



Esco® Laboratory Freezer

Reliable Storage. Secure Protection.
Flexible Configuration.





Protect What Matters Most.

Designed for life science applications, the Esco Laboratory Freezer delivers precise temperature control and dependable low-temperature storage to preserve the integrity of valuable samples. An intelligent microprocessor control system ensures reliable performance while simplifying day-to-day operation.

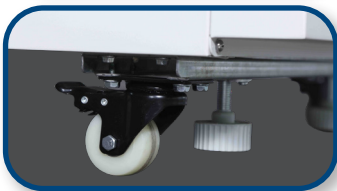
With a comprehensive alarm system for continuous sample protection, users can respond quickly to abnormal conditions and reduce the risk of sample loss. Ideal for the storage of biological reagents, microorganisms, bioproducts, and other critical laboratory materials.

Product Features



Safety System

- Startup delay and shutdown interval protection help protect the compressor and refrigeration system during power interruptions and restart cycles.
- Audible and visual alarms provide timely notification of abnormal conditions
- Standard built-in combination lock for each door, compatible with external padlocks*



User-Friendly Design

- Wide voltage tolerance (187–242 V) for stable operation under fluctuating power conditions
- Pressure Relief Port enables quick door reopening during frequent access*
- Lockable casters and leveling feet provide easy relocation and enhanced stability



Control System

- LED display for clear monitoring of temperature and alarm status
- Available in -25°C and -40°C configurations to support a wide range of laboratory storage applications.
- Simple and intuitive user interface



Flexible Storage Configuration

- Configurable with 7 to 18 drawers
- Durable drawer design for secure sample organization



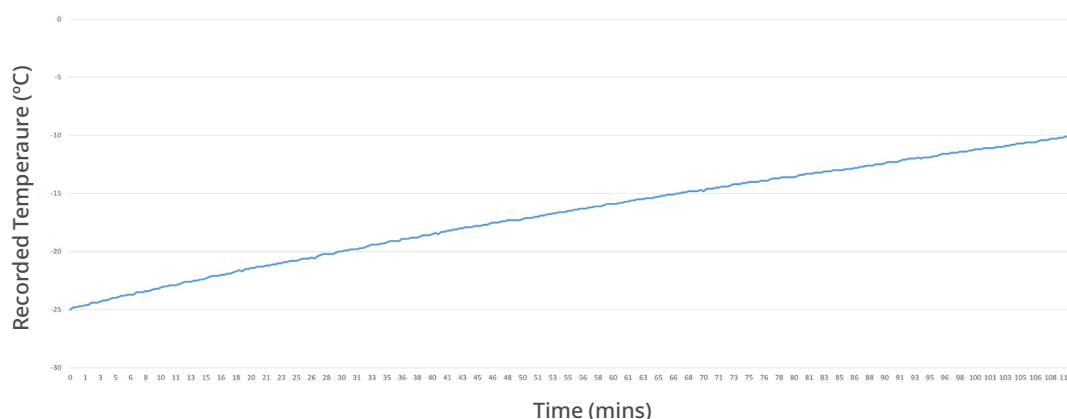
Model Variants

- 10 models available to meet different storage capacity requirements
- Available in single-door and dual-door configurations
- Dual-door models feature independent cooling systems with separate displays and controls

*Applicable to dual-door models only.

PERFORMANCE DATA

Temperature Hold Over Time

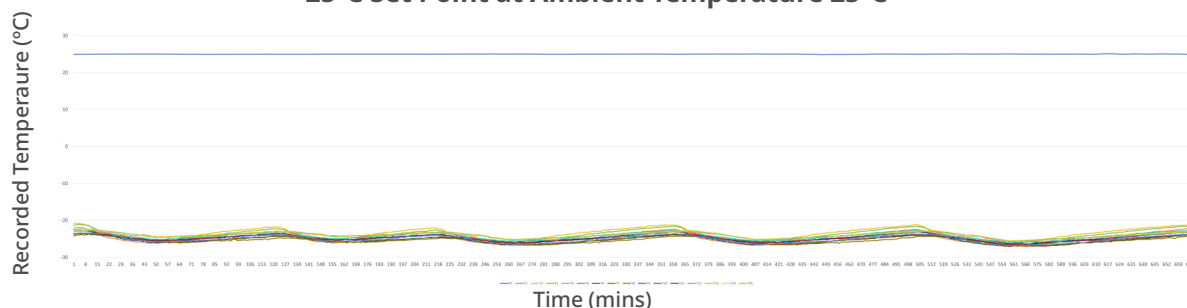


Model : LF-25L326-1
Initial Temperature : -25°C
Final Temperature (at 110 mins) : -10°C
Temperature Hold-over Time : approximately 110 minutes (from -25°C to -10°C)

Excellent insulation and temperature hold-over capacity:

Average chamber temperature takes approximately 110 minutes to rise from -25°C to -10°C during hold-over testing. This slow temperature rise demonstrates superior insulation performance and advanced thermal technology, ensuring maximum sample protection and minimal risk of degradation during unexpected power outages or system shutdowns in laboratory environments.

-25°C Set Point at Ambient Temperature 25°C

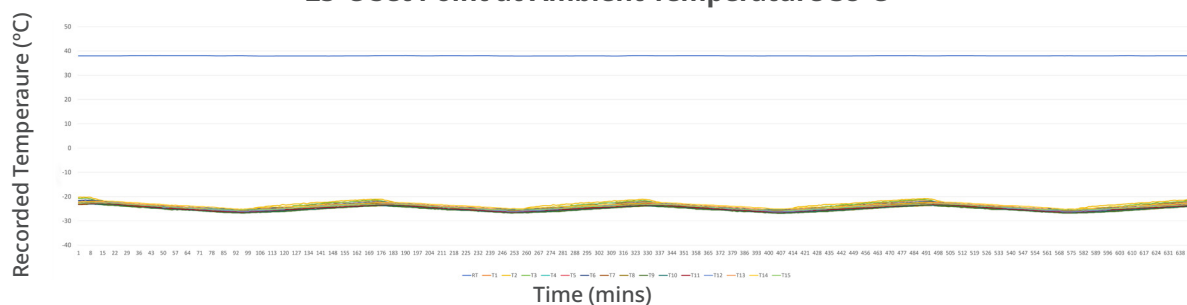


Excellent Temperature Uniformity ($\pm 3^{\circ}\text{C}$):

Model : LF-25L326-1
Set Point : -25°C

Minimal temperature difference between the highest and lowest temperature points across multiple tracking sensors. Ensures all biological samples are stored under highly consistent conditions, minimizing thermal deviations and preserving sample integrity regardless of their placement or location within the freezer chamber.

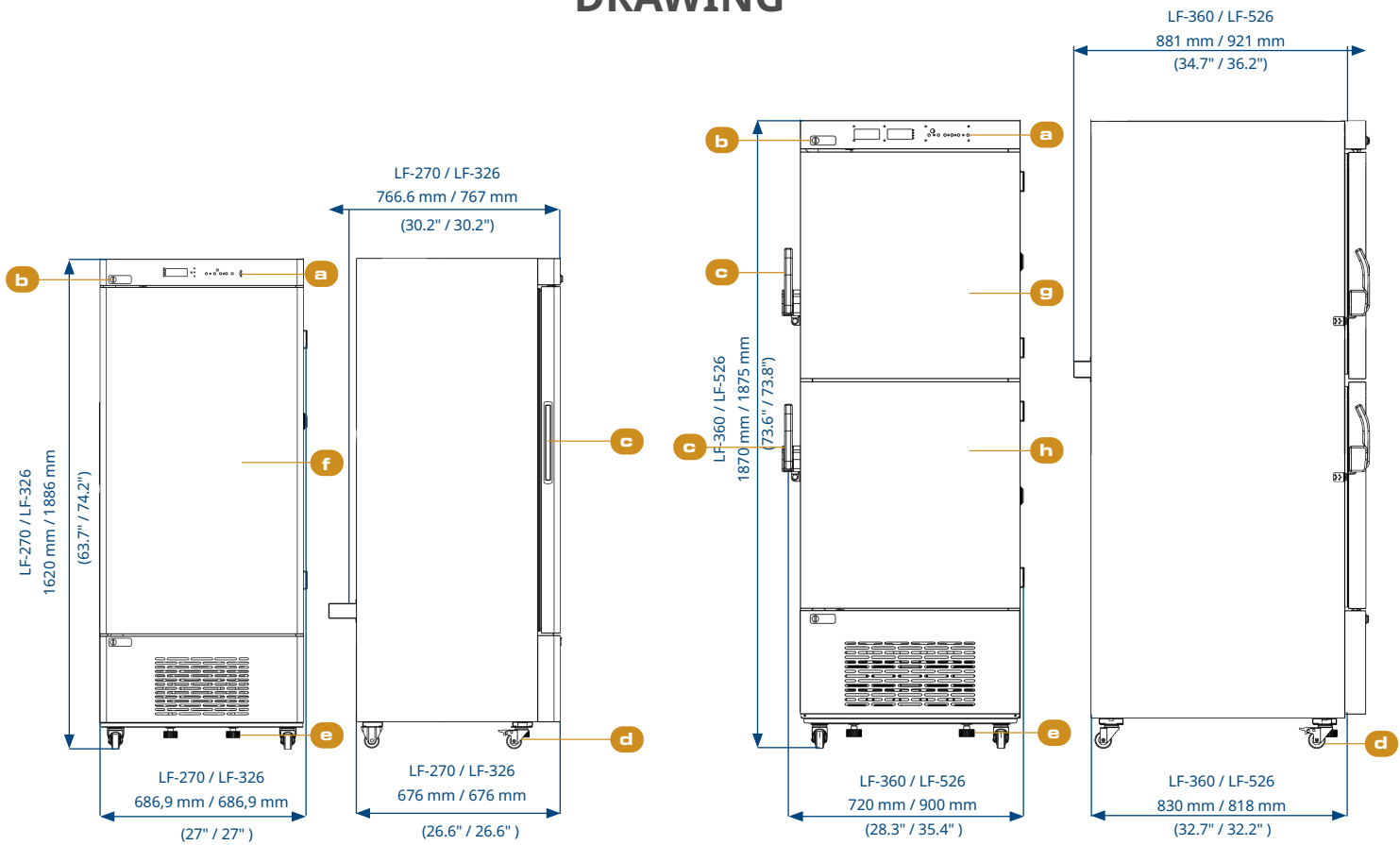
-25°C Set Point at Ambient Temperature 38°C



Consistent performance under extreme environment conditions:

Esco Laboratory Freezer delivers accurate and uniform temperature control even in challenging environments. Its performance remains stable at extreme ambient temperature (38°C), demonstrating the robustness of its cooling system under high heat load conditions. Esco Laboratory Freezer provides you a highly reliable and secure solution for your sensitive sample storage needs.

DRAWING



Esco Laboratory Freezer Model Guide

LF - L - 1

Model	Code	Temperature Range	Code	Volume	Code	Electrical Code	Code
Laboratory Freezer	LF	-10°C to -25°C	25	270 L (9.5 cu. ft) 280 L (9.8 cu. ft) 326 L (11.5 cu. ft) 360 L (12.7 cu. ft) 526 L (18.6 cu. ft)	270 280 326 360 526	220-240 VAC, 50 Hz	1
		-20°C to -40°C	40				

General Specifications

Model	LF-25L280-1	LF-25L270-1	LF-25L326-1	LF-25L360-1	LF-25L526-1	LF-40L280-1	LF-40L270-1	LF-40L326-1	LF-40L360-1	LF-40L526-1
Temperature Range	-10°C to -25°C (14°F to -13°F)					-20°C to -40°C (-4°F to -40°F)				
Ambient Temperature	10°C to 32°C (50°F to 90°F); recommended: 18°C to 25°C (64°F to 77°F)									
Capacity	280 L (9.8 cu. ft)	270 L (9.5 cu. ft)	326 L (11.5 cu. ft)	360 L (12.7 cu. ft)	526 L (18.6 cu. ft)	280 L (9.8 cu. ft)	270 L (9.5 cu. ft)	326 L (11.5 cu. ft)	360 L (12.7 cu. ft)	526 L (18.6 cu. ft)
Interior and Exterior Material	Powder-Coated Steel with Corrosion and Oxidation Resistance									
Internal Dimensions (W x D x H)	480 x 433 x 1460 mm (18.9" x 17" x 57.5")	508 x 480 x 1126.5 mm (20" x 18.9" x 44.3")	508 x 480 x 1392.5 mm (20" x 18.9" x 55")	Upper & Lower Chamber: 466 x 632 x 625 mm (18.3" x 24.8" x 24.6")	Upper & Lower Chamber: 651 x 632 x 635 mm (25.6" x 24.8" x 25")	480 x 433 x 1460 mm (18.9" x 17" x 57.5")	508 x 480 x 1126.5 mm (19.8" x 18.9" x 44.3")	508 x 480 x 1392.5 mm (20" x 18.9" x 54.8")	Upper & Lower Chamber: 466 x 632 x 625 mm (18.3" x 24.8" x 24.6")	Upper & Lower Chamber: 651 x 632 x 635 mm (25.6" x 24.8" x 25")
External Dimensions (W x D x H)	659 x 600 x 1694 mm (26" x 23.6" x 66.7")	673 x 676 x 1620 mm (26.5" x 26.6" x 63.7")	673 x 676 x 1886 mm (26.4" x 26.6 x 74.2")	720 x 830 x 1870 mm (28.3" x 32.6" x 73.6")	900 x 818 x 1875 mm (35.4" x 32.3" x 73.8")	659 x 600 x 1694 mm (26" x 23.6" x 66.7")	673 x 676 x 1620 mm (26.5" x 26.6" x 63.7")	673 x 676 x 1886 mm (26.5" x 26.6" x 74.2")	720 x 830 x 1870 mm (28.3" x 32.7" x 73.6")	900 x 818 x 1875 mm (35.4" x 32.2" x 73.8")
Display Type	Single LED Display			Dual LED Display		Single LED Display			Dual LED Display	
Cooling Method	Direct Cooling									
Defrost Method	Manual Defrost									
Refrigerant	R290									
Temperature Accuracy	±0.1°C (±0.18°F)									
Temperature Uniformity	±3°C (±5.4°F)					±4°C (±7.2°F)				
Temperature Fluctuation	≤4°C (≤7.2°F)					≤5°C (≤9°F)				
Number of Outer Door(s)	1			2		1			2	
Number of Inner Door(s)	-	4	5	-			4	5	-	
Casters	4 casters (2 lockable at front) with 2 levelling feet									
Alarms	H/L Temp, Sensor Failure, Door Open	H/L Temp, Power Failure, Sensor Failure, Door Open		H/L Temp, Power Failure, Sensor Failure, Door Open, High Ambient		H/L Temp, Sensor Failure, Door Open	H/L Temp, Power Failure, Sensor Failure, Door Open		H/L Temp, Power Failure, Sensor Failure, Door Open, High Ambient	
Electrical Safety	Delayed Start Function; Wide Voltage Range (187–242 V)									
Storage Configuration	6 Wire Shelves + 7 Drawers	3 Wire Shelves	4 Wire Shelves	2 Compartments with 2 Wire Shelves and 6 Drawers per Compartment	2 Compartments with 2 Wire Shelves and 9 Drawers per Compartment	6 Wire Shelves + 7 Drawers	3 Wire Shelves	4 Wire Shelves	2 Compartments with 2 Wire Shelves and 6 Drawers per Compartment	2 Compartments with 2 Wire Shelves and 9 Drawers per Compartment
Wire Shelf Dimensions (W x D)	480 x 433 mm (18.9" x 17")	508 x 480 mm (20" x 18.9")		466 x 632 mm (18.3" x 24.8")	651 x 632 mm (25.6" x 24.8")	480 x 433 mm (18.9" x 17")	508 x 480 mm (19.8" x 18.9")		466 x 632 mm (18.3" x 24.8")	651 x 632 mm (25.6" x 24.8")
Drawer Dimensions (W x D x H)	463.8 x 377 x 195 mm (x 6) (18.2" x 15" x 7.6") 463.8 x 242 x 212 mm (x 1) (18.2" x 9.5" x 8.3")	-		208 x 621.5 x 190 mm (8.2" x 24.5" x 7.5")		463.8 x 377 x 195 mm (x 6) (18.2" x 15" x 7.6") 463.8 x 242 x 212 mm (x 1) (18.2" x 9.5" x 8.3")	-		208 x 621.5 x 190 mm (8.2" x 24.5" x 7.5")	
Pressure Relief Port(s)	-			2		-			2	
Access Port(s)	1			2		1			2	
USB Port	-	Optional		Available		-	Optional		Available	
Energy Consumption (kWh/24 hours)	3.35	1.52	2.45	1.68	3.52	7.81	4.44	5.2	6.34	6.2
Noise Level (dBA)	50				52				50	55
Net Weight	105 kg (231.5 lbs)	92 kg (202.8 lbs)	104 kg (229.3 lbs)	132 kg (291 lbs)	160 kg (352.7 lbs)	110 kg (242.5 lbs)	98.5 kg (217.1 lbs)	104 kg (229.3 lbs)	138 kg (304.2 lbs)	192 kg (423.3 lbs)
Shipping Weight	115 kg (253.5 lbs)	114 kg (251.3 lbs)	126 kg (227.8 lbs)	172 kg (379.1 lbs)	180 kg (396.8 lbs)	120 kg (264.5 lbs)	122 kg (268.9 lbs)	126 kg (277.8 lbs)	178 kg (392.4 lbs)	212 kg (467.4 lbs)
Shipping Dimensions	710 x 650 x 1800 mm (28" x 25.6" x 70.8")	750 x 750 x 1750 mm (29.5" x 29.5" x 68.9")	750 x 750 x 1990 mm (29.5" x 29.5" x 78.3")	780 x 920 x 2000 mm (30.7" x 36.2" x 78.7")	921 x 960 x 1970 mm (36.2" x 37.8" x 77.5")	710 x 650 x 1800 mm (28" x 25.6" x 70.8")	750 x 750 x 1750 mm (29.5" x 29.5" x 68.9")	750 x 750 x 1990 mm (29.5" x 29.5" x 78.3")	780 x 920 x 2000 mm (30.7" x 36.2" x 78.7")	921 x 960 x 1970 mm (36.2" x 37.8" x 77.5")

ORDERING INFORMATION

MODELS		
Item Code	Model Code	Description
2130208	LF-25L270-1	Upright Model, 270L, -10°C to -25°C, 220-240 VAC, 50 Hz, AVR Included
2130209	LF-25L280-1	Upright Model, 280L, -10°C to -25°C, 220-240 VAC, 50 Hz, AVR Included
2130210	LF-25L326-1	Upright Model, 326L, -10°C to -25°C, 220-240 VAC, 50 Hz, AVR Included
2130211	LF-25L360-1	Upright Model, 360L, -10°C to -25°C, 220-240 VAC, 50 Hz, AVR Included
2130212	LF-25L526-1	Upright Model, 526L, -10°C to -25°C, 220-240 VAC, 50 Hz, AVR Included
2130213	LF-40L270-1	Upright Model, 270L, -20°C to -40°C, 220-240 VAC, 50 Hz, AVR Included
2130214	LF-40L280-1	Upright Model, 280L, -20°C to -40°C, 220-240 VAC, 50 Hz, AVR Included
2130215	LF-40L326-1	Upright Model, 326L, -20°C to -40°C, 220-240 VAC, 50 Hz, AVR Included
2130216	LF-40L360-1	Upright Model, 360L, -20°C to -40°C, 220-240 VAC, 50 Hz, AVR Included
2130217	LF-40L526-1	Upright Model, 526L, -20°C to -40°C, 220-240 VAC, 50 Hz, AVR Included

ACCESSORIES	
Item Code	Description
2130223	Thermal Printer
2130224	Dot Matrix Printer
2130225	External Padlock
2130226	RS485/232 Interface
2130227	USB Port for LF-25L270-1, LF-40L270-1, LF-25L326-1, LF-40L326-1

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Our team provides full technical assistance from installation, calibration, user training, to decommissioning. Comprehensive documentation and service reports are included for traceability and compliance purposes.



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We offer responsive technical support within 24 hours for priority clients. Our support team is easily reachable via email and phone.



Dedicated Regional Service Team

Our Field Service Representatives are trained to provide fast and reliable service, with access to ready spare parts and factory-level technical support.



Commitment to Service Excellence

We aim to exceed customer expectations through timely, consistent, and professional support throughout the equipment lifecycle.



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Cell Counter



CO₂ Incubator



Liquid Nitrogen Tank



Laboratory Refrigerator



Ultra-low Temperature Freezer



Contact your local sales representative for availability and terms.



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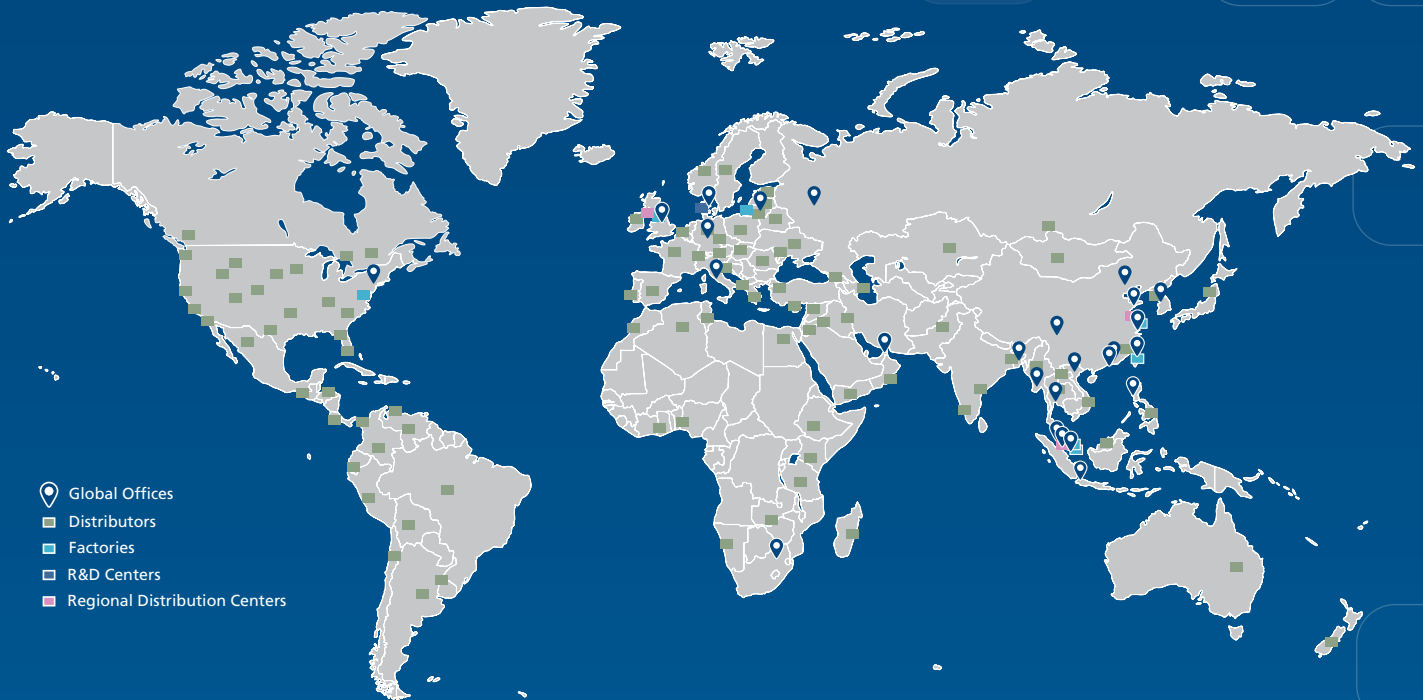
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