

Thermo King- Cold Storage Solutions

Specs, Options & Pricing

✓
GDP



THERMO KING COLD STORAGE SOLUTIONS



Ultra low temperature, flexible and adaptable refrigerated solutions

- Various customizations and upgrades on **ISO Containers**
- Optimize end-user experience on storage
- Protection of temperature sensitive perishables and pharmaceuticals
- Temporary refrigerated storage
- **Temperature set-points between -70°C to + 30°C**

patients in remotely populated regions is a challenge of its own. A similar issue arises when the task is to inoculate patients in highly dense urban areas. There simply is not enough cold storage capacity. At Kuehne+Nagel, we have developed a solution to bridge this bottleneck: the Temperature Pod: <https://bit.ly/37nBuCK>

#ForWhenItMattersTheMost #vaccine #temperaturepod



Cold comfort for COVID-19 – The Temperature Pod

home.kuehne-nagel.com • 3 min read

999

21 comments



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THERMO KING COLD STORAGE SOLUTIONS



Ultra low temperature, flexible and adaptable refrigerated solutions

- Flexibility and ease to scale up or down as your demands shift
- Various customizations and upgrades to optimize end-user experience
- Complies with various regulations to give peace of mind
- Flexible and innovative solutions for goods in transit and storage
- Market-leading expertise
- The widest range of temperature management



PRODUCT RANGE



MAGNUM PLUS

Deep freeze (-40°C)

- From +30°C to -40°C temperature control
- Fast pull-down
- Precise temperature control
- Low energy consumption
- Proven technology



SUPERFREEZER

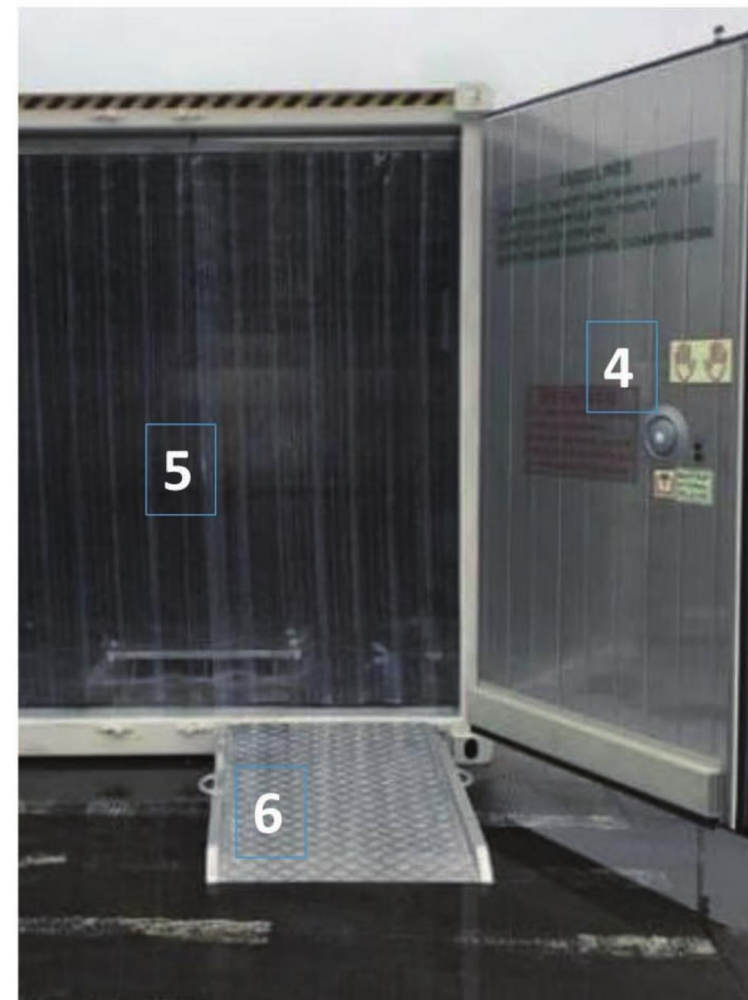
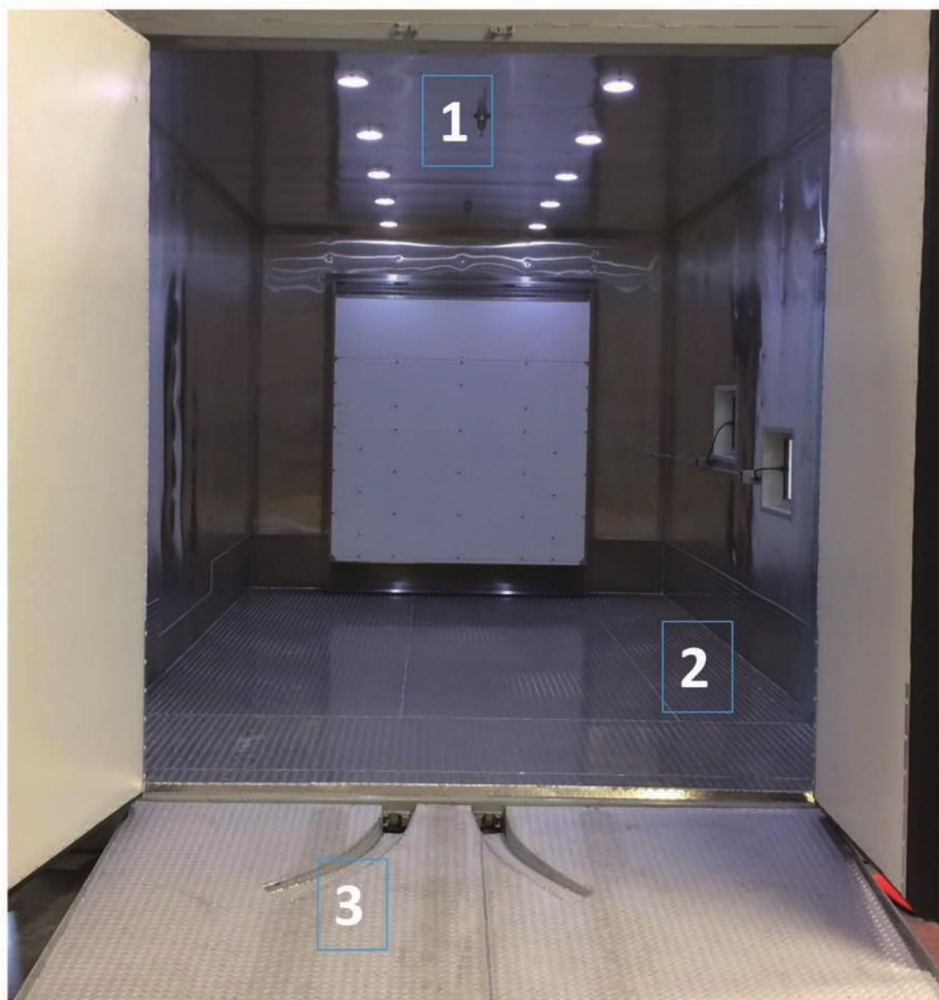
Ultra-low temperature (-70°C)

- From -10°C to -70°C temperature control
- Designed to transport and maintain safely high value cargo
- Ex situ preservation of the stored product properties avoiding retrogradation

COLD STORAGE SOLUTIONS – STANDARD OFFERING

Thermo King

Thermo King standard offering
for Cold Storage (-40°C and -70°C solutions)

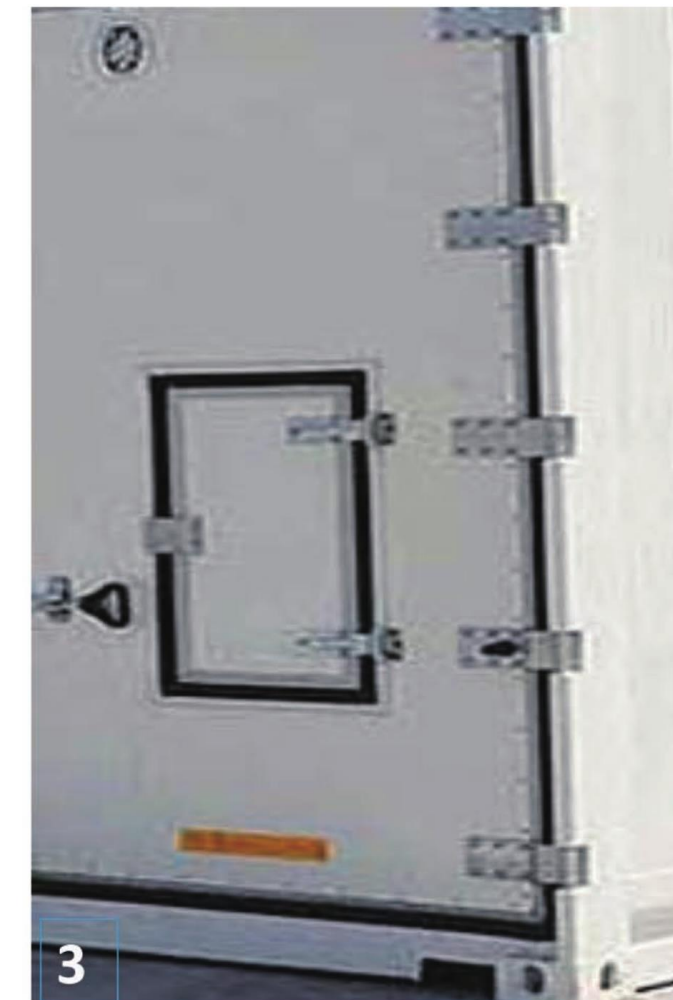
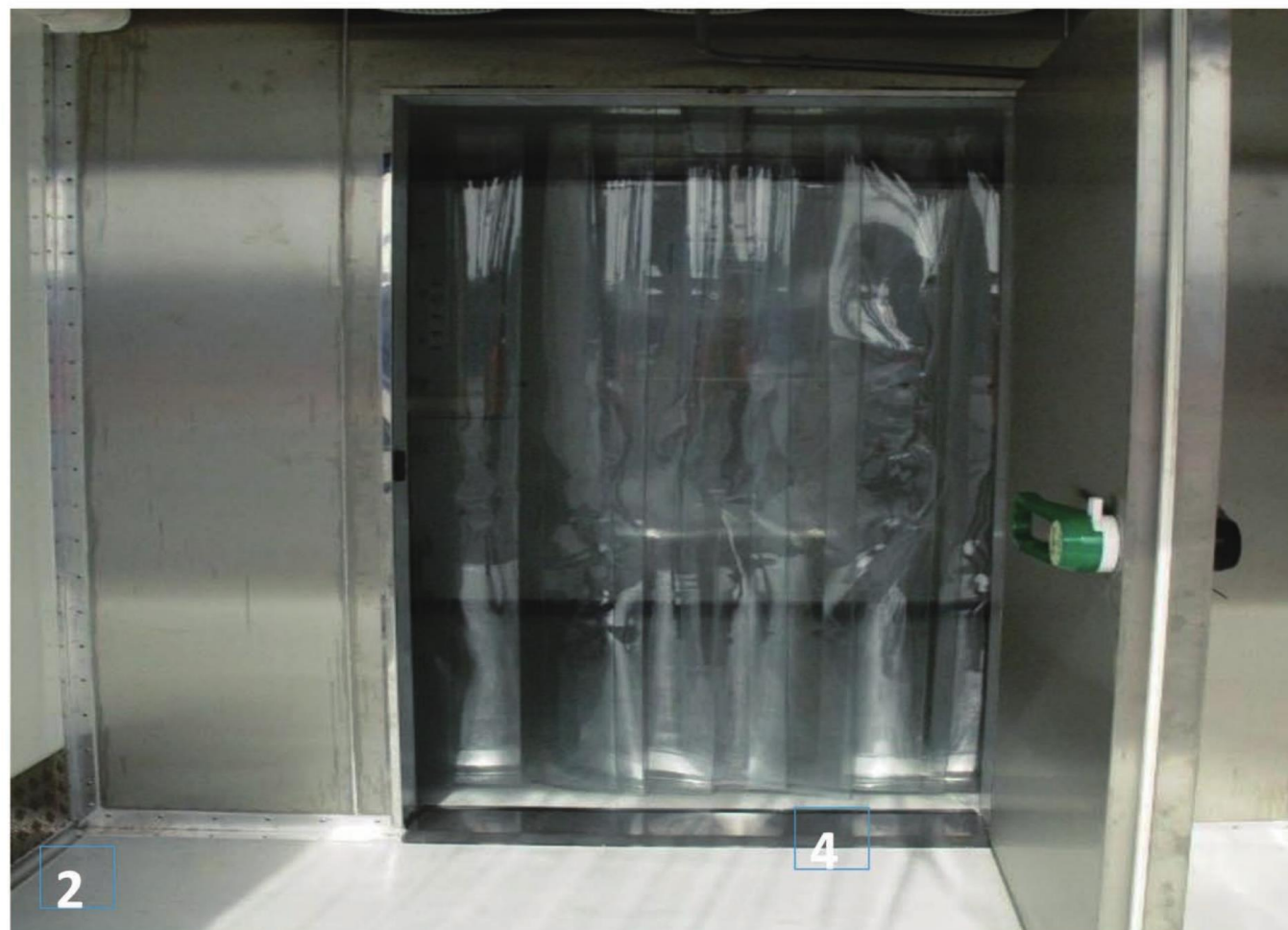


1. Lights
2. Flat floor
3. Access ramp for fork lift
4. Door release (safety precaution)
5. Curtains (safety precaution)
6. Access ramp for trolley
7. Door switch (safety precaution)
8. Easy door access

COLD STORAGE SOLUTIONS – UPGRADES



Thermo King options for additional safety measures, to create redundancies, and for easy access for operators.



1. Sliding easy access door
2. Built-in antichamber
3. Escape door

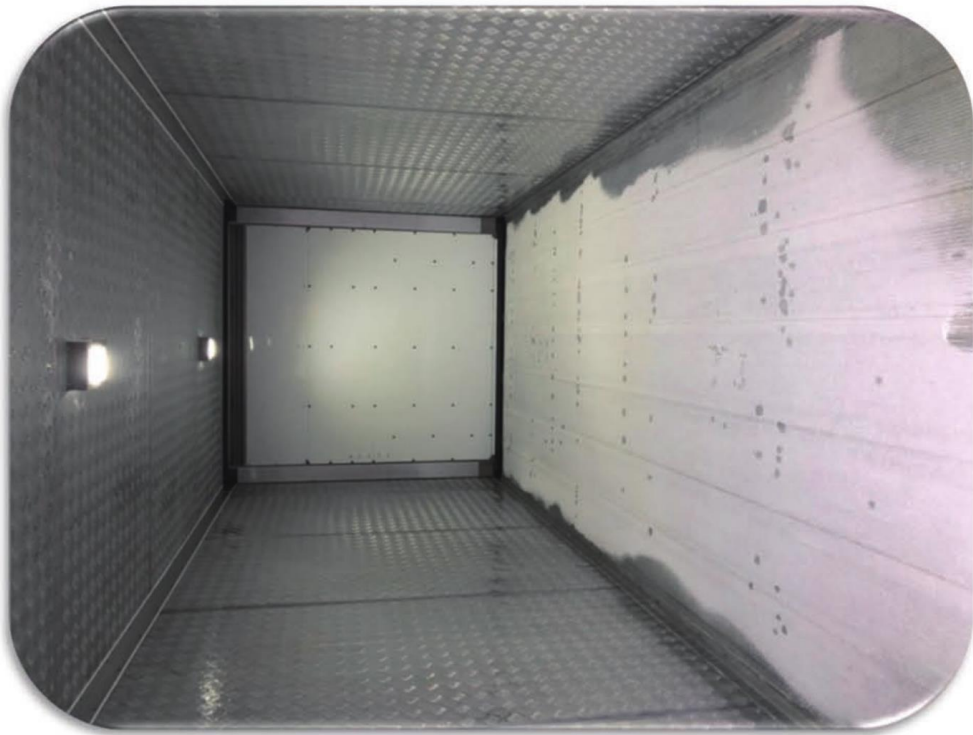
COLD STORAGE SOLUTIONS – UPGRADES



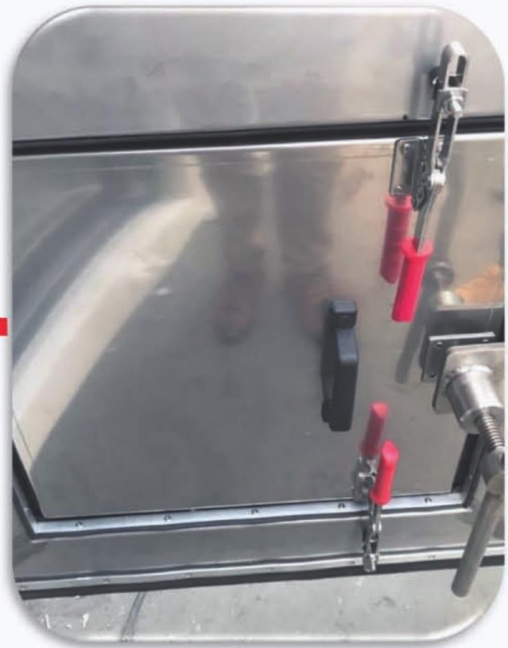
Photos of TK -70C Super Freezer with container solutions



Container with customized door and emergency safety hatch door.



Inside of container.

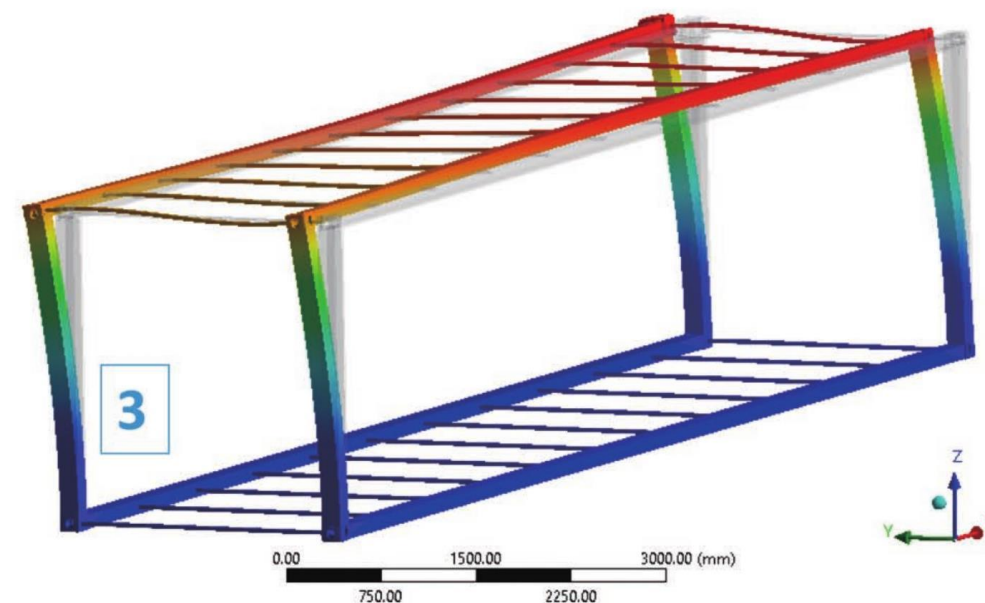
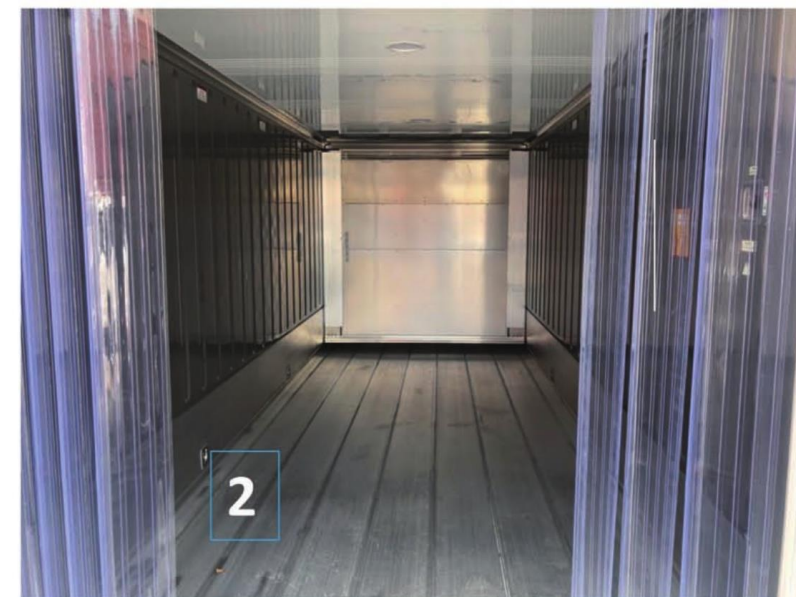


Inside view of emergency safety hatch door.

COLD STORAGE SOLUTIONS- ONLY FOR ULT OFFERING



Unique features for ULT (-70°C) – required



1. Extra Insulation: Lowest Heat Leakage
2. Ultra-low temperature curtains
3. Reinforced structure for in-out extreme temperature variation

CSS CONTAINER DIMENSIONS



ISO 668 TK size	ISO 6346 type	Unit	Temp range	Door	Volume m3	Internal mm			External mm		
						Length	Width	Height	Length	Width	Height
10´ container CSS	12RB	SuperFreezer	-70° to -10°C	Special 1100*2000	11.1	2,342	2,138	2,219	2,991	2,438	2,591
20´ container CSS	22RB	SuperFreezer	-70° to -10°C	Special 1100*2000	24.3	5,410	2,058	2,179	6,058	2,438	2,591

COOLING CAPACITIES & PRODUCT SPECIFICATIONS



MAGNUM PLUS

Test method according to AHRI standard no. 1110-69 approval Unit mounted in test room				
Net cooling capacity at 37.8°C (100°F) ambient temperature at 60 Hz power				
Evaporator Return Air Temperature	Power requirement Watt	Watts	KCal/hr	BTU/hr
21.1°C (70°F)	11,500	16,500	13,608	56,700
1.7°C (35°F)	11,000	11,900	10,584	40,945
-17.8°C (0°F)	7,500	7,200	6,300	24,785
-28.9°C (-20°F)	6,600	5,000	4,360	17,251
-35°C (-31°F)	6,000	4,100	3,528	14,000
-40C (-40F)	3,650	3,700	3,184	12,636
Net heating capacity (including fan heat) at 60 Hz power				
System heating capacity	5,250		4,515	17,914

SUPER FREEZER

Test method according to AHRI standard no. 1110-69 approval. Unit mounted in test room			
Net cooling capacity at 37.8°C (100°F) ambient temperature at 60 Hz power			
Evaporator Return Air Temperature	Fan Heat Watt	Net Capacity Watt	Power requirement Watt Power Factor
-70°C	550 W	3.744 W	9.585 W – 0.70
-65°C	550 W	4.876 W	10.660 W – 0.73
-60°C	550 W	5.850 W	13.200 W – 0.81
-30°C	550 W	8.250 W	16.300 W – 0.84

ELECTRICAL SPECS



- Magnum Plus (operates on 360-460 volt/3 phase/50 or 60 HZ)
 - 25 Amp Circuit Breaker
 - Power electronics is protected with 3*20 amp fuses
 - Compressor and fan motors are protected with overheat protectors
 - Unit is delivered with a 60LF 4*4mm² power cable with 32 Amp plug type CEE17
- Super Freezer (operates on 360-460 volt/3 phase/50 or 60 HZ)
 - 32 Amp Circuit breaker
 - The main relay board is protected with 3*20 amp fuses
 - Compressors and fan motors are protected with overheat protectors
 - Unit is delivered with a 60LF 4*6mm² power cable with 32 Amp plug type CEE17

CERTIFICATION



Certifications and design standards:

Magnum+



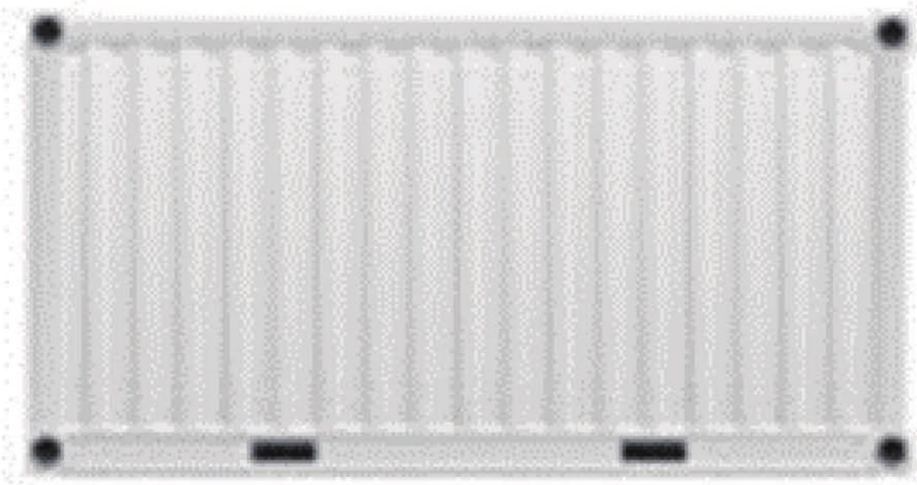
Superfreezers



- ISO1496-2
- CE
- Pharma GDP
- AHRI
- ATO (former Sprenger Institute)
- ATP
- American Bureau of Shipping, Lloyds and Bureau Veritas
- USDA
- TIR (International Customs Regulations for Containers)

Certifications and design standards:

Containers



- ISO/TC-104 CC
- ISO 668 Dimensions and ratings (1995 edition)
- ISO 6346 Coding, identification and markings (3rd edition 1995)
- ISO 1496-2 Specification and testing thermal containers (2018)
- ISO 1161 Specification of corner fittings (1990)
- TIR requirements and certificate
- CSC requirements and certificate
- TCT: No exposed timber components to be used

SUGGESTED PRICING



THERMO KING PRICING FOR COLD STORAGE SOLUTIONS			
[Full Package Box plus Refrigeration Unit]			
ISO 668 TK Size	ISO 6346 Type	Refrigeration Unit	Temp Range
10' Container	12R1	SuperFreezer	-70° to -10°C
20' Container	22R1	SuperFreezer	-70° to -10°C

- Current Lead Times (subject to change without notice)
 - Immediate stock availability:
 - Regional stock of 20' Containers in Belgium: starting from mid-Feb
 - Additional stock in China (Port of Shanghai)
 - New production: max 12 weeks

BACKUP POWER SUPPLY - SG-5000



Side-mount



Center-mount

SG-5000



Clip-On