PHCbi

Life Science
Innovator
Since 1966

MEETS
CDC PHARMACY
RECOMMENDATION

MEETS
CDC VACCINE
RECOMMENDATION

DESIGNED FOR VACCINE, PHARMACEUTICAL AND MEDICAL PRODUCT STORAGE.

High Performance Biomedical Refrigerators and Freezers

PHCbi refrigerators and freezers are engineered from the inside out to create, maintain and restore precise temperatures that are not commonly found with household or commercial cabinets.

PHC Corporation of North America

www.phchd.com/us/biomedical

IT'S THE **QUALITY OF COLD**

that determines the efficacy of internal storage conditions.

MPR-N450FH-PA
Combo Refrigerator/Freezer

MDF-U731M-PA
-30°C Manual Defrost
Biomedical Freezer

MPR-722-PA
Pharmaceutical Refrigerator

SR-L6111W-PA
Undercounter Refrigerator

Storage temperatures specified on pharmaceutical product inserts are categorized as refrigerated or frozen. While frozen products typically tolerate a broader temperature environment, refrigerated products must be kept from freezing.

The combination of temperature control accuracy, interior temperature uniformity, quick recovery, resistance to high ambient temperature and multiple monitoring processes delivers a quality of cold that characterizes our commitment to engineering, storage safety and reliability.

MEETS CDC VACCINE RECOMMENDATION

MEETS CDC PHARMACY RECOMMENDATION

Our pharmacy storage cabinets are designed to meet current CDC pharmacy guidelines and upcoming standards for vaccine storage.

The CDC estimates that more than $20 million is lost each year - in the Vaccines for Children program alone - on wasted pharmaceuticals stored under insufficient conditions. In addition, it is impossible to visually verify if a vaccine has been frozen during a temperature excursion in cold chain storage. This may render the vaccine useless and may negate the purpose of the immunization itself, leading to a potential exposure to disease. [1,2,3,4]

Excellence in cold chain storage.

Our refrigerators, freezers and combo refrigerators/freezers represent more than fifty years of engineering excellence in cold chain storage and temperature controlled products. From the refrigeration platform to the control center and cabinet configuration, each model delivers an extra measure of protection for safety and viability of high value pharmaceuticals.

GOVERNING BODIES

More information on standards associated with improving storage and safety of vaccines and other pharmaceutical independent reports is available from these and other agencies.

- U.S. Centers for Disease Control and Prevention (CDC), Atlanta, GA
- Vaccines for Children (VFC), NSF. Atlanta, GA
- National Institute for Standards and Technology (NIST), Gaithersburg, MD
- NSF International, Ann Arbor, MI
- World Health Organization (WHO), Geneva, Switzerland

ENERGY STAR

We have earned ENERGY STAR certification for a selection of high performance biomedical refrigerators and freezers that operate over a temperature range of 10°C to -40°C. ENERGY STAR products are third-party certified based on testing in EPA-recognized laboratories. For the latest information on our ENERGY STAR products visit www.phchd.com/us/biomedical/energy-star.

Designed for Vaccine, Pharmaceutical and Medical Product Storage.

ACCURACY

Temperature accuracy is a critical requirement in the quality of cold. Our refrigerators are factory pre-set at 5°C (41°F).* This assures interior storage temperature is sufficiently above the freezing point of vaccines and other liquid-based pharmaceuticals that can lose efficacy if frozen. This margin is essential for storage of small-volume doses in microsyringes that can freeze quickly if exposed to 0°C (32°F) for a short time following a door-open recovery period.

UNIFORMITY

The quality of cold starts with interior temperature uniformity from top-to-bottom, front-to-back and side-to-side. Uniformity assures stored product safety regardless of where in the refrigerator it is placed.

RECOVERY

Frequent door openings are common in retail pharmacies, clinics, hospitals, public health institutions and other facilities where vaccines are stored for distribution and administration. Vaccines are sensitive to freezing temperatures. PHCbi refrigerators protect against the possibility of freezing with a combination of precise temperature control and positive airflow balanced within the cabinet and supervised by a microprocessor-based controller.

AMBIENT TOLERANCE

High ambient temperatures are common in all US markets during the summer months, especially when HVAC demand is stressed due to low-voltage or brown-out conditions. PHCbi refrigerators and freezers are designed with high-efficiency insulation, peripheral gaskets to prevent cold air loss and robust refrigeration components selected for broad voltage tolerance. Dual pane glass doors on selected models reduce or eliminate condensation.

MONITORING

Microprocessor controllers include secure setpoint management with factory pre-sets, high visibility digital temperature displays, battery backup, local audio/visual deviation alarms and remote alarm contacts. For 24/7/365 independent monitoring, utilize the LabAlert® Monitoring System.

*The SR-L6111W-PA refrigerator factory pre-set is +4°C.

Vaccine Storage Recommendations

If a vaccine freezes, its efficacy may be diminished or destroyed without visible indication to the administering clinician. Thus, vaccines inadvertently frozen in cold chain distribution or local storage may not offer protection to patients.[1]

In an effort to assure the quality of vaccines at the end of the distribution cold chain, the United States Centers for Disease Control and Prevention (CDC) has published guidelines for best practices in vaccine storage.[2] These guidelines, which continue to evolve, are based on studies conducted by the National Institute of Standards and Technology (NIST).[3]

Established in 2014, these guidelines are designed to isolate and identify the conditions that affect vaccine efficacy and storage integrity, including the following areas of focus:

- Must not be a household or dormitory type of refrigerator. Dormitory-style units should not be used under any circumstances. This type of refrigerator poses a significant risk of freezing a vaccine even when it is used for temporary storage. A NIST report showed that this type of unit demonstrated inconsistent temperature control, regardless of where the vaccine was located in the chamber. Within two weeks of use, median temperature of the refrigerator setpoint had drifted approximately 4°C lower, freezing the vaccines contained inside[4]
- Must offer dedicated storage in a stand-alone refrigerator specifically designed to establish and maintain key performance parameters
- Must maintain accurate, uniform and repeatable storage temperature over a range of 2°C to 8°C (36°F to 46°F). The factory setpoint is 5°C (41°F)*
- Must protect from freezing temperatures anywhere in the refrigerator. This is critical for storage of small vaccine doses and microsyringes that can freeze quickly
- For vaccines that require frozen storage, freezer temperature range must be between -15°C to -50°C (-5°F to 58°F)
- May require NIST calibrated thermometer with certificate of calibration

ANIMAL VACCINE APPLICATIONS

High performance biomedical refrigerators and freezers are also recommended for storage of vaccines and other pharmaceuticals developed for veterinary use. These applications include veterinary offices, zoological and animal preservation reserves, farm cooperatives and large-scale dairy operations where herd management is required and vaccines are stored.

1) A 2012 Centers for Disease Control and Prevention (CDC) report revealed improper storage of some vaccines from the Vaccines for Children (VFC) program serving an estimated 40 million children through a national network.

2) NSF International (NSF) and The U.S. Center for Disease Control and Prevention have assigned industry consultants comprised of leading refrigeration and freezer cabinet manufacturers, including PHC Corporation of North America, to establish vaccine storage guidelines with an emphasis on establishing criteria for storage refrigerators to protect refrigerated vaccines from freezing. These criteria will require that all vaccines be stored in refrigerators that meet performance standards currently offered by PHC Corporation of North America.

3) U.S. Centers for Disease Control and Prevention. (2016). *CDC Vaccine Storage and Handling Toolkit*. Atlanta, GA. Retrieved from http://www.cdc.gov/vaccines/recs/storage/toolkit/storage-handling-toolkit.pdf.

4) U.S. National Institute of Standards and Technology. (2009). *Thermal analysis of refrigeration systems used for vaccine storage.* Gaithersburg, MD: Chojnacky, M., Miller, W., Ripple, D., & Strouse, G. Retrieved from http://www.nist.gov/customcf/get_pdf.cfm?pub_id=904574.

*The SR-L6111W-PA refrigerator factory pre-set is +4°C.

Use of non-compliant household or domestic refrigerators for pharmaceutical storage may be unsafe, costly and creates liabilities for any audited dispensing pharmacy clinician at a leading hospital or health agency that cannot assure the efficacy of vaccines associated with federally funded programs or other public health initiatives. [1,2,3,4]

High Performance
Model MPR-N450FSH-PA
Combo Refrigerator/Freezer

Domestic/Household
Refrigerator

CDC Regulatory Compliance Requirements for Vaccine Storage

MPR Series Refrigerators, Combo Refrigerators/Freezers, and Freezers are designed to meet best practice and performance directives established by the CDC.

- NIST certified calibrated temperature control and indicating probes (optional)*
- Accurate refrigerator temperature control, 2°C to 8°C (36°F to 46°F), factory pre-set at 5°C (41°F)
- Automatic defrost; elimination of ice and water while maintaining product temperature within specification
- Protection from inadvertent freezing in refrigerator chamber
- Independent temperature controls for refrigerator and freezer chambers
- Tight peripheral door seals
- Freezer range, -15°C to -50°C (-5°F to 58°F), chambers must maintain -15°C (5°F) throughout

PHCbi MPR Series Refrigerators and Freezers vs Domestic/Household Products

Performance	MPR Series	Domestic/Household
Meets CDC Criteria for Vaccine Safety	Yes	—
Precise Temperature Setting, Digital Display	Microprocessor Control, 1°C Setpoint Accuracy	—
Uniform Top-to-Bottom Temperature	Forced Airflow, ±3°C (Refrigerators), ±5°C (Freezers)	—
Fast Temperature Recovery	Reserve Cooling Power	—
Ambient Temperature Protection	High Performance Insulation	—
Protection from Vaccine Freezing	Tight Temperature Uniformity To Protect Stored Product From Freezing	—
Design Attributes	Specifically for Vaccine/Biological/ Pharmaceutical Use	—
Dual Pane Glass Door	Transparent UV Screening	—
Integrated Systems Supervision	Microprocessor Monitoring	—
Deviation Alarms	Temperature, Door Ajar	—
Remote Alarm Terminal	Standard NO/NC/C - DC 24V 2A Connection	—
Self-Diagnostic Functions	Continuous	—
Access Ports for Independent Probes	Yes	—
NIST Traceable Temperature Probe	Optional	—
Automatic Defrost on Demand, Evaporator Sensor Initiated	Maintains Stored Product Temperature	—
Independently Controlled Freezer Section	On Combo Refrigerator/ Freezer Units Only	—

* National Institute of Standards and Technology (NIST) and the American Society for Testing and Materials (ASTM Standard).

Standard Features Guide

All MPR Series Refrigerators, Combo Refrigerators/ Freezers, and Freezers come standard with:

- CFC Free insulation
- Microprocessor temperature controller with alarms
- CFC Free refrigerants
- Highly visible LED digital temperature display
- Remote alarm contacts
- Key pad lockout
- Key door lock
- Diagnostics (sensors only on SR-L6111W-PA and SF-L6111W-PA)
- Access ports with plugs
- Leveling feet & casters (leveling feet only on SR-L6111W-PA and SF-L6111W-PA undercounter units)

Temperature Operation and Defrost

Refrigerators

- Exceptional uniformity prevents vaccines from freezing
- Unique defrost system keeps refrigerator free from frost build up. Electronically monitored and initiates only when needed

Freezers

- Freezers incorporate either forced air, cold wall or cold evaporator shelves to achieve freezing temperatures
- Freezers have either automatic or manual defrost

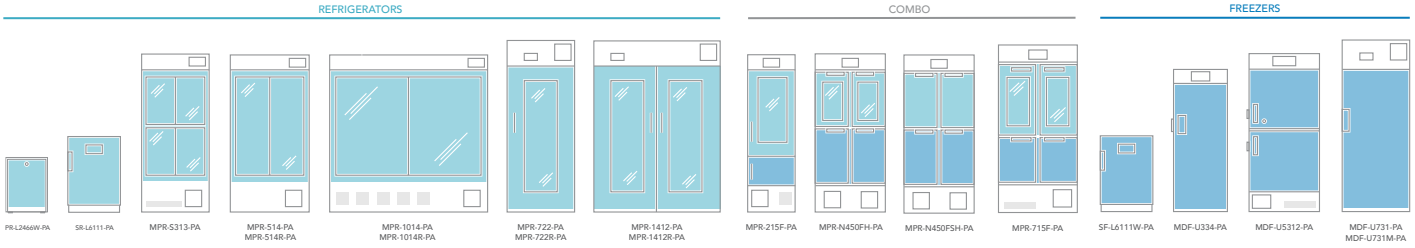
Selection

PHCbi vaccine/pharmacy refrigerators and biomedical freezers are available in a variety of configurations, including undercounter and upright models with shelves. Pull-out wire baskets or pull-out solid drawers are available on select models.

Purchasing Guide by Annual Dosage Volume

Choosing a pharmacy refrigerator or freezer for retail pharmacies, public health agencies and other administrating bodies is based on volume.

	Pharmacy Refrigerators		Pharmacy Freezers	
Annual Doses Administered	Cabinet Size	PHCbi Refrigerator Model	Cabinet Size	PHCbi Freezer Model
Low Volume, less than 500 doses/year	5.7 cu.ft. to 12.0 cu.ft.	SR-L6111W-PA Undercounter Refrigerator MPR-S313-PA Refrigerator MPR-215F-PA Combo Refrigerator/Freezer MPR-N450FH-PA Combo Refrigerator/Freezer MPR-N450FSH-PA Combo Refrigerator/Freezer	1.4 cu.ft. to 5.5 cu.ft.	SF-L6111W-PA Undercounter Freezer MPR-215F-PA Combo Refrigerator/Freezer MPR-N450FH-PA Combo Refrigerator/Freezer MPR-N450FSH-PA Combo Refrigerator/Freezer
Moderate Volume, 500 to 2,000 doses/year	12.0 cu.ft. to 17.3 cu.ft.	MPR-S313-PA Refrigerator MPR-450FH-PA Combo Refrigerator/Freezer MPR-450FSH-PA Combo Refrigerator/Freezer MPR-715F-PA Combo Refrigerator/Freezer MPR-514-PA Refrigerator MPR-514R-PA Refrigerator	1.4 cu.ft. to 24.4 cu.ft.	SF-L6111W-PA Undercounter Refrigerator MPR-215F-PA Combo Refrigerator/Freezer MPR-450FH-PA Combo Refrigerator/Freezer MPR-450FSH-PA Combo Refrigerator/Freezer MDF-U334-PA Freezer MDF-U5312-PA Freezer MDF-U731-PA Freezer MDF-U731M-PA Freezer
Large Volume, 2,000 to 10,000 doses/year	17.3 cu.ft. to 48.0 cu.ft.	MPR-722-PA Refrigerator MPR-722R-PA Refrigerator MPR-1014-PA Refrigerator MPR-1014R-PA Refrigerator MPR-1412-PA Refrigerator MPR-1412R-PA Refrigerator	—	—
Very Large Volume, 10,000+ doses/year	48.0 cu.ft.	MPR-1412-PA Refrigerator MPR-1412R-PA Refrigerator	—	—



MPR SERIES REFRIGERATORS

High Performance Biomedical Refrigerators– Swing Door Models

SR-L6111W-PA

MPR-722-PA
MPR-722R-PA

MPR-1412-PA
MPR-1412R-PA

PHCbi Lab and Pharmacy Refrigerators include significant design and performance properties for storage of temperature sensitive vaccines and other pharmaceutical materials.

Swing Door Model Features

- Swing door models include dual glass viewing window
- Positive internal airflow maintains precise top-to-bottom temperature uniformity to protect stored product in every location within the refrigerator
- Top mount refrigeration system and controls
- Interior light*

* No interior light on Model SR-L6111W-PA

ALL CABINETS MEET ESSENTIAL CRITERIA FOR VACCINE AND PHARMACY USE:

- Accuracy
- Uniformity
- Recovery
- Ambient Tolerance
- Monitoring

MEETS CDC VACCINE RECOMMENDATION

MEETS CDC PHARMACY RECOMMENDATION

NEMA	Plug (P)	Receptacle (R)
5-15		

Model Number		SR-L6111W-PA
External Dimensions (W × D × H) nominal	inches | mm	23.6 × 25.7 × 34.6 | 600 × 652 × 880*
Internal Dimensions (W × D × H) nominal	inches | mm	20.9 × 17.4 × 27.8 | 530 × 441 × 706
Volume	cu.ft. | liters	5.7 | 161
Net Weight	lbs. | kg	110 | 50
Performance		
Temperature Control Range	°C	+1 to +14
Vaccine Storage Operating Temperature	°C	+2 to +8
Factory Pre-Set Temperature	°C	+4
Highest Ambient Temperature and Maintains Cabinet Temperature	°C	+35
Evaporator Prevents Vaccines from Freezing		Operates above freezing at all times
Control		
Microprocessor Controller, Adjustable	°C	Increments of 1 - Door mounted
Digital Temperature Display		LED
Controller Security		Lockable with key pad
Electronics Diagnostics		Sensors only
Refrigeration		
Cooling Method Internal Airflow for Precise Temperature		Uniformity forced air
Defrost Method Initiated Only as Needed		Electronically monitored evaporator
Refrigeration System		Air cooled, CFC free
Insulation		CFC free urethane
Construction		
Outer Door	qty	1-CFC free insulation
Interior		Formed ABS
Exterior		Resin bonded galv steel
Outer Door Lock		Key
Interior Light		—
Shelves	qty	3-Adjustable, Wire
Drawers	qty	—
Casters	qty	—
Adjustable Feet	qty	4-Leveling
Access Port	qty	1
Access Port Diameter	inches | mm	1.1 | 30
Alarms (V = Visual, B = Buzzer, R = Remote)		
Power Failure		V-B-R
High Temperature		V-B-R
Low Temperature		V-B-R
Door Open		V-B
Remote Alarm Contacts		Normally open, Normally closed, common
Remote Alarm Output		DC 24V 2A
Electrical and Noise Level		
Power Supply		115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle
Noise Level	dB(A)	—
Options		
Blackout Panels to Cover Glass	qty	—
Stackable		SRFL61PS

* Exterior cabinet depth measures 23.6" (600 mm) without control panel. Add 2.2" (56 mm) for control panel/display.

High Performance Biomedical Refrigerators– Swing Door Models

Model Number		MPR-722-PA (w/shelves)	MPR-722R-PA (w/drawers)	MPR-1412-PA (w/shelves)	MPR-1412R-PA (w/drawers)
External Dimensions (W × D × H) nominal	inches | mm	30.3 × 36.2 × 76.8 | 770 × 920 × 1955*	30.3 × 36.2 × 76.8 | 770 × 920 × 1955*	56.7 × 36.2 × 76.8 | 1440 × 920 × 1951**	56.7 × 36.2 × 76.8 | 1440 × 920 × 1951**
Internal Dimensions (W × D × H) nominal	inches | mm	25.6 × 27.9 × 59.1 | 650 × 710 × 1500	25.6 × 27.9 × 59.1 | 650 × 710 × 1500	52.0 × 28.0 × 59.1 | 1320 × 710 × 1500	52.0 × 28.0 × 59.1 | 1320 × 710 × 1500
Volume	cu.ft. | liters	24.2 | 684	23.7 | 671	48.2 | 1364	48.0 | 1359
Net Weight	lbs. | kg	334 | 174	425 | 193	547 | 248	633 | 287
Performance					
Temperature Control Range	°C	+2 to +23	+2 to +23	+2 to +23	+2 to +23
Vaccine Storage Operating Temperature	°C	+2 to +8	+2 to +8	+2 to +8	+2 to +8
Factory Pre-Set Temperature	°C	+5	+5	+5	+5
Highest Ambient Temperature and Maintains Cabinet Temperature	°C	+40	+40	+40	+40
Evaporator Prevents Vaccines from Freezing		Operates above freezing at all times	Operates above freezing at all times	Operates above freezing at all times	Operates above freezing at all times
Control					
Microprocessor Controller, Adjustable	°C	Increments of 1	Increments of 1	Increments of 1	Increments of 1
Digital Temperature Display		LED	LED	LED	LED
Controller Security		Lockable with key pad	Lockable with key pad	Lockable with key pad	Lockable with key pad
Electronics Diagnostics		Total control system	Total control system	Total control system	Total control system
Refrigeration					
Cooling Method Internal Airflow for Precise Temperature		Uniformity forced air	Uniformity forced air	Uniformity forced air	Uniformity forced air
Defrost Method Initiated Only as Needed		Electronically monitored evaporator	Electronically monitored evaporator	Electronically monitored evaporator	Electronically monitored evaporator
Refrigeration System		Air cooled, CFC free	Air cooled, CFC free	Air cooled, CFC free	Air cooled, CFC free
Insulation		CFC free urethane	CFC free urethane	CFC free urethane	CFC free urethane
Construction					
Outer Door	qty	1-with dual pane glass	1-with dual pane glass	2-With dual pane glass	2-With dual pane glass
Interior		Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish
Exterior		Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish
Outer Door Lock		Key	Key	Key	Key
Interior Light		Yes-with control panel switch	Yes-with control panel switch	Yes-with control panel switch	Yes-with control panel switch
Shelves	qty	4-Adjustable, Wire	—	8-Adjustable, Wire	—
Drawers	qty	—	5-Solid	—	10-Solid
Casters	qty	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed
Adjustable Feet	qty	2-Front of base; for securing unit in place	2-Front of base; for securing unit in place	2-Front of base; for securing unit in place	2-Front of base; for securing unit in place
Access Port	qty	2-Side; 1-Top	2-Side; 1-Top	2-Side; 1-Top	2-Side; 1-Top
Access Port Diameter	inches | mm	1.1 | 30	1.1 | 30	1.1 | 30	1.1 | 30
Alarms (V = Visual, B = Buzzer, R = Remote)					
Power Failure		R(V-B optional)	R(V-B optional)	V-B-R	V-B-R
High Temperature		V-B-R	V-B-R	V-B-R	V-B-R
Low Temperature		V-B-R	V-B-R	V-B-R	V-B-R
Door Open		V-B	V-B	V-B	V-B
Remote Alarm Contacts		Normally open, Normally closed, common	Normally open, Normally closed, common	Normally open, Normally closed, common	Normally open, Normally closed, common
Remote Alarm Output		DC 24V 2A	DC 24V 2A	DC 24V 2A	DC 24V 2A
Electrical and Noise Level					
Power Supply		115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle
Noise Level	dB(A)	48	48	42	42
Options					
Blackout Panels to Cover Glass	qty	1-Optional	1-Optional	2-Optional	2-Optional
Stackable		—	—	—	—

* Consult product sales rep for doorway entry instructions, less than 36.2".

** Consult product web page for doorway entry instructions, less than 36.2": www.phchd.com/us/biomedical/preservation/pharmaceutical-refrigerators/mpr-1412

MPR SERIES REFRIGERATORS

High Performance Biomedical Refrigerators– Sliding Door Models

MPR-S313-PA

MPR-514-PA
MPR-514R-PA

MPR-1014-PA
MPR-1014R-PA

Sliding Door Model Features

- Tinted, dual pane glass with reflective coating sliding doors
- Unique slim line, front to back design. These models are ideal where lab and aisle space is limited
- Full view glass to observe stored product for inventory control
- Back wall plenum provides horizontal airflow for maintaining precise top-to-bottom temperature uniformity to protect stored product in every location within the refrigerator
- Horizontal airflow allows maximum shelf loading
- Interior light

PURPOSE DESIGNED REFRIGERATORS FOR VACCINE STORAGE:

- Internal air plenum for superior temperature accuracy and uniformity even when shelves and pull-out wire shelves are fully loaded
- Installation made easy with slim line design for easy access through doorways
- Stainless steel interior – easy to clean and corrosion resistant
- Easy access to inventory with pull-out wire baskets

Model Number		MPR-S313-PA
External Dimensions (W × D × H) nominal	inches | mm	31.5 × 18.3 × 70.9 | 800 × 465 × 1800
Internal Dimensions (W × D × H) nominal	inches | mm	28.3 × 12.8 × 56.5 | 720 × 350 × 1435
Volume	cu.ft. | liters	12.0 | 340
Net Weight	lbs. | kg	220 | 100
Performance		
Temperature Control Range	°C	+2 to +14
Vaccine Storage Operating Temperature	°C	+2 to +8
Factory Pre-Set Temperature	°C	+5
Highest Ambient Temperature and Maintains Cabinet Temperature	°C	+35
Evaporator Prevents Vaccines from Freezing		Operates above freezing at all times
Control		
Microprocessor Controller, Adjustable	°C	Increments of 1 - Door mounted
Digital Temperature Display		LED
Controller Security		Lockable with key pad
Electronics Diagnostics		Sensors only
Refrigeration		
Cooling Method Internal Airflow for Precise Temperature		Internal plenum
Defrost Method Initiated Only as Needed		Electronically monitored evaporator
Refrigeration System	qty	1-Air cooled, CFC free
Insulation		CFC free urethane
Construction		
Outer Door	qty	4-Tinted, Dual pane, Reflective Coating
Interior		Stainless steel
Exterior		Zinc galvanized steel, Acrylic finish
Outer Door Lock		Key
Interior Light		—
Shelves	qty	5-Adjustable, Wire
Baskets	qty	—
Casters	qty	—
Adjustable Feet	qty	4-Leveling
Access Port	qty	1-Side wall
Access Port Diameter	inches | mm	1.1 | 30
Alarms (V = Visual, B = Buzzer, R = Remote)		
Power Failure		V-B-R
High Temperature		V-B-R
Low Temperature		V-B-R
Door Open		V-B
Remote Alarm Contacts, *Optional*		Normally open, Normally closed, Common
Remote Alarm Output, *Optional*		DC 24V 2A
Electrical and Noise Level		
Power Supply		115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle
Noise Level	dB(A)	40

MEETS CDC VACCINE RECOMMENDATION

MEETS CDC PHARMACY RECOMMENDATION

NEMA	Plug (P)	Receptacle (R)
5-15		

High Performance Biomedical Refrigerators– Sliding Door Models




Model Number		MPR-514-PA (w/shelves)	MPR-514R-PA (w/shelves & baskets)	MPR-1014-PA (w/shelves)	MPR-1014R-PA (w/shelves & baskets)
External Dimensions (W × D × H) nominal	inches | mm	35.4 × 23.6 × 70.5 | 900 × 600 × 1790	35.4 × 23.6 × 70.5 | 900 × 600 × 1790	70.9 × 23.6 × 70.5 | 1800 × 600 × 1790	70.9 × 23.6 × 70.5 | 1800 × 600 × 1790
Internal Dimensions (W × D × H) nominal	inches | mm	31.5 × 18.3 × 51.2 | 800 × 465 × 1300	31.5 × 18.3 × 51.2 | 800 × 465 × 1300	66.9 × 18.3 × 51.2 | 1700 × 465 × 1300	66.9 × 18.3 × 51.2 | 1700 × 465 × 1300
Volume	cu.ft. | liters	17.3 | 489	17.2 | 486	36.5 | 1033	36.3 | 1029
Net Weight	lbs. | kg	311 | 141	324 | 147	542 | 246	569 | 258
Performance					
Temperature Control Range	°C	+2 to +14	+2 to +14	+2 to +14	+2 to +14
Vaccine Storage Operating Temperature	°C	+2 to +8	+2 to +8	+2 to +8	+2 to +8
Factory Pre-Set Temperature	°C	+5	+5	+5	+5
Highest Ambient Temperature and Maintains Cabinet Temperature	°C	+35	+35	+35	+35
Evaporator Prevents Vaccines from Freezing		Operates above freezing at all times	Operates above freezing at all times	Operates above freezing at all times	Operates above freezing at all times
Control					
Microprocessor Controller, Adjustable	°C	Increments of 1	Increments of 1	Increments of 1	Increments of 1
Digital Temperature Display		LED	LED	LED	LED
Controller Security		Lockable with key pad	Lockable with key pad	Lockable with key pad	Lockable with key pad
Electronics Diagnostics		Total control system	Total control system	Total control system	Total control system
Refrigeration					
Cooling Method Internal Airflow for Precise Temperature		Internal plenum	Internal plenum	Internal plenum	Internal plenum
Defrost Method Initiated Only as Needed		Electronically monitored evaporator	Electronically monitored evaporator	Electronically monitored evaporator	Electronically monitored evaporator
Refrigeration System		1- Air cooled, CFC free	1- Air cooled, CFC free	2- Air cooled, CFC free	2- Air cooled, CFC free
Insulation		CFC free urethane	CFC free urethane	CFC free urethane	CFC free urethane
Construction					
Outer Door	qty	2- Tinted, Dual pane, Reflective Coating	2- Tinted, Dual pane, Reflective Coating	2- Tinted, Dual pane, Reflective Coating	2- Tinted, Dual pane, Reflective Coating
Interior		Stainless steel	Stainless steel	Stainless steel	Stainless steel
Exterior		Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish
Outer Door Lock		Key	Key	Key	Key
Interior Light		Yes- with control panel switch	Yes- with control panel switch	Yes- with control panel switch	Yes- with control panel switch
Shelves	qty	5- Adjustable, Wire*	5- Adjustable, Wire**	10- 5 each side, Adjustable, Wire	5- Adjustable, Wire
Baskets	qty	—	5 - Wire	—	10- Wire
Casters	qty	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed
Adjustable Feet	qty	2- Front of base; for securing unit in place	2- Front of base; for securing unit in place	2- Front of base; for securing unit in place	2- Front of base; for securing unit in place
Access Port	qty	1- Side wall	1- Side wall	1- Side wall	1- Side wall
Access Port Diameter	inches | mm	1.1 | 30	1.1 | 30	1.1 | 30	1.1 | 30
Alarms (V = Visual, B = Buzzer, R = Remote)					
Power Failure		V-B-R	V-B-R	V-B-R	V-B-R
High Temperature		V-B-R	V-B-R	V-B-R	V-B-R
Low Temperature		V-B-R	V-B-R	V-B-R	V-B-R
Door Open		V-B	V-B	V-B	V-B
Remote Alarm Contacts, *Optional*		Normally open, Normally closed, Common	Normally open, Normally closed, Common	Normally open, Normally closed, Common	Normally open, Normally closed, Common
Remote Alarm Output, *Optional*		DC 24V 2A	DC 24V 2A	DC 24V 2A	DC 24V 2A
Electrical and Noise Level					
Power Supply		115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle
Noise Level	dB(A)	42	42	44	44

* Full size

** Half size

MPR SERIES COMBO REFRIGERATORS/FREEZERS

High Performance Biomedical Combo Refrigerator/Freezer

MPR-215F-PA

MPR-N450FH-PA
MPR-N450FSH-PA

MPR-715F-PA

Combo Refrigerator/Freezer cabinets are popular for installations where space is limited. Both refrigeration and freezer functions are self-contained and independently controlled in separate compartments with individual doors.

Refrigerator Features

- Includes dual glass viewing window
- Positive internal airflow maintains precise top-to-bottom temperature uniformity to protect stored product in every location within the refrigerator

Freezer Features

- Cold wall cooling system
- Manual defrost

MULTIPURPOSE, SPACE EFFICIENT, HIGH PERFORMANCE:

- Slim line cabinet design
- Single cabinet with two independent temperature controlled chambers
- Each chamber has its own refrigeration and control system
- Cost effective storage of refrigerated and frozen vaccines

MEETS CDC VACCINE RECOMMENDATION

MEETS CDC PHARMACY RECOMMENDATION

NEMA	Plug (P)	Receptacle (R)
5-15		

Model Number		MPR-215F-PA refrigerator / freezer
External Dimensions (W × D × H) nominal	inches | mm	21.3 × 21.9 × 70.6 | 540 × 557 × 1794
Internal Dimensions (W × D × H) nominal	inches | mm	17.9 × 18.3 × 36.1** | 455 × 466 × 917 16.5 × 13.5 × 10.5** | 420 × 342 × 267
Volume	cu.ft. | liters	6.2 | 176 / 1.4 | 39
Net Weight	lbs. | kg	189 | 86
Chambers	qty	1- Top / 1- Lower
Performance		
Temperature Control Range	°C	+2 to +14 / -15 to -35
Vaccine Storage Operating Temperature	°C	+2 to +8 / -15 or colder
Factory Pre-Set Temperature	°C	+5 / -30
Highest Ambient Temperature and Maintains Cabinet Temperature	°C	+35
Refrigerator Evaporator Prevents Vaccines from Freezing		Operates above freezing at all times
Control		
Microprocessor Controller, Adjustable	°C	Increments of 1 - Independently controls refrigerator & freezer
Digital Temperature Display		LED
Controller Security		Lockable with key pad
Electronics Diagnostics		Total control system
Refrigeration		
Cooling Method Internal Airflow for Precise Temperature		Forced air / Direct cold wall cooling
Defrost Method		Automatic* / Manual
Refrigeration System	qty	2- Independent Air cooled, CFC free
Insulation		CFC free urethane
Construction		
Outer Door, Swing door with CFC Insulation	qty	1- Dual pane, glass 1- Solid
Interior		Styrene resin / Painted aluminum plate
Exterior		Painted Steel
Outer Door Lock	qty	1- Key, Locks both top and bottom
Interior Light	qty	1- LED, control panel switch / 0
Shelves	qty	3- Adjustable, Wire / 1- Wire
Casters	qty	2-Swivel; 2-Fixed
Adjustable Feet	qty	2- Front of base; for securing unit in place
Access Port	qty	1- Side wall / 1- Side wall
Access Port Diameter	inches | mm	1.1 | 30 / 1.1 | 30
Alarms (V = Visual, B = Buzzer, R = Remote)		
Power Failure		V-B-R
High Temperature		V-B-R
Low Temperature		V-B-R
Door Open		V-B
Remote Alarm Contacts		Normally open, Normally closed, Common
Remote Alarm Output		DC 24V 2A
Electrical and Noise Level		
Power Supply		115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle
Noise Level	dB(A)	36

* Electronically monitored defrost only when needed. Evaporator operates above freezing. Prevents vaccines from freezing.

** Deduct 1.9" (50 mm) For Back Wall Air Plenum

*** Deduct 1.9" (50 mm) For Back Wall Air Plenum; Right Side Chamber Height 26.0" (661 mm); Left Side Chamber Height 52.0" (1321 mm)

High Performance Biomedical Combo Refrigerator/Freezer



Model Number		MPR-N450FH-PA refrigerator / freezer	MPR-N450FSH-PA refrigerator / freezer	MPR-715F-PA**** refrigerator / freezer
External Dimensions (W × D × H) nominal	inches | mm	31.9 x 25.2 x 72.4 | 810 x 640 x 1838	31.9 x 25.2 x 72.4 | 810 x 640 x 1838	31.9 x 25.2 x 72.4 | 810 x 640 x 1838
Internal Dimensions (W × D × H) nominal	inches | mm	28.3 x 20.3 x 35.9 | 720 x 516 x 913 26.8 x 18.5 x 16.3 | 680 x 470 x 415	28.3 x 20.3 x 35.9 | 720 x 516 x 913 26.8 x 18.5 x 16.3 | 680 x 470 x 415	31.9 × 24.2 × 35.2 | 810 × 615 × 894 15.1 × 21.7 × 16.6 | 385 × 552 × 422 (each chamber)
Volume	cu.ft. | liters	11.5 | 326 / 4.8 | 136	11.5 | 326 / 4.8 | 136	14.7 | 415 / 6.2 | 176
Net Weight	lbs. | kg	284 | 129	284 | 129	357 | 162
Chambers	qty	2- Top and lower left / 1- Lower right	2- Top and lower left / 1- Lower right	1- Top / 2- Lower
Performance				
Temperature Control Range	°C	+2 to +14 / -30 to -20	+2 to +14 / -30 to -20	+2 to +14 / -15 to -35
Vaccine Storage Operating Temperature	°C	+2 to +8 / -15 or colder	+2 to +8 / -15 or colder	+2 to +8 / -15 or colder
Factory Pre-Set Temperature	°C	+5 / -20	+5 / -20	+5 / -30
Highest Ambient Temperature and Maintains Cabinet Temperature	°C	+30	+30	+30
Refrigerator Evaporator, Prevents Vaccines from Freezing		Operates above freezing at all times	Operates above freezing at all times	Operates above freezing at all times
Control				
Microprocessor Controller, Adjustable	°C	Increments of 1 - Independently controls refrigerator & freezer	Increments of 1 - Independently controls refrigerator & freezer	Increments of 1 - Independently controls refrigerator & freezer
Digital Temperature Display		Select refrigerator, freezer or concurrent	Select refrigerator, freezer or concurrent	LED
Controller Security		Lockable with key pad	Lockable with key pad	Lockable with key pad
Electronics Diagnostics		Total control system	Total control system	Total control system
Refrigeration				
Cooling Method Internal Airflow for Precise Temperature		Forced air / Direct cold wall cooling	Forced air / Direct cold wall cooling	Forced air / Direct cold wall cooling
Defrost Method Initiated Only as Needed		Automatic* / Manual	Automatic* / Manual	Automatic* / Manual
Refrigeration System		2-Independent Air cooled, CFC free	2-Independent Air cooled, CFC free	2-Independent Air cooled, CFC free
Insulation		2-Independent Air cooled, CFC free	2-Independent Air cooled, CFC free	CFC free urethane
Construction				
Outer Door, Swing door with CFC Insulation	qty	2-Top, Bi-parting with dual pane glass; 1-Lower left, Solid 1-Solid	2-Top, Bi-parting with dual pane glass; 1-Lower left, Solid 1-Solid	2-Top, Bi-parting with dual pane glass 2-Bi-parting, Solid
Interior		Painted Steel / ABS resin	Painted Steel / ABS resin	Painted steel / Painted steel
Exterior		Painted Steel	Painted Steel	Painted Steel
Outer Door Lock		1-Key, Center left, Locks top left and lower left 1-Key, Center right, Locks top right and lower right	1-Key, Center left, Locks top left and lower left 1-Key, Center right, Locks top right and lower right	1-Key, Center left, Locks top left and lower left 1-Key, Center right, Locks top right and lower right
Interior Light		1-LED, control panel switch / 0	1-LED, control panel switch / 0	1-LED, control panel switch / 0
Shelves	qty	(3) Tempered glass, adjustable / 2-PE Coated wire	(3) Tempered glass, adjustable / 2-PE Coated wire	(3) Adjustable, Wire / (2) Wire
Casters	qty	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed
Adjustable Feet	qty	2-Front of base; for securing unit in place	2-Front of base; for securing unit in place	2- Front of base; for securing unit in place
Access Port	qty	(1) Back wall, left (1) Lower back middle	(1) Back wall, left (1) Lower back middle	2- Side wall, Left top and bottom / 0
Access Port Diameter	inches | mm	1.2 | 30 1.2 | 30	1.2 | 30 1.2 | 30	1.1 | 30
Alarms (V=Visual, B=Buzzer, M=Message, R=Remote)				
Power Failure		R	V-B-R	V-B-R
High Temperature		V-B-M-R	V-B-M-R	V-B-R
Low Temperature		V-B-M-R	V-B-M-R	V-B-R
Door Open		V-B-M	V-B-M	V-B
Remote Alarm Contacts		Normally open, Normally closed, Common	Normally open, Normally closed, Common	Normally open, Normally closed, Common
Remote Alarm Output		DC 24V 2A	DC 24V 2A	DC 24V 2A
Electrical and Noise Level				
Power Supply		115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle
Noise Level	dB(A)	41	41	43

* Electronically monitored defrost only when needed. Evaporator operates above freezing. Prevents vaccines from freezing.

** Deduct 1.9" (50 mm) For Back Wall Air Plenum

*** Deduct 1.9" (50 mm) For Back Wall Air Plenum; Right Side Chamber Height 26.0" (661 mm); Left Side Chamber Height 52.0" (1321 mm)

**** Minor refrigerator uniformity deviation falls outside CDC parameters for vaccine storage. This cabinet is ideal for general pharmacy use.

MDF SERIES FREEZERS

High Performance Biomedical Freezers

SF-L6111W-PA

MDF-U334-PA

MDF-U5312-PA

MDF-U731-PA
MDF-U731M-PA

PHCbi Biomedical Freezers include design and performance properties for storage of pharmaceuticals and biomedical materials that require freezing temperatures for long-term storage at -20°C to -30°C (-4°F to -22°F).

Freezer Features

Select from 5.5 to 24.4 cu.ft. storage capacities.
Freezer temperature achieved through:

- Cold wall design*
- Forced air*
- Cold evaporator shelf design*
- Unique double door freezer
- Minimizes cold air loss during door opening
- Quick temperature recovery after door opening

* Method of achieving temperature depends on the model

FOR BULK STORAGE OF FROZEN PHARMACEUTICALS:

- Cold wall design and shelf evaporator require manual defrost
- Unit cooler with fan and electronic automatic defrost
- Cabinet temperature increase is minimal during automatic defrost
- Straight line, constant temperature achieved with cold wall or shelf evaporator cooling

MEETS CDC VACCINE RECOMMENDATION

MEETS CDC PHARMACY RECOMMENDATION

NEMA	Plug (P)	Receptacle (R)
5-15		

Model Number		SF-L6111W-PA
External Dimensions (W × D × H) nominal	inches | mm	23.6 × 25.7 × 34.6 ** | 600 × 652 × 880
Internal Dimensions (W × D × H) nominal	inches | mm	20.9 × 17.4 × 27.8 | 530 × 441 × 706
Volume	cu.ft. | liters	5.5 | 156
Net Weight	lbs. | kg	117 | 53
Performance		
Temperature Control Range	°C	-15 to -20
Vaccine Storage Operating Temperature	°C	-15 or colder
Factory Pre-Set Temperature	°C	-20
Highest Ambient Temperature and Maintains Cabinet Temperature	°C	+26
Control		
Microprocessor Controller, Adjustable	°C	Increments of 1 Door mounted
Digital Temperature Display		LED
Controller Security		Lockable with key pad
Electronics Diagnostics		Sensors only
Refrigeration		
Cooling Method	qty	2- Shelf evaporator
Defrost Method		Manual
Refrigeration System	qty	1- Air cooled, CFC free
Insulation		CFC free urethane
Construction		
Outer Door, Swing door with CFC Insulation	qty	1- Solid
Interior		Molded resin panel
Exterior		Resin bonded, Galvanized steel
Outer Door Lock		Key
Additional Door Lock		—
Shelves	qty	2- Fixed, Perforated
Bins	qty	—
Casters	qty	—
Adjustable Feet	qty	4- Leveling
Access Port	qty	1
Access Port Diameter	inches | mm	1.1 | 30
Alarms (V = Visual, B = Buzzer, R = Remote)		
Power Failure		V-B-R
High Temperature		V-B-R
Low Temperature		V-B-R
Door Open		V-B
Remote Alarm Contacts		Normal open, Normal closed, Common
Remote Alarm Output		DC 24V 2A
Electrical and Noise Level		
Power Supply		115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle
Noise Level	dB(A)	—
Options		
Stackable		SRFL61PS

** Exterior cabinet depth measures 23.6" (600 mm) without control panel. Add 2.2" (56 mm) for control panel/display.

High Performance Biomedical Freezers

Model Number		MDF-U334-PA	MDF-U5312-PA Top Chamber / Bottom Chamber	MDF-U731-PA	MDF-U731M-PA
External Dimensions (W × D × H) nominal	inches | mm	24.2 × 27.9 × 63.8 | 614 × 709 × 1620	31.7 × 30.4 × 70.9 | 804 × 772 × 1802	30.3 × 32.7 × 77 | 770 × 830 × 1955	30.3 × 32.7 × 77 | 770 × 830 × 1955
Internal Dimensions (W × D × H) nominal	inches | mm	19.3 × 19.1 × 50.8 | 490 × 486 × 1290	25.9 × 23.9 × 50.1 | 658 × 607 × 1272	25.6 × 27.6 × 53.9 | 650 × 700 × 1370	25.6 × 27.6 × 59.8 | 650 × 700 × 1520
Volume	cu.ft. | liters	9.7 | 274	17.0 | 482	22.0 | 623	24.4 | 690
Net Weight	lbs. | kg	179 | 81	295 | 134	342 | 155	335 | 152
Performance					
Temperature Control Range	°C	-18 to -30	-20 to -30	-15 to -30	-18 to -30
Vaccine Storage Operating Temperature	°C	-15 or colder	-15 or colder	-15 or colder	-15 or colder
Factory Pre-Set Temperature	°C	-30	-30	-30	-30
Highest Ambient Temperature and Maintains Cabinet Temperature	°C	+35	+35	+35	+35
Control					
Microprocessor Controller, Adjustable	°C	Increments of 1	Increments of 1; One setpoint temp. maintained in both chambers	Increments of 1	Increments of 1
Digital Temperature Display		LED	LED	LED	LED
Controller Security		Lockable with key pad	Lockable with key pad	Lockable with key pad	Lockable with key pad
Electronics Diagnostics		Total control system	Total control system	Total control system	Total control system
Refrigeration					
Cooling Method		4- Shelf evaporator	4- Shelf evaporator; 3 top, 1 bottom	Forced air	Cold wall
Defrost Method		Manual	Manual	Automatic	Manual
Refrigeration System		1- Air cooled, CFC free	1- Air cooled, CFC free	1- Air cooled, CFC free	1- Air cooled, CFC free
Insulation		CFC free urethane	CFC free urethane	CFC free urethane	CFC free urethane
Construction					
Outer Door, Swing door with CFC Insulation	qty	1- Solid	2- Solid	1- Solid	1- Solid
Interior		Styrene resin	Styrene resin	Styrene resin	Styrene resin
Exterior		Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish	Zinc galvanized steel, Acrylic finish
Outer Door Lock		Key	Key- Upper lock, locks both doors	Key	Key
Additional Door Lock	qty	Hasp for pad lock	Hasp for pad lock; both doors	Hasp for pad lock	Hasp for pad lock
Shelves	qty	4- Fixed, Perforated	3- Fixed, Perforated / 1- Fixed, Perforated	4- Adjustable, Wire	4- Adjustable, Wire
Bins	qty	4- Large, 1- Small	6- Medium / 4-Large	—	Optional
Casters	qty	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed	2-Swivel; 2-Fixed
Adjustable Feet	qty	2- Front of base; for securing unit in place	2- Front of base; for securing unit in place	2- Front of base; for securing unit in place	2- Front of base; for securing unit in place
Access Port	qty	1- Side	0 / 1- Back	2- Side; 1-Top	2- Side; 1-Top
Access Port Diameter	inches | mm	1.1 | 30	1.1 | 30	1.1 | 30	1.1 | 30
Alarms (V = Visual, B = Buzzer, R = Remote)					
Power Failure		V-B-R	V-B-R	V-B-R	V-B-R
High Temperature		V-B-R	V-B-R	V-B-R	V-B-R
Low Temperature		V-B-R	V-B-R	V-B-R	V-B-R
Door Open		V-B	V-B	V-B	V-B
Remote Alarm Contacts		Normal open, Normal closed, Common	Normal open, Normal closed, Common	Normal open, Normal closed, Common	Normal open, Normal closed, Common
Remote Alarm Output		DC 24V 2A	DC 24V 2A	DC 24V 2A	DC 24V 2A
Electrical and Noise Level					
Power Supply		115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle	115V, 1Ø, 60Hz, NEMA 5-15P requires 5-15R receptacle
Noise Level	dB(A)	40	40	40	40
Options					
Stackable		—	—	—	—

** Exterior cabinet depth measures 23.6" (600 mm) without control panel.
Add 2.2" (56 mm) for control panel/display.

LABALERT® MONITORING

A real-time monitoring and notification system, LabAlert was developed to protect your stored product investment. LabAlert provides independent wireless monitoring for storage refrigerators and freezers. The secure, cloud-based solution offers comprehensive monitoring with customizable dashboards for easy user interface. No software installation is required. Supports FDA 21 CFR Part 11 compliance. LabAlert is scalable to meet corporate enterprise standards for pharmaceutical / vaccine efficacy and safety. It works across multiple units, multiple locations and easily adapts to growing facilities.

CALIBRATION SERVICES

PHC Corporation of North America offers both pre-delivery and on-site calibration services. Services are specifically designed to verify quality compliance and ensure display accuracy to manufacturing and regulatory specifications. Procedures and documentation are designed to conform to NIST/ISO requirements. ISO/IEC 17025* calibration is available upon request.

VALIDATION SERVICES

PHC Corporation of North America offers a full line of validation services that range from pre-delivery to comprehensive on-site equipment qualification. Services are specifically designed to verify quality compliance to manufacturing and regulatory specifications. Advanced technology is integrated alongside contemporary processes for turnkey solutions using NIST/ISO calibrated instrumentation for calibration, validation and qualification in accordance with current GxP regulations [GMP, GLP, GCP], ISO, CAP, AABB, CLIA, USDA, local standards and other regulations. We offer assistance in product selection that meets customer applications, including equipment, service and support.

*ISO/IEC 17025.2005 specifies the general competence to carry out testing and/or calibration including sampling. It covers testing and calibration performed using standard methods, non-standard methods and laboratory-developed methods. (Ref: ISO Web Site, May 2016).

Specifications are subject to change without notice.
For latest specification information contact PHC Corporation of North America at info@us.phchd.com.

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About PHC Corporation of North America
PHC Corporation of North America is a leader in laboratory equipment for biopharmaceutical, life sciences, academic, healthcare and government markets. The company is operated as a subsidiary of PHC Holdings Corporation, Tokyo, Japan, which is a global healthcare company involved in the three core businesses of Medical Devices, Healthcare IT and Life Sciences. Product lines under the new PHCbi brand include the space saving and energy efficient VIP® ECO, TwinGuard® and VIP Series ultra-low temperature freezers, cryogenic and biomedical freezers, pharmacy and high performance refrigerators, cell culture CO_2 and multigas incubators, programmable heated and refrigerated microbiological incubators, Class II,Type A2 biological safety cabinets, portable autoclaves, cell processing work stations and Drosophila/ Plant Growth Chambers. For more information, please call PHC Corporation of North America at 800-858-8442, email info@us.phchd.com or visit http://www.phchd.com/us/biomedical.