The future has a name

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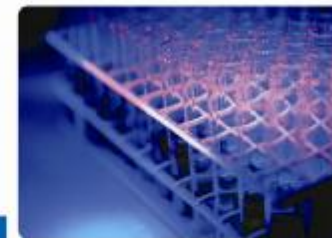
kaltıs®

kaltis®

Kaltis® freezer quality, stability, reliability and low maintenance, offers you peace of mind that your samples are correctly stored, day after day, year in and year out.

CONTENTS

Kaltis® laboratory equipment is characterised by design innovation, quality construction and long-term reliability.

Kaltis® freezers provide reliable, dependable performance under all laboratory conditions. Our ultra low temperature freezers have a 25-year track record of proven performance.

Kaltis® low and ultra low freezers are designed for the long-term storage of biological materials, blood components and pharmaceuticals, covering a wide range of applications such as life sciences, pharmaceutical and industry.

Kaltis® freezers utilize the latest refrigeration technology and have been developed to increase reliability, stability, dependability and to reduce energy consumption.

Electrical Information

Kaltis® freezers comply with CE & UL safety and performance standards. We supply power cords and plugs suitable for all parts of the world.

Typical Applications	Low -10°C~-40°C	Ultra Low -50°C~-86°C	Cryogenic -140°C~-150°C
Bacteria	S	S	L
Blood components		S	L
Bone marrow		S	L
Clinical samples	S	S/L	L
Fungi (yeasts/spores/molds)	S	S/L	L
Insect cell culture		S	L
Mammalian cell culture		S	L
Materials testing storage	G	G	G
Molecular biology enzymes/kits	S		
Nucleic acids (DNA/RNA)	S/L	L	
Plant cell culture		S	L
Plasma	G		
Proteins	G		
Red cell storage		G/L	
Sperm, fertilized ova		S	L
Tissue		S	L
Viruses	S/L	G/L	

S: Short Term   G: General Storage   L: Long Term

Performance Data

Please contact us for performance specifications, such as temperature pull down, warm-up insulation, power consumption, noise levels and other model-specific operational characteristics.

Ordering Information

Kaltis® can help you to select a freezer for your specific application and reqirements. Kaltis® freezer part numbers are voltage-specific.

Environment friendly, CFC/HCFC-Free refrigerants, insulation and packaging.

Kaltis® manufactures only CFC/HCFC-Free refrigeration systems. We only use CFC/HCFC-Free refrigerants and insulation. Our packaging materials are recyclable.
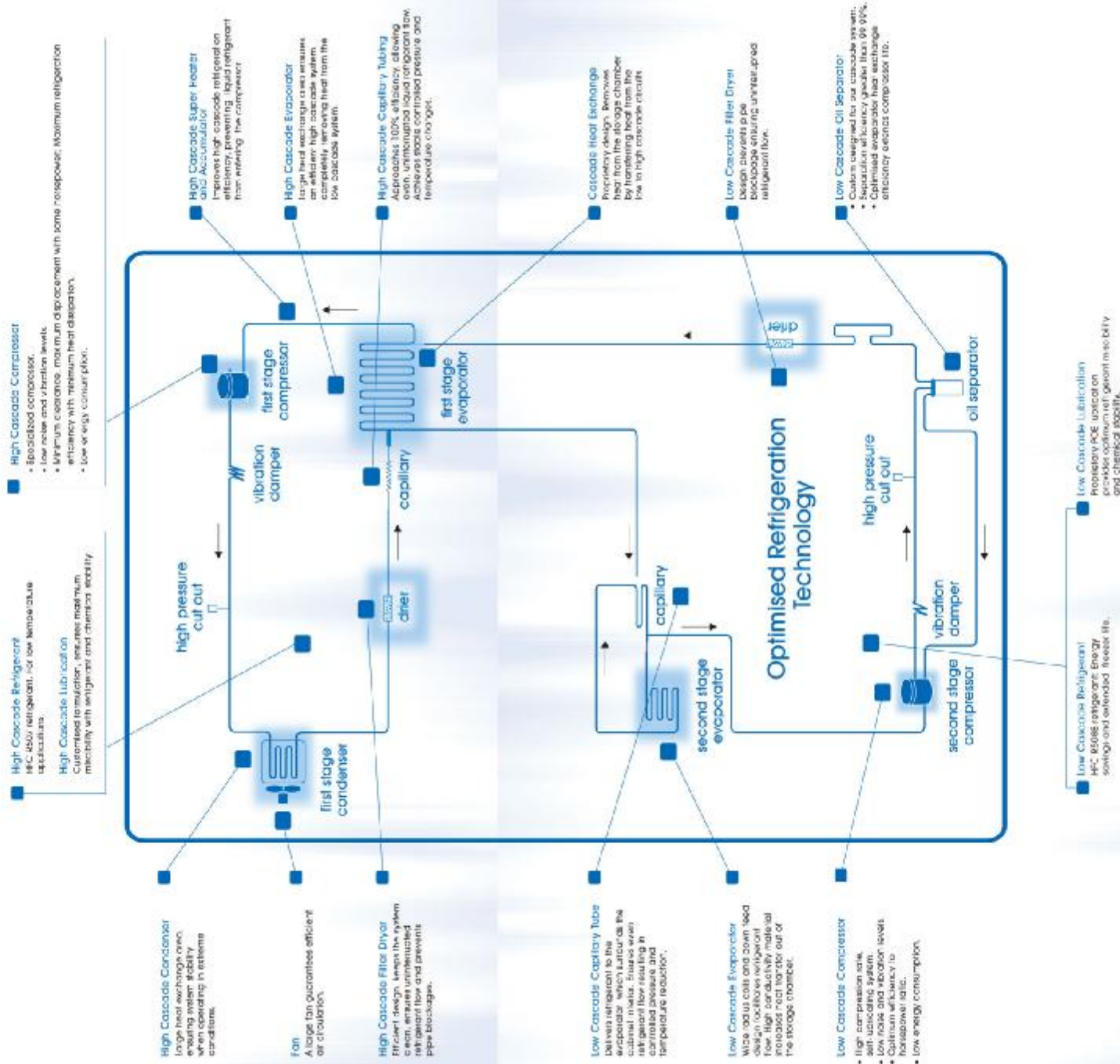
kaltis®

Why Kaltis®?

Kaltis® freezers are optimised refrigeration systems. These systems have been extensively field tested and are reliable and stable.

Our refrigeration systems have the following features:

✦ Refrigerants and compressors are available globally.
✦ Our freezers have been tested in elevated temperature and humidity environments, and unstable power supply conditions.
✦ CFC/HCFC-Free, ozone-friendly refrigerants.
✦ Low start-up current requirement and low energy consumption.
✦ Low noise levels (below53dBA)

Advanced Refrigeration Technology

High Cascade Compressor
- Specialized compressor.
- Low noise and vibration levels.
- Minimum clearance, maximum displacement with some horsepower. Maximum refrigeration efficiency with minimum heat dissipation.
- Low energy consumption.

High Cascade Refrigerant
HFC R50 refrigerant. For low temperature applications.

High Cascade Lubrication
Customised formulation, ensures maximum miscibility with refrigerant and chemical stability.

High Cascade Condenser
Large heat exchange area ensuring water stability when operating in extreme conditions.

Fan
A large fan guarantees efficient air circulation.

High Cascade Filter Dryer
Efficient design, keeps the system clean, ensures uninterrupted refrigerant flow and prevents pipe blockages.

Low Cascade Capillary Tube
Delivers refrigerant to the evaporator which is around as the capillary metal. Ensures even refrigerant flow allowing in controlled pressure and temperature reduction.

Low Cascade Evaporator
Wide radius coils and zoom feed design positions refrigerant flow. High conductivity material increases fast transfer out of the storage chamber.

Low Cascade Compressor
- High compression rate.
- self lubricating system.
- Low noise and vibration levels.
- Optimum efficiency to horsepower ratio.
- Low energy consumption.

High Cascade Super Heater and Accumulator
Improves high cascade refrigeration efficiency, preventing liquid refrigerant from entering the compressor.

High Cascade Evaporator
Large heat exchange area ensures an efficient high cascade system completely removing heat from the low cascade system.

High Cascade Capillary Tubing
Approaches 100% efficiency, allowing even, uninterrupted liquid refrigerant flow. Achieves stable controlled pressure and temperature changes.

Cascade Heat Exchange
Proprietary design. Removes heat from the storage chamber by transferring heat from the low in high cascade circuits.

Low Cascade Filter Dryer
Design prevents pipe blockage ensuring uninterrupted refrigerant flow.

Low Cascade Oil Separator
Custom designed for our cascade system.
- Separation efficiency greater than 96-99%.
- Optimised evaporator heat exchange efficiency extends compressor life.

Low Cascade Lubrication
Proprietary POE Lubrication provides optimum refrigerant miscibility and chemical stability.

Low Cascade Refrigerant
HFC R508 refrigerant. Energy savings and extended freezer life.

Diagram labels

first stage compressor

vibration damper

high pressure cut out

first stage condenser

capillary

drier

first stage evaporator

second stage evaporator

second stage compressor

vibration damper

high pressure cut out

oil separator

drier

capillary

Optimised Refrigeration Technology

The future has a name

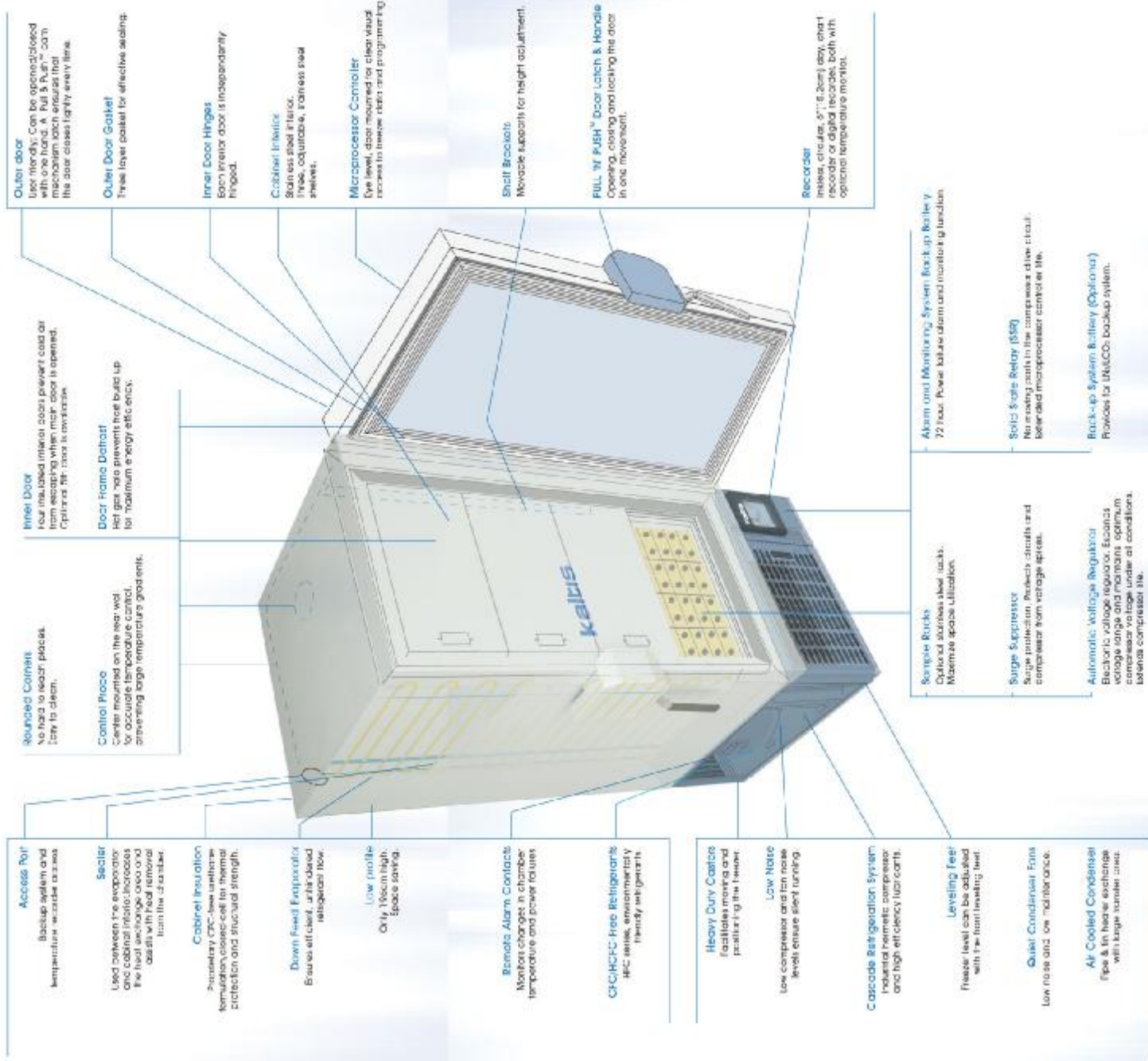## Designed and Optimized for Ultra Low Temperature Applications.

Our cabinets are designed to meet the challenge of ultra low temperature applications, while ensuring long term durability and low maintenance.

* The Cabinet is easy to maintain.
* Proprietary low "K" factor, CFC/HCFC-Free insulation.
* Heated door seal and lid gaskets form multi-point seals, minimizing frost build up, especially around access areas.
* Upright and chest cabinets utilise a down feed evaporator coil which completely surrounds the inner chamber. This coil is designed to ensure uninterrupted refrigerant flow ensuring and construction optimal cooling efficiency.

Cabinet Design

The illustration shows the kaltis® Prime Series Upright, 499L, 4 Door, -86°C freezer with optional temperature recorder and inventory system.

Outer door
User friendly. Can be opened/closed with one hand. A Pull & Push™ cam mechanism latch ensures that the door closes tightly every time.

Outer Door Gasket
Three layer gasket for effective sealing.

Inner Door Hinges
Each inner door is independently hinged.

Cabinet Interior
Stainless steel interior. Inner, adjustable, stainless steel shelves.

Microprocessor Controller
Eye level, door mounted for clear visual access to freezer status and programming.

Shelf Brackets
Movable supports for height adjustment.

FULL 'N' PUSH™ Door Latch & Handle
Opening, closing and locking the door in one movement.

Recorder
Inkless, circular, 6", 8.2cm) day, chart recorder or digital records, both with optional temperature monitor.

Inner Door
Four insulated interior doors prevent cold air from escaping when main door is opened. Optional filler door is available.

Door Frame Defrost
Hot gas hole prevents frost build up for maximum energy efficiency.

Rounded Corners
No hard to reach places. Easy to clean.

Control Place
Center mounted on the rear wall for accurate temperature control, preventing large temperature gradients.

Alarm and Monitoring System Back-up Battery
72 hour Power failure alarm and monitoring function.

Solid State Relay (SSR)
No moving parts in the compressor draw circuit. Extended microprocessor controller life.

Back-up System Battery (Optional)
Provides for LN/LCO₂ backup system.

Surge Racks
Optional stainless steel racks. Maximise space utilisation.

Surge Suppressor
Surge protection. Protects circuits and compressor from voltage spikes.

Automatic Voltage Regulator
Electronic voltage regulator. Balances voltage range and maintains optimum compressor voltage under all conditions. Extends compressor life.

Access Port
Back-up system and temperature recorder access.

Sealer
Used between the evaporator and cabinet interior. Increases the heat exchange area and assists with heat removal from the chamber.

Cabinet Insulation
Proprietary CFC-free urethane formulation, closed-cell for thermal protection and structural strength.

Down Feed Evaporator
Ensures efficient, uninhibited refrigerant flow.

Low profile
Only 190cm high. Space saving.

Remote Alarm Contacts
Monitors change in chamber temperature and power failures.

CFC/HCFC-Free Refrigerants
HFC series, environmentally friendly refrigerants.

Heavy Duty Castors
Facilitates moving and positioning the freezer.

Low Noise
Low compressor and fan noise levels ensure silent running.

Cascade Refrigeration System
Industrial hermetic compressor and high efficiency lubricants.

Levelling Feet
Freezer level can be adjusted with the front levelling feet.

Quiet Condenser Fans
Low noise and low maintenance.

Air Cooled Condenser
Pipe & fin heat exchange with large surface area.
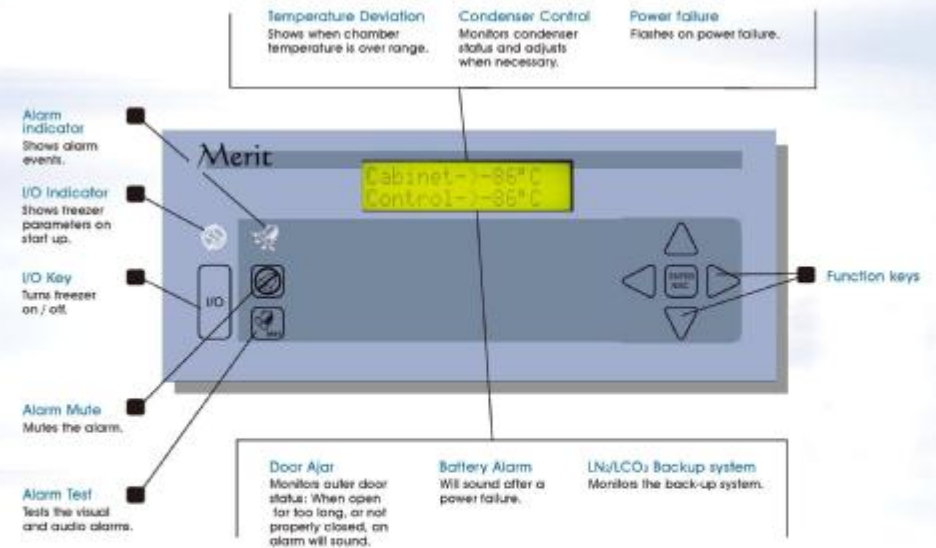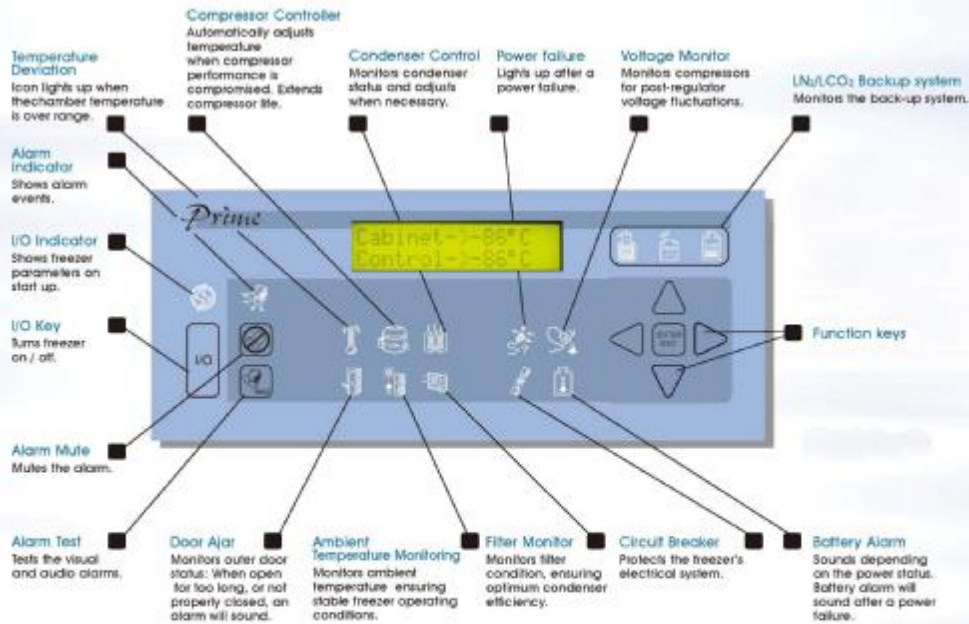
Minerva™ Microprocessor Controllers
Prime and Merit series

- **Intelligent Self-Diagnosis**
  System controller monitors and displays the operating parameters and, if necessary, makes adjustments.

- **Digital Display**
  Easy to read, multifunction LCD Digital display.

- **Audible & Visual Alarms**
  Automatically activated by an alarm event.

- **Automatic Restart Delay**
  Auto Restart Delay ensures on line quality after power failure, decreases power loading, and protects the compressors.

- **Voltage & Heavy Load Monitor**
  Monitors voltage.
  Automatically activated to decrease compressor load, extending compressor life.

- **Auto Restart**
  Automatic system re-start and re-set after a power failure.

- **Security**
  Standard-4 digit password

- **Amperage Monitor**
  Monitors current, in real-time.

- **Real Time Clock**
  Built in clock; Confirms alarm time and highest temperature.

- **Event Recorder**
  Records alarm, temperature & time.

Minerva™ Microprocessor Controllers
Prime and Merit series

- **Intelligent Self-Diagnosis**
  System controller monitors and displays the operating parameters and, if necessary, makes adjustments.

- **Digital Display**
  Easy to read, multifunction LCD Digital display.

- **Audible & Visual Alarms**
  Automatically activated by an alarm event.

- **Automatic Restart Delay**
  Auto Restart Delay ensures on line quality after power failure, decreases power loading, protecting the compressors.

- **Real Time Clock**
  Built in clock: Confirms the alarm time and highest temperature. Records alarm, temperature & time.

- **Heavy Load Mode**
  Automatically activated to decrease compressor load, extending compressor life.

- **Auto Restart**
  Automatic restart and system re-set after a power failure.

- **Security**
  Standard-4 digit password

Minerva™ microprocessor controllers combine system control, electronic, alarm and monitoring functions. Minerva™ provides the highest level of storage and refrigeration protection. Minerva™ constantly scans ambient conditions and the refrigeration system. Information is constantly sent to the controller, ensuring optimum temperature control with the minimum power consumption.

Temperature Deviation
Icon lights up when the chamber temperature is over range.

Compressor Controller
Automatically adjusts temperature when compressor performance is compromised. Extends compressor life.

Condenser Control
Monitors condenser status and adjusts when necessary.

Power failure
Lights up after a power failure.

Voltage Monitor
Monitors compressors for post-regulator voltage fluctuations.

LN₂/LCO₂ Backup system
Monitors the back-up system.

Alarm indicator
Shows alarm events.

I/O Indicator
Shows freezer parameters on start up.

I/O Key
Turns freezer on / off.

Function keys

Alarm Mute
Mutes the alarm.

Alarm Test
Tests the visual and audio alarms.

Door Ajar
Monitors outer door status: When open for too long, or not properly closed, an alarm will sound.

Ambient Temperature Monitoring
Monitors ambient temperature ensuring stable freezer operating conditions.

Filter Monitor
Monitors filter condition, ensuring optimum condenser efficiency.

Circuit Breaker
Protects the freezer's electrical system.

Battery Alarm
Sounds depending on the power status. Battery alarm will sound after a power failure.

Temperature Deviation
Shows when chamber temperature is over range.

Condenser Control
Monitors condenser status and adjusts when necessary.

Power failure
Flashes on power failure.

Alarm indicator
Shows alarm events.

I/O Indicator
Shows freezer parameters on start up.

I/O Key
Turns freezer on / off.

Function keys

Alarm Mute
Mutes the alarm.

Alarm Test
Tests the visual and audio alarms.

Door Ajar
Monitors outer door status: When open for too long, or not properly closed, an alarm will sound.

Battery Alarm
Will sound after a power failure.

LN₂/LCO₃ Backup system
Monitors the back-up system.

kaltis

Operating Temperature

- -86°C Range -20°C to -86°C.

Refrigeration System

The air cooled refrigeration system has been designed to maintain the set temperature in elevated ambient temperature environments.
- Dual cascade refrigeration system, with two, 1HP air-cooled compressors.
- CFC/HCFC-Free refrigerants.
- Extra large condenser with two aerodynamic axial fans provides increased air flow and heat expulsion.
- Down flow evaporator for efficient refrigerant flow, oil return, and longer compressor life.
- Washable condenser filter keeps fins dust-free, maintaining optimal cooling efficiency.

Control System

- Key Pad, multi-functional display, microprocessor control system.
- Password protected security system for power, temperature & alarm settings. Independent operating temperatures and high/low limit alarm.
- Factory set for quick setup and system start. Temperature adjustments in steps of 1°C.

Electrical System

- Automatic voltage compensation for voltage fluctuations.
- Incoming line voltage monitoring and digital display.
- Built-in surge suppressor flattens incoming voltage spikes.
- Solid state relay. No moving parts in compressor drive circuit. No spikes on start-up, protecting the microprocessor controller.
- Circuit breaker. Protects compressor and power supply circuits.
- Built in Automatic Delay Restart. Ensures on line quality, decreasing power load and protecting the compressor.

Alarm System

- Intelligent Self-Diagnosis system controller monitors system parameters and displays alarm status in real time.
- Audible & visual alarms alert you to:
  Temperature changes
  Power failure
  Low back up battery voltage
  Door ajar
- Automatic, continuous back-up battery charge provides full system function during power failure.
- Remote alarm contacts for advanced protection.
- Automatic temperature fluctuation recognition and logging.
- Touch pad alarm test function to test the alarm system without opening the freezer door.
- 22 alarm codes.

Monitoring System

- Climate indicator displays environmental temperature.
- Clean filter indicator monitors condenser filter, ensuring optimum cooling performance.
- Voltage compensation indicator. Automatically monitors and adjusts incoming voltage, compensating for voltage spikes.
- Low battery indicator. Flashing light shows when battery needs replacement.
- Surge suppressor indicator monitors circuit breaker.
- Compressor protection monitors and automatically adjusts freezer conditions, extending compressor life.
- Computer interface through a standard RS-232 data port. Allows monitoring of all freezer functions (requires optional software).
- Real time clock.
- Alarm history. Records alarm time and highest temperature.

Cabinet Construction

- Moulded, closed cell, CFC/HCFC-Free urethane insulation.
- Heavy-gauge steel cabinet with high-impact powder coated exterior finish.
- Stainless Steel Interior.
- Rounded interior corners for easy cleaning.
- Access port (25.4mm) diameter, with cap.
- Dual wheel, heavy duty swivel castors.

Upright Cabinet Construction

- Low profile design.
- Eye-level, door mounted controls.
- Four, insulated inner doors with independent door hinges and lock. An optional 5th door is available.
- Three, adjustable SUS304 shelves, creating four interior compartments.
- High-density, CFC/HCFC-Free door insulation.
- PULL 'N' PUSH™ door latch & handle, patented cam mechanism. Close door by pushing handle forward. Open the door by pulling handle backwards. For added security, a padlock can be fitted.

Chest Cabinet Construction

- Low profile design for easier access to samples.
- Heavy-duty counter balanced lid with integrated keyed lid lock for security.
- Double seal lid gaskets to minimise frost build-up.
- Independent inner lids provide additional internal temperature protection.

Inventory System and Accessories

- Includes racks, boxes and dividers. These may be ordered separately, or as full-load sample inventory system.
- See Accessories section for information for optional alarm systems, temperature recorders, LNₓ/LCO₂ back-up systems, inventory components and associated products.
- RS485 communication port, optional software.

-86 °C Prime Series Ultra Low Temperature Freezers

Model No.	Power Requirements			Dimensions		Capacity		Weight	
	VOLTS V	FREQUENCY Hz	AMPS	Interior (cm / inch) W x D x H	Exterior (cm / inch) W x D x H	L	ft³	Kg	Lb
GV039P	100-115	50-60	15	60 x 50 x 129 / 23.6 x 19.6 x 50.7	85 x 74 x 196 / 33.4 x 29.1 x 77.1	390	11.7	290	639
AV039P	220-240	50	7.5						
DV039P	208-230 / 200	50-60	7.5						
GV050P	100-115	50-60	15	60 x 64.5 x 129 / 23.6 x 25.3 x 50.7	85 x 88.5 x 196 / 33.4 x 29.1 x 77.1	499	17.6	320	705
AV050P	220-240	50	7.5						
DV050P	208-230 / 200	50-60	7.5						
GV061P	100-115	50-60	15	74 x 64.5 x 129 / 29.1 x 25.3 x 50.7	99 x 88.5 x 196 / 38.9 x 34.8 x 77.1	616	21.7	350	771
AV061P	220-240	50	7.5						
DV061P	208-230 / 200	50-60	7.5						
GV073P	100-115	50-60	15	85 x 64.5 x 129 / 34.6 x 25.3 x 50.7	113 x 88.5 x 196 / 44.4 x 29.1 x 77.1	733	25.8	380	838
AV073P	220-240	50	7.5						
DV073P	208-230 / 200	50-60	7.5						
GH020P	100-115	50-60	15	50 x 57 x 69.3 / 19.6 x 22.4 x 27.2	115 x 82 x 98.2 / 45.2 x 32.2 x 38.6	198	7.0	250	551
AH020P	220-240	50	7.5						
DH020P	208-230 / 200	50-60	7.5						
GH030P	100-115	50-60	15	75 x 57 x 69.3 / 29.5 x 22.4 x 27.2	140 x 82 x 98.2 / 55.1 x 32.2 x 38.6	298	10.5	310	661
AH030P	220-240	50	7.5						
DH030P	208-230 / 200	50-60	7.5						
GH040P	100-115	50-60	15	100 x 57 x 69.3 / 39.6 x 22.4 x 27.2	165 x 82 x 98.2 / 64.9 x 32.2 x 38.6	398	14.0	330	726
AH040P	220-240	50	7.5						
DH040P	208-230 / 200	50-60	7.5						
GH050P	100-115	50-60	15	125 x 57 x 69.3 / 49.2 x 22.4 x 27.2	190 x 82 x 98.2 / 74.8 x 32.2 x 38.6	498	17.5	390	859
AH050P	220-240	50	7.5						
DH050P	208-230 / 200	50-60	7.5						
GH060P	100-115	50-60	15	150 x 57 x 69.3 / 59.0 x 22.4 x 27.2	215 x 82 x 98.2 / 84.6 x 32.2 x 38.6	598	21.1	420	925
AH060P	220-240	50	7.5						
DH060P	208-230 / 200	50-60	7.5						

- Width allowance for handles & hinges: Upright freezers: 80mm, Chest freezers: 110mm.

-86°C Merit Series Ultra Low Temperature Freezers

Model No.	Power Requirements			Dimensions		Capacity		Weight	
	VOLTS V	FREQUENCY Hz	AMPS	Interior (cm / inch) W x D x H	Exterior (cm / inch) W x D x H	L	ft³	Kg	Lb
GVC39M	100-115	50-60	15	60 x 50 x 129 / 23.6 x 19.6 x 50.7	85 x 74 x 196 / 33.4 x 29.1 x 77.1	390	11.7	290	639
AVC39M	220-240	50	7.5						
DVC39M	208-230 / 200	50-60	7.5						
GVC50M	100-115	50-60	15	60 x 64.5 x 129 / 23.6 x 25.3 x 50.7	85 x 88.5 x 196 / 33.4 x 29.1 x 77.1	499	17.6	320	705
AVC50M	220-240	50	7.5						
DVC50M	208-230 / 200	50-60	7.5						
GVC61M	100-115	50-60	15	74 x 64.5 x 129 / 29.1 x 25.3 x 50.7	99 x 88.5 x 196 / 38.9 x 34.8 x 77.1	616	21.7	350	771
AVC61M	220-240	50	7.5						
DVC61M	208-230 / 200	50-60	7.5						
GVC73M	100-115	50-60	15	85 x 64.5 x 129 / 34.6 x 25.3 x 50.7	113 x 88.5 x 196 / 44.4 x 29.1 x 77.1	733	25.8	380	838
AVC73M	220-240	50	7.5						
DVC73M	208-230 / 200	50-60	7.5						
GH020M	100-115	50-60	15	50 x 57 x 69.3 / 19.6 x 22.4 x 27.2	115 x 82 x 96.2 / 45.2 x 32.2 x 38.6	198	7.0	250	551
AH020M	220-240	50	7.5						
DH020M	208-230 / 200	50-60	7.5						
GH030M	100-115	50-60	15	75 x 57 x 69.3 / 29.5 x 22.4 x 27.2	140 x 82 x 96.2 / 55.1 x 32.2 x 38.6	298	10.5	310	661
AH030M	220-240	50	7.5						
DH030M	208-230 / 200	50-60	7.5						
GH040M	100-115	50-60	15	100 x 57 x 69.3 / 39.6 x 22.4 x 27.2	165 x 82 x 96.2 / 64.9 x 32.2 x 38.6	398	14.0	330	726
AH040M	220-240	50	7.5						
DH040M	208-230 / 200	50-60	7.5						
GH050M	100-115	50-60	15	125 x 57 x 69.3 / 49.2 x 22.4 x 27.2	190 x 82 x 96.2 / 74.8 x 32.2 x 38.6	498	17.5	390	859
AH050M	220-240	50	7.5						
DH050M	208-230 / 200	50-60	7.5						
GH060M	100-115	50-60	15	150 x 57 x 69.3 / 59.0 x 22.4 x 27.2	215 x 82 x 96.2 / 84.6 x 32.2 x 38.6	598	21.1	420	925
AH060M	220-240	50	7.5						
DH060M	208-230 / 200	50-60	7.5						

- Refer to comparative chart on page 19 for series-specific features.

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The future has a name

Operating Temperature

- -40°C (range -10°C to -40°C).

Refrigeration System

The air cooled refrigeration system has been designed to maintain the set temperature in elevated ambient temperature environment.
- Cascade refrigeration system, with one, 1HP air-cooled compressors.
- CFC/HCFC-Free refrigerants.
- Extra large condenser with two aerodynamic axial fans provides increased air flow and heat expulsion.
- Down flow evaporator for efficient refrigerant flow, oil return, and longer compressor life.
- Washable condenser filter keeps fins dust-free, maintaining optimal cooling efficiency.. No tools are required for removal.

Control System

- Key Pad, multi-functional display, microprocessor control system.
- Password protected security system for power, temperature & alarm settings. Independent operating temperatures and high/low limit alarm.
- Preset for quick setup and system start. Temperature adjustments in steps of 1°C.

Electrical System

- Automatic voltage compensation for voltage fluctuations.
- Incoming line voltage monitoring and digital display.
- Built-in surge suppressor minimizes effect of incoming voltage spikes.
- Solid state relay. No moving parts in compressor drive circuit. No spikes on start-up, protecting the microprocessor controller.
- Circuit breaker. Protects compressor and power supply circuits.
- Built in Automatic Delay Restart. Ensures on line quality, decreasing power load and protecting the compressor.

Alarm System

- Intelligent Self-Diagnosis system controller monitors system parameters and display alarm status in real time.
- Audible & visual alarms alert you to:
  Temperature Changes
  Power failure
  Low back up battery power alarm
  Door ajar
- Automatic, continuous charge of the backup battery provides full system function during power failure.
- Remote alarm contacts for advanced protection.
- Automatic temperature fluctuation recognition and logging.
- Key pad alarm test function to test the alarm system without opening the freezer door.
- 18 alarm codes.

Monitoring System

- Climate indicator warns of environmental temperature risks affecting performance.
- Clean filter indicator advises when to wash condenser filter to maintain optimum cooling performance.
- Voltage compensation indicator. Automatically monitors and adjusts incoming voltage, flattening voltage spikes, ensuring compressor operation remains within specifications.
- Low battery indicator. Flashing light shows when battery needs replacement.
- Surge suppressor indicator monitors circuit breaker.
- Compressor life protection monitors and automatically adjusts freezer conditions, extending compressor life.
- Computer interface through a standard RS 232 data port. Allows monitoring of all freezer functions (requires optional software).
- Real time clock.
- Alarm history. Records alarm time and highest temperature.

Cabinet Construction

- Moulded, closed cell, CFC-free urethane insulation.
- Heavy-gauge steel cabinet with high-impact powder coated finish.
- Rounded interior corners for easy cleaning.
- Access port (25.4mm) diameter, with cap.
- Dual wheel, heavy-duty swivel casters.

Upright Cabinet Construction

- Low profile design.
- Eye-level, door mounted controls.
- Four, insulated inner doors with independent door hinges and lock. An optional 5th door is available.
- Three, adjustable SUS304 shelves, creating four interior compartments.
- High-density, CFC/HCFC-Free door insulation.
- PULL 'N' PUSH™ door latch & handle, patented cam mechanism. Close door by pushing handle forward. Open the door by pulling handle backwards. For added safety and security, a padlock can be fitted.

Chest Cabinet Construction

- Low profile design for easier access to samples.
- Heavy-duty counter balanced lid with integrated keyed lid lock for security.
- Double seal lid gaskets to minimize frost build-up.
- Independent sub-lids provide additional internal temperature protection.

Inventory System and Accessories

- Includes racks, boxes and dividers. These may be ordered separately or as full-load sample inventory system.
- See Accessories section for information on optional alarm systems, temperature recorders, LN2/CO2 back-up systems, inventory components and associated products.
- RS485 communication port, optional software.

-40 °C Prime Series Low Temperature Freezers

Model No.	Power Requirements			Dimensions		Capacity		Weight	
	VOLTS V	FREQUENCY Hz	AMPS	Interior (cm / inch) W × D × H	Exterior (cm / inch) W × D × H	L	ft³	Kg	Lb
GA039P	100-115	50-60	10	60 x 50 x 139 23.6 x 19.6 x 50.7	85 x 74 x 196 33.4 x 29.1 x 77.1	390	13.7	290	639
AA039P	220-240	50	5.7						
DA039P	208-230 200	50-60	5.7						
GA050P	100-115	50-60	10	60 x 64.5 x 129 23.6 x 25.3 x 50.7	85 x 88.5 x 196 33.4 x 29.1 x 77.1	499	17.6	320	705
AA050P	220-240	50	5.7						
DA050P	208-230 200	50-60	5.7						
GA061P	100-115	50-60	10	74 x 64.5 x 129 29.1 x 25.3 x 50.7	99 x 88.5 x 196 39.0 x 34.8 x 77.1	616	21.7	350	771
AA061P	220-240	50	5.7						
DA061P	208-230 200	50-60	5.7						
GA073P	100-115	50-60	10	88 x 64.5 x 129 34.6 x 25.3 x 50.7	113 x 88.5 x 196 44.4 x 29.1 x 77.1	732	25.8	380	838
AA073P	220-240	50	5.7						
DA073P	208-230 200	50-60	5.7						
L8020P	100-115	50-60	8.5	50 x 57 x 69.3 19.6 x 22.4 x 27.2	115 x 82 x 98.2 45.2 x 32.2 x 38.6	198	7.0	250	551
A8020P	220-240	50	4.5						
D8020P	208-230 200	50-60	4.5						
G8030P	100-115	50-60	8.5	75 x 57 x 69.3 29.5 x 22.4 x 27.2	140 x 82 x 98.2 55.1 x 32.2 x 38.6	298	10.5	310	684
A8030P	220-240	50	4.5						
D8030P	208-230 200	50-60	4.5						
G8040P	100-115	50-60	8.5	100 x 57 x 69.3 39.6 x 22.4 x 27.2	165 x 82 x 98.2 64.9 x 32.2 x 38.6	398	14.0	330	726
A8040P	220-240	50	4.5						
D8040P	208-230 200	50-60	4.5						
G8050P	100-115	50-60	8.5	125 x 57 x 69.3 49.2 x 22.4 x 27.2	190 x 82 x 98.2 74.8 x 32.2 x 38.6	498	17.5	390	859
A8050P	220-240	50	4.5						
D8050P	208-230 200	50-60	4.5						
G8060P	100-115	50-60	8.5	150 x 57 x 69.3 59.0 x 22.4 x 27.2	215 x 82 x 98.2 84.6 x 32.2 x 38.6	598	21.1	420	925
A8060P	220-240	50	4.5						
D8060P	208-230 200	50-60	4.5						

• Width allowance for handles & hinges:Upright freezers:80mm, Chest freezers:110mm.

-40°C Merit Series Low Temperature Freezers

Model No.	Power Requirements			Dimensions		Capacity		Weight	
	VOLTS V	FREQUENCY Hz	AMPS	Interior (cm / inch) W × D × H	Exterior (cm / inch) W × D × H	L	ft³	Kg	Lb
GA039M	100-115	50-60	10	60 x 50 x 139 33.6 x 19.6 x 50.7	85 x 74 x 196 33.4 x 29.1 x 77.1	390	13.7	290	639
AA039M	220-240	50	5.7						
DA039M	208-230 200	50-60	5.7						
GA050M	100-115	50-60	10	60 x 64.5 x 129 23.6 x 25.3 x 50.7	85 x 88.5 x 196 33.4 x 29.1 x 77.1	499	17.6	320	705
AA050M	220-240	50	5.7						
DA050M	208-230 200	50-60	5.7						
GA061M	100-115	50-60	10	74 x 64.5 x 129 29.1 x 25.3 x 50.7	99 x 88.5 x 195 39.0 x 34.8 x 77.1	616	21.7	350	771
AA061M	220-240	50	5.7						
DA061M	208-230 200	50-60	5.7						
GA073M	100-115	50-60	10	88 x 64.5 x 129 34.6 x 25.3 x 50.7	113 x 88.5 x 196 44.4 x 29.1 x 77.1	732	25.8	380	838
AA073M	220-240	50	5.7						
DA073M	208-230 200	50-60	5.7						
G8020M	100-115	50-60	8.5	50 x 57 x 69.3 19.6 x 22.4 x 27.2	115 x 82 x 96.2 45.2 x 32.2 x 38.6	198	7.0	250	551
A8020M	220-240	50	4.5						
D8020M	208-230 200	50-60	4.5						
G8030M	100-115	50-60	8.5	75 x 57 x 69.3 29.5 x 22.4 x 27.2	140 x 82 x 96.2 55.1 x 32.2 x 38.6	298	10.5	310	684
A8030M	220-240	50	4.5						
D8030M	208-230 200	50-60	4.5						
G8040M	100-115	50-60	8.5	100 x 57 x 69.3 39.6 x 22.4 x 27.2	165 x 82 x 96.2 64.9 x 32.2 x 38.6	398	14.0	330	726
A8040M	220-240	50	4.5						
D8040M	208-230 200	50-60	4.5						
G8050M	100-115	50-60	8.5	125 x 57 x 69.3 49.2 x 22.4 x 27.2	190 x 82 x 96.2 74.8 x 32.2 x 38.6	498	17.5	390	859
A8050M	220-240	50	4.5						
D8050M	208-230 200	50-60	4.5						
G8060M	100-115	50-60	8.5	150 x 57 x 69.3 59.0 x 22.4 x 27.2	215 x 82 x 96.2 84.6 x 32.2 x 38.6	598	21.1	420	925
A8060M	220-240	50	4.5						
D8060M	208-230 200	50-60	4.5						

• Refer to comparative chart on page 19 for series specific features.

Kaltis® Green

Environmentally Friendly, Hydrocarbon Freezers. Good for the Environment - Good for your Lab

Hydrocarbons are non toxic, non ozone depleting gases. Our range of HC-freezers have been designed to meet your environmental requirements. This freezer range is available in chest and upright models, and has the identical advanced features of our Prime and Merit series.

As well as eliminating environmentally harmful refrigerants, these freezers offer up to 10% reduction in power consumption. The hydrocarbon content of our new freezers is less than a tablespoon full and the freezers have been designed to meet EC regulations and ACRID guidelines for the use of hydrocarbon refrigerants.

KALTIS® HE FREEZERS

A RANGE OF FREEZERS DESIGNED TO OPERATE AT ELEVATED ENVIRONMENTAL TEMPERATURES WITH EXCEPTIONAL INTERNAL TEMPERATURE STABILITY.

HE freezers are available in -80°C ultra-low and -40°C low temperature models, only in the Prime series. These carry a five year compressor warranty, as well as all the other standard specifications for this series.

These freezers have been designed to operate in elevated temperature environment. Our proprietary expansion valve technology ensures that the compressor temperature is kept constant, resulting in the compressors operating smoothly at elevated environmental temperatures. This minimizes internal temperature fluctuations, guaranteeing stability, keeping your samples safe.

-86°C Ultra Low HC Freezers | -40°C Low Temperature HC Freezers

Model No. PRIME	Model No. MERIT	Volts V	Capacity L	Capacity ft³	Model No. PRIME	Model No. MERIT	Volts V	Capacity L	Capacity ft³
HC-GV039P	HC-GA039M	100-115			HC-GA039P	HC-GA039M	100-115		
HC-AV039P	HC-AV039M	220-240	390	13.7	HC-AA039P	HC-AA039M	220-240	390	13.7
HC-DV039P	HC-DV039M	208-230 200			HC-DA039P	HC-DA039M	208-230 200		
HC-GV050P	HC-GA050M	100-115			HC-GA050P	HC-GA050M	100-115		
HC-AV050P	HC-AV050M	220-240	490	17.6	HC-AA050P	HC-AA050M	220-240	490	17.6
HC-DV050P	HC-DV050M	208-230 200			HC-DA050P	HC-DA050M	208-230 200		
HC-GV061P	HC-GA061M	100-115			HC-GA061P	HC-GA061M	100-115		
HC-AV061P	HC-AV061M	220-240	616	21.7	HC-AA061P	HC-AA061M	220-240	616	21.7
HC-DV061P	HC-DA061M	208-230 200			HC-DA061P	HC-DA061M	208-230 200		
HC-GV073P	HC-GA073M	100-115			HC-GA073P	HC-GA073M	100-115		
HC-AV073P	HC-AV073M	220-240	732	25.8	HC-AA073P	HC-AA073M	220-240	732	25.8
HC-DV073P	HC-DA073M	208-230 200			HC-DA073P	HC-DA073M	208-230 200		
HC-GH020P	HC-GH020M	100-115			HC-GB020P	HC-GB020M	100-115		
HC-AH020P	HC-AH020M	220-240	198	7.0	HC-AB020P	HC-AB020M	220-240	198	7.0
HC-DH020P	HC-DH020M	208-230 200			HC-DB020P	HC-DB020M	208-230 200		
HC-GH030P	HC-GH030M	100-115			HC-GB030P	HC-GB030M	100-115		
HC-AH030P	HC-AH030M	220-240	290	10.5	HC-AB030P	HC-AB030M	220-240	290	10.5
HC-DH030P	HC-DH030M	208-230 200			HC-DB030P	HC-DB030M	208-230 200		
HC-GH040P	HC-GH040M	100-115			HC-GB040P	HC-GB040M	100-115		
HC-AH040P	HC-AH040M	220-240	396	14.0	HC-AB040P	HC-AB040M	220-240	396	14.0
HC-DH040P	HC-DH040M	208-230 200			HC-DB040P	HC-DB040M	208-230 200		
HC-GH050P	HC-GH050M	100-115			HC-GB050P	HC-GB050M	100-115		
HC-AH050P	HC-AH050M	220-240	496	17.5	HC-AB050P	HC-AB050M	220-240	496	17.5
HC-DH050P	HC-DH050M	208-230 200			HC-DB050P	HC-DB050M	208-230 200		
HC-GH060P	HC-GH060M	100-115			HC-GB060P	HC-GB060M	100-115		
HC-AH060P	HC-AH060M	220-240	596	21.1	HC-AB060P	HC-AB060M	220-240	596	21.1
HC-DH060P	HC-DH060M	208-230 200			HC-DB060P	HC-DB060M	208-230 200		

* Width allowance for handles & hinges: Upright freezers: 80mm, Chest freezers: 110mm.

-80°C Ultra Low HE Freezers | -40°C Low Temperature HE Freezers

Model No.	Volts V	Capacity L	Capacity ft³	Model No.	Volts V	Capacity L	Capacity ft³
HE-GV039P	110-115			HE-GA039P	110-115		
HE-AV039P	220-240	390	13.7	HE-AA039P	220-240	390	13.7
HE-DV039P	208-230 200			HE-DA039P	208-230 200		
HE-GV050P	110-115			HE-GA050P	110-115		
HE-AV050P	220-240	490	17.6	HE-AA050P	220-240	490	17.6
HE-DV050P	208-230 200			HE-DA050P	208-230 200		
HE-GH020P	110-115			HE-GB020P	110-115		
HE-AH020P	220-240	198	7.0	HE-AB020P	220-240	198	7.0
HE-DH020P	208-230 200			HE-DB020P	208-230 200		
HE-GH030P	110-115			HE-GB030P	110-115		
HE-AH030P	220-240	298	10.5	HE-AB030P	220-240	298	10.5
HE-DH030P	208-230 200			HE-DB030P	208-230 200		
HE-GH040P	110-115			HE-GB040P	110-115		
HE-AH040P	220-240	398	14.0	HE-AB040P	220-240	398	14.0
HE-DH040P	208-230 200			HE-DB040P	208-230 200		
HE-GH050P	110-115			HE-GB050P	110-115		
HE-AH050P	220-240	498	17.5	HE-AB050P	220-240	498	17.5
HE-DH050P	208-230 200			HE-DB050P	208-230 200		

* Refer to comparative chart on page 19 for series-specific features.

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DOUBLE DOOR FREEZERS

Our range of double door upright freezers offers the same performance specifications as the single door models, but with the added convenience of two doors. This facilitates access to samples with minimum temperature loss from opening a single door, ensuring that the correct internal temperature is maintained at all times.

Each door features our patented Pull 'n Push™ door handle assembly and hot gas hole for minimal frost build up.

-86°C ULTRA LOW					-40°C LOW				
Model No.		Volts	Capacity		Model No.		Volts	Capacity	
PRIME	MERIT	V	L	ft³	PRIME	MERIT	V	L	ft³
DD-GV039P	DD-GV039M	100~115			DD-GA039P	DD-GA039M	100~115		
DD-AV039P	DD-AV039M	220~240	490	17.3	DD-AA039P	DD-AA039M	220~240	490	17.3
DD-DV039P	DD-DV039M	208~230 200			DD-DA039P	DD-DA039M	208~230 200		
DD-GV050P	DD-GV050M	100~115			DD-GA050P	DD-GA050M	100~115		
DD-AV050P	DD-AV050M	220~240	499	17.6	DD-AA050P	DD-AA050M	220~240	499	17.6
DD-DV050P	DD-DV050M	208~230 200			DD-DA050P	DD-DA050M	208~230 200		
DD-GV061P	DD-GV061M	100~115			DD-GA061P	DD-GA061M	100~115		
DD-AV061P	DD-AV061M	220~240	616	21.7	DD-AA061P	DD-AA061M	220~240	616	21.7
DD-DV061P	DD-DV061M	208~230 200			DD-DA061P	DD-DA061M	208~230 200		
DD-GV073P	DD-GV073M	100~115			DD-GA073P	DD-GA073M	100~115		
DD-AV073P	DD-AV073M	220~240	732	25.8	DD-AA073P	DD-AA073M	220~240	732	25.8
DD-DV073P	DD-DV073M	208~230 200			DD-DA073P	DD-DA073M	208~230 200		

Accessories

Kaltis® supplies a full range of accessories for all your requirements. Some accessories are factory installed and must be specified with your order. Others can be installed on site by a service engineer.

Validation Testing Program

Kaltis® validation testing services, prior to shipping, can fast track in-house Installation Qualification (IQ), Operation Qualification (OQ), and Performance Qualification (PQ) programs on delivery. Kaltis® factory validation services include documentation and performance reports, compressor and sub-system component specifications, microprocessor flow diagrams, software specifications and more.
Validation must be requested when ordering. For details contact Kaltis®, or your nearest distributor.

Temperature Recorders

Chart Recorder

A 6" (15.2cm) circular chart, 7-day temperature recorder uses pressure sensitive chart paper; 1 box of 80 charts included. Inkless

With Digital Recorder Option

Remote Phone Alarm(RPA)

- Multiple freezers can be connected. High/low alarm and power failure events are communicated by telephone.
  Built in backup battery. Can dial a phone number
- on power failure.
- Set by normal key pad phone
  Can Dail up to 5 numbers

Back-Up System

- Factory fitted backup systems for the Prime and Merit series. Can also be retro fitted.
- Liquic flow is shut off automatically when the freezer door or lid is opened.
- All parameters are fed back to, and monitored by the controller.
- Activation set points are 5°C lower than the high alarm setting.
- The system operates from a rechargeable battery, and includes all hardware except the gas cylinder.

Temperature Probes

Additional temperature sensors can be fitted to the alarm system. These are factory installed and must be specified with the order. Additional temperature sensors installed in Prime series products can be incorporated in the control panel. A maximum of three probes can be installed to monitor sample temperature, or cabinet temperature uniformity.

Export Packaging

Reinforced, solid wood crating. Includes all certifications.

RS232 Communication Port

For Merit and Prime series. Allows the remote control of a single freezer. Maximum distance 10m

RS485 Communication Port

Optional. Allows the remote monitoring and control of the freezer. Maximum distance: 1000M. Up to 99 freezers can be monitored.

Monitoring Software

For remote monitoring, control, and data logging of freezer operation data. Maximum of 99 freezers can be connected to 1 PC through this port.
(Note:Only 1 freezer can connect to 1 PC through the RS232 port).
- Display of freezer temperature, time and event history.
- Numeric and graphic temperature display.
- All parameters can set through the PC.
- Data is exported as a .txt file.
- Data log time can be adjusted

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Inventory system

Fiberboard Boxes

All boxes are 13.6cm²(5.31" square). Boxes and dividers are sold separately.

2" Tall
3" Tall

Boxes are supplied flat
Fiberboard Grid Dividers

7 x 7,   49 x 16mm
8 x 8,   64 x 14mm
9 x 9,   81 x 13mm
10 x 10, 100 x 12mm

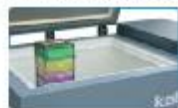### Injection-molded Boxes

2" Tall box, 10 x 10
2" Tall box, 9 x 9

Upright Freezer Shelves

Solid, reinforced, stainless steel shelves for heavy loads. Shelves rest on removable mounting brackets which are adjustable in 2.54cm (1") vertical increments. Each shelf includes 5 clips for left, rear and center support.

For 390Liter (13.7cu.ft.) cabinet
For 499Liter (17.6cu.ft.) cabinet
For 616Liter (21.7cu.ft.) cabinet
For 732Liter (25.8cu.ft.) cabinet

Wire Basket Kits

Wire baskets offer convenient inventory management for chest freezers. The three level arrays have upper, middle, and bottom trays. Wire baskets are protected by a high impact polystyrene liner.

Inventory System

Upright — Four inner doors

Liters	No*	390		No*	499
2" 5*3 WxDxH	1	16 Racks 240 Boxes	2" 5*4 WxDxH	2	16 Racks 320 Boxes
3" 3*3 WxDxH	5	16 Racks 144 Boxes	3" 3*4 WxDxH	6	16 Racks 192 Boxes

Upright — Five inner doors

Liters	No*	390		No*	499
2" 4*3 WxDxH	3	20 Racks 240 Boxes	2" 4*4 WxDxH	4	20 Racks 320 Boxes
3" 3*3 WxDxH	7	20 Racks 180 Boxes	3" 3*4 WxDxH	8	20 Racks 240 Boxes

Upright — Four inner doors

	616	732
	20 Racks 400 Boxes	24 Racks 480 Boxes
	20 Racks 240 Boxes	24 Racks 288 Boxes

Upright — Five inner doors

	616	732
	25 Racks 400 Boxes	30 Racks 480 Boxes
	25 Racks 300 Boxes	30 Racks 360 Boxes

Chest

Liters	No*	199	299	399	498	598
2" 12*1 WxDxH Full rack	9	12 Racks 144 Boxes	16 Racks 192 Boxes	24 Racks 288 Boxes	32 Racks 384 Boxes	40 Racks 480 Boxes
2" 6*1 WxDxH Half rack	10	24 Racks 144 Boxes	32 Racks 192 Boxes	48 Racks 288 Boxes	64 Racks 384 Boxes	80 Racks 480 Boxes
3" 8*1 WxDxH Full rack	11	12 Racks 96 Boxes	16 Racks 128 Boxes	24 Racks 192 Boxes	32 Racks 256 Boxes	40 Racks 320 Boxes
3" 4*1 WxDxH Half rack	12	24 Racks 96 Boxes	32 Racks 128 Boxes	48 Racks 192 Boxes	64 Racks 256 Boxes	80 Racks 320 Boxes

kaltis®
The future has a name

Uses the latest freezer design technology.
Our products are tested in the most demanding environments, guaranteeing peace of mind that your samples are safely stored.

- **Refrigeration System**
  Stable, field tested, rugged refrigeration system uses industry-grade compressors, high efficiency oil separators, down feed evaporators, accumulators, super heaters and intensive condensers.

- **Microprocessor Control**
  The controllers are specially designed for our freezers and provide integrated alarm, monitoring, and control functions, guaranteeing protection to the refrigeration system and to your samples.

- **Power Supply**
  All our products feature an electronic voltage regulator, circuit breakers, and automatic start relays. This guarantees power quality, resulting in freezer operating stability.

- **Alarm System**
  Prime and Merit series have both visual (alarm code) and audio alarms. Alarm status is clearly displayed. Prime series also feature an icon display.

- **Monitoring System**
  Internal and external parameters are monitored in real time and adjustments are made necessary. Alarm history is also displayed.

- **Cabinet Structure**
  Ergonomically designed, robust cabinet, with eye level control panel.

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	Prime		Merit		Benefit
Operating Temperature	-85°C	-40°C	-85°C	-40°C	
Refrigeration System					
Single Refrigeration System		O		O	High Efficiency
Cascade System	O		O		Stable, reliable
Industrial-Grade Compressors	O	O	O	O	High Efficiency, Energy Saving
CFC-Free Refrigerant	O	O	O	O	Environmentally friendly
High Cascade Refrigerant	O	O	O	O	HFC series
Low Cascade Refrigerant	O		O		HFC series
Down feed Evaporator	O	O	O	O	Smooth refrigerant flow
Washable condenser filter	O	O	O	O	Ensures optimum cooling
Enhanced Condenser	O	O	O	O	Optimum Cooling
Controller					
Microprocessor	O	O	O	O	Accurate control
Password Protection	O	O	O	O	Start-up and setting security
Independent high / low alarm	O	O	O	O	Simple to set
Power Supply					
Circuit Breaker	O	O	O	O	Protects Power Supply Circuit
Automatic Voltage Regulator	O	O	O	O	Provides Stable voltage
Surge Protection	O	O	O	O	Protects control system
Digital Voltage Monitoring	O	O			Monitors post-regulator voltage
Digital Current Monitoring	O	O			Monitors current in real time
Solid State Relay	O	O	O	O	Extends controller life
Automatic restart delay	O	O	O	O	Ensures power quality
Alarm System					
Intelligent Self-Diagnostics	O	O	O	O	Automatically confirms alarm event
Icon Display	O	O			Visual Display
Alarm Codes	22	18	12	10	Directly displays alarm status
Audio Alarm	O	O	O	O	Temperature or power failure
Alarm backup battery	O	O	O	O	For monitoring of alarm system
Alarm Test	O	O	O	O	Test alarm function
RS232 communication port	O	O	Optional	Optional	Software for PC, data logging
RS485 communication port	Series	Optional	Optional	Optional	Software for PC, data logging
Remote alarm contact	O	O	O	O	Additional protection of alarm contact
Monitoring System					
Chamber temperature	O	O	O	O	Independent high/low alarm
Door Open	O	O	O	O	Sounds when door is open/closed
Compressor Protection	O	O			Self adjusting, extending compressor life
High Ambient Temperature	O	O			High ambient temperature conditions
Low Condensation	O	O	O	O	Auto dial alarm (optional)
Filter Condition	O	O			Advises when filter requires replacement
Power failure	O	O	O	O	Alarm sounds on power failure
Voltage Fluctuations / supply Monitor	O	O			Monitors post-regulator voltage fluctuations
Circuit Breaker	O	O			Circuit Protection
Cabinets (All Models)					
Urethane insulation	O	O	O	O	Low K value (Thermal conductivity rate)
RS485 Communications Port	O	O	O	O	On Line Monitoring
Internal Rounded corners	O	O	O	O	Easy to clean.
General Insulation	O	O	O	O	Reduces noise levels
Heavy duty castors/ Leveling Feet	O	O	O	O	Facilitates moving and leveling
Upright Models					
Eye Level Controller	O	O	O	O	User friendly, easy to read
Low Profile Design	O	O	O	O	Only 196 cm(77.2") tall
Three adjustable shelves and four or five inner doors	O	O	O	O	Maximizes internal space
Pull 'N' Push latch and handle. Independent insulated inner doors	O	O	O	O	Easy to use
Chest Models					
Low profile design	O	O	O	O	Easy access to inventory
Counter-balanced hinges	O	O	O	O	Easy to open
Insulated interior lids	O	O	O	O	Greater sample protection

Specifications subject to change without notice

Model No.		Freezer Capacity		Description (Sample Access)	
		Liters	ft³	Side	Drawer
1	R2-S3-S/D	390	13.7	2"	3"
2	R2-S4-S/D	499, 615, 732	17.6/21.7/25.8	2"	2"
3	R2-41-S/D	390 – 510*	13.7	3"	3"
4	R2-44-S/D	499, 615, 732 – 510*	17.6/21.7/25.8	3"	3"
5	R3-33-S/D	390	13.7	3"	3"
6	R3-34-S/D	499, 615, 732	17.6/21.7/25.8	3"	3"
7	R3-33-S/D	390 – 510*	13.7	3"	3"
8	R3-34-S/D	499, 615, 732 – 510*	17.6/21.7/25.8	3"	3"

Model No.		Freezer Capacity		Description (Sample Access)
		Liters	ft³	Side
9	R2-121-S			2"
10	R2-61-S	198, 295, 368, 498, 598	7.0/10.5/14.0/17.5/21.1	2"
11	R3-31-S			3"
12	R3-41-S			3"

*ID: inner doors

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kaltis® Taiwan
No. 2, Lane 442, Jhongjheng Rd.
Jhonghe City, 23550 Taipei County, Taiwan

Tel: +886 2 22491250
Fax: +886 2 22475519

Email: sales@Kaltis.biz

kaltis® USA
10440 Paramount Boulevard, Unit # F156
Downey, CA 90241, USA

Tel / Fax: 562-9278249

kaltis®