



Frey Family Farm

Case Study



Summary

Customer	Homeowner
Location	Lancaster, PA
Industry	Residential
Laars Product	Mascot LX boiler

Challenge

Provide an energy efficient and reliable space and domestic hot water heating system for a 3,500 square foot log cabin home with 4 baths on a 200 acre working farm in Lancaster County PA.





Solution

A Laars Mascot LX with an input rate of 125,000 BTU/hr and 95% AFUE was installed to supply hydronic heating, in tandem with a geothermal heat pump system, to 1,900 lineal feet of ½-inch PEX radiant heat tubing in the lower concrete slab and 3,160 feet of 3/8-inch synthetic rubber tubing for the under-floor areas in a six-zone system. Three prefabricated, pre-engineered hydronic panels were used to manage they system flow.

The Mascot LX was also paired with two 120-gallon Bradford White tanks. The first tank is a buffer tank used for the hydronic system that is kept at temperatures between 110 -140°F and vary according to ambient temps as monitored by an outdoor reset. The second is a stainless steel indirect water heater that satisfies the ample domestic hot water needs of the home's many bathrooms and taps.

The results are best summed up by the home owner: "I especially like the system for its high efficiency and that Laars makes the boiler here in the US, even their own stainless steel heat exchangers...We never imagined having a home as comfortable as this one. The floors were cozy warm all winter long, even with record low temps!"

