



An Extended Guide · No. 1374

Sizing the Inlet, Breaker, and Cord to Your Generator

Matching the hookup
to your generator

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! Read this first — panel work is a licensed electrician's job

A generator interlock kit is installed inside your home's electrical panel, and panel work is among the most dangerous jobs in any house. The power inside a panel can injure or kill even with the lights off, and a wiring mistake can start a fire or push deadly voltage back onto the lines outside, where a utility crew may be working. Adding an interlock — the sliding plate, the generator breaker, and the inlet it connects to — is a licensed electrician's job, almost always with a permit and an inspection. It is never a do-it-yourself project, and it is never something I do myself. This guide is here to help you understand, choose, and safely use an interlock — not to wire one. And please, never try to shortcut all this by backfeeding a generator through a wall or dryer outlet with a double-ended cord; that shortcut kills people, and an interlock kit is the safe, legal way to do the very thing it tempts you to do. Sizing the inlet, breaker, and cord to your generator is the electrician's calculation — this guide just helps you understand the idea so all the pieces agree.

Making the hookup match your generator

Sizing simply means making sure the parts of your interlock hookup — the generator breaker, the outdoor inlet, and the cord — all suit the generator you'll use. Get them to agree, and everything works safely. This guide explains the idea in plain English.

I'm Bill. I'm going to teach you the concept — no math homework, and I won't make up any numbers, because every generator is different. What I'll give you is a clear way of thinking, so you understand what the electrician is matching and why, and what you're paying for.

The electrician does the actual sizing and the wiring. But when you understand the idea, you can gather the right details, ask good questions, and know that the pieces of your setup truly belong together.

★ Want help getting your details together?

Send me your generator's make and model, or a photo of its outlet panel, and I'll help you get ready for the sizing conversation with an electrician. Call or text (330) 200-8042.

Sizing the hookup, on one page

If you remember only these ideas, you understand what this guide is about.

- ❑ There are really two 'sizing' questions — the generator you choose, and the hookup that matches it.
- ❑ This guide is about the hookup: the generator breaker, the inlet, and the cord.
- ❑ All three are rated to suit your generator's output and its outlet.
- ❑ The size of generator you pick — based on what you want to run — drives those choices.
- ❑ A licensed electrician does this sizing, and it's part of the quote.
- ❑ It's confirmed when the work is installed and inspected.

✓ No numbers to memorize

You don't calculate any of this. You choose a generator, and the pro matches the breaker, inlet, and cord to it. That's the whole job.

The two questions people mix up

The word 'sizing' gets used for two different things, and keeping them apart makes everything clearer.

One question is 'how big a generator do I need?' That's about what you want to run — the furnace, the fridge, a well pump — and our load-management and cost-and-quotes guides help you think it through. The other question is 'what breaker, inlet, and cord match that generator?' That's the hookup, and it's what this guide is about.

They're related but separate. You pick the generator first, and the hookup is then matched to it. Once you see them as two steps in order, the whole thing stops feeling tangled.

✓ Two steps, in order

First choose the generator (what you run). Then the hookup — breaker, inlet, cord — gets matched to it. Two questions, one after the other.

Sizing the generator: what you want to run

The first question — how big a generator — comes from your must-run list, not from the interlock.

How big a generator you need depends on what you'd want running at once during an outage: the furnace, the refrigerator, some lights, a well pump if you have one. A longer list generally means a larger generator. I won't put numbers here, because they depend on your own appliances — our load-management guide helps you decide what to run at once, and our cost-and-quotes guide helps you weigh what a given size means for your budget.

This is the choice that's really yours to make, with a little help. And once you've settled on a generator, the rest of the hookup simply follows from it.

★ Want help thinking through what to run?

That's one of my favorite conversations to have — no numbers pressure, just your real needs. Call or text (330) 200-8042 and we'll picture it together.

Sizing the hookup: breaker, inlet, and cord

Once you have a generator in mind, three parts get matched to it. This is the part this guide is really about.

The generator breaker inside your panel, the outdoor inlet, and the heavy cord between them are each chosen so they can safely carry the power your generator can put out — no more, no less. That matching is the electrician's calculation, and it's why the hookup can't really be settled until the generator is.

- **The generator breaker** is rated to suit your generator's output.
- **The inlet** matches your generator's outlet and the breaker.
- **The cord** is matched to both the generator and the inlet.

✓ Three pieces, one generator

Breaker, inlet, cord — three pieces, all pointed at the same target: your generator. When they agree, the hookup is safe.

A word about the generator breaker

This is the breaker that lets your generator's power into the panel — and the interlock plate is what keeps it safe.

The generator breaker sits in your panel and feeds power in from the inlet. Electricians sometimes call it a 'backfeed breaker,' because it feeds power back into the panel. Don't let that word worry you — it is nothing like the dangerous, illegal 'backfeeding' through a wall or dryer outlet. With an interlock, the sliding plate makes sure the main breaker is off before this breaker can ever come on, so the two power sources can never meet.

Its rating is chosen to suit your generator, and it's installed and inspected as part of the job. Our permits-and-inspection guide covers that sign-off, and our how-it-prevents-backfeed guide explains the safety in more detail.

! A safe breaker, not a shortcut

The generator breaker plus the interlock is the safe, legal way to bring generator power into your panel. A double-ended cord into an outlet never is — please never do that.

The inlet, matched to your generator

The outdoor inlet has its own job in the matching.

The inlet has to fit your generator's output outlet and be rated for the power that flows through it. Your electrician picks an inlet that agrees with both your generator and the generator breaker, so nothing in the chain is overworked. Our inlet-box-and-cord guide covers the inlet as a part you'll use; here we're just noting that its size is chosen to match, never guessed.

✓ A photo of the outlet panel helps

The plug on your generator points the electrician to the right inlet. A clear photo of the generator's outlet panel saves a lot of guesswork.

The cord, matched to both ends

The heavy cord ties the generator to the inlet, and it has to agree with both.

One end of the cord fits your generator's outlet, the other fits the inlet, and the cord itself has to be heavy enough to carry the power safely over its length. Your electrician recommends the right cord for your generator and the distance it needs to reach. I won't quote a gauge, because the correct one depends on your generator and your run — our inlet-box-and-cord guide covers cord length and care.

✓ Right cord, not just any cord

A cord that fits the plugs isn't automatically heavy enough. Let the electrician confirm the cord suits your generator and its run.

Two kinds of homes, two sets of needs

The biggest thing that changes sizing between town and country is one large motor: the well pump.

If you live in town or the suburbs

In town, without a well pump, your must-run list is usually lighter, so a more modest generator often covers it comfortably. The breaker, inlet, and cord are then matched to that generator.

- In town, your list is often the furnace, fridge, and some lights.
- A more modest generator frequently covers that comfortably.
- The breaker, inlet, and cord are then matched to that generator.
- 240-volt loads are less common in town unless you have central air or electric heat.

If you are out in the country on a well

Out on a well, the 240-volt well pump is a big, hardwired load that often shapes the whole generator choice. Get the generator right for the pump, and the hookup is simply matched to that generator.

- A well pump is a big, hardwired 240-volt load.
- It often pushes you toward a larger generator with 240-volt output.
- The generator breaker, inlet, and cord are then matched to that generator.
- Our well-pump guide goes deeper on the pump itself — in general terms, no numbers.

★ On a well? Start with the pump

The well pump usually drives rural sizing. Tell me about yours and I'll help you get ready for the electrician. Call (330) 200-8042.

Why the generator drives everything

The order of decisions is the key to keeping this simple.

You choose a generator based on what you want to run, and then the breaker, inlet, and cord are all matched to that generator. That's why the hookup can't really be sized until the generator is chosen. If you swapped to a very different generator later, parts of the hookup might need to change too — so it's worth settling the generator first and matching the hookup to it once.

✓ Generator first, hookup second

Settle the generator, then match the hookup. Doing it in that order means you only pay to match the pieces once.

This is the electrician's calculation

You understand the idea; the licensed electrician does the actual sizing and the wiring.

Matching a breaker, inlet, and cord to a generator involves ratings and details that a licensed electrician handles precisely — and that a guess gets wrong. Bring your generator's details, and they'll confirm the breaker, inlet, and cord that suit it, then install and label everything. It's then checked at inspection, so you know the whole chain was matched correctly.

! Ratings must match — let the pro confirm

Mismatching the breaker, inlet, cord, and generator can be unsafe. This is exactly the kind of thing a licensed electrician gets right and a guess gets wrong.

It's part of the quote

Sizing the hookup isn't a separate errand you run on your own.

A good electrician includes the right generator breaker, inlet, and cord in the quote for the job, sized to your generator. When you compare quotes, make sure each one includes these parts and the permit, so you're comparing the same complete job rather than a bare-bones number against a full one. Our cost-and-quotes guide covers making fair comparisons.

✓ Confirm the parts are included

Ask each electrician to spell out that the breaker, inlet, and cord matched to your generator are part of the quoted price.

If you already own a generator

When the generator's a given, the hookup is simply matched to it — nice and concrete.

Rather than trusting a chart online, bring the generator itself, or clear photos of its output outlet panel and its nameplate, to the electrician. They'll match the breaker, inlet, and cord to it. If you already own a cord too, bring it so they can confirm it fits your generator and the inlet they'll install.

★ Send me a photo of the outlet panel

A clear photo of your generator's outlet panel tells the electrician a lot. Send it my way and I'll help you get organized first. (330) 200-8042.

If you're buying a generator

Starting fresh lets you size the generator to your needs first — the ideal order.

Build your must-run list, choose a generator that comfortably covers it — our load-management and cost-and-quotes guides help with that — and then the hookup is matched to whatever generator you land on. Let your real needs pick the generator, and the breaker, inlet, and cord follow. Don't buy the cord or inlet ahead of the generator; they depend on it.

★ I'll help you shop smart

I don't sell generators and earn no commission, so my only goal is the right fit. Bring me your list and we'll pick a size together. (330) 200-8042.

The 240-volt question

Big loads like a well pump bring 240 volts into the picture, and that shapes the generator — and so the hookup.

A 240-volt load — most commonly a well pump, but also things like an electric water heater or central air — needs a generator that provides 240-volt power. If one of those is on your list, it pushes your generator choice, and the breaker, inlet, and cord are then matched to that generator. Our well-pump guide goes deeper on the pump, in general terms and without numbers, because it's the single biggest factor for rural homes.

★ On a well? Size around the pump

The well pump usually dominates a rural setup. Tell me about yours and I'll help you get ready to talk sizes with an electrician. (330) 200-8042.

Common sizing confusions

A few mix-ups cause most of the head-scratching. Here's how to sidestep them.

- **Thinking a bigger breaker means more power.** No — the generator sets your power; the breaker just has to match it.
- **Sizing the hookup before choosing the generator.** The generator comes first; the hookup follows.
- **Buying a random cord online.** The cord must match your generator and inlet — let the pro recommend it.
- **Assuming any interlock fits any generator.** The breaker and inlet are matched to your generator's output.

! Match, don't guess

Every confusion here comes from guessing instead of matching. Choose the generator, then let the electrician match the pieces.

Sizing myths

A few tidy-sounding myths lead people astray. Here's the truth.

- **'A bigger inlet gives me more power.'** No — the generator sets your power; the inlet only has to match it.
- **'I can size the cord myself from a chart.'** The right cord depends on your generator and the run — let the electrician confirm.
- **'The breaker size is the same for everyone.'** It's matched to your generator's output, which varies.
- **'If the plate fits my panel, any generator will do.'** The plate is about your panel; the breaker, inlet, and cord are about your generator.

! The pieces have to agree

The one idea worth keeping: the breaker, inlet, and cord all have to agree with your generator. That agreement is the safety.

What to bring to your electrician

A little preparation makes the sizing conversation quick and accurate.

- ❑ Your generator's make and model — or the generator itself.
- ❑ A clear photo of the generator's output outlet panel.
- ❑ A photo of the generator's nameplate, if you can reach it safely.
- ❑ Your must-run list, so they understand the loads involved.
- ❑ Any cord you already own, so they can confirm it fits.

★ I'll help you gather it

Bring me the generator's details and I'll help you organize everything before the electrician visits, so nothing gets missed. Call (330) 200-8042.

Common Questions

The questions I hear most about sizing the hookup.

Q: What does 'sizing the inlet and breaker' actually mean?

It means matching the generator breaker, the outdoor inlet, and the cord to your generator's output and outlet, so each can safely carry its power. Your licensed electrician does this.

Q: Do I have to calculate any of this myself?

No. You choose a generator based on what you want to run; the electrician sizes the breaker, inlet, and cord to match it. There's no math on your end.

Q: Does a bigger breaker or inlet let me run more?

No. Your generator's capacity sets how much you can run. The breaker and inlet just have to be rated to match the generator — they don't add power.

Q: Is the sizing part of the quote?

Yes. A good electrician includes the right breaker, inlet, and cord in the quote, and confirms it all at install and inspection.

★ More questions about your hookup?

Call or text (330) 200-8042 and I'll walk through how the pieces match your specific generator.

How I help with sizing the hookup

This is where a patient helper earns their keep, and I'm glad to be that person.

I'll help you keep the two sizing questions straight, gather your generator's details and photos, understand what the electrician is matching and why, and make sure the quote includes the right parts. Then I hand it to a licensed electrician to size, wire, and confirm. You get the understanding; the pro does the work — no commission, no upselling.

★ Let's get your pieces matched

Sizing feels technical until someone sits with you. Let me be that someone. Call or text (330) 200-8042.

The short version to carry with you

If the details blur, hold onto these.

- ❑ There are two sizing questions: the generator you choose, and the hookup that matches it.
- ❑ The hookup is the generator breaker, the inlet, and the cord — all matched to your generator.
- ❑ You don't calculate any numbers; the licensed electrician does, as part of the quote.
- ❑ It's confirmed when the work is installed and inspected.

✓ Keep this guide handy

When you talk sizes with an electrician, this page keeps the two questions clear in your mind.

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 sizing the inlet, breaker, and cord to your generator 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.

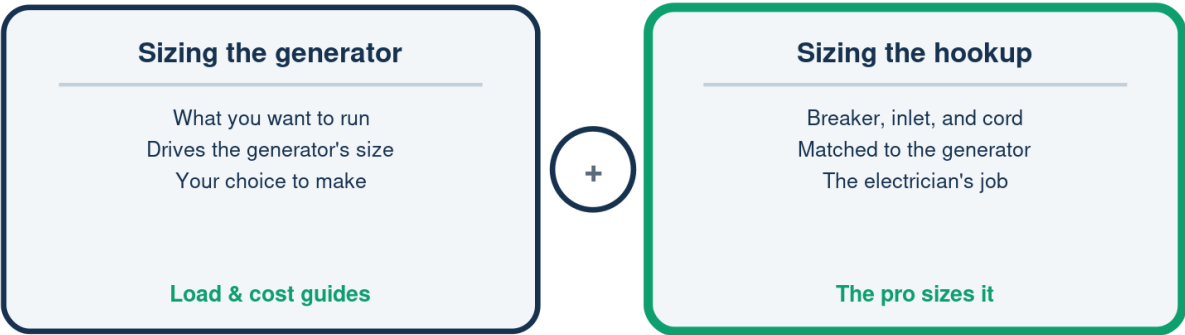
When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day,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

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Two Different Sizing Questions

The generator you choose, and the hookup

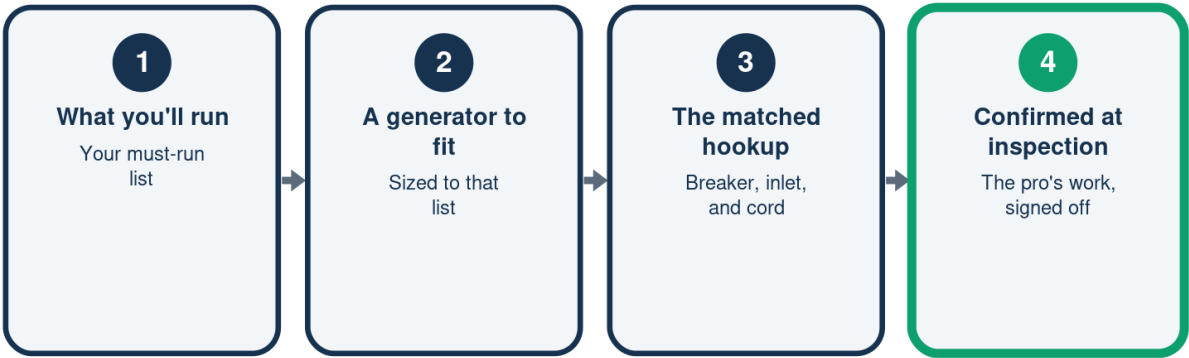


Pick the generator first; the hookup is matched to it.

No numbers here -- your generator sets them, and the pro confirms.

The Order of Decisions

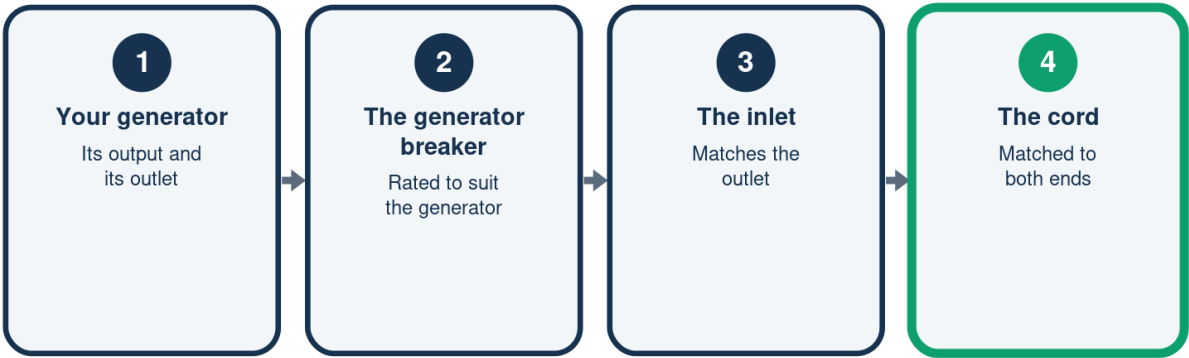
Each choice sets up the next



You can't size the hookup until the generator is chosen.

Matched to Your Generator

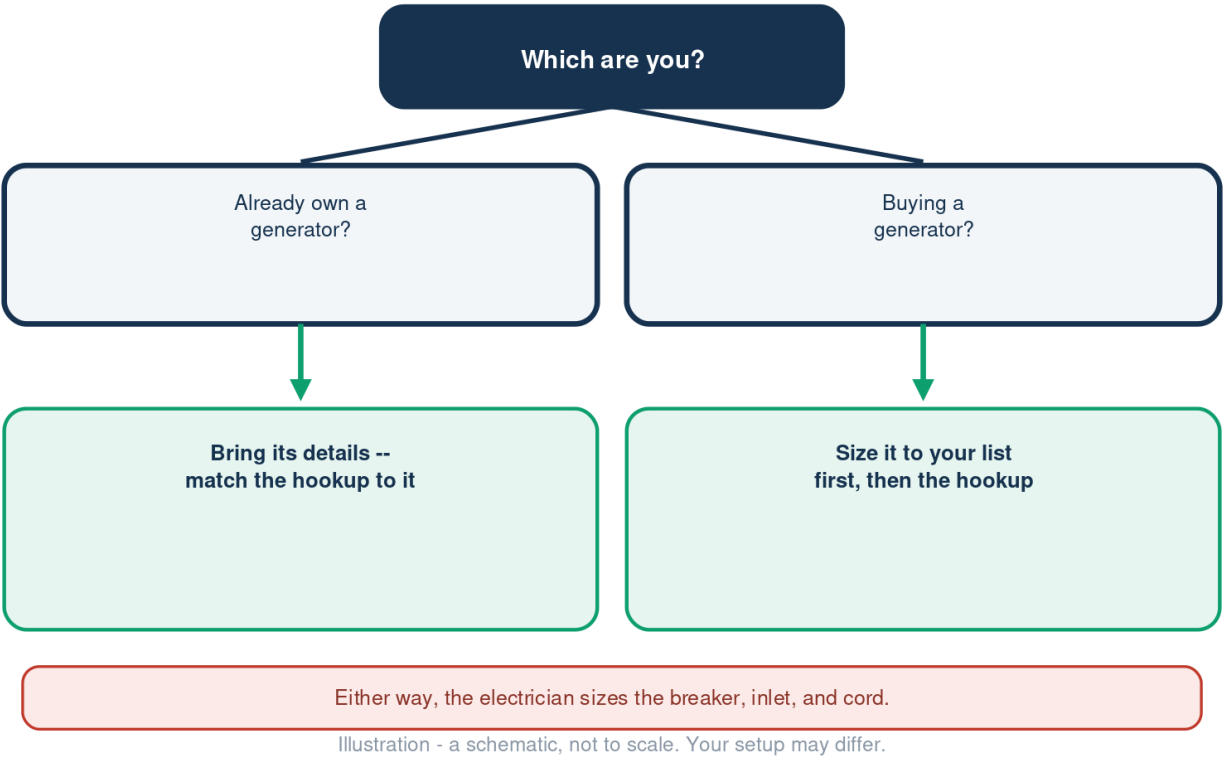
Three pieces, all pointed at one target



The electrician sizes each piece to your generator -- no guessing.

Own One, or Buying One?

Either way, the pro matches the hookup





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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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