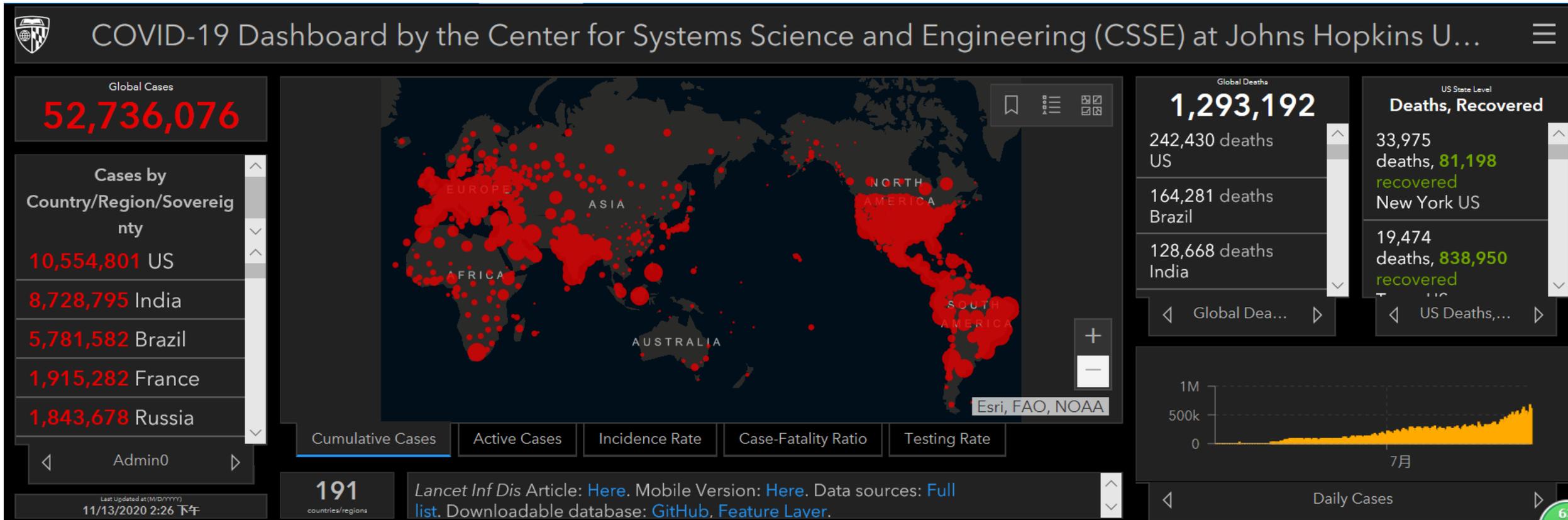


ULT Cold Chain Solution for mRNA COVID-19 Vaccine

ANTECH GROUP INC.

COVID-19: A Global Crisis

50 MILLION+ CASES, AND KEEP INCREASING...



mRNA Vaccine for COVID-19



Pfizer and **BioNTech** are focusing on mRNA technology for COVID-19 vaccine.

Pfizer Inc. announced that BNT162b2, its mRNA-based vaccine candidate, is more than 90% effective in preventing COVID-19, based on early data that has yet to be peer-reviewed.

ANYHOW, Pfizer BNT162b2 requires ULTRA-LOW Temperature (-80°C to -60°C / -112°F to -76°F) storage and transportation. This is a GREAT CHALLENGE because there is not an existed system to support a wide injection plan.

Storage conditions

NO COPY

NDC 59267-1000-2

Pfizer-BioNTech COVID-19 Vaccine

Suspension for Intramuscular Injection

195 Multiple Dose Vials

(after dilution each vial contains 5 doses of 0.3 mL)

 | 

STORAGE: Prior to dilution, store at -80°C to -60°C (-112°F to -76°F). Store in this carton to protect from light.

DOSAGE AND ADMINISTRATION: After dilution, each vial contains 5 doses of 0.3 mL. See FDA-authorized Fact Sheet or scan QR code for information.

MUST BE DILUTED BEFORE USE with sterile 0.9% Sodium Chloride Injection, USP (not supplied). After dilution, store the vaccine at 2°C to 25°C (35°F to 77°F). Discard after 6 hours. Contains no preservative. For use under Emergency Use Authorization. **Rx only**



FPO 2D

Manufactured by Pfizer Inc
New York, NY 10017
Manufactured for BioNTech Manufacturing GmbH
An der Goldgrube 12
55131 Mainz, Germany

359267100023
FPO UPC @ 100%

PAA156052

LOT:

EXP:

**IMPRINT AREA (reads this way)
NO VARNISH
NO COPY, NO INK,**

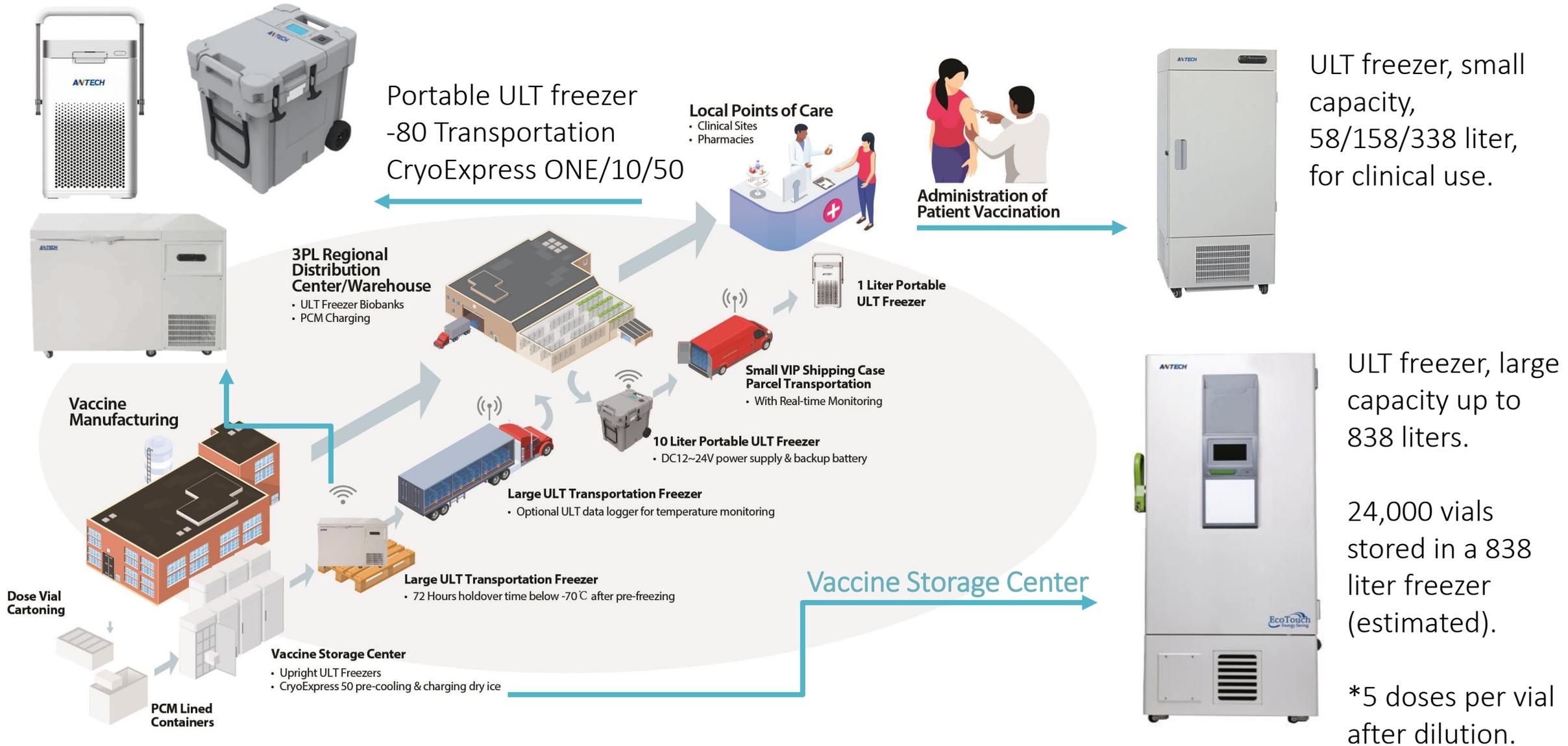
STORAGE:

Prior to dilution, store at -80° C to -60° C (-112° F to -76° F).

Store in carton to protect from light.

After dilution, each vial contains 5 doses of 0.3 mL.

ULT Cold Chain & Storage



Part I: ULT Storage at Vaccine Storage Center

- Large Capacity ULT Freezers



Highlight model: MDF-86U838D



Highest Safety Guarantee: DULA COOLING SYSTEM

When one compressor fails, freezer temperature still below -70 °C with the other compressor. Not necessary to use CO2/LN2 backup system.

Model	MDF-86U838D
Capacity	838 liters, loading 24,000 vaccine vials
Temperature	-86°C ~ -60°C
Cooling System	Dual Compressor system
Compartment	4
Power	220V/50Hz; 220V/60Hz; 120V/60Hz

**Estimated based on available packing information of Pfizer BNT162b2, 5 doses per vial after dilution.*

More Choices

Upright, EcoTouch Series, energy-saving

Model	Description / Features
MDF-86U338T	Touch screen, energy saving, 338 liter
MDF-86U458T	Touch screen, energy saving, 408 liter
MDF-86U588T	Touch screen, energy saving, 588 liter
MDF-86U728T	Touch screen, energy saving, 728 liter
MDF-86U838T	Touch screen, energy saving, 838 liter



Upright, DualTouch Series, dual cooling system for highest safety, keep -70 when one compressor fails

Model	Description / Features
MDF-86U458D	Dual compressor cooling system, touch screen, 408 liter
MDF-86U588D	Dual compressor cooling system, touch screen, 588 liter
MDF-86U728D	Dual compressor cooling system, touch screen, 728 liter
MDF-86U838D	Dual compressor cooling system, touch screen, 838 liter



Part II: ULT Storage at Vaccination Site - Small & Medium Size ULT Freezer



Highlight models: MDF-86U58/158/408D



Model	MDF-86U58	MDF-86U158	MDF-86U408D
Capacity	58 liters, loading 1,500 vaccine vials*	158 liters, loading 3,500 vaccine vials*	408L, loading 10,000 vaccine vials*
Temperature	-86°C ~ -60°C	-86°C ~ -60°C	-86°C ~ -60°C
Cooling System	Single compressor system	Single compressor system	Dual Compressor system
Power	220V/50Hz; 220V/60Hz; 120V/60Hz		

**Estimated based on available packing information of Pfizer BNT162b2, 5 doses per vial after dilution.*

More Choices

Upright, compact design for clinical

Model	Description / Features
MDF-86U58	Single compressor, 58 liter
MDF-86U158	Single compressor, 158 liter

Upright, EcoTouch Series, energy-saving

Model	Description / Features
MDF-86U338T	Touch screen, energy saving, 338 liter
MDF-86U458T	Touch screen, energy saving, 408 liter

Upright, DualTouch Series, dual cooling system for highest safety, keep -70 when one compressor fails

Model	Description / Features
MDF-86U458D	Dual compressor cooling system, touch screen, 408 liter

Part III: Transportation Below -70°C



ULT Transportation Freezer – 57 Liter

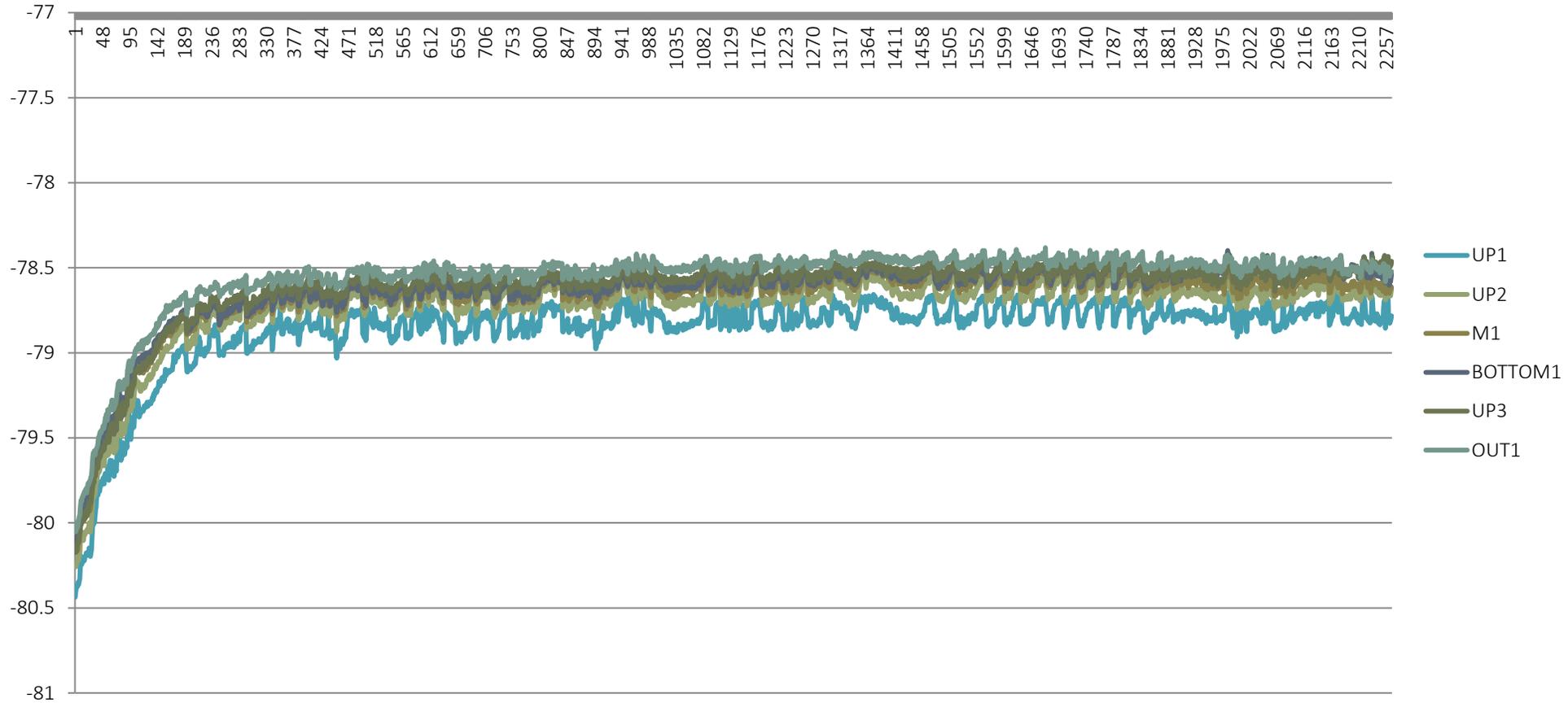
CryoExpress 50



Model	CryoExpress 50 (MMF-4)
External Dimensions	1270 × 780 × 965mm
Vaccine Storage Dimensions	410 × 310 × 450mm
Vaccine Capacity	69 liters
Dry Ice Volume	60 kg
Holdover time ≤ -70° C	≥ 72 Hours without power supply*
Power Supply (for pre-cooling)	AC 100~220V
Total Working Weight	235 kgs

**Pre-freeze to -80° C & filled with 60 kgs of dry ice.*

CryoExpress 50



Holdover Test Temperature Curve

Portable ULT Freezers – 1 Liter



CryoExpress ONE (MMF-1)

Technical Specification

External dimensions	L270xW270xH450mm
Internal dimensions	L150xW134xH54.5mm
Capacity	1L
Weight	13.5kg
Maximum Power	100W
Operating Voltage	12-24V
Rated Power	80W
Temperature Range	-86°C to 4°C
Built-in Battery	≥1Hour (Machine running at full power)
Optional External Battery	Additional 4 hour working time 400*46*140mm, 3.2kgs

Portable ULT Freezers – 10 Liter



CryoExpress 10

Model	CryoExpress 10 (MMF-2)
External Dimensions	615x462x625mm
Internal Dimensions	233x292x155mm
Capacity	10 liters
Weight	23 kgs
Power	100W
Power Supply	DC12~24V, AC100~240V
Temperature Range	-80~30° C

Track Your Vaccine

FEATURES

- USB connector allows downloading data without reader or cable
- Repeat start enables launching new recording immediately without configuration
- Time mark records events requiring special attention
- Firmware user upgradable
- IATA PI970 II compliant, your goods with Tempod inside will not be handled as dangerous goods
- RTCA DO-160G compliant allows monitoring in air freight
- GxP regulations compliant



Track Your Vaccine



AUTO PDF REPORT WITH EMBEDDED RAW DATA

Automatically generated encrypted PDF format report, no software required to access data file. Embedded raw data allows further data processing via TempSen cloud and 3rd party system.



MULTIPLE ALARM RANGES

Up to 5 alarm ranges offer detailed and precise temperature excursion statistics.



SOFTWARE-FREE ONLINE CONFIGURATION

Allows rapid online configuration without installing specific programming software, multiple platforms compatible.



PASSWORD PROTECTION

Enable password protection to prevent unauthorized manipulation to device.



INTUITIVE LCD INDICATION

LCD presents all key information including recording statistics, alarm and running status, remaining battery volume.



IP65 RATING

Thorough protective design ensures logger continuously and stably works in complex environments.

Track Your Vaccine

SPECIFICATIONS

Type	Multi-use
Sensor	Temperature: External RTD sensor (1m)
Memory Capacity	28800 readings
Measurement Range	-100°C...70°C
Accuracy	±0.5°C
Resolution	0.1°C / °F
Start Mode	Manual / Auto / Temperature start
Logging Interval	1 minute...2 hours
Alarm Range	High and low alarms / 5 alarm ranges
Battery	3.0V lithium battery, user replaceable
Battery Life	18 months

Display	LCD •OK(√), Alarm(x), alarm zone •Running status •Temperature statistics (max, min, avg) •Remaining battery level •Mark history
Connection	USB 2.0 Connector
Automatic Data File	Encrypted PDF report with embedded raw data
Software	TempCentre2 (21 CFR 11 compliant)
Calibration	Factory NIST traceable 3-point calibration
Certifications	CE, FCC, RTCA-DO160G, IATA PI970 II, RoHS, WEEE
Protection Class	IP65
Dimensions	100mm L x 40mm W x 12mm H
Weight	Approx. 68g

PROTECTING YOUR EFFORTS TO FIGHT AGAINST COVID-19.



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