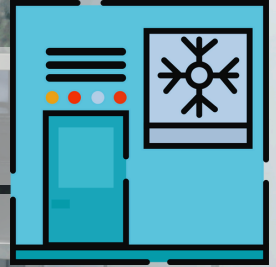


FREEZER/CHILLER BREAKDOWN PREVENTIVE MEASURES & SAFETY PRACTICES

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Freezer and chiller breakdowns can be caused by several factors, some of which are preventable. Understanding these causes will help prevent unnecessary downtime and improve overall efficiency:

- **Improper Maintenance:** Lack of regular inspection and servicing.
- **Electrical Failures:** Power surges or faulty wiring can cause compressor failure.
- **Overloading:** Storing too many products can strain the unit, reducing efficiency.
- **Blocked Vents:** Dirty or blocked air vents reduce airflow, causing the unit to overheat or freeze up.
- **Faulty Temperature Sensors:** If sensors fail to read correctly, the unit might not maintain the correct temperature.
- **Refrigerant Leaks:** A refrigerant leak can cause loss of cooling efficiency, leading to potential breakdown.

The Risks of Freezer/Chiller Breakdowns:

A. Food Safety Hazards

Freezer/chiller breakdown can cause items to reach unsafe temperatures, promoting bacterial growth. This threatens food quality, consumer health, and safety compliance.

B. Operational Downtime

Freezer/chiller malfunction can stop operations, disrupt supply chains, and lead to financial losses. Delays negatively impact customer satisfaction and relationships.

C. Workplace Safety Risks

Breakdowns can create workplace safety hazards, such as:

- Slippery floors from water condensation, increasing slip and fall risks.
- Electrical faults, leading to fire or shock hazards.
- Manual handling of heavy items, causing strain or injury.

Preventive Measures to Avoid Freezer/Chiller Breakdowns:

By proactively addressing the common causes, we can prevent most breakdowns. Here are some best practices:



- **Routine Maintenance:** Implement a planned preventative maintenance schedule (PPM schedule) that includes cleaning coils, checking refrigerant levels, inspecting gaskets, and testing the thermostat.



- **Temperature Monitoring:** Monitor the temperature by checking both the temperature display and thermometer inside the chiller/freezer, track any fluctuations, and report any abnormal changes.



- **Ensure Proper Loading:** Do not overload freezers and chillers; always leave sufficient space for air circulation.



- **Proper Ventilation:** Keep vents and air ducts free from dust and obstructions. Blocked airflow can lead to inefficient cooling and eventual breakdowns.



- **Electrical Protection:** Conduct routine inspections of wiring and connections to prevent potential failures.



- **Ensure Generator Availability:** A backup generator is necessary in case of power outages, which could lead to temperature fluctuations in your freezers or chillers. Regularly test the generator to ensure it functions when needed.



- **Employee Training:** Ensure all staff members are well-trained in the safe operation and handling of refrigeration units.

In the event of a chiller/freezer shutdown due to electricity or operational failure, the following actions should be taken to prevent food items from defrosting:



- Turn off the malfunctioning unit, disconnect it from the power supply, and label it as out of service to prevent electrical hazards.



- Notify the Maintenance team, supervisor, QHSE officer, and the location manager immediately.



- Check the condition of the items in the chiller/freezer. Discard any items that have defrosted.



- Check with the Maintenance-in-charge to confirm the exact time needed to resolve the issue.



- Transfer all items to another freezer/Chiller.



- Once the problem is rectified, transfer the items back to the chiller/freezer promptly.
- Keep an emergency contact list for technicians, service providers, and suppliers to reduce downtime with quick access to assistance.



- Provide training to staff on how to report and respond during an emergency shutdown.

- After the emergency, investigate the incident and complete the Accident/Incident Report

Through effective maintenance, training, and quick action, we can reduce risks and minimize disruptions. By prioritizing preventive measures and promoting a culture of safety, we can maintain the efficiency of our equipment and safeguard the well-being of our employees.

7 Commercial Refrigeration Maintenance Tips

1) Consistently Clean the Interior and Exterior	5) Check the Air Filters Often
2) Regularly Clean the Condensor Coil	6) Routinely Clean Drain Pans and Tubes
3) Check the Area by the Evaporator Coil	7) Keep Your Refrigeration Unit Dry
4) Check the Gaskets Often	