

Installation Issues

Home Energy Magazine

An engineering study found three main areas of concern:

1 - Duct Leakage

- Average loss per home = 360 cfm
- Average loss (as % of sq. footage) = 19.5%

2 - Refrigerant Charge

- 62 % were overcharged
- 23 % were undercharged

3 - Sizing of the Unit

- 88 % were oversized
- 2 % were undersized

Texas A&M University

found a 23% refrigerant undercharge could result in a 52% efficiency loss

Pacific Gas & Electric

Found the average heating energy savings for :

- 1 - repair of disconnected ducts was 15%
- 2 - repair of diffuser leakage 7.5%
- 3 - correcting low air flow 5.6%
- 4 - repairing leaks and correcting refrigerant charge 18.4%

Lakeland Electric & Water

Researchers found that by repairing leaking duct work, cooling energy was reduced by an average of 17.4%

Honeywell

Found that heat pumps lost almost 50% of their efficiency after 20 years, even if typical "dust stop" filter was installed. In 20 years, a 12 SEER unit could degrade to a 6 SEER. This would double the energy cost!

Louisiana State University

and Gulf States Utility found consumers could save about \$30 per month just by making sure that their air conditioning system was cleaned and serviced regularly. HVAC manufacturer's Data shows a condensing unit with an SEER of 13 matched with an old air handler would decrease the SEER to 9.2, resulting in 30% less efficiency.