

**Technical Data Sheet**  
**Kendro Ultra-Low Freezer Model ULT185-5**  
 Kendro Laboratory Products, Asheville, North Carolina

Specifications	Model Number	
	ULT185-5-A31	ULT185-5-V31
<b>Application, Rating and Electrical Data:</b>		
Application	Storage of General Laboratory Materials	
Storage Volume	1.0 Cubic Foot (28.3 Liter)	
Temperature Rating	-40°C to -80°C @ 90°F(32 °C) Ambient	
Electrical Power	115/60/1	220-240/1/50
Rated Amps/Breaker	12.0/15.0	6/15
Power Plug/Power Cord Length	NEMA 5-15P / 8.3 Feet (2.5 Meters)	European 10/16-250 / 8.3 Feet (2.5 Meters)
Sound Pressure Level (dBA)	~59 dBA @ 5 ft in front, 5 ft high	
Agency Listings	UL,cUL	CE
Indoor/Outdoor Usage	Indoor Use Only	
Application Environment	Non-Corrosive, Non-Flammable, Non-Explosive, Good Air Ventilation, 59° F-90° F (15-32°	
<b>Refrigeration Configuration</b>		
Refrigeration System	2-stage Kendro cascade	
Compressor / Number	1/2 hp Copeland Compressor; quantity= 2	
Condenser Type/Number	Enhanced Finned-Tube / Forced-Air Cooled / 1	
Expansion Device	Capillary Tube On First and Second Stages	
Evaporator Type	Cold Wall	
Defrost Method	Manual Defrost	
Refrigerant Charge	R134a/R404a in First Stage; R508b(Suva95) in Second Stage (CFC & HCFC free)	
<b>Controller/Electrical System Configuration and Features</b>		
Controller Level	Lower	
Power Switch	Keyed switch	
Controller Type	Microprocessor Control	
Setpoint Security	Front access with special tool	
Compressor Safe Guard	Standard safety devices only	
Control Sensor	Single RTD	
RS232/Remote Alarm Terminals	Remote Alarm Terminals	
Power Surge Protector	N/A	
Adjustable Warm/Cold Alarms	No, warm alarm (only) occurs at 90% of setpoint value	
Auto-Voltage Safeguard	N/A	
<b>Dimensions and Construction</b>		
Interior Dimensions	9.63"H X 12" F-B" X 15.25" W(24.5 cm X 30.5 cm X 38.7 cm)	
Exterior Dimensions	20"H X 24" F-B X 30.75" W(50.8 cm X 61 cm X 78.1 cm)	
Insulation	2.25 - 4.0 in. (5.7 - 10 cm) High Density HCFC-blown Polyurethane Foam (R=19 - 33)	
Perimeter Heater	Hot Gas Halo Line	
Shelves / Capacity	not applicable	
All-Direction Casters/Level Legs	4 leveling legs standard	
Ship Weight	190 lb (86 kg)	
<b>Other Options</b>	6" 7-day Electronic Temperature Recorder	
<b>Typical Performance Characteristics in 32°C Ambient</b>		
<p><b>Pulldown &amp; Warm-up</b></p> <p>Y-axis: CENTER TEMP (C) from 40 to -100                  X-axis: TIME (MINUTES) from 0 to 210</p>	<p><b>-80°C Cycle</b></p> <p>Y-axis: TEMP (C) from -65 to -85                  X-axis: TIME (MINUTES) from 0 to 180</p>	<p>Ambient: 32°C                      Load: Empty                      Sensor weighting: Unweighted                      Avg. stability: 5°C                      Avg. uniformity: N/A                      Cycle rate (on/off): 20 / 5 minutes                      Avg. energy consumption: 16.3 kW-hr/day                      Avg. heat rejection: 2300 Btu/hr (680 W)</p>
1) Performance is nominal and individual units may vary. 2) Freezer performance will differ due to product amount, product size and operating conditions. 3) Continuous product enhancements may, without notice, result in amendments or omissions to this specification. Kendro Laboratory Products cannot accept responsibility for damage, injury, loss or expenses resulting from misapplication of the information herein.		