Orchid Series-Cake Showcase

User Manual

NOTE

Preface

Dear users:

1. Welcome to use Orchid series cake showcase manufactured by our company. It is designed for sites like various supermarkets and hotels and mainly used for refrigeration and show of articles. The refrigeration temperature is 2-7℃ and the humidity is 75% above.

2. The product refrigeration system has evaporator under laid with unique design and making of the liner, making temperature inside more uniform. Precise automatic defrosting control functions with stable performance; use natural air defrosting to save electricity energy.

3. The product has humanized design, increases the display function of the commodities. It is nice and decent so that it plays a certain adornment effect in using occasions.

4. The executive components of refrigeration system and the controlling components of electrical equipment are foreign brand-name products, so as to ensure the operation of the product is stable and reliable. The reasonable system design improves the heat exchanging efficiency. Thus the cooling inside the cabinet is faster and the temperature is lower, and it is more energy-efficient.

5. This product adopts a wide climatic zone and designed to resist bad working environment. Large efficient evaporator can reduce accumulated cream, so significantly increases the effective using area. The cold air in the showcase is supplied from all directions with more uniform temperature. It is designed panoramically with ultra clear safety glass of high strength, definition and good displaying effect. Using LED lights can bring better displaying effects. For defrosting process, this product adopts double controls of defrosting temperature and time, in order to be safe and save electric energy.

In order to use our product better and prolong the service life of it, please carefully read the operation manual of this product before using.

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Ⅶ. After-Sale Service

On the condition that user follows the user manual, the product will have one-year warranty since the delivery date and our company will be responsible for replacement and repair of the damaged components caused by poor quality during the period (glass damage excluded).

Proper fees will be charged after repairing damaged products caused by following reasons:

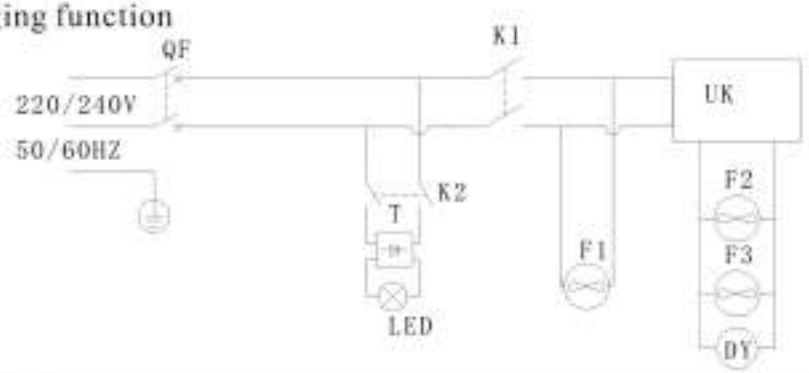
1. Not follow user manual.
2. Randomly use unmatched components for replacement.
3. Voltage fluctuation value exceeds permissible scope or other natural factors.

Ⅷ. Appendix with Shipment

1. 1 product instruction.
2. 1 quality certificate and warranty card.

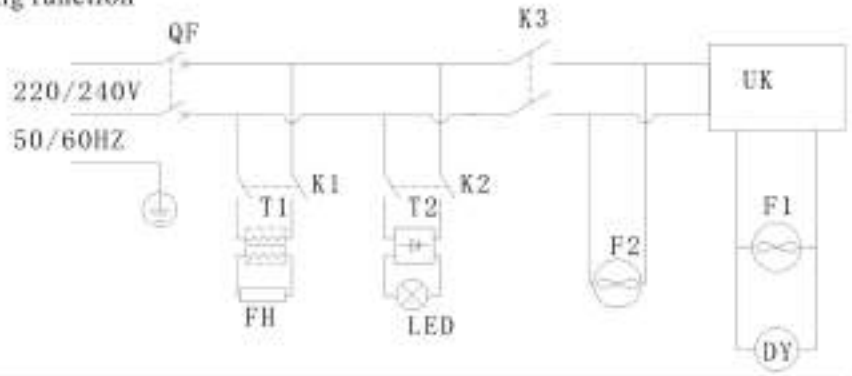
VI. Electrical Schematic Diagram

Without defogging function



Electric components			
QF	Small circuit breaker	F1	Condenser fan
UK	Thermostat XR02CX	F2	Evaporator fan
DY	Compressor	F3	Cooling fan
LED	LED strip	T	DC power
K1/K2	Rocker switch KCD4201C T55		

With defogging function



Electric components			
QF	Small circuit breaker	F1	Condenser fan
UK	Thermostat XR02CX	F2	Evaporator fan
DY	Compressor	T2	DC power
LED	LED strip	T1	Toroidal transformer
K1/K2/K3	Rocker switch KCD4-201C T55	FH	Laminated glass electrothermal wire

I. Main Technical Parameters

Model	Refrigeration temperature(℃)	Voltage/ frequency	Total input power	Refrigerant	Dimensions (L×W×H cm)	Net weight (kg)
Curved series with heater(Height 1.2m)						
FGDG900LM	2-7	220-240V 50/60Hz	450W	R134a	90×74×120	161
FGDG1200LM			770W		120×74×120	202
FGDG1500LM			900W	R404A	150×74×120	248
FGDG1800LM			1550W		180×74×120	287
FGDG2100LM			1800W		210×74×120	327
Square series with heater/Electrothermal Film(Height 1.2m)						
FGDG900LS	2-7	220-240V 50/60Hz	450W	R134a	90×74×120	291
FGDG1200LS			770W		120×74×120	232
FGDG1500LS			900W	R404A	150×74×120	285
FGDG1800LS			1550W		180×74×120	315
FGDG2100LS			1800W		210×74×120	355
Curved series w/o heater(Height 1.3m)						
FGDG800LM-S	2-8	220-240V 50/60Hz	450W	R134a	80×74×130	145
FGDG1000LM-S			450W		100×74×130	175
FGDG1200LM-S			600W		120×74×130	215
FGDG1500LM-S			700W		150×74×130	265
FGDG1800LM-S			910W	R404A	180×74×130	305
FGDG2100LM-S			1120W		210×74×130	365
Square series w/o heater(Height 1.3m)						
FGDG800LS-S	2-8	220-240V 50/60Hz	450W	R134a	80×74×130	157
FGDG1000LS-S			450W		100×74×130	205
FGDG1200LS-S			600W		120×74×130	235
FGDG1500LS-S			700W		150×74×130	285
FGDG1800LS-S			910W	R404A	180×74×130	325
FGDG2100LS-S			1120W		210×74×130	388
Curved series with heater(Height 1.3m)						
FGDG800LM-3	2-8	220-240V 50/60Hz	543W	R134a	80×74×130	145
FGDG1000LM-3			750W		100×74×130	175
FGDG1200LM-3			790W		120×74×130	215
FGDG1500LM-3			810W	R404A	150×74×130	265
FGDG1800LM-3			1590W		180×74×130	305
FGDG2100LM-3			1840W		210×74×130	365

Square series with heater/Electrothermal Film(Height 1.3m)						
FGDG800LS-3	2-8	220-240V 50/60Hz	543W	R134a	80×74×130	157
FGDG1000LS-3			750W		100×74×130	205
FGDG1200LS-3			790W		120×74×130	235
FGDG1500LS-3			810W	R404A	150×74×130	285
FGDG1800LS-3			1590W		180×74×130	325
FGDG2100LS-3			1840W		210×74×130	388

Ⅱ. Cautions

1.Must use separate single-phase triple-pole power socket with the socket earth port (E) reliably earthed.

Warnings: 

do not take running water or gas pipe as the earthing terminal.

2. Do not directly put the power line on the passage. There should be a trough plate with certain strength for shielding or groove with cover plate to avoid damage from heavy load and sharp tools.

3. Never put hazards which are volatile, corrosive, radioactive, flammable, explosive, poisonous and polluting the food in the cabinet.

4. Do remember to cut off the power before cleaning the product or changing lamp. Do not rinse it in case of electrical appliance being affected with damp, soaking or having other accidents.

5. Once the product has electric and refrigeration system troubles, non-professional electricians and personnel without sufficient refrigeration technology and rich experience shall not randomly fiddle with, disassemble and repair it in case of causing more serious accidents and even danger, which will lead to more losses.

compressor not working	Temperature controller is damaged.		Repair or replace the temperature controller.
	Compressor is damaged.		Repair or replace the compressor.
lamp off	The power master switch is off or the lamp switch is off.		Switch on.
	Lamp's connector contacts poor.	Check whether they are flexible or tripping off.	Reinsert the plugs after pulling out and fix them.
	Lamp power transformer damaged.	Check output has voltage or not. If not, then it is damaged.	Replace power transformer
	The lamp is damaged.	Dismount the lamp and measure its resistance. Check whether it has resistance. If not, the lamp is damaged.	Replace the tube.

Ⅴ.Non-faults

1. When the compressor operates, the surface will be hot. In normal compressor operation, the surface temperature will be high. This is normal phenomenon. Do not touch with hands.

2. There is moisture condensation on the glass surface. With high environment temperature and humidity, it is easy for dewdrop to appear on the external surface of the glass. Please wipe it dry timely using soft dry cloth.

3. The room temperature is lower than the controlling temperature of the thermostat so that the compressor breaks down. Because the room temperature is lower than the temperature of the thermostat, so the data collected by the temperature sensor is not enough to start the compressor.

Over high temperature Inside the Cabinet	The equipment is near heat source.	Check the surrounding heat source of the equipment.	Move the heat source away.
	Evaporator frosting is too thick.	Observe the evaporator window.	Defrost timely and shorten the refrigerating and defrosting period.
	The storing goods are too much inside the cabinet.	Whether the goods obstruct the air outlet and influence the air flowing.	Take some goods out.
	The refrigerant leaks.	Check the welding point and filling opening.	Weld again, fill the refrigerant.
	The surrounding wind speed of the equipment is too high.	Check the surrounding wind source of the equipment.	Move the wind source away or reduce the wind speed.
Faults	Fault Causes	Scope of Examination	Troubleshooting
Over high temperature Inside the Cabinet	Condenser dust is too much and influences the heat discharging.	Check the condenser.	Wash the condenser.
	Condenser fan and evaporator fan are damaged.	Check the fans.	Repair or replace the fans.
too loud noise	The cabinet is not placed stable.	Whether the cabinet castors support firmly.	Adjust the castors.
	Fixed screws of compressor unit and others are flexible.	Whether the screws are fixed and reliable.	Tighten the screws.
compressor not working	The voltage exceeds the allowed fluctuation range.	Check the power voltage.	Use voltage stabilizer and insert proper power. Make sure the equipment operate normally.
	The output control loop of the temperature controller disconnects.	Check the output control loop to find the disconnection point.	Connect the loop.

III. **Precautions for use**

1. Push and place gently when carrying with inclination not exceeding 45 degrees.

2. The product should be placed in the area which is ventilated, cool, dry, kept away from heat and dust. Direct sun exposure should be avoided in case of affecting refrigeration effect and the ground should be even and firm. Distance of the cabinet's periphery from walls and other objects should be no less than 10 cm in order to ensure good radiating of condenser. When the showcase put in specified area, please unfasten supporting screw on the front end of it in order to prevent displacement due to external force .

3. Proper power supply for the product is 187V~242V/50Hz. If the voltage does not meet requirement, please install power regulator with corresponding capacity. Plug in and start only after confirming the voltage. After power on for 20 minutes, check whether electrical appliance works normally and refrigeration effect remarkable or not.

4. The showcase should be operating for a period of time to confirm the refrigeration system in normal condition before use at each time. After the temperature inside is reduced to normal one, food can be put into refrigeration tray for refrigeration.

5. Do not put too much over hot food in the showcase's surface in case of generating over charge instantaneously.

6. Thermostat is not allowed to adjust on general conditions.

7. Time interval of starting the refrigeration units should be no less than 3 minutes otherwise compressor will be easily damaged or its service life shortened.

8. Defrosting period has been set for the product (defrosting per 2H, 10MIN). If the controller loses control, we suggest stopping and opening to defrost for 10-30MIN. Do not rinse with water and do not speed up defrosting by using mechanical equipment or in other ways.

9. Do not use electrical appliances in food closet of showcase such as high temperature sterilizer and ozone generator.

10. For long-term discontinuation, take internal and external cleaning well for the product. Then dry and place it in dry, cool ventilated place, and frequently check to beware the rats. When restarting the equipment, strictly check the electrical lines to see that whether be bit and damaged by the rats. After strict inspection and making sure, the equipment can be restarted to use.

Warnings: 

Cut off the power before cleaning. Wipe with detergent, water and wet cloth, do not use solvent harmful to human or corrosive to showcase and spray with water in case of causing leakage accident due to damage of electrical elements.

11. Non-professionals shall not randomly open and replace members, electrical elements in the freezer and refrigeration units.

12. Never directly replace the tube without cutting off electricity when tube has faults and self-check and replacement is required.

Warnings: 

Replace lamp. First cut off power, unplug LED strip lead from connector, then disconnect lampshade with supporting rack, and draw out lamp from the captive fastener of lampshade, insert new LED strip into it. Fix lampshade, plug lead into connector and turn on the power supply. Check whether to work normally or not. If not, do troubleshooting.

13. Ask professional maintenance personnel to replace damaged power line to avoid danger.

14. If you cannot repair the failure by yourself, please ask for professional personnel to work out in a timely manner, or inform our technical personnel to repair the failure.

15.Ask professional maintenance personnel to replace damaged power line to avoid danger.

16.physical or mental disability for adults and minors is prohibited to use this product.

Ⅳ.Common faults and troubleshooting

If you think the product has troubles, just check and do troubleshooting as per following form. If still fails, please contact our company or sales department. Non-professionals should not randomly dismantle and maintain product structures, electrical elements and refrigeration system. Check and troubleshooting must be done by professional technicians or accident will be easily caused, leading to bigger losses. Once the product is found to be electrified, please cut off power immediately and then ask professionals for check and repair.

Common Troubleshooting

Faults	Fault Causes	Scope of Examination	Troubleshooting
No electric input	Leakage circuit breaker disconnects	Check whether each electrical element has leakage and whether earthed well.	Replace leakage elements and earthed well.
	Poor contact betweenplug and socket	Whether there is looseness between plug and socket.	Repair or change the socket
	Input control line fault	Check control circuit	repair control circuit fault location