thermoscientific



Designed for your clinical, diagnostic and research needs



REFRIGERATORS

LABORATORY













CHROMATOGRAPHY



BLOOD BANK















FLAMMABLE MATERIAL



FRFF7FRS

LABORATORY









PLASMA



ENZYME



FLAMMABLE MATERIAL



Thermo Scientific[™] Forma[™] High-Performance Laboratory Refrigerators and Freezers

lt's a **cold** hard fact:

Temperature variation can have an impact on the viability of samples and the efficacy of reagents. These variations can shorten product shelf life, degrade enzymes and reduce vaccine effectiveness. Therefore, it's important to choose a high-performance refrigerator or freezer that has been designed for the demanding standards of the clinical and laboratory environment.

We continually search for ways to enhance our products and processes responsibly:

- Reduce the use of refrigerants in our cold storage equipment
- Use solvent-free, paint technology
- All of our high-performance refrigerators and freezers are manufactured in a zero waste to landfill facility
- Fluorescent lighting in our refrigerators replaced with mercury-free, LED lights

Microprocessor-Based Controller

simplifies operation, improves reliability

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

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

Power Failure

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

Interior Light Switch

Enables interior lighting system (on glass door cabinets)







Automatic Defrost System

Defrost sensor manages automatic defrost cycle (except manual defrost models)

Door Ajar

Illuminated when door is left open (not available on sliding glass door cabinet)

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

Audible Alarm

Simulates in the event of warm, cold or power loss conditions. Mute will silence audible alarm with 6 minute ring back interval; display remains flashing

Our bright, easy to read display lets you know at-a-glance if your unit is running within range. Visual and audio alarms are designed to alert you in the event of a problem. Immediate access to high and low temperature parameters with the press of a button.

Touchpad Scan

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

Digital Display

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

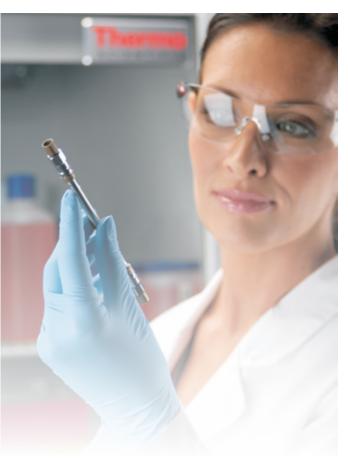
Service Parameters

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



Chromatography Refrigerators

Columns



Our **Forma high-performance 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.

- Forced air circulation for uniform temperature at all shelf levels
- Heat-free defrost for maximum uniformity
- Two 2" (5 cm) access ports with insulated hinged covers
- Interior plug outlet (duplex on A and D models; single on V and W models)
- Four casters for easy mobility, front two are lockable

- Bright, LED interior lighting
- Adjustable, epoxy-coated wire shelves are standard (optional drawers)
- Keyed on/off switch with setpoint security
- Self-closing door with 90° stop (except FRCR4504 sliding glass door model)
- Built-in remote alarm contacts
- Optional 4-20 milliamp output





Thermo Scientific Forma High-Performance Chromatography Refrigerators

Tomporotur	Dongo 1	C to 10°C foo	tonu propot to	-4°C (auto defro	ot)					
Model No.	Cu. Ft. (L)	Voltage (Hz)	Certification	Plug	Door	Full Adjustable Shelves	Half Adjustable Shelves	Int. Dimensions* H x D x W inches (mm)	Ext. Dimensions* H x D x W inches (mm)	Ship Weight Ib (kg)
FRCR2304A FRCR2304D FRCR2304V FRCR2304W [‡]	23.3 (659)	115 (60) 208/230 (60) 230 (50) 230 (50)	UL UL CE CE	NEMA 5-15 NEMA 6-15 European U.K.	single, glass	0	2	58.0 x 29.0 x 24.0 (1473 x 737 x 610)	79.2 x 36.4 x 28.0 (2012 x 925 x 711)	425 (193)
FRCR3004A FRCR3004D FRCR3004V FRCR3004W [‡]	29.2 (826)	115 (60) 208/230 (60) 230 (50) 230 (50)	UL UL CE CE	NEMA 5-15 NEMA 6-15 European U.K.	single, glass	0	2	58.0 x 29.0 x 30.0 (1473 x 737 x 762)	79.2 x 36.4 x 34.0 (2012 x 925 x 864)	435 (197)
FRCR4504A FRCR4504D FRCR4504V FRCR4504W [‡]	45.8 (1297)	115 (60) 208/230 (60) 230 (50) 230 (50)	UL UL CE CE	NEMA 5-15 NEMA 6-15 European U.K.	double, sliding glass	4	2	58.0 x 26.0 x 52.5 (1473 x 660 x 1334	79.1 x 34.5 x 56.5 (2010 x 838 x 1435)	670 (304)
FRCR5004A FRCR5004D FRCR5004V FRCR5004W [‡]	51.1 (1447)	115 (60) 208/230 (60) 230 (50) 230 (W)	UL UL CE CE	NEMA 5-15 NEMA 6-15 European U.K.	double, glass	4	2	58.0 x 29.0 x 52.5 (1473 x 737 x 1334)	79.2 x 36.4 x 56.5 (2012 x 925 x 1435)	580 (263)
FRCR7504A FRCR7504D FRCR7504V FRCR7504W	78.8 (2231)	115 (60) 208/230 (60) 230 (50) 230 (W)	UL UL CE CE	NEMA 5-15 NEMA 6-15 European U.K.	triple, glass	8	2	58.0 x 29.0 x 81.0 (1473 x 737 x 2057)	79.2 x 36.4 x 85.0 (2012 x 925 x 2159)	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.

^{*} Note for Australia and New Zealand: Due to the units having two power cords (one for unit, one for internal receptacle), units are supplied with 15A power cords.



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Use the above details to contact us if this literature doesn't answer all your questions.

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.





