



# REF45 Upright

## double door laboratory refrigerators

### Features

Powerful refrigeration system and superior plenum air distribution

- modular refrigeration system with microprocessor controller provides a  $\pm 1$  C (1.8 F) performance throughout
- industry-exclusive center plenum air distribution delivers cold air to both sides at six different levels
- frost-free and 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 CFC-free foam insulation throughout
- 8 heavy-duty epoxy-coated shelves standard (4 per side)

### Heavy-duty door for ease of use and energy savings

- dual-pane glass door or solid stainless 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

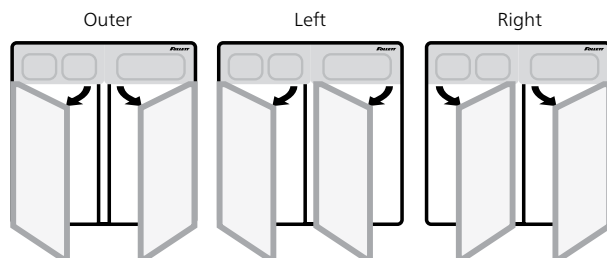
### Cool, energy-efficient LED lights

- full length LED light bars illuminate all shelves
- 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

### Warranty

- 2 years parts, 5 years compressor parts, 2 years labor

| Upright double door laboratory refrigerator, 115V/60 Hz |         |             |        |                 |                 |
|---------------------------------------------------------|---------|-------------|--------|-----------------|-----------------|
| Storage system                                          | Hinging | Heated door | Keypad | Door style      | Item number     |
| 8 shelves                                               | outer   | yes         | yes    | heated glass    | REF45-LB-0HTKPG |
| 8 shelves                                               | outer   | yes         | no     | heated glass    | REF45-LB-0HT00G |
| 8 shelves                                               | outer   | no          | yes    | glass           | REF45-LB-000KPG |
| 8 shelves                                               | outer   | no          | yes    | stainless steel | REF45-LB-000KPS |
| 8 shelves                                               | outer   | no          | no     | glass           | REF45-LB-00000G |
| 8 shelves                                               | outer   | no          | no     | stainless steel | REF45-LB-00000S |
| 8 shelves                                               | right   | yes         | no     | heated glass    | REF45-LB-RHT00G |
| 8 shelves                                               | right   | no          | no     | glass           | REF45-LB-R0000G |
| 8 shelves                                               | right   | no          | no     | stainless steel | REF45-LB-R0000S |
| 8 shelves                                               | left    | yes         | no     | heated glass    | REF45-LB-LHT00G |
| 8 shelves                                               | left    | no          | no     | glass           | REF45-LB-L0000G |
| 8 shelves                                               | left    | no          | no     | stainless steel | REF45-LB-L0000S |



Job

Item

801 Church Lane | Easton, PA 18040, USA  
1.800.523.9361 | 1.610.252.7301 | folletthealthcare.com



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## Factory-installed options:

Integral keypad and electronic locking system with keyed access manual override (available on outer-hinged units only)

Keypad integral to touchscreen controls; electronic locking mechanism opens both doors simultaneously

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

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

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## Accessories

Additional shelves, set of 2 (item# 00927269)

Quick-connect replacement RTD temperature probe with ISO 17025 certificate of traceable calibration (item# 01140458)

Replacement high-side refrigeration module (complete condensing unit) (item# 01147891)

Digital data logger kit (item# 01057561)

Pyxis® compatible door bracket, available on one outside handled door of right or left hinged models only (item# 00927202)

Omniceil® compatible door bracket, available on one outside handled door of right or left hinged models only (item# 00966432)

medDISPENSE® compatible door bracket, available on one outside handled door of right or left hinged models only (item# 00978296)

Glycerine, 16 oz (item# 00959296)

Additional key (item# 00945436) for glass door

Additional key (item# 01035013) for stainless steel door

Wall bracket kit, seismic anchoring (item# 00927194)

NOTE: Accessories ship separately.

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Touchscreen display



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Heavy duty epoxy coated shelves



## Specification

|                       |                                               |
|-----------------------|-----------------------------------------------|
| Nominal capacity      | 45 cu ft                                      |
| Ventilation clearance | 16.00" (40.6 cm) top,<br>2.00" (5.08 cm) back |

## Exterior

|                               |                                                 |
|-------------------------------|-------------------------------------------------|
| <b>W1</b> Width               | 59.75" (151.8 cm)                               |
| <b>D1</b> Depth with handle   | 33.55" (85.2 cm)                                |
| <b>H1</b> Height with casters | 79.54" (202.0 cm)                               |
| Casters                       | (6) swiveling dual wheel casters with toe locks |
| <b>D2</b> Door swing          | 59.55" (151.3 cm)                               |

## Interior

|                                |                                                                        |
|--------------------------------|------------------------------------------------------------------------|
| Height                         | 54.31" (138.0 cm) with upper return panel                              |
| Lighting                       | (2) energy efficient full length LED lights                            |
| Storage system                 | (8) full, epoxy-coated shelves adjustable in 1/2" (1.27 cm) increments |
| Overall shelf dimensions       | 23.38" W x 25.50" L<br>(59.4 cm x 64.8 cm)                             |
| Max. load rating per shelf     | 125 lb (57 kg)                                                         |
| Max number of shelves per side | 10                                                                     |

## Door configurations

|             |                                                                                      |
|-------------|--------------------------------------------------------------------------------------|
| Door        | (2) dual-pane glass, argon filled with low-E coating (heated opt) or stainless steel |
| Door lock   | cylinder type with one key per door                                                  |
| Door handle | ADA-compliant, full length handle                                                    |
| Door hinges | torsion rod self-closing with 90° hold open feature                                  |
| Gasket      | magnetic dart style (replaceable)                                                    |

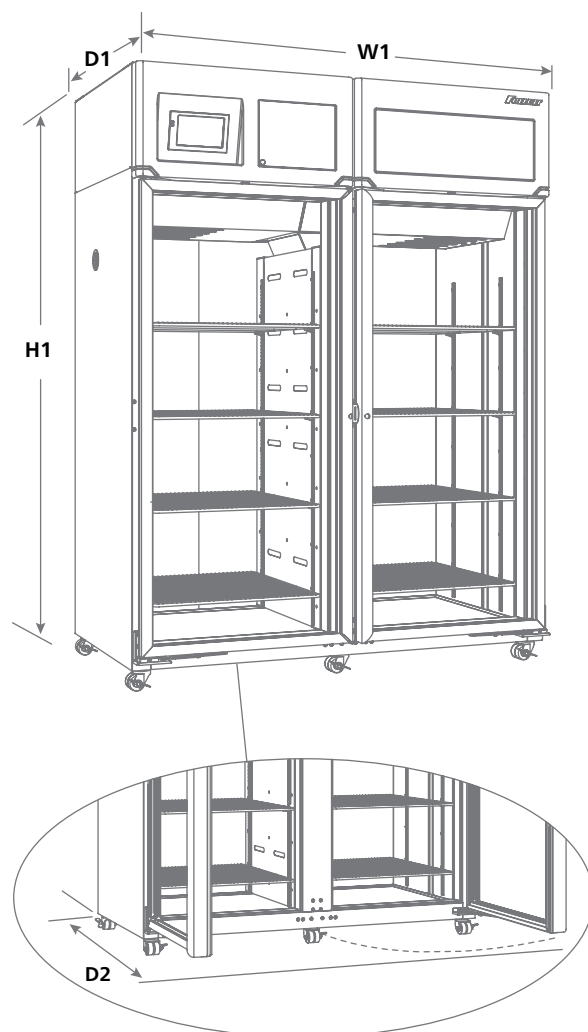
## Electrical

|                                           |                                                                                                                            |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Electrical<br>115 V/60/1<br>(103 - 132 V) | 12 full load amps, Max. fuse<br>20 amps, dedicated circuit,<br>NEMA 5-20P,<br>90° hospital-grade plug,<br>9' (2.7 m) cord. |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|

## Controls

|                                      |                                                                                                 |
|--------------------------------------|-------------------------------------------------------------------------------------------------|
| Temperature display                  | 7" LCD capacitive touchscreen digital temperature display available in user-programmable C or F |
| 3rd party probe access               | soft access port on left side of cabinet                                                        |
| Product temperature display probe    | (1) quick-connect RTD<br>(± 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                                 |
| 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 2 min on, 6 off                                                                  |
| Programmable operating range         | 3.3 to 10 C (38 to 50 F)                                                                        |
| Factory preset                       | 3.3 C                                                                                           |

## Dimensional drawing



Omniceil is a registered trademark of Omnicell, Inc. in the United States.  
Pyxis is a registered trademark of CareFusion in the United States and other countries.  
medDISPENSE is a registered trademark of InterMetro Industries Corp. in the United States and other countries.  
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## Alarming

|                                                    |                                                                          |
|----------------------------------------------------|--------------------------------------------------------------------------|
| High and low product temperature alarm (top probe) | 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, adjustable                                          |
| 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

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

## System performance

|                                                                            |                                                                              |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Top-to-bottom temperature consistency                                      | ± 1 C (1.8 F)                                                                |
| Refrigeration system                                                       | integral top-mounted modules with 1/2 hp compressor and air-cooled condenser |
| Refrigerant and charge                                                     | non-CFC R134a refrigerant, 13 oz                                             |
| Air circulation system                                                     | ducted air to each storage level through plenum openings                     |
| Air temperature pull down                                                  | 27 to 4 C (80 to 39 F) in 30 minutes                                         |
| Product simulation bottle temperature pull down                            | 27 to 4 C (80 to 39 F) in 5 h 45 min (to 8 C (46 F) in 1 h 50 min)           |
| Energy consumption                                                         | 7.4 kWh/day (auto-off defrost)                                               |
| BTU/hr normal heat rejection, includes duty cycle (75 F ambient)           | 1480 BTU/hr (434 W)                                                          |
| BTU/hr maximum (total) heat rejection, continuous operation (75 F ambient) | 5240 BTU/hr (1536 W)                                                         |

## Shipping

|                                                       |                                                           |
|-------------------------------------------------------|-----------------------------------------------------------|
| Shipping size                                         | 48.00" W x 70.00" L x 83.00" H (121.9 x 177.8 x 210.8 cm) |
| Approximate refrigeration condenser module net weight | 52 lb (24 kg)                                             |
| Approximate net weight                                | 610 lb (277 kg)                                           |
| Approximate ship weight                               | 750 lb (341 kg)                                           |
| NOTE: For indoor use only                             |                                                           |

**SHORT FORM SPECIFICATION:** Upright double door refrigerator with 45 cu ft of nominal capacity. To include (8) epoxy-coated shelves, adjustable in 1/2" (1.27 cm) increments. Environmentally responsible R134a refrigeration system to include top-mounted modules with 1/2 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 distributes cold air to both sides at 6 different levels. Storage area to be insulated with CFC-free, high density polyurethane foam. 9' (2.7 m) power cord with NEMA 5-20 90° hospital-grade plug. UL listed.

