Thermo Scientific Revco Laboratory Refrigerators and Freezers

Unrivalled cold storage protection for valuable samples and materials

Chromatography
General Purpose
Blood Bank
Plasma
Pharmacy
Enzyme

Thermo
S C I E N T I F I C

Thermo Scientific Revco Laboratory Refrigerators and Freezers

Researchers worldwide protect more than two billion samples inside Thermo Scientific cold storage equipment. With proven solutions including +4°C refrigerators to -196°C cryogenic freezers and Thermo Scientific Nalgene® and Nunc™ consumables, you're free to concentrate on your work without worrying about your valuable samples.

Unrivalled sample protection

Reliable, dependable performance

- The Thermo Scientific IntrLogic microprocessor controller, available on all +4°C refrigerators and -20°C or -30°C lab freezers, controls, measures, compares, and reports cabinet operation with digital accuracy

- All our refrigerator and freezer cabinets, including space-saving undercounter and upright models, share design and technology improvements developed through decades of experience

Operating Range	+1°C to +8°C	to -20°C	to -30°C
Freezer Operating Temperatures			
General Purpose Refrigerators	•		
Chromatography Refrigerators	•		
Blood Bank Refrigerators	•		
Pharmacy Refrigerators	•		
General Purpose Freezers		•	•
Plasma Freezers			•
Enzyme Freezers		•	
Typical Use and Storage Applications			
General Storage	•	•	•
Reagents and Kits	•		
Whole Blood	•		
Plasma			•
Enzymes and Temperature Sensitive Materials		•	
Chromatography Apparatus and Instrumentation	•		
Test Samples	•	•	•
Biologicals	•	•	•
Culture Media	•		
Patient Medication	•		
BOD Protocols	•		
Pre-Freezing		•	•
Vaccines	•	•	•
Shelf Life Testing	•		

For critical storage applications, full alarm models with optional temperature recorders are strongly recommended.
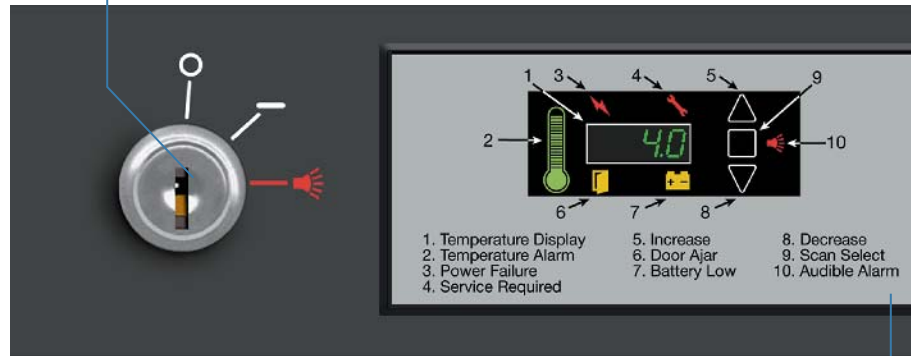
Thermo Scientific IntrLogic Controller Simplifies Operation, Improves Reliability

Intuitive Graphics and Microprocessor Technology

Setpoint Security
Key-operated triple position switch for main power and alarm; locks in temperature and alarm setpoints to minimize setpoint error and prevent tampering

Instrument-Grade Components
Electronic components and sub-systems are selected for performance and reliability under demanding laboratory conditions

Service Parameters
Touchpad sequence allows override access to control function defaults for troubleshooting functions

Modular Control Design
Self-contained control housing integrated into main control panel for efficient maintenance, as required

1. Temperature Display
2. Temperature Alarm
3. Power Failure
4. Service Required
5. Increase
6. Door Ajar
7. Battery Low
8. Decrease
9. Scan Select
10. Audible Alarm

IntrLogic control panel is standard on Thermo Scientific Revco refrigerators and freezers

Microprocessor-Based Control
IntrLogic microprocessor manages setpoint and actual conditions to provide the highest level of security for the stored product

Automatic Defrost System
Defrost sensor manages automatic defrost cycle (manual defrost models excluded)

IntrLogic Guide
Offers information at-a-glance for all control and display functions

Power Down Mode
During power failure digital display dims to conserve backup battery

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Thermo Scientific Revco lab refrigerators and freezers include enhanced digital electronic technology designed to simplify operation and deliver greater accuracy.

- Icon-based controls and displays include graphic references for universal operation
- Setpoint security with key-operated triple-position master switch controls power to all systems for added safety
- A graphic thermometer confirms proper operation at-a-glance, shows normal, high or low temperature condition; steady green for normal, flashing top bar for overtemperature, flashing bulb for undertemperature
- Unique Service Required alarm alerts users when preventative maintenance is necessary to maintain optimum unit performance

IntrLogic Control Alarm Sequence

Event	Audible Alarm	Visual Alarm						Self Corrected Event	Remote Alarm Contacts Activated
Overtemperature	continuous*	🌡	4.0				🔊	slow flash, icon only	yes
Undertemperature	continuous*	🌡	4.0				🔊	slow flash, icon only	yes
Power Loss	continuous*			⚡				slow flash, icon only	yes
Door Ajar	delay				🚪		🔊		no
Low Battery	no					🔋			no
Service Required	no			🔧					no

Audible and visual warnings for door ajar, low alarm battery, system maintenance and power failure provide immediate status of critical functions. A push-button alarm test verifies sensor continuity, while the battery backup assures system readiness. The enlarged digital display improves visibility, taking the guesswork out of setpoint and performance management.

*Mute will silence audible alarm with 6-minute ring back interval; display remains flashing. Moving triple position key switch to middle position disables alarm and audible and visual warnings.
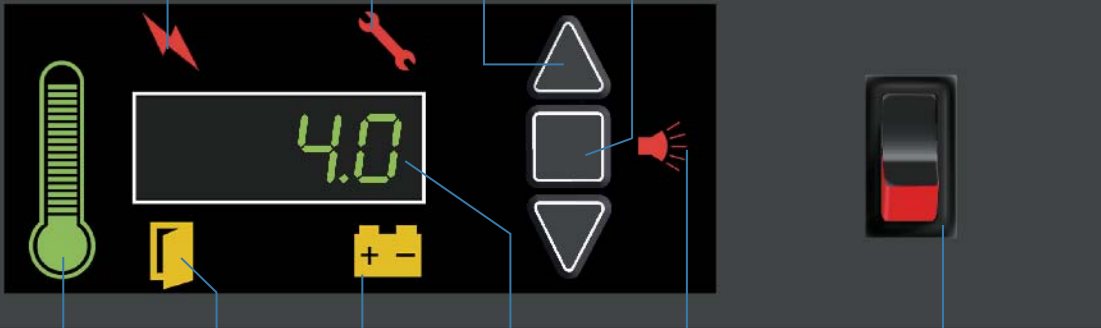
Power Failure Icon
Illuminated when main power is interrupted

Service Required
Illuminated when controller is in programming mode, or if simulated warm or cold conditions fail to occur during alarm test function

Touchpad Data Entry
Increases or decreases setpoint values in programming mode

Touchpad Scan Changes main display; also used to access various programming and service functions (alarm mute, recall 6 minutes)

Alarm Test Pressing "up" and "scan" buttons creates simulated overtemperature and undertemperature condition and activates audible and visual alarms; display flashes momentarily when test is complete

Graphic Thermometer
Easy to view, shows normal, high or low temperature condition; steady green for normal, flashing top bar for overtemperature, flashing bulb for undertemperature

Door Ajar
Illuminated when door is left open and alarm is in "active" mode (not available on 45.8 cu.ft. (1297 L) sliding glass door models)

Battery Backup
Continuous charge provides full alarm function in case of power failure

Low Battery Alarm
Illuminated when the alarm system battery backup charge is low

Digital Display
Indicates cabinet temperature during normal operation, flashes during alarm condition or setpoint adjustment. Displays other values with touchpad sequence

Audible Alarm
Audible and visual indicators are activated in the event of warm, cold or power loss conditions. Mute will silence audible alarm with 6 minute ring back interval; display remains flashing
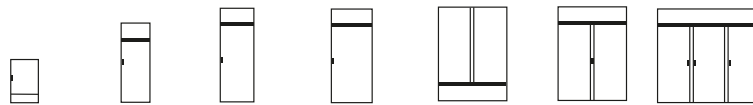
Interior Light Switch
Enables interior lighting system (on applicable models)

Laboratory Quality Cabinet Construction

Our refrigerators and freezers are available in seven sizes, from compact 4.9 cu.ft. (133 L) undercounter models to spacious, triple-door 78.8 cu.ft. (2231 L) cabinets. All models are built to meet UL, CUL, CE and TUV standards for safety.

- Hermetically sealed refrigeration compressor, air-cooled condenser and automatic condensate removal for auto defrost models

- An efficient, high-capacity air circulation system optimizes top-to-bottom temperature uniformity, accelerates temperature recovery following door openings, and accommodates insertion of warm product

- CFC-free refrigerants, insulation and product packaging

- Depending on model selection, standard or optional shelves, drawers, temperature recorders, cabinet casters and other accessories are available to meet most laboratory needs

Laboratory Refrigerator and Freezer Selection Guide

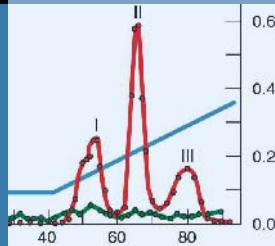| Automatic Defrost Models	Cu.Ft. (L)	4.9 (133)	11.5 (326)	23.3 (659)	29.2 (826)	45.8 (1297)	51.1 (1447)	78.8 (2231)
Chromatography Refrigerators						IntrLogic	IntrLogic	IntrLogic
General Purpose Lab Refrigerators		IntrLogic	IntrLogic	IntrLogic	IntrLogic	IntrLogic	IntrLogic	IntrLogic
Blood Bank Refrigerators		IntrLogic	IntrLogic	IntrLogic	IntrLogic		IntrLogic	
Pharmacy Refrigerators			IntrLogic	IntrLogic	IntrLogic		IntrLogic	
General Purpose Lab Freezers, -30°C		IntrLogic	IntrLogic	IntrLogic	IntrLogic		IntrLogic	
Plasma Freezers, -30°C		IntrLogic	IntrLogic	IntrLogic	IntrLogic		IntrLogic	
Manual Defrost Models								
Enzyme Freezer, -20°C				IntrLogic				

Remote alarm contacts are included on all models.

Thermo Scientific Revco Chromatography Refrigerators

Featuring IntrLogic Microprocessor Control

Our chromatography refrigerators are designed for a variety of applications requiring close temperature control, full access to chromatography instrumentation and easy set-up of instrumentation and apparatus within the chamber.

REC7504 chromatography refrigerator. Casters and glass doors are standard. Shown with optional temperature recorder.

Our chromatography refrigerators feature the IntrLogic microprocessor control system, positive airflow systems, industrial quality cabinet construction and extra-strength refrigeration compressors selected for industrial, clinical and scientific use.

IntrLogic Microprocessor Control

Our REC series refrigerators feature enhanced digital electronic technology designed to simplify operation and deliver greater accuracy (see pages 4 and 5).

- Adjustable temperature control, range +1°C to +8°C, factory pre-set to +4°C
- Icon-based controls and displays include graphic references for universal operation
- Setpoint security with key- operated triple-position master switch controls power to all systems for added safety
- Audible/visual warnings for over-temperature, undertemperature and power failure, with visual status reports on critical functions

- Graphic thermometer confirms proper operation at-a-glance, shows normal, high or low temperature condition; steady green for normal, flashing top bar for overtemperature, flashing bulb for undertemperature
- Advanced defrost sensor manages the defrost cycle, minimizing trace amounts of frost build-up to maintain refrigeration coil efficiency
- Enlarged digital display, resolution to within 0.1°C, improves visibility
- Alarm silence, ringback and automatic reset functions
- Push-button alarm test verifies sensor continuity
- Battery backup assures control panel function during power failure
- Remote alarm contacts are included on all models

Chromatography Refrigerators

							Int. Dimensions* H x D x W	Ext. Dimensions* H x D x W	Ship Weight
Model No.	Cu.Ft. (L)	Voltage (Hz)	Amps/ Breaker (Plug)	Door	Full Shelves	Half Shelves	inches (mm)	inches (mm)	lb (kg)

Temperature Range: +1°C to +8°C, factory preset to +4°C (auto defrost)

Model No.	Cu.Ft. (L)	Voltage (Hz)	Amps/ Breaker (Plug)	Door	Full Shelves	Half Shelves	Int. Dimensions* H x D x W inches (mm)	Ext. Dimensions* H x D x W inches (mm)	Ship Weight lb (kg)
REC2304A REC2304D REC2304V REC2304W	23.3 (659)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	single, glass	0	2	58.0 x 29.0 x 24.0 (1470 x 730 x 610)	79.1 x 36.2 x 28.0 (2010 x 920 x 720)	425 (193)
REC3004A REC3004D REC3004V REC3004W	29.2 (826)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	single, glass	0	2	58.0 x 29.0 x 30.0 (1470 x 730 x 760)	79.1 x 36.2 x 34.0 (2010 x 920 x 870)	435 (197)
REC4504A REC4504D REC4504V REC4504W	45.8 (1297)	115 (60) 208/230 (60) 230 (50) 230 (50)	15.0/20 (P2) 8.5/15 (P4) 8.5/15 (P7) 8.5/15 (P8)	double, sliding, glass	4	2	58.0 x 26.0 x 52.5 (1470 x 660 x 1330)	79.1 x 33.0 x 56.5 (2010 x 840 x 1440)	670 (304)
REC5004A REC5004D REC5004V REC5004W	51.1 (1447)	115 (60) 208/230 (60) 230 (50) 230 (W)	15.0/20 (P2) 8.5/15 (P4) 8.5/15 (P7) 8.5/15 (P8)	double, glass	4	2	58.0 x 29.0 x 52.5 (1470 x 730 x 1330)	79.1 x 36.2 x 56.5 (2010 x 920 x 1440)	580 (263)
REC7504A REC7504D REC7504V REC7504W	78.8 (2231)	115 (60) 208/230 (60) 230 (50) 230 (W)	16.0/20 (P2) 10.5/15 (P4) 10.5/15 (P7) 10.5/15 (P8)	triple, glass	8	2	58.0 x 29.0 x 81.0 (1470 x 730 x 2050)	79.1 x 36.2 x 85.0 (2010 x 920 x 2160)	965 (438)

* Published interior volumes are nominal; useable cu.ft. (L) capacities may be offset by shelves, drawers, blower coils, or cabinet protrusions. For specific cabinet dimensions and allowances, or for verification of clearance tolerances, contact our sales representative. Product performance may be affected by ambient temperature conditions, humidity conditions, sample loading preferences, and frequency of door openings. Contact our sales representative for specific inquiries regarding your application.

Cabinet Construction and Performance

- All refrigeration and control systems are top-mounted (except sliding glass door model REC4504, base mounted)
- Door lock provision on all models
- One duplex vapor-proof interior outlet, continuous on; separate power cord provided
- Door-activated light switch on all models except REC4504
- Model REC4504 has independent switch activated lights only
- Epoxy-coated, open wire shelves, adjustable in 1" (25 mm) increments; no tools required
- Multi-pane glass door(s) with spring loaded door closures and a 90° stay-open feature (except sliding door model REC4504)
- Positive, forced-air circulation maintains temperature uniformity at all shelf levels
- Peripheral closed-cell door gasket(s) maintain temperature integrity

- Two access ports, 2" (50 mm) diameter, with hinged covers
- Keyed door locks for security (except model REC4504)
- 2" (50 mm) casters, 2 locking, 2 non-locking, factory installed
- Separate power cord for interior outlets on models REC4504 and REC7504
- High-density, CFC-free urethane foam insulation protects cabinet from ambient temperature fluctuations and minimizes operating costs
- Interior and exterior surfaces are finished with a high-impact powder paint coating

Refrigeration System

- Heavy duty, industrial-grade, hermetically sealed compressors
- Automatic defrost for optimum cooling capacity
- Automatic condensate removal; no drain lines required

Optional Accessories

- Voltage safeguard, free standing
- Temperature recorder, 6" (152 mm) circular chart, 7-day drive
- Additional access port, 2" (50 mm) diameter, with cover
- Stainless steel interior and exterior surfaces
- Additional shelves, full or half size
- Heated glass doors and door swing variations available on most models

REC4504 chromatography refrigerator with sliding glass doors as standard. Shown with optional temperature recorder.

Thermo Scientific Revco High Performance Laboratory Refrigerators

Featuring IntrLogic Microprocessor Control

Our selection of general purpose laboratory refrigerators offers cabinet sizes to fit a variety of space needs and storage volume requirements.

Left to right: Models REL2304, REL404 and REL5004. Shown with optional casters and temperature recorders. Optional glass doors are available. Model REL404 shown with optional finished countertop.

Our REL series refrigerators feature the IntrLogic microprocessor control system, positive airflow systems, industrial quality cabinet construction and extra-strength refrigeration compressors selected for industrial, clinical and scientific use.

IntrLogic Microprocessor Control

Our REL series lab refrigerators feature enhanced digital electronic technology designed to simplify operation and deliver greater accuracy (see pages 4 and 5).

- Adjustable temperature control, range +1°C to +8°C, factory pre-set to +4°C
- Icon-based controls and displays include graphic references for universal operation
- Setpoint security with key- operated triple-position master switch controls power to all systems for added safety
- Audible/visual warnings for over-temperature, undertemperature and power failure, with visual status reports on critical functions

- Graphic thermometer confirms proper operation at-a-glance, shows normal, high or low temperature condition; steady green for normal, flashing top bar for overtemperature, flashing bulb for undertemperature
- Advanced defrost sensor manages the defrost cycle, minimizing trace amounts of frost build-up to maintain refrigeration coil efficiency
- Enlarged digital display, resolution to within 0.1°C, improves visibility
- Alarm silence, ringback and automatic reset functions
- Push-button alarm test verifies sensor continuity
- Battery backup assures control panel function during power failure
- Remote alarm contacts are included on all models

REL404 undercounter refrigerator.

General Purpose Laboratory Refrigerators

Temperature Range: +1°C to +8°C, factory preset to +4°C (auto defrost)

Model No.	Cu.Ft. (L)	Voltage (Hz)	Amps/ Breaker (Plug)	Cabinet	Door	Shelves	Int. Dimensions* H x D x W inches (mm)	Ext. Dimensions* H x D x W inches (mm)	Ship Weight lb (kg)
REL404A REL404D REL404V REL404W	4.9 (133)	115 (60) 208/230 (60) 230 (50) 230 (50)	8.0/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	undercounter	single, solid	3	20.0 x 20.0 x 20.0 (500 x 500 x 500)	33.4 x 26.0 x 24.0 (850 x 660 x 610)	212 (96)
REL1204A REL1204D REL1204V REL1204W	11.5 (326)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	space saver	single, solid	4	52.0 x 21.0 x 20.0 (1320 x 530 x 500)	71.9 x 28.8 x 24.0 (1830 x 740 x 610)	280 (127)
REL2304A REL2304D REL2304V REL2304W	23.3 (659)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	upright	single, solid	4	58.0 x 29.0 x 24.0 (1470 x 730 x 610)	77.5 x 35.5 x 28.0 (1970 x 910 x 720)	405 (184)
REL3004A REL3004D REL3004V REL3004W	29.2 (826)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	upright	single, solid	4	58.0 x 29.0 x 30.0 (1470 x 730 x 760)	77.5 x 35.5 x 34.0 (1970 x 910 x 870)	435 (197)
REL4504A REL4504D REL4504V REL4504W	45.8 (1297)	115 (60) 208/230 (60) 230 (50) 230 (50)	15.0/20 (P2) 8.5/15 (P4) 8.5/15 (P7) 8.5/15 (P8)	upright	double, sliding glass	8	58.0 x 26.0 x 52.0 (1470 x 660 x 1320)	77.5 x 35.0 x 56.5 (1970 x 890 x 1440)	670 (304)
REL5004A REL5004D REL5004V REL5004W	51.1 (1447)	115 (60) 208/230 (60) 230 (50) 230 (50)	15.0/20 (P2) 8.5/15 (P4) 8.5/15 (P7) 8.5/15 (P8)	upright	double, solid	8	58.0 x 29.0 x 52.0 (1470 x 730 x 1320)	77.5 x 35.5 x 56.5 (1970 x 910 x 1440)	585 (265)
REL7504A REL7504D REL7504V REL7504W	78.8 (2231)	115 (60) 208/230 (60) 230 (50) 230 (50)	16.0/20 (P2) 10.5/15 (P4) 10.5/15 (P7) 10.5/15 (P8)	upright	triple, solid	12	58.0 x 29.0 x 81.0 (1470 x 730 x 2050)	77.5 x 35.5 x 85.0 (1970 x 910 x 2160)	805 (365)

* Published interior volumes are nominal; useable cu.ft. (L) capacities may be offset by shelves, drawers, blower coils, or cabinet protrusions. For specific cabinet dimensions and allowances, or for verification of clearance tolerances, contact our sales representatives. Product performance may be affected by ambient temperature conditions, humidity conditions, sample loading preferences, and frequency of door openings. Contact our sales representatives for specific inquiries regarding your application.

Cabinet Construction and Inventory System

- High-density, CFC-free urethane foam insulation protects cabinet from ambient temperature fluctuations and minimizes operating costs
- Positive, forced-air circulation maintains temperature uniformity at all shelf levels
- Directional airflow assures quick recovery after door openings
- Interior cabinet lights with door-activated on/off switch, plus independent switch on control panel for 11.5 cu.ft. (326 L) and larger models
- Model REL4504 features independent switch activated lights only; under-counter model REL404 does not have lights
- Self-closing doors close against closed-cell peripheral gasket
- Door locking provision on all models except REL4504
- Full-length door handle(s) on all models except sliding door model REL4504

- Interior and exterior surfaces are finished with a high-impact powder paint coating
- Epoxy-coated, open wire shelves, adjustable in 1" (25 mm) increments; no tools required
- 2" (50 mm) casters standard on model REL4504
- Adjustable leveling feet standard
- 1" (25 mm) access port standard on model REL404

Refrigeration System
- Heavy duty, industrial-grade, hermetically sealed compressors
- Automatic defrost maintains optimum cooling capacity
- Automatic condensate removal; no drain lines required

Optional Accessories
- Voltage safeguard, free standing
- Built-in 6" (152 mm), 7-day circular chart recorder (free-standing on REL404)
- Access port, 2" (50 mm) diameter, with cover
- Stainless steel interior and exterior surfaces

- 2" (50 mm) casters
- Additional shelves
- Full-view glass doors, double pane construction (standard on REL4504)
- Heated glass doors and door swing variations are available on most models
- Finished countertop for REL404

REL5004 refrigerator shown with optional casters and temperature recorder.

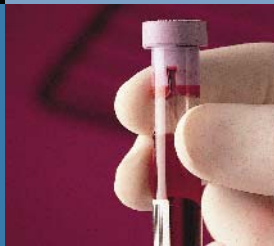# Thermo Scientific Revco Blood Bank Refrigerators

Featuring IntrLogic Microprocessor Control

Our blood bank refrigerators are designed to meet strict requirements established by the AABB, ANRC and FDA for storage of whole blood and blood components.
The complete selection of +4°C refrigerators feature simplified push-button alarm test functions and reliable, field-proven refrigeration systems.

Upright blood bank refrigerators feature roll-out drawers and temperature recorders as standard. Model shown REB5004.

Our REB series refrigerators feature the IntrLogic microprocessor control system, positive airflow systems, industrial quality cabinet construction and extra-strength refrigeration compressors selected for industrial, clinical and scientific use.

IntrLogic Microprocessor Control

Our REB blood bank refrigerators feature enhanced digital electronic technology designed to simplify operation and deliver greater accuracy (see pages 4 and 5).

- Adjustable temperature control, range +1°C to +8°C, factory pre-set to +4°C
- Icon-based controls and displays include graphic references for universal operation
- Setpoint security with key- operated triple-position master switch controls power to all systems for added safety
- Audible/visual warnings for over-temperature, undertemperature and power failure, with visual status reports on critical functions
- Alarm setpoints pre-set to warn of temperature deviation at +5.5°C overtemperature and +1.5°C undertemperature

- Graphic thermometer confirms proper operation at-a-glance, shows normal, high or low temperature condition; steady green for normal, flashing top bar for overtemperature, flashing bulb for undertemperature
- Advanced defrost sensor manages the defrost cycle, minimizing trace amounts of frost build-up to maintain refrigeration coil efficiency
- Enlarged digital display, resolution to within 0.1°C, improves visibility
- Alarm silence, ringback and automatic reset functions
- Push button alarm test verifies sensor continuity
- Battery backup assures control panel function during power failure
- Extra-long alarm probe lead allows manual testing and verification
- Remote alarm contacts are included on all models

REB404 undercounter blood bank refrigerator shown with optional finished countertop

Blood Bank Refrigerators

	Cu.Ft./L (Blood Bag Capacity)**	Voltage (Hz)	Amps/ Breaker (Plug)	Cabinet	Door	Drawers	Int. Dimensions* H x D x W inches (mm)	Ext. Dimensions* H x D x W inches (mm)	Ship Weight lb (kg)
Model No.									
REB404A REB404D REB404V REB404W	4.9/133 (48)	115 (60) 208/230 (60) 230 (50) 230 (50)	8.0/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	undercounter	single, solid	2	20.0 x 20.0 x 20.0 (500 x 500 x 500)	33.4 x 26.0 x 24.0 (850 x 660 x 610)	212 (96)
REB1204A REB1204D REB1204V REB1204W	11.5/326 (120)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	space saver	single, glass	5	52.0 x 21.0 x 20.0 (1320 x 530 x 500)	71.9 x 28.8 x 24.0 (1830 x 740 x 610)	320 (145)
REB2304A REB2304D REB2304V REB2304W	23.3/659 (288)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	upright	single, glass	6	58.0 x 29.0 x 24.0 (1470 x 730 x 610)	77.5 x 35.5 x 28.0 (1970 x 910 x 720)	470 (213)
REB3004A REB3004D REB3004V REB3004W	29.2/826 (360)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	upright	single, glass	6	58.0 x 29.0 x 30.0 (1470 x 730 x 760)	77.5 x 35.5 x 34.0 (1970 x 910 x 870)	505 (227)
REB5004A REB5004D REB5004V REB5004W	51.1/1447 (576)	115 (60) 208/230 (60) 230 (50) 230 (50)	15.0/20 (P2) 8.5/15 (P4) 8.5/15 (P7) 8.5/15 (P8)	upright	double, glass	12	58.0 x 29.0 x 52.0 (1470 x 730 x 1320)	77.5 x 35.5 x 56.5 (1970 x 910 x 1440)	790 (359)

Temperature Range: +1°C to +8°C, factory preset to +4°C (auto defrost)

* Published interior volumes are nominal; useable cu.ft. (L) capacities may be offset by shelves, drawers, blower coils, or cabinet protrusions. For specific cabinet dimensions and allowances, or for verification of clearance tolerances, contact our sales representative. Product performance may be affected by ambient temperature conditions, humidity conditions, sample loading preferences, and frequency of door openings. Contact our sales representative for specific inquiries regarding your application.

** Nominal capacity based on 450 mL whole blood bags.

Cabinet Construction and Inventory System

- Full-extension adjustable stainless steel drawers
- Dual-pane glass viewing door(s), insulated to prevent condensation (optional on REB404)
- High-density CFC-free urethane foam insulation protects cabinet from ambient temperature fluctuations and minimizes operating costs
- Positive, forced-air circulation to maintain temperature uniformity at all drawer levels
- Directional air flow assures quick recovery after door openings
- Interior cabinet lights with door activated on/off switch, plus independent switch on control panel (except on 4.9 cu.ft. (133 L) models)
- Self-closing doors close against closed-cell peripheral gasket
- Door locking provision on all models
- 1" (25 mm) access port standard on REB404

- Adjustable leveling feet standard; optional casters are available
- All models feature a smooth, scratch resistant painted interior and exterior surface for easy cleaning

Temperature Recorders

- Built-in 6" (152 mm), 7-day circular chart recorder standard (optional free-standing recorder on REB404)
- Provides permanent record of storage conditions

Refrigeration System

- Heavy duty, industrial-grade, hermetically sealed compressors
- Automatic defrost for optimum cooling capacity
- Automatic condensate removal; no drain lines required

Optional Accessories

- Voltage safeguard, free-standing
- Free-standing temperature recorder for REB404

- Access port, 2" (50 mm) diameter, with cover [standard 1" (25 mm) port for REB404]
- Stainless steel interior and exterior surfaces
- 2" (50 mm) casters
- Additional drawers, stainless steel drawer dividers
- Heated glass doors and door swing variations available on most models
- Finished countertop for REB404

Slimline REB1204 blood bank refrigerator.

Thermo Scientific Revco Pharmacy Refrigerators

Featuring IntrLogic Microprocessor Control

Configured for accurate storage and easy retrieval of pharmacy products, our RPR pharmacy refrigerators feature full extension stainless steel roll-out drawers. Developed for stable temperature control over a range of +1°C to +8°C, these refrigerators are available in four sizes.

Our pharmacy refrigerators are designed to provide stable temperature control and allow efficient inventory management. Model shown: RPR3004 with full extension roll-out drawers and full view glass door.

Our RPR series pharmacy refrigerators feature the IntrLogic microprocessor control system, positive airflow systems, industrial quality cabinet construction and extra-strength refrigeration compressors selected for industrial, clinical and scientific use.

IntrLogic Microprocessor Control

Our RPR pharmacy refrigerators feature enhanced digital electronic technology designed to simplify operation and deliver greater accuracy (see pages 4 and 5).

- Adjustable temperature control, range +1°C to +8°C, factory pre-set to +4°C
- Icon-based controls and displays include graphic references for universal operation
- Setpoint security with key- operated triple-position master switch controls power to all systems for added safety
- Audible/visual warnings for over-temperature, undertemperature and power failure, with visual status reports on critical functions

- Graphic thermometer confirms proper operation at-a-glance, shows normal, high or low temperature condition; steady green for normal, flashing top bar for overtemperature, flashing bulb for undertemperature
- Advanced defrost sensor manages the defrost cycle, minimizing trace amounts of frost build-up to maintain refrigeration coil efficiency
- Enlarged digital display, resolution to within 0.1°C, improves visibility
- Alarm silence, ringback and automatic reset functions
- Push button alarm test verifies sensor continuity
- Battery backup assures control panel function during power failure
- Remote alarm contacts are included on all models

Pharmacy Refrigerators

Temperature Range: +1°C to +8°C, factory preset to +4°C (auto defrost)										
Model No.	Cu.Ft. (L)	Voltage (Hz)	Amps/ Breaker (Plug)	Cabinet	Door	Drawers	Int. Dimensions* H x D x W inches (mm)	Ext. Dimensions* H x D x W inches (mm)	Ship Weight lb (kg)
RPR1204A RPR1204D RPR1204V RPR1204W	11.5 (326)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	upright	single, glass	5	52.0 x 21.0 x 20.0 (1320 x 530 x 500)	71.9 x 28.8 x 24.0 (1830 x 740 x 610)	320 (145)
RPR2304A RPR2304D RPR2304V RPR2304W	23.3 (659)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	upright	single, glass	6	58.0 x 29.0 x 24.0 (1470 x 730 x 610)	77.5 x 35.5 x 28.0 (1970 x 910 x 720)	470 (213)
RPR3004A RPR3004D RPR3004V RPR3004W	29.2 (826)	115 (60) 208/230 (60) 230 (50) 230 (50)	9.4/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	upright	single, glass	6	58.0 x 29.0 x 30.0 (1470 x 730 x 760)	77.5 x 35.5 x 34.0 (1970 x 910 x 870)	505 (227)
RPR5004A RPR5004D RPR5004V RPR5004W	51.1 (1447)	115 (60) 208/230 (60) 230 (50) 230 (50)	15.0/20 (P2) 8.5/15 (P4) 8.5/15 (P7) 8.5/15 (P8)	upright	double, glass	12	58.0 x 29.0 x 52.0 (1470 x 730 x 1320)	77.5 x 35.5 x 56.5 (1970 x 910 x 1440)	790 (359)

* Published interior volumes are nominal; useable cu.ft. (L) capacities may be offset by shelves, drawers, blower coils, or cabinet protrusions. For specific cabinet dimensions and allowances, or for verification of clearance tolerances, contact our sales representative. Product performance may be affected by ambient temperature conditions, humidity conditions, sample loading preferences, and frequency of door openings. Contact our sales representative for specific inquiries regarding your application.

Cabinet Construction and Inventory System

- Full extension stainless steel drawers, fully adjustable
- Full view glass door(s), double pane construction eliminates condensation; spring-loaded closures include 90° stay open feature
- High-density, CFC-free urethane foam insulation protects cabinet from ambient temperature fluctuations and minimizes operating costs
- Positive, forced-air circulation maintains temperature uniformity at all shelf levels
- Directional air flow assures quick recovery after door openings
- Interior cabinet lights with door activated on/off switch, plus independent switch on control panel
- Self-closing doors close against closed-cell peripheral gasket

- Door locking provision on all models
- Adjustable leveling feet standard; optional casters are available
- Smooth scratch resistant painted interior and exterior surfaces for easy cleaning

Refrigeration System

- Heavy duty, industrial-grade, hermetically sealed compressors
- Automatic defrost maintains optimum cooling capacity
- Automatic condensate removal; no drain lines required

Optional Accessories

- Voltage safeguard, free standing
- Built-in 6" (152 mm), 7-day circular chart recorder
- Access port, 2" (50 mm) diameter, with cover
- Stainless steel interior and exterior surfaces

- 2" (50 mm) casters
- Additional shelves
- Additional drawers
- Heated glass doors and door swing variations available on most models

RPR1204 pharmacy refrigerator, shown with optional casters and temperature recorder.

Thermo Scientific Revco High Performance Laboratory Freezers

Featuring IntrLogic Microprocessor Control

Our general laboratory freezers are designed for medical and scientific applications such as storage of reagents, pharmaceuticals, biologicals, or other commonly used laboratory materials. Models offer cabinet sizes to fit a variety of space needs and storage volume requirements.

ULT-5030 (left) and ULT-2330 (right) -30°C freezers, shown with optional casters and temperature recorder.

Our freezers feature the IntrLogic microprocessor control system, positive airflow systems, industrial quality cabinet construction and extra-strength refrigeration compressors selected for industrial, clinical and scientific use.

IntrLogic Microprocessor Control

Our ULT series lab freezers feature enhanced digital electronic technology designed to simplify operation and deliver greater accuracy (see pages 4 and 5).

- Pre-set -30°C operation
- Icon-based controls and displays include graphic references for universal operation
- Setpoint security with key- operated triple-position master switch controls power to all systems for added safety
- Audible/visual warnings for over-temperature, undertemperature and power failure, with visual status reports on critical functions

- Graphic thermometer confirms proper operation at-a-glance, shows normal, high or low temperature condition; steady green for normal, flashing top bar for overtemperature, flashing bulb for undertemperature
- Advanced defrost sensor manages the defrost cycle, minimizing trace amounts of frost build-up to maintain refrigeration coil efficiency
- Enlarged digital display, resolution to within 0.1°C, improves visibility
- Alarm silence, ringback and automatic reset functions
- Push button alarm test verifies sensor continuity
- Battery backup assures control panel function during power failure
- Remote alarm contacts are included on all models

General Purpose Laboratory Freezers

Temperature Range: -30°C (auto defrost)

Model No.	Cu.Ft. (L)	Voltage (Hz)	Amps/ Breaker (Plug)	Cabinet	Door	Shelves	Int. Dimensions* H x D x W inches (mm)	Ext. Dimensions* H x D x W inches (mm)	Ship Weight lb (kg)
ULT430A ULT430D ULT430V ULT430W	4.9 (133)	115 (60) 208/230 (60) 230 (50) 230 (50)	8.0/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	undercounter	single, solid	3	20.0 x 20.0 x 20.0 (500 x 500 x 500)	33.4 x 26.0 x 24.0 (850 x 660 x 610)	212 (96)
ULT1230A ULT1230V ULT1230W	11.5 (326)	115 (60) 230 (50) 230 (50)	8.0/15 (P1) 8.0/15 (P7) 8.0/15 (P8)	space saver	single, solid	4	52.0 x 21.0 x 20.0 (1320 x 530 x 500)	71.9 x 28.8 x 24.0 (1830 x 740 x 610)	280 (127)
ULT2330A ULT2330D ULT2330V ULT2330W	23.3 (659)	115 (60) 208/230 (60) 230 (50) 230 (50)	16.0/20 (P2) 12.0/15 (P4) 12.0/15 (P7) 12.0/15 (P8)	upright	single, solid	4	58.0 x 29.0 x 24.0 (1470 x 730 x 610)	77.5 x 35.5 x 28.0 (1970 x 910 x 720)	370 (168)
ULT3030A ULT3030D ULT3030V ULT3030W	29.2 (826)	115 (60) 208/230 (60) 230 (50) 230 (50)	16.0/20 (P2) 12.0/15 (P4) 12.0/15 (P7) 12.0/15 (P7)	upright	single, solid	4	58.0 x 29.0 x 30.0 (1470 x 730 x 760)	77.5 x 35.5 x 34.0 (1970 x 910 x 870)	445 (202)
ULT5030A ULT5030D ULT5030V ULT5030W	51.1 (1447)	115 (60) 208/230 (60) 230 (50) 230 (50)	16.0/20 (P2) 12.0/15 (P4) 12.0/15 (P7) 12.0/15 (P8)	upright	double, solid	8	58.0 x 29.0 x 52.0 (1470 x 730 x 1320)	77.5 x 35.5 x 56.5 (1970 x 910 x 1440)	600 (272)

Temperature Range: -20°C (manual defrost)

Model No.	Cu.Ft. (L)	Voltage (Hz)	Amps/ Breaker (Plug)	Cabinet	Door	Shelves	Int. Dimensions* H x D x W inches (mm)	Ext. Dimensions* H x D x W inches (mm)	Ship Weight lb (kg)
UGL2320A UGL2320D UGL2320V UGL2320W	23.3 (659)	115 (60) 208/230 (60) 230 (50) 230 (50)	13.5/20 (P2) 5.6/15 (P4) 5.6/15 (P7) 5.6/15 (P8)	upright solid	single	4	58.0 x 29.0 x 24.0 (1470 x 730 x 610)	77.5 x 35.5 x 28.0 (1970 x 910 x 720)	425 (193)

* Published interior volumes are nominal; useable cu.ft. (L) capacities may be offset by shelves, drawers, blower coils, or cabinet protrusions. For specific cabinet dimensions and allowances, or for verification of clearance tolerances, contact our sales representative. Product performance may be affected by ambient temperature conditions, humidity conditions, sample loading preferences, and frequency of door openings. Contact our sales representative for specific inquiries regarding your application.

Cabinet Construction and Inventory System
- Cabinet capacities from 4.9 to 51.1 cu.ft. (133 to 1447 L)
- High-density, CFC-free urethane foam insulation protects cabinet from ambient temperature fluctuations and minimizes operating costs
- Positive, forced-air circulation maintains temperature uniformity at all shelf levels
- Directional air flow assures quick recovery after door openings
- Solid door with keyed door lock for added security
- Self-closing doors close against closed-cell peripheral gasket
- Door locking provision on all models
- Full-length door handle(s) on all models
- Epoxy-coated, open wire shelves, adjustable in 1" (25 mm) increments; no tools required

- Adjustable leveling feet standard; optional casters are available
- Scratch resistant painted interior and exterior finish for easy cleaning
- 1" (25 mm) access port standard on ULT430

Refrigeration System
- Heavy duty, industrial-grade, hermetically sealed compressors
- Automatic defrost maintains optimum cooling capacity
- Automatic condensate removal; no drain lines required

Optional Accessories
- Voltage safeguard, free standing
- Built-in 6" (152 mm), 7-day circular chart recorder (free-standing on ULT430)
- Access port 1" (25 mm) diameter, (standard on ULT430)

- Stainless steel interior and exterior surfaces
- 2" (50 mm) casters
- Additional shelves
- Finished countertop for ULT430

Model ULT430 undercounter freezer, shown with optional finished countertop.

Thermo Scientific Revco -30°C Plasma Freezers

Featuring IntrLogic Microprocessor Control

Our -30°C plasma freezers are designed to meet AABB, ANRC and FDA standards for safety and performance in plasma storage. Five models offer cabinet sizes to meet a variety of space needs and storage volume requirements.

UFP5030 (left) and UFP1230 (right) plasma freezers are equipped with 7-day temperature recorders as standard to provide an accurate record of storage temperature.

Our -30°C plasma freezers feature the IntrLogic microprocessor control system, positive airflow systems, industrial quality cabinet construction, and extra-strength refrigeration compressors selected for demanding blood bank applications.

IntrLogic Microprocessor Control

Our plasma freezers feature enhanced digital electronic technology designed to simplify operation and deliver greater accuracy (see pages 4 and 5).

- Pre-set -30°C operation
- Icon-based controls and displays include graphic references for universal operation
- Setpoint security with key- operated triple-position master switch controls power to all systems for added safety
- Audible/visual warnings for over-temperature, undertemperature and power failure, with visual status reports on critical functions

- Graphic thermometer confirms proper operation at-a-glance, shows normal, high or low temperature condition; steady green for normal, flashing top bar for overtemperature, flashing bulb for undertemperature
- Advanced defrost sensor manages the defrost cycle, minimizing trace amounts of frost build-up to maintain refrigeration coil efficiency
- Enlarged digital display, resolution to within 0.1°C, improves visibility
- Alarm silence, ringback and automatic reset functions
- Push button alarm test verifies sensor continuity
- Battery backup assures control panel function during power failure
- Extra-long alarm probe lead allows manual testing and verification
- Remote alarm contacts are standard on all models

UFP430 undercounter plasma freezer shown with optional finished countertop

Plasma Freezers

Temperature Range: -30°C (auto defrost)								
Model No.	Cu.Ft./L (Plasma Box Capacity)**	Voltage (Hz)	Amps/ Breaker (Plug)	Cabinet	Door	Drawers	Int. Dimensions* H x D x W inches (mm)	Ext. Dimensions* H x D x W inches (mm)	Ship Weight lb (kg)
UFP430A UFP430D UFP430V UFP430W	4.9/133 (78)	115 (60) 208/230 (60) 230 (50) 230 (50)	8.0/15 (P1) 6.0/15 (P4) 6.0/15 (P7) 6.0/15 (P8)	undercounter	single, solid	2	20.0 x 20.0 x 20.0 (500 x 500 x 500)	33.4 x 26.0 x 24.0 (850 x 660 x 610)	212 (96)
UFP1230A UFP1230V UFP1230W	11.5/326 (273)	115 (60) 230 (50) 230 (50)	8.0/15 (P1) 8.0/15 (P7) 8.0/15 (P8)	space saver	single, solid	7	52.0 x 21.0 x 20.0 (1320 x 530 x 500)	71.9 x 28.8 x 24.0 (1830 x 740 x 610)	365 (166)
UFP2330A UFP2330D UFP2330V UFP2330W	23.3/659 (532)	115 (60) 208/230 (60) 230 (50) 230 (50)	16.0/20 (P2) 12.0/15 (P4) 12.0/15 (P7) 12.0/15 (P8)	upright	single, solid	7	58.0 x 29.0 x 24.0 (1470 x 730 x 610)	77.5 x 35.5 x 28.0 (1970 x 910 x 720)	425 (193)
UFP3030A UFP3030D UFP3030V UFP3030W	29.2/826 (665)	115 (60) 208/230 (60) 230 (50) 230 (50)	16.0/20 (P2) 12.0/15 (P4) 12.0/15 (P7) 12.0/15 (P8)	upright	single, solid	7	58.0 x 29.0 x 30.0 (1470 x 730 x 760)	77.5 x 35.5 x 34.0 (1970 x 910 x 870)	580 (263)
UFP5030A UFP5030D UFP5030V UFP5030W	51.1/1447 (1064)	115 (60) 208/230 (60) 230 (50) 230 (50)	16.0/20 (P2) 12.0/15 (P4) 12.0/15 (P7) 12.0/15 (P8)	upright	double, solid	14	58.0 x 29.0 x 52.0 (1470 x 730 x 1320)	77.5 x 35.5 x 56.5 (1970 x 910 x 1440)	650 (295)

*Published interior volumes are nominal; useable cu.ft. (L) capacities may be offset by shelves, drawers, blower coils, or cabinet protrusions. For specific cabinet dimensions and allowances, or for verification of clearance tolerances, contact our sales representative. Product performance may be affected by ambient temperature conditions, humidity conditions, sample loading preferences, and frequency of door openings. Contact our sales representative for specific inquiries regarding your application.

** Nominal capacity based on 250 mL plasma boxes.

Cabinet Construction and Inventory System
- High-density, CFC-free urethane foam insulation protects cabinet from ambient temperature fluctuations and minimizes operating costs
- Positive, forced-air circulation maintains uniformity at all shelf levels
- Directional airflow assures quick recovery after door openings
- Solid door with keyed door lock for added security
- Doors are self-closing against a closed-cell peripheral gasket; doors are spring loaded on all but undercounter models
- Door locking provision on all models
- Full-length door handle on all models
- Full extension stainless steel drawers
- Adjustable leveling feet standard; optional casters are available

- Interior and exterior surfaces are finished with a high-impact powder paint coating
- 1" (25 mm) access port standard on UFP430

Temperature Recorders
- Built-in 6" (152 mm), 7-day circular chart recorder, standard (optional free-standing on UFP430)
- Provides permanent record of storage conditions

Refrigeration System
- Heavy duty, industrial-grade, hermetically sealed compressors
- Automatic defrost maintains optimum cooling capacity
- Automatic condensate removal; no drain lines required

Optional Accessories
- Voltage safeguard, free-standing
- Access port, 1" (25 mm) diameter
- Stainless steel interior and exterior surfaces
- 2" (50 mm) casters
- Stainless steel drawer dividers
- Finished countertop for UFP430
- Free-standing temperature recorder for UFP430

UFP2330 plasma freezer shown with optional casters.

Thermo Scientific Revco -20°C Enzyme Freezers

Featuring IntrLogic Microprocessor Control

Our manual defrost -20°C upright freezers are designed for storage applications where slight intermittent coil warming during an auto defrost cycle is not desired. Two models feature gravity convection air systems for maximum stability without blowers or fans.

The -20°C UEN2320 enzyme freezer stores 45 enzyme bins on 9 shelves. Shown with optional casters and temperature recorder.

Our -20°C freezers feature the IntrLogic microprocessor control system, gravity air circulation, industrial quality cabinet construction, and extra-strength refrigeration compressors selected for industrial, clinical and scientific use. The UEN2320 enzyme freezer features an easily accessible inventory system.

IntrLogic Microprocessor Control

Our -20°C enzyme freezers feature enhanced digital electronic technology designed to simplify operation and deliver greater accuracy (see pages 4 and 5).

- Pre-set -20°C operation
- Icon-based controls and displays include graphic references for universal operation
- Setpoint security with key- operated triple-position master switch controls power to all systems for added safety
- Audible/visual warnings for over-temperature, undertemperature and power failure, with visual status reports on critical functions

- Graphic thermometer confirms proper operation at-a-glance, shows normal, high or low temperature condition; steady green for normal, flashing top bar for overtemperature, flashing bulb for undertemperature
- Enlarged digital display, resolution to within 0.1°C, improves visibility
- Alarm silence, ringback and automatic reset functions
- Push button alarm test verifies sensor continuity
- Battery backup assures control panel function during power failure
- Remote alarm contacts are standard on all models

High impact plastic enzyme storage bins enable easily accessible, highly concentrated inventory storage. Additional bins are useful for managing loose material in general purpose applications; see Accessories section.

Enzyme Freezers

							Int. Dimensions* H x D x W inches (mm)	Ext. Dimensions* H x D x W inches (mm)	Ship Weight lb (kg)
Temperature Range: -20°C (manual defrost)									
Model No.	**Cu.Ft. (L)**	**Voltage (Hz)**	**Amps/ Breaker (Plug)**	**Cabinet**	**Door**	**Shelves**			
UEN2320A	23.3	115 (60)	13.5/20 (P1)	upright	single, solid	9	58.0 x 29.0 x 24.0 (1470 x 730 x 610)	77.5 x 35.5 x 28.0 (1970 x 910 x 720)	425 (193)
UEN2320D	(659)	208/230 (60)	5.6/15 (P4)						
UEN2320V		230 (50)	5.6/15 (P7)						
UEN2320W		230 (50)	5.6/15 (P8)						

* Published interior volumes are nominal; useable cu.ft. (L) capacities may be offset by shelves, drawers, blower coils, or cabinet protrusions. For specific cabinet dimensions and allowances, or for verification of clearance tolerances, contact our sales representative. Product performance may be affected by ambient temperature conditions, humidity conditions, sample loading preferences, and frequency of door openings. Contact our sales representative for specific inquiries regarding your application.

Cabinet Construction
- Upright 23.3 cu.ft. (659 L) cabinet
- High-density, CFC-free urethane foam insulation protects cabinet from ambient temperature fluctuations and minimizes operating costs
- Solid door with keyed door lock for added security
- Self-closing door closes against closed-cell peripheral gasket
- Door locking provision on all models
- Full-length door handle
- Adjustable leveling feet standard; optional casters are available
- Scratch resistant painted interior and exterior finish for easy cleaning

Inventory System
- Epoxy-coated, open wire shelves, adjustable in 1" (25 mm) increments; no tools required
- Includes nine shelves with enzyme storage system of five bins per shelf, maximum 45 bins; labels not provided

Refrigeration System
- Heavy duty, industrial-grade, hermetically sealed compressors
- Manual defrost

Optional Accessories
- Voltage safeguard, free-standing
- Built-in 6" (152 mm), 7-day circular chart recorder
- Access port, 1" (25 mm) diameter
- Stainless steel exterior
- 2" (50 mm) casters
- Additional shelves
- Additional bins

-20°C freezer shown with optional casters and temperature recorder.

Accessories

Voltage safeguard

Productive use of your refrigerator or freezer can be enhanced with accessories specially designed to improve utility and convenience. Many accessories are factory installed and must be specified with your original order.

Field installed accessories may require the services of a factory authorized technician.

Some accessories or options may affect refrigerator or freezer performance; for more information contact your Sales Representative.

Voltages and Serial Numbers
Serial number tags on all our Forma products contain model numbers and voltage information needed for accurate selection of accessories ordered for field installation.

- It is recommended that accessories be ordered when your refrigerator or freezer is ordered
- Factory-installed accessories allow proper set-up without power-down or emptying the cabinet

Validation Testing Program
Validation testing services in advance of shipment can accelerate in-house FDA Installation Qualification (IQ) and Operation Qualification (OQ) programs. Validation services include documentation and performance reports, compressor and sub-system component specifications, microprocessor flow diagrams, software specifications and more. For more details, contact your sales representative.

Certification of Calibration
Control, alarm and temperature recording systems are systematically calibrated at the factory for accurate performance. An optional Certificate of Calibration to an NIST (National Institute of Standards and Technology, formerly National Bureau of Standards) traceable instrument includes a model number and serial number certificate and single point calibration. Multiple point calibration is also available. Calibration certificates must be requested when ordering.

Catalog No. 6916-2

Glass Doors
Solid doors are offered standard on most refrigerators unless otherwise specified. Optional dual-pane glass doors must be specified when ordering. Contact your Sales Representative for information on heated glass doors.

Shelves
Additional epoxy-coated, open-wire shelves are designed to fit individual cabinets; shelves are available in full- and half-sizes. Undercounter models use full-size only.

Shelves							
Nominal Cabinet Volume, Cu.Ft. (L)	4.9 (133)	11.5 (326)	23.3 (659)	29.2 (826)	45.8 (1297)	51.1 (1447)	78.8 (2231)
Shelves	Catalog Number						
Epoxy-Coated, Full-Size	7125	7125	6696	6695	6696	6696	6696
Epoxy-Coated, Half-Size	n/a	n/a	6698	6697	6698	6698	6698
Epoxy-Coated, Full-Size Only	n/a	6202-1	6696-1	6695-1	6696-1	6696-1	6696-1

Door Options Selection Chart							
Cu.Ft. (L)		4.9(133)	11.5(326)	23.3(659)	29.2(826)	51.1(1447)	78.8(2231)
Swing	Type	Catalog Number					
LH	solid	7119	6995	6997	6999		
	glass	7123	6996	6998	7000		
	heated glass		7073	7075	7087		
RH	solid	std	std	std	std		
	glass	7118	7066	7012	7013		
	heated glass		7074	7086	7088		
LH/LH	solid					7001	
	glass					7067	
	heated glass					7089	
RH/RH	solid					7068	
	glass					7069	
	heated glass					7090	
LH/RH	solid					std	
	glass					7014	
	heated glass					7091	
LH/LH/LH	solid						7070
	glass						7071
	heated glass						7093
RH/RH/RH	solid						7072
	glass						7008
	heated glass						7083
LH/LH/RH	solid						7009
	glass						7010
	heated glass						7084
LH/RH/RH	solid						std
	glass						7015
	heated glass						n/a

LH = Left Hand, RH = Right Hand Note: Glass doors are standard on selected blood bank, chromatography and pharmacy refrigerators; consult specification chart for details.
Sliding glass doors are standard on all 45.8 cu.ft. (1297 L) models. Heated glass doors will increase amperage and may require next size breaker.

Roll-Out Drawers

Optional stainless steel drawers, offered as an alternative to standard open wire shelving, are adjustable with full extension. Drawers are factory installed and must be specified when ordering cabinet.
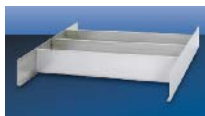
Roll-Out Drawers							
Nominal Cabinet Volume, Cu.Ft. (L)	4.9 (133)	11.5 (326)	23.3 (659)	29.2 (826)	45.8 (1297)	51.1 (1447)	78.8 (2231)
Drawers, Complete Set	**Catalog Number (Number of Drawers)**						
Refrigerator	7134 (2)*	7445 (5)	6699 (6)	6704 (6)	6703 (12)	6700 (12)	6701 (18)
Freezer	7134 (2)*	7446 (7)*	6699 (6)	6704 (6)	6703 (12)	6700 (12)	6701 (18)
Drawers, Additional				**Catalog Number**			
Refrigerator	n/a	n/a	6702	6725	6726	6702	6702
Freezer	n/a	n/a	6702	6725	6726	6702	6702

Interior, Exterior and Countertop Finishes

- Optional stainless steel interior and/or exterior surfaces are available and must be specified when ordering

- Optional stainless steel or white finished countertops on undercounter models

Finishes							
Nominal Cabinet Volume, Cu.Ft. (L)	4.9 (133)	11.5 (326)	23.3 (659)	29.2 (826)	45.8 (1297)	51.1 (1447)	78.8 (2231)
Finishes				**Catalog Number**			
Stainless Steel Interior	7116	6199	6115	6709	6711	6116	6117
Stainless Steel Exterior	7117	6201	6128	6710	6712	6129	6130
White Countertop	7120	n/a	n/a	n/a	n/a	n/a	n/a
Stainless Steel Countertop	7127	n/a	n/a	n/a	n/a	n/a	n/a

Finished countertop adds 1" (25 mm) to unit height.

- The LabCooler II Benchtop Cooler maintains enzymes at stable -20°C for up to two hours. Holds (24) 1.5 ml tubes and (8) 0.5 ml tubes.

- The LabCooler Lite Benchtop Cooler is smaller and more compact, maintains enzyme temperatures at -10°C or below for up to one hour outside the freezer. Holds up to (7) 1.5 ml tubes. Includes a clear interlocking top.

Cooler II	Catalog No. 6744
LabCooler Lite	Catalog No. 6745

Casters

Casters are optional on most models. Casters are factory installed when ordered at time of cabinet order; customer installed if ordered separately. Choose from 2" (50 mm) or 3" (76 mm) casters.

Casters							
Nominal Cabinet Volume, Cu.Ft. (L)	4.9 (133)	11.5 (326)	23.3 (659)	29.2 (826)	45.8 (1297)	51.1 (1447)	78.8 (2231)
Casters				**Catalog Number**			
2" Casters (50 mm), Set of 4	6041	6041	6041	6041	6094	6041	6041
3" Casters (76 mm), Set of 4	6041-1	6041-1	6041-1	6041-1	6694-1	6041-1	6041-1
Locking Casters for -30°C Freezers only							
Set includes 2 non-locking 2" (50 mm) casters	6983	6983	6983	6983	6983	6983	6983

Drawer Dividers (Blood Bank Refrigerators and Plasma Freezers)

Stainless steel drawer dividers help manage inventory of bags and boxes.

Drawer Dividers						
Nominal Cabinet Volume, Cu.Ft. (L)	4.9 (133)	11.5 (326)	23.3 (659)	29.2 (826)	51.1 (1447)	78.8 (2231)
Drawer Dividers			**Catalog Number**			
Stainless steel column divider (number of columns)	7027 (4)	7027 (4)	6206 (4)	6963 (5)	6206 (4)	6206 (4)

Temperature Recorders

Optional 6" (152 mm) chart, 7-day temperature recorders use pressure-sensitive chart paper; one box of 50 charts included. Built-in recorders must be specified when ordering. Recorders are standard on 11.5 cu.ft. (326 L) and larger blood bank refrigerators and plasma freezers.

Temperature Recorders							
Nominal Cabinet Volume, Cu.Ft. (L)	4.9 (133)	11.5 (326)	23.3 (659)	29.2 (826)	45.8 (1297)	51.1 (1447)	78.8 (2231)
Temperature Recorders				**Catalog Number**			
Built-in, Factory Installed	n/a	6183-7					
Free-standing Customer Installed	6383-7	6383-7					
Replacement Chart paper, -40°C to +25°C, box of 50 charts	6184	6184					

Thermo Scientific LabCooler Modules

Our LabCooler™ Benchtop cooler helps maintain enzymes and other frozen material at stable temperatures when used at the lab bench. When stored in a freezer, coolers insulate enzymes and other biologicals from periodic temperature fluctuations due to door openings, defrost cycles or temporary power outages of short duration. Choose from two models.

Catalog No. 6744, shown top; Catalog No. 6745, shown above.

Alarm Delay Module

The alarm delay eliminates nuisance alarms due to intermittent or transitory conditions such as lightning or brief power outages. The adjustable delay requires an alarm condition to exist continuously for a pre-determined time (adjustable) before a signal is released to a central alarm/ monitoring system or telephone dialer.

- Adjustable delay from 0.5 to 32 minutes

- Red alarm indicator light remains flashing after transient condition is corrected; requires manual reset

- Signals chronic alarm conditions which may indicate impending component failure; allows time for inspection or corrective maintenance

- Inserts variable time interval between detection of alarm condition and transmission of signal

- Includes accurate digital timing circuit adjustable from 0.5, 1, 2, 4, 8, 18, or 32 minutes

- Operates independent of line power; built-in battery and alarm test function uses customer supplied 9V battery

Catalog No. 6903

Enzyme Storage Bin

Bins are supplied standard on Model FFEN-2320 Enzyme Freezer.

Additional bins are useful for storage and inventory management. Formed of high impact ABS plastic, off-white. Labels not included.

Catalog No. 6736

Interior Dimensions (nominal)
3.5"W (90 mm) x 3"H (76 mm) x 24"L (610 mm)

Exterior Dimensions (nominal)
4.4"W (112 mm) x 3.04"H (77 mm) x 25.25"L (641 mm)

Solid wood	Catalog No. 6099
Wood frame	Catalog No. 6924

Access Port

Additional port for probes, cables, leads or measuring instruments may be added to any cabinet. Port is 1" (25 mm) diameter for freezers and 2" (50 mm) for refrigerators. Location must be specified when ordering. 2" for refrigerators and freezers.

Catalog No. 6038

Digital Temperature Monitor

Simple, accurate and cost-effective, the digital temperature and power monitor provides both alarm/monitoring and digital temperature display in a single, self-contained unit. Standard features include high alarm, alarm mute and chirp, audio delay timer, remote alarm contacts (SPDT), NiCad battery backup, and low voltage AC power supply, 120V, AC.

- The monitor can be installed on or adjacent to any refrigerator or freezer
- Activates an audible and visual warning in case of power failure or overtemperature condition
- Choose from single probe digital models or multiple probe, microprocessor-based models
- Temperature range is -100°C to +25°C
- Probe size 1.25"L x 0.25" diameter (32 mm x 6 mm)

Digital Temperature Monitor Specifications

	Digital		Microprocessor-Based		
Catalog No.	6898	6899	6900	6901	6902
Input channels	1	1	2	3	4
Temperature range	-100°C to +25°C				
Display and setpoint resolution	1°C	1°C	0.1°C	0.1°C	0.1°C
Temperature alarm	high only		high and low		
LCD alphanumeric display	numeric only		8-character, back-lit, adjustable		
Visual alarm	red only		green = normal; red = deviation		
Solid-state probe lead wire	8 foot Teflon®	8 foot 24 gauge	20' Teflon, color-coded		
Relay delay	n/a		programmable, 0 – 30 minutes		
Alarm/battery test switch	n/a		standard		
Mounting method	Velcro®		bracket		
Case dimensions	5"L x 4.5"W x 2"D 27 x 114 x 50 mm		6.25"L x 3.25"W x 2"D 158 x 83 x 50 mm		

NALGENE® and NUNC™ cryogenic storage

give you everything you need to safely store precious specimens, organize freezer space and simplify sample retrieval. NALGENE and NUNC combine to provide one-stop shopping for the widest variety and highest quality of externally and internally threaded cryovials, storage boxes, lab top coolers and controlled rate freezing containers. New NUNC Cryobank and Bank-It™ cryovials are designed automated cryogenic storage.

For further information regarding these products – visit **www.nalgene.com**

Specifications

CFC-Free Refrigerants, Insulation and Packaging

All our refrigerators and freezers use CFC-free refrigerants, cabinet insulation and packaging.

Product Selection

This catalog is divided into sections according to general product application. Because most controllers allow adjustable setpoints, all temperatures are listed as design operating temperatures and typically represent the lowest or coldest temperature of a temperature range.

Electrical Information

Thermo Scientific Forma refrigerators and freezers are designed to meet UL, CUL, CE and TUV criteria for safety and performance. All connections must comply with local electrical codes.

- Selection charts for each standard model list voltage, rated amperage, recommended circuit breaker size, and NEMA (National Electrical Manufacturers' Association, USA) electrical plug information
- Most refrigerators and freezers are supplied with line cord plugs (P) which require corresponding receptacles illustrated on the line cord plug reference chart to the right
- Site preparation requires availability of the proper receptacle; a dedicated circuit is recommended

- Special voltage selections may be available at extra cost and must be specified when ordering
- For questions regarding site preparation, installation and electrical connection, contact our sales representative

Certification of Calibration

Control, alarm and temperature recording systems are systematically calibrated at the factory for accurate performance. An optional Certificate of Calibration to an NIST (National Institute of Standards and Technology, formerly National Bureau of Standards) traceable instrument includes a Model Number and Serial Number Certificate (single point calibration). Multiple point calibration is also available. Calibration certificates must be requested when ordering; for details contact our sales representatives.

Validation Testing Program

Validation testing services in advance of shipment can accelerate in-house FDA Installation Qualification (IQ) and Operation Qualification (OQ) programs. Validation services include documentation and performance reports, compressor and sub-system component specifications, microprocessor flow diagrams, software specifications and more. For more details, contact our sales representatives.

Performance Data

For detailed performance information such as temperature recovery, power consumption and other model-specific operational characteristics, contact our sales representatives.

Ordering Information

Our sales representatives will assist in choosing the proper refrigerator or freezer for your application.

- Each model number is voltage specific. For clarity, please include the voltage of your selected refrigerator or freezer when ordering
- When ordering your refrigerator or freezer, please consider current or future accessory requirements such as temperature recorders, extra shelves and alarm/monitoring systems
- Many accessories are factory installed and must be specified when ordering

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				
P8 British				

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.

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Asia: China +86 21 6865 4588 or +86 10 8419 3588, India toll free 1800 22 8374, India +91 22 6716 2200, Japan +81 45 453 9220,
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