

To show energy conservation compliance using the R-Value Computation Compliance Method (Table R402.1.3 of the 2021 International Energy Conservation Code) specify the following required insulation and fenestration values for Climate Zone 2:

- Maximum Fenestration U-Factor: 0.40 (0.65 for Skylights*)
- Maximum Glazed Fenestration SHGC: 0.25
- Minimum Ceiling R-Value: 49
- Minimum Wall R-Value: 13
- Minimum Floor R-Value: 13
- Minimum Duct Insulation R-Value: 8 in attics
- Minimum Duct Insulation R-Value: 6 in other portions of home

* *Skylights may be excluded from glazed fenestration SHGC requirements in climate zones 1 through 3 where the SHGC for such skylights does not exceed 0.30*

When using the prescriptive compliance methods, you must additionally comply with one of the following:

- R408.2.1 Enhanced envelope performance.

The total building thermal envelope UA, the sum of U-factor times assembly area, shall be less than or equal to 95 percent of the total UA resulting from multiplying the U-factors in Table R402.1.2 by the assembly areas as in the proposed building. The UA calculation shall be performed in accordance with Section R402.1.5. The area-weighted average SHGC of all glazed fenestration shall be less than or equal to 95 percent of the maximum glazed fenestration SHGC in Table R402.1.2

- R408.2.2 More efficient HVAC equipment performance.

Heating and cooling equipment shall meet one of the following efficiencies:

1. Greater than or equal to 95 AFUE natural gas furnace and 16 SEER air conditioner.
2. Greater than or equal to 10 HSPF/16 SEER air source heat pump.
3. Greater than or equal to 3.5 COP ground source heat pump.

For multiple cooling systems, all systems shall meet or exceed the minimum efficiency requirements in this section and shall be sized to serve 100 percent of the cooling design load. For multiple heating systems, all systems shall meet or exceed the minimum efficiency requirements in this section and shall be sized to serve 100 percent of the heating design load.

- R408.2.3 Reduced energy use in service water-heating

The hot water system shall meet one of the following efficiencies:

1. Greater than or equal to .82 EF fossil fuel service water-heating system.
2. Greater than or equal to 2.0 EF electric service water-heating system.
3. Greater than or equal to 0.4 solar fraction solar water-heating system.

- R408.2.4 More efficient duct thermal distribution system option.

The thermal distribution system shall meet one of the following efficiencies:

1. 100 percent of ducts and air handlers located entirely within the building thermal envelope.
2. 100 percent of ductless thermal distribution system or hydronic thermal distribution system located completely inside the building thermal envelope.
3. 100 percent of duct thermal distribution system located in conditioned space as defined by Section R403.3.2

- R408.2.5 Improved air sealing and efficient ventilation system option.

The measured air leakage rate shall be less than or equal to 3.0 ACH50, with either an Energy Recovery Ventilator (ERV) or Heat Recovery Ventilator (HRV) installed. Minimum HRV and ERV requirements, measured at the lowest tested net supply airflow, shall be greater than or equal to 75 percent Sensible Recovery Efficiency (SRE), less than or equal to 1.1 cubic feet per minute per wall (0.03 m³/min/watt) and shall not use recirculation as a defrost strategy. In addition, the ERV shall be greater than or equal to 50 percent Latent Recovery/Moisture Transfer (LRMT).