



# **BOSCH**

Invented for life

## **Bosch Water Source Heat Pump**

### **WT & WW Model**

The FHP single and two-stage water-to-water models offer a clean solution with enhanced features to meet the design requirements for many types of HVAC and industrial applications that require cost effective heated or chilled water systems.





# Bosch Cost Effective Heated or Chilled Systems

## The Bosch WT & WW

The WT Model is available in 2-6 tons, including a wider range of voltages. Also provides almost limitless options for hydronic systems due to its single two-stage compressor and high operating temperatures for best-in-class performance.

The WW Model is available from 10-35 tons. Including either one single-stage scroll compressor (sizes 120, 180, 210) or dual two-stage scroll compressor (sizes 122, 240, 360, 420) for water-cooled modular reverse cycle chiller applications designed to meet all your needs and requirements.



## Applications\*

There are many load side applications for which the water-to-water heat pump/liquid chiller is ideally suited. Some typical uses are as follows: Hydronic baseboard heating, hydronic in-slab floor heating, forced air fan coil heating or cooling, ice and snow melting, heating potable water, (when allowed by code) heating swimming pool and spa, process fluid heating or cooling

\*Not recommended in low temperature applications or ice production

# Features & Benefits

## Quiet Comfort

- ▶ **Floating Compressor Base (WT only)**  
Reduces vibration and noise transmission from the compressor to the structure
- ▶ **Compressor Blanket (option)**  
Ensure that heating and cooling needs will be met quietly as well as efficiently

## Safety

- ▶ **Flow Proving Switch (option)**  
Prevents the continued operation of the compressor should the water supply fail
- ▶ **Unit Protection Module<sup>(1)</sup>**  
Monitors the unit operation and safety controls that protect the unit
- ▶ **Dual Refrigerant Freeze Sensors<sup>(1)</sup>**  
Freeze protection on the source and load side of the system

## Service Friendly

- ▶ **Schrader Charging Valves**  
Facilitates service diagnosis by allowing the connection of refrigerant hoses quickly and securely
- ▶ **Comfort Alert Module (WT only)**  
This feature can significantly improve system diagnostics by monitoring and analyzing data from the compressor and thermostat demands. This then alerts the technician through flashing LED indicators should issues arise

## Robust and Durable Construction

- ▶ **Galvanized Steel Cabinet**  
Provides strength and corrosion protection against the elements
- ▶ **Cupro-nickel Coaxial Heat Exchanger (option)**  
Protects against corrosion when water conditions are of low quality

## Quality Design and Efficiency

- ▶ **Extended Range**  
Accommodates a wider range in temperature swings commonly found in geothermal projects
- ▶ **Heat Recovery Package (WT option)**  
Takes advantage of waste heat of the compressor and uses it to heat domestic water
- ▶ **Energy Management Switch (option)**  
Allows you to connect to an energy management system that can turn the unit off and on

(1) With remote mounted controller



**Heated  
Floors  
Equals  
Comfort!**



# Options Designed for any Application

## Controls

There are two main choices when designating controllability for the water-to-water models. There is either a factory installed unit mounted controller (UMC) or a field supplied remote mounted controller (RMC). In deciding which to choose for the project, one factor to consider is if the project entails a building automation system with DDC. If this is the case, the remote mounted controller is mandatory. For further explanation, contact the local sales representative to receive a better understanding of the WW/WT controllability choices.

## 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. The unit will operate in a 100% stand-alone control mode or connect to a Building Automation System (BAS) using open protocols BACnet<sup>TM</sup>, Modbus, N2 or LonWorks<sup>®</sup> (with an optional Lon card). Stand-alone DDC modules must use remote intelligent sensors and are to be programmed by the Control Air M or M+ only. Zone temperatures, leaving air temperatures and water temperatures can be monitored from the central control computer and unit fault indication displayed.

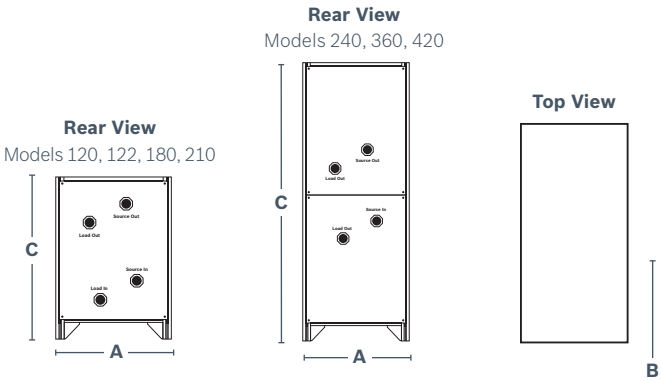
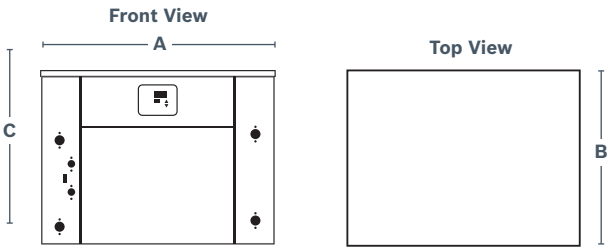
## Additional Features

- ▶ 75VA transformer
- ▶ TXV
- ▶ Remote reset at thermostat
- ▶ Fault LED indication
- ▶ Four-way reversing valve
- ▶ Filter drier

## Additional Options

- ▶ 100VA transformer
- ▶ Phase monitor<sup>(6)</sup>
- ▶ Wire to 208V<sup>(7)</sup>
- ▶ Pump/valve relay

# Technical Specifications



MODEL	WT MODEL UNIT DIMENSIONS <sup>(2)</sup>		
	A (width)	B (depth)	C (height)
WT025	32.50	24.00	24.00
WT035	32.50	24.00	24.00
WT049	32.50	24.00	24.00
WT061	32.50	24.00	24.00
WT071	32.50	24.00	24.00

MODEL	WW MODEL UNIT DIMENSIONS <sup>(2)</sup>		
	A (width)	B (depth)	C (height)
WW120	28.00	46.00	37.50
WW122	28.00	46.00	37.50
WW180	28.00	46.00	37.50
WW210	28.00	46.00	37.50
WW240	28.00	46.00	70.00
WW360	28.00	46.00	70.00
WW420	28.00	46.00	70.00

(2) All dimensions in inches unless otherwise noted. All dimensions are within +0.125". Specifications subject to change without notice.



ASHRAE/AHRI/ISO 13256-1. ENGLISH (I-P) UNITS <sup>(5)</sup>															
MODEL	Load	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump				CFM	GPM
		Cooling 86°F		Heating 68°F		Cooling 59°F		Heating 50°F		Cooling 77°F		Heating 32°F			
		Capacity BTU/h	EER	Capacity BTU/h	COP	Capacity BTU/h	EER	Capacity BTU/h	COP	Capacity BTU/h	EER	Capacity BTU/h	COP		
WT025	Full	21000	13.40	29000	4.40	24500	21.20	23600	3.50	22500	15.90	18200	2.95	6	6
	Part	15500	14.70	21800	4.60	18500	25.70	17000	3.70	18000	22.10	14900	3.10	6	6
WT035	Full	29000	12.40	43000	4.30	34000	19.95	34000	3.50	30000	14.60	26800	2.80	9	9
	Part	21700	12.73	31500	4.55	25000	21.78	24900	3.45	24000	18.09	21600	2.95	9	9
WT049	Full	39000	12.60	56000	4.10	45000	19.70	46000	3.50	41000	14.55	36400	2.80	10	10
	Part	29000	12.85	41000	4.40	33500	23.60	32600	3.40	32500	19.25	28100	2.90	10	10
WT061	Full	49000	12.90	70300	4.20	55500	19.65	57300	3.50	51000	14.80	44900	2.85	13	13
	Part	37000	13.30	50300	4.40	42500	22.75	40100	3.40	41000	18.85	34400	2.90	13	13
WT071	Full	57500	12.30	84100	4.20	64000	18.80	69200	3.40	60000	14.30	53500	2.80	15	15
	Part	43500	12.45	64700	4.40	50500	20.65	51700	3.35	48500	17.60	44500	2.90	15	15
WW120	Full	102200	11.73	136900	4.40	125000	19.20	129000	3.70	116000	15.50	103500	3.00	30	30
WW122	Part	54900	12.30	78500	4.20	63500	19.00	63600	3.40	61000	16.70	56000	3.20	30	30
	Full	114000	13.80	160800	4.60	130000	21.30	129500	3.80	119500	16.10	102500	2.95	30	30
WW180	Full	127000	13.80	180500	4.50	143000	20.70	148500	3.80	132500	15.90	121000	3.20	34	27
WW210	Full	164200	13.20	239500	4.40	185500	19.10	194000	3.70	171500	15.10	156000	3.00	40	32
WW240	Full	222000	13.50	320000	4.40	249500	19.20	258500	3.70	232500	15.50	206500	3.00	56	44
WW360	Full	254000	13.80	361500	4.50	286500	20.70	297000	3.80	265000	15.90	242000	3.20	68	54
WW420	Full	328300	13.20	479000	4.40	370500	19.10	387500	3.70	343000	15.10	312000	3.00	80	64

The performance data results alter depending on application design; use Bosch Selection Tools software for specific performance data per the application, selection and specifications. <http://bst.fhp-mfg.com/eRep/>

# 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](http://boschheatingandcooling.com) and [bosch.ca](http://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](http://boschheatingandcooling.com).



Heating



Cooling



Hot Water



Controls

### **Bosch Thermotechnology Corp.**

Watertown, MA • Londonderry, NH • Ft. Lauderdale, FL  
General Inquiries: 1-866-642-3198

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