WC MODULAR SCROLL CHILLER FOR COMMERCIAL APPLICATIONS

The WaterFurnace WC Modular Scroll Chiller is the perfect fit for commercial and industrial applications. Its R-410A dual scroll compressors provide high efficiency and the ultimate in capacity control while the modular cabinet design is perfect for multiple chiller bank installations. The optional *6-pipe header rack allows for application and enables the system to provide simultaneous heating and cooling with impressive efficiencies.

KEY FEATURES

HIGH-EFFICIENCY COMPRESSORS: WC Scroll Chillers use high efficiency R-410A dual scroll compressors that are mounted on rubber grommets for vibration isolation.

REMOVABLE *6-PIPE HEADER RACK: Piping racks can be installed and flushed before installing the refrigerant module, and additional header racks can be installed for future central plant expansion. Each header rack is compatible with all tonnage modules. The 4-pipe header racks can be combined with *6 pipe header racks to meet the heat recovery capacity required for every project.

INSULATED & EFFICIENT WATER-TO-REFRIGERANT HEAT EXCHANGER: Large oversized stainless steel interlaced copper-brazed plate water-to-refrigerant heat exchangers provide unparalleled efficiency. All heat exchangers, water lines, and suction lines are insulated to prevent condensation during low temperature inlet water operation.

CONVENIENT CONTROL PANEL FOR EASE OF SERVICE: WC Chiller control panel features a heavy-duty, hinged service door with a convenient user interface display for ease of service and installation. The top control panel features high voltage components such as the electrical disconnect, fuses, and compressor contactors, while the bottom control panel features the main control and superheat boards. The control panel was designed with the technician in mind to provide convenient, clear wiring with plenty of working space.

4-WAY REVERSING VALVE: WC Chillers enabled for reverse mode* are equipped with a heavy-duty 4-way reversing valve with low refrigerant pressure drop. 4-way valves are operated by the system controller to enhance reliability.

2-WAY ISOLATION VALVES: WC Chillers are equipped with low pressure drop (high Cv) solenoid valves to vary the pump according to flow required.

ADDED CONTROL WITH ELECTRONIC EXPANSION VALVE: Optional electronic expansion valves in the WC Scroll Chillers provide great superheat control along with a wider range of operation. Superheat values are reported back to the system controller which allows more diagnostic information to the technician without requiring the use of refrigerant manifold gauges.

ELECTRICAL DISCONNECT: A factory mounted, internally wired, disconnect is available to provide electrical isolation from high voltage supply at the chiller.

COMPRESSOR PROTECTION MODULE: Most chillers come with an external compressor protection module that provides additional motor protection such as reverse phase detection and a pre-wire thermistor. All other models have internal overload protection with reverse phase detection.

FLOW SWITCH FOR EXTENDED COMPRESSOR LIFE: Stainless steel, multi-segment paddle type flow switches come standard on every unit to protect the compressor from running when low flows are encountered.

PROTECTIVE CABINET: All chiller frames are constructed of heavy gauge steel and painted with corrosion resistant, polyester, powder coat paint. The frame includes fork truck pockets to assist in maneuverability of the product during installation.

AVAILABILITY INFO
- SHR Max Size
- Reversibility up to 50 ton
- 6 pipe up to 50 ton

*Available in up to 50 ton models
## WC MODULAR SCROLL CHILLER 20-80 TON

### Dual Scroll Modular IPLV Ratings

<table>
<thead>
<tr>
<th>Model</th>
<th>Full Load Rating</th>
<th>IPLV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cooling Capacity (MBtu/hr)</td>
<td>Input Power (kW)</td>
</tr>
<tr>
<td>020</td>
<td>265,000</td>
<td>15.8</td>
</tr>
<tr>
<td>030</td>
<td>390,000</td>
<td>24.1</td>
</tr>
<tr>
<td>040</td>
<td>510,000</td>
<td>31.1</td>
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<tr>
<td>050</td>
<td>620,000</td>
<td>37.9</td>
</tr>
<tr>
<td>060</td>
<td>805,000</td>
<td>49.1</td>
</tr>
<tr>
<td>070</td>
<td>892,000</td>
<td>54.7</td>
</tr>
<tr>
<td>080</td>
<td>990,000</td>
<td>62.5</td>
</tr>
</tbody>
</table>

### Modular Physical Data

#### Refrigerant
- Number of Circuits: 2
- Factory Charge, lbs [kg]: 1 to 1.5 lbs per nominal ton [0.45 to 0.68 kg]

#### Compressor
- Single Speed Scroll
- Compressor Quantity [tons]: 2 [10], 2 [15], 2 [20], 2 [25], 2 [30], 2 [35], 2 [40]
- Compressor Weight, lbs [kg]: 150 [68], 167 [76], 251 [114], 262 [119], 370 [168], 316 [143], 406 [184]
- Oil Charge, oz: 112 [3.3], 122 [3.6], 227 [6.7], 227 [6.7], 227 [6.7], 179 [5.3], 227 [6.7]

#### Evaporator
- Brazed Plate
- Quantity: 1
- Weight, lbs [kg]: 80 [36], 127 [57], 157 [71], 194 [88], 217 [98], 179 [5.3], 227 [6.7]
- Water Volume, gal [L]: 2.2 [8.5], 3.6 [13.5], 4.4 [16.8], 5.5 [20.9], 6.2 [23.4], 6.8 [25.9], 6.8 [25.9]

#### Condenser
- Brazed Plate
- Quantity: 1
- Weight, lbs [kg]: 74 [33], 112 [51], 142 [64], 179 [81], 202 [91], 224 [101], 224 [101]
- Water Volume, gal [L]: 2.2 [8.5], 3.6 [13.5], 4 [15.1], 5.1 [19.5], 5.7 [21.7], 6.3 [23.8], 6.3 [23.8]

### Header Rack Physical Data

#### 4" Header Rack
- Water Volume, gal [L]: 8.6 [32.7]
- Water Weight, lbs [kg]: 72 [33]
- Shipping Weight, lbs [kg]: 548 [249]

#### 6" Header Rack
- Water Volume, gal [L]: 8.6 [32.7]
- Water Weight, lbs [kg]: 72 [33]
- Shipping Weight, lbs [kg]: 615 [279]

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* - Consult nameplate for exact charge quantity.

**Header Rack Physical Data**

<table>
<thead>
<tr>
<th>Model</th>
<th>4&quot;</th>
<th>6&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Volume, gal [L]</td>
<td>8.6 [32.7]</td>
<td>8.6 [32.7]</td>
</tr>
<tr>
<td>Water Weight, lbs [kg]</td>
<td>72 [33]</td>
<td>72 [33]</td>
</tr>
<tr>
<td>Shipping Weight, lbs [kg]</td>
<td>548 [249]</td>
<td>615 [279]</td>
</tr>
</tbody>
</table>

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* Consult nameplate for exact charge quantity.


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