



BOSCH

Invented for life

Bosch Water Source Heat Pump

EP Model

Industry-leading single-stage efficiencies, standard features, and a variety of options - providing energy efficient solutions to accommodate your building requirements.





The Enhanced EP Model

Bosch EP Model

The EP Model, water-to-air heat pump offers high efficiency, value added features and a single stage compressor (scroll type 1 1/2 - 6 ton sizes). An optional ECM constant airflow (variable speed) fan motor can give you the flexibility, performance and quiet operation needed to meet the expectations of your clients.

Quiet Comfort

- ▶ **Floating Compressor Base** - Reduces vibration and noise transmission from the compressor to the structure
- ▶ **Closed-cell Foam Insulation (option)** - Helps to provide cleaner, fiber-free air and reduces sound transmission
- ▶ **Compressor Blanket (option)** - Offers optimum low sound levels (not available on smaller units with rotary compressor)

Service Friendly

- ▶ **Blower Inlet Ring** - (available in 015-070 only) Allows quick servicing of blower fan motor without disassembly of blower housing
- ▶ **Insulated Divider** - Separates the compressor and blower sections, allowing the unit to be serviced easily during operation
- ▶ **Schrader Charging Valves** - Facilitates service diagnosis by allowing the connection of refrigerant hoses quickly and securely

Robust and Durable Construction

- ▶ **Galvanized Steel Cabinet** - Provides strength and corrosion protection
- ▶ **Evaporator Coil Protection with DuoGuard™ (option)** - Tin electro-plated copper tubing with high-tech polymer coated aluminum fins that aid in protecting the evaporator coil from most forms of corrosive elements in the air stream
- ▶ **Stainless Steel Drain Pan** - Resists cracking & corrosion which provides long-lasting reliability for condensate collection
- ▶ **Cupro-nickel Coaxial Heat Exchanger (option)** - Protects against corrosion when water conditions are of low quality
- ▶ **40A Non-fused disconnect (option)** - Allows shut off of unit without lockout of the main panel (N/A with electric heat)

Safety

- ▶ **Flow Proving Switch (option)** - Prevents the operation of the compressor should the water supply fail
- ▶ **Unit Protection Module (UPM)** - Monitors the unit operation and safety controls that protect the unit
- ▶ **Dual Refrigerant Freeze Sensors** - Monitors if refrigerant temperatures reach freeze limits and disables unit to protect it

Quality Design & Efficiency

- ▶ **Boilerless Control (option)** - Disables the compressor and/or activates electric heater should the water temperature drop below adjustable set point
- ▶ **Water Side Economizer (option)** - Provides free-cooling without the use of mechanical cooling (compressors)
- ▶ **Extended Range (option)** - Accommodates geothermal closed loop applications when Entering Fluid Temperatures are anticipated below 60 °F
- ▶ **TXV** - Bi-flow thermal expansion valve for optimum performance over a wide range of heating and cooling conditions
- ▶ **Heat Recovery Package (option for 024-070 in -1 or -3 voltage only)** - Provides domestic water heating during the air conditioning or heating mode to supplement your building's potable water heating needs assisting any electric domestic water heating storage tank



ECM Constant Airflow (Variable Speed) Fan Motor

The high efficiency Electrically Commutated Motor (ECM), available in 1/3hp to 1hp, provides constant airflow in a wide static pressure range up to 1 in.w.g. Optional in all unit sizes except 1/2 through 1 ton, this motor is a great choice in high filtration applications. The motor has a soft start/stop feature, keeping noise to a minimum. Passive dehumidification can be achieved with the constant airflow ECM by reducing nominal airflow by 15%. This control feature lowers air coil temperature and prevents over-cooling of the space when in dehumidification mode. The constant airflow ECM requires a neutral wire in a 460V application.

MERV-8 and MERV-13 Filters

The optional 2" MERV-8 or -13 filter is most advantageous for premium air filtration on commercial HVAC projects. High efficiency filtration is a cost-effective way of upgrading air quality while maintaining low pressure drop and sustaining long service life. These filters effectively remove up to 98% of airborne matter, such as fine particulates, bacteria, smoke, gases and allergens including dust mites, pollen, mold spores, dust and smog. MERV-8 and MERV-13 rated filters are a minimum requirement for EQ credits 3.1 and 5 on LEED® projects. Note: MERV-13 factory option requires ECM Constant Airflow fan motor option. With the optional ECM constant airflow motor the EP is prepared to handle higher external pressure drops when utilizing the higher efficiency MERV-13 filters.

Blower and Motor

PSC blower motors are standard on unit sizes 1/2 through 1 ton. Multiple speed constant torque ECM motors are standard on units sizes 1 1/2 through 6 tons, allowing the user to select the correct speed to deliver the specified airflow and the design system static pressure.

DDC Controls and Zone Sensors

To complement the controller, Bosch Thermotechnology Corp. offers a line of intelligent zone sensors, which provide precision measurement and communication capabilities in an attractive low profile enclosure.



DDC Controls

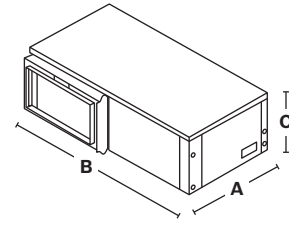
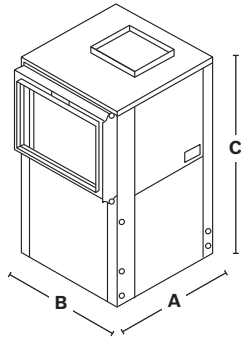
The optional factory mounted DDC Controller is preprogrammed and installed on the unit with the Unit Protection Module (UPM) to be job site ready. With a factory-supplied DDC wall sensor, the unit will operate in a 100% stand-alone control mode or connect to a Building Automation System (BAS) using open protocols BACnet™, Modbus, N2 or LonWorks® (with an optional Lon card).

Additional Options

- ▶ 5, 10, 15, 20 kW electric heaters
- ▶ Relays - EMS, blower monitor, compressor monitor, and pump/valve
- ▶ Fire alarm/dual power
- ▶ Comfort alert module
- ▶ 2-Way internal solenoid valve
- ▶ Autoflow water regulator valve
- ▶ Hot gas bypass
- ▶ Hot gas reheat
- ▶ Straight cooling



Technical Specifications



| Model | Vertical Unit Dimensions (in inches) | | |
|-------|--------------------------------------|-----------|------------|
| | A (width) | B (depth) | C (height) |
| EP007 | 21.75 | 21.75 | 32.75 |
| EP009 | 21.75 | 21.75 | 32.75 |
| EP012 | 21.75 | 21.75 | 32.75 |
| EP015 | 21.75 | 21.75 | 39.25 |
| EP018 | 21.75 | 21.75 | 39.25 |
| EP024 | 21.75 | 26.25 | 47.25 |
| EP030 | 24.25 | 33.50 | 47.25 |
| EP036 | 24.25 | 33.50 | 47.25 |
| EP042 | 26.25 | 33.50 | 58.25 |
| EP048 | 26.25 | 33.50 | 58.25 |
| EP060 | 26.25 | 33.50 | 66.25 |
| EP070 | 26.25 | 33.50 | 66.25 |

| Model | Horizontal Unit Dimensions (in inches) | | |
|-------|--|-----------|------------|
| | A (width) | B (depth) | C (height) |
| EP007 | 21.75 | 43.25 | 16.75 |
| EP009 | 21.75 | 43.25 | 16.75 |
| EP012 | 22.25 | 45.25 | 19.75 |
| EP015 | 22.25 | 45.25 | 19.75 |
| EP018 | 26.26 | 45.25 | 19.75 |
| EP024 | 30.25 | 54.75 | 22.00* |
| EP030 | 30.25 | 68.25 | 22.00* |
| EP036 | 30.25 | 68.25 | 22.00* |
| EP042 | 30.25 | 79.00 | 22.00* |
| EP048 | 30.25 | 79.00 | 22.00* |
| EP060 | 30.25 | 89.25 | 22.00* |
| EP070 | 30.25 | 89.25 | 22.00* |

All dimensions in inches unless otherwise noted. All dimensions within +0.125". Specifications subject to change without notice. *Total unit height is 22.75 with base rails for EP030 - EP070.

| ASHRAE / AHRI / ISO 13256-1. English (I-P) Units | | | | | | | | | | | | | | |
|---|------------------------------|---------------------------|--------------|---------------------------|---------------------|---------------------------|--------------|---------------------------|--------------------|---------------------------|--------------|------|-----------------------|---------------------|
| Model Number | Entering Water Temperatures | | | | | | | | | | | | Fluid Flow Rate (GPM) | Air Flow Rate (CFM) |
| | Water Loop (WLHP) | | | | Ground Water (GWHP) | | | | Ground Loop (GLHP) | | | | | |
| | Cooling 86°F | | Heating 68°F | | Cooling 59°F | | Heating 50°F | | Cooling 77°F | | Heating 32°F | | | |
| | Capacity and Efficiency Data | | | | | | | | | | | | | |
| Cooling Capacity (Btu/hr) | EER | Heating Capacity (Btu/hr) | COP | Cooling Capacity (Btu/hr) | EER | Heating Capacity (Btu/hr) | COP | Cooling Capacity (Btu/hr) | EER | Heating Capacity (Btu/hr) | COP | | | |
| EP with PSC Motor | | | | | | | | | | | | | | |
| EP007 | 6800 | 15.70 | 8600 | 5.70 | 8400 | 25.10 | 6900 | 4.70 | 7400 | 18.50 | 5100 | 3.55 | 2.0 | 300 |
| EP009 | 8900 | 14.35 | 11200 | 5.30 | 10500 | 24.35 | 9000 | 4.50 | 9500 | 17.05 | 6800 | 3.60 | 2.5 | 325 |
| EP012 | 12200 | 14.90 | 14600 | 5.00 | 14200 | 22.70 | 12000 | 4.30 | 12600 | 17.50 | 9300 | 3.60 | 4.0 | 400 |
| EP with ECM Motor (Constant Torque or Constant Air Flow) | | | | | | | | | | | | | | |
| EP015 | 15100 | 16.55 | 16700 | 5.21 | 17000 | 27.25 | 13000 | 4.28 | 16200 | 19.80 | 11000 | 3.63 | 4.0 | 500 |
| EP018 VT | 19500 | 15.90 | 21300 | 5.00 | 21300 | 25.30 | 17700 | 4.40 | 20500 | 18.50 | 14800 | 3.70 | 5.0 | 650 |
| EP018 HZ | 19500 | 15.40 | 21300 | 5.00 | 21300 | 24.70 | 17700 | 4.40 | 20500 | 17.90 | 14800 | 3.65 | 5.0 | 650 |
| EP024 | 24500 | 16.95 | 28500 | 5.15 | 28400 | 27.35 | 23700 | 4.50 | 26000 | 19.80 | 18000 | 3.70 | 6.0 | 850 |
| EP030 | 27000 | 16.60 | 31000 | 5.70 | 31000 | 27.00 | 25000 | 4.95 | 28500 | 19.40 | 20300 | 3.95 | 7.0 | 1000 |
| EP036 VT | 36000 | 17.10 | 41000 | 5.50 | 40200 | 25.90 | 34400 | 4.90 | 37500 | 19.70 | 26000 | 3.90 | 10.0 | 1200 |
| EP036 HZ | 36000 | 16.10 | 41000 | 5.35 | 40200 | 24.30 | 34400 | 4.70 | 37500 | 18.70 | 26000 | 3.90 | 10.0 | 1200 |
| EP042 VT | 38400 | 15.20 | 42400 | 5.50 | 44100 | 25.60 | 35000 | 4.65 | 40600 | 19.40 | 26800 | 3.70 | 10.5 | 1400 |
| EP042 HZ | 38400 | 17.15 | 42400 | 5.80 | 44100 | 27.20 | 35000 | 5.00 | 40600 | 19.50 | 26800 | 4.00 | 10.5 | 1400 |
| EP048 VT | 44400 | 15.00 | 50000 | 5.25 | 51100 | 24.00 | 40500 | 4.30 | 46800 | 17.75 | 33400 | 3.70 | 12.0 | 1600 |
| EP048 HZ | 44400 | 15.00 | 50000 | 5.25 | 51100 | 24.00 | 40500 | 4.50 | 46800 | 17.80 | 33400 | 3.70 | 12.0 | 1600 |
| EP060 | 58900 | 14.95 | 69800 | 5.60 | 66500 | 23.25 | 56700 | 4.85 | 61500 | 17.45 | 46900 | 4.05 | 15.0 | 2000 |
| EP070 | 68000 | 16.20 | 86000 | 5.60 | 71400 | 22.40 | 71400 | 5.00 | 70500 | 18.50 | 56500 | 4.20 | 17.0 | 2200 |

Tabulated performance data is at noted water temperatures and entering air conditions of 80.6°F DB/66.2°F WB at ARI/ISO 13256-1 rated CFM.

About **Bosch**

Bosch Group

The Bosch Group is a leading global supplier of technology and services in the areas of Automotive, Industrial Technology, Consumer Goods and Building Technology. The company was founded in Stuttgart, Germany, in 1886 and presently has more than 440 subsidiaries and is represented in over 150 countries.

In the U.S., Canada and Mexico, the Bosch Group manufactures and markets automotive original equipment and aftermarket solutions, industrial drives and control technology, power tools, security and communication systems, packaging technology, thermotechnology, household appliances and software solutions. The Bosch Group's products and services are designed to improving quality of life by providing innovative and beneficial solutions. In this way, the company offers technology worldwide that is "Invented for life." Additional information is available online at boschheatingandcooling.com and bosch.ca.

Bosch Thermotechnology in North America

Bosch Thermotechnology is a leading source of high quality water heating and comfort systems. The company offers gas tankless, electric whole house and point-of-use water heaters, Bosch and Buderus floor-standing and wall mounted boilers, Bosch and FHP geothermal, water-source and air-source systems as well as controls and accessories for all product lines. Bosch Thermotechnology is committed to being Simply Smart by offering products that work together as integrated systems that enhance quality of life in an ultra-efficient and environmentally friendly manner. For more information, visit boschheatingandcooling.com.

Bosch Water-Source Heat Pumps: Made in the U.S.A.

Bosch and FHP water-source and geothermal 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.

