



## Temperature differences between Rooms and Floors

There are many factors that can cause minor temperature differences throughout your home. It is common to see several degree differences (5-7 degrees) to what your thermostat is set. This is more evident in rooms furthest from the thermostat. Below are some common causes for these differences and some helpful points for keeping temperatures more consistent.

### 1. Common causes of temperature differences

- **HVAC System Imbalance:** If the ductwork isn't appropriately balanced airflow can be inconsistent. Dampers may need to be adjusted especially from season to season. Most new home builders will balance the system one-time during the first year. You may want to contact a professional if you are uncomfortable with adjusting the dampers.
- **Sun Exposure:** Rooms facing the sun (especially west- or south-facing) will naturally get warmer during the day, while shaded rooms stay cooler.
- **Room Location:** Upper floors tend to be warmer (heat rises), while basements or lower levels are cooler (cool air settles).
- **Appliances and Electronics:** Computers, TVs, and lighting can generate heat and warm up a room more than others.
- **Closed Doors:** Keeping doors closed can limit airflow and trap heat or cold in certain rooms.
- **Vent Obstructions:** Furniture or rugs blocking vents can prevent proper heating or cooling.
- **Extremely Hot/Cold outdoor temperatures:** Extreme outdoor temperatures, generally less than 10 degrees or more than 90 degrees
- **Below-Grade Walls and Floors:** Basements are typically built below grade, meaning the walls and floors are in direct contact with the surrounding soil. This contact allows cold from the earth to penetrate the walls and floors, making it difficult to maintain a comfortable temperature

### 2. Solutions for more consistent temperatures throughout the home

- **Balance Your HVAC System:**
  - Adjust dampers in your ductwork and registers in your room to redirect more airflow to the affected rooms.
  - Adjustments to your HVAC system may need to be made throughout the year depending on seasonal temperature fluctuations.
  - Alternatively install smart register vents that automatically open or close to balance temperatures.
- **Seal and Insulate:**
  - Be sure that all doors are sealed properly
  - Install insulated curtains or thermal blinds.
- **Improve Air Circulation:**
  - Use ceiling fans to distribute warm or cool air more evenly.
  - Keep interior doors open to allow better airflow between rooms.



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- **Sunlight Control:**

- Install shades, reflective films, or external awnings to control heat gain from sun-exposed windows.

The HVAC system in your home is designed to keep temperatures generally within several degrees of what your thermostat is set. Following the instructions in this bulletin will help keep your home comfortable in all seasons for years to come.

Technical Services Team

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