

Results of Annual Simulation

Installed Collector Power:	20.65 kBtu/hr	
Collector Surface Area Irradiation:	34.47 MBtu	495.52 kBtu/sq.ft
Energy Produced by Collectors:	19.24 MBtu	276.56 kBtu/sq.ft
Energy Produced by Collector Loop:	16.70 MBtu	240.14 kBtu/sq.ft
DHW Heating Energy Supply:	17.2 MBtu	
Space Heating Energy Supply:	140.91 MBtu	
Solar Contribution to DHW:	15.36 MBtu	
Solar Contribution to Heating:	448.48 kBtu	
Energy from Auxiliary Heating:	143.76 MBtu	

Propane Gas Savings:	264.7 cu.yd
CO2 Emissions Avoided:	2,657.62 lbs
DHW Solar Fraction:	82.3 %
Total Solar Fraction:	9.9 %
Fractional Energy Savings (prEN 12976):	10.3 %
System Efficiency:	45.9 %

Basic Data

Climate File

Location:	Hanover NH
Weather Data Record:	"Portland ME"
Global Radiation Annual Total:	4.85 MBtu
Latitude:	43.65 °
Longitude:	70.32 °

Domestic Hot Water


Average Daily Consumption:	80 gal
Desired Temperature:	120 °F
Load Profile:	Morning Max
Cold Water Temperature:	February: 45.48 °F / August: 52.72 °F

Space Heating

Standard Building Heat Flow Requirement:	80 kBtu/hr
Standard External Temperature:	-11.54 °F
Design Temperatures :	140 °F/120 °F

System Components

Collector Loop


Manufacturer:	Viessmann Werke GmbH & Co
Type:	 Vitosol 300-T SP3 3 m ²
Number:	2.00
Total Gross Surface Area:	93.043 sq.ft
Total Active Solar Surface Area:	69.556 sq.ft
Inclination (Tilt Angle):	60 °
Azimuth:	0 °

DHW Tank with Two Heating Spirals


Manufacturer:	Viessmann
Type:	 Vitocell-B 300 (500 Liter)
Volume:	132.09 gal

Space Heating Buffer Tank

Manufacturer:	Viessmann
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 Original T*SOL Database

 With Test Report


 Solar Keymark

System Components


Type:	 Vitocell-V 300 (200 Liter)
Volume:	52.84 gal

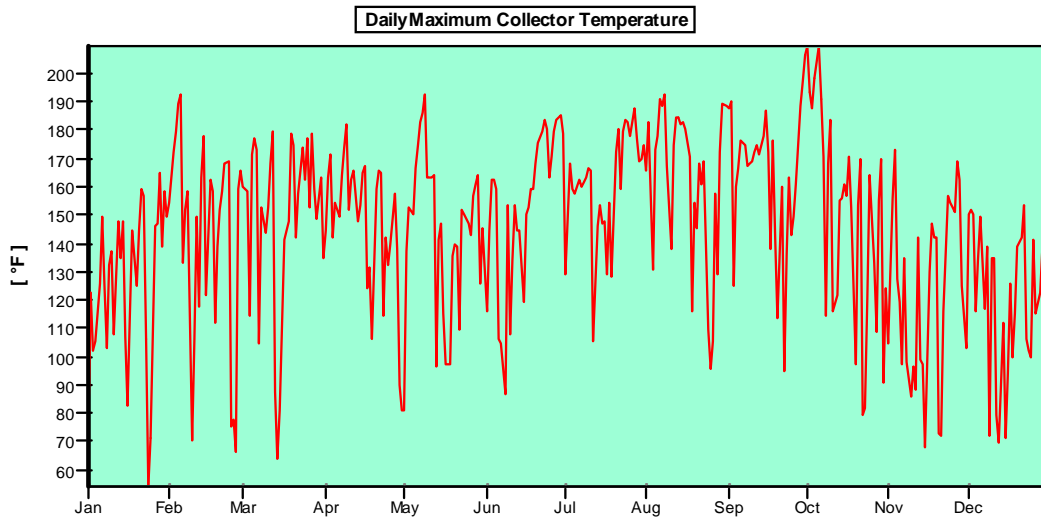
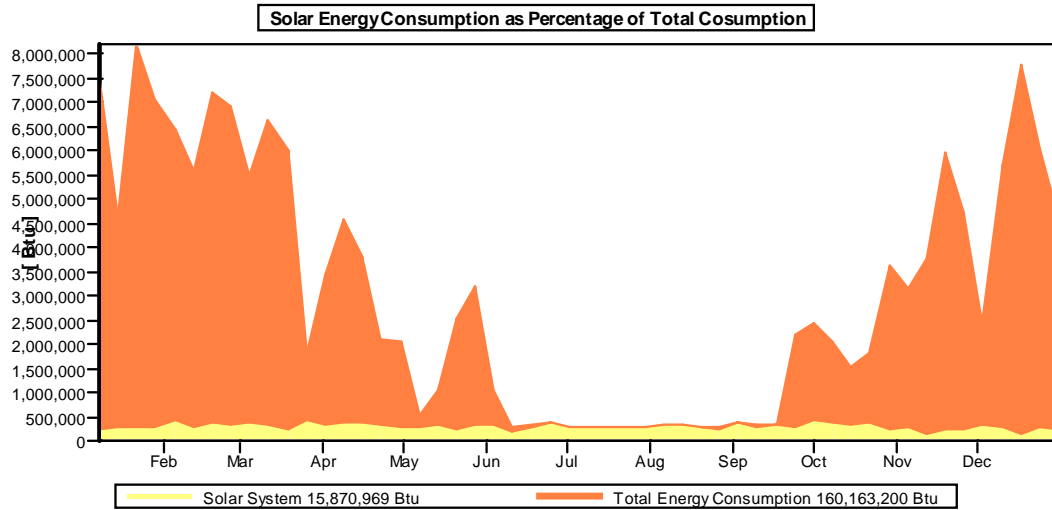
Auxiliary Heating

Manufacturer:	Viessmann
Type:	Vitodens 200 8 bis 32 kW
Nominal Output:	109.18 kBtu/hr

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 Solar Keymark



These calculations were carried out by T*SOL Pro 4.4 - the Simulation Programme for Solar Thermal Heating Systems. The results are determined by a mathematical model calculation with variable time steps of up to 6 minutes. Actual yields can deviate from these values due to fluctuations in the weather, consumption and other factors. The Schematic System Diagram above does not represent and cannot replace a full technical drawing of the solar system.