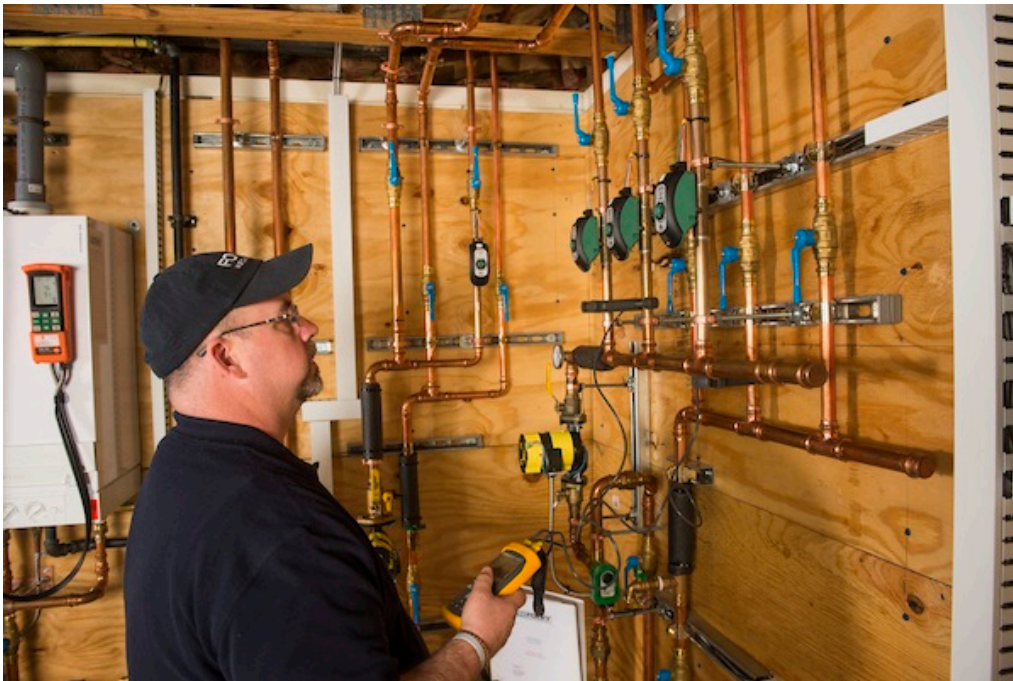




## Foley Mechanical, Inc. performs residential radiant makeover

September 25, 2014



Foley Mechanical lead tech, Brian Golden, runs diagnostics on the pumping system.

The owner of this DC-metro area home is European and he grew up in hydronically heated homes. His current residence is a 1970's vintage contemporary home with gas forced-air heat. He was tired of the high fuel bills, noise and, primarily, the discomfort of the forced-air system. In particular, the family room addition was very cold in the winter. A basement rec room was also very uncomfortable. The 50-gallon tank style water heater did not provide enough DHW for his family.



The mechanical room.

Foley Mechanical, Inc., one of the premier mechanical contractors in the country, designed and installed a multi-zone hydronic heating and domestic hot water (DHW) system featuring a high efficiency boiler, stainless steel DHW tank, radiant floor heat, panel radiators and towel warmer radiator. The system was split into eight independent heating zones. The cold rooms per put on their own zones with independent control. In addition, the Radson panel radiators and Runtal towel warmers also featured thermostatic radiator valves (TRVs) for individual room control. “The client loves the comfort and efficiency of the system,” says Dan Foley, Foley Mechanical, Inc.



The primary challenge was retrofitting the hydronic piping in an existing house while protecting the finishes and floor coverings. “We minimized the number of cuts and patches by carefully planning and laying out of the system,” says Foley. Another challenge working within the homeowner’s budget.



Golden checks the Viessmann Vitodens 100 condensing gas boiler.

**Date started:** 8/2013

**Date Finished:** 9/2013

**Size of Project:** Approx. 4,500 sq. ft.

**Workers onsite:** 3 — Brian Golden, Harvey Youker and Fred Johnson

**Boiler** — Viessmann Vitodens 100 condensing gas boiler, 95% AFUE, 118k BTU input

**Water heater** — Viessmann Vitocell 300 stainless steel indirect DHW tank, 79 gal.

**Pumps** — Taco 007, Taco Bumble Bee

**Relays** — Taco SR and ZVC relay boxes

**Piping** — Viega Pro-Press copper fittings

**Tools Used** — Milwaukee, Hilti, REMS and Ridgid

**Valves** — Cimberio press ball valves, Webstone isolation flanges

**Separators** — Spirovent Quad VDX hydro-separator

**Expansion tanks** — Amtrol

**Other** — Taco Sentry zone valves, Taco low water cut-off safety, Taco i-Valve mixing valve, Hilti strut and brackets, Radson panel radiators, Runtal towel warmer radiators, Viega Climate Panel radiant and Viega Pro Pex radiant, Uponor MLC Pex-Al-Pex.



