



Should I choose Radiant or Forced-Air?

Choosing between an air duct heating & cooling system and radiant in-floor heating can be a puzzling task for many homeowners. Duct design and fan technology have improved dramatically over the past two decades, creating quieter, more comfortable air systems than in the past. At the same time, radiant floors are considered by some homeowners to be the ultimate in comfort. The following table can help you sort through the advantages and drawbacks of each. Note that a modern, well-designed system will be comfortable no matter which setup you choose.

	Duct Systems	Radiant Floors
COST	Heating and cooling are provided by the same duct system. Typically 25 –40 % of the cost of radiant floors per square foot when heating and cooling	Provides heating only, radiant cooling is risky. Requires ducting for cooling or indoor air quality.
COMFORT	Distributes heat evenly throughout the house in a well-designed system, ability to utilize separate thermostats and multiple zones.	Heats objects rather than air. A room heated with radiant feels like being warmed by the sun. Radiant systems typically have a thermostat zone in each major room.
INDOOR AIR QUALITY	Indoor air quality options such as filtration, humidification, and heat recovery ventilation (HRV) are easily integrated into a forced-air system.	Moving air can irritate people with severe allergies; however, radiant systems typically require ducting to provide adequate filtration and ventilation.
RESPONSE TIME	Forced-air systems can usually warm a room faster than a radiant system when the thermostat is changed.	Adding additional zones is typically less expensive with radiant systems than with forced-air.
NOISE	Can be noisy if poorly designed, especially at start-up.	Silent, no air drafts.
OTHER ASPECTS TO CONSIDER	Works well with any floor covering; especially suited for upper floors, more difficult to install for retrofit if no attic or crawl space is available.	Easy to install in basement or garage slabs, can raise floor height 1 to 3 inches. Furniture and rug placement can affect comfort.