

Geothermal Manifold Installation with a Professional Touch

Summer 2012

Project:

Residential Geothermal Manifold Installation

Place:

Port Washington, Wis.

Design:

Caleffi GeoCal™ Geothermal Manifold,
QuickSetter™ Balancing Valves,
GeoGrip™ Connections

Purchaser:

Contractor: Professional Geothermal Systems
Port Washington, Wis.



Mark Doll makes a good living doing one thing very well – designing and installing ground source heating and cooling systems with a professional touch. He has done many installations; retrofit, new construction, small systems as well as large. His company recently completed a 4 ton heating & cooling system on a new home in Port Washington, Wis. Rather than weld together a loop manifold and burying it in the yard as he traditionally would do, he incorporated a Caleffi GeoCal™ geothermal manifold and located it in the basement mechanical room. With the geo system fired up and performing smoothly, Mark gave an assessment of his first time use of this new manifold approach.

With the GeoCal™ manifold "I can bring all earth loop piping into one common station and avoid having to fusion weld" comments Mark. "Yes, there is the added material cost of the manifold, but it is largely offset by eliminating the welding labor. I didn't have to deploy welding equipment to the site either."

Having only constructed geothermal manifolds via welding in the past, Mark was more than a little curious about how to securely connect up the loops using Caleffi's mechanical fittings. "The GeoGrip™ connections were easy to connect to my PE pipe, too. And on both our air and fluid pressure tests, the fittings held secure with no decay."

On the manifold, Mark used Caleffi's optional QuickSetter™ balancing valves. "Getting proper flow in all loops is important for efficiency, but not so easy to accomplish with buried manifolds. The QuickSetters allowed me to dial in the 3 gpm I wanted on each loop with no guessing, and it brings the flow control into the house. They even come with insulation shells that fit like a glove."

Another advantage to using GeoCal™ manifolds is each loop can be isolated. Commented Mark, "Purging and filling required much less pumping effort because I could do one loop at a time. With a welded manifold, the entire loop field is purged which requires a big pump."

Would he use another GeoCal™ manifold? "The manifold has advantages when compared to the traditional 'blind' system. The GeoCal™ is a breeze to install and gives a lot of flexibility as the automatic air vents and supply and return temperature gauges are a couple of added plusses. With this first one up and running, and the customer satisfied, I'll be evaluating how it holds up. But Caleffi makes good stuff and as the weeks go by, I'm confident I'll be looking to use the GeoCal™ again".





Caleffi North America, Inc.
3883 W. Milwaukee Road
Milwaukee, WI 53208
T: 414.238.2360 F: 414.238.2366

QuickSetter™ Balancing Valves Contribute to Ambience of Brooklyn, N.Y.'s New Wythe Hotel Summer 2012

Project:

Two Trees Development Corporation, Wythe Hotel
Floor warming system install

Place:

Williamsburg - Brooklyn, N.Y.

Design:

Caleffi QuickSetter™ Balancing Valves

Purchaser:

Engineer: Ettinger Engineers
New York, N.Y.

Manufacturer's Rep: Rathe Associates
Farmingdale, N.Y.



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It's a cold day in January and you are checking into the beautiful new Wythe Hotel in Brooklyn, N.Y. You see the old wood beams and brickwork preserved in this renovated factory. Your charming room has customized local wallpaper, vintage mirrors, and locally handcrafted beds. You are greeted by the soothing warmth of radiant heated concrete floors: radiant heat made possible by Caleffi QuickSetter™ balancing valves.

The QuickSetter™ contributes to the hotel ambience thanks to Don Rathe, owner of Rathe & Associates. Don worked with Ettinger Engineering to help design the building's radiant floor heating system. This feature became part of a package of attractive, eco-friendly hotel benefits, which is now catching the attention of many New York area critics who are spreading the word about the hotel since its opening in May 2012.

Don recommended QuickSetter™ valves to balance the system without requiring a balancing contractor. "With its 'set it and forget it' feature, we balanced the 72 rooms in only one day where traditional balancing would have taken us three or four days". Adds mechanical contractor Leo Andreadakis, owner of Danica Group: "It was so easy - we could have sent an apprentice to go around and accurately set the flows."

Each room has an access panel with a QuickSetter™ 132 series balancing valve, used to properly balance the hot water circulating through the radiant tubing installed in the concrete floor. Don wanted to make sure equal flow was available to every room and that the balancing valves were installed and set to the design flow rate. He says "even though a lot of engineers call for balancing valves in their projects, they are installed but not set properly."

According to Don, "Traditional balancing devices rely on pressure ports and complicated instrumentation to set flow. Though they are often specified, the iterative process for balancing takes skill and balancing contractors with the required knowledge are rarely called in. Instead, the building staff will tweak them on a guess". So if modern equipment such as the variable frequency pumps used at the Wythe is deployed, the intended goal of ultimate comfort and energy efficiency can be missed. "The cost of inefficiency is big here. New York City doesn't exactly have low electrical rates you know" adds Don.

The hotel owners wanted to be as 'green' as possible. The Caleffi QuickSetters did their part to help them accomplish that. Plus, the ability of Caleffi QuickSetter™ balancing valves to heat floors during cold winter months will make the Wythe Hotel the hot place to stay in New York City.

