

Product Update

The latest ratings from our labs

How much of your home energy bill is spent on air conditioning?

2%
MARINE
CLIMATE

5%
COLD/VERY COLD

12%
MIXED-
HUMID

17%
HOT-DRY/
MIXED-DRY



27%
HOT-
HUMID

Source: Averages are based on EIA 2015 Residential Energy Consumption Surveys.



How to Beat the Heat

In search of better A/C? Don't sweat it. Our expert testing and advice will help you chill out on the hottest summer days without overspending.

by Mary H. J. Farrell



INSIDE
CR'S LABS

Chris Regan, a senior test project engineer, moves an LG window A/C into CR's climate-controlled chamber.

PHOTO: JOHN WALSH/CONSUMER REPORTS

FEW THINGS CAN suck the fun out of summer faster than a weak or fickle air conditioner—except, perhaps, a broken one. Whether it's central air conditioning or a window unit, we all want air conditioning that cools quickly, runs quietly, and soldiers on when we need it most.

To help you find a dependable cooling system, we put 22 window and portable air conditioning units through rigorous testing in our lab—starting with a simulated heat wave. In a climate-controlled chamber, we cranked up the temperature to 90° F, then measured how long it took a window A/C to lower the temperature by 10° F and a portable unit by 5° F. We checked thermostat accuracy by setting window units at 75° F and portables at 80° F. Then we gauged how noisy the units are and how well they operate and recover during brownout and blackout conditions when voltage is low or power is off.

But we didn't stop our evaluation

there. We also factored in predicted reliability and owner satisfaction ratings from our latest annual member survey of the owners of 6,729 room air conditioners. To calculate a brand's predicted reliability, we asked our members about the products they own, and used the data to make projections about how new models from a given brand would hold up over time. We also asked how likely members were to recommend their air conditioner, and then translated their answers into an owner satisfaction rating. We wrapped all of that testing and survey information into the Overall Scores you see in our A/C ratings on page 23.

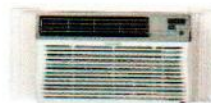
The results yielded a cool surprise: Every brand of window A/C in our survey earns an Excellent rating for reliability. That makes them one of the most reliable products we test. Portable units also proved to be reliable, though some brands didn't fare quite as well. Three of 7 brands earn an Excellent for reliability.

**BEST WINDOW UNIT
IN EACH CATEGORY**



5,000 TO 6,500 BTU/HR.
✔ **LG LW6019ER**
\$270

78
OVERALL
SCORE



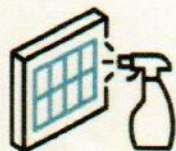
7,000 TO 8,500 BTU/HR.
✔ **Kenmore Elite 77087**
\$310

78
OVERALL
SCORE



9,800 TO 12,500 BTU/HR.
✔ **SPT WA-12FMS1**
\$340

80
OVERALL
SCORE



**TLC for
Your A/C**

Dirt is the enemy of an efficient unit. If you keep it clean and maintain it year-round, you'll be rewarded with steady cooling for years and lower utility bills.

WINDOW AND PORTABLE AIR CONDITIONERS

Spring: If you removed an air conditioner from a window last year, reinstall it following your owner's manual. If you left it in place, inspect the window seals around it to make sure air isn't passing through. If you notice leaks, reseal around the unit with weather stripping.

Summer: Take out the filter at least once a month, vacuum it with an upholstery brush, then wash it using a mild

solution of dishwashing liquid and warm water. Let it dry before putting it back.

Fall: Window units are built to withstand colder weather, so you don't need to remove them from windows if it's a hardship. "But doing so will extend the life of the product," says Tom Kelly, senior product manager for GE Appliances.

Whichever option you choose, make sure you clean the filter

one more time before shutting down the A/C for the season.

If you leave it in place, you can prevent cold air from wafting into your home by covering the indoor side with plastic or cloth covers sold online for about \$10 to \$20. Make sure the side panels are also properly insulated.

Portable air conditioners require one extra step: Drain the internal water tank before storing the unit.

With so many dependable options to choose from, start by looking for the products in our ratings that match the square footage of the room you want to cool. Don't just go for the highest Btu you can find. A unit that's too powerful will cool your space too quickly without removing enough humidity, making the air feel clammy.

"Then consumers should take a closer look at the owner satisfaction ratings when considering which one to buy," says Simon Slater, CR's associate director of survey research. Of nine window unit brands, only Friedrich earns a Very Good rating for satisfaction. Four brands earn a middling rating of Good, and four earn a score of Fair. (None rate Poor.) For portable units, most were reliable but not very well-liked.

Because the installation of central air conditioning differs from home to home—based on floor plans, ductwork, and other factors—CR doesn't test these systems. Instead,

we rate brands for reliability based on what our members tell us about the systems they purchased and had installed over the past decade. Our central-air reliability ratings include 21 national brands (see chart at right).

If you haven't shopped for a new air conditioner in a while, you'll be happy to know that newer models—both room and central—come with features that add convenience and save energy. More window units are WiFi compatible, allowing you to control them remotely from your smartphone (see "Smart Moves to Keep You Cool," on page 22). And by taking advantage of these smart features, you can enroll in utility programs designed to save money and energy (see "Can Your Utility Company Help Save You Money?" on page 22).

And no matter how you cool your home when it's hot, we've got simple maintenance tips to keep your system in top condition all year long.

CENTRAL AIR CONDITIONERS

Spring: Now is the best time to service your system. (If it's part of a central heating system, have it serviced again in the fall.) Hire a licensed professional to change or clean any filters, clean and flush the coils, inspect the condensate drain, and vacuum the blower compartments. The contractor should make sure that the system has the proper amount of refrigerant and that there are no leaks or mechanical problems.

Summer: When there's heavy use, check and possibly change filters at least once a month. Make sure that shrubs and tree branches don't encroach on the outdoor condenser, which will affect the unit's efficiency. Keep vegetation at least 2 feet away.

Fall: Wandering whether your outside unit should be covered during the off-season? Usually not, according to Stewart

Unsdorfer, president of Central Heating & Air Conditioning in Cleveland. It's built to withstand the rain and snow, he says.

In fact, covering a unit traps moisture, which can lead to rust or mildew and provide a haven for rodents. But you can shield just the top of it in the spring and fall to prevent seedlings and leaves from dropping inside. (Be sure to remove the shield before you use the unit again.)

Considering Central Air?

You'll want a brand that's predicted to last and well-liked by owners. The brands below that earn an orange rating of Fair are more trouble-prone and aren't eligible to be recommended by CR. The more reliable brands also tend to have higher owner satisfaction ratings.

Brand	Predicted Reliability	Owner Satisfaction
Trane	↑	↑
Armstrong	↑	↑
Ducane	↑	↑
American Standard	↑	↑
Bryant	↑	↑
Lennox	↑	↑
Carrier	↑	↑
Payne	↓	↓
Rheem	↓	↑
Ruud	↓	↑
Arcoaire	↓	↓
Day & Night	↓	↓
Heil	↓	↓
Tempstar	↓	↓
Amana	↓	↓
Goodman	↓	↓
Coleman	↓	↓
Luxaire	↓	↓
York	↓	↓
Frigidaire	↓	↓
Maytag	↓	↓

Source: Consumer Reports 2017 Fall Survey and 2018 Summer Survey, covering 21,770 units.