

End of Summer SALE

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DAIKIN 16 SEER AIR
CONDITIONING SYSTEMS



Daikin 16 SEER AC with Gas Furnace

1.5 Ton	\$4427	or	\$87 /month
2 Ton	\$4481	or	\$88 /month
2.5 Ton	\$4596	or	\$90 /month
3 Ton	\$4956	or	\$97 /month
3.5 Ton	\$5083	or	\$100 /month
4 Ton	\$5469	or	\$108 /month
5 Ton	\$5655	or	\$111 /month

Daikin 16 SEER Heat Pump

1.5 Ton	\$4869	or	\$96 /month
2 Ton	\$4933	or	\$97 /month
2.5 Ton	\$5112	or	\$101 /month
3 Ton	\$5363	or	\$109 /month
3.5 Ton	\$5851	or	\$115 /month
4 Ton	\$6579	or	\$129 /month
5 Ton	\$7196	or	\$142 /month

12 Year

Parts Warranty

These are high efficiency 16 SEER, new premium models. Not scratch and dent or builder grade equipment. Cannot be combined with any other coupons, offers or discounts. Monthly payment is based on 0% interest for 60 months. Licensed by: Texas Department of Licensing and Regulations, PO Box 12157, Austin TX 78711 (512)463-6599, HVAC License TACB010288E, Electrical M51271 and The Texas State Board of Plumbing Examiners, PO Box 4200, Austin TX 78765 (512)936-5200, Plumbing M39682

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Fall
2018

Equipment Size, Ducts, and Building Envelope

What do these three have in common?

- Equipment Size
- Ducts
- Building Envelope

For HVAC contractors, everything. However, they are listed in reverse order. Many contractors and homeowners talk about HVAC systems. However, an HVAC unit is not a system; the house is the system. The HVAC unit is a subsystem that also includes ductwork and the building envelope. Getting equipment, ductwork and building envelope working together as a team is the key to maximizing home performance and indoor comfort.

Missing the Forest for the Trees

Many homeowners feel like they'll get an HVAC unit with all these bells and whistles and they'll save all this money and energy, but reality frequently falls short of their expectations. This misconception reminds me of an episode from the Tim Allen show Home Improvement when

he wanted a larger motor for his lawnmower to get the job done faster.

However, 70% of the time, deficiencies are not equipment related. Instead, a faulty building envelope is often the culprit. Installing a new HVAC unit without dealing with the building envelope is like installing a NASCAR engine in a 1970s-era Pinto with flat tires. On the other hand, fixing infiltration and exfiltration faults even without replacing HVAC equipment will outperform a new HVAC system alone all-day long.

Infiltration and Exfiltration
Homeowners come to me saying, "I have a cold room and a hot room and a damp basement. Can you fix it?" My response is, yes, I can.

The first step is to determine where the problems originate. It's standard operating procedure when performing a Manual J

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Equipment Size, Ducts, and Building Envelope
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It's That Time Of Year Again!
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Dayton Coupon Corner
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End of Summer Sale
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Equipment Size, Ducts, and Building Envelope

Continued from page 1

calculation to include the square footage of the conditioned space along with ceiling height, windows, doors, ceiling and floors. It is also customary to calculate R-values for insulation in walls and ceilings, as well as U-values for windows and doors. However, most Manual J software has a significant defect to account for Infiltration and exfiltration rate, the data is hidden and unless you know where to look, you will not know to enter it, as this rate is one of the most important values.

Infiltration and exfiltration rate are directly related to the building envelope. Knowing how well the building envelope is performing or not performing is key to equipment sizing. Yet many contractors ignore this basic fact. If we do not verify our insulation levels and ASSUME that the size of the existing equipment is correct, we are not serving our customers well.

At Dayton, we perform a complete home audit that includes inspections to detect duct leakage along with a blower door test to measure infiltration and exfiltration. Knowing the blower door number and the correct insulation value can change the equipment sizing needed for a home to a half to 2 tons larger than the existing equipment size. Once the unit is sized correctly, we confirm the ducts are sized correctly per Manual D. We find that returns are undersized 99% of the time.

For instance, if the infiltration values are not changed when doing a Manual J., the default is average, which means it is set up for 8 total air exchanges per day during a 24 hour period. But if your house has 32 exchanges in 24 hours, you would need a system that can be up to two times larger to compensate. However, a larger unit also requires larger ducts and more energy. And unless you correct the factors responsible for the excessive air exchanges, much of the conditioned air is directed toward the outdoors. This contributes to needlessly high utility bills.

Oftentimes customers want to replace windows to eliminate drafts. But it often makes more sense to seal up leaks in the attic instead. For instance, many attic hatches are no more than a piece of plywood with no weather stripping. Plus, where do you want your home's air exchanges to come from – a moldy attic or crawlspace or the windows?

Contractor Pushback and Customer Resistance

Many contractors don't want to invest the time and effort associated with learning techniques associated with solving building envelope issues. They just focus on selling a bunch of equipment, and then they wonder why they're losing so much money on callbacks.

Some customers are also resistant to investing the money associated with fixing ductwork or building envelope issues. To an extent, that's understandable. It can cost an additional \$4,000 to \$8,000 on top of what they would spend on a new HVAC unit. However, addressing building envelope issues often allows customers to put off buying a new HVAC unit for another year or two because they're no longer requiring the unit to run 24/7, which offsets the cost.

The Cherry on Top

Realizing a full return on the investment required to correct building envelope issues can require as much as 10 years, although consumers start to notice a reduction in their utility bills after a year or so. One customer reported back to us that she had saved \$6,000 in a year and a half after corrected her building envelope problems. In her case, the electric heat pump was cycling constantly, which really jacked her utility rates up.

While that kind of result isn't typical, what is typical is that our customers are surprised how much better their home is performing after we've addressed infiltration and exfiltration problems. We've had customers who were able to stop using asthma inhalers because of improved indoor air quality. Once the house is healthier the comfort and energy efficiency will come, not the other way around. Efficiency is the cherry on top.

It's that time of year again!

Time to schedule your Fall inspection. As you know, performing regular air conditioning and heating system maintenance not only helps to ensure that equipment is operating safely, but it also serves to help maintain optimal system performance and prolong life expectancy. Our 25 point inspection twice a year ensures nothing slips through the cracks! *All for just 14.95 per month.*

Becoming a VIP Comfort Partner means you'll receive the following:

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The service you will be provided with is defined in over 300 5-star Google reviews, by an A+ rating by the BBB and an A+ rating on Angie's List's where we've received their prestigious Super Service Award 9 years in a row. We have over 27 years of

Customer: "My furnace makes a loud noise once in a while and I smell something funny."

Technician: "Sounds like it's just getting gas."

experience delivering the highest quality service available, and we are fully dedicated to maintaining our position as one of Austin and San Antonio's top-rated service companies. We are adequately licensed and insured. Our technicians are employees of the company, they are highly trained and must pass a criminal background check before we allow them into your home. Dayton does not use 3rd party contractors.

We provide service 7 days a week and until 7:30 PM Monday through Friday! In the unfortunate event you need emergency service, your call is dispatched within the hour of your call. We look forward to working with you!



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