

2023 VFC Vaccine Storage Unit Guidance

Units meeting CDC recommendations are most likely to provide a safe and effective vaccine environment. This guide reflects current requirements for vaccine storage units. Guidelines may change based on discoveries and evidence. Please refer to CDC and TDOH websites for the most up-to-date information.

Please note that we cannot guarantee any unit will maintain the required temperature range. Final approval is pending at least 2 consecutive days of temperature monitoring.

Once you receive your new unit, please send 2 days of data logger reports to temperature.health@tn.gov for review/approval.

ANY temperature excursion related to unit failure or procedural failure should be immediately reported to Temperature Health:

Please quarantine your product and you may report the excursion to Temperature.Health@tn.gov or call 1-800-342-1813 during regular business hours Monday through Friday, 08:00 AM CST - 04:30 PM CST. You should also fax or email your DDL reports and current affected inventory list including Brand Name, LOT Numbers, Expiration Dates, and Number doses to 615-401-6829 or Temperature.Health@tn.gov. If your storage unit is not going back into range please refer to your REVMP plan and move the vaccine to your back-up location.

Funds are currently available through a state DA grant to help fund a fridge and freezer unit that meets all VFC recommendations and requirements. Please reach out to vaccine.storage@tn.gov with questions / concerns / interest.

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The stand-alone units are preferred and should include the following features:

- ✓ Reliably maintain proper vaccine temperatures.
 - Refrigerators must maintain temperatures between 36°F and 46°F (2°C and 8°C); Stand-alone preferred.
 - Freezers must maintain temperatures between -58°F and +5°F (-50°C and -15°C); Stand-alone.
 - Ultra-Cold freezers must maintain temperatures between -60°C to -90°C range with a digital temperature display.
- ✓ Refrigerator or freezer thermostats should be set at the factory-set or midpoint temperature of the acceptable temperature range.
- ✓ Have enough room to store the year's largest inventory without crowding. Vaccines should be placed in the middle of the unit and allow for space in-between and around vaccines for air circulation.
- ✓ Recommend wire shelves to allow good interior circulation to minimize internal temperature variance.
- ✓ Any units with three settings are not allowed. **The thermostat must have a digital or dial thermostat.** Units with only 3 temperature settings are not allowed for vaccine storage.
- ✓ Fridge to freezer convertible units are not allowed.
- ✓ Frost-free or auto-defrosting features are recommended for freezers. If they do not have this feature, it is the provider's responsibility to manually defrost the storage unit on a regular basis and document that process in the REVMP.
- ✓ Manual defrost units should have a secondary back-up unit for use during defrosting. This is required to be documented in the REVMP.
- ✓ All units should seal tightly and close properly (recommend door ajar audible alarm, self-closing door hinges, or door locks)
- ✓ Minimum storage size preferred is 4.9 cu. ft. (See inventory size calculation below)
- ✓ Units less than 4.9 cu ft. should be compact, purpose-built, pharmaceutical grade units for biologics or vaccines
- ✓ Units should not have glass doors apart from double paned pharmaceutical grade units
- ✓ Pharmaceutical grade combination units are allowed.

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Unapproved Storage Units

DORM-STYLE, SOFT DRINK, AND BAR-STYLE UNITS: Small, single door combined units should never be used for ANY type of vaccine storage. These units are high risk for temperature excursions. Cold air from the freezer compartment is often vented down into the main compartment causing unstable and inconsistent refrigerator temperatures.

COMBINATION HOUSEHOLD UNITS: Combination household units are no longer approved for vaccine storage in Tennessee for any program.

Approved Storage Unit Examples

Please note the Tennessee Immunization Program cannot endorse or recommend specific products or brands.

The manufacturers and distributors below are a sample of biological-grade refrigerators.

Aegis	http://www.aegisfridge.com/
American Biotech Supply	http://americanbiotechsupply.com/find-a-dealer
Helmer	http://www.helmerinc.com/
ThermoFisher Scientific	https://www.thermofisher.com/us/en/home/order.html
Follett	http://www.follettice.com

The manufacturers and distributors below are a sample of household and commercial-grade refrigerators.

Whirlpool	https://www.lowes.com/pd/Whirlpool-17-7-cu-ft-Freezerless-Refrigerator-White-ENERGY-STAR/1000056883
Maxx Cold	https://www.lowes.com/pd/Maxx-Cold-23-cu-ft-1-Door-Reach-In-Commercial-Refrigerator-White/50426098

Portable Cold Storage Units:

Portable storage units are excellent options for transport (8 hours maximum). They are required for off-site/mobile clinics, and can be used for emergent transportation of vaccines to their backup unit. Temperatures must be monitored hourly while vaccines are in these units. It is important to procure a unit that can maintain required temperature ranges, has a programmable thermostat, and has the capability to plug into both a vehicle charging port and AC wall outlets. **They cannot be used as a primary storage unit or used for vaccine storage during unit defrosting.**

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Approved Portable Refrigerator links:

The manufacturers and distributors below are a sample of portable transport units.

AccuCold Portable refrigerator / freezer	Accucold Portable Refrigerator/Freezer - SPRF26M MME (mmemed.com)
Engel Portable refrigerator / freezer	https://engelcoolers.com/collections/powered-fridge-freezers

Choosing the right sized vaccine unit:

1. Estimate the maximum number of VFC vaccine and privately purchased vaccine that will be in the refrigerator.

Refrigerator:	
Add the number of doses <i>on hand (current inventory)</i> from your last order form.	
Public Vaccine	_____
Private Vaccine	+ _____
Total Doses	= _____
Multiple (max inventory)	X 1.25
Maximum Doses	= _____

2. Match your maximum doses with the minimum cubic feet needed to safely store your vaccine.

Maximum Doses	Minimum Cubic Feet
≥ 2,000 doses	May need more than one refrigerator
1,000 – 2,000 doses	40 cu. ft.
900 – 1,000 doses	36 cu. ft.
801 – 900 doses	21 – 23 cu. ft.
701 – 800 doses	17 – 19.5 cu. ft.
400 – 700 doses	11 – 16.7 cu. ft.
100 – 399 doses	4.9 – 6.1 cu. ft.