## Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 and 2021 Washington State Energy Code (WSEC). 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.

This tool is for the permitting purposes only. A Manual J calculation is required to meet the requirement of the Washington State Energy Code.

Project Information		Contact Information
Florence Addition		Mark Dorsey
8818 SE 62nd Street		mark@firstlamp.net
Mercer Island, WA, 98040		4915 Rainier Ave S, STE 202
Heating System Typ	e: O All Other Systems	Heat Pump
To see detailed instructions	for each section, place your cursor on the wor	rd "Instructions"
Design Temperature		Deisgn Temperature 25
Instructions Mercer Island		$\Delta T = Indoor (70 degrees) - Outdoor Design Temp 45$
Area of Building Conditioned Floor A	rea	
Instructions	Conditioned Floor Area (sq ft)	1,402
Average Ceiling Hei	ght	Conditioned Volume
Instructions	Average Ceiling Height (ft)	9.5 13,316
<b>Glazing and Doors</b>		U-Factor X Area = UA
Instructions	U-0.28	0.280 770 215.52
Skylights		U-Factor X Area = UA
Instructions		0.50 0 0.00
Insulation		
Attic		U-Factor X Area = UA
Instructions	None	
Single Rafter or Joist Vaulted Ceilings		U-Factor X Area UA
Instructions	R-38	0.026 1,481 38.51
Above Grade Walls	(see Figure 1)	U-Factor X Area UA
Instructions	R-21 INT plus R-5 ci	0.041 2,568 105.31
Floors		U-Factor X Area UA
Instructions	R-38	0.025 1,402 35.05
Below Grade Walls	and Slabs (see Figure 1)	Wall U-Factor X Area UA
Instructions Wal	I & Slab None	
	Depth Select nearest slab depth	Slab F-Factor X Length UA
Slab on Grade (see Figure 1)		F-Factor X Length UA
Instructions	R-10 Fully Insulated	0.360 66 23.58
Location of Ducts		
Instructions Conditioned Space		Duct Leakage Coefficient
		1 000

Sum of UA



18,809	Btu / Hour
6,471	Btu / Hour
25,280	Btu / Hour
25,280	Btu / Hour
g heat loss x 1. eat loss x 1	10
31,600	Btu / Hour
nir furnace mp	
	18,809 6,471 25,280 25,280 a heat loss x 1 eat loss x 1 31,600 iir furnace mp