Project: Sycamore Farm Cottage Location: Harding Township, NJ

DAIKINAC

absolute comfort

DAIKIN altherma

Challenge:

Design and install an HVAC system that rivals the efficiency of a geothermal system without the costly earth loop.

The Solution: The Daikin Altherma system with solar thermal integration.

The 1,321 sq. ft. cottage is a second structure for the Sycamore Farm property. The main house, built prior to the cottage, was heated and cooled using a number of geothermal heat pumps and achieves a high level of efficiency and extremely low energy costs. When the decision was made to build the cottage, the owners wanted a similar level of efficiency but did not want the cost of drilling an earth loop as would be required for geothermal. In addition, there were multiple heat loads that needed to be accommodated for including radiant, domestic hot water, and pool heating, and multiple zones of cooling on top of that.



Daikin Altherma Monobloc

"Installation was a breeze and the system does exactly what it is designed to do... The system operates perfectly"

Typically, each of these would be handled by

devoted systems which would have called for

a boiler for the radiant, a hot water heater for

domestic hot water, a separate pool heater,

own air handler and outdoor condensing unit.

Contracting spec'd and installed an evacuated

tube solar array with 3 collectors consisting of

a total of 90 highly efficient vacuum tubes. All

these components needed to be assembled in

such a way that they would complement each

other to deliver the desired results. Perfection

Poccia stated "The cottage is a small structure

with a lot going on", "We needed a heating and

cooling unit that was flexible with its installation

options and sophisticated enough to handle all

Altherma Monobloc was selected for reasons

cooling, domestic hot water production, and space heating water production all in one

appliance. It is also able to work with the solar

needed or take over completely and provide all

the heating needs. The Daikin control system

is state of the art and is able to "throttle" the

unit in order to give the proper amount of

After careful consideration, the Daikin

including: Its ability to provide heating,

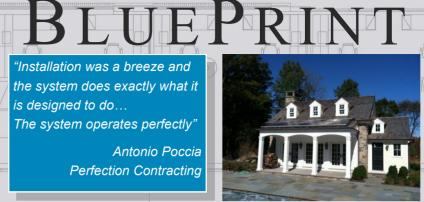
thermal array to back up the solar when

the demands".

Contracting owner and president, Antonio

incorporate a solar component. Perfection

Antonio Poccia Perfection Contracting



Cottage with Solar array on roof

heating and cooling as indoor and outdoor conditions change. The basement was small and the owners hoped for the maximum amount of storage space, so only one corner and a separate air conditioning system with its was taken up with the fan coil (for cooling), pumping system and thermal storage tank for An added complexity was the owners desire to the solar.

> Because of the sophisticated control system within the Daikin system and the control system within the solar thermal system, standard thermostats could be used to operate the entire system. Antonio Poccia is an expert at designing what he calls "elegant" systems which do a lot with a-little, and he insists on a "no compromise" philosophy which means it has to be simpler to install, use less materials, deliver superior performance, take up less space, and cost less to operate. The Daikin Altherma system met all of the criteria for the owners and Perfection Contracting.

> The installation was smooth and InCliCo, who stocks the Daikin product, is well prepared and willing to assist in any way.

Project information

Contractor: Antonio Poccia Perfection Contracting Newton, NJ

Stocking Representative: InCliCo West Caldwell, NJ

Daikin AC Equipment

1 (Model # EBLQ048BA6VJU) Monobloc Outdoor Unit 1 (Model # EFWT048) Hydronic Fan Coil Unit

Indoor Fan Coil and Pump station