

**THERMO KING****SUPER FREEZER REFRIGERATION UNIT****General:**

Unit type:	Ultra-Low temperature unit. Cascade system with dual refrigeration circuit R134a with Copeland 3 cylinder compressor. Charge 3.5 kg (7.7 lbs) R23 with Copeland Scroll compressor. Charge 3.2 kg (7.0 lbs)	
Setpoint Range:	-70°C to -10°C	(-94°F to -14°F)
Ambient temperature Range:	-30°C to +37.8°C	(-22°F to 100°F)
Required heat leakage of 10' box:	18 Watt/°K @ 20C wall temperature, to ensure set-point at ambient	
Required heat leakage of 20' box:	20 Watt/°K @ 20C wall temperature, to ensure set-point at ambient	
Container protection	Pressure equalization valve to avoid excessive vacuum in the container	

Cooling Capacity @ ambient temperature +37.8°C (100°F)

At setpoint -30°C (-22°F)	8,250 watt @ 460V/60Hz	7,112 watt @ 400V/50Hz
At setpoint -60°C (-76°F)	5,850 watt @ 460V/60Hz	5,086 watt @ 400V/50Hz
At setpoint -70°C (-94°F)	3,880 watt @ 460V/60Hz	3,344 watt @ 400V/50Hz

Electricity

Power supply:	A/C 400 to 500 Volt 3 phase 60 Hz ±2,5% A/C 360 to 460 Volt 3 phase 50 Hz ±2,5%	
Main circuit breaker:	32 Amp	
Power cable:	18.3 m (60 LF) cable (3phase and ground) with CEE17 power plug (32 Amp; ground 3h)	
Maximum power draw:	19 kw during "pull down"	

Controller

Advanced Microprocessor MP3000 control system
 Temperature control using 6 NTC sensors
 Temperature accuracy: +/- 1°C (+/-1.8°F)
 Datalogger document system parameters and changes, results of Pre-Trip Inspections, Alarms & messages, as well as temperature logs.
 Temperature logs are defaulted to 1 hour interval, and user can change to 30 min, memory allow 15,000 temperature logs
 3 USDA cargo sensor ports with Cannon receptacles
 Telematics (option) to allow two-way communication with controller. Using Global Network Satellite System and Global cellular LTE, 2G, 3G signal)
 Datalogger can be retrieved via serial port on unit, or via Telematics
 Defrost: utilizing electrical defrost heaters, with timer and on demand

Noise level: 80db (A) in 250 Hz band, mesured in front of the unit at 1.5 m distance

Certifications and design standards: ISO1496-2; CE; ATP; AHRI; USDA; TIR

Weight of SuperFreezer unit:	630 kg	(1,390 lbs)	
Weight of 10' container incl unit:	12,000 kg	(24,000 lbs)	Payload: 8,750 kg (19,290 lbs)
Weight of 20' container incl unit:	24,000 kg	(52,910 lbs)	Payload: 19,500 kg (42,990 lbs)