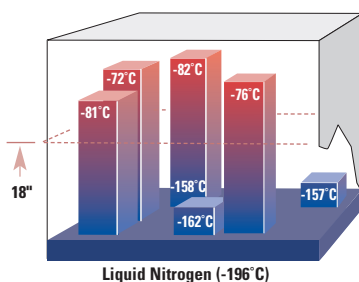


Our Thermo Scientific Revco Ultima II cryogenic freezers maintain uniform temperatures of  $-140^{\circ}\text{C}$  and  $-150^{\circ}\text{C}$ , safely below the  $-130^{\circ}\text{C}$  glass transition temperature of water. Cell viability is improved because biologically relevant, thermally driven reactions are not known to occur.

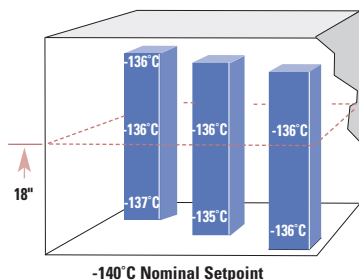
## Thermo Scientific Revco Ultima II Cryogenic Freezers

Mechanical cryopreservation for long-term biological storage

### Liquid Nitrogen Vapor Storage



### Mechanically Refrigerated Cryogenic Freezer



### Superior Uniformity

Comparison of temperature distribution in a liquid nitrogen freezer (vapor phase) and mechanically refrigerated cryogenic freezer (i.e. Ultima II Model ULT10140-9). Graph represents temperatures at relative locations within the chamber. Data suggests that 100% of the Ultima II storage space maintains uniform storage temperatures safely below  $-130^{\circ}\text{C}$ , while temperature in  $\text{LN}_2$  vapor system is dependent on storage location.



### Safer, More Convenient Than $\text{LN}_2$

- Our cryogenic freezers include all features, control and performance attributes of the Ultima II Series freezers, plus many important advantages not available when using  $\text{LN}_2$
- Stable cryogenic temperature of  $-140^{\circ}\text{C}$  and  $-150^{\circ}\text{C}$  without  $\text{LN}_2$  as a cooling medium
- Patented, single compressor, orbital refrigeration system
- Top-to-bottom temperature uniformity dramatically improved when compared to  $\text{LN}_2$  vapor
- Lower operating costs than  $\text{LN}_2$  freezers of similar capacity
- 100% of interior space is usable, with stored samples maintained below critical temperature

- Ample interior volume with capacity of up to 21,600 samples in Model ULT-10140 and up to 14,400 samples in Model ULT-7150 (2 ml vials in boxes)
- Uses standard Thermo Scientific Revco inventory racks and fiberboard boxes

### Refrigeration System

- Exclusive mixed refrigerant autocascade with a single, orbital refrigeration compressor, air-cooled
- CFC-free refrigerants
- Downfeed evaporator for most efficient refrigerant flow
- High-capacity air-cooled condenser with dual condenser fans, aerodynamically shaped fan blades
- Washable condenser filter keeps fins free of dust to maintain peak cooling efficiency; no tools required for removal

## Thermo Scientific Revco Ultima II -140°C Cryogenic Chest Freezers

Operating Temperature: -140°C

Model No.	Cu.Ft. (L)	Electrical	Amps/ Breaker (Plug)	Interior Dimensions* H x D x W inches (mm)	Exterior Dimensions* H x D x W inches (mm)	Ship Weight lb (kg)
ULT-10140-9-D		208/230V 60Hz 1Ø	20.0/30 (P6)			
ULT-10140-9-E		208/230V 60Hz 3Ø	16.0/20 (HW <sup>1</sup> )			
ULT-10140-9-M	10.3	380V 50Hz 3Ø	11.0/15 (HW <sup>1</sup> )	26.5 x 19.0 x 35.25	42.75 x 29.0 x 69.0	1065
ULT-10140-9-R	(292)	200V 50Hz 3Ø	16.0/20 (HW <sup>1</sup> )	(670 x 480 x 890)	(1090 x 740 x 1760)	(483)
ULT-10140-9-V		230V 50Hz 1Ø	20.0/30 (HW <sup>1</sup> )			















## Thermo Scientific Revco Ultima II -150°C Cryogenic Chest Freezers

Operating Temperature: -150°C

Model No.	Cu.Ft. (L)	Electrical	Amps/ Breaker (Plug)	Interior Dimensions* H x D x W inches (mm)	Exterior Dimensions* H x D x W inches (mm)	Ship Weight lb (kg)
ULT-7150-9-D		208/230V 60Hz 1Ø	20.0/30 (P6)			
ULT-7150-9-E		208/230V 60Hz 3Ø	16.0/20 (HW <sup>1</sup> )			
ULT-7150-9-M	6.8	380V 50Hz 3Ø	11.0/15 (HW <sup>1</sup> )	26.5 x 19.0 x 23.5	42.75 x 29.0 x 58.0	825
ULT-7150-9-R	(193)	200V 50Hz 3Ø	16.0/20 (HW <sup>1</sup> )	(670 x 480 x 590)	(1090 x 740 x 1480)	(374)
ULT-7150-9-V		230V 50Hz 1Ø	20.0/30 (HW <sup>1</sup> )			

\*All dimensions and specifications subject to change without notice. External dimensions include allowances for cabinet door, hinges, latches, handles, and control panel protrusions. <sup>1</sup>No plug provided; requires hardwire connection by customer.

## Line Cord Plug Reference

Models with this code	have this plug	require this receptacle	NEMA Reference	
			Plug	Receptacle
P1			5-15P	5-15R
P2			5-20P	5-20R
P3			5-30P	5-30R
P4			6-15P	6-15R
P5			6-20P	6-20R
P6			6-30P	6-30R
P7			European	

Refrigerators and freezers supplied with line cord plugs (P) require corresponding receptacles illustrated in the Line Cord Plug Reference. Catalog selection charts list each standard model with voltage, rated amperage, recommended circuit breaker size and NEMA electrical plug information.