



An Extended Guide · No. 1599

# Sizing for Your Refrigerator and Freezer

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Keeping food cold  
without oversizing

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**! Read this first — size for safety, not just comfort**

Getting the size right is not only about comfort — it is about safety, too. An undersized unit gets overloaded and pushed harder than it should be: it runs hot, it strains, and a motor that can't get the surge it needs can hum, overheat, and be damaged. So take the size seriously and always leave yourself a margin — a little extra room — rather than sizing right to the edge. And one safety rule never changes: any fuel-burning generator gives off carbon monoxide, an invisible, deadly gas, so it runs **OUTDOORS ONLY**, well away from the house (the safety agencies say at least 20 feet), never in a garage or on a porch even with the door open. A battery or power station makes no exhaust and is safe to use indoors. The stakes here aren't just a machine — they're the food your family eats, so we'll keep the food-safety rules front and center alongside the sizing.

## Keeping the cold going, without overbuying

The fridge and freezer are the first things almost everyone wants to keep running in an outage — and for good reason. This guide shows you how to size for them sensibly, and how a little know-how lets a smaller unit protect both.

I'm Bill. The good news is that a fridge and freezer are more forgiving than they look. They hold their cold for hours with the door shut, and they don't need to run every minute — which, as you'll see, is the secret to covering them without a giant machine.

We'll cover the one number that trips people up (the compressor's surge), how to read your appliance's nameplate, how long your food actually stays safe, and the take-turns trick that stretches a modest unit across both boxes.

**★ Worried about your food and your fridge?**

Tell me what you're keeping cold and call or text me at (330) 200-8042. I'll help you size for the fridge and freezer and make a simple keep-it-cold plan — free, with nothing to sell you.

## The whole idea, on one page

If you remember only this page, your food and your sizing are both in good shape.

- ❑ A fridge and freezer have compressor motors, so they surge when they start — size for that jolt, not just the steady draw.
- ❑ They hold their cold: a fridge keeps food safe about 4 hours, a full freezer about 48 (about 24 half full), kept shut.
- ❑ Because they hold cold, you can cycle the generator between them and other loads — a smaller unit covers both by taking turns.
- ❑ Keep the doors closed, and watch an appliance thermometer.
- ❑ Discard perishables held above 40 degrees F for over 4 hours. When in doubt, throw it out — never taste.
- ❑ Read each appliance's nameplate for its real numbers; never guess.

### ✓ Cold is your friend

The cold already in a full freezer buys you hours of runtime you don't have to generate. Keeping the door shut is half the battle.

## Why a fridge is a motor load

A refrigerator looks like a quiet box, but there's a motor inside — and that changes how you size for it.

The compressor is a motor, and like every motor it needs a brief, much bigger jolt of power to get spinning than it needs to keep running. That starting surge lasts only a second or two, but your unit has to deliver it the instant the compressor kicks on, or the fridge won't start. Our [running-watts-versus-starting-watts](#) guide explains this two-number idea in full.

Here's the wrinkle: a fridge cycles on and off all day to hold its temperature. So it asks for that surge again and again, not just once. Sizing has to account for the jolt, not only the gentle draw you'd see if you watched it mid-cycle.

### ✓ Both the fridge and the freezer surge

If you're running both, remember each has its own compressor and its own surge. That matters for how you size — and it's exactly why the take-turns trick, a few pages on, is so handy.

## Reading the fridge or freezer nameplate

Your real numbers live on a small label — the nameplate — not in an ad or a rule of thumb.

Look inside the door, along a side wall, or on the back. You're hunting for watts; if you see only volts and amps, multiply them for the running watts. A compressor's plate may also show a starting or 'LRA' (locked-rotor amps) figure — that's your clue to the surge, which runs several times the steady number for that first moment.

An older fridge or a deep chest freezer in the garage often draws differently than a newer kitchen model, so read each one rather than assuming they match. Our guide on reading a nameplate walks through every marking you'll see.

### ★ Photograph both labels

Snap the nameplate on the kitchen fridge and on any freezer, and text them to me at (330) 200-8042. I'll help you read the running and starting numbers off each — free, no obligation.

## The good news: they hold their cold

Before we size anything, here's the fact that makes the whole job easier: your food doesn't spoil the moment the power blinks.

A closed fridge and a closed freezer are insulated boxes full of cold mass. When the power stops, they coast — slowly warming, not suddenly. That coasting is why you don't need to power them every single minute, and why a modest unit can keep both safe by visiting each in turn.

The single most powerful thing you can do is simple: keep the doors shut. Every time you open them, the cold you've been saving rushes out and the clock speeds up. Decide what you need, grab it quickly, and close the door.

### ✓ A shut door is free runtime

The hours of safe cold already sitting in your freezer cost you no fuel and no watts. Guard them by keeping the door closed, and you've stretched your backup power for free.

## How long food stays safe

These are the timing guidelines to keep in mind, straight from the food-safety folks. Kept closed is the key phrase throughout.

| Appliance         | Stays safe about | If you                  |
|-------------------|------------------|-------------------------|
| Refrigerator      | 4 hours          | Keep the door shut      |
| Full freezer      | 48 hours         | Keep it packed and shut |
| Half-full freezer | 24 hours         | Add ice or water jugs   |

A full freezer holds cold roughly twice as long as a half-full one, because all that frozen mass helps keep the rest cold. That's a good reason to keep a freezer full — even with jugs of water — heading into storm season.

✓ **Fuller freezer, longer coast**

If your freezer is half empty, fill the space with jugs of water. They freeze into a block of cold that stretches your safe hours and gives you drinking water later.

## The 40-degree rule, and when in doubt, toss

One temperature and one time are worth committing to memory, because they decide what's safe to keep.

Discard perishable foods — meat, poultry, fish, eggs, and leftovers — that have been held above 40 degrees F for more than 4 hours. That's the line. Food that stayed colder than that, or warmed for less time, is generally still fine; food past that line should go.

And the golden rule when you're unsure: when in doubt, throw it out. It's not worth a family member getting sick to save a package of chicken.

### **! Never taste food to check if it's safe**

Some germs that cause illness leave no smell, no taste, and no visible change. Tasting tells you nothing and risks a lot. Judge by temperature and time, not by a nibble — and when in doubt, throw it out.

## An appliance thermometer earns its keep

Guesswork about temperature is exactly what an inexpensive little thermometer takes off your plate.

Keep a small appliance thermometer in the fridge and another in the freezer. During and after an outage, a quick glance tells you the real temperature inside — so you're deciding what to keep based on a number, not a hunch. It's especially valuable if the power came back while you were out and you don't know how warm things got.

These cost very little and last for years. If you keep backup power for the fridge and freezer at all, a couple of these thermometers are among the smartest small buys you can make.

### ✓ Two thermometers, two peace-of-mind checks

One in the fridge, one in the freezer. After any outage, read them first — they turn 'is this still okay?' into a simple yes or no.

## Little tricks to stretch the cold

A few no-cost habits make your cold last longer, so your backup power has less work to do.

- **Keep the doors shut** as much as humanly possible — this is the big one.
- **Keep the freezer full**, with water jugs filling any empty space, so the frozen mass holds cold.
- **Open the fridge, not the freezer**, when you can — the freezer's long coast is worth protecting.
- **Group food together** so items help keep each other cold.
- **Have a cooler and ice ready** for the few things you reach for often, so the fridge stays shut.

### ✓ Plan the openings

Decide what you need before you open the door, grab it all at once, and close up. A little planning keeps hours of cold from escaping in seconds.

## The big sizing lever: taking turns

Here's the trick that lets a smaller unit protect both boxes — and the whole reason their coasting matters for sizing.

Because a fridge and freezer hold their cold, you don't have to power both around the clock. You can run one for a while, then switch to the other, then move on to other loads entirely — letting each box coast while it's unplugged. Cycling like this means your unit only has to carry one of them at a time, not both plus everything else at once.

That can shrink the unit you actually need. A machine that couldn't carry the whole list at once can carry it comfortably by taking turns. Our guide on managing loads during a run covers the take-turns approach in detail — when to switch, and how to do it safely.

### ✓ Turns beat brute force

Cycling isn't a compromise — plenty of seasoned owners do it on purpose. It's gentler on the engine and the fuel, and it lets a modest unit do a bigger job.

## Two kinds of homes, two sets of needs

Keeping food cold looks a little different in town than out in the country — and on a well, the fridge and freezer have to share the unit with a very hungry neighbor: the well pump.

### If you live in town or the suburbs

In town or the suburbs, the fridge and maybe a freezer are often the whole cold-storage story. With city water flowing no matter what, there's no big pump competing for your unit, so the fridge or freezer's own surge is usually your biggest jolt.

- Size for the fridge, and add the freezer if you keep one — each has its own compressor surge.
- Your biggest single surge is likely the fridge or freezer itself; circle the larger of the two.
- Cycling between the two boxes lets a modest unit protect both with room to spare.
- Keep the doors shut and a thermometer inside, and your food rides out a typical town outage easily.

### If you are out in the country on a well

Out on a well, a full chest freezer is often a serious investment — a season of meat, or the garden's whole harvest. And the 240-volt well pump competes with the freezer for the 'biggest surge' slot, so taking turns matters even more.

- The well pump's surge usually outweighs the freezer's — it's likely your single biggest jolt to size around.
- Cycle deliberately: run the pump to fill water and pressure, then let it rest while the freezer takes a turn.
- A well-stocked chest freezer is worth protecting; keep it full, shut, and cold between turns.
- Read the pump's nameplate or ask your well company; see our well-pump sizing guide for its surge.

#### ★ A freezer full of food is worth a plan

If you're protecting a big rural freezer alongside the well pump, the take-turns plan is what keeps a modest unit up to the job. Tell me your loads and I'll help you map it. Call (330) 200-8042.

## How taking turns works, step by step

Cycling sounds fiddly until you've done it once. Here's the simple rhythm.

- ❑ Start the unit with little or nothing plugged in, so it's not straining at the moment of startup.
- ❑ Bring the fridge or freezer on by itself and let it run a good while to pull the temperature back down.
- ❑ Switch that box off, then bring the other one — or another load — on for its turn.
- ❑ Turn a load off before you connect or disconnect a big one, so the surge lands on a quiet unit.
- ❑ Keep an eye on the thermometers, and give whichever box is warming the next turn.

### ✓ The boxes coast while they wait

Remember, an unplugged fridge or freezer isn't spoiling — it's coasting on the cold inside. That's what makes taking turns safe.

## Chest freezer versus upright

If you're relying on a freezer through outages, the style matters more than folks expect.

A chest freezer holds its cold noticeably longer than an upright. When you open a chest, the cold air stays down in the box because cold air sinks; when you open an upright, the cold spills out the front and warm air rolls in. In a long outage, that difference can mean extra hours of safe food.

An upright is easier to organize and reach into day to day, so it's a fair trade-off for many kitchens. But if you're buying a freezer partly for outage resilience — common out in the country — a chest freezer's longer coast is a real advantage.

### ✓ Open a chest less, and briefly

Whatever style you own, the rule holds: fewer, shorter openings. A chest just forgives you more when you do have to open it.

## That second fridge or freezer in the garage

The overflow fridge or the deep freezer out in the garage is easy to forget — until you're deciding what to power.

First, decide honestly whether it makes your must-run list. A second fridge holding a few sodas may not be worth a spot; a chest freezer packed with meat surely is. Whatever you decide, read its nameplate — older or larger units can draw and surge differently than your kitchen fridge, so don't assume they match.

If it does make the list, it's another motor to fit into your take-turns plan, not another box to run nonstop. Our must-run list guide helps you weigh what's worth powering when the list gets long.

### ✓ **Decide before the storm, not during**

Sorting out whether the garage freezer is a must or a maybe is far easier on a calm afternoon than by flashlight. Make the call in advance.

## Turning it into a sizing number

Here's how the fridge and freezer fit into the overall sizing method, without a single invented figure.

If you'll run both boxes at once, add both their running watts to your steady total, then add just the larger of their two surges on top — not both surges stacked. Add the rest of your must-run loads and a comfortable margin, and that's your number. If instead you'll cycle between them, you only carry one box's running watts and surge at a time, which lowers the number you need.

Either way, the real figures come from the nameplates. Our worksheet guide gives you a page to add them up, and our running-watts-versus-starting-watts guide explains why you add only the single biggest surge.

### ★ Let's add up your cold storage

Send me the nameplate photos from your fridge and freezer at (330) 200-8042 and we'll land on the number they add up to — and decide whether running both or taking turns fits your unit best.

## When the power comes back: keep or toss?

After an outage, a calm minute of checking saves both your food and your peace of mind.

Start with the thermometers. If the freezer still reads below freezing, or still has ice crystals in the food, it's generally safe to refreeze or use. If the fridge stayed at or below 40 degrees F, its food is fine. The trouble zone is perishables that sat above 40 degrees F for more than 4 hours — those should go.

If you were away and can't tell how warm things got or for how long, lean on the golden rule: when in doubt, throw it out. And never taste a food to decide — temperature and time are your only reliable guides.

### **! Above 40 degrees F over 4 hours — let it go**

Perishables like meat, poultry, fish, eggs, and leftovers held above 40 degrees F for more than 4 hours are not worth the risk. Discard them, and don't taste-test to double-check.

## Signs the fridge isn't getting enough power

If a unit is undersized for the fridge, it tells you. Here's what to watch and listen for.

- ❑ The lights dim or flicker the instant the compressor tries to start.
- ❑ The fridge hums or buzzes, struggles, and won't quite catch.
- ❑ A generator's engine bogs down, or a battery flashes an overload warning and cuts the outlet.
- ❑ The compressor keeps trying and failing to start, over and over.

### **! Stop and lighten the load — don't keep forcing it**

If the compressor can't start, turn other things off and give it a clear shot with more surge headroom free. Forcing a stubborn start again and again can overheat and damage both the compressor and the unit. If it keeps happening, the surge came up short — call me at (330) 200-8042.

## A simple fridge-and-freezer plan

Pull it all together into a plan you can follow without thinking hard in the moment.

- ❑ Read the nameplates and know each box's running and starting numbers.
- ❑ Keep an appliance thermometer in the fridge and the freezer.
- ❑ Keep the freezer full (jugs of water count) and the doors shut.
- ❑ Power one box at a time, cycling between them and your other loads.
- ❑ After the outage, check the thermometers — and when in doubt, throw it out.

### ✓ A plan beats a scramble

Five simple habits, decided in advance, turn a stressful outage into a calm routine.  
Tape this list inside a cupboard door.

## Questions worth asking

Whether you're planning with a salesperson or with me, these keep your cold-storage sizing honest.

### **Q: Do I have to run the fridge and freezer at the same time?**

Not usually. Because both hold their cold, you can cycle between them and run just one at a time — which often lets a smaller unit protect both.

### **Q: Is a fridge's surge really that big a deal?**

It's the number folks forget. The compressor needs a brief jolt several times its running watts to start, and a unit sized only to the steady draw may not deliver it.

### **Q: How full should I keep the freezer?**

As full as practical — fill empty space with water jugs. A full freezer holds cold about twice as long as a half-full one, which stretches your safe hours.

### **Q: Should I get a battery or a generator for the fridge?**

A battery can often carry a fridge for a while if its watts and watt-hours fit; a generator suits longer runs and bigger lists. Our guide on watts versus watt-hours helps you weigh a battery.

#### **✓ There's no silly question**

If any of this still feels uncertain, that's normal — call or text me at (330) 200-8042 and we'll sort out your fridge and freezer together.

## Common Questions

The fridge-and-freezer questions I hear most, answered plainly.

### **Q: How long will my food really last without power?**

Kept closed, a fridge keeps food safe about 4 hours, a full freezer about 48 (about 24 if half full). A thermometer inside each box tells you the real story.

### **Q: The power was out while I was gone — is my food okay?**

Check the thermometers. If perishables sat above 40 degrees F for more than 4 hours, discard them. If you can't tell how warm it got, when in doubt, throw it out — and never taste to check.

### **Q: Can I refreeze food that partly thawed?**

If it still has ice crystals or stayed at or below 40 degrees F, it's generally safe to refreeze, though quality may suffer. Anything that warmed past that line should go.

### **Q: Why does the freezer seem to last so much longer than the fridge?**

All that frozen mass holds cold far longer than a fridge's mostly-air interior. Keeping the freezer full and shut is what buys you those extra hours.

### **★ Still sorting out your cold storage?**

Send me your fridge and freezer nameplates at (330) 200-8042 and we'll size for them and build a simple keep-it-cold plan together.

## Bringing it all together

You now know how to keep the cold going without overbuying: size for the compressor's surge, then let the boxes' own coasting do the rest.

Read the nameplates, keep the doors shut and a thermometer inside, cycle between the boxes so a modest unit can protect both, and lean on the food-safety clock — about 4 hours for a fridge, about 48 for a full freezer — with the 40-degree rule and 'when in doubt, throw it out' as your guides.

From here, our worksheet guide helps you add the numbers up, our guide on managing loads during a run covers taking turns, and our guide on watts versus watt-hours helps if you're weighing a battery for the fridge.

### ★ Let's keep your food safe together

If you'd rather talk it through than sort it out alone, that's exactly what I'm here for. Call or text me at (330) 200-8042 and we'll size for your fridge and freezer — free, with nothing to sell you.

## You don't have to do this alone

You just have to remember that a friendly, patient person is one call away.

I hope this guide made keeping your refrigerator and freezer running feel a little less daunting and a lot more doable. Keep it in a drawer with your other home papers, come back to a page whenever you need it, and don't worry about memorizing anything.

When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day, come-back-free guarantee. I don't do the licensed electrical or gas work myself — for that I'll help you line up a trustworthy local pro.

### ★ Bill's Home Tech — real help, close to home

Call or text me at (330) 200-8042, or visit BillsHomeTech.com. Serving Atwater and all of Portage County. 30+ years of patient, plain-English tech help — and if you're ever not 100% happy with a visit, I'll make it right or refund it. That's a promise. — Bill

## How Long Food Stays Safe

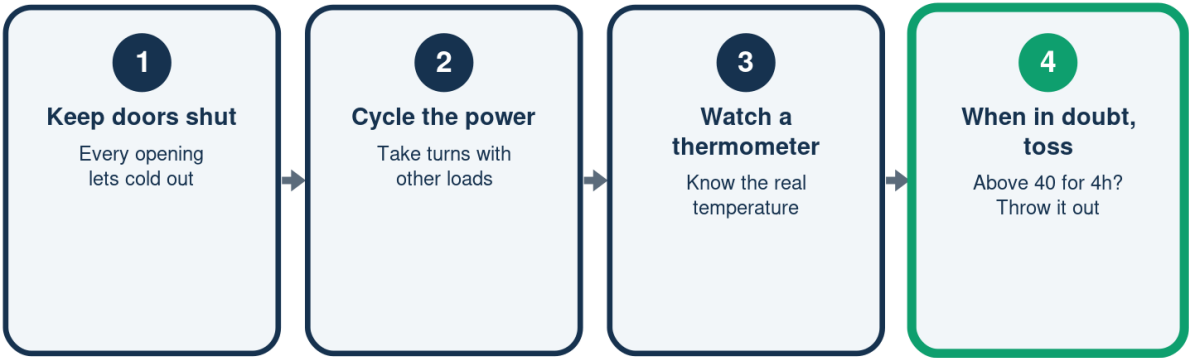
Kept closed, with the power out

| Stays safe about |          | If you             |
|------------------|----------|--------------------|
| Refrigerator     | 4 hours  | Keep the door shut |
| Full freezer     | 48 hours | Keep it packed     |
| Half freezer     | 24 hours | Add ice or jugs    |

Above 40 degrees F over 4 hours -- toss perishables. When in doubt, throw it out.

# Keeping Food Safe Through an Outage

Four habits that do the heavy lifting



A shut door is free runtime; a thermometer settles every doubt.

## Chest Freezer vs. Upright

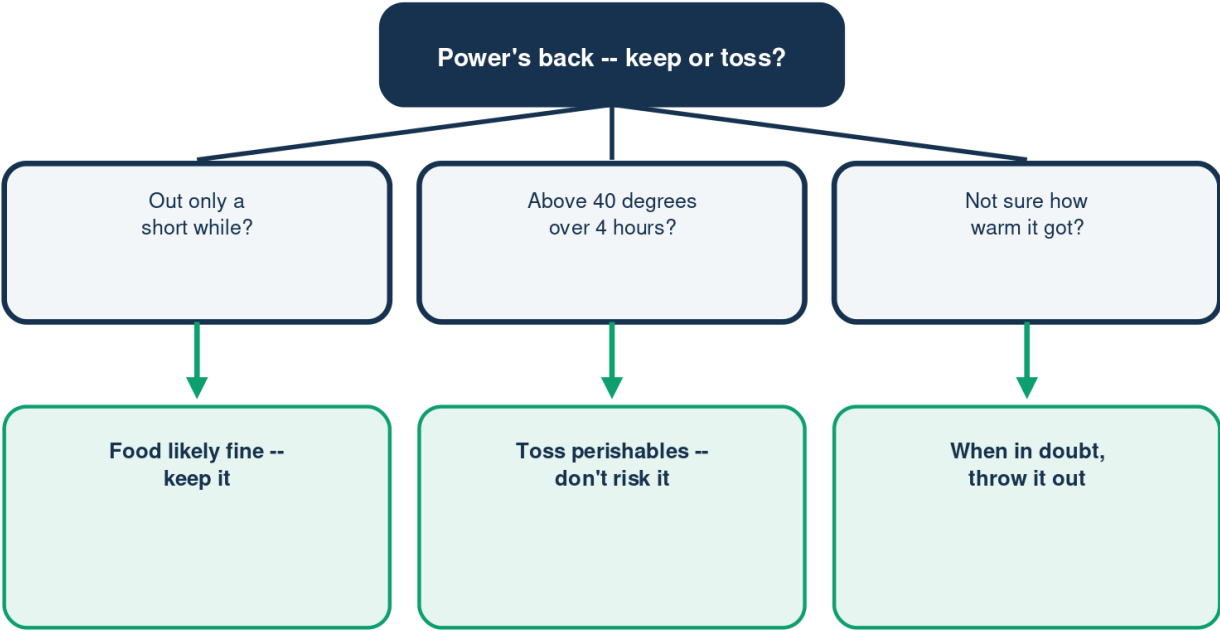
Why the style matters in an outage

|                   | Chest          | Upright         |
|-------------------|----------------|-----------------|
| Holds cold        | Longer         | Not as long     |
| Open it up        | Cold stays low | Cold spills out |
| Finding food      | Dig a bit      | Easy on shelves |
| Best in an outage | Yes            | Keep it shut    |

A chest freezer holds its cold longer -- a real edge in an outage.

# Power's Back -- Keep or Toss?

Judge by temperature and time, never by taste



Never taste food to check -- some germs leave no smell or taste.

Illustration - a schematic, not to scale. Your setup may differ.



## Need a Real Person?

You do not have to remember all of it.  
You just have to remember you can call.  
Friendly, in-home tech help -- I come to you.

### BILL'S PROMISE

If you are not 100% happy with a visit, I will  
make it right -- or refund it. No awkwardness,  
no fine print. That is how I would want to be treated.

**(330) 200-8042 · BillsHomeTech.com**

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— Bill

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### Prefer help without a visit?

Bill can screen-share and fix many things remotely — a flat \$49, free for Support Plan members.



## A Note From Bill

### A quick note from Bill.

I write these guides to make home tech a little less frustrating, and I do my best to keep every step accurate and up to date. Still, every home, device, and setup is a bit different, so I can't promise a guide will match yours exactly or fix your particular problem. These guides are for general information only — they're not professional, legal, or financial advice, and they don't replace your device's own manual or the manufacturer's instructions. Please go slow, use your own good judgment, and use everything here at your own risk. If a step involves electrical wiring, a gas appliance, a water heater, plumbing, or climbing a ladder — or if anything just doesn't feel safe — please stop and call a licensed professional (or give me a call at 330-200-8042). Bill's Home Tech and Bill Davis can't be responsible for any damage, data loss, or injury that comes from using these guides. Thanks for reading, and stay safe out there.

— *Bill*



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