

An electric space heater is often the simplest way to warm a cold garage: plug it in, switch it on, and feel heat almost immediately. But that convenience can become expensive if you run the heater for hours every day. A mini-split heat pump usually costs less <https://momhomeguide.com/best-diy-mini-split-heat-pump-garage-heating-2026/> to operate because it moves heat rather than making all of it from electricity.

That difference matters for anyone tracking **garage heating bills**. The best choice depends on how often you heat the space, how well the garage is insulated, and whether your electrical panel can support a mini-split. Here's how to compare operating costs, size a system for a garage, and weigh DIY options such as Zone Air and MRCOOL.

Why a heat pump can cost less to run

An electric resistance heater converts electricity directly into heat. In practical terms, one kilowatt-hour (kWh) of electricity produces about 3,412 British thermal units (BTUs) of heat. A heat pump uses electricity to move heat from outside into the garage. Because it transfers heat instead of creating it entirely from electricity, it can deliver more than one unit of heat for each unit of electricity consumed.

That performance is described by the heat pump's coefficient of performance (COP). A COP of 2 means the system delivers roughly twice as much heat energy as the electricity it uses under those operating conditions. Actual performance changes with outdoor temperature, equipment, installation quality, and the temperature you set indoors. As the weather gets colder, many heat pumps become less efficient and may deliver less heat.

This is why **heat pump efficiency** can translate into lower running costs than an electric resistance heater—especially when the garage needs steady heat for long periods. It does not mean every mini-split will be cheaper in every situation. A poorly insulated garage, an oversized system that cycles frequently, or a heater used only briefly can change the comparison.

Estimate the operating cost before you buy

A simple estimate helps put the comparison in dollars. Check your utility bill for the price per kWh, then estimate how many hours per day you'll heat the garage. For a rough comparison, assume a 1.5 kW space heater runs at full output for eight hours: that's 12 kWh. At an electricity rate of \$0.20 per kWh, it would cost about \$2.40 for those eight hours.

A heat pump's cost depends on its electrical draw at the outdoor temperature and heating output you need. For illustration, if a heat pump averages 1 kW of electrical input while delivering comparable heat, eight hours would use 8 kWh, or \$1.60 at the same rate. That example is not a performance guarantee: check the manufacturer's capacity and power-use data at temperatures close to your winter conditions.. Pretty simple.

Heating option	How it makes heat	What affects running cost	Common fit
Electric resistance heater	Converts electricity directly to heat	Wattage, hours of use, electricity rate	Occasional or localized heating
Mini-split heat pump	Moves heat from outdoors into the garage	Outdoor temperature, system efficiency, sizing, installation, electricity rate	Frequent or sustained heating

For a more accurate comparison, look at the model's heating capacity and input power at low outdoor temperatures—not just its headline rating. Your local electricity rates, thermostat settings, and usage pattern all affect your actual **electric resistance heater cost** and heat pump cost.

Garage sizing is different from room sizing

Don't size a garage mini-split with a chart meant for a typical interior bedroom. Garages often have more air leakage, large overhead doors, uninsulated concrete floors, and less insulation in the walls and ceiling. They may also be taller than standard rooms. These factors increase heat loss and make a simple square-foot estimate unreliable.

As a starting point, a garage may need roughly **30% to 50% more heating capacity than an interior room of the same floor area**. That is a planning range, not a substitute for a heat-loss calculation. The right capacity depends on your climate, insulation, door seals, window area, ceiling height, and the temperature you want to maintain.

Check these details before choosing BTUs

- **Insulation:** Note whether the walls, ceiling, and overhead door are insulated—and how well.
- **Ceiling height:** A tall garage contains more air to warm and may need a different approach to air circulation.
- **Air leakage:** Check the bottom and sides of the garage door, man-door weatherstripping, and any gaps around wiring or plumbing.
- **Use pattern:** Maintaining a moderate temperature all day is different from warming a cold space for a short work session.
- **Outdoor design temperature:** Look for heating capacity at winter temperatures relevant to your location.

Oversizing is not a reliable way to compensate for drafts. It can lead to short cycling, uneven comfort, and unnecessary expense. If the garage is especially leaky or unusually tall, get a proper heat-loss estimate rather than relying only on a quick BTU-per-square-foot rule.

Zone Air vs. MRCOOL for a DIY mini-split

Zone Air and MRCOOL are names shoppers may encounter when comparing ductless systems and DIY-oriented installation options. Their exact offerings, included parts, warranty terms, and installation requirements can vary by model and seller, so compare the specific product documents—not just the brand name or a "DIY" label.

Some DIY-oriented systems are designed to reduce the amount of refrigerant-line work a homeowner must do. Before ordering, check the installation manual for line-set length, connection requirements, approved tools, and who is permitted to install or service the equipment. Refrigerant work and local code requirements deserve particular attention; do not assume every DIY kit can be installed without qualifications or that every warranty covers every installation method.. But it's not a one-size-fits-all solution

Compare the details that affect the job

- **Heating performance:** Compare capacity at low outdoor temperatures, not just the maximum BTU figure.
- **Electrical requirements:** Verify voltage, minimum circuit ampacity (MCA), and maximum overcurrent protection (MOCP) on the nameplate and in the manual.
- **Line-set setup:** Check the included length, whether it can be shortened, and the manufacturer's rules for handling extra length. Avoid a plan that leaves excess line coiled behind the condenser unless the manual specifically allows it.
- **Warranty and support:** Read the actual terms, including installation conditions, parts coverage, and who handles service questions.

- **Outdoor mounting:** Confirm whether the system calls for a condenser pad or permits wall brackets, and follow clearance and snow-height instructions.

Reviews can help reveal how owners experienced the ordering process, documentation, and support, but they can't confirm that a system is suitable for your garage or electrical panel. Angi can be useful when you want to find local HVAC pros or electricians; ask candidates about cold-weather heating capacity, garage sizing, and the circuit requirements for the exact unit you're considering.

115V plug-in or 230V dedicated circuit?

Small plug-in heaters commonly run on 115V household circuits, while larger heaters and many mini-splits require a 230V supply. Some mini-split models are available in 115V versions, but voltage alone does not tell you whether a system is right for your garage. The unit's nameplate and installation manual determine the circuit requirements.

A 230V mini-split often needs a dedicated circuit sized to the manufacturer's instructions. That may mean hiring an electrician, checking panel capacity, and accounting for the breaker and wiring requirements. Do not select a breaker based only on a retailer's summary or a generic rule: the unit's MCA and MOCP, local electrical code, and the actual installation all matter.

Before buying, verify the electrical plan

1. Find the exact model's nameplate specifications and installation manual.
2. Confirm its voltage, MCA, and MOCP, and whether a dedicated circuit is required.
3. Check whether your panel has the capacity and available space for the circuit.
4. Ask a qualified electrician to assess wiring, disconnect placement, grounding, and local permit requirements.

Don't use an extension cord or share a circuit with other high-draw equipment unless the appliance and electrical instructions explicitly permit it. A plug-in heater may avoid installation work, but a 1,500-watt heater draws substantial current while operating. Follow the heater's clearance and circuit guidance, and avoid plugging it into an undersized or overloaded circuit.





Installation details that influence comfort and reliability

Ever notice how the outdoor unit needs a stable, well-drained location with the clearances specified by its manufacturer. A condenser pad can provide a level base at ground level. Wall brackets can raise the unit above snow and reduce exposure to standing water, but they must be appropriate for the unit's weight and attached to suitable structure. Either option should allow access for maintenance and airflow.

Indoors, place the wall-mounted head where its airflow can reach the work area without being blocked by shelves, vehicles, or stored items. Seal obvious drafts before expecting the heat pump to maintain a comfortable temperature. Weatherstripping the overhead door and insulating the ceiling can reduce heat loss, helping limit **garage heating bills** regardless of the heating system.

Cold-climate performance needs careful checking. Look at the unit's rated heating capacity and efficiency at low outdoor temperatures, along with any stated minimum operating temperature and defrost behavior. A heat pump's advertised efficiency at mild conditions doesn't guarantee the same efficiency during a cold snap. Some households keep a safe backup heat source for the coldest days, but factor its electrical load and circuit requirements into the plan.

When a space heater still makes sense

A resistance heater can be a practical choice if you only need to warm one workbench for a short period, heat the garage infrequently, or can't justify the upfront cost and electrical work of a mini-split. It is also easy to move, though portable models must be used according to their instructions and kept clear of flammable materials.

A mini-split is more compelling when you heat the whole garage regularly, want cooling in summer, or need steady temperature control for hobbies, exercise, or workshop use. The initial purchase and installation can cost more, but lower consumption for comparable heat may offset some of that expense over time. The payback depends on local energy rates, usage hours, installation costs, and winter conditions—there is no universal break-even point.

Bottom line

A heat pump can be cheaper to run than an electric resistance heater because it moves heat instead of producing it directly from electricity. But the real savings depend on a properly sized system, cold-weather performance, electricity prices, and how often you heat the garage.

Start with the garage itself: account for its insulation, ceiling height, air leaks, and overhead door. Then compare Zone Air and MRCOOL models by their actual heating data, manuals, line-set details, warranty terms, and electrical specifications. Finally, verify whether the unit needs a 115V connection or a 230V dedicated circuit before you buy. That homework is far more useful than choosing a system based on BTUs or a “DIY” claim alone.