

Think **Green**  
Think **Renewable**  
Think **Greensource**



## **Greensource** Residential Geothermal Heat Pumps

iSeries: BP Model

[BoschGeo.com](http://BoschGeo.com)



**BOSCH**

Invented for life

## About the **Bosch Group**



The Bosch Group has been a leading global supplier of technology and services in the areas of Automotive, Industrial Technology, Consumer Goods and Building Technology for over 100 years. Every Bosch product is built with one goal in mind; to enhance the quality of life by providing innovative technological solutions. Bosch is a leader in the development of next generation technologies that deliver improved performance and peace of mind while conserving and sustaining natural resources. Bosch is highly regarded for its development of automotive braking and steering safety systems (ABS) which have been improving automotive performance for over 30 years, helping reduce the number of accidents on North America's roads and highways. Environmental stewardship inspires and drives Bosch product development. Bosch is a leader in the development of next generation technologies that deliver improved performance and efficiency while conserving natural resources. In the area of sustainable mobility, we're helping reduce the fuel consumption and CO<sub>2</sub> emissions of new vehicles. Energy efficiency and environmental protection are also shaping our Industrial Technology,

Consumer Goods and Building Technology products. Green technologies, such as gas tankless water heaters, wind power and geothermal heat pumps are perhaps the best examples of smart technologies growing in demand and shaping the future of Bosch.

### About **Bosch Thermotechnology** in North America

Bosch Thermotechnology is a leading source of high quality water heating and comfort heating systems in North America. The company offers Bosch tankless, point-of-use water heaters, Buderus and Bosch wall-hung boilers, Buderus floor-standing boilers, Bosch heat pump water heaters, Bosch geothermal heat pumps as well as controls and accessories for every product line. Bosch Thermotechnology is committed to reinventing energy efficiency by offering smart products that work together as integrated systems, which enhance quality of life in an ultra efficient and environmentally friendly manner.



#### **Proven and tested technologies**

Bosch heat pumps are made by highly trained and skilled workers in our factory based in Fort Lauderdale, Florida. They are manufactured with rigorous standards and factory testing ensuring high efficient operation over the life of the unit. Bosch's ISO 9001 and ISO 14001 certified facilities provide consistent quality in every unit built.



# Geothermal Heating & Cooling

## How does it work?

Bosch geothermal heat pump systems are some of the most energy and cost efficient on the market, as well as the greenest technology for heating and cooling your home. The technology uses the constant temperature of the earth which makes it extremely efficient all year long in virtually any climate.

### Advantages of Bosch's Geothermal Systems

#### Environmentally Friendly

Bosch's green technology is the most environmentally friendly way to cool and heat your home. The system has no carbon dioxide emissions or any other negative effects on the environment. Bosch's geothermal installations reduce greenhouse gas emissions which are responsible for climate change.

#### Reliability

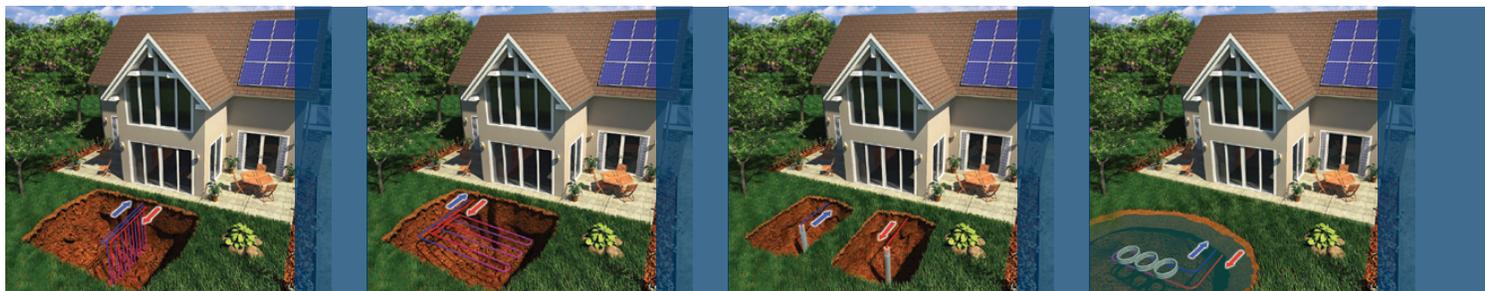
Ground loop systems have a life expectancy in excess of 50 years. Your Bosch heat pump is manufactured with rigorous standards ensuring high efficient operation over the life of the unit. Our residential warranty offering is among the best you will find on the market.

#### Lower Operating Cost

Bosch's technology helps to save up to 70% on your energy bills for heating, cooling and hot water because of its more efficient operation when compared to conventional systems. Simple payback could be as short as 5 to 7 years and you can experience costs savings from the beginning.

#### Earth Coupling Options

Geothermal systems use the earth as a heat source and heat sink. In order to transfer heat to or from the house, heat exchangers (ground loops) are installed in the ground. These consist of high density polyethylene plastic pipes. The loops are then connected to the heat pump and fluid is circulated through the loop piping, transferring the heat between the heat pump and the earth.



Vertical Ground Loop System

Horizontal Ground Loop System

Open System

Pond/Lake Loop System

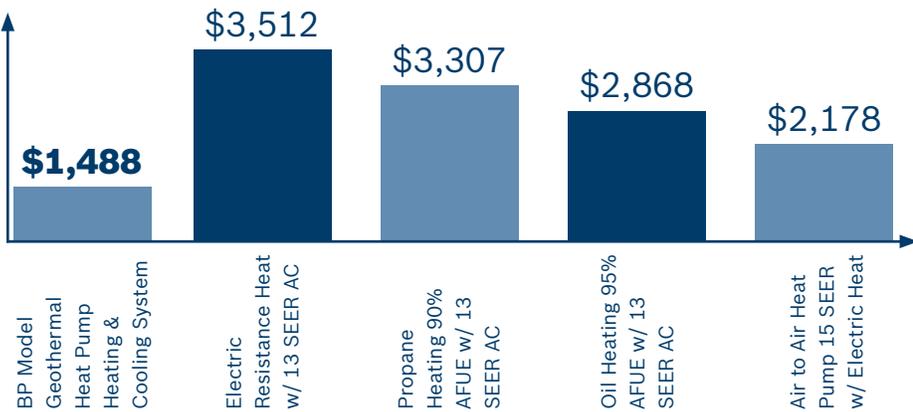
# Why Bosch Geothermal Heat Pumps?



## Being Green Means Saving Green

Recognized by ENERGY STAR, this fully featured, highly efficient, two-stage heat pump offers an appliance-style cabinet and is available in sizes of 2 to 5 tons. The Bosch Greensource geothermal heat pump requires less energy to produce the equivalent cooling and heating output of other heat pumps on the market. This saves energy and reduces the cost to stay comfortable in your home. You can save up to 70% on your energy bills, plus payback on this investment can be as short as 5 to 7 years.

## Total Annual Operating Costs Comparison



Based on South Bend Airport Weather Data, South Bend, IN,  
 Electric per kw 0.14  
 Oil per gallon 3.86  
 Propane per gallon 2.86

Operating costs with SM Model: **\$1,291**  
 Operating costs with CE Model: **\$1,319**

These operating costs are not guaranteed or warranted by Bosch. This is a demonstration of the potential savings with BP Model geothermal equipment and not a promise of actual savings. Savings can vary according to products, local conditions, building size and construction, seasonal use, and types of equipment. For an more accurate assessment on your project, contact a Bosch dealer today.

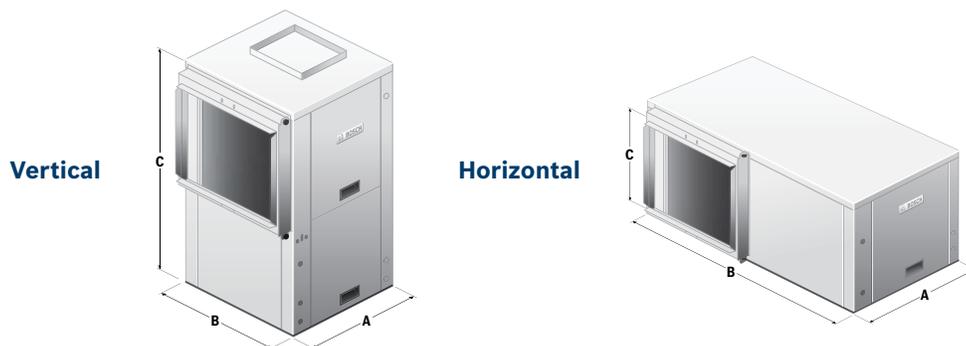
## Reliable and Unmatched Quality

Bosch's electronic circuit board aids in troubleshooting and helps reduce the time required to diagnose the operation of the unit in order to keep it running at optimal conditions. The circuit board can send automatic alerts to be displayed on a Bosch thermostat therefore expediting any maintenance that is required. Plus, Bosch is so confident that each Greensource geothermal heat pump is reliable that Bosch backs it with a limited warranty<sup>(1)</sup> on all parts and labor for up to 10 years!

## Quiet Operation

Greensource is equipped with an advanced sound package comprising of a unique floating base pan to isolate internal components from the exterior cabinet thereby reducing sound and vibration. Combined with high-density, closed-cell foam cabinet insulation makes the Greensource one of the quietest units on the market.

# Dimensions



Greensource iSeries geothermal heat pumps are available as BP Models from 2 to 5 tons.

All dimensions are in inches.

Model	Greensource iSeries BP Model Dimensions					
	Vertical			Horizontal		
	A (width)	B (depth)	C (height)	A (width)	B (depth)	C (height)
BP007	21.75	21.75	32.75	21.75	43.25	16.75
BP009	21.75	21.75	32.75	21.75	43.25	16.75
BP012	21.75	21.75	32.75	22.25	45.25	19.75
BP015	21.75	21.75	39.25	22.25	45.25	19.75
BP018	21.75	21.75	39.25	22.25	45.25	19.75
BP024	21.75	26.25	47.25	26.25	54.75	22.00
BP030	24.25	33.50	47.25	30.25	68.25	22.00
BP036	24.25	33.50	47.25	30.25	68.25	22.00
BP042	26.25	33.50	58.25	30.25	79.00	22.00
BP048	26.25	33.50	58.25	30.25	79.00	22.00
BP060	26.25	33.50	66.25	30.25	89.25	22.00

## Benefits

### Limited Residential Warranty<sup>(1)</sup> - Coverage for your Geothermal Heat Pump

With the limited residential warranty, you receive peace-of-mind knowing you will receive replacement parts protection for up to 10 years. This standard offering covers all components incorporated into the unit cabinet at the time of manufacture. Other components or parts that are purchased from Bosch and installed in the field have a 1 year replacement parts warranty from proof of certificate of occupancy date or proof of certified start up date. Additionally, a standard 10 year labor-allowance is included for the replacement of any defective component to help offset labor expenses if a component should fail.

### 30% Tax Credit for Geothermal Heat Pumps

As of December 1, 2009, home owners who install ENERGY STAR qualified geothermal heat pumps are eligible for a 30% tax credit on the cost of the geothermal system including all installation costs. There is no cap on the federal tax credit. Presently, these tax credits are only available through the end of 2016. The Bosch Greensource iSeries is compliant with ENERGY STAR Tier 3.

(1) For complete warranty details please visit [www.boschheatingandcooling.com](http://www.boschheatingandcooling.com)

### Financing Information

The smarter way to heat and cool your home is more affordable than ever thanks to special financing options. Qualified homeowners can choose from a variety of loans with a low fixed rate or established fixed monthly rates towards the installation and purchase of Bosch geothermal heat pumps. Depending on model and installation costs, homeowners may be able to borrow as little as \$2,500 or up-to \$20,000 with a 10-year repayment window. A Bosch approved contractor must perform the installation in order to be eligible for the financing. For a complete listing of Bosch installers in your area, log on to [boschheatingandcooling.com](http://boschheatingandcooling.com)

# Key Features

## Standard

The iSeries Greensource geothermal heat pump comes equipped with the quality and innovative technology that only Bosch can provide including:

### Cabinet

- ▶ Cabinetry is constructed using white pre-painted galvanized steel for a sleek appliance aesthetic.

### Quiet Operation

- ▶ All panels are insulated with ½” thick, 1.5 lb./cu.ft. density micromat fiberglass insulation for both thermal insulation and noise reduction thereby keeping your home quieter and temperature regulated.

### Serviceability

- ▶ Designed to be serviced from the front of the unit.
- ▶ Insulated bulkheads allow the unit to be serviced during operation.
- ▶ Quicker and convenient servicing means more time spent in comfort.

### ECM Constant CFM (Variable Speed) Motor

- ▶ The new high efficiency ECM motor option, available in 1/3hp to 1hp, provides constant airflow in a wide static pressure range up to 1 in.w.g. to provide maximum comfort.

### Single Stage Compressor

- ▶ Our intuitive unit adjusts the intensity of your home’s heating and cooling needs thereby lower operating costs while maximizing efficiency and comfort.

### Hanging Brackets for Easy Installation

- ▶ All horizontal units come standard with hanging bracket kits for suspending the unit from field supplied hanger rods.

### Quality Water Connections

- ▶ All water connections are heavy duty bronze FPT fittings securely fastened to the unit corner post.

### Refrigerant Circuit

- ▶ Designed using the optimum combination of compressor, water and copper tin plate and aluminum fin evaporator coils with TXV to provide peak performance and improved efficiency.



### Superior Standard Warranty

- ▶ 10 Year Parts Limited Warranty
- ▶ 10 Year Labor Limited Warranty

### Improved Air Filtration with Filter Rack & 2” MERV-8 Filter

- ▶ Allows you to change your filter easily and improve your home’s indoor air quality by removing 80% of airborne particles and other allergens as small as 1 micron.

### TXV (Thermal Expansion Valve)

- ▶ Improves refrigerant management and efficiencies.

### Longer Lasting with Tin Plated Evaporator Coil

- ▶ Tin electro-plated copper tubing with aluminum fins will protect the evaporator coil from most forms of corrosive elements in the airstream.

### Intuitive Alerts and Protection via the Electronic Circuit Board

- ▶ Low pressure switch protection
- ▶ High pressure switch protection
- ▶ Alarm output
- ▶ Condensate overflow protection
- ▶ Anti-short cycling
- ▶ 5 minute delay - low pressure bypass at start up
- ▶ Random start of unit
- ▶ Brown out protection
- ▶ Evaporator freeze protection
- ▶ Water coil/coaxial coil/condenser freeze protection

### ▶ Copper Coax Coil

### ▶ 75VA Transformer

### ▶ Extended Range

### ▶ Air and Water Freeze Protection

### ▶ Condensate Overflow Sensor

# Key Features

## Optional

### Cupro-nickel Coil

A cupro-nickel heat exchanger is recommended in conditions anticipating moderate scale formation or in brackish water.

### Internal Electric Heat

Can be factory mounted or field installed. Your choices include a 5, 10, 15, or 20 kilowatt back up or an emergency heater can be use depending on the size of the geothermal heat pump.

### Domestic Hot Water Heat Recovery Package

Can be used to heat domestic hot water using the wasted heat from the hot compressed gas of the compressor. That's like free hot water!

### Dehumidification Options

There are two dehumidification options to suit your needs. The first uses a Variable Speed CFM Motor combined with a Bosch humidity control thermostat. The second option utilizes a Hot Gas Reheat Coil with a Bosch humidity control thermostat.

Contact your Bosch Contractor for additional options.

# Bosch System Solutions

## Indoor Air Quality & Control Accessories (not included)



Thermostats	Photo-Catalytic Oxidizers (PCO)	Humidifiers	Smoke Detection	Fresh Air Dampers	Carbon and Potassium-Permanganate Filters
<p>Bosch thermostats are fully customizable to meet your individual needs for humidity and temperature control.</p>	<p>Helps to refresh and clean the air in your home by converting volatile organic compounds and other gases into harmless water vapor and CO<sub>2</sub>.</p>	<p>Our humidifiers release moisture into the air while helping to seal windows and doors tightly; saving you money!</p>	<p>In case of a fire, the smoke detector prevents smoke from being spread from room to room by automatically shutting down the system.</p>	<p>Brings in a controlled amount of fresh air and helps prevent your home from going into a negative pressure situation.</p>	<p>Helps to remove gases, odors, and other volatile organic compounds by trapping them in a carbon and potassium permanganate mesh.</p>

# Performance Information

ENERGY STAR Rated Products 

ASHRAE/AHRI/ISO 13256-1. with PSC Motor Capacity and Efficiency Data												
Model Number	Entering Water Temperatures											
	Water Loop (WLHP)				Ground Water (GWHP)				Ground Loop (GLHP)			
	86°F		68°F		59°F		50°F		77°F		32°F	
	Cooling Capacity	EER	Heating Capacity	COP	Cooling Capacity	EER	Heating Capacity	COP	Cooling Capacity	EER	Heating Capacity	COP
BP007	6,800	15.7	8,800	5.7	8,400	25.1	7,000	4.9	7,400	18.5	5,100	3.6
BP009	9,000	16.2	11,200	5.5	10,500	25.5	9,000	4.5	9,500	19.3	6,800	3.6
BP012	12,200	14.9	16,500	5.1	14,600	22.7	13,000	4.3	13,000	17.5	10,000	3.6

ASHRAE/AHRI/ISO 13256-1. with ECM Motor (Constant Torque or Constant Air Flow) Capacity and Efficiency Data												
Model Number	Entering Water Temperatures											
	Water Loop (WLHP)				Ground Water (GWHP)				Ground Loop (GLHP)			
	86°F		68°F		59°F		50°F		77°F		32°F	
	Cooling Capacity	EER	Heating Capacity	COP	Cooling Capacity	EER	Heating Capacity	COP	Cooling Capacity	EER	Heating Capacity	COP
BP015	15,200	17.5	17,500	5.6	17,000	28.8	13,000	4.6	16,200	20.6	11,000	3.9
BP018	19,500	16.4	21,300	5.3	21,300	25.6	17,700	4.5	20,500	19.0	14,800	3.8
BP024	24,500	18.2	28,500	5.7	28,400	28.1	23,700	4.6	26,000	21.1	18,000	4.0
BP030	27,000	16.6	31,000	5.9	31,700	27.0	25,000	5.2	28,500	19.4	20,500	4.3
BP036	36,000	17.2	41,000	5.6	40,200	25.9	34,400	4.9	37,500	19.7	26,000	4.1
BP042	40,600	18.2	42,400	6.0	45,000	25.7	35,000	5.1	42,200	21.1	26,800	4.1
BP048	47,400	17.2	50,000	5.3	52,900	26.1	40,500	4.3	49,500	20.0	33,400	3.7
BP060	60,400	16.2	71,500	5.7	66,500	24.1	56,700	4.9	61,500	18.5	47,000	4.2

## Net Zero Home: A Peace of Mind Solution

The Bosch Net Zero home is a systems approach to creating a house that is not an energy drain on the planet's finite resources. It's technology helps homeowners to reduce their monthly utility bills and protect the environment.

Bosch has assembled a comprehensive suite of heating, cooling, water heating, electricity generating technologies and energy-efficient appliances that, when installed in a home, reduce the homes energy usage due to intelligent product designs and higher efficiencies. In addition, this approach enables the home owner to generate enough power to offset the already reduced energy demand, meaning zero energy bill for the home owner. **Ask your Bosch Contractor or go to [Boschexperiencecenter.com](http://Boschexperiencecenter.com) to learn more about how Bosch products can work together for your ultimate comfort.**

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Scan the QR code to the right to access Greensource product information.



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