

AC Quality Installation

Keep Cool, Save Money

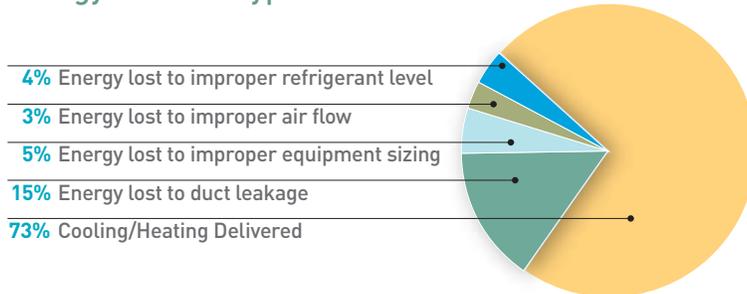
A quality installation of your central air conditioning (AC) equipment can help keep your home comfortably cool in the summer while saving you as much as 36% on annual cooling costs.

Higher Quality, Lower Costs

Did you know that a home heating, ventilation, and air conditioning (HVAC) system accounts for up to 44% of a typical home energy bill?

Nearly half of all heating and cooling equipment in U.S. homes never performs to its advertised capacity and efficiency levels due to improper installation. This costs homeowners more in utility bills and can even shorten the equipment's life. A quality installation of energy-efficient equipment ensures you're getting the best performance from your equipment and saving money, too.

Energy Lost in a Typical Installation*



*This Energy Lost in a Typical Installation chart is from ENERGY STAR®. Percentages are based on national averages.



How a Quality Installation Helps

Whether you're installing new central AC equipment or replacing existing heating and cooling equipment, a quality installation of high-efficiency equipment can lower your energy bills, increase comfort in your home, and extend the useful life of your equipment.

Energy-efficient central AC equipment will be:

- **Correctly sized to meet your home's needs**

Installing the right size equipment for your home is essential to getting the best performance. Often, homeowners think bigger is better when buying new equipment, but in reality, a system that's too large will make your home less comfortable and shorten the equipment's life with frequent "on/off" cycling. Your contractor will ensure you get the right size system by measuring your home and calculating the appropriate size.

- **Connected to a well-sealed duct system**

Ducts circulate air from the central AC or heat pump throughout the house. Ducts that are damaged or poorly connected leak hot or cold air and waste energy. Your contractor will measure your home's duct system leakage and will seal or repair the ducts to improve your home's energy efficiency.

- **Operating with sufficient air flow in the system**

The air flow in your heating and cooling system needs to have the right volume to operate efficiently. If air flow is too high or too low, it can make your home less comfortable and increase your utility bills. Your contractor will measure air flow and make needed adjustments for optimal performance.

- **Installed with the right amount of refrigerant**

It's important for an air conditioner or heat pump to have the correct amount of refrigerant, called the "refrigerant charge." An improperly charged system may consume more energy and result in higher humidity. Contractors should test your home's refrigerant charge and adjust it as needed. This will make your home more comfortable and help you avoid wasting money on your utility bills.



Working with a Contractor

Hiring a licensed contractor increases the likelihood that your system will be installed properly.

A qualified contractor knows and is prepared to comply with local codes, ordinances, and the requirements of the Building Energy Efficiency Standards (State Administrative Code, Title 24, Part 6).

Be sure to choose a licensed contractor

Contact a licensed C-20 contractor of your choice to provide an installation proposal for AC products. Licensed contractors:

- Take a law and trade exam
- Must purchase a bond that insures you against certain damages related to their work on your project
- Must pass a background check

The Contractors State License Board (CSLB) regulates licensed contractors. Installers who perform contracting work without a license haven't been through the same qualification process and may be practicing in violation of the law. For more information from CSLB, call **1-800-321-2752** or visit their website: cslb.ca.gov/Consumers/HireAContractor

Ask for multiple bids

You may wish to consult with more than one licensed contractor so you can get multiple proposals for various energy-efficient models that meet your specific needs.

Choosing the Right Central AC Equipment

After you've selected a contractor, you'll need to choose your central AC equipment.

This table can help you and your contractor determine what energy-efficient equipment will be best for your home.

Energy-Efficient Central AC Equipment Ratings*

Tier	SEER	EER	RATING	TXV
ENERGY STAR & CEE Tier 1	14.5 Split 14 Package	12 Split 11 Package	Good	Required in CA
CEE Tier 2	15 Split 14 or higher Package	12.5 Split 12 or higher Package	Better	Required in CA
CEE Tier 3	16 or higher Split	13 or higher Split	Best	Required in CA
Geothermal	_____	EER- 13.0 COP-4.0	Best	Required in CA

*Information in this table is from the Consortium for Energy Efficiency (CEE), current as of April 2012.

For energy-efficient central heat pump ratings, please see the table at the CEE's website:

www.cee1.org/resid/rs-ac/rs-ac-main.php3

SEER: Seasonal Energy Efficiency Ratio

EER: Energy Efficiency Ratio

TXV: Thermostatic Expansion Valve

COP: Coefficient of Performance

Compliance with State Building Efficiency Standards

For AC quality installations in California, the state may require building permits for HVAC installations and modifications, such as the installation or removal of HVAC equipment.

Also, be prepared for quality assurance inspections. A building inspector may perform a quality assurance check of any installation to ensure that:

- The system complies with all applicable state and county or city codes
- The work specified under the permit has been performed properly
- Required compliance documents have been submitted

Contact Us

For more information, call our Smarter Energy Line at 1-800-933-9555.