

0.0
0.0
0.0
0.0

Sum of Vertical Fenestration Area and UA
Vertical Fenestration Area Weighted U = UA/Area

93.0

Overhead Glazing (Skylights)

Component Description	Ref.	U-factor

Qt.	Width Feet	Inch	Height Feet	Inch

Area
0.0
0.0
0.0
0.0
0.0
0.0

Sum of Overhead Glazing Area and UA
Overhead Glazing Area Weighted U = UA/Area

0.0

Total Sum of Fenestration Area and UA (for heating system sizing calculations)

93.0

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

Project Information

Contact Information

Heating System Type: All Other Systems Heat Pump

To see detailed instructions for each section, place your cursor on the word "Instructions"

Design Temperature

[Instructions](#)

Design Temperature Difference (ΔT) 45
 $\Delta T = \text{Indoor (70 degrees)} - \text{Outdoor Design Temp}$

Area of Building

Conditioned Floor Area

[Instructions](#)

Conditioned Floor Area (sq ft)

Average Ceiling Height

[Instructions](#)

Average Ceiling Height (ft)

Conditioned Volume

2,248

Glazing and Doors

[Instructions](#)

U-Factor X Area = UA
 0.300 X = 27.90

Skylights

[Instructions](#)

U-Factor X Area = UA
 0.50 X = ---

Insulation

Attic

[Instructions](#)

U-Factor X Area = UA
 0.026 X = 1.43

Single Rafter or Joist Vaulted Ceilings

[Instructions](#)

U-Factor X Area = UA
 No selection X = ---

Above Grade Walls (see Figure 1)

[Instructions](#)

U-Factor X Area = UA
 0.056 X = 21.67

Floors

[Instructions](#)

U-Factor X Area = UA
 0.029 X = 6.55

Below Grade Walls (see Figure 1)

[Instructions](#)

U-Factor X Area = UA
 No selection X = ---

Slab Below Grade (see Figure 1)

[Instructions](#)

F-Factor X Length = UA
 No selection X = ---

Slab on Grade (see Figure 1)

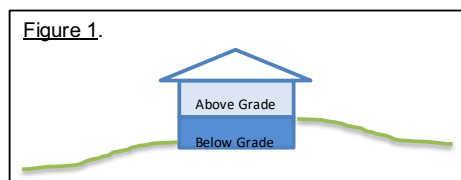
[Instructions](#)

F-Factor X Length = UA
 0.360 X = 19.80

Location of Ducts

[Instructions](#)

Duct Leakage Coefficient
 1.00



Sum of UA	77.36
Envelope Heat Load	3,481 Btu / Hour
<i>Sum of UA x ΔT</i>	
Air Leakage Heat Load	1,093 Btu / Hour
<i>Volume x 0.6 x ΔT x 0.018</i>	
Building Design Heat Load	4,574 Btu / Hour
<i>Air leakage + envelope heat loss</i>	
Building and Duct Heat Load	4,574 Btu / Hour
<i>Ducts in unconditioned space: sum of building heat loss x 1.10</i>	
<i>Ducts in conditioned space: sum of building heat loss x 1</i>	
Maximum Heat Equipment Output	6,403 Btu / Hour
<i>Building and duct heat loss x 1.40 for forced air furnace</i>	
<i>Building and duct heat loss x 1.25 for heat pump</i>	