

Heating System Sizing Calculator Instructions

Design Temperature

Using the drop-down, please select the city that is closest to your building site.

Area of Building

Using exterior measurements, enter the square footage of living space conditioned directly or indirectly.

Average Ceiling Height

Enter the average ceiling height from your building plans.

Glazing and Doors

Calculate and enter the total area of the glazing products (windows and doors) in the structure.

Example:

- Window #1 area 10 sf
- Window #2 area 15 sf

Total area 25 sf

The glazing (window) portion of this calculator assumes the installed glazing products have an area weighted average U-factor of 0.30.

Skylights

Calculate and enter the total area of the skylights in the structure.

Example:

- Skylight #1 area 10 sf
- Skylight #2 area 15 sf

Total area 25 sf

The skylight portion of this calculator assumes the installed skylight products have an area weighted average U-factor of 0.30.

Insulation - Attic

Using the drop-down, select the R-value specified in your building plans for flat and/or scissor truss ceilings. Then, calculate and enter the area of the ceiling under attic insulated with the selected R-value.

Insulation - Single Rafter or Joist Vaulted Ceilings

Using the drop-down, select the R-value specified in your building plans for vaulted ceilings. Then, calculate and enter the area of the vaulted ceiling insulated with the selected R-value.

If there are no vaulted ceilings, select "No Vaulted Ceilings in this project."

Insulation - Above Grade Walls

Using the drop-down, select the R-value specified in your building plans for the Above Grade Walls. Then, calculate and enter the net above grade wall area.

Net above grade wall area is the total above grade wall area minus the area of windows and doors.

See Figure 1 for help understanding above and below grade.

Insulation - Floors

Using the drop-down, select the R-value specified in your building plans for floors above conditioned and/or unconditioned spaces. Then, calculate and enter the floor area with the selected R-value.

Insulation - Below Grade Walls

Using the drop-down, select the R-value specified in your building plans for the Below Grade Walls. Then, calculate and enter the net below grade wall area.

Net below grade wall area is the total below grade wall area minus the area of windows and doors.

Insulation - Slab Below Grade

Using the drop-down, select the insulation status specified in your building plans for the Below Grade Walls. Then, calculate and enter the linear feet of perimeter of the slab below grade.

For example, if the basement floor is a 54' x 32' slab below grade, the linear perimeter would be 172' ($54'+54'+32'+32' = 172'$).

Insulation - Slab on Grade

Using the drop-down, select the R-value specified in your building plans for slab on grade. Calculate and enter the linear feet of perimeter of the slab on grade.

For example, if the living room is a 20' x 30' slab on grade, the linear perimeter would be 100' ($20'+20'+30'+30'=100'$).

Location of Ducts

Using the drop-down, select whether the majority of ducts will be installed in conditioned or unconditioned spaces.

- If the majority of ducts will be installed in living areas, or if the heating system will be ductless, select "Conditioned Space"
- If the majority of ducts will be installed in unconditioned space (for example, crawlspace or unconditioned basement), select "Unconditioned Space"