

Project Description

Location:

- Rudartsi, Sofia Region
Bulgaria

Project Type:

- Two, 2-Story residential
properties

Size:

- Each Home: 2605 sqft [242
sqm]

Products Used:

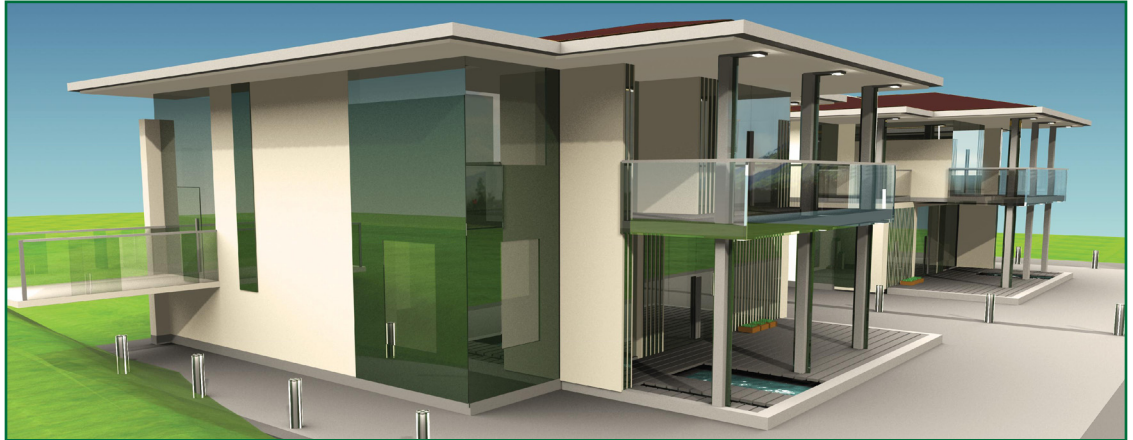
- Quad-Lock R-22 Wall
Assembly with 6" [15cm]
wall cavity
- J Bornay, Inclin 3000 heo,
5KW Wind Generator
- CIAT, Aurea 2 40HT Water-
in-Water Thermal Pumps
- WILO, TWU4-0420-EM-B
pumps for autonomic water
source

Project Partners:

- Architect - Andrea
Momerin Archeos Ltd.
- Facade Design - Betty
Bencheva, Michaedesign
Ltd.
- Structural Engineer -
Tsvetan Vashkov
- Quad-Lock Bulgaria -
Maria Kolentsova

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604.590.3111 or
888.711.5625

Sustainable Housing in Bulgaria



Challenge:

These two custom homes are located on the side of a hill where there is no access to water or electrical services. This posed an immediate problem with trying to obtain approval to build on this site. The homes needed to be a self-sufficient and sustainable design.

Solution:

The statistics compiled from other Quad-Lock projects in the region were used to convince the officials that a self-sufficient design could be accomplished. The energy efficiencies of Quad-Lock ICF and concrete meant that the energy requirements were cut dramatically and could be supplied by a hybrid system utilizing a wind generator and solar panels. The water services are supplied through two 130' [40m] wells.

Initially, a geothermal installation was looked at and deemed too expensive for only two homes. A water-in-water heating and cooling system with thermal pumps was used because of its efficiency and environmental friendliness. In the winter, the thermal pump heats the water from 13°C to 40°C and circulates it through the in-floor system. In the summer, the water is circulated bypassing the thermal pump.



Why Quad-Lock:

- Energy efficiencies
- Product familiarity through other
projects in Bulgaria

These were the first homes of their kind in this region and have been widely recognized as a premier example of alternative or green building methodology.

