



REF20 Upright

laboratory and pharmacy refrigerators

Features

Powerful refrigeration system and superior plenum air distribution

- modular refrigeration system with microprocessor controller provides a ± 1 C (1.8 F) performance throughout
- industry-exclusive plenum air distribution delivers cold air at six different levels
- auto-evaporating condensate

User-friendly interface

- 7" LCD capacitive touchscreen digital temperature display available in user-programmable C or F
- integral event and data logging with easy downloading via convenient USB port

Protection for your valuable products

- audible and visual high/low temperature, door open, power failure, low battery alarms
- dry contacts for remote alarming

Full stainless steel cabinet and high quality components

- full stainless steel interior and exterior provide resistance to rust and corrosion
- quick-connect RTD product temperature probe easily accessible inside storage cabinet
- dished stainless floor contains spills for easy clean up
- heavy-duty dual casters roll easily and lock securely
- 2.75" (6.98 cm) of CARB compliant non-HFC foam throughout
- four heavy-duty epoxy-coated shelves standard on LB models, six baskets standard on PH models

Heavy-duty door for ease of use and energy savings

- dual-pane glass door with ADA-compliant full length locking handle
- energy efficient low-E glass coating to reduce energy loss by 30 - 50% compared to non-coated glass
- glass remains condensation-free to 27 C (80 F) at 60% RH and eliminates need for heated doors in most applications
- self-closing hinges lock open at 90 degrees for easy product loading

Cool, energy-efficient LED lights

- full length LED light bars illuminate all shelves or baskets
- instant-on LEDs eliminate delay of fluorescent lights and deliver longer life
- energy-efficient LEDs allow products to be placed next to lights
- auto-on with door opening; ON/OFF front panel switch

| Model configurations | | | | | |
|----------------------|---------|-------------|--------|-----------------|-----------------|
| Storage system | Hinging | Heated door | Keypad | Door style | Item number |
| 4 shelves | right | yes | yes | glass | REF20-LB-RHTKPG |
| 4 shelves | right | yes | no | glass | REF20-LB-RHT00G |
| 4 shelves | right | no | yes | glass | REF20-LB-R00KPG |
| 4 shelves | right | no | yes | stainless steel | REF20-LB-R00KPS |
| 4 shelves | right | no | no | glass | REF20-LB-R0000G |
| 4 shelves | right | no | no | stainless steel | REF20-LB-R0000S |
| 4 shelves | left | yes | yes | glass | REF20-LB-LHTKPG |
| 4 shelves | left | yes | no | glass | REF20-LB-LHT00G |
| 4 shelves | left | no | yes | glass | REF20-LB-L00KPG |
| 4 shelves | left | no | yes | stainless steel | REF20-LB-L00KPS |
| 4 shelves | left | no | no | glass | REF20-LB-L0000G |
| 4 shelves | left | no | no | stainless steel | REF20-LB-L0000S |
| 6 baskets | right | yes | yes | glass | REF20-PH-RHTKPG |
| 6 baskets | right | yes | no | glass | REF20-PH-RHT00G |
| 6 baskets | right | no | yes | glass | REF20-PH-R00KPG |
| 6 baskets | right | no | yes | stainless steel | REF20-PH-R00KPS |
| 6 baskets | right | no | no | glass | REF20-PH-R0000G |
| 6 baskets | right | no | no | stainless steel | REF20-PH-R0000S |
| 6 baskets | left | yes | yes | glass | REF20-PH-LHTKPG |
| 6 baskets | left | yes | no | glass | REF20-PH-LHT00G |
| 6 baskets | left | no | yes | glass | REF20-PH-L00KPG |
| 6 baskets | left | no | yes | stainless steel | REF20-PH-L00KPS |
| 6 baskets | left | no | no | glass | REF20-PH-L0000G |
| 6 baskets | left | no | no | stainless steel | REF20-PH-L0000S |

Features (continued)

Warranty

- 2 year parts and labor
 - 5 year compressor parts only
 - optional extended one year warranty (item# EW12)
 - 3 year parts and labor
 - 5 year compressor parts only
 - optional extended three year warranty (item# EW36)
 - 5 year parts and labor
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Certifications



Commercial Refrigerator
SAFETY US/CA – SA12646

Factory-installed options

Left-hinged door, facing unit (right-hinged door standard)

Integral keypad and electronic locking system with keyed access manual override

Solid stainless steel door with 2.60" (6.60 cm) thick insulation and ADA-compliant full-length locking handle (full-length glass door standard)

Heated glass door and frame (recommended for ambients above 27 C (80 F), 60% RH) (glass door only)

NOTE: Factory-installed options must be specified at time of order – for details contact factory or your local sales representative.

Accessories

Replacement CRS (Complete Refrigeration System) module. 2 years parts, 5 years compressor parts, 2 years labor warranty. (item# 00939785)

Additional shelves (2), REF20-LB (item# 00927251)

NOTE: Maximum of (10) shelves at 4.50" (11.43 cm) spacing or (8) shelves at 6.00" (5.24 cm) spacing.

Replacement "quick-connect" RTD probe with certificate of NIST-traceable calibration (item# 01140458)

Pyxis® compatible door bracket (item# 00927202)

Omniceil® compatible door bracket (item# 00966432)

medDISPENSE® compatible door bracket (item# 00978296)

Glycerine, 16 oz (item# 00959296)

Wall bracket kit, seismic anchoring (item# 00927194)

NOTE: Accessories ship separately.

Touchscreen display



Heavy-duty epoxy coated shelves on LB models



"Floating" basket system on PH models



Specification

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|-----------------------|---|
| Nominal capacity | 19.7 cu ft (558 L) |
| Ventilation clearance | 10.00" (25.4 cm) top, 2.00" (5.08 cm) back |

Exterior

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|-------------------------------|---|
| W1 Width | 29.75" (75.6 cm) |
| D1 Depth with handle | 30.50" (77.5 cm) |
| H1 Height with casters | 79.50" (201.9 cm) |
| Casters | (4) swiveling dual wheel casters with toe locks |
| D2 Door swing | 56.50" (143.5 cm) |

Interior

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|---|---|
| Height | 55.94" (142.1 cm) |
| Lighting | (2) energy efficient full length LED lights |
| Storage system | (4) full, epoxy-coated shelves, adjustable in 1/2" (1.27 cm) increments on LB models, (6) full extension, epoxy-coated baskets on PH models |
| Shelf dimensions (LB models) | 23.38" W x 19.50" D (59.4 cm x 49.5 cm) |
| Max. number of shelves | (10) shelves at 4.50" (11.43 cm) spacing or (8) shelves at 6.00" (5.24 cm) spacing |
| Overall basket dimensions (PH models) | 23.50" W x 20.00" D x 6.38" H (59.7 x 50.8 x 16.21 cm) |
| Inside basket dimensions (PH models) | 21.75" W x 19.25" D x 5.88" H (55.2 x 48.9 x 14.94 cm) |
| Space between baskets (PH models) | 8.00" (20.32 cm) |
| Working load rating per shelf or basket | 59 lb (27 kg) |
| Max. load rating per shelf or basket | 88 lb (40 kg) |

Door configurations

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|-------------|---|
| Door | dual-pane glass door or solid stainless steel |
| Door lock | cylinder type with one key |
| Door handle | ADA-compliant, full length handle |
| Door hinges | torsion rod self-closing with 90° hold open feature |
| Gasket | magnetic dart style (replaceable) |

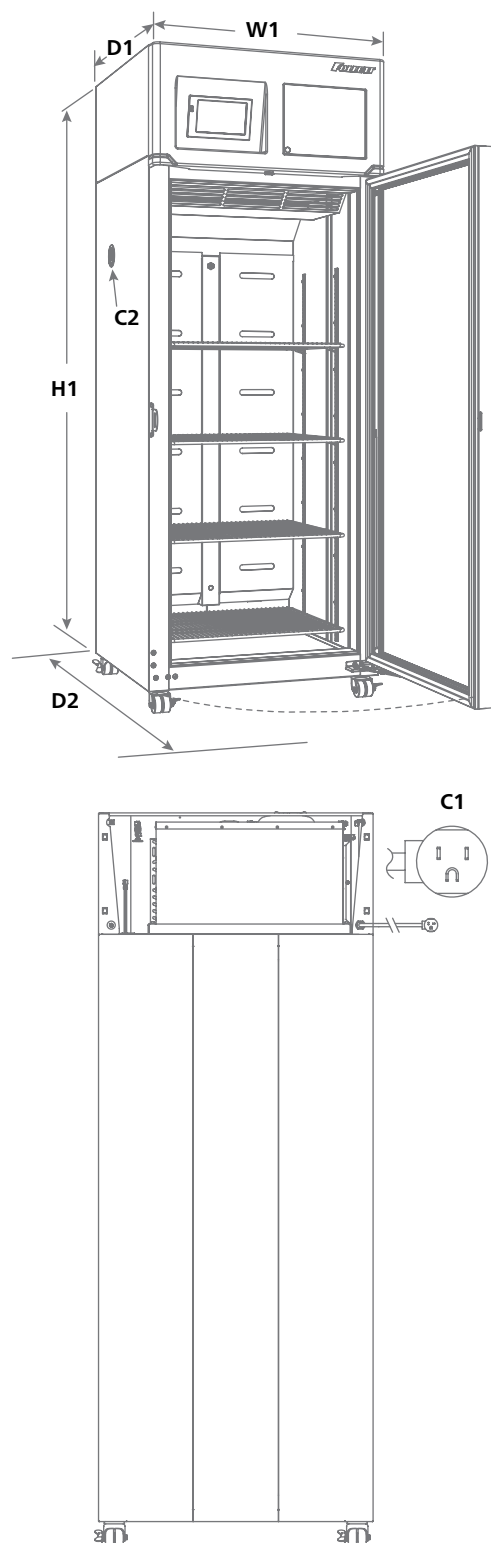
Electrical

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|---|---|
| C1 Electrical | 10.6 run load amps, NEMA 5-15 90° hospital-grade plug. 9' (2.7 m) cord. |
| Maximum size of branch circuit overcurrent device | 15 amps dedicated circuit |

Controls

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|-----------------------------------|---|
| Temperature display | 7" LCD capacitive touchscreen digital temperature display available in user-programmable C or F |
| C2 3rd party probe access | soft access port on left side of cabinet |
| Product temperature display probe | (1) quick-connect RTD (± 0.4 C, ± 0.7 F) |
| Temperature probe calibration | top probe calibration in 0.1° increments |
| Password protection PIN | 4 digit password to prevent interface setting/selection changes |

Dimensional drawing



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| | |
|--------------------------------------|---|
| Date and time | programmable |
| Product simulation bottle size | (1) 125 ml |
| Refrigeration and defrost probes | NTC thermistor type |
| Refrigeration cycle with probe error | factory set at 4 min on, 8 off, user adjustable |
| Programmable operating range | 2.2 to 10 C (36 to 50 F) |
| Factory preset | 4.4 C |

Alarming

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|--|--|
| High and low product temperature alarm | audible and visual, user programmable set points in C or F |
| Power failure alarm | audible and visual |
| Door ajar alarm | audible and visual |
| Probe error alarm | audible and visual – product temperature probes, refrigeration and defrost |
| Alarm mute | 10 minute ring-back |
| Alarm volume | 0-10 scale |
| Low battery alert | audible and visual |
| Back-up battery status | shows voltage level |
| Min/max temperature log | shows highest and lowest product temperature since last reset occurred |
| Remote contacts | NO/NC standard, located behind front panel |

Data logging

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|-----------------|--|
| Information log | graphs or displays temperature data and displays chronological event data (50,000 data points) |
| Data export | USB export capabilities |

System performance

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|--|--|
| Top-to-bottom temperature consistency | ± 1 C (1.8 F) |
| Refrigeration system | integral top-mounted module with 1/3 hp compressor and air-cooled condenser |
| Refrigerant and charge | non-CFC R134a refrigerant, 11.4 oz |
| Air circulation system | ducted air to each storage level through back plenum openings, front face return |
| Air temperature pull down | 24 to 5 C (75 to 41 F) in 30 minutes |
| Product simulation bottle temperature pull down | 24 to 5 C (75 to 41 F) in 120 minutes |
| Energy consumption | 5.4 kWh/day (auto-off defrost) |
| BTU/hr normal heat rejection, includes duty cycle (75 F ambient) | 955 BTU/hr (280 Watts) |
| BTU/hr maximum (total) heat rejection, continuous operation (75 F ambient) | 3185 BTU/hr (933 Watts) |

Shipping

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|---|--|
| Shipping size | 42.00" W x 43.00" D x 86.00" H (106.7 x 109.2 x 218.4 cm) |
| Approximate refrigeration module net weight | 62 lb (28 kg) |
| Approximate net weight | REF20-LB models – 290 lb (132 kg) REF20-PH models – 380 lb (172 kg) |
| Approximate ship weight | REF20-LB models – 410 lb (186 kg) REF20-PH models – 473 lb (215 kg) |

NOTE: For indoor use only

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SHORT FORM SPECIFICATION: Upright refrigerator with 19.7 cu ft (558 L) of nominal capacity. To include (choose one) ____ (4) full, epoxy-coated shelves, adjustable in 1/2" (1.27 cm) increments or ____ (6) full extension, epoxy-coated "floating" baskets. Environmentally responsible R134a refrigeration system to include an integral top-mounted module with 1/3 hp compressor and air-cooled condenser. 7" LCD capacitive touchscreen with user selectable C or F. Event and data logging with USB download capability. Air circulation system to duct air through back plenum openings with front face return. Storage area to be insulated with CARB compliant non-HFC foam. 9' (2.7 m) power cord with NEMA 5-15 90° hospital-grade plug. UL listed.