

System Summary

GR 030 and Slinky Horz - 8 ft/ft trench 1.00"

ClimateMaster Unit

Series: Genesis GR - R22
 Model: 30
 Style: Single Stage
 Hot Water Generator: Yes
 Heating Run Time: 2,428 Hours
 Cooling Run Time: 196 Hours
 0
 0

Geothermal Source

Source Type: Horizontal Closed Loop
 Soil Type: Damp Silt/Clay
 Pipe Type: 1" IPS PE SDR 11
 Pipe Configuration: Horz Slinky 8 Ft/Ft
 Avg Pipe Depth: 5 Feet
 Trench Length: 225 Feet

 Min Freeze Protect: 10 Deg F

 Max Source-Cooling: 88 Deg F
 Avg Source-Cooling: 68 Deg F
 Avg Source-Heating: 40 Deg F
 Min Source-Heating: 30 Deg F

Deep Earth Temp: 54 Deg F
 Surface Swing: 13.2 Deg F
 Swing Time Lag: 37 Days
 Soil Conductivity: 0.75
 Soil Diffusivity: 0.60
 Loop Conductivity: 2.97

Auxiliary Heat

Type: Electric Resistance
 Style: Forced Air
 Auxiliary Required: 3 Kw
 Optional Emergency: 8 Kw
 Efficiency: 100 %

 Aux Balance Point: 27 Deg F

Water Heater

Type: Electric Water Heater
 Style: Standard Efficiency
 Efficiency: 100.0 %

Heating

Genesis GR - R22
 Electrical Use: 5,438 Kwh
 Average Efficiency: 3.11 COP
 Annual Contribution: 99 %
 Annual Cost: \$245

Electric Resistance

Electrical Use: 120 Kwh
 Average Efficiency: 100 %
 Annual Contribution: 1 %
 Annual Cost: \$5

Annual Heating Cost: \$250

Cooling

Genesis GR - R22
 Electrical Use: 431 Kwh
 Average Efficiency: 14.2 EER

Annual Cooling Cost: \$32

Water Heating

Genesis GR - R22
 Electrical Use: 0 Kwh
 Average Efficiency: 0.00 COP
 Annual Contribution: 0 %
 Annual Cost: \$0

Electric Water Heater

Electrical Use: 5,924 Kwh
 Average Efficiency: 100 %
 Annual Contribution: 100 %
 Annual Cost: \$298

Annual Water Heating Cost: \$298

Continuous Fan

Electrical Use: 0 Kwh

Annual Continuous Fan Cost: \$0

Total Annual Operating Cost: \$581

Due to the variability of weather, system installation, and living habits this analysis is to be considered an estimate.