Simply Smart

Our water-source heat pumps are easy to install, highly efficient heating and cooling solutions for retrofit and new construction applications.
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 FHP 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.

Bosch Group of Companies
The Bosch group of companies 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 360 subsidiaries and is represented in over 150 countries.

In the U.S., Canada and Mexico, the Bosch group of companies manufactures and markets automotive original equipment and after-market solutions, industrial drives and control technology, power tools, security and communication systems, packaging technology, thermotechnology, household appliances, and software solutions. Bosch products and services are designed to improve 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 boschusa.com.

About Bosch
<table>
<thead>
<tr>
<th>Unit Types</th>
<th>Models</th>
<th>Application</th>
<th>Sizes (Tons)</th>
<th>Water Loop (WLHP)</th>
<th>Ground Loop (GLHP)</th>
<th>Ground Water (GWHP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER-TO-AIR - 1/2 THROUGH 6 TONS</td>
<td>Rotary (.5-1.25T)</td>
<td>Single-Stage</td>
<td>5.75, 12.5, 25, 50</td>
<td>15.8 – 21.7 EER</td>
<td>17.5 – 24.5 EER</td>
<td>22.4 – 28.8 EER</td>
</tr>
<tr>
<td></td>
<td>Reciprocating (1.5-3.5T)</td>
<td>Single-Stage</td>
<td>7.5, 15.7, 31.5, 50</td>
<td>17.5 – 24.5 EER</td>
<td>18.5 – 32.0 EER</td>
<td>23.1 – 37.0 EER</td>
</tr>
<tr>
<td></td>
<td>Rotary (.5-6T)</td>
<td>Two-Stage</td>
<td>2.5, 5, 7.5, 10</td>
<td>17.5 – 24.5 EER</td>
<td>18.5 – 32.0 EER</td>
<td>23.1 – 37.0 EER</td>
</tr>
<tr>
<td></td>
<td>Reciprocating (1.5-6T)</td>
<td>Two-Stage</td>
<td>5.5, 11.5, 23, 30</td>
<td>17.5 – 24.5 EER</td>
<td>18.5 – 32.0 EER</td>
<td>23.1 – 37.0 EER</td>
</tr>
<tr>
<td></td>
<td>Reciprocating (4-6T)</td>
<td>Two &amp; Four-Stage</td>
<td>10, 20, 30, 40, 50</td>
<td>17.5 – 24.5 EER</td>
<td>18.5 – 32.0 EER</td>
<td>23.1 – 37.0 EER</td>
</tr>
<tr>
<td></td>
<td>Reciprocating (6-8T)</td>
<td>Two &amp; Four-Stage</td>
<td>15, 25, 35, 50, 60</td>
<td>17.5 – 24.5 EER</td>
<td>18.5 – 32.0 EER</td>
<td>23.1 – 37.0 EER</td>
</tr>
<tr>
<td></td>
<td>Reciprocating (10-30T)</td>
<td>Two &amp; Four-Stage</td>
<td>25, 50, 75</td>
<td>17.5 – 24.5 EER</td>
<td>18.5 – 32.0 EER</td>
<td>23.1 – 37.0 EER</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Refrigerant</th>
<th>Compressor</th>
<th>Blower Motor</th>
<th>Cabinet Configurations</th>
<th>Water Circuit Options</th>
<th>Controls</th>
<th>Coil and Reheat Options</th>
<th>Air Filter</th>
<th>Cabinet Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotary (.5-1.25T)</td>
<td>Scroll (6)</td>
<td>Constant Torque &amp; Constant Airflow ECM</td>
<td>Vertical, Horizontal</td>
<td>Flow Proving Switch, (package) 2-Position Motorized Valve, Measureflow Valve</td>
<td>PSC, Constant Torque &amp; Constant Airflow ECM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reciprocating (1.5-3.5T)</td>
<td>Scroll (26-37)</td>
<td>Constant Torque &amp; Constant Airflow ECM</td>
<td>Vertical, Horizontal</td>
<td>Flow Proving Switch, (package) 2-Position Motorized Valve, Measureflow Valve</td>
<td>PSC, Constant Torque &amp; Constant Airflow ECM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotary (4-6T)</td>
<td>Scroll (26-37)</td>
<td>Constant Torque &amp; Constant Airflow ECM</td>
<td>Vertical, Horizontal</td>
<td>Flow Proving Switch, (package) 2-Position Motorized Valve, Measureflow Valve</td>
<td>PSC, Constant Torque &amp; Constant Airflow ECM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reciprocating (4-6T)</td>
<td>Scroll (26-37)</td>
<td>Constant Torque &amp; Constant Airflow ECM</td>
<td>Vertical, Horizontal</td>
<td>Flow Proving Switch, (package) 2-Position Motorized Valve, Measureflow Valve</td>
<td>PSC, Constant Torque &amp; Constant Airflow ECM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reciprocating (6-8T)</td>
<td>Scroll (26-37)</td>
<td>Constant Torque &amp; Constant Airflow ECM</td>
<td>Vertical, Horizontal</td>
<td>Flow Proving Switch, (package) 2-Position Motorized Valve, Measureflow Valve</td>
<td>PSC, Constant Torque &amp; Constant Airflow ECM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reciprocating (10-30T)</td>
<td>Scroll (26-37)</td>
<td>Constant Torque &amp; Constant Airflow ECM</td>
<td>Vertical, Horizontal</td>
<td>Flow Proving Switch, (package) 2-Position Motorized Valve, Measureflow Valve</td>
<td>PSC, Constant Torque &amp; Constant Airflow ECM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reciprocating (10-30T)</td>
<td>Scroll (26-37)</td>
<td>Constant Torque &amp; Constant Airflow ECM</td>
<td>Vertical, Horizontal</td>
<td>Flow Proving Switch, (package) 2-Position Motorized Valve, Measureflow Valve</td>
<td>PSC, Constant Torque &amp; Constant Airflow ECM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Please note:
The “FHP” name has now become a product delineation of Bosch commercial heat pumps. The entire heat pump line of Bosch quality products are made in the USA and rigorously tested to the highest standards at our Ft. Lauderdale, Florida facility.
FAMILY OF PRODUCTS

Water-to-Water Units

WT Model | Water-to-Water 2-Stage Packaged Unit (Chiller/Boiler)
- 2 to 6 tons
- Up to 22.1 EER (GLHP); Up to 4.7 COP (WSHP) Part Load
- Wide range of voltages
- Near limitless options for hydronic systems
- Two-stage compressor and high operating temperatures for best-in-class performance
- Two-stage reverse cycle chiller water heater designed specifically to meet high-end hydronic systems

WW Model | Water-to-Water 2-Stage Packaged Unit (Chiller/Boiler)
- 10 to 35 tons
- Up to 22.1 EER (GLHP); Up to 4.7 COP (WSHP) Part Load
- Single-stage scroll compressor or dual scroll compressors
- Two-stage refrigerant circuits (20 to 35 tons) for water-cooled modular reverse cycle chiller applications

Large Units

EC Model | Water-to-Air Packaged Unit & Split System Large Capacity
- 6 to 30 tons
- Up to 24.5 EER (GLHP); Up to 5.6 COP (WSHP)
- Dual refrigeration system
- High efficiency unit with increased flexibility in installation and availability of applications

MC Model | Water-to-Air Packaged Unit
- 30 to 60 tons
- Up to 16.1 EER (WSHP); Up to 5.4 COP (WSHP)
- Ultra Efficiency with value added features and multi-levels of capacity
- Scroll compressors, variable air volume and 100% outside air capability providing flexibility, performance and quiet operation
**LV Model | Water-to-Air Packaged Unit**

**Standard features:**
- Two sided 1” R/A filter rack with 1” MERV-4 filter
- Unit Protection Module (UPM)
- Uncoated air coil made of copper tubes and aluminum fins
- PSC direct-drive blower motor
- Stainless steel drain pan
- Removable inlet blower ring
- R-410A refrigerant; single stage compressor
- Dual refrigerant freeze sensors - water and air side
- Copper coaxial heat exchanger
- Horizontal package units include hanging brackets(1)
- Condensate overflow sensor switch
- Lockout circuit and 50 VA transformer (size 007-042), 75 VA transformer (size 048-070)
- Duct flange connections for 1.5” supply and 1” return air
- Floating compressor base
- Schrader access ports
- Capillary tube expansion device
- Galvanized steel cabinet

(1) Shipped loose inside of unit.

**Notes:** For units ordered with cupro-nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper. To remove all copper in the water loop, contact Applications Engineering about the marine option.

---

**High Efficiency Replacement**
This option-rich offering is available in .5 to 6 ton size range and meets or exceeds ASHRAE 90.1 efficiency standards. Outfitted with the latest in compressor, blower motor and heat transfer technologies, this product performs extremely well in both water loop and geothermal applications.

**Quiet Operation**
The LV Model comes standard with a unique sound package designed to eliminate vibration transmission to the cabinet and reduce unwanted noise in the occupied space. The product is designed with blower wheels that help keep discharge air noise to a minimum.

**Cabinet Configuration Flexibility**
The LV horizontal cabinets come standard with blower systems that are easily reconfigured on the job site. The blower discharge arrangement can be easily changed from end to straight discharge or vice versa.

---

**Environmentally Friendly**
These highly efficient units not only reduce your operating cost, but play their part in reducing carbon dioxide emissions, a leading cause of global warming.

**Quality & Reliability**
Rigorous factory testing virtually assures hassle free operation from the start, while over 40 years of experience in designing heat pumps for commercial applications are your assurance of a state of the art quality product. Our ISO 9001-2008 and ISO 14001-2004 certified facilities provide consistent quality in every unit we build.
### Options | LV Model Packaged Unit

**Factory installed:**
- .5” Closed-cell foam insulation
- 75VA Transformer (007-042)
- 100VA Transformer (048-070)
- 2” MERV-13 Four sided filter rack
- 2” MERV-8 Four sided filter rack
- 2-Position motorized water valve
- 3-Point DDC expansion module
- Automatic water flow valve
- Blower monitor relay
- Boilerless control
- Circulating pump (external)
- Compressor blanket
- Compressor monitor relay
- DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)\(^{(3)}\)
- DDC with LonWorks card\(^{(3)}\)
- Disconnect switch, 40A external
- DUOGUARD coated evaporator coil
- ECM Constant airflow fan motor\(^{(4,5)}\)
- ECM Constant torque fan motor\(^{(4)}\)
- Energy Management System (EMS) relay
- Extended range (geothermal)
- Fan/pump interlock relay
- Fire alarm relay/dual power
- Flow proving switch
- Hot gas bypass
- Hot gas reheat (on/off)\(^{(3,6)}\)
- Marine package\(^{(7,8)}\)
- Phase protection monitor\(^{(9)}\)
- Quiet package\(^{(10)}\)
- Scharder port\(^{(11)}\)
- Status LED
- Straight cool (no reversing valve)
- TXV
- Unit wiring for 208 Volt
- Water side economizer package\(^{(3)}\)

(1) ECM Motor must be selected. Includes access panel. Not available with economizer option.
(2) Includes access panel. Not available with economizer option.
(3) 75 VA transformer is required. Standard filter rack only with economizer.
(4) Not available on 575 V units.
(5) Requires a neutral wire on 460V units. Not available on 575V units.
(6) TXV or extended range required on hot gas reheat option.
(7) Special; will require extended lead time.
(8) Marine option adds water connections directly on water coil, oversized openings in cabinet for piping directly to connections, and a 2” drain pan. Extended range and CuNi coil must be selected with this option.
(9) Available only on 3-phase units.
(10) Closed Cell Foam Insulation with Compressor Blanket.
(11) Unit comes standard with dual schrader ports for charging/servicing. This option is for an additional port for the connection of a field-supplied/installed water regulating valve.

### AHRI/ANSI 13256-1 PERFORMANCE DATA

**FLUID FLOW RATE**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>COOLING CAPACITY (WLHP)</th>
<th>EER (WLHP)</th>
<th>HEATING CAPACITY (WLHP)</th>
<th>COP (WLHP)</th>
<th>COOLING CAPACITY (GLHP)</th>
<th>EER (GLHP)</th>
<th>HEATING CAPACITY (GLHP)</th>
<th>COP (GLHP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LV007</td>
<td>2.0</td>
<td>12.20</td>
<td>7,800</td>
<td>5.30</td>
<td>6,800</td>
<td>15.10</td>
<td>4,900</td>
<td>3.40</td>
</tr>
<tr>
<td>LV009</td>
<td>2.5</td>
<td>12.40</td>
<td>9,900</td>
<td>4.70</td>
<td>8,700</td>
<td>14.60</td>
<td>5,740</td>
<td>3.20</td>
</tr>
<tr>
<td>LV012</td>
<td>3</td>
<td>12.20</td>
<td>13,000</td>
<td>4.30</td>
<td>11,800</td>
<td>14.10</td>
<td>8,700</td>
<td>3.20</td>
</tr>
<tr>
<td>LV015</td>
<td>4</td>
<td>12.80</td>
<td>16,100</td>
<td>4.40</td>
<td>14,200</td>
<td>14.60</td>
<td>11,300</td>
<td>3.30</td>
</tr>
<tr>
<td>LV018</td>
<td>5.0</td>
<td>14.40</td>
<td>22,200</td>
<td>4.60</td>
<td>21,200</td>
<td>15.80</td>
<td>14,300</td>
<td>3.50</td>
</tr>
<tr>
<td>LV024</td>
<td>6</td>
<td>13.40</td>
<td>26,600</td>
<td>4.40</td>
<td>25,000</td>
<td>15.50</td>
<td>17,000</td>
<td>3.40</td>
</tr>
<tr>
<td>LV030</td>
<td>7</td>
<td>13.20</td>
<td>33,400</td>
<td>4.30</td>
<td>31,000</td>
<td>14.70</td>
<td>20,900</td>
<td>3.30</td>
</tr>
<tr>
<td>LV036</td>
<td>9</td>
<td>13.10</td>
<td>44,600</td>
<td>4.30</td>
<td>41,200</td>
<td>14.30</td>
<td>29,400</td>
<td>3.20</td>
</tr>
<tr>
<td>LV041</td>
<td>9</td>
<td>13.40</td>
<td>44,600</td>
<td>4.30</td>
<td>41,200</td>
<td>14.30</td>
<td>29,400</td>
<td>3.20</td>
</tr>
<tr>
<td>LV042</td>
<td>10</td>
<td>13.70</td>
<td>46,300</td>
<td>4.30</td>
<td>42,600</td>
<td>14.80</td>
<td>31,000</td>
<td>3.30</td>
</tr>
<tr>
<td>LV048</td>
<td>12</td>
<td>13.00</td>
<td>56,400</td>
<td>4.30</td>
<td>48,800</td>
<td>14.90</td>
<td>35,400</td>
<td>3.40</td>
</tr>
<tr>
<td>LV060</td>
<td>15</td>
<td>13.00</td>
<td>67,200</td>
<td>4.30</td>
<td>60,100</td>
<td>14.10</td>
<td>46,900</td>
<td>3.20</td>
</tr>
<tr>
<td>LV070</td>
<td>18</td>
<td>13.30</td>
<td>72,800</td>
<td>4.40</td>
<td>66,400</td>
<td>15.00</td>
<td>50,800</td>
<td>3.40</td>
</tr>
</tbody>
</table>

**ECM MOTOR (OPTION)**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>COOLING CAPACITY (WLHP)</th>
<th>EER (WLHP)</th>
<th>HEATING CAPACITY (WLHP)</th>
<th>COP (WLHP)</th>
<th>COOLING CAPACITY (GLHP)</th>
<th>EER (GLHP)</th>
<th>HEATING CAPACITY (GLHP)</th>
<th>COP (GLHP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LV015</td>
<td>4</td>
<td>13.90</td>
<td>15,500</td>
<td>4.40</td>
<td>14,400</td>
<td>16.20</td>
<td>10,700</td>
<td>3.30</td>
</tr>
<tr>
<td>LV018</td>
<td>5.0</td>
<td>14.40</td>
<td>21,900</td>
<td>4.80</td>
<td>21,500</td>
<td>15.90</td>
<td>14,100</td>
<td>3.70</td>
</tr>
<tr>
<td>LV024</td>
<td>6</td>
<td>14.50</td>
<td>26,200</td>
<td>4.60</td>
<td>25,400</td>
<td>16.80</td>
<td>16,700</td>
<td>3.60</td>
</tr>
<tr>
<td>LV030</td>
<td>7</td>
<td>15.00</td>
<td>32,900</td>
<td>4.60</td>
<td>31,600</td>
<td>17.50</td>
<td>20,400</td>
<td>3.40</td>
</tr>
<tr>
<td>LV036</td>
<td>9</td>
<td>15.40</td>
<td>41,400</td>
<td>4.70</td>
<td>40,200</td>
<td>17.70</td>
<td>26,500</td>
<td>3.60</td>
</tr>
<tr>
<td>LV041</td>
<td>9</td>
<td>13.60</td>
<td>43,700</td>
<td>4.40</td>
<td>42,200</td>
<td>15.90</td>
<td>28,500</td>
<td>3.60</td>
</tr>
<tr>
<td>LV042</td>
<td>10</td>
<td>14.10</td>
<td>45,300</td>
<td>4.30</td>
<td>43,500</td>
<td>16.30</td>
<td>30,100</td>
<td>3.50</td>
</tr>
<tr>
<td>LV048</td>
<td>12</td>
<td>14.20</td>
<td>55,600</td>
<td>4.50</td>
<td>49,600</td>
<td>16.30</td>
<td>34,600</td>
<td>3.60</td>
</tr>
<tr>
<td>LV060</td>
<td>15</td>
<td>14.30</td>
<td>66,400</td>
<td>4.30</td>
<td>61,100</td>
<td>16.40</td>
<td>46,200</td>
<td>3.30</td>
</tr>
<tr>
<td>LV070</td>
<td>16</td>
<td>14.60</td>
<td>71,800</td>
<td>4.80</td>
<td>57,500</td>
<td>16.60</td>
<td>50,000</td>
<td>3.50</td>
</tr>
</tbody>
</table>
LV Model | Water-to-Air Split System

Standard features:
- Two sided 1" R/A filter rack with 1" MERV-4 filter
- Unit Protection Module (UPM)
- Uncoated air coil made of copper tubes and aluminum fins
- ECM constant torque fan motor
- Stainless steel drain pan
- Removable inlet blower ring
- R-410A Refrigerant; single stage compressor
- Dual refrigerant freeze sensors - water and air side
- Copper coaxial heat exchanger
- Lockout circuit and 50 VA transformer
- Duct flange connections for supply and return air
- Floating compressor base
- Schrader access ports
- Geothermal-ready with extended range
- Galvanized steel cabinet
- .5", 1.5lbs/ft³ Dual density fiberglass insulation

The option-rich LV Split System was created to provide maximum flexibility. Available in vertical or horizontal configurations (air handling section) from 1.5 through 6 tons, this system is designed to meet your every need. Consisting of two sections, these units can be placed remotely to allow for installation in locations where space is limited or sound is an issue.

Notes: All dimensions within +/- 0.125.
1" filter rack extends 1.23" beyond the side of the unit. 2" filter rack extends 2.89" beyond the side of the unit. The 2" filter rack is 4-sided with a filter access door on each end and can accept either a 1" or 2" filter.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>CONDENSING SECTION DIMENSIONS (IN INCHES)</th>
<th>MODEL</th>
<th>HORIZONTAL AIR HANDLER DIMENSIONS (IN INCHES)</th>
<th>MODEL</th>
<th>VERTICAL AIR HANDLER DIMENSIONS (IN INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>LV018</td>
<td>21.50</td>
<td>21.50</td>
<td>22.00</td>
<td>43.00</td>
<td>17.00</td>
</tr>
<tr>
<td>LV024</td>
<td>21.50</td>
<td>21.50</td>
<td>22.00</td>
<td>43.00</td>
<td>17.00</td>
</tr>
<tr>
<td>LV030</td>
<td>21.50</td>
<td>21.50</td>
<td>22.00</td>
<td>43.00</td>
<td>17.00</td>
</tr>
<tr>
<td>LV036</td>
<td>21.50</td>
<td>26.00</td>
<td>22.00</td>
<td>54.50</td>
<td>19.00</td>
</tr>
<tr>
<td>LV042</td>
<td>21.50</td>
<td>26.00</td>
<td>22.00</td>
<td>54.50</td>
<td>19.00</td>
</tr>
<tr>
<td>LV048</td>
<td>24.00</td>
<td>32.50</td>
<td>25.00</td>
<td>54.50</td>
<td>21.00</td>
</tr>
<tr>
<td>LV060</td>
<td>24.00</td>
<td>32.50</td>
<td>25.00</td>
<td>54.50</td>
<td>21.00</td>
</tr>
<tr>
<td>LV070</td>
<td>26.00</td>
<td>33.30</td>
<td>25.00</td>
<td>65.00</td>
<td>21.00</td>
</tr>
</tbody>
</table>
Options | LV Model Split System

Factory Installed - Condenser Section:
▶ .5” closed-cell foam insulation
▶ 2-Position motorized water valve
▶ Automatic water flow valve
▶ Boilerless control
▶ Compressor blanket
▶ Compressor monitor relay
▶ Disconnect switch, 40A
▶ Fan/pump interlock relay
▶ Flow proving switch
▶ Phase protection monitor(1)
▶ Status LED

Factory Installed - Air Handler/Fan Coil Section:
▶ .5” Closed-cell foam insulation
▶ 75VA Transformer
▶ 100VA Transformer
▶ 2” MERV-13 Four-sided filter rack(2)
▶ 2” MERV-8 Four-sided filter rack(2)
▶ Condensate overflow sensor switch
▶ Disconnect switch, 40A external
▶ DuoGuard coated evaporator coil
▶ ECM Constant airflow motor(3)
▶ Energy Management System (EMS) relay
▶ Unit wiring for 208 Volt

(1) Available only on 3-phase units.
(2) Includes access panel.
(3) Requires a neutral wire on 460V units. Not available on 575V units.

AHRI/ANSI 13256-1 PERFORMANCE DATA

<table>
<thead>
<tr>
<th>MODEL</th>
<th>WATER LOOP HEAT PUMP</th>
<th></th>
<th></th>
<th>GROUND LOOP HEAT PUMP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>COOLING 86˚ F</td>
<td>HEATING 68˚ F</td>
<td>COOLING 77˚ F</td>
<td>HEATING 32˚ F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CAPACITY BTUH</td>
<td>EER BTUH/W</td>
<td>CAPACITY BTUH</td>
<td>COP</td>
<td>CAPACITY BTUH</td>
</tr>
<tr>
<td>LV018</td>
<td>18,900</td>
<td>13.3</td>
<td>21,100</td>
<td>4.4</td>
<td>20,400</td>
</tr>
<tr>
<td>LV024</td>
<td>22,600</td>
<td>13.1</td>
<td>24,900</td>
<td>4.3</td>
<td>23,900</td>
</tr>
<tr>
<td>LV030</td>
<td>26,400</td>
<td>13.0</td>
<td>29,600</td>
<td>4.3</td>
<td>27,900</td>
</tr>
<tr>
<td>LV036</td>
<td>35,000</td>
<td>13.8</td>
<td>37,000</td>
<td>4.3</td>
<td>37,300</td>
</tr>
<tr>
<td>LV042</td>
<td>38,600</td>
<td>13.0</td>
<td>41,600</td>
<td>4.3</td>
<td>40,900</td>
</tr>
<tr>
<td>LV048</td>
<td>43,300</td>
<td>13.6</td>
<td>51,800</td>
<td>4.3</td>
<td>45,100</td>
</tr>
<tr>
<td>LV060</td>
<td>54,300</td>
<td>13.0</td>
<td>64,000</td>
<td>4.3</td>
<td>57,400</td>
</tr>
<tr>
<td>LV070</td>
<td>62,100</td>
<td>13.6</td>
<td>70,400</td>
<td>4.3</td>
<td>64,200</td>
</tr>
</tbody>
</table>

Note: Ratings based upon AHRI/ANSI 13256-1 with 1” disposable filter.
**EP Model | Water-to-Air Packaged Unit**

**Standard features:**
- Schrader access ports
- Deluxe 2” four-sided R/A filter rack with 1” MERV-4 filter and access panel\(^{(1)}\)
- Unit Protection Module (UPM)
- Uncoated air coil made of copper tubes and aluminum fins
- Dual refrigerant freeze sensors
- TXV Expansion device
- Stainless steel drain pan
- Removable inlet blower ring
- Copper coaxial heat exchanger
- Horizontal package units include hanging brackets\(^{(2)}\)
- Condensate overflow sensor switch
- 75VA Transformer
- Duct flange connections for supply and return
- ECM Constant torque blower motor (EP015 and higher)
- PSC Motor (EP012 and lower)
- Floating compressor base
- Galvanized steel cabinet
- .5”, 1.5lbs/ft\(^3\) Dual density fiberglass insulation
- R-410A Refrigerant; single refrigerant circuit

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

---

**Notes:**
- For units ordered with cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.
- \(xxC\) - Copper coaxial condenser
- \(xxN\) - Cupro-Nickel coaxial condenser
- \(^{(1)}\) For 2” field-supplied filters, remove spring clips prior to connecting return ductwork.
- \(^{(2)}\) Shipped loose inside unit.
- \(^{(3)}\) Total unit height is 22.75 with base rails for EP030 - EP070.

---

**Specifications:**
- All dimensions in inches unless otherwise noted. All dimensions within ±0.125”.
- Specifications subject to change without notice.
**Options | EP Model Packaged Unit**

**Factory installed:**
- .5" Closed-cell foam insulation
- 100VA Transformer
- 2” MERV-13 Filter
- 2” MERV-8 Filter
- 2-Position motorized water valve
- Automatic water flow valve
- Blower monitor relay
- Boilerless control
- Comfort alert module
- Compressor blanket
- Compressor monitor relay
- DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)
- DDC with LonWorks card
- Disconnect switch, 40A
- DUOGUARD coated evaporator coil
- ECM constant airflow fan motor
- Electric heat - 5 kW
- Electric heat - 10 kW
- Electric heat - 15 kW
- Electric heat - 20 kW
- Energy Management System (EMS) relay
- Extended range (geothermal)
- Fire alarm relay/dual power
- Flow proving switch
- Heat recovery package
- Hot gas bypass
- Hot gas reheat (modulating)
- Hot gas reheat (on/off)
- Phase protection monitor
- Pump/valve relay
- Quiet package
- Straight cool
- Unit wiring for 208 Volt
- Water circulating pump
- Waterside economizer

---

**ASHRAE / AHRI / ISO 13256-1. ENGLISH (I-P) UNITS**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>WATER LOOP HEAT PUMP</th>
<th>GROUND WATER HEAT PUMP</th>
<th>GROUND LOOP HEAT PUMP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>COOLING 86˚F</td>
<td>HEATING 68˚F</td>
<td>COOLING 59˚F</td>
</tr>
<tr>
<td></td>
<td>CAPACITY BTUH</td>
<td>EER BTUH/W</td>
<td>CAPACITY BTUH</td>
</tr>
<tr>
<td>EP WITH PSC MOTOR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EP007</td>
<td>6,800</td>
<td>15.7</td>
<td>8,800</td>
</tr>
<tr>
<td>EP009</td>
<td>9,000</td>
<td>16.2</td>
<td>11,200</td>
</tr>
<tr>
<td>EP012</td>
<td>12,200</td>
<td>14.9</td>
<td>16,500</td>
</tr>
<tr>
<td>EP WITH ECM MOTOR (CONSTANT TORQUE OR CONSTANT AIR FLOW)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EP015</td>
<td>15,200</td>
<td>17.5</td>
<td>17,500</td>
</tr>
<tr>
<td>EP018</td>
<td>19,500</td>
<td>16.4</td>
<td>21,300</td>
</tr>
<tr>
<td>EP024</td>
<td>24,500</td>
<td>18.2</td>
<td>28,500</td>
</tr>
<tr>
<td>EP030</td>
<td>27,000</td>
<td>16.6</td>
<td>31,000</td>
</tr>
<tr>
<td>EP036</td>
<td>36,000</td>
<td>17.2</td>
<td>41,000</td>
</tr>
<tr>
<td>EP042</td>
<td>40,600</td>
<td>18.2</td>
<td>42,400</td>
</tr>
<tr>
<td>EP048</td>
<td>47,400</td>
<td>17.2</td>
<td>50,000</td>
</tr>
<tr>
<td>EP060</td>
<td>60,400</td>
<td>16.2</td>
<td>71,500</td>
</tr>
<tr>
<td>EP070</td>
<td>68,000</td>
<td>16.2</td>
<td>86,000</td>
</tr>
</tbody>
</table>

**Note:** 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.
ES Model | Water-to-Air
2-Stage Packaged Unit

Standard features:
- Uncoated air coil made of copper tubes and aluminum fins
- Schrader access ports
- Unit Protection Module (UPM)
- Duct flange connections
- Condensate overflow sensor
- Extended range with TXV, insulated copper coaxial heat exchanger and schrader valve
- Stainless steel drain pan
- Deluxe 2” four-sided R/A filter rack with 1” MERV-4 filter and access panel
- Dual refrigerant freeze sensors - water and air side
- R-410A Refrigerant; single refrigerant circuit
- Horizontal package units include hanging brackets
- Floating compressor base
- Copeland Ultratech™ two-stage unloading scroll compressor
- ECM Constant airflow fan motor
- 75VA Transformer
- Galvanized steel cabinet
- .5”, 1.5lbs/ft³ Dual density fiberglass insulation

Notes: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

The ES 2-stage, water-to-air heat pumps offer high efficiency, value added features and dual capacity with standard features like a two speed scroll compressor and a ECM constant airflow fan motor, giving you the flexibility, performance and quiet operation needed to exceed the expectations of your clients.

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser

(1) For 2” field-supplied filters, remove spring clips prior to connecting return ductwork.
(2) Shipped loose inside unit.
(3) 460/4/60 unit requires neutral wire.

Notes: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>HORIZONTAL UNIT DIMENSIONS (IN INCHES)</th>
<th>MODEL</th>
<th>COUNTERFLOW UNIT DIMENSIONS (IN INCHES)</th>
<th>MODEL</th>
<th>VERTICAL UNIT DIMENSIONS (IN INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A (WIDTH)</td>
<td>B (DEPTH)</td>
<td>C (HEIGHT)</td>
<td>A (WIDTH)</td>
<td>B (DEPTH)</td>
</tr>
<tr>
<td>ES025</td>
<td>26.00</td>
<td>54.50</td>
<td>21.75</td>
<td>ES025</td>
<td>21.50</td>
</tr>
<tr>
<td>ES035</td>
<td>26.00</td>
<td>54.50</td>
<td>21.75</td>
<td>ES035</td>
<td>21.50</td>
</tr>
<tr>
<td>ES049</td>
<td>30.00</td>
<td>68.00</td>
<td>21.75</td>
<td>ES049</td>
<td>24.00</td>
</tr>
<tr>
<td>ES061</td>
<td>30.00</td>
<td>68.00</td>
<td>21.75</td>
<td>ES061</td>
<td>26.00</td>
</tr>
<tr>
<td>ES071</td>
<td>30.00</td>
<td>68.00</td>
<td>21.75</td>
<td>ES071</td>
<td>26.00</td>
</tr>
</tbody>
</table>

Notes: All dimensions in inches unless otherwise noted. All dimensions within ±0.125”. Specifications subject to change without notice. For each configuration, add relevant dimensional information and drawings for units with Waterside Economizer.
Options | ES Model Packaged Unit

Factory installed:
- .5” Closed cell foam insulation
- 100VA Transformer
- 2” MERV-13 Filter
- 2” MERV-8 Filter
- 2-Position motorized water valve
- Automatic water flow valve
- Blower monitor relay
- Boilerless control
- Comfort alert module
- Compressor blanket
- Compressor monitor relay
- DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)
- DDC with LonWorks card
- Disconnect switch, 40A
- Electric heat - 5 kW
- Electric heat - 10 kW
- Electric heat - 15 kW
- Electric heat - 20 kW
- Energy Management System (EMS) relay
- Fan/pump interlock relay
- Fire alarm relay/dual power
- Flow proving switch
- Heat recovery package
- Hot gas bypass
- Hot gas reheat (on/off)
- Phase protection monitor
- Quiet package
- Straight cool
- Tin plated evaporator coil
- Unit wiring for 208 Volt
- Water circulating pump
- Water side economizer

(1) Single phase units only.
(2) Not available with electric heat.
(4) Not available on HZ straight through config.
(5) Comes with internal circulating pump.
(6) Available only on 3-phase units.
(7) Closed cell foam insulation with compressor blanket.
(8) Aluminum fins are uncoated.
(9) The standard ES filter rack is not available with the WSE option. The filter rack will be a 1”, 2-sided, C-channel rack without an access panel.

<table>
<thead>
<tr>
<th>AHRI/ANSI 13256-1 PERFORMANCE DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER LOOP HEAT PUMP</td>
</tr>
<tr>
<td>COOLING 86˚F</td>
</tr>
<tr>
<td>CAPACITY BTUH</td>
</tr>
</tbody>
</table>

**ES025**
- Part: 6
  - GPM: 18800
    - Capacity BTUH: 17.5
    - EER: 20500
      - COP: 5.1
      - GPM: 21000
        - Capacity BTUH: 30.0
        - EER: 18000
          - COP: 4.6
          - GPM: 20000
            - Capacity BTUH: 24.5
            - EER: 15500
              - COP: 4.0

- Full: 6
  - GPM: 26000
    - Capacity BTUH: 16.0
    - EER: 30000
      - COP: 5.0
      - GPM: 29000
        - Capacity BTUH: 24.0
        - EER: 25000
          - COP: 4.6
          - GPM: 27500
            - Capacity BTUH: 18.7
            - EER: 19000
              - COP: 3.8

**ES035**
- Part: 9
  - GPM: 24000
    - Capacity BTUH: 17.0
    - EER: 27000
      - COP: 5.3
      - GPM: 27000
        - Capacity BTUH: 28.0
        - EER: 22500
          - COP: 4.5
          - GPM: 27000
            - Capacity BTUH: 24.5
            - EER: 20500
              - COP: 4.0

- Full: 9
  - GPM: 36000
    - Capacity BTUH: 14.6
    - EER: 43000
      - COP: 4.8
      - GPM: 42000
        - Capacity BTUH: 21.6
        - EER: 36000
          - COP: 4.2
          - GPM: 38000
            - Capacity BTUH: 17.2
            - EER: 28000
              - COP: 3.8

**ES049**
- Part: 12
  - GPM: 34000
    - Capacity BTUH: 16.0
    - EER: 39000
      - COP: 5.4
      - GPM: 38000
        - Capacity BTUH: 24.0
        - EER: 32000
          - COP: 4.6
          - GPM: 36000
            - Capacity BTUH: 21.8
            - EER: 28500
              - COP: 4.0

- Full: 12
  - GPM: 48000
    - Capacity BTUH: 12.6
    - EER: 58000
      - COP: 4.8
      - GPM: 54000
        - Capacity BTUH: 19.0
        - EER: 48000
          - COP: 4.2
          - GPM: 49000
            - Capacity BTUH: 15.5
            - EER: 38000
              - COP: 3.6

**ES061**
- Part: 14
  - GPM: 42000
    - Capacity BTUH: 17.0
    - EER: 48000
      - COP: 5.4
      - GPM: 48000
        - Capacity BTUH: 26.0
        - EER: 40000
          - COP: 4.6
          - GPM: 45000
            - Capacity BTUH: 23.5
            - EER: 36500
              - COP: 4.0

- Full: 14
  - GPM: 60000
    - Capacity BTUH: 14.0
    - EER: 72000
      - COP: 4.7
      - GPM: 68000
        - Capacity BTUH: 19.7
        - EER: 61000
          - COP: 4.3
          - GPM: 62000
            - Capacity BTUH: 15.7
            - EER: 49000
              - COP: 3.6

**ES071**
- Part: 18
  - GPM: 51000
    - Capacity BTUH: 15.8
    - EER: 55000
      - COP: 4.4
      - GPM: 57000
        - Capacity BTUH: 25.2
        - EER: 47000
          - COP: 4.0
          - GPM: 56000
            - Capacity BTUH: 21.8
            - EER: 42000
              - COP: 3.7

- Full: 18
  - GPM: 72000
    - Capacity BTUH: 14.5
    - EER: 80000
      - COP: 4.5
      - GPM: 77000
        - Capacity BTUH: 19.6
        - EER: 68000
          - COP: 4.2
          - GPM: 74000
            - Capacity BTUH: 16.3
            - EER: 53000
              - COP: 3.5

Note: Ratings based upon AHRI/ANSI 13256-1 with 1” disposable filter.
**LM Model | Water-to-Air 2-Stage Packaged Unit**

**Standard features:**
- Uncoated air coil made of copper tubes and aluminum fins
- Schrader access ports
- Floating compressor base
- Copeland Ultratech™ two-stage unloading scroll compressor
- Horizontal package units include hanging brackets
- Deluxe 2" four-sided R/A filter rack with 1" MERV-4 filter and access panel
- R-410A Refrigerant; single refrigerant circuit
- ECM Constant torque fan motor
- Unit Protection Module (UPM)
- 75VA Transformer
- Condensate overflow sensor and dual refrigerant freeze sensors
- Stainless steel drain pan
- Extended range with TXV, insulated copper coaxial heat exchanger and schrader valve
- Galvanized steel cabinet
- .5", 1.5lbs/ft³ Dual density fiberglass insulation

**Notes:**
For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

- xxC - Copper coaxial condenser
- xxN - Cupro-Nickel coaxial condenser

(1) Shipped loose inside unit.
(2) For 2" field-supplied filters, remove the spring clips prior to connecting return air ductwork.

---

**Introducing the LM Model, a highly efficient packaged water source heat pump and the ideal solution for high performance buildings. This model offers our customers best-in-class comfort, efficiency and noise levels along with a wide range of available features and options. The LM Model incorporates a number of features and options that benefit our customers and allow the specifying engineer to maximize LEED® credits on high performance projects.**

---

**DIMENSIONS (IN INCHES)**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>VERTICAL</th>
<th>HORIZONTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A (WIDTH)</td>
<td>B (DEPTH)</td>
</tr>
<tr>
<td>LM024</td>
<td>24.0</td>
<td>27.4</td>
</tr>
<tr>
<td>LM036</td>
<td>25.8</td>
<td>33.4</td>
</tr>
<tr>
<td>LM048</td>
<td>25.8</td>
<td>33.4</td>
</tr>
<tr>
<td>LM060</td>
<td>27.0</td>
<td>33.4</td>
</tr>
<tr>
<td>LM070</td>
<td>27.0</td>
<td>33.4</td>
</tr>
</tbody>
</table>
Options | LM Model Packaged Unit

Factory installed:
- .5" Closed cell foam insulation
- 2" MERV-13 Filter
- 2" MERV-8 Filter
- 2-Position water motorized water valve
- Automatic water flow valve
- Comfort alert module
- Compressor blanket
- Compressor monitor relay
- Current sensor (blower)
- DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)
- DDC with LonWorks card
- Disconnect switch, 40A external
- DUOGUARD coated evaporator coil
- ECM Constant airflow fan motor
- Electric heat - 5 kW
- Electric heat - 10 kW
- Electric heat - 15 kW
- Electric heat - 20 kW
- Energy Management System (EMS) relay
- Flow proving switch
- Heat recovery package
- Hot gas reheat (on/off)
- Phase protection monitor
- Pump/valve relay
- Quiet package
- Smart start
- Status LED
- Unit wiring for 208 Volt
- Water circulating pump

(1) Voltage must be single phase.
(2) Not available with electric heat.
(3) Non-fused disconnect.
(4) Requires a neutral line on 460V.
(5) Not available with hot gas reheat or straight through config.
(7) Available only on 3-phase units.
(8) Closed cell foam insulation with compressor blanket.
(9) Voltage must be 208-230/1/60.

ARI/ISO 13256-1 PERFORMANCE DATA

<table>
<thead>
<tr>
<th>MODEL</th>
<th>FLUID FLOW RATE</th>
<th>COOLING CAPACITY</th>
<th>EER</th>
<th>HEATING CAPACITY</th>
<th>COP</th>
<th>COOLING CAPACITY</th>
<th>EER</th>
<th>HEATING CAPACITY</th>
<th>COP</th>
<th>COOLING CAPACITY</th>
<th>EER</th>
<th>HEATING CAPACITY</th>
<th>COP</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM024</td>
<td>Part Load</td>
<td>6.0</td>
<td>18500</td>
<td>18.9</td>
<td>21200</td>
<td>6.5</td>
<td>21700</td>
<td>33.6</td>
<td>16700</td>
<td>5.1</td>
<td>21000</td>
<td>28.1</td>
<td>14400</td>
</tr>
<tr>
<td></td>
<td>Full Load</td>
<td>6.0</td>
<td>25500</td>
<td>17.4</td>
<td>29200</td>
<td>5.6</td>
<td>29000</td>
<td>26.5</td>
<td>23500</td>
<td>4.9</td>
<td>26600</td>
<td>19.9</td>
<td>18000</td>
</tr>
<tr>
<td>LM036</td>
<td>Part Load</td>
<td>9.0</td>
<td>29000</td>
<td>22.2</td>
<td>31000</td>
<td>6.5</td>
<td>32600</td>
<td>37.0</td>
<td>25200</td>
<td>5.2</td>
<td>31900</td>
<td>32.0</td>
<td>22400</td>
</tr>
<tr>
<td></td>
<td>Full Load</td>
<td>9.0</td>
<td>39000</td>
<td>19.0</td>
<td>42800</td>
<td>5.6</td>
<td>43300</td>
<td>28.0</td>
<td>35900</td>
<td>5.1</td>
<td>40800</td>
<td>22.0</td>
<td>28400</td>
</tr>
<tr>
<td>LM048</td>
<td>Part Load</td>
<td>12.0</td>
<td>36700</td>
<td>18.9</td>
<td>40900</td>
<td>6.2</td>
<td>42000</td>
<td>33.8</td>
<td>33700</td>
<td>5.2</td>
<td>39900</td>
<td>27.8</td>
<td>29800</td>
</tr>
<tr>
<td></td>
<td>Full Load</td>
<td>12.0</td>
<td>49200</td>
<td>16.6</td>
<td>56100</td>
<td>5.3</td>
<td>55300</td>
<td>25.3</td>
<td>46300</td>
<td>4.7</td>
<td>51300</td>
<td>19.3</td>
<td>36900</td>
</tr>
<tr>
<td>LM060</td>
<td>Part Load</td>
<td>15.0</td>
<td>47500</td>
<td>18.7</td>
<td>53600</td>
<td>5.8</td>
<td>53300</td>
<td>31.2</td>
<td>44300</td>
<td>4.8</td>
<td>51600</td>
<td>26.5</td>
<td>39800</td>
</tr>
<tr>
<td></td>
<td>Full Load</td>
<td>15.0</td>
<td>63800</td>
<td>17.0</td>
<td>73300</td>
<td>5.2</td>
<td>70200</td>
<td>24.4</td>
<td>60300</td>
<td>4.6</td>
<td>65100</td>
<td>18.9</td>
<td>48000</td>
</tr>
<tr>
<td>LM070</td>
<td>Part Load</td>
<td>18.0</td>
<td>55200</td>
<td>17.8</td>
<td>64900</td>
<td>5.7</td>
<td>60800</td>
<td>28.5</td>
<td>52900</td>
<td>4.8</td>
<td>60300</td>
<td>25.4</td>
<td>46200</td>
</tr>
<tr>
<td></td>
<td>Full Load</td>
<td>18.0</td>
<td>71600</td>
<td>16.3</td>
<td>84000</td>
<td>5.1</td>
<td>78700</td>
<td>23.1</td>
<td>70000</td>
<td>4.5</td>
<td>73700</td>
<td>18.5</td>
<td>55300</td>
</tr>
</tbody>
</table>
LM Model | Water-to-Air Split System

Standard features:

**Air Handler Section**
- Uncoated air coil made of copper tubes and aluminum fins
- Horizontal units include hanging brackets
- Deluxe 2” four-sided R/A filter rack with 1” MERV-4 filter and access panel
- ECM Constant airflow fan motor
- 75VA Transformer
- Condensate overflow sensor
- Air coil freeze refrigerant sensor
- Stainless steel drain pan
- Galvanized steel cabinet
- 1/2”, 1.5lbs/ft³ Dual density fiberglass insulation

**Condensing Section**
- Schrader access ports
- Floating compressor base
- Copeland Ultratech™ two-stage unloading scroll compressor
- R-410A Refrigerant; single refrigerant circuit
- Unit Protection Module (UPM)
- Extended range with TXV and insulated copper coaxial heat exchanger
- Pre-painted steel cabinet
- Closed-cell foam insulation
- Coax coil refrigerant freeze sensor

The fully featured LM Split Systems include a standard two-stage scroll compressor and an ECM (Electronically Commutated Motor) for best-in-class efficiency and comfort.

**Notes:**
- Electric heat is not available on horizontal units with -XXS (straight through) configuration.
  - For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.
- (1) For 2” field-supplied filters, remove spring clips prior to removing return air ductwork.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>HORIZONTAL AIR HANDLER DIMENSIONS (IN INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A (WIDTH)</td>
</tr>
<tr>
<td>LM024</td>
<td>33.00</td>
</tr>
<tr>
<td>LM036</td>
<td>33.00</td>
</tr>
<tr>
<td>LM048</td>
<td>38.50</td>
</tr>
<tr>
<td>LM060</td>
<td>38.50</td>
</tr>
<tr>
<td>LM070</td>
<td>49.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODEL</th>
<th>CONDENSING SECTION DIMENSIONS (IN INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A (WIDTH)</td>
</tr>
<tr>
<td>LM024</td>
<td>24.00</td>
</tr>
<tr>
<td>LM036</td>
<td>24.00</td>
</tr>
<tr>
<td>LM048</td>
<td>24.00</td>
</tr>
<tr>
<td>LM060</td>
<td>27.00</td>
</tr>
<tr>
<td>LM070</td>
<td>27.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODEL</th>
<th>VERTICAL AIR HANDLER DIMENSIONS (IN INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A (WIDTH)</td>
</tr>
<tr>
<td>LM024</td>
<td>21.50</td>
</tr>
<tr>
<td>LM036</td>
<td>21.50</td>
</tr>
<tr>
<td>LM048</td>
<td>24.00</td>
</tr>
<tr>
<td>LM060</td>
<td>26.00</td>
</tr>
<tr>
<td>LM070</td>
<td>26.00</td>
</tr>
</tbody>
</table>

Notes:
- Overall unit dimensions do not include filter rack or duct flanges.
- All dimensions in inches unless otherwise noted. All dimensions within ±0.125”. Specifications subject to change without notice.
- 1” filter rack extends 1.23” beyond the side of the unit. 2” filter rack extends 2.89” beyond the side of the unit.
- The 2” filter rack is 4 sided with a filter access door on each end and can accept either a 1” or 2” filter.
Options | LM Model Split System

Condenser section factory installed:
- Comfort alert module\(^{(1)}\)
- Compressor monitor relay
- Flow proving switch
- Painted steel / no insulation (outdoor application CS only)
- Pump/valve relay
- Smart start\(^{(2)}\)

Air handler section factory installed:
- .5” Closed cell foam insulation
- 2” MERV-13 filter
- 2” MERV-8 filter
- Blower current sensor

- DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)
- DDC Controller with LonWorks card
- Electric heat - 5 kW\(^{(3)}\)
- Electric heat - 10 kW\(^{(3)}\)
- Electric heat - 15 kW\(^{(3)}\)
- Electric heat - 20 kW\(^{(3)}\)
- Energy Management System (EMS) relay
- Tin coated evaporator coil\(^{(4)}\)
- Unit wire to 208 Volt

(1) Single phase units only.
(2) Voltage must be 208-230/1/60.
(3) Available on 208-230/1/60 and 208-230/3/60 units, top and end blow only.
(4) Aluminum fins are uncoated.

---

<table>
<thead>
<tr>
<th>MODEL</th>
<th>WATER LOOP HEAT PUMP</th>
<th>GROUND WATER LOOP HEAT PUMP</th>
<th>GROUND LOOP HEAT PUMP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>COOLING 86°F</td>
<td>HEATING 68°F</td>
<td>COOLING 59°F</td>
</tr>
<tr>
<td>LM024-1CS</td>
<td>LM024-1AV</td>
<td>6</td>
<td>Full</td>
</tr>
<tr>
<td>Partial</td>
<td>17200</td>
<td>16.8</td>
<td>19900</td>
</tr>
<tr>
<td>LM036-1CS</td>
<td>LM036-1AV</td>
<td>9</td>
<td>Full</td>
</tr>
<tr>
<td>Partial</td>
<td>27000</td>
<td>17.9</td>
<td>32000</td>
</tr>
<tr>
<td>LM048-1CS</td>
<td>LM048-1AV</td>
<td>12</td>
<td>Full</td>
</tr>
<tr>
<td>Partial</td>
<td>35600</td>
<td>18.2</td>
<td>40400</td>
</tr>
<tr>
<td>LM060-1CS</td>
<td>LM060-1AV</td>
<td>15</td>
<td>Full</td>
</tr>
<tr>
<td>Partial</td>
<td>42800</td>
<td>16</td>
<td>54500</td>
</tr>
<tr>
<td>LM070-1CS</td>
<td>LM070-1AV</td>
<td>18</td>
<td>Full</td>
</tr>
<tr>
<td>Partial</td>
<td>50400</td>
<td>15.4</td>
<td>58600</td>
</tr>
</tbody>
</table>

Note: Ratings based upon AHRI/ANSI 13256-1 with 1” disposable filter
**EC Model | Water-to-Air**
**Packaged Unit & Split System**
**Large Capacity**

**Standard features:**
- Dual circuit (2-stage heat, 2-stage cool) with two compressors and belt drive fan
- Schrader access ports
- 1" C-Channel filter rack with 1" MERV-4 panel filter
- High and low pressure switches
- Condensate overflow sensor and lockout circuit
- Duct flange connections for the supply and return ductwork
- TXV expansion device
- Single point electrical and water connections - on package units only
- Unit Protection Module (UPM)
- Uncoated air coil made of copper tubes and aluminum fins
- Extended range (standard on horizontal sizes 072, 096, 120, 150; optional on horizontal 180, 242 and optional on all verticals)
- Stainless steel drain pan
- 75VA Transformer
- Refrigerant R-410A
- Galvanized steel cabinet
- 1/2", 1.5lbs/ft³ Dual density fiberglass insulation
- Dual refrigerant freeze sensors - water and air side

---

The EC Model water-to-air heat pump provides one of the best combinations of performance and efficiency available. Safety devices are built into each unit to provide the maximum system protection possible.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SINGLE BLOWER LARGE VERTICAL UNIT DIMENSIONS (IN INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A (WIDTH)</td>
</tr>
<tr>
<td>EC072</td>
<td>42.00</td>
</tr>
<tr>
<td>EC096</td>
<td>42.00</td>
</tr>
<tr>
<td>EC120</td>
<td>42.00</td>
</tr>
<tr>
<td>EC151</td>
<td>52.50</td>
</tr>
<tr>
<td>EC181</td>
<td>52.50</td>
</tr>
</tbody>
</table>

Notes: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.
All dimensions in inches unless otherwise noted. All dimensions within ±0.125“. Specifications subject to change without notice. Height excludes mounting rails.

**xC** - Copper coaxial condenser
**xN** - Cupro-Nickel coaxial condenser

---

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DUAL BLOWER LARGE VERTICAL UNIT DIMENSIONS (IN INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A (WIDTH)</td>
</tr>
<tr>
<td>EC210</td>
<td>80.00</td>
</tr>
<tr>
<td>EC240</td>
<td>80.00</td>
</tr>
<tr>
<td>EC300</td>
<td>80.00</td>
</tr>
<tr>
<td>EC360</td>
<td>80.00</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>MODEL</th>
<th>LARGE HORIZONTAL UNIT DIMENSIONS (IN INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A (WIDTH)</td>
</tr>
<tr>
<td>EC072</td>
<td>38.00</td>
</tr>
<tr>
<td>EC096</td>
<td>38.00</td>
</tr>
<tr>
<td>EC120</td>
<td>38.00</td>
</tr>
<tr>
<td>EC150</td>
<td>42.00</td>
</tr>
<tr>
<td>EC180</td>
<td>60.25</td>
</tr>
<tr>
<td>EC242</td>
<td>60.25</td>
</tr>
</tbody>
</table>
### Options | EC Model Packaged Unit & Split System

#### Factory installed:
- 1/2" Closed-cell foam insulation
- 100VA Transformer
- 2" Two-sided filter rack
- 2" Four-sided filter rack
- Blower monitor relay
- Blower rotate 180°
- Boilerless control
- Compressor blanket
- Compressor monitor relay
- DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)
- DDC with LonWorks card
- DUOGUARD coated evaporator coil
- Energy Management System (EMS) relay
- Extended range (geothermal) (vertical unit)
- Fan/pump interlock relay
- Fire alarm relay/dual power
- Flow proving switch
- Hot gas bypass

#### Not available with economizer option.

(1) Includes 1" MERV-4 air filter and access panel. For 2" field-supplied filters, remove spring clips prior to connecting return ductwork.

(2) Requires 100 VA transformer.

(3) Standard on horizontal units except EC180-HZ and EC242-HZ.

(4) HGRH option does not include controls.

(5) 3-phase units only.

(6) Series evap 100% OA available only 6-30 verticals.

(7) Application of VFD requires the hot gas bypass option be added. Minimum airflow % of nominal is 50% cooling and 80% heating; higher airflow may be required depending on conditions. Voltage must be 208-230/3/60 or 460/4/60.

(8) This option is only available on 6-30 ton verticals.

#### PERFORMANCE IN ACCORDANCE WITH ANSI/ASHRAE/ISO 13256-1

#### HORIZONTAL CONDENSING SECTION

<table>
<thead>
<tr>
<th>MODEL</th>
<th>EC072</th>
<th>EC096</th>
<th>EC120</th>
<th>EC150</th>
<th>EC151</th>
<th>EC180</th>
<th>EC181</th>
<th>EC210</th>
<th>EC240</th>
<th>EC300</th>
<th>EC360</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (WIDTH)</td>
<td>42.00</td>
<td>42.00</td>
<td>42.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
</tr>
<tr>
<td>B (DEPTH)</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
</tr>
<tr>
<td>C (HEIGHT)</td>
<td>22.00</td>
<td>22.00</td>
<td>22.00</td>
<td>22.00</td>
<td>22.00</td>
<td>22.00</td>
<td>22.00</td>
<td>22.00</td>
<td>22.00</td>
<td>26.50</td>
<td>27.00</td>
</tr>
</tbody>
</table>

#### VERTICAL AIR HANDLER UNIT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>EC072</th>
<th>EC096</th>
<th>EC120</th>
<th>EC150</th>
<th>EC151</th>
<th>EC180</th>
<th>EC181</th>
<th>EC210</th>
<th>EC240</th>
<th>EC300</th>
<th>EC360</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (WIDTH)</td>
<td>42.00</td>
<td>42.00</td>
<td>42.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
</tr>
<tr>
<td>B (DEPTH)</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
</tr>
<tr>
<td>C (HEIGHT)</td>
<td>41.00</td>
<td>41.00</td>
<td>41.00</td>
<td>41.00</td>
<td>41.00</td>
<td>41.00</td>
<td>41.00</td>
<td>41.00</td>
<td>41.00</td>
<td>41.00</td>
<td>41.00</td>
</tr>
</tbody>
</table>

#### ASHRA/AHRI/ISO 13256-1 – AHRI CERTIFIED

<table>
<thead>
<tr>
<th>MODEL</th>
<th>EC072</th>
<th>EC096</th>
<th>EC120</th>
<th>EC150</th>
<th>EC151</th>
<th>EC180</th>
<th>EC181</th>
<th>EC210</th>
<th>EC240</th>
<th>EC300</th>
<th>EC360</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPM</td>
<td>16</td>
<td>21</td>
<td>28</td>
<td>35</td>
<td>35</td>
<td>42</td>
<td>42</td>
<td>50</td>
<td>60</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>COOLING 86° F</td>
<td>13.0</td>
<td>14.0</td>
<td>13.2</td>
<td>16.0</td>
<td>16.0</td>
<td>14.2</td>
<td>14.2</td>
<td>14.6</td>
<td>14.4</td>
<td>13.0</td>
<td>14.8</td>
</tr>
<tr>
<td>CAPACITY BTUH</td>
<td>92000</td>
<td>116000</td>
<td>158000</td>
<td>181000</td>
<td>181000</td>
<td>182000</td>
<td>170000</td>
<td>220000</td>
<td>248000</td>
<td>295000</td>
<td>386000</td>
</tr>
<tr>
<td>EER BTUH/W</td>
<td>4.5</td>
<td>4.8</td>
<td>4.4</td>
<td>5.6</td>
<td>5.6</td>
<td>5.0</td>
<td>5.0</td>
<td>5.1</td>
<td>5.0</td>
<td>4.2</td>
<td>4.2</td>
</tr>
<tr>
<td>HEATING 68° F</td>
<td>18.6</td>
<td>20.6</td>
<td>18.3</td>
<td>24.0</td>
<td>24.0</td>
<td>20.0</td>
<td>20.0</td>
<td>22.5</td>
<td>21.1</td>
<td>18.8</td>
<td>22.0</td>
</tr>
<tr>
<td>COOLING 59° F</td>
<td>72400</td>
<td>93200</td>
<td>123000</td>
<td>140000</td>
<td>140000</td>
<td>156000</td>
<td>156000</td>
<td>204000</td>
<td>250000</td>
<td>300000</td>
<td>342000</td>
</tr>
<tr>
<td>CAPACITY BTUH</td>
<td>80400</td>
<td>116000</td>
<td>134000</td>
<td>185000</td>
<td>185000</td>
<td>195000</td>
<td>185000</td>
<td>292000</td>
<td>325000</td>
<td>365000</td>
<td>472000</td>
</tr>
<tr>
<td>EER BTUH/W</td>
<td>18.6</td>
<td>20.6</td>
<td>18.3</td>
<td>24.0</td>
<td>24.0</td>
<td>20.0</td>
<td>20.0</td>
<td>22.5</td>
<td>21.1</td>
<td>18.8</td>
<td>22.0</td>
</tr>
<tr>
<td>HEATING 50° F</td>
<td>75600</td>
<td>93200</td>
<td>123000</td>
<td>140000</td>
<td>140000</td>
<td>156000</td>
<td>156000</td>
<td>204000</td>
<td>250000</td>
<td>300000</td>
<td>342000</td>
</tr>
<tr>
<td>CAPACITY BTUH</td>
<td>80400</td>
<td>116000</td>
<td>134000</td>
<td>185000</td>
<td>185000</td>
<td>195000</td>
<td>185000</td>
<td>292000</td>
<td>325000</td>
<td>365000</td>
<td>472000</td>
</tr>
<tr>
<td>COP</td>
<td>3.8</td>
<td>4.2</td>
<td>3.9</td>
<td>5.0</td>
<td>5.0</td>
<td>4.2</td>
<td>4.2</td>
<td>4.5</td>
<td>4.5</td>
<td>3.8</td>
<td>4.0</td>
</tr>
<tr>
<td>COOLING 77° F</td>
<td>14.2</td>
<td>15.4</td>
<td>14.7</td>
<td>17.9</td>
<td>17.9</td>
<td>15.4</td>
<td>15.4</td>
<td>17.2</td>
<td>16.0</td>
<td>14.0</td>
<td>16.4</td>
</tr>
<tr>
<td>CAPACITY BTUH</td>
<td>54800</td>
<td>73600</td>
<td>100000</td>
<td>107000</td>
<td>107000</td>
<td>118000</td>
<td>118000</td>
<td>152000</td>
<td>180000</td>
<td>318000</td>
<td>412000</td>
</tr>
<tr>
<td>EER BTUH/W</td>
<td>14.2</td>
<td>15.4</td>
<td>14.7</td>
<td>17.9</td>
<td>17.9</td>
<td>15.4</td>
<td>15.4</td>
<td>17.2</td>
<td>16.0</td>
<td>14.0</td>
<td>16.4</td>
</tr>
<tr>
<td>HEATING 32° F</td>
<td>180000</td>
<td>180000</td>
<td>180000</td>
<td>180000</td>
<td>180000</td>
<td>180000</td>
<td>180000</td>
<td>180000</td>
<td>180000</td>
<td>180000</td>
<td>180000</td>
</tr>
<tr>
<td>COP</td>
<td>3.2</td>
<td>3.5</td>
<td>3.2</td>
<td>4.2</td>
<td>4.2</td>
<td>3.5</td>
<td>3.5</td>
<td>3.9</td>
<td>3.9</td>
<td>3.2</td>
<td>3.3</td>
</tr>
</tbody>
</table>
CA Model | Console Unit

**Standard features:**
- Slope top powder-coated cabinet with .5” dual density matte-faced fiberglass insulation
- Dual schrader ports
- Unit includes complete chassis, unit sub-base, and unit cabinet
- Baked polyester coated air coil made of copper tubes and aluminum fins
- All CA -UXC units have CXC LED electronic temperature control
- Stainless steel drain pan
- All CA -RXX units have UPM control to utilize remote 24VAC thermostats and DDC wall sensors
- Dual Refrigerant Freeze Sensors - Water and Air Side
- Cleanable 3/8” Metal Mesh Air Filter
- .5” Copper SWT Connections (LH or RH)
- Powder-Coated Light Beige Cabinet, 48” Wide
- Extended Range with TXV and Insulated Copper Coaxial Heat Exchanger
- 40VA Transformer
- R-410A Refrigerant

**Notes:** Full details of the warranty are included with the product at the time of sale and will be provided upon request.

- All dimensions in inches unless otherwise noted.
- All dimensions within ±0.125”.
- Fresh air opening (in sub-base rear).
- Caution! When installing unit in cold climates, an outside air damper must be provided to prevent possible condenser freeze-up.

### Console units are available as CA models from 3/4 to 1 1/2 tons with a standard length of 48”. Schools, apartment entrances, and other buildings can benefit from the Bosch Console unit. Its small size allows for installation in tight places and can be set up to bring in fresh outside air for better indoor air quality.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>STANDARD LENGTH UNIT DIMENSIONS (IN INCHES)</th>
<th>EXTENDED LENGTH UNIT DIMENSIONS (IN INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A (WIDTH) B (DEPTH) C (HEIGHT)</td>
<td>A (WIDTH) B (DEPTH) C (HEIGHT)</td>
</tr>
<tr>
<td>CA009</td>
<td>48.00 12.00 23.88</td>
<td>63.00 12.00 23.88</td>
</tr>
<tr>
<td>CA012</td>
<td>48.00 12.00 23.88</td>
<td>63.00 12.00 23.88</td>
</tr>
<tr>
<td>CA015</td>
<td>48.00 12.00 23.88</td>
<td>63.00 12.00 23.88</td>
</tr>
<tr>
<td>CA018</td>
<td>48.00 12.00 23.88</td>
<td>63.00 12.00 23.88</td>
</tr>
</tbody>
</table>

**Right Hand Water Connections**

**Standard Length**

**Left Hand Water Connections**

**Extended Length**

**Right Hand Water Connections**

**Extended Length**
**Options** | CA Model Console Unit

**Factory installed:**
- .5 FPT Water connections (allows quick connect of hose kit)
- 75VA Transformer
- Blower monitor relay\(^{(1)}\)
- Cabinet extension to 63” (std. is 48” wide)\(^{(2)}\)
- Chassis only (deducts painted cabinet and sub-base)
- Chassis with sub-base (deducts painted cabinet)
- Compressor monitor relay
- DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)\(^{(1)(3)}\)

- DDC with LonWorks card\(^{(2)(3)}\)
- Energy Management System (EMS) relay
- Fan/pump interlock relay
- Motorized outside air damper kit
- Non-fused disconnect switch
- Straight cool
- Unit wiring for 208 Volt

**Notes:** You must designate whether you need right or left hand by using the model nomenclature in the beginning section of this book. For example: ULC, RLC, SLC are all left hand models while URC, RRC, SRC are Right hand units.

For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

Unit mounted controller controls only the unit it is installed on. It will neither control other units nor communicate to a building automation system.

(1) Available on RXX only.
(2) 63” Extended cabinet designed to enclose pump package. Pump package not included.
(3) Requires 75 VA transformer.

**AHRI/ANSI 13256-1 PERFORMANCE DATA**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>GPM</th>
<th>WATER LOOP HEAT PUMP</th>
<th>GROUND WATER LOOP HEAT PUMP</th>
<th>GROUND LOOP HEAT PUMP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>COOLING 86˚F</td>
<td>HEATING 68˚F</td>
<td>COOLING 77˚F</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CAPACITY BTUH</td>
<td>EER BTUH/W</td>
<td>CAPACITY BTUH</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CA009</td>
<td>2.0</td>
<td>8700</td>
<td>13.4</td>
<td>9500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CA012</td>
<td>3.0</td>
<td>11700</td>
<td>12.7</td>
<td>12600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CA015</td>
<td>4.0</td>
<td>14300</td>
<td>12.9</td>
<td>16700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CA018</td>
<td>5.0</td>
<td>16900</td>
<td>12.2</td>
<td>20800</td>
</tr>
</tbody>
</table>

**Notes:** Ratings based upon AHRI/ANSI 13256-1 with 3/8” washable mesh filter.
MC Model | Water-to-Air Packaged Unit

Standard features:
- Uncoated air coil made of copper tubes and aluminum fins
- VH (high-boy) and VL (low-boy) modular take-apart design
- Unit Protection Module (UPM)
- 4-Sided filter rack with 4” MERV-8 pleated air filter and access panel
- Painted steel drain pan
- TXV Expansion device
- Schrader access ports
- High and low pressure switches
- 100 VA Transformer
- Refrigerant freeze sensors on air and water-side
- Condensate overflow sensor protection
- Multiple circuit (2- or 4-stage heat, 2- or 4-stage cool) and belt drive inverter duty motor(s)
- Single-point electrical and water connections
- Galvanized steel cabinet
- .5", 1.5lbs/ft³ Dual density fiberglass insulation
- R-410A Refrigerant

This large capacity water-to-air heat pump offers high efficiency, value added features and multi-levels of capacity with standard features like scroll compressors, variable air volume and 100% outside air capability giving you the flexibility, performance and quiet operation needed to exceed the expectations of your clients.

### Vertical High Configuration Unit Dimensions (in inches)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>A (WIDTH)</th>
<th>B (DEPTH)</th>
<th>C (HEIGHT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC360</td>
<td>69.50</td>
<td>51.63</td>
<td>111.00</td>
</tr>
<tr>
<td>MC480</td>
<td>139.00</td>
<td>51.63</td>
<td>111.00</td>
</tr>
<tr>
<td>MC600</td>
<td>139.00</td>
<td>51.63</td>
<td>111.00</td>
</tr>
<tr>
<td>MC720</td>
<td>139.00</td>
<td>51.63</td>
<td>111.00</td>
</tr>
</tbody>
</table>

### Vertical Low Configuration Unit Dimensions (in inches)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>A (WIDTH)</th>
<th>B (DEPTH)</th>
<th>C (HEIGHT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC360</td>
<td>69.50</td>
<td>64.75</td>
<td>80.00</td>
</tr>
<tr>
<td>MC480</td>
<td>139.00</td>
<td>64.75</td>
<td>80.00</td>
</tr>
<tr>
<td>MC600</td>
<td>139.00</td>
<td>64.75</td>
<td>80.00</td>
</tr>
<tr>
<td>MC720</td>
<td>139.00</td>
<td>64.75</td>
<td>80.00</td>
</tr>
</tbody>
</table>

Notes: All dimensions in inches unless otherwise noted. All dimensions within +0.125”. Specifications subject to change without notice. Height does not include 1.5” for the lifting support rails.
Options
MC Model Packaged Unit

Factory installed:
- .5" Closed-cell foam insulation
- Blower monitor relay
- Boilerless control
- Compressor monitor relay
- DDC 560 Controller with multiple protocol (BACNet, Modbus, N2)
- DDC 560 with LonWorks card
- EMS Relay
- Extended range (geothermal)
- Fan/pump interlock relay
- Fire alarm relay/dual power
- Flow proving switch
- Hot gas bypass
- Hot gas reheat (on/off) (1)
- Modulating HGRH (2)
- Motor and drive package, 7.5 to 20 HP, dual motors and fans (3)
- Phase protection monitor
- Stainless steel drain pan
- Straight cool
- Variable frequency drive (4)
- Water-side economizer

Notes: All the MC360’s ship in one section. All 480-720’s ship in two sections. The VL will separate into two sections. The VH will separate into three sections. See MC catalog for shipping split information.

Notes: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser

(1) For DDC control with on/off HGRH, MC360 requires the DDC 560, and MC480 through MC720 requires the 6126 FLEX controller with I/O flex expander 8160 kit
(2) For DDC controls with modulating HGRH, MC360 requires the DDC 583 controller, and MC480 through MC720 requires the 6126 FLEX controller.
(3) 480-720 only contain dual motors and fans, 360 size contains single motor and fan
(4) Minimum fan speed percentage of nominal CFM: 50% for cooling and 80% for heating. Design conditions may dictate higher percentages. Voltage must be 208-230/3/60 or 460/4/60.

PERFORMANCE IN ACCORDANCE WITH ARI/ISO 13256-1
ISO CORRECTED (WITH FAN & PUMP POWER)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>GPM</th>
<th>CFM</th>
<th>COOLING 86º F</th>
<th>HEATING 68º F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAP</td>
<td>EER</td>
<td>CAP</td>
<td>COP</td>
</tr>
<tr>
<td>MC360</td>
<td>90</td>
<td>12,000</td>
<td>395,246</td>
<td>13.1</td>
</tr>
<tr>
<td>MC480</td>
<td>120</td>
<td>16,000</td>
<td>555,796</td>
<td>16.1</td>
</tr>
<tr>
<td>MC600</td>
<td>150</td>
<td>20,000</td>
<td>642,387</td>
<td>15.4</td>
</tr>
<tr>
<td>MC720</td>
<td>180</td>
<td>24,000</td>
<td>790,649</td>
<td>13.1</td>
</tr>
</tbody>
</table>

Notes: 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/
**WT Model | Water-to-Water**  
2-Stage Packaged Unit (Chiller/Boiler)

**Standard features:**
- 75VA Transformer
- Copeland Ultratech™ two-stage compressor
- Floating compressor base
- Schrader access ports
- Extended range with TXV and insulated copper coaxial condenser
- High and low pressure switches and lockout circuit
- Dual refrigerant freeze sensors
- Unit Protection Module (UPM) with control terminal strip in -CSC, -CSN models
- Remote control or unit mounted LED temperature controller
- Galvanized steel cabinet
- .5", 1.5lbs/ft³ Dual density fiberglass insulation
- R-410A Refrigerant

*Note: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.*

*Note: CSN, USN CuNi on source side only.*

xxC - Copper coaxial condenser  
xxN - Cupro-Nickel coaxial condenser

---

**The WT Model is available in 2-6 tons, includes a wider range of voltages and optional double-wall load side heat exchanger. Also providing almost limitless options for hydronic systems due to its two-stage compressor and high operating temperatures for best-in-class performance.**

---

**HORIZONTAL UNIT DIMENSIONS (IN INCHES)**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>A (WIDTH)</th>
<th>B (DEPTH)</th>
<th>C (HEIGHT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WT025</td>
<td>32.50</td>
<td>24.00</td>
<td>24.00</td>
</tr>
<tr>
<td>WT035</td>
<td>32.50</td>
<td>24.00</td>
<td>24.00</td>
</tr>
<tr>
<td>WT049</td>
<td>32.50</td>
<td>24.00</td>
<td>24.00</td>
</tr>
<tr>
<td>WT061</td>
<td>32.50</td>
<td>24.00</td>
<td>24.00</td>
</tr>
<tr>
<td>WT071</td>
<td>32.50</td>
<td>24.00</td>
<td>24.00</td>
</tr>
</tbody>
</table>

*Note: All dimensions in inches unless otherwise noted. All dimensions within +0.125". Specifications subject to change without notice.*
Options | WT Model Packaged Unit

Factory installed:
- 100VA Transformer
- Comfort alert diagnosis module(2)
- Compressor blanket
- Compressor monitor relay
- DDC Controller with multiple protocol (BACnet, Modbus, N2)(3)
- DDC with LonWorks card(3)
- Double wall water coil (load-side only)(4)
- Energy Management System (EMS) relay
- Flow proving switches(5)
- Heat recovery package(6)
- Load-side CuNi
- Phase monitor(7)
- Pump interlock relay
- Unit wiring for 208 Volt

Note: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

Note: CSN, USN CuNi on source side only.

xC - Copper coaxial condenser
xN - Cupro-Nickel coaxial condenser

<table>
<thead>
<tr>
<th>MODEL</th>
<th>LOAD</th>
<th>SOURCE WATER FLOW RATE (GPM)</th>
<th>LOAD WATER FLOW RATE (GPM)</th>
<th>WATER LOOP HEAT PUMP</th>
<th>GROUND WATER HEAT PUMP</th>
<th>GROUND LOOP HEAT PUMP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>COOLING 86˚F</td>
<td>HEATING 68˚F</td>
<td>COOLING 59˚F</td>
<td>HEATING 50˚F</td>
<td>COOLING 77˚F</td>
</tr>
<tr>
<td>WT025</td>
<td>Part</td>
<td>6 5</td>
<td>15500 14.7</td>
<td>22000 4.6</td>
<td>18500 25.7</td>
<td>17000 3.7</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td>6 5</td>
<td>21000 13.4</td>
<td>31000 4.4</td>
<td>24500 21.2</td>
<td>25000 3.6</td>
</tr>
<tr>
<td>WT035</td>
<td>Part</td>
<td>9 7</td>
<td>22500 14.5</td>
<td>31000 4.7</td>
<td>25500 24.5</td>
<td>25000 3.6</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td>9 7</td>
<td>29000 12.6</td>
<td>43000 4.3</td>
<td>34000 20.2</td>
<td>34000 3.5</td>
</tr>
<tr>
<td>WT049</td>
<td>Part</td>
<td>10 8</td>
<td>29000 13.8</td>
<td>42000 4.5</td>
<td>33500 23.5</td>
<td>34500 3.8</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td>10 8</td>
<td>39000 12.8</td>
<td>58000 4.1</td>
<td>45000 19.7</td>
<td>47000 3.6</td>
</tr>
<tr>
<td>WT061</td>
<td>Part</td>
<td>13 10</td>
<td>37000 14.2</td>
<td>55000 4.7</td>
<td>42500 23.3</td>
<td>41500 3.6</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td>13 10</td>
<td>49000 12.9</td>
<td>74500 4.2</td>
<td>56000 19.9</td>
<td>59000 3.4</td>
</tr>
<tr>
<td>WT071</td>
<td>Part</td>
<td>15 12</td>
<td>43500 13.5</td>
<td>65500 4.4</td>
<td>50500 21.8</td>
<td>52000 3.5</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td>15 12</td>
<td>57500 12.4</td>
<td>86500 4.1</td>
<td>64000 18.8</td>
<td>70000 3.4</td>
</tr>
<tr>
<td>WW120</td>
<td>Full</td>
<td>30 30</td>
<td>110100 13.5</td>
<td>160000 4.4</td>
<td>125000 19.2</td>
<td>129000 3.7</td>
</tr>
<tr>
<td>WW122</td>
<td>Part</td>
<td>30 25</td>
<td>54950 12.3</td>
<td>78600 4.2</td>
<td>63500 19.0</td>
<td>63600 3.4</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td>30 25</td>
<td>114150 13.8</td>
<td>160800 4.6</td>
<td>130200 21.3</td>
<td>129800 3.8</td>
</tr>
</tbody>
</table>

Notes: 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/ *For units with a part load rating temperature of 68° F. This applies only to ground loop condition. The other two conditions have the same water temp for full and part load conditions. **For units with a part load rating temperature of 41° F. This applies only to ground loop condition. The other two conditions have the same water temp for full and part load conditions.
**WW Model | Water-to-Water**

2-Stage Packaged Unit (Chiller/Boiler)

**Standard features:**
- Single refrigerant circuit (1-stage heat, 1-stage cool) (WW120, 180 and 210 only)
- Dual refrigerant circuit (2-stage heat, 2-stage cool) with two compressors (WW122, 240, 360 and 420 only)
- Schrader access ports, two per refrigerant circuit for service
- High and low pressure switches
- Unit Protection Module (UPM) with control terminal strip -CSC, -CSN models
- Dual refrigerant freeze sensors
- Unit mounted controller -USC, -USN models
- Single point electrical connections
- Galvanized steel cabinet
- 1/2”, 1.5lbs/ft³ Dual density fiberglass insulation
- R-410A Refrigerant
- 100 VA Transformer
- Extended range with TXV and insulated copper coaxial condenser

The WW Model is available from 10-35 tons. Including either a single-stage scroll compressor (WW120, 150, 180 and 210) or dual scroll compressors, two-stage refrigerant circuits for water-cooled modular reverse cycle chiller applications designed to meet all your needs and requirements.

Note: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

Note: CSN, USN CuNi on source side only.

xC - Copper coaxial condenser
xN - Cupro-Nickel coaxial condenser

<table>
<thead>
<tr>
<th>MODEL</th>
<th>UNIT DIMENSIONS (IN INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WW120</td>
<td>A</td>
</tr>
<tr>
<td>28.00</td>
<td>46.00</td>
</tr>
<tr>
<td>WW122</td>
<td>28.00</td>
</tr>
<tr>
<td>WW180</td>
<td>28.00</td>
</tr>
<tr>
<td>WW210</td>
<td>28.00</td>
</tr>
<tr>
<td>WW240</td>
<td>28.00</td>
</tr>
<tr>
<td>WW360</td>
<td>28.00</td>
</tr>
<tr>
<td>WW420</td>
<td>28.00</td>
</tr>
</tbody>
</table>
### Options | WW Model Packaged Unit

**Factory installed:**
- Compressor blanket
- Compressor monitor relay
- CuNi on load side
- DDC Controller with multiple protocol
- (BACnet, Modbus, N2)\(^{(2)}\)
- DDC with LonWorks card\(^{(2)}\)
- Energy Management System (EMS) relay
- Fan/pump interlock relay
- Flow proving switches\(^{(3)}\)
- Phase protection monitor\(^{(4)}\)
- Unit wiring for 208 Volt

(1) Unit mounted controller controls only the unit it’s installed on. It will neither control other units nor communicate to a building automation system.
(2) Only available on -CSC and -CSN units.
(3) Both water circuits. Model must be CSX.
(4) Three phase units only.

### ASHRAE/AHRI/ISO 13256-2. ENGLISH (I-P) UNITS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>LOAD</th>
<th>SOURCE WATER FLOW RATE (GPM)</th>
<th>LOAD WATER FLOW RATE (GPM)</th>
<th>COOLING 86°F</th>
<th>HEATING 68°F</th>
<th>COOLING 59°F</th>
<th>HEATING 50°F</th>
<th>COOLING 77°F*</th>
<th>HEATING 32°F**</th>
</tr>
</thead>
<tbody>
<tr>
<td>WW180</td>
<td>Full</td>
<td>34</td>
<td>27</td>
<td>127000</td>
<td>13.8</td>
<td>180500</td>
<td>4.5</td>
<td>143000</td>
<td>13.8</td>
</tr>
<tr>
<td>WW210</td>
<td>Full</td>
<td>40</td>
<td>32</td>
<td>164200</td>
<td>13.2</td>
<td>239500</td>
<td>4.4</td>
<td>185500</td>
<td>19.1</td>
</tr>
<tr>
<td>WW240</td>
<td>Full</td>
<td>56</td>
<td>44</td>
<td>222000</td>
<td>13.5</td>
<td>320000</td>
<td>4.4</td>
<td>249500</td>
<td>19.2</td>
</tr>
<tr>
<td>WW360</td>
<td>Full</td>
<td>68</td>
<td>54</td>
<td>254000</td>
<td>13.8</td>
<td>361500</td>
<td>4.5</td>
<td>286500</td>
<td>20.7</td>
</tr>
<tr>
<td>WW420</td>
<td>Full</td>
<td>80</td>
<td>64</td>
<td>328300</td>
<td>13.2</td>
<td>479000</td>
<td>4.4</td>
<td>370500</td>
<td>19.1</td>
</tr>
</tbody>
</table>

**Notes:** 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/](http://bst.fhp-mfg.com/eRep/)

*For units with a part load rating temperature of 68°F. This applies only to ground loop condition. The other two conditions have the same water temp for full and part load conditions.

**For units with a part load rating temperature of 41°F. This applies only to ground loop condition. The other two conditions have the same water temp for full and part load conditions.