

Manual Defrost Enzyme Freezers

Our manual defrost **Revco high-performance, -20°C upright freezers** are designed for storage applications in which even slight intermittent coil warming during auto defrost cycles cannot be tolerated. Models feature gravity convection air systems for maximum temperature stability without blowers or fans.

- Cold wall convection cooling for temperature uniformity
- Manual defrost for optimum control
- Four casters, front two are lockable
- 1" (2.5cm) insulated access port
- Adjustable, epoxy-coated wire shelves are standard (optional drawers)
- TempTest electronic probe/alarm test
- Keyed on/off switch with setpoint security
- Self-closing door with 90° stop
- Built-in remote alarm contacts
- Optional 4-20 milliamp output



Optional, inkless, seven day, graphic, chart recorder

Control Panel:
Keyed on/off switch with set point security

Microprocessor control system with audio and visual alarms

Bright, digital temperature display

Easily accessible inventory system

Doors:
Spring-loaded, self closing doors with 90° stay-open feature

Lockable doors for added sample security

Smooth, ergonomic handle

▶ See pages 22-24 for Options and Accessories

Thermo Scientific Revco High-Performance Enzyme Freezers with Manual Defrost

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)
UEN2320A	23.3	115 (60)	13.5/20 (P1)	upright	single	9	58.0 x 29.0 x 24.0	79.2 x 37.2 x 28.0	425 (193)
UEN2320D	(659)	208/230 (60)	5.6/15 (P4)				(1473 x 737 x 610)	(2012 x 945 x 711)	
UEN2320V		230 (50)	5.6/15 (P7)						
UEN2320W		230 (50)	5.6/15 (P8)						
UEN3030A	29.2	115 (60)	16.0/20 (P1)	upright	single	4	58.0 x 29.0 x 30.0	79.2 x 37.2 x 34.0	445 (197)
UEN3030D	(826)	208/230 (60)	12.0/15 (P4)				(1473 x 737 x 762)	(2012 x 945 x 864)	
UEN3030V		230 (50)	12.0/15 (P7)						
UEN3030W		230 (50)	12.0/15 (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.

Services

Electrical Information

Thermo Scientific Revco high-performance refrigerators and freezers are designed to meet UL, CUL, and CE 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, 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 required
- 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 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 (single point calibration). Multiple point calibration is also available. Calibration certificates must be requested when ordering; for details contact your sales representative.

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 subsystem component specifications, microprocessor flow diagrams, software specifications and more. For more details, contact your sales representative.

Standard Plug Option Configurations

Choose one of our specialty plugs to configure your freezer to meet local requirements

Model No.	Plug Description	Male End
Standard Plugs		
US125V20A	NEMA 5-20	
US230V15A	NEMA 6-15	
EU230V16A	Continental EU	
Specialty Plugs		
IT230V16A	Italy	
UK230V13A	Great Britain	
IN230V16A	India	
IS230V16A	Israel	
AU230V16A	Australia	
CH230V16A	China	
DK230V16A	Denmark	
AR230V16A	Argentina	
SW230V16A	Switzerland	
BR230V16A	Brazil	

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.

Ordering Information

Your sales representative will assist you with choosing the correct 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 on the following pages are factory installed and must be specified when ordering

Options & Accessories

Productive use of your refrigerator or freezer can be enhanced with options and accessories specifically 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.

Note that some options and accessories may affect refrigerator or freezer performance; for more information contact your sales representative.



Shelves

Voltages and Serial Numbers

Serial number tags on all of our Revco units provide 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.

Glass Doors

Solid doors are standard on most refrigerators unless otherwise specified. Dual-pane glass doors are optional and 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.

Rollout 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.





Rollout Doors



Enzyme Storage Bins



Alarm Delay Module

Temperature Chart 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 all blood bank refrigerators and plasma freezers.

Enzyme Storage Bin

Bins are supplied standard on Model UEN-2320 Enzyme Freezer. Additional bins are useful for storage and inventory management. Formed of high impact ABS plastic, off-white. Labels not included.

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)

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

-20°C Laptop Cooler

- Holds 20 CryoTubes™ (1.0 and 1.8 mL)
- Inserts are included to accommodate 0.2 to 0.5 mL microcentrifuge tubes
- Protects enzymes, cells, reagents and solutions by maintaining freezer temperatures while on the laboratory bench (T° < 20°C maintained up to 1 hour)
- Maintains freezer temperature during the frost free cycle, power failure and accidental door opening
- Printed grid on one way keyed lid for proper orientation and sample identification
- Molded of impact resistant polycarbonate; stackable, with locking handle

Options & Accessories Ordering Guide

Laboratory Refrigerators

	4.9 cu. ft. (133 L)	11.5 cu. ft. (326 L)	23.3 cu. ft. (659 L)	29.2 cu. ft. (826 L)	45.8 cu. ft. (1297 L)	51.1 cu. ft. (1447 L)	78.8 cu. ft. (2231 L)	
	MODEL NO.	MODEL NO.	MODEL NO.	MODEL NO.	MODEL NO.	MODEL NO.	MODEL NO.	
Shelves								
Epoxy-coated, full size	7125	7125	6696	6695	6696	6696	6696	
Epoxy-coated, half size	n/a	n/a	6698	6697	6698	6698	6698	
Door Options and Accessories								
LH swing, solid	7119	6995	6997	6999	n/a	n/a	n/a	
LH swing, glass	n/a	6996	6998	7000	n/a	n/a	n/a	
LH swing, heated glass	n/a	7073	7075	7087	n/a	n/a	n/a	
RH swing, glass	7118	7066	7012	7013	n/a	n/a	n/a	
RH swing, heated glass	n/a	7074	7086	7088	n/a	n/a	n/a	
LH/LH swing, solid	n/a	n/a	n/a	n/a	n/a	7001	n/a	
LH/LH swing, glass	n/a	n/a	n/a	n/a	n/a	7067	n/a	
LH/LH swing, heated glass	n/a	n/a	n/a	n/a	n/a	7089	n/a	
RH/RH swing, solid	n/a	n/a	n/a	n/a	n/a	7068	n/a	
RH/RH swing, glass	n/a	n/a	n/a	n/a	n/a	7069	n/a	
RH/RH swing, heated glass	n/a	n/a	n/a	n/a	n/a	7090	n/a	
LH/RH swing, glass	n/a	n/a	n/a	n/a	n/a	7014	n/a	
LH/RH swing, heated glass	n/a	n/a	n/a	n/a	n/a	7091	n/a	
Roll-Out Drawers								
Complete Set	Cat. No. (qty)	7134 (2)	7445 (5)	6699 (6)	6704 (6)	n/a	6700 (12)	6701 (18)
(Single Drawers)		n/a	n/a	6702	6725	n/a	6702	6702
Drawers Dividers								
For blood bank refrigerators	Cat. No. (qty)	7027 (4)	7027 (4)	6206 (4)	6963 (5)	n/a	6206 (4)	6206 (4)
Casters (2" casters standard)								
3" casters (76 mm), set of 4*		6041-1	6041-1	6041-1	6041-1	6694	6041-1	6041-1
Finishes (adds 1" or 25 mm to unit height)								
Stainless steel interior (Not available on -20°C units)		7116	6199	6115	6709	6711	6116	6117
Temperature Chart Recorders								
(Standard on blood bank units)								
Built-in, factory installed		n/a	6183-7	6183-7	6183-7	6183-7	6183-7	6183-7
Free-standing, customer installed		6383-7	6383-7	6383-7	6383-7	6383-7	6383-7	6383-7
Replacement chart paper, -40 to +25 box of 50		6184	6184	6184	6184	6184	6184	6184
Surge Suppressor								
Specify voltage with order		6402	6402	6402	6402	6402	6402	6402
Deluxe Electronic Remote Alarm								
Requires dedicated phone line		6224	6224	6224	6224	6224	6224	6224
Remote Alarm Module								
Specify voltage with order		5612-A	5612-A	5612-A	5612-A	5612-A	5612-A	5612-A
Alarm Delay Module								
Specify voltage with order		6903	6903	6903	6903	6903	6903	6903
Digital Temperature Monitor								
Specify voltage with order		6898	6898	6898	6898	6898	6898	6898
4-20 Milliamp Transmitter (Factory Installed)								
For refrigerator		6907	6907	6907	6907	6907	6907	6907
+5°C Setpoint								
		7580TA	7580TA	7580TA	7580TA	n/a	7580TA	n/a
Seismic Restraint Kits								
Seismic restraint kit (basic)		N/A	TFR210	TFR210	TFR210	TFR210	TFR210	TFR210
Seismic restraint kit for OSHPD		N/A	TF-LRF12	TF-LRF23	TF-LRF30	TF-LRF45	TF-LRF50	7TF-LRF75

2" casters are pre-installed on all units, except 4.9 cu. ft. where casters are shipped uninstalled.