Heat Pump Home Runs

→ Air Source Heat Pump







A manufactured home is single story home that is built in a factory and transported to the homesite as a complete home (single wide) or two halves (double wide). Regardless of the type, manufactured homes can be great candidates for a full load heat pump retrofit.

Existing Duct Work Evaluation

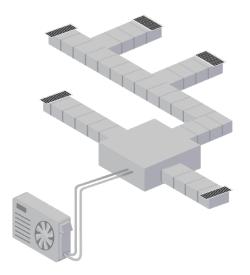
If the answer to any of the questions below is "no" then the distribution system is not in good working order and likely needs modification or replacement to accommodate a ducted heat pump.

- » Is the duct system obviously noisy with the fan on?
- » Is the duct work sealed?
- » Is the duct work free from 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?

Is the ducted distribution in good working order (or can be functionally modified in place)?



No, does not have duct work or in it is in poor condition.



Recommendation – Ductless:

Several ductless systems to serve each zone of the house.



Follow Best Practices!

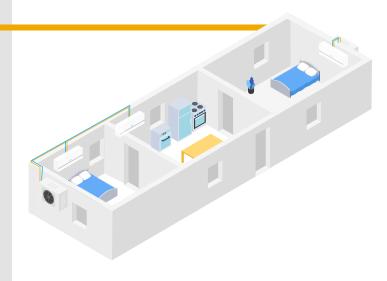
- » Always perform a load calculation.
- » Look for opportunities to reduce the load with air sealing and insulation.

Learn More About System Design Recommendations



Ductless Considerations

- » Evaluate the electric panel capacity.
- » Install multiple single-zone heat pumps for the easiest way to match capacity to load.
- » Consider low wall or floor mount units for homes with low ceilings.
- » Use a single large capacity head to serve an open-plan living/dining kitchen area or similar.
- » 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.
- » Check with the land owner to make sure there are no restrictions regarding the outdoor unit's placement.



Ducted, 1:1 Replacement Considerations

- » Evaluate supply and return duct work.
- » If there is no existing central AC, evaluate the electric panel capacity.
- » Seal and insulate ductwork as part of job scope.
- » Check with the land owner to make sure there are no restrictions regarding the outdoor unit's placement.



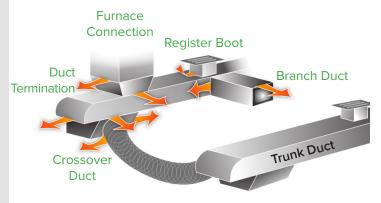
Duct Sealing for Manufactured Homes

Ductwork in manufactured homes is often very leaky, owing to poor construction practices, especially in older homes, and damage during transport.

Make duct sealing the first step for any ducted heat pump installation.

Beware of return vents that use the manufactured home's floor cavity, or belly, as the sole return. These systems should be converted to a cabinet return at the air handler, undercutting doors or adding louvers to balance room pressure.

TYPICAL AIR LEAKAGE LOCATIONS



Graphic developed for the U.S. DOE WAP Standardized Curricula

