm (Max Minor Dim.)	
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Back	52	50 mm by 3 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick. If no opening provided on Side enclosure, metallic handler may be provided.

- b. Front Frame: Steel frame with tempered glass, 3 or 4 mm thick. Mounted to enclosure sides in a steel frame and held in place with brackets and glass cement.

PART E: Model FA26V60A or FA26V60A-Cx or FA26V60A-x

General: The subject model is similar in construction to Model FA23V60L described in PART A except for the following:

Note: The subject model is similar in construction to model FA26V60 described in PART D except for the less depth of the firebox.

1. Enclosure:

- a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Refer to Att7 for dimensions. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	104	40 mm by 3 mm	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position
	6	72.6 mm long by 5.6 mm	Louver shaped. Components compartment opening.

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2mm, measured 2 mm min average thick.

Alternate: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Same as the above except for top and back as described below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust

	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	Slot: 52 or louver: 12	Slots: 40 mm by 3 mm Louver: 80 mm long by 3.4 mm (Max Minor Dim.)	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Back	52	50 mm by 3 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2mm, measured 2 mm min average thick. If no opening provided on Side enclosure, metallic handler may be provided.

- b. Front Frame: Steel frame with tempered glass, 3 or 4 mm thick. Mounted to enclosure sides in a steel frame and held in place with brackets and glass cement.

PART F: Model FA30V60 or FA30V60-Cx or FA30V60-x

General: The subject model is similar in construction to Model FA23V60L described in PART A except for the following:

Note: The subject model is similar in construction to model FA26V60 described in PART D except for the larger sizes.

1. Enclosure:

- a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Refer to Photo-2 and Att8 for dimensions. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	88	42.5 mm by 3.5 mm	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position
	6	72.6 mm long by 5.6 mm	Louver shaped. Components compartment opening.

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick.

Alternate: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Same as the above except for top and back as described below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	Slot: 44 or louver: 12	Slots: 40 mm by 3 mm Louver: 80 mm long by 3.4 mm (Max Minor Dim.)	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Back	52	50 mm by 3 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick. If no opening provided on Side enclosure, metallic handler may be provided.

- b. Front Frame: Steel frame with tempered glass, 3 or 4 mm thick. Mounted to enclosure sides in a steel frame and held in place with brackets and glass cement.

PART G: Model F18V66L or F18V66L-Cx or F18V66L-x; F23V66L or F23V66L-Cx or F23V66L-x

General: The subject model is similar in construction to Model FA23V60L described in PART A except for the following: Refer to Photo-5~7 and Att10 Drawings for the detailed dimensions.

1. Enclosure:

- a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. See Att10 for dimensions. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	1	304 mm by 25.3 mm	Heater exhaust
	1	58 mm by 17 mm	Flame control switch and Heater control switch location
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	104	40 mm by 3 mm	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Side	2	80 mm by 27.6 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick.

Alternate: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Same as the above except for top and back as described below:

Locations	Openings	Dimensions	Purpose
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Front	61	24.4 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	Slot: 52 or louver: 12	Slots: 40 mm by 3 mm Louver: 80 mm long by 3.4 mm (Max Minor Dim.)	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Back	52	50 mm by 3 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick. If no opening provided on Side enclosure, metallic handler may be provided.

- b. Front Frame: Steel frame with tempered glass, 3 or 4 mm thick. Mounted to enclosure sides in a steel frame and held in place with brackets and glass cement.
- c. Supporting Panel: Formed of painted sheet steel min 0.6 mm thick. Secured to enclosure sides with screws. See Att10Drawing-8 for dimensions. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust
	1	19.2 mm by 13 mm	Flame control switch location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1	30.2 mm by 11.2 mm	Heater control switch location. Covered with molded touching plastic plate, secured to its holder by snap fit.

6. Internal Wiring: (INT) cURus Recognized.

- a. Heating Element Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.  
Alternate Heating Element Supply: AWM I A 3122 FT2/AWM 3122 HB, 16 AWG, 200 C, 300V.
- b. Self-hold Thermostat Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.  
Alternate Self-hold Thermostat Supply: AWM I A 3122 FT2 / AWM 3122 HB, 16 AWG, 200 C, 300 V.
- c. Blower Motor Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.  
Alternate Blower Motor Supply: AWM I A 3122 FT2 / AWM 3122 HB, 22 AWG, 200 C, 300V.
- d. Synchronous Motor Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.  
Alternate: AWM I A 1007 FT1 / AWM 1007 VW-1, 22 AWG, 80 C, 300 V
- e. Main PCB Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.  
Alternate Main PCB Supply: AWM I A 3122 FT2 / AWM 3122 HB, 22 AWG, 200 C, 300V.
- f. Ember LEDs strip Supply: AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.
- g. Heater Control Switch Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.  
Alternate: AWM I A 3122 FT2 / AWM 3122 HB, 16 AWG, 200 C, 300V  
Alternate: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.

- h. Flame Control Switch Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.  
Alternate: AWM I A 3122 FT2 / AWM 3122 HB, 22 AWG, 200 C, 300V.

Remarks: Cable ties provided to fix the internal wirings. Fiber glass tube provided for preventing wirings from overheating near heater element.

- 7A. Heater Control Switch: cURus Recognized. (E170626)  
Manufacturer: SHENZHEN BAOKEZHEN ELECTRONICS CO LTD.  
Designation: SC792-6.  
Rating: 125 / 250 VAC, 15 A.  
Mounting: secured to its holder on Supporting panel by snap fit.

Alternate Heater Control Switch: cURus Recognized. (E199326)  
Manufacturer: MERCHANT CORP LTD  
Designation: SR-32  
Rating: 125 VAC, 16 A.  
Mounting: secured to its holder on Supporting panel by snap fit.

- 7B. Flame Control Switch: cURus Recognized. (E170626)  
Manufacturer: SHENZHEN BAOKEZHEN ELECTRONICS CO LTD.  
Designation: SC768.  
Rating: 125 / 250 VAC, 15 / 7.5 A.  
Mounting: secured to its holder on Supporting panel by snap fit.

Alternate Flame Control Switch: cURus Recognized. (E199326)  
Manufacturer: MERCHANT CORP LTD  
Designation: SR-06  
Rating: 125VAC, 16A.  
Mounting: secured to its holder on Supporting panel by snap fit.

Flame Control Switch: cURus Recognized. (E170626)  
Manufacturer: SHENZHEN BAOKEZHEN ELECTRONICS CO LTD.  
Designation: SC768.  
Rating: 125 / 250 VAC, 15 / 7.5 A or 6A 250V.  
Mounting: secured to its holder on Supporting panel by snap fit.

Alternate Flame Control Switch: cURus Recognized. (E199326)  
Manufacturer: MERCHANT CORP LTD  
Designation: SR-06  
Rating: 125VAC, 16A or 6A 250V.  
Mounting: secured to its holder on Supporting panel by snap fit.

- 8. Main PCB and Flame LEDs Strip: (INT) UL Recognized.  
Material: Glass Fabric Epoxy.  
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.  
Dimension: 1.6 mm thick, overall dimension 300 mm by 40 mm, refer to Photo-8 for details.  
Mounting: Secured to bottom supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.  
Consists of the following critical components soldered on it:

- a. X Capacitor: cURus Recognized. (E252221)  
Manufacturer: DONGGUAN EASY-GATHER ELECTRONIC CO LTD.  
Designation: MKP-X2.  
Rating: 250 VAC, 2.2 uF or 300 VAC 684K.

- b. Capacitor:  
EC1: Electrolytic type, 10 uF, 400 V, 105 C.
- c. Flame LEDs: Total 11 provided, each rated 2 V dc, 20 mA.

AlternateMain PCB and Flame LEDs Strip: Refer to Photo-33.

- 9. Faux Fire Assembly: Consists of the following:
  - a. Ember LED: Total 12 provided, each rated 2 V dc, 20 mA.
- 13. Remote Controller: Not used for Model F18V66L.

**PART H: Model Exxyyor Exxyy-x series.**

Note #1: “xx” denotes unit size (equals to 25, 35, 42, 48, 52); “yy” denotes frame material (WF equals to tempered glass; W equals to wood frame; MR equals to Mirror tempered glass; C equals to tempered glass with touch pad)

Note #2: For this series, due to its different usage conditions (wall-insert, wall mounts, free-standing), the representative models E25WF and E52W were evaluated with satisfactory results by CSA C22.2 No. 46-13, UL 2021 (4<sup>th</sup> Edition) and UL 1278 (4<sup>th</sup> Edition).

General: The subject models are similar in construction to each other except for the unit sizes, frame material and control PCBs. Pls refer to Att11 and Att1 for details.

- 1. Enclosure:
  - a. Bottom, Sides, Top, Front and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	31 x 2	40 mm by 3 mm	Components compartment opening
	65	77 mm by 3 mm	Heater intake
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Back	22	Louver shaped, 39 mm long by 3.4 mm (Max Minor Dim.)	Components compartment intake.
	40	40 mm by 3 mm	Components compartment intake.
Top	9	45 mm by 3.6 mm.	Components compartment intake.
	24	Louver shaped, 39 mm long by 3.4 mm (Max Minor Dim.)	Components compartment intake.
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Bottom	45	44 mm by 5 mm	Heater exhaust. (with or without wire screen, or wire screen only) Wire screen of 3.9 mm LWO by 2.6 mm SWO.

- b. Front: Tempered glass, 6 mm or 4 mm thick. Molded mounting bracket secured to tempered glass with glass cement. The glass was then secured to enclosure with screws.  
Alternate: wooden frame or mirror tempered glass.

2. Supporting Pedestal (Optional): Refer to Photo-10.

3. Power Supply Cord: UL and cUL Listed. (E315592)  
Manufacturer: LINOYA ELECTRONIC TECHNOLOGY CO LTD.  
Designation: XYTP-006.  
Plugcap: Type 5-15P, rated 125 V, 15A.  
Cord: HPN-R cord, 16/3C AWG, rated 300 V, 105 C.  
Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord: UL and cUL Listed. (E334525)  
Manufacturer: ZHONGSHANCITY HONGSHANCHUAN ELECTRICAL EQUIPMENTS CO LTD.  
Designation: HSC-203.  
Plugcap: Type 5-15P, rated 125 V, 15A.  
Cord: HPN-R cord, 16/3C AWG, rated 300 V, 105 C.  
Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord: UL and cUL Listed. (E254458)  
Manufacturer: GUANGDONG KAIHUA ELECTRIC APPLIANCE CO LTD.  
Designation: KH-9922L.  
Plugcap: Type 5-15P, rated 125 V, 15A.  
Cord: HPN-R cord, 16/3C AWG, rated 300 V, 105 C.  
Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord: UL and cUL Listed. (E206144)  
Manufacturer: UNIRISE ELECTRIC WIRE & CABLE CO LTD.  
Designation: UE-322A.  
Plugcap: Type 5-15P, rated 125 V, 15A.  
Cord: HPN-R cord, 16/3C AWG, rated 300 V, 105 C.  
Length: 1.8 m min, 2.4 m max.

Connection Box and Cover: Refer to Photo-29.

Note: Applied this connection box and cover only for models stated in PART H when the units intended for permanently connection.

4. Strain Relief Bushing: UR Recognized. (E98707)  
Manufacturer: KAI SUH SUH ENTERPRISE CO LTD.  
Designation: SR-F51.  
Mounting: Secured to side panel through a suitably sized double “D” shaped hole.

5. Bonding: The green conductor from the power supply cord is terminated to a certified, closed loop connector and then is secured to bracing panel by a M4 screw, star washer. The screw serves no other purpose than to provide a grounding point for the appliance.

6. Wire Connector: (INT) cURus Recognized.  
Type: Insulated, closed-end pressure crimp-on type.  
Rating: 105C or 750 C, suitable for 16 AWG, 20 AWG and 22 AWG.

7. Quick Connect: (INT) cURus Recognized.  
Type: Crimp type, uninsulated.  
Rating: Suitable for 16 AWG.
8. Internal Wiring: (INT) cURus Recognized.
- a. Heating Element supply: AWM I A 3122 FT2 / AWM 3122 HB, 16 AWG, 200 C, 300 V.
  - b. Self-hold Thermostat Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.  
Alternate Self-hold Thermostat Supply: AWM I A 3122 FT2 / AWM 3122 HB, 16 AWG, 200 C, 300 V.
  - d. Blower Motor supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.
  - e. Synchronous Motor supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.
  - f. Control Panel supply: AWM I A 2468 FTI / AWM 2468 VW-1, 24 AWG, 80 C, 300 V.  
Remarks: cURus Recognized cable ties provided to fix the internal wirings. cURus Recognized fiberglass sleeving provided to protect the internal wirings .
9. Control Panel: (INT) cURus Recognized.  
Material: Glass Fabric Epoxy.  
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.  
Dimension: Measured 1.6 mm thick, overall dimension 156 mm by 29 mm.  
Mounting: Secured to enclosure side with two screws and molded plastic spacers providing 9.8 mm spacing to enclosure side.  
Consist of the following main critical components soldered on it:
- J1~J6: Rated 12 VDC, 50 mA.  
EC1: Electrolytic type, 100 uF, 16 V, 105 C.  
LED display: Rated 2 V, 40 mW.
- 9A. Touch Panel: (INT) cURus Recognized. Refer to Photo-17.  
Material: Glass Fabric Epoxy.  
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.  
Dimension: Measured 1.6 mm thick, overall dimension 170 mm by 30 mm.  
Mounting: Secured to enclosure side with two screws and molded plastic spacers providing 9.8 mm spacing to enclosure side.  
Remarks: Touch panel applied only for model with “C”, example E25C.
10. Main PCB: (INT) cURus Recognized.  
Material: Glass Fabric Epoxy.  
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.  
Dimension: Measured 1.6 mm thick, overall dimension 147 mm by 82 mm.  
Mounting: Secured to supporting panel with 4 screws and nuts, molded plastic spacers provided 9.3 mm min spacing to supporting panel.  
Consist of the following main critical components soldered on it:
- a. Fuse: cURus Recognized. (E321507)  
Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.  
Designation: FKN TYPE FUSIBLE RESISTORS.  
Rating: 0.82R 1W.
  - b. Capacitor:  
EC2: Electrolytic type, 10 uF, 400 V, 105 C.  
EC3: Electrolytic type, 100uF, 25 / 16 V, 105 C.

EC5: Electrolytic type, 470 uF, 25 V, 105 C.

EC6: Electrolytic type, 10 uF, 400 V, 105 C.

- c. Relay (RLY1): cURus Recognized. (E134517)  
Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.  
Designation: HF2160-1A-12DE.  
Rating: 12 V dc coil, contact 240 Vac, 30 A, 100,000 operations.

Alternate Relay (RLY1): cURus Recognized. (E179944)  
Manufacturer: NINGBO SONGLE RELAY CO LTD.  
Designation: SLI-12VDC-SL-A.  
Rating: 12 V dc coil, contact 240 Vac, 30 A, 100,000 operations.

Alternate Relay (RLY1): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GK-C-1A-12D.  
Rating: 12 V dc coil, contact 250 Vac, 30 A, 100,000 operations.

Relay (RLY2): cURus Recognized. (E170653)  
Manufacturer: XIAMEN HONGMEI ELECTRONIC CO LTD.  
Designation: JQC-3FF.  
Rating: 12 V dc coil, contact 250 V ac, 10 A, 100,000 operations.

Alternate Relay (RLY2): cURus Recognized. (E167996)  
Manufacturer: NINGBO SONGLE RELAY CO LTD.  
Designation: SRD-12VDC-SL-A.  
Rating: 12 V dc coil, contact 250 V ac, 10 A, 100,000 operations.

Alternate Relay (RLY2): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GH-1A-12L.  
Rating: 12 V dc coil, contact 125 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E190598)  
Manufacturer: SANYOU CORPORATION LTD.  
Designation: SRD-S-112D.  
Rating: 250 V ac, 7A, 100,000 operations.

- d. High Frequency Transformer:  
Insulation Class: 130 C.  
Core: 21 mm by 21 mm by 5.6 mm. Homocentric squares ferrite core.  
Bobbin: Single concentric bobbing, material Phenolic Molding Compound (PMC), 2.2 mm thick, 13 mm OD by 16 mm long. (Flame Rating: UL 94 V-0, RTI=150 C)  
Winding: N1, 0.15mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15 mm dia, 9 turns;  
Mounting: Soldered to Main PCB via pin terminals.

- e. NTC Sensor: cURus Recognized. (E256966)  
Manufacturer: SHENZHEN KEPENDA ELECTRONIC CO LTD.  
Designation: MF58-503.

Alternate Main PCB: Refer to Photo 25 and Illustrations 11-14 for details.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @ 1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 147 mm by 82 mm.

Consists of the same critical components described in part A item 8 above.

11. Faux Fire Assembly: Consists of the following:

a. Flame LED: 13x2 provided. Each rated 2 V, 40 mW.

Ember LED: Total 12x2 provided. Rated 2 V, 40 mW.

b. Synchronous Motor: cURus Recognized. (E212993)

Manufacturer: ZHAOQING LONGTOU ELECTRONIC & ELECTRIC CO LTD.

Designation: TY-50B.

Rating: 120 V, 50 / 60 Hz, 4 W, 15/18 rpm.

Protection: Impedance protected.

Mounting: Secured to the bracket with two screws.

Remarks: Twisted shaft provided with PVC reflective film fastened on it.

Alternate Synchronous Motor: cURus Recognized. (E242178)

Manufacturer: GAOYAO CITY HENGJUN ELECTRICAL APPLIANCE CO LTD.

Designation: TY-50.

Rating: 120 V, 50 / 60 Hz, 4 W, 15/18 rpm.

Protection: Impedance protected.

Mounting: Secured to the bracket with two screws.

Remarks: Twisted shaft provided with PVC reflective film fastened on it.

Alternate Synchronous Motor: cURus Recognized. (E199324)

Manufacturer: FOSHAN SHUNDE HENGXING MICRO MOTOR CO LTD.

Designation: TYJ50-8A

Rating: 120 V, 60 Hz, 4W, 18 rpm.

Protection: Impedance protected.

Remarks: Twist shaft provided with PVC reflective film fastened on it.

c. Projection Screen: Made of PP, flame rating UL 94 HB @ 0.8 mm. Measured 2 mm thick.

d. Decorative Faux Log:

Material: Unsaturated polyester.

Flame rating: UL94 V-2 @ 2.0 mm, RTI= 130 C.

Dimensions: Average approximately 2 mm thick.

Mounting: Secured to enclosure sides with mechanical ways.

Alternate Ember Bed: Decorative parts, made of stone or acrylic crystal or real crush glass.

12. Heater Element Assembly: Consists of the following:

a. Heating Element Bracket: Made of formed sheet steel.

Dimensions: 0.5 mm thick average, overall dim when assembled 35 mm by 34 mm.

Mounting: Secured to blower motor housing with screws.

b. Housing: Two pieces provided, made of mica, 0.8 mm thick, overall dim when assembled 319 mm by 35 mm.

c. Heating Element: material Alchrome, two elements are connected in parallel, secured in place by element supports and side brackets, each element is made of 0.7 mm dia wire, 3.5~3.7  $\Omega$ /m, 900 C melting point.

d. Heating Element Support: Four provided, made of mica, 0.8 mm thick.

e. Self-hold Thermostat: cURus Recognized. (E309745)  
Manufacturer: DONGGUAN SHUNHE ELECTRONIC CO LTD.  
Designation: H20 or H20X  
Rating: 125 V, 15 A, 105 C.  
Mounting: Riveted to heater element housing.  
Remarks: This thermostat acts as manual reset type. To reset, disconnecting the power by unplugging the plug from the wall receptacle.

Alternate Self-hold Thermostat: cURus Recognized. (E301742)  
Manufacturer: FOSHAN CHANCHENG EAGLE TECHNOLOGY CO LTD.  
Designation: AMT-P1  
Rating: 125 V, 15 A, 105 C.  
Mounting: Riveted to heater element housing.  
Remarks: This thermostat acts as manual reset type. To reset, disconnecting the power by unplugging the plug from the wall receptacle.

f. (Optional) Thermal Fuse: cURus Recognized. (E313239)  
Manufacturer: HONGYU ELECTRICAL (HONG KONG) CO LTD  
Designation: H4B00184C or H4B00144C  
Rating: 184C or 144C, 250V, 16A.

13. Fan Assembly: Consists of the following:

a. Blower Motor: cURus Recognized. (E327392)  
Manufacturer: SHEN ZHEN ZHAOLI MOTOR LTD or GuangDong ZhaoLi Motor Group Co., Ltd.  
Designation: YJ48/200.  
Rating: 120 V, 60 Hz, 14.5 W.  
Enclosure: Open.  
Insulation Class: class B.  
Protection: Impedance protection. ZP marked on the motor.  
Type: Shaded pole, induction motor.  
Mounting: Secured to blower motor housing with mechanical ways.

Alternate Blower Motor: cURus Recognized. (E343126)  
Manufacturer: FOSHAN CITY SHUNDE DISTRICT LEPUDA MOTOR CO LTD.  
Designation: PLD48-120.  
Rating: 120 V, 60 Hz, 14.5 W.  
Enclosure: Open.  
Insulation Class: class B.  
Protection: Impedance protection. ZP marked on the motor.  
Type: Shaded pole, induction motor.  
Mounting: Secured to blower motor housing with mechanical ways.

Alternate Blower Motor: cURus Recognized. (E184751)  
Manufacturer: HUNAN KELI MOTOR CO LTD.  
Designation: YJ48-16E.  
Rating: 120 V, 60 Hz, 14W.

Enclosure: Open.  
 Insulation Class: class B.  
 Protection: Impedance protection. ZP marked on the motor.  
 Type: Shaded pole, induction motor.  
 Mounting: Secured to blower motor housing with mechanical ways

- b. Blower Wheels:  
 Material: Sheet aluminum.  
 Dimension: 0.5 mm thick min, 9.2 mm wide by 295 mm long. Consists of 3 or 4 sections, each section has 20 blades spaced equally.  
 Mounting: Secured to the rotating shaft with by fitted press.  
 Remarks: Fan housing provided.

- 14. Remote Control: Infrared control.
- 15. Pedestal and Air Deflector: Refer to Att1 Photos page -10 for details. Secured to bottom by means of screws.

**PART I: Model GxxxK08yyy-ff, GxxxR16yyy-ff series**

Note 2: "xxx" denotes unit size 18, 23, 26, 30, 36, 42; "yyy" denotes H, M, L; "ff" denotes blank, x, Cx, NR, NRx, MT, MTx

General: The subject models are similar in construction to each other except for the unit sizes, control PCBs. Pls refer to Att11 and Att1 for details.

The subject models are similar in construction to models described in PART A except for the following:

- 1. Enclosure:
  - a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. See Att3 for details. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	Slotted openings	10 mm by 4 mm	Heater exhaust
	1	85 mm by 40 mm, or 58 mm by 17 mm or 140 mm by 30 mm. or 76.5 mm by 36 mm	Touch control panel location. Secured to its holder with screws.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	4	Louver shaped, 80 mm long by 3.4 mm (Max Minor Dim.)	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Back	86	50 mm by 5 mm	Heater intake
	104 (alternate)	40 mm by 3 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick. If no opening provided on Side enclosure, metallic handler may be provided

- b. Front Frame: Steel frame with tempered glass, 3 or 4 mm thick. Mounted to enclosure sides in a steel frame and held in place with brackets and glass cement.

Optional Decorative Mantel (Applied for 18/23/26 inches models in Part I): Refer to Photo 30-32.

7. Control Panel: (INT) UL Recognized.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick.

Mounting: secured to plastic cover with screws.

Note: This push type control panel is for K series models. There is touch type control panel for R series models.

Consists of the following critical components soldered on it:

- a. Buttons (SW1 to SW6): Rated 5 V, 100 mA.
- b. Display: Rated 2 V, 150 mA.
- c. IR1: Rated 2.7-5.5V, 0.8 mA.

Alternate Control Panel: (INT) UL Recognized. Refer to Att2 ILL-41.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 141 mm by 32 mm.

Mounting: secured to plastic cover with screws.

Consists of the following critical components soldered on it:

- a. SW1~SW5 or SW6: Rated 2V, 20mA.
- b. Display: Rated 2 V, 150mA.
- c. Remote: Rated 2.7-5.5V, 0.8mA.

8. Main PCB: (INT) UL Recognized.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 146 mm by 84 mm.

Mounting: Secured to enclosure side with screws, molded plastic spacers provided 9 mm min spacing to metal part.

Consists of the following critical components soldered on it:

- a. Fuse: cURus Recognized. (E321507)  
Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.  
Designation: RXF-1W.  
Rating: 0.82R 1W.
- b. Capacitor:  
EC1, EC2: Electrolytic type, 10 uF, 400 V, 105 C.  
EC3: Electrolytic type, 47 uF, 50 V, 105 C.  
EC4: Electrolytic type, 470 uF, 25 V, 105 C.  
EC5: Electrolytic type, 100 uF, 16V, 105 C.

- c. Relay (K1): cURus Recognized. (E134517)  
Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.  
Designation: HF2160-1A-12DE.  
Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (K1): cURus Recognized. (E179944)  
Manufacturer: NINGBO SONGLE RELAY CO LTD.  
Designation: SLI-12VDC-SL-A.  
Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (K1): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GK-C-1A-12D.  
Rating: Contact 277Vac, 40 A, 100,000 operations.

Relay (K2&K3): cURus Recognized. (E134517)  
Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.  
Designation: JQC-3FF.  
Rating: 125 V ac, 12 A, 100,000 operations.

Alternate Relay (K2&K3): cURus Recognized. (E167996)  
Manufacturer: NINGBO SONGLE RELAY CO LTD.  
Designation: SRD-12VDC-SL-A.  
Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (K2&K3): cURus Recognized. (E321783)  
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.  
Designation: GH-1A-12L.  
Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (K2&K3): cURus Recognized. (E190598)  
Manufacturer: SANYOU CORPORATION LTD.  
Designation: SRD-S-112D.  
Rating: 250 Vac, 7 A, 100,000 operations.

- d. High Frequency Transformer:  
Insulation Class: 130 C.  
Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core.  
Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long.  
(Flame Rating: UL 94 V-0, RTI=130 C)  
Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.  
Mounting: Soldered to Main PCB via pin terminals.

Alternate Control Panel and Main PCB: Refer to Photo-26 and ILL-15 for details.  
Material: Glass Fabric Epoxy.  
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.  
Dimension: 1.6 mm thick, overall dimension 150 mm by 84 mm.  
Consists of the same critical components described in part A item 8 above.

9. Faux Fire Assembly:

- e. Stepper Motor: Accepted by applicant.

Manufacturer: Dongguan Cambridge Electrical Manufacturing Co., Ltd

Designation: 24BYJ48.

Rating: DC 12V, 1.5 W.

Alternate motor (Synchronous Motor): cURus Recognized. (E212993)

Manufacturer: ZHAOQING LONGTOU ELECTRONIC & ELECTRIC CO LTD.

Designation: TY-50B.

Rating: 120 V, 50 / 60 Hz, 4 W, 12/15/18 rpm.

Protection: Impedance protected.

Mounting: Secured to the bracket with two screws.

Remarks: Twisted shaft provided with PVC reflective film fastened on it.

Alternate Synchronous Motor: cURusRecognized.(E199324)

Manufacturer: FOSHAN SHUNDE HENGXING MICRO MOTOR CO LTD.

Designation: TYJ50-8A

Rating: 120 V, 60 Hz, 4W, 18 rpm.

Protection: Impedance protected.

Remarks: Twist shaft provided with PVC reflective film fastened on it.

10. Switch (Optional): Not provided.

11. Heater Element Assembly: Consists of the following:

- a. Heating Element: Two provided.

Material: FOSHAN SHUNDE SOWELL CO LTD.

Dimension: 0.6 mm dia, 19~20ohm at 25 C.

Rating: 120 V, 1450 W.

Location: Located centrally within Heater Element Housing.

- b. Heater Element Sheath:

Material: Quartz.

Dimensions: 1.0 mm thick, OD 10.1 mm, ID 8 mm, 350 mm long.

- c. End Seals:

Material: Ceramic.

Dimensions: Overall 15.8 mm dia by 17.5 mm.

Location: Completely seals Heater Element Sheath ends with rivets.

- d. Cold Pin:

Material: Nickel.

Dimensions: Overall 19 mm by 5 mm by 2.4 mm.

Connection: One end is crimped to the Heating Element. The other end is crimped to Leads.

- e. Leads: (INT) cURus Recognized.

Type: AWM I A/ 3122, 16 AWG, 300 V, 200 °C, VW-1.

Connection: One end is terminated in certified wire connector. The other end is terminated to Cold Pin as described above.

- f. Self-hold Thermostat: cURus Recognized. (E309745)  
Manufacturer: DONGGUAN SHUNHE ELECTRONIC CO LTD.  
Designation: H20X.  
Rating: 125 V, 15 A, 100 C.  
Mounting: Riveted to plastic holder.

Alternate Self-hold Thermostat: cURus Recognized. (E309745)  
Manufacturer: DONGGUAN SHUNHE ELECTRONIC CO LTD.  
Designation: H20X.  
Rating: 125 V, 15 A, 120 C.  
Mounting: Riveted to plastic holder.

(Optional) Thermal Fuse: cURus Recognized. (E313239)  
Manufacturer: HONGYU ELECTRICAL (HONG KONG) CO LTD  
Designation: H4B00184C or H4B00144C  
Rating: 125 V, 15 A, 184 C or 144 C.  
Mounting: Riveted to plastic holder.

- 12a. Blower Motor: cURus Recognized. (E327392)  
Manufacturer: SHEN ZHEN ZHAOLI MOTOR LTD or GuangDong ZhaoLi Motor Group Co., Ltd.  
Designation: YJ48/200  
Rating: 120 V, 60 Hz, 14.5 W.  
Enclosure: Open.  
Insulation Class: class B.  
Protection: Impedance protection. ZP marked on the motor.  
Type: Shaded pole, induction motor.  
Mounting: Secured to blower motor housing with mechanical ways.

Blower Wheels:  
Material: Sheet aluminum.  
Dimension: 0.5 mm thick min, 9.2 mm wide by 295 mm long. Consists of 3 sections, each section has 20 blades spaced equally.  
Mounting: Secured to the rotating shaft with by fitted press.  
Remarks: Fan housing provided.

Alternate Blower Motor: cURus Recognized. (317753)  
Manufacturer: HUNAN KELI MOTOR CO LTD.  
Designation: YJ48-16E.  
Rating: 120 V, 60 Hz, 14W.  
Enclosure: Open.  
Insulation Class: class B.  
Protection: Impedance protection. ZP marked on the motor.  
Type: Shaded pole, induction motor.  
Mounting: Secured to blower motor housing with mechanical ways.

Blower Wheels:  
Material: Sheet aluminum.  
Dimension: 0.5 mm thick min, 9.2 mm wide by 295 mm long. Consists of 3 sections, each section has 20 blades spaced equally.  
Mounting: Secured to the rotating shaft with by fitted press.  
Remarks: Fan housing provided.

PART J: Model RVxxxxzz80yyy or RVxxxxzz80yyy-ff

Note2: "xxx" denotes sizes, equals to 18, 23, 26, 28, 30, 33, 36, 42, 48,60, 72, 96 and 108; "yyy" denotes height and front frame shape, equals to H, M, L, S, F with FG, CG, or CCG.

Note 3: "zz" denotes frame material, equals to P, D, V. (P means deep ember; D means glass frame; V means steel frame)

Note 4: "ff" denotes color, equals to x, Cx, NR, NRx, MTx, BB, HB, FB, SB, Tx. (C means arc-frame; NR means simple; MT means straight middle board; BB means brick beige; HB means herringbone beige; FB means flagstone beige; SB means stacked beige)

Note 5: Models of 18~42 inches are of **insert type only**; models of 48~60 inches are of **insert, mounted, and movable type (use of pedestal)**; models of 72~108 inches are of **insert, mounted and location-dedicated type (stationary type)**.

Note 6: For this series, due to its different usage conditions (wall-insert, wall mounts, free-standing), the representative model was evaluated with satisfactory results by CSA C22.2 No. 46-13, UL 2021 (4<sup>th</sup> Edition) and UL 1278 (4<sup>th</sup> Edition).

General: The subject model is similar in construction to Model FA23V60L described in PART A except for the following: Refer to Photo-22, Photo-28 and Att11 Drawings 58, Drawings 60-65 for the detailed dimensions.

1. Enclosure:

- a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. See Att11 Drawings 58 for dimensions. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	1	304 mm by 35 mm total,	Slotted openings. Heater exhaust
	1	58 mm by 17 mm or 75 mm by 35 mm	Flame control switch and Heater control switch location
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	104	40 mm by 3 mm	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Side	2	80 mm by 27.6 mm	Plastic handle position

Alternate: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Same as the above except for top and back as described below:

Locations	Openings	Dimensions	Purpose
Front	61	35 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	Slot: 52 or louver: 12	Slots: 40 mm by 3 mm Louver: 80 mm long by 3.4 mm (Max Minor Dim.)	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Back	52	50 mm by 3 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick. If no opening provided on Side enclosure, metallic handler may be provided.

Alternate: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Same as the above except for top and back as described below:

Locations	Openings	Dimensions	Purpose
Front	1	304 mm by 35 mm total, 10 mm by 3 mm each	Slotted openings. Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	Slot: 52 and louver: 6	Slots: 40 mm by 3 mm Louver: 80 mm long by 3.4 mm (Max Minor Dim.)	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Back	69	50 mm by 3 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick. If no opening provided on Side enclosure, metallic handler may be provided.

- b. Front glass: 3 mm or 4 mm thickness tempered glass, hooked onto body side flange, secured by locking tabs or screws.

- 2. Power supply cord: Same as description in Part A.

Connection Box and Cover: Refer to Photo-29.

Note: Applied this connection box and cover only for models stated in PART J when the units intended for permanently connection.

- 8. Main PCB: Same as description in item 8, Part A.

Alternate Main PCB: Refer to Illustrations 17-18 for details.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 160 mm by 82 mm.

Consists of the same critical components described in item 8, Part A above.

Note: Applied this Alternate Main PCB only for models stated in Part J.

- 14. Pedestal (Optional for models 48-108 inches): Refer to Att11 Drawings -62 for details. Secured to bottom by means of screws.

- 15. Toggle Switch (Optional): Manufactured byxinbao, model SS-12F15, rated 0.5A, used to disable the heater, marked with O & I.

PART J1: ZFxxxzz03yyy or ZFxxxzz03yyy-ff

Note2: "xxx" denotes sizes, equals to 30, 33, 36, 42, 48, 50, 60, 74, 96; "yyy" denotes height and front frame shape, equals to L, F.

Note 3: "zz" denotes frame material, equals to P, D, V. (P means deep ember; D means glass frame; V means steel frame)

Note 4: "ff" denotes decorate, equals to Sx, Wx, Gx, Cx, Tx.

Note 5: Models of 30~74 inches are of insert, mounted, and movable type (use of pedestal); model of 96 inches is of insert, mounted and location-dedicated type (stationary type).

Note 6: For this series, due to its different usage conditions (wall-insert, wall mounts, free-standing), the representative model was evaluated with satisfactory results by CSA C22.2 No. 46-13, UL 2021 (4<sup>th</sup> Edition) and UL 1278 (4<sup>th</sup> Edition).

General: The subject model is similar in construction to Model FA23V60L described in PART A except for the following: Refer to Photo-35~38 and Att12 Drawings for the detailed dimensions.

1. Enclosure:

- a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. See Att12 Drawings for dimensions. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	59	32 mm by 2.9 mm	Heater exhaust
	30 (30" and 33")	13 mm by 13 mm	Heater intake
	37 (36" ~ 96")		
	1	190 mm by 18 mm	Heater control switch location
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	2	35 mm by 4 mm	Heater intake
	2	15 mm by 4 mm	Heater intake

- b. Front glass: 3 mm or 4 mm thickness tempered glass, hooked onto body side flange, secured by locking tabs or screws.
- c. Optional mode of connection: Refer to Att2 ILL-42.
- d. Optional sidelight connection: Refer to Att1 Photos 36

9. Faux Fire Assembly:

- b. Alternate Stepper Motor: Accepted by applicant.  
 Manufacturer: Dongguan Cambridge Electrical Manufacturing Co., Ltd  
 Designation: 24BYJ48.  
 Rating: DC 12V, 1.5 W.

PART K: Model xxx22-yyy or xxx22-yyy-ff

Note2: "xxx" denotes sizes, equals to 18, 23, 26, 28, 30, 33, 36, 42, 48,60 and 72; "yyy" denotes height and front frame shape, equals to H, M, L, S with FG, CG, or CCG.

Note 4: "ff" denotes color, equals to x, Cx, NR, NRx, MTx, BB, HB, FB, SB, Px, Vx, Dx. (C means arc-frame; NR means simple; MT means straight middle board; BB means brick beige; HB means herringbone beige; FB means flagstone beige; SB means stacked beige)

General: The subject model is similar in construction to Model described in PART I except for the following: Refer to Photo-23, 24 and Att3 Drawings 59 for the detailed dimensions.

1. Enclosure:

- a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. See Att11 Drawings 59 for dimensions. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	Slotted openings	300 mm by 50 mm or 300mm by 30mm	Heater exhaust
	1	58 mm by 17 mm or 85 mm by 40mm or 140mm by 30mm	Flame control switch and Heater control switch location
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Back	104	40 mm by 3 mm	Heater intake
Top	2	35 mm by 4 mm	Heater intake
	2	15 mm by 4 mm	Heater intake
Side	2	80 mm by 27.6 mm	Plastic handle position

Alternate: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. Same as the above except for top and back as described below:

Locations	Openings	Dimensions	Purpose
Front	61	24.4 mm by 3 mm	Heater exhaust
	1	153 mm by 17 mm	Touch control panel location. Covered with molded touching plastic plate, secured to its holder by snap fit.
	1 (alternative)	142 mm by 30.4 mm	Control panel location.
Top	Slot: 52 or louver: 12	Slots: 40 mm by 3 mm Louver: 80 mm long by 3.4 mm (Max Minor Dim.)	Heater intake
	2 (alternative)	35 mm by 4 mm	Heater intake
	2 (alternative)	15 mm by 4 mm	Heater intake
Back	52	50 mm by 3 mm	Heater intake
Side	2	90 mm by 32 mm	Plastic handle position

Remarks: The plastic handle press-fitted into the enclosure sides. Flame rating UL 94 5VA@2 mm, measured 2 mm min average thick. If no opening provided on Side enclosure, metallic handler may be provided

- 2A. Terminal (Optional): Recognized. (E152546)  
 Manufacturer: HEAVY POWER CO LTD  
 Designation: PA10  
 Rating: 600Vac 30A

8. Main PCB: Same as item 8 in PART I.
- 8A. Alternate Main PCB: Refer to Photo 27 and ILL 16 for details.  
Material: Glass Fabric Epoxy.  
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.  
Dimension: 1.6 mm thick, overall dimension 150 mm by 45 mm.  
Consists of the same critical components described in item 8 above.
11. Heater Element Assembly: Consists of the following:
- a. Heating Element: Two provided.  
Material: OCr25A15A (Ni20Cr80).  
Dimension: 0.6 mm dia, measured 29.5 ohm at 25 C.  
Rating: 120 V, 60 Hz, 1450 W.  
Location: Located centrally within Heater Element Housing.
  - b. Heater Element Sheath:  
Material: Quartz.  
Dimensions: 1.0 mm thick, OD 10, ID 8.5, 290 mm long.
  - c. End Seals:  
Material: Ceramic.  
Dimensions: Overall 19 or 18 mm dia by 18 or 15 mm.  
Location: Completely seals Heater Element Sheath ends with rivets.
  - d. Cold Pin:  
Material: SUS304  
Dimensions: Overall 19 mm by 7.5 mm by 0.8 mm.  
Connection: One end is crimped to the Heating Element. The other end is crimped to Leads.
  - e. Leads: (INT) cURus Recognized.  
Type: AWM I A/ 3122, 16 AWG, 300 V, 200 °C, VW-1.  
Connection: One end is terminated in certified wire connector. The other end is terminated to Cold Pin as described above.
  - f. Housing/Barrier: Shape as Photo 24. Made of formed sheet metal. Secured together with screws.
  - g. Self-hold Thermostat: cURus Recognized. (E309745)  
Manufacturer: DONGGUAN SHUNHE ELECTRONIC CO LTD.  
Designation: H20 or H20X  
Rating: 125 VAC, 15 A, 10,000 operations, 105 C or 120 C.  
Mounting: Riveted to Housing.  
Remarks: This thermostat acts as manual reset type. To reset the thermostat, disconnect the power

PART L: Model KD100-ff, KD100-ff-x

Note 5: In Part L, "ff" denotes zz, Cz, Tz, Gz, MTzz and "zz" = 23, 26, 30.

The suffix "x" denotes 1~20 and the different numbers indicated different customer.

General: The subject model is similar in construction to Model FA23V60L described in PART A except for the following: Refer to for the detailed dimensions.

1. Enclosure:

- a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.6 mm thick. Secured together with screws. See Att1 Photo40~41 and Att13 Drawings 1~2 for dimensions. Openings as below:

Locations	Openings	Dimensions	Purpose
Front	1 for 23' size	294 mm by 34 mm total,	Slotted openings. Heater exhaust
	1 for 26' size	294 mm by 34 mm total,	Slotted openings. Heater exhaust
	1 for 30' size	294 mm by 34 mm total,	Slotted openings. Heater exhaust
Top	9	Louver: 80mm long by 3.4 mm (max minor Dim)	Heater intake
	10	40.0 mm by 5.0 mm	Heater intake
	2	35.0 mm by 4.0 mm	Heater intake
	2	15.0 mm by 4.0 mm	Heater intake
	3	50.0 mm by 5.0 mm	Heater intake
Back	50	50.0 mm by 5.0 mm	Heater intake

7. Control Panel: (INT) UL Recognized.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @ 1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 95 mm by 40 mm.

Mounting: secured to plastic cover with screws.

Consists of the following critical components soldered on it:

- a. Buttons (SW1 to SW6): Rated 5 V, 100 mA.
- b. Display: Rated 2 V, 150 mA.
- c. IR1: Rated 2.7-5.5V, 0.8 mA.

8. Main PCB: (INT) UL Recognized. Refer to Att1 Photo-42 and Att2 ILL-43 for details.

Material: Glass Fabric Epoxy.

Flame Rating: UL 94 V-0 @ 1.4 mm, RTI=130 C.

Dimension: 1.6 mm thick, overall dimension 135 mm by 65 mm.

Mounting: Secured to enclosure bottom with screws, molded plastic spacers provided 9 mm min spacing to metal part.

Consists of the following critical components soldered on it:

- a. Fuse: cURus Recognized. (E321507)  
 Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.  
 Designation: RXF-1W.  
 Rating: 0.82R 1W.
- b. Capacitor:  
 EC1, EC2: Electrolytic type, 10 or 15 uF, 400 V, 105 C.  
 EC3: Electrolytic type, 47 uF, 50 V, 105 C.  
 EC4: Electrolytic type, 470 uF, 25 V, 105 C.  
 EC5: Electrolytic type, 100 uF, 16V, 105 C.
- c. Relay (K1): cURus Recognized. (E134517)  
 Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.  
 Designation: HF2160-1A-12DE.

Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (K1): cURus Recognized. (E179944)

Manufacturer: NINGBO SONGLE RELAY CO LTD.

Designation: SLI-12VDC-SL-A.

Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (K1): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GK-C-1A-12D.

Rating: Contact 277Vac, 40 A, 100,000 operations.

Relay (K2): cURus Recognized. (E321783)

Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.

Designation: GI-1A-12D.

Rating: Contact 125Vac, 10 A, 100,000 operations.

d. High Frequency Transformer:

Insulation Class: 130 C.

Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core.

Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long.

(Flame Rating: UL 94 V-0, RTI=130 C)

Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.

Mounting: Soldered to Main PCB via pin terminals.

11. Heater Element Assembly: Consists of the following:

a. Heating Element: Two provided.

Material: OCr25A15A (Ni20Cr80).

Dimension: 0.6 mm dia, measured 29.5 ohm at 25 C.

Rating: 120 V, 60 Hz, 1450 W.

Location: Located centrally within Heater Element Housing.

b. Heater Element Sheath:

Material: Quartz.

Dimensions: 1.0 mm thick, OD 10, ID 8.5, 290 mm long.

c. End Seals:

Material: Ceramic.

Dimensions: Overall 19 or 18 mm dia by 18 or 15 mm.

Location: Completely seals Heater Element Sheath ends with rivets.

d. Cold Pin:

Material: SUS304

Dimensions: Overall 19 mm by 7.5 mm by 0.8 mm.

Connection: One end is crimped to the Heating Element. The other end is crimped to Leads.

e. Leads: (INT) cURus Recognized.

Type: AWM I A/ 3122, 16 AWG, 300 V, 200 °C, VW-1.

Connection: One end is terminated in certified wire connector. The other end is terminated to Cold Pin as described above.

- h. Housing/Barrier: Made of formed sheet metal. Secured together with screws.
  
- i. Self-hold Thermostat: cURus Recognized. (E309745)  
Manufacturer: DONGGUAN SHUNHE ELECTRONIC CO LTD.  
Designation: H20 or H20X  
Rating: 125 VAC, 15 A, 10,000 operations, 105 C or 120 C.  
Mounting: Riveted to Housing.  
Remarks: This thermostat acts as manual reset type. To reset the thermostat, disconnect the power.

Wall-insert Heater, household use, stationary type, grounded, cord-connected, rated 120 V, 60 Hz, 800 W:  
Models LPxxV05yy or LPxxV05yy-ff.

Note: "xx" denotes 12, 13, 15; "yy"= S (small), R (reduction), T (Tiny), L; "ff" denotes x, Cx, NR, NRx, MT, MTx, Wx, Gx, x= 1~20.

Wall-insert Heater, household use, stationary type, grounded, cord-connected, rated 120 V, 60 Hz, 1400 W:  
Models NTxxzz09yy or NTxxzz09yy-ff

Note: "xx" denotes 18, 23, 26, 28, 30, 33, 36, 42, 48, 54, 58, 60; "zz"= P, V, D; "yy"= S (small), R (reduction), T (Tiny), L, M; "ff" denotes x, Cx, NR, NRx, MT, MTx, Wx, Gx, x= 1~20.

General: Models construction details as described below and also reference to Att1 Photos, Att14 Drawings

1. Enclosure:

- a. Top, Bottom, Sides and Back: Formed of painted sheet steel min 0.60 mm thick. Secured together by screws. Refer to Att1 Photo-46~51, Att14 Drawing-1~3 for construction and detailed dimensions.

Critical Openings for different models as below:

Applicable models: LPxxV05yy-ff, NTxxzz09yy-ff, "ff" denotes NR, NRx, x= 1~20.

Locations	Openings	Dimensions	Purpose
Front	24	32.0 mm by 5.0 mm	Heater exhaust opening
	1	13.0 mm by 19.0 mm	Flame Control Switch location
	1	11.00 mm by 30.0 mm	Heater Control Switch location
Top	2	3.8 mm by 15.0 mm	Components compartment intake
	2	3.8 mm by 35.0 mm	Components compartment intake
	6	Louver shaped, 78.0 mm by 3.6 mm (Max Minor Dim.)	Components compartment intake
Top (alternate)	2	3.8 mm by 15.0 mm	Components compartment intake
	2	3.8 mm by 35.0 mm	Components compartment intake
	6	5.0 mm by 25.0 mm	Components compartment intake
Back	34	35.0 mm by 5.0 mm	Components compartment intake

Applicable models: LPxxV05yy, LPxxV05yy-ff, NTxxzz09yy, NTxxzz09yy-ff,

Locations	Openings	Dimensions	Purpose
Front	61	32.0 mm by 3.0 mm	Heater exhaust opening
Top	2	3.8 mm by 15.0 mm	Components compartment intake
	2	3.8 mm by 35.0 mm	Components compartment intake
	12	Louver shaped, 78.0 mm by 3.6 mm (Max Minor Dim.)	Components compartment intake
Top (alternate)	2	3.8 mm by 15.0 mm	Components compartment intake
	2	3.8 mm by 35.0 mm	Components compartment intake
	6	5.0 mm by 25.0 mm	Components compartment intake
Back	52	50.0 mm by 3.0 mm	Components compartment intake

- b. Front Frame: Tempered glass, 3 or 4 mm thick. Mounted to enclosure sides in a steel frame and held in place with brackets and screws,

The following table for critical components:

Item No.	Component Description	Manufacturer / Trade mark	Cat. No. or Material	Rating, Dimensions, Securement & Comment	Appr Agcy
2	Power Supply Cord Applicable models: LPxxV05yy, LPxxV05yy-ff.				
	Plugcap	LINOYA ELECTRONIC TECHNOLOGY CO LTD (E315592)	XYTP-006	Type 5-15 P, 125 V, 15 A.	cURus Recognized
	Flexible cord	LINOYA ELECTRONIC TECHNOLOGY CO LTD.	SJT or HPN-R	18/3 AWG, 300 V, 105 C Length: >1.8 m and <2.4 m	cURus Recognized
	Plugcap	GUANGDONG KAIHUA ELECTRIC APPLIANCE CO LTD. (E254267)	KH-9922L	Type 5-15 P, 125 V, 15 A.	cETLus Recognized
	Flexible cord	GUANGDONG KAIHUA ELECTRIC APPLIANCE CO LTD.	SJT or HPN-R	18/3 AWG, 300 V, 105 C Length: >1.8 m and <2.4 m	cURus Recognized
	Plugcap	UNIRISE ELECTRIC WIRE & CABLE CO LTD. (E206144)	UE-322A	Type 5-15 P, 125 V, 15 A.	cURus Recognized
	Flexible cord	UNIRISE ELECTRIC WIRE & CABLE CO LTD.	SJT or HPN-R	18/3 AWG, 300 V, 105 C Length: >1.8 m and <2.4 m	cURus Recognized
	Plugcap	TRANSWORLD ELECTRIC CO LTD. (E87333)	TE-34P	Type 5-15 P, 125 V, 15 A.	cURus Recognized
	Flexible cord	TRANSWORLD ELECTRIC CO LTD.	SJT	18/3 AWG, 300 V, 105 C Length: >1.8 m and <2.4 m	cURus Recognized
	Plugcap	ZHONGSHANCITY HONGSHANCHUAN ELECTRICAL EQUIPMENTS CO LTD. (E334525)	HSC-203	Type 5-15 P, 125 V, 15 A.	cURus Recognized

	Flexible cord	ZHONGSHANCITY HONGSHANCHUAN ELECTRICAL EQUIPMENTS CO LTD.	HPN-R cord,	18/3 AWG, 300 V, 105 C Length: >1.8 m and <2.4 m	cURus Recognized
Power Supply Cord Applicable models: NTxxxz09yy, NTxxxz09yy-ff.					
	Plugcap	LINOYA ELECTRONIC TECHNOLOGY CO LTD (E315592)	XYTP-006	Type 5-15 P, 125 V, 15 A.	cURus Recognized
	Flexible cord	LINOYA ELECTRONIC TECHNOLOGY CO LTD.	SJT or HPN- R	16/3 AWG, 300 V, 105 C Length: >1.8 m and <2.4 m	cURus Recognized
	Plugcap	GUANGDONG KAIHUA ELECTRIC APPLIANCE CO LTD. (E254267)	KH-9922L	Type 5-15 P, 125 V, 15 A.	cETLus Recognized
	Flexible cord	GUANGDONG KAIHUA ELECTRIC APPLIANCE CO LTD.	SJT or HPN- R	16/3 AWG, 300 V, 105 C Length: >1.8 m and <2.4 m	cURus Recognized
	Plugcap	UNIRISE ELECTRIC WIRE & CABLE CO LTD. (E206144)	UE-322A	Type 5-15 P, 125 V, 15 A.	cURus Recognized
	Flexible cord	UNIRISE ELECTRIC WIRE & CABLE CO LTD.	SJT or HPN- R	16/3 AWG, 300 V, 105 C Length: >1.8 m and <2.4 m	cURus Recognized
	Plugcap	TRANSWORLD ELECTRIC CO LTD. (E87333)	TE-34P	Type 5-15 P, 125 V, 15 A.	cURus Recognized
	Flexible cord	TRANSWORLD ELECTRIC CO LTD.	SJT	16/3 AWG, 300 V, 105 C Length: >1.8 m and <2.4 m	cURus Recognized
	Plugcap	ZHONGSHANCITY HONGSHANCHUAN ELECTRICAL EQUIPMENTS CO LTD. (E334525)	HSC-203	Type 5-15 P, 125 V, 15 A.	cURus Recognized
	Flexible cord	ZHONGSHANCITY HONGSHANCHUAN ELECTRICAL EQUIPMENTS CO LTD.	HPN-R cord,	16/3 AWG, 300 V, 105 C Length: >1.8 m and <2.4 m	cURus Recognized
3	Strain Relief Bushing Applicable models: LPxxV05yy, LPxxV05yy-ff.				
	Supplier	HEAVYPOWER CO., LTD (E107293)	6N-4	Secured in Side Housing or Back Housing through a suitably sized double “D” shaped hole.	cURus Recognized
Strain Relief Bushing Applicable models: NTxxxz09yy, NTxxxz09yy-ff.					
	Supplier	HEAVYPOWER CO., LTD (E107293)	6N3-4	Secured in Side Housing or Back Housing through a suitably sized double “D” shaped hole.	cURus Recognized

4	Bonding Applicable models: LPxxV05yy, LPxxV05yy-ff, NTxxzz09yy, NTxxzz09yy-ff. The green conductor from the power supply cord is terminated to a certified, closed loopconnector and then is secured to the supporting panel by a M4 screw, star washer. The screw serves no other purpose than to provide a grounding point for the appliance				
	Wire Connector Applicable models: LPxxV05yy, LPxxV05yy-ff, NTxxzz09yy, NTxxzz09yy-ff.				
5	Wire Connector	INT	-	Type: Insulated, closed-end pressure crimp-on type. Rating: 105 C, suitable for 16 AWG-24 AWG.	cURus or UL Recognized
6	Internal Wiring Applicable models: LPxxV05yy, LPxxV05yy-ff.				
	a. Heating Element Supply	INT	-	AWM I A 1015 FT1 / AWM 1015 VW-1, 18 AWG, 105 C, 600 V.	cURus or UL Recognized
	Alternate	INT	-	AWM I A 3122 FT2/AWM 3122 HB, 18 AWG, 200 C, 300 V.	cURus or UL Recognized
	b. Self-hold Thermostat Supply	INT	-	AWM I A 1015 FT1 / AWM 1015 VW-1, 18 AWG, 105 C, 600 V.	cURus or UL Recognized
	Alternate	INT	-	AWM I A 3122 FT2 / AWM 3122 HB, 18 AWG, 200 C, 300 V.	cURus or UL Recognized
	c. Blower Motor lead	INT	-	AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.	cURus or UL Recognized
	d. Synchronous Motor lead	INT	-	AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.	cURus or UL Recognized
	e. LED strip Supply	INT	-	AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.	cURus or UL Recognized
	f. Control Panel Supply	INT	-	AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.	cURus or UL Recognized
	Remarks: Cable ties provided to fix the internal wirings. Fiberglass tube provided for preventing wirings from overheating near heater element.				
Internal Wiring Applicable models: NTxxzz09yy, NTxxzz09yy-ff.					
a. Heating Element Supply	INT	-	AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.	cURus or UL Recognized	
Alternate	INT	-	AWM I A 3122 FT2/AWM 3122 HB, 16 AWG, 200 C, 300 V.	cURus or UL Recognized	
b. Self-hold Thermostat Supply	INT	-	AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.	cURus or UL Recognized	

	Alternate	INT	-	AWM I A 3122 FT2 / AWM 3122 HB, 16 AWG, 200 C, 300 V.	cURus or UL Recognized
	c. Blower Motor lead	INT	-	AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.	cURus or UL Recognized
	d. Synchronous Motor lead	INT	-	AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.	cURus or UL Recognized
	e. LED strip Supply	INT	-	AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.	cURus or UL Recognized
	f. Control Panel Supply	INT	-	AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.	cURus or UL Recognized
Remarks: Cable ties provided to fix the internal wirings. Fiberglass tube provided for preventing wirings from overheating near heater element.					
7A.	Heater Control Switch: Applicable models: LPxxV05yy-ff, NTxxzz09yy-ff, "ff" denotes NR, NRx, x= 1~20.				
	Supplier	SHENZHEN BAOKEZHEN ELECTRONICS CO LTD. (E170626)	SC792-6.	Rated 125 / 250 VAC, 15 A.	cURus or UL Recognized
	Alternate	MERCHANT CORP LTD. (E199326)	SR-32	Rated 125 VAC, 16 A.	cURus or UL Recognized
7B.	Flame Control Switch: Applicable models: LPxxV05yy-ff, NTxxzz09yy-ff, "ff" denotes NR, NRx, x= 1~20.				
	Supplier	SHENZHEN BAOKEZHEN ELECTRONICS CO LTD. (E170626)	SC768	Rated 125 / 250 VAC, 15/7.5 A.	cURus or UL Recognized
	Alternate	MERCHANT CORP LTD. (E199326)	SR-06	Rated 125VAC, 16A or 6A 250V.	cURus or UL Recognized
	Alternate	SHENZHEN BAOKEZHEN ELECTRONICS CO LTD. (E170626)	SC768	Rated 125 / 250 VAC, 15 / 7.5 A or 6A 250V.	cURus or UL Recognized
7C	Control System: Mainly consists of Control panel and main PWB as following:				
7C.1	PWB Control Panel - Push buttons: (INT) cURus or UL Recognized Applicable models: For all models. Factory Model Number: F-2-Key. Material: Glass Fabric Epoxy. Flame Rating: UL 94 V-0 @ 1.6 mm, RTI=130 C. (Complied with UL 796) Dimension: Measured 1.6 mm thick, overall dimension 46.0 mm by 27.0 mm. Mounting: Secured to molded spacer with screws and nuts. Consist of the following main critical components soldered on it, refer to Att1 Photo-52.				
	Key (Flame and Heat)	-	-	Rated 2 V, 20 mA	Accepted by applicant

	Digit LED1	-	-	Rated 2 V, 20 mA	Accepted by applicant
	EC1	-	-	Electrolytic type, 100 uF, 16 V, 105 C.	Accepted by applicant
7C.2	<p>Main Printed Wiring Board: (INT) cURus or UL Recognized                      Applicable models: For all models.                      Factory Model Number: ZQ-HEATER-MAIN.                      Flame Rating: UL 94 V-0 @ 1.6 mm, RTI=130 C. (Complied with UL 796)                      Dimension: Measured 1.6 mm thick, overall dimension 71.0 mm by 47.5 mm.                      Mounting: Secured to enclosure with 4 plastic spacers, providing 8 mm min spacing to enclosure metal.                      Consist of the following main critical components soldered on it, refer to Att1 Photo-52, Att2 ILL-48~49.</p>				
	a. Fuse	HANGZHOU HUAZU ELECTRONIC CO LTD. (E321507)	RXF-1W	0.82R, 1 A.	cURus or UL Recognized
	b. Relay (RELAY1)	SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH. (E321783)	GJL-1A-12LF	125 V, 20 A, 12 Vdc, T85	cURus or UL Recognized
	c. Electrolytic type Capacitor				
	EC1	-	-	100 uF, 16 V, 105 C.	NA
	EC2,	-	-	10 uF, 400 V, 105 C	NA
	EC3	-	-	470 uF, 25 V, 105 C	NA
	d. Polypropylene capacitor (C1)	-	CBB21	Rated 105K, 450V.	cURus or UL Recognized
7D	Control System: Mainly consists of Control panel and main PWB as following:				
7D.1	<p>PWB Control Panel - Push buttons: (INT) cURus or UL Recognized                      Applicable models: For all models.                      Factory Model Number: G18K08L-MT1-KEY.                      Material: Glass Fabric Epoxy.                      Flame Rating: UL 94 V-0 @ 1.6 mm, RTI=130 C. (Complied with UL 796)                      Dimension: Measured 1.6 mm thick, overall dimension 60.0 mm by 40.0 mm.                      Mounting: Secured to molded spacer with screws and nuts.                      Consist of the following main critical components soldered on it, refer to Att1 Photo-53.</p>				
	SW1~SW4	-	-	Rated 2 V, 20 mA	Accepted by applicant
	Digit LED Display	-	-	Rated 2 V, 20 mA	Accepted by applicant
7D.2	<p>Main Printed Wiring Board: (INT) cURus or UL Recognized                      Applicable models: For all models.                      Factory Model Number: MT-MAIN-8                      Flame Rating: UL 94 V-0 @ 1.6 mm, RTI=130 C. (Complied with UL 796)                      Dimension: Measured 1.6 mm thick, overall dimension 55.0 mm by 124.0 mm.                      Mounting: Secured to enclosure with 4 plastic spacers, providing 8 mm min spacing to enclosure metal.                      Consist of the following main critical components soldered on it, refer to Att1 Photo-53, Att2 ILL-50.</p>				
	a. Fuse	HANGZHOU HUAZU ELECTRONIC CO LTD. (E321507)	RXF-1W	0.82R, 1 A.	cURus or UL Recognized

	b. Relay (K1)	SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH. (E321783)	GK-C-1A-12D	250 V, 40 A, 12 Vdc, T85	cURus or UL Recognized
	Relay (K2, K3)	SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH. (E321783)	GI-1A-12D	125 V, 10 A, 12 Vdc, T85	cURus or UL Recognized
c. Electrolytic type Capacitor					
	EC1, EC2	-	-	Rated 4.7 uF, 400 V, 105 C.	NA
	EC3	-	-	Rated 22 uF, 50 V, 105 C	NA
	EC4	-	-	Rated 470 uF, 25V, 105 C	NA
	EC5	-	-	Rated 100 uF, 16 V, 105 C.	NA
f. High Frequency Transformer (T1): refer to Att2 ILL-46~47 for details. Insulation Class: 130 C. Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core. Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long. (Flame Rating: UL 94 V-0, RTI=130 C) Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns. Mounting: Soldered to Main PCB via pin terminals.					
7E	Control System: Same as Item 7, 8 of PART A. Applicable models: For all models.				
8.	Faux Fire Assembly: Consists of critical parts as following: Applicable models: LPxxV05yy, LPxxV05yy-ff, NTxxzz09yy, NTxxzz09yy-ff.				
8.1	Synchronous Motor:				
	Supplier	FOSHAN SHUNDE HENGXING MICRO MOTOR CO LTD. ((E199324))	TYJ50-8A.	Rated 120 V, 60 Hz, 4 W, 18r/min. Protection: Impedance protected	cURus or UL Recognized
	Alternate	Zhaoqing City Gaoyao District Hengjun Electrical Appliance Co Ltd. (E242178)	TY-50	Rated 120 V, 60 Hz, 4 W, 18r/min. Protection: Impedance protected	cURus or UL Recognized
	Alternate	ZHAOQING LONGTOU ELECTRONIC & ELECTRIC CO LTD. (E212993)	TY-50B	Rated 120 V, 60 Hz, 4 W, 12 or 18 r/min. Protection: Impedance protected	cURus or UL Recognized
Alternate Stepper Motor: Accepted by applicant. Refer to Att2 ILL-52. Manufacturer: Dongguan Cambridge Electrical Manufacturing Co., Ltd Designation: 24BYJ48. Rating: DC 12V, 1.5 W.					
8.2	Projection Screen: Made of PP, measured 1-3mm thick, flame rating HB @ 0.8 mm, RTI=105 C.				

8.3	Ember Bed: Material: Resin. Flame rating: UL 94 V-0 @ 0.8 mm, RTI=105 C. Dimensions: Average approximately 5 mm thick. Mounting: Secured to Bottom panel and Sides panel with adhesive. Alternate Ember Bed: Made of PP. Flame rating HB. Measured 1.0 mm ~3.0 mm. Alternate Ember Bed: Made of PE. Flame rating HB. Measured 1.0 mm ~3.0 mm.				
9	Heater Element Assembly (Resistance heater), Applicable models: LPxxV05yy, LPxxV05yy-ff. a. Heating Element: two elements are connected in parallel, secured in place by element supports and side brackets, each element is made of 0.7mm dia wire, 3.5~3.7 Ω/m, 900 C melting point. Rated 120 V, 60 Hz, 800W.				
	b. Self-hold Thermostat	DONGGUAN SHUNHE ELECTRONIC CO LTD. (E309745)	H20 or H20X Rated 125 V, 15 A, 10,000 operations, 105 C	cURus Recognized	
	Alternate	FOSHAN CHANCHENG EAGLE TECHNOLOGY CO LTD. (E301742)	AMT-P1 Rated 125 V, 15 A, 10,000 operations, 105 C.	cURus Recognized	
	c. (Optional) Thermal Fuse	HONGYU ELECTRICAL (HONG KONG) CO LTD. (E313239)	H4B00184C or H4B00144C Rated 184C or 144C, 16 A.	cURus Recognized	
	Heater Element Assembly (Resistance heater), Applicable models: NTxxzz09yy, NTxxzz09yy-ff. a. Heating Element: two elements are connected in parallel, secured in place by element supports and side brackets, each element is made of 0.7mm dia wire, 3.5~3.7 Ω/m, 900 C melting point. Rated 120 V, 60 Hz, 1400W.				
	b. Self-hold Thermostat	DONGGUAN SHUNHE ELECTRONIC CO LTD. (E309745)	H20 or H20X Rated 125 V, 15 A, 10,000 operations, 105 C	cURus Recognized	
	Alternate	FOSHAN CHANCHENG EAGLE TECHNOLOGY CO LTD. (E301742)	AMT-P1 Rated 125 V, 15 A, 10,000 operations, 105 C.	cURus Recognized	
	c. (Optional) Thermal Fuse	HONGYU ELECTRICAL (HONG KONG) CO LTD. (E313239)	H4B00184C or H4B00144C Rated 184C or 144C, 16 A.	cURus Recognized	
10	Fan Assembly: Consists of the following: Applicable models: LPxxV05yy, LPxxV05yy-ff, NTxxzz09yy, NTxxzz09yy-ff.				
10.1	Blower Motor	SHEN ZHEN ZHAOLI MOTOR LTD or GuangDong ZhaoLi Motor Group Co., Ltd. (E327392)	YJ48/200	120 V, 60 Hz, 14.5 W. Class B, Impedance protection, ZP marked on the motor. Secured to blower motor housing with mechanical ways.	cURus or UL Recognized
	Alternate	FOSHAN CITY SHUNDE DISTRICT LEPUDA MOTOR CO LTD. (E343126)	PLD48-120	120 V, 60 Hz, 14.5 W. Class B, Impedance protection, ZP marked on the motor. Secured to blower motor housing with mechanical ways.	cURus or UL Recognized

	Alternate	HUNAN KELI MOTOR CO LTD. (E184751)	YJ48-16E	120 V, 60 Hz, 14W. Class B, Impedance protection, ZP marked on the motor. Secured to blower motor housing with mechanical ways.	cURus or UL Recognized
10.2	Blower Wheels	Various	Sheet aluminum	37 mm dia, 190 mm long Secured to the rotating shaft with by fitted press.	NA
	Applicable models: LPxxV05yy, LPxxV05yy-ff,				
	Blower Wheels	Various	Sheet aluminum	37 mm dia, 295 mm long Secured to the rotating shaft with by fitted press.	NA
	Applicable models: NTxxzz09yy, NTxxzz09yy-ff.				

**TEST HISTORY**

Edition: 1 (Project 2729095)

Clauses refer to CSA C22.2 No. 46-13& UL2021 (3<sup>rd</sup> Ed.) unless otherwise indicated.

Model under test: FA23V60L, FA26V60				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Stalled Fan Test	7.6.4.6	41.3	T	P
Drape Test	7.6.5.3	-	T	P
Furniture Restriction Test	7.6.5.5	-	T	P
Extreme Operating Voltage / Overvoltage Test	7.7	41.4	T	P
Strain Relief	7.8	13.3	T	P
Physical Abuse Tests	7.11	-	T	P
Leakage Current Test	7.12	35	T	P
Continuous Operation Test:	-	38	T	P
Vertical Wall Test	-	41.6	T	P
Terry Cloth Drape Test	-	41.7	T	P
Padded Surface Test:	-	41.10.1.2 & 41.10.1.3	T	P
Curtain Drape Test	-	41.10.2	T	P
Protection against personal Injury Test	-	53	T	P
Vertical Wall Test	7.6.4.5	-	N	Not a portable heater
Air Discharge on Top Enclosure Drape Test	7.6.4.7	-	N	For floor-insert heater only
Six layers of Cheesecloth Drape Test	7.6.4.8	-	N	Not a portable heater
Air Filter Blocked Test	7.6.4.9	-	N	No heater air filter provided
Shredded Paper Test	7.6.5.7	-	N	Not a baseboard heater
Abnormal Temperature Tests for In-car Heaters	7.6.6	-	N	Not an in-car heater
Abnormal Input for Heaters with PTC Elements	7.6.7	-	N	No PTC Elements
Cold Ambient Start Up for Cord-connected Heaters with PTC Elements	7.6.8	-	N	No PTC Elements
Starting	7.6.9	-	N	No PTC Elements
Overload for Manually Operated Switches	7.9.3	-	N	No such component

Endurance for Manually Operated Switches	7.9.5	-	N	No such switches
Performance of Fusible Links:	7.10	-	N	No fusible links.
Performance of Thermally Operated Controls	7.13	-	N	Self-hold thermostat is certified.
Performance of Heaters Having PTC Heater Elements:	7.14	-	N	No PTC heater elements.
Static force	-	13.2.2	N	Wall mounted
Hydrostatic Test:	7.15	-	N	No parts under pressure.
Dropping Melted Particles Test	7.16	-	N	No perforated metal panels or wire screens.
Stability	7.17	50	N	Not a free-standing type heater.
Requirements for Cord Connected Double Insulated Electric Air Heaters:	8	-	N	Not a double insulated electric air heater.
Alarm Device Endurance Test:	-	40	N	No alarm devices for indication of limit control.
Abnormal Motor Temperature Test:	-	41.2	N	Motor not connected across heating element.
Tip Over Test:	7.6.4.3	41.5	N	Wall-insert heater.
Litter:	-	41.8	N	Not a radiant type heater
Motor Overload and Stalled Motor	-	41.9	N	Motors are UL Recognized
Floor Insert Heaters	-	41.11	N	Wall-insert heater.
Ceiling Panel Heaters	-	41.12	N	Wall-insert heater.
Abnormal Ambient Test	-	41.13	N	No such temperature limits.
Endurance Test	-	42	N	No automatic control / assembly
Short Circuit Tests	-	43	N	No supplementary fuse provided
Overload Test - High Voltage Transformers	-	44	N	No high voltage transformer
Burnout Test - High Voltage Transformers	-	45	N	No high voltage transformer
Insulation Resistance Test	-	47	N	No thermal insulation provided
Rain Test	-	48	N	Not for outdoor use
Static Load Test	-	49	N	Not a floor insert heater
Stability of Cord Connected Floor Supported Heaters	-	50	N	Wall-insert heater.
Element Support Impact Tests	-	51	N	Not a freestanding heater
Test for Permanence of Cord Tag	-	52	N	No visibly glowing element provided
Strength of Adjustment Stop	-	54	N	Household use heater

Model under test: FA23V60, FA26V60L, FA30V60.				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P

Drape Test	7.6.5.3	-	T	P
Terry Cloth Drape Test	-	41.7	T	P

Edition: 2 (Project 70030304)

Update Report 261046-2729095 to add new model, alternate new PCB and wirings.

Clauses refer to CSA C22.2 No. 46-13& UL2021 (3<sup>rd</sup> Ed.) unless otherwise indicated.

Model under test: F18V66L				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Stalled Fan Test	7.6.4.6	41.3	T	P
Drape Test	7.6.5.3	-	T	P
Furniture Restriction Test	7.6.5.5	-	T	P
Extreme Operating Voltage / Overvoltage Test	7.7	41.4	T	P
Strain Relief	7.8	13.3	W	Testing conducted onFA23V60L was considered as representative.
Physical Abuse Tests	7.11	-	W	Testing conducted onFA23V60L was considered as representative
Leakage Current Test	7.12	35	T	P
Continuous Operation Test:	-	38	T	P
Vertical Wall Test	-	41.6	T	P
Terry Cloth Drape Test	-	41.7	T	P
Padded Surface Test:	-	41.10.1.2 & 41.10.1.3	T	P
Curtain Drape Test	-	41.10.2	T	P
Protection against personal Injury Test	-	53	W	Testing conducted onFA23V60L was considered as representative

Edition: 3 (Project 70080537)

Update Report 261046-2729095 to add new models. Representative models were selected for testing and test data locates in CSA Documentum.

Edition: 4 (Project 70114144)

Update Report 261046-2729095 to alternate components. No testings were deemed to be necessary.

Edition: 5 (Project 70179591)

Update Report 261046-2729095 to add new models. The following tests were selected for representative models:

Clauses refer to CSA C22.2 No. 46-13& UL2021 (4TH Ed.) unless otherwise indicated.

Model under test: FA18V60L (Test on thermal fuse)				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Stalled Fan Test	7.6.4.6	41.3	T	P
Drape Test	7.6.5.3	-	T	P
Furniture Restriction Test	7.6.5.5	-	T	P
Vertical Wall Test	-	41.6	T	P
Terry Cloth Drape Test	-	41.7	T	P

Model under test: RV18V80S				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Stalled Fan Test	7.6.4.6	41.3	T	P
Drape Test	7.6.5.3	-	T	P
Furniture Restriction Test	7.6.5.5	-	T	P
Extreme Operating Voltage / Overvoltage Test	7.7	41.4	T	P
Leakage Current Test	7.12	35	T	P
Continuous Operation Test:	-	38	T	P
Vertical Wall Test	-	41.6	T	P
Terry Cloth Drape Test	-	41.7	T	P
Padded Surface Test:	-	41.10.1.2 & 41.10.1.3	T	P
Curtain Drape Test	-	41.10.2	T	P

Model under test: 3322				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P

Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Stalled Fan Test	7.6.4.6	41.3	T	P
Drape Test	7.6.5.3	-	T	P
Furniture Restriction Test	7.6.5.5	-	T	P
Extreme Operating Voltage / Overvoltage Test	7.7	41.4	T	P
Leakage Current Test	7.12	35	T	P
Continuous Operation Test:	-	38	T	P
Vertical Wall Test	-	41.6	T	P
Terry Cloth Drape Test	-	41.7	T	P
Padded Surface Test:	-	41.10.1.2 & 41.10.1.3	T	P
Curtain Drape Test	-	41.10.2	T	P

Edition: 6 (Project 70218958)

Update Report 261046-2729095 to add new models. The following tests were conducted on Model xxx22-yyy-ff in accordance with CSA C22.2 No. 46-13 and UL 2021 (4th Edition), with satisfactory results.

Model under test: xxx22-yyy-ff				Ratings: 120 V, 60 Hz, 1500 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Stalled Fan Test	7.6.4.6	41.3	T	P
Drape Test	7.6.5.3	-	T	P
Furniture Restriction Test	7.6.5.5	-	T	P
Continuous Operation Test	-	38	T	P
Vertical Wall Test	-	41.6	T	P
Terry Cloth Drape Test	-	41.7	T	P
Protection against personal Injury Test	-	53	T	P

Edition: 7 (Project 80003271)

Update Report 261046-2729095 to evaluate models described in Part J to comply with UL1278 and add model numbers. The following tests were conducted on model RV48DV80L in accordance with CSA C22.2 No. 46-13 & UL 2021 (4th Edition) & 1278 (4th Edition), with satisfactory results.

Model under test: RV48DV80L				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drap Test	7.6.4.1	-	T	P
Stalled Fan Test	7.6.4.6	41.3	T	P
Drape Test	7.6.5.3	-	T	P
Furniture Restriction Test	7.6.5.5	-	T	P
Extreme Operating Voltage / Overvoltage Test	7.7	41.4	T	P
Static force	-	13.2.2	T	P
Strain Relief	7.8	13.3	W	Refer to Project 27290095
Physical Abuse Tests	7.11	-	W	Refer to Project 27290095
Leakage Current Test	7.12	35	T	P
Continuous Operation Test:	-	38	T	P
Vertical Wall Test	-	41.6	T	P
Terry Cloth Drap Test	-	41.7	T	P
Padded Surface Test:	-	41.10.1.2 & 41.10.1.3	T	P
Curtain Drap Test	-	41.10.2	T	P
Protection against personal Injury Test	-	53	W	Refer to Project 27290095
Strength of Adjustment Stop	-	54	T	P
Drape Test	7.6.4.2	-	N	For heater intended for installation in or on walls and install bottom of heater not less than 610 mm above floor
Tip Over Test:	7.6.4.3	41.5	N	For portable heater
Overturn Test For In-car Heaters	7.6.4.4	-	N	For in-car heater
Vertical Wall Test	7.6.4.5	-	N	For portable heater
Air Discharge on Top Enclosure Drape Test	7.6.4.7	-	N	For floor-insert heater
Six layers of Cheesecloth Drap Test	7.6.4.8	-	N	For portable heater
Air Filter Blocked Test	7.6.4.9	-	N	No heater air filter provided
Drape Test for Portable baseboard Heaters	7.6.5.4	-	N	For portable baseboard heater
Furniture Restriction Test for Portable Baseboard Heaters	7.6.5.6	-	N	For portable baseboard heater
Shredded Paper Test	7.6.5.7	-	N	For baseboard heater

Abnormal Temperature Tests for In-car Heaters	7.6.6	-	N	For in-car heater
Abnormal Input for Heaters with PTC Elements	7.6.7	-	N	No PTC Elements
Cold Ambient Start Up for Cord-connected Heaters with PTC Elements	7.6.8	-	N	No PTC Elements
Starting	7.6.9	-	N	No PTC Elements
Ruptured Element Test	7.6.10	-	N	No sheath-type heating elements used.
Overload for Manually Operated Switches	7.9.3	-	N	UL Recognized switch used.
Endurance for Manually Operated Switches	7.9.5	-	N	UL Recognized switch used.
Performance of Fusible Links:	7.10	-	N	No fusible links.
Performance of Thermally Operated Controls	7.13	-	N	Self-hold thermostat is certified.
Performance of Heaters Having PTC Heater Elements:	7.14	-	N	No PTC heater elements.
Hydrostatic Test:	7.15	-	N	No parts under pressure.
Dropping Melted Particles Test	7.16	-	N	No perforated metal panels or wire screens.
Stability	7.17	-	N	Not a free-standing type heater.
Requirements for Cord Connected Double Insulated Electric Air Heaters:	8	-	N	Not a double insulated electric air heater.
Alarm Device Endurance Test:	-	40	N	No alarm devices for indication of limit control.
Abnormal Motor Temperature Test:	-	41.2	N	Motor not connected across heating element.
Litter:	-	41.8	N	For radiant type heater
Motor Overload and Stalled Motor	-	41.9	N	Motors are UL Recognized
Floor Insert Heaters	-	41.11	N	For floor insert heater
Ceiling Panel Heaters	-	41.12	N	For ceiling panel heater
Abnormal Ambient Test	-	41.13	N	No such temperature limits.
Endurance Test	-	42	N	No automatic control / assembly
Short Circuit Tests	-	43	N	No supplementary fuse provided
Overload Test - High Voltage Transformers	-	44	N	No high voltage transformer
Burnout Test - High Voltage Transformers	-	45	N	No high voltage transformer
Insulation Resistance Test	-	47	N	No thermal insulation provided
Rain Test	-	48	N	For outdoor use heater
Static Load Test	-	49	N	For floor insert heaters
Stability of Cord Connected Floor Supported Heaters	-	50	N	For floor support heaters
Element Support Impact Tests	-	51	N	For freestanding heaters
Test for Permanence of Cord Tag	-	52	N	No visibly glowing element provided

Model under test: RV48DV80L				Ratings: 120 V, 60 Hz 1400 W.
Test Requirements	C22.2 No. 46 Cl.	UL 1278 Par.	T: Tested W: Waived N: Not Applicable	Comments
Rating	7.2	38	W	Refer to wall-mounted type
Temperature (Normal)	7.4	40	T	P
Dielectric Strength	7.5	48	T	P
Tip Over Test:	7.6.4.3	42.4	T	P
Vertical-wall Test	7.6.4.5	42.5	W	Refer to wall-mounted type
Stalled Fan Test	7.6.4.6	42.3 / 42.11	W	Refer to wall-mounted type
Six-layers of Cheesecloth Drape Test	7.6.4.8	-	T	P
Drape Test	7.6.5.3	-	W	Refer to wall-mounted type
Furniture Restriction Test	7.6.5.5	-	W	Refer to wall-mounted type
Extreme Operating Voltage / Overvoltage Test	7.7	42.2	W	Refer to wall-mounted type
Terry Cloth Drape Test	-	42.6	W	Refer to wall-mounted type
Strain Relief	7.8	59	W	Refer to wall-mounted type
Physical Abuse Tests	7.11	-	W	Refer to wall-mounted type
Leakage Current Test	7.12	39	W	Refer to wall-mounted type
Stability Test	7.17	51	T	P
Element Support Impact Tests	-	52	T	P
Strength of Adjustable Stop Test	-	57	W	Refer to wall-mounted type
Test for Permanence of Cord Tag	-	54	T	P
Protection against personal Injury Test	-	55	W	Refer to wall-mounted type
Two Layer Cheesecloth Drape Test	7.6.4.1	-	N	Portable heater.
Drape Test	7.6.4.2	-	N	Portable heater.
Overturn Test For In-car Heaters	7.6.4.4	-	N	Not In-car heater.
Blocked Outlet and Inlet	7.6.4.7	-	N	Not Floor-in heater.
Air Filter Blocked Test	7.6.4.9	-	N	No air filter provided.
Drape Test for Portable baseboard Heaters	7.6.5.4	-	N	No portable baseboard heater.
Furniture Restriction Test for Portable Baseboard Heaters	7.6.5.6	-	N	Not Portable baseboard heater.
Shredded Paper Test	7.6.5.7	-	N	Not baseboard heater.
Abnormal Temperature Tests for In-car Heaters	7.6.6	-	N	Not an in-car heater.
Abnormal Input For Heater with PTC elements	7.6.7	-	N	No PTC element used.
Cold Ambient Start-Up For Cord-Connected Heaters With PTC Elements	7.6.8	-	N	No PTC element used.
Starting	7.6.9	-	N	No PTC element used.

Ruptured Element Test	7.6.10	-	N	No sheath-type heating elements used.
Overload for Manually Operated Switches	7.9.3	-	N	UL Recognized switches used.
Endurance for Manually Operated Switches	7.9.5	-	N	UL Recognized switches used.
Performance of Fusible Links:	7.10	-	N	No fusible links.
Performance of Thermally Operated Controls	7.13	-	N	Self-hold thermostat is certified.
Performance of Heaters Having PTC Heater Elements:	7.14	-	N	No PTC heater elements.
Static force	-	13.2.2	N	Wall mounted.
Hydrostatic Test:	7.15	-	N	No parts under pressure.
Dropping Melted Particles Test	7.16	-	N	No perforated metal panels or wire screens.
Dielectric Strength	8.6.1	-	N	Not double-insulated heater.
Leakage Current	8.6.2	-	N	Not double-insulated heater.
Abnormal Operation	8.6.3	-	N	Not double-insulated heater.
Alarm Device Endurance Test:	-	41	N	No alarm devices for indication of limit control.
Terry Cloth Band Drapes Test	-	42.7	N	Not use at an elevated location.
Wall-hung Heaters	-	42.8	N	Portable heaters.
Abnormal Ambient Test	-	42.9	N	No automatic reset devices.
Motor Overload and Stalled Motor	-	42.10	N	No remote protective device.
Motor Connected Across Heating Elements	-	42.12	N	Motor not connected across heating elements.
Endurance Test	-	43	N	No automatic control, no movement of the power supply cord.
Short Circuit Tests	-	44	N	No supplementary fuse or high-voltage circuit current protector used.
Overload Test - High Voltage Transformers	-	45	N	No high voltage transformer.
Burnout Test - High Voltage Transformers	-	46	N	No high voltage transformer.
Components Failure Test	-	47	N	No solid state components.
Insulation Resistance Test	-	49	N	No thermal insulation used.
Water Spray Test	-	50	N	Not intended for outdoor use.
Drop Test	-	53	N	Not use at an elevated location.
Test for Permanence of Cord Tag	-	54	N	UL Recognized cord tag.
Knob Securement Test	-	56	N	No such knob used.
Hydrostatic Test:	-	58	N	No parts under pressure.
Permanence of Marking	-	60	N	Certified labels.

Project 80016553

Update Report 261046-2729095 to alternate model numbers and PCB. The following tests were conducted on model RV26D80F in accordance with CSA C22.2 No. 46-13 & UL 2021 (4th Edition), with satisfactory results.

Model under test: RV26D80F				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Continuous Operation Test:	-	38	T	P
Terry Cloth Drape Test	-	41.7	T	P
Protection against personal Injury Test	-	53	T	P

Construction Review:

Construction review performed with satisfactory results.

Project 80043288

Update Report 2729095 to cover FIR findings and other report corrections. The following tests were conducted on model FA18V60L in accordance with CSA C22.2 No. 46-13 and UL 2021 (4th Edition), with satisfactory results.

Model under test: FA18V60L				Ratings: 120 V, 60 Hz, 1400 W.
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Drape Test	7.6.5.3	-	T	P
Continuous Operation Test:	-	38	T	P
Terry Cloth Drape Test	-	41.7	T	P

Construction Review:

Construction review performed with satisfactory results.

Project 80060397

Update Report 2729095 to cover portable application in PART A/C/G/J, alternate new PCB and other report corrections. The following testings performed on chosen representative models F18V66L, G18K08L-NR, and G23K08L were deemed necessary:

Model under test: F18V66L				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Terry Cloth Drape Test	-	41.7	T	P

Model under test: F18V66L				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 1278 Par.	T: Tested W: Waived N: Not Applicable	Comments
Tip Over Test:	7.6.4.3	42.4	T	
Stability Test	7.17	51	T	

Model under test: G18K08L-NR				Ratings: 120 V, 60 Hz, 1500 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Stalled Fan Test	7.6.4.6	41.3	T	P
Drape Test	7.6.5.3	-	T	P
Furniture Restriction Test	7.6.5.5	-	T	P
Extreme Operating Voltage / Overvoltage Test	7.7	41.4	T	P
Continuous Operation Test:	-	38	T	P
Vertical Wall Test	-	41.6	T	P
Terry Cloth Drape Test	-	41.7	T	P
Padded Surface Test:	-	41.10.1.2 & 41.10.1.3	T	P
Curtain Drape Test	-	41.10.2	T	P

Model under test: G23K08L				Ratings: 120 V, 60 Hz, 1500 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Terry Cloth Drape Test	-	41.7	T	P

Model under test: G23K08L				Ratings: 120 V, 60 Hz, 1500 W
Test Requirements	C22.2 No. 46 Cl.	UL 1278 Par.	T: Tested W: Waived N: Not Applicable	Comments
Tip Over Test:	7.6.4.3	42.4	T	
Stability Test	7.17	51	T	

Construction Review:

Construction review performed with satisfactory results.

Project 80136662

Update Report 261046-2729095 to alternate PCBs, model ZFxxxxz03yyy or ZFxxxxz03yyy-ff. The following testings performed on chosen representative models ZF30D03L and ZF36D03L were deemed necessary:

Model under test: ZF30D03L and ZF36D03L				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Terry Cloth Drape Test	-	41.7	T	P
Protection against personal Injury Test	-	53	T	P

Model under test: ZF30D03L and ZF36D03L				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 1278 Par.	T: Tested W: Waived N: Not Applicable	Comments
Tip Over Test:	7.6.4.3	42.4	T	
Stability Test	7.17	51	T	

Construction Review:

Construction review performed with satisfactory results.

Project 80165620

Update Report 2725095 to add blower motor factory name, PCB, model KD100-ff or KD100-ff-x and lp/nt series, connection means in report Part K. The models listed in the report are similar in construction, so the tests were conducted on models RV18V80S, KD100-23, LP12V05T-NR and NT18V09T as representatives. The following testings performed on chosen representative models RV18V80S, KD100-23, LP12V05T-NR and NT18V09T, were deemed necessary:

Testing performed at CSA Group Guangzhou lab.

Model under test: RV18V80S				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Drape Test	7.6.5.3	-	T	P
Terry Cloth Drape Test	-	41.7	T	P
Protection against personal Injury Test	-	53	T	P

Model under test: KD100-23				Ratings: 120 V, 60 Hz, 1500 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Stalled Fan Test	7.6.4.6	41.3	T	P
Drape Test	7.6.5.3	-	T	P
Terry Cloth Drape Test	-	41.7	T	P

Model under test: LP12V05T-NR				Ratings: 120 V, 60 Hz, 800 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P

Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Drape Test	7.6.5.3	-	T	P
Terry Cloth Drape Test	-	41.7	T	P

Model under test: NT18V09T				Ratings: 120 V, 60 Hz, 1400 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Drape Test	7.6.5.3	-	T	P
Terry Cloth Drape Test	-	41.7	T	P

The following tests were conducted on Main Printed Wiring Board in accordance with CSA Standard C22.2 No.223-15& UL1310 (7th Ed., Dated August 16, 2019), with satisfactory results.

Model under test: Main Printed Wiring Board			Rating: input: 120V, 60Hz, Output: 12VDC	
Tests	No.223-15, Cl.	UL1310 (7th Ed.) Par.	T: Tested N: Not Applicable W: Waived	Comments
Open Circuit Secondary Voltage/Maximum Output Voltage	6.3.1	28	T	P
Maximum output current and power	6.3.4	30	T	P
Dielectric Voltage Withstand Test	6.5	34	T	P
Abnormal- Component breakdown	6.8	39.7	T	P

Construction Review:

Construction review performed with satisfactory results.

This Edition supersedes all previous editions.

---End of Report---