

-86°C Hydrocarbon ULT Freezer



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Suitable for hospitals, blood-bank, Centers for Disease Prevention, scientific research institutions, bioengineering, Animal Husbandry industry pelagic fishery, electronic and chemical industry, etc. Used for the refrigeration of red and white cells, skin, skeleton, germ, virus, seminal fluid biological products and for low-temperature testing of electron devices and special materials.

Temperature Control System

Controlled by a micro-computer, LCD display, touch screen eye level control panel; The inner temperature can be adjusted at the range of $40^{\circ}\text{C} \sim 86^{\circ}\text{C}$, and the temperature regulation accuracy is 0.1°C . ambient temp $+15$ to $+32^{\circ}\text{C}$.

Security Control System

Multi malfunction alarms: high-temperature alarm, low-temperature alarm, sensor malfunction alarm, condenser dirty alarm, low battery alarm, power failure alarm, overpressure alarms, over ambient temperature alarms, open the door alarms and so on for safe use; Besides, you can check history alarming information and derive data. All the history data can be saved over 10 years; Three alarming methods: buzzer alarming, independent icon alarming, and remote alarming; Protection function: compressor power-on delay protection, time between power off; overpressure protection, password protection and normal operation protection under failure mode, door lock. Password protection can prevent parameters from being changed randomly. Display screen with running indication and communication status indication can show real-time operation of the freezer; The power switch has two-way fuse over-current protection, together with the power on indicator light ensure safety.

Refrigeration System

Optimized cascade refrigeration technology, special evaporation system and condensation system, strong refrigerating efficiency, CFC/HCFC free natural Refrigeration International famous brand compressor and EBM fan electromotor and oil separator, stable product performance, strong refrigerating efficiency; Enhanced sealing design double door seal.

Humanized Design

Unique handle design: the door can be opened by both hands, individual press lock on the handle and 2 padlocks; Wide voltage design can help it work stably under $198\text{--}254\text{V}$; Can show the temperature curve and history data, and have derive data function; Press-out type dust removal screen with locks, simple and convenient for maintenance; Thermometer holes design for temperature examination, Battery backup for control system up to 24 hours at to power failure.

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Ergonomic Design



Individual Removable Foam Inner Doors

- Individual inner doors can be opened independently to minimize frost buildup inside the chamber.
- Unique door seal design for the minimum loss of cold temperature during a door opening.
- Compatibility with existing racking system from competitors.
- Stainless Steel handle to ensure proper strength for door latching.
- Some interior door handles have been upgraded to stainless steel

for more comfortable door-opening experience.

Excellent Doors Seals



Total of Five gasket to safeguard the freezer temperature including four seals for the exterior door, one for each inner door.

Touch Screen



- 7 LCD Display Simple Operation, Visible running status
- Optimized slideway design, easier to open and close the door.
- Two port holes for ease of temperature monitoring

High-Efficiency Refrigeration Components



- Hermetically sealed industrial-grade compressors for
- Low sound level.
- High efficient oil separator.
- Unique hydrocarbon refrigeration system to provide maximum
- ultra-low refrigeration application.
- efficiency in extreme conditions.

Energy Saving Refrigeration



High-efficiency cooling fans and compressors, combined with hydrocarbon refrigerants, ensure energy savings and long-term sample security.

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Improved Handle Design



Lockable handle with a unique key prevents other Thermolab freezer owner's access to your precious samples also comes with space for a padlock for that extra security

Pressure Equalizations Port



Heated port with a spring-assisted mechanism to prevent icing on the vent allows users to reopen the main door soon after entering. Adopts chromium plating, rustproof.

USB Interface



Enables users to download historical temperature data for compliance/auditing purposes.

Multilayered Sealing Structure



Triple layer of gaskets split between main and inner doors decreases heat loss and guarantee excellent warm up times in the event of a power failure.

Multilevel Alarms



Alarming functions that include high and low temperature sensor error power failure high ambient center ant door ajar.

Dual cascading-: Dual cascade refrigeration system with height adjustable shelves - TW-86L450T TW-86L570T/TW-86L710T

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TECHNICAL SPECIFICATIONS



Model		TW-86L450T		TW-86L570T		TW-86L710T Old Model TW86L725T	
Technical Data	Cabinet Type	Upright					
	Climate class	SN					
	Cooling type	Direct Cooling					
	Defrost mode	Manual					
	refrigerant	HC (R290/R1700					
	Sound level(dB(A))	50dB					
Performance	Cooling Performance	-86°C					
	Temp range	-40°C to-86°C					
Control	Controller	Microprocessor / PLC 7 inches Touch screen HMI					
	Display	LCD					
Electrical Data	Power Supply (V/Hz)	230V/ 50Hz					
	Electrical Current(A)	7		7		7	
	Power Consumption (KWh/24H) at-86°C						
	Power (W)	1200		1200		1200	
Construction	Capacity (L/Cu. Ft.)	450/16		570/20.2		725/25.6	
	Made OF Construction	Internal - SS 304 /PPGI -as per or user requirement					
		External- SS 304 / CRCA Powder coated or as per user requirement					
	Net / Gross Weight (approx.)	300/330kg		317/395kg		359/395kg	
	Interior Dimensions (W*D*H)	465*725*1310mm		600*725*1310mm		765*725*1310mm	
	Exterior Dimensions (W*D*H)	795*1075*1990mm		925*1075*1990mm		1090*1075*1990mm	
Packing Dimensions (W*D*H)	880*1149*2100mm		1010*1149*2100mm		1175*1149*2100mm		
Alarms	Remote alarm (Dry contacts)	Yes					
	High/Low Temp	Yes					
	Hot Condenser	Yes					
	Power failure	Yes					
	Sensor Error	Yes					
	Low Battery	Yes					
	High Ambient Temp.	Yes					
Door Ajar	Yes						
Racks & Boxes at 2/3 Loading Optional	Freezer Rack Qty.	Qty.	12		16		20
		Rows	5*5		5*5		5*5
	Cryogenic Box Qty.	Qty.	300		400		500
		Size	2 inch		2 inch		2 inch
	Cryogenic vial Qty.	9*9 grid	24300		32400		40500
10*10 grid		30000		40000		50000	
Optional Accessories	Foot/caster	Y		Y		Y	
	Porthole Availability	Y/2		Y/2		Y/2	
	Shelf/compartment	3 / 4 Nos of shelves can increase as per user requirement					
	RS485 /USB interface	Y		Y		Y	
	5 V Power Supply port	Optional/ as per user requirement					
	Temp chart recorder/data logger	Optional/ as per user requirement					
	Co2 Backup System	Optional/ as per user requirement					
	LN2 Backup System	Optional/ as per user requirement					
	Voltage stabilizer	Optional/ as per user requirement					
	Internal stainless steel 304	Optional/ as per user requirement					
Extra shelf/cryo gloves scraper	Optional/ as per user requirement						
Certification	ISO 9001, ISO 13485/JAF Body, NABL, European CE with IEC test std Iso 60601/ 610101 , WHGGMP & ISO 14001 ISO 40001 ROHS.						

Pls read new model as TW -86L710T against old model Old Model TW-86L725T