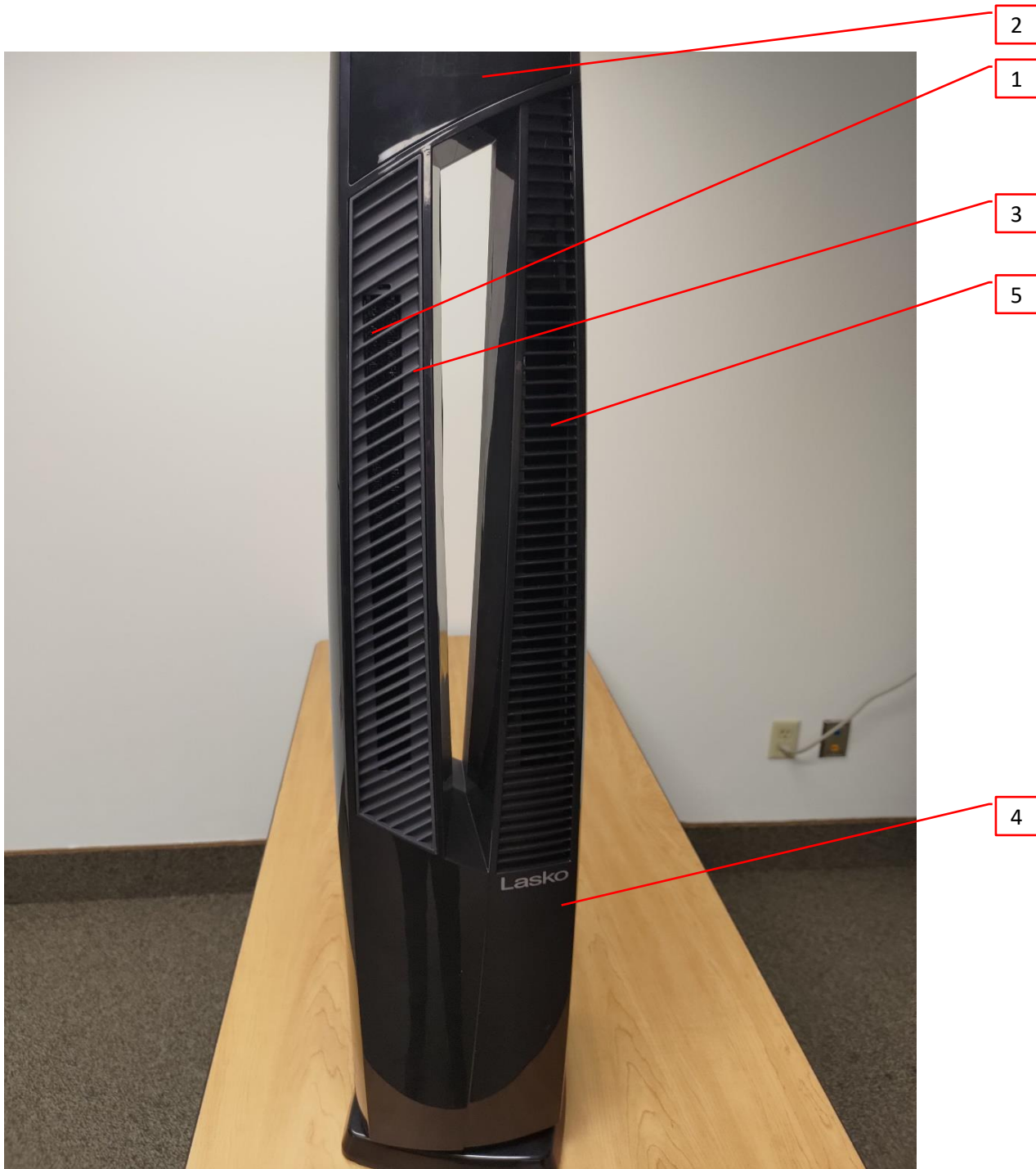


1.0 Reference and Address			
Report Number	104754719CRT-001	Original Issued: 23-Jul-2021	Revised: 8-Jun-2026
Standard(s)	Movable and Wall- or Ceiling-Hung Electric Room Heaters [ANSI/UL 1278:2014 Ed.4+R:08Mar2024]		
Applicant	Lasko Products, LLC	Manufacturer 1	Risheng Electrical Appliances Co. Ltd.
Address	820 Lincoln Ave West Chester, PA 19380	Address	Chuangye Industry Zone, Xinhe, Wanjiang District, Dongguan City, Guangdong Province, 523000
Country	USA	Country	China
Contact	Parvathi Kodandaraman	Contact	Xiao Yao Ren
Phone	610-719-8949	Phone	86-769-88991018
FAX	610-692-9325	FAX	86-769-88991008
Email	pkodandaraman@laskoproducts.com	Email	xiaoyaoren@vip.163.com
Manufacturer 2	May Quality Industries SDN. BHD.		
Address	LOT 836, JALAN ABDUL RAHMAN, PARIT KASSIM, MUAR, JOHOR, 84150		
Country	Malaysia		
Contact	Li Chun Bing		
Phone	13416618860		
FAX	NA		
Email	iso2@decomin.com.cn		

2.0 Product Description	
Product	Electric Heater
Brand name	Lasko
Description	The product is a cord-connected Electric Heater. It is intended for indoor household use and is provided with a polarized plug.
Models	FHV820, FHV830.
Model Similarity	Model FHV820 is similar to FHV830 except for color, metal grill and PCB.
Ratings	120V, 60Hz, 1500W
Other Ratings	NA

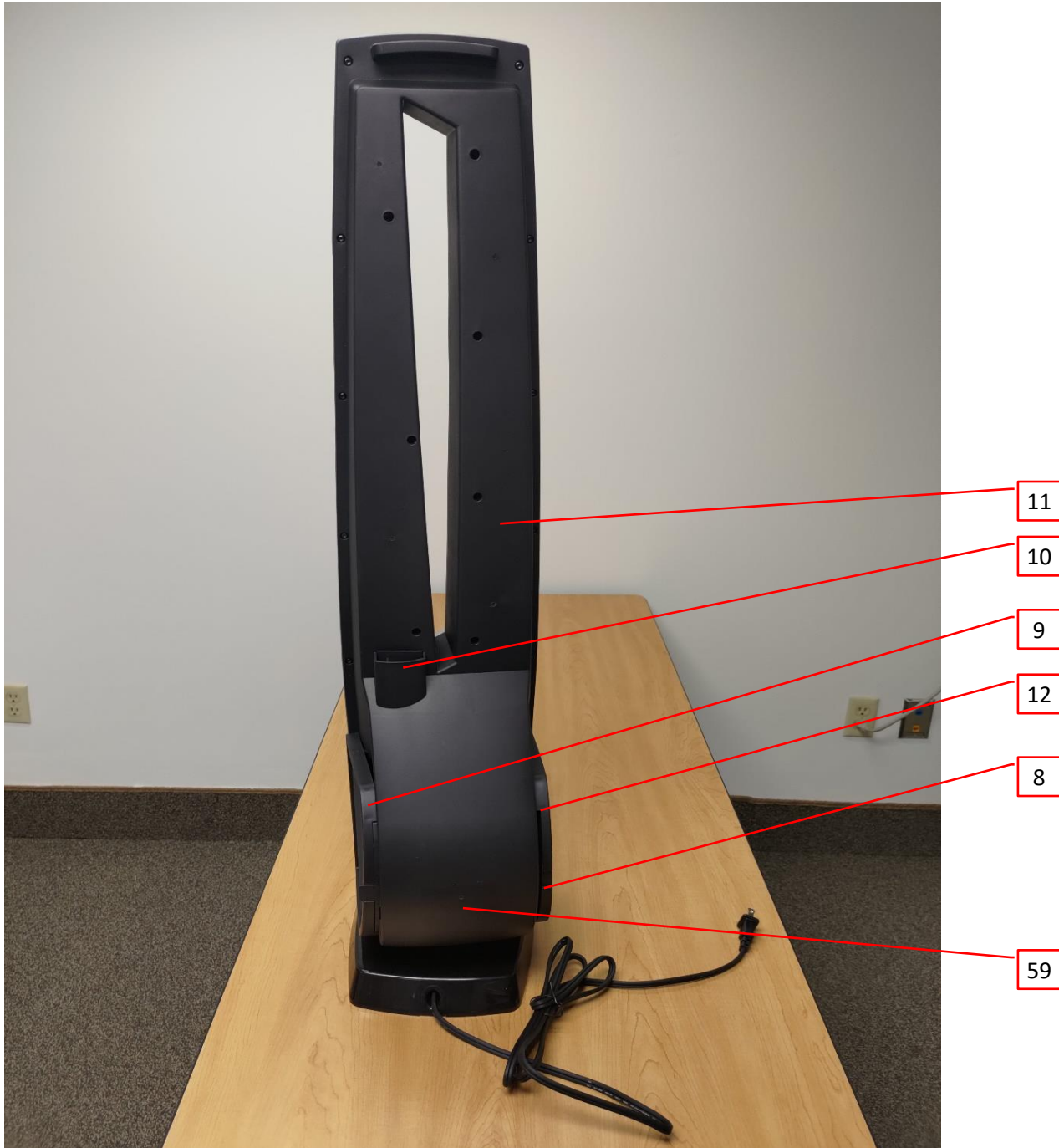
3.0 Product Photographs

Photo 1 - Exterior view front



3.0 Product Photographs

Photo 2 - Exterior view back



3.0 Product Photographs

Photo 3 -Side view



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3.0 Product Photographs

Photo 4 - Exterior view front



60

3.0 Product Photographs

Photo 5 - Base



26

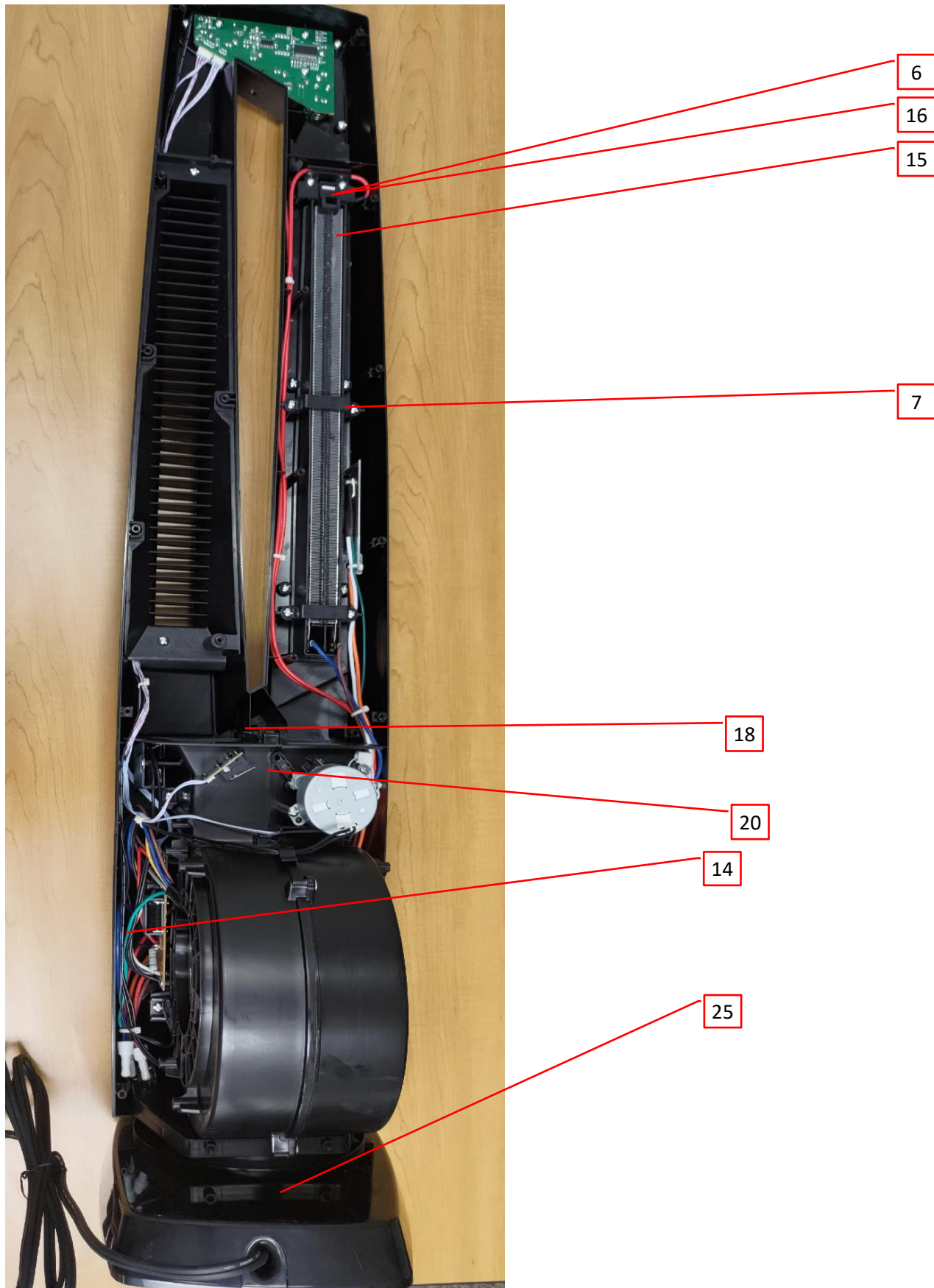
3.0 Product Photographs

Photo 6 - Remote



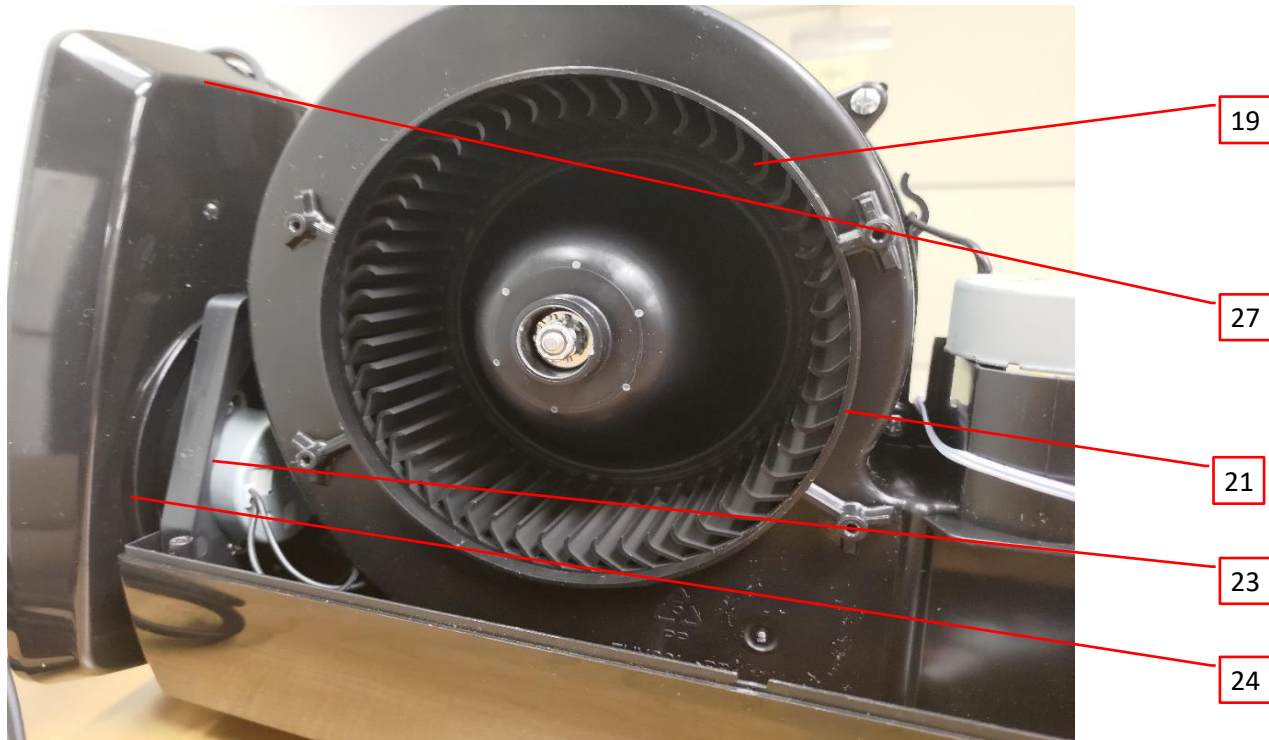
3.0 Product Photographs

Photo 7 - Internal



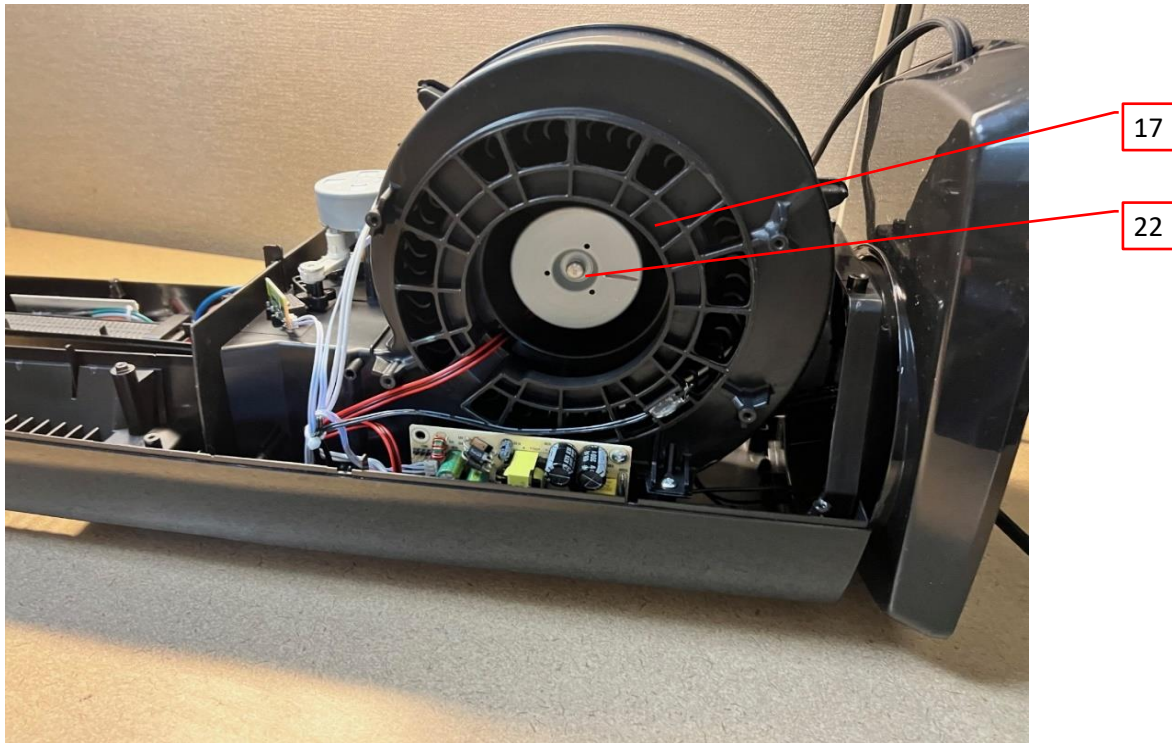
3.0 Product Photographs

Photo 8 - Blower wheel



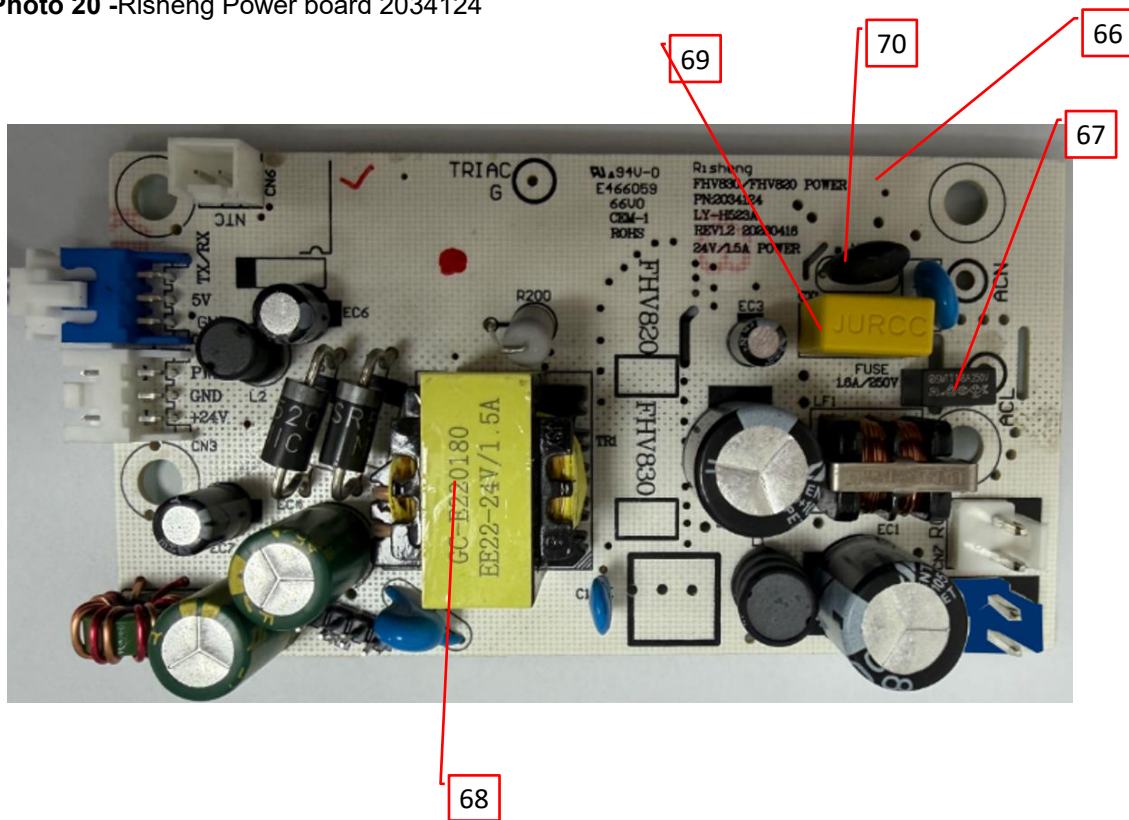
3.0 Product Photographs

Photo 9 - Motor



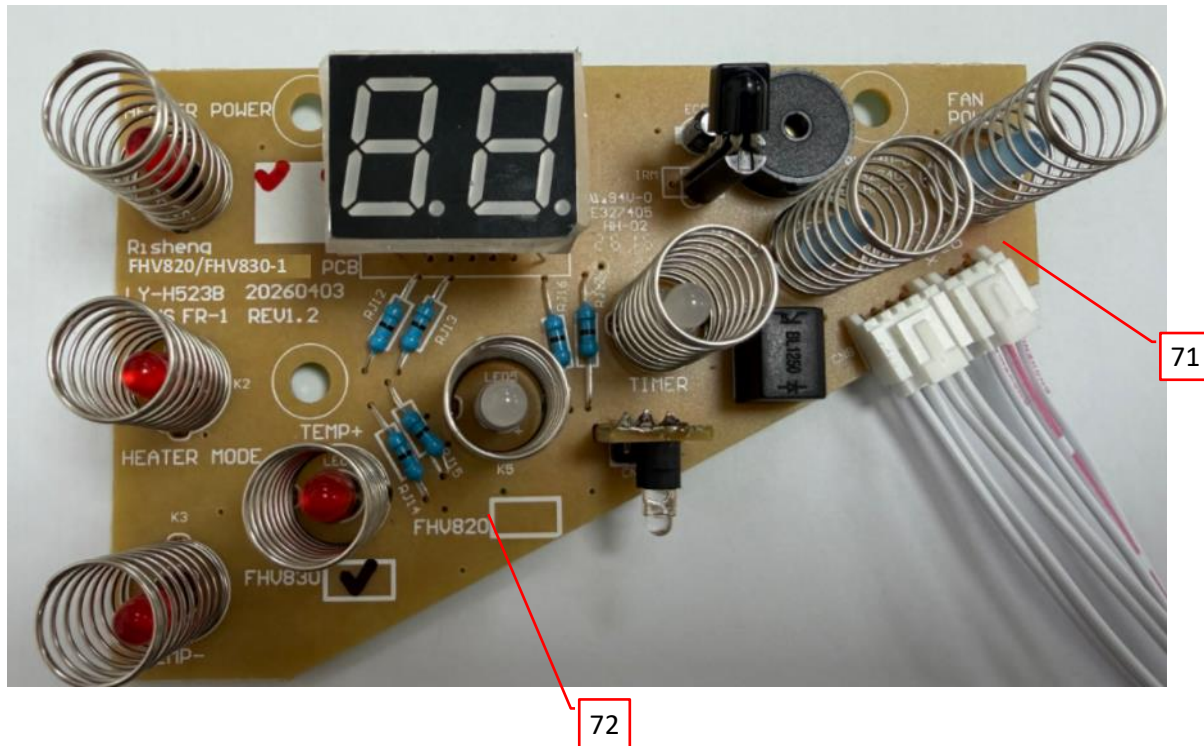
3.0 Product Photographs

Photo 20 -Risheng Power board 2034124



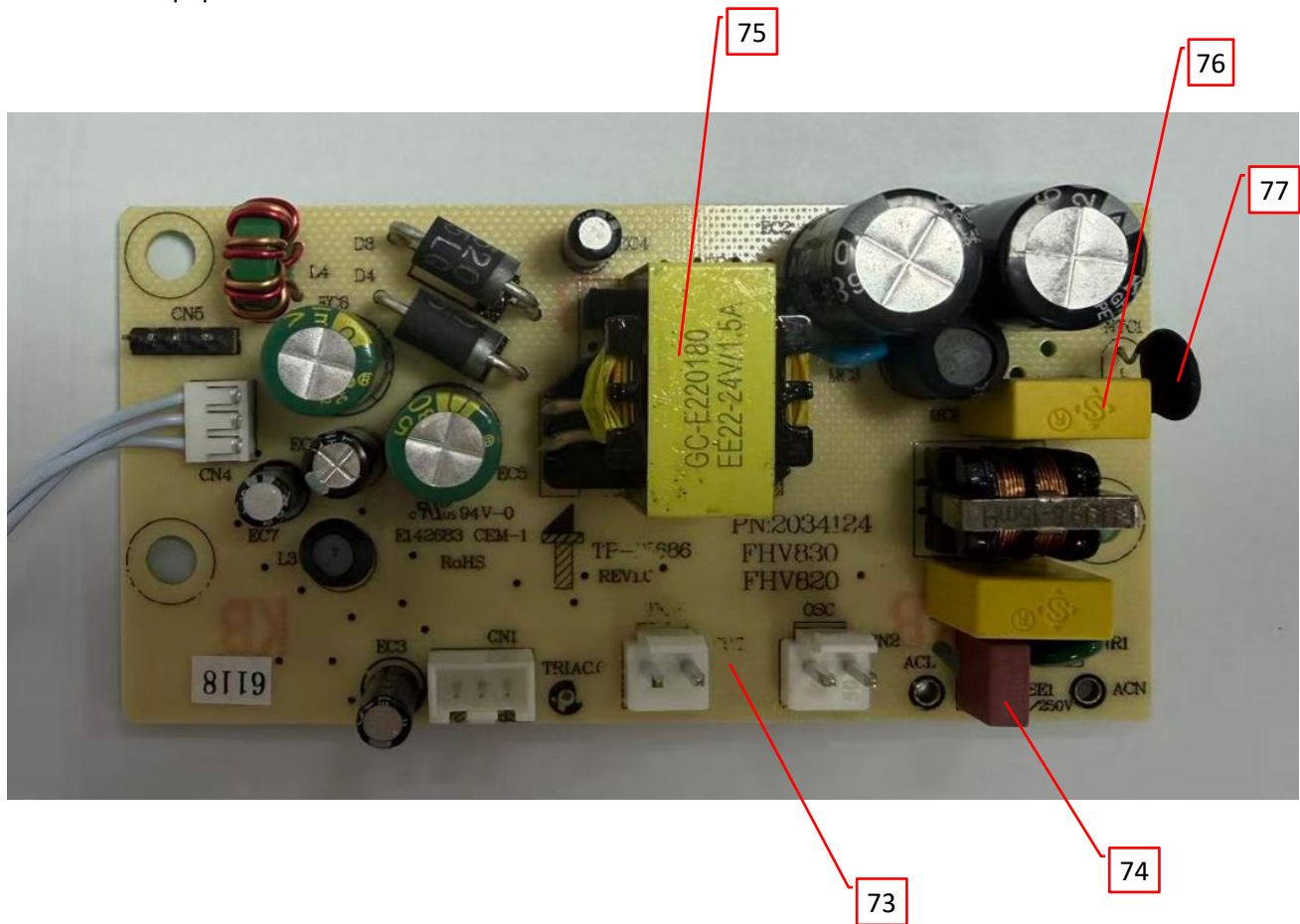
3.0 Product Photographs

Photo 21 -Risheng Display board FHV820/FHV830-1



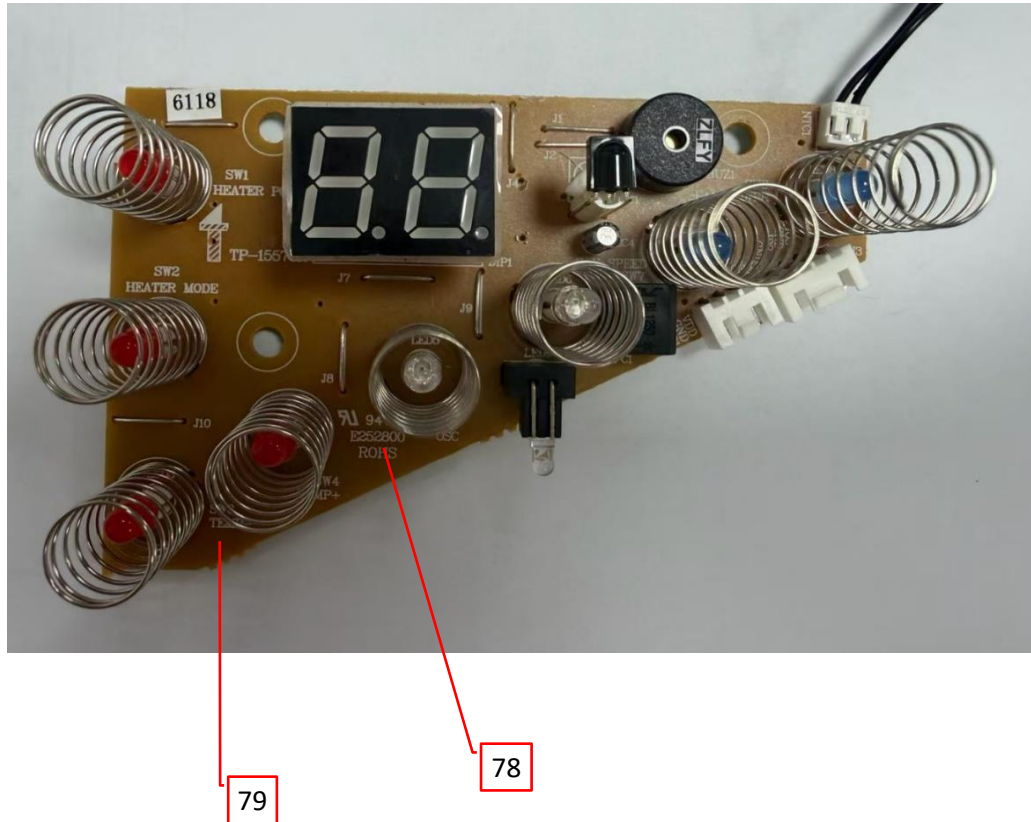
3.0 Product Photographs

Photo 22 -Topapex Power board 2034124



3.0 Product Photographs

Photo 23 -Topapex Display board FHV820/FHV830-1



4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
1	1	Heater Grill	NANTONG ORIENT PLASTICS CO LTD	3080GF30	PBT, min 1.6mm thick, V-0, rated 130°C 1.9" x 20.269" x .321"	cURus
			Kingfa Sci & Tech Co Ltd.	PBT-RG301(r1)	PBT, min 1.5mm thick, V-0, rated 130°C 1.9" x 20.269" x .321"	cURus
1	2	Lens	LG Chem Ltd.	GN-1006FM	PC, min 2.5mm thick, V-0 (All), rated 110°C	cURus
			Silver Age Engineering Plastics (Dongguan) Co Ltd.	230	PC, min 0.8mm thick, V-0 (NC, RD), rated 80°C	cURus
1	3	Heater Grill Insert	NANTONG ORIENT PLASTICS CO LTD	3080GF30	PBT, min 1.6mm thick, V-0, rated 130°C	cURus
			Kingfa Sci & Tech Co Ltd.	PBT-RG301(r1)	PBT, min 1.5mm thick, V-0, rated 130°C	cURus
1	4	Front Body	LG Chem Huizhou Petrochemical Co Ltd.	AF312B	ABS, min 2.1mm thick, V-0, 5VB (All), rated 70°C	cURus
			Lotte Chemical Corporation.	VH-0815(+)	ABS, min 2.0mm thick, V-0, 5VB (All), rated 85°C	cURus
1	5	Air Guide	Polyrocks Chemical Co Ltd.	5000(f1)	PP, min 0.75mm thick, V-0 (All), rated 120°C	cURus
			Silver Age Engineering Plastics (Dongguan) Co Ltd.	433+(f1)	PP, min 0.75mm thick, V-0 (All), rated 110°C	cURus
7	6	TCO Holder	NANTONG ORIENT PLASTICS CO LTD	3080GF30	PBT, min 1.6mm thick, V-0, rated 130°C	cURus
			Kingfa Sci & Tech Co Ltd.	PBT-RG301(r1)	PBT, min 1.5mm thick, V-0, rated 130°C	cURus
7	7	Element Bracket	NANTONG ORIENT PLASTICS CO LTD	3080GF30	PBT, min 1.6mm thick, V-0, rated 130°C	cURus
			Kingfa Sci & Tech Co Ltd.	PBT-RG301(r1)	PBT, min 1.5mm thick, V-0, rated 130°C	cURus
2	8	Intake Filter	Polyrocks Chemical Co Ltd.	5000(f1)	PP, min 0.75mm thick, V-0 (All), rated 120°C	cURus
			Silver Age Engineering Plastics (Dongguan) Co Ltd.	433+(f1)	PP, min 0.75mm thick, V-0 (All), rated 110°C	cURus

4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
2	9	Intake Grill Motor Side	Polyrocks Chemical Co Ltd.	5000(f1)	PP, min 0.75mm thick, V-0 (All), rated 120°C	cURus
			Silver Age Engineering Plastics (Dongguan) Co Ltd.	433+(f1)	PP, min 0.75mm thick, V-0 (All), rated 110°C	cURus
2	10	Remote Bracket	Polyrocks Chemical Co Ltd.	5000(f1)	PP, min 0.75mm thick, V-0 (All), rated 120°C	cURus
			Silver Age Engineering Plastics (Dongguan) Co Ltd.	433+(f1)	PP, min 0.75mm thick, V-0 (All), rated 110°C	cURus
2	11	Rear Body	Polyrocks Chemical Co Ltd.	5000(f1)	PP, min 0.75mm thick, V-0 (All), rated 120°C	cURus
			Silver Age Engineering Plastics (Dongguan) Co Ltd.	433+(f1)	PP, min 0.75mm thick, V-0 (All), rated 110°C	cURus
2	12	Intake Grill Inlet Side	Polyrocks Chemical Co Ltd.	5000(f1)	PP, min 0.75mm thick, V-0 (All), rated 120°C	cURus
			Silver Age Engineering Plastics (Dongguan) Co Ltd.	433+(f1)	PP, min 0.75mm thick, V-0 (All), rated 110°C	cURus
6	13	Remote	LG Chem Huizhou Petrochemical Co Ltd.	HP181	ABS, Rated HB, 75°C, 1.6mm minimum thickness, all colors. Powered by 2 AAA batteries	cURus
			Ningbo LG Yongxing Chemical Co Ltd.	HI-121H	ABS, min.1.5mm thick, HB, rated 80°C. Powered by 2 AAA batteries	cURus

4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
7	14	Power Board	Risheng Electrical Appliances Co. Ltd.	2034124	Input:120VAC,60 Hz Output: 24V, 1.5A Consists of items 66-70.	NR
			ShenZhen Topapex Technology Co Ltd.	2034124	Input:120VAC,60 Hz Output:24V, 1.5A Consists of items 73-77.	NR
7	15	Heating Element	Dongguan Longyang Electronic Technology Co Ltd.	LYB-120-1500	Ceramic 120V, 1500W	cURus
			Dongguan City LongKey Electronic Co Ltd.	RFB-120-1500	Ceramic 120V, 1500W	cURus
			KAI YI ELECTRIC HEATING(M) SDN. BND.	LYB-120-1500	Ceramic 120V, 1500W	cURus
7	16	Manual Reset TCO	Auone Electronic Mfg Ltd.	AUT-65P	65 °C, 125V	cURus
			Foshan Eagle Technology Co Ltd.	AMT-P2-65°C	65 °C, 125V	cURus
9	17	Housing Motor Mount	Polyrocks Chemical Co Ltd.	168(+)(f1)	PP, min 0.75mm thick, V-0, rated 120°C	cURus
7	18	Louver	LG Chem Huizhou Petrochemical Co Ltd.	AF312B	ABS, min 0.75mm thick, V-0, 5VB (All), rated 70°C	cURus
			Lotte Chemical Corporation.	VH-0815(+)	ABS, min 2.0mm thick, V-0, 5VB (All), rated 85°C	cURus
8	19	Blower Wheel	Polyrocks Chemical Co Ltd.	168(+)(f1)	PP, min 0.75mm thick, V-0, rated 120°C	cURus
7	20	Louver Cam (Not Shown)	Super-Dragon Engineering Plastics Co Ltd.	PA66FG430	Nylon, min 0.75mm thick, V-0, rated 120°C	cURus
			Kingfa Sci & Tech Co Ltd.	PA66-RG301	Nylon, min 0.75mm thick, V-0, rated 115°C	cURus
8	21	Housing Inlet	Polyrocks Chemical Co Ltd.	168(+)(f1)	PP, min 0.75mm thick, V-0, rated 120°C	cURus
9	22	Motor	Risheng Electrical Appliances Co Ltd.	2034409	24 VDC, 1.5A	See 5.0
			Risheng Electrical Appliances Co Ltd.	2033423	24 VDC, 1.5A	See 5.0

4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
8	23	Oscillation Motor	Foshan Shunde Hengxing Micro Motor Co Ltd.	TYJ50-8A	120V~ 60Hz	cURus
			Creative Motor Mfg Co Ltd.	TYC50(H21)	120V~ 60Hz	cURus
			Minzhuo Electric Co Ltd	50TYZ-0.2B02	120V~ 60Hz	cURus
			Jiangmen Dongrun Mechinery And Electrical Co Ltd	TY50J	120V~ 60Hz	cURus
8	24	Oscillation Plate	LG Chem Huizhou Petrochemical Co Ltd.	AF312B	ABS, min 2.1mm thick, V-0, 5VB (All), rated 70°C	cURus
			Lotte Chemical Corporation.	VH-0815(+)	ABS, min 2.0mm thick, V-0, 5VB (All), rated 85°C	cURus
7	25	Cam	Super-Dragon Engineering Plastics Co Ltd.	PA66FG430	Nylon, min 0.75mm thick, V-0, rated 120°C	cURus
			Kingfa Sci & Tech Co Ltd.	PA66-RG301	Nylon, min 0.75mm thick, V-0, rated 115°C	cURus
5	26	Base	LG Chem Huizhou Petrochemical Co Ltd.	AF312B	ABS, min 2.1mm thick, V-0, 5VB (All), rated 70°C	cURus
			Lotte Chemical Corporation.	VH-0815(+)	ABS, min 2.0mm thick, V-0, 5VB (All), rated 85°C	cURus

4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
8	27	Funnel	LG Chem Huizhou Petrochemical Co Ltd.	AF312B	ABS, min 2.1mm thick, V-0, 5VB (All), rated 70°C	cURus
			Lotte Chemical Corporation.	VH-0815(+)	ABS, min 2.0mm thick, V-0, 5VB (All), rated 85°C	cURus
3	28	Base Cover	Polyrocks Chemical Co Ltd.	5000(f1)	PP, min 0.75mm thick, V-0 (All), rated 120°C	cURus
			Silver Age Engineering Plastics (Dongguan) Co Ltd.	433+(f1)	PP, min 0.75mm thick, V-0 (All), rated 110°C	cURus
3	29	Cordset	Unirise Electric Wire & Cable Co Ltd.	HPN-R	2×16AWG, 300V, 105°C. 6 - 8' in length. Provided with molded on 1-15P plug rated 125V 15A. Base design acts as strain relief.	cURus
			Good Cledar Group Ltd.	HPN-R	2×16AWG, 300V, 105°C. Provided with molded on 1-15P plug rated 125V 15A. Base design acts as strain relief.	cURus
			New Square Co Ltd.	HPN-R	2×16AWG, 300V, 105°C. Provided with molded on 1-15P plug rated 125V 15A. Base design acts as strain relief.	cURus
			Various	HPN-R	2×16AWG, 300V, 105°C. 6 - 8' in length. Provided with molded on 1-15P plug rated 125V 15A. Base design acts as strain relief.	cURus or cETLus

4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
2	59	Label	Zhongshan Fuzhou Adhesive Product Co Ltd.	TL-TA25	Rated 60°C max, indoor use only.	UR
			Zhongshan Fuzhou Adhesive Product Co Ltd.	TL-SM25	Rated 60°C max, indoor use only.	UR
			LIAN YI PRINTING CO LTD	LY-03	Rated 80°C max, indoor use only.	UR
2	59a	Cautionary Marking Label	ZHONGSHAN FUZHOU ADHESIVE PRODUCT CO LTD	TL-TA25	Rated 60°C, indoor use. Adhered to Rear Housing on Item 4. Generic material type ABS.	UR
				TL-SM25		
			LIAN YI PRINTING CO LTD	LY-03	Rated 80°C max, indoor use only. Adhered to Rear Housing on Item 4. Generic material type ABS.	UR
2	59b	Cord Tag	LASKO PRODUCTS LLC	Tyvek L 1057D	Label with adhesive, DRAGON-FC Ink imprinted on top of base material. Rated for use on HPN-R cord 16AWG or larger.	ETLus Recognized

4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
4	60	Metal Grill	Various	Metal	Min thickness 0.8mm	NR
20	65	DC Motor Bracket (Not shown)	Polyrocks Chemical Co Ltd.	5000(f1)	PP, min 0.75mm thick, V-0 (All), rated 120°C. Located at base of item 22.	cURus
			Silver Age Engineering Plastics (Dongguan) Co Ltd.	433+	PP, min 0.75mm thick, V-0 (All), rated 110°C. Located at base of item 22.	
20	66	PCB	Various	Various	UL94 V-0, DSR-ALL, 130°C max, 1.6mm min thick.	UR
20	67	Fuse	Shenzhen Lanson Electronics Co. Ltd.	SMT	250VAC, 1.6A	UR
			XC ELECTRONICS (SHENZHEN)CO RP.,LTD	5TE	250VAC, 1.6A	
20	68	Transformer	Guang Dong GuoCiElectronics Limited	EE-22	Input: 120V, 60Hz Output: 24VDC, 1.5A	See 5.0
20	69	Capacitor	Various	224	275V, 224	UR
20	70	NTC	Various	5D-9	Rated 5Ω, 3A Max, 200C Max	NR

4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
21	71	Display Board	Risheng Electrical Appliances Co. Ltd.	FHV820/FHV830-1	Rated 5VDC, Consists of item 72	NR
21	72	PCB	Various	Various	UL94 V-0, DSR-ALL, 130°C max, 1.6mm min thick.	UR
22	73	PCB	Various	Various	UL94 V-0, DSR-ALL, 130°C max, 1.6mm min thick.	UR
22	74	Fuse	Shenzhen Lanson Electronics Co. Ltd.	SMT	250VAC, 1.6A	UR
			XC ELECTRONICS (SHENZHEN) CO RP., LTD	5TE	250VAC, 1.6A	
22	75	Transformer	Guang Dong GuoCi Electronics Limited	EE-22	Input: 120V, 60Hz Output: 24VDC, 1.5A	See 5.0
22	76	Capacitor	Various	224	275V, 224	UR
22	77	NTC	Various	5D9	Rated 5Ω, 3A Max, 200C Max	NR
23	78	Display Board	ShenZhen Topapex Technology Co Ltd.	FHV820/FHV830-1	Rated 5VDC, Consists of item 79	NR
23	79	PCB	Various	Various	UL94 V-0, DSR-ALL, 130°C max, 1.6mm min thick.	UR
NOTES: 1) Not all item numbers are indicated (called out) in the photos, as their location is obvious. 2) "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used. 3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated periodically refer to section 5.0 for details.						

5.0 Critical Unlisted CEC Components

INSULATED COIL

Photo #	Item no.	Name	Manufacturer/Trademark	Type / model
20	68	Transformer	Guang Dong GuoCiElectronics Limited	EE-22
Electrical Rating:		Input: 120V, 60Hz Output: 24VDC, 1.5A		Insulation class A
Component Standard used:		UL 5085-1		

MATERIALS LIST (refer to illustration 10 for assembly drawing)

Component	Manufacturer	Type/model	Dimensions/thickness/assembly information
Bobbin	Chang Chun	T375HF	150°C, V-0
Triple Insulating Wire	SHEN ZHEN	DRTIW-B	130°C, Re-inforced Insulation
Varnish	Zhuai Changxian	E962	130°C, MW-28C
Winding	DONG GUAN YIDA INDUSTRIAL CO	QA-X/155	155°C
		xUEW/155	
Tape	Xinhuahui Plastic	HMT803	130°C, 3 layers

WINDING(S) RESISTANCE

Winding Designation	Wire Size (mm ²)	Wire Type	Turns	Volts	Amps	DC resistance (Ω) +/- 10%:
N1	0.4	2UEW	37	-	-	0.31
N2	0.16	DRTIW-B	8	-	-	0.335
N3	0.6	2UEW	10	-	-	0.032
N4	0.4	2UEW	14	-	-	0.31

VERIFICATION PROCESS

Frequency: Annual	Test Site: CEC	Number of samples to test: 1	
Test Name	Test Parameters		
Winding resistance	See resistance per winding above.		
Dielectric Strength	Apply voltage Between	Test Voltage	Test Time
	Primary to core	1240V	60s
	Primary to secondary	2500V	60s
	Secondary to core	500V	60s

5.0 Critical Unlisted CEC Components						
INSULATED COIL						
Photo #	Item no.	Name	Manufacturer/Trademark		Type / model	
22	75	Transformer	Guang Dong GuoCiElectronics Limited		EE-22	
Electrical Rating:		Input: 120V, 60Hz Output: 24VDC, 1.5A			Insulation class A	
Component Standard used:		UL 5085-1				
MATERIALS LIST (refer to illustration 10 for assembly drawing)						
Component	Manufacturer	Type/model	Dimensions/thickness/assembly information			
Winding	DONG GUAN YIDA INDUSTRIAL CO	QA-X/155	155°C			
		xUEW/155				
Tape	Xinhuahui Plastic	HMT803	130°C, 3 layers			
Bobbin	Chang Chun	T375HF	150°C, V-0			
Triple Insulating Wire	SHEN ZHEN DARUN SCIENCE AND TECHNOLOGY	DRTIW-B	130°C, Re-inforced Insulation			
Varnish	Zhuai Changxian	E962	130°C, MW-28C			
WINDING(S) RESISTANCE						
Winding Designation	Wire Size (mm ²)	Wire Type	Turns	Volts	Amps	DC resistance (Ω) +/- 10%:
N1	0.4	2UEW	37	-	-	0.31
N2	0.16	DRTIW-B	8	-	-	0.335
N3	0.6	2UEW	10	-	-	0.032
N4	0.4	2UEW	14	-	-	0.31
VERIFICATION PROCESS						
Frequency:	Annual	Test Site: CEC		Number of samples to test: 1		
Test Name		Test Parameters				
Winding resistance		See resistance per winding above.				
Dielectric Strength		Apply voltage Between		Test Voltage	Test Time	
		Primary to core		1240V	60s	
		Primary to secondary		2500V	60s	
		Secondary to core		500V	60s	

5.0 Critical Unlisted CEC Components						
INSULATED COIL						
Photo #	Item no.	Name	Manufacturer/Trademark		Type / model	
9	22	Motor	Risheng Electrical Appliances Co Ltd.		2033423	
Electrical Rating:		24 VDC, 1.5A			Insulation class A	
Component Standard used:		UL 1004-1, CSA C22.2# 100				
MATERIALS LIST (refer to illustration 11 for assembly drawing)						
Component	Manufacturer	Type/model	Dimensions/thickness/assembly information			
Rotor Bowl	Xiongchang	SPCC	φ61*φ59*19mm			
Shaft	WuHan Steel&Iron Manufactory	45#	φ8 *65mm			
"E"Ring	Angang Steel Company Limited	SK5	φ12 *6*1mm			
Magnet	Magnet(Ningbo) Co., LTD.	Plastic magnetic	oe: 1000GS φ59mm*φ52.8mm*19mm			
Bearing	Kao Cheng Precision Tech. (Shen Zhen) Co.,Ltd	608Z	φ8*22*6mm			
		698Z	φ8*19*6mm			
		608RS	φ8*19*6mm			
Waveform shrapnel	Huifeng Harduare Factory	φ18mm*φ12*0.2mm	φ18mm*φ12*0.2mm			
Stator	WuHan Steel&Iron Manufactory	H800	φ52mm*φ21*10mm			
Motor driver PCBA	Various	24V 1.5A	24V 1.5A, PCB 1.6MM			
Rip Cord	Dongguan Xiehe Wire Co Ltd	UL 1007	80°C, 300V, 22AWG, VW-1, 550mm			
	Various		80°C, 300V, 22AWG, VW-1, 550mm			
Winding	Risheng Electrical Appliances Factory No 2 Plant	QA-1 1UEW	Φ0.43mm*67			
WINDING(S) RESISTANCE						
Winding Designation	Wire Size (mm ²)	Wire Type	Turns	Volts	Amps	DC resistance (Ω) +/- 10%:
Main	0.43	QA-1 1UEW	67	24	0.5	1.27
VERIFICATION PROCESS						
Frequency:	Annual	Test Site: CEC		Number of samples to test: 1		
Test Name		Test Parameters				
Winding resistance		See resistance per winding above.				
Dielectric Strength		Apply voltage Between		Test Voltage	Test Time	
		Primary to core		500V	60s	
		Primary to secondary		--	--	
		Secondary to core		--	--	

5.0 Critical Unlisted CEC Components

INSULATED COIL						
Photo #	Item no.	Name	Manufacturer/Trademark	Type / model		
9	22	Motor	Risheng Electrical	2034409		
Electrical Rating: 24VDC, 1.5A				Insulation class A		
Component Standard used: UL 1004-1, UL 1004-2						
MATERIALS LIST (refer to illustration 7 for assembly drawing)						
Component	Manufacturer	Type/model	Dimensions/thickness/assembly information			
Bearing	kao Cheng Precision Tech. (Shen Zhen)Co.,Ltd	698Z	φ8*19*6mm			
Bearing	kao Cheng Precision Tech. (Shen Zhen)Co.,Ltd	608RS	φ8*19*6mm			
Bearing	kao Cheng Precision Tech. (Shen Zhen)Co.,Ltd	608Z	φ8*22*6mm			
Rotor Bowl	Xiongchang Hardware Factory	SPCC	φ61*φ59*19mm			
Motor Driver PCB	Various	24V 1.5A	24VDC 1.5A, 1.6mm PCB FR4			
Shaft	WuHan Steel&Iron Manufactory	#45	φ8 *65mm			
Stator	Wuhan Steel & Iron Manufactory	H800	φ52mm*φ21*10mm			
Wire	Various	UL 2468	22AWG/6C, Recognized component.			
Winding	Risheng Electrical Appliances Factory No 2 Plant	QA-1 1UEW	Φ0.45mm*70			
WINDING(S) RESISTANCE						
Winding Designation	Wire Size (mm ²)	Wire Type	Turns	Volts	Amps	DC resistance (Ω) +/- 10%:
Main	0.45	1UEW	70	24	0.5	2.4
VERIFICATION PROCESS						
Frequency: Annual	Test Site: CEC			Number of samples to test: 1		
Test Name	Test Parameters					
Winding resistance	See resistance per winding above.					
Dielectric Strength	Apply voltage Between			Test Voltage		Test Time
	Primary to core			500V		60s
	Primary to secondary			--		--
	Secondary to core			--		--

6.0 Critical Features

Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.

Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.

Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.

Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.

Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.

1. Spacing - In primary circuits, 1/16 inch minimum spacing are maintained through air and over surfaces of insulating material between current-carrying parts of opposite polarity and between current-carrying parts and dead-metal parts. Further, 1/2 inch minimum spacing are maintained through air and over surfaces of insulating material between the bare heating element and grounded metal parts except for temperature limiting control sensing element and its supports.
2. Mechanical Assembly - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are reliably mounted and prevented from shifting or rotating by lockwashers, starwashers, or the mounting format.
3. Corrosion Protection - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.
4. Accessibility of Live Parts - All uninsulated live parts in primary circuitry are housed within a metal and plastic enclosure constructed such that any openings are not penetrable by the probe specified in the above-referenced Standard.
5. Grounding - Grounding - This product is not provided with a means of grounding as it is not required to be grounded since it is intended to operate on a circuit with a potential less than 150 Volts to ground.
6. Polarized Connection - This product is provided with a polarized power supply connection. All single pole switches and fuses are connected only to the ungrounded supply circuit conductor.
7. Internal Wiring - Internal wiring is reliably routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets. All wiring is minimum 16 AWG, with a minimum rating of 300V, 200°C and the element lead wire that is 16AWG, 105°C, 300V.
8. Schematics - Refer to Illustration No(s). 8 and 9 for schematics requiring verification during Field Representative Inspection Audits. Verify polarity of lead connections.
9. Markings - The product is marked on a component labeling system as described in item 59 of section 4.0 as follows: applicant's name or brand name, factory ID, model number, date of manufacture, electrical ratings,
10. Cautionary Markings - Refer Item 59a of section 4. The product shall be plainly marked "CAUTION" and the following cautionary marking that shall be visible from a point 1.5 m above the floor and between 0.3 and 1.2 m away from the front surface of the heater when the heater is placed in the intended use location and the marking shall be in letters not less than 3.2 mm in height and shall be of a permanent type and in a color that contrasts with that of the enclosure or background.

Refer to Illustration 3.1 for details and wording.

6.0 Critical Features

11. Cord Tag Marking - Refer to Item 59b of section 4. The statements "WARNING - TO REDUCE THE RISK OF FIRE" and "DO NOT REMOVE THIS TAG!" shall be in letters at least 3/16 inch(4.8 mm) in height. The remaining text shall be in letters of at least 1/16 inch (1.6 mm) in height. The tag shall be a flag-type cord tag with an adhesive back. The tag is to be wrapped tightly once around and is to adhere to the supply cord. The ends of the tag are to adhere to each other and project as a flag. The required markings are to be positioned on the projecting flag portion of the tag.

Refer to Illustration 3.2 for details and wording.
12. Carton Markings - The product shall include the following information pertaining to the heater features and its use conditions. It shall be included on the external surface of the packaging of the heater. All information shall be grouped together and appear on one side, except the bottom of the packaging.

Refer to Illustration 3.3 for details and wording.
13. Removable Warning Label - The label shall be temporarily affixed and be readily visible on the heater and shall allow easy removal of the label.

Refer to Illustration 3.4 for details and wording.
14. Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the manufacturer as required by the standard. Refer to Illustration 1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, and 2.4.

7.0 Illustrations

Illustration 1.1 - FHV801 Instructions

Lasko®

Tower Heater Fan with Remote Control Instruction Manual

Since 1906

Used for Model:
FHV801



Register Your Product Today
www.lasko.com/product-registration/

You will benefit from:

- Efficient and enhanced support
- Future product updates

Have a Question? Need a Part?
Please Do Not Return Product to Store!
Contact Lasko Customer Service:
(800) 233-0298 Monday-Friday 8AM - 5PM EST.
(Valid in the USA, its Territories, and CANADA Only)

READ AND SAVE THESE INSTRUCTIONS

Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage!

This Unit is for residential use only. It is not intended to be used in commercial, industrial or agricultural settings.



7.0 Illustrations

Illustration 1.2 - FHV801 Instructions



WARNING



IMPORTANT SAFETY INSTRUCTIONS

When using electrical appliances, these instructions and warnings should always be followed to reduce the risk of fire, electrical shock, injury to persons and hyperthermia:



Read all instructions before using this Heater.



WARNING



- PLUG UNITS DIRECTLY INTO A 120V WALL OUTLET/RECEPTACLE ONLY. NEVER USE WITH AN EXTENSION CORD. DO NOT PLUG UNIT INTO ANY OTHER CORD CONNECTED DEVICE, SUCH AS A POWER STRIP, SURGE PROTECTOR, MULTIPLE OUTLET ADAPTER, CORD REEL OR OUTLET-TYPE AIR FRESHENER. THE USE OF SUCH DEVICES MAY CREATE A FIRE HAZARD. DO NOT PLUG MULTIPLE DEVICES IN THE SAME OUTLET OR ON SAME CIRCUIT AS UNIT.
- FAULTY WALL OUTLET CONNECTIONS MAY CAUSE THE WALL OUTLET TO OVERHEAT. BE SURE THAT UNIT PLUG FITS TIGHTLY INTO OUTLET BEFORE EACH USE. DURING USE, CHECK TO MAKE CERTAIN THE UNIT PLUG IS NOT OVERHEATING. IF NECESSARY HAVE A QUALIFIED ELECTRICIAN CHECK AND/OR REPLACE THE WALL OUTLET. DO NOT USE THIS UNIT WITH ANY SOLID STATE SPEED CONTROL DEVICES.
- Make certain that the power source conforms to the electrical requirements of the Unit.
- Extreme caution is necessary when any Unit is used by or near children or invalids. The Unit should not be left operating unattended. Never leave children unattended when the Unit is on or plugged in.
- This appliance has a polarized plug (one blade is wider than the other). To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Do not attempt to defeat this safety feature.
- DO NOT use the Unit in areas where gasoline, paint, or flammable liquids are used or stored. DO NOT use Unit in locations where flammable or explosive chemicals are stored, or in wet atmospheres.
- Do not operate any Unit with a damaged cord or plug or after the Unit malfunctions, or has been dropped or damaged in any manner. To disconnect Unit, turn the Unit OFF then remove the plug from the outlet.
- Always unplug Unit when not in use. Unplug power cord before servicing or moving the Unit.
- Do not insert or allow fingers or foreign objects to enter any ventilation or exhaust opening as it may cause an electric shock, fire, or damage the Unit. Do not block or tamper with the Unit in any manner while it is in operation.
- Do not block air intakes or exhaust in any manner. Do not place on soft surfaces, like a bed, where openings may become blocked. Do not depend on the on/off switch as the sole means of disconnecting power when servicing or moving the Unit. Always unplug the power cord.
- Hyperthermia can result in death. Symptoms of hyperthermia include high body temperature, headache, nausea, vomiting, tiredness, dizziness, fainting, and rapid pulse. If you begin to experience symptoms related to hyperthermia, turn off the heater and seek medical attention.
- To avoid excessive room temperatures which can cause hyperthermia: DO NOT leave product running unattended in a confined space around infants, or individuals with reduced physical, sensory, or mental capabilities.



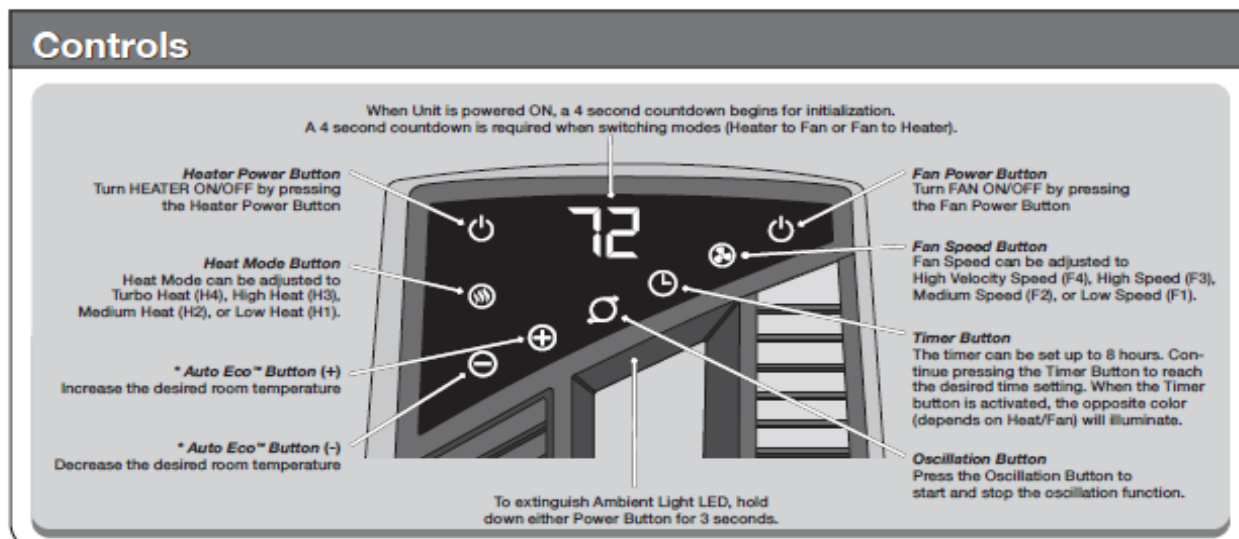
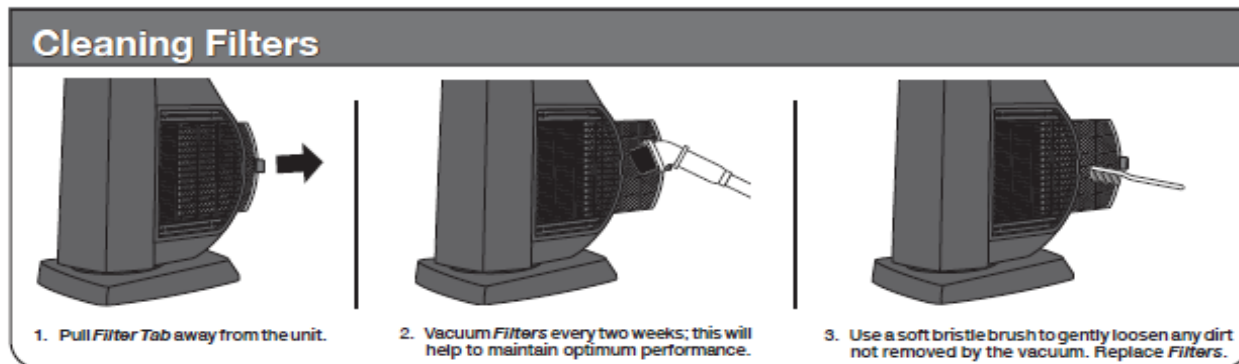
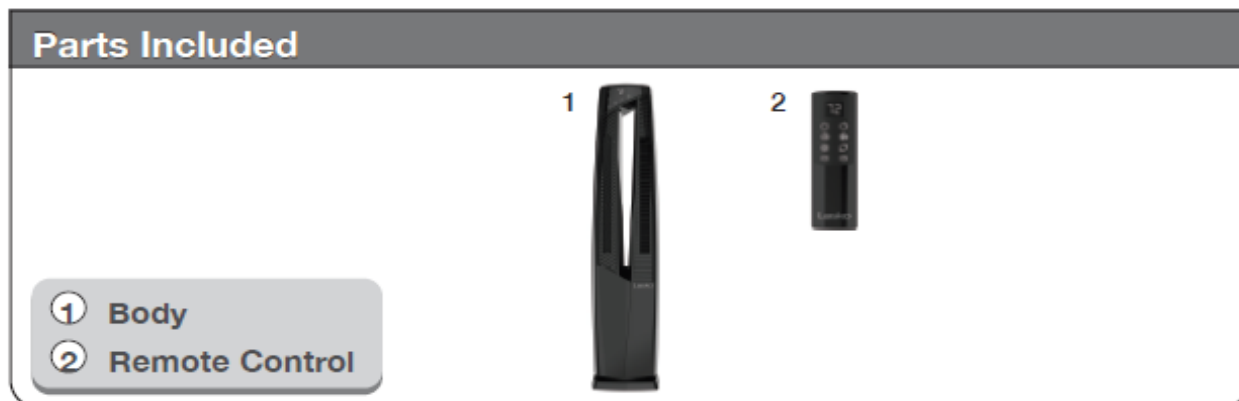
CAUTION

- Always place the Unit on a stable, flat, level surface when operating, to avoid the chance of the Unit overturning. Locate the Power Cord so the Unit or other objects are not resting on it. DO NOT run Power Cord under carpeting. DO NOT cover Power Cord with throw rugs, runners, or similar coverings as this may cause cord to overheat. Arrange Power Cord away from room traffic and where it will not be tripped over.
- This Unit is HOT when in use. To avoid burns, do not let bare skin touch hot surfaces. Always use handle when moving this Unit. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes and curtains at least 3 feet (0.9 m) from the front of the Unit and keep them at least 1 foot (0.3 m) from the sides and rear.
- This Unit is not intended for use in wet or damp locations. This Unit is not intended for use in bathrooms, laundry areas and similar indoor locations. NEVER locate a Unit where it may fall into a bathtub or other water container.
- DO NOT use Unit outdoors.
- This Unit is not suitable for use in agricultural facilities including areas where livestock, poultry or other animals are confined. Please refer to National Electric Code (NEC) Article 547-7 (2008), or applicable state or local codes or standards relating to electrical requirements for Agricultural Buildings. **THIS UNIT DOES NOT MEET THE REQUIREMENTS OF NEC ARTICLE 547-7 (2008).**
- This Unit is not suitable for use in hazardous locations. Please refer to National Electric Code (NEC) Article 500 or applicable state or local codes or standards relating to electrical requirements for Hazardous locations. **THIS UNIT DOES NOT MEET THE REQUIREMENTS OF NEC ARTICLE 500 (2008).**
- Remote controls for other appliances or electronic equipment can sometimes interfere with the operation of this Unit. If this occurs, move the Unit to another location.
- Keep Unit remote control unit away from chairs and your bed where it may be sat or laid upon and inadvertently turn on the Unit.

SAVE THESE INSTRUCTIONS

7.0 Illustrations

Illustration 1.3 - FHV801 Instructions



Addition Info:

- Memory – If the Unit is turned off by the Power button, while in the Fan or Heater mode, it will resume operation in the last Speed/Heater setting when Powered on.
- Unit dims 80% after 10 seconds.

*** FOR MORE DETAILED DESCRIPTION OF AUTO ECO™ FUNCTION, SEE PAGE 4**

7.0 Illustrations

Illustration 1.4 - FHV801 Instructions

AUTO ECO™ THERMOSTAT

Pressing the (+) or (-) buttons while in any Heater function or speed will turn on the Auto Eco™ function.

1. To set the room at a specific temperature press the (+) or (-) buttons to the desired temperature. The temperature will now be flashing. The Unit is now in Auto Eco™ Mode.
2. When you reach the temperature at which you want to set the Unit, the set temperature will flash several times and then the display will return to indicate the current room temperature, and will gradually change as the room temperature changes. NOTE: the temperature display does not indicate the temperature of the heated air being emitted by the Unit.
3. Heater will run on HIGH heat when the ambient temperature is less than the set temperature.
4. Heater will run on LOW heat when ambient temperature reaches set temperature, and will continue to run on LOW heat until ambient temperature reaches 2 degrees Fahrenheit above set temperature.
5. Heater will turn OFF once the ambient temperature is greater than 2 degrees Fahrenheit above set temperature. The fan will continue to run for 15 seconds after the heater element is turned off.

All of this happens automatically with Lasko Auto Eco™ Technology. To deactivate the Auto Eco™ function, turn the Unit off or press the (Y) button.

NOTE: In Auto Eco™, the Unit will display the current room temperature in ° Fahrenheit. Press the (+) and (-) buttons at the same time to change the display to ° Celsius. Press the same two buttons together again to change the display back to ° Fahrenheit.

SAFETY FEATURE

1. A thermal overload protector is built in to prevent overheating.
2. If an overheat temperature is reached, the Unit will automatically shut off. It can only resume operation when the user resets the unit.

To Reset Unit:

1. Unplug the Unit and wait 10 minutes for the Unit to cool down.
2. After the Unit has cooled down, plug the unit into a 120V~ electrical outlet and follow the operation instructions described in this manual.

TROUBLE SHOOTING TIPS

If your unit shuts off unexpectedly or fails to operate, the previously mentioned safety feature may have been activated to prevent overheating.

1. Be sure the power cord is plugged into a working electrical outlet.
2. Make certain the batteries in the remote control are new and properly installed.
3. Check your Temperature setting. The unit may be off because it has reached the desired temperature setting.
4. If your unit runs for several minutes and shuts off repeatedly, your unit may require cleaning. See Maintenance section below.

SERVICING: For servicing, other than general user maintenance, please contact Customer Service at (800) 233-0268, Monday through Friday, from 8am-5pm Eastern.

LUBRICATION: Motor is permanently lubricated.

STORAGE: Store the Unit with these instructions in the original carton in a cool, dry place.

DISPOSITION: Corrugated packaging materials are recyclable. For environmentally responsible disposal of this product, contact your local waste service provider or visit www.1800recycling.com.

MAINTENANCE



WARNING

To reduce the risk of electrical shock and fire please observe the following instructions. Cleaning the Unit regularly will help to maintain its efficiency.



- Always unplug the cord before moving, servicing or cleaning.
- NEVER place the unit in or near water. DO NOT IMMERSE UNIT IN WATER.
- Clean the unit only with a vacuum equipped with a brush attachment; the vacuum will remove the lint and dirt from the surface of the unit.
- Vacuum intake grills every two weeks; this will help to maintain optimum performance.
- Use a toothbrush or other soft bristle brush to gently loosen any dirt not removed by the vacuum.
- NEVER attempt to take apart the unit.
- Clean the body of the unit with a soft cloth only.
- NEVER use ALCOHOL or SOLVENTS such as gasoline, benzene, paint thinner, or other harsh cleaners.

LASKO PRODUCTS, LLC LIMITED WARRANTY (VALID IN THE USA, ITS TERRITORIES, AND CANADA ONLY)

WHAT THIS WARRANTY COVERS: This product is warranted against defects in workmanship and/or materials.

HOW LONG THIS WARRANTY LASTS: This warranty extends only to the original purchaser of the product and lasts for three (3) years from the date of original purchase or until the original purchaser of the product sells or transfers the product, whichever first occurs.

WHAT LASKO WILL DO: Lasko will, at its sole option, repair or replace any part or parts that prove to be defective or replace the whole product with the same or comparable model. For all warranty claims, the product must be returned to Lasko Products, LLC at customer expense with proof of purchase within the warranty period. Contact the Lasko customer service department to obtain a Return Authorization ("RA"). DO NOT return products without an RA or the warranty claim will not be processed.

WHAT THIS WARRANTY DOES NOT COVER: This warranty does not apply if the product was damaged or failed because of accident, improper handling or operation, shipping damage, abuse, misuse, unauthorized repairs made or attempted, or the use of the product for commercial or nonresidential service. This warranty does not cover shipping costs for the return of products to Lasko for repair or replacement. Lasko will pay return shipping charges from Lasko following warranty repairs or replacement. ANY AND ALL WARRANTIES, EXPRESSED OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY), LAST THREE YEARS FROM THE DATE OF ORIGINAL PURCHASE OR UNTIL THE ORIGINAL PURCHASER OF THE PRODUCT SELLS OR TRANSFERS THE PRODUCT, WHICHEVER FIRST OCCURS AND IN NO EVENT SHALL LASKO'S LIABILITY UNDER ANY EXPRESS OR IMPLIED WARRANTY INCLUDE (I) INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM ANY CAUSE WHATSOEVER, OR (II) REPLACEMENT OR REPAIR OF ANY HOUSE FUSES, CIRCUIT BREAKERS OR RECEPTACLES. NOTWITHSTANDING ANYTHING TO THE CONTRARY, IN NO EVENT SHALL LASKO'S LIABILITY UNDER ANY EXPRESS OR IMPLIED WARRANTY EXCEED THE PURCHASE PRICE OF THE PRODUCT AND ANY SUCH LIABILITY SHALL TERMINATE UPON THE EXPIRATION OF THE WARRANTY PERIOD.

Some states and provinces do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so these exclusions or limitations may not apply to you. This warranty gives you specific legal rights. You may also have other rights which vary from state to state and province to province. Proof of purchase is required before a warranty claim will be accepted.

CUSTOMER SERVICE:

Toll-Free (800) 233-0268. Email: producthelp@lasko.com

Our Customer Service team is available to assist you with product and service questions, and replacement parts. They can be reached Monday through Friday, 8am-5pm Eastern. Please have your model number available, as well as the type and style (located on the underside of your product).

Customer Service Dept., 820 Lincoln Ave., West Chester, PA 19380

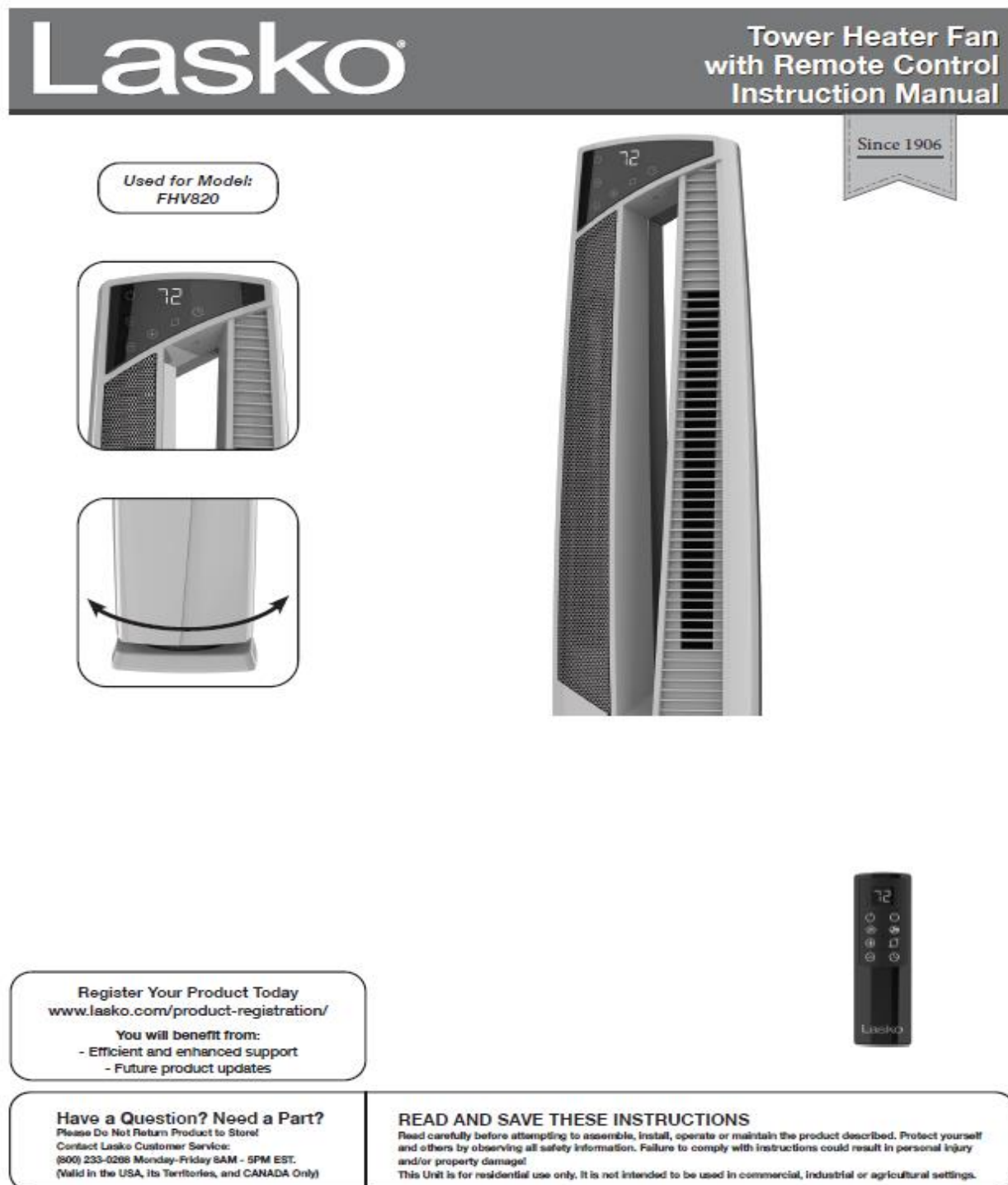
(Please do not send product to this location) www.lasko.com

PARTS FOR DISCONTINUED, OBSOLETE AND CERTAIN OTHER PRODUCTS MAY NOT BE AVAILABLE. DUE TO SAFETY REASONS, MANY ELECTRONIC COMPONENTS AND MOST HEATER COMPONENTS ARE NOT AVAILABLE TO CONSUMERS FOR INSTALLATION OR REPLACEMENT.

Manual printed in China

7.0 Illustrations

Illustration 2.1 - FHV820 Instructions



7.0 Illustrations

Illustration 2.2 - FHV820 Instructions



WARNING



IMPORTANT SAFETY INSTRUCTIONS

When using electrical appliances, these instructions and warnings should always be followed to reduce the risk of fire, electrical shock, injury to persons and hyperthermia:



Read all instructions before using this Heater.



WARNING



- PLUG UNITS DIRECTLY INTO A 120V WALL OUTLET/RECEPTACLE ONLY. NEVER USE WITH AN EXTENSION CORD. DO NOT PLUG UNIT INTO ANY OTHER CORD CONNECTED DEVICE, SUCH AS A POWER STRIP, SURGE PROTECTOR, MULTIPLE OUTLET ADAPTER, CORD REEL OR OUTLET-TYPE AIR FRESHENER. THE USE OF SUCH DEVICES MAY CREATE A FIRE HAZARD. DO NOT PLUG MULTIPLE DEVICES IN THE SAME OUTLET OR ON SAME CIRCUIT AS UNIT.
- FAULTY WALL OUTLET CONNECTIONS MAY CAUSE THE WALL OUTLET TO OVERHEAT. BE SURE THAT UNIT PLUG FITS TIGHTLY INTO OUTLET BEFORE EACH USE. DURING USE, CHECK TO MAKE CERTAIN THE UNIT PLUG IS NOT OVERHEATING. IF NECESSARY HAVE A QUALIFIED ELECTRICIAN CHECK AND/OR REPLACE THE WALL OUTLET. DO NOT USE THIS UNIT WITH ANY SOLID STATE SPEED CONTROL DEVICES.
- Make certain that the power source conforms to the electrical requirements of the Unit.
- Extreme caution is necessary when any Unit is used by or near children or invalids. The Unit should not be left operating unattended. Never leave children unattended when the Unit is on or plugged in.
- This appliance has a polarized plug (one blade is wider than the other). To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Do not attempt to defeat this safety feature.
- DO NOT use the Unit in areas where gasoline, paint, or flammable liquids are used or stored. DO NOT use Unit in locations where flammable or explosive chemicals are stored, or in wet atmospheres.
- Do not operate any Unit with a damaged cord or plug or after the Unit malfunctions, or has been dropped or damaged in any manner. To disconnect Unit, turn the Unit OFF then remove the plug from the outlet.
- Always unplug Unit when not in use. Unplug power cord before servicing or moving the Unit.
- Do not insert or allow fingers or foreign objects to enter any ventilation or exhaust opening as it may cause an electric shock, fire, or damage the Unit. Do not block or tamper with the Unit in any manner while it is in operation.
- Do not block air intakes or exhaust in any manner. Do not place on soft surfaces, like a bed, where openings may become blocked. Do not depend on the on/off switch as the sole means of disconnecting power when servicing or moving the Unit. Always unplug the power cord.
- Hyperthermia can result in death. Symptoms of hyperthermia include high body temperature, headache, nausea, vomiting, tiredness, dizziness, fainting, and rapid pulse. If you begin to experience symptoms related to hyperthermia, turn off the heater and seek medical attention.
- To avoid excessive room temperatures which can cause hyperthermia: DO NOT leave product running unattended in a confined space around infants, or individuals with reduced physical, sensory, or mental capabilities.



CAUTION

- Always place the Unit on a stable, flat, level surface when operating, to avoid the chance of the Unit overturning. Locate the Power Cord so the Unit or other objects are not resting on it. DO NOT run Power Cord under carpeting. DO NOT cover Power Cord with throw rugs, runners, or similar coverings as this may cause cord to overheat. Arrange Power Cord away from room traffic and where it will not be tripped over.
- This Unit is HOT when in use. To avoid burns, do not let bare skin touch hot surfaces. Always use handle when moving this Unit. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes and curtains at least 3 feet (0.9 m) from the front of the Unit and keep them at least 1 foot (0.3 m) from the sides and rear.
- This Unit is not intended for use in wet or damp locations. This Unit is not intended for use in bathrooms, laundry areas and similar indoor locations. NEVER locate a Unit where it may fall into a bathtub or other water container.
- DO NOT use Unit outdoors.
- This Unit is not suitable for use in agricultural facilities including areas where livestock, poultry or other animals are confined. Please refer to National Electric Code (NEC) Article 547-7 (2008), or applicable state or local codes or standards relating to electrical requirements for Agricultural Buildings. **THIS UNIT DOES NOT MEET THE REQUIREMENTS OF NEC ARTICLE 547-7 (2008).**
- This Unit is not suitable for use in hazardous locations. Please refer to National Electric Code (NEC) Article 500 or applicable state or local codes or standards relating to electrical requirements for Hazardous locations. **THIS UNIT DOES NOT MEET THE REQUIREMENTS OF NEC ARTICLE 500 (2008).**
- Remote controls for other appliances or electronic equipment can sometimes interfere with the operation of this Unit. If this occurs, move the Unit to another location.
- Keep Unit remote control unit away from chairs and your bed where it may be sat or laid upon and inadvertently turn on the Unit.

SAVE THESE INSTRUCTIONS

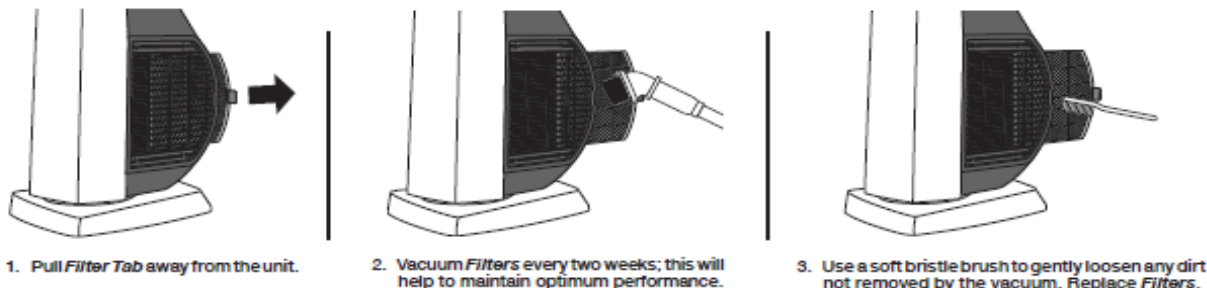
7.0 Illustrations

Illustration 2.3 - FHV820 Instructions

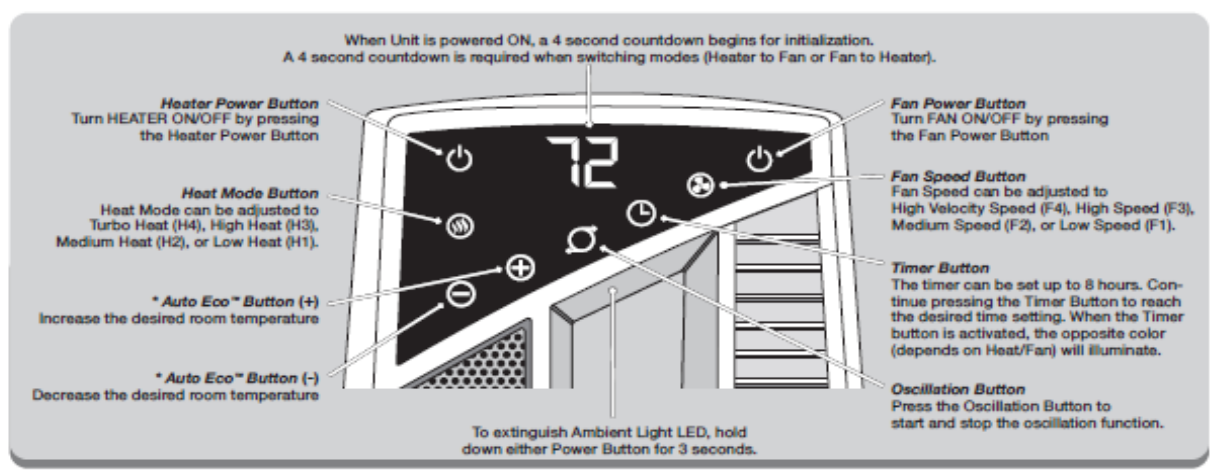
Parts Included



Cleaning Filters



Controls



Addition Info:

- Memory – If the Unit is turned off by the Power button, while in the Fan or Heater mode, it will resume operation in the last Speed/Heater setting when Powered on.
- Unit dims 80% after 10 seconds.

*** FOR MORE DETAILED DESCRIPTION OF AUTO ECO™ FUNCTION, SEE PAGE 4**

7.0 Illustrations

Illustration 2.4 - FHV820 Instructions

AUTO ECO™ THERMOSTAT

Pressing the (+) or (-) buttons while in any Heater function or speed will turn on the Auto Eco™ function.

1. To set the room at a specific temperature press the (+) or (-) buttons to the desired temperature. The temperature will now be flashing. The Unit is now in Auto Eco™ Mode.
2. When you reach the temperature at which you want to set the Unit, the set temperature will flash several times and then the display will return to indicate the current room temperature, and will gradually change as the room temperature changes. NOTE: the temperature display does not indicate the temperature of the heated air being emitted by the Unit.
3. Heater will run on HIGH heat when the ambient temperature is less than the set temperature.
4. Heater will run on LOW heat when ambient temperature reaches set temperature, and will continue to run on LOW heat until ambient temperature reaches 2 degrees Fahrenheit above set temperature.
5. Heater will turn OFF once the ambient temperature is greater than 2 degrees Fahrenheit above set temperature. The fan will continue to run for 15 seconds after the heater element is turned off.

All of this happens automatically with Lasko Auto Eco™ Technology. To deactivate the Auto Eco™ function, turn the Unit off or press the (OFF) button.

NOTE: In Auto Eco™, the Unit will display the current room temperature in ° Fahrenheit. Press the (+) and (-) buttons at the same time to change the display to ° Celsius. Press the same two buttons together again to change the display back to ° Fahrenheit.

SAFETY FEATURE

1. A Tip-Over Switch is built in to prevent operation if the Heater is tipped over.
2. A thermal overload protector is built in to prevent overheating.
3. If an overheat temperature is reached, the Unit will automatically shut off. It can only resume operation when the user resets the unit.

To Reset Unit:

1. Unplug the Unit and wait 10 minutes for the Unit to cool down.
2. After the Unit has cooled down, plug the unit into a 120V~ electrical outlet and follow the operation instructions described in this manual.

TROUBLE SHOOTING TIPS

If your unit shuts off unexpectedly or fails to operate, the previously mentioned safety feature may have been activated to prevent overheating.

1. Be sure the power cord is plugged into a working electrical outlet.
2. Make certain the batteries in the remote control are new and properly installed.
3. Check your Temperature setting. The unit may be off because it has reached the desired temperature setting.
4. If your unit runs for several minutes and shuts off repeatedly, your unit may require cleaning. See Maintenance section below.

SERVICING: For servicing, other than general user maintenance, please contact Customer Service at (800) 233-0268, Monday through Friday, from 8am-5pm Eastern.

LUBRICATION: Motor is permanently lubricated.

STORAGE: Store the Unit with these instructions in the original carton in a cool, dry place.

DISPOSITION: Corrugated packaging materials are recyclable. For environmentally responsible disposal of this product, contact your local waste service provider or visit www.1800recycling.com.

MAINTENANCE



WARNING

To reduce the risk of electrical shock and fire please observe the following instructions. Cleaning the Unit regularly will help to maintain its efficiency.



- Always unplug the cord before moving, servicing or cleaning.
- NEVER place the unit in or near water. DO NOT IMMERSE UNIT IN WATER.
- Clean the unit only with a vacuum equipped with a brush attachment; the vacuum will remove the lint and dirt from the surface of the unit.
- Vacuum intake grills every two weeks; this will help to maintain optimum performance.
- Use a toothbrush or other soft bristle brush to gently loosen any dirt not removed by the vacuum.
- NEVER attempt to take apart the unit.
- Clean the body of the unit with a soft cloth only.
- NEVER use ALCOHOL or SOLVENTS such as gasoline, benzene, paint thinner, or other harsh cleaners.

LASKO PRODUCTS, LLC LIMITED WARRANTY (VALID IN THE USA, ITS TERRITORIES, AND CANADA ONLY)

WHAT THIS WARRANTY COVERS: This product is warranted against defects in workmanship and/or materials.

HOW LONG THIS WARRANTY LASTS: This warranty extends only to the original purchaser of the product and lasts for three (3) years from the date of original purchase or until the original purchaser of the product sells or transfers the product, whichever first occurs.

WHAT LASKO WILL DO: Lasko will, at its sole option, repair or replace any part or parts that prove to be defective or replace the whole product with the same or comparable model. For all warranty claims, the product must be returned to Lasko Products, LLC at customer expense with proof of purchase within the warranty period. Contact the Lasko customer service department to obtain a Return Authorization ("RA"). DO NOT return products without an RA or the warranty claim will not be processed.

WHAT THIS WARRANTY DOES NOT COVER: This warranty does not apply if the product was damaged or failed because of accident, improper handling or operation, shipping damage, abuse, misuse, unauthorized repairs made or attempted, or the use of the product for commercial or nonresidential service. This warranty does not cover shipping costs for the return of products to Lasko for repair or replacement. Lasko will pay return shipping charges from Lasko following warranty repairs or replacement. ANY AND ALL WARRANTIES, EXPRESSED OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY), LAST THREE YEARS FROM THE DATE OF ORIGINAL PURCHASE OR UNTIL THE ORIGINAL PURCHASER OF THE PRODUCT SELLS OR TRANSFERS THE PRODUCT, WHICHEVER FIRST OCCURS AND IN NO EVENT SHALL LASKO'S LIABILITY UNDER ANY EXPRESS OR IMPLIED WARRANTY INCLUDE (I) INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM ANY CAUSE WHATSOEVER, OR (II) REPLACEMENT OR REPAIR OF ANY HOUSE FUSES, CIRCUIT BREAKERS OR RECEPTACLES. NOTWITHSTANDING ANYTHING TO THE CONTRARY, IN NO EVENT SHALL LASKO'S LIABILITY UNDER ANY EXPRESS OR IMPLIED WARRANTY EXCEED THE PURCHASE PRICE OF THE PRODUCT AND ANY SUCH LIABILITY SHALL TERMINATE UPON THE EXPIRATION OF THE WARRANTY PERIOD.

Some states and provinces do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so these exclusions or limitations may not apply to you. This warranty gives you specific legal rights. You may also have other rights which vary from state to state and province to province. Proof of purchase is required before a warranty claim will be accepted.

CUSTOMER SERVICE:

Toll-Free (800) 233-0268. Email: producthelp@lasko.com

Our Customer Service team is available to assist you with product and service questions, and replacement parts. They can be reached Monday through Friday, 8am-5pm Eastern. Please have your model number available, as well as the type and style (located on the underside of your product).

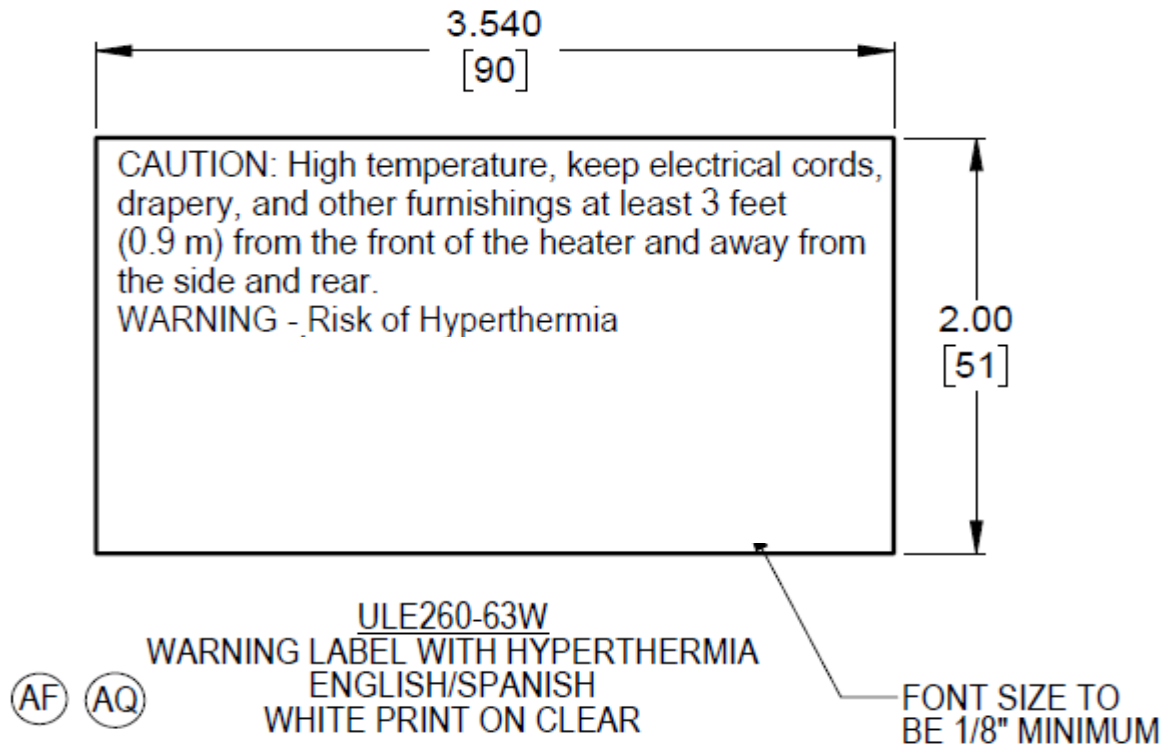
Customer Service Dept., 820 Lincoln Ave., West Chester, PA 19380

(Please do not send product to this location) www.lasko.com

PARTS FOR DISCONTINUED, OBSOLETE AND CERTAIN OTHER PRODUCTS MAY NOT BE AVAILABLE. DUE TO SAFETY REASONS, MANY ELECTRONIC COMPONENTS AND MOST HEATER COMPONENTS ARE NOT AVAILABLE TO CONSUMERS FOR INSTALLATION OR REPLACEMENT.

7.0 Illustrations

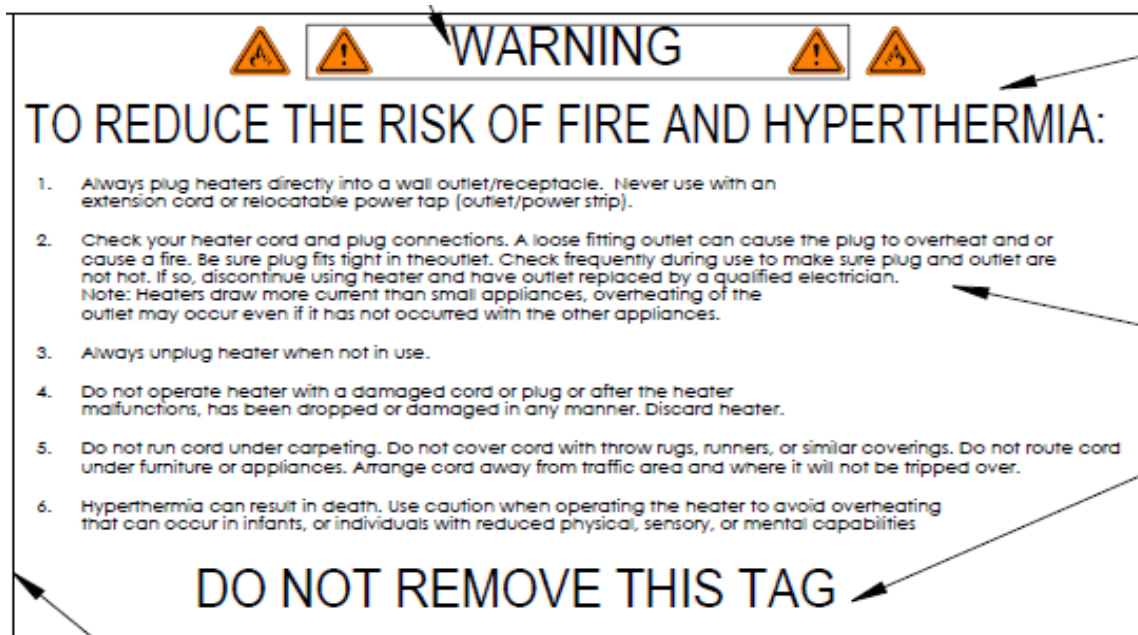
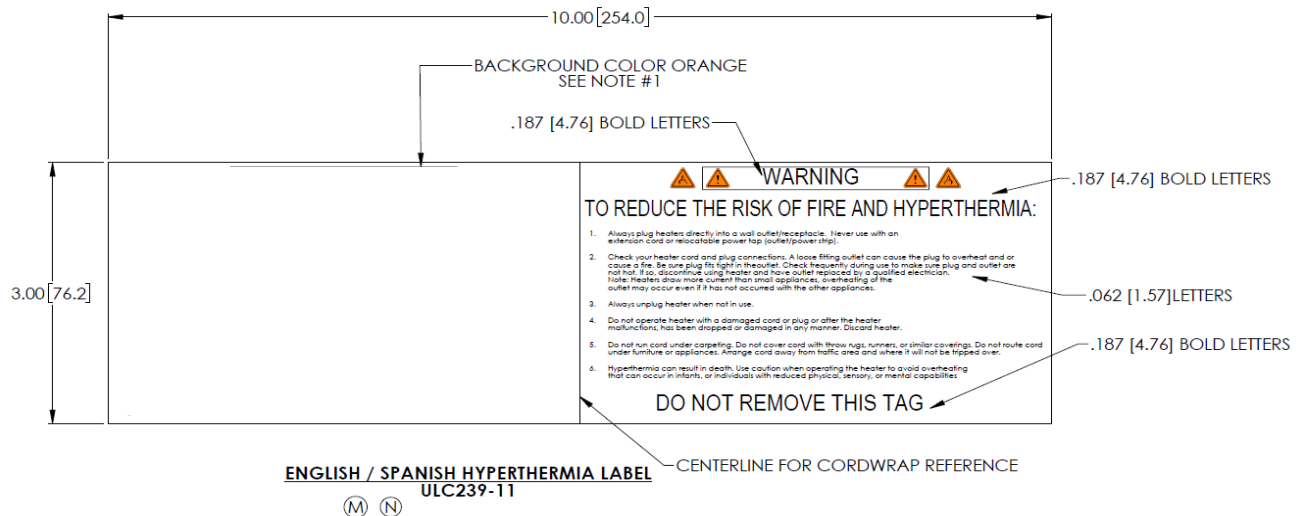
Illustration 3.1 - Cautionary marking



7.0 Illustrations

Illustration 3.2 - Cord Tag Warning Label.

Location: The warning tag shall be permanently affixed to the power-supply cord, no more than 6 inches (152 mm) from the attachment plug and shall be made of substantial material (cardboard, cloth, plastic, or the equivalent) to provide mechanical strength and to prevent easy removal.



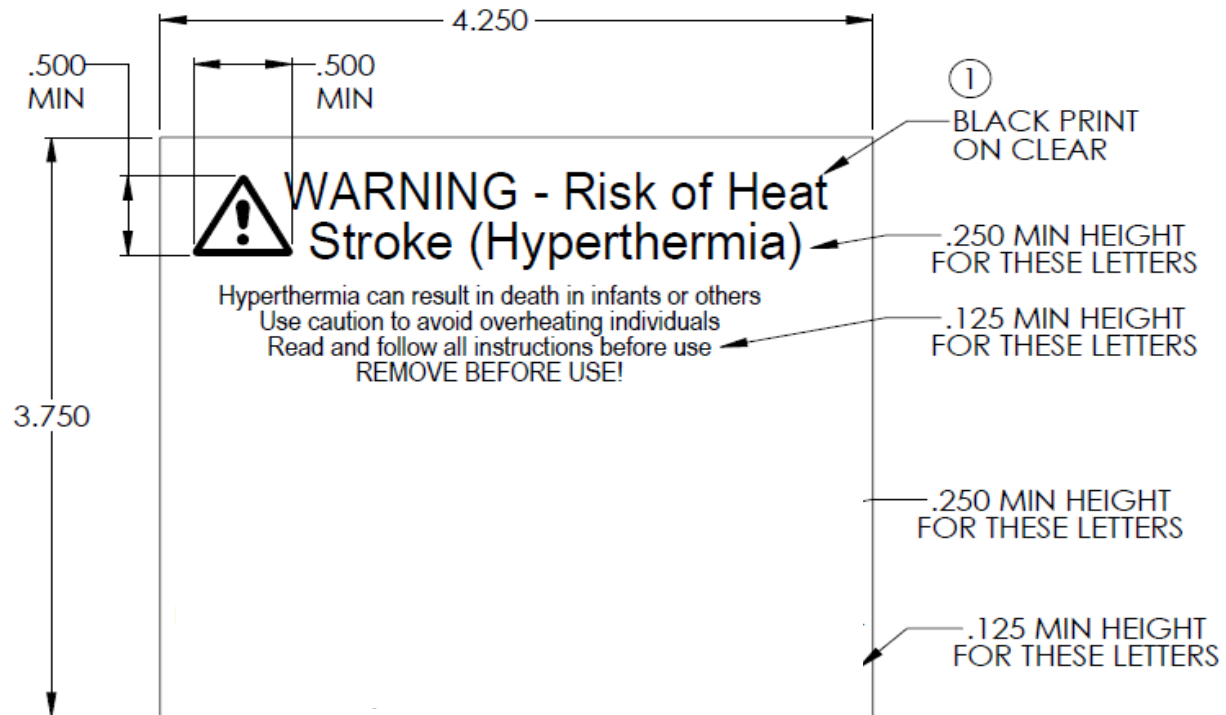
7.0 Illustrations

Illustration 3.3 - Carton Markings



7.0 Illustrations

Illustration 3.4 - Removable Warning Label



ULB307-1B
SPANISH/ENGLISH
LOCATION: FRONT HOUSING
SEE MANUFACTURING BOOK

① ③

Illustration 7 - Motor drawing for model 2034409



Illustration 8 - Schematic for Topapex FHV820/830 (Verify Polarity between L-N)

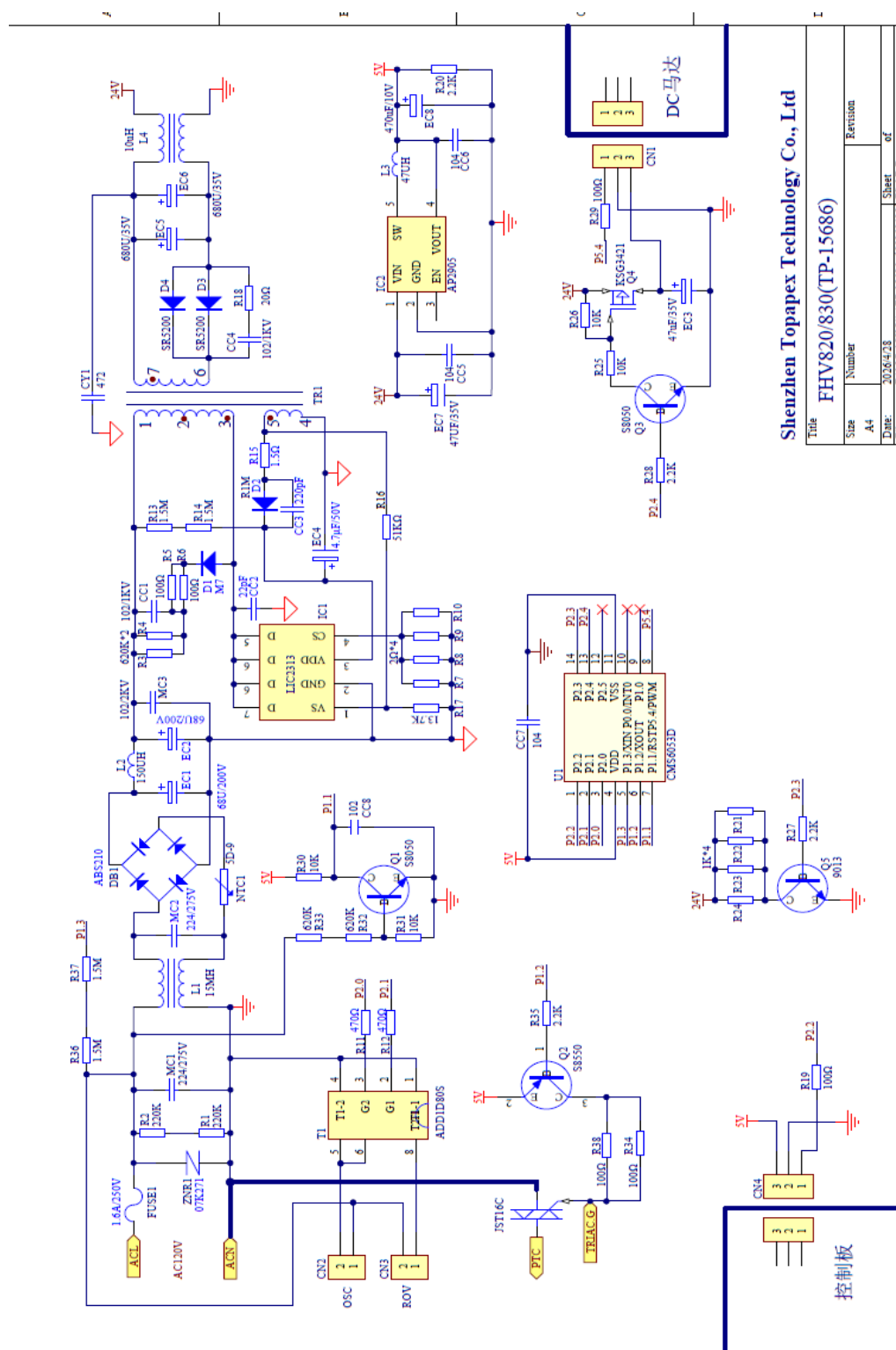
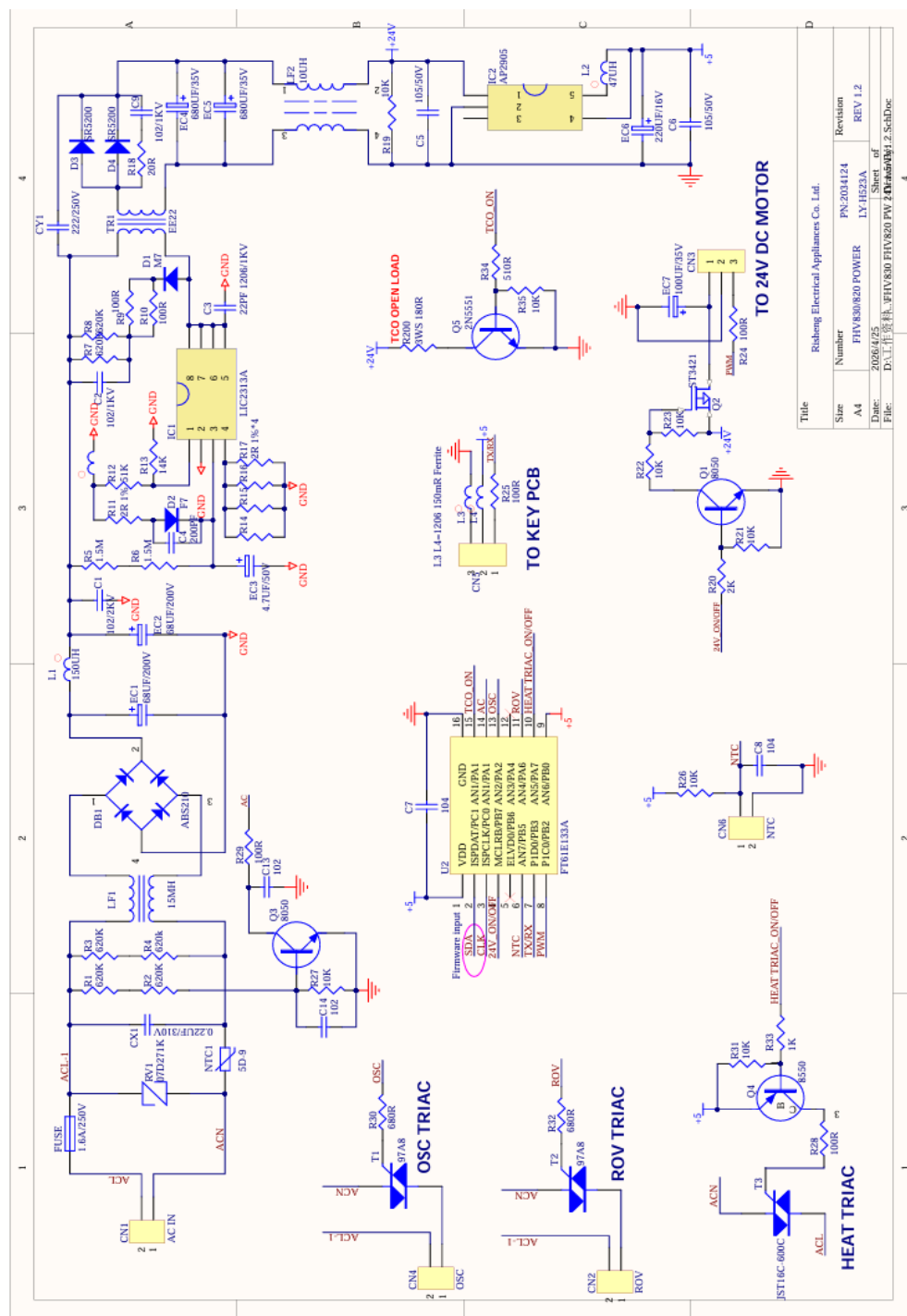
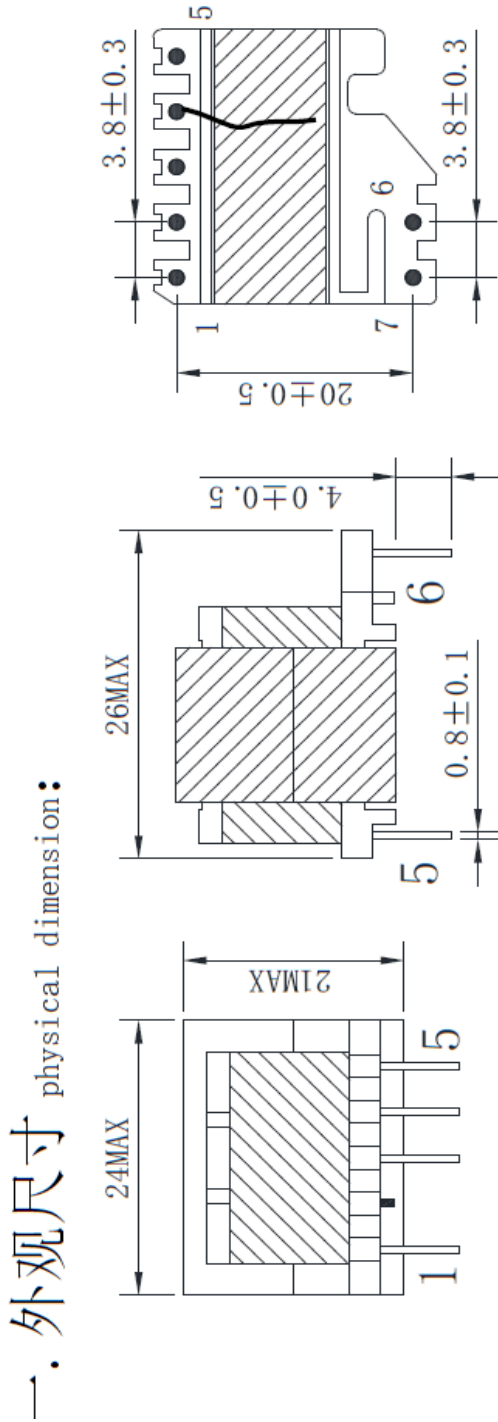


Illustration 9 - Schematic for Risheng FHV820/830 (Verify Polarity between L-N)



7.0 Illustrations

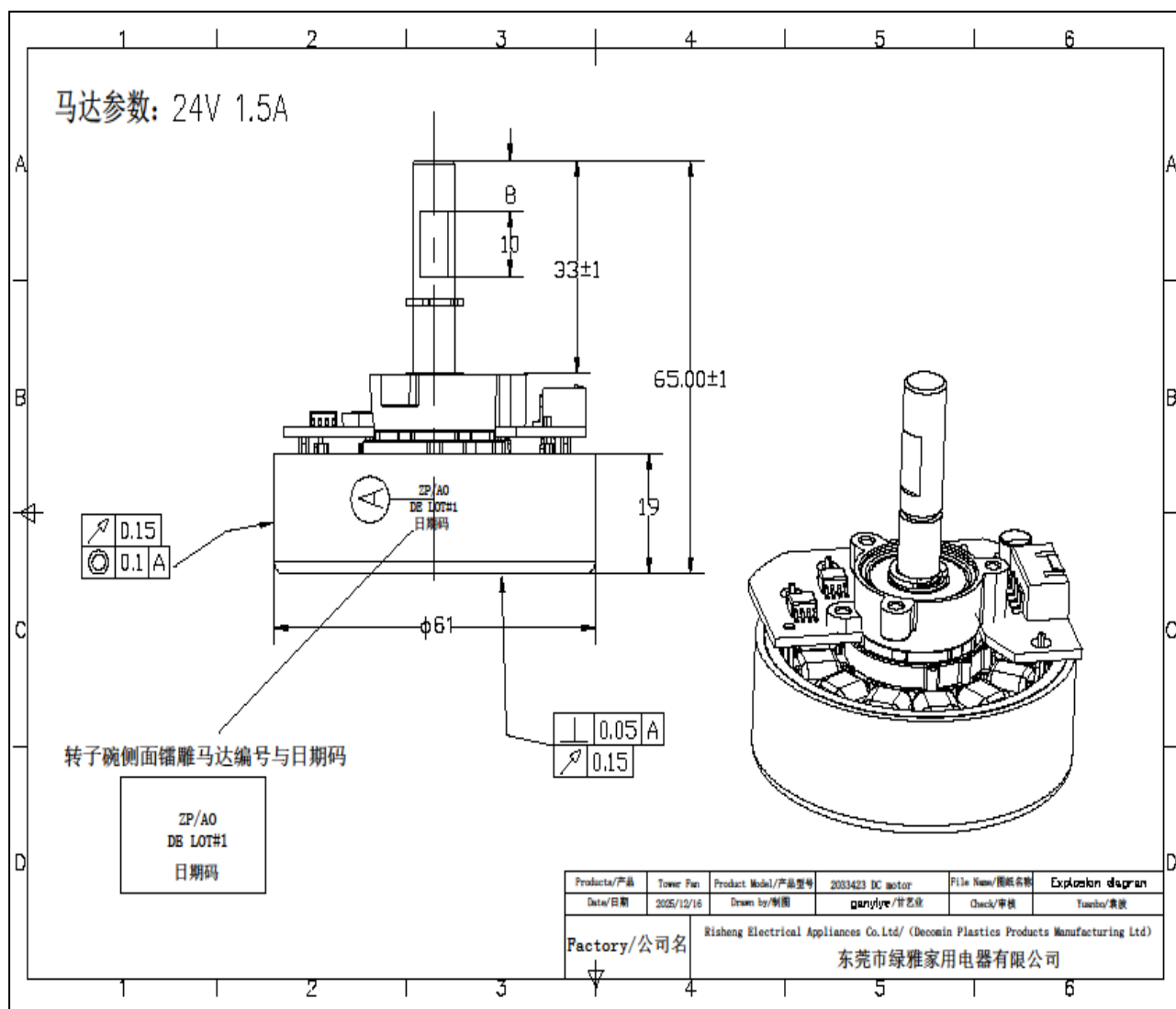
Illustration 10 - Drawing of Transformer, model E22



- 备注 remarks:
- 1. PIN 2 foot solder rear cut flat gear plate.
 - 2. Core is Connected to Pin4
 - 3. label: GC-E220180
EE22-24V/1.5A

7.0 Illustrations

Illustration 11 - Drawing of Motor 2033423



8.0 Test Summary				
Evaluation Period	06/17/2021 - 07/19/2021		Project No.	G104754719
Sample Rec. Date	17-Jun-2021	Condition	Production	Sample ID. 1-15
Test Location	Lasko Products, LLC, 820 Lincoln Ave, West Chester, PA 19380 USA			
Test Procedure	Test Data Acceptance - Level 3			
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.				
The following tests were performed:				
Test Description	UL 1278 Clause	CSA C22.2 No. 46 Clause	UL 746C Clause	
Leakage Current Test	39	7.12	--	
Power Input Test	38, SC6	7.2.2	--	
Normal Temperature Test	40, SC7	--	--	
Dielectric Voltage - Withstand Test	48	7.5	--	
Low Ambient Temperature Starting Test: Movable SC	SC8	--	--	
Component Failure Test	47	--	--	
Abnormal Operation Test - Restricted Inlet	SC9	6.6.5.8	--	
Abnormal Operation Test - Overvoltage & Extreme	42.2	7.7	--	
Abnormal Operation Test - Stalled Fan/Stalled Motor Test	42.3	7.6.4.6	--	
Abnormal Operation Test - Tip-over Test (Movable	42.4	7.6.4.3	--	
Abonormal Operation Test - Vertical-Wall Test (Movable	42.5	7.6.4.5	--	
Abnormal Operation Test - Terry Cloth Drape Test	42.6	--	--	
Abnormal Operation Test - Terry Cloth Band Drape Test	42.7	--	--	
Insulation Resistance Test	49	--	--	
(2 V) DC Offset Voltage Temperature Test	SC10.2b	--	--	
(Half-Wave, Thermally Protected) DC Offset Voltage	SC10.2C-SC10.3	--	--	
Stability of Movable Heaters Test	51	7.17	--	
Element Support Impact Tests - Without Accessible	52	--	--	
Impact Polymeric Materials Test	12.2	--	56	
Strain Relief Test	59	7.8a	--	
Push Back Strain Relief Test	16.13	7.8b	--	
Mold Stress Relief Distortion Test	9.4	--	29, 61.2	
Strain Relief Test Following Mold Stress Relief Distortion	59	--	29.1c, 61.2	
Test Description	UL 1004-1 Clause	UL 1004-3 Clause	77-14 Clause	100-14 Clause
Winding Resistance Test	--	--	--	--
Power Input Test	--	8	6.4	--
Normal Temperature Test	37	--	6.5	7.4
Dielectric Voltage - Withstand Test	--	10	6.3	--

Evaluation Period	6/25/2024	Project No.	G105748178
Due to the previous testing performed and reported above no additional testing was necessary for Movable and Wall- or Ceiling-Hung Electric Room Heaters [ANSI/UL 1278:2014 Ed.4+R:21Feb2022]			

8.0 Test Summary

Evaluation Period	10/17/2024	Project No.	G105992880
Due to the previous testing performed and reported above no additional testing was necessary for Movable and Wall- or Ceiling-Hung Electric Room Heaters [ANSI/UL 1278:2014 Ed.4+R:08Mar2024]			

Evaluation Period	05/27/2026 through 05/28/2026	Project No.	G106582222
Sample Rec. Date	17-Jun-2021	Condition	Production
Sample ID.	1-15		
Test Location	Lasko Products, LLC, 820 Lincoln Ave, West Chester, PA 19380 USA		
Test Procedure	Test Data Acceptance - Level 3		

Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.

Due to testing previous performed in Intertek report 105978373CRT-001 & 106337699CRT-001 only the following tests were performed:

Test Description	UL 1278 Clause	UL 1012 Clause	--
Leakage Current Test	39	--	--
Power Input Test	38, SC6	--	--
Normal Temperature Test	40, SC7	--	--
Dielectric Voltage - Withstand Test	48	--	--
Component Failure Test	47	--	--
Abnormal Operation Test - Overvoltage & Extreme	42.2	--	--
Abnormal Operation Test - Stalled Fan/Stalled Motor Test	42.3	--	--
Insulation Resistance Test	49	--	--
Output Short Circuit	--	54.2	--
Transformer Overload Test	--	54.7	--

8.1 Signatures

A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.

Completed by:	Derrek Root	Reviewed by:	Russell Ransom
Title:	Staff Engineer	Title:	Senior Staff Engineer
Signature:		Signature:	

9.0 Correlation Page For Multiple Listings

The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.

BASIC LISTEE	Lasko Products, LLC
Address	820 Lincoln Ave West Chester, PA 19380
Country	USA
Product	Electric Heater

MULTIPLE LISTEE 1	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 1 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 2	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 2 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 3	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 3 MODELS	BASIC LISTEE MODELS

10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments and/or revisions.

LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issued by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

For US standards, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

For Canadian standards, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

If all standards on the ATM have the same standard title, the shared title or its abbreviation may be used in place of the examples above. Example: "Medical Electrical Equipment" or "MEE"; "Information Technology Equipment" or "ITE"; "Audio/Video Information And Communication Technology Equipment" or "A/V ICTE".

Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.

The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

The Applicant will be notified, in writing, via the applicable contact methods, as defined in Section 1.0, when these components must be selected and sent to Component Evaluation Center (CEC) for re-evaluation.

Due to particular testing requirements, some components may be requested to be shipped to specific labs. Thus, specific shipment destination(s) for each sample will be provided in the written notification.

Managing CEC Location:
Intertek Testing Services NA Inc.
ETL Component Evaluation Center
1717 Arlingate Ln.
Columbus, Ohio 43228 USA
Attn: CEC Safety

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

11.0 Manufacturing and Production Tests

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

Required Tests

Dielectric Voltage Withstand Test,
Tip Test

11.1 Dielectric Voltage Withstand Test

Method

One hundred percent of production of the products covered by this Report shall be subjected to a routine production line dielectric withstand test.

The test shall be conducted on products, which are fully assembled. Prior to applying the test potential, all switches, contactors, relays, etc., should be closed so that all primary circuits are energized by the test potential. If all primary circuits cannot be tested at one time, then separate applications of the test potential shall be made.

The test voltage specified below shall be applied between primary circuits and accessible dead-metal parts. The test voltage may be gradually increased to the specified value but must be maintained at the specified value for one second or one minute as required.

Test Equipment

The test equipment shall incorporate a transformer with an essentially sinusoidal output, a means to indicate the applied test potential, and an audible and/or visual indicator of dielectric breakdown.

The test equipment shall incorporate a voltmeter in the output circuit to indicate directly the applied test potential if the rated output of the test equipment is less than 500VA.

If the rated output of the test equipment is 500VA or more, the applied test potential may be indicated by either:

- 1 - a voltmeter in the primary circuit;
- 2 - a selector switch marked to indicate the test potential; or
- 3 - a marking in a readily visible location to indicate the test potential for test equipment having a single test potential output.

In cases 2 and 3, the test equipment shall include a lamp or other visual means to indicate that the test potential is present at the test equipment output. All test equipment shall be maintained in current calibration.

Products Requiring Dielectric Voltage Withstand Test:

<u>Product</u>	<u>Test Voltage</u>	<u>Test Time</u>
All products covered by this Report.	1000V	60 s
	or	
	1200V	1 s

11.2 Tip Test

Method

The manufacturer shall test each heater that employs a tip-over switch to determine that the switch functions as intended after assembly in the heater. The heater shall be energized during this test.

Products Requiring Tip Test:

All products covered by this Report.

12.0 Revision Summary				
The following changes are in compliance with the declaration of Section 8.1:				
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
27-Jul-2021	D. Hammond	1	--	Changed standard from "Movable and Wall- or Ceiling-Hung Electric Room Heaters [UL 1278:2014 Ed.4+R:10Sep2020]" to "Movable and Wall- or Ceiling-Hung Electric Room Heaters [ANSI/UL 1278:2014 Ed.4+R:10Sep2020]"
G104754719CRT	R. Ransom			
25-Jun-2024	A. Valencia	1	-	Updated standard from Movable and Wall- or Ceiling-Hung Electric Room Heaters [ANSI/UL 1278:2014 Ed.4+R:10Sep2020] to Movable and Wall- or Ceiling-Hung Electric Room Heaters [ANSI/UL 1278:2014 Ed.4+R:21Feb2022]
G105748178CRT	R. Ransom	4	59a	Added Component: Cautionary Marking Label TL-TA25, TL-SM25 by ZHONGSHAN FUZHOU ADHESIVE PRODUCT CO LTD
		4	59b	Added Component: Cord Tag Tyvek L 1057D by LASKO PRODUCTS LLC
		6	10	Rewrote statement from Refer to Illustrations 3.1 and 3.2 for details. to Refer Item 59a of section 4. The product shall be plainly marked "CAUTION" and the following cautionary marking that shall be visible from a point 1.5 m above the floor and between 0.3 and 1.2 m away from the front surface of the heater when the heater is placed in the intended use location and the marking shall be in letters not less than 3.2 mm in height and shall be of a permanent type and in a color that contrasts with that of the enclosure or background. Refer to Illustration 3.1 for details and wording.
		6	11	Added new statement: Cord Tag Marking
		6	12	Added new statement: Carton Markings
		6	13	Added new statement: Removable Warning Label
		6	14	Renumber - Statement was renumber from 11 to 14.
		7	1.1 - 1.4	Replaced with version covering Hyperthermia requirements
		7	2.1 - 2.4	Replaced with version covering Hyperthermia requirements
		7	3.1	Replaced with version covering Hyperthermia requirements
		7	3.2	Replaced with version covering Hyperthermia requirements
		7	3.3	Added Illustration: Carton Markings
		7	3.4	Added Illustration: Removable Warning Label
		8	-	Added evaluation block in section 8.0
		8.1	-	Replaced signatures from Daniel Hammond/Russell Ransom to Angel Valencia/Russell Ransom

12.0 Revision Summary				
The following changes are in compliance with the declaration of Section 8.1:				
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
17-Oct-2024	J. Polhamus	1	-	Revised Standard from "Movable and Wall- or Ceiling-Hung Electric Room Heaters [ANSI/UL 1278:2014 Ed.4+R:21Feb2022]" to "Movable and Wall- or Ceiling-Hung Electric Room Heaters [ANSI/UL 1278:2014 Ed.4+R:08Mar2024]"
G105992880CRT	R. Ransom	4	29	Added "Various" "HPN-R" Cordset alternate
		8	-	Added new test summary for standard update; Updated signatures
8-Jun-2026	D. Root <i>DR</i>	2	-	Added model FHV830 and removed FHV 801.
G106582222CRT	R. Ransom <i>R/R</i>	2	-	Added to model similarity "Model FHV820 is similar to FHV830 except for color, metal grill and PCB." and removed "Model FHV820 is similar to FHV801 except for color, metal grille and pcb."
		1	2	Added manufacturer 2 May Quality Industries SDN. BHD.
		3	9	Replaced photo 9
		3	-	Removed photos 10-19.
		3	20	Added Photo 20 -Risheng Power board 2034124
		3	21	Added Photo 21 -Risheng Display board FHV820/FHV830-1
		3	22	Added Photo 22 -Topapex Power board 2034124
		3	23	Added Photo 23 -Topapex Display board FHV820/FHV830-1
		4	14	Updated Manufacturer from "Sounds Electric Co Ltd." to "Risheng Electrical Appliances Co. Ltd."
		4	14	Removed models "FHV801-1 PCB, FHV801/FHV820 -2 PCB, FHV801/FHV820 -3 PCB, FHV801/FHV820 -4 PCB" and added 2034124.
		4	14	Removed models for ShenZhen Topace Technology Co Ltd.FHV801-1 PCB, FHV801/FHV820 -2 PCB, FHV801/FHV820 -3 PCB, and FHV801/FHV820 -4 PCB and added 2034124
		4	15	Added alternate manufactured by KAI YI ELECTRIC HEATING(M) SDN. BND., model LYB-120-1500.
		4	22	Added motor manufactured by Risheng Electrical Appliances Co Ltd., model 2034409
		4	22	Removed motor model 2035212.
		4	22	Added motor manufactured by Risheng Electrical Appliances Co Ltd., model 2033423
		4	23	Added alternate models 50TYZ-0.2B02 and TY50J.
		4	59	Added alternate model LY-03
		4	59a	Added alternate model LY-03
		4	65	Added DC Motor Bracket
		4	-	Removed items 30-58
		4	-	Removed items 61- 64
		4	66	Added PCB
		4	67	Added Fuse
		4	68	Added Transformer
		4	69	Added Capacitor
		4	70	Added NTC

12.0 Revision Summary				
The following changes are in compliance with the declaration of Section 8.1:				
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
		4	71	Added Display Board
		4	72	Added PCB
		4	73	Added PCB
		4	74	Added Fuse
		4	75	Added Transformer
		4	76	Added Capacitor
		4	77	Added NTC
		4	78	Added Display Board
		4	79	Added PCB
		5	22	Added motor manufactured by Risheng Electrical Appliances Co Ltd., model 2034409
		5	22	Removed motor model 2035212.
		5	22	Added motor manufactured by Risheng Electrical Appliances Co Ltd., model 2033423
		7	4	Removed Illustration 4 - Motor 2035212 assembly drawing
		7	7	Added Illustration 7 - Motor drawing for model 2034409
		7	5	Removed Illustration 5 - Shen Zhen Topace FHV801_820 PCB Schematic
		7	5.1	Removed Illustration 5.1 - Shen Zhen Topace FHV801_820 PCB Schematic
		7	6	Removed Illustration 6 - Zhuhai Sounds Electric Co FHV801_820 PCB Schematic
		7	8	Added Illustration 8 - Schematic for Topapex FHV820/830
		7	9	Added Illustration 9 - Schematic for Risheng FHV820/830 (Verify Polarity between L-N)
		7	10	Added Illustration 10 - Drawing of Transformer, model E22
		7	11	Added Illustration 10 - Drawing of Motor 2033423
		8	-	Added new test summary for standard update; Updated signatures