

Heat Pump Home Runs

- Air Source Heat Pump
- One-Story Ranch Home



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A **single story** ranch-style home with a simple floor plan is a great candidate for a full displacement heat pump retrofit, no matter if they are heated with hydronic or ducted central systems. See our separate guides for homes with more complicated floorplans.

Existing Duct Work Evaluation

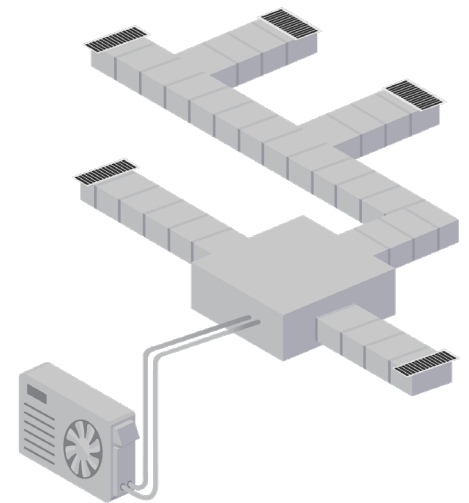
If the answer to any of the questions below is “no” then the distribution system is not in good working order and likely needs modification or replacement to accommodate a ducted heat pump.

- » Is the duct system obviously noisy with the fan on?
- » Is the duct work sealed?
- » Is the duct work free from panned or cavity returns?
- » Does the current duct system provide adequate airflow for heating with a heat pump?

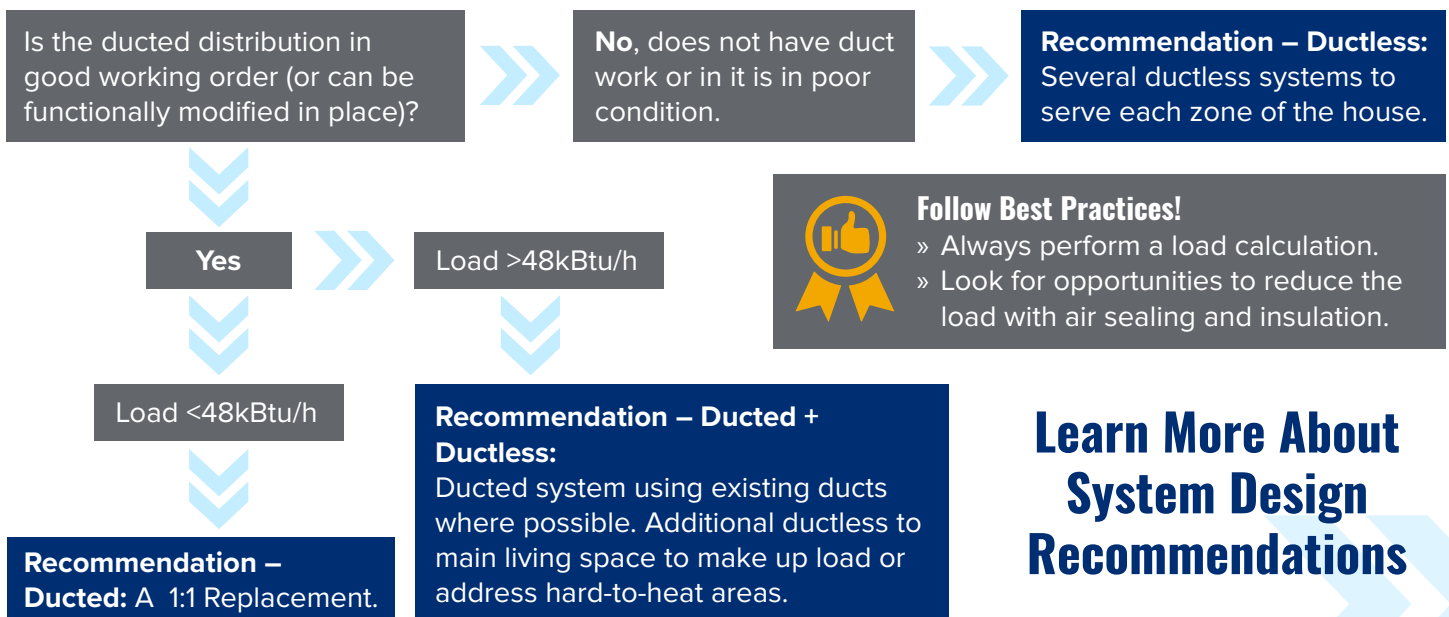


Follow Best Practices!

- » Measure system airflow to get a baseline
- » Perform a Manual D to determine required duct sizing



Which heat pump design is right for this house?



**Learn More About
System Design
Recommendations**

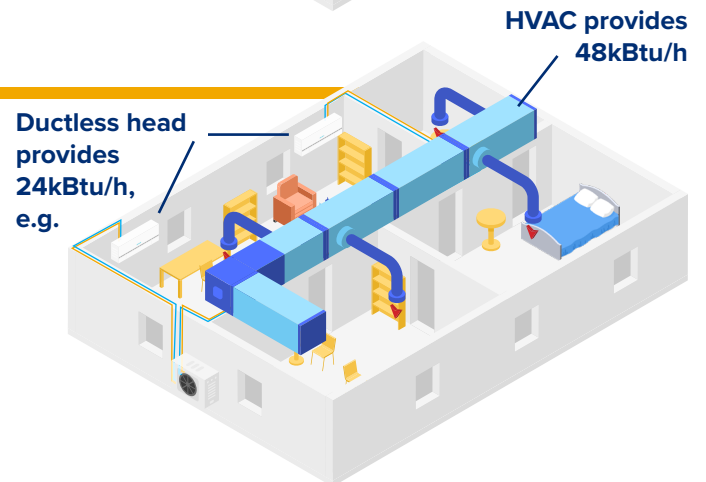
Ducted, 1:1 Replacement Considerations

- » Evaluate supply and return duct work.
- » If there is no existing central AC, evaluate the electric panel capacity (see tips below).



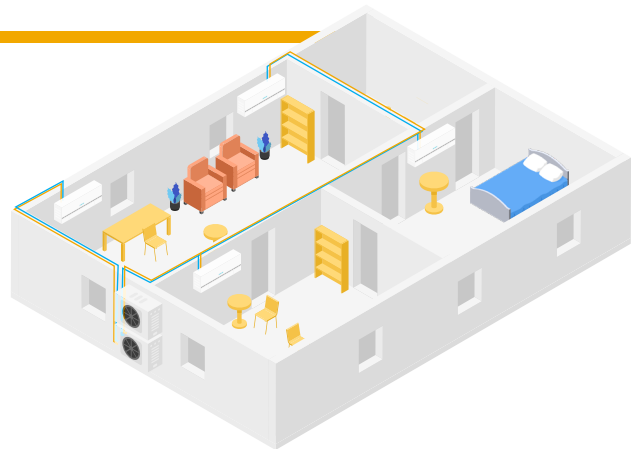
Ducted + Ductless Considerations

- » Evaluate supply and return duct work.
- » If there is no existing central AC, evaluate the electric panel capacity.



Ductless Considerations

- » Evaluate the electric panel capacity.
- » Install multiple single-zone heat pumps for the easiest way to match capacity to load.
- » Consider compact-ducted units to serve more than one room.
- » Avoid over-zoning: using multiple ductless heads for a given outdoor unit requires careful sizing around the min and max capacity of the unit and the load served.



Electric Panel Capacity Evaluation

Panel upgrades add significant cost to a job. Use the tips below to evaluate the likelihood a panel upgrade is needed.

- » If the home already has central AC panel capacity is probably adequate.
- » If the house is served by a 100 amp panel an upgrade is likely required.
- » If there are fewer than 2 empty breaker slots available, discuss the below options with an electrician.

Options by cost:

\$ Support another load with a tandem breaker and use thin double-pole breaker for heat pumps.

\$\$ Add a subpanel to combine loads to free up space on the main panel.

\$\$\$ Use an automatic circuit sharing device such as NeoCharge, Dryer Buddy and others.

\$\$\$\$ Upgrade to a larger panel.



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