

Behlen introduces a new, patented* geothermal energy transfer technology – The *Aqui-Flo*[™] ground water system for heat pump heating & cooling applications

geothermal heat pump systems are the most energy, cost, and space efficient systems for heating and cooling buildings of any system in the HVAC industry. These systems eliminate the need for expensive “Boiler/ Chiller” equipment by utilizing the natural thermal properties of the earth to capture or dissipate heat through heat pump energy transfer.

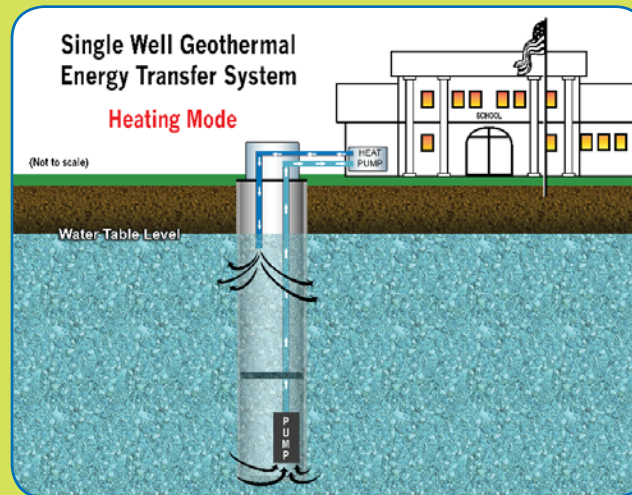
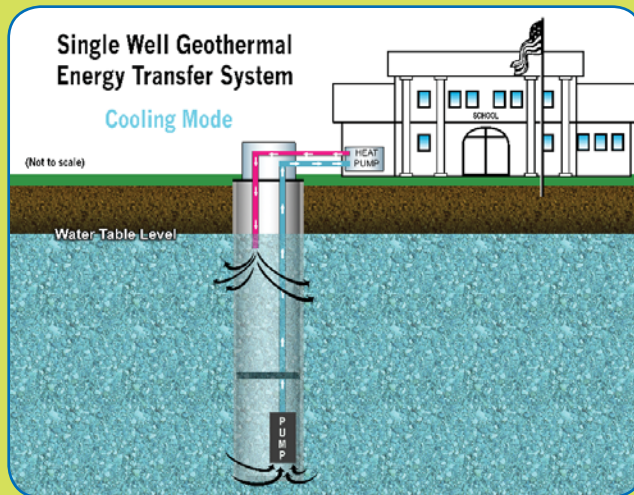
How the system works:

The *Aqui-Flo*[™] system operates on an “open loop” principle. Groundwater (at the relatively constant temperature of the earth) is extracted from a water

well near the lower levels of an aquifer. This water is circulated either directly to the heat pumps or indirectly through a heat exchanger located in the mechanical room. Energy is either extracted from or dissipated into the groundwater after which the water is returned to the well and injected into the upper levels of the aquifer.

Preferred Hydro-Geological Conditions for the *Aqui-Flo*[™] System:

- An unconfined sand / gravel aquifer
- Above average water quality (e.g., PH, hardness)
- Moderate aquifer flow velocity



Aqui-Flo[™]

Provides outstanding benefits

- No effect on water table level or stream flows
- Groundwater loop is closed from pump inlet to injection outlet (Below water table level)
- Stable capacity – because groundwater temperature is relatively constant year-round
- Internal equipment occupies much less space than a traditional boiler room
- Competitive initial cost of installation vs. traditional closed-loop geothermal systems
- Superior life cycle cost advantages (initial cost, operating cost, maintenance)
- A “Green Technology” – one of the most favorable environmental approaches
- LEED (Leadership in Energy & Environmental Design) Credit Opportunities:
 - Occupies less land area than typical horizontal or vertical closed-loop systems
 - Very energy efficient, with the earth providing most of the energy for heating and cooling
 - No outdoor equipment (chillers, air handlers, etc.) vs. conventional systems – preserves architectural aesthetics
 - Low electrical load demand vs. conventional systems
 - Appropriate for both new construction and retrofit of older building
- Simultaneously heat and cool different areas of the same building
- Some direct cooling possible
- Provides a quiet, pleasant environment both inside and outside the building
- Utilizes simple, highly reliable controls and equipment
- Investment Tax Credit and Energy Rebate incentives apply



Now, owners and engineers have a new, unique alternative for tapping the tremendous energy source beneath our feet... the **Aqui-Flo™** technology.

Both the Environmental Protection Agency and the U.S. Department of Energy have endorsed geothermal energy transfer technology.

“...the most energy efficient, environmentally clean, and cost-effective space conditioning system available today...”

U.S. Environmental Protection Agency

“No active technology for heating and cooling is more efficient than the geothermal heat pump.”

U.S. Department of Energy

**“GREEN”
technology**

Behlen And Renewable Energy:

Behlen Mfg. Co. has a long and proud history of innovation in the markets it serves. Behlen was founded in 1936 by Walter Behlen – a visionary and entrepreneur. Behlen has been a market leader in the agricultural, livestock, and metal building industries ever since.

Currently, Behlen continues to innovate and provide leadership in the development of new technologies. Our patented * Aqui-Flo™ geothermal system is one example of Behlen’s leading-edge participation in the growing renewable energy market. In addition to geothermal, Behlen is also pursuing wind and solar energy opportunities.

Behlen remains committed to providing customers with technologies that are not only innovative but also cost effective and environmentally friendly.



Aqui-Flo™

*U.S. Patent Numbers:
7,082,799 · 6,925,830 · 6,772,605

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Introducing a **NEW** Geothermal Energy Transfer System

for HVAC Applications

Aqui-Flo™

Distributed by Behlen Mfg. Co.
Columbus, Nebraska

Discover the Uniqueness
and the Advantages of
our Patented* Concept

Aqui-Flo™

an Efficient and Green
Geothermal Energy
Solution!



**“GREEN”
technology**