

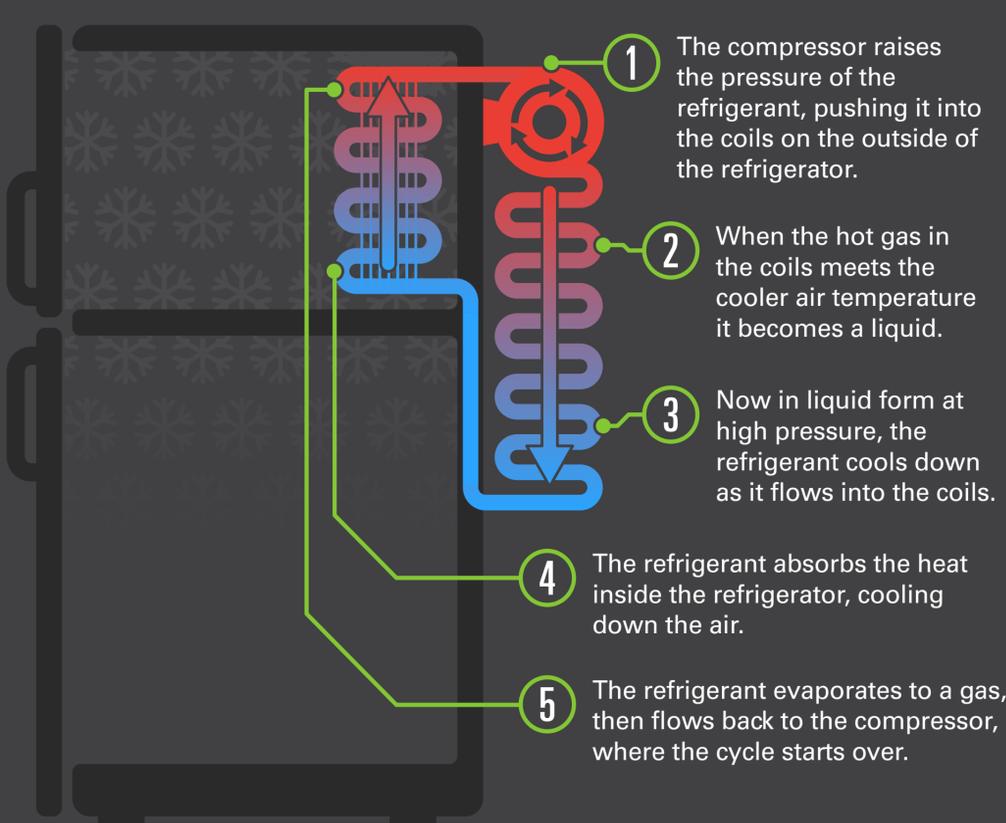
RISKY BUSINESS

What You Need To Know About...



Refrigeration Systems and Spoilage

HOW THEY WORK:



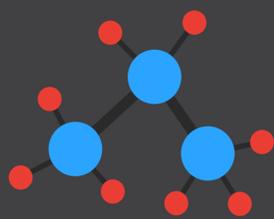
WHY THEY BREAK DOWN:

Loss of refrigeration can result in physical damage, spoilage and business interruption.

- Over-frequent on/off cycling:** This shortens the life of the insulation surrounding the motor windings, causing motors to burn out prematurely.
- Voltage fluctuation:** Any sudden change in voltage will cause motor strain and increase the risk of breakdown.
- Systems sitting idle:** Most failures occur when equipment is started after sitting idle, or when it cycles on and off frequently.
- Inadequate maintenance:** Thirty-five percent of equipment breakdowns can be attributed to human error.



EMERGING TRENDS:



Due to environmental protocols, existing refrigerant gases are being replaced with natural gases, such as propane, isobutane and isopentane. Compared to traditional halogenated refrigerants, such as R-22, natural refrigerants help protect the ozone layer. However, in many cases, these natural gases are flammable.

PREVENTIVE MAINTENANCE:

Suggestions for refrigeration loss prevention:

- Visually inspect refrigeration units for signs of corrosion, unusual vibrations and oil stains. Check that the drain pan is clear of debris.
- Check for decay in the insulation on suction lines between the condensing unit and the evaporator coil. This can cause condensation and water damage.
- Ensure that refrigeration units are covered by a service contract that includes emergency response.
- Clean evaporator and condensing coils every 30 days.
- Clean fan blades to reduce drag.

SPOILAGE FACTS:

Various factors cause food spoilage, making items unsuitable for consumption. Light, oxygen, heat, humidity, temperature and bacteria can all affect both safety and quality of perishable foods.

Twenty-five percent of all foods produced globally are lost due to microbial spoilage.¹

Refrigeration slows bacterial growth. A refrigerator set at 40°F or below will protect most foods.²

Freezing at 0°F keeps food safe from spoilage.³

Fifty-five percent of perishable food waste at stores was caused by poor temperature control, including during display at retail.⁴

Electronic and digital technology make it possible for refrigerators to monitor walk-in freezers and other refrigerators 24/7 so a restaurant or grocery store can receive instant alerts for temperature changes outside of normal ranges.⁵

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References

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