Product Data Sheet
23 cu. ft. Plasma Freezer, High Performance, FDA listed
Class II medical device

NSBF231WSWCR/0

Product Description

Corepoint™ Scientific Plasma Freezers are designed in accordance with FDA listed Class II medical devices. In addition, plasma freezers also conform to the requirements set forth by AABB for the refrigerated cold storage of blood-based products.

Backed by optimal temperature control and EPA SNAP compliant refrigerants, these high-performance units protect blood, prevent waste, and allow for peak delivery. Corepoint™ Scientific Plasma freezers utilize smart controllers and feature a full array of alarms, LED interior lighting, stainless steel interiors, sliding drawers and probe access port.

General Description and Application

Description	Single solid door plasma freezer
Operational environment	Indoor use only, +18°C to +26°C (+65°F to +78°F), <70% RH
Storage capacity	23 cu. ft. gross volume, up to 480 plasma boxes with optional 8th drawer
Door	One swing solid door, self-closing, stay position at 100° open, right hinged, non-reversible, magnetic sealed gasket, keyed lock
Drawers	7 drawers standard with option for 8th, 304 SS drawers, 65 lb. capacity each
Mounting and Installation	4 swivel casters, front casters locking
Interior lighting	Shielded, switched LED lighting, full coverage, balanced spectrum
External probe access	Rear wall port (3/4") dia.
Insulation	Cabinet is foamed-in-place with EPA compliant high density urethane foam
Exterior materials	White powder coated steel
Access control	Key lock
General warranty	Two (2) years parts and labor warranty, excluding calibrations
Compressor warranty	Seven (7) years compressor warranty
Product Weight	360 lbs. (7 drawers)
Shipping Weight	419 lbs. (7 drawers)
Rated Amperage	7 Amps
Power Plug/Power Cord	Hospital grade, NEMA 5-15, 9 ft nominal (2.7 m)
Facility Electrical Requirement	110-120V AC: 15 A (minimum)
Agency Listing and Certification	FDA listed Class II medical device, 21CFR part 820 compliant, ETL, CETL Listed (certified to UL471 standard, hydrocarbon refrigerant safety)
Optional Accessories	Additional 8th drawer per door, Chart paper, Mounting anchor, Upper solid ballast, Lower glycerol bottle kit (factory install only), IQ/OQ/PQ

Refrigeration System

Compressor	Hermetic, variable speed (VSC). Rated speed range: 2000-4500 rpm
Refrigerant	EPA SNAP compliant, R290
Condenser	Fin and tube design, high efficiency fan
Evaporator	Fin and tube design, high efficiency fan
Defrost	Cycle optimized, automatic

Performance

Uniformity[1] (Cabinet air)	+/- 0.7°C
Stability[2] (Cabinet air)	+/- 0.1°C
Maximum temperature variation (Cabinet air)	+/- 0.7°C
Stability[2] (Simulator ballast)	+/- 0.1°C
Stability[2] (Simulator bag)	+/- 0.1°C
Temperature Rise after Short Door Openings	Temperature did not exceed -34.5°C at any probe
Recovery after 1 min Door Opening	All probes under -29.6°C throughout opening
Energy Consumption	8.57 KWh/day[3]
Average Heat Rejection	12.03 KWh/day (320 BTU/h)[3]
Noise Pressure Level (dBA)	43 or less installed

Controller, Configuration, Alarms and Monitoring

Controller technology	Proportional Integral Derivative (PID) microprocessor with LCD display
Battery Backup	24V high capacity battery, controller, all alarms active, temperature monitoring DAQ and event logging active on battery backup
Digital Communication	RS-485 (MODBUS)
Chart Recorder	6" paper, inkless
Temperature setpoint range	-15°C to -35°C
Display probe	Calibrated, stainless steel
External alarm connection	State switching remote alarm contacts
Alarms	Visual and audible indicators, Power failure, Temperature sensor failure, Battery voltage monitor and replacement, High / Low temperature, Door ajar
Simulator ballast	Upper probe: 4 oz. (120 ml) bottle, 50% glycerol mixture. Lower probe: Solid thermal media

Performance data acquired at 22°C ambient, -35°C nominal set point in an empty cabinet with drawers using validation ballast probes, during stabilized steady state operation and a DAQ sampling rate of one measurement every 10 seconds

1 - Uniformity is defined as the maximum variance in temperature across all probes at any point in time over the testing period

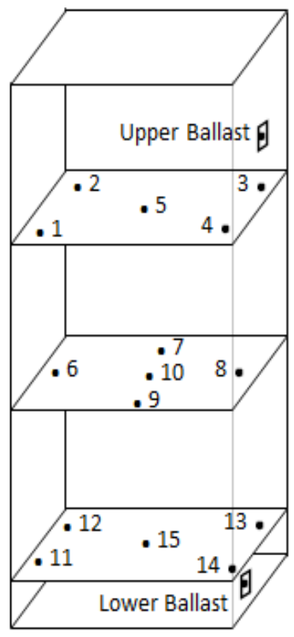
2 - Stability is defined as the maximum variance in temperature experienced by any single probe over the testing period

3 - Data per Energy Star test results or equivalent testing and calculation. Heat rejection based on daily averages, not continuous operation. Performance exceeds Energy Star requirements.

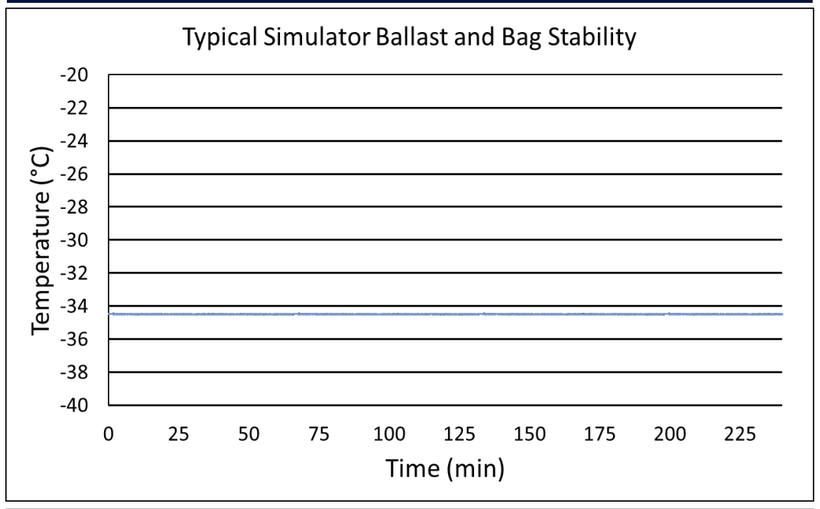
Certifications

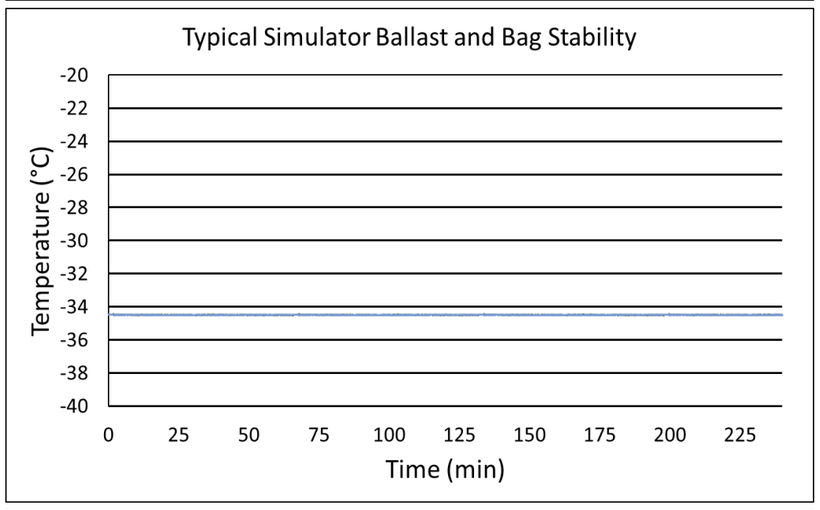
Temperature Probes

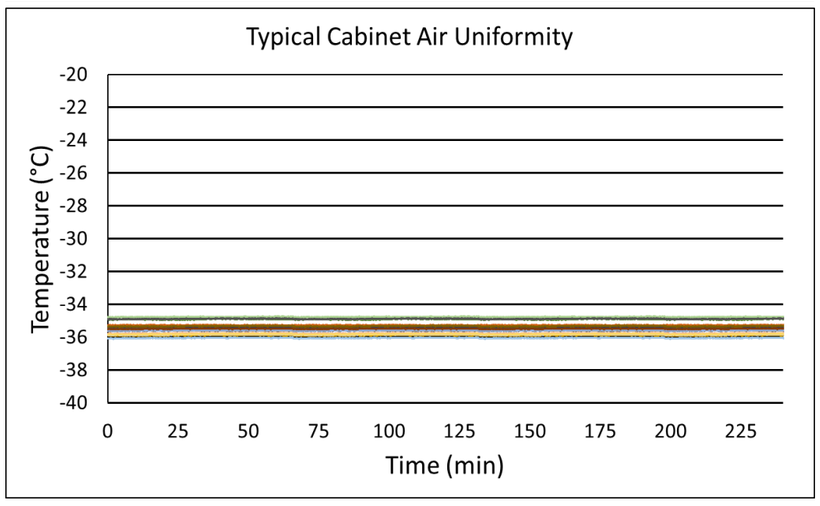
Probe	Ave	Min	Max
1	-35.3	-35.3	-35.2
2	-35.6	-35.7	-35.6
3	-35.9	-35.9	-35.9
4	-35.5	-35.5	-35.4
5	-34.9	-35.0	-34.9
6	-35.6	-35.6	-35.5
7	-35.8	-35.8	-35.7
8	-35.9	-35.9	-35.8
9	-35.8	-35.9	-35.8
10	-36.1	-36.1	-36.0
11	-34.8	-34.8	-34.7
12	-35.4	-35.4	-35.3
13	-35.5	-35.6	-35.5
14	-34.9	-34.9	-34.8
15	-35.3	-35.4	-35.3
Bal	-34.5	-34.5	-34.5
Bag	-34.5	-34.5	-34.5

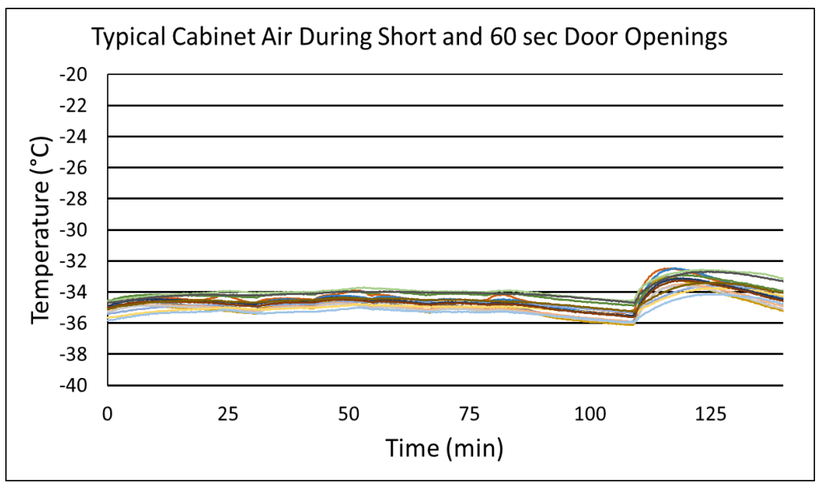


Temperature Charts









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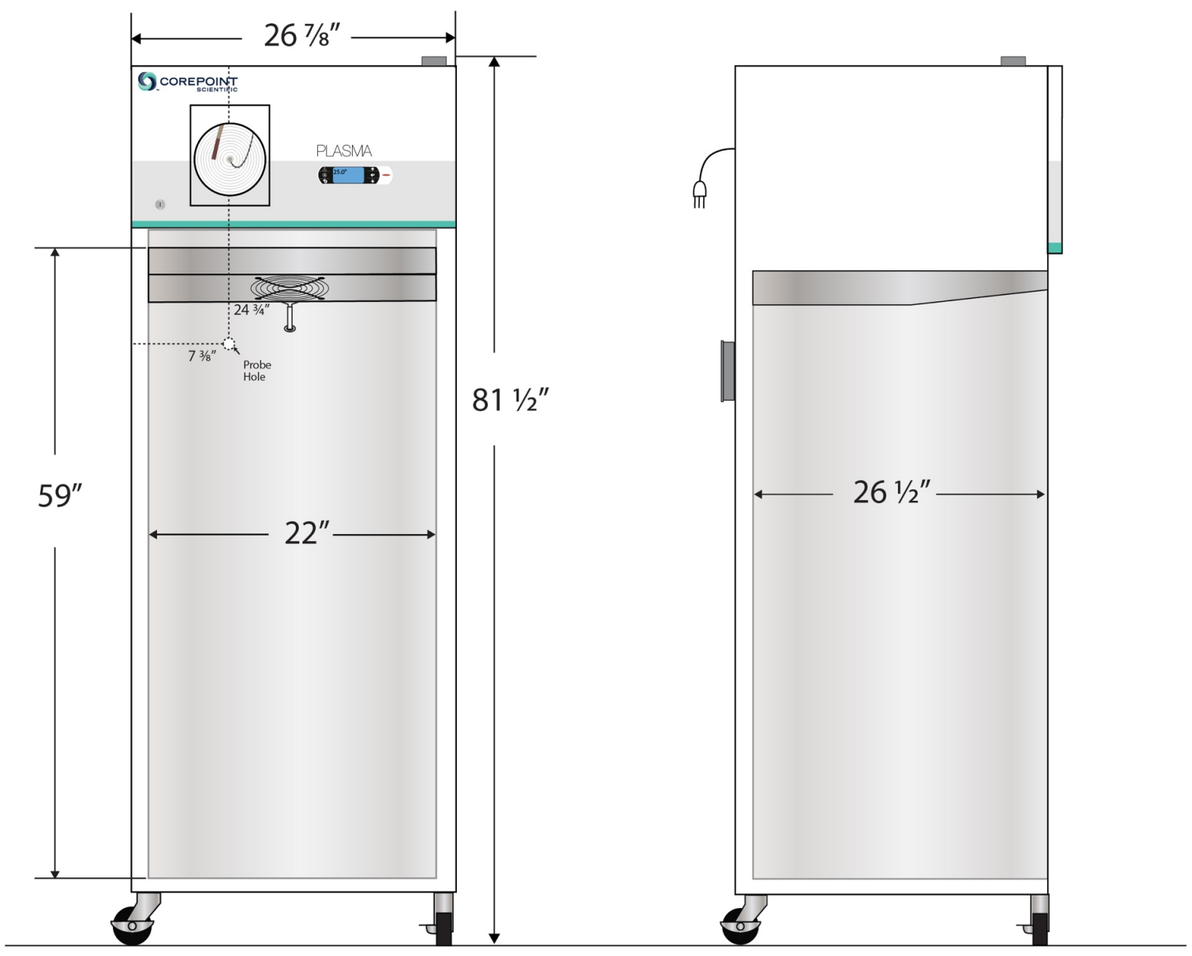
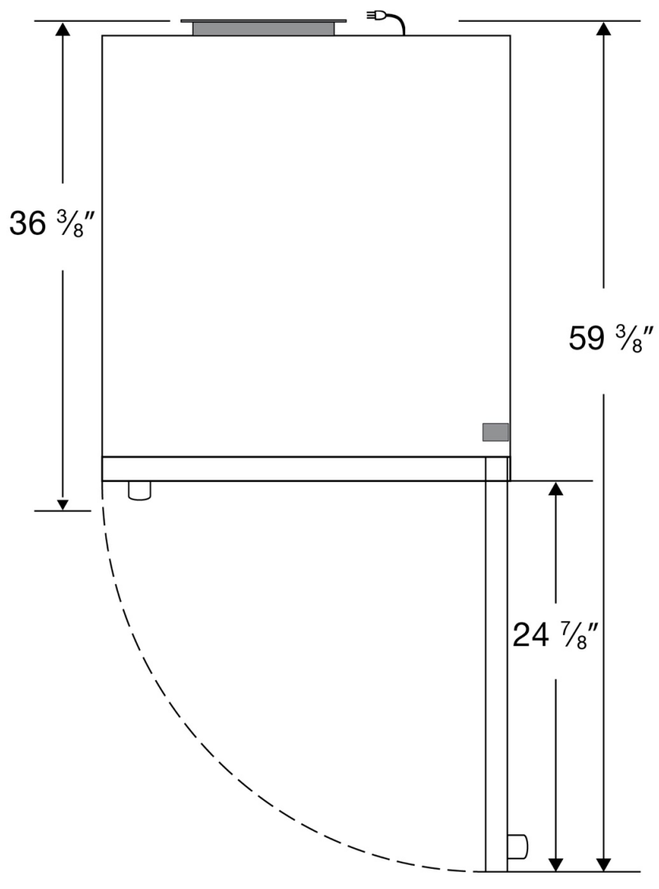
Images

Dimensions

	Width	Depth	Height	Door Swing	Total open Depth
Exterior	26 7/8"	36 3/8"	81 1/2"	24 7/8"	59 3/8"
Interior	22"	26 1/2"	59"		





Contact

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