

# PURPOSE-BUILT FOR BIOPHARMA AND PHARMACEUTICAL MANUFACTURING

Commercial bulk storage with integrated redundancy, fast temperature recovery, and optimized material handling



FARRAR™ pioneered forced air convection cooling to answer the challenge of preserving and storing biological and human tissue donor samples and materials. Purpose-built for life science applications, the Ultra-Low Chamber ULC-190, new ULC-259, and ULC-311 are the only +2°C to +8°C and -20°C to -80°C, forced air, ultra-low-temperature freezers on the market.

Ideal for bulk commercial short and long-term needs, these innovative chambers offer rapid, efficient, and more sustainable product cool-down and accommodate universal product containers (all sizes—bags, bottles, boxes, etc. of pharmaceutical packaging).

With 190 cu. ft. / 5,380 liters up to 311 cu. ft. / 8,806 liters of storage, these solutions help optimize footprint requiring only 47 sq. ft. / 4.36 m<sup>2</sup> of space. At +/-3.0°C, the units feature unmatched uniformity, offer fully redundant systems (control, refrigeration, airflow), and provide the fastest temperature recovery from door opening versus competitor offerings. Designed with energy balance in mind, the ULC is a smart storage solution series for life science applications that offer dynamic refrigeration control and low energy consumption (ULC-190 = 0.3 kWh/cu. ft.).

## SERIES KEY FEATURES

- Integrated full redundancy (refrigeration, controls, electrical)
- Best temperature uniformity on the market (+/- 3.0°C)
- Low temperature deviation (+/- 1°C)
- Wide-range (+2°C to +8°C and -20°C to -80°C) forced air convection
- Optimized footprint
- Optional racking/shelving system available
- Optional material handling carts available

## BUILT FOR FREEZING

- 6x capacity of a standard ULT (27 cu. ft.)
- Reliable material storage enabling reduction in emergency product transfer
- Configurable for racks, carts, boxes, and pallets



## APPLICATION AND ELECTRICAL REQUIREMENTS

Application	Pharmaceutical, Biopharmaceutical, Biorepository, Bio-Logistics
Chamber Volume	ULC-190 = 190 cu. ft. / 5,380 L ULC-259 = 259 cu. ft. / 7,334 L ULC-311=311 cu. ft. / 8,806 L
Temperature Range	+2°C to +8°C and -20°C to -80°C
Electrical	North America: 208-230VAC, Single Phase, 60Hz International: 230VAC, Single Phase, 50Hz
Circuit Breaker	2 x 30 amp
Ambient Operating Temperature	+18°C to +30°C

## CUSTOMER BENEFITS

- Fastest temperature recovery from door opening
- Low energy consumption and ENERGY STAR® certified (ULC-190 = 0.3 kWh/cu. ft.)
- HMI touchscreen provides visual temperature profile progress with export capability
- Universal container acceptance (all sizes—bags or bottles)
- Adjustable shelves available for process optimization
- Accommodates any configuration including hanging systems or Metro Shelving systems
- Available Internationally
- Plug-and-play installation

- Designed with frequent access storage, clinical trial kitting, and logistics prep process needs in mind
- Ergonomically engineered for high-density storage and pull/pack/ship accessibility
- Accommodates smart sliding racks and carts to minimize product/substance/sample handling
- Enables easy loading and pulling from the ground
- Intelligent drawer systems accommodate blood bag and cryo box upright ULT racking, shippable packaging, bottles, and single-use bags and shells
- Enables maximized storage density without sacrificing organization

## STORAGE CAPACITY / DIMENSIONS

	ULC-190	ULC-259	ULC-311
<b>Total Volume</b>	190 cu. ft. / 5,380 L	259 cu. ft. / 7,334 L	311 cu. ft. / 8,806 L
<b>Area Footprint</b>	47 sq. ft. / 4.36 m <sup>2</sup>	55.6 sq. ft. / 5.17 m <sup>2</sup>	67.5 sq. ft. / 6.28 m <sup>2</sup>
<b>Interior Dimensions</b>	110 x 38 x 90 in (W x D x H) 2794 x 965 x 2286 mm	121 x 54 x 68.625 in (W x D x H) 3073.4 x 1371.6 x 1743.0 mm	116 x 54 x 87 in (W x D x H) 2946 x 1372 x 2210 mm
<b>Exterior Dimensions</b>	122 x 57 x 143 in (W x D x H) 3098 x 1448 x 3632 mm	133.125 x 76.25 x 127.25 in (W x D x H) 3381.3 x 1936.7 x 3232.1 mm	128 x 76 x 147 in (W x D x H) 3251 x 1930.4 x 3734 mm
<b>Unit Weight</b>	3,150 lbs. / 1,429 Kg	3,500 lbs. / 1,588 Kg	3,900 lbs. / 1,769 Kg
<b>Shipping Weight</b>	3,900 lbs. / 1,769 Kg	4,100 lbs. / 1,860 Kg	4,500 lbs. / 2,132 Kg



## REFRIGERATION SYSTEM

<b>Evaporator/QTY</b>	Forced Air / (2)
<b>Condenser/QTY</b>	Forced Air-Cooled / (2) or Water-Cooled
<b>Metering Device</b>	Electronic
<b>High Stage/ Low Stage</b>	R-449A / R-508B
<b>Air Cooled Condenser</b>	+18°C to +30°C
<b>Water Cooled Condenser</b>	Tower Water 85°F (29.5°C), Max. flow rate 7gpm (26.5 l/min)
<b>Requirements</b>	Chilled Water 45°F (7.2°C), Max. flow rate 3.5 gpm (13.25 l/min)

## PERFORMANCE DATA

<b>Uniformity Air Temperature</b>	+/- 3.0°C (empty chamber)
<b>Temperature Control</b>	+/- 1.0°C
<b>Warranty</b>	1 year parts and labor (North America) 1 year parts only (Outside of North America)

## CONTROLLER

<b>Temperature Controller/QTY</b>	Microprocessor (2)
<b>Displays (145mm)</b>	LCD (2)
<b>Modbus TCP/IP</b>	Communication Protocol
<b>Alarms</b>	High/Low temperature, door ajar, power failure, remote alarm contacts
<b>Dry Contacts</b>	Standard (C, NO, NC)

# ORDERING INFORMATION

Model Numbers			Description	Voltage (Hz)	Amps (FLA) / Breaker
ULC-190	ULC-259	ULC-311			
ULC-190_AC	ULC-259_AC	ULC-311_AC	Air-Cooled	208-230VAC - 1 Phase - 60 Hz	2 x 24 FLA / 30A
ULC-190_WC	ULC-259_WC	ULC-311_WC	Water- Cooled	208-230VAC - 1 Phase - 60 Hz	2 x 24 FLA / 30A
ULC-190i_AC	ULC-259i_AC	ULC-311i_AC	Air-Cooled	230VAC - 1 Phase - 50 Hz	2 x 24 FLA / 32A
ULC-190i_WC	ULC-259i_WC	ULC-311i_WC	Water-Cooled	230VAC - 1 Phase - 50 Hz	2 x 24 FLA / 32A

## ULC SERIES MATERIAL HANDLING SOLUTIONS

Product	Options	Dimensions
<b>ULC-190</b>	Shelves	54" x 36" (1372 x 914 mm) Adjustable @ 1" Increments
	Product Cart	36 3/4" (934 mm) D x 33" (838 mm) W x 61 1/2" (1562 mm) H, (4) Shelves 18" (457 mm)
	Transfer Cart	27" (686 mm) W x 56" (1423 mm) D x 45 1/8" (1146 mm) H
<b>ULC-259</b>	Sliding Shelves	55 1/8" x 40 1/2" (1400 x 1029 mm) - 4 across by 6 high @ 10" increments - individually sliding
	Product Cart	49 3/8" (1229 mm) D x 20 3/8" (517 mm) W x 51 1/4" (1302 mm), (6) shelves 10" (254 mm)
	Transfer Cart	41 1/16" (1043 mm) D x 39" (991 mm) W 45 1/8" (1146 mm) H
<b>ULC-311</b>	Palette Capacity	4 - 40" (1016 mm) W x 48" (1219 mm) D x 36" (914 mm) H
	Product Cart	51 1/2" (1308 mm) D x 21" (534 mm) W x 61 1/2" (1562 mm) H, (4) Shelves 18" (457 mm)
	Transfer Cart	41 1/16" (1043 mm) D x 39" (991 mm) W 45 1/8" (1146 mm) H

## ADDITIONAL SERVICES & OPTIONS

- Warranty Options
- Validation IQ/OQ
- Temperature Mapping Studies
- Shelving System and Portable Material Handling
- Custom Programming and Testing



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