



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

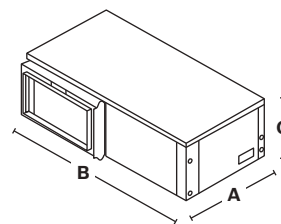
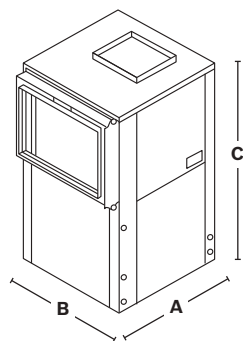
The optional factory mounted DDC Controller is preprogrammed and installed on the unit with the Unit Protection Module (UPM) to be job site ready. With a factory-supplied DDC wall sensor, the unit will operate in a 100% stand-alone control mode or connect to a Building Automation System (BAS) using open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



Heating



Cooling



Hot Water



Controls

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