



**Digital Controller
Ultra Low Temperature
Freezer Manual**

K205ULT Series

Thanks for selecting K2 Series Ultra Low Temperature Freezer. We would provide the best product and service to you. Failure to read, understand and follow the instructions in this manual may result in damage to the unit, injury to operating personnel, and poor equipment performance.



CAUTION!

All internal adjustments and maintenance must be performed by qualified service personnel.

This appliance can be used by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance.

Cleaning and user maintenance shall not be made by children without supervision.



Important operating and/or maintenance instructions. Read the accompanying text carefully.



Potential electrical hazards. Only qualified persons should perform procedures associated with this symbol.



Hot surface(s) present which may cause burns to unprotected skin or to materials which may be damaged by elevated temperatures.



Extreme temperature hazards, hot or cold. Use special handling equipment or wear special, protective clothing.

Always use the proper protective equipment (clothing, gloves, etc).

Always use dissipate extreme cold or heat and wear protective clothing.

Always follow good hygiene practices.

Each individual is responsible for his or her own safety.

1. Installation and operation

2. Product description

3. Operation

4. Cleaning and maintenance

5. Maintenance

6. Disposal

If the user's manual is lost or damaged, you can through our website to download or contact us by E-mail.

1. Installation and operation

1.1 Safety Information

All electrical work must be executed by suitably qualified persons. When using any electrical appliance, safety precautions must always be observed.

- ◆ Do not use this appliance for other than its intended use. This product is intended for use as a beverage Low Temperature Freezer. Consult your supplier for alternatives.
- ◆ Do not cover the front grille or block the rear air entry by placing object up against the cabinet.
- ◆ Please close attention, when used by or near children, infirm persons.
- ◆ Ensure adequate ventilation.
- ◆ Do not probe any openings.
- ◆ Do not touch any moving parts or hot surfaces.
- ◆ Regulations require that all electrical work be carried out by authorized persons. For your own safety and that of others please ensure this is done.
- ◆ Do not overload the power supply. Always ensure on the rating label. The rating label is located.

If have any problem, please consult a qualified electrician. Caution: Never use extension leads or multiple adaptors.

- ◆ If the mains supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified and skilled persons in order to avoid hazard.
- ◆ Disconnect the mains power supply before attempting any cleaning, removal of any covers, or maintenance work.
- ◆ Do not store explosive substances, such as aerosol cans with flammable propellant.
- ◆ Warning: Do not use mechanical devices or other means to accelerate the defrosting process. Defrosting is performed automatically.
- ◆ Warning: Do not damage the refrigeration circuit.
- ◆ Warning: Do not use electrical appliances inside the storage compartment of this appliance.

1.2 Assembly

- ◆ Remove the appliance from the packaging and peel off any protective film from all surfaces.
- ◆ Fit the shelf support clips onto the shelf support strips, making sure that the clips for each shelf are of the same height and that they are securely engaged on the support strip.
- ◆ Unwrap each shelf carefully, to prevent damaging their protective coating or surface finish.
- ◆ Position the shelves onto the clips.



Please dispose of all waste packaging appropriately and in accordance with all local recycling laws.



WARNING

Do not overload the power supply. Always ensure that the power supply is adequate for the electrical requirements specified on the rating label and never use extension leads or multiple adaptors.

K2 Series.....Installation and operation


1.3 Positioning the product

- ◆ Please position the cabinet carefully being careful not to bump it.
- ◆ The power supply flex exits the product at the bottom right hand side (as viewed from the front). For ease of access; the flex should be retrieved prior to positioning the product in its final location.
- ◆ The maximum recommended ambient temperature for this product is 32°C
- ◆ Avoid positioning the appliance in direct sunlight or damp areas.
- ◆ Allow adequate space for the door(s) to fully open.
- ◆ Ensure that this product is positioned on a level surface, so as to allow the door(s) to shut and seal correctly, as well as to allow proper drainage from the evaporator tray, to prevent any overflow. If necessary, adjust the screw feet of the appliance to make it level.

Note: The refrigerator is not with close contact the wall; the need to maintain a gap of 50mm to wall. This is conducive to the freezer cooling.


1.4 Ventilation

- ◆ All models must have clear and unobstructed ventilation from the entire surface area of the front grille.
- ◆ The 2 and 3 door models may be built into an enclosure without the need for ventilation other than at the front.
- ◆ The single door Low Temperature Freezers must have a minimum ventilation space of 50mm at sides and rear.
- ◆ Dimensions of the space to be provided for the appliance are referenced on page 12 of this manual.
- ◆ Dimensions and position of the means for supporting and fixing the appliance within this space are referenced on page 12 of this manual.

- ◆  **WARNING:** Failure to provide the minimum ventilation space will harm the performance of your Low Temperature Freezer could cause fire and will invalidate the warranty.

- ◆  **WARNING:** Keep clear of obstruction all ventilation openings in the appliance

enclosure or in the structure for building in.

- ◆ **WARNING:**  You are must not store volatile, flammable and explosive materials inside this Refrigerator.

Setting Temperature





1.5 Temperature controller

1.5.1 Description

Digital controller is used for medical and laboratory uses to design for simple refrigeration equipment controller. It measures the temperature in the cabinet, with temperature control (can be set to cooling or heating mode), the defrost control, over-temperature alarm, power failure detection alarm, remote alarm, maximum and minimum temperature records and other functions.



1.5.2 Indicator light status description

Indicator Light	Symbol	Status	Meaning
Setting	Set	ON	Parameter setting
		OFF	Status of temperature measuring and controlling
High temperature compressor work indicator light		ON	High temperature compressor work
		OFF	High temperature compressor stop
		FLASH	High temperature compresso time delay
Low-temperature compressor work indicator light		ON	Low-temperature compressor work in non-forced refrigeration mode
		OFF	Low temperature compressor is closed in non-forced refrigeration mode
		FLASH	Forced refrigeration mode
Capillary heating indicator light		ON	Capillary heating starts
		OFF	Capillary heating is closed
High temperature alarm lamp for condenser (high temperature press circuit)	E2H	ON	High temperature alarm of secondary system condenser
High temperature protection indicator for condenser (high temperature press circuit)	E2P	ON	High temperature protection of secondary system condenser
The door opens alarm indicator light	Erd	ON	Door open alarm
Power light		ON	Grid power supply anomaly
		OFF	Normal power supply

1.5.3 Button Description

Button	Function
SET	Enter the status of parameter setting
	Switch between menu and parameter
▲(UP)	Adjust menu and parameters
	After 3s, upload the setting parameters to the copy card
▼(DOWN)	Adjust menu and parameters
	Continue to press down for 3s, download setting parameters from copy card
RST	Exit from parameter setting
	Continue to press for 3s to force the stop capillary heating output
NO BUZZER	Clear alarm
	When the main power supply is not out of power, the mandatory cooling mode will be activated for 10s

1.5.4 Functions and Parameters

1.5.4.1 In the status of temperature measuring and controlling, press Set key for 3s to enter user menu, it display the code St, then press Set key again, display the value of St. it could be modified by pressing the key UP or DWON.

1.5.4.2 When the St code displays, press the UP button to display the A8 code, and the A8 parameter value is displayed after the SET key, which can be modified by manipulating UP or DWON keys.

1.5.4.3 When the A8 code is displayed, press the UP button to display the A9 code, and the A9 parameter value is displayed after the SET key, which can be modified by manipulating UP or DWON keys.

1.5.4.4 When the A9 code is displayed, press the UP key, display the Po code, press the SET key to display 00, and then enter the control menu password through the UP or DOWN key. Once again, press SET to confirm the password entry, the controller automatically verifies the correctness of the password, and when the password is verified, it is entered into the management menu. At this time, the UP or DOWN key can be used to select other parameters including St, A8, A9 and Po, otherwise, the controller will only stay in the parameters of St, A8, A9 and Po, and cannot display other parameter items. After selecting the menu item, press the SET key to enter the current menu item parameter setting, adjust the parameter value according to the UP or DOWN key, and then press the SET key to return menu selection.

1.5.4.5 Under the status of parameter setting, press RST key or no key operation within 30s, it will exit from parameter setting and automatically save the current parameter value.

1.5.4.6 The password entry of the administration menu is valid. After the parameter setting is set, the correct password must be entered again after the adjustment.

1.5.4.7 When the controller is in normal measurement and control status, it can be forced to start the capillary heater relay by pressing the RST key for 3s.

1.5.4.8 When the main power supply is not without power, press NO BUZZER button to activate the forced cooling mode for 10s.

1.5.4.9 When the controller appears, the buzzer calls, and there are two situations where the buzzer stops chirping:

1.5.4.9.1 After all the alarms are lifted, the buzzer stops chirping.

1.5.4.9.2 Press the NO BUZZER key and the BUZZER will stop ringing for ten minutes (if the fault is not removed within ten minutes, the alarm will ring after ten minutes). If a new alarm comes up after all the alarm is lifted in ten minutes, the buzzer will call again immediately. It can be modified by modifying the value of the A4 (10 minutes by default) to stop the BUZZER when the NO BUZZER key is pressed.

1.5.5 Temperature parameter setting

Parameters	Description	Min	Max	Unit	Default
St	Temperature set value	C13	C14	°C/°F	-80
A8	Over temperature alarm upper deviation	0.1	20	°C/°F	10
A9	Over temperature alarm lower deviation	0.1	20	°C/°F	10
C13	Set Minimum temperature	-95	C14	°C/°F	-90
C14	Set Maximum temperature	C13	85	°C/°F	-50
C1	Temperature difference	0.1	20	°C/°F	0.4

Parameter description:

St Set temperature

User set the shutdown point temperature.

C13 The minimum set temperature

Permissible the minimum set temperature (St)

C14 The maximum set temperature

Permissible the maximum set temperature (St)

C1 Difference in temperature

When the temperature \leq St, the compressor stops working; when the temperature $>$ St + C1, The compressor work.

1.5.6 Alarm Code

Alarm code	Fault Description
E1	Tank temperature sensor failure
E2	Condensing sensor fails
E3	Ring temperature sensor failure
E4	Evaporator sensor failure
E1H	Tank temperature super high temperature alarm
E1L	Tank temperature super Low temperature alarm
E3H	Ring temperature and ultra high temperature alarm
E3L	Ring temperature and ultra low temperature alarm
E2H	High temperature alarm of condenser
E2P	High temperature protection of condenser
Erd	Door open alarm

2. Product description

	Model	K205ULT
Technical Data	Cabinet Type	Chest
	Climate Class	N
	Cooling Type	Direct cooling
	Defrost Mode	Manual
	Refrigerant	CFC-Free
Performance	Cooling performance(°C)	-86
	Temperature Range(°C)	-40~-86
Control	Controller	Microprocessor
	Display	LED
Material	Interior	stainless steel
	Exterior	Galvanized steel powder coating
Dimensions	Capacity(L)	128
	Interior Dimensions(W*D*H)	640×450×470 (mm)
	Exterior Dimensions(W*D*H)	820×690×1030 (mm)
	Thickness of Cabinet Foamed Layer	90mm
	Thickness of Door	90mm
Power Supply(V/Hz)		220V/50Hz or 115V/60Hz
Controller Functions	Display	Large digital display & adjusting keys
	High/Low Temperature	Y
	Hot Condenser	Y
	Power Failure	Y
	Sensor Error	Y
	Low Battery	Y
	High Ambient Temp	Y
	Alarm mode	Sound and light alarm, remote alarm terminal
Accessories	Caster	Y
	Test Hole	Y
	Chart Temperature Recorder	Optional
	Door locking device	Y
	Handle	Y
	Pressure balance hole	Y
	Racks & Boxes	Optional

3. Operation

This product is designed to operate at a recommended ambient temperature of 32°C and as such, is categorized as a climate class 3 product.

3.1 Access to power

- ◆ Close the door of the appliance.

DW-86L Series.....Setting

3.2 Setting Temperature

- ◆ Press down to decrease the set temperature.
- ◆ Press up to increase the set temperature.

DW-86L Series.....Cleaning and Maintenance

4. Cleaning



- ◆ **WARNING:** You must disconnect the plug before cleaning or maintenance.
- ◆ Do not use abrasive cleaning agents which may scratch and harm the delicate interior finishes of your appliance.
- ◆ Always wipe dry after cleaning.
- ◆ The agent or qualified technician must carry out repair if required.

4.1 Clean the filter of single door Low Temperature Freezer

- ◆ The filter must be kept clean and free of dust at all times. It is recommended that the cleaning routine be conducted at intervals appropriate to the speed of accretion of dust on the filter and in any event at least every month. Failure to keep the filter clean will damage the refrigeration system and invalidate the warranty.
- ◆ Pull the filter upwards to remove it from its locating place under the glass door.
- ◆ Use a vacuum cleaner, preferably with a rush attachment, to remove built up dust.
- ◆ Refit the filter to its original location to ensure continual efficient operation is maintained.

4.2 Clean the condenser

- ◆ The condenser must be kept clean and free of dust at all times. It is recommended that the cleaning routine be conducted at intervals appropriate to the speed of accretion of dust on the condenser. Failure to keep the condenser clean will damage the refrigeration system and invalidate the warranty.



- ◆ **WARNING:** The condenser is a delicate component and is easily damaged. Never use a stiff brush or sharp objects to clean it. Never use water.

5. **Maintenance**

If your appliance develops a fault, please check the following table before making a call to the helpline.

Fault	Probable Cause	Action
The appliance is not working	The unit is plugged in correctly	Check the unit is plugged in correctly
	Plug or lead is damaged	Call our agent or qualified technician
	Power supply	Check power supply
	Internal wiring fault	Call our agent or qualified technician
The appliance turns on, but the temperature is too high or too low	Filter or condenser blocked with dust	Clean filter or condenser
	Doors are not shut properly	Check doors are shut and seals are not damaged
	Appliance is located near a heat source or air flow to the condenser is being interrupted	Move the appliance to a more suitable location
	Ambient temperature is too high	Increase ventilation or move appliance to a Low Temperature Freezer position
	Insufficient airflow to the fans	Remove any blockages to the fans
	Appliance is overloaded	Reduce the amount stored in the appliance
	Factory default parameters adjusted	Call our agent or qualified technician
The LED lights not working	Led light short Leaded damage	Call our agent or qualified technician
The appliance is unusually loud	The appliance is touching a neighboring object	Check installation position and change if necessary
	The appliance has not been installed in a level or stable position	Check installation position and change if necessary

K2 Series.....Disposal

6. **Disposal**

If in any doubt, please consult your Local Authority, contact us or contact the reseller from whom you purchased the appliance.