# High■Performance Basics

High■performance homes are not defined by products or labels. They are defined by how well the house controls heat, air, and moisture. This guide explains the basics in plain language so you can understand what actually affects comfort and durability.

## 1. The Enclosure: How the House Separates Inside from Outside

The enclosure includes insulation, air sealing, windows, and assemblies that form the boundary between indoors and outdoors. Its job is to slow heat flow, limit uncontrolled air movement, and manage moisture.

1. Insulation slows heat movement but does not stop air leaks.
2. Air leaks are a major cause of comfort problems and energy waste.
3. Windows affect comfort as much as walls, especially near seating areas.
4. Weak enclosure details often lead to drafts, cold rooms, and condensation.

## 2. Airflow: Why Drafts and Pressure Matter

Air moves through homes because of pressure differences. Wind, exhaust fans, duct leakage, and temperature differences all push air through gaps in the enclosure.

1. Uncontrolled airflow brings in outdoor heat, cold, and moisture.
2. Leaky ducts can create pressure imbalances that worsen comfort.
3. Air sealing reduces drafts and makes temperatures more even.
4. Balanced airflow supports predictable HVAC performance.

## 3. Comfort: More Than Just Thermostat Settings

Comfort is influenced by temperature, humidity, airflow, and surface temperatures. Oversized or poorly matched systems often create short cycling, noise, and uneven conditions.

1. Even temperatures matter more than peak output.
2. Oversized HVAC systems often feel less comfortable.
3. Humidity control affects how warm or cool a space feels.
4. Comfort complaints often trace back to enclosure or airflow issues.

## 4. Why These Systems Must Work Together

Insulation, air sealing, and HVAC systems work as a system. Changing one without considering the others often creates new problems.

1. Better air sealing usually allows smaller HVAC equipment.
2. Insulation upgrades change heating and cooling loads.
3. Ventilation must be planned, not accidental.
4. Performance problems usually come from missing coordination.

High■performance decisions work best when they are made early, before equipment is selected and contracts are signed.