







Standard Location Vs. Flammable Storage Vs. Explosion Proof Refrigeration

Standard Location	Flammable Storage	Explosion Proof
		
Purpose: General purpose cold storage equipment.	Purpose: Cold equipment for storing flammable materials in ordinary locations.	Purpose: Flammable material cold storage equipment used in hazardous environments.* <small>*(Per NFPA: Class I, Division II, Group C & D, T5)</small>
Where: regular research labs, clinics, hospitals or any non-hazardous location.	Where: regular research labs, clinics, hospitals or any non-hazardous location.	Where: Restricted hazardous locations, explosion-safe environments. (see * above)
What to store: Any non-corrosive, non-flammable, or non-explosive materials	What to store: Flammable, any non-corrosive (or corrosive but in sealed container	What to store: Flammable, any non-corrosive (or corrosive but in sealed container
		
1) Interior: The general purpose cold storage equipment can have the electrical components in its interior, such as: door switch, interior light, evaporator heater, etc.	1) Interior: The flammable material storage interior is a “spark-free” environment. NO electrical heating, or any component which can cause spark.	1) Interior: The hazardous location cold storage interior is a “spark-free” environment. NO electrical, heating, or any component which can cause spark.
2) Door Gasket: The magnet door gasket is a standard feature on the general purpose cold storage equipment.	2) Door Gasket: The magnet door gasket is a standard feature on the flammable material storage equipment	2) Door Gasket: The magnet door gasket is a standard feature on the hazardous location cold storage equipment.
3) Temp Control: The temp control, depending on size, can be located in either exterior or interior of the cold storage equipment.	3) Temp Control: The temp control, must be located on the EXTERIOR of the flammable material cold storage equipment	3) Temp Control: The temp control must be located on the EXTERIOR of the hazardous location cold storage equipment.
4) Power Cord: Standard 3 prong plug that connects to wall electrical outlet. Cord is located in the back bottom of the unit.	4) Power Cord: Standard 3 prong plug that connects to wall electrical outlet. Cord is located in the back top of the unit.	4) Power Cord: They are factory sealed wires. No plug. The cord must be hard-wired to the power resource.
5) Starting Kit: All electrical starting kit components are located next to the compressor in the open environment.	5) Starting Kit: All electrical starting kit components are located next to the compressor in sealed conduit.	5) Starting Kit: All electrical starting kit components are located next to the compressor in sealed conduit.
6) Temp Control & Wiring: The electrical temp control and wiring are located in the open environment	6) Temp Control & Wiring: The electrical temp control and wiring are located in the sealed conduit.	6) Temp Control & Wiring: The electrical temp control and wiring are located in sealed metal conduit.

Frequently Asked Questions

Q: What is the rule of thumb of OrdLoc, Flam, & HrdLoc Unit?

A: Standard Location - electrical components are allowed to be in the exterior or interior of the cold storage equipment.
Flammable Location - Interior (chamber) must be SPARK-FREE.
Hazardous Location - Interior & Exterior must be SPARK-FREE.

Q: What is the UL listing and NFPA compliance on each model?

A: Standard Location - UL Category: SGKW, Commercial Refrigeration Equipment. NFPA: Not required.
Flammable Location - UL category: SOVQ, Flammable material storage refrigeration equipment. NFPA: 45 A.12.2.2.1 / 12.2.2.2.1.
Hazardous Location - UL Category: STRY, Refrigeration Equipment For Hazardous Locations. NFPA: 45 a12.2.2.1 / 12.2.2.2.1. NEC: Article 500 and 501. OSHA 29 CFR 1910.307 / 308

Q: Where are the differences on flammable and hazardous location cold storage equipment?

A: Wiring - The wiring on both flammable and hazardous location model is contained in CLOSED conduit. The flammable model uses PVC conduit. The hazardous location model uses rigid metal conduit.
Power Cord - The flammable uses standard 3 prong plug. the hazardous location uses factory sealed wires, and it must be HARD-WIRED to the power source.

Q: What are the common design elements on flammable and hazardous location cold storage equipments?

A: Start Kit Components - all electrical start kit parts are contained in a sealed rigid metal tube welded to the compressor
Interior - The chamber in both flammable and hazardous location model is SPARK-FREE. No door switch, interior light, evaporator heater, etc.
Door Gasket - Both Flammable and hazardous location models have magnet door gasket.

Q: Where is the thermostat and how to adjust it on each model?

A: Standard Location - Thermostat location is different depending on the model. The user should reference the owner’s manual
Flammable Location - Located in the back top of the cold storage equipment. Turn the thermostat knob to make adjustments.
Hazardous Location - Located in the back top of the cold storage equipment. Remove the cap on the metal enclosure and turn the thermostat knob to make adjustments.

Q: Can hazardous location model be used in flammable or standard location?

A: Yes. However, it is a common mistake that users purchas a hazardous location model for storing flammable materials in standard location, which a flammable material storage model will be more suitable

In addition, all hazardous location models must be HARD-WIRED to the power resource