LEED BD+C: Homes | v4

Heating and cooling distribution systems

Possible 3 points

Glossary

Intent

To minimize energy loss to thermal bridges and leaks in the heating and cooling distribution system.

Requirements

Case 1. Forced-Air System

Option 1. Ductwork in Conditioned Space (3 points)

Duct leakage testing is waived if the following conditions are met:

- The air-handler unit and all ductwork are located entirely within conditioned spaces.
- The envelope is airtight; 2 points are earned in EA Credit: Air Infiltration.

Ductless systems with air circulation blowers qualify. This case is not available for multifamily projects whose ductwork runs through spaces between units: interstitial space is considered outside the thermal envelope of the unit.

OR

Option 2. Ductwork in Unconditioned Space (2 points)

Large Homes or Multifamily Units
For homes or multifamily units of 1,200 square feet (110 square meters) or more, limit the rate of duct air leakage to outside the conditioned envelope. For each installed system, the tested duct leakage rate must not exceed 3.0 cfm at 25 Pascals per 100 square feet (0.9 cmm at 25 Pascals per 100 square meters) of conditioned floor area, verified by the qualified energy rater.

Small Homes or Multifamily Units
For homes or multifamily units smaller than 1,200 square feet (110 square meters), limit the rate of duct air leakage to outside the conditioned envelope. For each installed system, the tested duct leakage rate must not exceed 4.0 cfm at 25 Pascals per 100 square feet (1.2 cmm at 25 Pascals per 100 square meters) of conditioned floor area, verified by the qualified energy rater.

Case 2. Hydronic System (2–3 points)

Keep the system (including boiler and distribution pipes) entirely within the conditioned envelope (2 points).

For an additional point, install an outdoor reset control that modulates distribution water temperature based on the outdoor air temperature (1 point).

Credit only available for projects using the EA prescriptive path’